

**HYDROLOGIC ASSOCIATES U.S.A., INC.  
ENVIRONMENTAL CONSULTANTS**

March 6, 1995

Mr. Gene McLoughlin, P.E.  
MDWASA  
P.O. Box 330316  
Miami, Florida 33233-0316

Dear Mr. McLoughlin,

The purpose of this letter report is to describe the procedures used and the results obtained from quantitative hydraulic analysis of possible confining zones penetrated by Injection well I-3N. The straddle packer tests and subsequent hydraulic analyses were conducted in the zones of the aquifer between 2240 to 2300, 2340 to 2400 and 2430 to 2490 feet below land surface (BLS).

**METHOD**

A straddle packer was used to isolate the test zone for drawdown and recovery tests. Stress was imposed on the hydraulic system with a 4 inch submersible pump and water level changes were measured in the drill stem with a pressure transducer and recorded on a Hermit 1000-C data logger. Raw data is presented in Appendix I. Prior to each test, the well was developed by pumping the formation fluid until the specific conductance stabilized. Specific conductance readings taken during development and the tests are included in Appendix II. The well was allowed to recover from development before performing the tests.

Water quality samples were collected at the end of each test. Parameters included; chlorides, total dissolved solids, alkalinity, hydrogen sulfide, all nitrogen species, ammonia, zinc, sulfate, ph and color. Laboratory analysis sheets are included in Appendix III.

## BACKGROUND

A 12 inch pilot hole was drilled below casing to a depth of 2900 feet below land surface. A suite of geophysical logs were run and, together with the borehole cutting samples, the test zones were selected by the WASA project hydrogeologist. Zones were selected between 2240 to 2300, 2340 to 2400 and 2430 to 2490 feet below land surface. Each zone was isolated with an inflatable straddle packer. The packer is made up of 2, 15 foot packers separated by a 60 foot length of drill stem. Ten feet of perforated drill stem is open to the formation between the two packer elements.

The packer assembly was lowered on the drill stem into the original pilot hole to the tested interval of 2430 to 2490 feet B.L.S. The packer elements were then inflated. A submersible pump was then installed in the drill stem to develop the formation fluids between the packer elements. After three hours of pumping, a constant specific conductance of 21,000 umhos was reached. The well was allowed to recover to its initial antecedent conditions. The well was then pumped while drawdown data was recorded. After the pumping was discontinued, recovery data were recorded until formation water level had again reached antecedent conditions. It was necessary to repeat the test on this zone due to unanticipated excessive drawdown past the transducer. Background, drawdown and recovery water level data is graphed on Figure 1. Raw data are presented in Appendix I.

The packer assembly was then raised to the 2340 to 2400 feet below land surface zone. The same procedure as above was then followed for this and subsequent zones. Background, drawdown and recovery water level data is graphed on Figure 2, for zone 2340 to 2400 and Figure 3 for zone 2240 to 2300.

AQUIFER TEST, I-3N ZONE 2430 - 2490

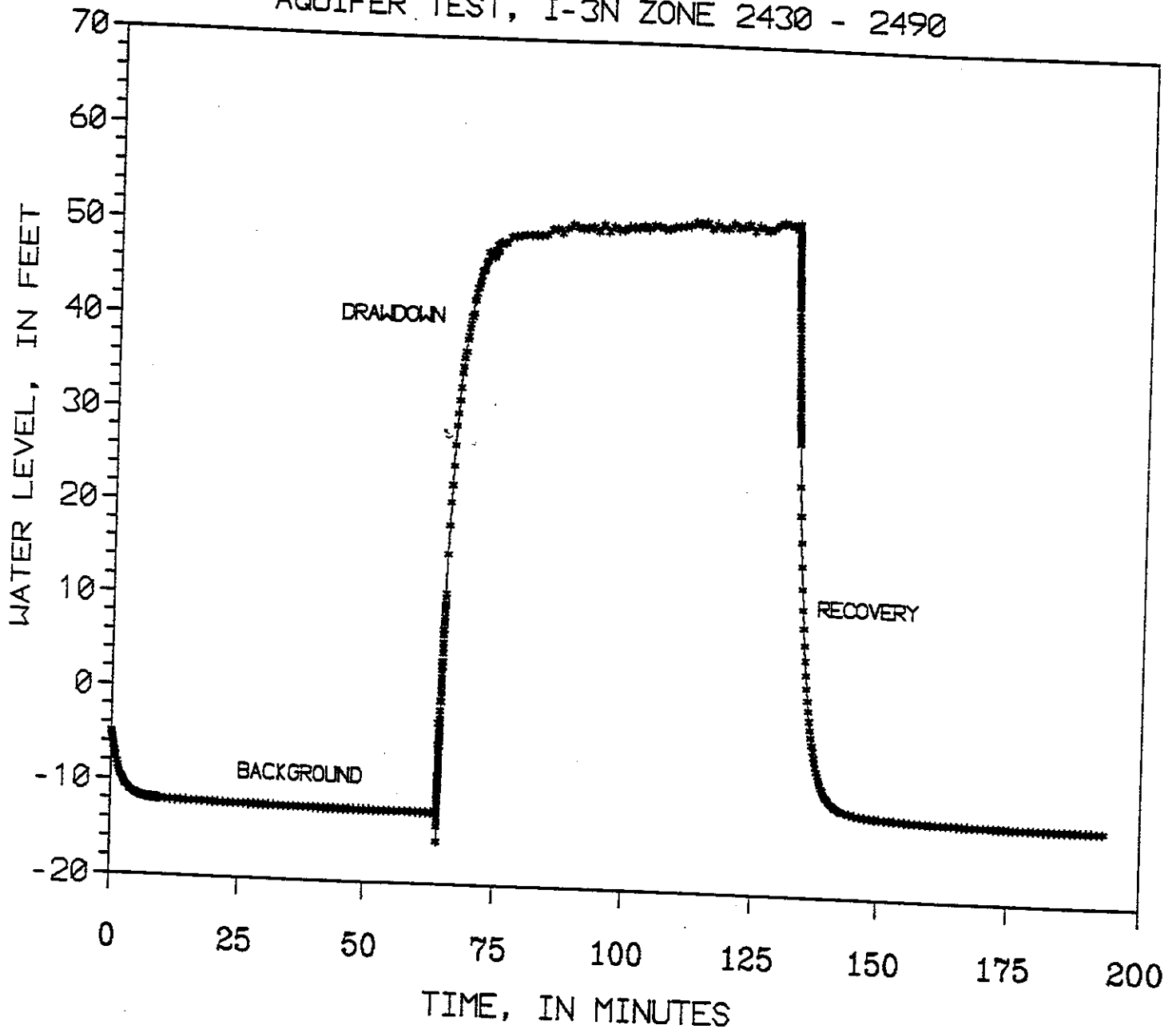


Figure 1. -- Background, drawdown and recovery data from I-3N, zone 2430 to 2490

AQUIFER TEST, I-3N ZONE 2340 - 2400

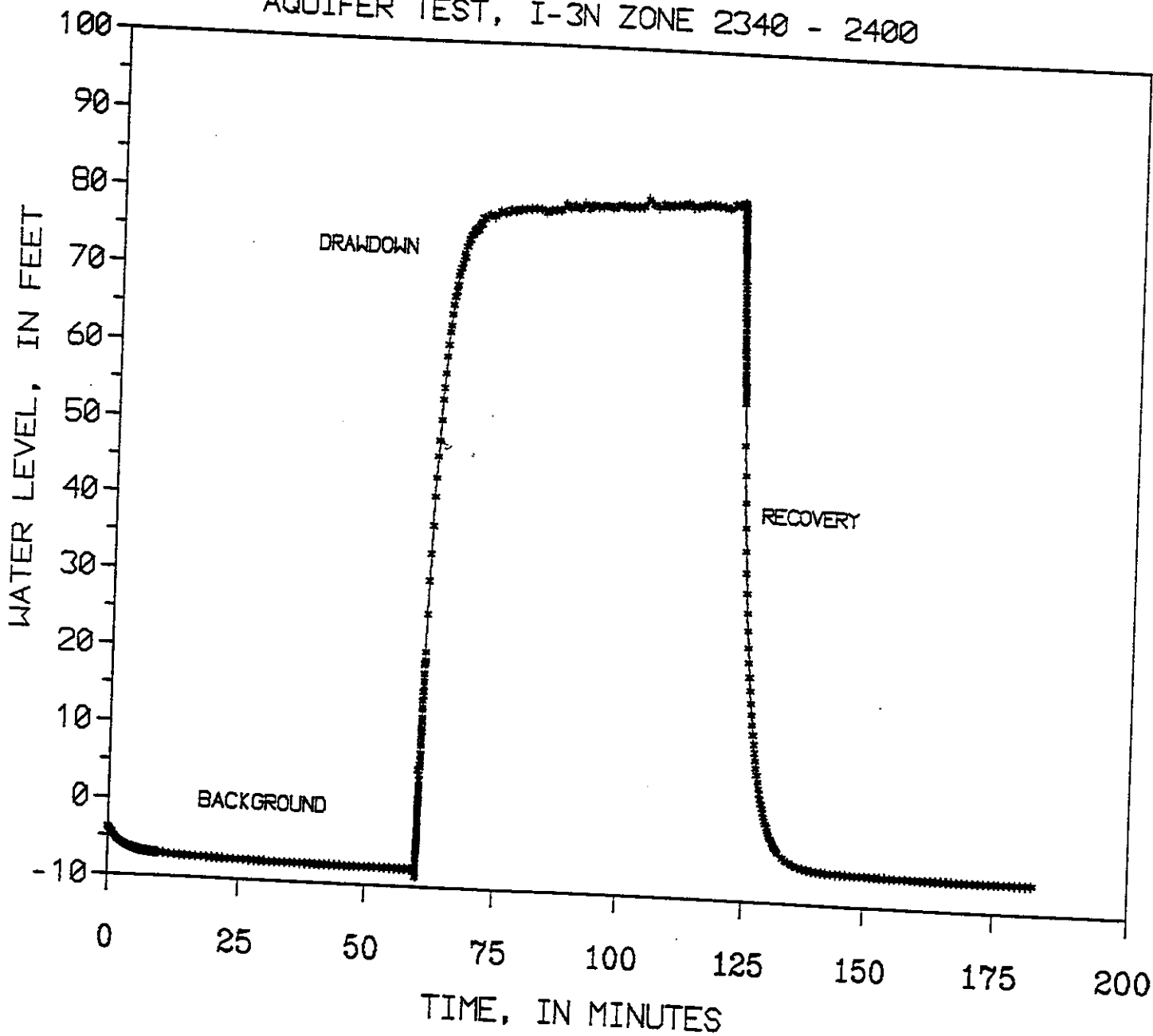


Figure 2. --- Background, drawdown and recovery data from I-3N, zone 2340 to 2400

AQUIFER TEST, I-3N ZONE 2240 - 2300

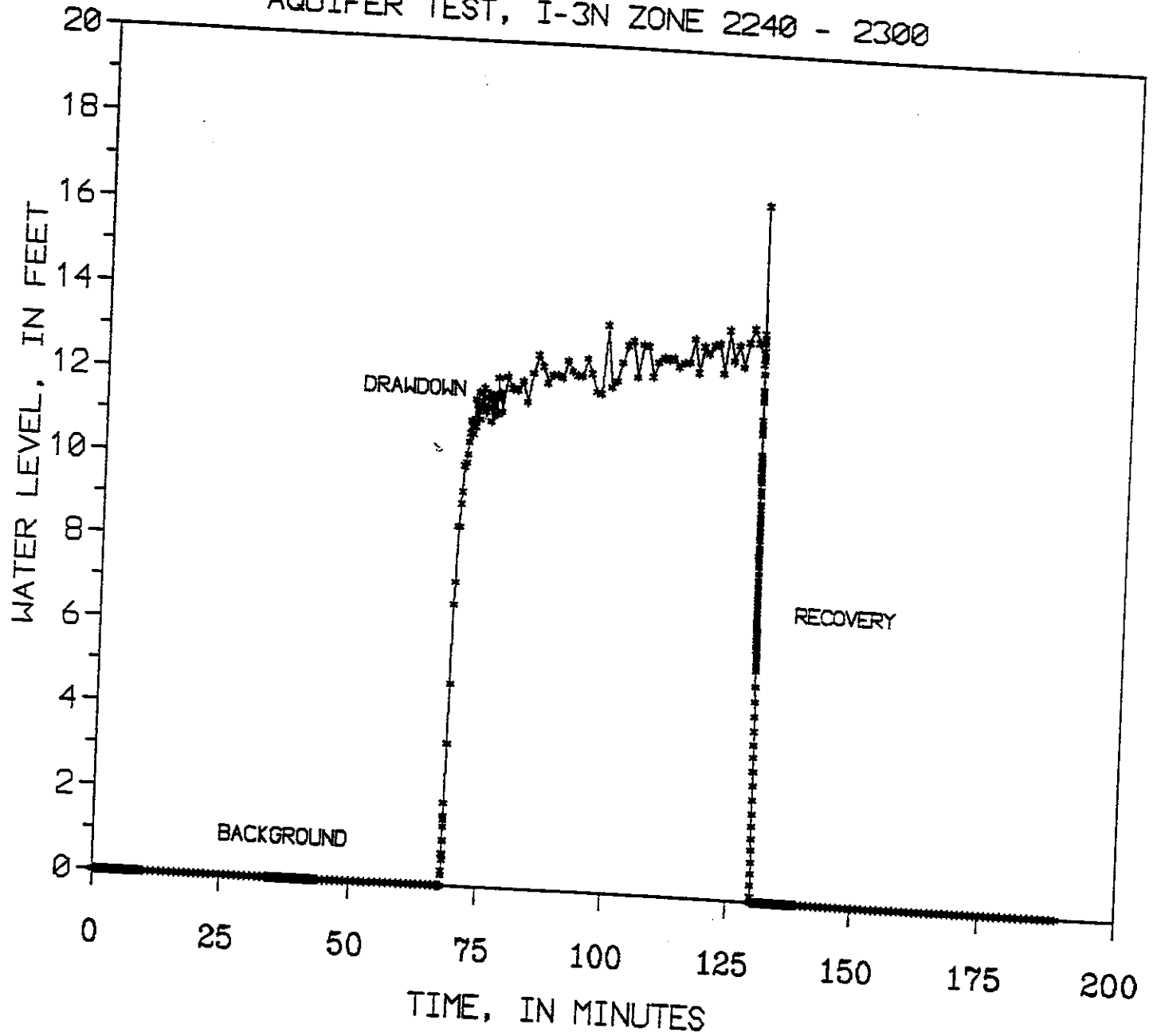


Figure 3. -- Background, drawdown and recovery data from I-3N, zone 2240 to 2300

## DATA ANALYSIS

Two methods of data analysis are used to calculate the transmissivity for each packer setting.

