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FEMP GLACIAL TILL/VADOSE ZONE HYDRAULIC INVESTIGATIONS REPORT, VOLS 1 & 2, REV 0, PREPARED BY PARSONS FOR THE FEMP - (USED AS A REFERENCE IN OU 5 RI REPORT - APPENDIX F)

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REPORT

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FEMP Glacial Till/Vadose Zone Hydraulic Investigations Report

Operable Unit 5
Project Order 37

Fernald Environmental Management Project
May 1994
Volume I of II
Revision 0

Submitted by:
U.S. Department of Energy
Fernald Office
P.O. Box 398705
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May 26, 1994
PARSONS ID#:05:037:100:0218-94

Mr. Jack Hughes
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Subject: Submittal of the FEMP Glacial Till/Vadose Zone Hydraulic Investigations Report, Revision 0
Project Order 37
Technical and Project Management Support for CRU-5
FERMCO Subcontract #2-21487
PARSONS Environmental Remedial Action Project

Reference: PARSONS ID# 05:037:100:0043-94, dated Feb. 1, 1994

Attention: Mr. K. Broberg

Dear Mr. Hughes:

Attached is the final draft of the FEMP Glacial Till/Vadose Zone Hydraulic Studies Investigations Report, Revision 0. The report incorporates all FERMCO comments and direction received since the referenced three volume Revision D submittal. The Revision 0 submittal has been condensed into two volumes. Volume I describes the extent of the investigations, activities, analyses, and provides a summary of the study's results and conclusions. Volume II contains pertinent background information and data supporting the analyses and conclusions presented in Volume I. Final assembly and distribution of this report conforms with direction received from Mr. K. Broberg.

The submittal of the Revision 0 report marks the completion of PARSONS' activities associated with this Project Order 37 work package. As previously discussed, PARSONS will close this work package and finalize related costs against the 5CGW1 cost code. Should additional revisions to this report be required, PARSONS recommends that Project Order 116, Task 300 (In-House Support) be used as the funding mechanism.

If you have any questions please contact me at 870-8107 or Mr. Pete Holland at 870-8133.

Very truly yours,

Brent F. Harvey
Project Manager, CRU-5

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FEMP Glacial Till/Vadose Zone Hydraulic Investigations Report

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FEMP Glacial Till/Vadose Zone Hydraulic Investigations Report Volume I

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LIST OF ACRONYMS AND ABBREVIATIONS

BGS	Below Ground Surface
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CRT	Constant Rate Pumping Test
CRU	CERCLA/RCRA Unit
FEMP	Fernald Environmental Management Project
GMA	Great Miami Aquifer
gpd	gallons per day
gpm	gallons per minute
GT/VZ	Glacial Till/Vadose Zone
HSA	Hollow Stem Auger
ID	Inside Diameter
psi	pounds per square inch
PVC	Polyvinyl Chloride
RCRA	Resource Conservation and Recovery Act
SCDM	Site Characterization and Data Management

SECTION 1

INTRODUCTION

1.1 Purpose and Objectives

The purpose of the Glacial Till/Vadose Zone (GT/VZ) Hydraulic Investigation Program was to obtain additional hydraulic conductivity data on the glacial overburden sediments, and to assess the barrier properties of the gray clay contained within the overburden. Hydraulic conductivity data contained within this report includes the results of 70 slug tests, seven yield tests, three pump tests, one packer test, and coefficient of permeability measurements from six Shelby tube samples of the gray clay. Data contained within this report on the barrier properties of the gray clay includes bulk density, specific gravity, moisture content, porosity, and water quality.

A strategy similar to that presented by Bradbury and Muldoon (Bradbury et al. 1990) was followed for the collection of hydraulic conductivity data. Bradbury and Muldoon explain that the "true" hydraulic conductivity of saturated near-surface materials is difficult to obtain due to measurement scale effects. Physical characteristics of geologic materials (particle size, roundness, sorting, etc.) vary spatially and this spatial variation can be large in many glacial and fluvial settings as a result of changes in depositional environments occurring over short distances. Tests and measurements of hydraulic conductivity of such variable material (such as glacial till) produce average values for the volume of the material being measured or tested. It is this "averaged" value that is used to address the problem at hand, not the "true" value.

As larger or smaller volumes of material are tested, a larger or smaller number of aquifer heterogeneities, which might be regarded as more or less conductive zones, are encountered. Hydraulic conductivity tests conducted for the GT/VZ Investigation Program can generally be grouped into three operational scales based upon the volume of material sampled.

1) Small Scale Tests ($< 1 m^3$): Core permeameter tests.

2) Site-Specific Tests ($1 m^3$ to Hundreds of Cubic Meters): Single well pumping tests, packer tests, and slug tests.

3) Local Tests (Hundreds of Cubic Meters to Thousands of Cubic Meters): Multiple well pumping tests.

The GT/VZ Investigation Program is based on the "Development of Glacial Till/Vadose Zone Investigation Program for Operable Unit 5 - November 13, 1992" (Ebasco and CH2M Hill 1992).

Activities 1 and 2 of that report identified tasks and general methodologies for evaluating the vertical and horizontal migration of groundwater through the glacial till into the Great Miami Aquifer (GMA). Following scoping meetings and a workshop on characterization of the Vadose Zone (Glacial Till), these tasks were formalized in the "FEMP Glacial Till/Vadose Zone Hydraulic Investigation Work Plan" (PARSONS 1993b). Data obtained from this investigation will be used to better understand fluid movement through the overburden sediments and to help construct an improved groundwater flow and solute transport model for the overburden sediments.

This report is divided into two volumes. Volume I describes the extent of the investigation, activities, analysis, and provides a summary of results and conclusions. Volume II contains background information and data to support the analyses presented in Volume I.

The intent of this report is to document the data collection activity and present the results. Hydrogeologic interpretations are limited. The reader should refer to the CRU5 RI Report for hydrogeologic interpretations.

1.2 Summary of Activities

Figure 1-1 shows the locations where tests and measurements were conducted. Below is a brief outline of the scope of the project.

Slug Tests

Seventy slug tests were performed on "1000 series" monitoring wells across the site to determine hydraulic conductivity in the "perched" groundwater zones. Slug test methods and results are discussed in Section 2.

Packer Tests

Packer tests were conducted to determine bulk hydraulic conductivities. Descriptions of activities, equipment, and results are discussed in Section 3.

Yield Tests

Seven yield tests were performed at 5 different locations to determine if a yield could be sustained and to establish discharge rates for the CRTs. Yield tests were also used to establish where CRTs could be conducted. Yield tests are discussed in Section 4.

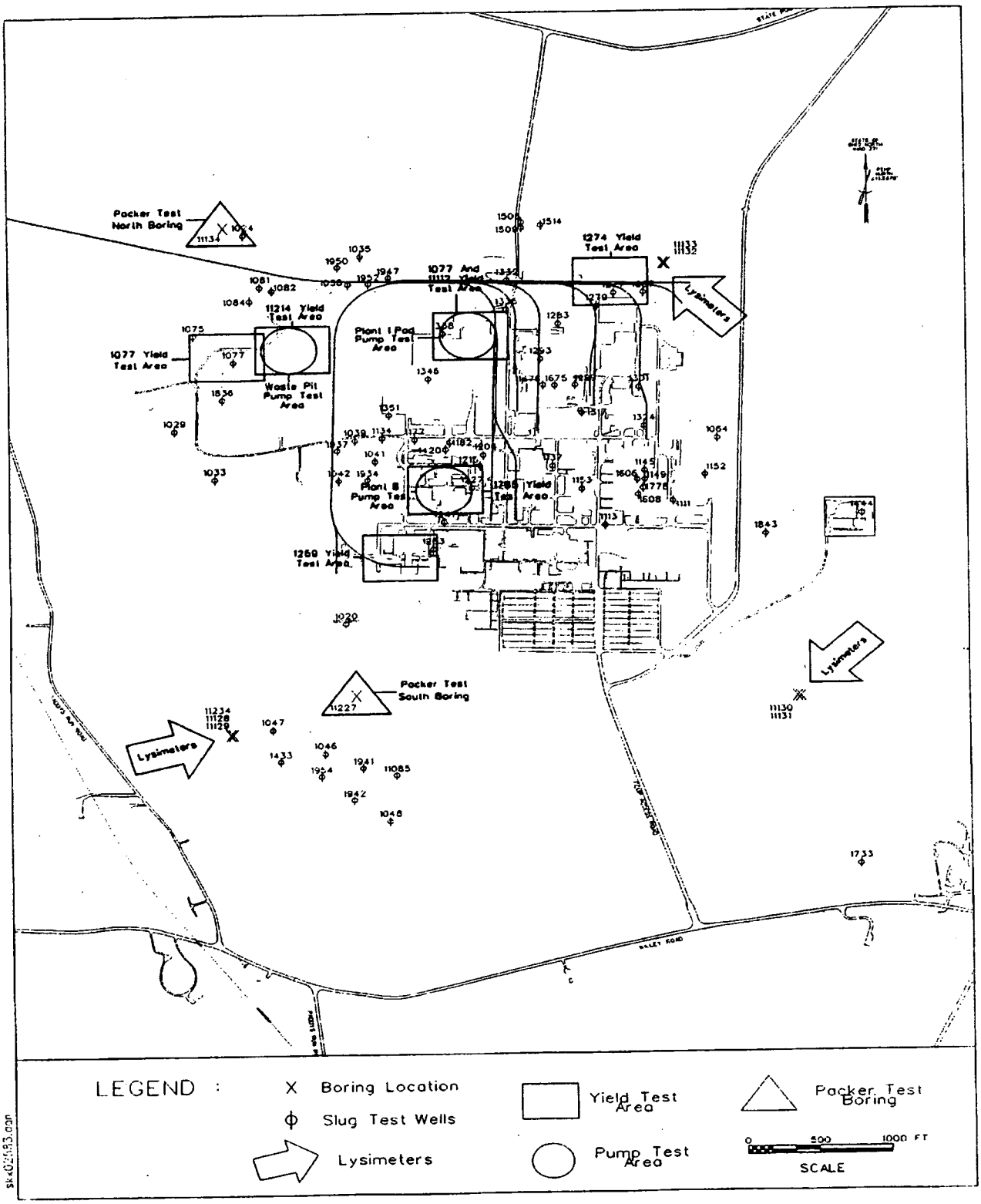

Figure 1-1 - Testing Locations

Constant Rate Pumping Tests (CRTs)

CRTs were performed at three separate locations. Drawdown trends were examined to provide insight into potential communication pathways and to determine hydraulic properties. Pumping test data and results are discussed in Section 5.

Lysimeter Installation

Three pairs of suction lysimeters were installed to obtain water samples from portions of the lower gray till and upper unsaturated GMA. Method and equipment descriptions and results are discussed in Section 6.

Geotechnical Data

Continuous split spoon samples were collected from the holes dug in support of this study and analyzed for grain size using a sieve analysis. Thirteen Shelby tube samples of gray clay were collected and tested for moisture content, bulk density, specific gravity, and coefficient of permeability. Test results from Shelby tube samples are presented and discussed in Section 7.

1.3 Management and Responsibilities

Activities described in this document were carried out jointly by FERMCO and PARSONS as defined in Subsection 1.4 of the GT/VZ Work Plan (PARSONS 1993b) and illustrated in Figure 1-2.

FERMCO CERCLA/RCRA Unit 5 (CRU-5) and Site Characterization and Data Management (SCDM) provided the procurement of all drilling, sampling, equipment installation, and testing. FERMCO SCDM was responsible for the direct daily oversight of all field activities while project oversight was the responsibility of CRU-5. PARSONS provided a technical representative in the field during all field activities. PARSONS provided the analysis and interpretation of the collected field data presented in this report.

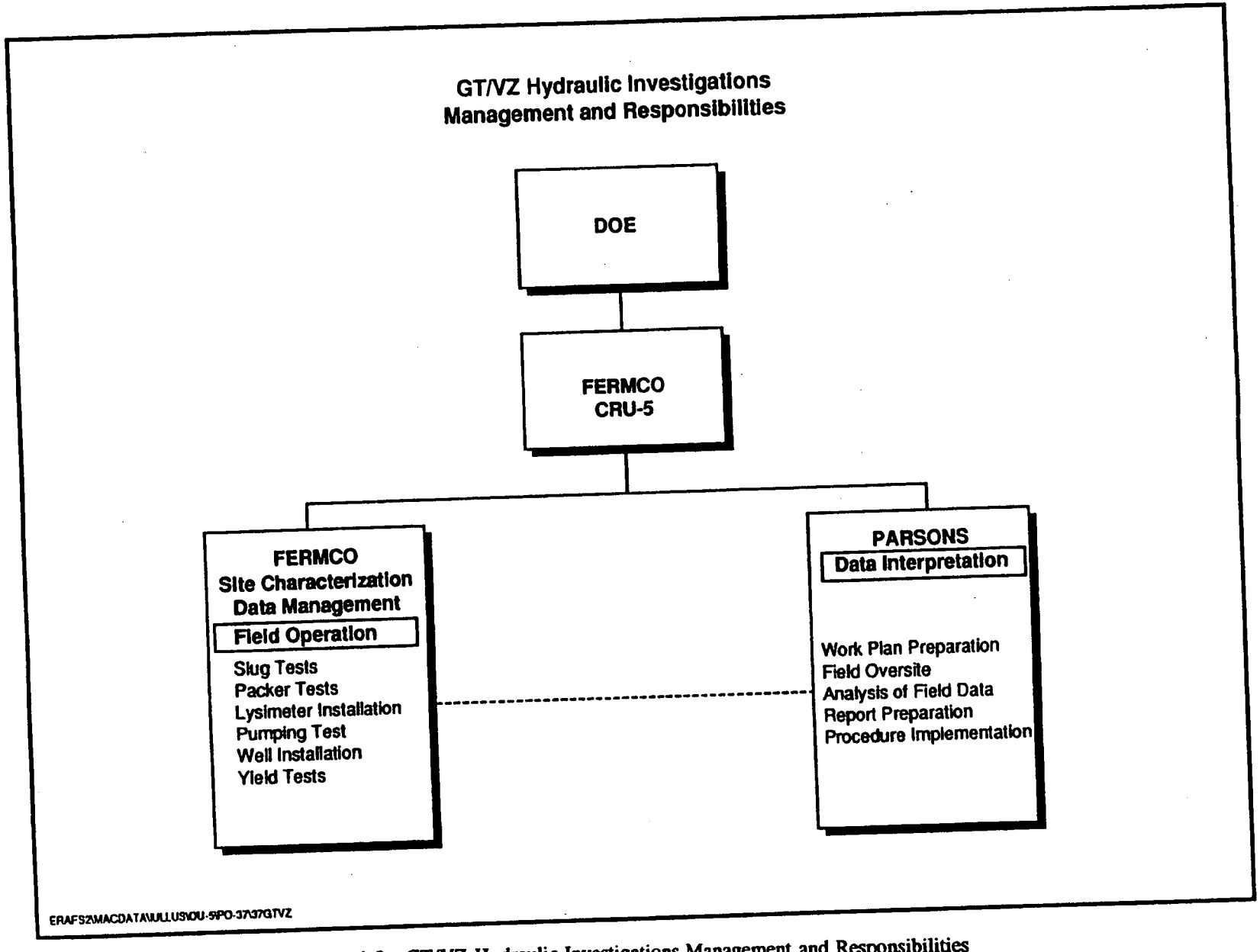

Figure 1-2 - GT/VZ Hydraulic Investigations Management and Responsibilities

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SECTION 2

SLUG TESTING

Slug Testing was performed according to Section 2 of the FEMP Glacial Till/Vadose Zone Hydraulic Investigations Work Plan (GT/VZ Work Plan) (PARSONS 1993b) on 70 existing or newly constructed wells at the Fernald Environmental Management Project (FEMP). Figure 2-1 shows the locations of the tested wells. The analysis of the slug test data and the results of slug testing are presented below.

2.1 Methods

In a slug test, a small solid object or volume of water (slug) is suddenly added (Falling Head Test) or removed (Rising Head Test) from a well, after which the rate of fall or rise of the water level in the well is measured. From these measurements, the transmissivity or hydraulic conductivity of the water-bearing unit in close proximity to the well can be determined.

If the water level in a well is near the ground surface, the slug of water can be quickly removed with a bailer or a bucket (bail down method). Otherwise, a closed cylinder or other solid body is submerged in the well and then, after the water level has stabilized, the cylinder is pulled out (Kruseman and de Ridder 1990). A slug test determines the characteristics of a relatively small volume of material immediately surrounding the well. This volume may have been disturbed during well drilling and construction.

Each well identified for slug testing in the GT/VZ Work Plan was tested according to the following general methodology.

1) Water level and total depth of well were measured manually to determine acceptability of the well for slug testing. Wells with insufficient water for slug testing were tested using the alternate bail-down procedure. Wells without a water level (dry wells) were not tested.

2) Each well was instrumented with a pressure transducer and data logger to measure and record the water level in the well.

3) A falling head test was performed on the well by lowering a slug into the well and recording the instantaneous rise in water level followed by the gradual decline of the level to its previous static level.

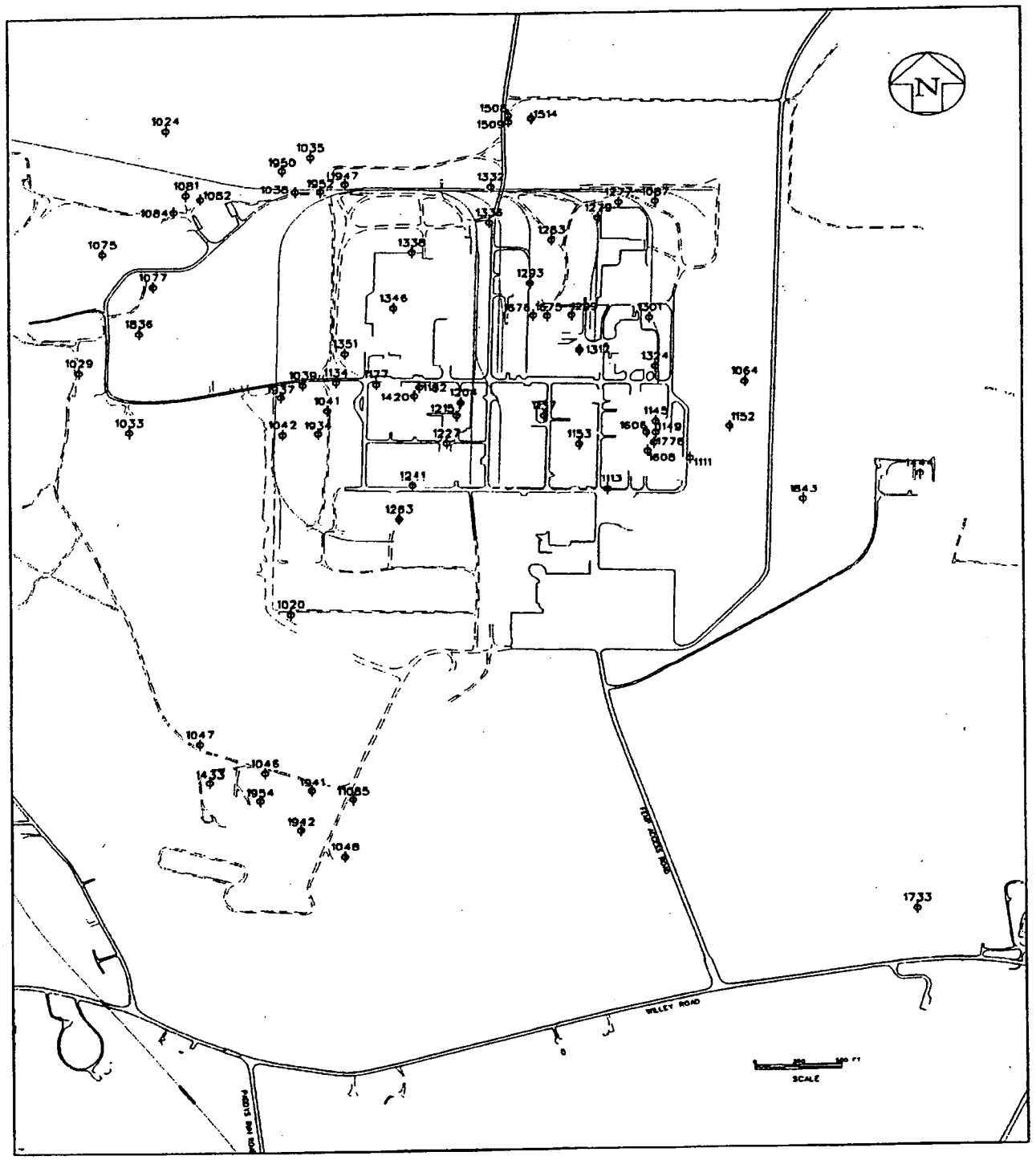

Figure 2-1 - Slug Test Well Locations

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Slug Test Well Locations

4) Once the water level returned to its original static level (or after the rate of level change had diminished) a rising head slug test was performed. This test was conducted by quickly retrieving the slug and recording the instantaneous drop in water level followed by a gradual recovery as the well again equalized to its previous static level.

The rate at which the original static water level is established following slug insertion/retrieval is a function of the hydraulic conductivity of the material near the well screen. Data obtained from slug testing was analyzed as described in Subsection 2.3.

Slug testing was not performed on nine of the wells listed by the work plan. Table 2-1 lists the wells along with the reasons why testing was not performed.

Table 2-1 - Wells That Were Not Slug Tested

Well	Reason Well not Slug Tested
1019	Well plugged and abandoned
1045	Insufficient water level
1072	Insufficient water level
1155	Insufficient water level
1220	Insufficient water level
1304	Well plugged and abandoned
1728	Insufficient water level
1754	Insufficient water level
1785	Constant rate pump test performed

2.2 Equipment

Slugs were constructed from varying lengths of 1- and 2-inch nominal polyvinyl chloride (PVC) pipe. The lengths of pipe were filled with gravel and sealed at both ends. The 4-inch-diameter monitoring wells were tested with 2-inch slugs, while the 2-inch-diameter wells were tested with 1-inch slugs. The slugs were lowered into and removed from the wells with a nylon cord.

Manual water level readings were taken with SOLINST electronic water measuring tapes.

Electronic water level measurements were taken and recorded with In Situ Hermit 2000 or 1000 series data loggers with pressure transducers.

2.3 Analysis

The methods of Bouwer and Rice (1976) and Cooper et al. (1967) were used to calculate hydraulic conductivity from the slug test data. These two methods of analysis were performed using AQTESOLV (Aquifer Test Solver) software, Version 1.1 (Duffield and Rumbaugh 1991). These methods are described below.

Bouwer and Rice

The Bouwer-Rice method calculates the hydraulic conductivity around a partially or fully penetrating well in an unconfined aquifer by measuring the rise of water level in the well, initially at equilibrium conditions, after a volume is quickly removed. The calculation is based on the Thiem equation of steady-state flow to a well. Using an electrical analog model, Bouwer and Rice developed a set of curves that relate the effective radius of a well to other known well dimensions and allows solution of the Thiem equation (Bouwer and Rice 1976).

The Bouwer-Rice method was originally developed for rising levels in an unconfined aquifer, however, the conductivity calculated by the Bouwer-Rice method for a confined aquifer should be of the same order of magnitude as that calculated with the procedure in Cooper et al. (1967) if the top of the screen is some distance below the upper confining layer (Bouwer 1989).

The Bouwer-Rice method also can be used for falling water levels (after the quick injection of water or solid volume) if the initial equilibrium water level is above the screened section of the well. However, if the equilibrium water level in the well is below the top of the screened section, then the subsequent flow of water into the aquifer not only takes place through the screen below the original water level but also through the vadose zone above the original water table. This leads to an over estimation of conductivity (Bouwer 1989).

For the rising head situation where the equilibrium water level in the well is within the screened interval, the effective screen length is only that which is below the static water table. Additionally, the thickness and porosity of the filter pack must be considered when calculating the equivalent value of the casing radius.

Cooper et al.

Cooper et al. (1967) presents a method that uses a family of type curves and a graphical solution technique to determine the transmissivity of a homogeneous isotropic confined aquifer in which a fully

penetrating well undergoes an instantaneous change in water level (slug test). Cooper et al. (1967) presents a solution for a well of finite diameter that is applicable for all times following the water level change.

This method has applicability to partially penetrating wells. Since the vertical permeability of most stratified aquifers is only a fraction of the horizontal permeability, the induced flow in the small radius of the cone that develops around the well during the short duration of the slug test is essentially two dimensional. The determined value of transmissivity approximates the transmissivity of that part of the water-bearing unit in which the well is screened.

2.3.1 Approach and Assumptions

The following assumptions were used during the slug test analysis.

1) General Assumptions
   (1) Preference was given to rising head data over falling head data.
   (2) Effective porosity of the sand pack surrounding the well screen is 0.3.
   (3) If the static water level is within the screened interval of the well, then the effective radius of the well includes the porosity of the surrounding sand pack.
   (4) If the static water level was within the screened interval of the well, falling head slug tests will overestimate hydraulic conductivity and are not used for parameter estimation.

2) Confined Conditions (Figure 2-2)
   (1) Effective screen length (L) is equal to the length of sand pack surrounding the well screen that is within the aquifer.
   (2) Height of static water (H) in the well is the distance from the bottom of the effective screen length (L) to static water level.
   (3) Groundwater is apparently confined beneath a layer of lower permeability. The static water level is higher then the top of the confined material.
   (4) Initial drawdown is that shown by the data logger as the earliest steadily changing level after the initial transient fluctuations (injection of the slug).

3) Unconfined Conditions (Figure 2-2)
   (1) Effective screen length (L) is equal to the length of sand pack surrounding the well screen that is below the static water level.
   (2) Height of static water (H) in the well is the distance from the bottom of effective screen length to static water level.
   (3) Vertical conductivity in the till is a fraction of horizontal conductivity such that flow to the well is essentially horizontal and the effective saturated thickness is equal to the distance from the bottom of the effective screened interval to static water level.

2.3.2 Analysis Methodology

The following steps were performed during the slug test analysis:

1) A schematic showing well construction and surrounding lithology was drawn using boring logs and the well construction logs. These well schematics are located in Appendix A.1.

2) Each well was categorized as confined or unconfined based on the relationship between the well screen, static water level, and lithology. Well parameters for confined and unconfined conditions were assigned as shown in Figure 2-2. The effective saturated thickness (D) and effective screen length (L) differ for confined and unconfined conditions. A list of input values for the tested wells is located in Appendices A2 and A3.

3) An AQTESOLV input file was prepared from the down-loaded data logger output file and the selected well parameters. Water level data is referenced to the initial static water level. For falling head tests the absolute value of the change in level is used.

4) If the static water level in the well was within the screened interval, an effective well radius (r_{eff}) was calculated for the well that considers the thickness and effective porosity of the filter pack. An equivalent value for casing radius was then calculated using the following equation (Dawson and Istok 1991):

$$r_{eff} = \sqrt{r_w^2(n) + r_c^2(1-n)}$$

where:

r_c = radius of well casing
r_w = radius of well (includes filter pack)
n = effective porosity of filter pack
r_{eff} = effective well radius

5) For wells with confined conditions, Cooper et al. (1967) was the primary method of analysis. These wells were also analyzed by Bouwer and Rice for comparative purposes. For unconfined conditions, Bouwer and Rice was the primary method of analysis.

6) Dominant sediment types (clay, silt, sand, or gravel) and color (brown or gray) was noted from the boring logs and a depositional category was assigned.

7) An estimate of hydraulic conductivity was determined by evaluating the results of each analysis for the well of concern; noting the goodness of fit of the data and the applicability of each method of analysis. Figure 2-3 shows the decision tree used to determine the type of test and analysis method used. Appendices A.2 and A.3 contain tables of all results by various analysis methods.

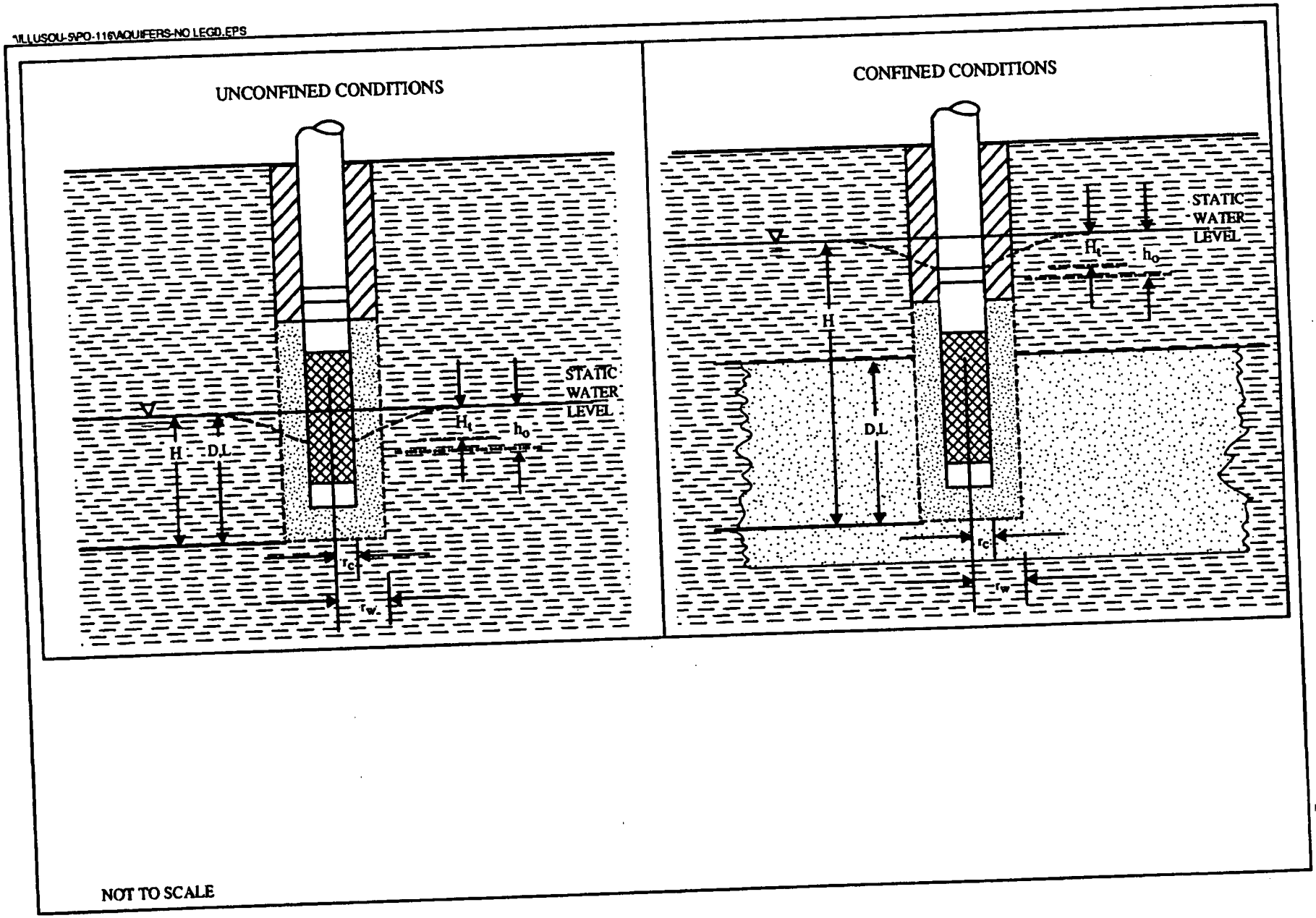

Figure 2-2 - Confined/Unconfined Conditions

2.4 Results

The results of the data analysis for the tested wells are shown in Table 2-2 and summarized in Table 2-3. The lithology of the tested wells varied greatly with location. Table 2-3 provides the high, low, and "average" of the calculated hydraulic conductivities for each general sediment type where the average conductivity is described by the geometric mean of the calculated values for that specific sediment type (Domenico and Schwartz 1990). Figure 2-4 presents this information graphically.

In general, slug test results are considered to be more accurate when conducted in less permeable sediments than in more permeable sediments. Highly permeable sediments produced a relatively quick response to the instantaneous change in level caused by the slug test. In several of the gravel or sand and gravel wells tested (Table 2-2), the response was so quick that it was partially obscured by the initial response caused by the slug being inserted into the well. For several of the tests performed in the tighter clay material (Table 2-2), the response was extremely slow taking several days to a week to equilibrate.

In wells installed in clay, the permeability of the sand pack was significantly greater then the surrounding material, a "double straight line" effect (Bouwer 1989) can be seen on the semi-log drawdown versus time plot. This effect is more or less pronounced depending on the difference between the permeabilities of the two materials.

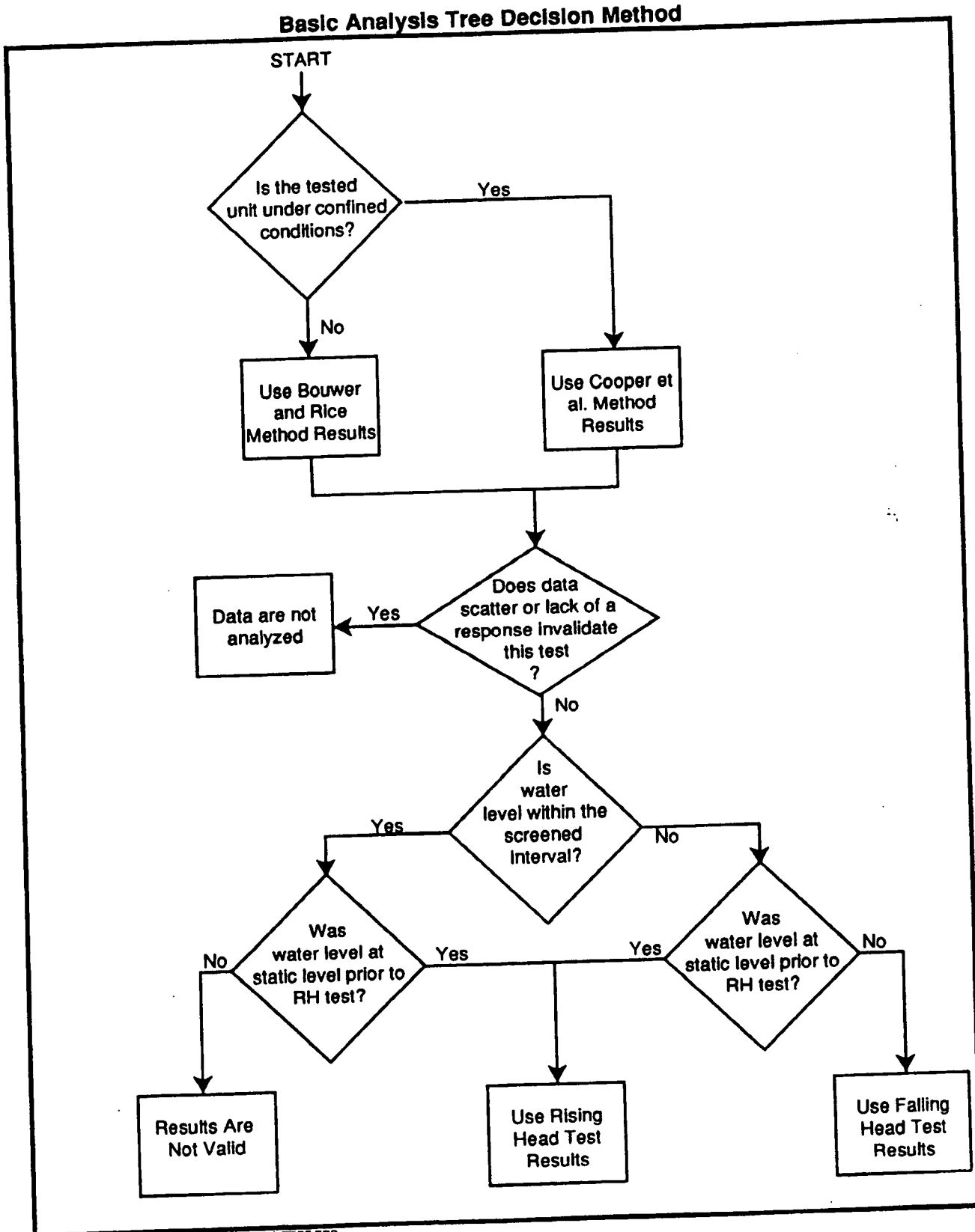

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Figure 2-3 - Method and Analysis Decision Tree

Table 2-2 - Summary of Slug Test Results by Material Type

Well Number	Material Type	Material Color	Dominant Material Description	Aquifer Type U = Unconfined C = Confined	Water Level within Effective Screened Interval YES or NO	Result by Optimal Method of Analysis K (ft/day)	Result by Optimal Metod of Analysis K (cm/sec) *	Optimal Method B = Bouwer - Rice C = Cooper et al FH = Falling Head RH = Rising Head	Comments	Geometric Mean of Conductivity for Mat'l Type (cm/sec)
1299	Clay	Grey	Grey clay trace sand and gravel	U	NO	1.25E-03	4.40E-07	B-FH	E	
1301	Clay	Grey	Grey silty gravelly clay	U	NO	2.22E-03	7.84E-07	B-FH	E	
1064	Clay	Grey	Silty grey gravelly clay some silt	U	NO	4.32E-03	1.52E-06	B-RH	C,E,A	
1317	Clay	Grey	Dark grey clay little gravel and sand	U	NO	6.76E-03	2.38E-06	B-RH		
1843	Clay	Grey	Grey silty clay with sand and gravel	U	NO	7.44E-03	2.62E-06	B-RH		
1047	Clay	Grey	Grey sandy clay some silt and gravel	U	YES	7.56E-03	2.67E-06	B-RH	C	
1084	Clay	Grey	Olive grey clay some gravel and sand trace silt	U	YES	1.68E-02	5.92E-06	B-RH	C,E,A	
1606	Clay	Grey	Grey to yellow brown silty clay	U	YES	2.11E-02	7.44E-06	B-RH	E	
1113	Clay	Grey	Brownish grey clay some sand	U	YES	4.11E-02	1.45E-05	B-FH	D,A	
1029	Clay	Grey	Olive grey gravelly clay	U	YES	1.38E-01	4.88E-05	B-FH	E,A	
1778	Clay	Grey	Grey silty clay trace gravel	U	YES	3.20E-01	1.13E-04	B-FH	D,A	
1041	Clay	Grey	Grey clay some silt	U	YES	8.14E-01	2.87E-04	B-FH	E,A	
1324	Clay	Grey	Dark grey clay little gravel trace sand	U	NO	6.28E+00	2.22E-03	B-RH	A	1.87E-06
1444	Clay	Brown	Light olive brown silty clay trace gravel	U	NO	2.70E-03	9.51E-07	B-RH	E	
1137	Clay	Brown	Brownish yellow clay	U	NO	6.47E-03	2.28E-06	B-FH	C,E,A	
1075	Clay	Brown	Olive brown clay some silt some gravel	U	NO	9.57E-03	3.38E-06	B-RH	C	
1145	Clay	Brown	Brownish yellow clay	U	NO	3.50E-02	1.24E-05	B-FH	E	
1082	Clay	Brown	Yellowish brown clay some silt trace gravel and sand	U	NO	3.85E-02	1.36E-05	B-FH	E	
1509	Clay	Brown	Light olive brown silty clay	U	YES	4.49E-02	1.58E-05	B-FH	D,A	
1952	Clay	Brown	Yellow brown silty clay	U	YES	4.93E-02	1.74E-05	B-RH		
1514	Clay	Brown	Light olive brown silty clay	U	YES	6.54E-02	2.31E-05	B-RH		
1279	Clay	Brown	Yellowish brown silty clay some gravel	U	NO	7.30E-02	2.58E-05	B-FH	E	
1676	Clay	Brown	Greyish brown silty clay trace gravel	U	NO	7.73E-02	2.73E-05	B-FH	E	
1934	Clay	Brown	Greyish olive brown silty clay	U	NO	9.23E-02	3.26E-05	B-RH		
1081	Clay	Brown	greyish brown clay some gravel silt and sand	U	NO	1.10E-01	3.87E-05	B-FH	E	
1283	Clay	Brown	Grey to yellowish brown silty clay	U	YES	2.39E-01	8.44E-05	B-FH	D,E,A	
1947	Clay	Brown	Yellowish brown silty clay	U	YES	2.50E-01	8.83E-05	B-RH		
1508	Clay	Brown	Light olive brown sandy clay	U	YES	2.67E-01	9.42E-05	B-RH		
1215	Clay	Brown	Olive brown silty clay	U	YES	2.75E-01	9.71E-05	B-RH		
1954	Clay	Brown	Grey silty clay with gravel	U	YES	3.27E-01	1.15E-04	B-RH		
1433	Clay	Brown	Olive brown silty clay with sand and gravel	U	YES	6.11E-01	2.15E-04	B-RH		
1020	Clay	Brown	Olive brown silty clay	U	NO	6.93E-01	2.44E-04	B-RH		
1152	Clay	Brown	Yellowish brown silty clay	U	YES	8.26E-01	2.91E-04	B-RH		3.59E-05
1950	Silt	Grey	Grey silt and sand	C	NO	3.23E-02	1.14E-05	C-FH		
1733	Silt	Grey	Grey clayey silt with some gravel	C	NO	4.52E-01	1.60E-04	C-FH	E	
1149	Silt	Grey	Yellowish brown clayey silt and sand	C	YES	1.07E+00	3.78E-04	C-RH		
1608	Silt	Grey	Grey clayey silt trace gravel	C	YES	4.86E+00	1.72E-03	B-RH	A	8.83E-05
1087	Silt	Brown	Brown silt trace gravel	U	YES	1.30E-03	4.58E-07	B-FH	E,A	
1836	Silt	Brown	Light olive brown clayey silt with intermitent sand lenses	U	YES	4.97E-02	1.75E-05	B-RH		
1942	Silt	Brown	Olive yellow silt and sand	C	YES	1.08E-01	3.81E-05	C-RH		

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Table 2-2 - Summary of Slug Test Results by Material Type (Continued)

Well Number	Material Type	Material Color	Dominant Material Description	Aquifer Type U=Unconfined C=Confined	Water Level within Effective Screened Interval YES or NO	Result by Optimal Method of Analysis K (ft/day)	Result by Optimal Metod of Analysis K (cm/sec)	Optimal Method B=Bouwer-Rice C=Cooper et al FH=Falling Head RH=Rising Head	Comments	Geometric Mean of Conductivity for Mat'l Type (cm/sec)
1153	Silt	Brown	Interbedded brown clay sand and silt	C	YES	4.85E-01	1.71E-04	C-RH		
1263	Silt	Brown	Olive brown clayey silt trace sand	U	YES	5.41E-01	1.91E-04	B-RH		
1204	Silt	Brown	Olive brown clayey silt	C	NO	5.50E-01	1.94E-04	C-RH		
1346	Silt	Brown	Light brown silt and sand	C	NO	6.23E-01	2.20E-04	C-RH		9.88E-05
1038	Sand	Grey	Grey sand some silt trace gravel	C	NO	3.41E-01	1.20E-04	C-RH		
1035	Sand	Grey	Grey well graded sand-gravel mixture	C	NO	6.60E-01	2.33E-04	C-FH	E	
1937	Sand	Grey	Light olive grey silty fine sand	C	NO	8.59E-01	3.03E-04	C-FH	E	
1046	Sand	Grey	Grey silt clay and sand	C	YES	1.66E+00	5.85E-04	C-RH		
1033	Sand	Grey	Grey silty sand	C	YES	2.00E+00	7.06E-04	C-RH		
1048	Sand	Grey	Yellowish brown silt sand and gravel	C	YES	2.33E+00	8.22E-04	C-RH		
1042	Sand	Grey	Grey silty sand	C	NO	8.02E+00	2.83E-03	C-RH		
1332	Sand	Grey	Olive grey silt and sand	C	NO	1.02E+01	3.61E-03	C-RH		
1039	Sand	Grey	Grey well graded gravelly sand	C	NO	1.35E+01	4.76E-03	C-FH	B	8.04E-04
1293	Sand	Brown	Yellowish brown clayey sand some gravel	C	NO	1.64E-01	5.80E-05	C-RH		
1134	Sand	Brown	Brownish yellow fine sand	C	NO	2.46E-01	8.67E-05	C-RH		
1277	Sand	Brown	Yellow brown sand trace gravel and clay	U	YES	2.98E-01	1.05E-04	B-FH	E,A	
1241	Sand	Brown	Brownish yellow silty sand	C	NO	4.36E-01	1.54E-04	C-FH	D	
1941	Sand	Brown	Olive brown clayey sand	U	YES	1.02E+00	3.62E-04	B-RH		
1338	Sand	Brown	Brown pooly graded sand trace gravel	C	YES	3.61E+00	1.27E-03	C-RH		
11085	Sand	Brown	Light olive brown well graded sand some silt	C	YES	4.12E+00	1.45E-03	C-RH		
1420	Sand	Brown	Olive brown silty sand	C	NO	3.02E+01	1.06E-02	C-RH		
1351	Sand	Brown	Brown sand-silt mixture	C	NO	3.22E+01	1.14E-02	C-RH		
1177	Sand	Brown	Brown sand trace gravel	C	YES	4.19E+01	1.48E-02	C-RH		
1227	Sand	Brown	Brownish yellow silty sand	C	YES	5.98E+01	2.11E-02	C-RH		
1336	Sand	Brown	Brown well graded sand trace gravel	C	YES	6.72E+01	2.37E-02	C-RH		1.75E-03
1024	Gravel	Grey	Olive grey fine to coarse sand and gravel	C	NO	2.76E+00	9.73E-04	C-RH		
1077	Gravel	Grey	Grey well graded gravel with sand	C	NO	4.72E+01	1.67E-02	C-FH	E	4.03E-03
1675	Gravel	Brown	Yellow brown clayey gravel	C	YES	4.56E+01	1.61E-02	C-RH	E,C	
1182	Gravel	Brown	Light olive brown clayey gravel	C	NO	6.68E+01	2.36E-02	C-RH		
1111	Gravel	Brown	Brown clayey gravel some sand	C	YES	2.16E+02	7.62E-02	C-RH		3.07E-02

NOTES:
A - RESULTS NOT VALID, NOT INCLUDED IN HIGH, LOW, OR GEOMETRIC MEAN
B - TWO FALLING HEAD TESTS AVERAGED
C - FALLING HEAD DATA NOT VALID OR UNABLE TO ANALYZE
D - RISING HEAD DATA NOT VALID OR UNABLE TO ANALYZE
E - WATER LEVEL NOT EQUALIZED PRIOR TO START OF RISING HEAD TEST

Table 2-3 - Summary of Results by Material Type

Material	Number of Wells Tested	Low Conductivity Value (cm/s)	High Conductivity Value (cm/s)	Geometric Mean (cm/s)
Gray Clay	6	4.4×10^{-7}	7.4×10^{-6}	1.87×10^{-6}
Brown Clay	17	9.5×10^{-7}	2.9×10^{-4}	3.6×10^{-5}
Gray Silt	3	1.14×10^{-5}	3.8×10^{-4}	8.8×10^{-5}
Brown Silt	6	1.7×10^{-5}	2.2×10^{-4}	9.9×10^{-5}
Gray Sand	9	1.2×10^{-4}	4.8×10^{-3}	8.0×10^{-4}
Brown Sand	11	5.8×10^{-5}	2.4×10^{-2}	1.7×10^{-5}
Gray Gravel	2	9.7×10^{-4}	1.7×10^{-2}	4.3×10^{-3}
Brown Gravel	3	1.6×10^{-2}	7.6×10^{-2}	3.1×10^{-2}

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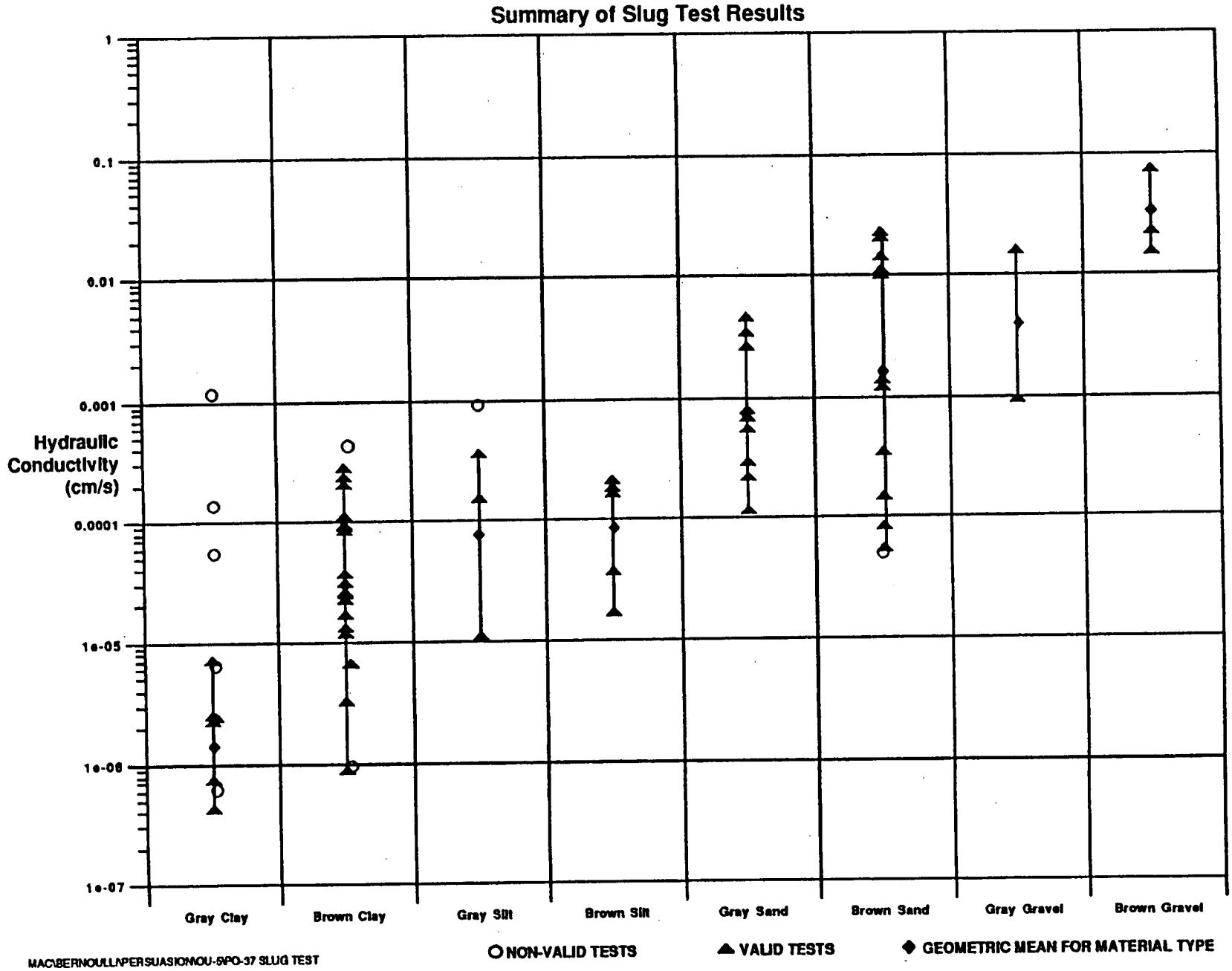

Figure 2-4 - Summary of Slug Test Results by Material Type

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SECTION 3

PACKER TESTS

Section 5 of the GT/VZ Work Plan (PARSONS 1993b) directed that packer tests be performed in two borings and in each of three pumping wells. The purpose of these packer tests was to collect data at different depths from one location which would provide a vertical profile of hydraulic conductivity of the gray clay. The locations of the two borings are shown in Figure 3-1 and are designated N (north) and S (south). Packer tests were to be performed on each distinct 5 foot interval of cohesive (clay) material in the borings, thus providing a vertical profile. Actual field conditions, though, did not allow for the vertical profiling and limited the number of tests conducted to one location.

3.1 Methods

Descriptions of methods used for packer testing are divided into the methods used for borehole advancement, geophysical sampling, and borehole abandonment (Subsection 3.1.1) and the methods used to conduct the actual packer testing (Subsection 3.1.2).

3.1.1 Borehole Advancement and Abandonment

Each boring was advanced by a Mobile Drill, B-80 hollow stem auger drilling rig using a 6-inch ID steel spin casing technique. Split spoon samples were collected continuously from the ground surface to the total depth of the borehole. To obtain undisturbed formation samples, the split spoon samplers were advanced ahead of the base of the spin casing.

Shelby tubes were collected within the lower clay unit of the clay till. To facilitate the collection of the Shelby tubes, an offset borehole was advanced and the tube was pushed into the desired horizon identified by split spoon samples from the initial borehole. Each Shelby tube was submitted to the laboratory for analysis for the following geotechnical parameters:

1) Grain size analysis with hydrometer
2) Moisture content
3) Soil density
4) Atterberg limits
5) Constant Head Permeability Tests (triaxial cell with back pressure)
6) Specific gravity
7) USCS classification

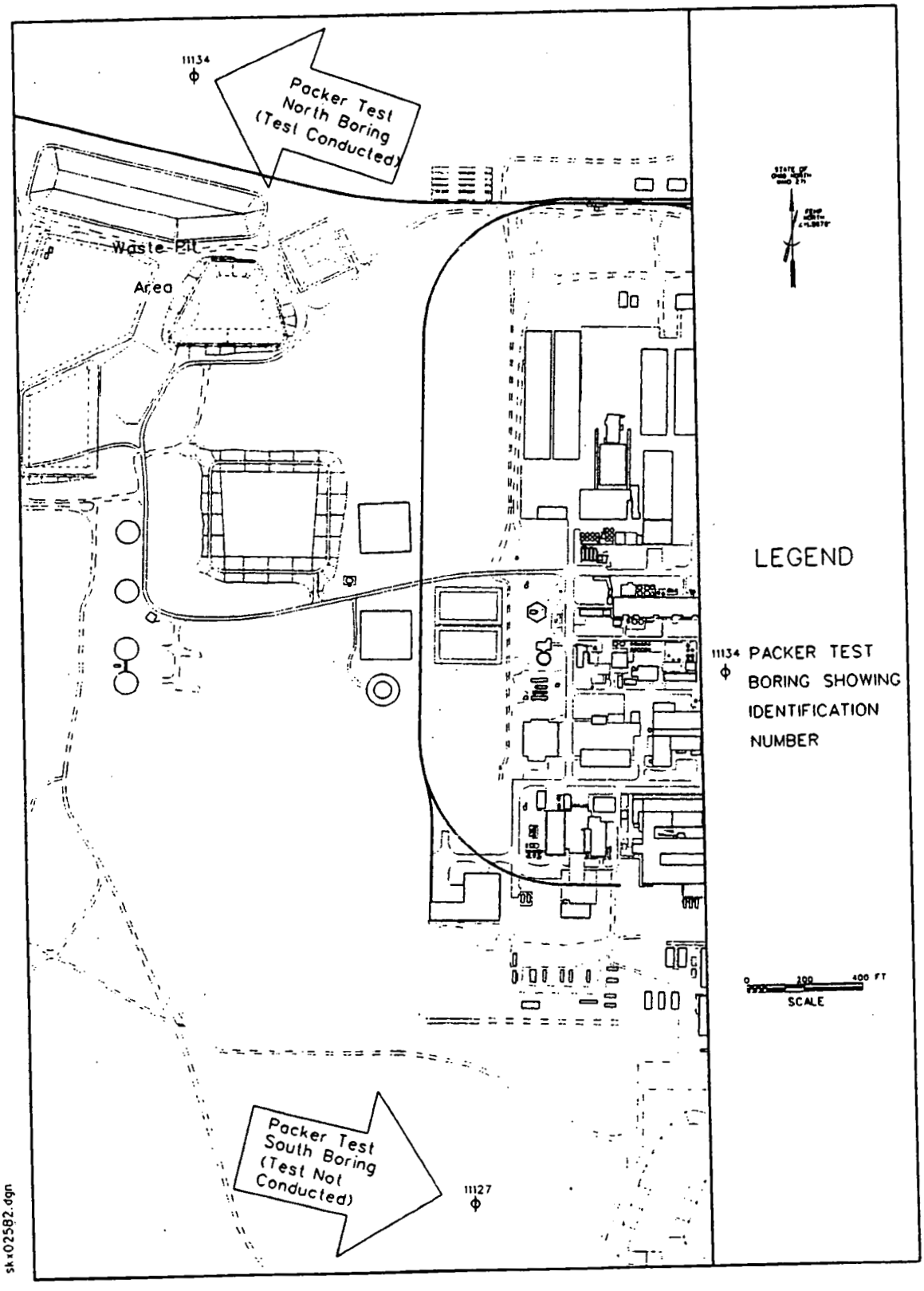

Figure 3-1 - Packer Test Locations

Potable water from the FEMP was used to facilitate circulation of the drilling cuttings to the surface and to lubricate the spin casing. The water was pumped from a truck-mounted holding tank into the borehole through a hose and swivel attached to the drill rig top, head drive. A conductor casing was installed into the surface of the borehole to contain the water circulated back from the borehole conductor casing through a discharge pipe into a steel tub. The water was then recirculated back to the truck-mounted holding tank. By containing the water in a closed loop in this manner, the total volume of water introduced to the boring was minimized.

When an appropriate 5-foot-length zone in the boring was identified by sampling, the spin casing was pulled back a sufficient length to facilitate the installation of the packer against the borehole walls and to provide for the 5-foot open hole below the packer base.

The work plan specified that the borehole walls be brushed prior to testing, however, examination of the split spoon samples indicated the presence of soft moist zones within the clay horizons that were to be packer tested. To minimize the potential of smearing the walls and sealing any fractures, the bore hole walls were not brushed prior to installation of the packer.

After the completion of packer testing, each borehole was abandoned by pumping a volclay grout slurry to within 1.5 feet of the ground surface. The remaining 1.5 feet were then capped with a cement seal.

3.1.2 Packer Test Methods

The work plan specified two types of packer tests and data analysis techniques which could be used to obtain values for hydraulic conductivity. The Constant Head Pump-In Test was the primary method of analysis while the Pressure Pulse Test was to be utilized if permeability of the till proved to be insufficient for analysis by constant head testing. The Constant Head Pump Test is described below. The Pressure Pulse Test was not utilized.

Constant Head Pump-In Test

The Constant Head Pump-In test procedures are described in USBR 7310 (1990). The analysis of the data produced from these procedures is based on the Theim (1906) steady state (or equilibrium) pumping test analytical method. The method presumes the following assumptions:

1) The tested interval is homogeneous, isotropic, and of uniform thickness.

2) The test interval fully penetrates the tested interval and receives or delivers water from the entire thickness of the interval.

3) Discharge or inflow is constant and has continued for sufficient duration to reach steady state or equilibrium conditions.

4) Flow to the well is horizontal, radial, and laminar.

The constant head pump-in test consists, generally, of the following steps:

1) When an appropriate horizon is identified, a length of the boring is isolated with the pressurized packer.

2) Water is injected into the isolated horizon of the boring, below the packer, at a constant pressure.

3) The volumetric flow of water into the well is monitored for following the establishment of steady state conditions.

4) Steps 1-3 are performed at each of three successive constant pressures. Pressures are selected based on a maximum injection pressure of 0.5 pounds per square inch (psi)/foot of depth to the midpoint of the horizon being tested, and the 20 psi maximum limitation of the transducer that measured the packed off horizon.

5) Values for hydraulic conductivity are calculated from flow rate, length and radius of test interval, and effective total head.

6) Following completion of the third pressure step, the well pressure is shut-in and the decay of the shut-in pressure is monitored.

3.2 Equipment

The packer used for the tests was constructed by Pennsylvania Drilling Company staff, and consisted of a rubber inflatable gland with stainless steel end caps and a port for the transducer to pass through. A second transducer was attached to the top of the packer to monitor pressure changes that would be encountered above the packer zone or as a result of upward leakage. The packer was attached to a hollow steel rod which was used to raise and lower the packer into the borehole and to provide a conduit for water to pressurize the borehole. Pressurized nitrogen gas was used to inflate the packer. A schematic diagram of the packer assembly is presented in Figure 3-2.

An In Situ XD 20 psi, electronic pressure transducer was used to measure the water pressure in the packed horizon. A 10 psi transducer was used to monitor the zone above the top of the packer. These transducers were connected to an In Situ SE-2000, 16 channel, electronic data logger.

PACKER TEST SETUP

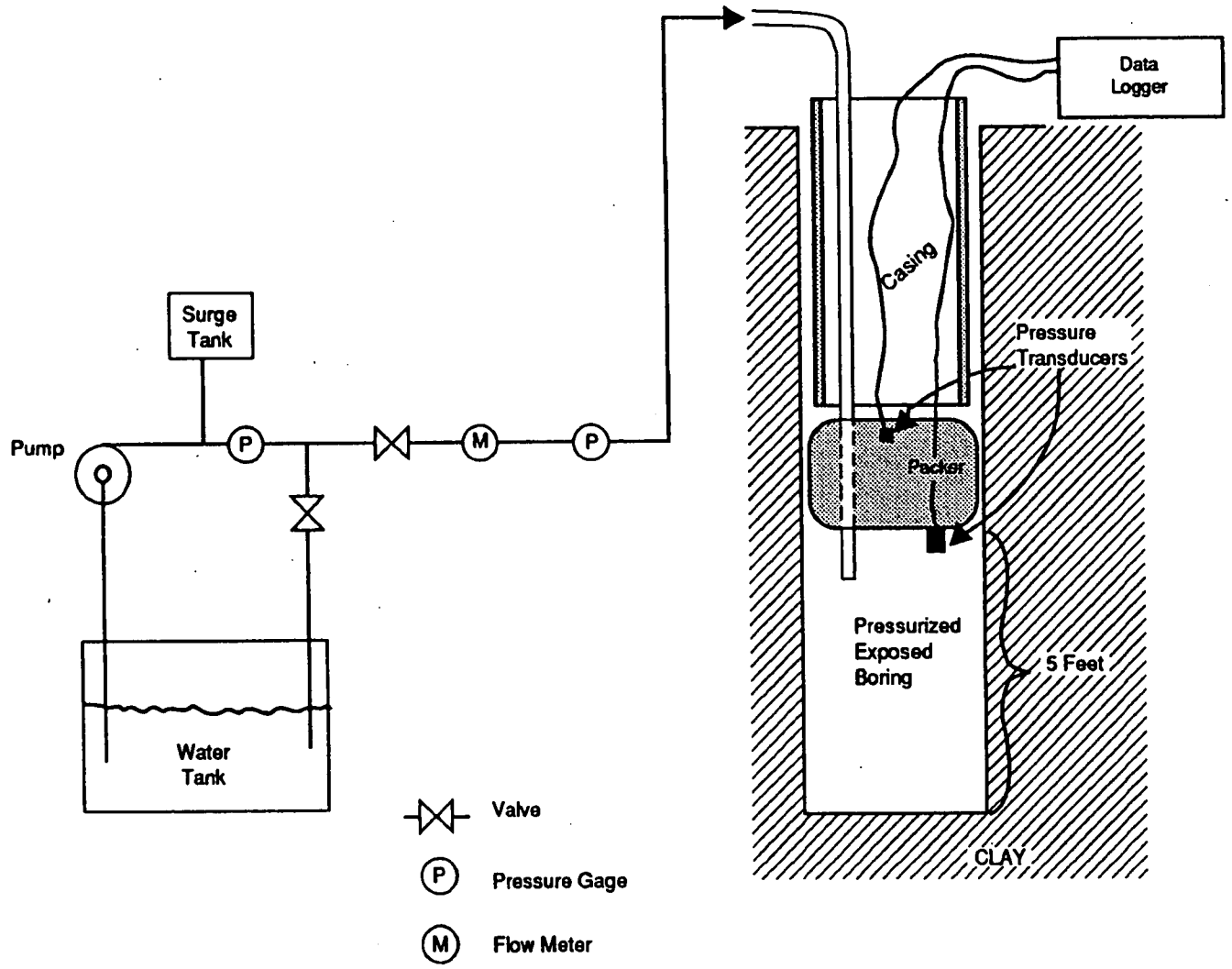

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Figure 3-2 - Packer Test Arrangement

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Potable water from a FEMP source was used for pressurizing the tested horizon. This water was stored in a truck-mounted tank and pumped via a Moyno positive displacement pump which was powered by the drilling rig. Water flowed from the Moyno pump to a surge tank and through the upline pressure gage. A valve and tee was mounted down line from the pressure gauge. The valve and tee were used to provide a method of bleeding off excess water to the packer line while it was being pressurized. The valve was also used to shut in the down hole pressure. Down line from the valve and tee was a Rockwell 50 gpm mechanical flow meter with digital recorder and sweep hand. The second or down line pressure gauge was installed in line after the flow meter. The 1-inch ID pressure hose went directly from the pressure gauge to the swivel at the top of the packer rods.

3.3 Analysis

Hydraulic conductivity values, K, were calculated according to the following formula:

$$K = \frac{q}{2\pi LH} \ln\left(\frac{L}{r}\right)$$

Where:

q = Constant rate flow into the test interval (ft^3/yr)
L = Length of test interval (ft)
$H_t = H_g + H_p$ = Total Head
H_g = Gravity head (ft)
H_p = Applied pressure head (ft)
r = Radius of borehole (ft)
K = Hydraulic Conductivity (ft/yr)

3.4 Results

Actual field conditions did not facilitate the collection of profile data. A single horizon of boring N was suitable for testing during the packer testing phase of the GT/VZ Investigation. The Constant Head Pump-In Test methods and data analysis methods were used to calculate values for hydraulic conductivity for this horizon.

Down to a depth of 17 feet BGS there were no suitable sections of cohesive material identified due to repeated failures in recovery to a depth of 11.5 feet and the presence of thin fine grain sand lenses from 11.5 feet to 17 feet. A 5-foot section of cohesive materials was identified from 17 to 22 feet, and a series of packer tests were conducted over the interval. The borehole was advanced to a depth of 34 feet and no additional suitable cohesive horizons of a minimum thickness of 5 feet were encountered. The borehole was terminated at a depth of 34 feet.

The horizon that was successfully tested between 17 and 22 feet at boring N-1, is described as soft to stiff dark gray silty clay with traces of sand and gravel, and medium plasticity. While traces of sand and gravel were noted to be present within the cohesive material matrix, no discrete lenses of granular materials suggestive of zones of elevated hydraulic conductivity were present within the tested horizon.

Packer testing on this horizon was conducted for three total pressures (12, 15, and 18 psi). The packer was successively inflated at 40, 60, and 80 psi for each of three initial attempts to test the interval. These three attempts failed when the packer inflation pressures were insufficient to seal it against the borehole wall and the injected water broke through. The packer was subsequently inflated to 100 psi which effectively sealed the packer against the borehole wall. A pressure of 100 psi is the maximum pressure recommended by the driller for inflation in an unconsolidated matrix.

During step 1, approximately 0.2 gallons of water were injected into the formation at a rate of 0.02 gpm (1.40×10^3 ft/yr). The flow rate in step 2 was 0.05 gpm (3.51×10^3 ft/yr) and 0.02 gpm for step 3. Since these three flow rates were relatively low, each step was run for a time period of 10 minutes to provide for a more accurate average measurement of flow per step.

Following the third step, the pressure was shut in and the holding pressure allowed to decay for 938 minutes. After approximately 660 minutes, the nitrogen in the packer leaked off sufficiently to allow the packer to deflate and break the seal with the borehole wall.

The equations for calculating values for hydraulic conductivity from the constant head pump-in test have been discussed in Subsection 3.3. Based on these calculations, the values for the parameters to determine hydraulic conductivities and the values for hydraulic conductivities are presented in Table 3-1.

The results of the packer test were relatively consistent between the three steps. The range of hydraulic conductivity values calculated from the test fall within the mid-range of values expected for silt and glacial till, (Driscoll 1986, and Freeze & Cherry 1979) which are the predominant lithologies of the material that was tested.

Table 3-1 - Packer Test Results

Step Number	Discharge, Q		Head (total)	Hydraulic Conductivity	
	(gpm)	(ft/yr)	(feet)	(ft/day)	(cm/sec)
1	0.02	1.4×10^{-3}	27.7	1.3×10^{-2}	4.6×10^{-6}
2	0.05	3.5×10^{-3}	34.5	2.6×10^{-2}	9.3×10^{-6}
3	0.02	1.4×10^{-3}	41.6	8.8×10^{-3}	3.1×10^{-6}
Geometric Mean				1.4×10^{-2}	5.1×10^{-6}

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SECTION 4

YIELD TESTS

Seven yield tests were performed in accordance with Section 6 of the GT/VZ Work Plan (PARSONS 1993b). The purpose of these tests was to determine the yield capability of various sand units so as to select locations for CRTs. In addition, the closest wells surrounding the test well were monitored for water level changes. Although response in these wells was not expected due to the low permeability and high heterogeneity of the surrounding sediments, it was felt that an attempt to detect a response was warranted No response in any of the surrounding wells was noted, however.

Yield tests were completed at the following locations (Figure 1-1):

1) North of the Old Drum Bailing Area, Well 1274
2) South of the Pilot Plant Building, Well 1259
3) Waste Pit Area, Wells 1077 and 11214
4) Plant 1 Pad Area, Wells 1339 and 11112
5) Plant 8 Area, Well 1785

4.1 Methods

The GT/VZ Work Plan called for each well to be pumped at three successively higher rates, starting at 1 gpm, for a maximum total period of 8 hours. Each step was to be of equal duration, 1 hour long if the drawdown trend stabilized, or shorter if the well began to dewater. Pumping rates for the second and subsequent steps were determined in the field, based on the observed response during the first step.

Observation wells in close proximity to the test well were instrumented with electronic data loggers and pressure transducers, while the water levels in others were measured manually.

To verify data logger measurements, early time drawdown and recovery measurements were made manually in each test well. Manual measurements were also made periodically in the instrumented observation wells. All manual water level measurements were taken relative to the top of the casing, and recorded on forms as specified by the GT/VZ Work Plan.

During the pumping phase of the tests, flow rates were measured and recorded at every minute for the first 6 minutes, at 2-minute intervals from 6 minutes to 20 minutes, and at 10 minute intervals for the duration of each step. The discharge rate was maintained within ±5 percent by monitoring the pump control box and the flow meter.

4.2 Equipment

Figure 4-1 shows the general equipment arrangement used for the yield tests.

All wells were initially pumped with a GRUNDFOS 1.8-inch outside diameter REDIFLO-2 submersible pump. This pump was selected because of its versatility for use in either 2-inch, or 4-inch wells and its variable flow range from < 1 gpm to 5 gpm. The discharge rate from the pump was manually adjusted on the pump control box.

Flow rates were measured with either a Hersey MVR 30 or Sensus mechanical flow meter with totalizer. The flow meter was installed in line with the discharge hose from the pump. Flow rates were periodically checked by comparison with a timed discharge into a graduated container.

Multi-channel data loggers (In Situ HERMIT 1000 and 2000 series), and In Situ pressure transducers were used to measure and record water levels.

Manual water level measurements were made with SOLINST electronic water level measuring tapes.

Water from wells 1274, 1259, 1077, and 1339 was discharged to truck-mounted 500-gallon tanks. Water produced from wells 11112 and 11214 was discharged to 1,860 and 1,900-gallon truck-mounted tanks. Discharged water was subsequently transferred to the FEMP general sump. Water from Well 1785 was pumped into a 500-gallon holding tank and subsequently transferred to the FEMP water treatment facility.

4.3 Analysis

The yield test data was analyzed to determine sustainable CRT pumping rates and to provide a pumping rate for the subsequent constant rate pumping tests, that were conducted within the GT/VZ Investigation.

The pumping rate for the CRT was derived from the step test data by projection of step drawdown data for each pumping rate to 10,000 minutes. Well drawdown for each step is plotted against time on a semi-logarithmic plot, the stable drawdown portion of each step response is then extrapolated to determine a time in the future at which the pump inlet would become uncovered if the discharge rate were held constant and steady state conditions were not reached. For the GT/VZ investigation, a maximum pumping time of 7 days or 10,000 minutes was targeted. It was felt that sustained low discharge pumping for 7 days would be needed to established communication for any great distance in the overburden sediments. This is due to the low permeability and heterogeneous nature. For each step test an estimate is made, based on the slopes of the individual rate steps, of a pumping rate which would not uncover the pump inlet during the first 10,000 minutes of pumping.

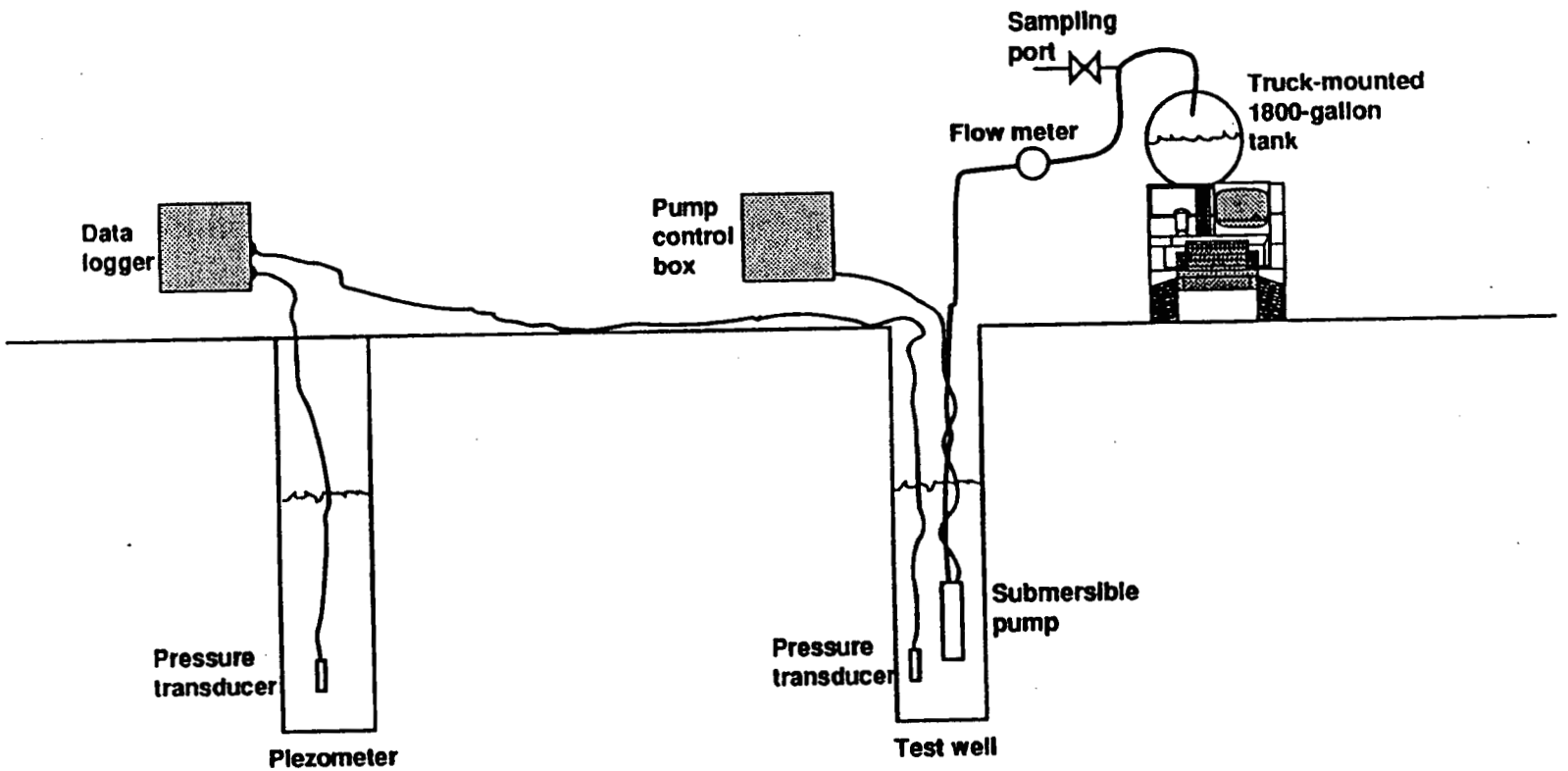

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Figure 4-1 - General Equipment Arrangement

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4.4 Results

A narrative of the specific results is provided for each of the tested wells as follows:

4.4.1 South of the Pilot Plant Building (Well 1259)

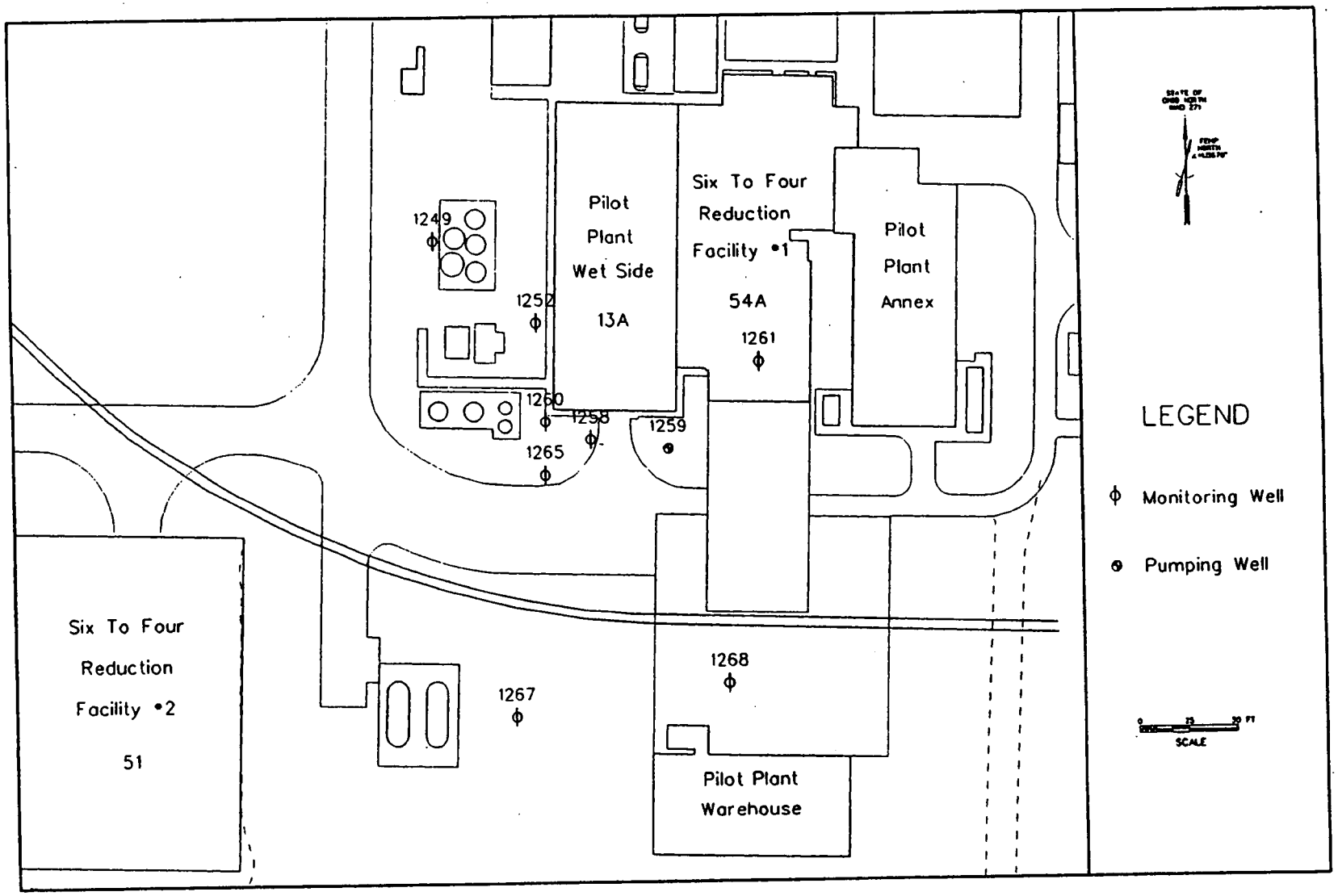
Well 1259 is located south of the Pilot Plant Building. The predominant lithology is brown silt. The observation wells used and their distances from the test well are listed in Table 4-1 and are shown in Figure 4-2.