1. Cooper-Jacob Analysis
2. Theis Recovery Analysis

### 1. Cooper-Jacob Analysis

The Cooper-Jacob method (Figures 4, 5, and 6) (Todd, 1980 p. 129) was used to compute a transmissivity value. The equation is as follows:

$$T = \frac{(2.3)(Q)}{(4)(\pi)(\Delta S_1)}$$

where  $Q$  = discharge in cubic feet per day  
 $\Delta S_1$  = drawdown over one log cycle of time

The data were plotted on semi-log paper (s versus log t) and a straight line fitted to the data.

Using the observed drawdown over a single log cycle, ( $\Delta S_1$ ), the transmissivity can be determined from the equation given by Todd (1980, p. 130) as:

Zone 2430 - 2490

$$T = \frac{(2.3)(7700) \text{ ft}^3/\text{day}}{(4)(3.1416)(37.5 \text{ ft})}$$

$$T = 37.5 \text{ ft}^2/\text{day}$$

Zone 2340 - 2400

$$T = \frac{(2.3)(7796) \text{ ft}^3/\text{day}}{(4)(3.1416)(63 \text{ ft})}$$

$$T = 22.6 \text{ ft}^2/\text{day}$$

Zone 2240 - 2300

$$T = \frac{(2.3)(7700) \text{ ft}^3/\text{day}}{(4)(3.1416)(8 \text{ ft})}$$

$$T = 175.7 \text{ ft}^2/\text{day}$$

Horizontal hydraulic conductivity is calculated by dividing T by the unit thickness of 60 feet, the horizontal hydraulic conductivity is:

Zone 2430 - 2490

$$K = .625 \text{ ft/day}$$
$$K = 2.2 \times 10^{-4} \text{ cm/sec.}$$

Zone 2340 - 2400

$$K = .377 \text{ ft/day}$$
$$K = 1.3 \times 10^{-4} \text{ cm/sec.}$$

Zone 2240 - 2300

$$K = 2.9 \text{ ft/day}$$
$$K = 1.0 \times 10^{-3} \text{ cm/sec}$$

Figure 4. -- Cooper-Jacob Drawdown Analysis, I-3N, zone 2430 to 2490

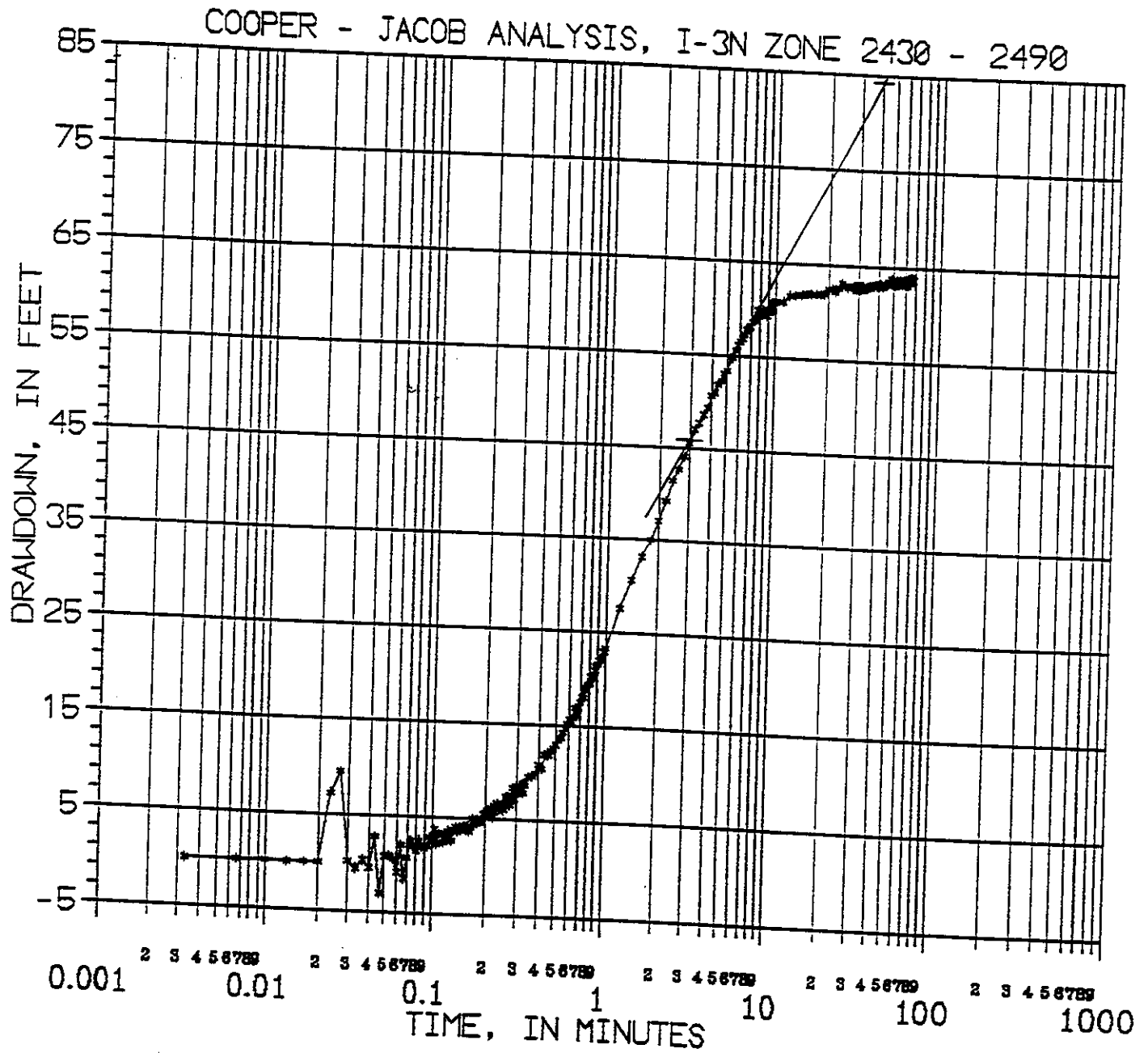




Figure 5. -- Cooper-Jacob Drawdown Analysis, I-3N, zone 2340 to 2400

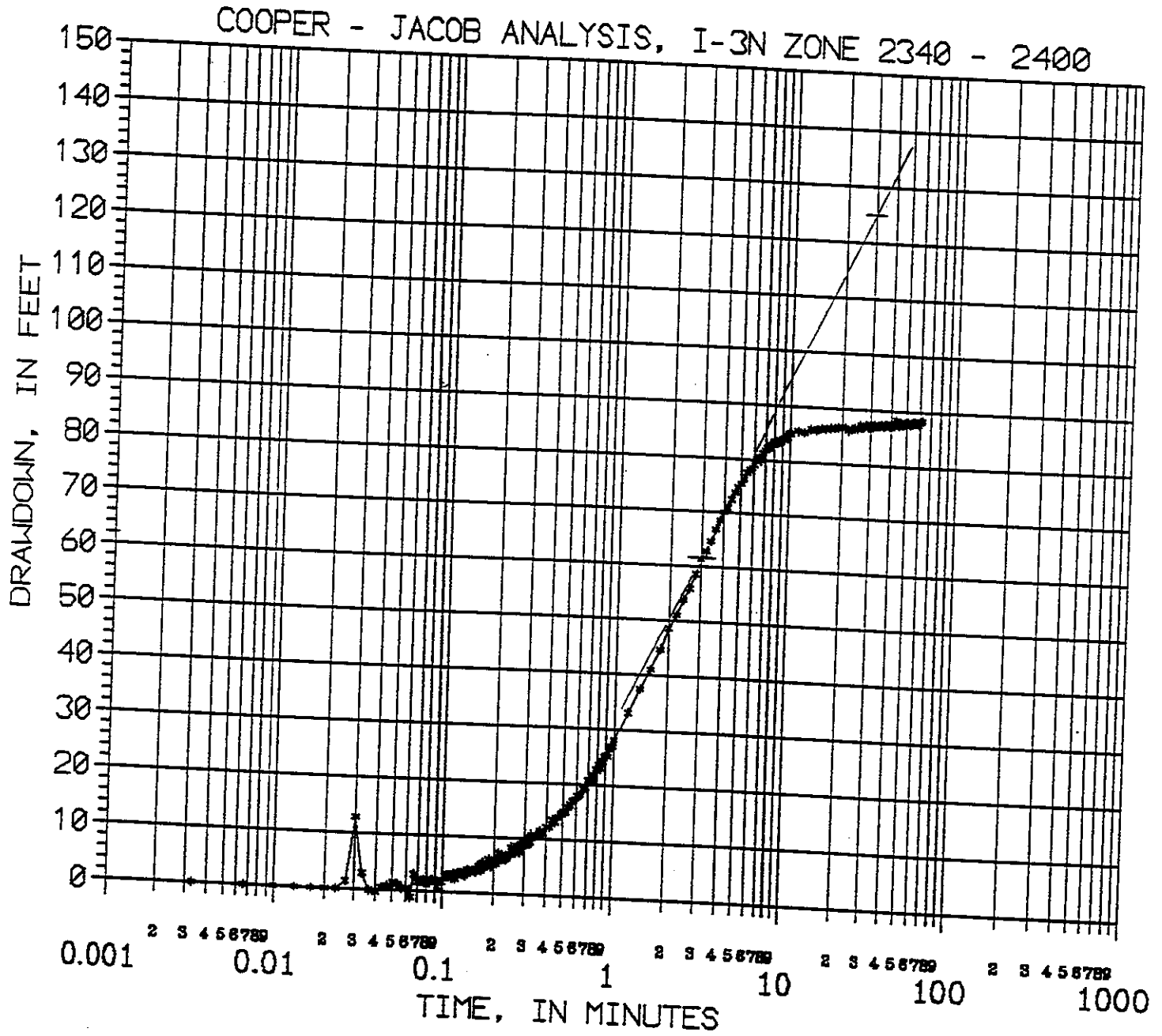
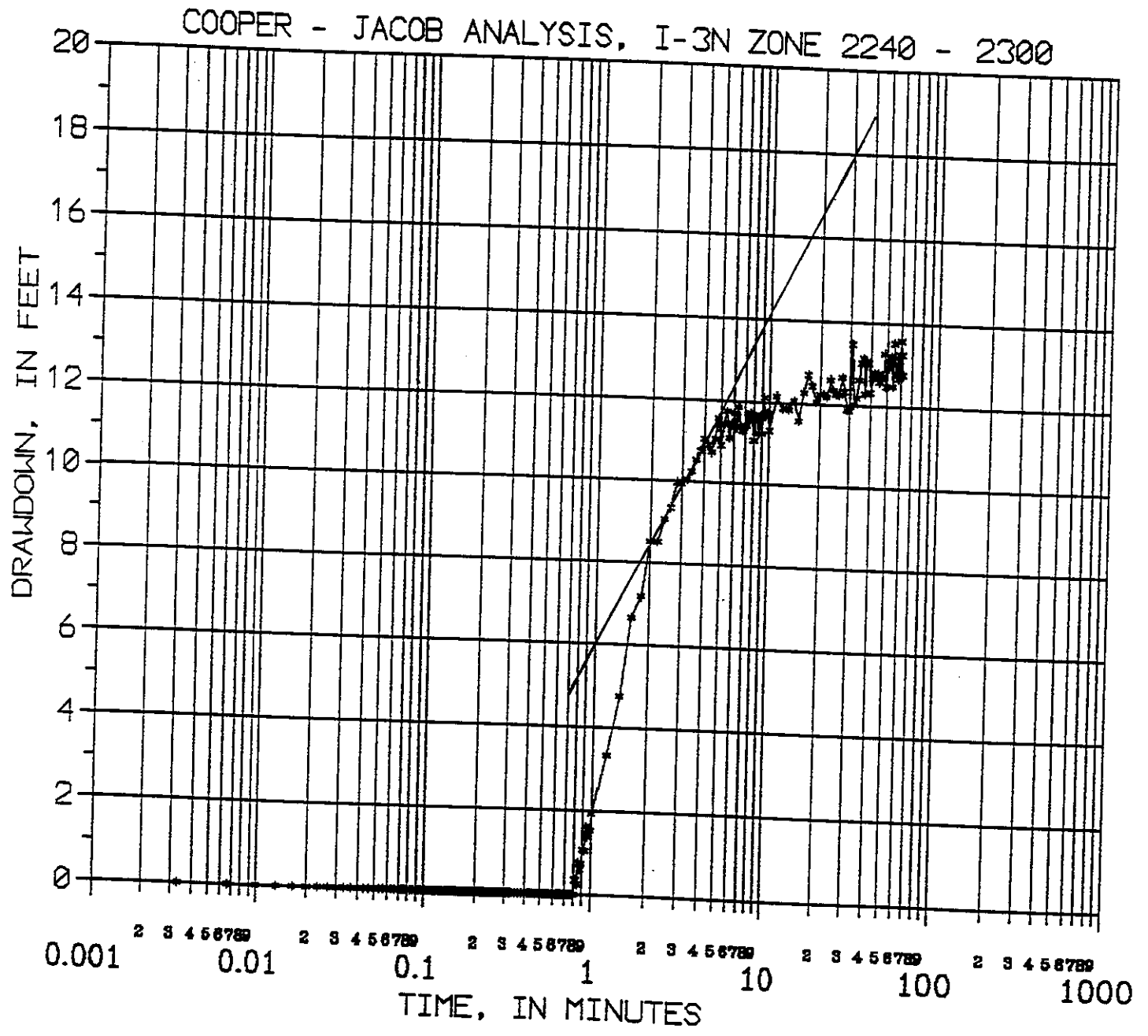


Figure 6. -- Cooper-Jacob Analysis, I-3N, zone 2240 - 2300



## 2. Theis Recovery Analysis

The Theis Method was used to analyze recovery in the well after the pump was shut down, using the method as described in Todd (1980 p. 133). Residual drawdown,  $s'$ , was plotted against the log of the ratio of time from the start of pumping to the time of shut down ( $t/t'$ ) (see Figures 7, 8 and 9).