Table 4-1 - Observation Wells, 1259 Yield Test

Well No.	Depth to Screen Bottom (Feet)	Distance from Well 1259 (Feet)
1249	7.5	160
1252	9.0	85
1258	20.2	40
1260	9.0	65
1261	20.0	65
1265	9.0	65
1267	16.5	155
1268	15.0	125

A yield test was performed on July 8, 1993 during which the well de-watered after 11 minutes of pumping at an average discharge rate of 0.65 gpm. During this short pumping period, a stable first step pumping rate of 1.0 gpm was not achieved. No drawdown was detected in any of the observation wells.

The limited yield from this well, coupled with the reported silt lithology, suggests that the hydraulic conductivities in the area are relatively low. Therefore, the sustainable pumping rate would be less than the minimum established rate of 1 gpm and additional yield or pump testing was not conducted.



MONITORING WELLS, 1259 YIELD TEST

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Figure 4-2 - 1259 Yield Test, Well Layout

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4.4.2 North of the Old Drum Bailing Area (Well 1274)

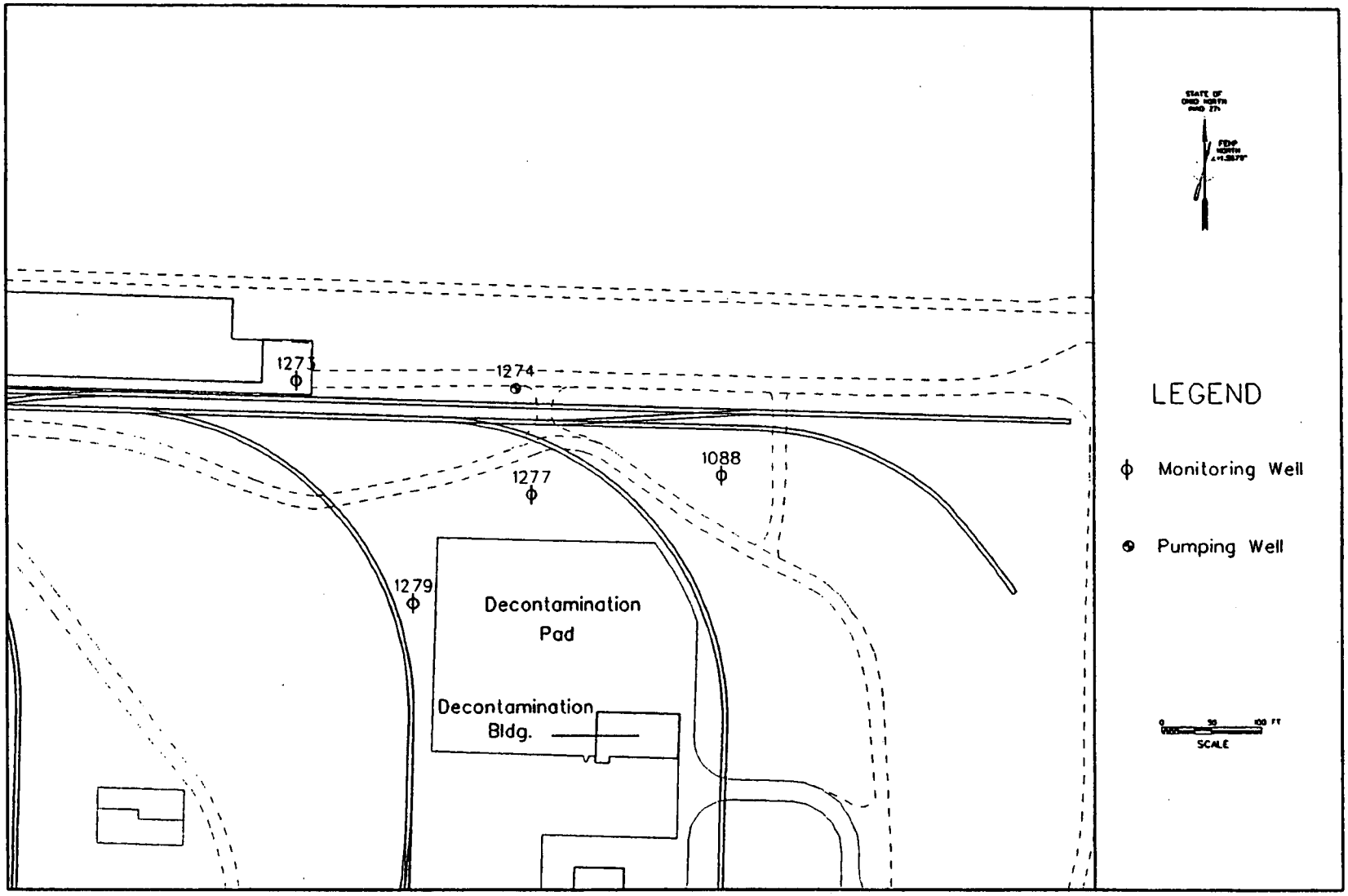
Well 1274 is located in the northern part of the site, north of the old drum bailing area. The predominant lithology is gray clay with a 2.5-foot sand lense. The observation wells used and their distances from the test well are listed in Table 4-2 and shown in Figure 4-3.

Table 4-2 - Observation Wells, 1274 Yield Test

Well No.	Depth (Feet)	Distance from Well 1274 (Feet)
1088	18.0	225
1273	13.5	225
1277	9.0	106
1279	15.0	237

During a yield test performed on August 8, 1993, well 1274 de-watered after 3.5 minutes of pumping at an average rate of 0.85 gpm. It was not possible to achieve stable flow at 1.0 gpm. No drawdown was detected in any of the observation wells.

The limited yield of Well 1274 suggests that the area is not suitable for a CRT.



MONITORING WELLS, 1274 YIELD TEST

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/dgn/bmp/skx02511.dgn

Figure 4-3 - 1274 Yield Test, Well Layout

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4.4.3 Waste Pit Area (Well 1077)

Well 1077 is located in the Waste Pit Area in the northwest portion of the FEMP. The predominant lithology of the well is clay with 9.0 feet of well-graded sand-gravel mixture under confined conditions. Observation wells and their distances from the test well are listed in Table 4-3 and shown in Figure 4-4.

Table 4-3 - Observation Wells, 1077 Yield Test

Well No.	Depth (Feet)	Distance from 1077 (Feet)
1076	50.0	66
1030	32.0	233
1765	22.5	526.5
1768	17.5	283.5
1775	30.0	281.4
11077	21.5	346.4

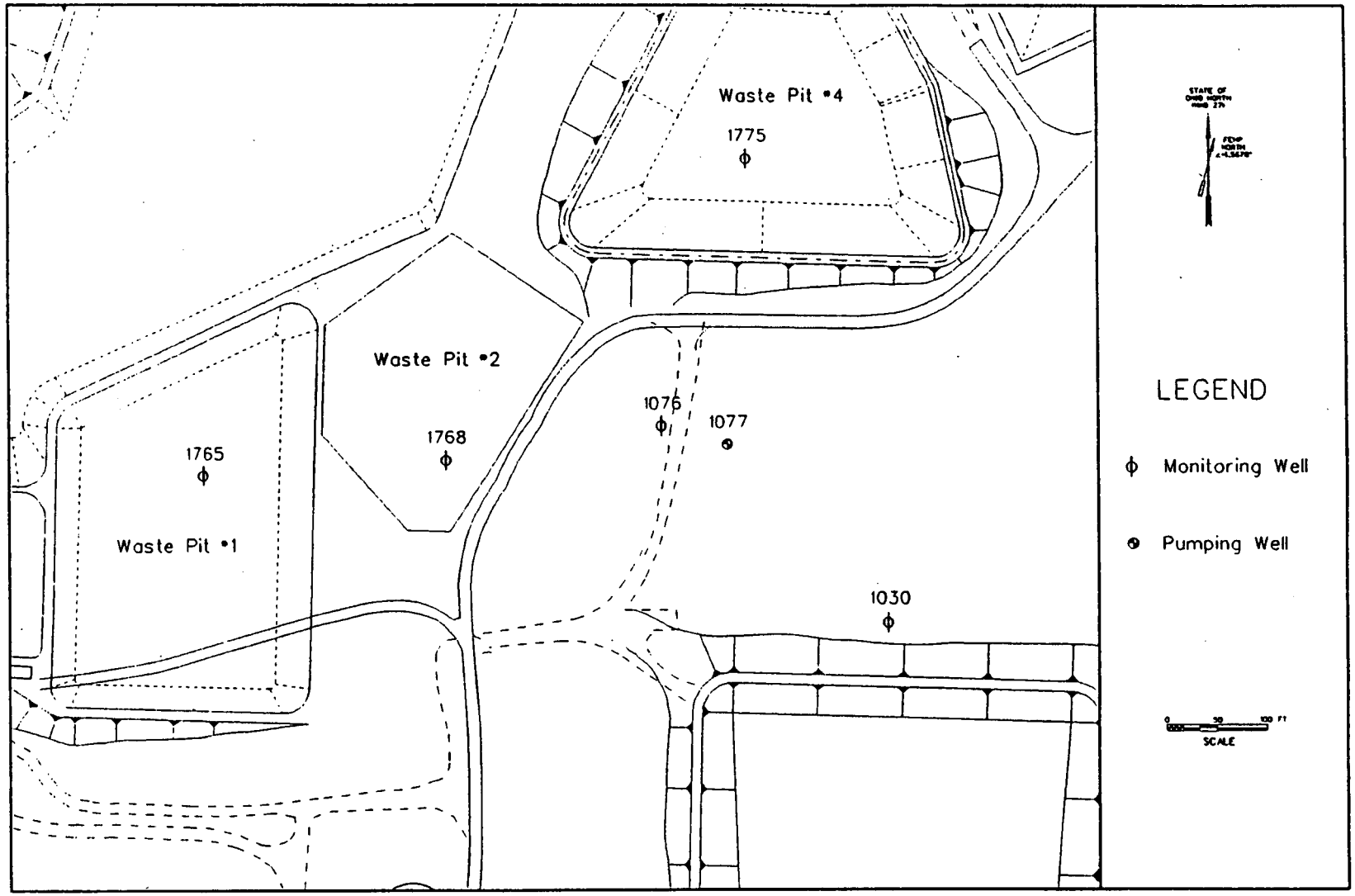
Well 1077 was initially pumped on July 30, 1993. During this test, three steps of 1 hour duration were achieved at the following discharge rates:

1) Step 1: 1.0 gpm
2) Step 2: 2.5 gpm
3) Step 3: 4.0 gpm

Step three brought the pumping level to within 0.5 feet of the pump inlet, and the test was subsequently terminated at the end of the step. No drawdown was detected in any of the observation wells, and after the pumping ceased, the well displayed a very slow rate of recovery.

Since the drawdown within the well was rather significant during the range of pumping steps during this test, it was subsequently retested on August 12, 1993. During this second test, the well was initially pumped in 2-hour step increments at the following rates:

1) Step 1: 1.0 gpm
2) Step 2: 1.5 gpm
3) Step 3: 2.0 gpm



MONITORING WELLS, 1077 YIELD TEST

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Figure 4-4 - 1077 Yield Test, Well Layout

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Discharge water holding capacity was a limiting factor, which limited Step 4 to 80 minutes and Step 5 to 50 minutes at the following discharge rates:

4) Step 4: 2.5 gpm
5) Step 5: 3.0 gpm

The well responded differently during the second yield test with a much lower rate of drawdown over time for steps 3, 4, and 5. This abrupt change in slope is attributed to a heavy rain which occurred during the test. Due to the inconsistency with the first two steps of both of the yield tests, the results from steps 3 through 5 are neglected. No drawdown was detected in any of the observation wells during the test. As in the first test, the well exhibited very slow recovery.

Time-drawdown plots for Step Tests A and B are shown in Figures 4-5 and 4-6. Projection of the drawdown curves for the first yield test (Test A), which was conducted on July 30, 1993, suggests that a pumping rate of 1.0 gpm could be sustained for a period > 10,000 minutes.

Projection of the drawdown curves for the first two steps of the second yield test (Test B) suggest that sufficient drawdown is not available in 1077 to pump the well at a rate of 1.0 gpm for a time period greater than 10,000 minutes. Since the first step rate (1.0 gpm) of the second test ran for a longer time period, it is considered a better indication of sustained yield. Sustained yield is thus conservatively estimated as < 1.0 gpm. The best actual specific capacity occurred when the well was pumped at a rate of 1.0 gpm during Test A.

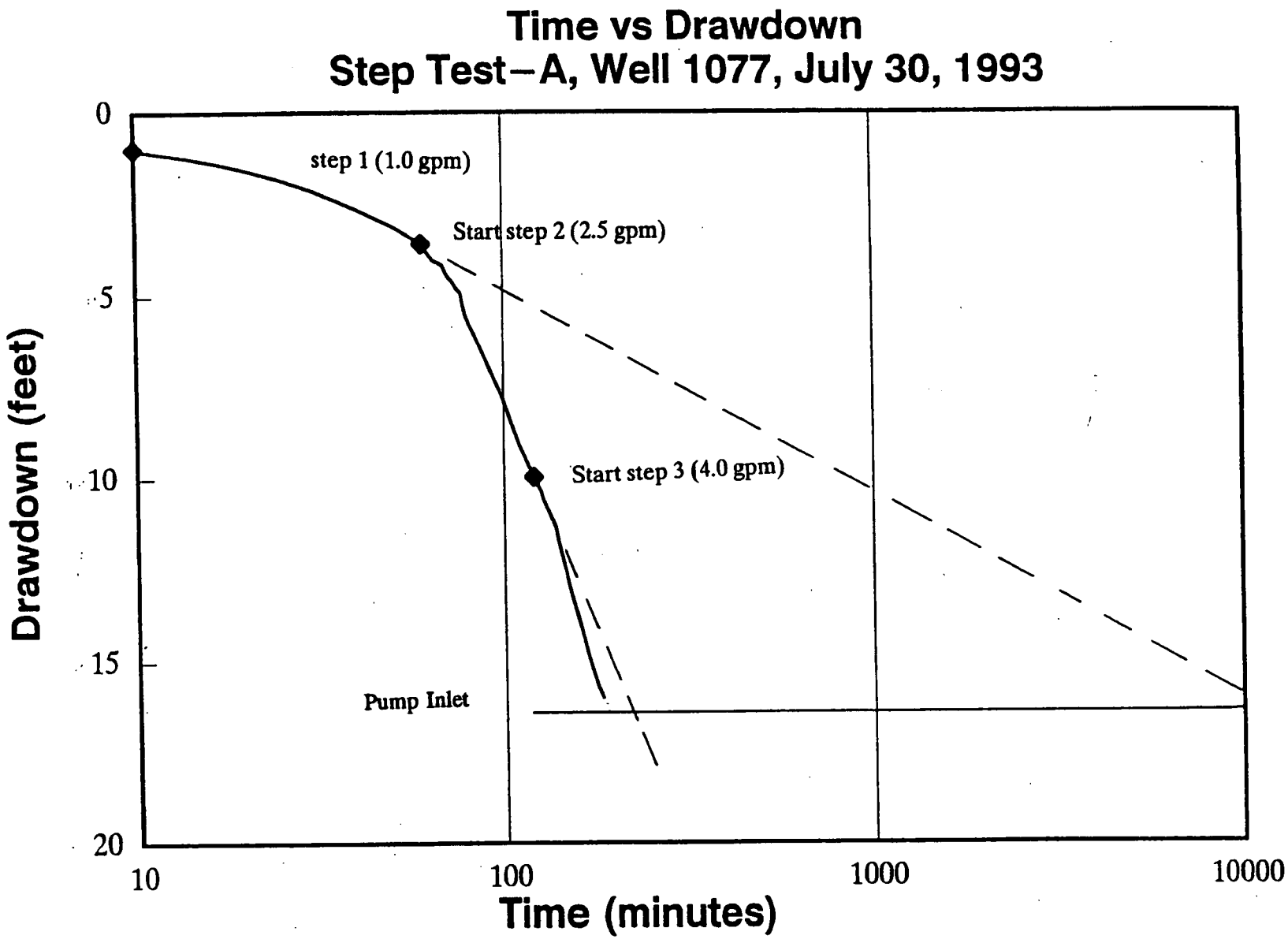

Figure 4-5 - Yield Test A, Well 1077

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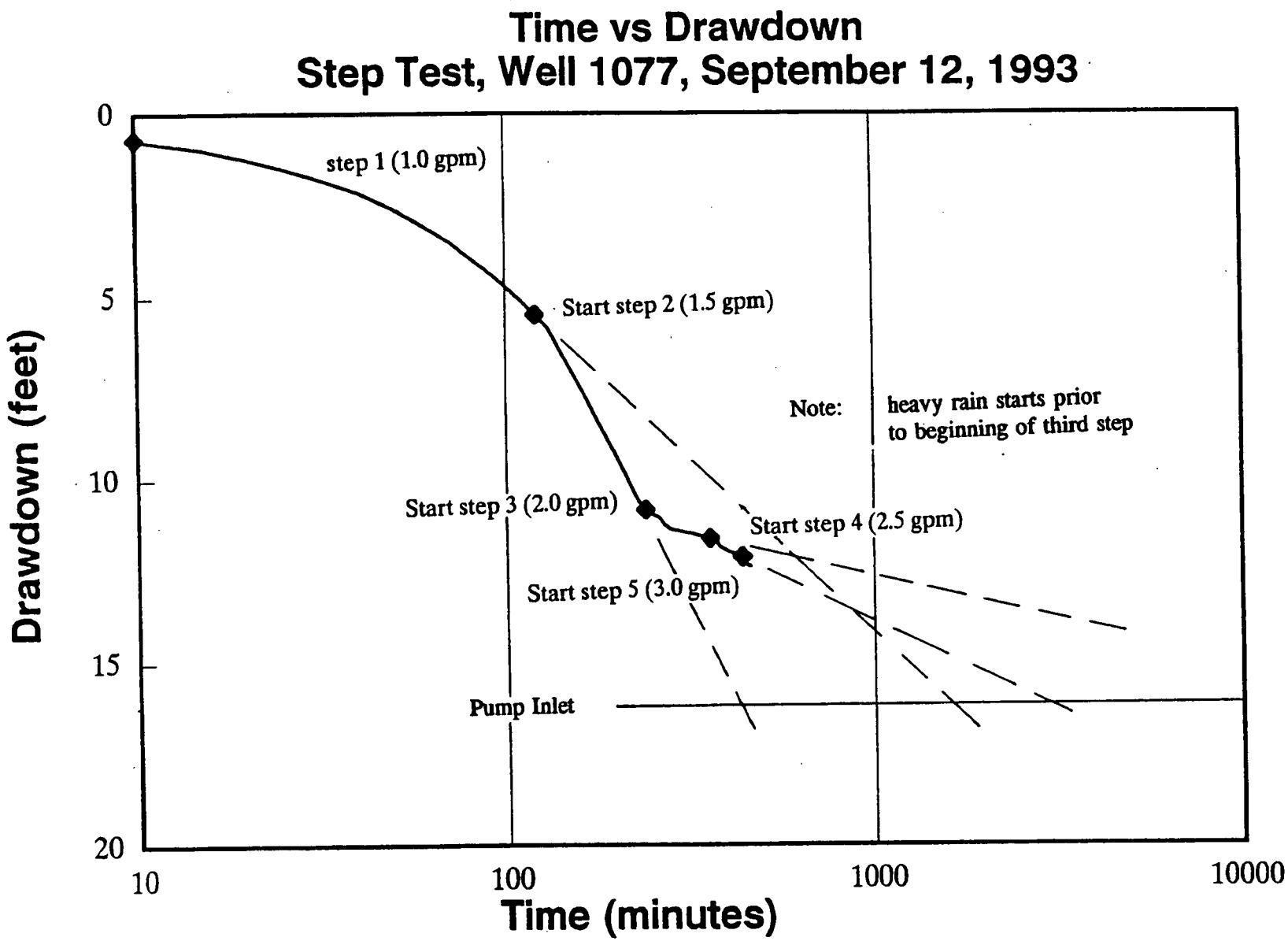

Figure 4-6 - Yield Test B, Well 1077

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4.4.4 Plant 1 Pad Area (Well 1339)

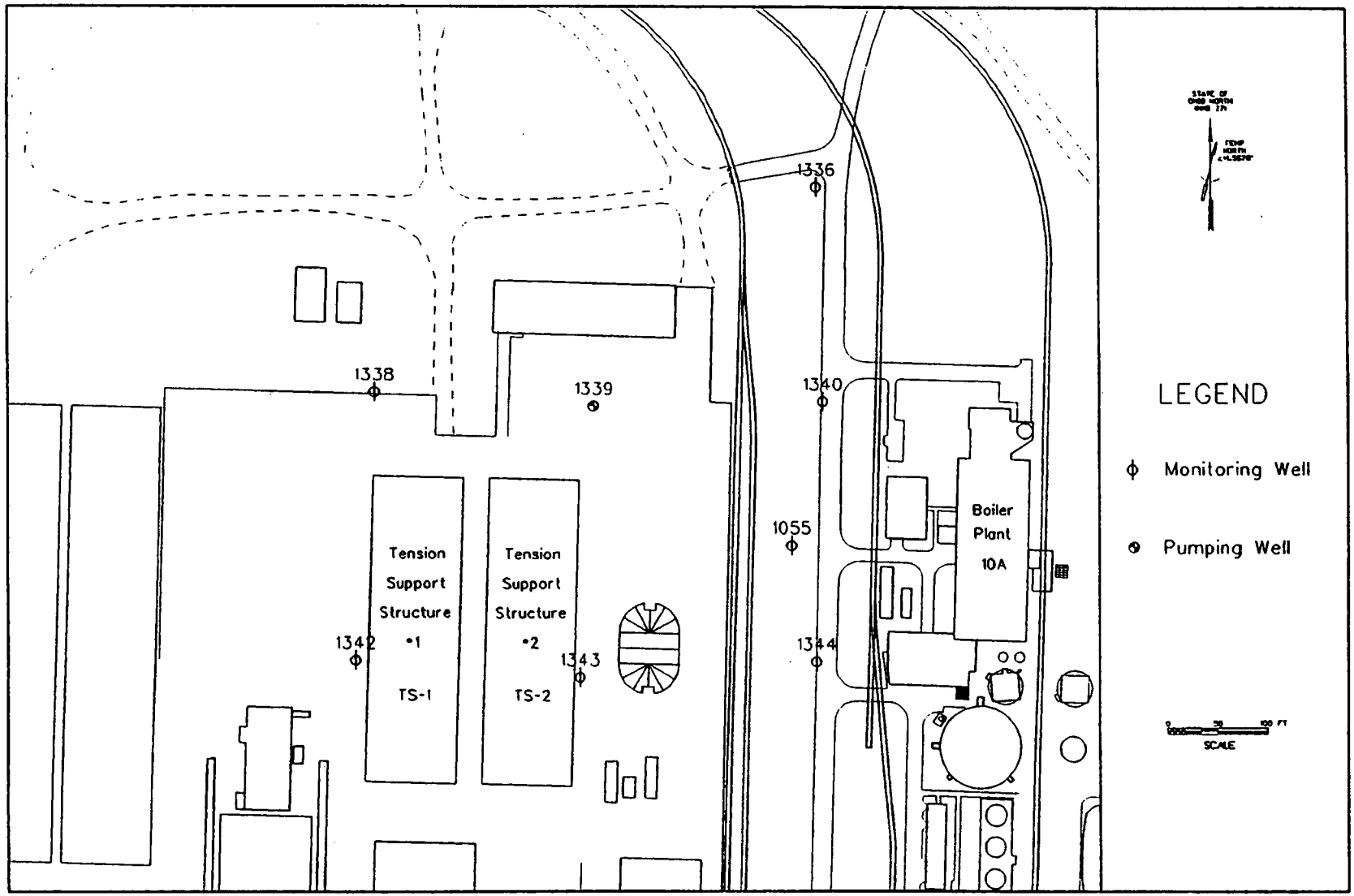
Well 1339 is a 2-inch ID well located southwest of the boiler plant in the Pad 1 Area. The predominant lithology is brown sand under unconfined conditions at a depth of 5 to 11.5 feet BGS. The sand layer is fully penetrated by Well 1339. Observation wells and their distances from the test well are listed in Table 4-4 and shown in Figure 4-7.

Table 4-4 - Observation Wells, 1339 Yield Test

Well No.	Depth (Feet)	Distance from Well 1339 (feet)
1055	20.0	235
1336	20.8	312
1338	10.5	225
1340	20.0	230
1342	18.0	350
1343	10.5	267
1344	20.0	337

Well 1339 was initially tested on July 15, 1993. The first step pumping rate was 1.85 gpm for a period of 1 hour at which a stable drawdown was achieved. Two subsequent stable drawdown steps of 2.9 gpm and 4.0 gpm were also achieved during this test, but discharge water holding capacity limited the second and third steps to a duration of less than 60 minutes. No drawdown was detected in any of the observation wells during the test.

Projection of step drawdown curves from Test A, shown in Figure 4-8, suggest that pumping at a rate of 1.85 gpm could extend to >10,000 minutes. Although the time duration of Step 2 was only 20 minutes, the projection of the drawdown curve at the Step 2 rate of 2.9 gpm suggests that the well could not be pumped in excess of 10,000 minutes. If the well were pumped at a rate of 4.0 gpm, the projection of the drawdown curve suggests that it would dewater in less than 200 minutes. Subsequent yield testing of Well 1339 confirmed that a rate of 4 gpm could not be sustained. Sustainable yield for Well 1339 is estimated conservatively at 1.85 gpm for 10,000 minutes.



MONITORING WELLS, 1339 YIELD TEST

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Figure 4-7 - 1339 Yield Test, Well Layout

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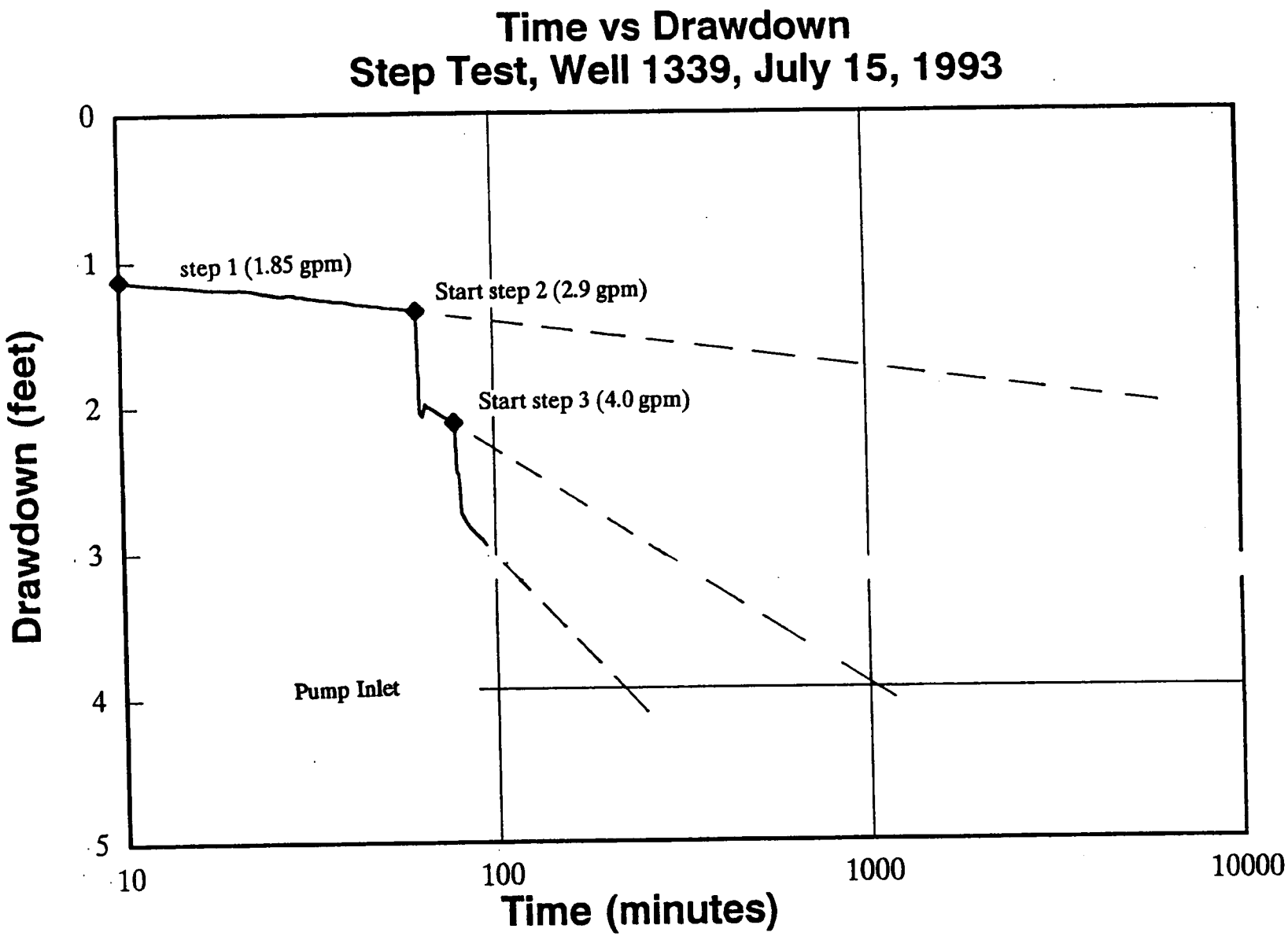

Figure 4-8 - Yield Test, Well 1339

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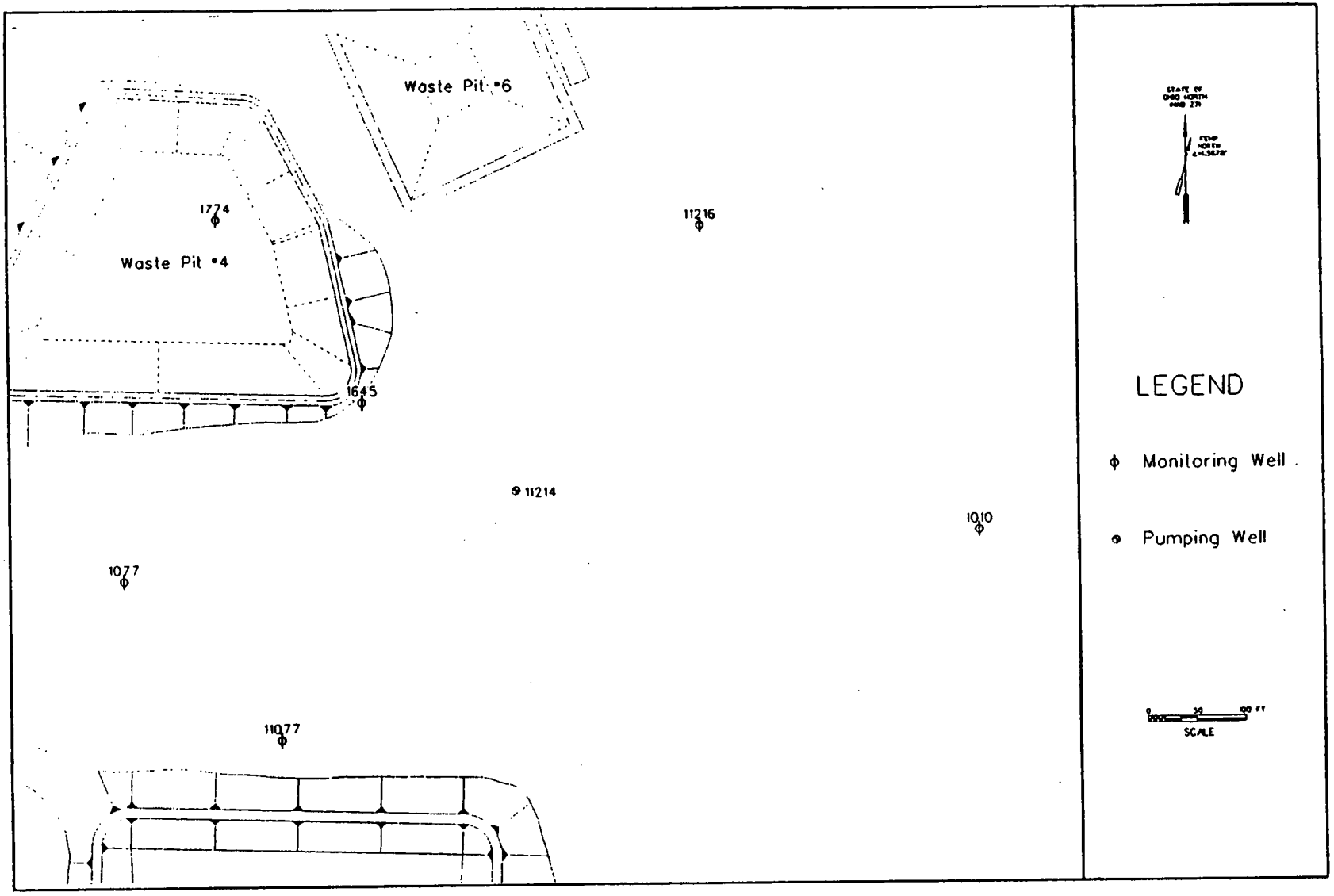
4.4.5 Waste Pit Area (Well 11214)

Well 11214 is a 4-inch ID well located in the waste pit area, approximately 400 feet east of Well 1077. The predominate lithology is 10 feet of fine sand and gravel under confined conditions overlain by an upper clayey sand unit. The sand and gravel layer is fully penetrated by Well 11214. Boring logs of adjacent observation wells suggest that the sand unit extends from 14 to 24 feet deep and is under confined conditions. The sand unit is believed to represent a 20-foot-wide channel that trends north-south (Figure 4-16). Observation wells and their distances from the test well are listed in Table 4-5 and shown in Figure 4-9.

Table 4-5 - Observation Wells, 11214 Yield Test

Well No.	Depth (Feet)	Distance from Well 11214 (Feet)
1077	33.0	411.3
1645	25.5	180
1774	31.0	407.1
1010	27.0	475.1



MONITORING WELLS, 11214 YIELD TEST

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/dgn/bmp/skx02514.dgn

Figure 4-9 - 11214 Yield Test, Well Layout

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Well 11214 was step/yield tested on September 2, 1993. During this test, five full steps were achieved at the following discharges and times:

1)	Step 1: 1.0 gpm	100 minutes
2)	Step 2: 1.5 gpm	100 minutes
3)	Step 3: 2.0 gpm	60 minutes
4)	Step 4: 2.5 gpm	70 minutes
5)	Step 5: 3.0 gpm	80 minutes
6)	Step 6: 3.5 gpm	77 minutes

The test was terminated when the pumping level reached the pump inlet 77 minutes into step 6 at a rate of 3.5 gpm. No drawdown was detected in any of the observation wells, but subsequent drilling for a pump test revealed all of the observation wells were outside of the channel. The well recovered to within 76 percent after 20 minutes, and 100 percent within 15 hours. Projection of step drawdown curves shown in Figure 4-10 suggest that the well could be pumped at a rate of 2.5 gpm for a time period greater than 10,000 minutes.

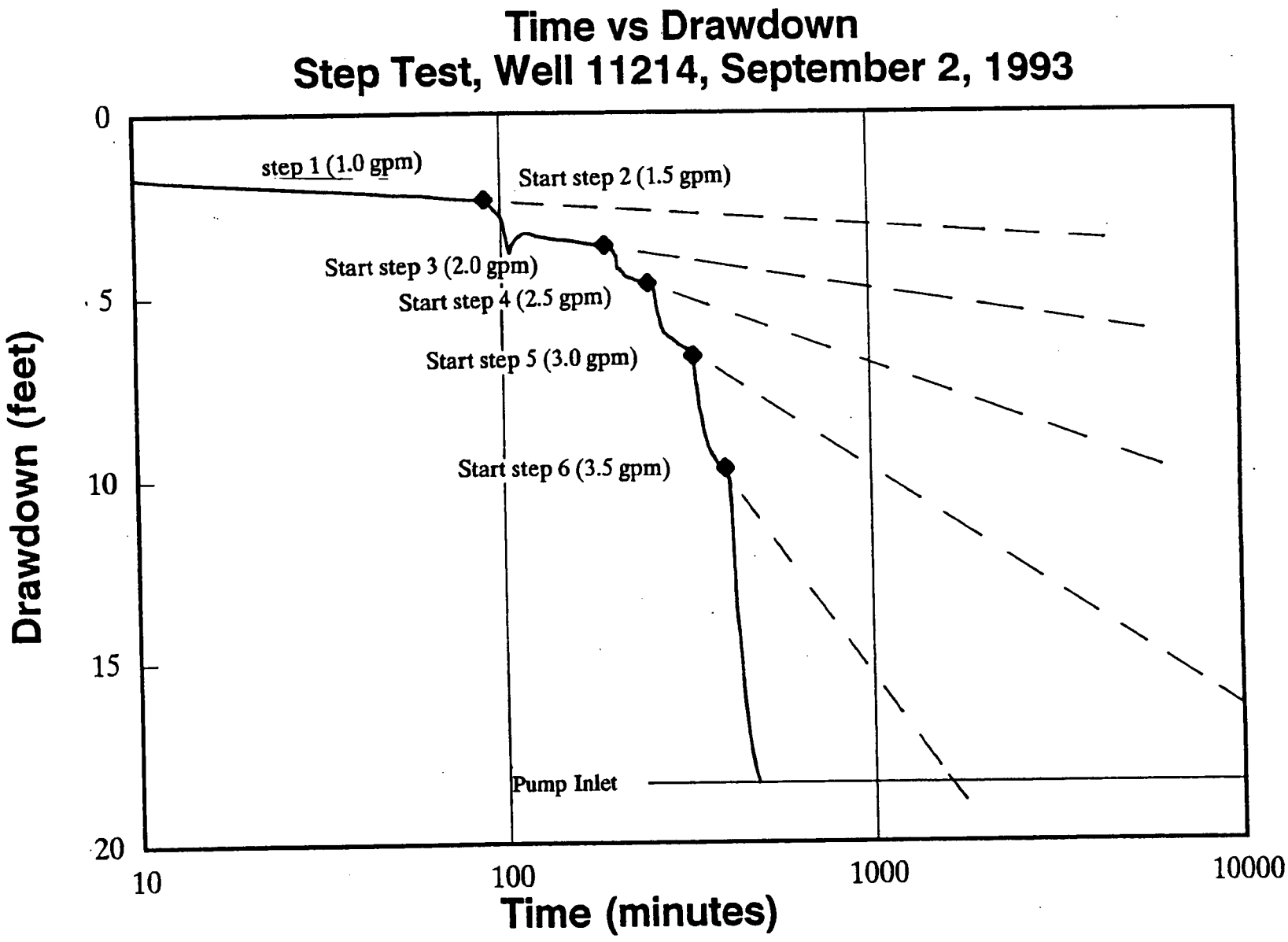

Figure 4-10 - Yield Test, Well 11214

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4.4.6 Plant 1 Pad Area (Well 11112)

Well 11112 is a 4-inch ID well that was installed in the Pad 1 Area. The predominant lithology is fine to coarse sand and gravel that is present from 4 to 14 feet under unconfined conditions. The sand and gravel layer is fully penetrated by Well 11112. Boring logs of the adjacent observation wells and Well 1339 suggest that these lithologic conditions are typical of the Pad 1 Area. Observation wells and their distances from the test well are shown in Figure 4-11 and are listed in Table 4-6.

Table 4-6 - Observation Wells, 11112 Yield Test

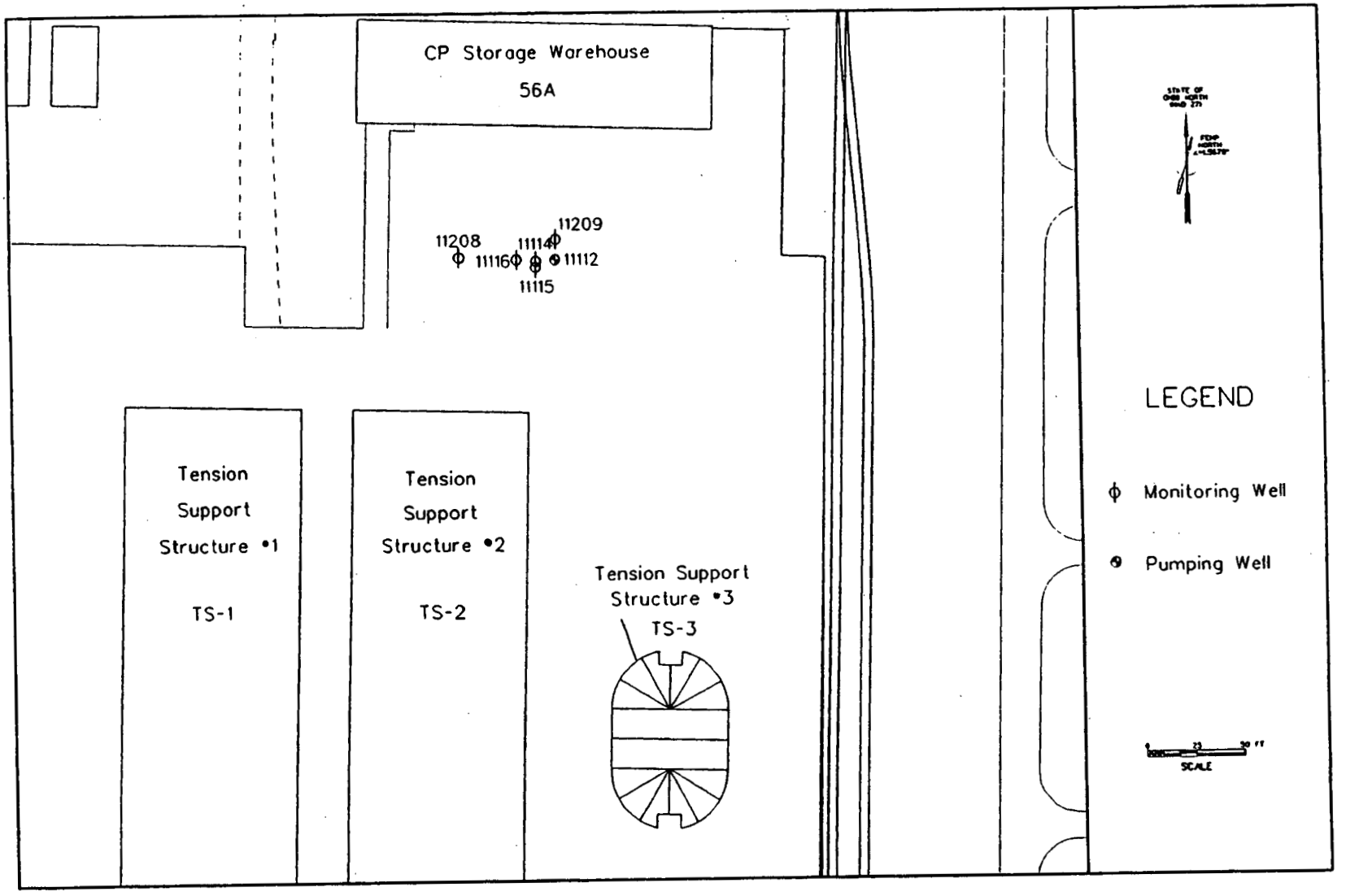
Well No.	Depth (Feet)	Distance from Well 11112 (Feet)
11114	17.5	9.99
11115	20.5	10.86
11116	16.0	19.97
11208	14.5	49.67
11209	21.5	10.18

The yield of Well 11112 was tested on September 24, 1993. The test was conducted at the following discharges and times:

1) Step 1: 1.0 gpm 70 minutes
2) Step 2: 1.5 gpm 60 minutes
3) Step 3: 2.0 gpm 60 minutes
4) Step 4: 2.5 gpm 50 minutes (de-water)

The test was terminated when the pumping level reached the pump inlet. The well recovered to within 95 percent of the pre-pumping static water level after 30 minutes.

The yield test data from Well 11112 are summarized in Table 4-6. Projection of the step drawdown curves, shown in Figure 4-12, suggest that the well could be pumped at a rate of 2.0 gpm for a time period greater than 10,000 minutes.



MONITORING WELLS, 11112 YIELD TEST

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/dgn/bmp/skx02515.dgn

Figure 4-11 - 11112 Yield Test, Well Layout

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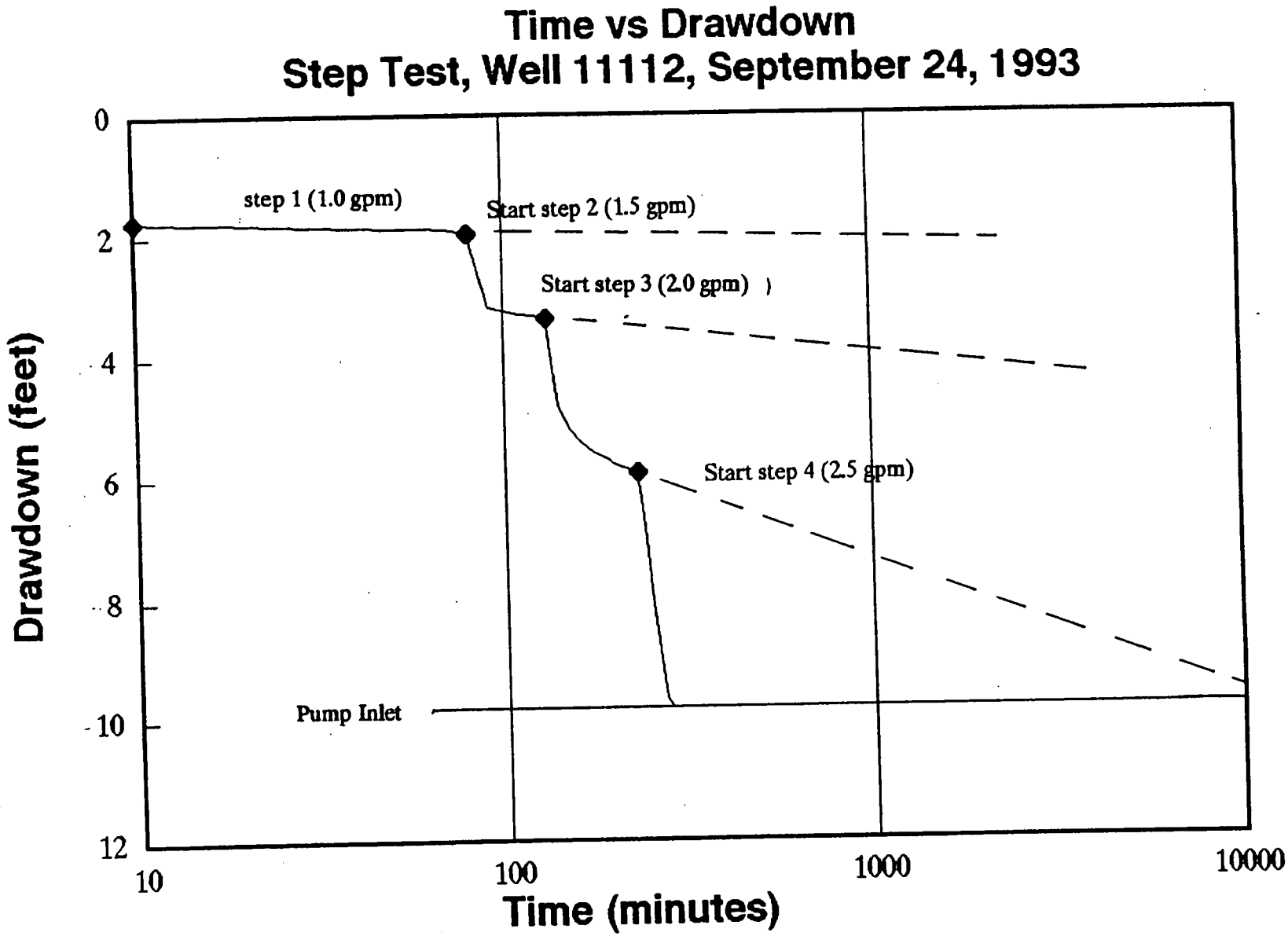

Figure 4-12 - Step Test, Well 11112

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4.4.7 Plant 8 Area (Well 1785)

Well 1785 is a 6-inch ID stainless steel well located in the Plant 8 area. The predominant lithology is fine to coarse sand and gravel from 8 to 18 feet below ground surface. The sand and gravel layer is fully penetrated by Well 1785. Boring logs from the Plant 8 observation well network that was installed during the GT/VZ investigation suggest that similar lithologic conditions are present throughout the Plant 8 area and Plant 2/3 area. Observation wells and their distances from the test well are shown in Figure 4-13 and listed in Table 4-7.

Table 4-7 - Observation Wells, 1785 Yield Test

Well No.	Depth (Feet)	Distance from Well 1785 (Feet)
11120	21.0	10.58
11118	7.5	10.82
11121	19.6	29.67
11211	23.0	11.27
1232	19.6	31.46

Well 1785 was initially yield tested on October 27, 1993. During the test, an initial step lasting 100 minutes was achieved at a rate of 0.85 gpm, but the well dewatered during the second step after a period of 80 minutes, at a pumping rate of 1.35 gpm. The well was allowed to recover and was subsequently pumped at a rate of 1.0 gpm for a period of 100 minutes.

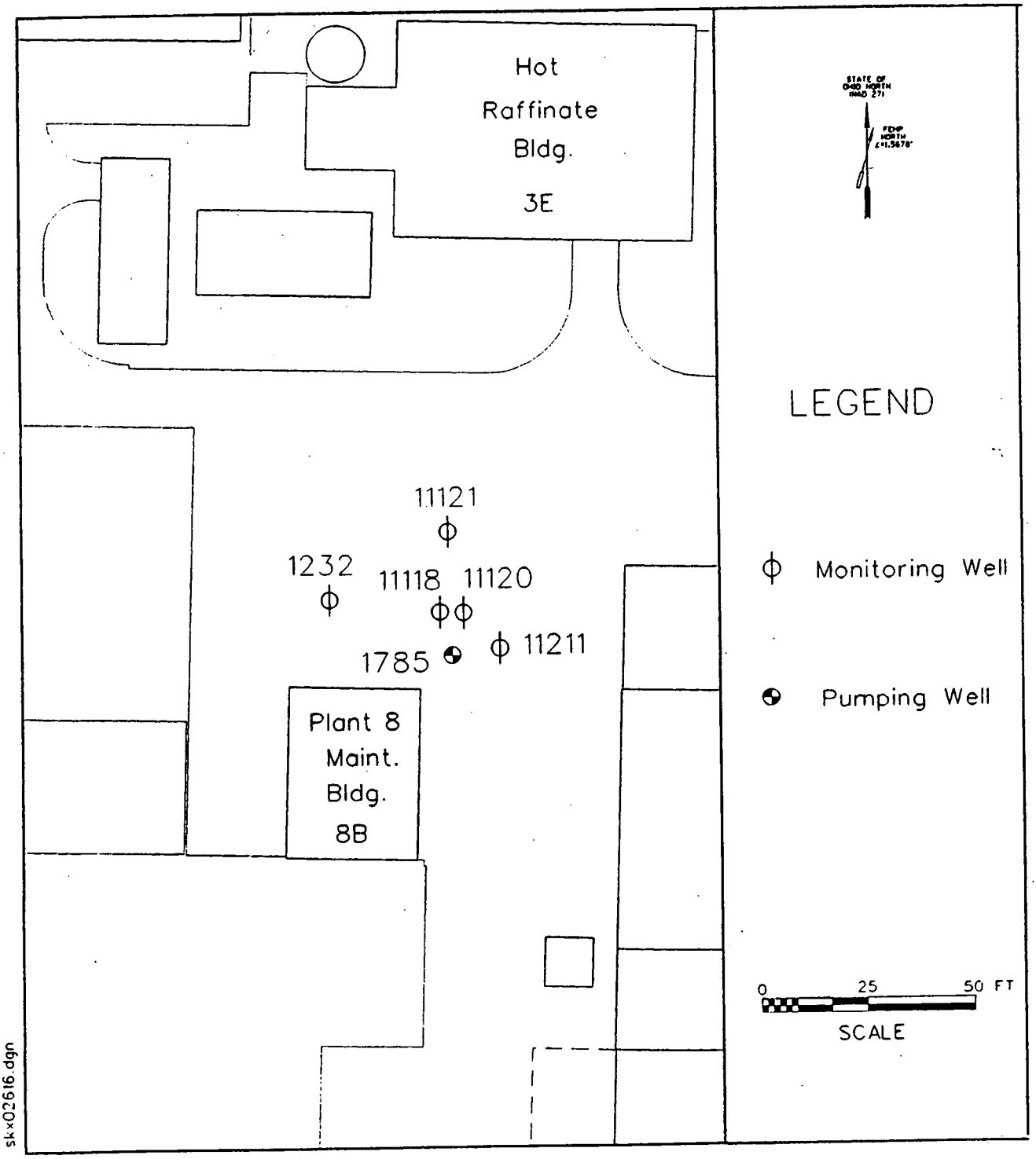

Figure 4-13 - 1785 Yield Test, Well Layout

Based on these results, an attempt to conduct a Constant Rate Pumping Test at a flow of 0.85 gpm was started on October 28. The results indicated a highly inefficient, possibly improperly developed, well. The well was alternately surged with a slug and pumped to achieve additional development. A second step test was subsequently conducted on November 3, 1993. During the test, three full steps were achieved. The test was terminated after the pumping level reached the pump inlet at approximately 50 minutes into the fourth step. The well recovered to greater than 90 percent within 60 minutes.

1)	Step 1: 1.0 gpm	100 minutes
2)	Step 2: 1.5 gpm	100 minutes
3)	Step 3: 1.75 gpm	80 minutes
4)	Step 4: 2.0 gpm	50 minutes (de-water)

The data from the second step test at Well 1785 are summarized in Table 4-12. Projection of the step drawdown curves, shown in Figure 4-14, suggest that the well could be pumped at a rate of 1.5 gpm for a period approaching 10,000 minutes.

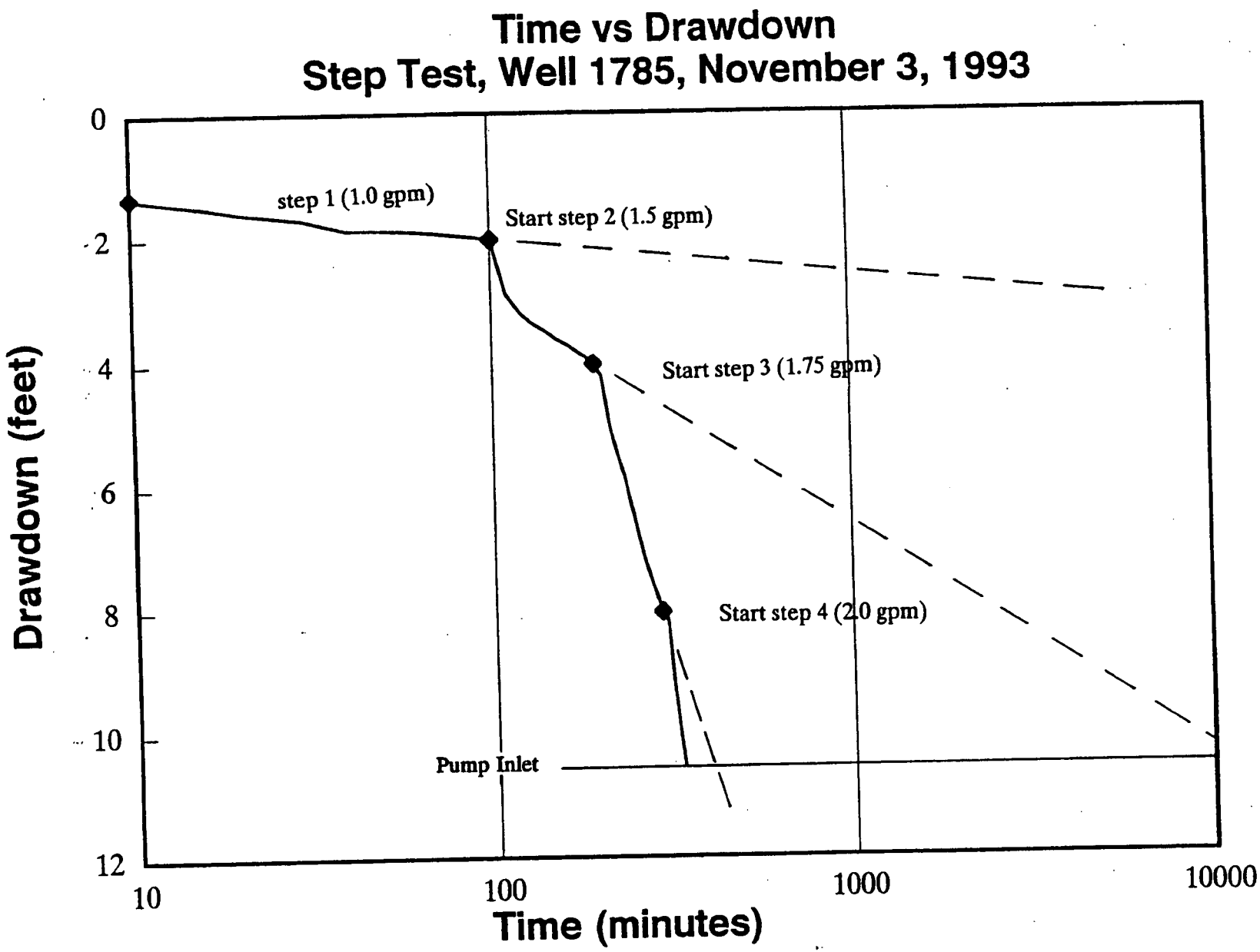

Figure 4-14 - Step Test, Well 1785

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SECTION 5

PUMPING TESTS

Constant rate pumping tests (CRTs) were performed in three areas -- the Waste Pit Area, Plant 1 Pad, and Plant 8 Area according to Section 3 of the GT/VZ Work Plan (PARSONS 1993b).

The objective of these pumping tests was to calculate hydraulic properties of the water-bearing sand zones in the GT/VZ. Data from the tests are used to determine the hydraulic conductivity, storativity, and anisotropic conditions that may exist in the pump test area and to make observations concerning hydraulic barriers and drawdown orientations.

All three pumping test locations were on FEMP property and are shown in Figure 5-1 and more generally in Figure 1-1.

1) Plant 1 Pad Area (Well 11112)
2) Waste Pit Area (Well 11214)
3) Plant 8 Area (Well 1785)

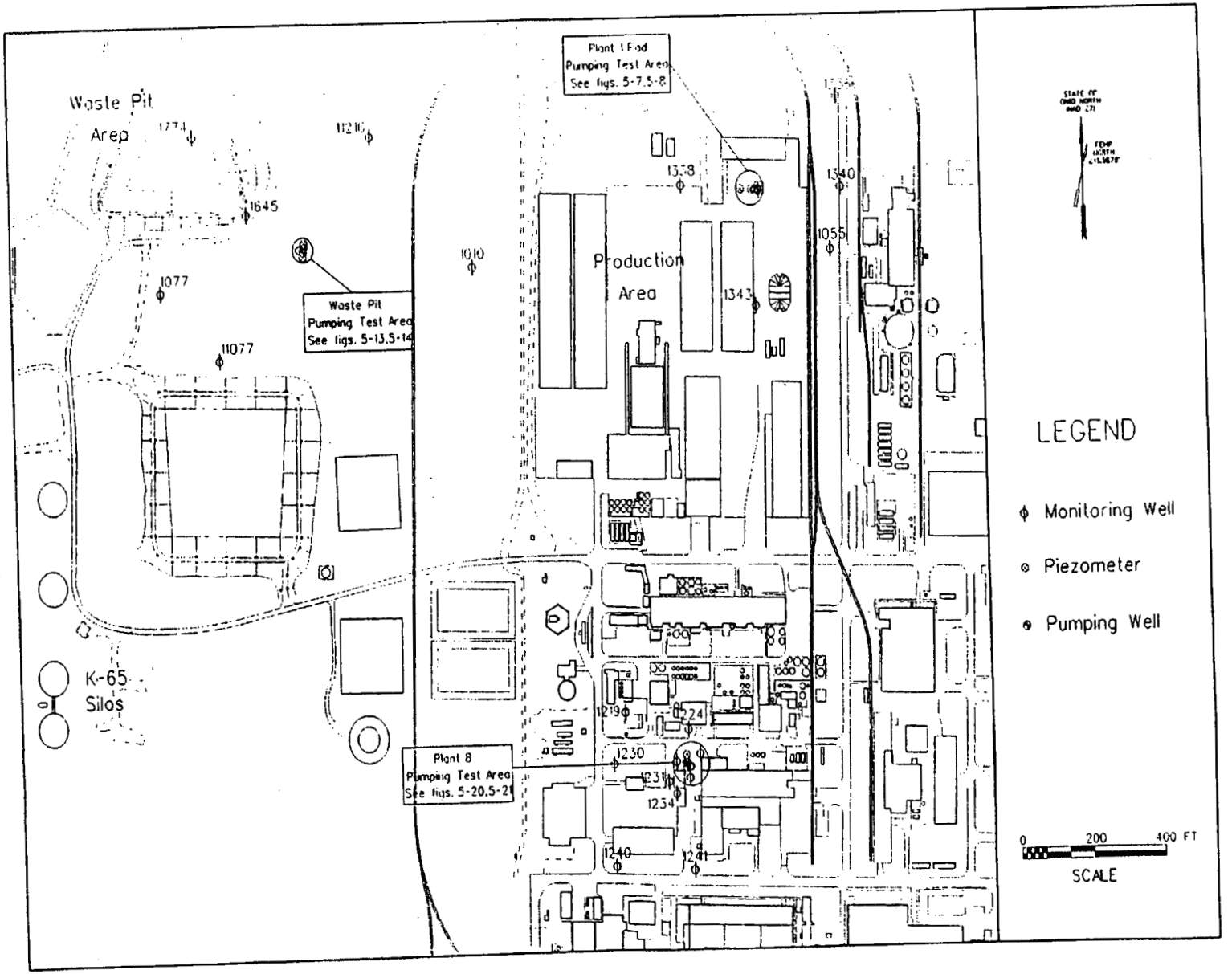

Figure 5-1 - Pumping Test Locations

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5.1 General Methods

5.1.1 Equipment

Figure 5-2 shows the general piping and equipment set-up for the pumping tests. Table 5-1 lists and describes the equipment and instrumentation used to conduct the tests.

A Grundfos Redi-Flo 2, submersible pump was used for the pumping tests. The rate of discharge from the pump was regulated by a control box that governed the rotation speed of the pump motor and impellers.

Discharge from the pump flowed through a 3/4-inch ID Teflon hose. A Hersey MVR 30 mechanical flow meter with sweep hand and digital totalizer was used to record the volume and rate of flow from the well. A Sensus mechanical flow meter was used to record flow from the test at the Waste Pit Area. A sampling port was placed in line from and downstream of the flow meter.

For pumping tests at the Plant 1 Pad and the Waste Pit Area, the discharge subsequently flowed into a truck mounted 1,500 gallon or 1,800 gallon tank. These trucks rotated between water holding and disposal from the pumping well to the sump. For the pumping test at Plant 8, discharge was sent to a 500-gallon, truck-mounted tank and subsequently to the Plant 8 treatment system.

Table 5-1 - Pumping Test Components

Component	Description
Test Pump	GRUNDFOS, 1.8 inch O.D., REDIFLO-2 submersible
Primary Flow Meter/Totalizer	Hersey MVR 30
Secondary Flow Measurement	Timed fill of calibrated volume
Test Pump Power Supply	Local site power
Automatic Water Levels	In Situ, HERMIT Model SE 2000 16 Channel data logger
Manual Water Levels	SOLINST, electronic water level measuring tape

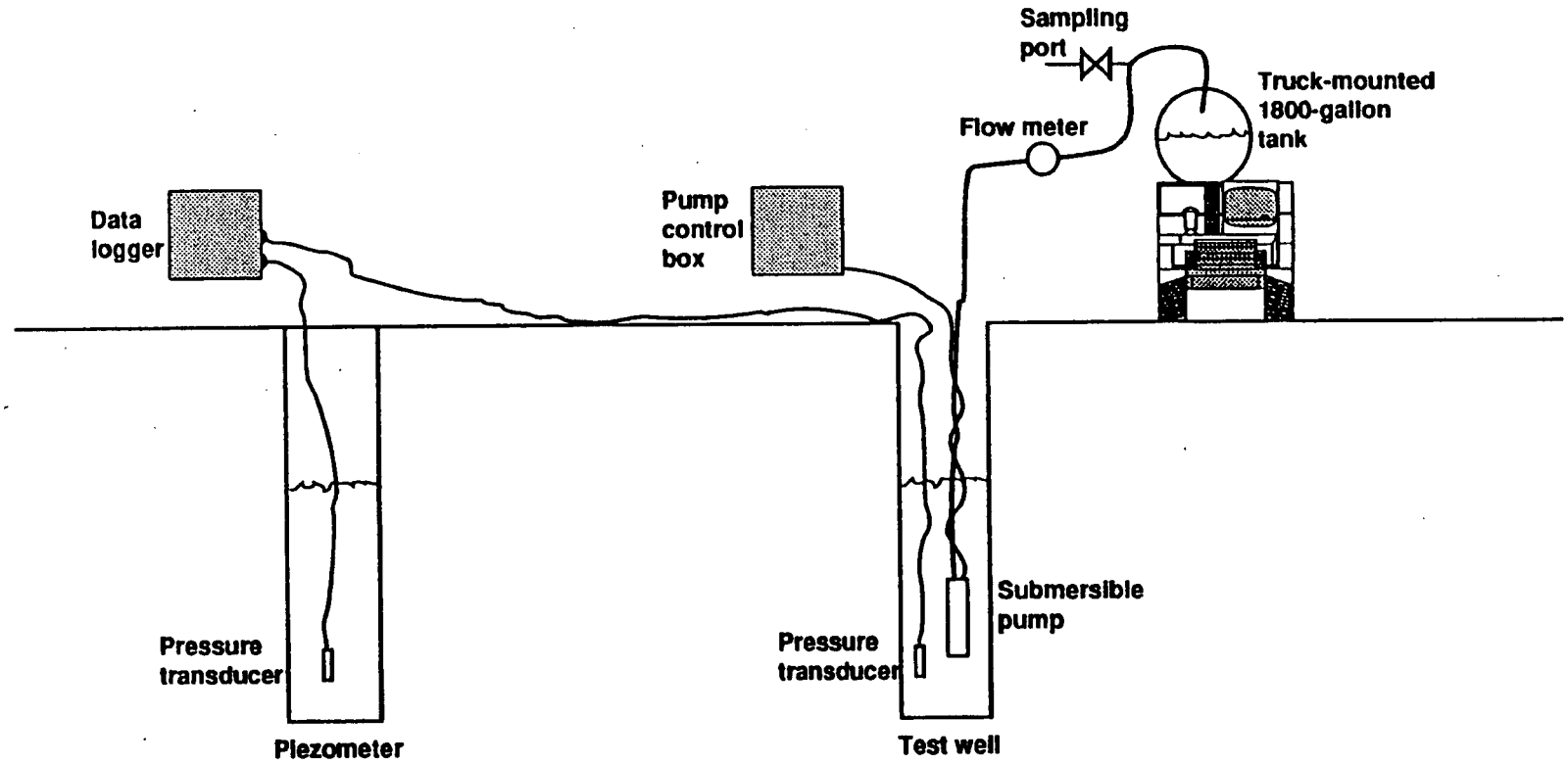

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Figure 5-2 - General Test Set-Up

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5.1.2 Monitoring System Installation

An observation well network was designed for each pump test location. According to the GT/VZ Work Plan, this design was based on the following criteria:

1) Evaluation of anisotropic conditions within each saturated horizon.
2) Proximity to flow boundaries.
3) Assessment of aquitard vertical hydraulic conductivity.
4) Radius of pumping influence.

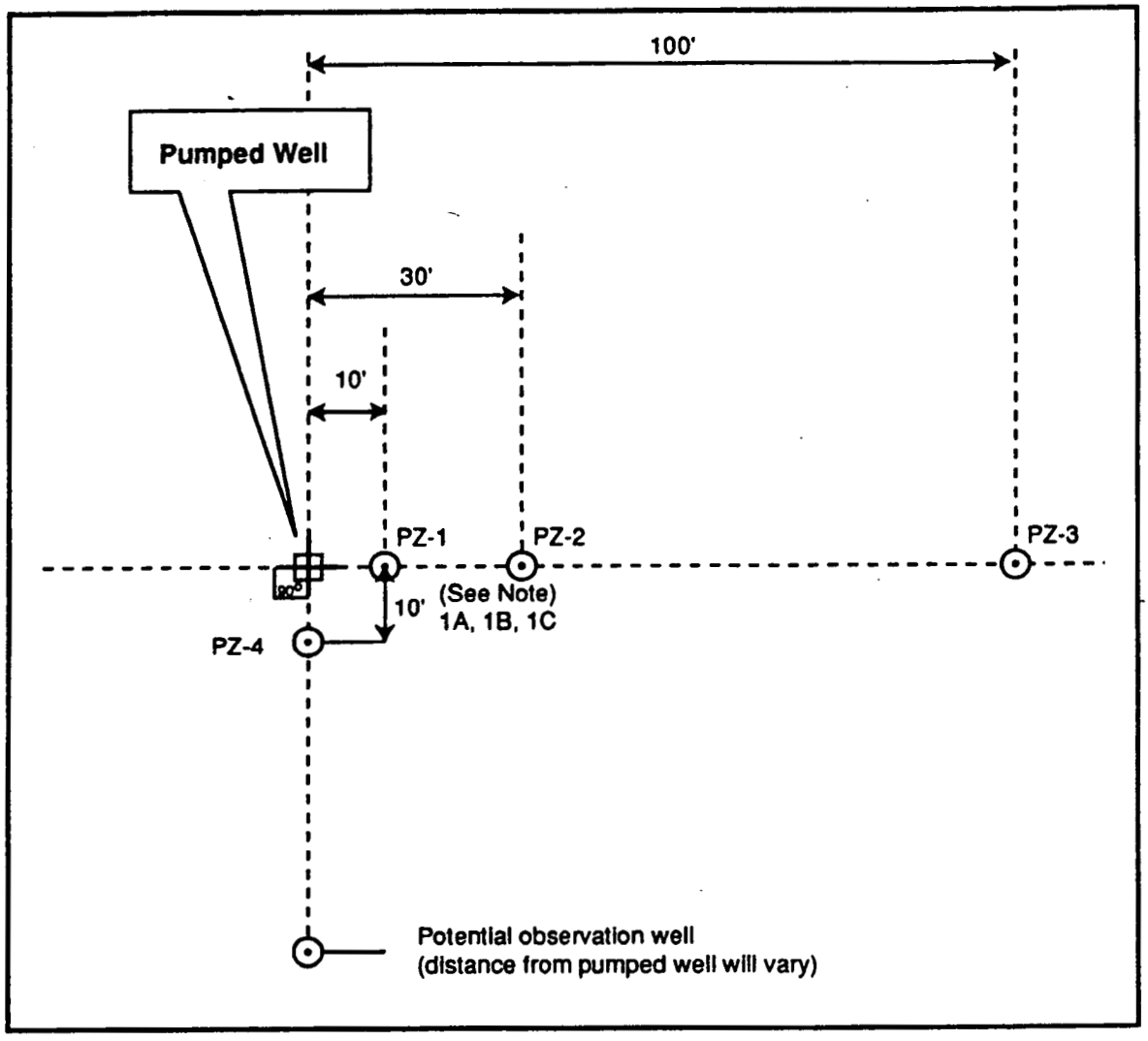
As shown in Figure 5-3, the design contains up to seven observation wells installed at varying distances from the pumping well. A cluster located 10 feet from the test well provided data on vertical hydraulic conductivity (Kv) and the influence of the upper and lower confining layers. The shallow observation well of the cluster (Pz-1A) was screened in the upper confining layer when possible. The deep observation well of the cluster (Pz-1C) was screened in the lower confining layer when possible. The third observation well in the cluster (Pz-1B) was installed at an intermediate depth screened within the sand body. A fourth (Pz-2) and fifth (Pz-3) observation well were linearly spaced 30 and 100 feet respectively from the test well. A sixth observation well (Pz-4) was installed at a distance of 10 feet perpendicular to the axis of the other observation wells.

During construction, each observation well borehole was advanced by a hollow stem auger (HSA) rig. Continuous split spoon samples were collected from the surface of the unconsolidated materials to the base of the borehole in the Pz-1C, Pz-2, Pz-3, and Pz-4 borings.

All observation wells installed within the sand or sand and gravel horizons were completed with 2-inch ID Schedule 40 PVC casing and 0.010 inch slot screens. Each screen length was selected to screen a minimum of 85 percent of the sand unit. A sand pack was installed in the annular space around the screened interval of the casing. The filter pack was capped by a bentonite pellet seal. Either a Volclay grout or a dry granular bentonite was placed above the pellet seal. The thickness and depth of the Volclay or granular Bentonite was dependent on the depth to the screened horizon. The remainder of the annular space was filled with cement. Flush mounts were installed at the Plant 1 Pad and Plant 8 Area. Protective steel casings and cement pads were installed at the waste pit area.

Geotechnical samples from the Plant 1 Pad and Plant 8 area observation wells, consisting of Shelby tubes for cohesive materials and split spoon samples of granular materials, were submitted to the laboratory and analyzed for the same physical characteristics as for Plant 8 Area test well (1785).

Some deviations from the GT/VZ Work Plan occurred to account for actual subsurface conditions. Documentation of these deviations are located in Appendix D.7. A brief description is provided below.



Observation Well

Pumped Well

Bearing Line

NOTE: PZ-1 consists of 1A, 1B, 1C

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Figure 5-3 - General Observation Well Layout

1) Drawdown data from the yield tests at both the Waste Pit Area and the Plant 1 Pad suggested that the radius of influence was considerably less than 100 feet. Therefore, the distance from the pumping well to the farthest observation well (Pz-3) was reduced from 100 feet to 50 feet, and the distance to Pz-2 was reduced from 30 feet to 20 feet for these pump tests.

2) For the pumping test in the Waste Pit Area, neither the deep or shallow observation well was installed to monitor the effects of vertical hydraulic conductivity in the upper or lower confining layer due to uncertainty over the location and existence of the layers.

3) A continuous upper confining layer in the Plant 1 Pad Area (pumping test 11112) was not present; therefore, a shallow observation well was not installed.

4) Since Well 1339 was in close proximity to Well 11112, it was used as an offset observation well instead of installing a new Pz-4.

Figures 5-8, 5-14, and 5-21 present the arrangement of the observation wells at each pump test location. Tables 5-4, 5-6, and 5-8 list the wells monitored during each pumping test along with well type, well depth, distance to test well, screen length, and well diameter.

5.1.3 Conduct of Pump Tests

During constant rate pumping tests, water levels in the test well and the close observation wells were recorded using either a 16-channel or 4-channel data logger and the logarithmic sampling cycle shown in Table 5-2. Water levels in the distant observation wells were measured manually. Appendix D in Volume II of this report contains data from manual measurements and the data logger. Manual levels were also obtained hourly in each close observation well to verify operation of the data logger.

5.1.4 Water Level Analysis

Four methods of analysis were used: Theis (1935), Cooper-Jacob (1946), Hantush-Jacob (1955), and Neuman (1974). Additionally, well recovery is analyzed by Theis (1935).

Effects due to background trends in water table elevations, barometric pressure, river stage, surface loading, and the effects of other wells were considered not to have a significant effect on the test results.

1) Background Trends in Water Level

The pump tests at the Plant 1 Pad and Plant 8 were located in areas where surface structures (buildings and pads) reduce the infiltration of surface water from precipitation events and the stormwater sewer system directs surface water away from the area. Figure 5-4 shows precipitation during the performance

of these pump tests. After analysis of background trend, only two pumping tests (Plant 1 Pad and Plant 8) required a correction for this effect. This analysis is discussed in Subsections 5.2.4 and 5.4.4 and is presented in Appendix D.4. Although a major precipitation event also occurred during the Waste Pit Area CRT, the event occurred late in the test after the onset of boundary conditions. That portion of the test data was not used due to the boundary conditions, so a correction for the storm event was not necessary.

2) Barometric Pressure Effects

An inverse relationship exists between barometric pressure and water level. This effect is more pronounced under confined conditions.

Some of the sand bodies tested by these pumping tests initially exhibited confined conditions. However, for pumping tests at the Plant 1 Pad and Waste Pit Area once the pumping tests began, the water level was lowered below the bottom of the upper confining layer and the sand unit responded in an unconfined or semi-confined manner. An analysis for the possible effects of changing barometric pressure is presented in Appendix D.6. The barometric efficiency for the wells used during these CRTs is insignificant and no correction is required.

3) Other Effects

Other factors that have been known to affect the indicated hydraulic head during a pumping test are:

1) River stage - Due to their distance from the pumping test site and significant difference in elevation, Paddys Run and the Great Miami River are not considered as a possible influence to the test data.

2) Surface Loading - Based on the hardened conditions at the Plant 1 Pad and the Plant 8 Area, and the fact that the Waste Pit Area responded as a semi-confined unit, the effect of a change in surface load during the pumping test would not be significant. Additionally, other than vehicular traffic at the test site, there were no known local changes in surface loading during the pumping tests. Surface loading is not considered a factor influencing the test results.

3) Other pumping wells - There were no other active pumping wells in the tested units or near the test locations during the pump test that could have affected the observed results.