A straight line was fitted to the early time data and the change in residual drawdown over a single log cycle ( $\Delta s' \ell$ ) was calculated. Transmissivity was then determined from the equation: Todd (1980, p.134):

$$T = \frac{2.3 (Q) \text{ ft}^3/\text{day}}{(4)(\pi)(\Delta s' \ell) \text{ ft}}$$

Zone 2430 - 2490

$$T = \frac{(2.3)(7700) \text{ ft}^3/\text{day}}{(4)(3.1416)(52.2 \text{ ft})}$$

$$T = 26.9 \text{ ft}^2/\text{day}$$

Zone 2340 - 2400

$$T = \frac{(2.3) (7796) \text{ ft}^3/\text{day}}{(4) (3.1416) (65 \text{ ft})}$$

$$T = 21.9 \text{ ft}^2/\text{day}$$

Zone 2240 - 2300

$$T = \frac{(2.3) (7700) \text{ ft}^3/\text{day}}{(4) (3.1416) (10.3 \text{ ft})}$$

$$T = 136.4 \text{ ft}^2/\text{day}$$

Horizontal hydraulic conductivity is calculated by dividing T by the unit thickness of 60 feet, the horizontal hydraulic conductivity is:

Zone 2430 - 2490

$$K = .448 \text{ ft/day}$$
$$K = 1.6 \times 10^{-4} \text{ cm/sec}$$

Zone 2340 - 2400

$$K = .365 \text{ ft/day}$$
$$K = 1.3 \times 10^{-4} \text{ cm/sec}$$

Zone 2240 - 2300

$$K = 2.3 \text{ ft/day}$$
$$K = 8.1 \times 10^{-4} \text{ cm/sec}$$

THEIS RECOVERY ANALYSIS, I-3N ZONE 2430 - 2490

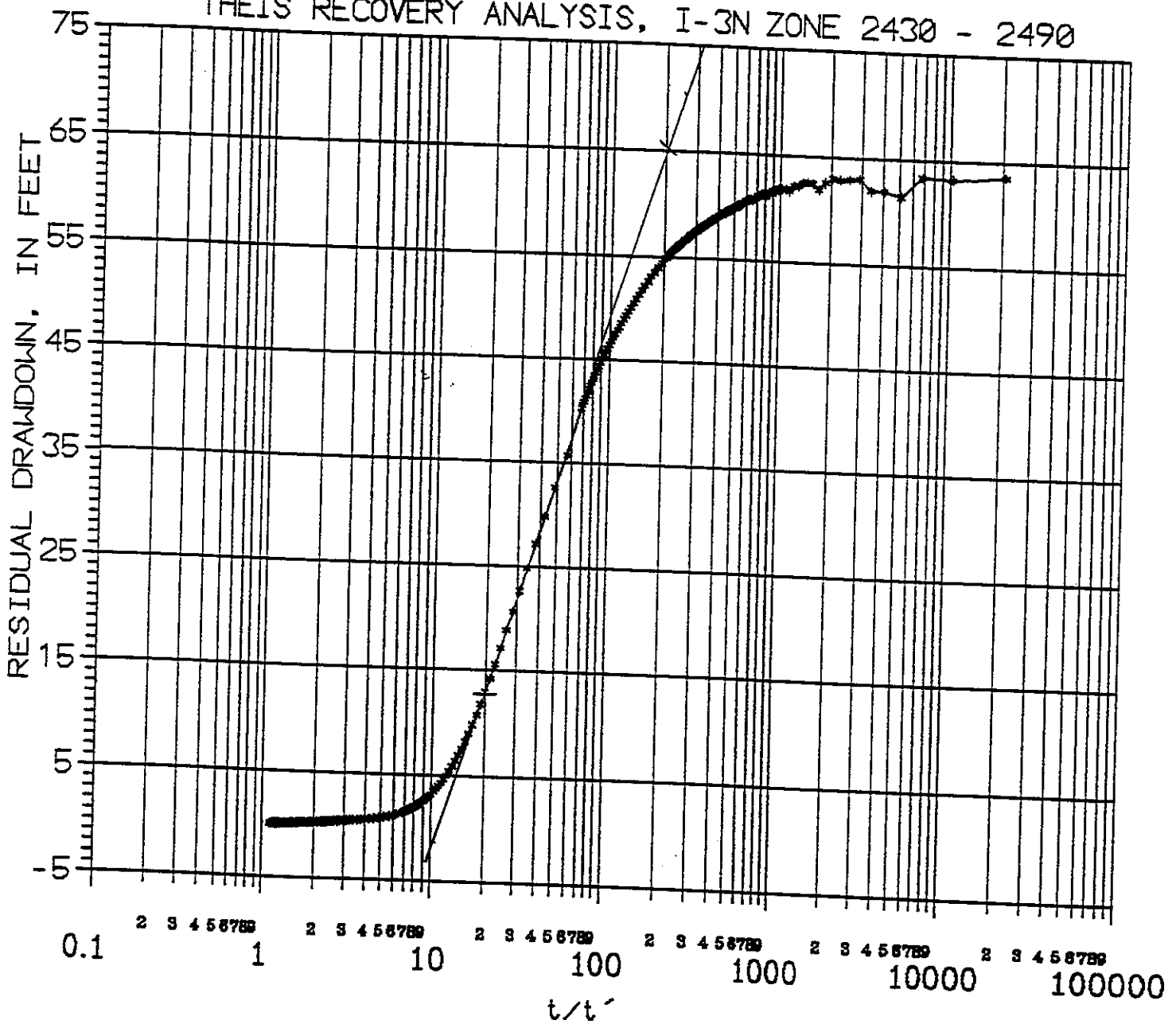


Figure 7. -- Theis Recovery Analysis I-3N, zone 2430 to 2490

THEIS ANALYSIS, I-3N ZONE 2340 - 2400

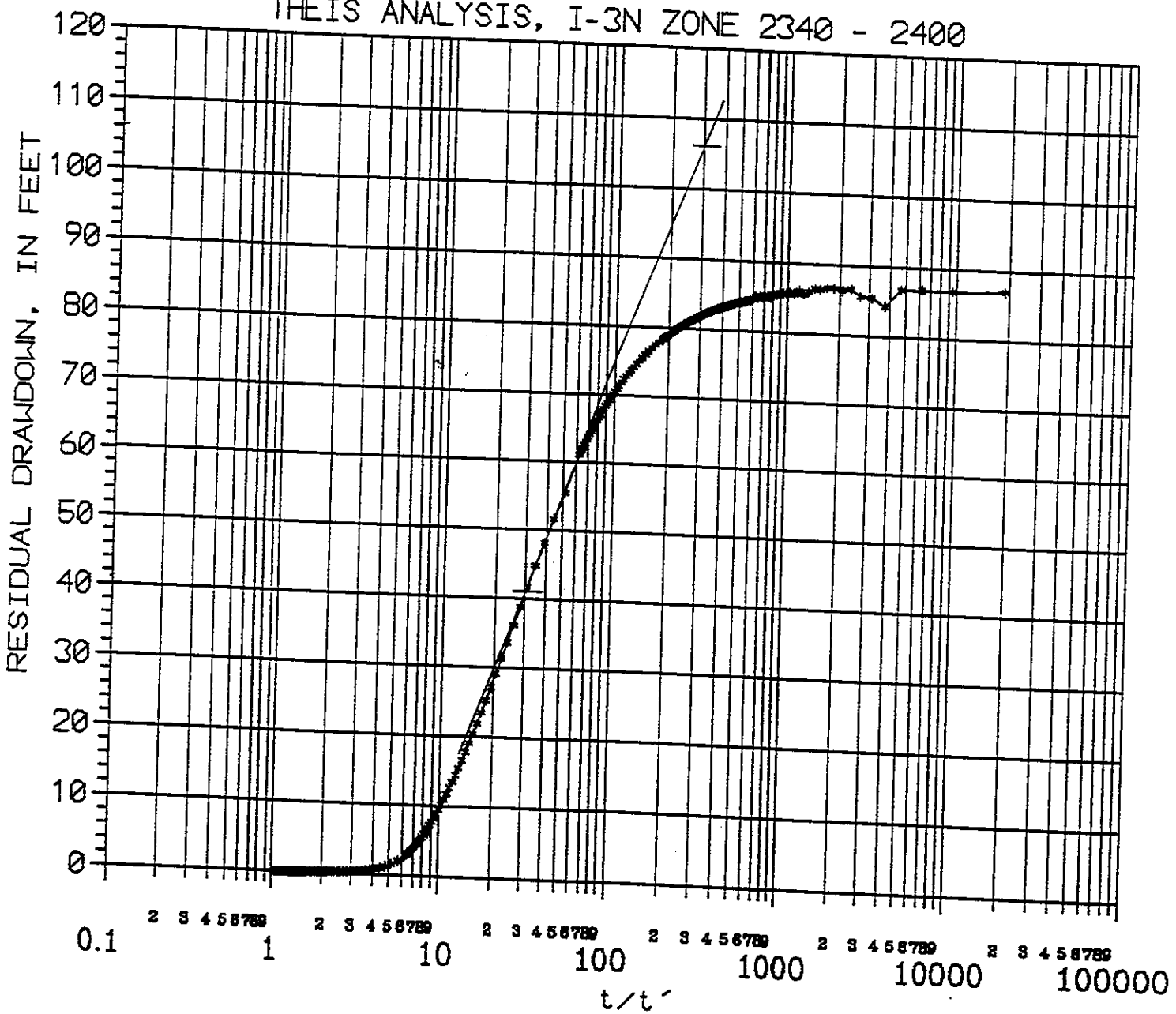
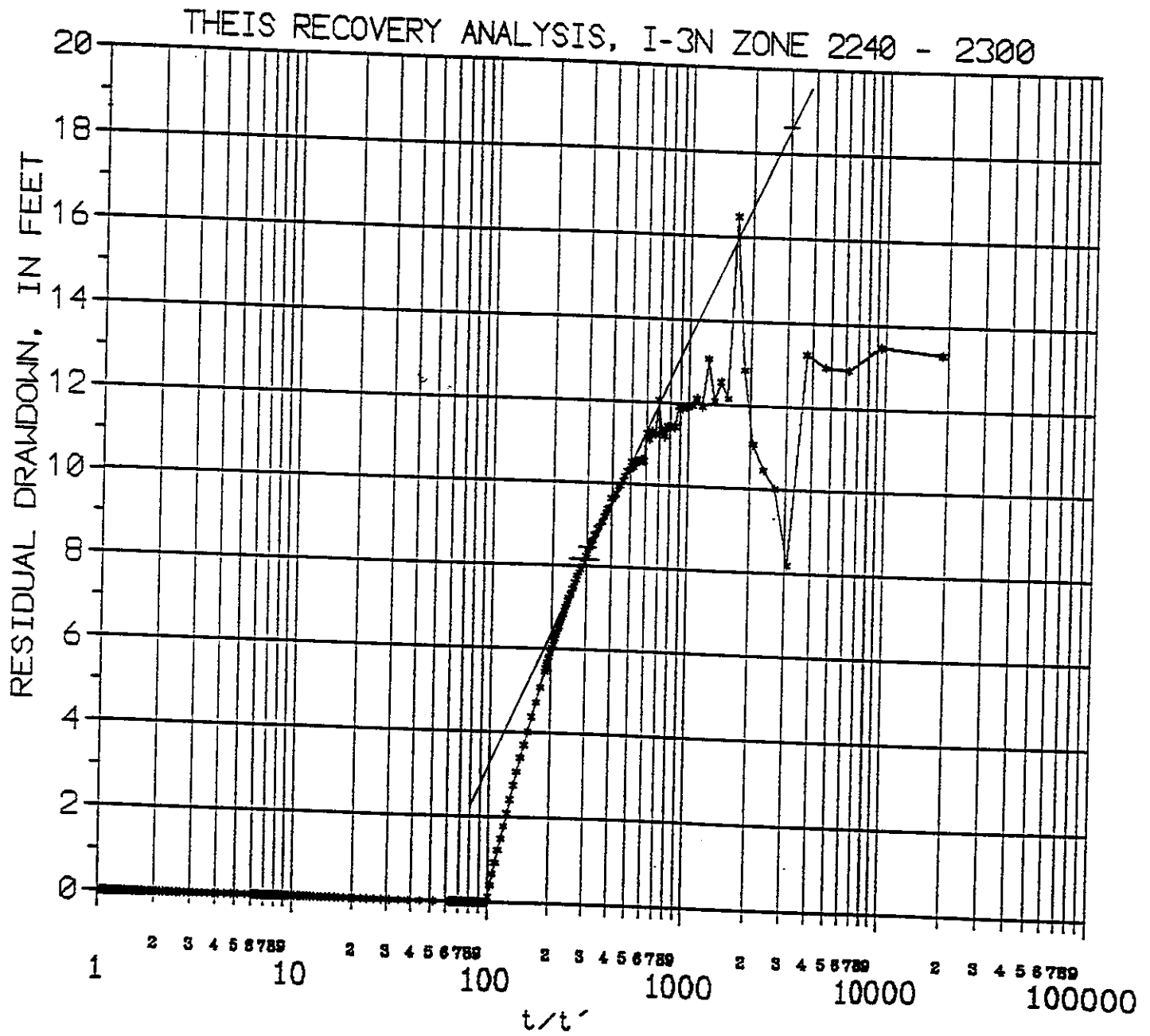


Figure 8 -- Theis Recovery Analysis I-3N, zone 2340 to 2400

Figure 9. -- Theis Recovery Analysis I-3N, zone 2240 to 2300



Analytical results of the tests are summarized as follows:

**Hydraulic Conductivity**

Zone 2430 - 2490

Cooper-Jacob =  $2.2 \times 10^{-4}$  cm/sec  
Theis Recovery =  $1.6 \times 10^{-4}$  cm/sec

Zone 2340 - 2400


Cooper-Jacob =  $1.3 \times 10^{-4}$  cm/sec  
Theis Recovery =  $1.3 \times 10^{-4}$  cm/sec

Zone 2240 - 2300

Cooper-Jacob =  $1.1 \times 10^{-2}$  cm/sec  
Theis Recovery =  $8.1 \times 10^{-4}$  cm/sec

If you have any questions or comments please feel free to contact me or Leo Swayze.

Sincerely,

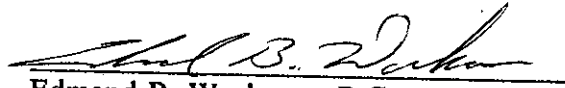
  
Edmand B. Workman, P.G.

EBW

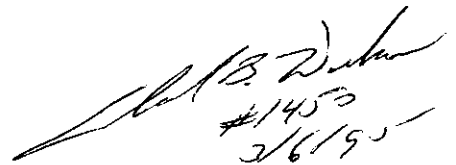


**CERTIFICATION**

I hereby certify that I have examined this document, and attest that it has been prepared in accordance with good geological practices.



**Edmand B. Workman, P.G.  
Hydrogeologist/Project Manager**



#1450  
3/6/95

**Date: 03/06/95**

**Registration # 1450**

**State: Florida**

**Appendix I**  
**Raw Aquifer Test Data**

SE1000C  
Environmental Logger  
02/17 13:52

Unit# 91513 Test 0

Setups: INPUT 1  
-----  
Type Level (F)  
Mode TOC  
I.D. 00000

Reference 0.000  
Linearity 0.090  
Scale factor 50.170  
Offset 0.120  
Delay mSEC 50.000

Step 0 02/16 18:07:46

Elapsed Time INPUT 1  
-----  
0.0000 -3.860  
0.0033 -3.860  
0.0066 -3.860  
0.0100 -3.860  
0.0133 -3.876  
0.0166 -3.876  
0.0200 -3.876  
0.0233 -3.876  
0.0266 -3.892  
0.0300 -3.892  
0.0333 -3.892  
0.0366 -3.892  
0.0400 -3.892  
0.0433 -3.908  
0.0466 -3.908  
0.0500 -3.908  
0.0533 -3.924  
0.0566 -3.924  
0.0600 -3.924  
0.0633 -3.924  
0.0666 -3.939  
0.0700 -3.939  
0.0733 -3.939  
0.0766 -3.939  
0.0800 -3.939  
0.0833 -3.939  
0.0866 -3.956  
0.0900 -3.939  
0.0933 -3.956  
0.0966 -3.956  
0.1000 -3.956  
0.1033 -3.972  
0.1066 -3.972  
0.1100 -3.972  
0.1133 -3.972  
0.1166 -3.988  
0.1200 -3.988

0.1233	-3.988
0.1266	-3.988
0.1300	-3.988
0.1333	-4.003
0.1366	-4.003
0.1400	-4.003
0.1433	-4.003
0.1466	-4.003
0.1500	-4.019
0.1533	-4.019
0.1566	-4.019
0.1600	-4.019
0.1633	-4.019
0.1666	-4.034
0.1700	-4.034
0.1733	-4.034
0.1766	-4.034
0.1800	-4.034
0.1833	-4.051
0.1866	-4.051
0.1900	-4.067
0.1933	-4.051
0.1966	-4.051
0.2000	-4.067
0.2033	-4.067
0.2066	-4.067
0.2100	-4.067
0.2133	-4.067
0.2166	-4.083
0.2200	-4.083
0.2233	-4.083
0.2266	-4.083
0.2300	-4.083
0.2333	-4.098
0.2366	-4.098
0.2400	-4.098
0.2433	-4.098
0.2466	-4.098
0.2500	-4.115
0.2533	-4.115
0.2566	-4.115
0.2600	-4.115
0.2633	-4.115
0.2666	-4.131
0.2700	-4.131
0.2733	-4.131
0.2766	-4.131
0.2800	-4.131
0.2833	-4.147
0.2866	-4.147
0.2900	-4.147
0.2933	-4.147
0.2966	-4.147
0.3000	-4.147
0.3033	-4.162
0.3066	-4.162
0.3100	-4.162
0.3133	-4.177
0.3166	-4.177
0.3200	-4.177

0.3233	-4.177
0.3266	-4.177
0.3300	-4.177
0.3333	-4.194
0.3500	-4.210
0.3666	-4.226
0.3833	-4.226
0.4000	-4.257
0.4166	-4.274
0.4333	-4.274
0.4500	-4.305
0.4666	-4.321
0.4833	-4.336
0.5000	-4.352
0.5166	-4.369
0.5333	-4.385
0.5500	-4.400
0.5666	-4.416
0.5833	-4.433
0.6000	-4.448
0.6166	-4.464
0.6333	-4.479
0.6500	-4.479
0.6666	-4.495
0.6833	-4.528
0.7000	-4.543
0.7166	-4.559
0.7333	-4.559
0.7500	-4.576
0.7666	-4.591
0.7833	-4.607
0.8000	-4.623
0.8166	-4.639
0.8333	-4.655
0.8500	-4.655
0.8666	-4.687
0.8833	-4.687
0.9000	-4.702
0.9166	-4.717
0.9333	-4.734
0.9500	-4.734
0.9666	-4.750
0.9833	-4.766
1.0000	-4.781
1.2000	-4.957
1.4000	-5.099
1.6000	-5.227
1.8000	-5.354
2.0000	-5.465
2.2000	-5.559
2.4000	-5.672
2.6000	-5.751
2.8000	-5.830
3.0000	-5.925
3.2000	-6.006
3.4000	-6.070
3.6000	-6.132
3.8000	-6.196
4.0000	-6.243
4.2000	-6.307

4.4000	-6.355
4.6000	-6.401
4.8000	-6.450
5.0000	-6.482
5.2000	-6.513
5.4000	-6.561
5.6000	-6.593
5.8000	-6.625
6.0000	-6.656
6.2000	-6.688
6.4000	-6.720
6.6000	-6.736
6.8000	-6.768
7.0000	-6.784
7.2000	-6.799
7.4000	-6.831
7.6000	-6.848
7.8000	-6.863
8.0000	-6.895
8.2000	-6.912
8.4000	-6.912
8.6000	-6.926
8.8000	-6.942
9.0000	-6.958
9.2000	-6.974
9.4000	-6.990
9.6000	-6.990
9.8000	-7.006
10.0000	-7.022
11.0000	-7.070
12.0000	-7.133
13.0000	-7.181
14.0000	-7.212
15.0000	-7.228
16.0000	-7.260
17.0000	-7.276
18.0000	-7.292
19.0000	-7.324
20.0000	-7.339
21.0000	-7.355
22.0000	-7.371
23.0000	-7.388
24.0000	-7.403
25.0000	-7.419
26.0000	-7.436
27.0000	-7.452
28.0000	-7.467
29.0000	-7.467
30.0000	-7.482
31.0000	-7.498
32.0000	-7.514
33.0000	-7.531
34.0000	-7.531
35.0000	-7.531
36.0000	-7.546
37.0000	-7.562
38.0000	-7.562
39.0000	-7.578
40.0000	-7.578
41.0000	-7.595

42.0000	-11.924
43.0000	-11.940
44.0000	-11.987
45.0000	-11.956
46.0000	-11.956
47.0000	-11.972
48.0000	-11.972
49.0000	-11.987
50.0000	-12.003
51.0000	-12.003
52.0000	-12.003
53.0000	-12.035
54.0000	-12.035
55.0000	-12.035
56.0000	-12.035
57.0000	-12.051
58.0000	-12.051
59.0000	-12.051
60.0000	-12.067
61.0000	-12.067

SE1000C  
Environmental Logger  
02/17 13:56

Unit# 91513 Test 1

-----  
Setups: INPUT 1  
-----  
Type Level (F)  
Mode TOC  
I.D. 00000

Reference 0.000  
Linearity 0.090  
Scale factor 50.170  
Offset 0.120  
Delay mSEC 50.000

Step 0 02/16 19:08:39

-----  
Elapsed Time INPUT 1  
-----  
0.0000 -7.705  
0.0033 -7.705  
0.0066 -7.705  
0.0100 -7.705  
0.0133 -7.705  
0.0166 -7.705  
0.0200 -7.705  
0.0233 -7.705  
0.0266 -6.243  
0.0300 5.146  
0.0333 -4.750  
0.0366 -7.784  
0.0400 -8.150  
0.0433 -7.197  
0.0466 -6.958  
0.0500 -6.259  
0.0533 -6.577  
0.0566 -7.260  
0.0600 -7.197  
0.0633 -8.754  
0.0666 -4.781  
0.0700 -6.085  
0.0733 -5.846  
0.0766 -5.782  
0.0800 -6.434  
0.0833 -5.958  
0.0866 -5.640  
0.0900 -5.513  
0.0933 -6.753  
0.0966 -5.861  
0.1000 -5.942  
0.1033 -4.940  
0.1066 -4.766  
0.1100 -4.655  
0.1133 -5.099  
0.1166 -4.352  
0.1200 -5.338



0.1233	-4.257
0.1266	-4.257
0.1300	-4.241
0.1333	-4.416
0.1366	-4.687
0.1400	-3.558
0.1433	-3.892
0.1466	-4.034
0.1500	-3.653
0.1533	-3.686
0.1566	-3.908
0.1600	-3.892
0.1633	-2.795
0.1666	-3.448
0.1700	-3.574
0.1733	-2.176
0.1766	-2.780
0.1800	-2.875
0.1833	-2.859
0.1866	-1.605
0.1900	-2.526
0.1933	-2.811
0.1966	-2.399
0.2000	-1.969
0.2033	-2.017
0.2066	-2.351
0.2100	-1.620
0.2133	-0.413
0.2166	-1.525
0.2200	-1.176
0.2233	-1.429
0.2266	-1.223
0.2300	-1.493
0.2333	-0.905
0.2366	-1.398
0.2400	-0.969
0.2433	-0.524
0.2466	-0.476
0.2500	0.683
0.2533	-0.270
0.2566	-0.254
0.2600	0.524
0.2633	-0.222
0.2666	0.064
0.2700	0.906
0.2733	0.334
0.2766	0.397
0.2800	-0.079
0.2833	1.398
0.2866	1.334
0.2900	0.858
0.2933	1.065
0.2966	1.207
0.3000	1.509
0.3033	1.366
0.3066	1.461
0.3100	2.255
0.3133	2.526
0.3166	1.286
0.3200	2.303

0.3233	1.620
0.3266	3.049
0.3300	2.573
0.3333	2.462
0.3500	2.859
0.3666	3.764
0.3833	3.224
0.4000	4.526
0.4166	4.495
0.4333	5.750
0.4500	5.416
0.4666	6.306
0.4833	7.004
0.5000	7.020
0.5166	7.195
0.5333	8.227
0.5500	8.593
0.5666	9.275
0.5833	9.545
0.6000	10.276
0.6166	10.133
0.6333	10.546
0.6500	11.562
0.6666	11.323
0.6833	11.863
0.7000	13.166
0.7166	13.182
0.7333	13.229
0.7500	14.134
0.7666	13.039
0.7833	15.197
0.8000	14.785
0.8166	16.039
0.8333	15.293
0.8500	16.658
0.8666	16.563
0.8833	17.515
0.9000	17.626
0.9166	17.515
0.9333	18.833
0.9500	18.992
0.9666	19.293
0.9833	19.341
1.0000	20.516
1.2000	25.421
1.4000	29.849
1.6000	33.372
1.8000	37.068
2.0000	40.908
2.2000	43.382
2.4000	46.190
2.6000	48.268
2.8000	50.949
3.0000	53.676
3.2000	55.151
3.4000	57.054
3.6000	59.242
3.8000	60.812
4.0000	62.413
4.2000	63.285

4.4000	64.775
4.6000	65.996
4.8000	67.026
5.0000	67.755
5.2000	68.580
5.4000	69.784
5.6000	70.308
5.8000	70.767
6.0000	71.322
6.2000	72.289
6.4000	72.716
6.6000	72.162
6.8000	73.525
7.0000	74.096
7.2000	74.476
7.4000	74.476
7.6000	75.046
7.8000	75.189
8.0000	75.696
8.2000	75.855
8.4000	75.490
8.6000	75.791
8.8000	75.807
9.0000	76.330
9.2000	76.552
9.4000	76.885
9.6000	76.504
9.8000	77.360
10.0000	77.296
11.0000	77.836
12.0000	77.582
13.0000	78.311
14.0000	78.137
15.0000	78.517
16.0000	78.390
17.0000	78.643
18.0000	78.691
19.0000	78.786
20.0000	78.849
21.0000	78.849
22.0000	78.343
23.0000	78.643
24.0000	78.770
25.0000	78.707
26.0000	79.578
27.0000	79.071
28.0000	79.436
29.0000	79.103
30.0000	79.721
31.0000	79.135
32.0000	79.658
33.0000	79.404
34.0000	79.420
35.0000	79.689
36.0000	79.309
37.0000	79.658
38.0000	79.753
39.0000	79.483
40.0000	79.642
41.0000	79.626

42.0000	79.642
43.0000	80.703
44.0000	80.038
45.0000	79.658
46.0000	80.117
47.0000	79.800
48.0000	79.990
49.0000	80.085
50.0000	80.133
51.0000	80.339
52.0000	79.880
53.0000	80.022
54.0000	80.101
55.0000	80.355
56.0000	80.339
57.0000	80.244
58.0000	80.196
59.0000	79.911
60.0000	80.466
61.0000	80.482
62.0000	80.751