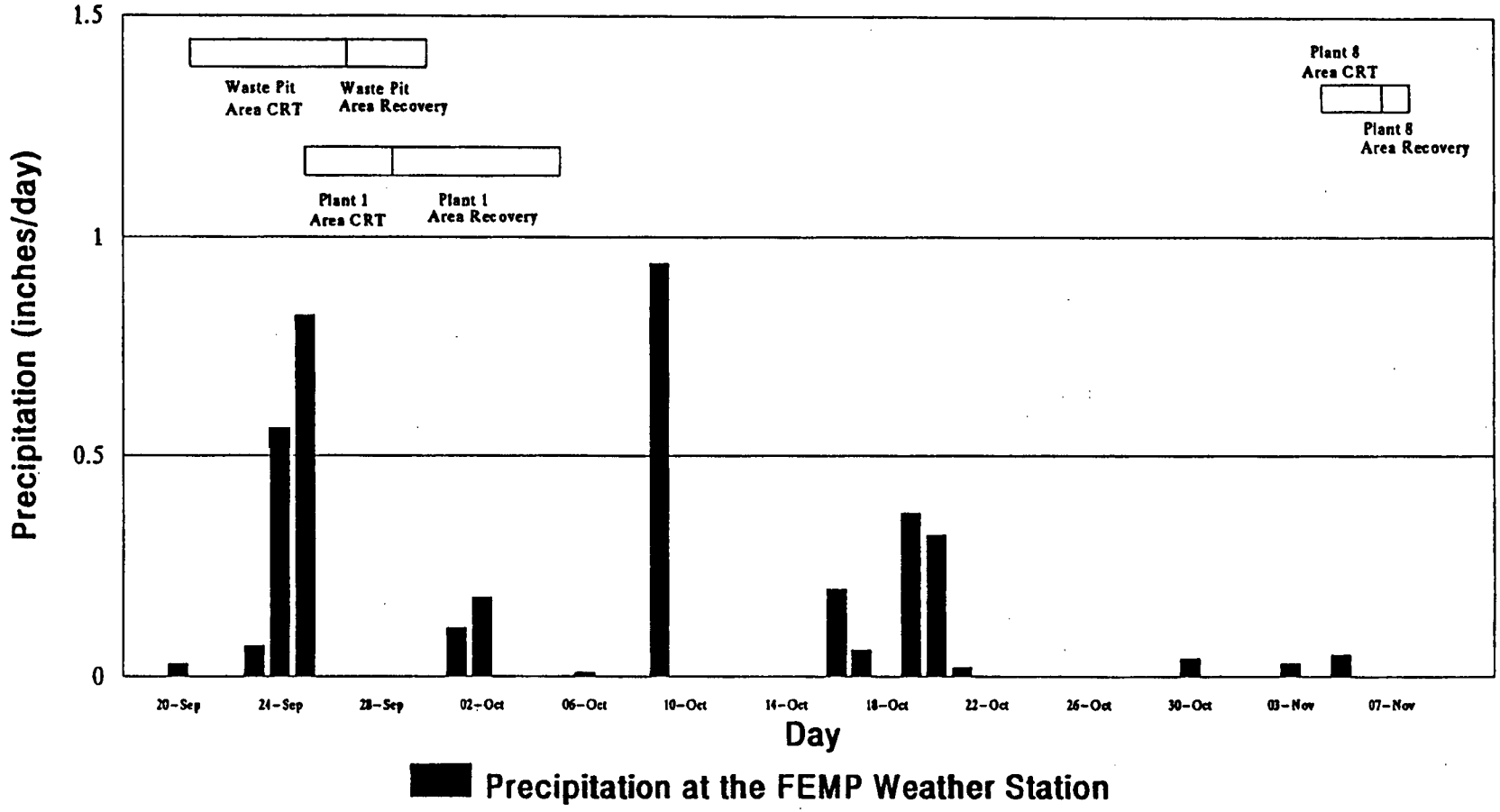

Figure 5-4 - Precipitation, September 20 through November 9, 1993

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Table 5-2 - Logarithmic Sampling Cycle

Log Cycle	Elapsed Time	Measurement Interval
1	0-20 seconds	0.5 seconds
2	20-60 seconds	1 second
3	1-10 minutes	12 seconds
4	10-100 minutes	2 minutes
5	> 100 minutes	15 minutes

Constant Rate Test and Recovery Period

Table 5-3 provides a brief chronology for each CRT and subsequent recovery period. The logarithmic data collection cycle on the data loggers was re-initiated simultaneously with pump shutdown from the CRT to record water level recovery measurements.

Table 5-3 - Constant Rate Test and Recovery Period Chronology

Event (information)	Plant 1 Pad (Well 11112)	Waste Pit Area (Well 11214)	Plant 8 Area (Well 1785)
Date/Time CRT Initiated (Discharge Rate)	9/25/93, 13:10 (1.75 gpm)	9/21/93, 13:45 (2.0 gpm)	11/04/93, 21:58 (1.25 gpm)
Date/Time CRT Terminated and Recovery Period Initiated (Total Pumping Time in Minutes)	9/29/93, 15:15 (5875)	9/27/93, 15:35 (8740)	11/07/93, 11:26 (3685)
Date and Time Recovery Period Terminated (Total Recovery Time in minutes / Percent Recovery)	10/5/93, 14:55 (8620 / 83.4%)	9/30/93, 13:15 (4180 / 66%)	11/08/93, 10:51 (1405 / 98%)

5.2 Plant 1 Pad (Well 11112)

5.2.1 Construction

Well 11112 was the pumped well for the CRT conducted in the Plant 1 Pad area. It is located adjacent to Well 1339. Figure 5-5 provides a diagram of the well and the surrounding lithology.

The well was completed on September 20, 1993 in a medium dense, yellowish brown, well graded sand, with a trace of gravel. The borehole was drilled with an 8-inch ID HSA drilling rig to a total depth of 19.5 feet BGS. In accordance with the GT/VZ Work Plan, continuous split spoon samples were collected from the concrete surface pad to the base of the borehole. Selected split spoon samples were submitted for sieve analysis.

Geotechnical samples of the lower gray gravelly clay were taken between 14.5 and 17.0 feet and 17.0 to 19.5 feet by Shelby tube. These samples were submitted for laboratory analysis for:

1) Grain Size (Hydrometer)
2) Moisture Content
3) Void Ratio
4) Atterberg Limits
5) Lab Density
6) Specific Gravity
7) Constant Permeability (triaxial cell with back pressure)

The well was completed with a 4-inch ID schedule 316 stainless steel casing to a depth of 16 feet BGS and screened with a 10 foot length of .020 inch slot screen between 4.0 and 14.0 feet BGS, which fully penetrated the saturated sand body. Yield test data from nearby observation well 1339 suggested that a 4-inch submersible pump, as specified by the GT/VZ Work Plan, would not be required and therefore, a 2-inch diameter submersible pump could be used in the well. A sand pack was installed in the annular space from the bottom of the borehole to 3.7 feet BGS. The shallow depth to the top of the screened zone would not permit the installation of a 5-foot thick bentonite seal. For the same reason, Volclay grout was not installed above the bentonite pellets. Instead, a dry granular bentonite seal was placed above the sand pack to a depth of 1.1 feet BGS to prevent the cement cap from sinking. The remainder of the annular space was finished with concrete and a flush mount steel vault was installed.

The well was developed by alternately pumping and surging with a slug. Following development, the well was sampled for total uranium, general chemistry constituents, and volatile organic compounds.

Well 11112

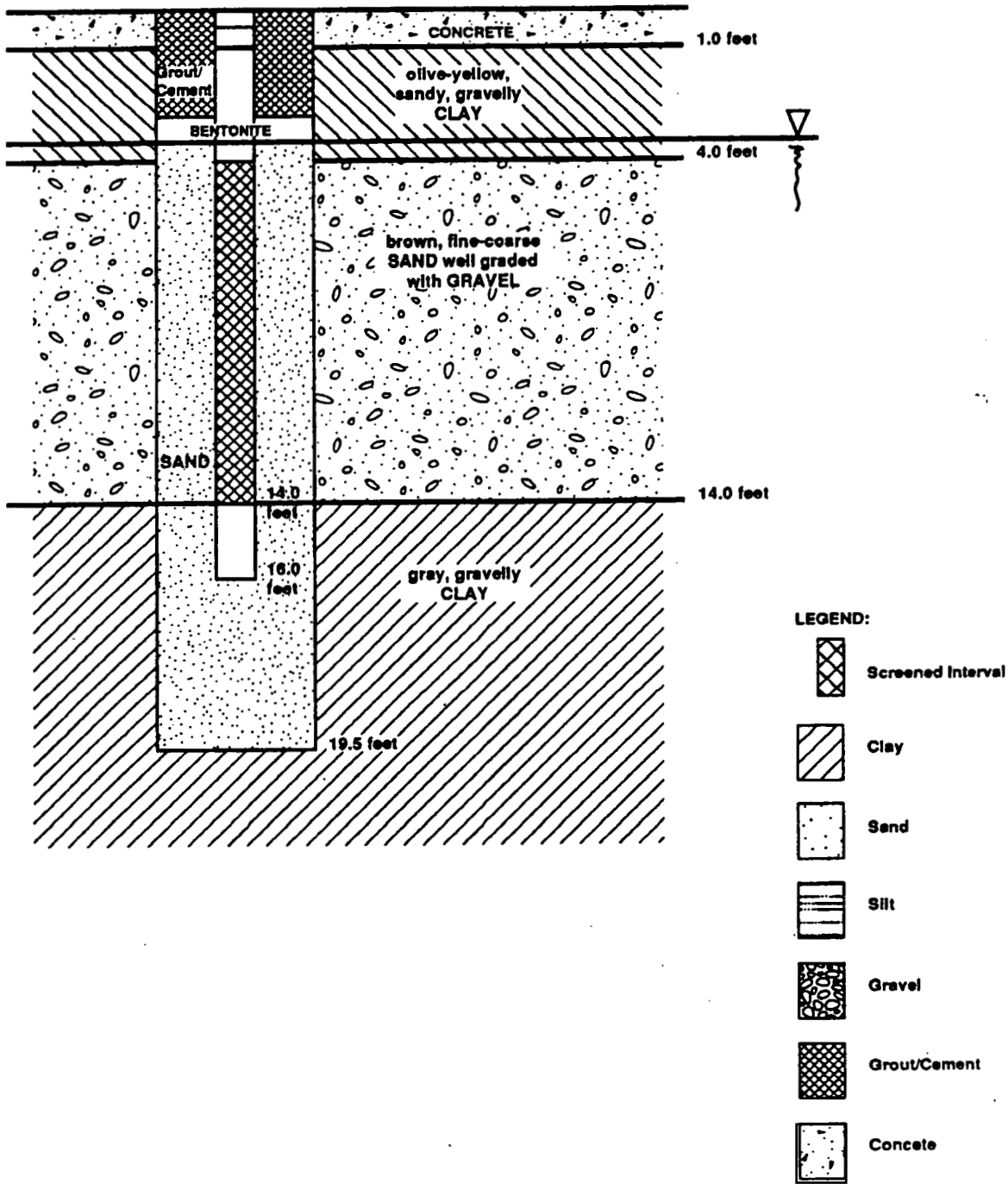

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Figure 5-5 - Well 11112: Construction and Surrounding Lithology

5.2.2 Conduct of Plant 1 Pad Pumping Test

The CRT started at 13:10 on September 25, 1993. A discharge rate of 1.75 gallons per minute (gpm) was maintained within ± 5 percent for the duration of the test. Drawdown in the test well reached 6.70 feet. Drawdown in Observation Well 11114 located 10 feet away reached 2.29 feet. The pump was turned off at 15:15 on September 29, 1993 beginning the recovery period. The well recovered slowly with 1.11 feet (16.6 percent) residual drawdown remaining after 6 days. Figure 5-6 shows a time-drawdown plot for the pump test while Figure 5-7 shows the total drawdown at the end of the test. Figure 5-8 shows the well arrangement in the immediate vicinity of Well 11112. This information is summarized in Table 5-4.

5.2.3 Analysis

The response was generally characteristic of unconfined conditions and the primary method of analysis is by the Neuman method (1974). The Theis (1935) method is used as a check of the results that were determined by the Neuman method. The applicability of the Theis method is based on the fact that an unconfined aquifer will initially respond to pumping as predicted by the Theis equation. The response only deviates from the Theis equation as the effects of delayed yield become evident. During these pumping tests, sufficient data are collected before these dewatering effects become prominent to allow the Theis equations to be used.

5.2.4 Background Trend

Figure 5-9 shows the levels of three wells, located near the Plant 1 Pad test area, immediately prior to and throughout the yield and pumping tests. Precipitation events are also shown in this figure over the same period.

During a 1-hour period ending at 8:00 on September 24th, 0.55 inches of precipitation fell. An additional 0.81 inches fell between 10:00 and 21:00 on September 25, 1993. These events occurred prior to and during the initial portion of the pumping test. These precipitation events caused the levels in the monitored wells to initially increase and then decrease over the period of the pump test. These wells are located north, east, and south of the test area and are screened in the same sand body. The average trend in these three wells is 0.120 ft/day. This correction factor is applied to the data from Plant 1 Pad observation wells which were used for parameter estimation (11114, 11209, 1339, 11116).

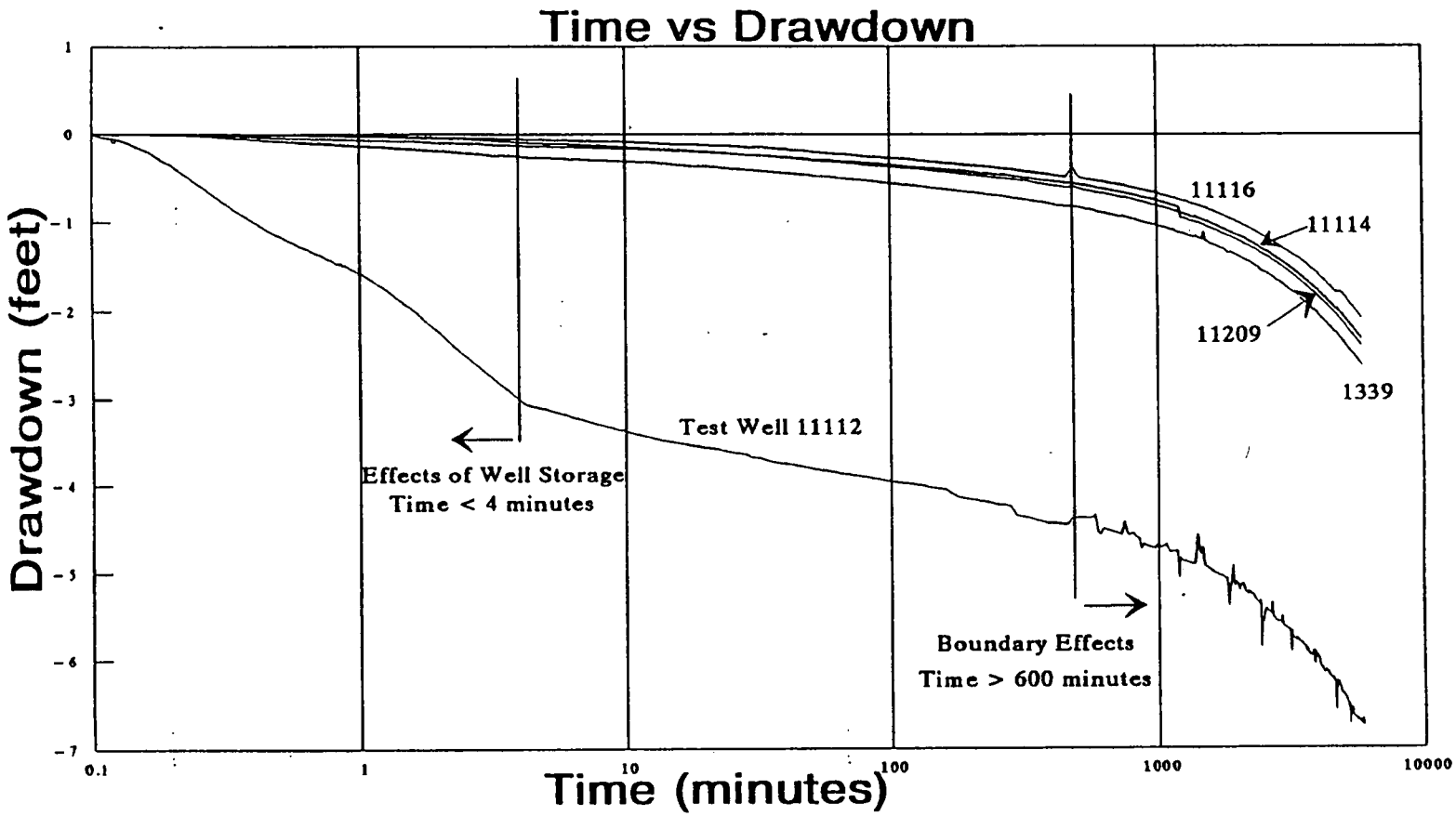

Figure 5-6 - Water Levels During the Plant 1 Pad CRT

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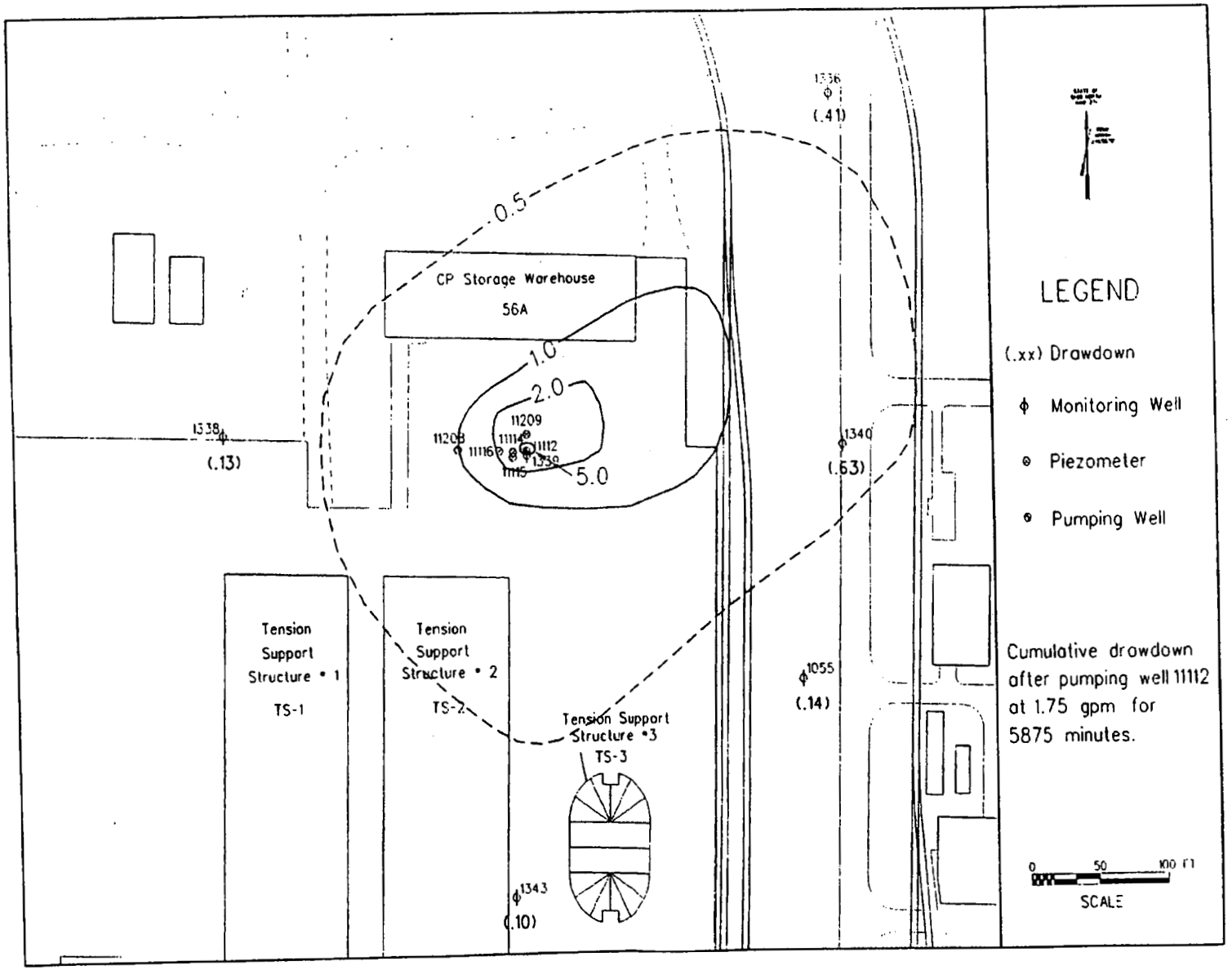

Figure 5-7 - Well Arrangement and Total Drawdown, Plant 1 Pad Pump Test

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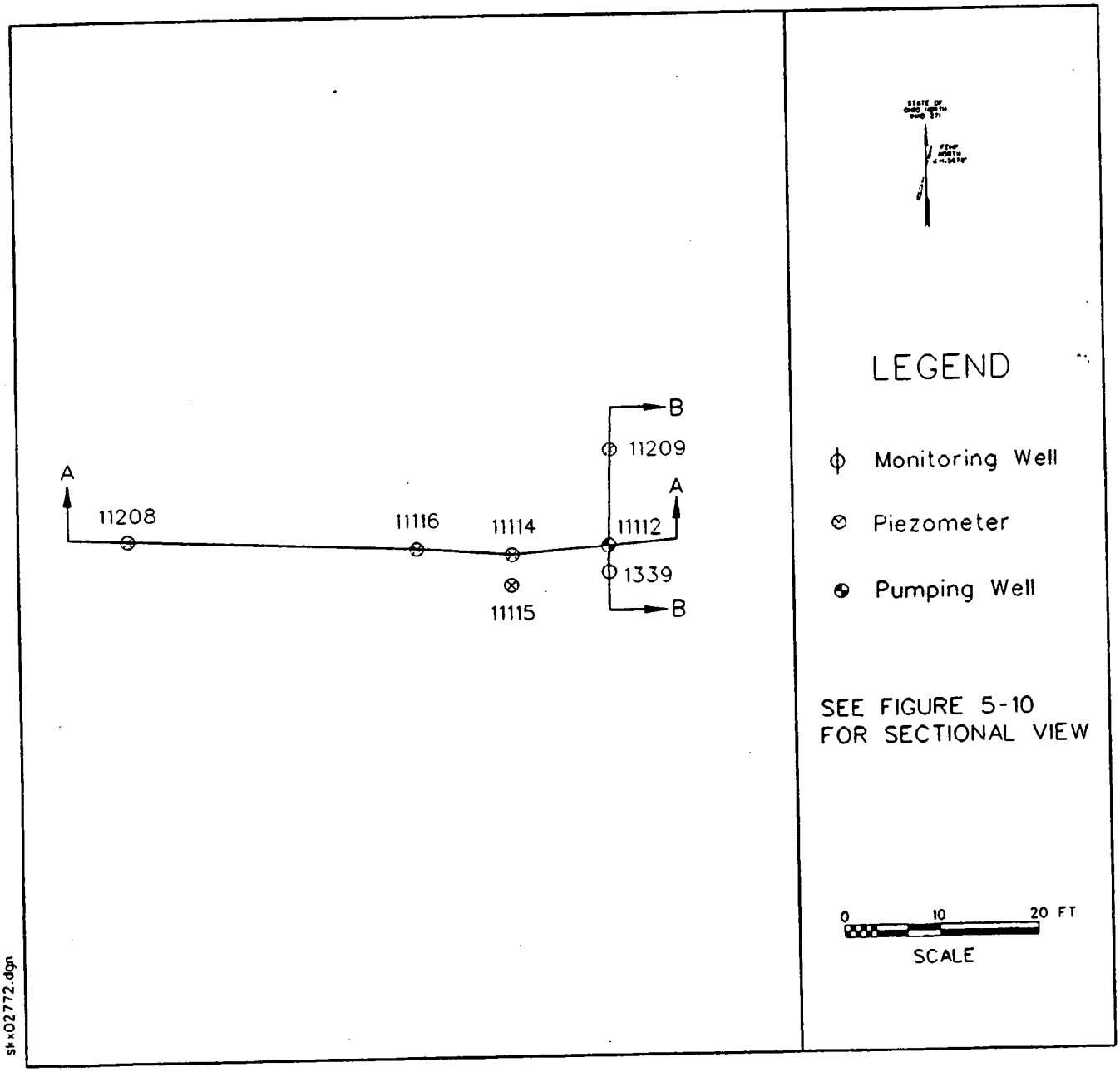

Figure 5-8 - Plant 1 Pad New Observation Well Locations

Table 5-4 - Test and Observation Wells, Plant 1 Pad Pumping Test

FEMP Well No.	Well Type	Depth to Screen Bottom (feet)	Distance to 11112 (feet)	Well Diameter, ID (inches)	Screen Length (feet)	Total Drawdown (ft)[1]	Notes
11112	Test Well	14.0	0.0	4	10	6.70	Test Well
11114 (Pz-1B)	New Observation Well	16.50	9.99	2	12.5	2.29	
11115 (Pz-1C)	New Observation Well	20.5	10.86	2	1.0	-3.00[2]	basal clay
11116 (Pz-2)	New Observation Well	13.5	19.97	2	7.5	2.05	
11208 (Pz-3)	New Observation Well	13.5	49.67	2	9.0	0.96	
11209 (Pz-4)	New Observation Well	20.5	10.18	2	14.0	2.36	90 degree offset
1339	Monitoring Well	12.0	2.67	2	7.0	2.59	
1055	Monitoring Well		243.7			.14	
1338	Monitoring Well	10.5	220.3	2	5.0	.13	
1340	Monitoring Well	20	230.6	2	10.0	.63	
1343	Monitoring Well	10.5	269.7	2	5.0	.10	
1336	Monitoring Well	20.8	309.01	2	13	.41	

1 Cumulative drawdown after 5,875 minutes at 1.75 gpm.

2 Well not equalized prior to start of pumping test; response is due to equalization following development.

Two observation wells (11208 and 11115) and the test well (11112) were eliminated from consideration for parameter estimation for the following reasons:

1) Observation Well 11208 was unduly influenced by precipitation events during the pump test. Additionally, the monitored response for Observation Well 11208 generally occurred after boundary conditions were encountered. The boundary effects violate the assumption of infinite areal extent.

2) Observation Well 11115 was screened in the basal clay and exhibited a continuously rising water level throughout the pumping test. The initial water level was below the static water level in the surrounding wells. It is believed that the rising water level in this well was due to slow and incomplete recovery following development.

5.2.5 Results

The objectives of this pumping test were to determine conductivity and storativity of the sand body as well as to assess the degree of hydraulic connection between the test well and surrounding wells. A conceptual cross section of the Plant 1 Pad Area is provided in Figure 5-10.

For the Plant 1 Pad pumping test, four observation wells (1339, 11114, 11209, 11116) showed sufficient response to pumping to be considered for parameter estimation (Table 5-5). The observation wells exhibited responses characteristic of unconfined conditions. When analyzed by the Neuman method, they exhibited a tight correlation for values of horizontal hydraulic conductivity and ratio of vertical to horizontal conductivity. All four observation wells exhibited a greater drawdown at approximately 600 minutes into the test. This change likely occurred when the expanding cone of depression from the test well encountered a flow boundary; in this case, the edge of the sand body. The effects of well storage can be seen over approximately the first four minutes of pumping as indicated by the abrupt change in slope at that time (Figure 5-6).

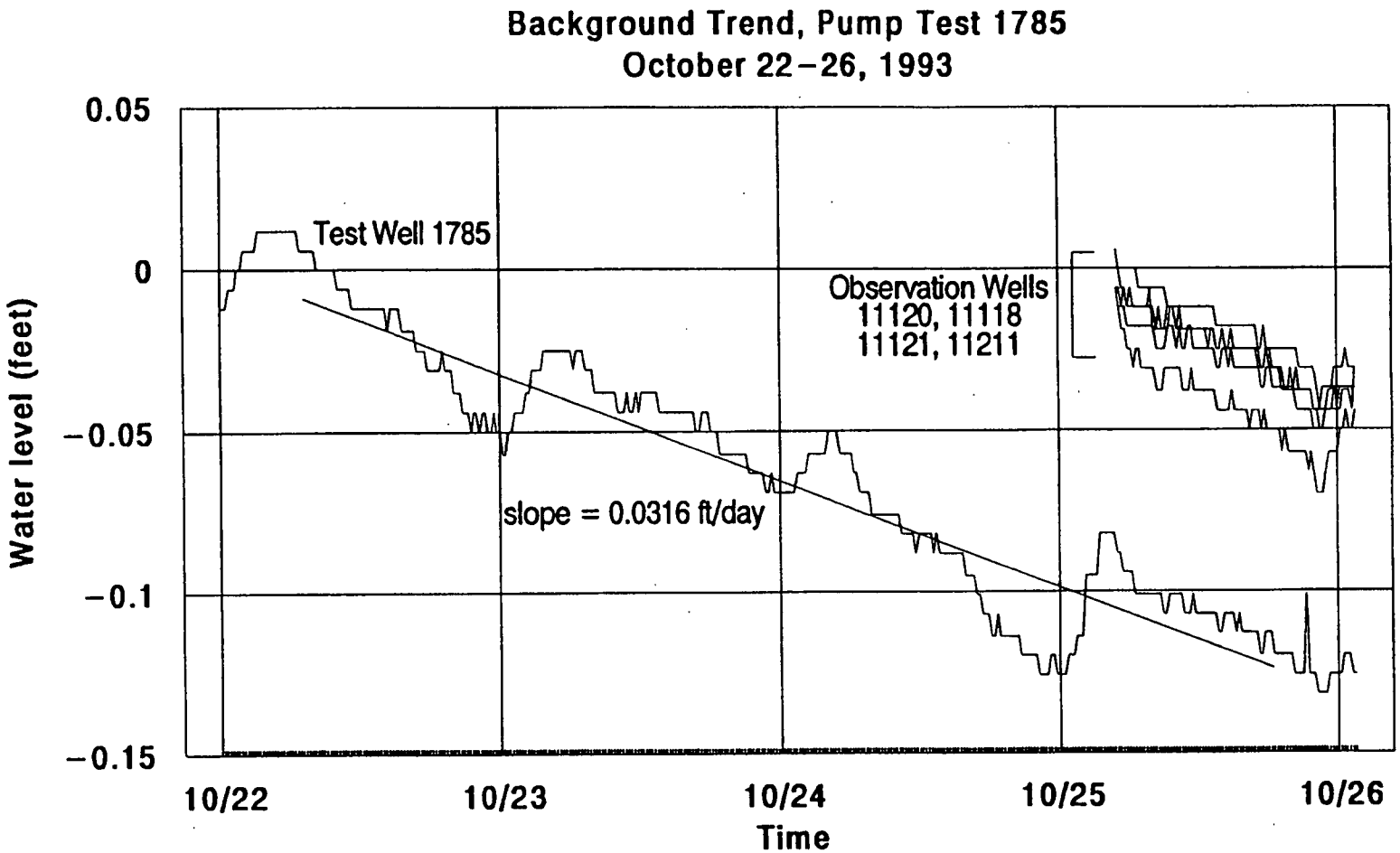

Figure 5-9 - Background Trend Pump Test, Plant 1 Pad

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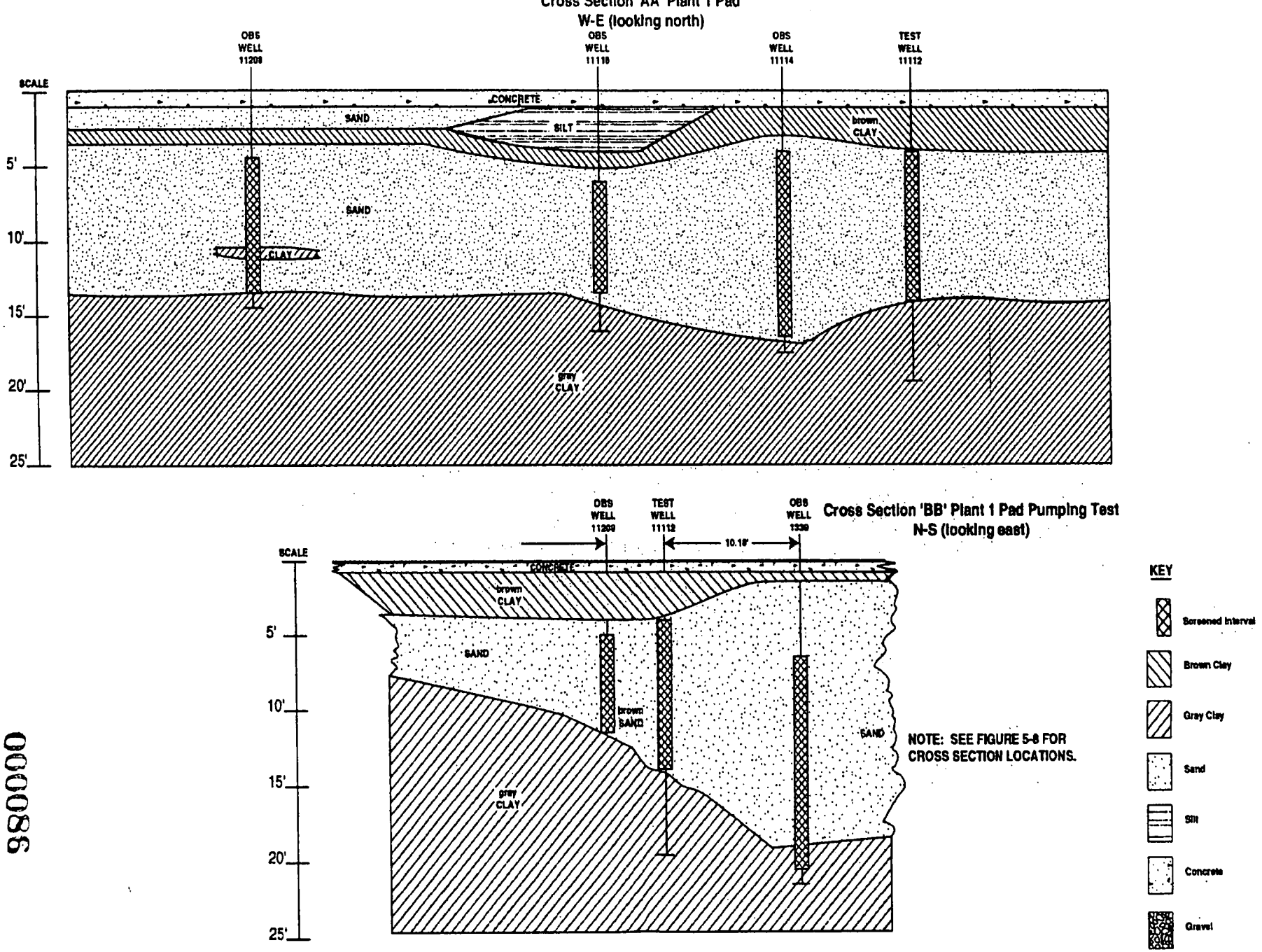

Figure 5-10 - Conceptual Cross Section, Plant 1 Pad Area

Table 5-5 - Pumping Test Results, Plant 1 Pad

			Theis		Neuman (Primary Method)				Theis Recovery
Well to Number	Distance to Test Well (ft)	Thickness (ft)	K_h (ft/day)	S	K_h (ft/day)	S	S_y	K_y/K_h	K_h (ft/day)
1339	2.67	10.5	38.6	0.015	20.3	0.16	0.107	0.54	6.53
11114	9.99	13.2	25.0	0.009	12.1	0.006	0.028	0.35	4.05
11209	10.18	17	32.2	0.002	11.7	0.002	0.024	0.56	NP
11116	19.97	8.1	120.1	0.002	33.4	0.001	0.007	0.13	5.47
Geometric Mean					17.6 (6.8×10^{-3} cm/sec)				
Average						0.0023	0.042	0.395	

Notes:

NP - calculation not performed

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From the Neuman analysis, the sand body penetrated by the test well exhibits a horizontal hydraulic conductivity of 17.6 ft/day (6.18 x 10^{-3} cm/sec), a specific yield of approximately 0.042, a storativity of 0.0023, and a ratio of horizontal hydraulic conductivity to vertical conductivity of approximately 2.5:1.

Calculated conductivity using the Theis recovery method yielded lower values due to the slow recharge to the sand body which is controlled in part by the surrounding clay till.

The shape of the drawdown contours in Figure 5-7 indicates a northeast to southwest trend.

The value of conductivity calculated for the test well (11112) is lower than the corresponding observation wells due to head losses associated with pumping, and the test well data is not considered for parameter estimation.

5.3 Waste Pit Area (Well 11214)

5.3.1 Construction

Well 11214 was the pumped well for the CRT conducted in the waste pit area. It was installed in August 1993. Figure 5-11 provides a diagram of the well and the surrounding lithology. The well was drilled to a total depth of 34.5 feet BGS with an 8-inch ID hollow stem auger drilling rig. The borehole was subsequently backfilled with a mixture of Volclay grout and Portland cement to a depth of 26.5 feet. A 4-inch ID schedule 316 stainless steel casing was installed to a depth of 24.25 feet BGS and was screened from 14 to 24 feet BGS with a 0.010 inch slot screen. A sand pack was placed from 26.5 to 9.0 feet and a 2.0 foot seal of bentonite pellets was placed above the sand pack. The remainder of the annular space was filled with a Volclay grout/cement. The well was completed with a 10.75 inch OD steel protective riser casing.

Well 11214 is situated within a small 20-foot wide channel that tends roughly in a northeast to southwest direction.

5.3.2 Conduct of Test

The Waste Pit Area CRT started at 13:45 on September 21, 1993. A discharge rate of 2.0 gpm was maintained within ± 5 percent for the duration of the test. Maximum drawdown in the test well reached 10.88 feet. The CRT was concluded at 15:35 on September 27th after approximately 8,740 minutes of pumping. Figure 5-12 shows a time-drawdown plot for the pump test while Figure 5-13 shows the total drawdown at the end of the test. Figure 5-14 shows the well arrangement in the immediate vicinity of Well 11214. This information is summarized in Table 5-6.

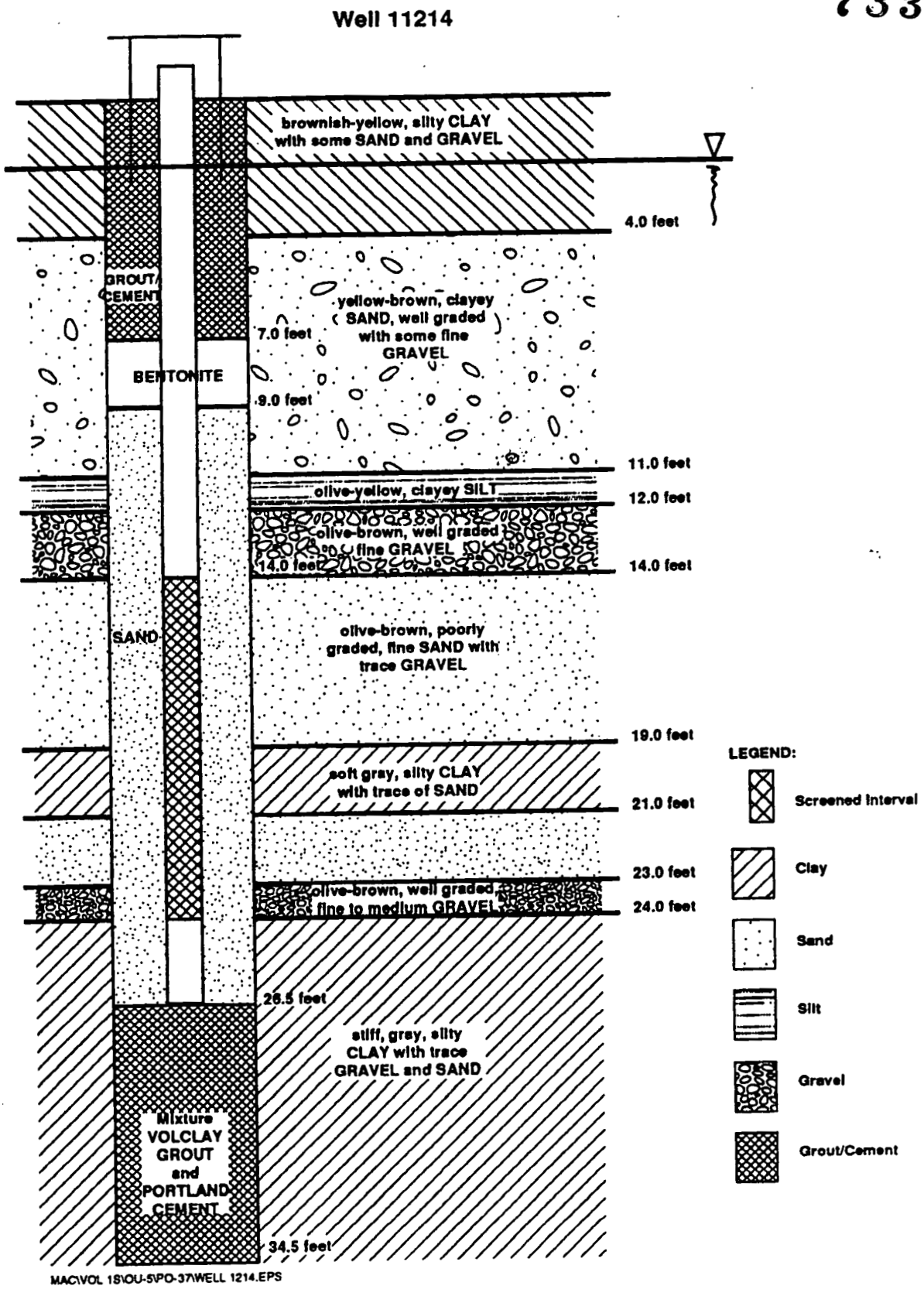
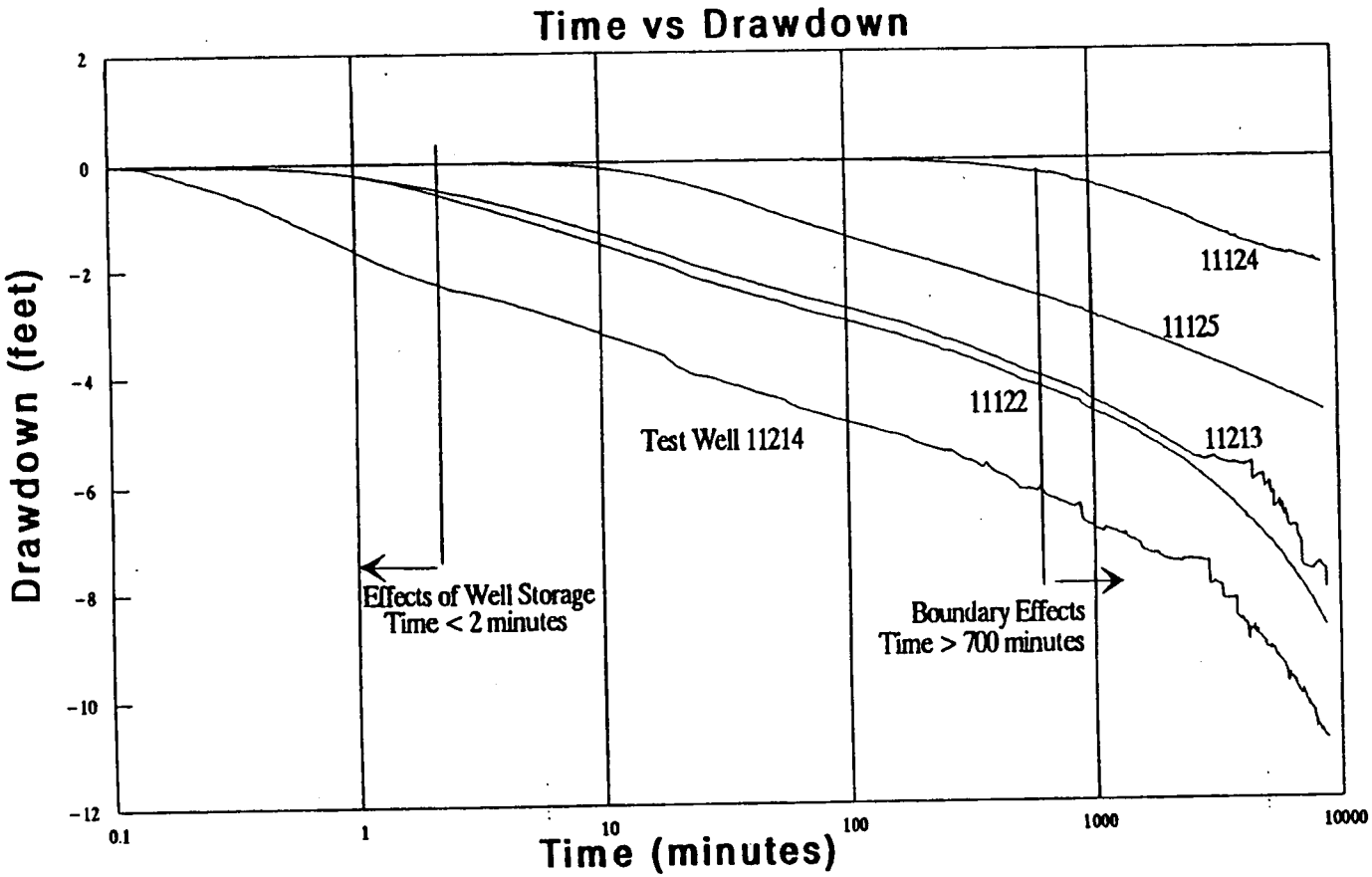


Figure 5-11 - Well 11214: Construction and Surrounding Lithology



Negative values indicate positive drawdown

Figure 5-12 - Water Levels During the Waste Pit Area Test

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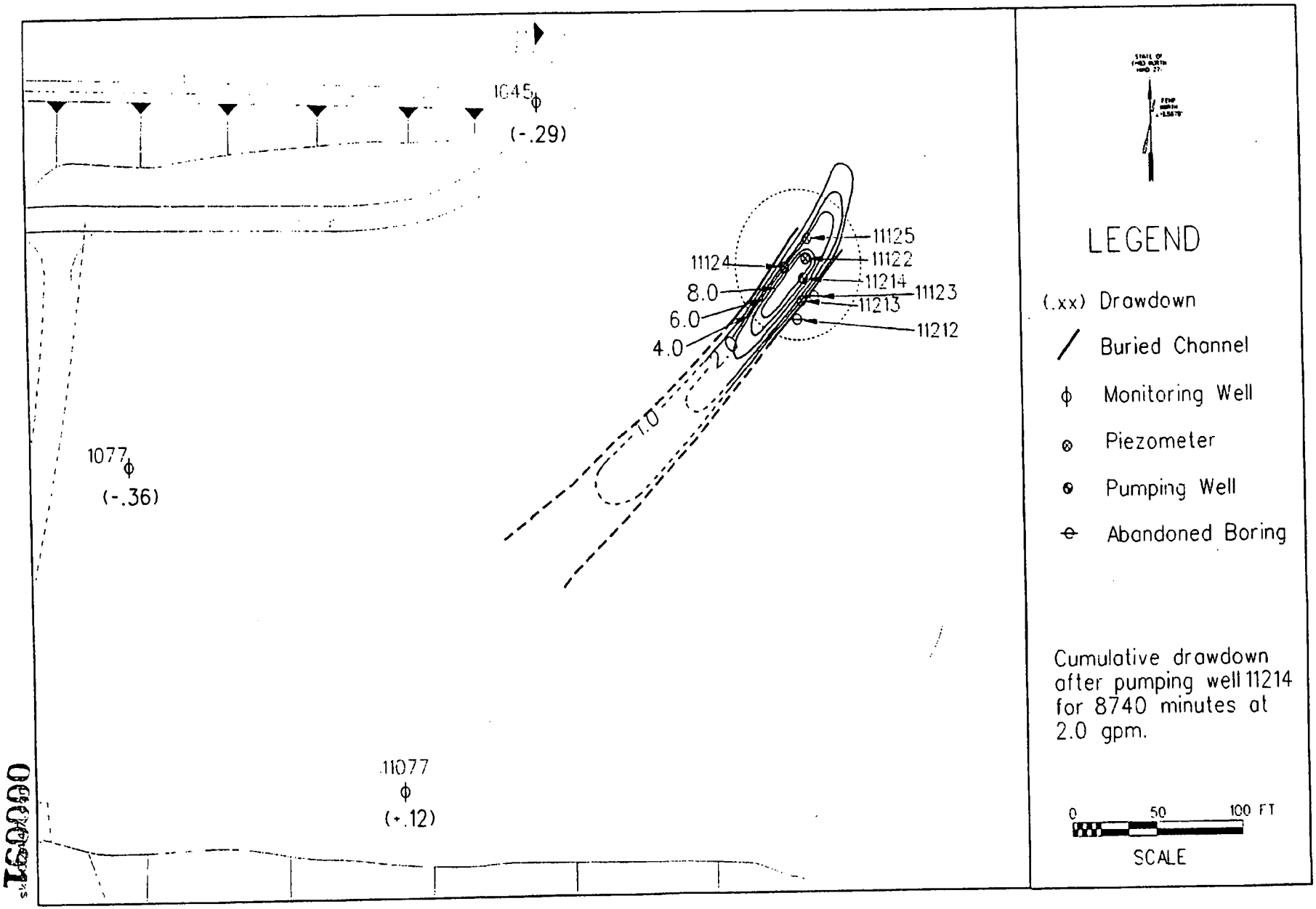

Figure 5-13 - Well Arrangement and Total Drawdown, Waste Pit Area Pump Test

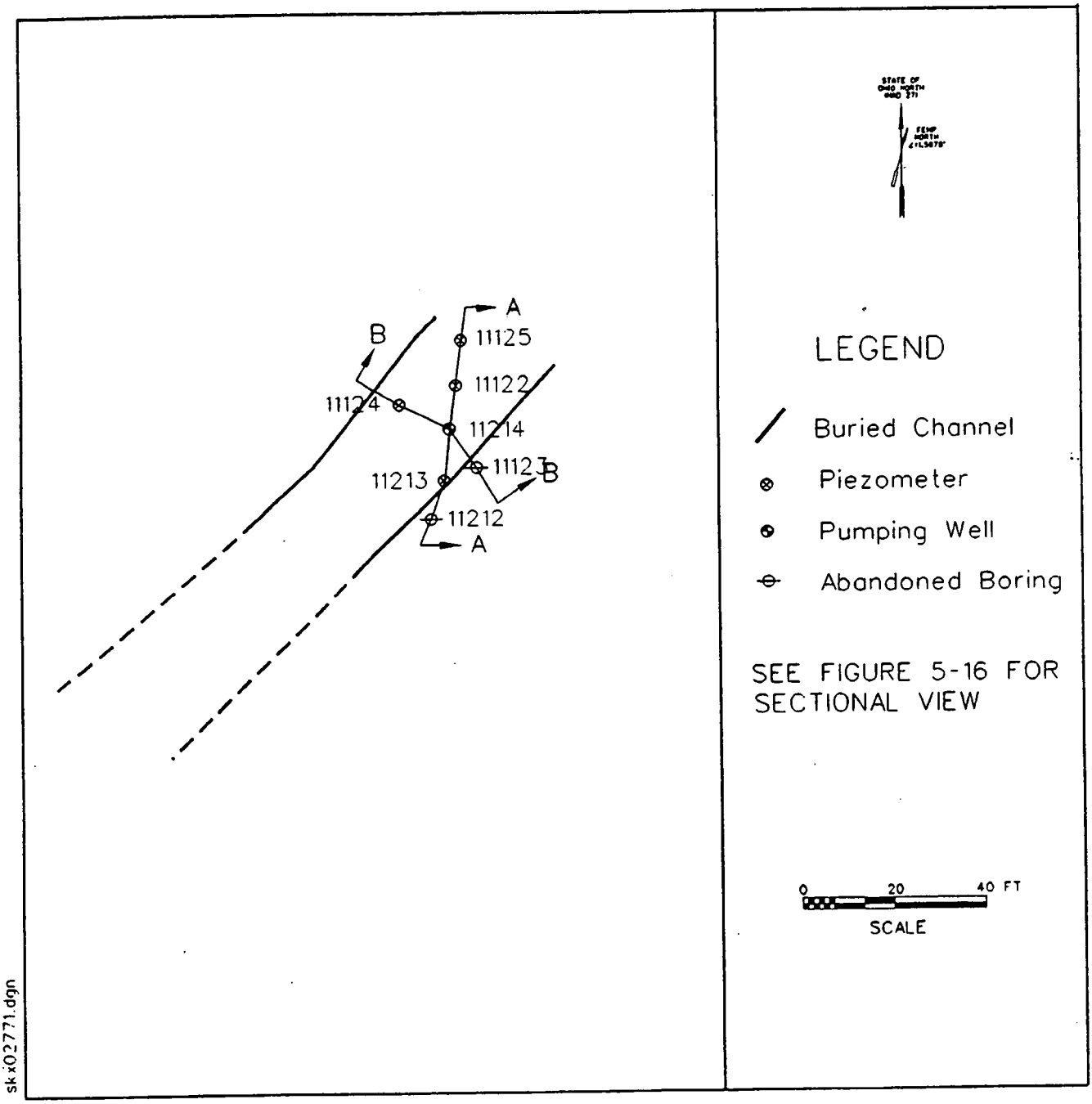

Figure 5-14 - Waste Pit Area New Observation Well Locations

Table 5-6 - Test and Observation Wells, Waste Pit Area Pumping Test

FEMP Well No.	Well Type	Depth to Screen Bottom (feet)	Distance to 11214 (feet)	Well Diameter, ID (inches)	Screen Length (feet)	Total Drawdown (ft)[A]	Notes
11214	Test Well	24.0	0.0	4	10.0	10.88	Test Well
11213	New Observation Well	16.0	11.15	2.0	11.0	8.11	
11122	New Observation Well	25.0	9.7	2.0	10.0	8.81	
11125	New Observation Well	11.5	19.65	2.0	6.0	4.77	
11124	New Observation Well	9.5	12.16	2.0	1.0	2.03	Shallow Sand Zone
1010	Monitoring Well	27	475.1	4	11	-0.03[B]	
1774	Monitoring Well	31	407.1	4	4	-0.302[B]	Waste Pit 4
1645	Monitoring Well	25.5	180.0	4	10	-0.29[B]	
11077	Monitoring Well	21.5	346.4	4	5	0.12	
1077	Monitoring Well	33	411.3	4	10	-0.36[B]	
11216	Monitoring Well	35	323.9	4	10	-0.08[B]	

A Cumulative drawdown after 8,740 minutes of pumping at 2.0 gpm.

B Overall negative drawdown due to rain event on September 24-25, 1993.

Recovery was monitored from the time the pump was turned off on September 27 until 11:15 on September 30 when the test well had recovered 66 percent. On September 28, at 09:05, the pressure transducers were inadvertently removed from Wells 11124, 11125, and 11120 for approximately 10 minutes due to miscommunication between the test technicians. The transducers were returned to their wells at approximately the same depth and monitoring continued.

5.3.3 Analysis

The response to pumping was generally characteristic of semi-confined conditions. Data was analyzed primarily by the Hantush-Jacob method with Neuman and Theis analysis included for purposes of comparison.

5.3.4 Background Trend

Figure 5-15 is used to evaluate the background trend for the Waste Pit Area pump test. The figure shows the water level in the test well (11214) and associated observation wells. Water levels in each of five wells are referenced to level at the start of the background period and are plotted over the 36-hour period immediately prior to the constant rate test. Each well exhibited a relatively constant water level over this period with variations of less than 0.03 feet. Figure 5-4 presents precipitation data collected over this time period from the FEMP weather station. Precipitation totaling 1.8 inches fell on October 24 and 25. While this precipitation occurred during the constant rate pumping test, it occurred far enough into the test that the effects of boundary conditions had already been encountered. Since the Theis and Cooper-Jacob analysis were performed on data prior to the appearance of boundary effects, the precipitation events do not affect parameter estimation.

5.3.5 Results

The test well (11214) penetrates and is screened in a sand body interpreted to be a narrow buried channel approximately 20 feet wide. The objective of this test was to estimate hydraulic conductivity. A conceptual cross section is provided in Figure 5-16.

Well locations and the cumulative drawdown at the end of the pumping test are shown in Figure 5-13. The cone of depression steepens noticeably to the west of the pumping well where it intercepts the edge of the channel. The test well demonstrated no communication with wells outside the channel. Wells outside the channel eventually showed a rising water level due to the precipitation event that occurred on September 24 and 25 (Table 5-6, Figure 5-13).

Three methods of analysis were used: (1) Hantush-Jacob (semi-confined), (2) Theis (confined), and (3) Neuman (unconfined). The recovery data was also analyzed using the Theis method. The test well

exhibited confined characteristics as initially the water level was above the lower extent of an upper brown silty-clay layer. An additional confining or semi-confining layer is also present approximately 10-14 feet BGS. As the test proceeded, hydraulic head was reduced and conditions transitioned to either unconfined or semi-confined.

The results of this analysis are provided in Table 5-7. The best data for analysis is between 2 and approximately 700 minutes. This time is after the effects of well storage have dissipated and before the effects of boundary conditions and precipitation become significant. During the early portion of this time period the hydraulic conditions are still largely confined so there is strong agreement between all three methods of pump test analysis. During a later portion of the pump test, it is likely that some dewatering of the upper sand body occurred.

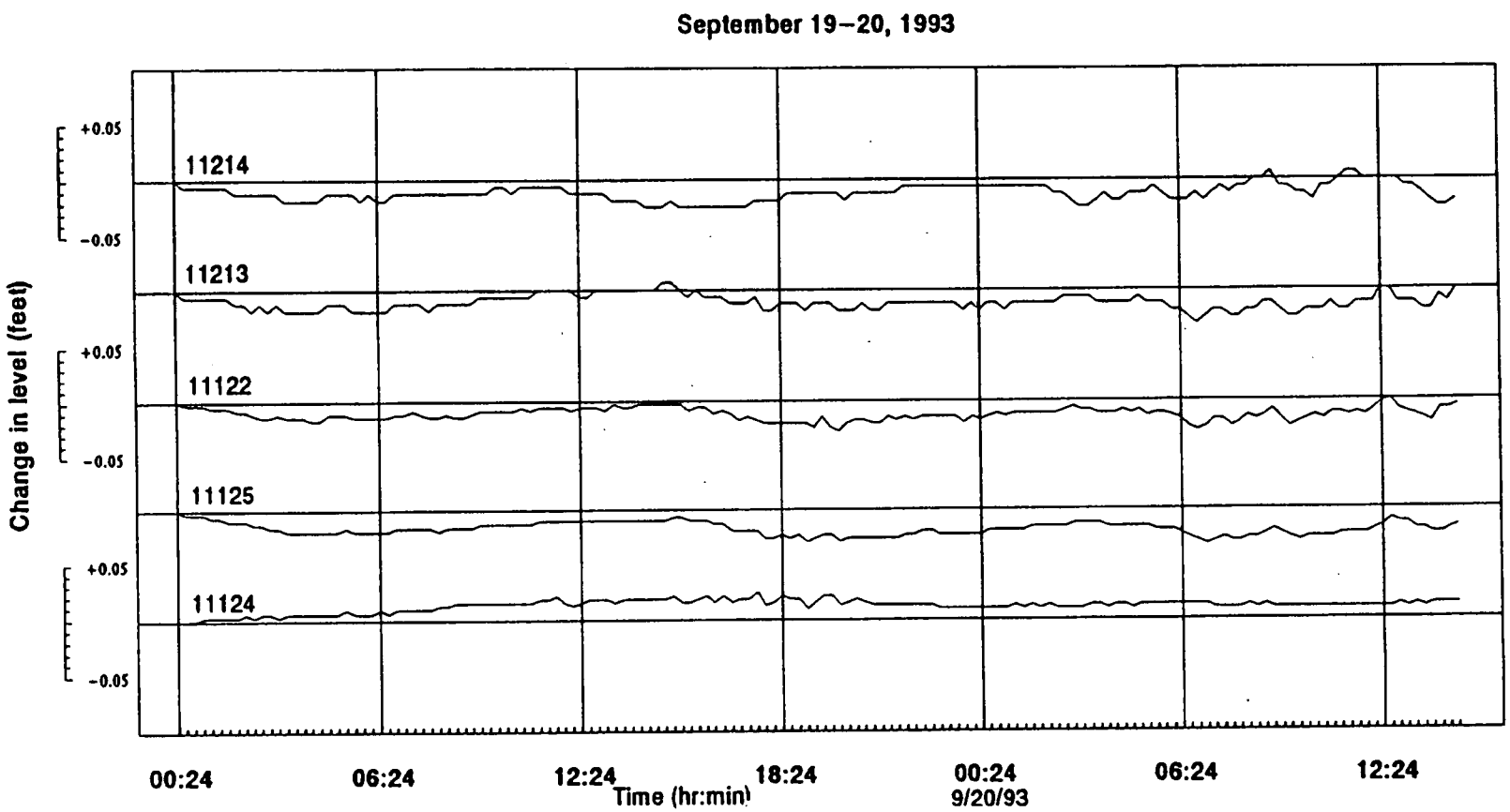

Figure 5-15 - Background Trend, Waste Pit Area Pump Test

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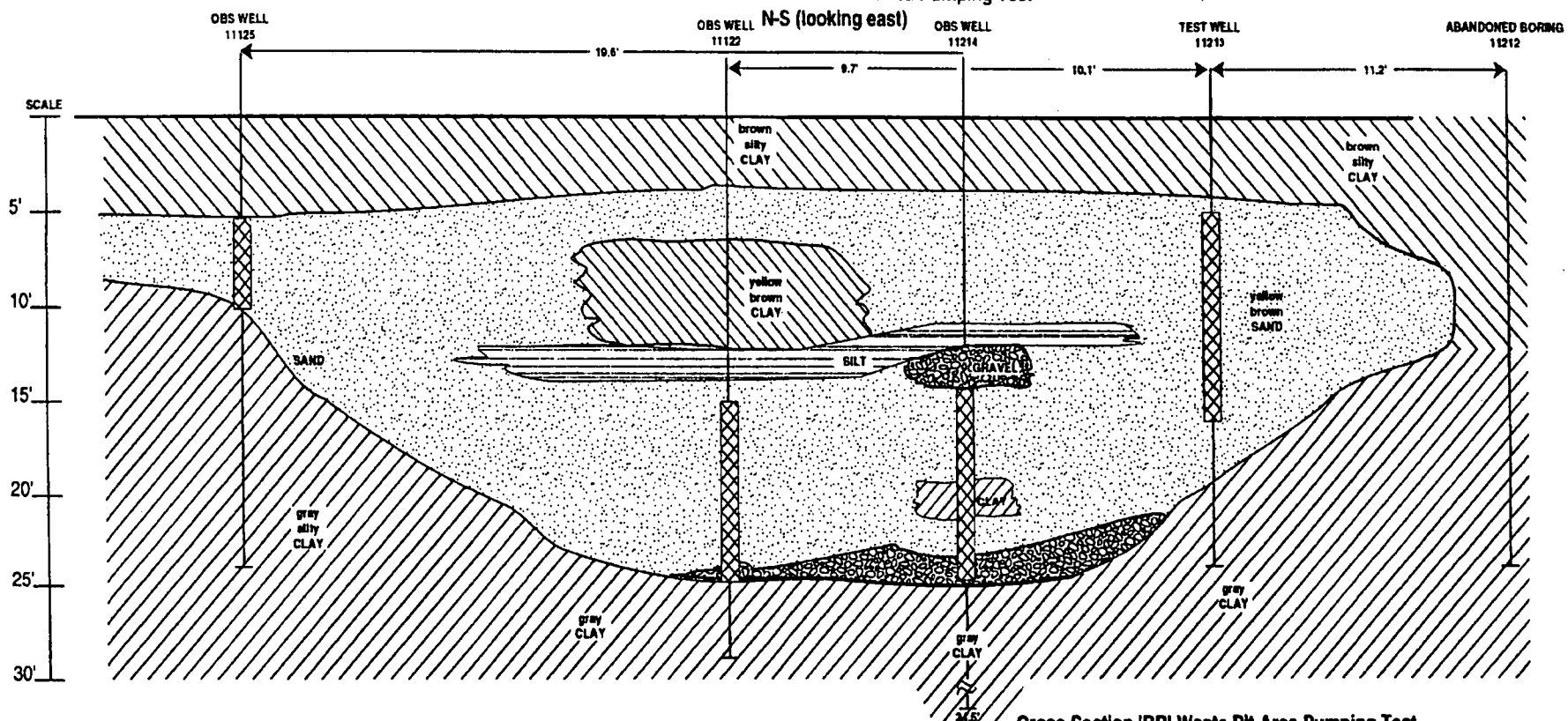

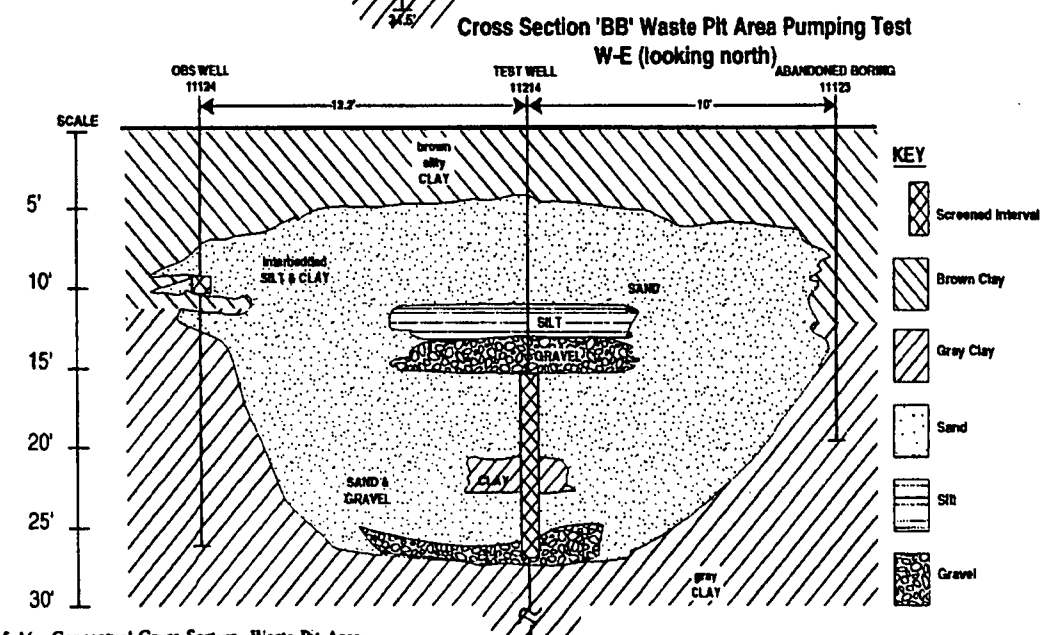

NOTE: SEE FIGURE 5-14
FOR CROSS SECTION LOCATIONS.

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Figure 5-16 - Conceptual Cross Section, Waste Pit Area

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Table 5-7 - Pumping Test Results, Waste Pit Area

			Theis		Neuman				Hantush-Jacob (Primary Method)		Theis Recovery
Well Number	Distance to Test Well (ft)	Thickness (ft) (Unconfined/ Confined)	K_h (ft/day)	S	K_h (ft/day)	S	S_y	K_v/K_h	K_h (ft/day)	S	K_h (ft/day)
11213	11.15	12.25	3.7	0.00083	3.7	0.00083	0.00049	0.036	3.7	0.00083	0.81
11122	9.7	15.25 / 11.25	4.0	0.00081	3.8	0.0014	0.0023	0.0099	3.9	0.0084	0.83
11125	19.65	6.75 / 6.25	5.6	0.0032	4.1	0.0031	0.0090	0.012	5.6	0.0029	2.47
Geometric Mean									4.3 (1.5×10^{-3} cm/sec)		
Average								0.0193		0.0040	

Notes:

NP - calculation not performed

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Recharge to the sand body was controlled in part by the less permeable clay material which surrounds the buried channel. This effect can be observed in the recovery analysis where the calculated conductivity is lower then that predicted by any of the three pumping analyses. Due to the short period of data collection following the termination of the pump test, the assumptions of the Theis analysis are not valid; however, it still provides fairly representative values.

Data was collected from 10 observation wells and the test well. These wells are shown on Figure 5-13. Observation wells located outside the channel (1645 and 1077) exhibited a negative drawdown (rising level) during the pump test and are not considered to be in communication with the test well. They were not considered during parameter estimation.

Additionally, the test well (11214) is not included in parameter estimation due to the effects of pumping. Observation Well 11124 is not included because its relatively poor response indicates that it is not in good communication with the rest of the channel (Figure 5-16).

The three remaining observation wells exhibited responses characteristic of semi-confined conditions. When analyzed by Theis, Neuman, and Hantush-Jacob, they exhibited a tight correlation for values of horizontal hydraulic conductivity and storage coefficient. A steepened drawdown curve was observed approximately 600-800 minutes into the test. This change in slope occurs as the expanding cone of depression from the test well encounters a flow boundary.

From the Hantush-Jacob analysis, the sand body exhibits a horizontal hydraulic conductivity of 4.3 ft/day (1.5×10^{-3} cm/sec) and a storativity of 0.004. This agrees with slug test results and values of storativity for semi-confined conditions. Theis' recovery analysis yielded lower values of conductivity due to dewatering of the sand body and slow recharge through the less permeable surrounding clay till.

The drawdown contour plot of Figure 5-14 shows an elongation consistent with the buried channel. Figure 5-17 shows a distance drawdown plot 700 minutes into the pump test (prior to the rain event). This figure qualitatively shows that with the exception of Well 11124, which is thought to be screened at the inside edge of the buried channel, the drawdown associated with each well generally correlates linearly with the log of distance. This indicates that the observation wells screened in the buried channel (with the exception of 11124) are in good communication with the test well.

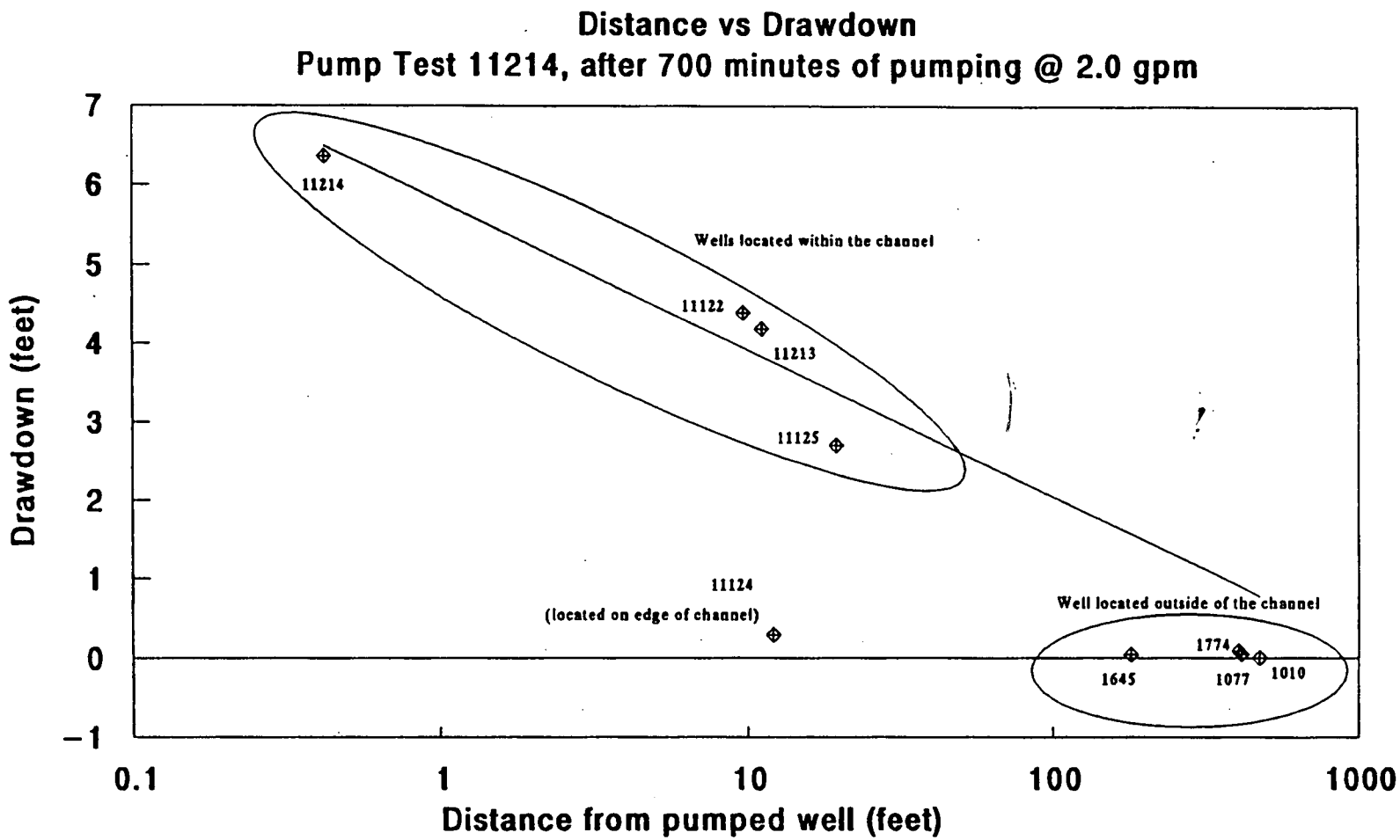

Figure 5-17 - Distance Drawdown, Waste Pit Area Pump Test

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5.4 Plant 8 Area (Well 1785)

5.4.1 Construction

Well 1785 was the pumped well for the CRT conducted in the Plant 8 area. It was installed in August 1991. Figure 5-18 provides a diagram of the well and surrounding lithology. The borehole was advanced with a 12-inch Outer Diameter (OD) hollow stem auger (HSA) drilling rig to a total depth of 21 feet BGS. The well was completed with a 6-inch ID Schedule 316 stainless steel casing to a depth of 18.7 feet BGS, and screened from 8.2 to 18.2 feet BGS with a 0.010 inch slot screen. A sand pack was placed from the bottom of the borehole to 6.0 feet. A 4.7 foot seal of Bentonite pellets was placed above the sand pack. The well was completed as a flush mount.

5.4.2 Conduct of Test

The CRT was initiated on November 4, 1993, at 13:30 at a constant discharge rate of 1.5 gpm. The test was terminated after 370 minutes due to dewatering of the well. The water level quickly recovered once the pump was shut off, regaining 90 percent of the CRT drawdown in less than 8-1/2 minutes.

A second CRT was begun at 21:58 at a lower discharge rate. The discharge rate was established as 1.25 gpm and maintained within ± 5 percent for the duration of the CRT. Maximum drawdown in the test well was measured at 10.76 feet. The test was concluded at 11:26 on November 7 after 3,685 minutes of pumping due to dewatering. Figure 5-19 shows a time-drawdown plot for the pump test while Figure 5-20 shows the total drawdown at the end of the test. Figure 5-21 shows the well arrangement in the immediate vicinity of Well 1785. This information is summarized in Table 5-8.

Recovery was monitored from the time the pump was turned off on November 7 until 10:51 on November 8th. At this time, the test well had recovered 98 percent. The well recovered 90 percent within 34 minutes of the end of the CRT.

5.4.3 Analysis

The response to pumping was characteristic of confined conditions. Data was analyzed by the Theis and Cooper-Jacob methods.