SE1000C  
Environmental Logger  
02/17 14:00

Unit# 91513 Test 2

-----  
Setups: INPUT 1  
-----  
Type Level (F)  
Mode TOC  
I.D. 00000

Reference 0.000  
Linearity 0.090  
Scale factor 50.170  
Offset 0.120  
Delay mSEC 50.000

Step 0 02/16 20:12:16

-----  
Elapsed Time INPUT 1  
-----  
0.0000 80.466  
0.0033 80.751  
0.0066 80.513  
0.0100 80.592  
0.0133 80.529  
0.0166 78.042  
0.0200 79.214  
0.0233 79.341  
0.0266 80.371  
0.0300 80.085  
0.0333 80.371  
0.0366 80.387  
0.0400 80.101  
0.0433 80.260  
0.0466 79.721  
0.0500 79.372  
0.0533 79.895  
0.0566 79.420  
0.0600 79.578  
0.0633 79.372  
0.0666 79.420  
0.0700 79.436  
0.0733 79.024  
0.0766 79.167  
0.0800 78.691  
0.0833 78.881  
0.0866 78.818  
0.0900 78.739  
0.0933 78.786  
0.0966 78.549  
0.1000 78.739  
0.1033 78.406  
0.1066 78.200  
0.1100 78.152  
0.1133 78.057  
0.1166 78.073  
0.1200 77.804

0.1233	77.836
0.1266	77.836
0.1300	77.740
0.1333	77.582
0.1366	77.471
0.1400	77.424
0.1433	77.296
0.1466	77.217
0.1500	77.059
0.1533	77.059
0.1566	76.995
0.1600	76.885
0.1633	76.789
0.1666	76.694
0.1700	76.631
0.1733	76.536
0.1766	76.425
0.1800	76.314
0.1833	76.251
0.1866	76.171
0.1900	76.061
0.1933	75.981
0.1966	75.855
0.2000	75.775
0.2033	75.680
0.2066	75.569
0.2100	75.506
0.2133	75.395
0.2166	75.331
0.2200	75.236
0.2233	75.110
0.2266	75.030
0.2300	74.935
0.2333	74.856
0.2366	74.745
0.2400	74.650
0.2433	74.555
0.2466	74.476
0.2500	74.397
0.2533	74.286
0.2566	74.190
0.2600	74.111
0.2633	74.016
0.2666	73.937
0.2700	73.842
0.2733	73.731
0.2766	73.651
0.2800	73.556
0.2833	73.461
0.2866	73.366
0.2900	73.287
0.2933	73.192
0.2966	73.113
0.3000	73.018
0.3033	72.923
0.3066	72.828
0.3100	72.748
0.3133	72.653
0.3166	72.558
0.3200	72.479

0.3233	72.384
0.3266	72.289
0.3300	72.193
0.3333	72.114
0.3500	71.623
0.3666	71.148
0.3833	70.656
0.4000	70.197
0.4166	69.721
0.4333	69.245
0.4500	68.770
0.4666	68.310
0.4833	67.851
0.5000	67.391
0.5166	66.931
0.5333	66.471
0.5500	66.028
0.5666	65.584
0.5833	65.140
0.6000	64.696
0.6166	64.252
0.6333	63.824
0.6500	63.380
0.6666	62.952
0.6833	62.524
0.7000	62.112
0.7166	61.684
0.7333	61.272
0.7500	60.843
0.7666	60.431
0.7833	60.019
0.8000	59.607
0.8166	59.195
0.8333	58.798
0.8500	58.386
0.8666	57.989
0.8833	57.593
0.9000	57.197
0.9166	56.816
0.9333	56.420
0.9500	56.023
0.9666	55.659
0.9833	55.278
1.0000	54.881
1.2000	49.315
1.4000	45.476
1.6000	41.923
1.8000	38.624
2.0000	35.529
2.2000	32.657
2.4000	29.976
2.6000	27.468
2.8000	25.135
3.0000	22.961
3.2000	20.944
3.4000	19.071
3.6000	17.309
3.8000	15.689
4.0000	14.261
4.2000	12.896

4.4000	11.594
4.6000	10.403
4.8000	9.291
5.0000	8.244
5.2000	7.275
5.4000	6.385
5.6000	5.527
5.8000	4.749
6.0000	4.018
6.2000	3.335
6.4000	2.700
6.6000	2.113
6.8000	1.573
7.0000	1.049
7.2000	0.587
7.4000	0.143
7.6000	-0.270
7.8000	-0.667
8.0000	-1.016
8.2000	-1.350
8.4000	-1.652
8.6000	-1.939
8.8000	-2.208
9.0000	-2.447
9.2000	-2.685
9.4000	-2.891
9.6000	-3.082
9.8000	-3.272
10.0000	-3.448
11.0000	-4.131
12.0000	-4.607
13.0000	-4.973
14.0000	-5.211
15.0000	-5.385
16.0000	-5.513
17.0000	-5.623
18.0000	-5.687
19.0000	-5.735
20.0000	-5.782
21.0000	-5.830
22.0000	-5.861
23.0000	-5.861
24.0000	-5.910
25.0000	-5.942
26.0000	-5.958
27.0000	-5.973
28.0000	-5.973
29.0000	-5.989
30.0000	-5.989
31.0000	-6.021
32.0000	-6.021
33.0000	-6.100
34.0000	-6.053
35.0000	-6.085
36.0000	-6.085
37.0000	-6.085
38.0000	-6.116
39.0000	-6.116
40.0000	-6.132
41.0000	-6.132



42.0000	-6.132
43.0000	-6.148
44.0000	-6.148
45.0000	-6.148
46.0000	-6.163
47.0000	-6.163
48.0000	-6.180
49.0000	-6.180
50.0000	-6.180
51.0000	-6.196
52.0000	-6.196
53.0000	-6.196
54.0000	-6.212
55.0000	-6.212
56.0000	-6.212
57.0000	-6.227
58.0000	-6.227
59.0000	-6.227
60.0000	-6.227

42.0000	-7.595
43.0000	-7.610
44.0000	-7.610
45.0000	-7.610
46.0000	-7.626
47.0000	-7.641
48.0000	-7.641
49.0000	-7.641
50.0000	-7.657
51.0000	-7.657
52.0000	-7.673
53.0000	-7.673
54.0000	-7.673
55.0000	-7.690
56.0000	-7.690
57.0000	-7.705
58.0000	-7.705
59.0000	-7.705
60.0000	-7.705

SE1000C  
Environmental Logger  
02/17 14:04

Unit# 91513 Test 3

Setups:	INPUT 1
Type	Level (F)
Mode	TOC
I.D.	00000

Reference	0.000
Linearity	0.090
Scale factor	50.170
Offset	0.120
Delay mSEC	50.000

Step 0 02/17 09:11:13

Elapsed Time	INPUT 1
--------------	---------

0.0000	0.000
0.0033	0.000
0.0066	0.000
0.0100	0.000
0.0133	0.000
0.0166	0.000
0.0200	0.000
0.0233	0.000
0.0266	0.000
0.0300	0.000
0.0333	0.000
0.0366	0.000
0.0400	0.000
0.0433	0.000
0.0466	0.000
0.0500	0.000
0.0533	0.000
0.0566	0.000
0.0600	0.000
0.0633	0.000
0.0666	0.000
0.0700	0.000
0.0733	0.000
0.0766	0.000
0.0800	0.000
0.0833	0.000
0.0866	0.000
0.0900	0.000
0.0933	0.000
0.0966	0.000
0.1000	0.000
0.1033	0.000
0.1066	0.000
0.1100	0.000
0.1133	0.000
0.1166	0.000
0.1200	0.000

0.1233	0.000
0.1266	0.000
0.1300	0.000
0.1333	0.000
0.1366	0.000
0.1400	0.000
0.1433	0.000
0.1466	0.000
0.1500	0.000
0.1533	0.000
0.1566	0.000
0.1600	0.000
0.1633	0.000
0.1666	0.000
0.1700	0.000
0.1733	0.000
0.1766	0.000
0.1800	0.000
0.1833	0.000
0.1866	0.000
0.1900	0.000
0.1933	0.000
0.1966	0.000
0.2000	0.000
0.2033	0.000
0.2066	0.000
0.2100	0.000
0.2133	0.000
0.2166	0.000
0.2200	0.000
0.2233	0.000
0.2266	0.000
0.2300	0.000
0.2333	0.000
0.2366	0.000
0.2400	0.000
0.2433	0.000
0.2466	0.000
0.2500	0.000
0.2533	0.000
0.2566	0.000
0.2600	0.000
0.2633	0.000
0.2666	0.000
0.2700	0.000
0.2733	0.000
0.2766	0.000
0.2800	0.000
0.2833	0.000
0.2866	0.000
0.2900	0.000
0.2933	0.000
0.2966	0.000
0.3000	0.000
0.3033	0.000
0.3066	0.000
0.3100	0.000
0.3133	0.000
0.3166	0.000
0.3200	0.000

0.3233	0.000
0.3266	0.000
0.3300	0.000
0.3333	0.000
0.3500	0.000
0.3666	0.000
0.3833	0.000
0.4000	0.000
0.4166	0.000
0.4333	0.000
0.4500	0.000
0.4666	0.000
0.4833	0.000
0.5000	0.000
0.5166	0.000
0.5333	0.000
0.5500	0.000
0.5666	0.000
0.5833	0.000
0.6000	0.000
0.6166	0.000
0.6333	0.000
0.6500	0.000
0.6666	0.000
0.6833	0.000
0.7000	0.000
0.7166	0.000
0.7333	0.000
0.7500	0.000
0.7666	0.000
0.7833	0.000
0.8000	0.000
0.8166	0.000
0.8333	0.000
0.8500	0.000
0.8666	0.000
0.8833	0.000
0.9000	0.000
0.9166	0.000
0.9333	0.000
0.9500	0.000
0.9666	0.000
0.9833	0.000
1.0000	0.000
1.2000	0.000
1.4000	0.000
1.6000	0.000
1.8000	0.000
2.0000	0.000
2.2000	0.000
2.4000	0.000
2.6000	0.000
2.8000	0.000
3.0000	0.000
3.2000	0.000
3.4000	0.000
3.6000	0.000
3.8000	0.000
4.0000	0.000
4.2000	0.000

4.4000	0.000
4.6000	0.000
4.8000	0.000
5.0000	0.000
5.2000	0.000
5.4000	0.000
5.6000	0.000
5.8000	0.000
6.0000	0.000
6.2000	0.000
6.4000	0.000
6.6000	0.000
6.8000	0.000
7.0000	0.000
7.2000	0.000
7.4000	0.000
7.6000	0.000
7.8000	0.000
8.0000	0.000
8.2000	0.000
8.4000	0.000
8.6000	0.000
8.8000	0.000
9.0000	0.000
9.2000	0.000
9.4000	0.000
9.6000	0.000
9.8000	0.000
10.0000	0.000
11.0000	0.000
12.0000	0.000
13.0000	0.000
14.0000	0.000
15.0000	0.000
16.0000	0.000
17.0000	0.000
18.0000	0.000
19.0000	0.000
20.0000	0.000
21.0000	0.000
22.0000	0.000
23.0000	0.000
24.0000	0.000
25.0000	0.000
26.0000	0.000
27.0000	0.000
28.0000	0.000
29.0000	0.000
30.0000	0.000
31.0000	0.000
32.0000	0.000
33.0000	0.000
34.0000	0.000

SE1000C  
Environmental Logger  
02/17 14:07

Unit# 91513 Test 4

-----  
Setups:           INPUT 1  
-----  
Type              Level (F)  
Mode              TOC  
I.D.              00000

Reference         0.000  
Linearity         0.090  
Scale factor      50.170  
Offset            0.120  
Delay mSEC        50.000

Step 0  02/17 09:46:04

-----  
Elapsed Time      INPUT 1  
-----  
0.0000            0.000  
0.0033            0.000  
0.0066            0.000  
0.0100            0.000  
0.0133            0.000  
0.0166            0.000  
0.0200            0.000  
0.0233            0.000  
0.0266            0.000  
0.0300            0.000  
0.0333            0.000  
0.0366            0.000  
0.0400            0.000  
0.0433            0.000  
0.0466            0.000  
0.0500            0.000  
0.0533            0.000  
0.0566            0.000  
0.0600            0.000  
0.0633            0.000  
0.0666            0.000  
0.0700            0.000  
0.0733            0.000  
0.0766            0.000  
0.0800            0.000  
0.0833            0.000  
0.0866            0.000  
0.0900            0.000  
0.0933            0.000  
0.0966            0.000  
0.1000            0.000  
0.1033            0.000  
0.1066            0.000  
0.1100            0.000  
0.1133            0.000  
0.1166            0.000  
0.1200            0.000

0.1233	0.000
0.1266	0.000
0.1300	0.000
0.1333	0.000
0.1366	0.000
0.1400	0.000
0.1433	0.000
0.1466	0.000
0.1500	0.000
0.1533	0.000
0.1566	0.000
0.1600	0.000
0.1633	0.000
0.1666	0.000
0.1700	0.000
0.1733	0.000
0.1766	0.000
0.1800	0.000
0.1833	0.000
0.1866	0.000
0.1900	0.000
0.1933	0.000
0.1966	0.000
0.2000	0.000
0.2033	0.000
0.2066	0.000
0.2100	0.000
0.2133	0.000
0.2166	0.000
0.2200	0.000
0.2233	0.000
0.2266	0.000
0.2300	0.000
0.2333	0.000
0.2366	0.000
0.2400	0.000
0.2433	0.000
0.2466	0.000
0.2500	0.000
0.2533	0.000
0.2566	0.000
0.2600	0.000
0.2633	0.000
0.2666	0.000
0.2700	0.000
0.2733	0.000
0.2766	0.000
0.2800	0.000
0.2833	0.000
0.2866	0.000
0.2900	0.000
0.2933	0.000
0.2966	0.000
0.3000	0.000
0.3033	0.000
0.3066	0.000
0.3100	0.000
0.3133	0.000
0.3166	0.000
0.3200	0.000