Well 1785

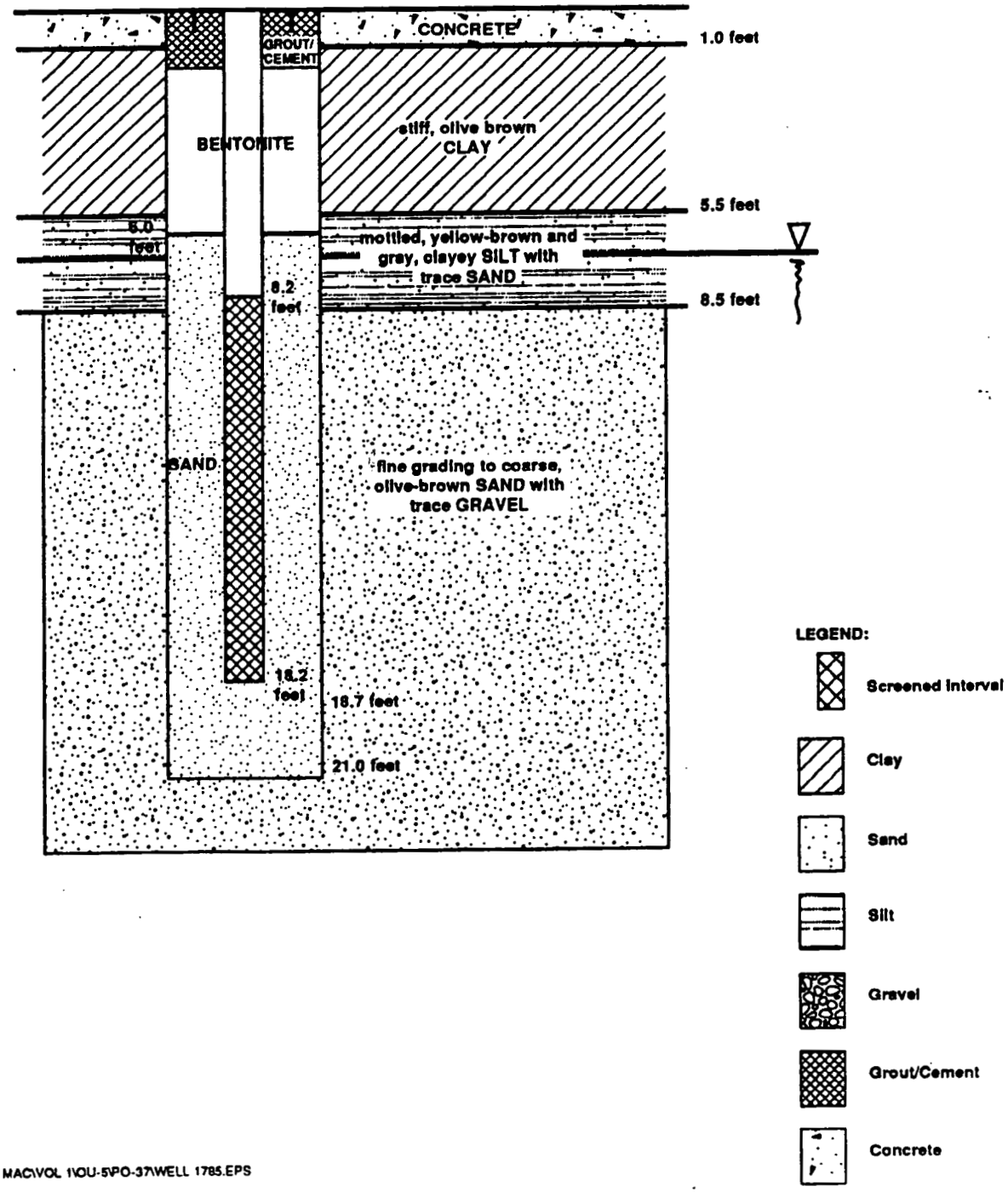

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Figure 5-18 - Well 1785: Construction and Surrounding Lithology

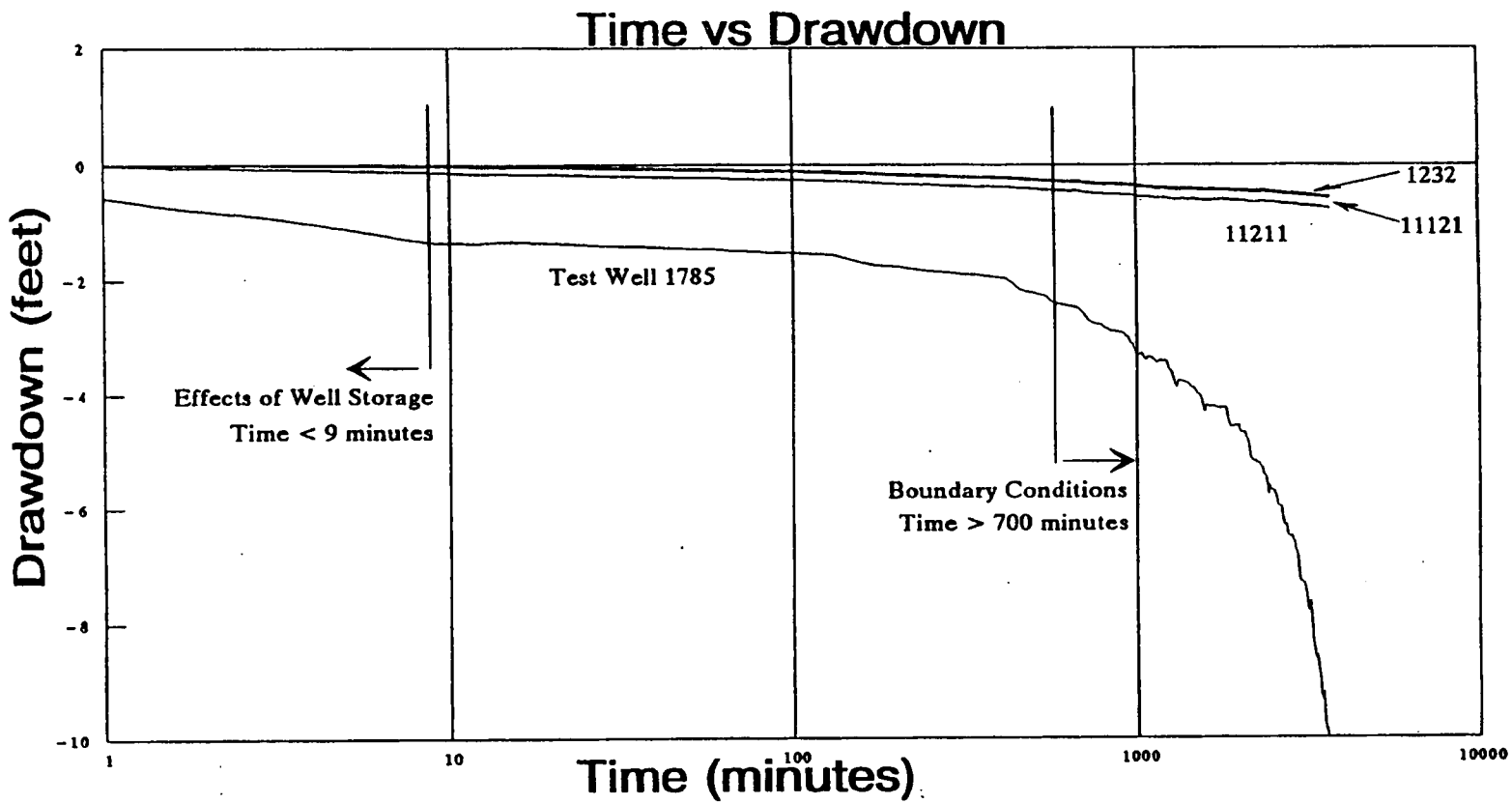

Figure 5-19 - Water Levels in the Plant 8 Area During the CRT

000103

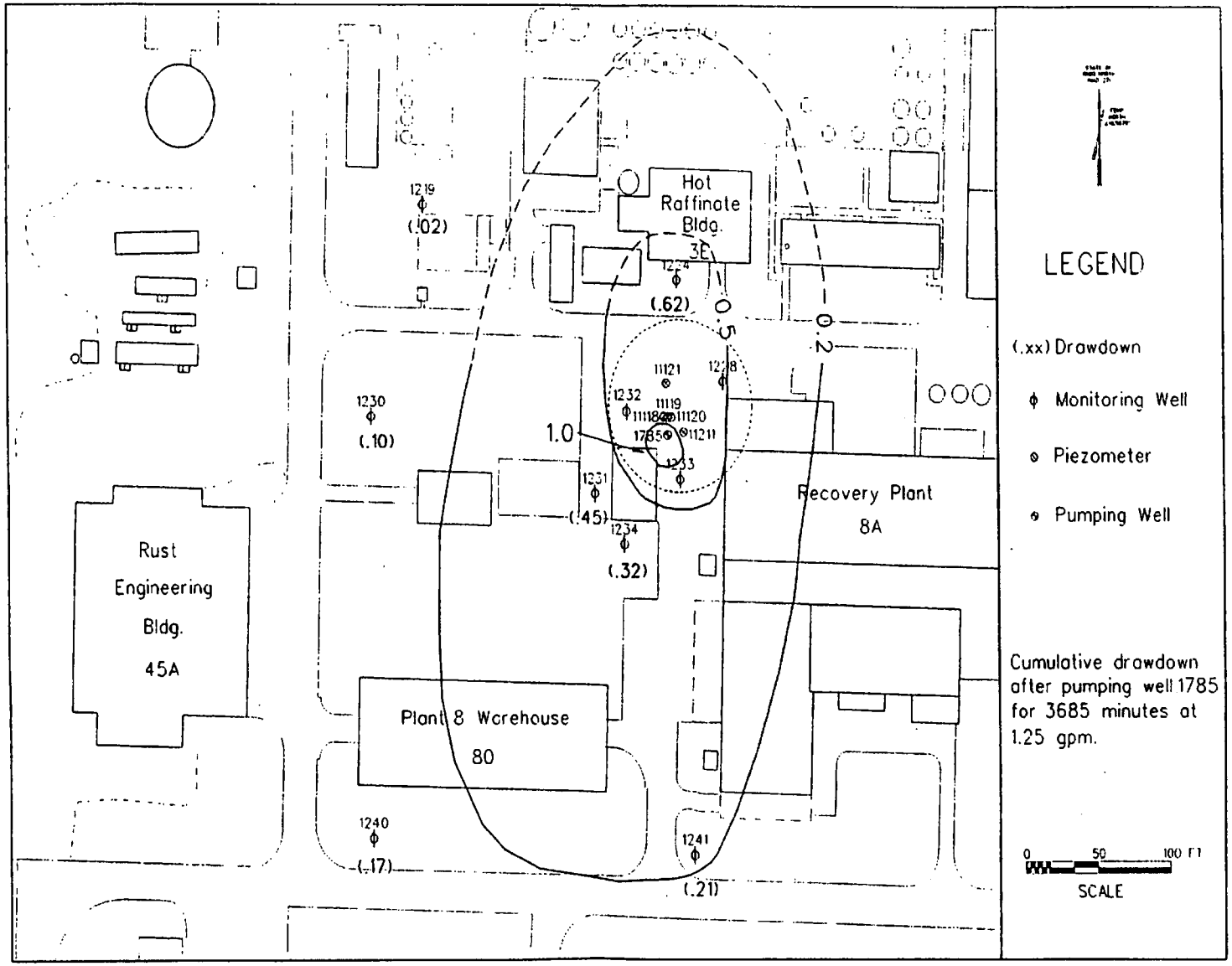

Figure 5-20 - Well Arrangement and Total Drawdown, Plant 8 Area Pump Test

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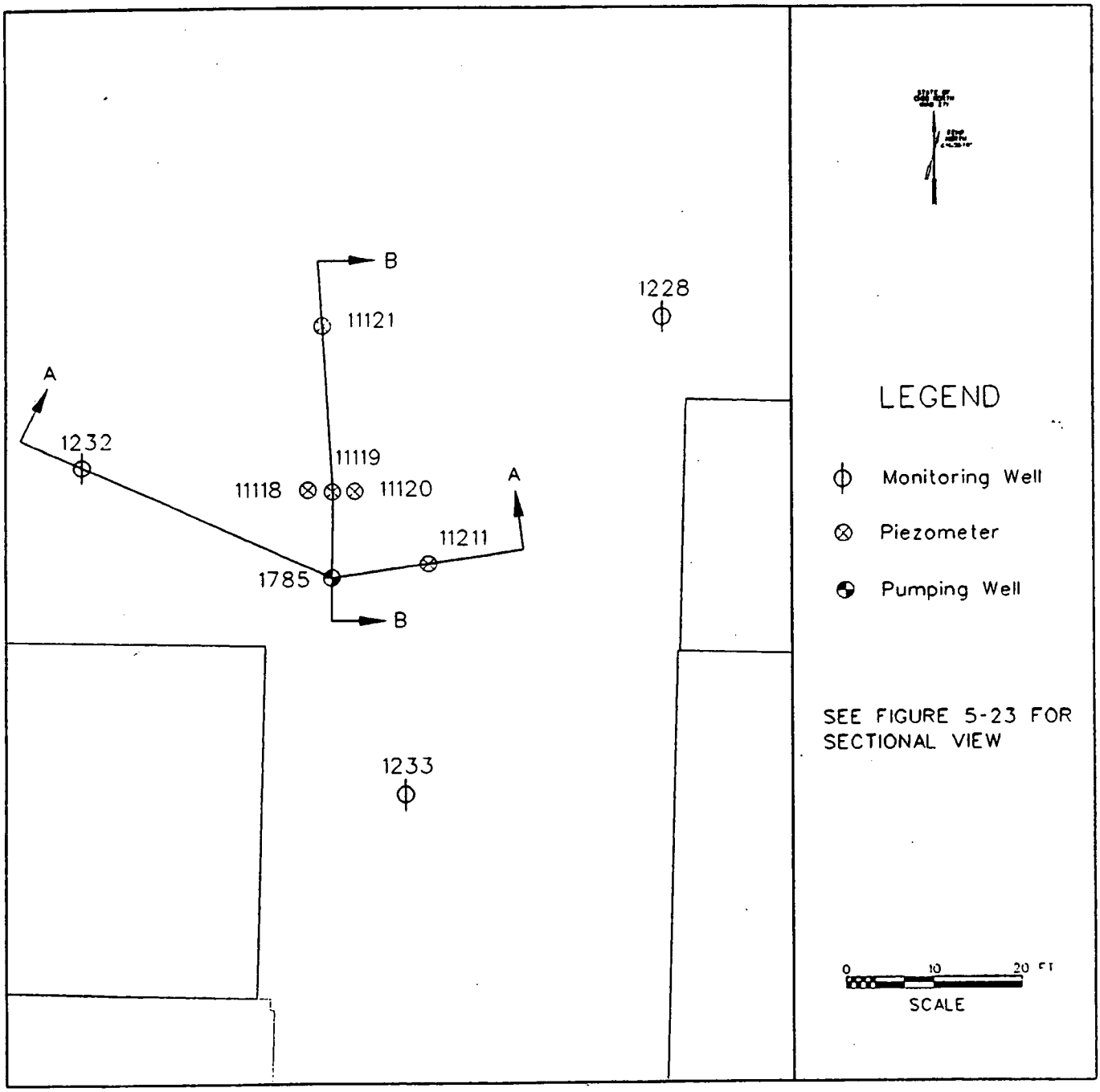


Figure 5-21 - Plant 8 Area New Observation Well Locations

Table 5-8 - Test and Observation Wells, Plant 8 Area Pumping Test

FEMP Well No.	Well Type	Depth to Screen Bottom (feet)	Distance to 1785 (feet)	Well Diameter, ID (inches)	Screen Length (feet)	Total Drawdown (ft)[A]	Notes
1785	Test Well	18.2	0.0	6	10	10.76	Test well
11119 (Pz-1C)	New Observation Well	24.5	10.18	2	1.0	0.79	basal clay
11120 (Pz-1B)	New Observation Well	21.0	10.58	2	11.5	1.00	
11118 (Pz-1A)	New Observation Well	7.5	10.82	2	1.5	0.08	upper clay
11211 (Pz-4)	New Observation Well	23.0	11.27	2	12.5	0.84	
1233	Monitoring Well	19.8	26.83	2	13	0.74	
11121 (Pz-2)	New Observation Well	24.0	29.67	2	14.5	0.66	
1232	Monitoring Well	19.6	31.46	2	15	0.63	
1228	Monitoring Well	14.6	48.88	2	4.8	0.50	
1231	Monitoring Well	20.0	61.36	2	12	0.45	
1234	Monitoring Well	10.5	69.53	2	3	0.32	
1224	Monitoring Well	20.0	88.98	2	10	0.62	
1230	Monitoring Well	20.0	206.13	2	10	0.10	
1219	Monitoring Well	12.0	214.90	2	5	0.02	
1241	Monitoring Well	15.5	241.07	2	4.8	0.21	
1240	Monitoring Well	13.5	309.07	2	5	0.17	

[A] Cumulative drawdown after 3,685 minutes of pumping at 1.25 gpm.

5.4.4 Background Trend

Figure 5-22 is used to evaluate the background trend for the Plant 8 Area pump test. This figure shows the water level in the test well (Well 1785) for the period October 22 through October 26, 1993. Water levels are referenced to an arbitrary reference point at the beginning of the monitoring period. Water levels in the associated observation wells are shown for the period of October 25-26 but were not available before this time. Well 1785 exhibited a daily cyclical trend imbedded on a consistently decreasing trend throughout the period. The steady decline over the 4-day period occurs at an average rate of 0.0316 ft/day. The response of the associated observation wells over the shorter period of time shows a similar trend. The observed background trend is also supported by the fact that during the recovery period following the constant rate test, the level in Well 1785 and the associated observation wells recovered quickly to a level approximately 0.2 feet below the original static water levels.

As shown in Figure 5-4, approximately 0.05 inches of rain fell during the Plant 8 pump test over a 2 hour period ending at 01:00 on November 5, 1993. The correction factor of 0.0316 ft/day, discussed above, has been applied to account for the background trend.

One observation well and the test well were eliminated from parameter estimation for the following reasons:

1) As mentioned above, a minor precipitation event occurred during the Plant 8 pump test that ultimately limited the interpretation of the collected data. Due to flooding of the Observation Well 11120 casing from surface water, this well is removed from the analysis.

2) The Plant 8 pump test only moderately stressed the sand body due to the inefficiency of the test well. Except for the test well, which lost available drawdown, the remaining wells responded under confined conditions. Due to its inefficiency, significant drawdown, and the resultant deviations from the assumptions of Theis and Jacobs, the test well is not considered for parameter analysis.

3) Observation Wells 11118 and 11119 were screened entirely within the upper (brown) and lower (gray) clay confining layers. Observation Well 11118 showed a very minimal response and 11119 exhibited approximately 80 percent of the response seen at 11120 that was screened at the same distance within the sand body. Observation Wells 11118 and 11119 thus are not analyzed for parameter estimation.

5.4.5 Results

For the Plant 8 Area pumping test, data from 15 observation and monitoring wells and the test well were collected. Figure 5-23 shows a conceptual cross section of the wells in the immediate area.

Data collected from three wells were considered adequate for parameter estimation. The responses from these wells were characteristic of confined conditions. When analyzed using the Theis and Cooper-Jacob methods, they exhibited a tight correlation for values of horizontal hydraulic conductivity and storativity. As seen in Figure 5-19, the effects of well storage for this test extend over the first 8 minutes of pumping due to a larger well casing radius and smaller discharge rate. A steepened drawdown curve was observed approximately 700 minutes into the test. This change in slope likely occurs as the expanding cone of depression from the test well encounters a flow boundary.

From the Theis analysis, the sand body exhibits a horizontal conductivity of 23.8 ft/day (8.4×10^{-3} cm/sec) and a storativity of .0054. These results fall within the range of the conductivity calculate from slug tests conducted in sand (Section 2) and typical values of storativity for similar materials under confined conditions.

A distance drawdown plot is shown at Figure 5-24. This figure shows that with the exception of Well 11118 all the wells generally responded linearly with the log of distance. This would indicate that all the wells (with the exception of 11118 are in relatively good communication with the test well.

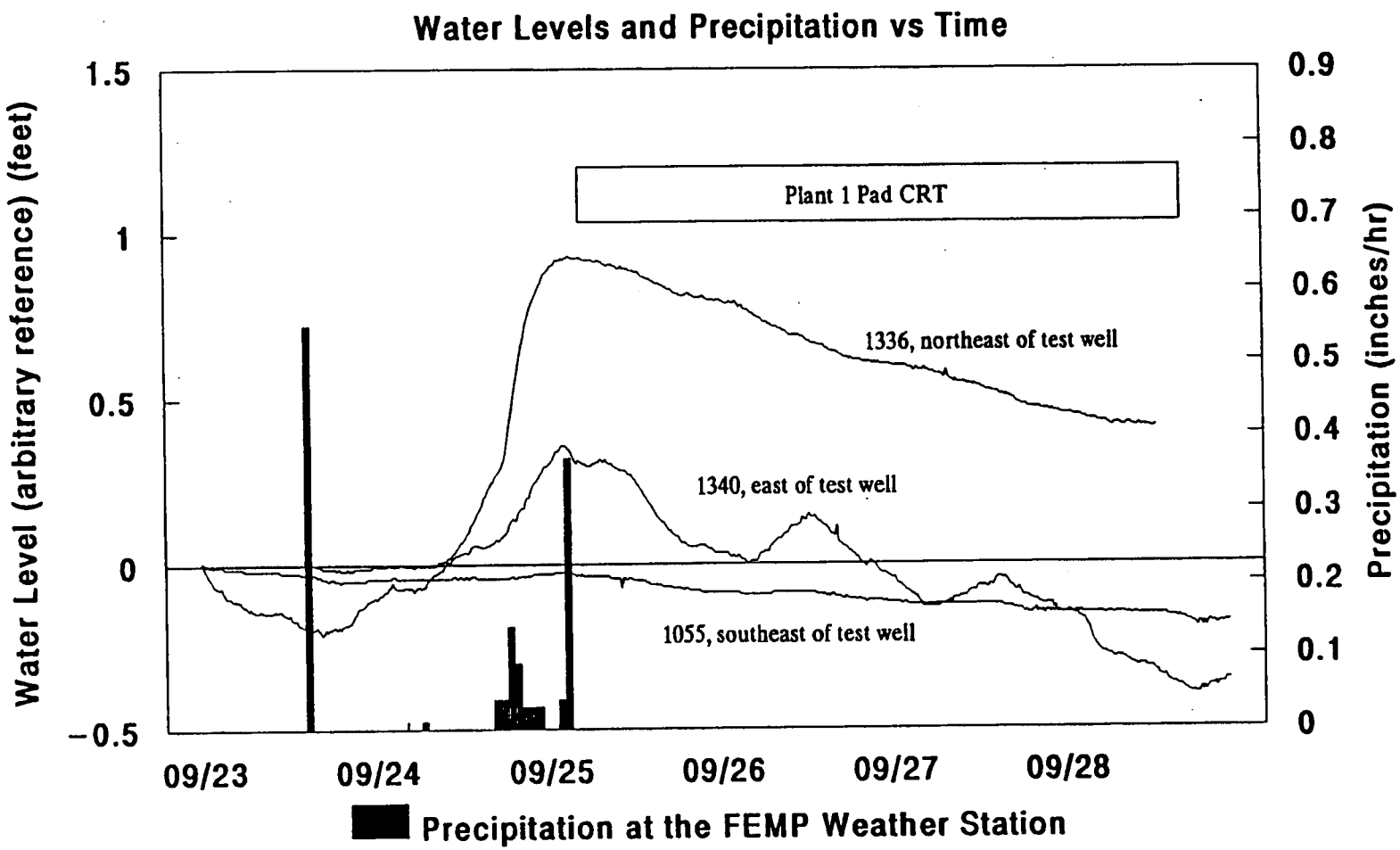
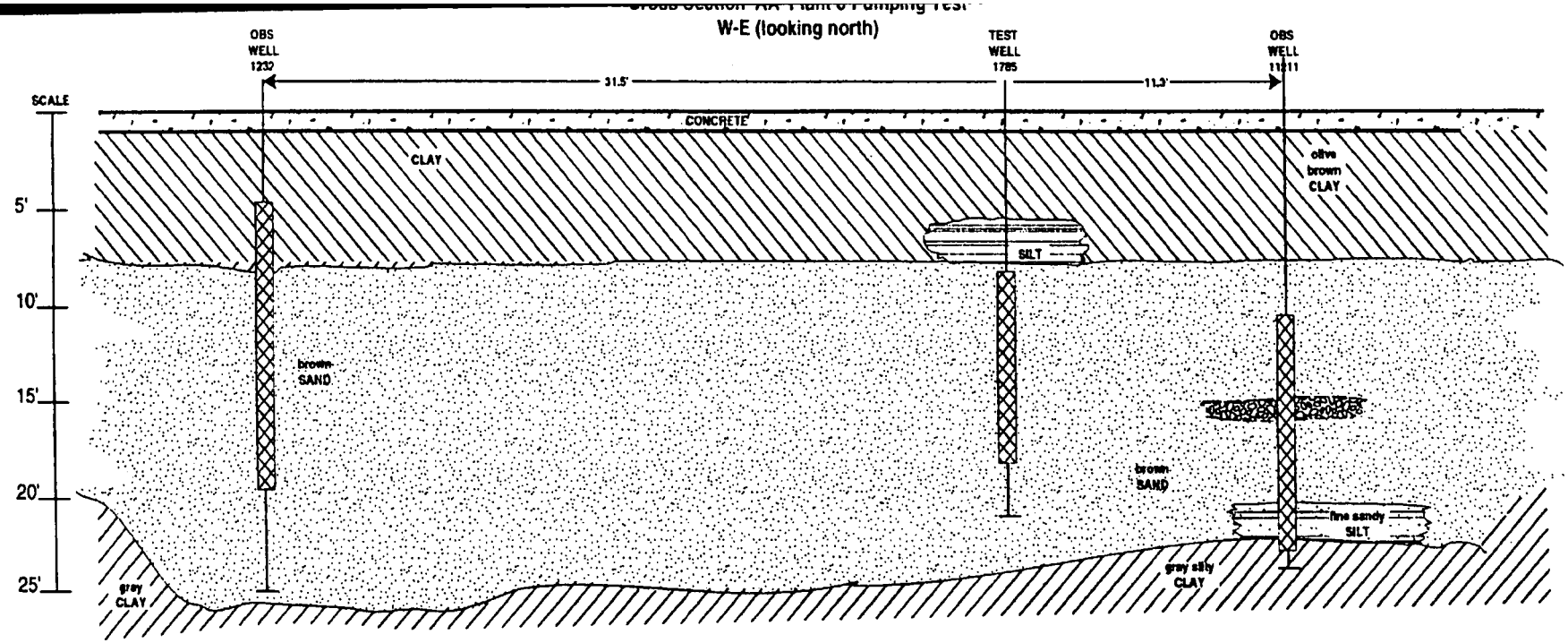


Figure 5-22 - Background Trend, Plant 8 Area Pump Test

000109



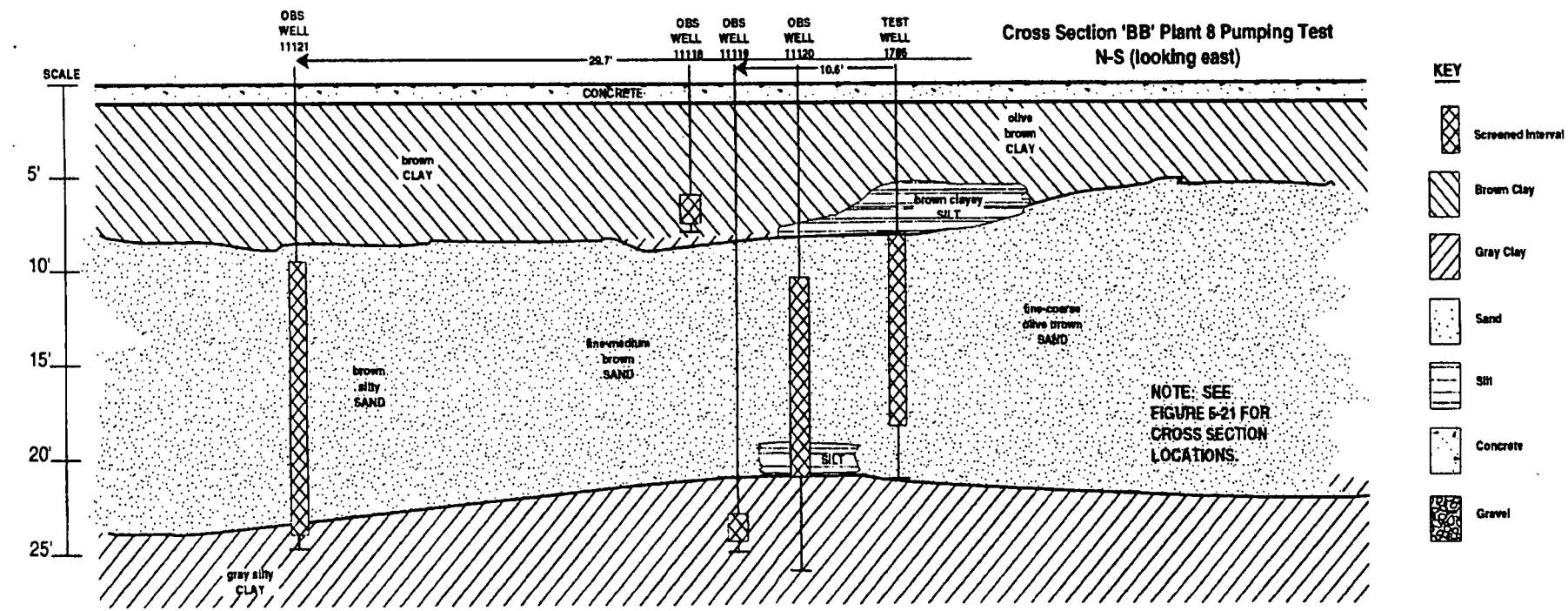


Figure 5-23 - Conceptual Cross Section, Plant 8 Area

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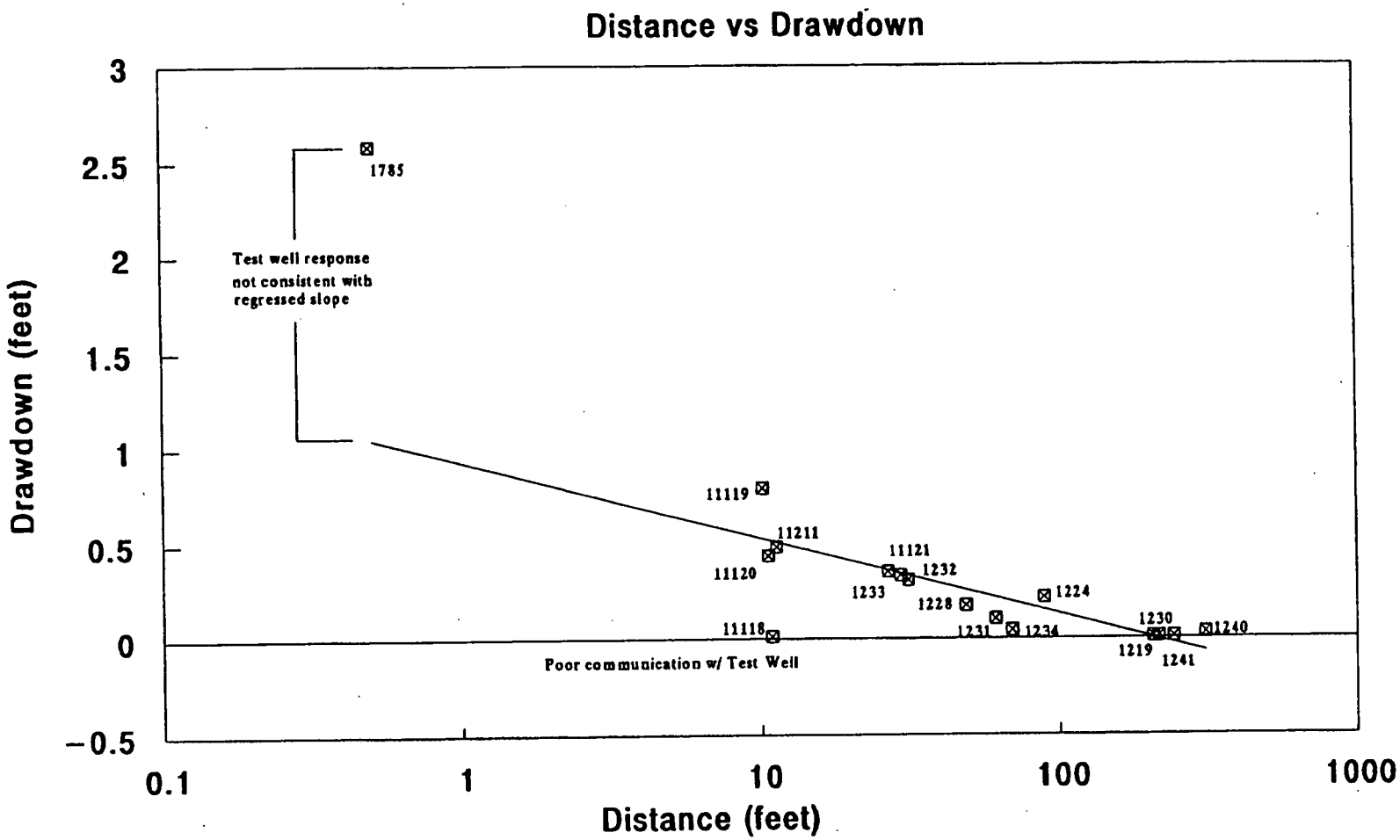

Figure 5-24 - Distance-Drawdown, Plant 8 Pump Test

Table 5-9 - Pump Test Results, Plant 8 Area

			Theis (Primary)		Cooper-Jacob		Theis Recovery
Well Number	Distance to Test Well (ft)	Saturated Thickness (ft)	K_h (ft/day)	S	K_h (ft/day)	S	K_h (ft/day)
11120	10.58	17	18.2	0.0085	20.0	0.0066	8.8
11121	29.67	15.5	26.9	0.0037	29.1	0.0032	9.5
11211	11.27	11.25	27.5	0.0040	30.8	0.0028	13.0
Geometric Mean			23.8 (8.4×10^{-3} cm/sec)				
Average				0.0054			

Notes:

NP - Analysis not performed

000112

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SECTION 6

LYSIMETERS

Six deep-sampling lysimeters were installed in accordance with the GT/VZ Work Plan (PARSONS 1993b). Pairs of lysimeters were installed in three areas on site property. The locations are shown in Figure 6-1. One lysimeter in each pair was used for sampling pore moisture in the lower clay at the base of the glacial overburden and the other was used for sampling pore moisture in the unsaturated sand and gravel above the water table of the GMA. In area A, an additional shallow lysimeter was installed to replace a lysimeter which failed.

6.1 Equipment

The installed lysimeters are 2-inch diameter, vacuum/pressure soil pore water samplers with a ceramic cup-type filter media. They are manufactured by Timco and a general arrangement is shown in Figure 6-2. This type of lysimeter allows water to enter a micro-porous ceramic cup at the instrument's base through capillary forces. The ceramic cup is attached to an 18 inch PVC cylindrical body with full depth riser and a PVC head. The head assembly attaches to the riser and connects the sample and pressure ports to the lysimeter via 1/4 inch nylon tubing. The nylon tubes extend from the lysimeter body up to the riser head at the surface and are used for vacuum extraction and pressure sampling. The sample tube extends from the head through the lysimeter to a point just in contact with the inside base of the lysimeter. The vacuum extraction tube extends into the lysimeter to a point approximately 3 inches below the inside of the cap.

6.2 Methods

The lysimeter borings were advanced by cable tool methods to a target depth. Table 6-1 provides completion details of the lysimeter borings.

A 16-inch ID steel casing was driven to the basal clay and the hole was allowed to set for a period of 24 hours to check for leakage from the upper till. Casings for the shallow lysimeters were advanced from 1.4 to 6 feet into the basal clay, and casings for the deep lysimeters were advanced from 3.9 to 22 feet to ensure that the potential for moisture to migrate downward from the granular material above the lower clay horizon was minimized and to stabilize the borehole. Following the installation of the surface casing(s), each borehole was advanced to total depth with 4.25 inch ID (8-inch OD) hollow stem augers.

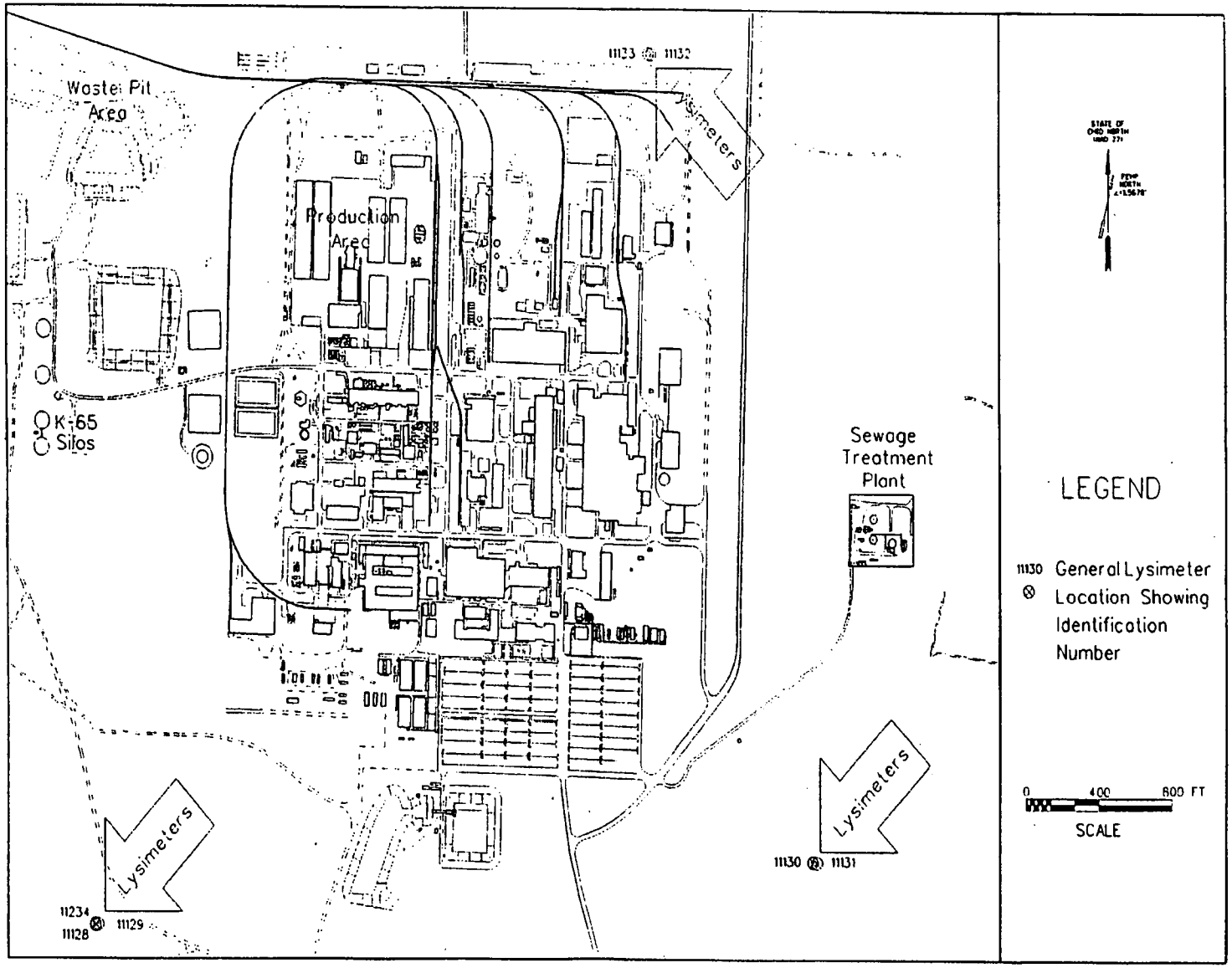

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Figure 6-1 - Lysimeter Locations

General Lysimeter Arrangement

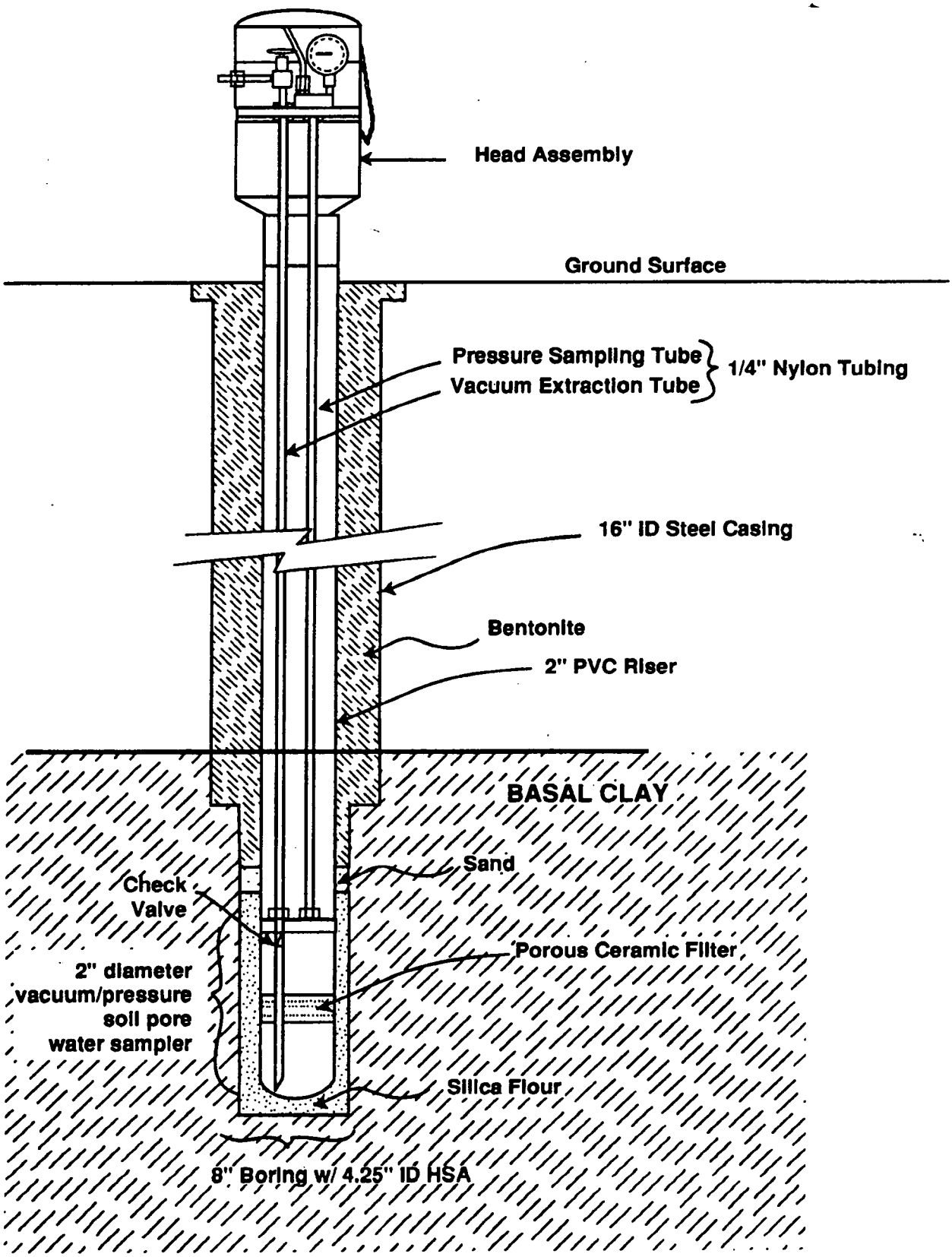

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Figure 6-2 - General Lysimeter Arrangement

Table 6-1 - Lysimeter Completion Details

FEMP Well Number	Lysimeter ID	16 Inch Casing Depth (Ft)	Depth to Basal Clay (Ft)	Depth of Casing in Basal Clay (Ft)	Depth of Lysimeter Tip (Ft)	Depth of Lysimeter in GMA (Ft)	Depth of Lysimeter in Basal Clay (Ft)
11128	AL-1	12.0	16.0	1.4	15.0	n/a	4.4
11129	AL-2	15.0	10.2	4.8	22.0	5.0	n/a
11130	BL-1	20.0	16.0	4.0	22.5	n/a	6.5
11131	BL-2	20.4	16.5	3.9	36.0	2.7	n/a
11132	CL-1	18.0	12.0	6.0	26.0	n/a	14.0
11133	CL-2	34.0	12.0	22.0	48.0	7.5	n/a

The tips of the shallow lysimeters were set at the midpoint within the basal clay to minimize the effects of vertical migration of moisture by capillarity either downward from the granular materials above the basal clay or upward from the upper GMA. The depths of the deep lysimeter tips ranged from 2.5 feet to 7.5 feet into the GMA.

Two undisturbed Shelby tube samples were collected from the lower clay. Selected split-spoon samples and the Shelby tube samples were submitted to IT Corp. laboratory. Laboratory tests performed on the samples included grain-size analysis, moisture content, Atterberg limits, unit weight, specific gravity, and hydraulic conductivity.

As shown by Figure 6-2, the lysimeter components were assembled and installed with a full-depth, 2-inch PVC riser screwed on to the lysimeter body to house the nylon tubing. The tubing was cut to allow approximately 2 feet of stick-up at the surface. A 3 to 6 inch thick slurry of silica flour and distilled water was tremied into the open borehole. The lysimeter and riser were lowered into the boring and secured to prevent floating. Additional slurry was placed 2 to 4 inches above the top of the ceramic tip of the lysimeter. At this point, number 7 mesh sand was poured to a minimum 3 to 6 inches above the top of the lysimeter, followed by a column of Volclay grout to within 0.4 feet of the surface at AL-2 and BL-2. The grout column was brought flush to the surface in the remaining boreholes. This grout was placed to prohibit shallow water from draining into the lysimeter zone.

6.3 Analysis

All six lysimeters were sampled for total uranium and common anions/cations. The results are shown on Table 6-2. Data indicate that uranium is present at the base of the glacial overvburden deposit and also in the upper unsaturated portions of the GMA.

The lysimeters which were installed in the lower clay at the base of the glacial overburden required very little to no vacuum for sampling. This indicates that the sampling conditions are very close to saturation. The lysimeters which are installed in the sand and gravel, beneath the glacial overburden deposit but above the water table of the GMA require a vacuum for sampling. This indicates that the sand and gravel is not saturated. The lysimeters set in the sand and gravels of the GMA are well above the water table of the GMA (approx. 15 feet) and well above the seasonal fluctuation of the water table (approx. 6-8 feet).

Table 6-2 - Lysimeter Results

Location	Date	Parameter	Result	Units
11129	09/24/93	Alkalinity as CaCO3	250.00	mg/L
		Bicarbonate Alkalinity	300.00	mg/L
		Calcium	79500.00	µg/L
		Carbonate Alkalinity	< 1.00	mg/L
		Chloride	46.00	mg/L
		Gross Alpha	< .12	pCi/mL
		Gross Beta	< .19	pCi/mL
		Magnesium	19100.00	µg/L
		Potassium	5900.00	µg/L
		Sodium	29200.00	mg/L
		Sulfate	88.00	µg/L
		Uranium, Total	15.00	µg/L
	03/21/94	Uranium, Total	16.00	µg/L
	03/22/94	Uranium, Total	29.00	µg/L
	03/23/94	Uranium, Total	28.00	µg/L
11130	09/30/93	Calcium	99300.00	µg/L
		Gross Alpha	< .14	pCi/mL
		Gross Beta	< .26	pCi/mL
		Magnesium	40000.00	µg/L
		Potassium	3820.00	µg/L
		Sodium	16300.00	µg/L
		Uranium, Total	7.90	µg/L
	03/21/94	Uranium, Total	13.00	µg/L
	03/22/94	Uranium, Total	2.90	µg/L
	03/23/94	Uranium, Total	2.80	µg/L
	03/24/94	Uranium, Total	2.80	µg/L

Table 6-2 - Lysimeter Results (Continued)

Location	Date	Parameter	Result	Units
11131	09/24/94	Alkalinity as CaCO3	190.00	mg/L
		Bicarbonate Alkalinity	240.00	mg/L
		Calcium	59800.00	µg/L
		Carbonate Alkalinity	< 1.00	mg/L
		Chloride	57.00	mg/L
		Gross Alpha	< .12	pCi/mL
		Gross Beta	< .19	pCi/mL
		Magnesium	23200.00	µg/L
		Potassium	2860.00	µg/L
		Sodium	29000.00	µg/L
		Sulfate	62.00	mg/L
		Uranium, Total	11.00	µg/L
	03/21/94	Uranium, Total	3.40	µg/L
	03/22/94	Uranium, Total	12.00	µg/L
	03/23/94	Uranium, Total	12.00	µg/L
	03/23/94	Uranium, Total (Duplicate)	12.00	µg/L
11132	09/29/93	Alkalinity as CaCO3	190.00	mg/L
		Bicarbonate Alkalinity	240.00	mg/L
		Calcium	59500.00	µg/L
		Carbonate Alkalinity	< 1.00	mg/L
		Chloride	25.00	mg/L
		Magnesium	23900.00	µg/L
		Potassium	2280.00	µg/L
		Sodium	19500.00	µg/L
		Sulfate	62.00	mg/L
	03/21/94	Uranium, Total	4.60	µg/L
	03/22/94	Uranium, Total	2.50	µg/L
	03/23/94	Uranium, Total	2.30	µg/L
	03/24/94	Uranium, Total	3.50	µg/L

Table 6-2 - Lysimeter Results (Continued)

Location	Date	Parameter	Result	Units
11133	09/28/93	Alkalinity as CaCO3	250.00	mg/L
		Bicarbonate Alkalinity	310.00	mg/L
		Calcium	87400.00	µg/L
		Carbonate Alkalinity	< 1.00	mg/L
		Chloride	39.00	mg/L
		Magnesium	24200.00	µg/L
		Potassium	4270.00	µg/L
		Sodium	27700.00	µg/L
		Sulfate	67.00	mg/L
		Uranium, Total	52.00	µg/L
	03/21/94	Uranium, Total	47.00	µg/L
	03/22/94	Uranium, Total	16.00	µg/L
	03/23/94	Uranium, Total	17.00	µg/L
	03/23/94	Uranium, Total (Duplicate)	14.00	µg/L
	03/24/94	Uranium, Total	16.00	µg/L
11234	03/21/94	Uranium, Total	4.10	µg/L
	03/22/94	Uranium, Total	3.90	µg/L
	03/23/94	Uranium, Total	4.60	µg/L
	03/23/94	Uranium, Total (Duplicate)	4.20	µg/L
	03/24/94	Uranium, Total	4.90	µg/L

SECTION 7

GEOTECHNICAL DATA

7.1 Textural Analysis of Glacial Overburden Sediments

Sieve analyses were conducted on 206 sediment samples collected during the installation of pump test wells, lysimeters, and packer borings for this study. The textural triangle shown in Figure 7-1 shows the grain size distributions determined from these sediment samples. A high density of data points is concentrated in a relatively small area of the textural triangle. The majority of the data fall within the "60 to 80 percent silt and clay" and "20 to 40 percent sand" zone of the textural triangle, which corresponds to the USCS groupings ML/MH and CL/CH. These sediments are described generally as silty or clayey fine sands, sandy clays, sandy silts, silty clays, silts, or clays.

Both Freeze and Cherry (1979) and Fetter (1980) have developed tables that correlate soil types to hydraulic conductivity. Based on the Freeze and Cherry table, the area with the greatest density of points in the textural triangle correlates to material with hydraulic conductivities from 10^{-5} cm/s to 10^{-10} cm/s. Using the Fetter table to convert the same data, a range of hydraulic conductivities from 10^{-4} cm/s to 10^{-6} cm/s would be expected.

7.2 Physical Properties of the Gray Clay

Shelby tube samples collected from six locations were measured for bulk density, specific gravity, volumetric moisture content, and the coefficient of permeability Figure 7-2 and Table 7-1.

The porosity of the gray clay has been calculated from the density measurements (Table 7-1). Both bulk density and particle mass density were measured according to the Corps of Engineers laboratory soil testing method EM1110-2-1906, Appendix II. The following relationship was used to calculate porosity (Freeze and Cherry 1979):

$$n = 1 - (\text{bulk density} / \text{particle mass density})$$

Porosity calculations ranged from 23 to 30 percent with an average porosity of 26 percent.

The moisture content of the gray clay located beneath the FEMP (Table 7-1) has been determined according to ASTM D2216. Moisture content measurements ranged from 10.3 to 25.4 percent with an average moisture content of 14.3 percent.

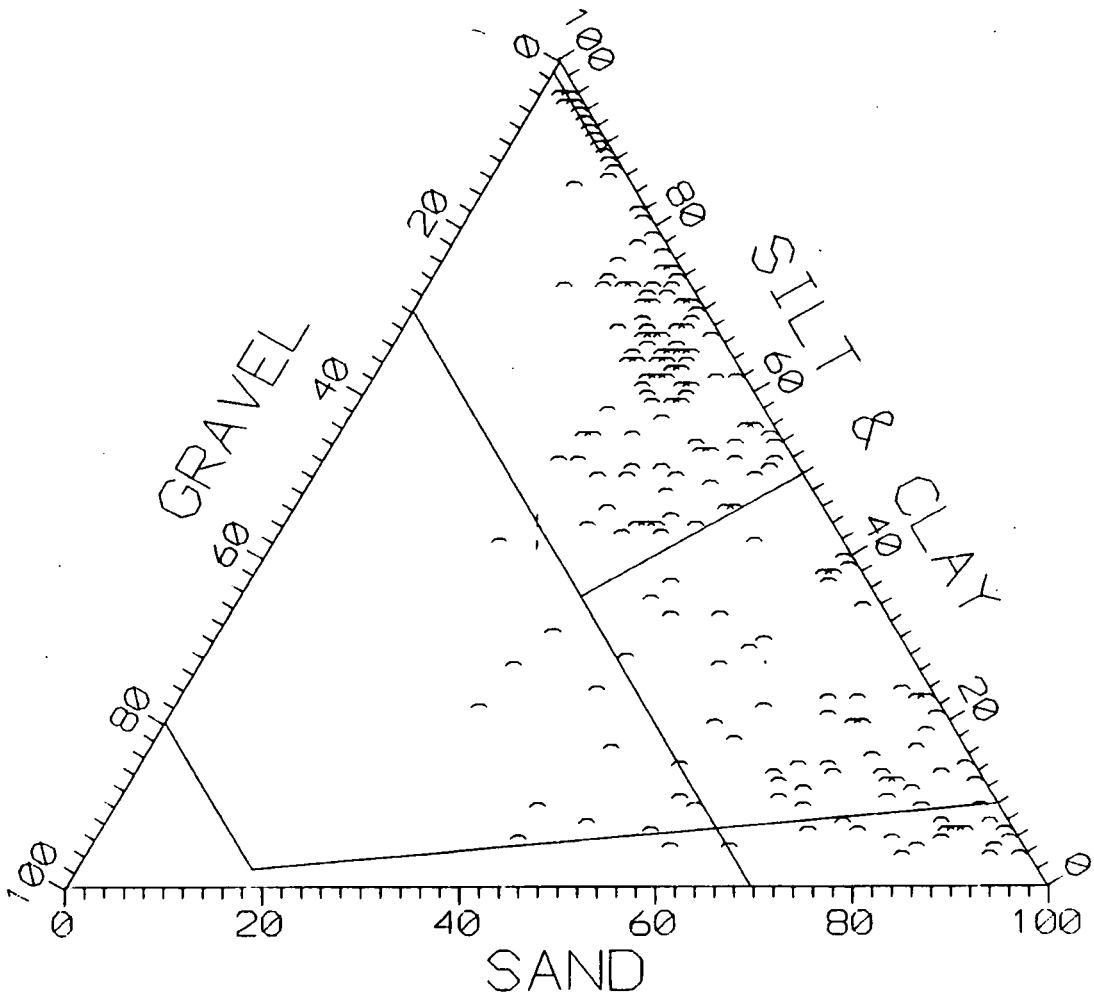

Figure 7-1 - Textural Triangle

Table 7-1 - Properties of Gray Clay

Well Number	Depth (BGS)	Bulk Density (g/cm_3)	Specific Gravity (g/cm_3)	Porosity (%)	Moisture Content	Coef. of Permeability	Soil Content
11112	14.5 to 17.0	2.1827	2.7380	20.28	13.8	1.9E-08	Gray Clay
11112	17.0 to 19.5	2.2065	2.7417	19.52	14.3	1.6E-08	Gray Clay
11113	31.5 to 34.5	2.3126	2.7486	15.86	25.4	2.4E-09	Gray Clay
11113	34.5 to 37.5	2.2413	2.7302	17.91	13.8	6.7E-08	Gray Clay
11133	10.5 to 13.0	2.2937	2.7452	-	-	1.5E-08	Brown/gray Clay
11133	18.0 to 20.5	2.2757	2.7341	16.77	12.5	2.7E-08	Gray Clay
11131	20.5 to 25.0	2.2320	2.7392	18.52	10.3	1.7E-08	Gray Clay
11127	21.5 to 22.5	2.3057	2.7460	16.03	13.0	2.3E-08	Gray Clay
11127	20.5 to 22.5	2.2929	2.7526	16.70	14.9	1.9E-08	Gray Clay
11129	10.5 to 13.0	2.2548	2.7432	17.80	10.6	2.7E-08	Gray Clay
11129	13.0 to 15.0	2.3387	2.7625	15.34	15.6	3.5E-08	Gray Clay
11134	16.5 to 19.0	2.3719	2.7563	13.95	12.2	2.4E-08	Gray Clay
11134	19.0 to 21.5	2.2607	2.7531	17.89	11.3	6.4E-08	Gray Clay

000123

2333

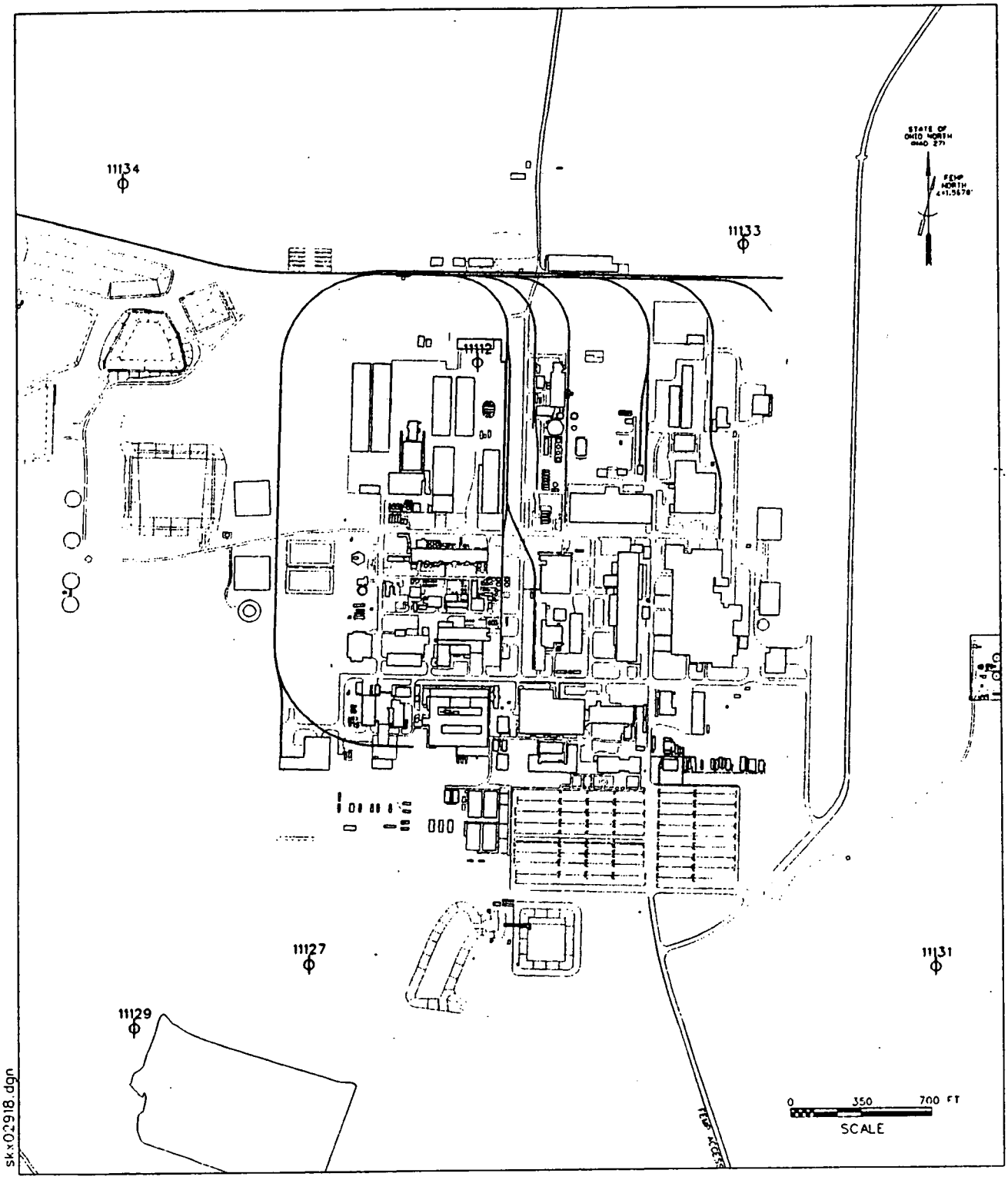

Figure 7-2 - Locations of Shelby Tube Samples

SECTION 8

CONCLUSIONS

8.1 Slug Tests

Seventy slug tests were performed across a wide variety of sediment types ranging from clay to gravel. Table 8-1 shows the range of values obtained. The majority of the tests performed on non-cohesive materials (sands and gravel) exhibited confined conditions while unconfined conditions were predominantly encountered during the majority of the tests performed on cohesive (clay) materials.

Table 8-1 - Comparison of Hydraulic Conductivities

Material Type	Slug Test Results Geometric Mean (cm/sec)	Packer Test Result (cm/sec)
Gray Clay	1.9×10^{-6}	5.1×10^{-6} [a]
Brown Clay	3.6×10^{-5}	
Gray Silt	8.8×10^{-5}	
Brown Silt	9.9×10^{-5}	
Gray Sand	8.0×10^{-4}	
Brown Sand	1.8×10^{-3}	
Gray Gravel	4.0×10^{-3}	
Brown Gravel	3.1×10^{-2}	

[a] Geometric mean of three packer steps

8.2 Yield Tests

The yield tests showed that several areas containing water bearing sediments could not support a sustainable yield. Three areas listed in Table 8-2 were identified where sustainable yields less than 1 gpm for 7 days were calculated. The yield tests were invaluable in selecting locations for longer term constant rate pumping tests.

Table 8-2 - Yield Test Results

Location	Well No.	Sustainable Yield (gpm)
South of Pilot Plant Building	1259	< 1.0
North of Old Drum Bailing Area	1274	< 1.0
Waste Pit Area	1077	< 1.0
Plant 1 Pad Area	1339	1.85
Waste Pit Area	11214	2.5
Plant 1 Pad Area	11112	2.0
Plant 8 Area	1785	1.5

8.3 Pumping Tests

Constant rate pumping tests were performed on a small confined channel (waste pit area) and on sand bodies of larger areal extent (Plant 8 and Plant 1 pad areas). In all three cases (Table 8-3), the pumping tests indicate boundary effects, most probably resulting from sediment changes. This deviation is evidenced in the semi-log plot of distance versus drawdown (Figures 5-17 and 5-24) where drawdown (the slope of the curve) steepens (grows more negative) as the effects of boundaries are experienced. Once pumping is stopped, the recovery of water level in the sand body is substantially slower than would be expected from the unbounded case. This can be seen in Tables 5-5, 5-7, and 5-9 where the values of conductivity calculated by the Theis recovery method are typically half or less than the values calculated from the pumping test data. The apparent permeability of the sand body is smaller during recovery because the groundwater recharging the sand unit is derived from the less permeable surrounding clay.

These tests again concluded that the potential for movement of fluids and contaminants at the FEMP is largely controlled by the clay till matrix that surrounds the sand and not the individual sand bodies themselves.

Table 8-3 - Pumping Test Results

Parameter	Units	Plant 1 Pad Area	Waste Pit Area	Plant 8 Area
Horizontal Hydraulic Conductivity (K_h)	cm/sec	6.2×10^{-3}	1.5×10^{-3}	8.4×10^{-3}
Storativity	dimensionless	0.0023	.0040	0.0054
Specific Yield	dimensionless	0.042		
K_h/K_v	dimensionless	0.395	0.019	

8.4 Packer Tests

The packer tests produced values of hydraulic conductivity for the lower gray clay which were consistent with the slug testing results. This tends to suggest that slug tests may be a good indication of hydraulic properties in the gray clay.

Table 8-4 - Packer Test Results

Packer Step Number	Hydraulic Conductivity (cm/sec)
1	4.6×10^{-6}
2	9.3×10^{-6}
3	3.1×10^{-6}
Geometric mean	5.1×10^{-6}

8.5 Lysimeters

A total of 6 lysimeters were installed in the base of the glacial overburden and in the upper portion of the sand and gravel of the Great Miami Aquifer. Sampling indicated that the conditions close to being saturated exist at base of the glacial overburden and uranium is present at the base of the glacial overburden.

8.6 Geotechnical Data

The majority of sediments (206 sieve analyses) can be described as silty of clayey fine sands, sandy clays, sandy silts, silty clays, silts or clays.

The coefficient of permeability of the gray clay ranges from 1.5×10^{-8} cm/s to 2.4×10^{-9} cm/s. The average porosity of the gray clay is 26 percent and the average moisture content of the gray clay is 14.3 percent.

SECTION 9

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FEMP Glacial Till/Vadose Zone Hydraulic Investigations Report

Operable Unit 5
Project Order 37

Fernald Environmental Management Project
May 1994
Revision 0
Volume II of II

Submitted by:
U.S. Department of Energy
Fernald Office
P.O. Box 398705
Cincinnati, Ohio 45239-8705

7333

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Prepared by:
PARSONS
Fairfield, Ohio

Prepared for:
Fernald Environmental Restoration
Management Corporation

PARSONS

FERMCO
Restoration Management Corporation

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FEMP Glacial Till/Vadose Zone Hydraulic Investigations Report Volume II

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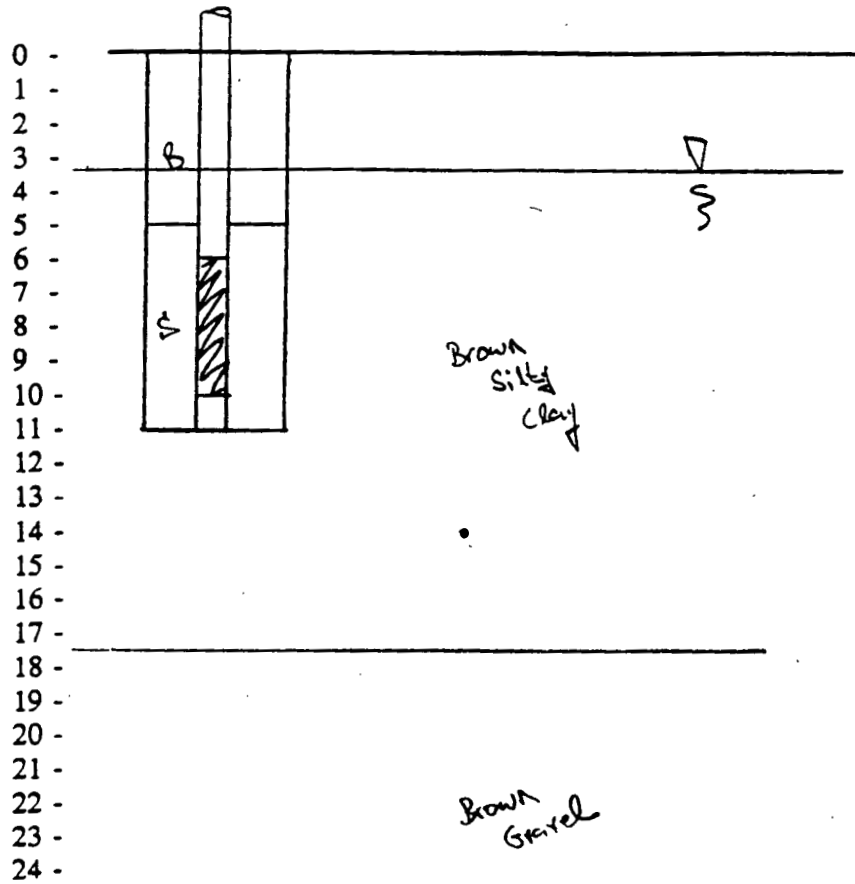
2) Field data, notes, and installation records can be found in the OU-5 RI Report.

APPENDIX A

SLUG TEST DATA AND DOCUMENTATION

F-7333

WELL NO. 1020

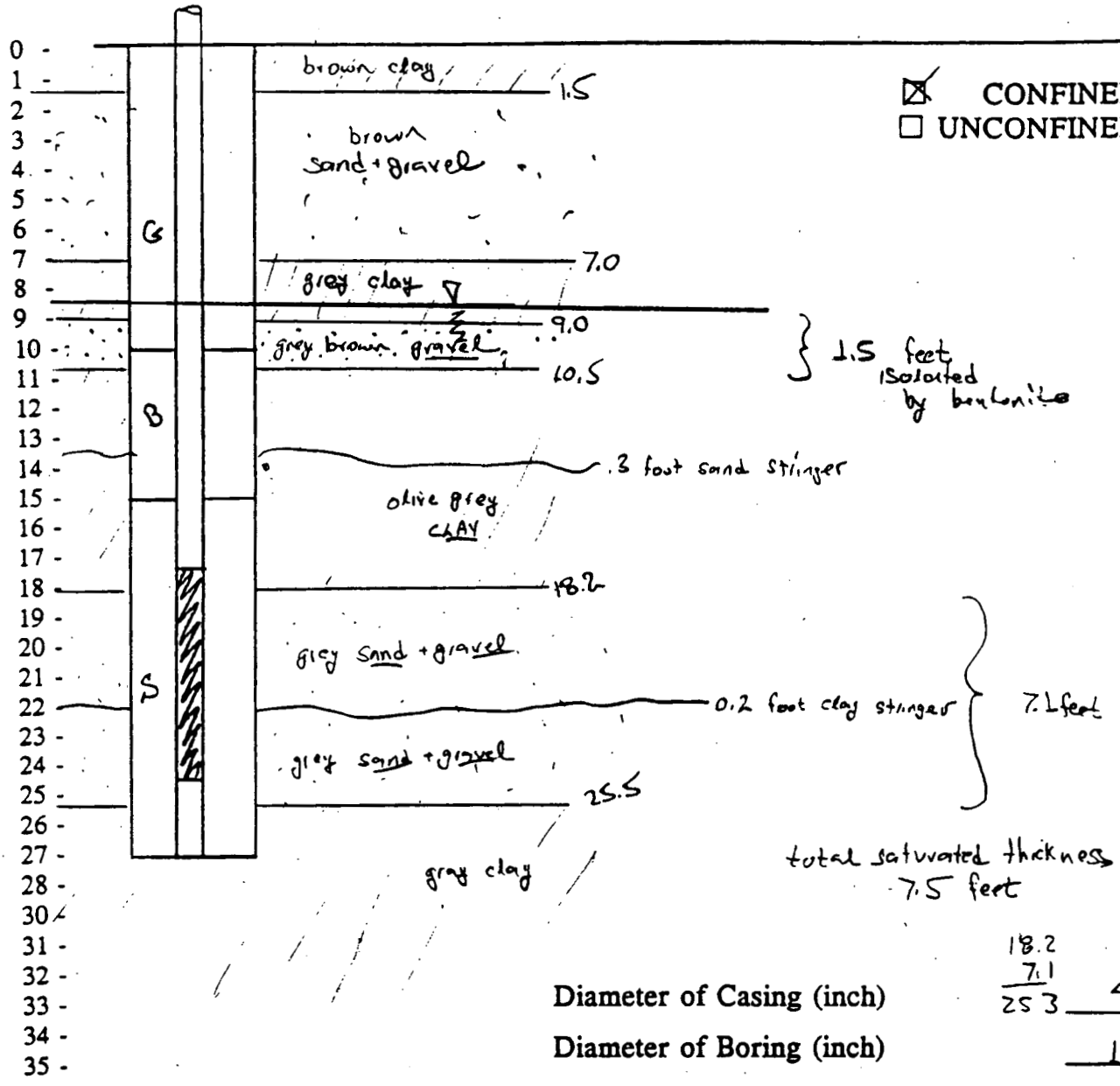


☐ CONFINED
☒ UNCONFINED

Diameter of Casing (inch)	4
Diameter of Boring (inch)	10
Installed screen length (ft)	4
Sand Pack, TOP (ft)	5
Sand Pack, BOTTOM (ft)	11
Height of well casing* (ft)	1.46
Upper Aquiclude, BOTTOM (ft)	N/A
Lower Aquiclude, TOP (ft)	N/A
Depth to water,(TOC)	FH- 5.17 RH- 5.18

FH = falling head
RH = rising head
B = bentonite
G = cement/grout
S = Sand (filter) Pack.
TOC = measured from top of casing
* measured as height above ground Surface

WELL NO. 1024



☒ CONFINED
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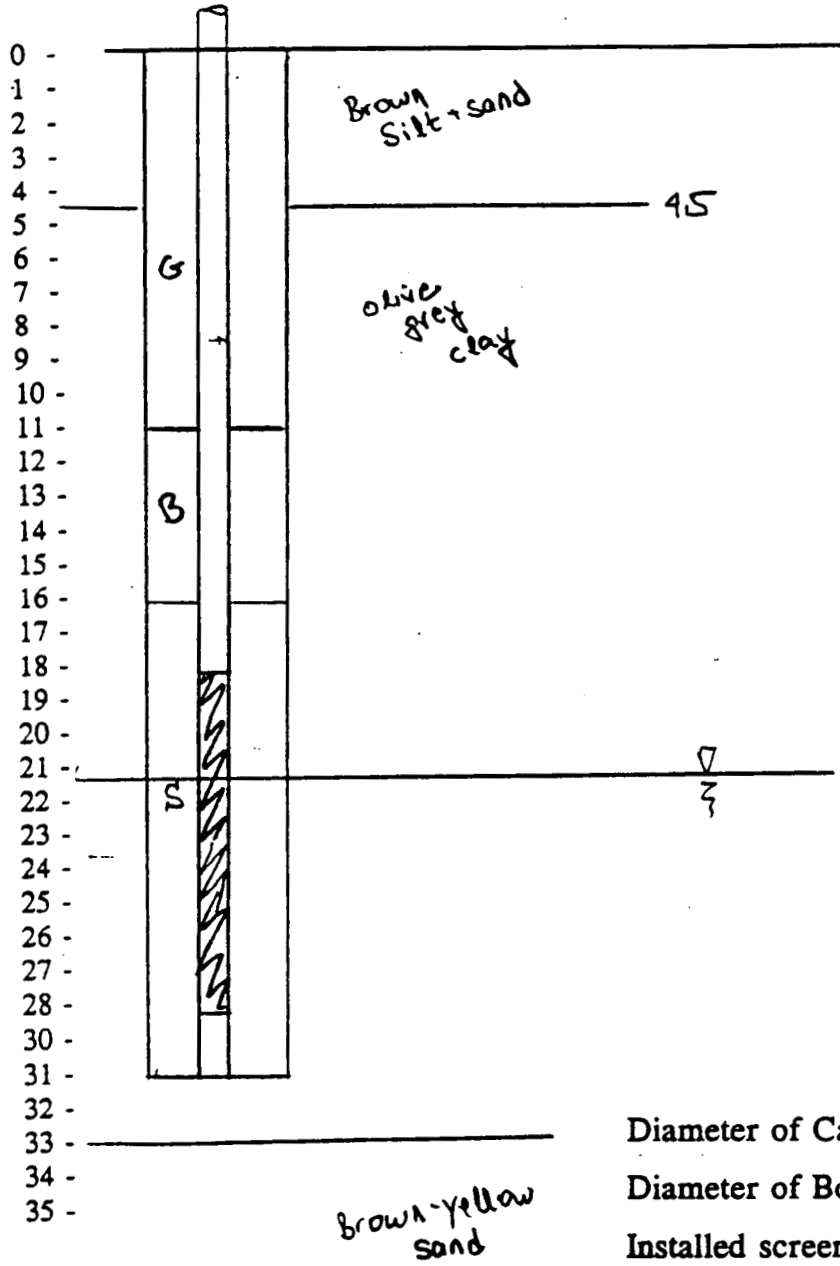
18.2
7.1
25.3

Diameter of Casing (inch)	4
Diameter of Boring (inch)	10
Installed screen length (ft)	7
Sand Pack, TOP (ft)	15
Sand Pack, BOTTOM (ft)	27
Height of well casing* (ft)	2.8
Upper Aquiclude, BOTTOM (ft)	18.2
Lower Aquiclude, TOP (ft)	25.3
Depth to water,(TOC)	FH- 11.33 RH- 11.33

FH = falling head
RH = rising head
B = bentonite
G = cement/grout
S = Sand (filter) Pack
TOC = measured from top of casing
* measured as height above ground Surface

WELL NO. E-7333
1029



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Diameter of Casing (inch)	4
Diameter of Boring (inch)	12
Installed screen length (ft)	10
Sand Pack, TOP (ft)	16.2
Sand Pack, BOTTOM (ft)	31
Height of well casing* (ft)	2.0
Upper Aquiclude, BOTTOM (ft)	N/A
Lower Aquiclude, TOP (ft)	N/A
Depth to water,(TOC)	FH-23.72 RH-23.31

FH = falling head
RH = rising head
B = bentonite
G = cement/grout
S = Sand (filter) Pack
TOC = measured from top of casing
* measured as height above ground Surface

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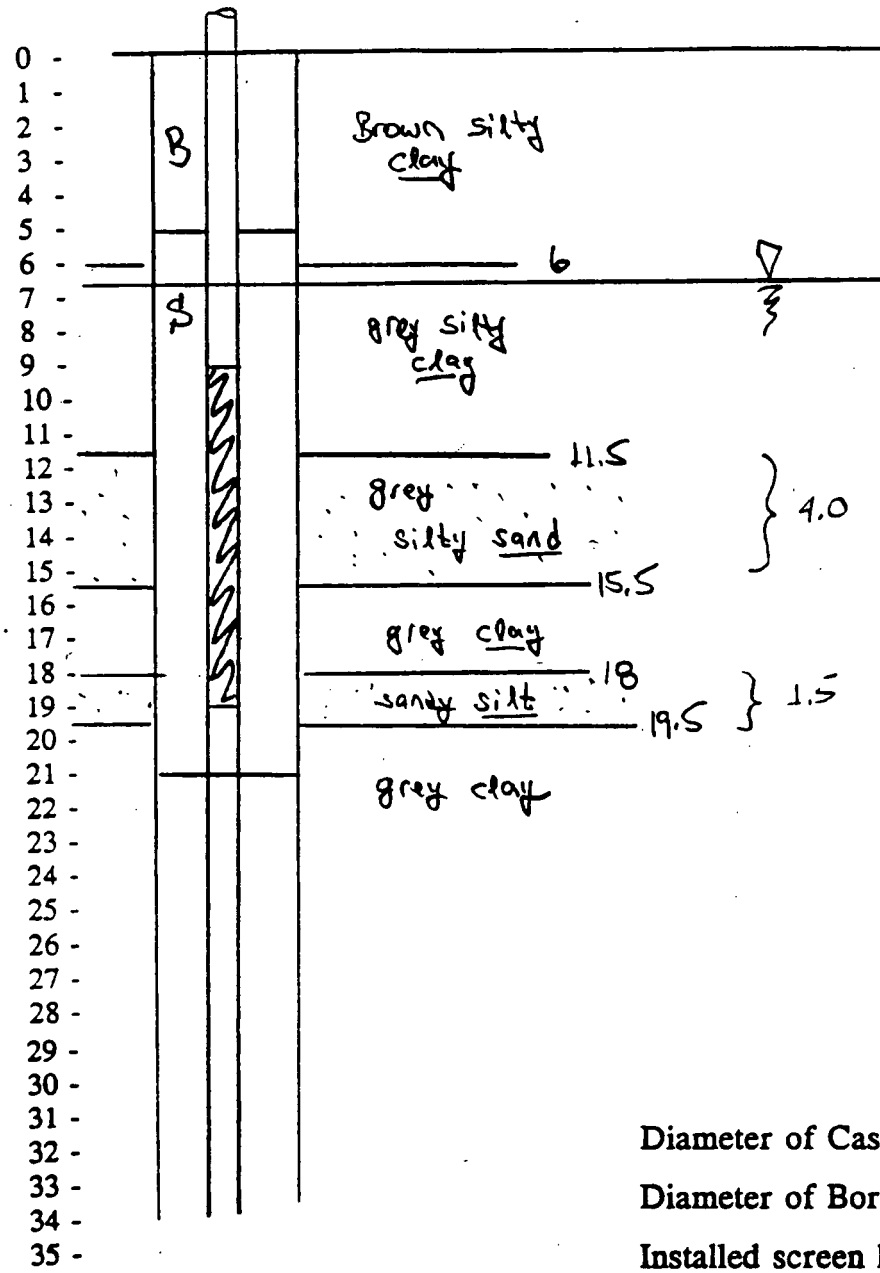

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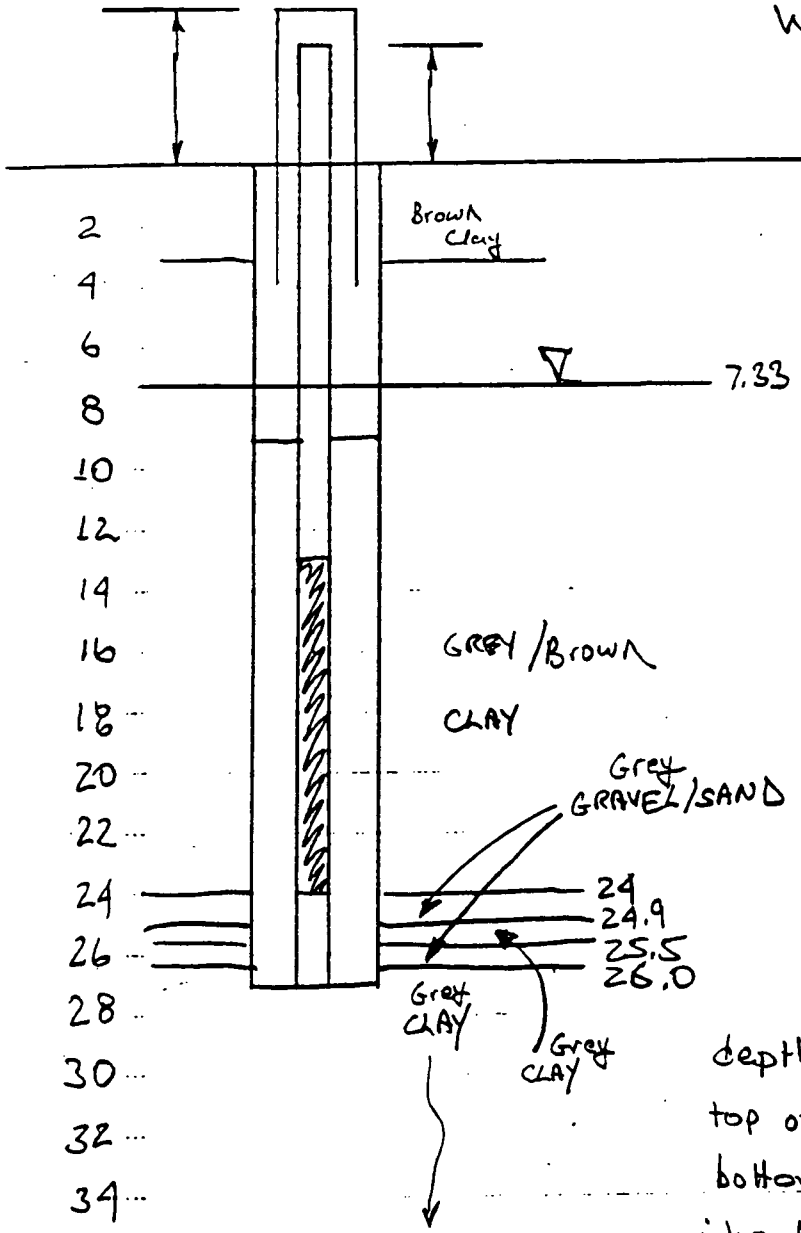
total saturated thickness 5.5 feet

Diameter of Casing (inch)	4
Diameter of Boring (inch)	12
Installed screen length (ft)	10
~~Sand~~ Gravel Pack, TOP (ft)	5
~~Sand~~ Gravel Pack, BOTTOM (ft)	21
Height of well casing* (ft)	2.0
Upper Aquiclude, BOTTOM (ft)	11.5
Lower Aquiclude, TOP (ft)	17.0
Depth to water,(TOC)	FH- 8.31 RH- 8.31

FH = falling head
RH = rising head
B = bentonite
G = cement/grout
S = Sand (filter) Pack
TOC = measured from top of casing
* measured as height above ground Surface

-7333

Well ID 1035

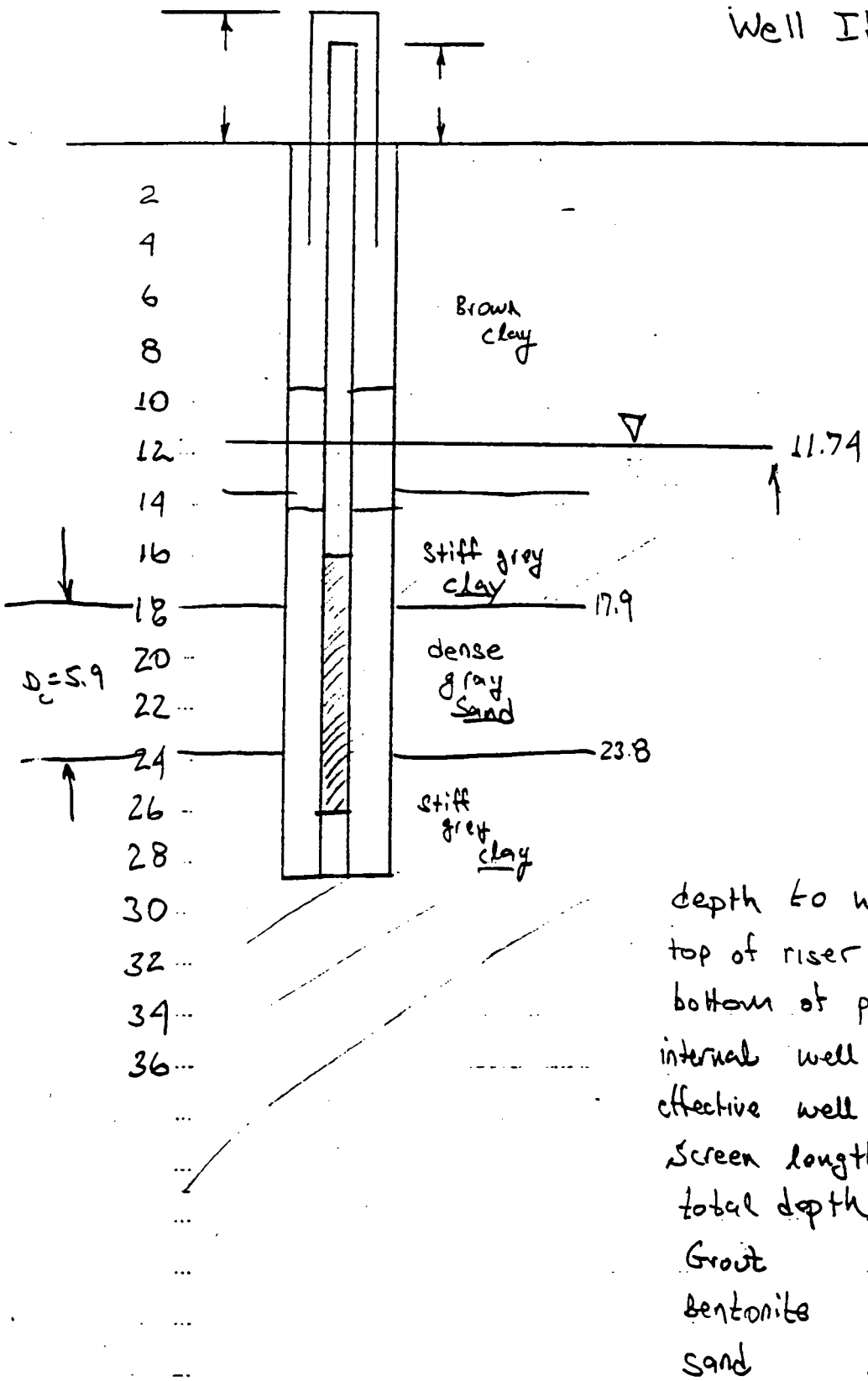


confined

depth to water (BGS)	7.33 / 7.18	feet
top of riser pipe	2	feet
bottom of protective pipe	2.5	feet
internal well diameter	4	inch
effective well diameter	10	inch
Screen length	11	feet
total depth	26.5	feet
Grout	—	—
Bentonite	0	9
sand/Gravel	9	27.
screen	13	24

000142

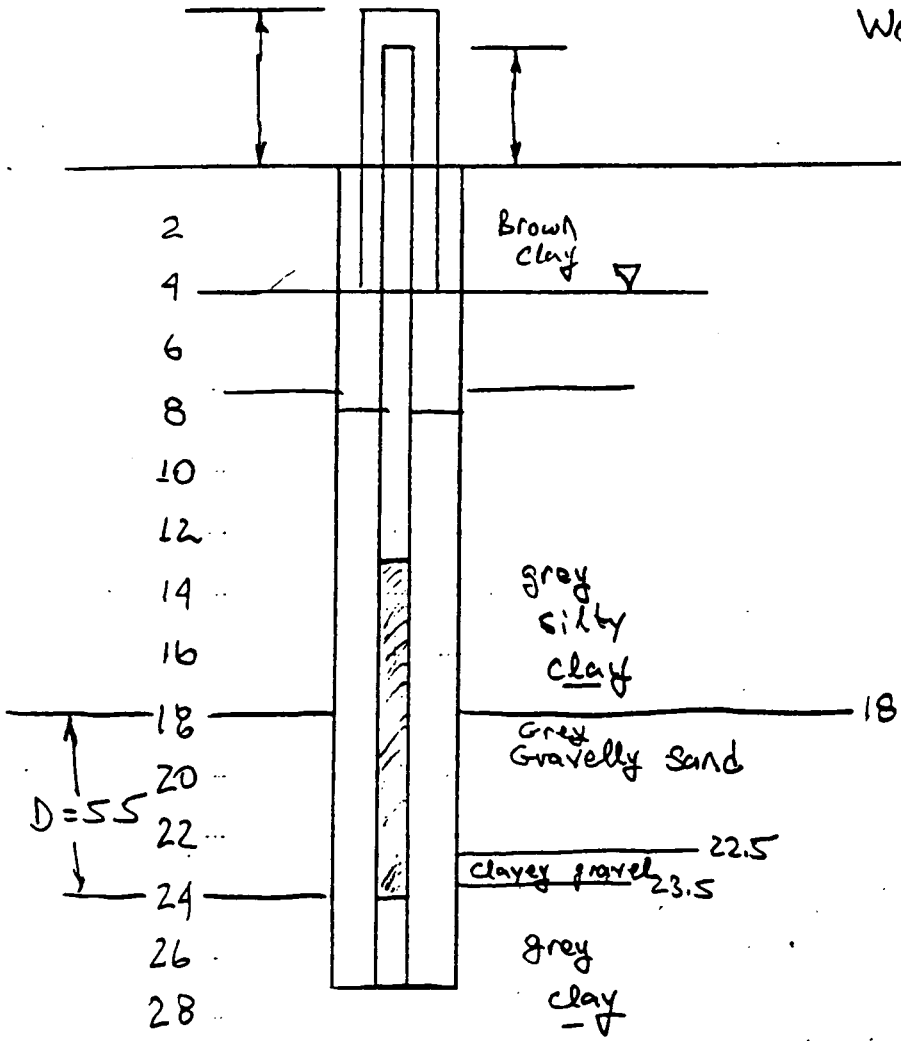
Well ID 1038



depth to water		11.74/11.51 fe
top of riser pipe		2.0 fee
bottom of protective pipe		2.5 fe
internal well diameter		4 inc
effective well diameter		10 inc
Screen length		10 fe
total depth		28.5 fe
Grout	0	9.5
bentonite	9.5	14.2
sand	14.2	28.5
screen	16.	26.