0.3233	0.000
0.3266	0.000
0.3300	0.000
0.3333	0.000
0.3500	0.000
0.3666	0.000
0.3833	0.000
0.4000	0.000
0.4166	0.000
0.4333	0.000
0.4500	0.000
0.4666	0.000
0.4833	0.000
0.5000	0.000
0.5166	0.000
0.5333	0.000
0.5500	0.000
0.5666	0.000
0.5833	0.000
0.6000	0.000
0.6166	0.000
0.6333	0.000
0.6500	0.000
0.6666	0.000
0.6833	0.000
0.7000	0.000
0.7166	0.000
0.7333	0.000
0.7500	0.000
0.7666	0.000
0.7833	0.000
0.8000	0.000
0.8166	0.000
0.8333	0.000
0.8500	0.000
0.8666	0.000
0.8833	0.000
0.9000	0.000
0.9166	0.000
0.9333	0.000
0.9500	0.000
0.9666	0.000
0.9833	0.000
1.0000	0.000
1.2000	0.000
1.4000	0.000
1.6000	0.000
1.8000	0.000
2.0000	0.000
2.2000	0.000
2.4000	0.000
2.6000	0.000
2.8000	0.000
3.0000	0.000
3.2000	0.000
3.4000	0.000
3.6000	0.000
3.8000	0.000
4.0000	0.000
4.2000	0.000

4.4000	0.000
4.6000	0.000
4.8000	0.000
5.0000	0.000
5.2000	0.000
5.4000	0.000
5.6000	0.000
5.8000	0.000
6.0000	0.000
6.2000	0.000
6.4000	0.000
6.6000	0.000
6.8000	0.000
7.0000	0.000
7.2000	0.000
7.4000	0.000
7.6000	0.000
7.8000	0.000
8.0000	0.000
8.2000	0.000
8.4000	0.000
8.6000	0.000
8.8000	0.000
9.0000	0.000
9.2000	0.000
9.4000	0.000
9.6000	0.000
9.8000	0.000
10.0000	0.000
11.0000	0.000
12.0000	0.000
13.0000	0.000
14.0000	0.000
15.0000	0.000
16.0000	0.000
17.0000	0.000
18.0000	0.000
19.0000	0.000
20.0000	0.000
21.0000	0.000
22.0000	0.000
23.0000	0.000
24.0000	0.000
25.0000	0.000
26.0000	0.000
27.0000	0.000
28.0000	0.000
29.0000	0.000
30.0000	0.000
31.0000	0.000
32.0000	0.000
33.0000	0.000

SE1000C  
Environmental Logger  
02/17 14:10

Unit# 91513 Test 5

Setups:	INPUT 1
-----	-----
Type	Level (F)
Mode	TOC
I.D.	00000

Reference	0.000
Linearity	0.090
Scale factor	50.170
Offset	0.120
Delay mSEC	50.000

Step 0 02/17 10:20:39

Elapsed Time	INPUT 1
-----	-----
0.0000	0.000
0.0033	0.000
0.0066	0.000
0.0100	0.000
0.0133	0.000
0.0166	0.000
0.0200	0.000
0.0233	0.000
0.0266	0.000
0.0300	0.000
0.0333	0.000
0.0366	0.000
0.0400	0.000
0.0433	0.000
0.0466	0.000
0.0500	0.000
0.0533	0.000
0.0566	0.000
0.0600	0.000
0.0633	0.000
0.0666	0.000
0.0700	0.000
0.0733	0.000
0.0766	0.000
0.0800	0.000
0.0833	0.000
0.0866	0.000
0.0900	0.000
0.0933	0.000
0.0966	0.000
0.1000	0.000
0.1033	0.000
0.1066	0.000
0.1100	0.000
0.1133	0.000
0.1166	0.000
0.1200	0.000

0.1233	0.000
0.1266	0.000
0.1300	0.000
0.1333	0.000
0.1366	0.000
0.1400	0.000
0.1433	0.000
0.1466	0.000
0.1500	0.000
0.1533	0.000
0.1566	0.000
0.1600	0.000
0.1633	0.000
0.1666	0.000
0.1700	0.000
0.1733	0.000
0.1766	0.000
0.1800	0.000
0.1833	0.000
0.1866	0.000
0.1900	0.000
0.1933	0.000
0.1966	0.000
0.2000	0.000
0.2033	0.000
0.2066	0.000
0.2100	0.000
0.2133	0.000
0.2166	0.000
0.2200	0.000
0.2233	0.000
0.2266	0.000
0.2300	0.000
0.2333	0.000
0.2366	0.000
0.2400	0.000
0.2433	0.000
0.2466	0.000
0.2500	0.000
0.2533	0.000
0.2566	0.000
0.2600	0.000
0.2633	0.000
0.2666	0.000
0.2700	0.000
0.2733	0.000
0.2766	0.000
0.2800	0.000
0.2833	0.000
0.2866	0.000
0.2900	0.000
0.2933	0.000
0.2966	0.000
0.3000	0.000
0.3033	0.000
0.3066	0.000
0.3100	0.000
0.3133	0.000
0.3166	0.000
0.3200	0.000

0.3233	0.000
0.3266	0.000
0.3300	0.000
0.3333	0.000
0.3500	0.000
0.3666	0.000
0.3833	0.000
0.4000	0.000
0.4166	0.000
0.4333	0.000
0.4500	0.000
0.4666	0.000
0.4833	0.000
0.5000	0.000
0.5166	0.000
0.5333	0.000
0.5500	0.000
0.5666	0.000
0.5833	0.000
0.6000	0.000
0.6166	0.000
0.6333	0.000
0.6500	0.000
0.6666	0.000
0.6833	0.000
0.7000	0.000
0.7166	0.000
0.7333	0.000
0.7500	0.000
0.7666	0.000
0.7833	0.000
0.8000	0.000
0.8166	0.349
0.8333	0.254
0.8500	0.747
0.8666	0.604
0.8833	0.730
0.9000	1.065
0.9166	1.049
0.9333	1.620
0.9500	1.382
0.9666	1.573
0.9833	1.541
1.0000	1.938
1.2000	3.336
1.4000	4.767
1.6000	6.656
1.8000	7.181
2.0000	8.515
2.2000	8.515
2.4000	9.071
2.6000	9.357
2.8000	9.977
3.0000	9.945
3.2000	10.056
3.4000	10.263
3.6000	10.549
3.8000	10.755
4.0000	11.056
4.2000	10.913

4.4000	10.739
4.6000	11.056
4.8000	11.565
5.0000	10.913
5.2000	11.438
5.4000	11.739
5.6000	11.104
5.8000	11.453
6.0000	11.708
6.2000	11.359
6.4000	11.850
6.6000	11.390
6.8000	11.280
7.0000	11.390
7.2000	11.406
7.4000	11.644
7.6000	11.724
7.8000	11.549
8.0000	11.056
8.2000	11.644
8.4000	11.629
8.6000	11.232
8.8000	11.677
9.0000	11.232
9.2000	12.105
9.4000	11.660
9.6000	11.739
9.8000	11.724
10.0000	11.311
11.0000	12.153
12.0000	11.867
13.0000	11.835
14.0000	12.057
15.0000	11.565
16.0000	12.263
17.0000	12.693
18.0000	12.422
19.0000	12.041
20.0000	12.232
21.0000	12.232
22.0000	12.169
23.0000	12.597
24.0000	12.343
25.0000	12.248
26.0000	12.232
27.0000	12.661
28.0000	12.312
29.0000	11.882
30.0000	11.850
31.0000	13.471
32.0000	12.009
33.0000	12.169
34.0000	12.613
35.0000	13.026
36.0000	13.137
37.0000	12.279
38.0000	13.058
39.0000	13.026
40.0000	12.312
41.0000	12.661

42.0000	12.788
43.0000	12.740
44.0000	12.788
45.0000	12.566
46.0000	12.676
47.0000	12.709
48.0000	13.264
49.0000	12.470
50.0000	13.089
51.0000	12.931
52.0000	13.137
53.0000	13.185
54.0000	12.486
55.0000	13.518
56.0000	12.788
57.0000	13.169
58.0000	12.661
59.0000	13.249
60.0000	13.582
61.0000	13.249
62.0000	12.756

SE1000C  
Environmental Logger  
02/17 14:17

Unit# 91513 Test 6

-----  
Setups:           INPUT 1  
-----  
Type              Level (F)  
Mode              TOC  
I.D.              00000

Reference           0.000  
Linearity           0.090  
Scale factor        50.170  
Offset              0.120  
Delay mSEC         50.000

Step 0 02/17 11:23:40

-----  
Elapsed Time       INPUT 1  
-----  
0.0000            13.074  
0.0033            13.312  
0.0066            13.471  
0.0100            12.899  
0.0133            12.946  
0.0166            13.249  
0.0200            8.198  
0.0233            10.024  
0.0266            10.453  
0.0300            11.073  
0.0333            12.835  
0.0366            16.473  
0.0400            12.153  
0.0433            12.533  
0.0466            12.073  
0.0500            13.074  
0.0533            11.930  
0.0566            12.121  
0.0600            11.946  
0.0633            11.914  
0.0666            11.867  
0.0700            11.914  
0.0733            11.423  
0.0766            11.423  
0.0800            11.423  
0.0833            11.184  
0.0866            11.343  
0.0900            12.057  
0.0933            11.232  
0.0966            11.295  
0.1000            11.104  
0.1033            11.247  
0.1066            10.580  
0.1100            10.612  
0.1133            10.549  
0.1166            10.532  
0.1200            10.422



0.1233	10.532
0.1266	10.373
0.1300	10.311
0.1333	10.183
0.1366	10.072
0.1400	9.961
0.1433	9.945
0.1466	9.755
0.1500	9.707
0.1533	9.627
0.1566	9.643
0.1600	9.421
0.1633	9.389
0.1666	9.294
0.1700	9.215
0.1733	9.087
0.1766	9.055
0.1800	8.960
0.1833	8.912
0.1866	8.786
0.1900	8.754
0.1933	8.627
0.1966	8.579
0.2000	8.467
0.2033	8.389
0.2066	8.309
0.2100	8.261
0.2133	8.150
0.2166	8.070
0.2200	8.007
0.2233	7.928
0.2266	7.848
0.2300	7.769
0.2333	7.689
0.2366	7.610
0.2400	7.515
0.2433	7.451
0.2466	7.371
0.2500	7.307
0.2533	7.229
0.2566	7.165
0.2600	7.070
0.2633	7.007
0.2666	6.926
0.2700	6.832
0.2733	6.768
0.2766	6.689
0.2800	6.625
0.2833	6.545
0.2866	6.481
0.2900	6.402
0.2933	6.338
0.2966	6.259
0.3000	6.180
0.3033	6.100
0.3066	6.037
0.3100	5.957
0.3133	5.894
0.3166	5.814
0.3200	5.752

0.3233	5.672
0.3266	5.593
0.3300	5.529
0.3333	5.450
0.3500	5.069
0.3666	4.718
0.3833	4.369
0.4000	4.019
0.4166	3.702
0.4333	3.400
0.4500	3.066
0.4666	2.748
0.4833	2.415
0.5000	2.081
0.5166	1.779
0.5333	1.493
0.5500	1.223
0.5666	0.937
0.5833	0.668
0.6000	0.397
0.6166	0.126
0.6333	0.000
0.6500	0.000
0.6666	0.000
0.6833	0.000
0.7000	0.000
0.7166	0.000
0.7333	0.000
0.7500	0.000
0.7666	0.000
0.7833	0.000
0.8000	0.000
0.8166	0.000
0.8333	0.000
0.8500	0.000
0.8666	0.000
0.8833	0.000
0.9000	0.000
0.9166	0.000
0.9333	0.000
0.9500	0.000
0.9666	0.000
0.9833	0.000
1.0000	0.000
1.2000	0.000
1.4000	0.000
1.6000	0.000
1.8000	0.000
2.0000	0.000
2.2000	0.000
2.4000	0.000
2.6000	0.000
2.8000	0.000
3.0000	0.000
3.2000	0.000
3.4000	0.000
3.6000	0.000
3.8000	0.000
4.0000	0.000
4.2000	0.000

4.4000	0.000
4.6000	0.000
4.8000	0.000
5.0000	0.000
5.2000	0.000
5.4000	0.000
5.6000	0.000
5.8000	0.000
6.0000	0.000
6.2000	0.000
6.4000	0.000
6.6000	0.000
6.8000	0.000
7.0000	0.000
7.2000	0.000
7.4000	0.000
7.6000	0.000
7.8000	0.000
8.0000	0.000
8.2000	0.000
8.4000	0.000
8.6000	0.000
8.8000	0.000
9.0000	0.000
9.2000	0.000
9.4000	0.000
9.6000	0.000
9.8000	0.000
10.0000	0.000
11.0000	0.000
12.0000	0.000
13.0000	0.000
14.0000	0.000
15.0000	0.000
16.0000	0.000
17.0000	0.000
18.0000	0.000
19.0000	0.000
20.0000	0.000
21.0000	0.000
22.0000	0.000
23.0000	0.000
24.0000	0.000
25.0000	0.000
26.0000	0.000
27.0000	0.000
28.0000	0.000
29.0000	0.000
30.0000	0.000
31.0000	0.000
32.0000	0.000
33.0000	0.000
34.0000	0.000
35.0000	0.000
36.0000	0.000
37.0000	0.000
38.0000	0.000
39.0000	0.000
40.0000	0.000
41.0000	0.000

42.0000	0.000
43.0000	0.000
44.0000	0.000
45.0000	0.000
46.0000	0.000
47.0000	0.000
48.0000	0.000
49.0000	0.000
50.0000	0.000
51.0000	0.000
52.0000	0.000
53.0000	0.000
54.0000	0.000
55.0000	0.000
56.0000	0.000
57.0000	0.000
58.0000	0.000
59.0000	0.000
60.0000	0.000

SE1000C  
Environmental Logger  
02/22 08:47

Unit# 91513 Test 0

-----  
Setups: INPUT 1  
-----  
Type Level (F)  
Mode TOC  
I.D. 00000

Reference 0.000  
Linearity 0.090  
Scale factor 50.170  
Offset 0.120  
Delay mSEC 50.000

Step 0 02/17 18:06:59

-----  
Elapsed Time INPUT 1  
-----  
0.0000 -4.890  
0.0033 -4.906  
0.0066 -4.922  
0.0100 -4.922  
0.0133 -4.938  
0.0166 -4.954  
0.0200 -4.954  
0.0233 -4.969  
0.0266 -4.985  
0.0300 -5.001  
0.0333 -5.001  
0.0366 -5.017  
0.0400 -5.033  
0.0433 -5.033  
0.0466 -5.049  
0.0500 -5.065  
0.0533 -5.081  
0.0566 -5.081  
0.0600 -5.096  
0.0633 -5.112  
0.0666 -5.112  
0.0700 -5.128  
0.0733 -5.144  
0.0766 -5.144  
0.0800 -5.160  
0.0833 -5.175  
0.0866 -5.175  
0.0900 -5.192  
0.0933 -5.192  
0.0966 -5.208  
0.1000 -5.224  
0.1033 -5.239  
0.1066 -5.239  
0.1100 -5.255  
0.1133 -5.271  
0.1166 -5.271  
0.1200 -5.287

0.1233	-5.303
0.1266	-5.318
0.1300	-5.318
0.1333	-5.335
0.1366	-5.335
0.1400	-5.351
0.1433	-5.366
0.1466	-5.366
0.1500	-5.382
0.1533	-5.398
0.1566	-5.414
0.1600	-5.414
0.1633	-5.430
0.1666	-5.430
0.1700	-5.446
0.1733	-5.462
0.1766	-5.462
0.1800	-5.477
0.1833	-5.494
0.1866	-5.494
0.1900	-5.509
0.1933	-5.525
0.1966	-5.525
0.2000	-5.541
0.2033	-5.541
0.2066	-5.556
0.2100	-5.573
0.2133	-5.573
0.2166	-5.588
0.2200	-5.604
0.2233	-5.604
0.2266	-5.620
0.2300	-5.637
0.2333	-5.652
0.2366	-5.652
0.2400	-5.668
0.2433	-5.668
0.2466	-5.683
0.2500	-5.699
0.2533	-5.699
0.2566	-5.715
0.2600	-5.715
0.2633	-5.732
0.2666	-5.747
0.2700	-5.747
0.2733	-5.763
0.2766	-5.779
0.2800	-5.779
0.2833	-5.795
0.2866	-5.795
0.2900	-5.810
0.2933	-5.826
0.2966	-5.826
0.3000	-5.842
0.3033	-5.858
0.3066	-5.858
0.3100	-5.874
0.3133	-5.890
0.3166	-5.890
0.3200	-5.906

0.3233	-5.906
0.3266	-5.921
0.3300	-5.938
0.3333	-5.938
0.3500	-6.001
0.3666	-6.049
0.3833	-6.096
0.4000	-6.144
0.4166	-6.192
0.4333	-6.239
0.4500	-6.287
0.4666	-6.350
0.4833	-6.382
0.5000	-6.430
0.5166	-6.477
0.5333	-6.525
0.5500	-6.573
0.5666	-6.620
0.5833	-6.668
0.6000	-6.716
0.6166	-6.763
0.6333	-6.795
0.6500	-6.843
0.6666	-6.890
0.6833	-6.938
0.7000	-6.986
0.7166	-7.018
0.7333	-7.065
0.7500	-7.097
0.7666	-7.145
0.7833	-7.176
0.8000	-7.224
0.8166	-7.256
0.8333	-7.303
0.8500	-7.351
0.8666	-7.383
0.8833	-7.431
0.9000	-7.462
0.9166	-7.494
0.9333	-7.542
0.9500	-7.573
0.9666	-7.621
0.9833	-7.653
1.0000	-7.685
1.2000	-8.193
1.4000	-8.557
1.6000	-8.891
1.8000	-9.193
2.0000	-9.447
2.2000	-9.685
2.4000	-9.908
2.6000	-10.098
2.8000	-10.273
3.0000	-10.432
3.2000	-10.574
3.4000	-10.702
3.6000	-10.812
3.8000	-10.924
4.0000	-11.018
4.2000	-11.099

4.4000	-11.178
4.6000	-11.242
4.8000	-11.304
5.0000	-11.368
5.2000	-11.416
5.4000	-11.464
5.6000	-11.511
5.8000	-11.543
6.0000	-11.590
6.2000	-11.622
6.4000	-11.654
6.6000	-11.671
6.8000	-11.702
7.0000	-11.733
7.2000	-11.749
7.4000	-11.765
7.6000	-11.781
7.8000	-11.797
8.0000	-11.813
8.2000	-11.829
8.4000	-11.845
8.6000	-11.860
8.8000	-11.860
9.0000	-11.877
9.2000	-11.892
9.4000	-11.892
9.6000	-11.908
9.8000	-11.908
10.0000	-11.924
11.0000	-11.956
12.0000	-12.003
13.0000	-12.003
14.0000	-12.035
15.0000	-12.051
16.0000	-12.067
17.0000	-12.083
18.0000	-12.099
19.0000	-12.115
20.0000	-12.130
21.0000	-12.146
22.0000	-12.146
23.0000	-12.162
24.0000	-12.162
25.0000	-12.178
26.0000	-12.178
27.0000	-12.194
28.0000	-12.210
29.0000	-12.210
30.0000	-12.226
31.0000	-12.242
32.0000	-12.242
33.0000	-12.258
34.0000	-12.258
35.0000	-12.258
36.0000	-12.273
37.0000	-12.289
38.0000	-12.289
39.0000	-12.273
40.0000	-12.305
41.0000	-12.305



42.0000	-12.321
43.0000	-12.305
44.0000	-12.321
45.0000	-12.321
46.0000	-12.337
47.0000	-12.337
48.0000	-12.353
49.0000	-12.353
50.0000	-12.353
51.0000	-12.353
52.0000	-12.369
53.0000	-12.385
54.0000	-12.385
55.0000	-12.400
56.0000	-12.400
57.0000	-12.385
58.0000	-12.400
59.0000	-12.400
60.0000	-12.416
61.0000	-12.416
62.0000	-12.432
63.0000	-12.432
64.0000	-12.432

SE1000C  
Environmental Logger  
02/22 08:44

Unit# 91513 Test 1

-----  
Setups:           INPUT 1  
-----  
Type              Level (F)  
Mode              TOC  
I.D.              00000

Reference           0.000  
Linearity           0.090  
Scale factor        50.170  
Offset              0.120  
Delay mSEC         50.000

Step 0 02/17 19:12:17

-----  
Elapsed Time       INPUT 1  
-----  
0.0000           -12.432  
0.0033           -12.448  
0.0066           -12.416  
0.0100           -12.432  
0.0133           -12.448  
0.0166           -12.432  
0.0200           -12.432  
0.0233           -5.175  
0.0266           -2.921  
0.0300           -12.210  
0.0333           -12.988  
0.0366           -12.067  
0.0400           -12.877  
0.0433           -9.622  
0.0466           -15.466  
0.0500           -11.671  
0.0533           -11.528  
0.0566           -11.892  
0.0600           -13.274  
0.0633           -10.416  
0.0666           -13.862  
0.0700           -11.686  
0.0733           -9.908  
0.0766           -10.479  
0.0800           -10.972  
0.0833           -9.892  
0.0866           -10.511  
0.0900           -10.702  
0.0933           -10.432  
0.0966           -9.510  
0.1000           -9.955  
0.1033           -8.653  
0.1066           -10.162  
0.1100           -9.097  
0.1133           -9.240  
0.1166           -9.987  
0.1200           -9.336

0.1233	-8.780
0.1266	-9.495
0.1300	-9.780
0.1333	-8.653
0.1366	-8.351
0.1400	-8.827
0.1433	-8.303
0.1466	-8.653
0.1500	-8.240
0.1533	-8.240
0.1566	-8.494
0.1600	-8.225
0.1633	-8.827
0.1666	-8.303
0.1700	-7.462
0.1733	-8.144
0.1766	-7.764
0.1800	-7.573
0.1833	-7.700
0.1866	-7.589
0.1900	-7.637
0.1933	-7.558
0.1966	-6.938
0.2000	-6.811
0.2033	-6.477
0.2066	-6.509
0.2100	-7.081
0.2133	-6.525
0.2166	-6.843
0.2200	-7.256
0.2233	-5.985
0.2266	-6.652
0.2300	-6.128
0.2333	-5.826
0.2366	-5.906
0.2400	-6.287
0.2433	-6.017
0.2466	-6.319
0.2500	-5.874
0.2533	-6.430
0.2566	-5.747
0.2600	-5.033
0.2633	-5.366
0.2666	-5.065
0.2700	-5.556
0.2733	-5.858
0.2766	-5.017
0.2800	-4.985
0.2833	-5.033
0.2866	-4.096
0.2900	-5.318
0.2933	-4.540
0.2966	-3.921
0.3000	-3.937
0.3033	-4.525
0.3066	-4.334
0.3100	-4.509
0.3133	-4.461
0.3166	-3.794
0.3200	-4.143

0.3233	-3.635
0.3266	-4.588
0.3300	-3.525
0.3333	-3.794
0.3500	-2.905
0.3666	-2.778
0.3833	-2.492
0.4000	-1.604
0.4166	-2.016
0.4333	-0.508
0.4500	-0.619
0.4666	-0.127
0.4833	0.221
0.5000	0.539
0.5166	1.063
0.5333	1.285
0.5500	1.921
0.5666	2.285
0.5833	2.762
0.6000	3.285
0.6166	3.095
0.6333	3.618
0.6500	4.507
0.6666	3.682
0.6833	4.555
0.7000	5.063
0.7166	5.682
0.7333	5.587
0.7500	6.491
0.7666	6.650
0.7833	7.000
0.8000	7.095
0.8166	7.841
0.8333	7.920
0.8500	7.714
0.8666	8.475
0.8833	9.015
0.9000	9.206
0.9166	9.570
0.9333	9.634
0.9500	9.682
0.9666	9.967
0.9833	10.554
1.0000	10.903
1.2000	15.157
1.4000	18.267
1.6000	20.773
1.8000	22.613
2.0000	24.675
2.2000	26.833
2.4000	28.990
2.6000	30.243
2.8000	31.623
3.0000	33.018
3.2000	34.572
3.4000	35.270
3.6000	36.158
3.8000	36.888
4.0000	38.204
4.2000	38.521

4.4000	39.409
4.6000	39.805
4.8000	40.614
5.0000	40.947
5.2000	42.342
5.4000	42.358
5.6000	43.135
5.8000	43.690
6.0000	44.070
6.2000	44.371
6.4000	44.847
6.6000	45.465
6.8000	45.513
7.0000	45.687
7.2000	46.242
7.4000	46.511
7.6000	46.607
7.8000	47.478
8.0000	47.098
8.2000	47.098
8.4000	47.526
8.6000	47.352
8.8000	46.971
9.0000	47.257
9.2000	47.748
9.4000	48.287
9.6000	47.558
9.8000	48.334
10.0000	48.525
11.0000	48.461
12.0000	49.175
13.0000	49.238
14.0000	49.285
15.0000	49.476
16.0000	49.365
17.0000	49.428
18.0000	49.381
19.0000	49.476
20.0000	50.062
21.0000	50.126
22.0000	49.729
23.0000	50.189
24.0000	50.681
25.0000	50.427
26.0000	50.221
27.0000	50.332
28.0000	50.427
29.0000	49.967
30.0000	50.775
31.0000	50.031
32.0000	50.553
33.0000	50.252
34.0000	50.221
35.0000	50.601
36.0000	50.522
37.0000	50.522
38.0000	50.759
39.0000	50.458
40.0000	50.887
41.0000	50.775

42.0000	50.538
43.0000	50.490
44.0000	50.791
45.0000	50.775
46.0000	50.902
47.0000	50.950
48.0000	51.394
49.0000	51.124
50.0000	51.362
51.0000	50.664
52.0000	51.203
53.0000	50.775
54.0000	50.823
55.0000	51.362
56.0000	50.918
57.0000	51.029
58.0000	51.330
59.0000	50.633
60.0000	51.203
61.0000	50.950
62.0000	50.664
63.0000	50.981
64.0000	51.378
65.0000	51.631
66.0000	51.473
67.0000	51.251
68.0000	51.299

SE1000C  
Environmental Logger  
02/22 08:41

Unit# 91513 Test 2

-----  
Setups: INPUT 1  
-----  
Type Level (F)  
Mode TOC  
I.D. 00000  
  
Reference 0.000  
Linearity 0.090  
Scale factor 50.170  
Offset 0.120  
Delay mSEC 50.000

Step 0 02/17 20:21:18

-----  
Elapsed Time INPUT 1  
-----  
0.0000 51.251  
0.0033 51.520  
0.0066 51.203  
0.0100 51.378  
0.0133 49.444  
0.0166 49.904  
0.0200 49.904  
0.0233 50.981  
0.0266 50.918  
0.0300 50.855  
0.0333 50.950  
0.0366 50.538  
0.0400 49.840  
0.0433 50.411  
0.0466 50.553  
0.0500 50.411  
0.0533 50.141  
0.0566 50.126  
0.0600 49.634  
0.0633 49.777  
0.0666 49.793  
0.0700 49.793  
0.0733 49.508  
0.0766 49.587  
0.0800 49.285  
0.0833 49.175  
0.0866 49.238  
0.0900 49.206  
0.0933 48.952  
0.0966 49.016  
0.1000 48.794  
0.1033 48.604  
0.1066 48.683  
0.1100 48.635  
0.1133 48.398  
0.1166 48.429  
0.1200 48.271