000143

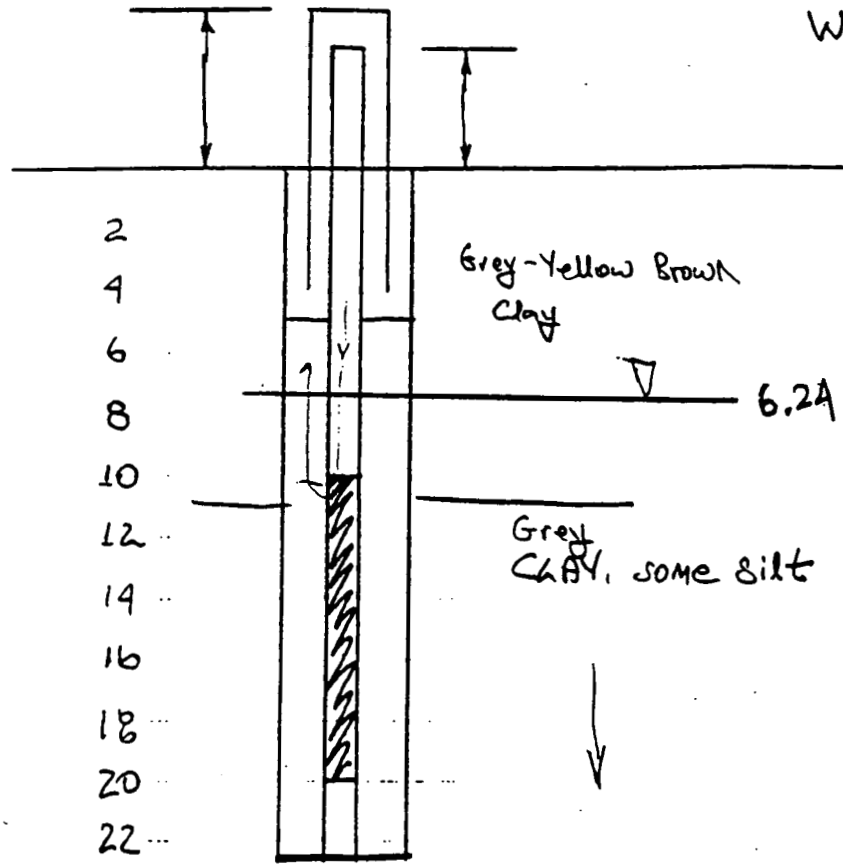
Well ID 1039



confined

depth to water	3.98 \ 3.99 \ 3.98 feet	
top of riser pipe		2.0 feet
bottom of protective pipe		2.5 feet
internal well diameter		4 inch
effective well diameter		10 inch
Screen length		11 feet
total depth		26.5 feet
Grout	—	—
bentonite	0	8.0
sand	8.0	27.0
screen	13.0	24.

Well ID 1041

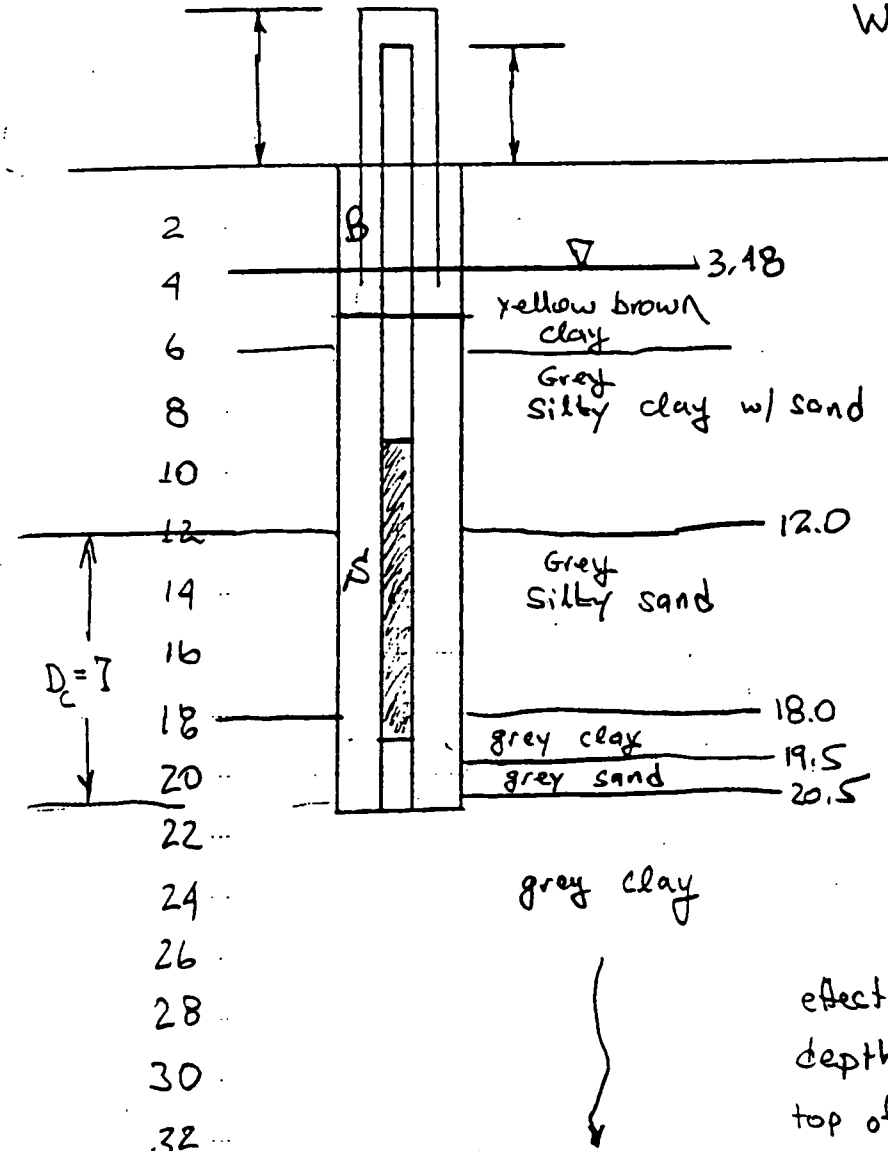


unconfined

depth to water		6.46 / 6.24 fe
top of riser pipe		3.0 fe
bottom of protective pipe		3.5 fe
internal well diameter		4 inc
effective well diameter		10 inc
Screen length		10 fe
total depth		22.5 f
Grout	—	—
bentonite	0	5
sand	5	22.5
screen	10	20

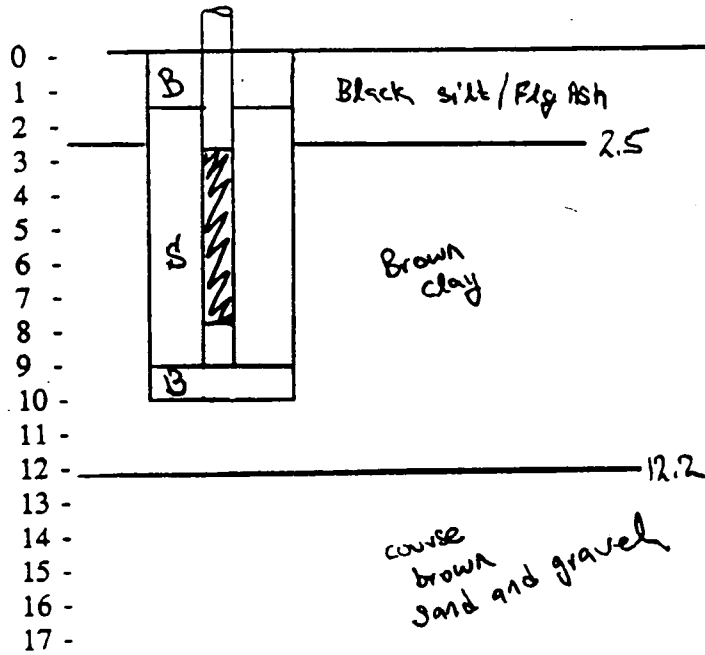
Well ID 1042

Bro



effectiv		
depth to water		3.48 feet
top of riser pipe		2.0 feet
bottom of protective pipe		2.5 feet
internal well diameter		4 inch
effective well diameter		10 inch
Screen length		10 feet
total depth		21 feet
Grout	—	—
Bentonite	0	5
~~sand~~ Gravel	5	21
screen	9	19

WELL NO. 1045



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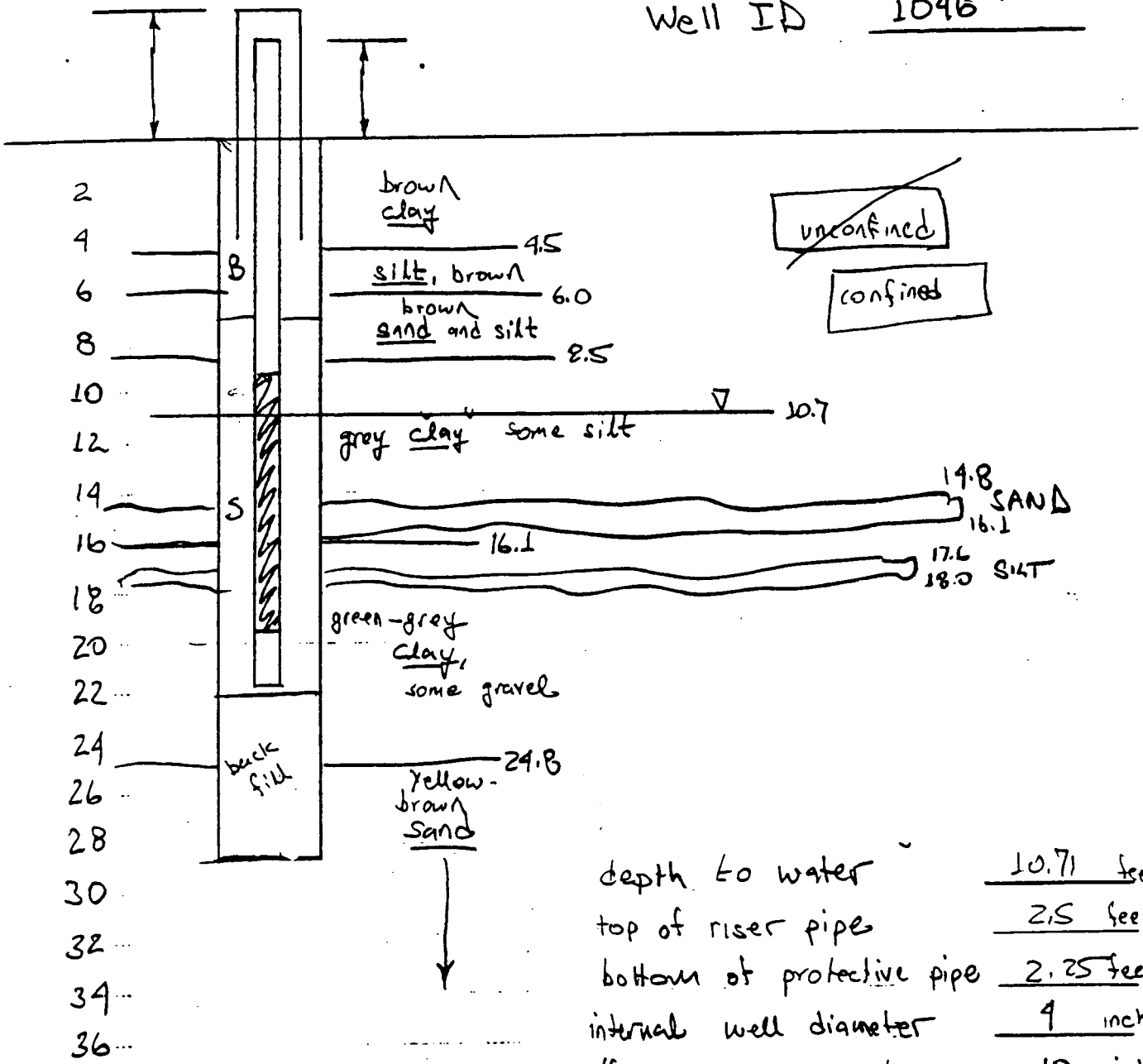
☐ ~~UNCONFINED~~

INSUFFICIENT WATER LEVEL TO TEST

Diameter of Casing (inch)	4
Diameter of Boring (inch)	12
Installed screen length (ft)	5
Sand Pack, TOP (ft)	1.5
Sand Pack, BOTTOM (ft)	9.
Height of well casing* (ft)	2.0
Upper Aquiclude, BOTTOM (ft)	N/A
Lower Aquiclude, TOP (ft)	N/A
Depth to water,(TOC)	FH-_____ RH-_____

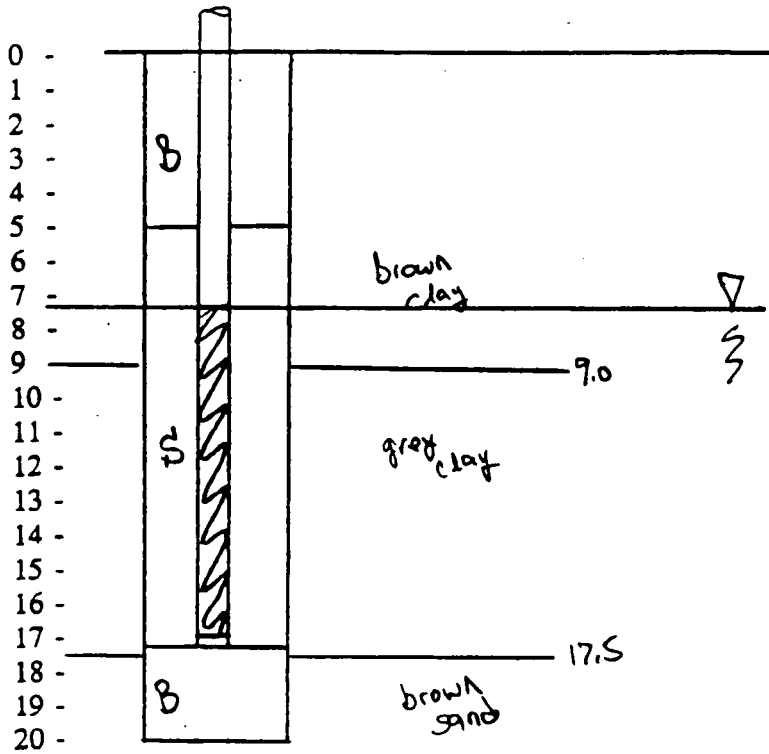
FH = falling head
RH = rising head
B = bentonite
G = cement/grout
S = Sand (filter) Pack
TOC = measured from top of casing
* measured as height above ground Surface

Well ID 1046 -7333



depth to water		10.71 feet
top of riser pipe		2.5 feet
bottom of protective pipe		2.25 feet
internal well diameter		4 inch
effective well diameter		10 inch
Screen length		10 feet
total depth		21.9 feet
Grout	—	—
Bentonite	0	7
Sand	7	22
screen	9.5	19.5

WELL NO. 10-47



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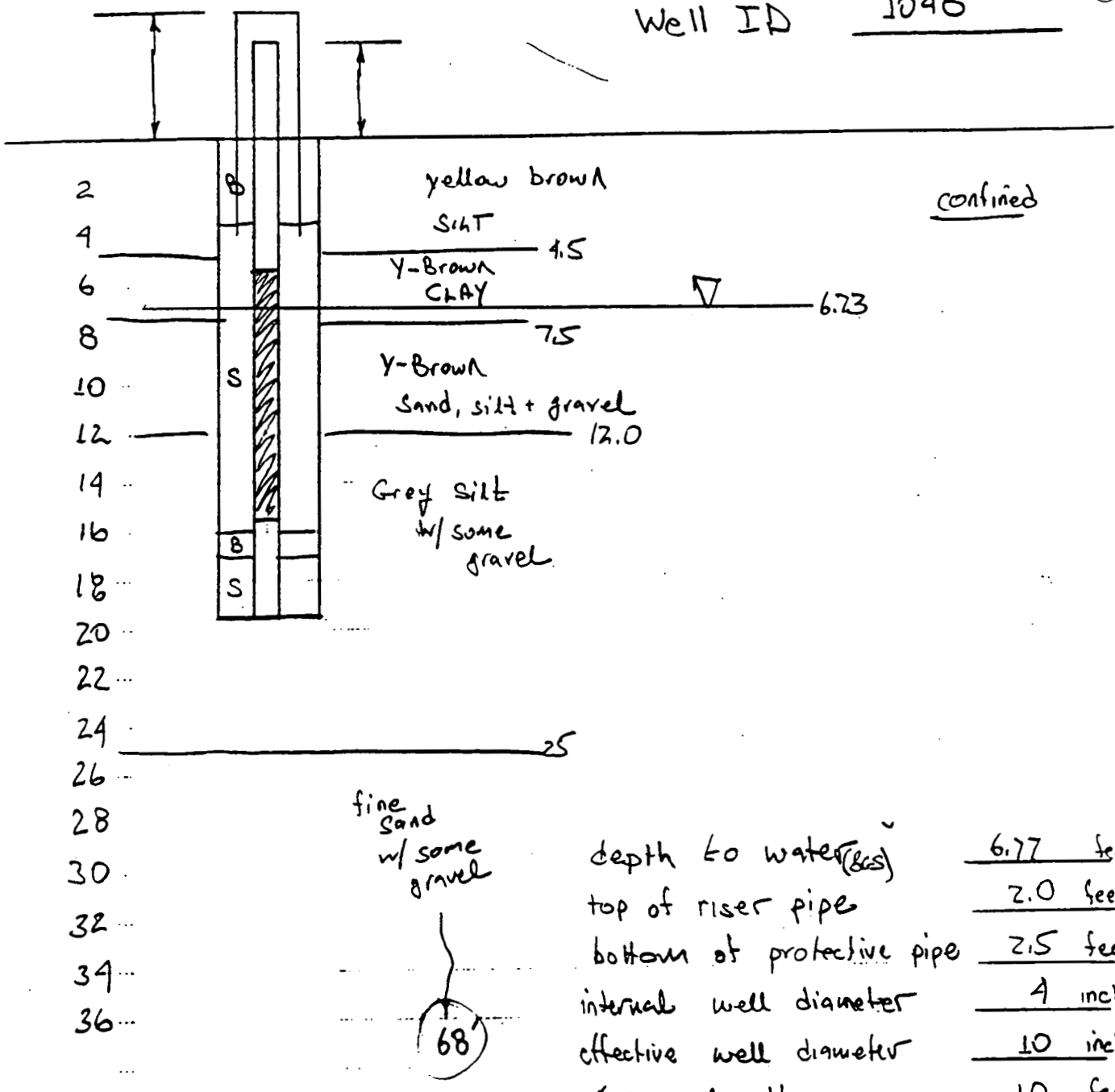
Diameter of Casing (inch)	4
Diameter of Boring (inch)	12
Installed screen length (ft)	10
Sand Pack, TOP (ft)	5
Sand Pack, BOTTOM (ft)	17.4
Height of well casing* (ft)	2.0
Upper Aquiclude, BOTTOM (ft)	N/A
Lower Aquiclude, TOP (ft)	N/A
Depth to water,(TOC)	FH- 9.14 RH- 8.86

FH = falling head
RH = rising head
B = bentonite
G = cement/grout
S = Sand (filter) Pack
TOC = measured from top of casing
* measured as height above ground Surface

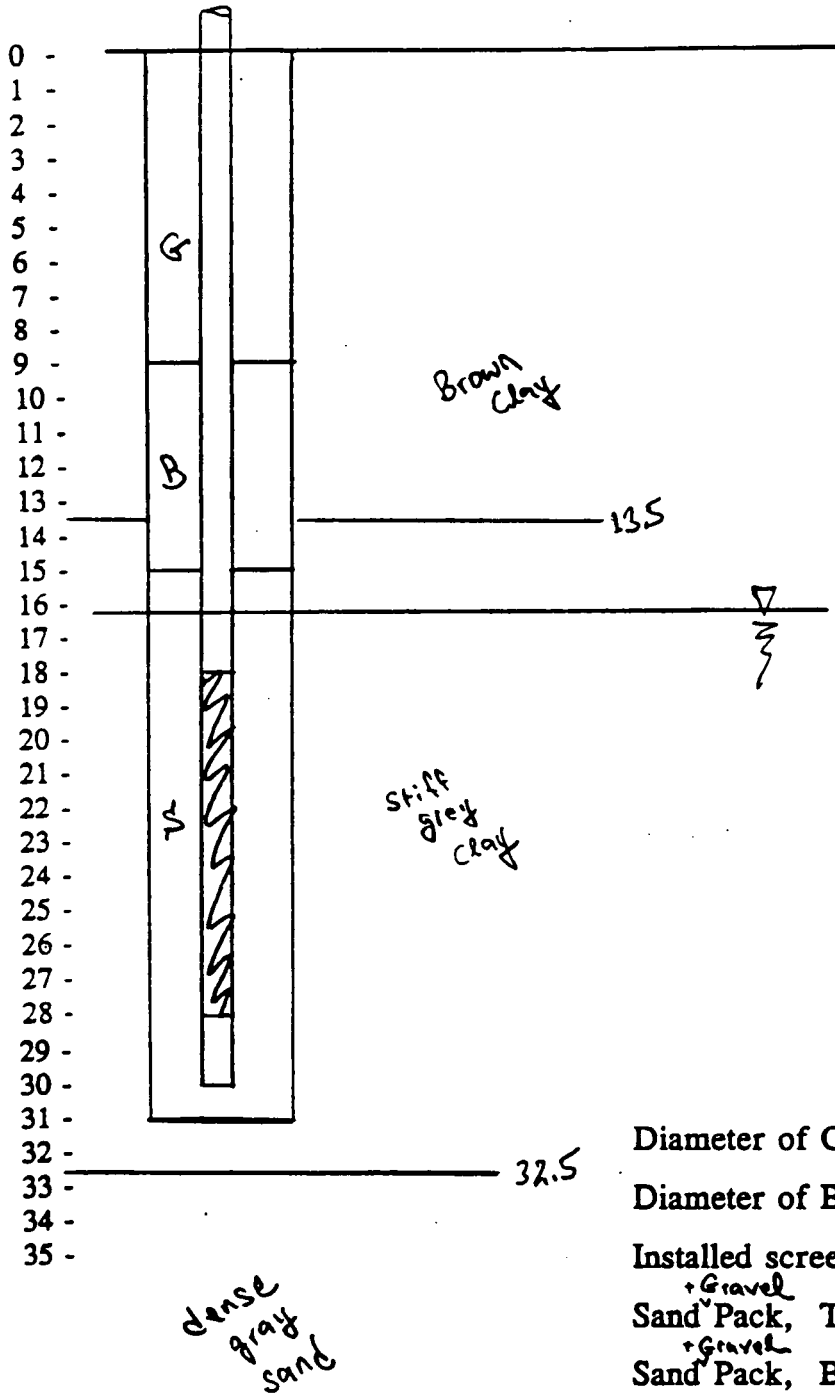
Well ID 1048 7333



confined

depth to water (bgs)		6.77 feet
top of riser pipe		2.0 feet
bottom of protective pipe		2.5 feet
internal well diameter		4 inch
effective well diameter		10 inch
Screen length		10 feet
total depth		15.5 feet
Grout	—	—
Bentonite	16.2 0	17.0 3.5
sand	3.5 17	16.2 19.5
screen	5.5	15.5

WELL NO. 1064



☐ CONFINED
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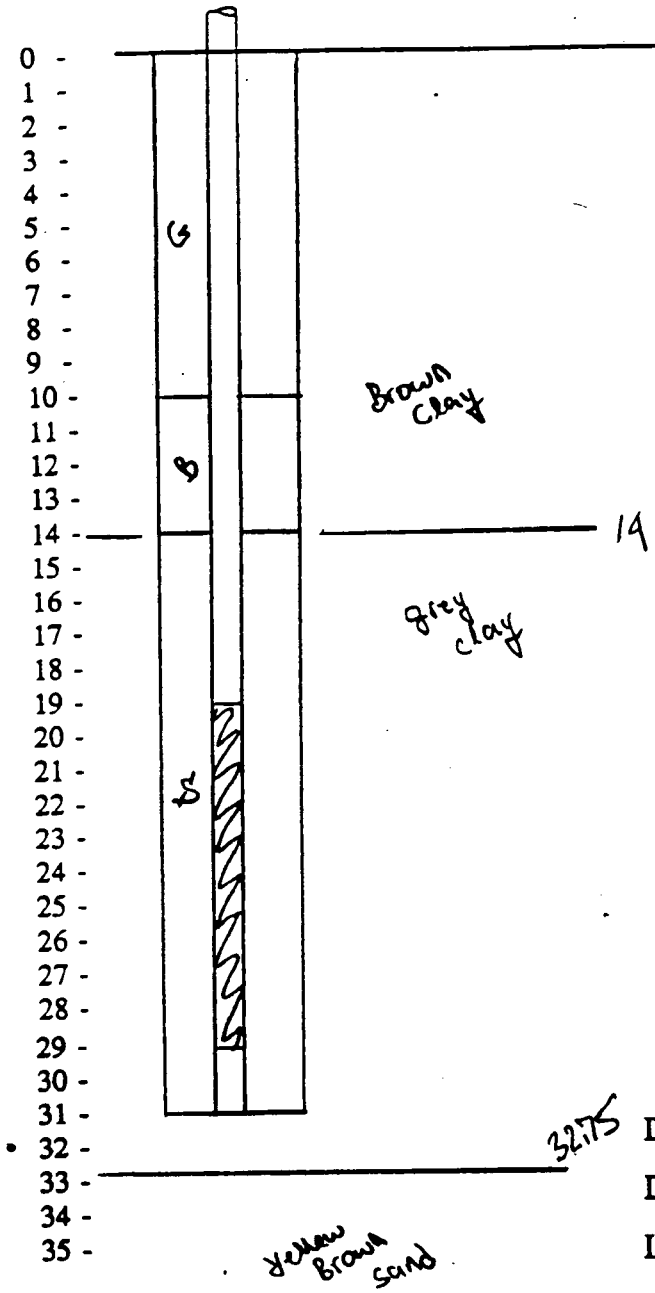
Diameter of Casing (inch)	4.
Diameter of Boring (inch)	12
Installed screen length (ft)	10
Sand +Gravel Pack, TOP (ft)	15
Sand +Gravel Pack, BOTTOM (ft)	31
Height of well casing* (ft)	2.0
Upper Aquiclude, BOTTOM (ft)	N/A
Lower Aquiclude, TOP (ft)	N/A
Depth to water,(TOC)	FH- 16.11 RH- 15.36

FH = falling head
RH = rising head
B = bentonite
G = cement/grout
S = Sand (filter) Pack
TOC = measured from top of casing
* measured as height above ground Surface

F-7333

WELL NO. 1072



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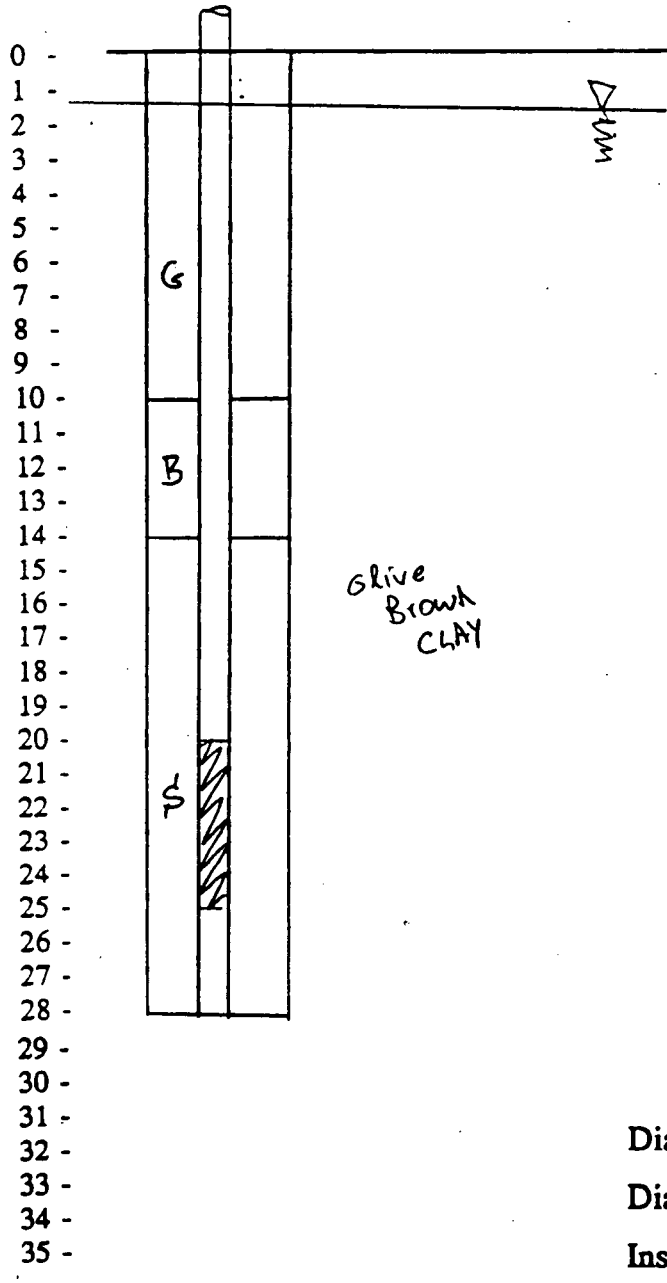
☒ UNCONFINED

INSUFFICIENT WATER LEVEL TO TEST

Diameter of Casing (inch)	4
Diameter of Boring (inch)	12
Installed screen length (ft)	10
Sand Pack, TOP (ft)	14
Sand Pack, BOTTOM (ft)	31
Height of well casing* (ft)	2.0
Upper Aquiclude, BOTTOM (ft)	N/A
Lower Aquiclude, TOP (ft)	N/A
Depth to water,(TOC) FH-_____ RH-_____	

FH = falling head
RH = rising head
B = bentonite
G = cement/grout
S = Sand (filter) Pack
TOC = measured from top of casing
* measured as height above ground Surface

WELL NO. 1075



☐ CONFINED
☒ UNCONFINED

Diameter of Casing (inch)	4
Diameter of Boring (inch)	12
Installed screen length (ft)	4*
Sand Pack, TOP (ft)	14
Sand Pack, BOTTOM (ft)	28
Height of well casing* (ft)	2.0
Upper Aquiclude, BOTTOM (ft)	N/A
Lower Aquiclude, TOP (ft)	N/A
Depth to water,(TOC)	FH- 3.13 RH- 3.29

* diagram shows 5 feet (20-25)

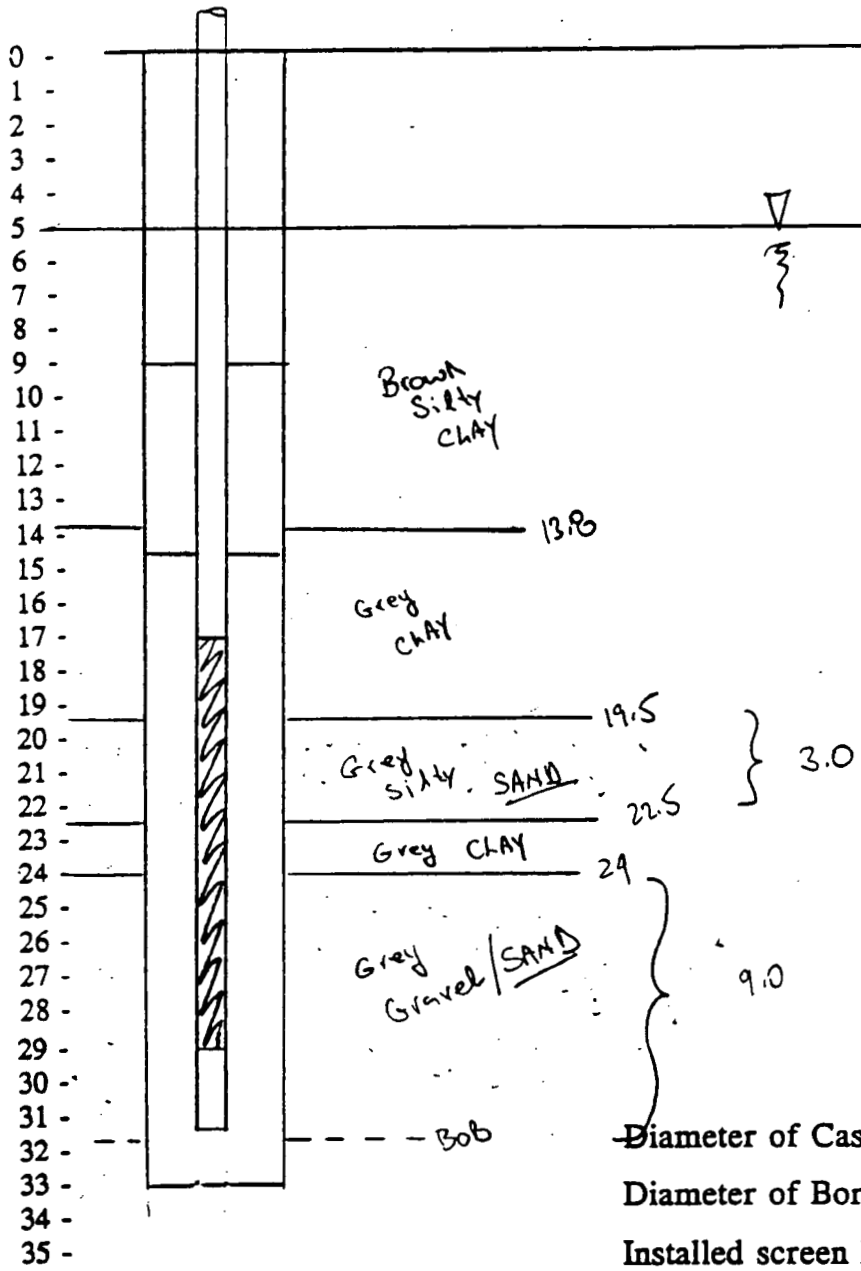
FH = falling head
RH = rising head
B = bentonite
G = cement/grout
S = Sand (filter) Pack
TOC = measured from top of casing
* measured as height above ground Surface

000153

WELL NO. 1077

7333

☒ CONFINED
☐ UNCONFINED



total saturated = 12 feet

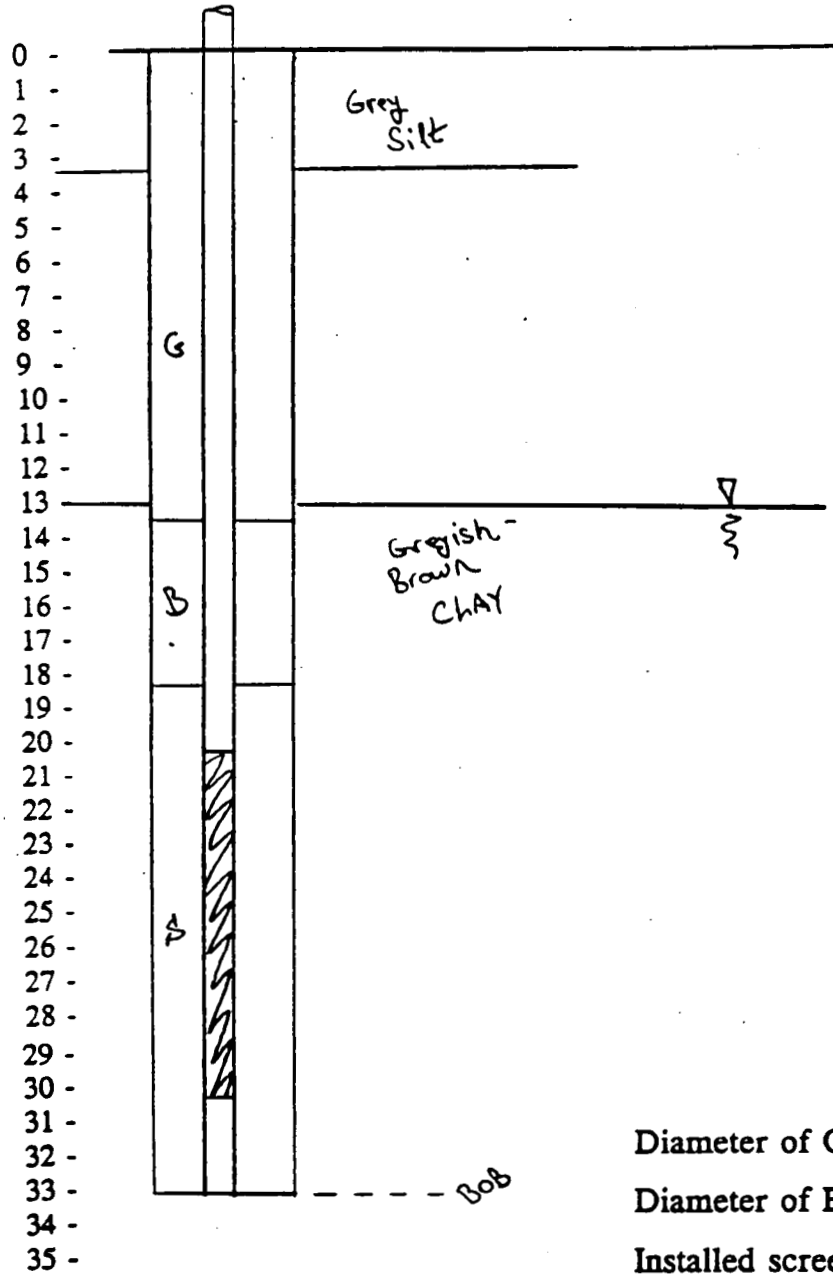
19.5
+12
31.5

Diameter of Casing (inch)	4
Diameter of Boring (inch)	12
Installed screen length (ft)	10
Sand Pack, TOP (ft)	14.5
Sand Pack, BOTTOM (ft)	33
Height of well casing* (ft)	2.0
Upper Aquiclude, BOTTOM (ft)	19.5
Lower Aquiclude, TOP (ft)	31.5
Depth to water,(TOC)	FH- 6.98 RH- 6.97

FH2- 6.94

FH = falling head
RH = rising head
B = bentonite
G = cement/grout
S = Sand (filter) Pack
TOC = measured from top of casing
* measured as height above ground Surface

WELL NO. 108L



☐ CONFINED
☒ UNCONFINED

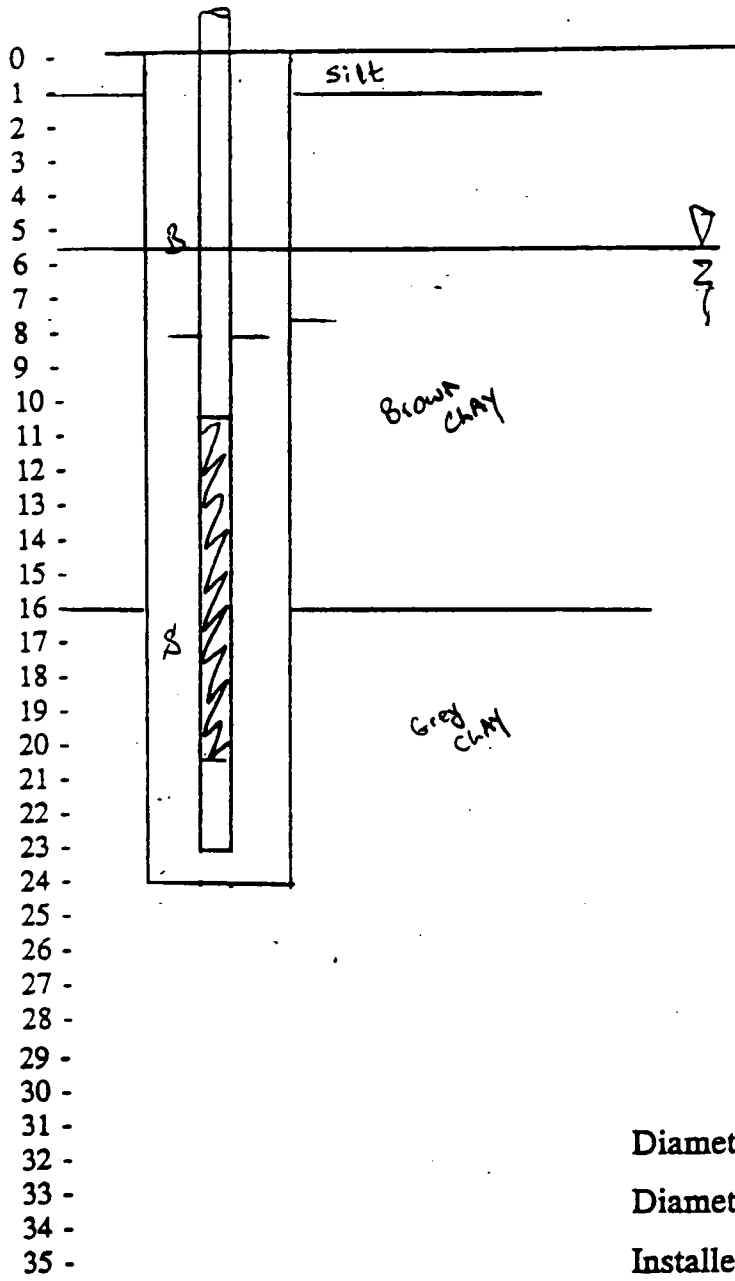
Diameter of Casing (inch)	4
Diameter of Boring (inch)	12
Installed screen length (ft)	10
Sand Pack, TOP (ft)	18.4
Sand Pack, BOTTOM (ft)	33.
Height of well casing* (ft)	2.0
Upper Aquiclude, BOTTOM (ft)	N/A
Lower Aquiclude, TOP (ft)	N/A
Depth to water,(TOC)	FH- 15.19 RH- 14.5

FH = falling head
RH = rising head
B = bentonite
G = cement/grout
S = Sand (filter) Pack
TOC = measured from top of casing
* measured as height above ground Surface

000155

WELL NO. 1082

7333

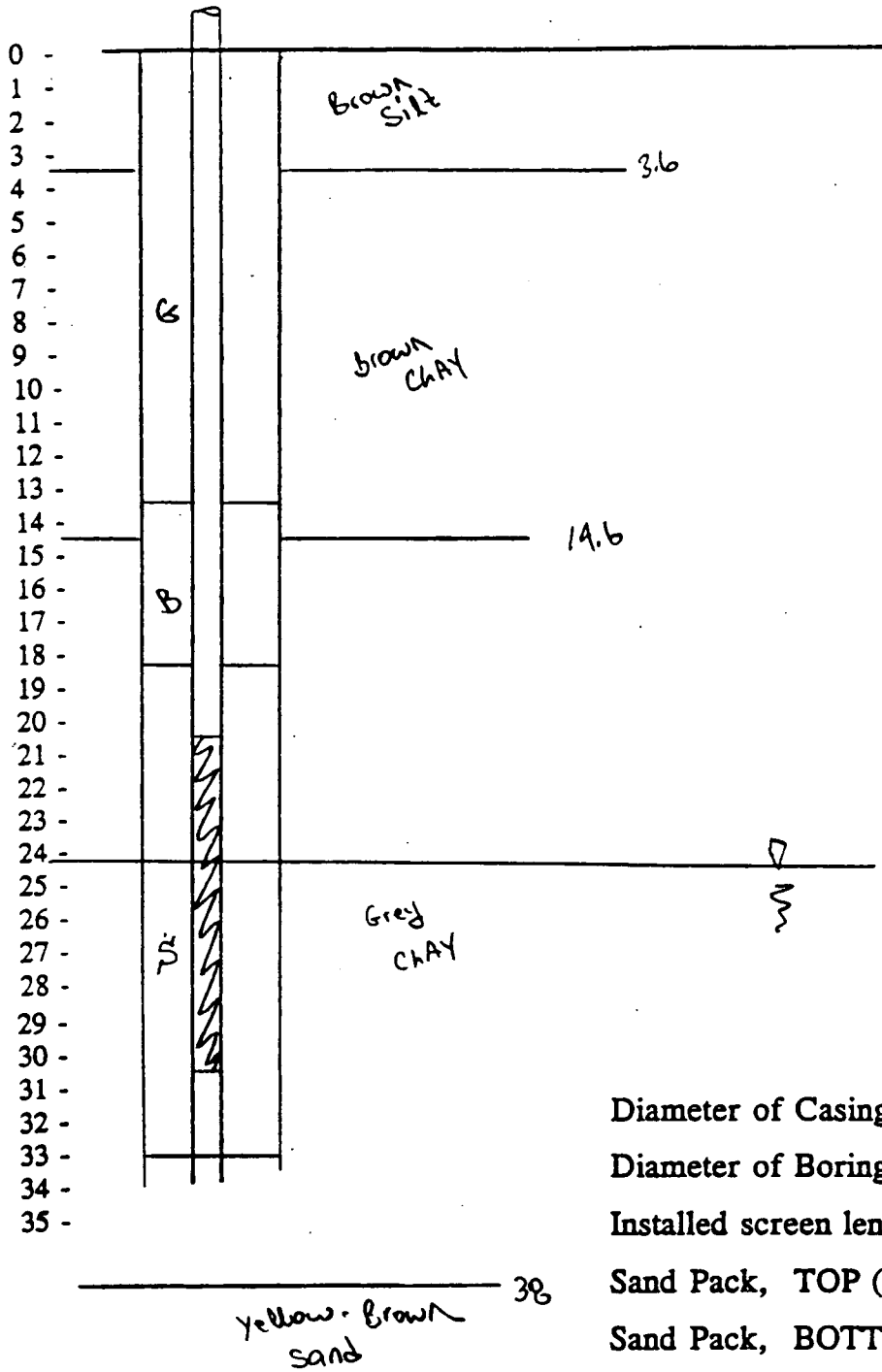


☐ CONFINED
☒ UNCONFINED

Diameter of Casing (inch)	4
Diameter of Boring (inch)	12
Installed screen length (ft)	10
Sand Pack, TOP (ft)	8
Sand Pack, BOTTOM (ft)	24
Height of well casing* (ft)	2.0
Upper Aquiclude, BOTTOM (ft)	N/A
Lower Aquiclude, TOP (ft)	N/A
Depth to water,(TOC)	FH- 7.41 RH- 8.03

FH = falling head
RH = rising head
B = bentonite
G = cement/grout
S = Sand (filter) Pack
TOC = measured from top of casing
* measured as height above ground Surface

WELL NO. 1084



☐ CONFINED
☒ UNCONFINED

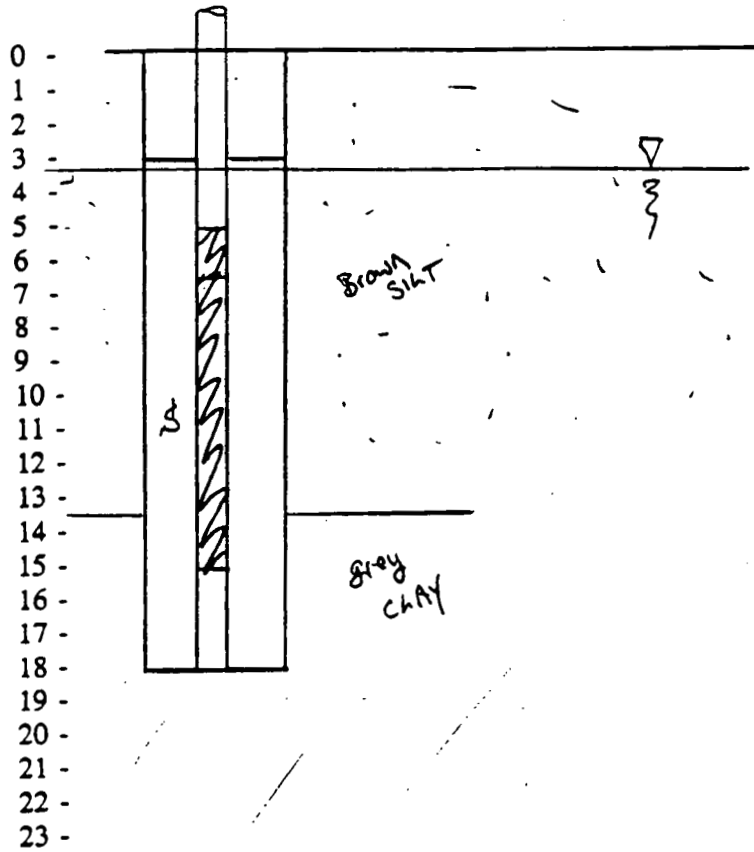
Diameter of Casing (inch)	4
Diameter of Boring (inch)	12
Installed screen length (ft)	10
Sand Pack, TOP (ft)	18.4
Sand Pack, BOTTOM (ft)	33.0
Height of well casing* (ft)	2.0
Upper Aquiclude, BOTTOM (ft)	N/A
Lower Aquiclude, TOP (ft)	N/A
Depth to water,(TOC)	FH- 26.38 RH- 26.34

FH = falling head
RH = rising head
B = bentonite
G = cement/grout
S = Sand (filter) Pack
TOC = measured from top of casing
* measured as height above ground Surface

000157

WELL NO. 1087

F-7333

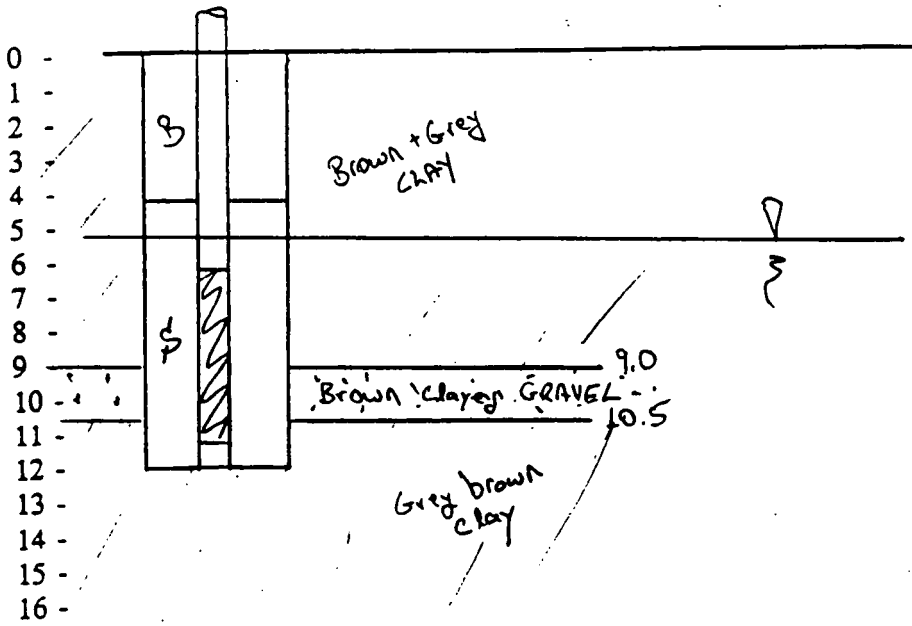


☐ CONFINED
☒ UNCONFINED

Diameter of Casing (inch)	4
Diameter of Boring (inch)	8
Installed screen length (ft)	10
Sand Pack, TOP (ft)	3
Sand Pack, BOTTOM (ft)	18
Height of well casing* (ft)	2.0
Upper Aquiclude, BOTTOM (ft)	0
Lower Aquiclude, TOP (ft)	13.5
Depth to water,(TOC)	FH- 5.64 RH- 6.60

FH = falling head
RH = rising head
B = bentonite
G = cement/grout
S = Sand (filter) Pack
TOC = measured from top of casing
* measured as height above ground Surface

WELL NO. 1111



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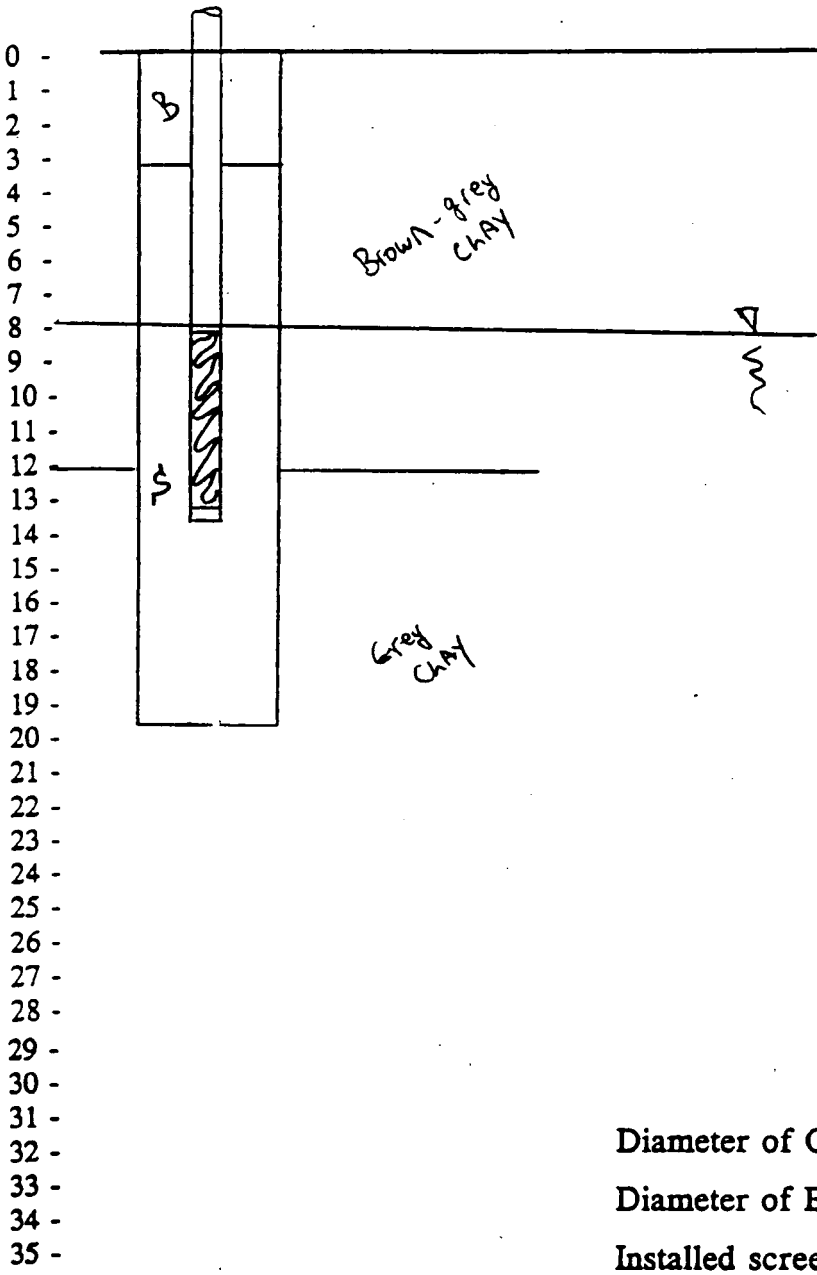
Diameter of Casing (inch)	2
Diameter of Boring (inch)	6
Installed screen length (ft)	5
Sand Pack, TOP (ft)	4.2
Sand Pack, BOTTOM (ft)	12
Height of well casing* (ft)	2.0
Upper Aquiclude, BOTTOM (ft)	9.
Lower Aquiclude, TOP (ft)	10.5
Depth to water,(TOC)	FH- 7.39 RH- 7.39

FH = falling head
RH = rising head
B = bentonite
G = cement/grout
S = Sand (filter) Pack
TOC = measured from top of casing
* measured as height above ground Surface

WELL NO. 1113

7333



☐ CONFINED
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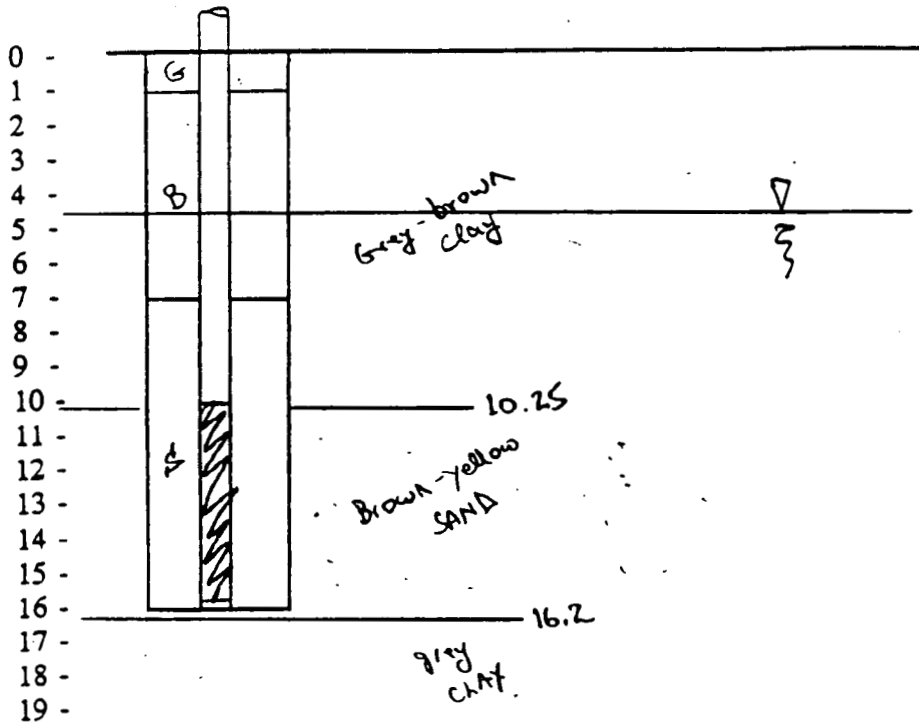
Diameter of Casing (inch)	2
Diameter of Boring (inch)	6
Installed screen length (ft)	5
Sand Pack, TOP (ft)	3.2
Sand Pack, BOTTOM (ft)	19.5
Height of well casing* (ft)	2.0
Upper Aquiclude, BOTTOM (ft)	n/a
Lower Aquiclude, TOP (ft)	n/a
Depth to water,(TOC)	FH- 9.80 RH- 9.81

FH = falling head
RH = rising head
B = bentonite
G = cement/grout
S = Sand (filter) Pack
TOC = measured from top of casing
* measured as height above ground Surface

WELL NO. 1134



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Diameter of Casing (inch)	2
Diameter of Boring (inch)	8
Installed screen length (ft)	5.8
Sand Pack, TOP (ft)	7
Sand Pack, BOTTOM (ft)	16
Height of well casing* (ft)	2.0
Upper Aquiclude, BOTTOM (ft)	10.25
Lower Aquiclude, TOP (ft)	16.2
Depth to water,(TOC)	FH- 6.67 RH- 6.68

FH = falling head
RH = rising head
B = bentonite
G = cement/grout
S = Sand (filter) Pack
TOC = measured from top of casing
* measured as height above ground Surface

WELL NO. 1137

7333

☐ CONFINED
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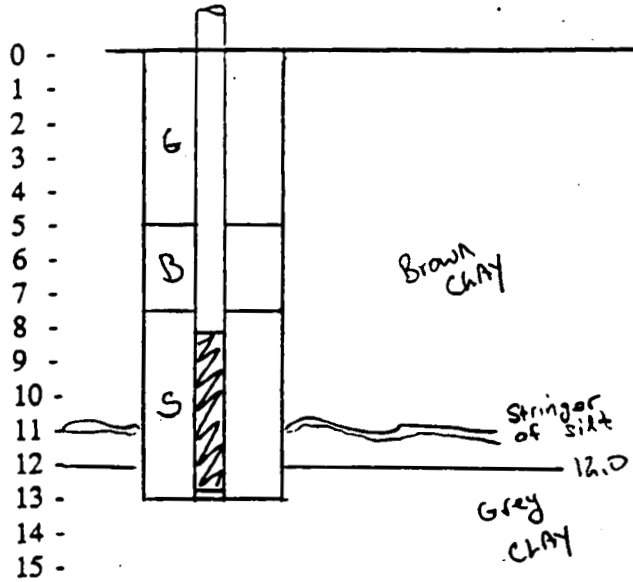
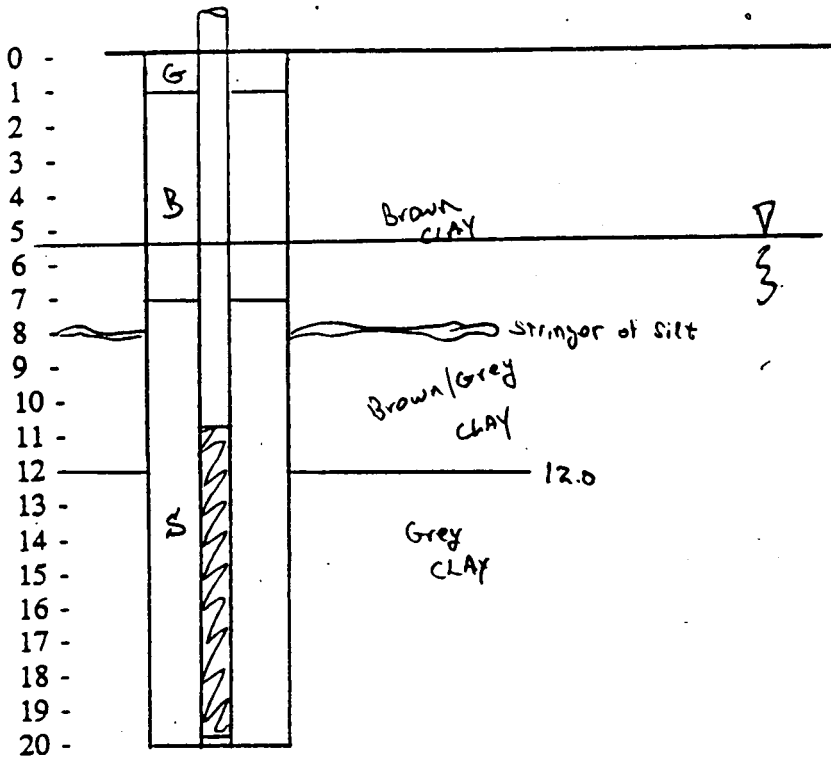


Diameter of Casing (inch)	2.
Diameter of Boring (inch)	8
Installed screen length (ft)	4.7
Sand Pack, TOP (ft)	7.6
Sand Pack, BOTTOM (ft)	13
Height of well casing* (ft)	1.9
Upper Aquiclude, BOTTOM (ft)	n/a
Lower Aquiclude, TOP (ft)	n/a
Depth to water,(TOC) FH-_____ RH-_____	

FH = falling head
RH = rising head
B = bentonite
G = cement/grout
S = Sand (filter) Pack
TOC = measured from top of casing
* measured as height above ground Surface

WELL NO. 1145



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Diameter of Casing (inch)	2
Diameter of Boring (inch)	8
Installed screen length (ft)	10*
Sand Pack, TOP (ft)	7
Sand Pack, BOTTOM (ft)	20
Height of well casing* (ft)	2.0
Upper Aquiclude, BOTTOM (ft)	n/a
Lower Aquiclude, TOP (ft)	n/a
Depth to water,(TOC)	FH- 7.31 RH- 7.21

FH = falling head
RH = rising head
B = bentonite
G = cement/grout
S = Sand (filter) Pack
TOC = measured from top of casing
* measured as height above ground Surface

* 10.8-19.8 by instal. log

000163

WELL NO. 1149

7333

☒ CONFINED
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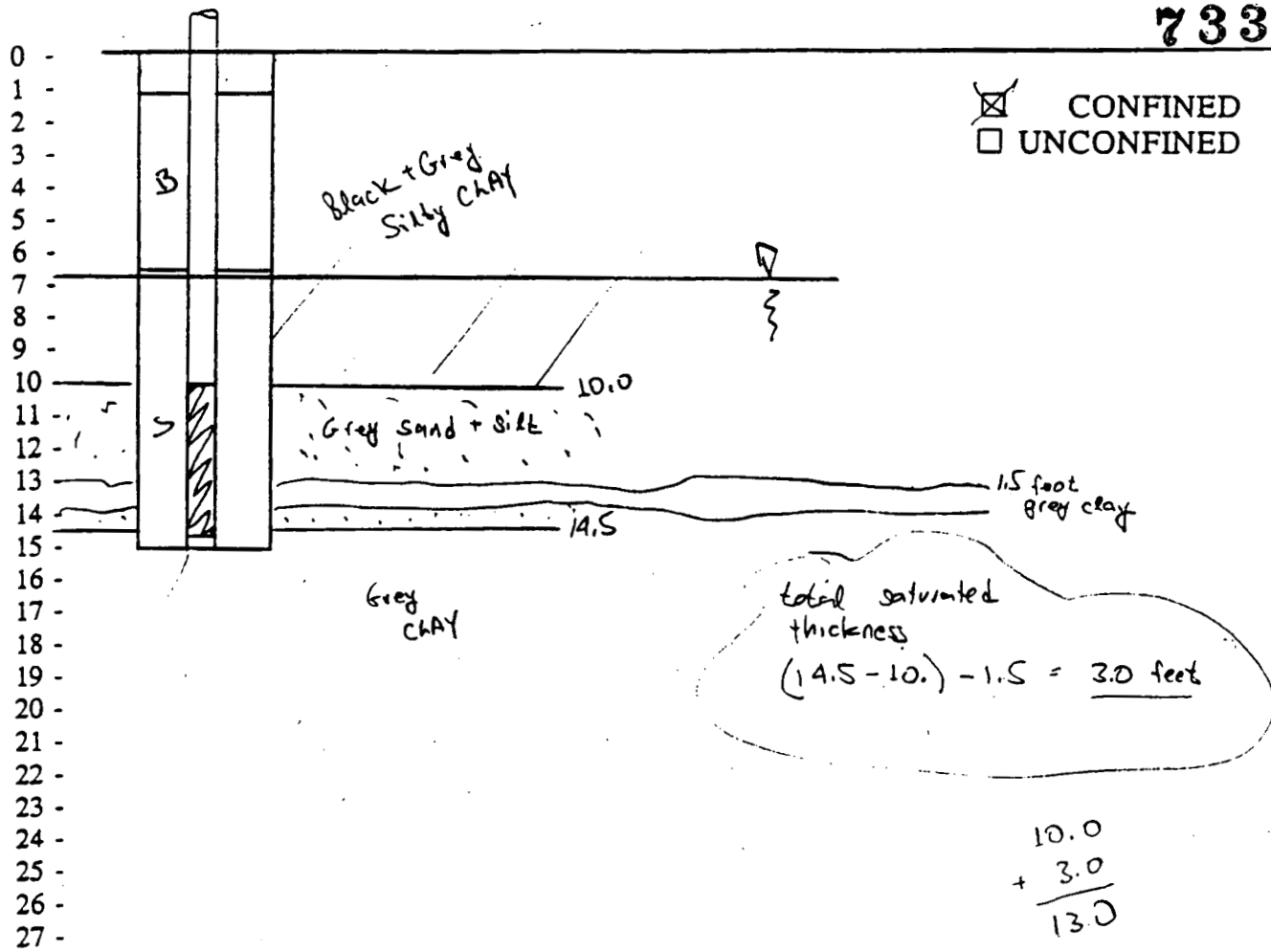
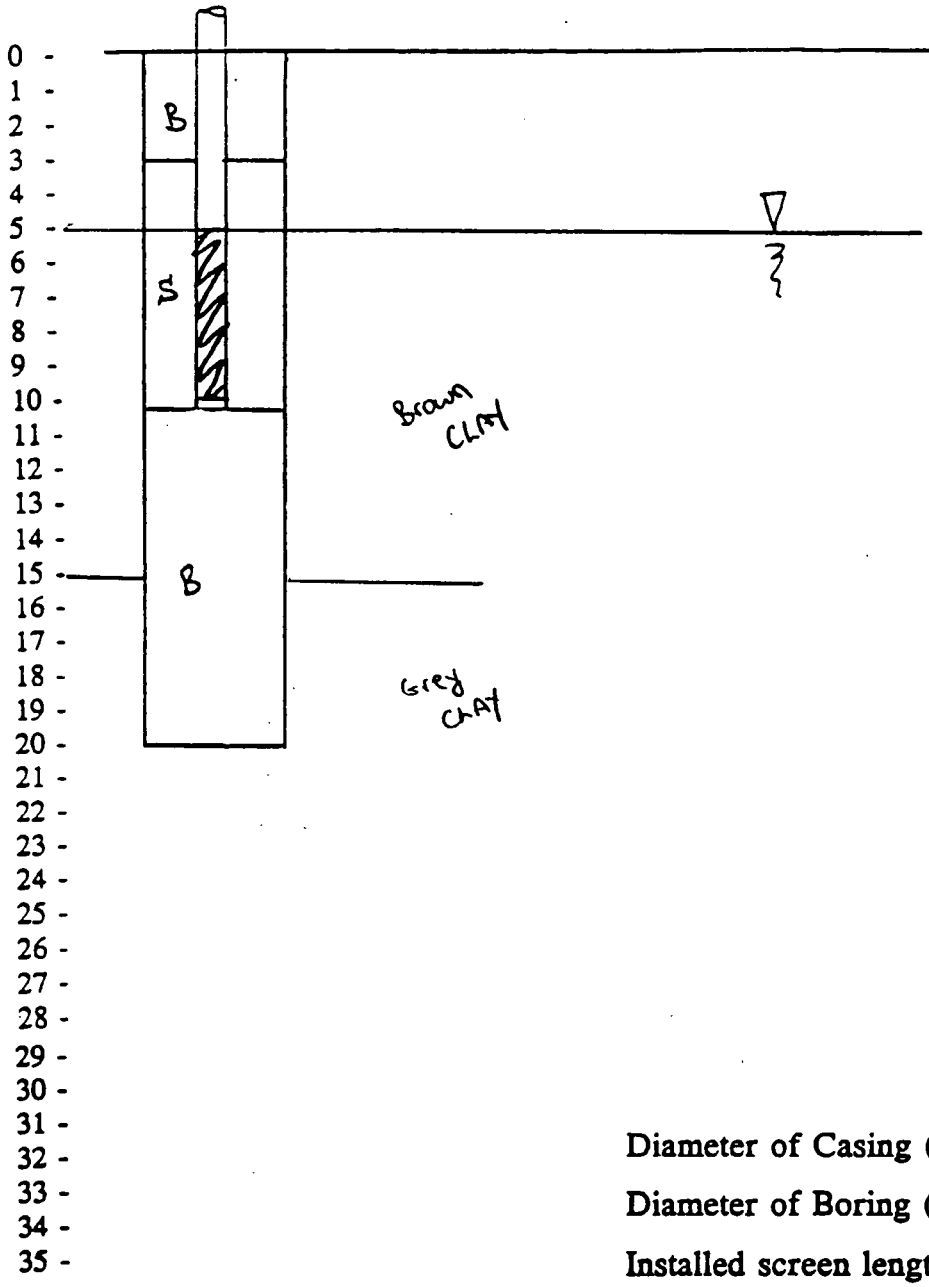


10.0
+ 3.0
13.0

Diameter of Casing (inch)	4
Diameter of Boring (inch)	8
Installed screen length (ft)	4.6
Sand Pack, TOP (ft)	6.5
Sand Pack, BOTTOM (ft)	15
Height of well casing* (ft)	.97
Upper Aquiclude, BOTTOM (ft)	10
Lower Aquiclude, TOP (ft)	13
Depth to water,(TOC)	FH- 7.74 RH- 7.78

FH = falling head
RH = rising head
B = bentonite
G = cement/grout
S = Sand (filter) Pack
TOC = measured from top of casing
* measured as height above ground Surface

WELL NO. 1152



☐ CONFINED
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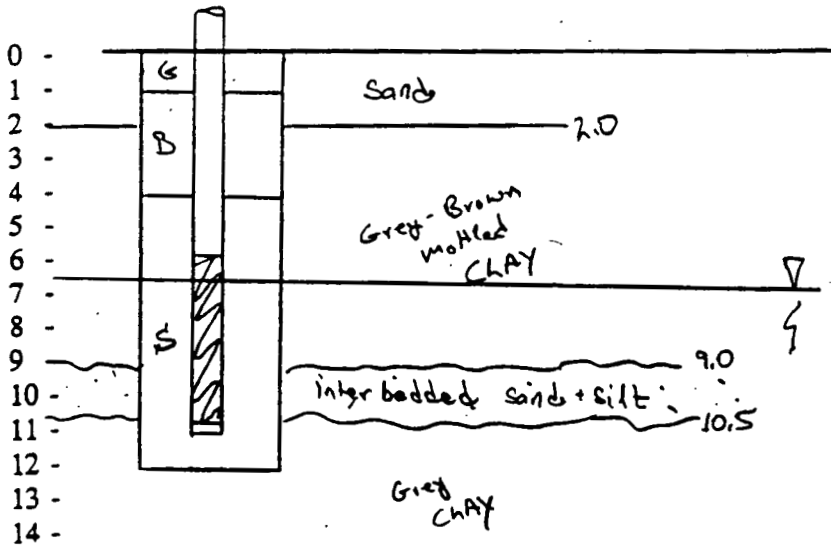
Diameter of Casing (inch)	2
Diameter of Boring (inch)	8
Installed screen length (ft)	4.8
Sand Pack, TOP (ft)	3
Sand Pack, BOTTOM (ft)	10.2
Height of well casing* (ft)	2.0
Upper Aquiclude, BOTTOM (ft)	N/A
Lower Aquiclude, TOP (ft)	N/A
Depth to water,(TOC)	FH- 7.08 RH- 7.14

FH = falling head
RH = rising head
B = bentonite
G = cement/grout
S = Sand (filter) Pack
TOC = measured from top of casing
* measured as height above ground Surface

WELL NO. 1153

7333



☒ CONFINED
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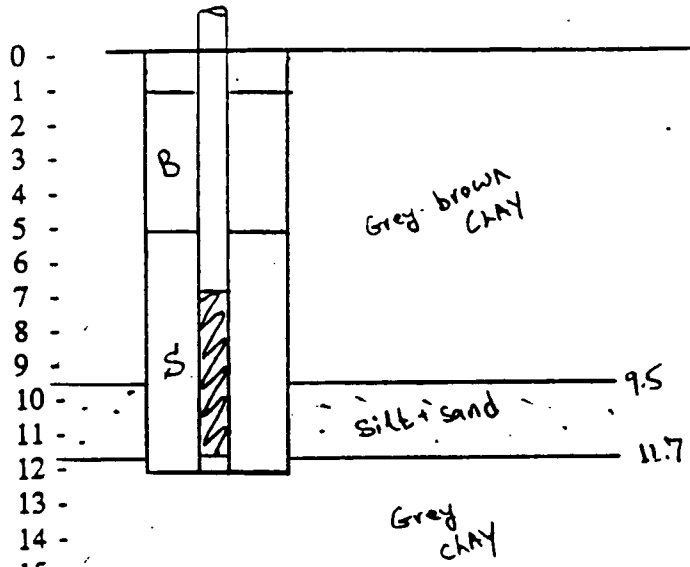
Diameter of Casing (inch)	4
Diameter of Boring (inch)	8
Installed screen length (ft)	4.8
Sand Pack, TOP (ft)	4
Sand Pack, BOTTOM (ft)	12
Height of well casing* (ft)	-.2
Upper Aquiclude, BOTTOM (ft)	9
Lower Aquiclude, TOP (ft)	10.5
Depth to water,(TOC)	FH- 6.73 RH- 6.90

FH = falling head
RH = rising head
B = bentonite
G = cement/grout
S = Sand (filter) Pack
TOC = measured from top of casing
* measured as height above ground Surface

WELL NO. 1155



☐ ~~CONFINED~~
☐ UNCONFINED

INSUFFICIENT WATER LEVEL TO TEST

Diameter of Casing (inch)	2
Diameter of Boring (inch)	8
Installed screen length (ft)	4.8
Sand Pack, TOP (ft)	5
Sand Pack, BOTTOM (ft)	12
Height of well casing* (ft)	-0.05
Upper Aquiclude, BOTTOM (ft)	
Lower Aquiclude, TOP (ft)	
Depth to water,(TOC) FH-_____ RH-_____	

FH = falling head
RH = rising head
B = bentonite
G = cement/grout
S = Sand (filter) Pack
TOC = measured from top of casing
* measured as height above ground Surface

WELL NO. 1177

7333

☒ CONFINED
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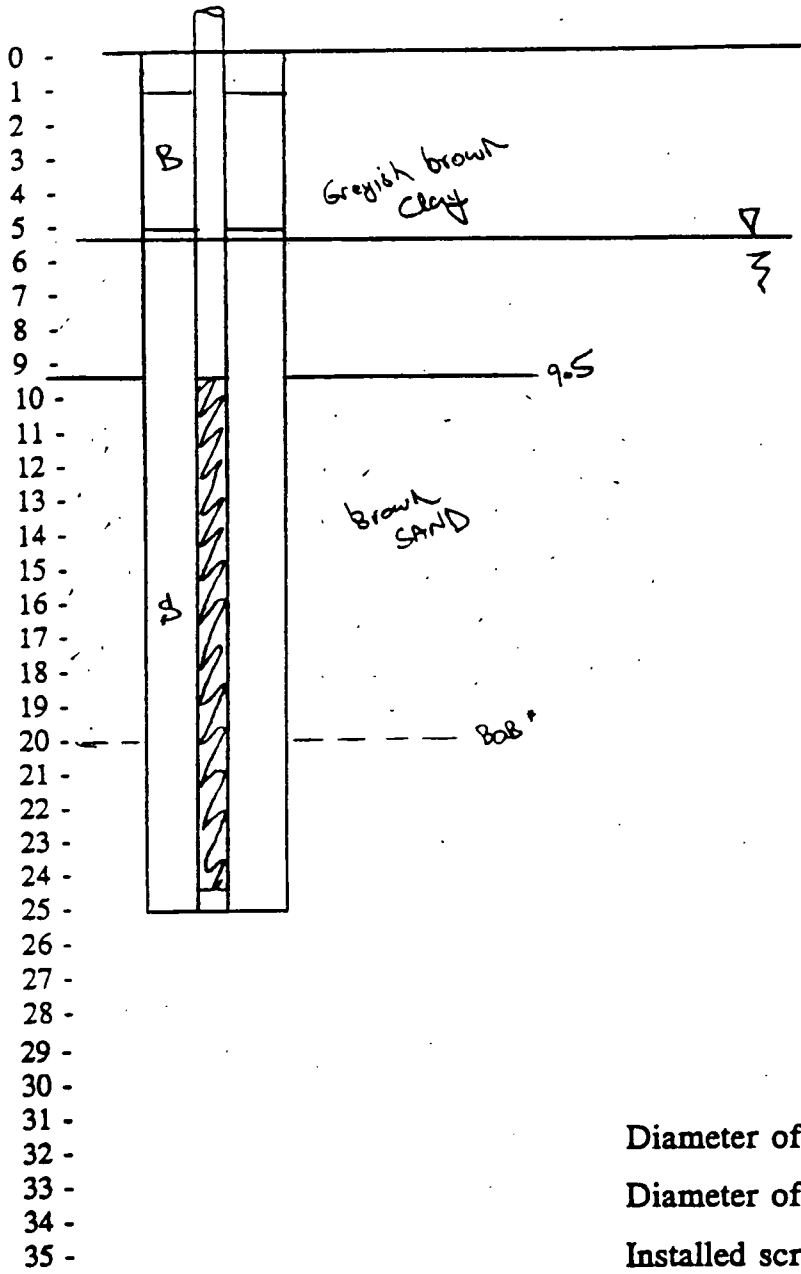
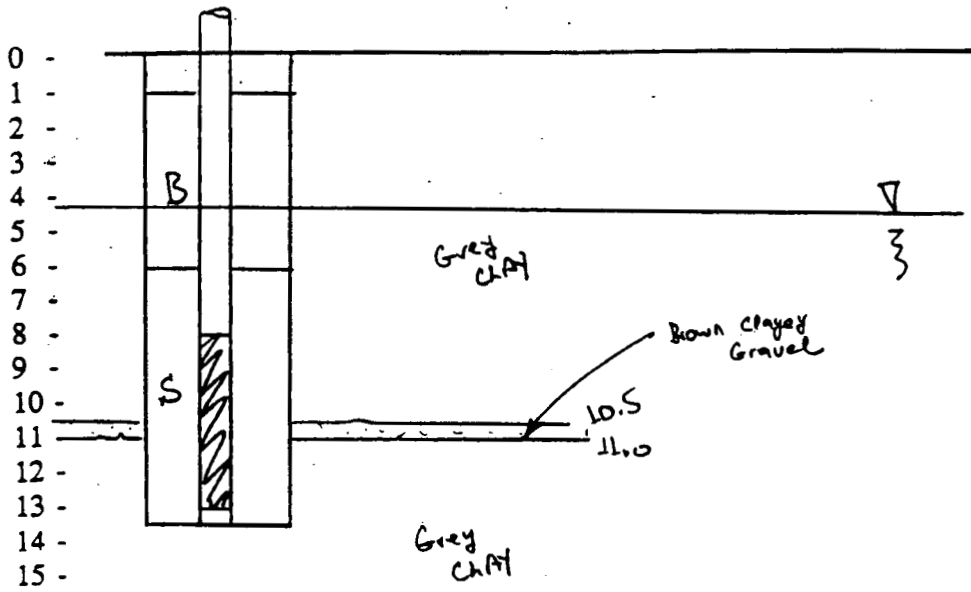


Diameter of Casing (inch)	2
Diameter of Boring (inch)	10
Installed screen length (ft)	15
Sand Pack, TOP (ft)	5
Sand Pack, BOTTOM (ft)	25
Height of well casing* (ft)	2.0
Upper Aquiclude, BOTTOM (ft)	9.5
Lower Aquiclude, TOP (ft)	20
Depth to water,(TOC)	FH- 7.18 RH- 7.18

* boring later drilled to 25' to install piezometer

FH = falling head
RH = rising head
B = bentonite
G = cement/grout
S = Sand (filter) Pack
TOC = measured from top of casing
* measured as height above ground Surface

WELL NO. 1182



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Diameter of Casing (inch)	2
Diameter of Boring (inch)	8
Installed screen length (ft)	5
Sand Pack, TOP (ft)	6
Sand Pack, BOTTOM (ft)	13.5
Height of well casing* (ft)	2.0
Upper Aquiclude, BOTTOM (ft)	10.5
Lower Aquiclude, TOP (ft)	11.0
Depth to water,(TOC)	FH- 6.35 RH- 6.35

FH = falling head
RH = rising head
B = bentonite
G = cement/grout
S = Sand (filter) Pack
TOC = measured from top of casing
* measured as height above ground Surface

WELL NO. 1204

- 7333

☒ CONFINED
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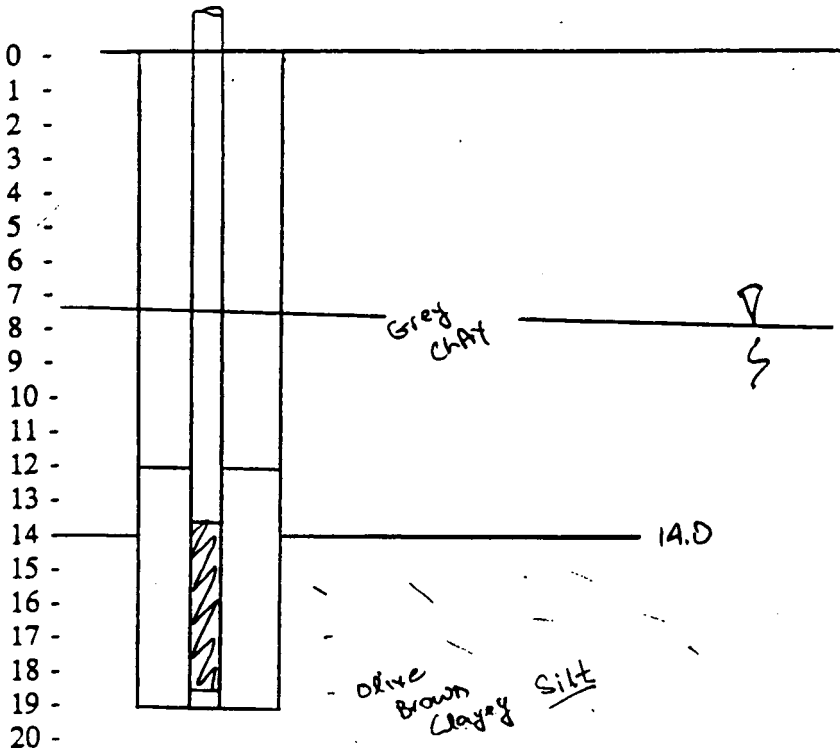
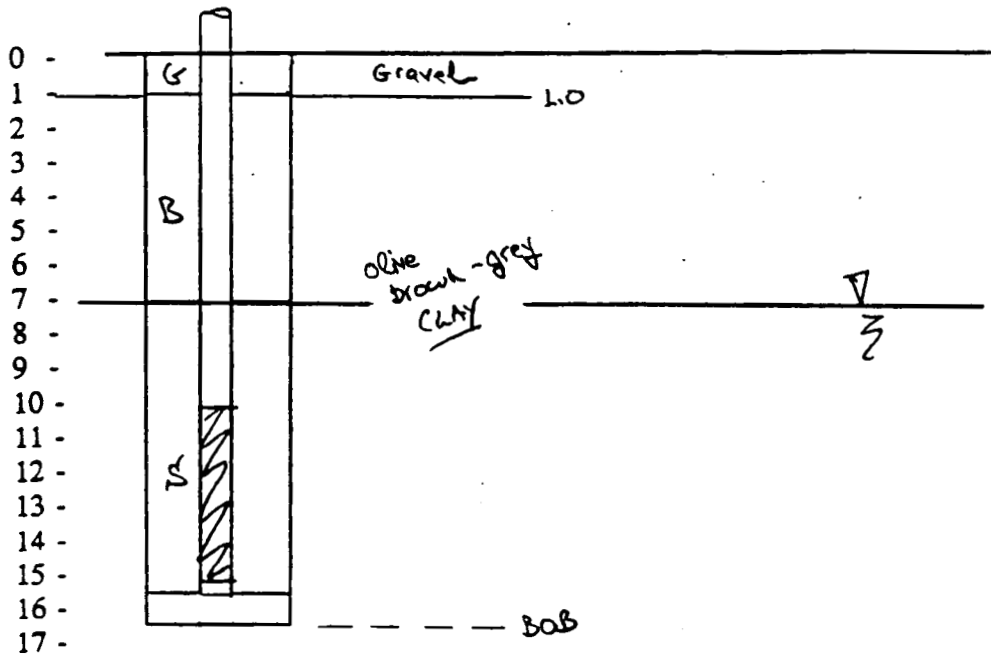


Diameter of Casing (inch)	2
Diameter of Boring (inch)	8
Installed screen length (ft)	5
Sand Pack, TOP (ft)	12
Sand Pack, BOTTOM (ft)	19
Height of well casing* (ft)	0.0
Upper Aquiclude, BOTTOM (ft)	19
Lower Aquiclude, TOP (ft)	19
Depth to water,(TOC)	FH- 7.42 RH- 7.42

FH = falling head
RH = rising head
B = bentonite
G = cement/grout
S = Sand (filter) Pack
TOC = measured from top of casing
* measured as height above ground Surface

000170

WELL NO. 1215



☐ CONFINED
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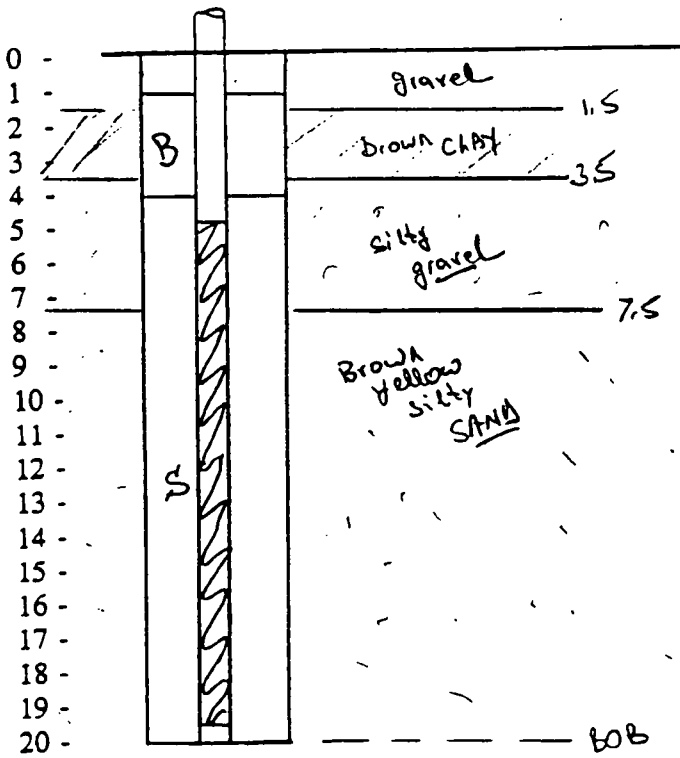
Diameter of Casing (inch)	2
Diameter of Boring (inch)	8
Installed screen length (ft)	5
Sand Pack, TOP (ft)	7
Sand Pack, BOTTOM (ft)	15.1
Height of well casing* (ft)	1.7
Upper Aquiclude, BOTTOM (ft)	N/A
Lower Aquiclude, TOP (ft)	N/A
Depth to water,(TOC)	FH- 8.74 RH- 8.73

FH = falling head
RH = rising head
B = bentonite
G = cement/grout
S = Sand (filter) Pack
TOC = measured from top of casing
* measured as height above ground Surface

WELL NO. 1220

E-7333



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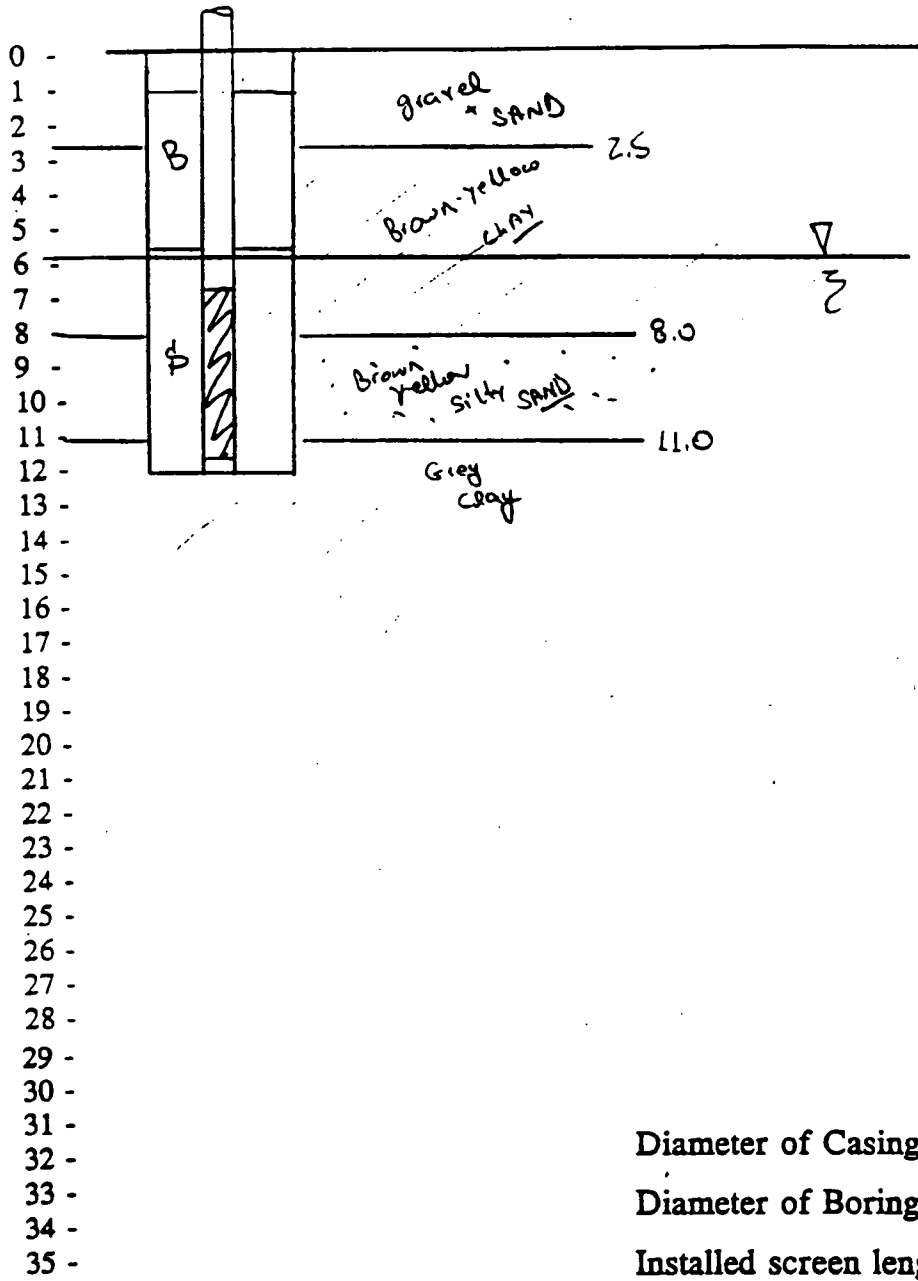
INSUFFICIENT WATER LEVEL TO TEST

Diameter of Casing (inch)	2
Diameter of Boring (inch)	8
Installed screen length (ft)	14.8
Sand Pack, TOP (ft)	4
Sand Pack, BOTTOM (ft)	20
Height of well casing* (ft)	2.0
Upper Aquiclude, BOTTOM (ft)	
Lower Aquiclude, TOP (ft)	
Depth to water,(TOC) FH-_____ RH-_____	

FH = falling head
RH = rising head
B = bentonite
G = cement/grout
S = Sand (filter) Pack
TOC = measured from top of casing
* measured as height above ground Surface

WELL NO. 1227



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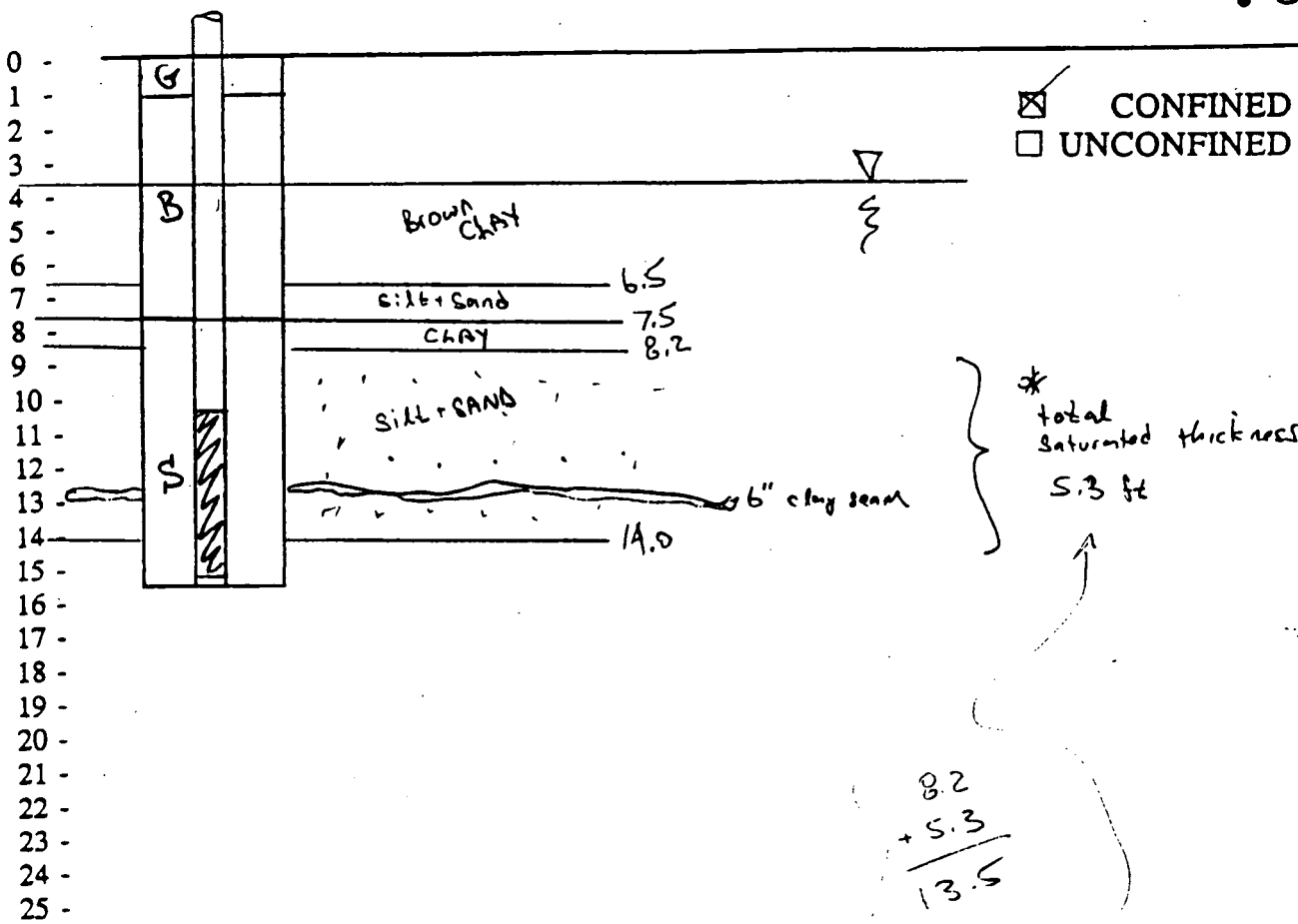
Diameter of Casing (inch)	2
Diameter of Boring (inch)	8
Installed screen length (ft)	4.8
Sand Pack, TOP (ft)	5.5
Sand Pack, BOTTOM (ft)	12.0
Height of well casing* (ft)	0.2
Upper Aquiclude, BOTTOM (ft)	8
Lower Aquiclude, TOP (ft)	11.0
Depth to water,(TOC)	FH- 5.82 RH- 5.83

FH = falling head
RH = rising head
B = bentonite
G = cement/grout
S = Sand (filter) Pack
TOC = measured from top of casing
* measured as height above ground Surface

WELL NO. 1241

7333



☒ CONFINED
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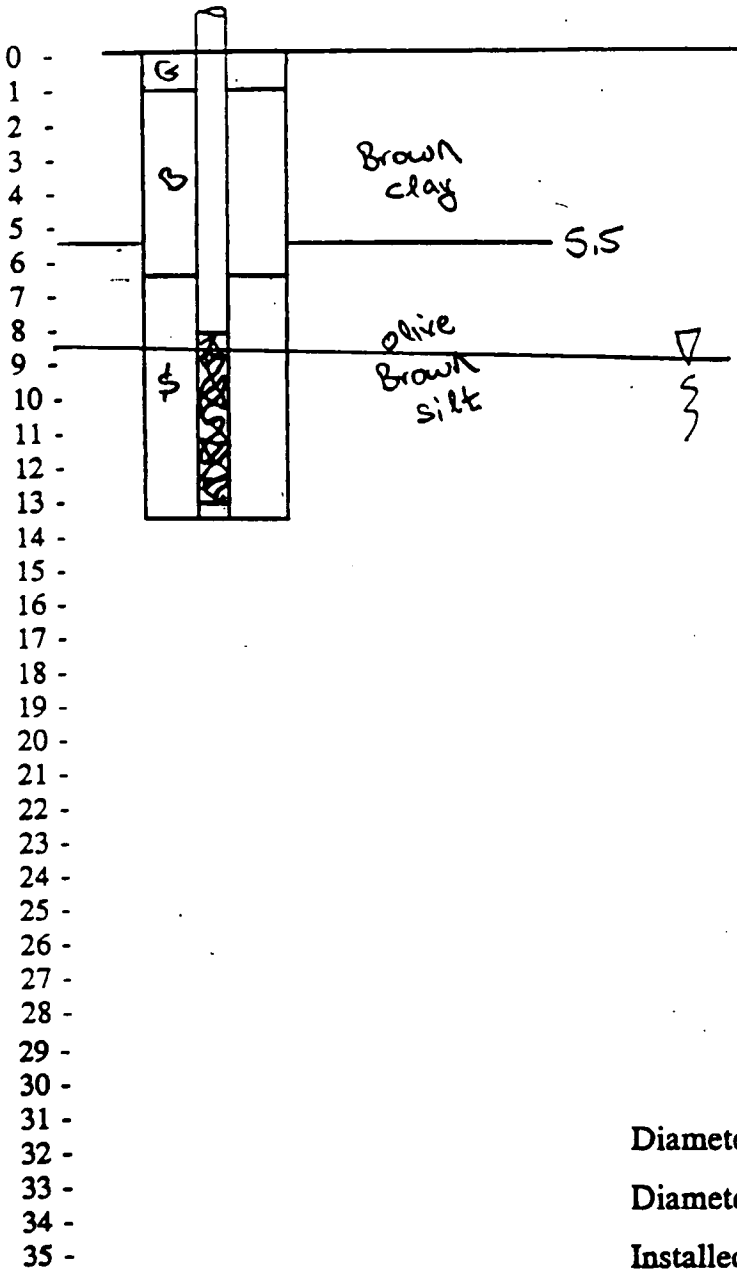
Diameter of Casing (inch)	2
Diameter of Boring (inch)	8
Installed screen length (ft)	4.8
Sand Pack, TOP (ft)	7.5
Sand Pack, BOTTOM (ft)	15.5
Height of well casing* (ft)	2.0
Upper Aquiclude, BOTTOM (ft)	8.2
* Lower Aquiclude, TOP (ft)	13.5
Depth to water,(TOC)	FH- 5.69 RH- 5.69

FH = falling head
RH = rising head
B = bentonite
G = cement/grout
S = Sand (filter) Pack
TOC = measured from top of casing
* measured as height above ground Surface

WELL NO. 1263



☐ CONFINED
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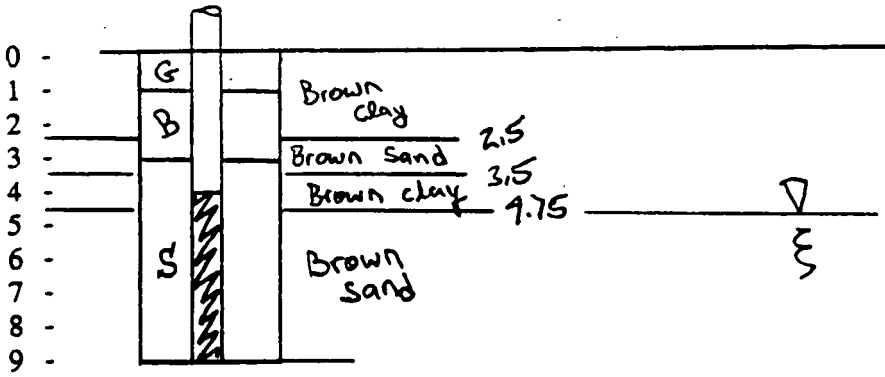
Diameter of Casing (inch)	2
Diameter of Boring (inch)	8
Installed screen length (ft)	5
Sand Pack, TOP (ft)	6.5
Sand Pack, BOTTOM (ft)	13.5
Height of well casing* (ft)	2.0
Upper Aquiclude, BOTTOM (ft)	N/A
Lower Aquiclude, TOP (ft)	N/A
Depth to water,(TOC)	FH- 10.61 RH- 10.59

FH = falling head
RH = rising head
B = bentonite
G = cement/grout
S = Sand (filter) Pack
TOC = measured from top of casing
* measured as height above ground Surface

WELL NO. 1277

F-7333



☐ CONFINED
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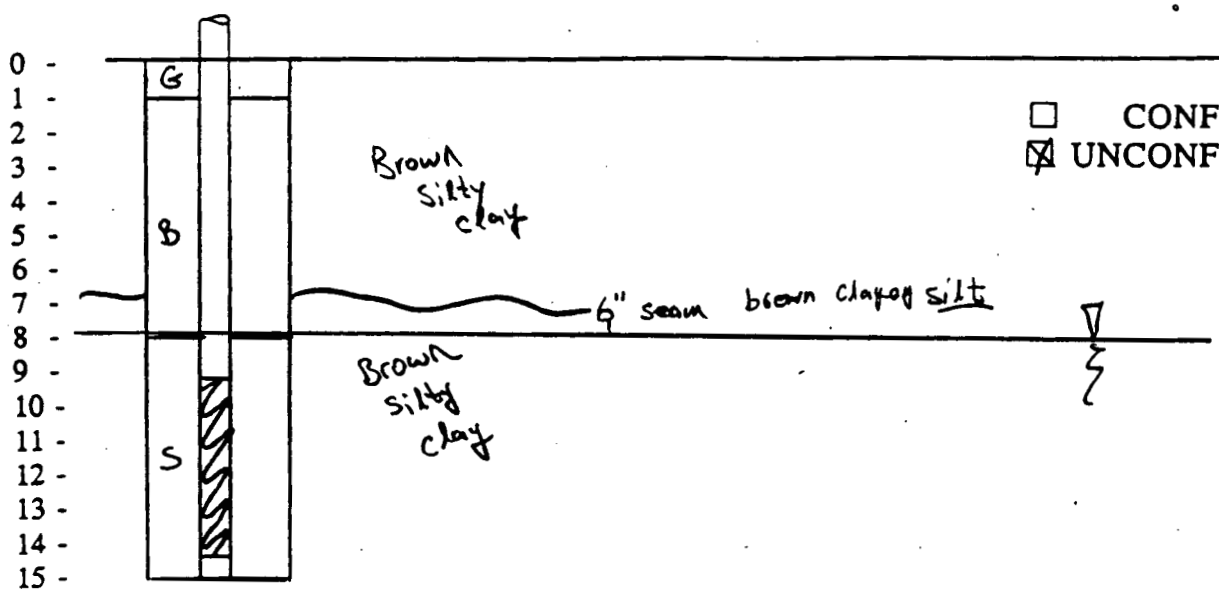
Diameter of Casing (inch)	2
Diameter of Boring (inch)	8
Installed screen length (ft)	5
Sand Pack, TOP (ft)	3
Sand Pack, BOTTOM (ft)	9
Height of well casing* (ft)	2.1
Upper Aquiclude, BOTTOM (ft)	4.75
Lower Aquiclude, TOP (ft)	9
Depth to water,(TOC)	FH- 6.89 RH- 6.69

FH = falling head
RH = rising head
B = bentonite
G = cement/grout
S = Sand (filter) Pack
TOC = measured from top of casing
* measured as height above ground Surface

WELL NO. 1279



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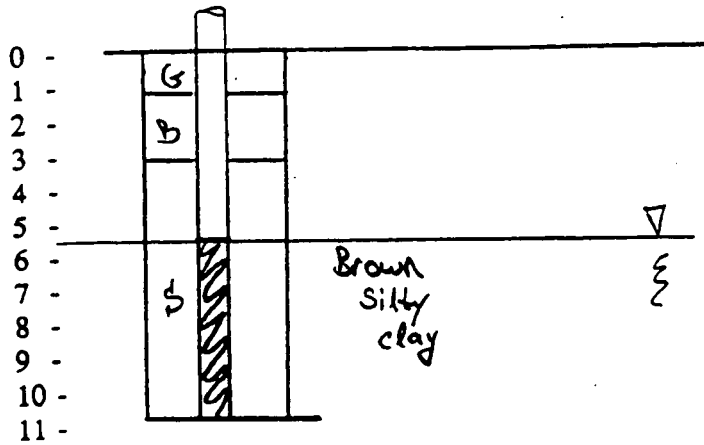
30 -
31 -
32 -
33 -
34 -
35 -

Diameter of Casing (inch)	2
Diameter of Boring (inch)	8
Installed screen length (ft)	4.8
Sand Pack, TOP (ft)	8
Sand Pack, BOTTOM (ft)	14.4
Height of well casing* (ft)	2.0
Upper Aquiclude, BOTTOM (ft)	N/A
Lower Aquiclude, TOP (ft)	N/A
Depth to water,(TOC)	FH- 7.79 RH- 6.43

FH = falling head
RH = rising head
B = bentonite
G = cement/grout
S = Sand (filter) Pack
TOC = measured from top of casing
* measured as height above ground Surface

WELL NO. 1283

7333

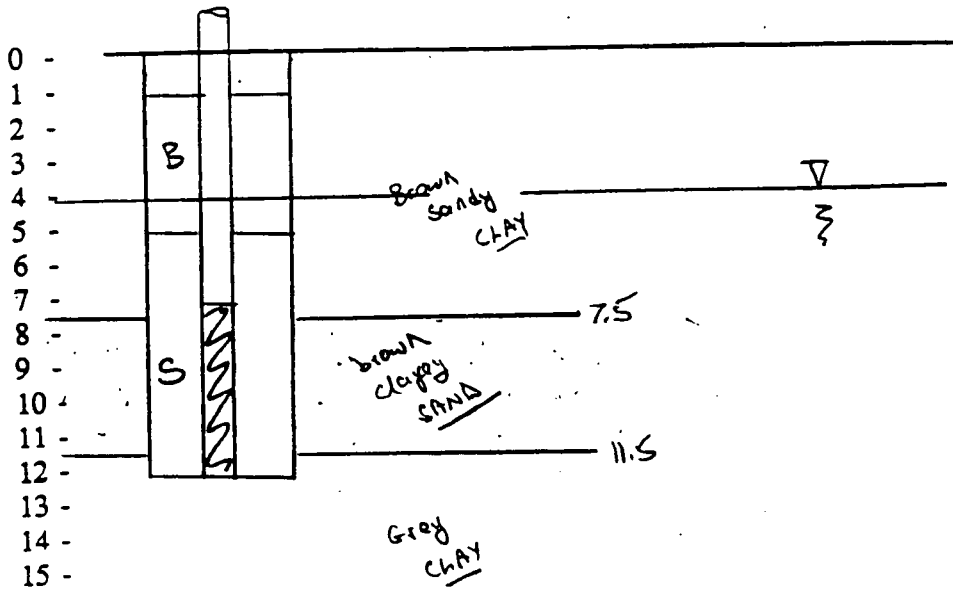


☐ CONFINED
☒ UNCONFINED

Diameter of Casing (inch)	2
Diameter of Boring (inch)	8
Installed screen length (ft)	4.8
Sand Pack, TOP (ft)	3
Sand Pack, BOTTOM (ft)	10.5
Height of well casing* (ft)	1.8
Upper Aquiclude, BOTTOM (ft)	N/A
Lower Aquiclude, TOP (ft)	N/A
Depth to water,(TOC)	FH- 7.28 RH- 7.28

FH = falling head
RH = rising head
B = bentonite
G = cement/grout
S = Sand (filter) Pack
TOC = measured from top of casing
* measured as height above ground Surface

WELL NO. 1293



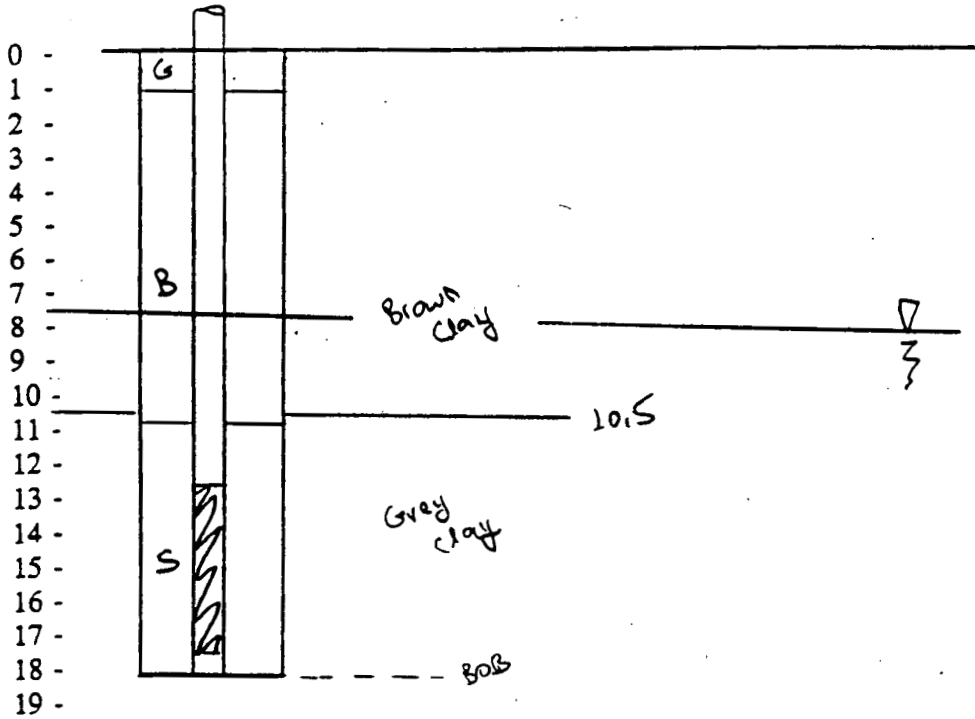
☒ CONFINED
☐ UNCONFINED

Diameter of Casing (inch)	2
Diameter of Boring (inch)	8
Installed screen length (ft)	5
Sand Pack, TOP (ft)	5
Sand Pack, BOTTOM (ft)	12
Height of well casing* (ft)	2.1
Upper Aquiclude, BOTTOM (ft)	7.5
Lower Aquiclude, TOP (ft)	11.5
Depth to water,(TOC)	FH- 6.13 RH- 6.14

FH = falling head
RH = rising head
B = bentonite
G = cement/grout
S = Sand (filter) Pack
TOC = measured from top of casing
* measured as height above ground Surface

WELL NO. 1299

7333

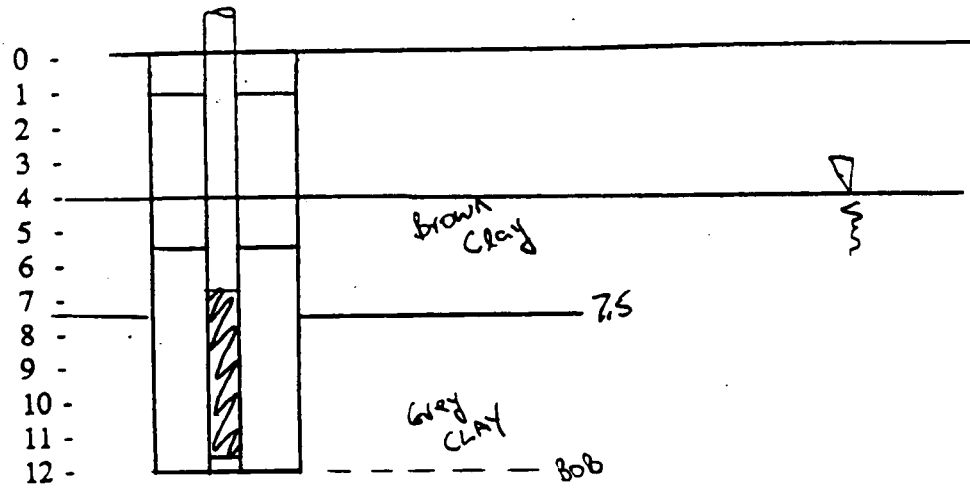


☐ CONFINED
☒ UNCONFINED

Diameter of Casing (inch)	2
Diameter of Boring (inch)	8
Installed screen length (ft)	4.8
Sand Pack, TOP (ft)	12.8
Sand Pack, BOTTOM (ft)	17.6
Height of well casing* (ft)	2.2
Upper Aquiclude, BOTTOM (ft)	N/A
Lower Aquiclude, TOP (ft)	N/A
Depth to water,(TOC)	FH- 9.66 RH- 8.13

FH = falling head
RH = rising head
B = bentonite
G = cement/grout
S = Sand (filter) Pack
TOC = measured from top of casing
* measured as height above ground Surface

WELL NO. 1301



☐ CONFINED
☒ UNCONFINED

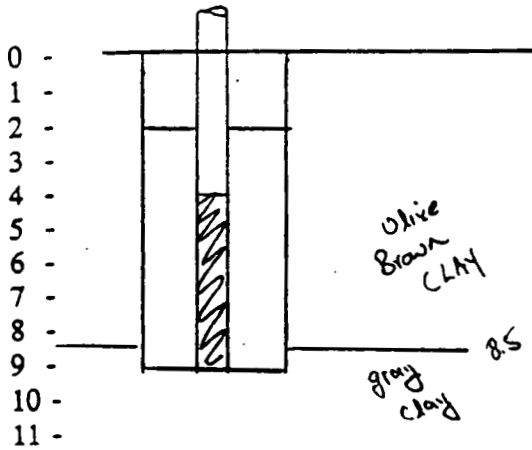
Diameter of Casing (inch)	2
Diameter of Boring (inch)	8
Installed screen length (ft)	4.8
Sand Pack, TOP (ft)	5.5
Sand Pack, BOTTOM (ft)	12.0
Height of well casing* (ft)	2.0
Upper Aquiclude, BOTTOM (ft)	N/A
Lower Aquiclude, TOP (ft)	N/A
Depth to water,(TOC)	FH- 5.97 RH- 6.68

FH = falling head
RH = rising head
B = bentonite
G = cement/grout
S = Sand (filter) Pack
TOC = measured from top of casing
* measured as height above ground Surface

000181

WELL NO. 1304

E-7333



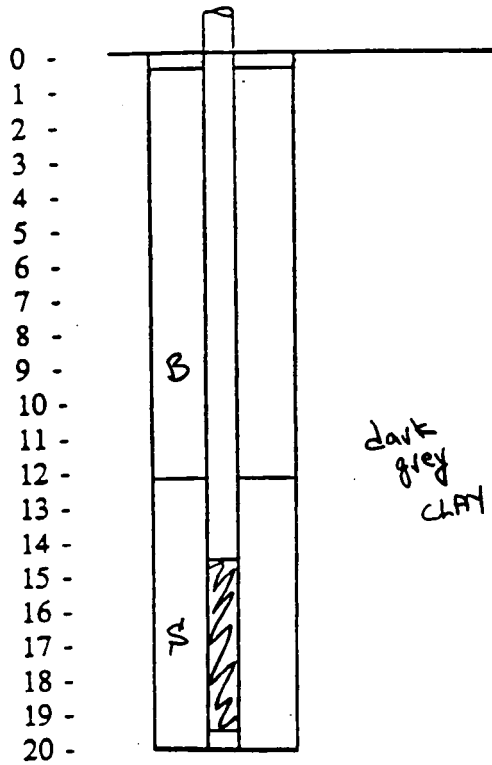
☐ CONFINED
☒ UNCONFINED

WELL PLUGGED AND ABANDONNED

Diameter of Casing (inch)	2
Diameter of Boring (inch)	8
Installed screen length (ft)	5
Sand Pack, TOP (ft)	2
Sand Pack, BOTTOM (ft)	9
Height of well casing* (ft)	0.0
Upper Aquiclude, BOTTOM (ft)	N/A
Lower Aquiclude, TOP (ft)	N/A
Depth to water,(TOC) FH-_____ RH-_____	

FH = falling head
RH = rising head
B = bentonite
G = cement/grout
S = Sand (filter) Pack
TOC = measured from top of casing
* measured as height above ground Surface

WELL NO. 1317



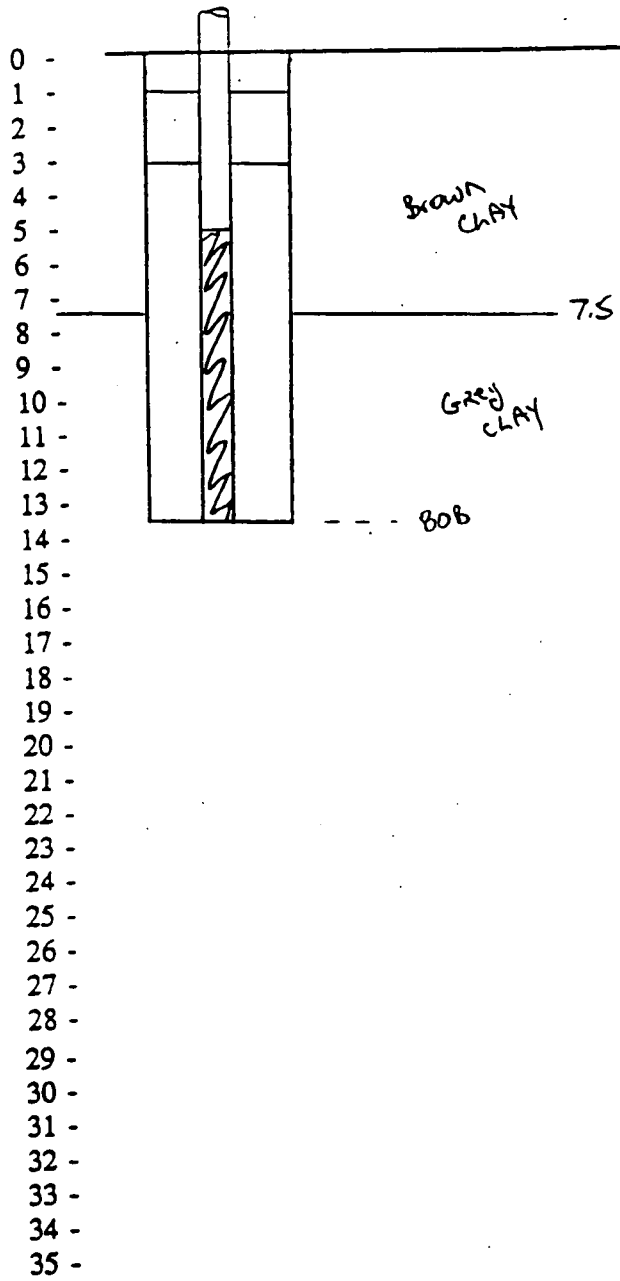
☐ CONFINED
☒ UNCONFINED

Diameter of Casing (inch)	2
Diameter of Boring (inch)	8
Installed screen length (ft)	5
Sand Pack, TOP (ft)	12.2
Sand Pack, BOTTOM (ft)	20.
Height of well casing* (ft)	.10
Upper Aquiclude, BOTTOM (ft)	N/A.
Lower Aquiclude, TOP (ft)	N/A
Depth to water,(TOC) FH-_____ RH-_____	

FH = falling head
RH = rising head
B = bentonite
G = cement/grout
S = Sand (filter) Pack
TOC = measured from top of casing
* measured as height above ground Surface

WELL NO. 1324

7338

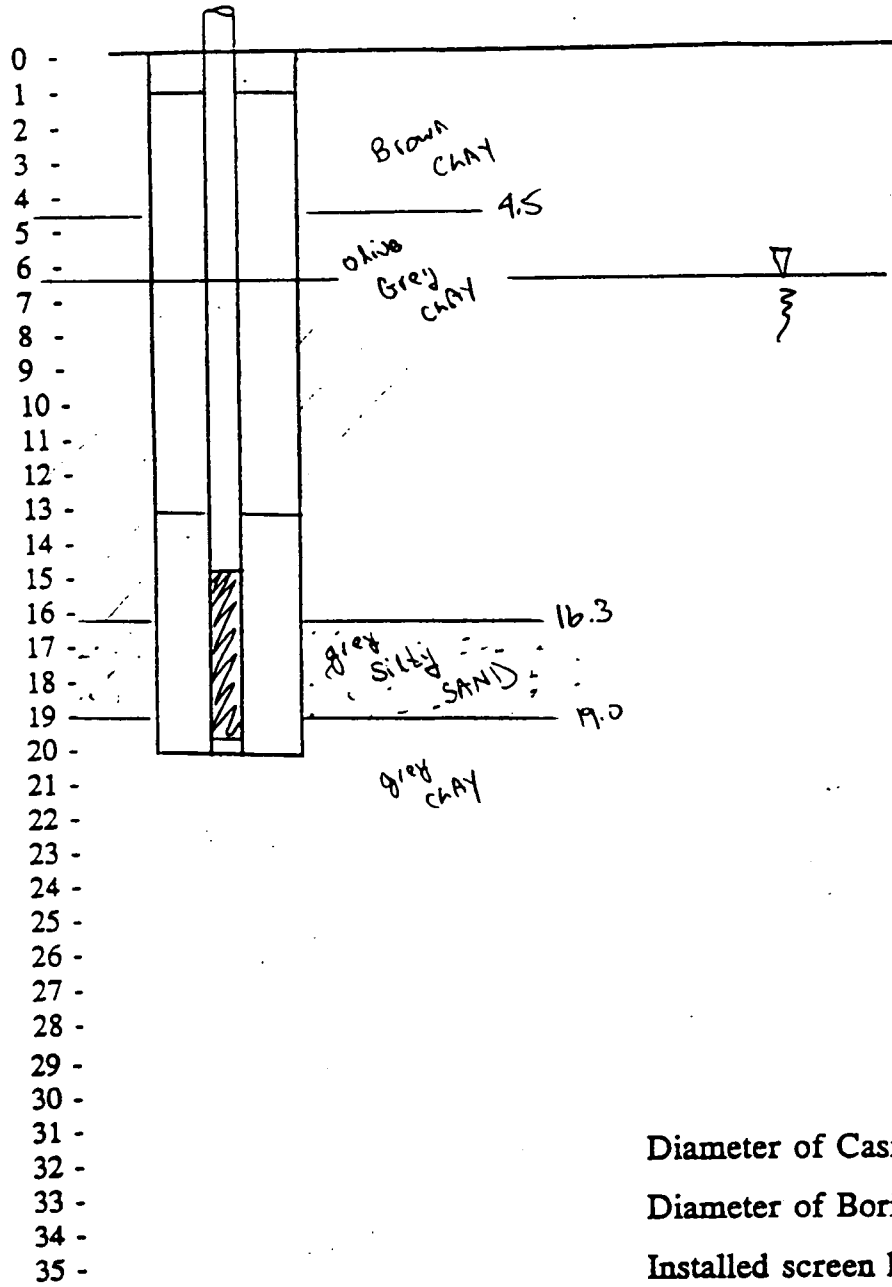


☐ CONFINED
☒ UNCONFINED

Diameter of Casing (inch)	2
Diameter of Boring (inch)	8
Installed screen length (ft)	8.5
Sand Pack, TOP (ft)	3
Sand Pack, BOTTOM (ft)	13.5
Height of well casing* (ft)	-.2
Upper Aquiclude, BOTTOM (ft)	N/A
Lower Aquiclude, TOP (ft)	N/A
Depth to water,(TOC)	FH-_____ RH-_____

FH = falling head
RH = rising head
B = bentonite
G = cement/grout
S = Sand (filter) Pack
TOC = measured from top of casing
* measured as height above ground Surface

WELL NO. 1332



☒ CONFINED
☐ UNCONFINED

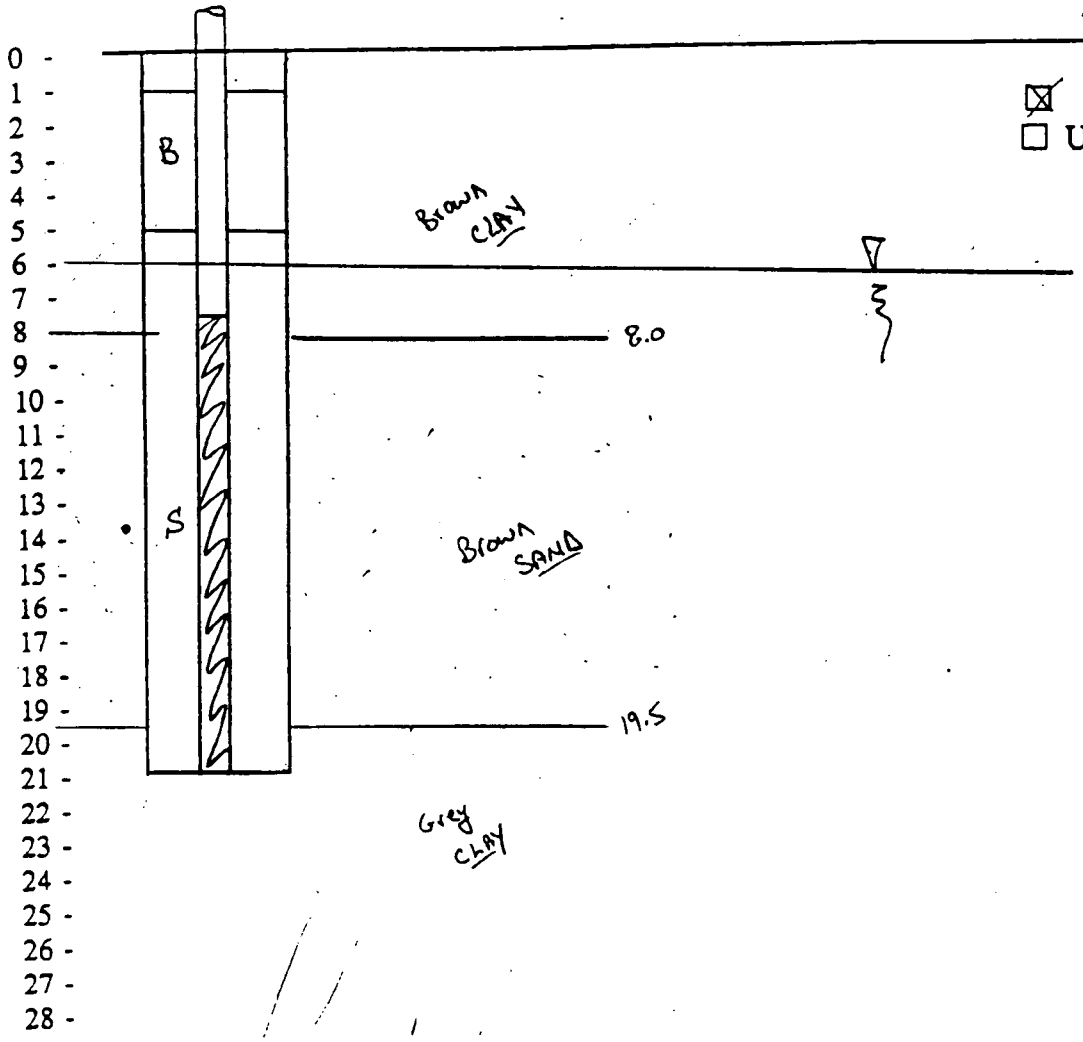
Diameter of Casing (inch)	2
Diameter of Boring (inch)	8
Installed screen length (ft)	4.8
Sand Pack, TOP (ft)	13
Sand Pack, BOTTOM (ft)	20
Height of well casing* (ft)	2.0
Upper Aquiclude, BOTTOM (ft)	16.3
Lower Aquiclude, TOP (ft)	19
Depth to water,(TOC)	FH- 8.65 RH- 8.65

FH = falling head
RH = rising head
B = bentonite
G = cement/grout
S = Sand (filter) Pack
TOC = measured from top of casing
* measured as height above ground Surface

WELL NO. 1336

7333

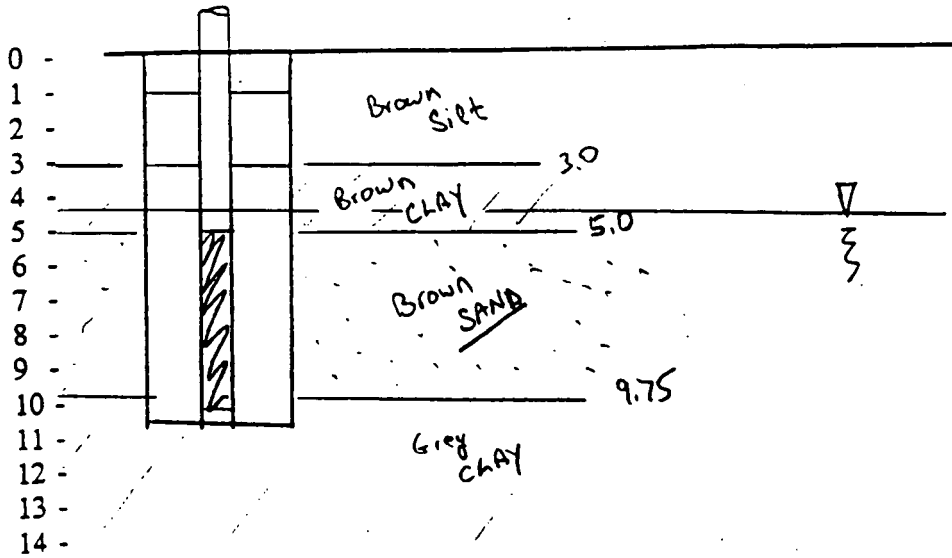
☒ CONFINED
☐ UNCONFINED



Diameter of Casing (inch)	2
Diameter of Boring (inch)	8
Installed screen length (ft)	13
Sand Pack, TOP (ft)	5
Sand Pack, BOTTOM (ft)	20.7
Height of well casing* (ft)	2.0
Upper Aquiclude, BOTTOM (ft)	8
Lower Aquiclude, TOP (ft)	19.5
Depth to water,(TOC)	FH- 7.95 RH- 7.95

FH = falling head
RH = rising head
B = bentonite
G = cement/grout
S = Sand (filter) Pack
TOC = measured from top of casing
* measured as height above ground Surface

WELL NO. 1338



☒ CONFINED
☐ UNCONFINED

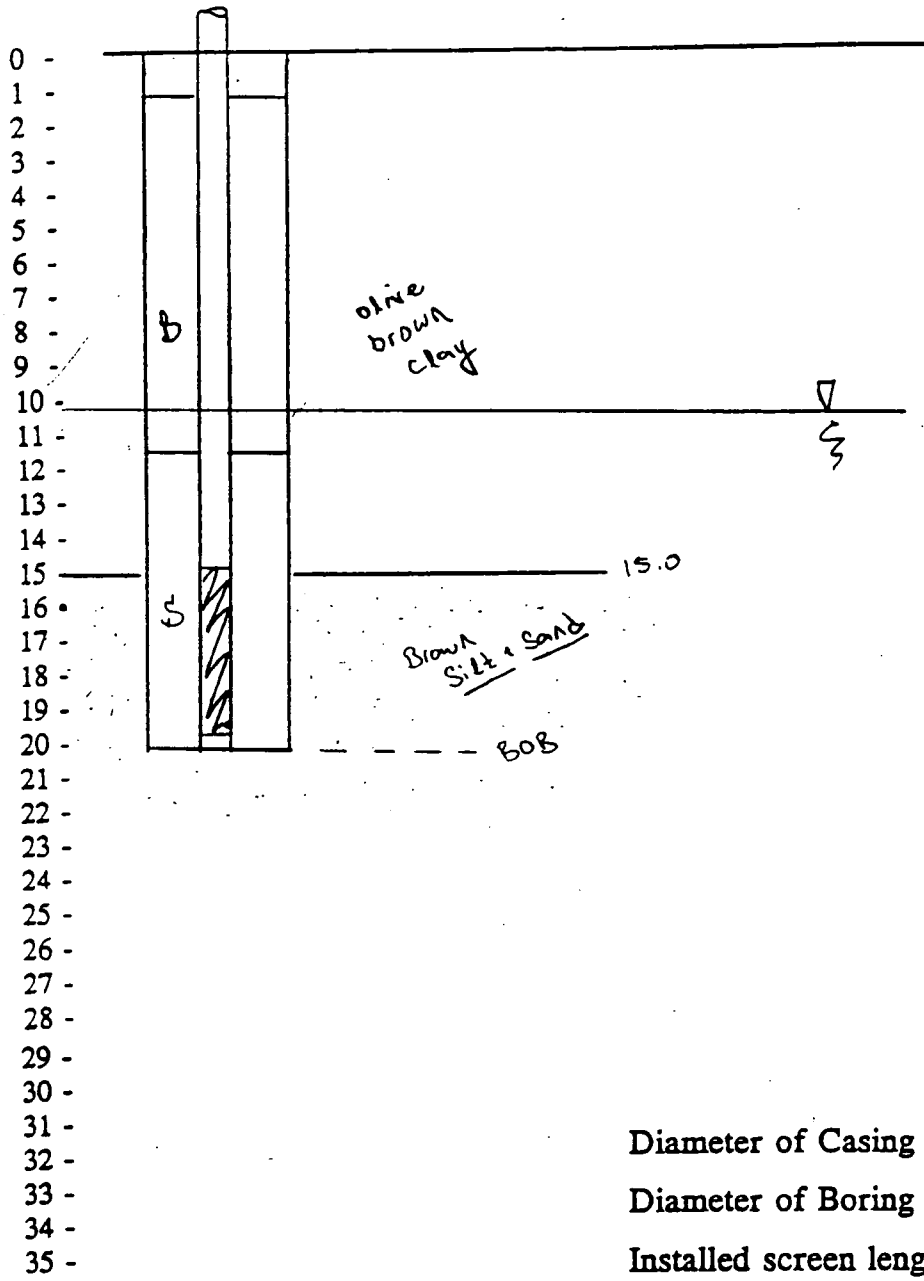
Diameter of Casing (inch)	2
Diameter of Boring (inch)	8
Installed screen length (ft)	5
Sand Pack, TOP (ft)	3
Sand Pack, BOTTOM (ft)	10.5
Height of well casing* (ft)	2.0
Upper Aquiclude, BOTTOM (ft)	5
Lower Aquiclude, TOP (ft)	9.75
Depth to water,(TOC)	FH- 6.29 RH- 6.29

FH = falling head
RH = rising head
B = bentonite
G = cement/grout
S = Sand (filter) Pack
TOC = measured from top of casing
* measured as height above ground Surface

WELL NO. 1396

7333

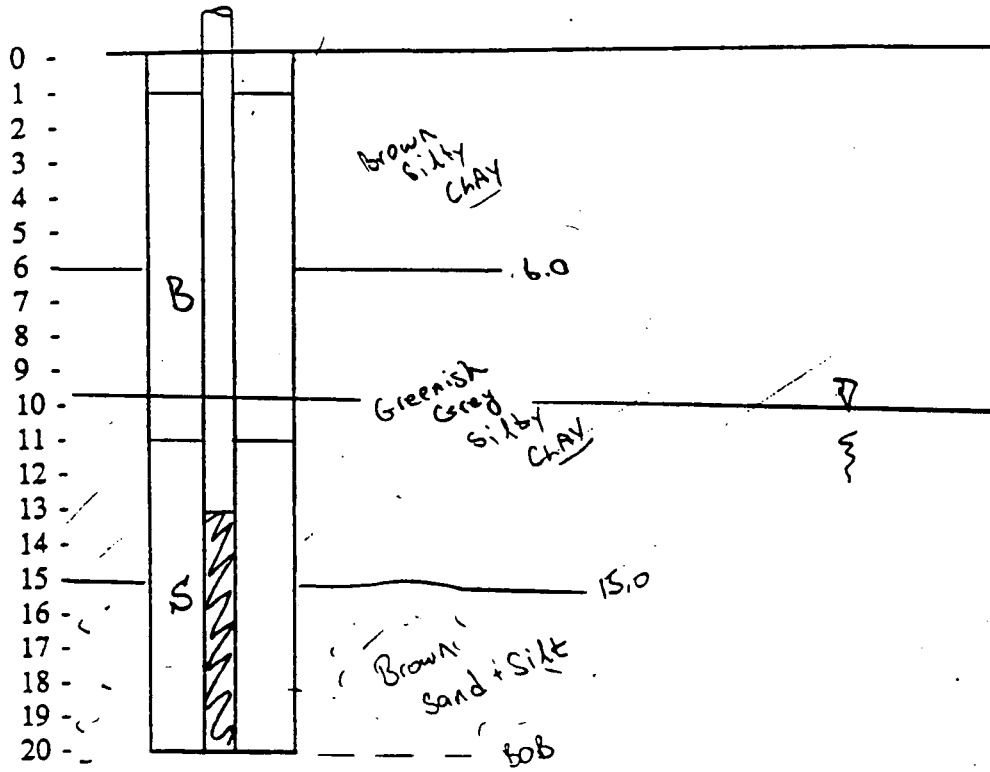
☒ CONFINED
☐ UNCONFINED



Diameter of Casing (inch)	2
Diameter of Boring (inch)	8
Installed screen length (ft)	4.7
Sand Pack, TOP (ft)	11.5
Sand Pack, BOTTOM (ft)	20
Height of well casing* (ft)	0.3
Upper Aquiclude, BOTTOM (ft)	15
Lower Aquiclude, TOP (ft)	20
Depth to water,(TOC)	FH- 10.08 RH- 10.08

FH = falling head
RH = rising head
B = bentonite
G = cement/grout
S = Sand (filter) Pack
TOC = measured from top of casing
* measured as height above ground Surface

WELL NO. 1351



☒ CONFINED
☐ UNCONFINED

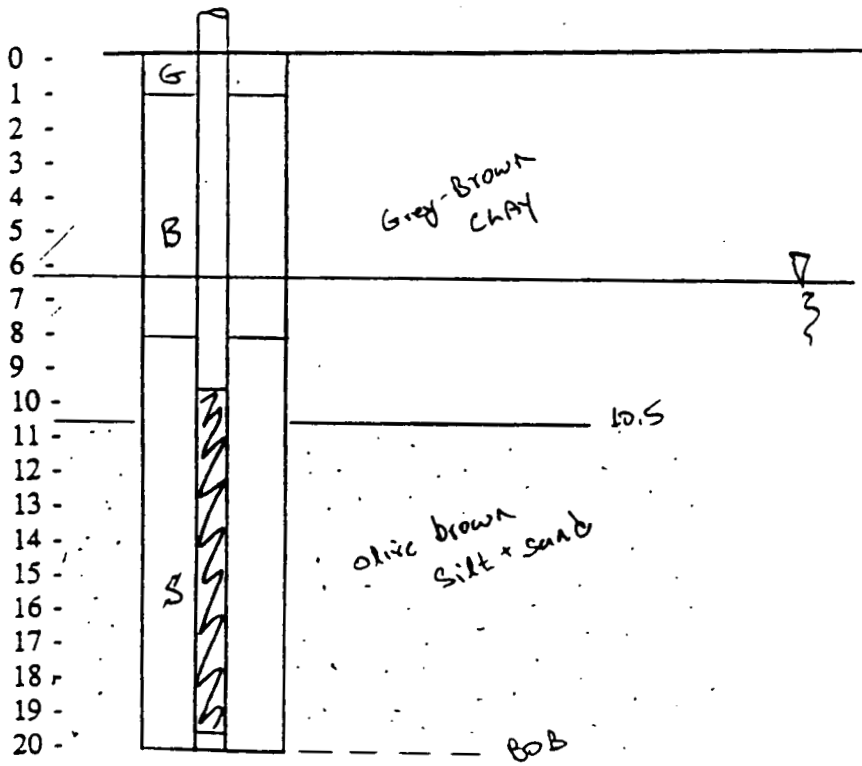
Diameter of Casing (inch)	2
Diameter of Boring (inch)	8
Installed screen length (ft)	7
Sand Pack, TOP (ft)	11
Sand Pack, BOTTOM (ft)	20
Height of well casing* (ft)	2.0
Upper Aquiclude, BOTTOM (ft)	15
Lower Aquiclude, TOP (ft)	20
Depth to water,(TOC)	FH- 11.85 RH- 11.85

FH = falling head
RH = rising head
B = bentonite
G = cement/grout
S = Sand (filter) Pack
TOC = measured from top of casing
* measured as height above ground Surface

WELL NO. 1420

F-7333

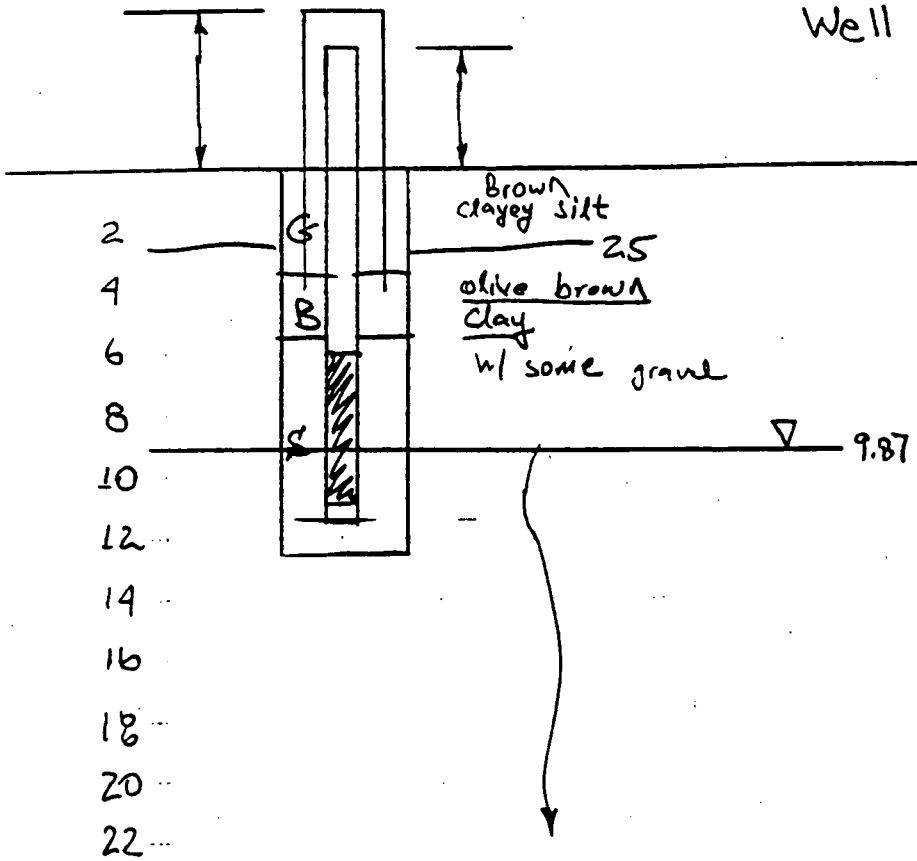
☒ CONFINED
☐ UNCONFINED



Diameter of Casing (inch)	4"
Diameter of Boring (inch)	10
Installed screen length (ft)	9.7
Sand Pack, TOP (ft)	8
Sand Pack, BOTTOM (ft)	20
Height of well casing* (ft)	12
Upper Aquiclude, BOTTOM (ft)	10.5
Lower Aquiclude, TOP (ft)	19.6
Depth to water,(TOC)	FH- 6.53 RH- 6.45

FH = falling head
RH = rising head
B = bentonite
G = cement/grout
S = Sand (filter) Pack
TOC = measured from top of casing
* measured as height above ground Surface