0.1233	48.065
0.1266	48.128
0.1300	48.049
0.1333	47.843
0.1366	47.875
0.1400	47.732
0.1433	47.574
0.1466	47.589
0.1500	47.494
0.1533	47.320
0.1566	47.320
0.1600	47.177
0.1633	47.082
0.1666	47.034
0.1700	46.955
0.1733	46.813
0.1766	46.749
0.1800	46.638
0.1833	46.575
0.1866	46.496
0.1900	46.416
0.1933	46.306
0.1966	46.210
0.2000	46.115
0.2033	46.052
0.2066	45.957
0.2100	45.893
0.2133	45.782
0.2166	45.687
0.2200	45.608
0.2233	45.529
0.2266	45.449
0.2300	45.370
0.2333	45.275
0.2366	45.180
0.2400	45.100
0.2433	45.021
0.2466	44.942
0.2500	44.847
0.2533	44.768
0.2566	44.673
0.2600	44.593
0.2633	44.514
0.2666	44.435
0.2700	44.340
0.2733	44.260
0.2766	44.181
0.2800	44.102
0.2833	44.007
0.2866	43.927
0.2900	43.832
0.2933	43.753
0.2966	43.674
0.3000	43.594
0.3033	43.515
0.3066	43.436
0.3100	43.357
0.3133	43.278
0.3166	43.182
0.3200	43.103



0.3233	43.024
0.3266	42.944
0.3300	42.865
0.3333	42.786
0.3500	42.326
0.3666	41.882
0.3833	41.438
0.4000	41.010
0.4166	40.566
0.4333	40.122
0.4500	39.694
0.4666	39.266
0.4833	38.854
0.5000	38.442
0.5166	38.029
0.5333	37.649
0.5500	37.268
0.5666	36.888
0.5833	36.491
0.6000	36.111
0.6166	35.762
0.6333	35.429
0.6500	35.064
0.6666	34.731
0.6833	34.382
0.7000	34.033
0.7166	33.700
0.7333	33.367
0.7500	33.018
0.7666	32.685
0.7833	32.352
0.8000	32.035
0.8166	31.702
0.8333	31.369
0.8500	31.052
0.8666	30.734
0.8833	30.417
0.9000	30.116
0.9166	29.799
0.9333	29.482
0.9500	29.180
0.9666	28.879
0.9833	28.578
1.0000	28.276
1.2000	23.723
1.4000	20.599
1.6000	17.727
1.8000	15.109
2.0000	12.728
2.2000	10.554
2.4000	8.570
2.6000	6.777
2.8000	5.079
3.0000	3.539
3.2000	2.142
3.4000	0.872
3.6000	-0.285
3.8000	-1.318
4.0000	-2.238
4.2000	-3.096

4.4000	-3.842
4.6000	-4.525
4.8000	-5.144
5.0000	-5.699
5.2000	-6.207
5.4000	-6.668
5.6000	-7.065
5.8000	-7.446
6.0000	-7.779
6.2000	-8.098
6.4000	-8.367
6.6000	-8.621
6.8000	-8.843
7.0000	-9.050
7.2000	-9.240
7.4000	-9.415
7.6000	-9.558
7.8000	-9.701
8.0000	-9.844
8.2000	-9.955
8.4000	-10.066
8.6000	-10.162
8.8000	-10.241
9.0000	-10.336
9.2000	-10.416
9.4000	-10.479
9.6000	-10.543
9.8000	-10.606
10.0000	-10.654
11.0000	-10.876
12.0000	-11.035
13.0000	-11.146
14.0000	-11.242
15.0000	-11.321
16.0000	-11.368
17.0000	-11.416
18.0000	-11.447
19.0000	-11.480
20.0000	-11.528
21.0000	-11.543
22.0000	-11.590
23.0000	-11.622
24.0000	-11.638
25.0000	-11.671
26.0000	-11.686
27.0000	-11.717
28.0000	-11.717
29.0000	-11.749
30.0000	-11.765
31.0000	-11.765
32.0000	-11.797
33.0000	-11.813
34.0000	-11.829
35.0000	-11.845
36.0000	-11.860
37.0000	-11.860
38.0000	-11.877
39.0000	-11.892
40.0000	-11.908
41.0000	-11.908

**Appendix II**  
**Specific Conductance Stabilization Data**

I-3N  
Zone 2430 - 2490  
2/16/95

<u>TIME</u>	<u>TEMP °C</u>	<u>SALINITY ( ppt NaCl)</u>	<u>CONDUCTIVITY</u> <u>umhos X 100K</u>
3:45	22	12	.18
4:00	22	12	.20
4:15	22	13	.14
4:30	22	11	.13
4:45	22	13	.21
5:00	22	14	.21
5:15	22	14	.21
5:15	22	14	.21
5:30	22	14	.21
5:45	22	14	.21
6:00			.21
6:15			
6:30			
6:45			
7:00			
		<b>Packer Test</b>	
9:20	23	14	.21
9:35	23	14	.21
9:50	23	14	.21
10:05	23	14	.21

I-3N  
Zone 2340 to 2400  
1/17/95

<u>TIME</u>	<u>TEMP<sup>o</sup>C</u>	<u>SALINITY (ppt NaCl)</u>	<u>CONDUCTIVITY</u> <u>X 100K</u>
5:10 pm	24	17	.27
5:20	24	17	.27
5:30	23.5	17	.27
5:45	23.5	17	.27
5:50	26	15	.27
6:00	26	15	.22
6:15	26	15	.23
6:30	26	15	.25
6:45	25	16	.25
7:00	25	16	.26
		" Packer Test	
7:15	24	17	.27
7:30	23	18	.27
7:45	23	18	.27
8:00	23	18	.27

I-3N  
Zone 2240 to 2300  
02/17/95

<u>TIME</u>	<u>TEMP°C</u>	<u>SALINITY (ppt NaCl)</u>	<u>CONDUCTIVITY</u> <u>X100K</u>
5:00 am	22	18	
5:15	22	18	.27
5:30	22	18	.27
5:45	22	18	.27
6:00	22	18	.27
6:15	22	18	.27
		<b>Packer Test</b>	
10:25	24	17	
10:40	24	17	.28
10:55	24	17	.28
11:10	24	17	.28
11:25	24	17	.28

**Appendix III**  
**Laboratory Analysis Reports**

**SL SAVANNAH LABORATORIES**  
 & ENVIRONMENTAL SERVICES, INC.

414 SW 12th Avenue • Deerfield Beach, Florida 33442 • (305) 421-7400 • Fax (305) 421-2584

LOG NO: D5-80638

Received: 20 FEB 95

Mr. Leo Swayze  
 Hydrologic Associates U.S.A., Inc.  
 8925 S.W. 148th St., Suite 212  
 Miami, FL 33176

Project: #HA93-379 (WASA North District)  
 Sampled By: E. Workman

REPORT OF RESULTS

Page 1

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE SAMPLED		
80638-1	I-3N 2430-2490	02-16-95		
80638-2	I-3N 2340-2400	02-16-95		
80638-3	I-3N 2240-2300	02-17-95		
PARAMETER		80638-1	80638-2	80638-3
Zinc				
Zinc, mg/l		0.030	0.020	0.023
Date Analyzed		02.23.95	02.23.95	02.23.95
Method Number		EPA 200.7	EPA 200.7	EPA 200.7
Alkalinity (to pH 4.5) as CaCO3 (310.1)				
Alkalinity (to pH 4.5) as CaCO3, mg/l		35	46	99
Date Analyzed		02.23.95	02.23.95	02.23.95
Method Number		EPA 310.1	EPA 310.1	EPA 310.1
Chloride (325.3)				
Chloride (325.3), mg/l		15000	15000	14000
Date Analyzed		02.23.95	02.23.95	02.23.95
Method Number		EPA 325.3	EPA 325.3	EPA 325.3
Color				
Color, c.u.		15	15	10
Date Analyzed		02.21.95	02.21.95	02.21.95
Method Number		EPA 110.2	EPA 110.2	EPA 110.2
Ammonia-N (350.1)				
Ammonia-N, mg/l		0.24	0.33	0.29
Date Analyzed		02.24.95	02.24.95	02.24.95
Method Number		EPA 350.1	EPA 350.1	EPA 350.1
Nitrogen Series				
Total Kjeldahl Nitrogen-N, mg/l		0.57	0.75	0.67
Nitrate + Nitrite-N, mg/l		<0.050	<0.050	<0.050
Total Nitrogen (EPA 351.2 + 353.2), mg/l		0.57	0.75	0.67
Method Number		353/351	353/351	353/351



# SL SAVANNAH LABORATORIES

& ENVIRONMENTAL SERVICES, INC.

414 SW 12th Avenue • Deerfield Beach, Florida 33442 • (305) 421-7400 • Fax (305) 421-2584

LOG NO: D5-80638

Received: 20 FEB 95

Mr. Leo Swayze  
Hydrologic Associates U.S.A., Inc.  
8925 S.W. 148th St., Suite 212  
Miami, FL 33176

Project: #HA93-379 (WASA North District)  
Sampled By: E. Workman

## REPORT OF RESULTS

Page 2

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	DATE SAMPLED		
80638-1	I-3N 2430-2490			
80638-2	I-3N 2340-2400	02-16-95		
80638-3	I-3N 2240-2300	02-16-95		
		02-17-95		
PARAMETER		80638-1	80638-2	80638-3
pH				
pH , units		9.4	9.6	9.4
Date Analyzed		02.21.95	02.21.95	02.23.95
Method Number		EPA 150.1	EPA 150.1	EPA 150.1
Solids, Total Dissolved				
Solids, Total Dissolved, mg/l		28000	29000	28000
Date Analyzed		02.21.95	02.21.95	02.21.95
Method Number		EPA 160.1	EPA 160.1	EPA 160.1
Sulfide (376.2)				
Sulfide , mg/l		<0.40	<0.40	<0.40
Date Analyzed		02.22.95	02.22.95	02.22.95
Method Number		EPA 376.2	EPA 376.2	EPA 376.2
Sulfate as SO4 (375.4)				
Sulfate (Turbidimetric) 375.4, mg/l		1300	1200	1000
Date Analyzed		02.23.95	02.23.95	02.23.95
Method Number		EPA 375.4	EPA 375.4	EPA 375.4

**SL SAVANNAH LABORATORIES**  
 & ENVIRONMENTAL SERVICES, INC.

414 SW 12th Avenue • Deerfield Beach, Florida 33442 • (305) 421-7400 • Fax (305) 421-2584

LOG NO: D5-80638

Mr. Leo Swayze  
 Hydrologic Associates U.S.A., Inc.  
 8925 S.W. 148th St., Suite 212  
 Miami, FL 33176

Received: 20 FEB 95

Project: #HA93-379 (WASA North District)  
 Sampled By: E. Workman

REPORT OF RESULTS

Page 3

LOG NO	SAMPLE DESCRIPTION , QC REPORT FOR LIQUID SAMPLES				
80638-4	Lab Blank				
80638-5	Accuracy - % Recovery (Mean)				
80638-6	Precision - Relative % Difference				
80638-7	Detection Limit				
PARAMETER		80638-4	80638-5	80638-6	80638-7
Zinc					
Zinc, mg/l		<0.020	107 %	7.5 %	0.020
Date Analyzed		02.23.95			
Method Number		EPA 200.7			
Chloride (325.3)					
Chloride (325.3), mg/l		<1.0	102 %	3.9 %	1.0
Date Analyzed		02.23.95			
Method Number		EPA 325.3			
Ammonia-N (350.1)					
Ammonia-N, mg/l		<0.030	93 %	5.4 %	0.030
Date Analyzed		02.24.95			
Method Number		EPA 350.1			
Nitrogen Series					
Total Kjeldahl Nitrogen-N, mg/l		<0.10	98 %	10 %	0.10
Nitrate + Nitrite-N, mg/l		<0.050	102 %	0.98 %	0.050
Total Nitrogen (EPA 351.2 + 353.2), mg/l		<0.15			0.15
Method Number		353/351			
Sulfide (376.2)					
Sulfide, mg/l		<0.40	103 %	4.9 %	0.40
Date Analyzed		02.22.95			
Method Number		EPA 376.2			
Sulfate as SO4 (375.4)					
Sulfate (Turbidimetric) 375.4, mg/l		<5.0	103 %	1.9 %	5.0
Date Analyzed		02.23.95			
Method Number		EPA 375.4			

SL Environmental HRS Cert. #E86221 and SL Drinking Water HRS Cert. #86371.  
 Method Reference: EPA 600/4-79-020.

**SL SAVANNAH LABORATORIES**  
**& ENVIRONMENTAL SERVICES, INC.**

414 SW 12th Avenue • Deerfield Beach, Florida 33442 • (305) 421-7400 • Fax (305) 421-2584

LOG NO: D5-80467

Received: 07 FEB 95

Mr. Leo Swayze  
 Hydrologic Associates U.S.A., Inc.  
 8925 S.W. 148th St., Suite 212  
 Miami, FL 33176

Project: ASR West Wallfield  
 Sampled By: EW/KH

REPORT OF RESULTS

Page 1

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES					DATE SAMPLED
80467-1	1350					
80467-2	1380					02-06-95
80467-3	1450					02-06-95
80467-4	1550					02-06-95
80467-5	1600					02-06-95
PARAMETER	80467-1	80467-2	80467-3	80467-4	80467-5	
Chloride (325.3)						
Chloride (325.3), mg/l	1800	1900	1700	1500	1600	
Date Analyzed	02.08.95	02.08.95	02.08.95	02.08.95	02.08.95	
Method Number	EPA 325.3	EPA 325.3	EPA 325.3	EPA 325.3	EPA 325.3	
Solids, Total Dissolved						
Solids, Total Dissolved, mg/l	4300	4700	5000	4400	4500	
Date Analyzed	02.08.95	02.08.95	02.08.95	02.08.95	02.08.95	
Method Number	EPA 160.1	EPA 160.1	EPA 160.1	EPA 160.1	EPA 160.1	
Specific Conductance						
Specific Conductance, umhos/cm	7600	7800	7800	8000	8000	
Date Analyzed	02.08.95	02.08.95	02.08.95	02.08.95	02.08.95	
Method Number	EPA 120.1	EPA 120.1	EPA 120.1	EPA 120.1	EPA 120.1	