Well ID 14.33



unconfined

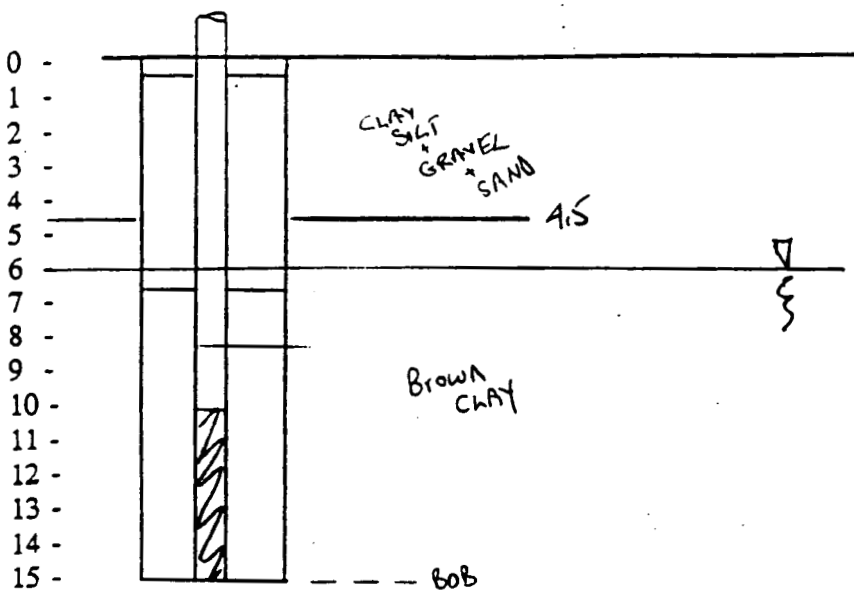
$D_c = D_u = 2.63$

depth to water (BGS)		9.87
top of riser pipe		2
bottom of protective pipe		N/A
internal well diameter		4
effective well diameter		
Screen length		5
total depth		11.4
Grout	0	3.5
Bentonite	3.5	5.5
sand	5.5	12.5
screen	6	11.0

000191

WELL NO. 1444

E-7333

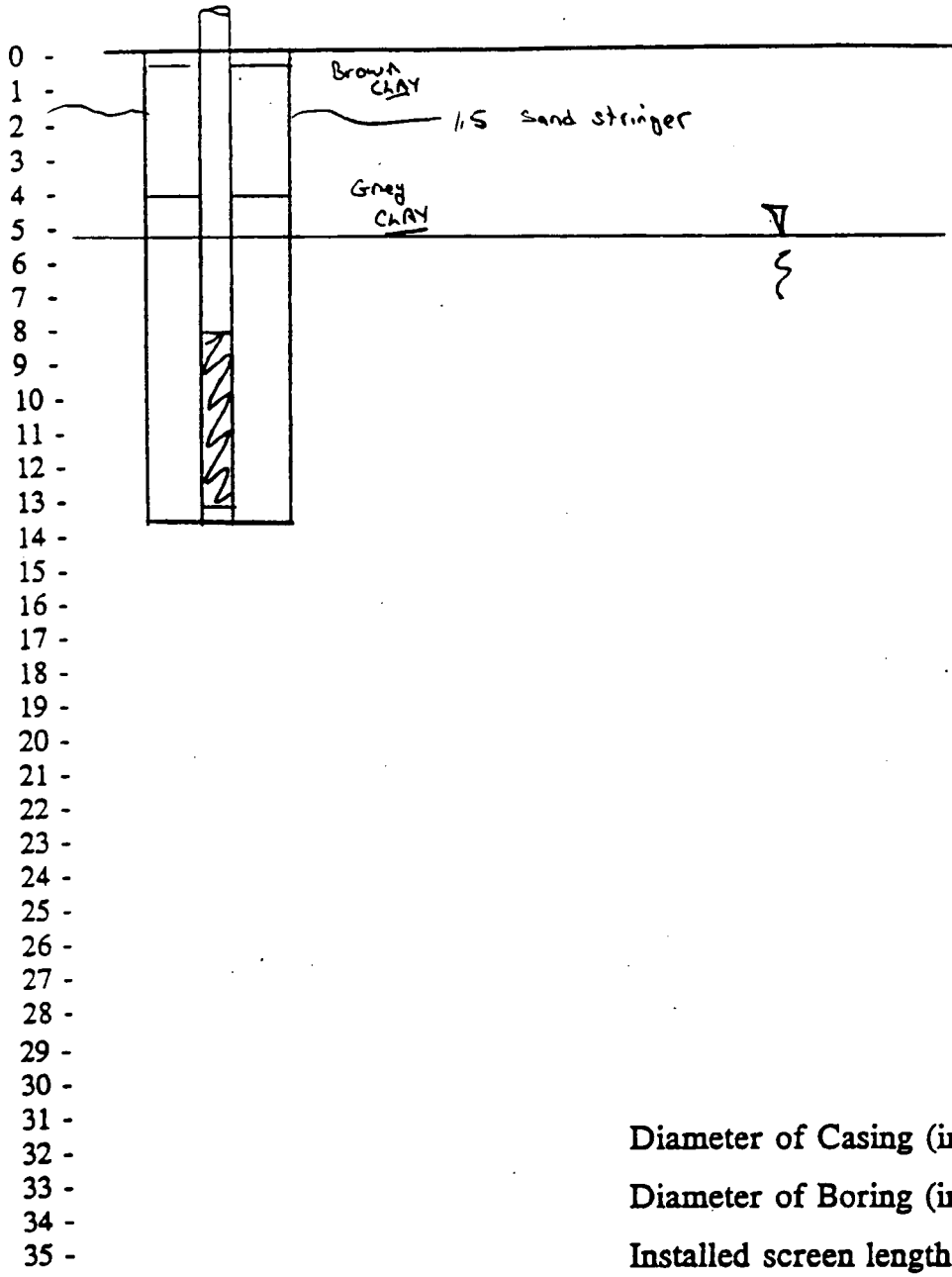


☐ CONFINED
☒ UNCONFINED

Diameter of Casing (inch)	2
Diameter of Boring (inch)	8
Installed screen length (ft)	5
Sand Pack, TOP (ft)	6.7
Sand Pack, BOTTOM (ft)	15
Height of well casing* (ft)	2.0
Upper Aquiclude, BOTTOM (ft)	0
Lower Aquiclude, TOP (ft)	15
Depth to water,(TOC)	FH- 8.08 RH- 7.94

FH = falling head
RH = rising head
B = bentonite
G = cement/grout
S = Sand (filter) Pack
TOC = measured from top of casing
* measured as height above ground Surface

WELL NO. 1508



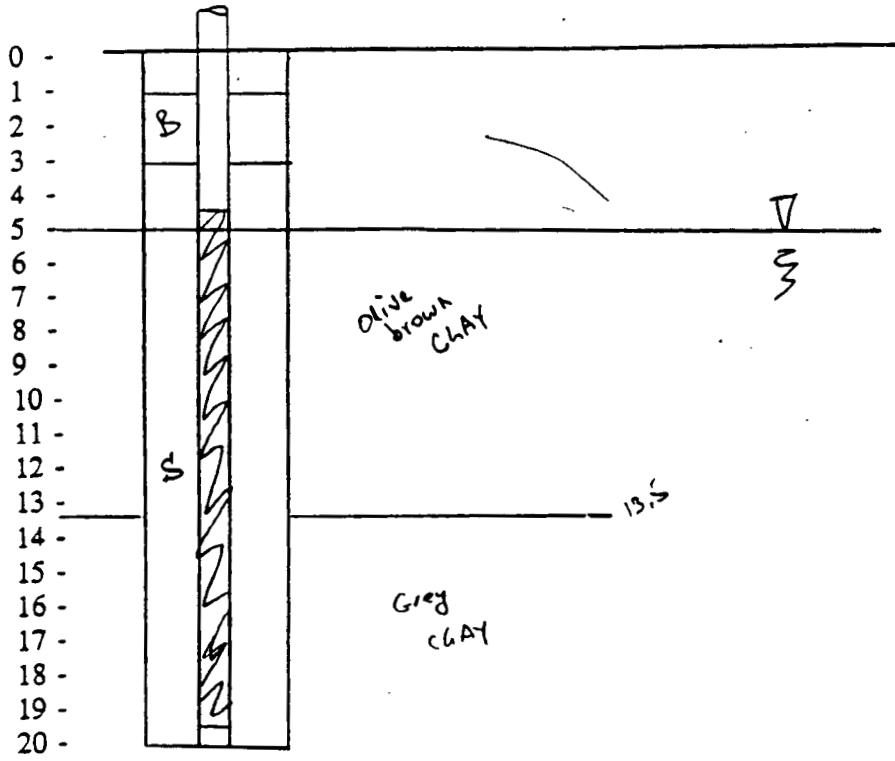
☐ CONFINED
☒ UNCONFINED

Diameter of Casing (inch)	2
Diameter of Boring (inch)	8
Installed screen length (ft)	5
Sand Pack, TOP (ft)	4
Sand Pack, BOTTOM (ft)	13.5
Height of well casing* (ft)	2.0
Upper Aquiclude, BOTTOM (ft)	N/A
Lower Aquiclude, TOP (ft)	N/A
Depth to water,(TOC)	FH- 7.07 RH- 7.01

FH = falling head
RH = rising head
B = bentonite
G = cement/grout
S = Sand (filter) Pack
TOC = measured from top of casing
* measured as height above ground Surface

000193

WELL NO. 1509

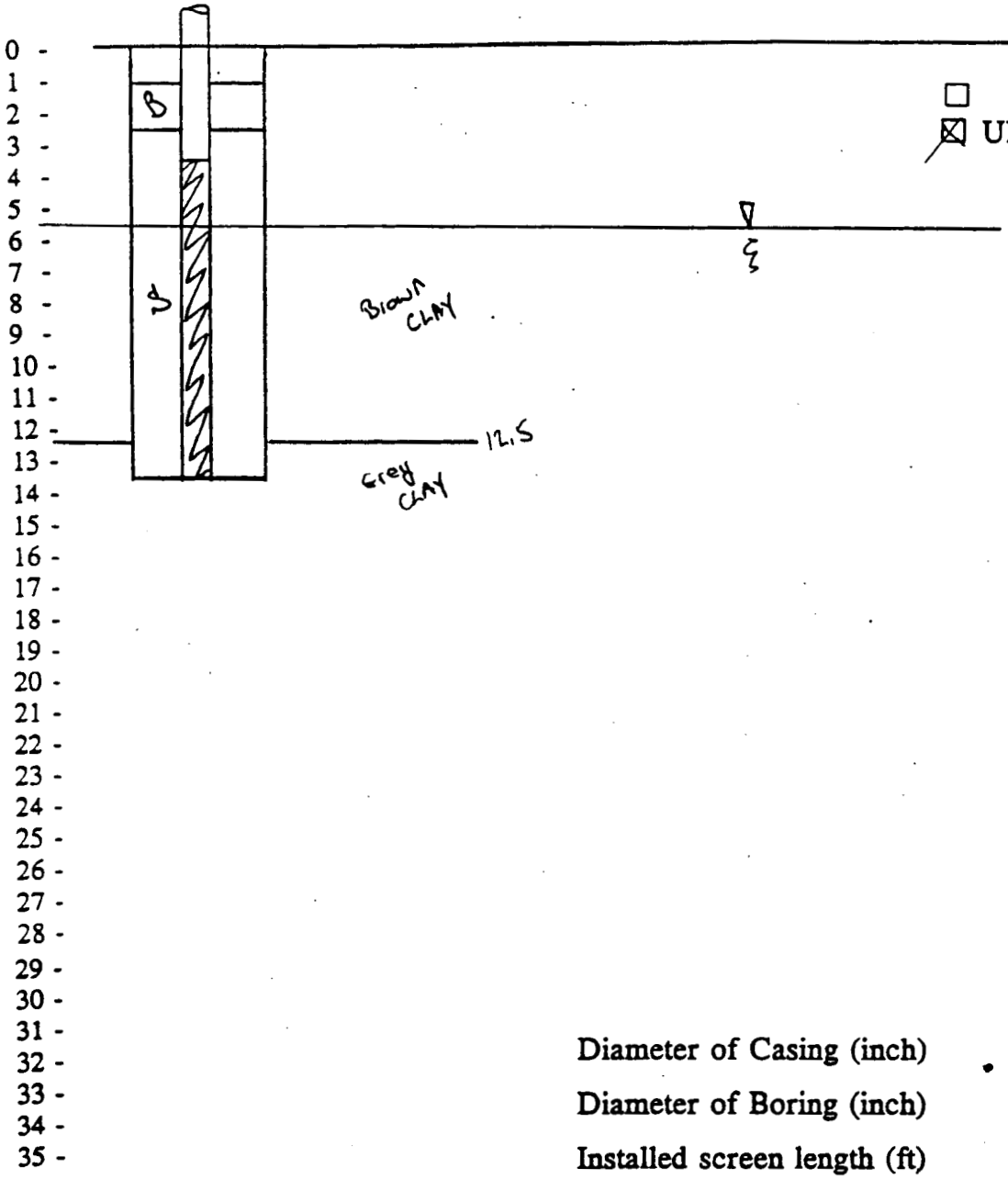


☐ CONFINED
☒ UNCONFINED

Diameter of Casing (inch)	2
Diameter of Boring (inch)	8
Installed screen length (ft)	15
Sand Pack, TOP (ft)	3
Sand Pack, BOTTOM (ft)	20
Height of well casing* (ft)	2
Upper Aquiclude, BOTTOM (ft)	N/A
Lower Aquiclude, TOP (ft)	N/A
Depth to water,(TOC)	FH- 7.03 RH- 6.17

FH = falling head
RH = rising head
B = bentonite
G = cement/grout
S = Sand (filter) Pack
TOC = measured from top of casing
* measured as height above ground Surface

WELL NO. 1519

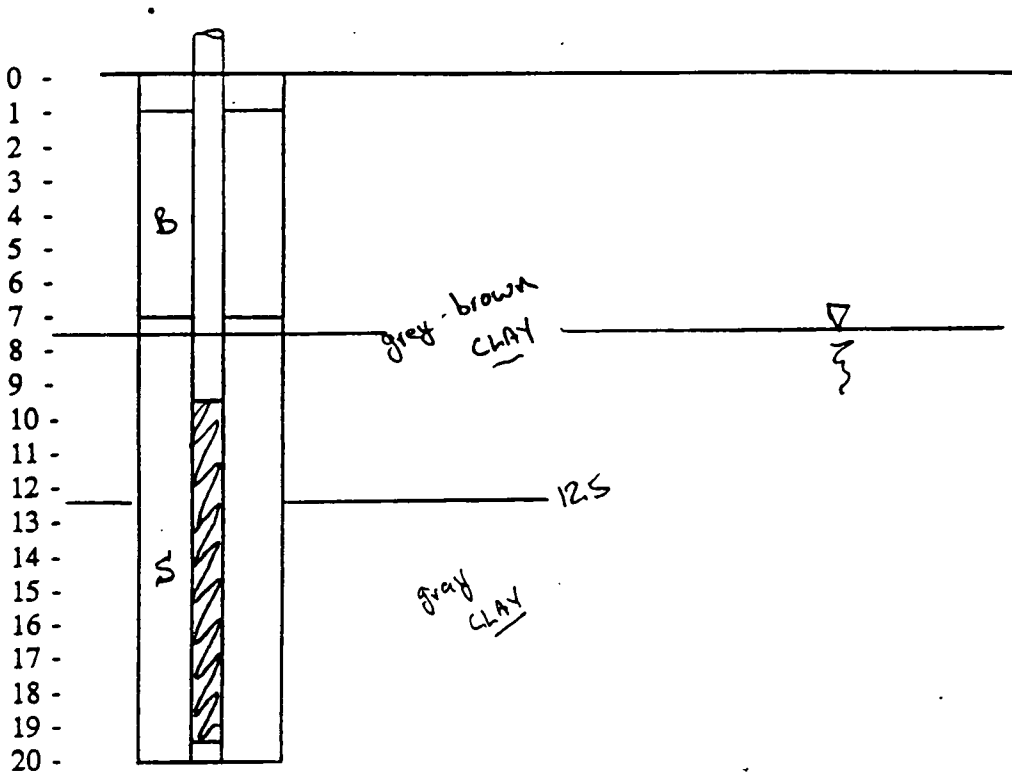


☐ CONFINED
☒ UNCONFINED

Diameter of Casing (inch)	2
Diameter of Boring (inch)	8
Installed screen length (ft)	10
Sand Pack, TOP (ft)	2.5
Sand Pack, BOTTOM (ft)	13.5
Height of well casing* (ft)	2.0
Upper Aquiclude, BOTTOM (ft)	N/A
Lower Aquiclude, TOP (ft)	N/A
Depth to water,(TOC)	FH- 7.29 RH- 7.31

FH = falling head
RH = rising head
B = bentonite
G = cement/grout
S = Sand (filter) Pack
TOC = measured from top of casing
* measured as height above ground Surface

WELL NO. 1606

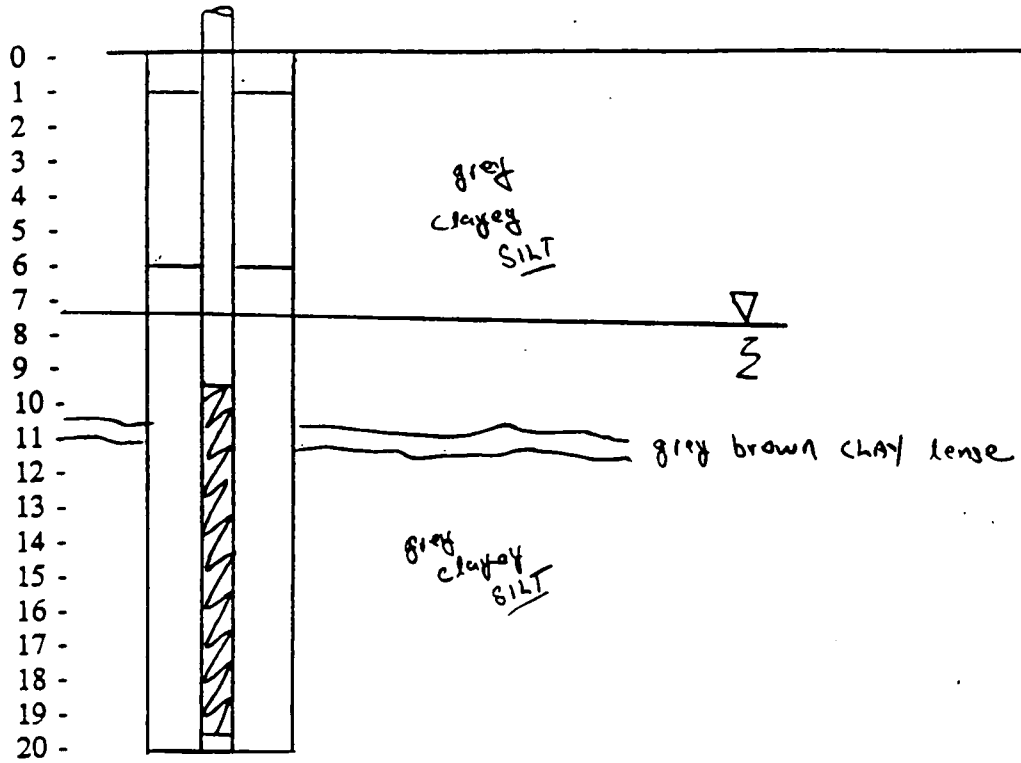


☐ CONFINED
☒ UNCONFINED

Diameter of Casing (inch)	4
Diameter of Boring (inch)	10
Installed screen length (ft)	10
Sand Pack, TOP (ft)	7
Sand Pack, BOTTOM (ft)	20
Height of well casing* (ft)	.10
Upper Aquiclude, BOTTOM (ft)	N/A
Lower Aquiclude, TOP (ft)	N/A
Depth to water,(TOC)	FH- 7.51 RH- 7.86

FH = falling head
RH = rising head
B = bentonite
G = cement/grout
S = Sand (filter) Pack
TOC = measured from top of casing
* measured as height above ground Surface

WELL NO. 1608



☒ CONFINED
☐ UNCONFINED

confined based on ↓. Moist @ 12.5 feet while drilling w/ water

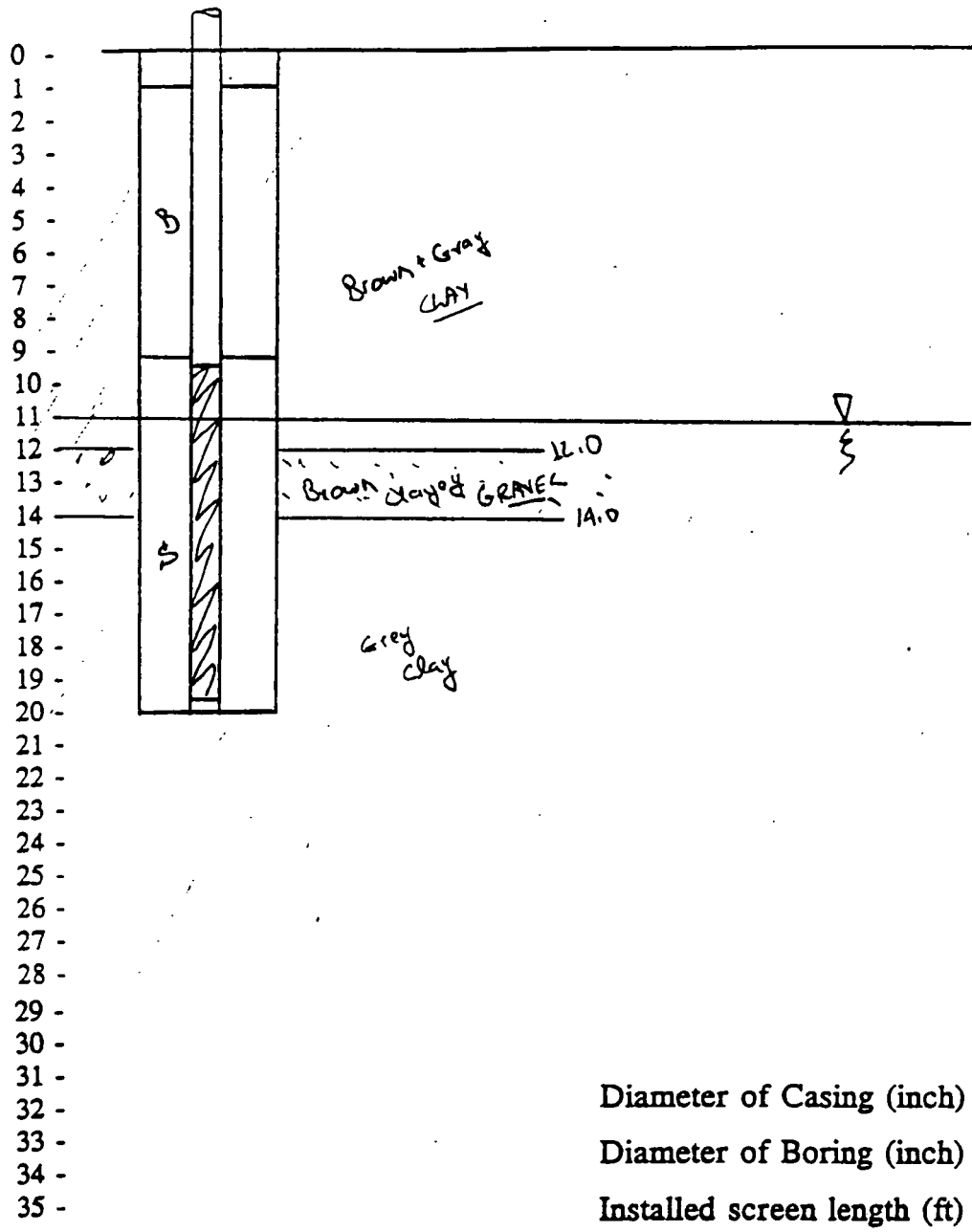
Diameter of Casing (inch)	4
Diameter of Boring (inch)	10
Installed screen length (ft)	10
Sand Pack, TOP (ft)	6
Sand Pack, BOTTOM (ft)	20
Height of well casing* (ft)	-.1
Upper Aquiclude, BOTTOM (ft)	11
Lower Aquiclude, TOP (ft)	20
Depth to water,(TOC)	FH- 7.55 RH- 7.75

FH = falling head
RH = rising head
B = bentonite
G = cement/grout
S = Sand (filter) Pack
TOC = measured from top of casing
* measured as height above ground Surface

WELL NO. 1675

7333

☒ CONFINED
☐ UNCONFINED

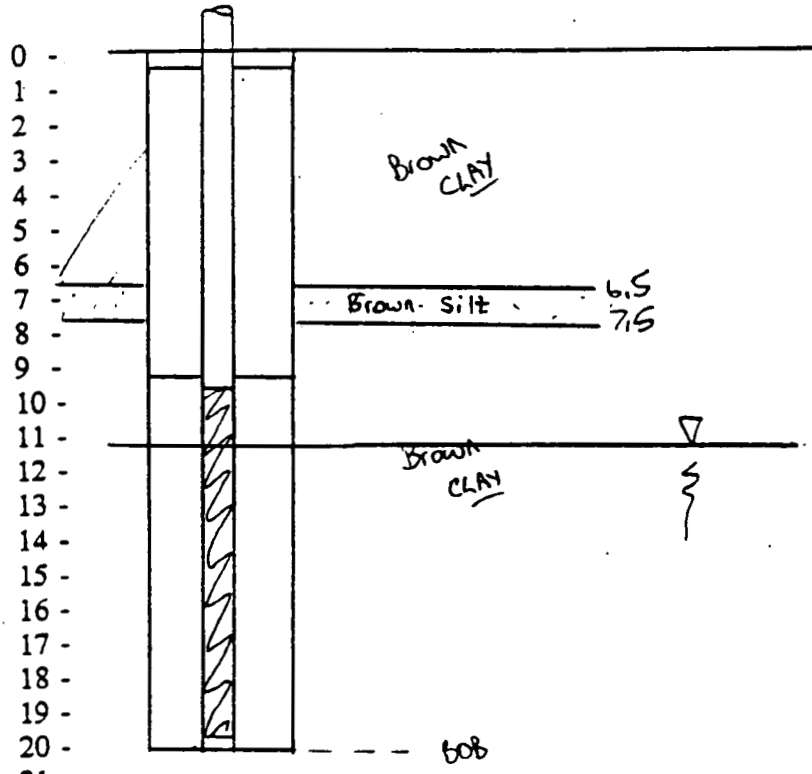


Diameter of Casing (inch)	2
Diameter of Boring (inch)	8
Installed screen length (ft)	10
Sand Pack, TOP (ft)	9.25
Sand Pack, BOTTOM (ft)	20
Height of well casing* (ft)	2.0
Upper Aquiclude, BOTTOM (ft)	12
Lower Aquiclude, TOP (ft)	14
Depth to water,(TOC)	FH- 13.08 RH- 12.11

FH = falling head
RH = rising head
B = bentonite
G = cement/grout
S = Sand (filter) Pack
TOC = measured from top of casing
* measured as height above ground Surface

000198

WELL NO. 1676



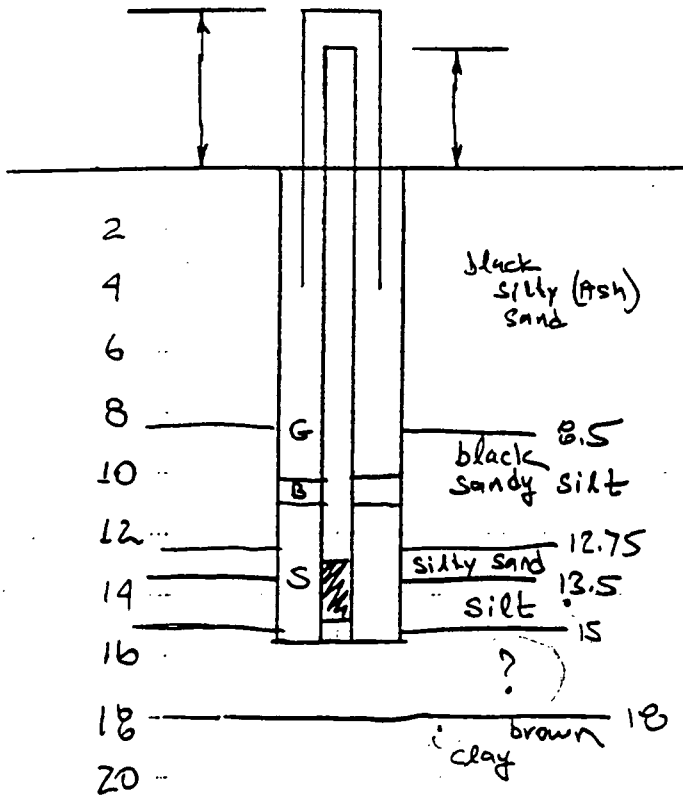
☐ CONFINED
☒ UNCONFINED

Diameter of Casing (inch)	2
Diameter of Boring (inch)	8
Installed screen length (ft)	10
Sand Pack, TOP (ft)	9.25
Sand Pack, BOTTOM (ft)	20
Height of well casing* (ft)	2.0
Upper Aquiclude, BOTTOM (ft)	N/A
Lower Aquiclude, TOP (ft)	N/A
Depth to water,(TOC)	FH- 11.95 RH- 10.66

FH = falling head
RH = rising head
B = bentonite
G = cement/grout
S = Sand (filter) Pack
TOC = measured from top of casing
* measured as height above ground Surface

Well ID 1711

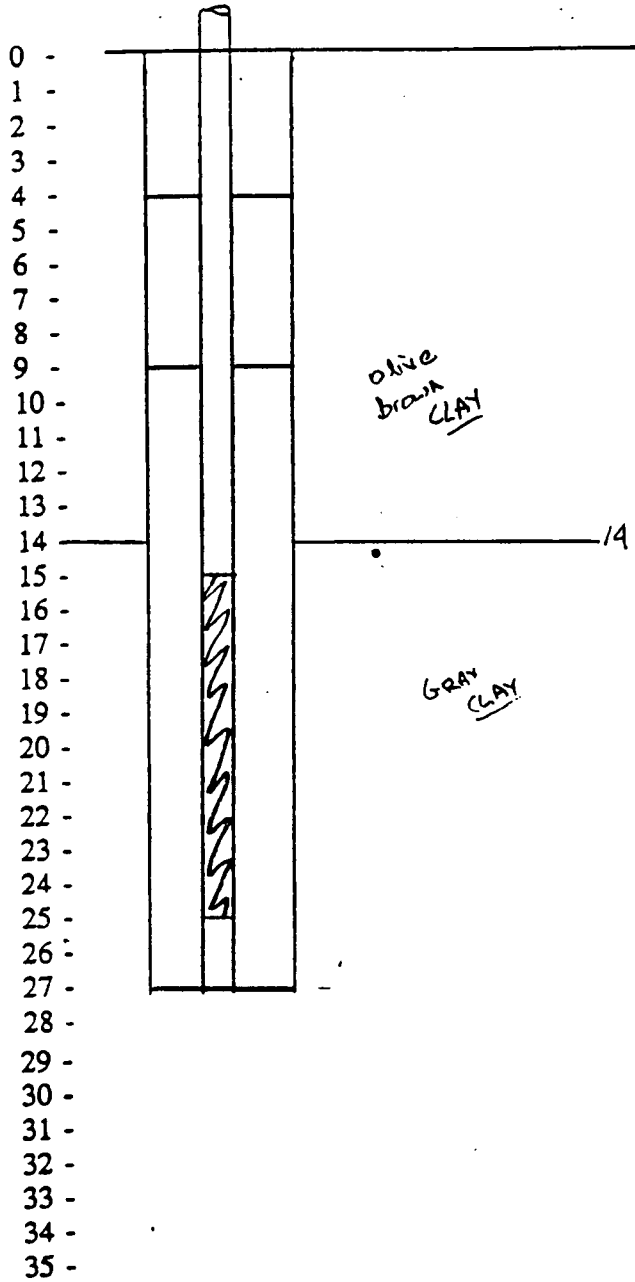
7333



depth to water		feet
top of riser pipe		1.8 feet
bottom of protective pipe		2.5 feet
internal well diameter		4 inch
effective well diameter		8 inch
Screen length		2 feet
total depth		15.5 feet
Grout/cement	0.0	10.5
Bentonite	10.5	11
sand	11	15.5
screen	13	15

000200

WELL NO. 1728



☐ CONFINED
☒ UNCONFINED

INSUFFICIENT WATER LEVEL TO TEST

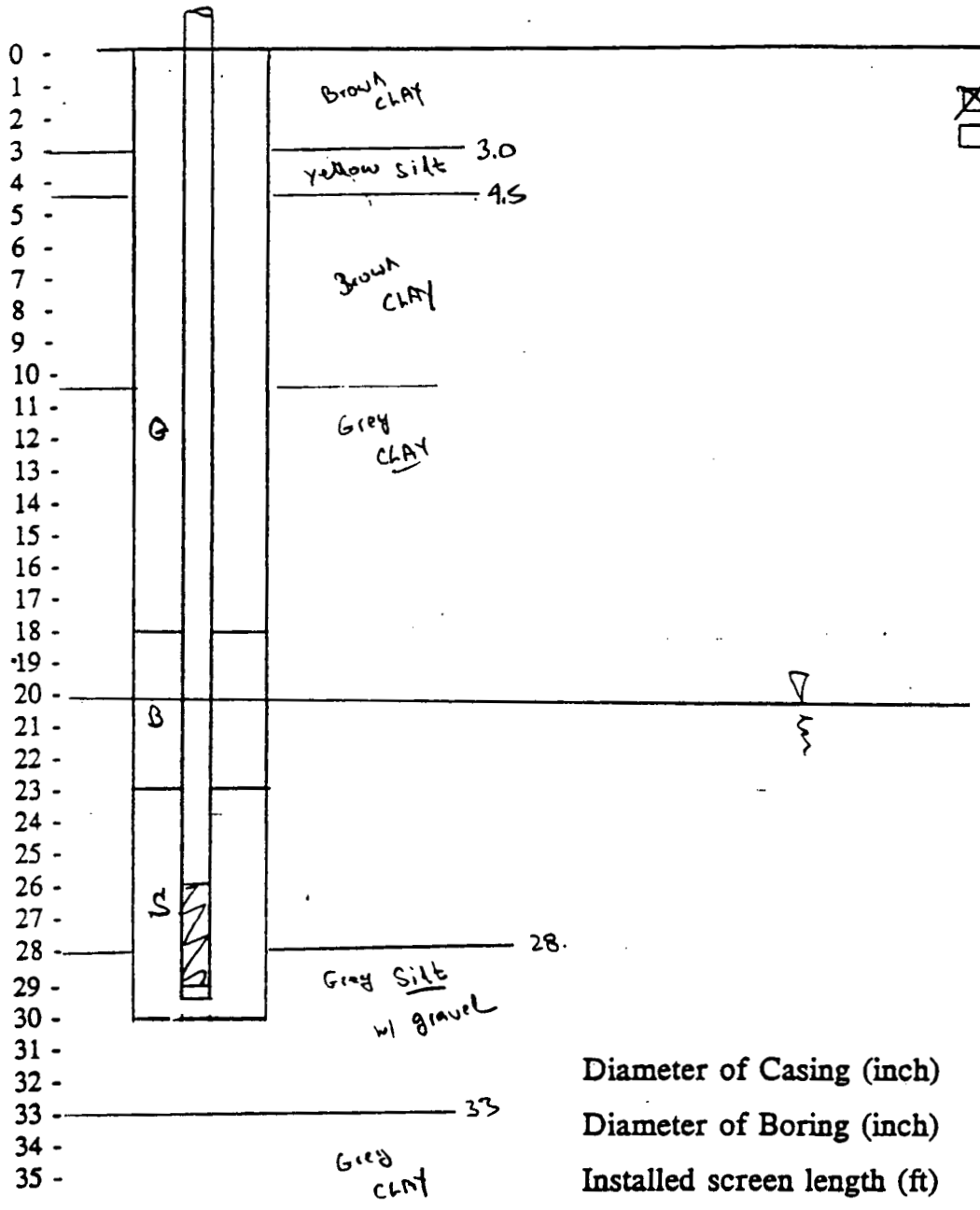
Diameter of Casing (inch)	4
Diameter of Boring (inch)	10
Installed screen length (ft)	10
Sand Pack, TOP (ft)	9
Sand Pack, BOTTOM (ft)	27
Height of well casing* (ft)	2.3
Upper Aquiclude, BOTTOM (ft)	N/A
Lower Aquiclude, TOP (ft)	N/A
Depth to water,(TOC) FH-_____ RH-_____	

FH = falling head
RH = rising head
B = bentonite
G = cement/grout
S = Sand (filter) Pack
TOC = measured from top of casing
* measured as height above ground Surface

WELL NO. 1733

E-7333

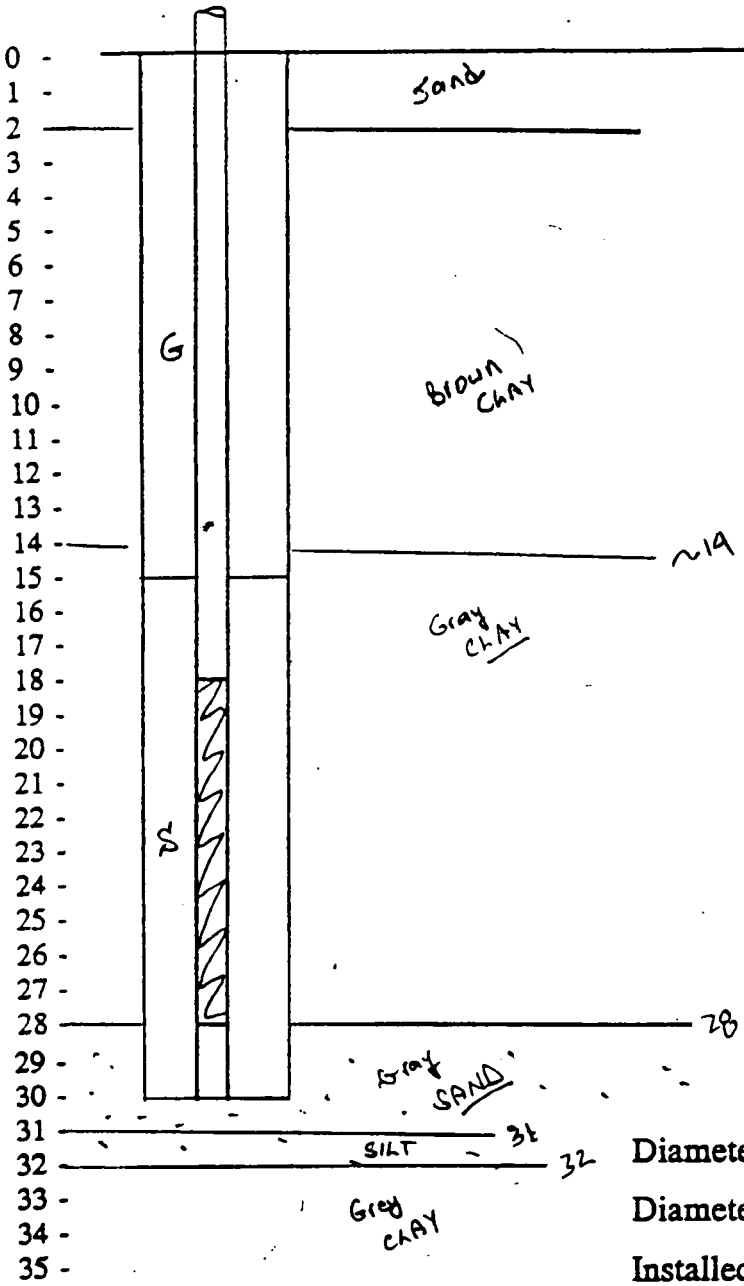
☒ CONFINED
☐ UNCONFINED



Diameter of Casing (inch)	4
Diameter of Boring (inch)	10
Installed screen length (ft)	3
Sand Pack, TOP (ft)	23
Sand Pack, BOTTOM (ft)	30
Height of well casing* (ft)	2.0
Upper Aquiclude, BOTTOM (ft)	28
Lower Aquiclude, TOP (ft)	33
Depth to water,(TOC)	FH- 22.20 RH- 23.56

FH = falling head
RH = rising head
B = bentonite
G = cement/grout
S = Sand (filter) Pack
TOC = measured from top of casing
* measured as height above ground Surface

WELL NO. 1754



☒ ~~CONFINED~~
☐ ~~UNCONFINED~~

INSUFFICIENT WATER LEVEL TO TEST

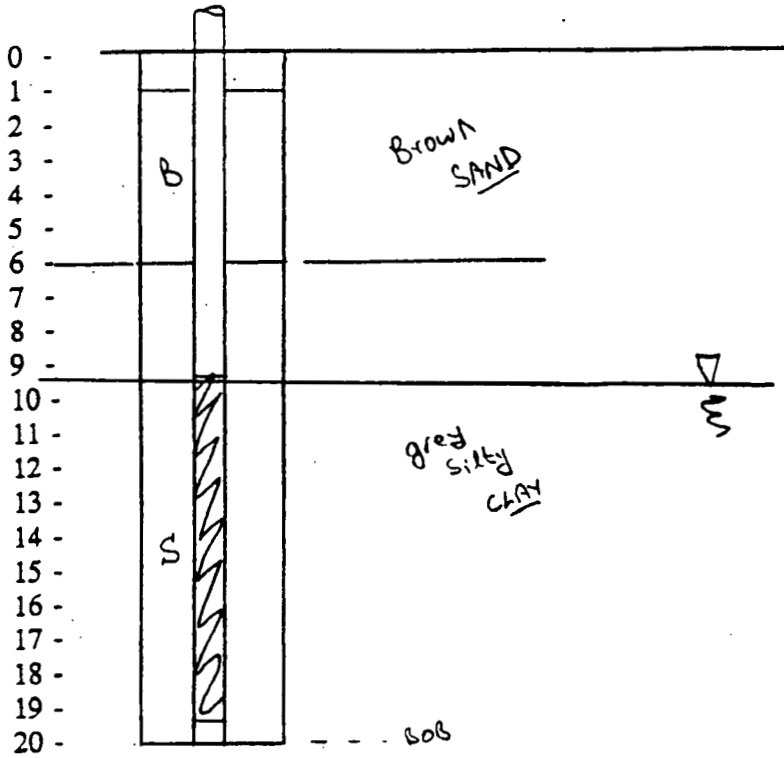
Diameter of Casing (inch)	4
Diameter of Boring (inch)	8
Installed screen length (ft)	10
Sand Pack, TOP (ft)	15
Sand Pack, BOTTOM (ft)	30
Height of well casing* (ft)	2.0
Upper Aquiclude, BOTTOM (ft)	
Lower Aquiclude, TOP (ft)	
Depth to water,(TOC) FH-_____ RH-_____	

FH = falling head
RH = rising head
B = bentonite
G = cement/grout
S = Sand (filter) Pack
TOC = measured from top of casing
* measured as height above ground Surface

000203

WELL NO. 177B

4-7333

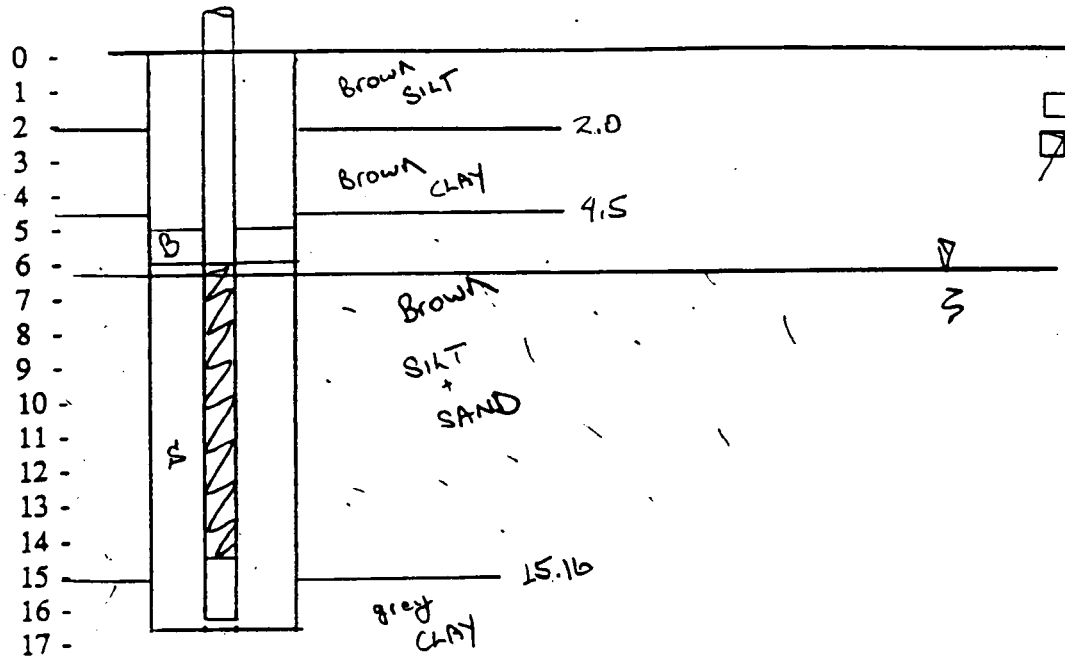


☐ CONFINED
☒ UNCONFINED

Diameter of Casing (inch)	4
Diameter of Boring (inch)	10
Installed screen length (ft)	10
Sand Pack, TOP (ft)	6
Sand Pack, BOTTOM (ft)	20
Height of well casing* (ft)	-.1
Upper Aquiclude, BOTTOM (ft)	N/A
Lower Aquiclude, TOP (ft)	N/A
Depth to water,(TOC)	FH- 9.50 RH- 9.35

FH = falling head
RH = rising head
B = bentonite
G = cement/grout
S = Sand (filter) Pack
TOC = measured from top of casing
* measured as height above ground Surface

WELL NO. 1836



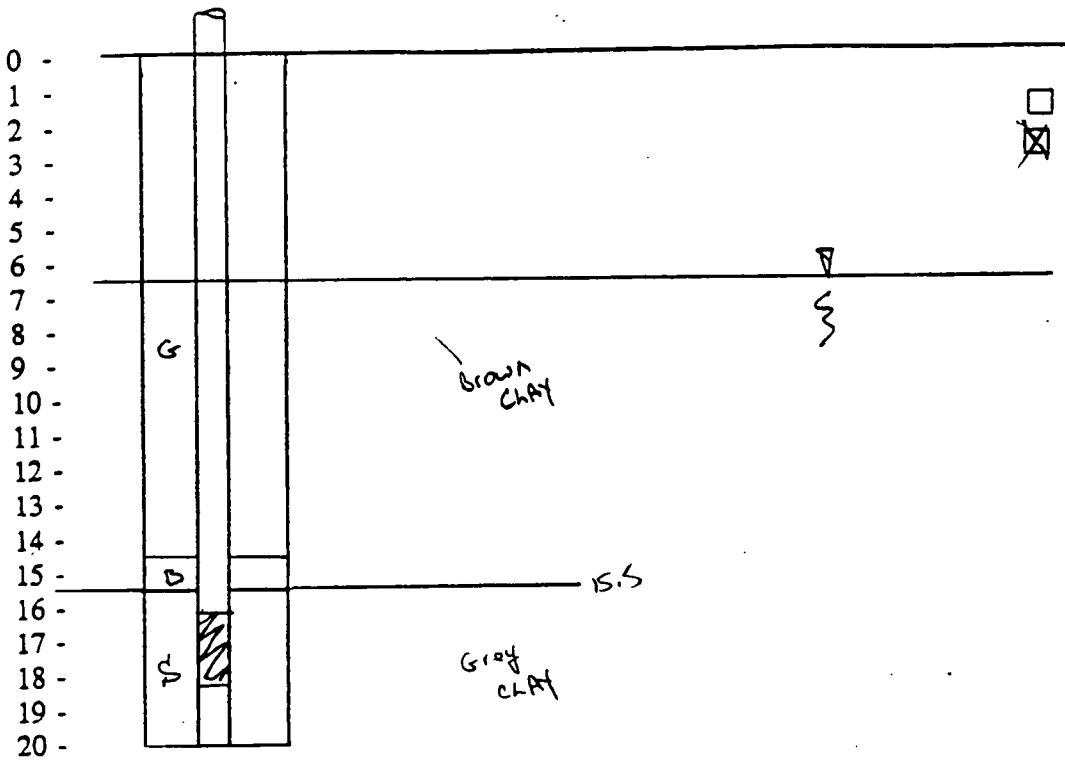
☐ CONFINED
☒ UNCONFINED

Diameter of Casing (inch)	4
Diameter of Boring (inch)	8
Installed screen length (ft)	7.9
Sand Pack, TOP (ft)	6
Sand Pack, BOTTOM (ft)	16.5
Height of well casing* (ft)	2.0
Upper Aquiclude, BOTTOM (ft)	0
Lower Aquiclude, TOP (ft)	15.16
Depth to water,(TOC)	FH- 8.44 RH- 8.42

FH = falling head
RH = rising head
B = bentonite
G = cement/grout
S = Sand (filter) Pack
TOC = measured from top of casing
* measured as height above ground Surface

WELL NO. 1843

7333



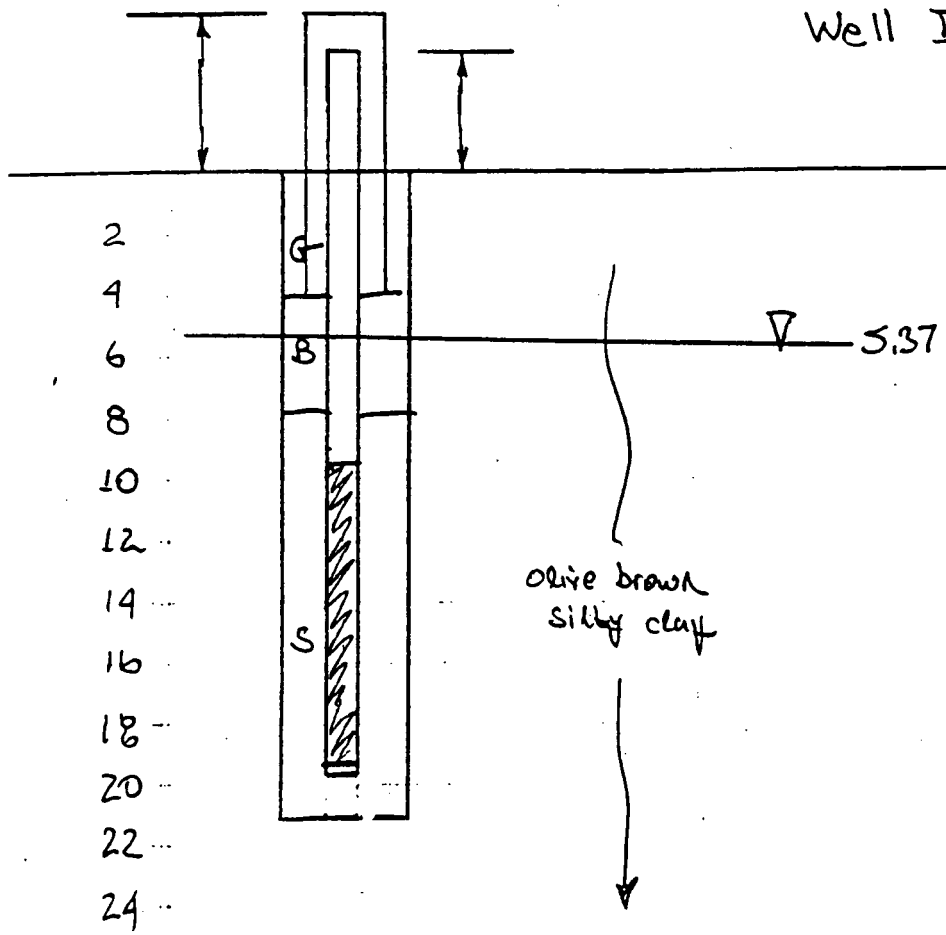
☐ CONFINED
☒ UNCONFINED

Diameter of Casing (inch)	2
Diameter of Boring (inch)	8
Installed screen length (ft)	2.
Sand Pack, TOP (ft)	15.5
Sand Pack, BOTTOM (ft)	20
Height of well casing* (ft)	2.0
Upper Aquiclude, BOTTOM (ft)	N/A
Lower Aquiclude, TOP (ft)	N/A
Depth to water,(TOC)	FH- 8.81 RH- 8.60

FH = falling head
RH = rising head
B = bentonite
G = cement/grout
S = Sand (filter) Pack
TOC = measured from top of casing
* measured as height above ground Surface

000206

Well ID 1934



unconfined

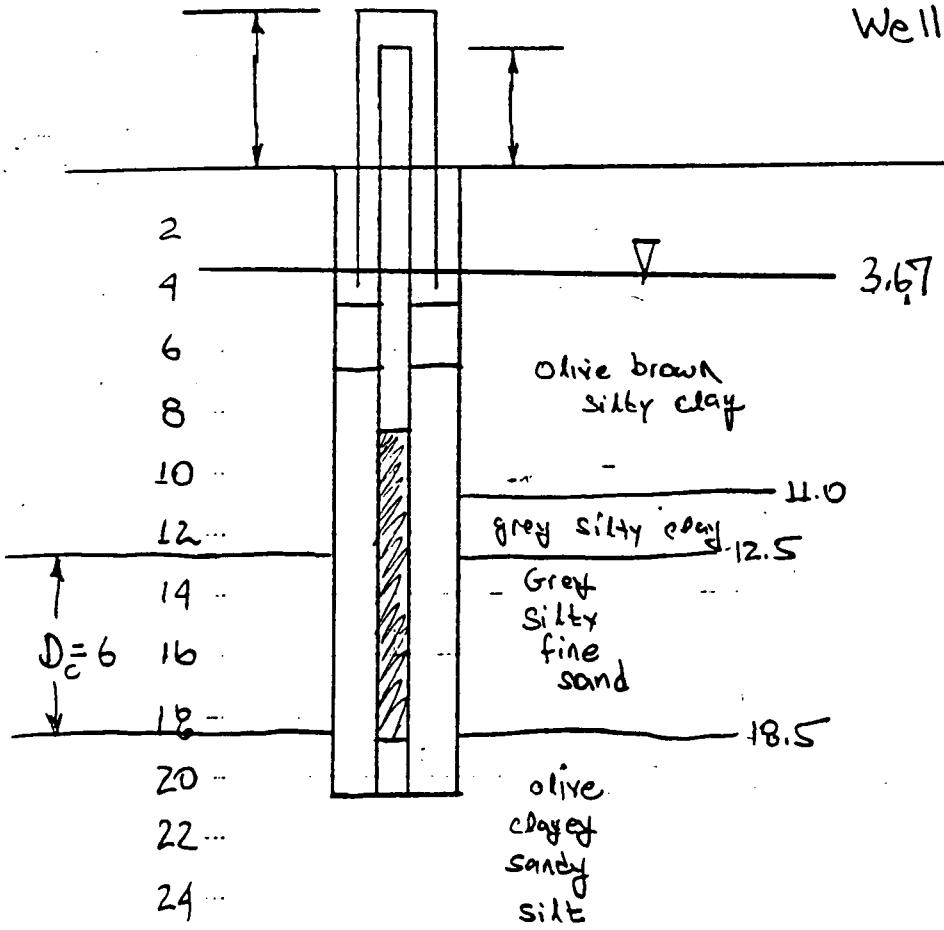
$D_w = 15.63$

depth to water (BGS)		5.37 fe
top of riser pipe		2 fee
bottom of protective pipe		2.5 fe
internal well diameter		2 inc
effective well diameter		8 inc
Screen length		10 fe
total depth		19.75 fe
Grout/cement	0	4.0
Bentonite	4	7.5
sand	7.5	21
screen	9.5	19.5

000207

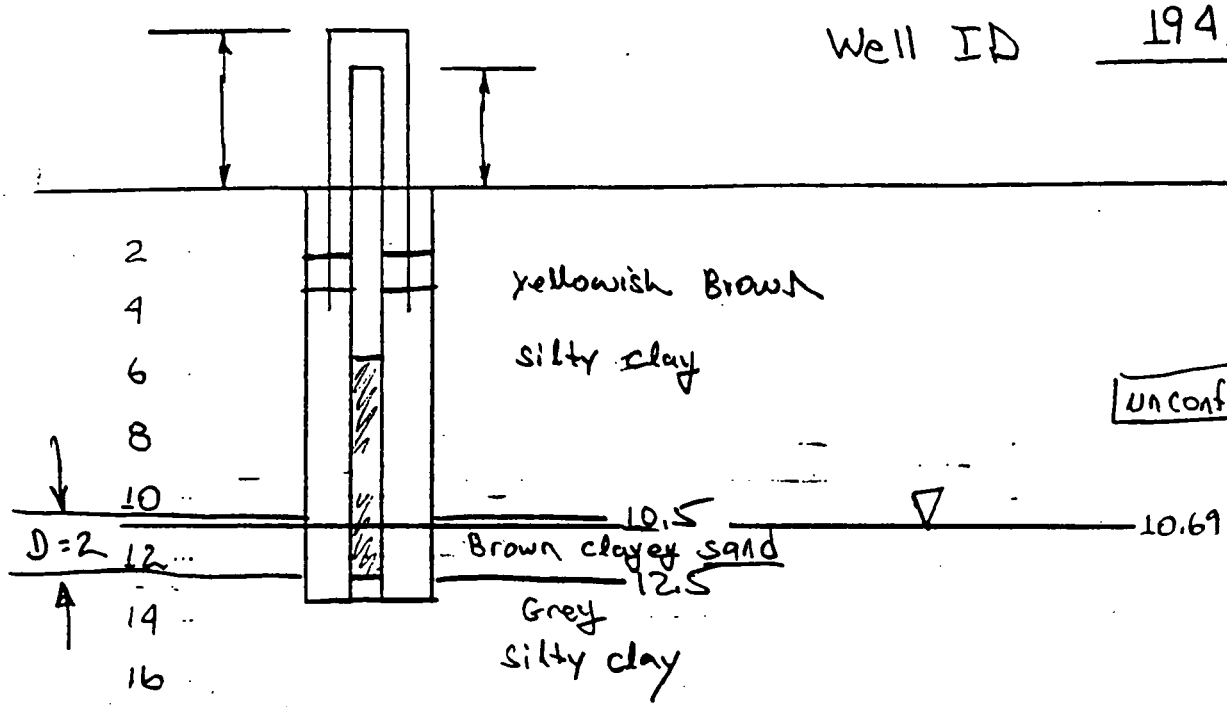
Well ID 1937

F = 7333



depth to water		3.63/3.88 feet
top of riser pipe		2.0 feet
bottom of protective pipe		2.5 feet
internal well diameter		2 inch
effective well diameter		8 inch
Screen length		10 feet
total depth		18.75 feet
Grout/cement	0	4.5
bentonite	4.5	6.5
sand	6.5	18.5
screen	8.5	18.5

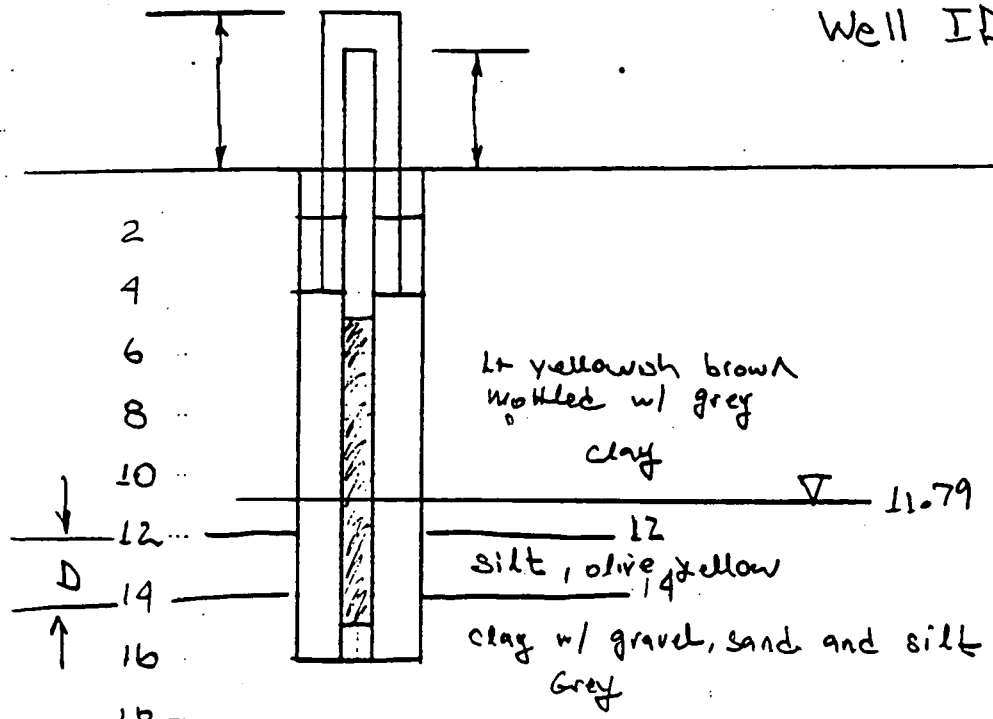
Well ID 1941



depth to water BGS		10.69 fe
top of riser pipe		2.0 fee
bottom of protective pipe		2.5 fee
internal well diameter		2 inc
effective well diameter		8 inc
Screen length		7.0 fee
total depth		12.7 fe
Grout/concrete	0	2.5
Bentonite	2.5	3.5
sand	3.5	13.5
screen	5.5	12.5

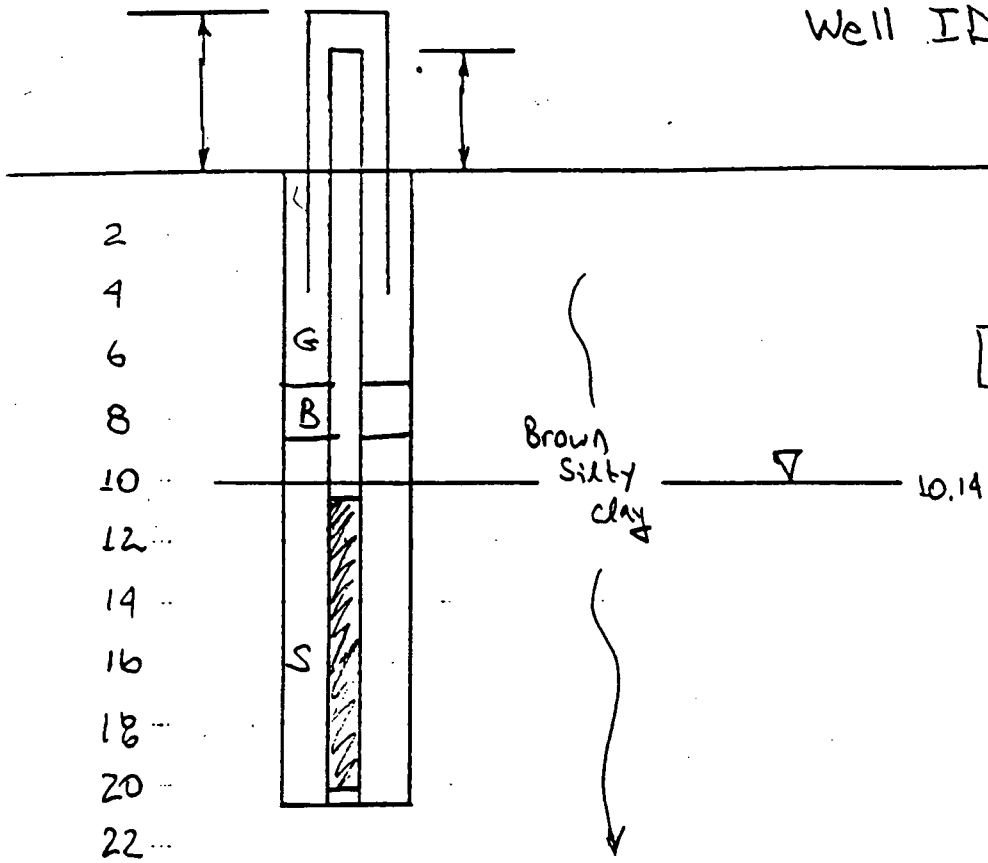
Well ID 1942

E-7333



depth to water		11.79 feet
top of riser pipe		2.0 feet
bottom of protective pipe		2.5 feet
internal well diameter		2 inch
effective well diameter		10 inch
Screen length		10 feet
total depth		16 feet
Grout	0	1.5
Bentonite	1.5	4
sand	4	16
screen	5	14.75

Well ID 1947



unconfined

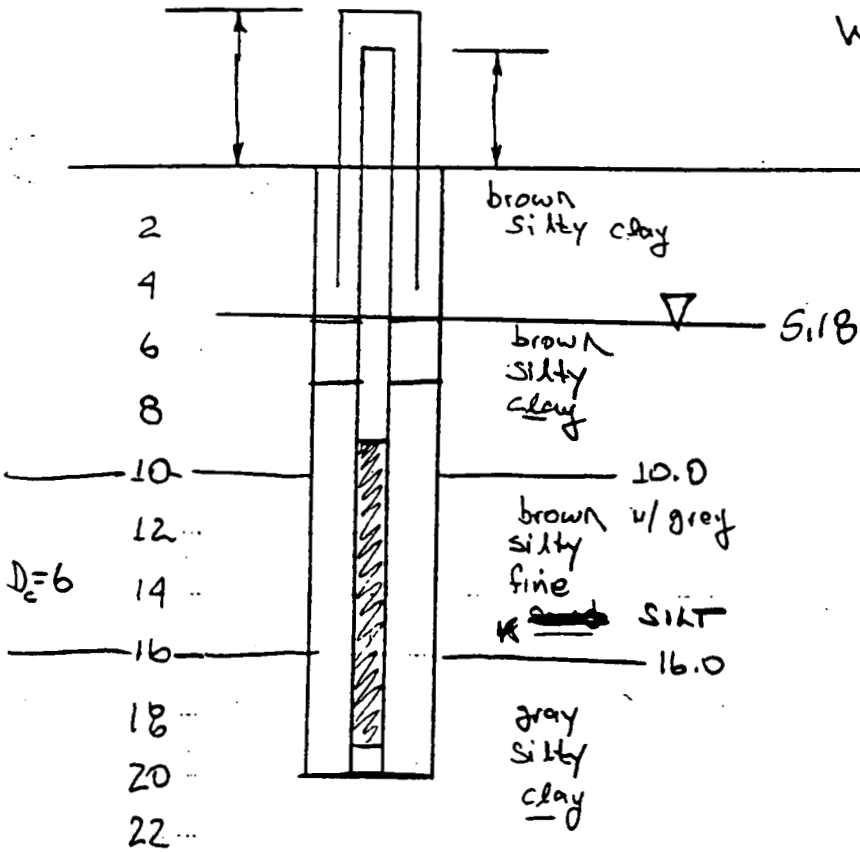
depth to water (BGS)		10.14 / 10.21 f
top of riser pipe		1.5 fe
bottom of protective pipe		— fe
internal well diameter		2 inc
effective well diameter		8 1/2 in
Screen length		10 fe
total depth		20.5 f
Grout	0	7
Bentonite	7	8.5
sand	8.5	20.5
screen	10.5	20.2

000211

Well ID 1950

7333

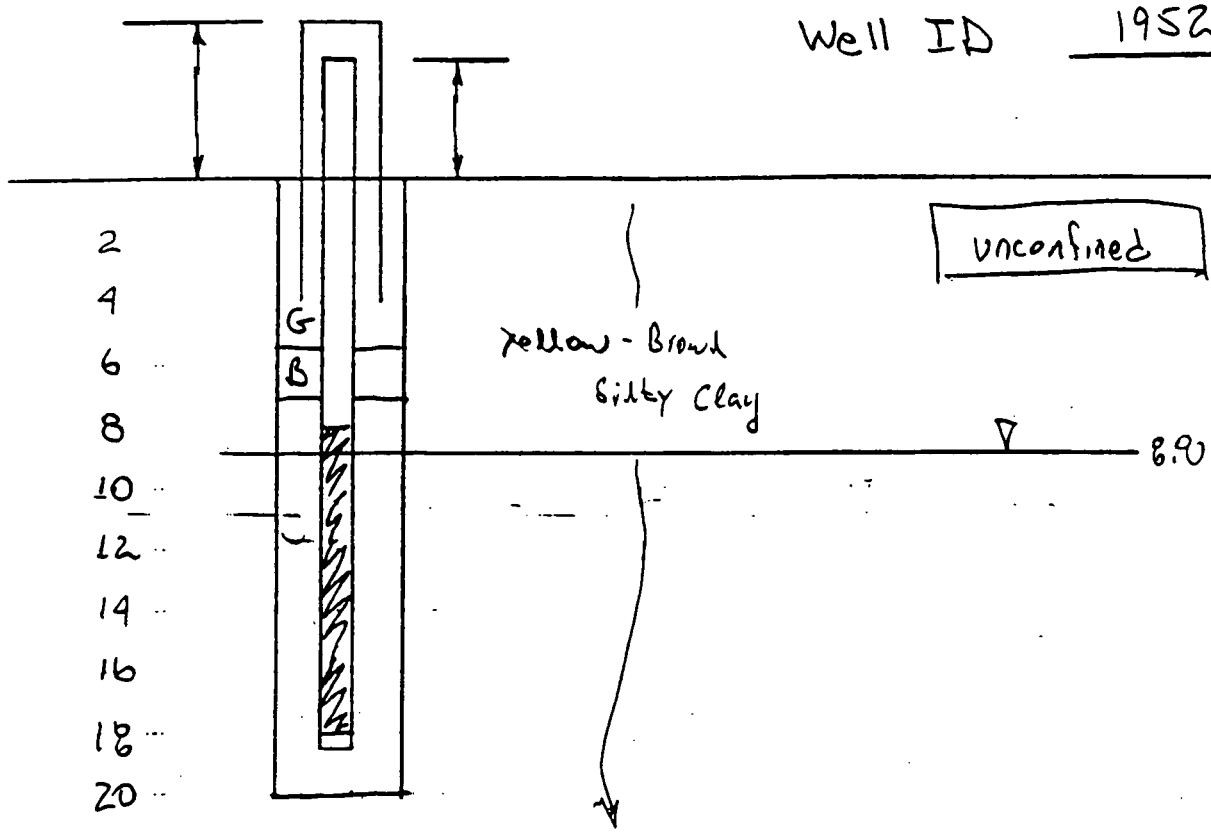
confined



depth to water		5.18/5.42 feet
top of riser pipe		2.0 feet
bottom of protective pipe		2.5 feet
internal well diameter		2.0 inch
effective well diameter		8.5 inch
Screen length		10 feet
total depth		19.3 feet
Grout	0	5.0
Bentonite	5.0	7.0
sand	7.0	20.
screen	9.	19

000212

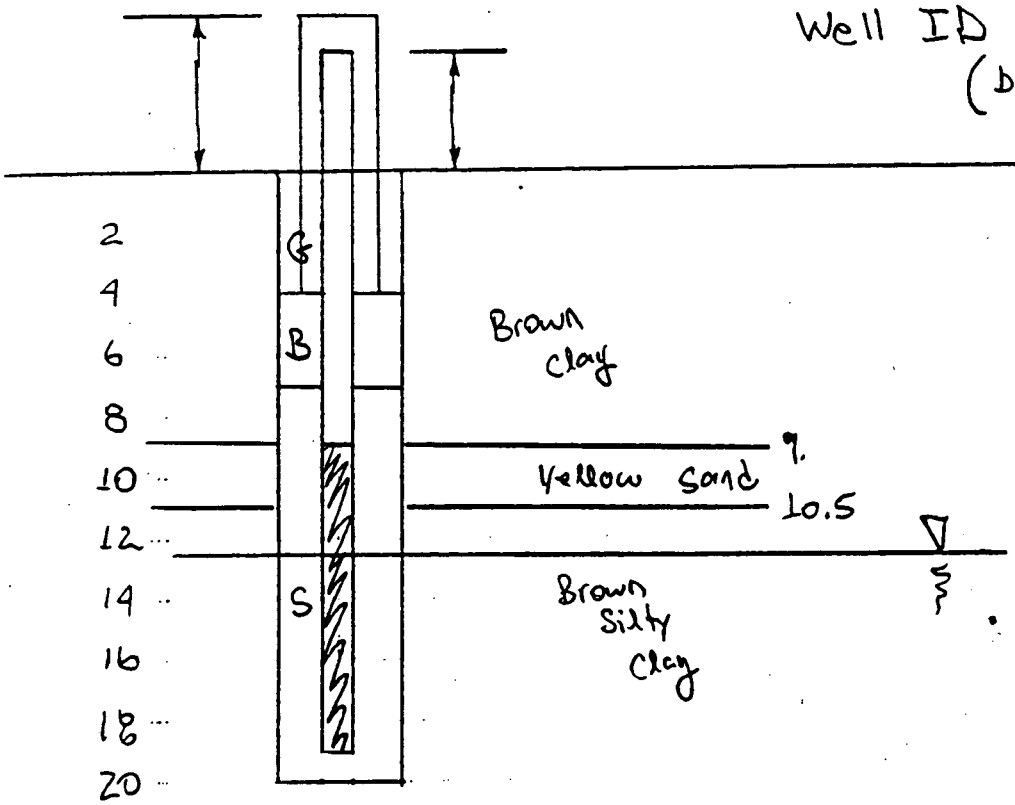
Well ID 1952



depth to water	8.83 / 8.88 f	
top of riser pipe	2 fe	
bottom of protective pipe	N/A fe	
internal well diameter	2 inc	
effective well diameter	8.5 in	
Screen length	10 fe	
total depth	18.3 f	
Grout	0	5.5
Bentonite	5.5	7
sand	7	20
screen	8	18

000213

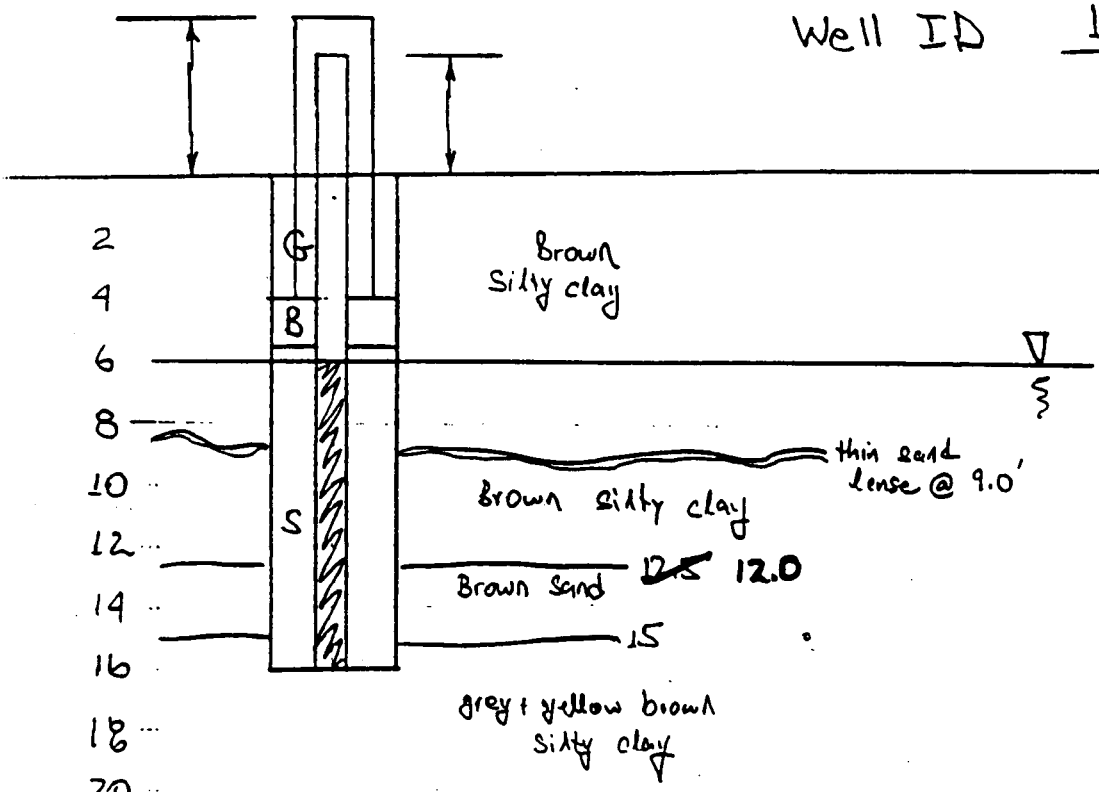
Well ID 1954
(Boring 11027) 7333



depth to water (BGS)	12.51	/12.57 feet
top of riser pipe		2.0 feet
bottom of protective pipe		— feet
internal well diameter		2 inch
effective well diameter		8 inch
Screen length		10 feet
total depth		20 feet
Grout/cement	0	4
Bentonite	4	7
sand	7	20
screen	9	19

000214

Well ID 11085



depth to water (BGS)		6.01/6.01 fe
top of riser pipe		2.0 fee
bottom of protective pipe		— fe
internal well diameter		2 inc
effective well diameter		8 inc
Screen length		10 fe
total depth		16 fe
Grout/cement	0	4
Bentonite	4	5.5
sand	5.5	16
screen	6	16

000215

PARSONS
ERA PROJECT

ENGINEERING CALCULATIONS TITLE AND SUMMARY SHEET

Date 10/11/93
Sheet 1 of 13

Proj. Order No. 37 Calculation No. 16-1

Project Title Technical and Project Management Support to CERCLA/RCRA Unit 5

Calculation Subject CRU-2 Slug Tests Date Verified/Checked 10/11/93

STATUS: PRELIMINARY X FINAL ____ SUPERSEDED ____ VOID ____

STATEMENT OF PROBLEM

Determine the hydraulic conductivity in the vicinity of each CRU-2 well by analyzing slug test data with Bouwer-Rice and/or Cooper et al solutions.

CRU-2 Wells:

1035 1038 1039 1041 1042 1046 1048 1433 1711
1934 1937 1941 1942 1947 1950 1952 1954 11085

SUMMARY OF CONCLUSIONS	Originator's Signature and Date
Summary tables and text are attached. See CRU-2 Glacial Till Slug Test Calculations Volume I & II for individual analysis of each well.	David A. Tope 10/11/93
CHECKING METHOD	**Checker's Signature and Date**
1. Review X 2. Alternate Calculation ____	10/11/93
	Lead Discipline Engineer's Signature and Date
	10/13/93

Rev. No.	Sheet No.	Description	Reviser's Signature/Date	Checker's Signature/Date	Approved by Signature/Date

05/93 ENG080

PARSONS
ERA PROJECT

ENGINEERING CALCULATIONS BASIS SHEET

Revision No. 0
Sheet 2 of 13

Proj. Order No. 37 Calculation No. 16-1

Project Title Technical and Project Management Support to CERCLA/RCRA Unit 5

Calculation Subject CRU-2 Slug Tests Date Verified/Checked 10/11/93

Prepared By: D. Tope D.T. Checked/Verified By:

Date 10/11/93

SUMMARY OF DATA SOURCES - CODES - ASSUMPTIONS

Data Sources:

1. CRU-2 Slug Test Data (filenames attached)

Assumptions:

1. Well casing radius corrections, as proposed by Bouwer-Rice, are performed for slug tests which the water level is rising in the screened portion of the well. A porosity of 30 % h been assumed for the aforementioned correction.
2. Distances for saturated aquifer thickness, effective screen length, and static height of wat in the well are as follows (See figures 1 & 2):

Confined Aquifer

- The saturated thickness is defined as the distance between the lower and upper aquitard
- The effective screen length is defined as the portion of the sand pack which lies between t lower and upper aquitard.
- The static height of water in the well is defined as the distance between the static water le and the bottom of the effective screen.
- Clay is considered an aquitard when it lies above or below a more permeable material (i sand).

Unconfined Aquifer

- The saturated thickness is defined as the distance between the bottom of the sand pack lower aquitard (whichever is lower) and the static water level.
- The effective screen length is defined as distance between the bottom of the sand pack a the top of the sand pack or static water level (whichever is lower).
- The static height of water in the well is defined as the distance between the bottom of sand pack and the static water level.
- If clay is the only material identified within the effective screen length, it is the medi analyzed for conductivity.

Summary of Conclusions

CRU-2 slug test data collection was automated by the use of a data logger. The data for rising head tests required no manipulation and was imported directly into AQTESOLV for analysis. The absolute value of drawdown was used for the falling head tests as required by the Cooper et al and Bouwer-Rice solutions. The quality of the test can be readily seen by plotting the data. Well number 1042 provides a good example of data conforming to the solutions developed by Cooper et al and Bouwer-Rice. The head should rise to its peak almost instantly (approximately 0.03 seconds for the rising head test) and fall back to the static water level over the period of the test.

Data was weighted in order to provide the best curve match for the selected solution. The Cooper et al solution typically requires a lower weight on early time data when the water level is falling/rising sharply due to removal/addition of the slug or oscillating from the forces of momentum (See well 1042 Rising Head Test and Well 1046 Falling Head Test). The Bouwer-Rice solution primarily weights early time data, neglecting the very early time data during slug addition/removal, because the effects of drawdown on the aquifer cause the late time data to deviate from the straight line predicted by the solution (See well 1042 Rising Head Test).

Well construction information specific to each well was obtained from the boring logs and is summarized in Table 1. The boring logs were also used to determine lithology and which condition, confined or unconfined, best represents the aquifer in the neighborhood of each test well. Pockets of sand sandwiched between two layers of clay were modeled as confined aquifers while wells surrounded mostly by clays and silts were modeled as unconfined aquifers.

The static water level as determined in the field was used in conjunction with the well construction information to determine if the water level was rising in the screened portion of the well. Corrections to the well casing radius for this condition, as proposed by Bouwer and Rice, were made as necessary. The effects of the water level rising in the screened portion of the well is depicted by the "double straight line" observed when plotting the data with the Bouwer-Rice solution. (See 11085 Rising Head Test and 1041 Falling Head Test) The first straight line has a greater slope and represents the rapid flow of water through the highly permeable sand pack. The second curve is less steep and represents the flow of water through the less permeable aquifer. In all cases, the second straight line is used in calculating the hydraulic conductivity of the aquifer.

The hydraulic conductivity predicted by the slug tests performed on each well is listed in Table 2. The tests are sorted by increasing hydraulic conductivity. Slug tests on wells with clays exhibited a conductivity on the order of 0.1 ft per day. Slug tests on wells with sands generally predicted conductivities on the order of 1.0 ft per day. The values predicted by Cooper et al and Bouwer-Rice were generally on the same order of magnitude. Test cases where the conductivities differed greatly can be attributed to bad test data.

PARSONS
ERA PROJECT

COMPUTER CALCULATION SUMMARY SHEET

CRU: 5 PO: 37 Job Number: 7663-0037-11115-330

Computer Code: AQTESOLV Version: 1.10

Code Verification Status: Verification Completed

Description of Program: AQTESOLV uses the Marquardt non linear least-squares curve matching technique perform slug test analysis for solutions developed by Cooper et al and Bower-Rice.

Source of Data: CRU-2 Slug Tests - Filenames attached

Purpose/Description of Calculation: Estimate hydraulic conductivity in the viscinity of each well in CRU-2.

Run Performed By: D. Tope

Date/Time of Run: See Attached

Computer Time of Run: Up to 1 minute depending on the quality of the data

Input Filename: See Attached

Output Filename: See Attached

Files Saved to Diskname: p:\engdata\geot\aqtesolv\po37\slug\cru2 Disk Location: Server

Results: See Summary of Conclusions

Performed By: David A. Tope Date: 10/11/93

Checked By: [illegible] Date: 10/11/93

Approved By: [illegible] Date: 10/13/93

12/92

Volume in drive P is ENG1
Volume Serial Number is 00FF-E8E6
Directory of P:\ENGDATA\GEOT\AQTESOLV\P037\SLUG\CRU2

Slug Test Data Files
==========

11085FH	4062	08-02-93	3:39p
1433BDRH	8847	08-25-93	12:09p
1941BDRH	7483	08-25-93	12:14p
11085RH	5094	08-02-93	3:43p
1950FH	6010	08-04-93	6:13p
1950RH	6058	08-04-93	6:15p
1947FH	5243	08-04-93	6:28p
1947RH	6107	08-04-93	6:29p
1942FH	15941	08-10-93	5:56p
1942RH	5501	08-10-93	5:58p
1048FH	5309	08-10-93	5:59p
1048RH	4085	08-22-93	9:09p
1035FH	7589	08-04-93	12:15p
1042FH1	3942	07-17-93	12:29p
1039FH	5098	08-04-93	12:07p
1039RH	5194	08-04-93	12:09p
1039FH2	5146	08-04-93	12:11p
1046FH	6437	08-10-93	6:04p
1046RH	4781	08-10-93	6:06p
1954FH	14526	08-02-93	3:44p
1042RH	3942	07-17-93	12:30p
1042FH2	3942	07-17-93	12:31p
1038FH	6054	07-17-93	12:33p
38RH	5526	07-17-93	12:34p
34FH	4037	07-26-93	6:32p
1937FH	5912	08-02-93	5:01p
1937FH2	3557	07-26-93	6:28p
1937RH	3941	07-26-93	6:30p
1934RH	4781	07-26-93	6:33p
1952FH	15509	07-26-93	6:34p
1952RH	5501	07-26-93	6:34p
1954RH	5142	08-02-93	3:45p
1041FH	4133	07-14-93	7:53p
1041RH	3942	07-14-93	7:54p

Bouwer-Rice Input Files
==========

1048RH	BAT	2257	08-29-93	10:16p
1934RH	BAT	3235	08-29-93	8:35p
1937RH	BAT	2300	08-29-93	8:42p
1039RH	BAT	3591	08-29-93	9:41p
1042RH	BAT	2678	08-29-93	9:56p
1050RH	BAT	3875	08-24-93	2:18p
1038RH	BAT	3756	08-29-93	9:37p
1950RH	BAT	3874	08-29-93	9:08p
1947RH	BAT	3939	09-29-93	12:56p
1952RH	BAT	3751	09-29-93	1:44p
33BDRH	BAT	3713	08-27-93	11:33a
1433RHBD	BAT	3713	08-29-93	10:32p
1941BDRH	BAT	2729	08-29-93	10:53p
1941RHBD	BAT	2729	08-29-93	10:58p

1954RH	BAT	3510	09-29-93	1:30p
11085RH	BAT	3452	08-30-93	1:16p
1942RH	BAT	3738	09-01-93	8:39a
1947FH	BAT	3703	08-29-93	10:43p
1041RH	BAT	2667	09-29-93	1:08p
46RH	BAT	3193	10-01-93	1:21p
1950FH	BAT	3899	08-29-93	10:46p
1952FH	BAT	3768	08-29-93	10:57p
1042FH1	BAT	2655	08-29-93	9:51p
1954FH	BAT	3762	09-29-93	1:24p
11085FH	BAT	2701	08-30-93	11:43a
1035FH	BAT	3718	08-29-93	9:06p
1038FH	BAT	3750	08-29-93	9:24p
1039FH	BAT	3592	08-29-93	9:32p
1039FH2	BAT	3692	08-29-93	9:37p
1042FH2	BAT	2690	08-29-93	9:44p
1046FH	BAT	3695	10-01-93	1:23p
1048FH	BAT	3507	08-29-93	10:16p
1934FH	BAT	2677	08-29-93	10:23p
1937FH	BAT	2430	08-29-93	10:34p
1942FH	BAT	3765	08-29-93	10:37p
1041FH	BAT	2812	09-29-93	1:00p

Cooper et al Input Files

1954RH	CAT	3510	08-30-93	11:48a
1041RH	CAT	2661	08-26-93	8:50a
1046FH	CAT	3692	09-10-93	4:17p
1039RH	CAT	3590	08-29-93	11:20p
42RH	CAT	2673	08-29-93	8:13p
34RH	CAT	3234	08-26-93	11:47a
1050RH	CAT	3870	08-23-93	7:25p
1038RH	CAT	3753	08-30-93	11:19a
1937RH	CAT	2295	08-29-93	11:16p
1950RH	CAT	3870	08-29-93	8:18p
1942RH	CAT	3732	08-29-93	8:08p
1046RH	CAT	3190	09-10-93	4:21p
1048RH	CAT	2738	09-10-93	2:38p
1048FH	CAT	3503	09-10-93	3:11p
1035FH	CAT	3717	08-29-93	7:44p
11085FH	CAT	2697	09-10-93	3:28p
11085RH	CAT	3443	09-10-93	3:36p
1952RH	CAT	3747	08-26-93	12:08p
1433BDRH	CAT	3713	08-27-93	11:08a
1941BDRH	CAT	2722	08-27-93	1:30p
1041FH	CAT	2807	08-26-93	11:35a
1934FH	CAT	2677	08-26-93	11:52a
1947FH	CAT	3701	08-26-93	12:01p
1952FH	CAT	3765	08-26-93	4:11p
1038FH	CAT	3747	08-29-93	7:52p
1039FH	CAT	3591	08-29-93	7:56p
1039FH2	CAT	3690	08-29-93	8:03p
1042FH1	CAT	2649	08-29-93	8:15p
1042FH2	CAT	2684	08-29-93	8:21p
1937FH2	CAT	2427	08-24-93	11:21a
50FH	CAT	3894	08-29-93	9:00p
1937FH	CAT	2425	08-29-93	8:42p
1942FH	CAT	3758	08-29-93	8:52p

Bouwer-Rice Output Files

1942RH	B	8560	09-01-93	8:42a
1947RH	B	6837	09-29-93	12:58p
41FH	B	5486	09-29-93	1:06p
1041RH	B	6312	09-29-93	1:10p
1954FH	B	6013	09-29-93	1:26p
1954FHA	B	9389	09-29-93	1:28p
1954RH	B	6762	09-29-93	1:45p
1954RHA	B	6388	09-29-93	1:33p
1952RH	B	6012	09-29-93	1:51p
1942FH	B	6013	08-29-93	10:41p
1947FH	B	15840	08-29-93	10:45p
1950FH	B	15465	08-29-93	10:49p
1952FH	B	9088	08-30-93	11:02a
1042FH1	B	14943	08-29-93	9:56p
1046RH	B	11037	10-01-93	1:22p
1048RH	B	7962	08-29-93	10:17p
1042RH	B	13739	08-29-93	9:57p
1937RH	B	8712	08-29-93	8:45p
1934RH	B	14339	08-29-93	8:36p
1039RH	B	18614	08-29-93	9:44p
1950RH	B	14039	08-29-93	9:09p
1035FH	B	13365	08-29-93	9:29p
1038FH	B	21016	08-29-93	9:26p
1039FH	B	19065	08-29-93	9:37p
1039FH2	B	16143	08-29-93	9:41p
1038RH	B	6912	08-29-93	9:39p
1042FH2	B	13968	08-29-93	9:46p
46FH	B	11263	10-01-93	1:27p
1048FH	B	9538	08-29-93	10:19p
1934FH	B	12915	08-29-93	10:26p
1937FH	B	10438	08-29-93	10:36p
1433BDRH	B	3978	08-27-93	11:36a
1433RHBD	B	8564	08-29-93	10:34p
1941RHBD	B	7514	08-29-93	10:59p
11085RH	B	7889	08-30-93	1:17p

Cooper et al Output Files

1942RH	C	10078	08-29-93	8:10p
1046RH	C	5428	09-10-93	4:24p
1046FH	C	17281	09-10-93	4:19p
1048RH	C	9178	09-10-93	3:01p
1048FH	C	15706	09-10-93	3:18p
1035FH	C	19606	08-29-93	7:47p
11085RH	C	7980	09-10-93	3:39p
11085FH	C	9181	09-10-93	3:34p
1937RH	C	11803	08-29-93	11:18p
1039RH	C	18330	08-29-93	11:25p
1934RH	C	11569	08-26-93	11:51a
1038RH	C	8128	08-30-93	11:23a
1950RH	C	8428	08-29-93	8:22p
1433BDRH	C	7444	08-27-93	11:11a
54RH	C	13530	08-30-93	11:50a
1041FH	C	13531	08-26-93	11:42a
1934FH	C	14281	08-26-93	11:56a
1952FH	C	12931	08-26-93	4:13p

1042RH	C	13455	08-29-93	8:15p
1038FH	C	14581	08-26-93	4:20p
1039FH	C	18781	08-29-93	7:59p
1039FH2	C	15859	08-29-93	8:08p
[illegible]42FH1	C	14509	08-29-93	8:18p
42FH2	C	13684	08-29-93	8:25p
1937FH2	C	12184	08-24-93	11:24a
1950FH	C	17806	08-29-93	9:04p
1041RH	C	10894	08-26-93	8:58a
1937FH	C	11429	08-29-93	8:44p
1947FH	C	15556	08-26-93	1:32p
1942FH	C	11804	08-29-93	8:54p

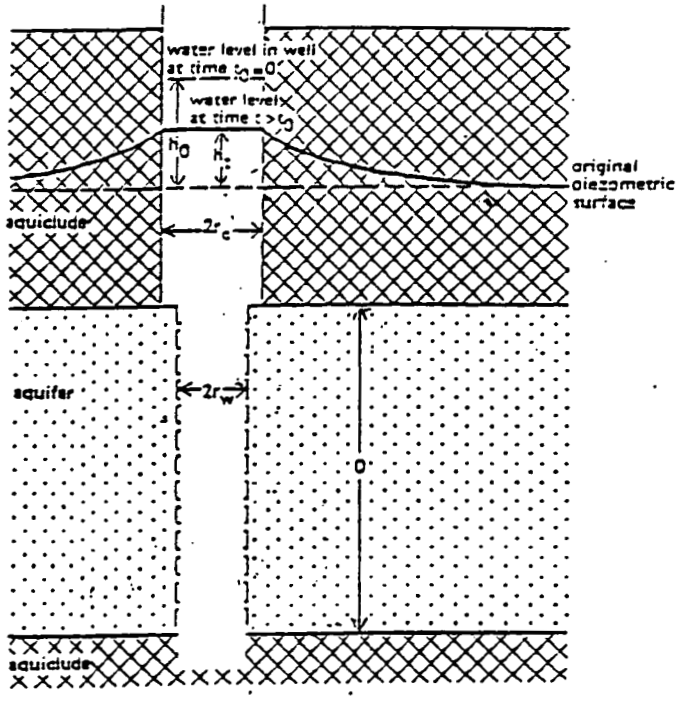


Figure 1 - Confined Aquifer

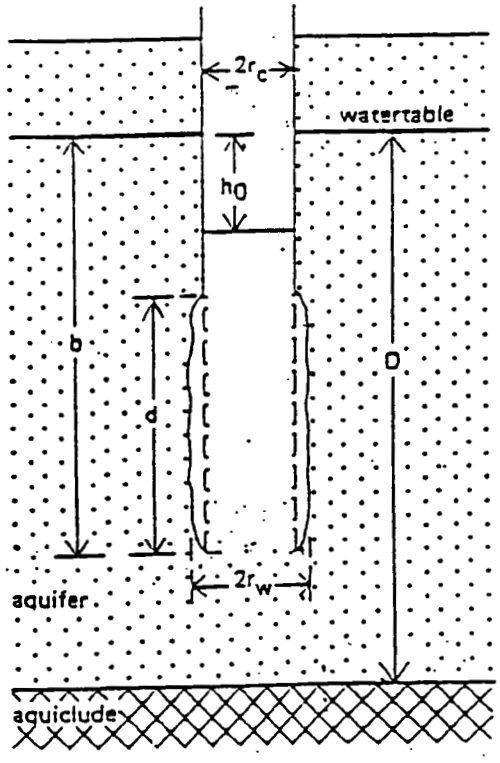


Figure 2 - Unconfined Aquifer

0002235

Table 1 - CRU-2 Boring Log Information and Field Data

Rising Head Slug Tests

	Well ID	Diameter of Casing (in)	Diameter of Boring (in)	Installed Screen Length (ft)	Riser Piping Height (ft)	Depth to Bottom Sand Pack (ft)	Depth to Water TOC (ft)	Depth to Water BGS (ft)	Depth to Top of Sand Pack (ft)	Head Rising in Sand Pack (Y/N)	Effective Radius of Casing (in)	Top of Lower Aquiclude (ft)	Bottom of Upper Aquiclude (ft)	Slug Diameter (in)	Slug Length (ft)	Slug Volume (ft^3)	Calculated Initial Drawdown (ft)
	1035	4	12	11	2	27	9.18	7.18	9	NO	2.00	26	24	2.375	NT	NT	NT
	1038	4	12	10	2	28.5	13.51	11.51	14.2	NO	2.00	23.8	17.9	2.375	4.35	0.1338	1.5335
	1039	4	12	11	2	27	5.99	3.99	8	NO	2.00	23.5	18	2.375	3.06	0.0941	1.0788
	1041	4	12	10	3	22.5	9.24	6.24	5	YES	3.69	22.5		2.375	4.35	0.1338	0.4510
	1042	4	12	10	2	21	5.48	3.48	5	NO	2.00	20.5	12	2.375	4.35	0.1338	1.5335
	1046	4	12	10	2.5	18	13.18	10.68	7	YES	3.69	22	4.5	2.375	3	0.0923	0.3111
	1048	4	12	10	2	16.2	8.78	6.78	3.5	YES	3.69	16.2	7	2.375	3	0.0923	0.3111
BD	1433	4	10	5	2	12.5	11.78	9.78	5.5	YES	3.21	12.5		NT	NT	NT	NT
NT	1711	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
	1934	2	8	10	2	21	7.38	5.38	7.5	NO	1.00	21		1.315	6	0.0566	2.5938
	1937	2	8	10	2	18.5	5.88	3.88	6.5	NO	1.00	18.5	12.5	1.315	6	0.0566	2.5938
BD	1941	2	8	7	2	13.5	12.69	10.69	3.5	YES	2.35	12.5	10.5	NT	NT	NT	NT
	1942	2	10	10	2	16	13.82	11.82	4	YES	2.86	14	12	1.315	3.1	0.0292	0.1634
	1947	2	8.5	10	1.5	20.5	11.71	10.21	8.5	YES	2.47	20.5		1.315	4	0.0377	0.2826
	1950	2	8.5	10	2	20	7.42	5.42	7	NO	1.00	16	10	1.315	4	0.0377	1.7292
	1952	2	8.5	10	2	20	10.88	8.88	7	YES	2.47	20		1.315	6	0.0566	0.4239
	1954	2	8	10	2	20	14.57	12.57	7	YES	2.35	20		1.315	5.05	0.0476	0.3969
	11085	2	8	10	2	16.5	8.01	6.01	5.5	YES	2.35	15	12	1.315	6	0.0566	0.4716

Falling Head Slug Tests

	Well ID	Diameter of Casing (in)	Diameter of Boring (in)	Installed Screen Length (ft)	Riser Piping Height (ft)	Depth to Bottom Sand Pack (ft)	Depth to Water TOC (ft)	Depth to Water BGS (ft)	Depth to Top of Sand Pack (ft)	Head Falling in Sand Pack (Y/N)	Effective Radius of Casing (in)	Top of Lower Aquiclude (ft)	Bottom of Upper Aquiclude (ft)	Slug Diameter (in)	Slug Length (ft)	Slug Volume (ft^3)	Calculated Initial Drawdown (ft)
	1035	4	12	11	2	27	9.33	7.33	9	NO	2.00	26	24	2.375	NT	NT	NT
	1038	4	12	10	2	28.5	13.74	11.74	14.2	NO	2.00	23.8	17.9	2.375	4.35	0.1338	1.5335
1	1039	4	12	11	2	27	5.98	3.98	8	NO	2.00	23.5	18	2.375	3.06	0.0941	1.0788
2	1039	4	12	11	2	27	5.99	3.99	8	NO	2.00	23.5	18	2.375	3.06	0.0941	1.0788
	1041	4	12	10	3	22.5	9.46	6.46	5	YES	3.69	22.5		2.375	4.35	0.1338	0.4510
1	1042	4	12	10	2	21	5.48	3.48	5	NO	2.00	20.5	12	2.375	4.35	0.1338	1.5335
2	1042	4	12	10	2	21	5.48	3.48	5	NO	2.00	20.5	12	2.375	4.35	0.1338	1.5335
	1046	4	12	10	2.5	18	13.21	10.71	7	YES	3.69	22	4.5	2.375	3	0.0923	0.3111
	1048	4	12	10	2	16.2	8.77	6.77	3.5	YES	3.69	16.2	7	2.375	3	0.0923	0.3111
NT	1433	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
NT	1711	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
	1934	2	8	10	2	21	7.37	5.37	7.5	NO	1.00	21		1.315	6	0.0566	2.5938
2	1937	2	8	10	2	18.5	5.63	3.63	6.5	NO	1.00	18.5	12.5	1.315	6	0.0566	2.5938
NT	1941	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
	1942	2	10	10	2	16	13.79	11.79	4	YES	2.86	14	12	1.315	3.1	0.0292	0.1634
	1947	2	8.5	10	1.5	20.5	11.64	10.14	8.5	YES	2.47	20.5		1.315	4	0.0377	0.2826
	1950	2	8.5	10	2	20	7.18	5.18	7	NO	1.00	16	10	1.315	4	0.0377	1.7292
	1952	2	8.5	10	2	20	10.83	8.83	7	YES	2.47	20		1.315	6	0.0566	0.4239
	1954	2	8	10	2	20	14.57	12.57	7	YES	2.35	20		1.315	5.05	0.0476	0.3969
	11085	2	8	10	2	16.5	8.01	6.01	5.5	YES	2.35	15	12	1.315	6	0.0566	0.4716

NT - Well Not Tested or Data Not Available

A porosity of 0.30 has been assumed for corrections due to head rising in the screened portion of the well.

Adjusted Effective Radius = sqrt((1-porosity) * radius of casing ^ 2 + porosity * radius of well ^ 2))

Table 2 – CRU–2 Slug Test Results

Well ID	Material Type	Material Color	Aquifer Type	Dominant Material Description	Head Rising/ Falling in Sand Pack	Rising Head Tests: Bouwer–Rice Unconfined K (ft/day)	Rising Head Tests: Cooper et al Confined K (ft/day)	Falling Head Tests: Bouwer–Rice Unconfined K (ft/day)	Falling Head Tests: Cooper et al Confined K (ft/day)
1711	NT	NT	NT	NT	NT	NT	NT	NT	NT
1952	Clay	Brown	Unconfined	Yellow brown silty clay	YES	0.049	NA	0.076	NA
1934	Clay	Brown	Unconfined	Greyish olive brown silty clay	NO	0.092	NA	0.100	NA
1950	Silt	Grey	Confined	Grey silt and sand	NO	0.034	0.074	0.101	0.032
1942	Silt	Brown	Confined	Olive yellow silt and sand	YES	0.121	0.108	0.226	0.235
1947	Clay	Brown	Unconfined	Yellowish brown silty clay	YES	0.250	NA	2.169	NA
1954	Clay	Brown	Unconfined	Grey silty clay with gravel	YES	0.327	NA	0.335	NA
1038	Sand	Grey	Confined	Grey sand some silt trace gravel	NO	0.236	0.341	0.412	NV
1433	Clay	Brown	Unconfined	Olive brown silty clay with sand and gravel	YES	0.611	NA	NT	NA
1035	Sand	Grey	Confined	Grey well graded sand – gravel mixture	NO	NV	NV	0.044	0.660
1041	Clay	Grey	Unconfined	Grey clay some silt	YES	1.274	NA	0.814	NA
1937	Sand	Grey	Confined	Light olive grey silty fine sand	NO	0.204	1.161	0.148	0.859
1941	Sand	Brown	Unconfined	Olive brown clayey sand	YES	1.025	NA	NT	NA
1046	Sand	Grey	Confined	Grey silt clay and sand	YES	0.158	1.659	0.255	3.114
1048	Sand	Grey	Confined	Yellowish brown silt sand and gravel	YES	1.010	2.331	0.809	0.941
11085	Sand	Brown	Confined	Light olive brown well graded sand some silt	YES	1.786	4.124		5.146
1042	Sand	Grey	Confined	Grey silty sand	NO	1.301	8.023	1.335	6.432
1039	Sand	Grey	Confined	Grey well graded gravelly sand	NO	2.544	18.228	2.107	13.489

NT – Well Not Tested or Data Not Available
NA – Analysis Not Required
NV – Data Erratic or Not Valid for Analysis

000222

Table 3 - CRU-2 Computer Input Summary

Rising Head Slug Tests

Cooper's Solution

	Well ID	Effective Radius of Casing (ft)	Radius of Boring (ft)	Saturated Thickness (ft)	Effective Screen Length (ft)	Static Height in Well (ft)
	1035	0.1667	0.5000	1.4	1.4	18.82
	1038	0.1667	0.5000	5.9	5.9	12.29
	1039	0.1667	0.5000	5.5	5.5	19.51
	1041	0.3073	0.5000	22.5	17.5	16.26
	1042	0.1667	0.5000	8.5	8.5	17.02
	1046	0.3073	0.5000	2.1	2.1	7.32
	1048	0.3073	0.5000	9.2	9.2	9.42
BD	1433	0.2674	0.4167	12.5	7	2.72
NT	1711	NT	NT	NT	NT	NT
	1934	0.0833	0.3333	21	13.5	15.62
	1937	0.0833	0.3333	6	6	14.62
BD	1941	0.1954	0.3333	2	2	1.81
	1942	0.2386	0.4167	2	2	2.18
	1947	0.2061	0.3542	20.5	12	10.29
	1950	0.0833	0.3542	6	6	10.58
	1952	0.2061	0.3542	20	13	11.12
	1954	0.1954	0.3333	20	13	7.43
	11085	0.1954	0.3333	3	3	8.99

Bouwer-Rice Solution

	Well ID	Effective Radius of Casing (ft)	Radius of Boring (ft)	Saturated Thickness (ft)	Effective Screen Length (ft)	Static Height in Well (ft)
	1035	0.1667	0.5000	19.82	18	19.82
	1038	0.1667	0.5000	16.99	14.3	16.99
	1039	0.1667	0.5000	23.01	19	23.01
	1041	0.3073	0.5000	16.26	16.26	16.26
	1042	0.1667	0.5000	17.52	16	17.52
	1046	0.3073	0.5000	11.32	7.32	7.32
	1048	0.3073	0.5000	9.42	9.42	9.42
BD	1433	0.2674	0.4167	2.72	2.72	2.72
NT	1711	NT	NT	NT	NT	NT
	1934	0.0833	0.3333	15.62	13.5	15.62
	1937	0.0833	0.3333	14.62	12	14.62
BD	1941	0.1954	0.3333	2.81	2.81	2.81
	1942	0.2386	0.4167	4.18	4.18	4.18
	1947	0.2061	0.3542	10.29	10.29	10.29
	1950	0.0833	0.3542	14.58	13	14.58
	1952	0.2061	0.3542	11.12	11.12	11.12
	1954	0.1954	0.3333	7.43	7.43	7.43
	11085	0.1954	0.3333	10.49	10.49	10.49

Falling Head Slug Tests

Cooper's Solution

	Well ID	Effective Radius of Casing (ft)	Radius of Boring (ft)	Saturated Thickness (ft)	Effective Screen Length (ft)	Static Height in Well (ft)
	1035	0.1667	0.5000	1.4	1.4	18.67
	1038	0.1667	0.5000	5.9	5.9	12.06
1	1039	0.1667	0.5000	5.5	5.5	19.52
2	1039	0.1667	0.5000	5.5	5.5	19.51
	1041	0.3073	0.5000	22.5	17.5	16.04
1	1042	0.1667	0.5000	8.5	8.5	17.02
2	1042	0.1667	0.5000	8.5	8.5	17.02
	1046	0.3073	0.5000	2.1	2.1	7.29
	1048	0.3073	0.5000	9.2	9.2	9.43
NT	1433	NT	NT	NT	NT	NT
NT	1711	NT	NT	NT	NT	NT
	1934	0.0833	0.3333	21	13.5	15.63
	1937	0.0833	0.3333	6	6	14.87
NT	1941	NT	NT	NT	NT	NT
	1942	0.2386	0.4167	2	2	2.21
	1947	0.2061	0.3542	20.5	12	10.36
	1950	0.0833	0.3542	6	6	10.82
	1952	0.2061	0.3542	20	13	11.17
	1954	0.1954	0.3333	20	13	7.43
	11085	0.1954	0.3333	3	3	8.99

Bouwer-Rice Solution

	Well ID	Effective Radius of Casing (ft)	Radius of Boring (ft)	Saturated Thickness (ft)	Effective Screen Length (ft)	Static Height in Well (ft)
	1035	0.1667	0.5000	19.67	18	19.67
	1038	0.1667	0.5000	16.76	14.3	16.76
1	1039	0.1667	0.5000	23.02	19	23.02
2	1039	0.1667	0.5000	23.01	19	23.01
	1041	0.3073	0.5000	16.04	16.04	16.04
1	1042	0.1667	0.5000	17.52	16	17.52
2	1042	0.1667	0.5000	17.52	16	17.52
	1046	0.3073	0.5000	11.29	7.29	7.29
	1048	0.3073	0.5000	9.43	9.43	9.43
NT	1433	NT	NT	NT	NT	NT
NT	1711	NT	NT	NT	NT	NT
	1934	0.0833	0.3333	15.63	13.5	15.63
	1937	0.0833	0.3333	14.87	12	14.87
NT	1941	NT	NT	NT	NT	NT
	1942	0.2386	0.4167	4.21	4.21	4.21
	1947	0.2061	0.3542	10.36	10.36	10.36
	1950	0.0833	0.3542	14.82	13	14.82
	1952	0.2061	0.3542	11.17	11.17	11.17
	1954	0.1954	0.3333	7.43	7.43	7.43
	11085	0.1954	0.3333	10.49	10.49	10.49

NT - Well Not Tested or Data Not Available
BD - Indicates Bail Down Test

Table 4 – CRU – 2 Computer Slug Test Results

Well ID	Rising Head Tests				Falling Head Tests			
	Bouwer–Rice Unconfined Aquifer		Cooper et al Confined Aquifer		Bouwer–Rice Unconfined Aquifer		Cooper et al Confined Aquifer	
	Test 1 K (ft/min)	Test 2 K (ft/min)	Test 1 T (ft^2/min)	Test 2 T (ft^2/min)	Test 1 K (ft/min)	Test 2 K (ft/min)	Test 1 T (ft^2/min)	Test 2 T (ft^2/min)
1711	NT	NT	NT	NT	NT	NT	NT	NT
1952	3.422E–05				5.287E–05			
1934	6.412E–05				6.935E–05			
1950	2.352E–05		3.071E–04		7.008E–05		1.349E–04	
1942	8.398E–05		1.498E–04		1.570E–04		3.265E–04	
1947	1.738E–04				1.506E–03			
1954	2.271E–04		3.043E–03		2.329E–04			
1038	1.641E–04		1.397E–03		2.858E–04			
1433	4.240E–04							
1035					3.063E–05		6.413E–04	
1041	8.849E–04				5.653E–04			
1937	1.417E–04		4.838E–03		1.028E–04		3.580E–03	
1941	7.118E–04							
1046	1.099E–04		2.420E–03		1.770E–04		4.541E–03	
1048	7.013E–04		1.489E–02		5.616E–04		6.009E–03	
11085	1.240E–03		8.591E–03				1.072E–02	
1042	9.037E–04		4.736E–02		9.272E–04	8.703E–04	5.414E–02	2.179E–02
1039	1.767E–03		6.962E–02		1.463E–03	1.761E–03	4.737E–02	5.567E–02

NT – Well Not Tested or Data Not Available

- 7333

PARSONS
ERA PROJECT

ENGINEERING CALCULATIONS TITLE AND SUMMARY SHEET

Date 10/11/93
Sheet 1 of 23

Proj. Order No. 37 Calculation No. 16-2

Project Title Technical and Project Management Support to CERCLA/RCRA Unit 5

Calculation Subject CRU-5 Slug Tests Date Verified/Checked 10/11/93

STATUS: PRELIMINARY X FINAL ____ SUPERSEDED ____ VOID ____

STATEMENT OF PROBLEM

Determine the hydraulic conductivity in the vicinity of each CRU-5 well by analyzing slug test data with Bouwer and Rice and/or Cooper et al solutions.

SUMMARY OF CONCLUSIONS	Originator's Signature and Date
Summary tables and text are attached. See CRU-5 Glacial Till Slug Test Calculations Volumes I through VI for individual analysis of each well.	David A. Pope 10/11/93

CHECKING METHOD		Checker's Signature and Date
1. Review	X	10/12/93
2. Alternate Calculation	____	Lead Discipline Engineer's Signature and Date: 10/13/93

Rev. No.	Sheet No.	Description	Reviser's Signature/Date	Checker's Signature/Date	Approved by Signature/Date

05/93 ENG080

000229

PARSONS
ERA PROJECT

ENGINEERING CALCULATIONS BASIS SHEET

Revision No. 0
Sheet 2 of 23

Proj. Order No. 37 Calculation No. 16-2

Project Title Technical and Project Management Support to CERCLA/RCRA Unit 5

Calculation Subject CRU-5 Slug Tests Date Verified/Checked 10/11/93

Prepared By: David A. Pope Checked/Verified By: [illegible]

Date 10/11/93

SUMMARY OF DATA SOURCES - CODES - ASSUMPTIONS

Data Sources:

1. CRU-5 Slug Test Computer Data Files (filenames attached)

Assumptions:

1. Well casing radius corrections, as proposed by Bouwer-Rice, are performed for slug tests in which the water level is rising in the screened portion of the well. A porosity of 30 % has been assumed for the aforementioned correction.
2. Distances for saturated aquifer thickness, effective screen length, and static height of water in the well are as follows (See figures 1 & 2):

Confined Aquifer

- The saturated thickness is defined as the distance between the lower and upper aquitard.
- The effective screen length is defined as the portion of the sand pack which lies between the lower and upper aquitard.
- The static height of water in the well is defined as the distance between the static water level and the bottom of the effective screen.
- Clay is considered an aquitard when it lies above or below a more permeable material (i.e. sand, silt, or gravel).

Unconfined Aquifer

- The saturated thickness is defined as the distance between the bottom of the sand pack or lower aquitard (whichever is higher) and the static water level.
- The effective screen length is defined as the distance between the bottom of the sand pack or lower aquitard (whichever is higher) and the top of the sand pack or static water level (whichever is lower).
- The static height of water in the well is defined as the distance between the bottom of the sand pack and the top of the lower aquitard (whichever is higher) and the static water level.
- If clay is the only material identified within the effective screen length, it is the medium analyzed for conductivity.

Summary of Conclusions

CRU-5 slug test data collection was automated by the use of a data logger. The data for rising head tests required no manipulation and was imported directly into AQTESOLV for analysis. The absolute value of drawdown was used for the falling head tests as required by the Cooper et al (1967) and Bouwer and Rice (1976) solutions. The quality of the test can be readily seen by plotting the data. Well number 1346 provides a good example of data conforming to the solutions developed by Cooper et al and Bouwer-Rice. The head should rise to its peak almost instantly (approximately 0.06 seconds for the rising head test) and fall back to the static water level over the period of the test.

Data was weighted in order to provide the best curve match for the selected solution. The Cooper et al solution typically requires a lower weight on early time data when the water level is falling/rising sharply due to removal/addition of the slug or oscillating from the forces of momentum (See well 1346 Rising and Falling Head Tests). The Bouwer-Rice solution primarily weights early time data, neglecting the very early time data during slug addition/removal, because the effects of drawdown on the aquifer cause the late time data to deviate from the straight line predicted by the solution (See well 1346 Falling Head Test).

Well construction information specific to each well was obtained from the boring logs and is summarized in Table 1. The boring logs and static water level data were used to determine lithology and which condition, confined or unconfined, best represents the aquifer in the neighborhood of each test well. Pockets of sand, silt, or gravel confined between two layers of clay were modeled as confined aquifers if the static water level was higher than the bottom of the upper confining layer. Wells surrounded predominantly by clays were modeled as unconfined aquifers. Figures 1 and 2 show how individual well parameters were selected for AQTESOLV input.

The static water level as determined in the field was used in conjunction with the well construction information to determine if the water level was rising in the effective screened portion of the well. Corrections to the well casing radius for this condition, as proposed by Bouwer and Rice, were made as necessary. The effects of the water level rising in the effective screened portion of the well is depicted by the "double straight line" observed when plotting the data with the Bouwer-Rice solution (See 1153 Falling Head Test). The first straight line has a greater slope and represents the rapid flow of water through the highly permeable sand pack. The second curve is less steep and represents the flow of water through the less permeable aquifer. In all cases, the second straight line is used in calculating the hydraulic conductivity of the aquifer.

The estimate hydraulic conductivity by the preferred solution for each well is listed in Table 6. The tests are sorted by increasing well number. The values predicted by Cooper et al and Bouwer-Rice were generally on the same order of magnitude. Test cases where the conductivities differed greatly can be attributed to bad test data.

PARSONS
ERA PROJECT

COMPUTER CALCULATION SUMMARY SHEET

CRU: 5 PO: 37 Job Number: 7663-0037-11115-330

Computer Code: AOTESOLV Version: 1.10

Code Verification Status: Verification Completed

Description of Program: AOTESOLV uses the Marquardt non linear least-squares curve matching technique to perform slug test analysis for solutions developed by Cooper et al and Bower-Rice.

Source of Data: CRU-5 Slug Tests - Filenames attached

Purpose/Description of Calculation: Estimate hydraulic conductivity in the viscinity of each well in CRU-5.

Run Performed By: D. Dornoff / S. Rosenfield

Date/Time of Run: See Attached

Computer Time of Run: Up to 1 minute depending on the quality of the data

Input Filename: See Attached

Output Filename: See Attached

Files Saved to Diskname: p:\engdata\geot\aotesolv\po37\slug\cru5 Disk Location: Server

Results: See Summary of Conclusions

Performed By: Dennis Dornoff Simon Rosenfeld Date: 10/11/93

Checked By: [illegible] Date: 10/11/93

Approved By: [illegible] Date: 10/13/93

12/92 ENG095

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Volume in drive P is ENG1
Volume Serial Number is 00FF-E8E6
Directory of P:\ENGDATA\GEOT\AQTESOLV\PO37\SLUG\CRU5

Bouwer and Rice Input Files
==========

1113FH	BAT	18360	09-15-93	3:06p
1047RH	BAT	3760	09-16-93	3:14p
1954RH	BAT	3510	09-29-93	1:30p
1954RHA	BAT	3510	09-29-93	1:32p
1675FH	BAT	4284	10-08-93	2:08p
1087FH	BAT	3918	09-15-93	11:31a
1077FH	BAT	3148	09-14-93	4:00p
1111RH	BAT	10807	09-15-93	9:18a
1332RH	BAT	3472	09-15-93	2:31p
1283RH	BAT	4997	09-16-93	4:24p
1514RH	BAT	3656	09-27-93	9:07a
1836RH	BAT	3741	09-17-93	9:42a
1029RH	BAT	3744	09-16-93	1:01p
1064RH	BAT	3895	09-17-93	10:23a
1075RH	BAT	4526	09-27-93	9:05a
1081RH	BAT	3912	09-17-93	10:28a
1082RH	BAT	3691	09-17-93	10:34a
1084RH	BAT	3762	09-16-93	3:21p
1113RH	BAT	5573	09-16-93	3:30p
1145RH	BAT	3904	09-16-93	3:37p
1152RH	BAT	3132	09-16-93	3:50p
1215RH	BAT	3468	09-28-93	3:09p
1263RH	BAT	3913	09-16-93	4:10p
77RH	BAT	5124	09-16-93	4:18p
1299RH	BAT	3905	09-17-93	8:26a
1301RH	BAT	3868	09-17-93	8:35a
1444RH	BAT	3745	09-17-93	8:44a
1508RH	BAT	3741	09-17-93	9:14a
1509RH	BAT	3267	09-17-93	9:17a
1606RH	BAT	3711	09-17-93	9:29a
1676RH	BAT	3901	09-17-93	9:34a
1778RH	BAT	3897	09-17-93	9:39a
1843RH	BAT	3146	09-17-93	9:47a
1317RH	BAT	4511	10-05-93	2:54p
1324RH	BAT	17674	10-05-93	2:33p
1324RH2	BAT	3551	09-17-93	1:18p
1324RH3	BAT	3502	09-17-93	1:22p
1836FH	BAT	3752	09-24-93	9:02a
1241FH	BAT	3703	09-16-93	2:48p
1029FH	BAT	3740	09-15-93	11:49a
1346RH	BAT	3749	09-15-93	3:33p
1351RH	BAT	3507	09-15-93	3:56p
1420RH	BAT	2833	09-15-93	4:28p
1608RH	BAT	3712	09-15-93	4:40p
1733RH	BAT	3235	09-16-93	12:56p
1149FH	BAT	3911	09-16-93	8:37a
1077RH	BAT	3160	09-16-93	2:17p
1241RH	BAT	3708	09-15-93	1:33p
[illegible]45FH	BAT	3878	09-16-93	8:14a
36RH	BAT	3587	09-15-93	2:45p
1033RH	BAT	3880	09-14-93	10:54a
1134RH	BAT	3904	09-15-93	9:15a
1149RH	BAT	3898	09-15-93	9:21a

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1153RH	BAT	4972	09-17-93	11:26a
1177RH	BAT	3040	09-14-93	2:07p
1182RF	BAT	2590	09-14-93	2:36p
1182RH	BAT	2590	09-27-93	9:36a
[illegible]27RH	BAT	3900	09-15-93	12:43p
75RH	BAT	4281	09-16-93	11:03a
1293RH	BAT	3888	09-15-93	2:15p
1137FH	BAT	3690	10-06-93	12:43p
1338RH	BAT	3898	09-16-93	10:10a
1024FH	BAT	2379	09-14-93	1:11p
1177FH	BAT	3451	09-16-93	11:10a
1182FH	BAT	2813	09-27-93	9:42a
1351FH	BAT	3544	09-17-93	11:23a
1420FH	BAT	3709	09-17-93	1:25p
1444FH	BAT	3709	09-24-93	10:38a
1508FH	BAT	3624	09-24-93	10:24a
1509FH	BAT	12295	09-29-93	3:03p
1514FH	BAT	3754	09-24-93	10:07a
1204FH	BAT	2810	09-27-93	8:32a
1215FH	BAT	3480	09-29-93	3:40p
1227FH	BAT	3536	09-27-93	8:38a
1263FH	BAT	3853	09-24-93	11:16a
1277FH	BAT	5176	09-24-93	11:11a
1279FH	BAT	3710	09-24-93	11:05a
1283FH	BAT	4284	09-24-93	10:55a
1293FH	BAT	3877	09-17-93	8:28a
1299FH	BAT	3897	09-24-93	10:49a
1301FH	BAT	3882	09-24-93	10:44a
1332FH	BAT	3562	09-17-93	9:58a
1336FH	BAT	3430	09-17-93	10:35a
38FH	BAT	3620	09-27-93	8:41a
1346FH	BAT	3706	09-17-93	11:00a
1020RH	BAT	2667	09-28-93	2:59p
1606FH	BAT	3686	09-24-93	10:00a
1075FH	BAT	3850	09-28-93	3:34p
1024RH	BAT	2359	09-14-93	9:37a
1020FH	BAT	2643	09-28-93	3:38p
1087RH	BAT	3765	09-28-93	3:19p
1047FH	BAT	2992	09-29-93	3:00p
1317FH	BAT	4512	10-05-93	3:10p
1033FH	BAT	3899	09-14-93	2:43p
1081FH	BAT	3912	09-14-93	4:42p
1152FH	BAT	3613	09-16-93	9:11a
1153FH	BAT	4165	09-16-93	10:27a
1137RH	BAT	17489	10-05-93	2:53p
1778FH	BAT	3909	09-24-93	9:06a
1676FH	BAT	3870	09-27-93	8:59a
1508FHA	BAT	3624	09-24-93	10:26a
1111FH	BAT	2667	09-15-93	12:56p
1204RH	BAT	3888	09-15-93	11:39a
1324RH1	BAT	2943	09-17-93	1:14p
1843FH	BAT	3156	09-24-93	8:51a
1728FH	BAT	3870	09-24-93	9:14a
1046RH	BAT	3193	10-01-93	1:21p
1046FH	BAT	3695	10-01-93	1:23p
[illegible]82FH	BAT	3724	09-15-93	10:04a

Cooper et al Input Files
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1182RH	CAT	2589	09-15-93	11:21a
1241RH	CAT	3709	09-15-93	1:51p
1153FB	CAT	4161	09-22-93	9:12a
1954RH	CAT	3510	08-30-93	11:48a
1024FH	CAT	2374	09-17-93	2:25p
33FH	CAT	3896	09-17-93	2:39p
1077FH	CAT	3142	09-17-93	2:57p
1111FH	CAT	2663	09-17-93	3:04p
1134FH	CAT	3684	09-17-93	3:48p
1149FH	CAT	3908	09-17-93	4:02p
1177FH	CAT	3447	09-20-93	12:54p
1111RH	CAT	3173	09-14-93	12:52p
1134RH	CAT	3904	09-14-93	1:19p
1149RH	CAT	3897	09-15-93	9:25a
1153RH	CAT	4993	09-14-93	1:55p
1177RH	CAT	3079	09-15-93	11:00a
1182RF	CAT	2590	09-14-93	2:38p
1204RH	CAT	3888	09-15-93	11:42a
1227RH	CAT	3358	09-15-93	1:15p
1293RH	CAT	3889	09-15-93	2:16p
1336RH	CAT	3369	09-16-93	8:38a
1338RH	CAT	3899	09-15-93	3:25p
1346RH	CAT	3748	09-15-93	3:37p
1351RH	CAT	3507	09-16-93	10:37a
1420RH	CAT	2833	09-15-93	4:31p
1608RH	CAT	3712	09-16-93	10:00a
1675RH	CAT	4282	09-16-93	11:05a
1153FHB	CAT	11050	09-20-93	11:49a
1332RH	CAT	3472	09-15-93	2:34p
1153FH	CAT	4160	09-20-93	11:42a
53FHA	CAT	12852	09-20-93	11:55a
1153FA	CAT	4158	09-20-93	11:59a
1336FH	CAT	3425	09-22-93	10:14a
1733FH	CAT	3703	09-22-93	12:39p
1033RH	CAT	3880	09-14-93	11:09a
1182FH	CAT	2808	09-20-93	1:16p
1204FH	CAT	3892	09-20-93	1:22p
1227FH	CAT	3532	09-20-93	1:39p
1241FH	CAT	3698	09-20-93	3:50p
1293FH	CAT	3873	09-22-93	9:28a
1332FH	CAT	3557	09-22-93	9:49a
1338FH	CAT	3615	09-22-93	10:30a
1346FH	CAT	3701	09-22-93	10:41a
1351FH	CAT	3536	09-22-93	10:53a
1420FH	CAT	3701	09-22-93	12:45p
1608FH	CAT	3450	09-22-93	12:21p
1675FH	CAT	4284	09-22-93	12:34p
1024RH	CAT	2359	09-14-93	9:22a
1046FH	CAT	3692	09-10-93	4:17p
1046RH	CAT	3190	09-10-93	4:21p

Bouwer and Rice Output Files
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1836FH	B	8258	09-24-93	9:04a
1033RH	B	8048	09-14-93	11:00a
34RH	B	13884	09-15-93	9:17a
1149RH	B	9382	09-15-93	10:34a
1153RH	B	15084	09-17-93	11:18a
1177RH	B	8182	09-14-93	2:12p

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1182RH	B	11482	09-27-93	9:37a
1204RH	B	13504	09-15-93	11:42a
1227RH	B	9473	09-15-93	12:52p
1241RH	B	7507	09-15-93	1:35p
[illegible]93RH	B	6307	09-15-93	2:16p
38RH	B	18309	09-16-93	10:12a
1346RH	B	17409	09-15-93	3:37p
1351RH	B	14859	09-15-93	3:59p
1420RH	B	10357	09-15-93	4:31p
1608RH	B	10357	09-16-93	9:59a
1733RH	B	7057	09-16-93	1:01p
1047RH	B	14409	09-16-93	3:16p
1064RH	B	8257	09-17-93	10:24a
1075RH	B	15009	09-27-93	9:07a
1081RH	B	8332	09-17-93	10:29a
1082RH	B	8407	09-17-93	10:35a
1084RH	B	16509	09-16-93	2:50p
1113RH	B	16384	09-16-93	3:24p
1317FH	B	6833	10-05-93	3:13p
1954RH	B	6762	09-29-93	1:45p
1954RHA	B	6388	09-29-93	1:33p
1675FH	B	10058	10-08-93	2:14p
1024RH	B	8182	09-14-93	9:39a
1111RH	B	16509	09-15-93	9:05a
1332RH	B	15759	09-15-93	2:33p
1336RH	B	14554	09-15-93	2:48p
1137RH	B	10883	10-06-93	10:19a
1145RH	B	18309	09-16-93	3:39p
1152RH	B	8257	09-16-93	3:52p
1215RH	B	14704	09-28-93	3:11p
53RH	B	13884	09-16-93	4:18p
1283RH	B	11632	09-16-93	4:26p
1299RH	B	18384	09-17-93	8:30a
1301RH	B	10132	09-17-93	8:42a
1444RH	B	20559	09-17-93	8:47a
1508RH	B	8257	09-17-93	9:15a
1514RH	B	21004	09-27-93	9:10a
1606RH	B	8257	09-17-93	9:31a
1676RH	B	8257	09-17-93	9:36a
1836RH	B	14254	09-17-93	9:45a
1843RH	B	8257	09-17-93	9:48a
1317RYH	B	14259	09-17-93	11:35a
1324RH	B	12606	10-05-93	2:39p
1324RH1	B	13137	09-17-93	1:16p
1087RH	B	20560	09-28-93	3:31p
1317RH	B	6832	10-05-93	2:55p
1675RH	B	11932	09-16-93	11:05a
1324RH2	B	13212	09-17-93	1:20p
1324RH3	B	13137	09-17-93	1:22p
1843FH	B	10433	09-24-93	8:53a
1778FH	B	10133	09-24-93	9:08a
1676FH	B	9008	09-27-93	9:57a
1606FH	B	14106	09-24-93	10:02a
1508FHA	B	7509	09-24-93	10:28a
1020FH	B	7658	09-28-93	3:41p
[illegible]75	B	8483	09-28-93	3:34p
17FH	B	7133	10-08-93	1:41p
1279FH	B	10133	09-24-93	11:07a
1277FG	B	8258	09-24-93	11:12a
1263FH	B	8258	09-24-93	11:17a

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1215FH	B	10208	09-29-93	3:42p
1277FH	B	8258	09-24-93	11:26a
1204FH	B	11266	09-27-93	8:56a
1338FH	B	6763	09-27-93	8:55a
[illegible]27FH	B	6013	09-27-93	8:57a
[illegible]82FH	B	11788	09-27-93	9:45a
1075FH	B	8483	10-08-93	1:51p
1059FH	B	8258	09-29-93	3:04p
1081FH	B	25520	09-24-93	10:49a
1082FH	B	19215	09-24-93	10:54a
1087FH	B	17865	09-24-93	11:11a
1113FH	B	25072	09-24-93	11:16a
1145FH	B	8038	09-24-93	11:45a
1152FH	B	8638	09-24-93	11:52a
1029FH	B	8638	09-24-93	10:34a
1514FH	B	7358	09-24-93	10:09a
1509FH	B	8258	09-24-93	10:17a
1508FH	B	8258	09-24-93	10:26a
1444FH	B	13885	09-24-93	10:39a
1301FH	B	10133	09-24-93	10:46a
1299FH	B	10133	09-24-93	10:51a
1283FH	B	7508	09-24-93	10:56a
1020RH	B	7507	09-28-93	3:02p
1046RH	B	11037	10-01-93	1:22p
1046FH	B	11263	10-01-93	1:27p
1137FH	B	8638	10-06-93	1:08p

Cooper et al Output Files
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32RH	C	16900	09-15-93	2:36p
[illegible]954RH	C	24800	10-08-93	2:01p
1204RH	C	15925	09-15-93	11:44a
1227RH	C	16150	09-15-93	1:17p
1241RH	C	19900	09-15-93	1:53p
1293RH	C	15550	09-15-93	2:18p
1336RH	C	26880	09-16-93	9:13a
1338RH	C	18100	09-15-93	3:27p
1346RH	C	16975	09-15-93	3:39p
1351RH	C	15700	09-16-93	10:53a
1420RH	C	10073	09-16-93	8:33a
1608RH	C	11198	09-16-93	10:04a
1675RH	C	11648	09-16-93	11:08a
1024FH	C	8199	09-17-93	2:27p
1033FH	C	15851	09-17-93	2:38p
1077FH	C	7899	09-17-93	2:59p
1111FH	C	9174	09-17-93	3:11p
1134FH	C	15926	09-17-93	3:50p
1149FH	C	9849	09-17-93	4:07p
1033RH	C	8348	09-14-93	11:14a
1111RH	C	10148	09-14-93	1:11p
1134RH	C	9848	09-14-93	1:24p
1149RH	C	9848	09-15-93	10:18a
1153RH	C	14725	09-14-93	1:59p
1177RH	C	14725	09-15-93	11:05a
[illegible]82RH	C	11948	09-15-93	11:30a
53FA	C	12851	09-20-93	12:03p
1177FH	C	16076	09-20-93	12:57p
1182FH	C	11949	09-20-93	1:19p
1204FH	C	16226	09-20-93	1:28p

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1227FH	C	16226	09-20-93	1:50p
1241FH	C	10824	09-20-93	4:13p
1293FH	C	16151	09-22-93	9:31a
1332FH	C	11949	09-22-93	9:54a
1336FH	C	16151	09-22-93	10:17a
1338FH	C	12776	09-22-93	10:32a
1346FH	C	11049	09-22-93	10:44a
1351FH	C	12926	09-22-93	11:00a
1420FH	C	12476	09-22-93	12:52p
1046RH	C	5428	09-10-93	4:24p
1153FB	C	11049	09-22-93	9:17a
1608FH	C	12551	09-22-93	12:31p
1733FH	C	11349	09-22-93	12:42p
1024RH	C	12700	09-14-93	9:26a
1046FH	C	17281	09-10-93	4:19p

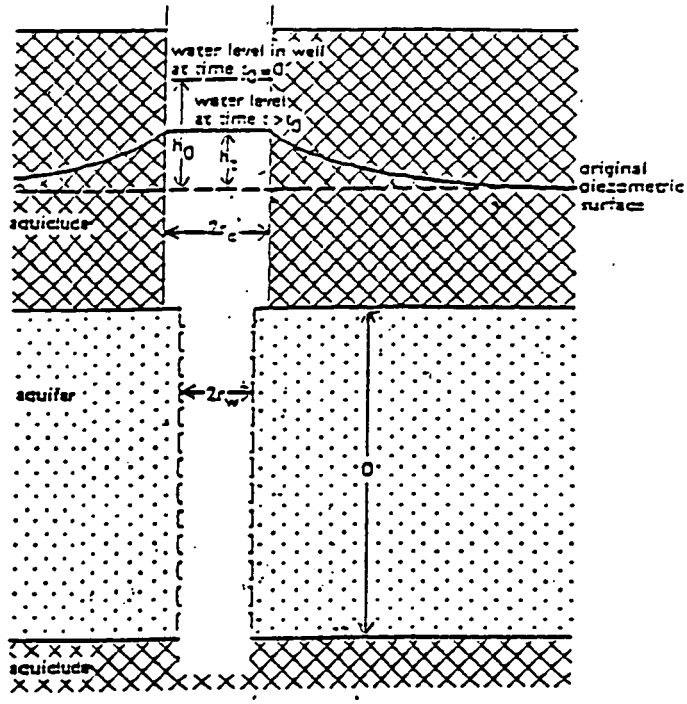

Figure 1 - Confined Aquifer

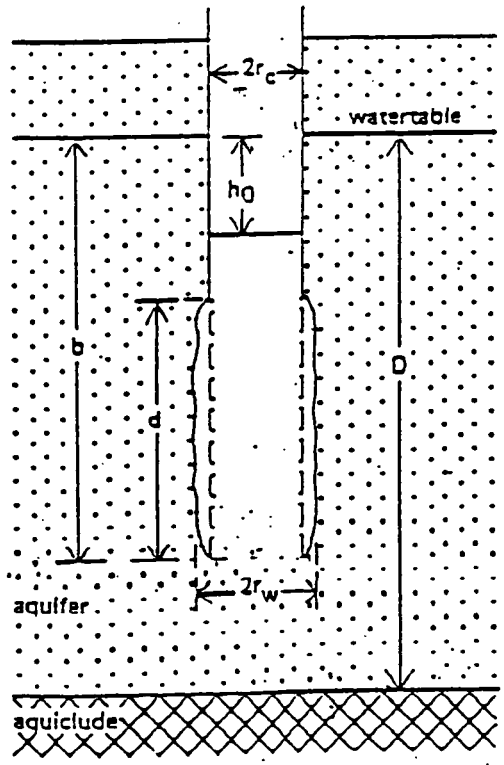

Figure 2 - Unconfined Aquifer

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Table 1 – CRU-5 Boring Log Information and Field Data

11-Oct-93

Well ID	Aquifer Type	Diameter of Casing (in)	Diameter of Boring (in)	Installed Screen Length (ft)	Depth to Top of Sand Pack BGS (ft)	Depth to Bottom of Sand Pack BGS (ft)	Riser Piping Height AGS (ft)	Depth to Bottom of Upper Aquitard BGS (ft)	Depth to Top of Lower Aquitard BGS (ft)	Depth to Water Rising Head TOC (ft)	Depth to Water Falling Head TOC (ft)	Head Rising in Sand Pack Rising Head (Y/N)	Head Rising in Sand Pack Falling Head (Y/N)	Effective Radius of Casing Rising Head (in)	Effective Radius of Casing Falling Head (in)
1019	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
1020	U	4	10	4	5	11	1.46	0	11	5.17	5.18	NO	NO	2.00	2.00
1024	C	4	10	7	15	27	2.8	18.2	25.3	11.33	11.33	NO	NO	2.00	2.00
1029	U	4	12	10	16.2	31	2	0	31	23.31	23.72	YES	YES	3.69	3.69
1033	C	4	12	10	5	21	2	11.5	17	8.31	8.31	YES	YES	3.69	3.69
1045	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NO	NO	0.00	0.00
1047	U	4	12	10	5	17.4	2	0	17.4	9.45	8.77	YES	YES	3.69	3.69
1064	U	4	12	10	15	31	2	0	31	15.36	16.11	NO	NO	2.00	2.00
1072	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
1075	U	4	12	4	14	28	2	0	28	3.29	3.13	NO	NO	2.00	2.00
1077	C	4	12	10	14.5	33	2	19.5	31.5	6.97	6.98	NO	NO	2.00	2.00
1081	U	4	12	10	18.4	33	2	0	33	14.59	15.19	NO	NO	2.00	2.00
1082	U	4	12	10	8	24	2	0	24	8.03	7.41	NO	NO	2.00	2.00
1084	U	4	12	10	18.4	33	2	0	33	26.34	26.38	YES	YES	3.69	3.69
1087	U	4	8	10	3	18	2	0	13.5	6.6	5.64	YES	YES	2.76	2.76
1111	C	2	6	5	4.2	12	2	9	10.5	7.39	7.39	YES	YES	1.84	1.84
1113	U	2	6	5	3.2	19.5	2	0	19.5	9.81	9.8	YES	YES	1.84	1.84
1134	C	2	8	5.8	7	16	2	10.25	16.2	6.68	6.67	NO	NO	1.00	1.00
1137	U	2	8	4.7	7.6	13	1.9	0	13	6.13	6.13	NO	NO	1.00	1.00
1145	U	2	8	9.8	7	20	2	0	20	7.21	7.31	NO	NO	1.00	1.00
1149	C	4	8	4.6	6.5	15	0.97	10	13	7.78	7.74	YES	YES	2.76	2.76
1152	U	2	8	4.8	3	10.2	2	0	10.2	7.14	7.08	YES	YES	2.35	2.35
1153	C	4	8	4.8	4	12	-0.2	9	10.5	6.9	6.73	YES	YES	2.76	2.76
1155	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
1177	C	2	10	15	5	25	2	9.5	20	7.18	7.18	YES	YES	2.86	2.86
1182	C	2	8	5	6	13.5	2	10.5	11	6.35	6.35	NO	NO	1.00	1.00
1204	C	2	8	5	12	19	0	14	19	7.42	7.42	NO	NO	1.00	1.00
1215	U	2	8	5	7	15.1	1.7	0	15.1	8.73	8.74	YES	YES	2.35	2.35
1220	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
1227	C	2	8	4.8	5.5	12	0.2	8	11	5.83	5.82	YES	YES	2.35	2.35
1241	C	2	8	4.8	7.5	15.5	2	8.2	13.5	5.64	5.64	NO	NO	1.00	1.00
1263	U	2	8	5	6.5	13.5	2	0	13.5	10.59	10.61	YES	YES	2.35	2.35
1277	U	2	8	5	3	9	2.1	4.75	9	6.64	6.89	YES	YES	2.35	2.35
1279	U	4	8	4.8	8	14.4	2	0	14.4	6.43	7.79	NO	NO	2.00	2.00
1283	U	2	8	4.8	3	10.5	1.8	0	10.5	7.28	7.28	YES	YES	2.35	2.35
1293	C	2	8	5	5	12	2.1	7.5	11.5	6.14	6.13	NO	NO	1.00	1.00
1299	U	2	8	5	12.8	17.6	2.2	0	17.6	8.13	9.66	NO	NO	1.00	1.00
1301	U	2	8	5	5.5	12	2	0	12	6.68	5.97	NO	NO	1.00	1.00
1304	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
1317	U	2	8	5	12.2	20	0.1	0	20	6.93	7.81	NO	NO	1.00	1.00
1324	U	2	8	8.5	3	13.5	-0.2	0	13.5	8.49	NT	YES	NO	2.35	1.00
1332	C	2	8	4.8	13	20	2	16.3	19	8.65	8.65	NO	NO	1.00	1.00
1336	C	2	8	13	5	20.7	2	8	19.5	7.95	7.95	YES	YES	2.35	2.35
1338	C	2	8	5	3	10.5	2	5	9.75	6.29	6.29	YES	YES	2.35	2.35
1346	C	2	8	4.7	11.5	20	0.3	15	20	10.08	10.08	NO	NO	1.00	1.00
1351	C	2	8	7	11	20	2	15	20	11.85	11.85	NO	NO	1.00	1.00
1420	C	4	10	9.7	8	20	0.2	10.5	19.6	6.45	6.53	NO	NO	2.00	2.00
1444	U	2	8	10	6.7	15	2	0	15	7.94	8.08	NO	NO	1.00	1.00
1508	U	2	8	5	4	13.5	2	0	13.5	7.07	7.07	YES	YES	2.35	2.35
1509	U	2	8	15	3	20	2	0	20	6.17	7.03	YES	YES	2.35	2.35
1514	U	2	8	10	2.5	13.5	2	0	13.5	7.31	7.24	YES	YES	2.35	2.35
1606	U	4	10	10	7	20	0.1	0	20	7.86	7.51	YES	YES	3.21	3.21
1608	C	4	10	10	6	20	-0.1	11	20	7.75	7.55	YES	YES	3.21	3.21

Table 1 - CRU-5 Boring Log Information and Field Data

11-Oct-93

Well ID	Aquifer Type	Diameter of Casing (in)	Diameter of Boring (in)	Installed Screen Length (ft)	Depth to Top of Sand Pack BGS (ft)	Depth to Bottom of Sand Pack BGS (ft)	Riser Piping Height AGS (ft)	Depth to Bottom of Upper Aquitard BGS (ft)	Depth to Top of Lower Aquitard BGS (ft)	Depth to Water Rising Head TOC (ft)	Depth to Water Falling Head TOC (ft)	Head Rising in Sand Pack Rising Head (Y/N)	Head Rising in Sand Pack Falling Head (Y/N)	Effective Radius of Casing Rising Head (in)	Effective Radius of Casing Falling Head (in)
1676	U	2	8	10	9.25	20	2	0	20	10.66	11.45	NO	YES	1.00	2.35
1728	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
1733	C	4	10	3	23	30	2	28	33	23.56	22.2	NO	NO	2.00	2.00
1754	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
1778	U	4	10	10	6	20	-0.1	0	20	9.35	9.5	YES	YES	3.21	3.21
1785	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
1836	U	4	8	7	6	16.5	2	0	15.16	8.42	8.44	YES	YES	2.76	2.76
1843	U	2	8	2	15.5	20	2	0	20	8.6	8.81	NO	NO	1.00	1.00

AGS - Above ground surface
BGS - Below ground surface
TOC - Top of Casing
C - Confined Aquifer
U - Unconfined Aquifer

Formulas:

Effective Radius = ((1 - Porosity) * Radius of Casing^2 + Porosity * Radius of Well^2)^1/2

Constants:

Porosity	0.30

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Table 2 – CRU-5 Calculated Initial Drawdown

	Well ID	Slug Diameter (in)	Slug Length (ft)	Slug Volume (ft^3)	Calculated Initial Drawdown Rising Head (ft)	Calculated Initial Drawdown Falling Head (ft)
	1019	NT	NT	NT	NT	NT
	1020	2.375	3.2	0.10	1.13	1.13
	1024	2.375	5	0.15	1.76	1.76
	1029	2.375	3.95	0.12	0.41	0.41
	1033	2.375	3.78	0.12	0.39	0.39
	1045	NT	NT	NT	NT	NT
	1047	2.375	5	0.15	0.52	0.52
	1064	1.3115	7	0.07	0.75	0.75
	1072	NT	NT	NT	NT	NT
	1075	2.375	3	0.09	1.06	1.06
	1077	2.375	3.03	0.09	1.07	1.07
	1081	2.375	3.06	0.09	1.08	1.08
	1082	2.375	3.06	0.09	1.08	1.08
	1084	BD	BD	BD	BD	BD
	1087	2.375	3.06	0.09	0.57	0.57
	1111	1.375	2	0.02	0.28	0.28
	1113	1.375	2	0.02	0.28	0.28
	1134	1.375	4	0.04	1.89	1.89
	1137	1.375	6.06	0.06	2.86	2.86
	1145	2.375	3.03	0.09	4.27	4.27
	1149	1.375	2	0.02	0.12	0.12
	1152	2.375	3.03	0.09	0.78	0.78
	1153	2.375	3.03	0.09	0.56	0.56
	1155	NT	NT	NT	NT	NT
	1177	1.375	5	0.05	0.29	0.29
	1182	1.375	5.06	0.05	2.39	2.39
	1204	1.375	5.06	0.05	2.39	2.39
	1215	1.375	5.06	0.05	0.43	0.43
	1220	NT	NT	NT	NT	NT
	1227	1.375	3.08	0.03	0.26	0.26
	1241	1.375	5.02	0.05	2.37	2.37
	1263	1.375	3	0.03	0.26	0.26
	1277	1.375	5	0.05	0.43	0.43
	1279	1.375	5.02	0.05	0.59	0.59
	1283	1.375	3	0.03	0.26	0.26
	1293	1.375	5	0.05	2.36	2.36
	1299	1.375	5	0.05	2.36	2.36
	1301	1.375	5	0.05	2.36	2.36
	1304	NT	NT	NT	NT	NT
	1317	1.375	5	0.05	2.36	2.36
	1324	BD	BD	BD	BD	BD
	1332	1.375	4	0.04	1.89	1.89
	1336	1.375	5	0.05	0.43	0.43
	1338	1.375	4	0.04	0.34	0.34
	1346	2.375	4	0.12	5.64	5.64
	1351	1.375	4	0.04	1.89	1.89
	1420	2.375	3.06	0.09	1.08	1.08
	1444	1.375	5	0.05	2.36	2.36
	1508	1.375	5	0.05	0.43	0.43
	1509	1.375	5	0.05	0.43	0.43
	1514	1.375	5	0.05	0.43	0.43
	1606	2.375	3.06	0.09	0.42	0.42
	1608	2.375	3.06	0.09	0.42	0.42

Table 2 – CRU–5 Calculated Initial Drawdown

	Well ID	Slug Diameter (in)	Slug Length (ft)	Slug Volume (ft^3)	Calculated Initial Drawdown Rising Head (ft)	Calculated Initial Drawdown Falling Head (ft)
	1676	1.375	5	0.05	2.36	0.43
	1728	NT	NT	NT	NT	NT
	1733	2.375	5	0.15	1.76	1.76
	1754	NT	NT	NT	NT	NT
	1778	2.375	3.02	0.09	0.41	0.41
	1785	NT	NT	NT	NT	NT
	1836	2.375	3.95	0.12	0.73	0.73
	1843	1.375	5	0.05	2.36	2.36

Formulas:

Slug Volume = PI * Raduis^2 * Height

NT – Not Tested
BD – Bail Down Test
NF – FADL Form Not Available

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Table 3 – CRU-5 Rising Head Test Computer Input Summary

Confined Solution

Aquifer Type	Well ID	Calculated Initial Drawdown (ft)	Radius of Casing (ft)	Radius of Well (ft)	Saturated Thickness (ft)	Effective Screen Length (ft)	Static Height in Well (ft)
NT	1019	NT	NT	NT	NT	NT	NT
U	1020	1.13	0.17	0.42	11	6	7.29
C	1024	1.76	0.17	0.42	7.1	7.1	16.77
U	1029	0.41	0.31	0.50	31	14.8	9.69
C	1033	0.39	0.31	0.50	5.5	5.5	10.69
NT	1045	NT	NT	NT	NT	NT	NT
U	1047	0.52	0.31	0.50	17.4	12.4	9.95
U	1064	0.75	0.17	0.50	31	16	17.64
NT	1072	NT	NT	NT	NT	NT	NT
U	1075	1.06	0.17	0.50	28	14	26.71
C	1077	1.07	0.17	0.50	12	12	26.53
U	1081	1.08	0.17	0.50	33	14.6	20.41
U	1082	1.08	0.17	0.50	24	16	17.97
U	1084	BD	0.31	0.50	33	14.6	8.66
U	1087	0.57	0.23	0.33	13.5	10.5	8.9
C	1111	0.28	0.15	0.25	1.5	1.5	5.11
U	1113	0.28	0.15	0.25	19.5	16.3	11.69
C	1134	1.89	0.08	0.33	5.95	5.75	11.32
U	1137	2.86	0.08	0.33	13	5.4	8.77
U	1145	4.27	0.08	0.33	20	13	14.79
C	1149	0.12	0.23	0.33	3	3	6.19
U	1152	0.78	0.20	0.33	10.2	7.2	5.06
C	1153	0.56	0.23	0.33	1.5	1.5	3.4
NT	1155	NT	NT	NT	NT	NT	NT
C	1177	0.29	0.24	0.42	10.5	10.5	14.82
C	1182	2.39	0.08	0.33	0.5	0.5	6.65
C	1204	2.39	0.08	0.33	5	5	11.58
U	1215	0.43	0.20	0.33	15.1	8.1	8.07
NT	1220	NT	NT	NT	NT	NT	NT
C	1227	0.26	0.20	0.33	3	3	5.37
C	1241	2.37	0.08	0.33	5.3	5.3	9.86
U	1263	0.26	0.20	0.33	13.5	7	4.91
U	1277	0.43	0.20	0.33	4.25	4.25	4.46
U	1279	0.59	0.17	0.33	14.4	6.4	9.97
U	1283	0.26	0.20	0.33	10.5	7.5	5.02
C	1293	2.36	0.08	0.33	4	4	7.46
U	1299	2.36	0.08	0.33	17.6	4.8	11.67
U	1301	2.36	0.08	0.33	12	6.5	7.32
NT	1304	NT	NT	NT	NT	NT	NT
U	1317	2.36	0.08	0.33	20	7.8	13.17
U	1324	BD	0.20	0.33	13.5	10.5	4.81
C	1332	1.89	0.08	0.33	2.7	2.7	12.35
C	1336	0.43	0.20	0.33	11.5	11.5	13.55
C	1338	0.34	0.20	0.33	4.75	4.75	5.46
C	1346	5.64	0.08	0.33	5	5	10.22
C	1351	1.89	0.08	0.33	5	5	10.15
C	1420	1.08	0.17	0.42	9.1	9.1	13.35
U	1444	2.36	0.08	0.33	15	8.3	9.06
U	1508	0.43	0.20	0.33	13.5	9.5	8.43
U	1509	0.43	0.20	0.33	20	17	15.83
U	1514	0.43	0.20	0.33	13.5	11	8.19
U	1606	0.42	0.27	0.42	20	13	12.24
C	1608	0.42	0.27	0.42	9	9	12.15

Unconfined Solution

Aquifer Type	Well ID	Calculated Initial Drawdown (ft)	Radius of Casing (ft)	Radius of Well (ft)	Saturated Thickness (ft)	Effective Screen Length (ft)	Static Height in Well (ft)
NT	1019	NT	NT	NT	NT	NT	NT
U	1020	1.13	0.17	0.42	7.29	6	7.29
C	1024	1.76	0.17	0.42	16.77	10.3	16.77
U	1029	0.41	0.31	0.50	9.69	9.69	9.69
C	1033	0.39	0.31	0.50	10.69	10.69	10.69
NT	1045	NT	NT	NT	NT	NT	NT
U	1047	0.52	0.31	0.50	9.95	9.95	9.95
U	1064	0.75	0.17	0.50	17.64	16	17.64
NT	1072	NT	NT	NT	NT	NT	NT
U	1075	1.06	0.17	0.50	26.71	14	26.71
C	1077	1.07	0.17	0.50	26.53	17	26.53
U	1081	1.08	0.17	0.50	20.41	14.6	20.41
U	1082	1.08	0.17	0.50	17.97	16	17.97
U	1084	BD	0.31	0.50	8.66	8.66	8.66
U	1087	0.57	0.23	0.33	8.9	8.9	8.9
C	1111	0.28	0.15	0.25	5.11	5.11	5.11
U	1113	0.28	0.15	0.25	11.69	11.69	11.69
C	1134	1.89	0.08	0.33	11.32	9	11.32
U	1137	2.86	0.08	0.33	8.77	5.4	8.77
U	1145	4.27	0.08	0.33	14.79	13	14.79
C	1149	0.12	0.23	0.33	6.19	6.19	6.19
U	1152	0.78	0.20	0.33	5.06	5.06	5.06
C	1153	0.56	0.23	0.33	3.4	3.4	3.4
NT	1155	NT	NT	NT	NT	NT	NT
C	1177	0.29	0.24	0.42	14.82	14.82	14.82
C	1182	2.39	0.08	0.33	6.65	5	6.65
C	1204	2.39	0.08	0.33	11.58	7	11.58
U	1215	0.43	0.20	0.33	8.07	8.07	8.07
NT	1220	NT	NT	NT	NT	NT	NT
C	1227	0.26	0.20	0.33	5.37	5.37	5.37
C	1241	2.37	0.08	0.33	9.86	6	9.86
U	1263	0.26	0.20	0.33	4.91	4.91	4.91
U	1277	0.43	0.20	0.33	4.46	4.46	4.46
U	1279	0.59	0.17	0.33	9.97	6.4	9.97
U	1283	0.26	0.20	0.33	5.02	5.02	5.02
C	1293	2.36	0.08	0.33	7.46	6.5	7.46
U	1299	2.36	0.08	0.33	11.67	4.8	11.67
U	1301	2.36	0.08	0.33	7.32	6.5	7.32
NT	1304	NT	NT	NT	NT	NT	NT
U	1317	2.36	0.08	0.33	13.17	7.8	13.17
U	1324	BD	0.20	0.33	4.81	4.81	4.81
C	1332	1.89	0.08	0.33	12.35	6	12.35
C	1336	0.43	0.20	0.33	13.55	13.55	13.55
C	1338	0.34	0.20	0.33	5.46	5.46	5.46
C	1346	5.64	0.08	0.33	10.22	8.5	10.22
C	1351	1.89	0.08	0.33	10.15	9	10.15
C	1420	1.08	0.17	0.42	13.35	11.6	13.35
U	1444	2.36	0.08	0.33	9.06	8.3	9.06
U	1508	0.43	0.20	0.33	8.43	8.43	8.43
U	1509	0.43	0.20	0.33	15.83	15.83	15.83
U	1514	0.43	0.20	0.33	8.19	8.19	8.19
U	1606	0.42	0.27	0.42	12.24	12.24	12.24
C	1608	0.42	0.27	0.42	12.15	12.15	12.15
C	1675	0.43	0.20	0.33	3.89	3.89	3.89

Table 3 – CRU-5 Rising Head Test Computer Input Summary

Confined Solution

Aquifer Type	Well ID	Calculated Initial Drawdown (ft)	Radius of Casing (ft)	Radius of Well (ft)	Saturated Thickness (ft)	Effective Screen Length (ft)	Static Height in Well (ft)
U	1676	2.36	0.08	0.33	20	10.75	11.34
NT	1728	NT	NT	NT	NT	NT	NT
C	1733	1.76	0.17	0.42	5	2	8.44
NT	1754	NT	NT	NT	NT	NT	NT
U	1778	0.41	0.27	0.42	20	14	10.55
NT	1785	NT	NT	NT	NT	NT	NT
U	1836	0.73	0.23	0.33	15.16	9.16	8.74
U	1843	2.36	0.08	0.33	20	4.5	13.4

Unconfined Solution

Aquifer Type	Well ID	Calculated Initial Drawdown (ft)	Radius of Casing (ft)	Radius of Well (ft)	Saturated Thickness (ft)	Effective Screen Length (ft)	Static Height in Well (ft)
U	1676	2.36	0.08	0.33	11.34	10.75	11.34
NT	1728	NT	NT	NT	NT	NT	NT
C	1733	1.76	0.17	0.42	11.44	7	8.44
NT	1754	NT	NT	NT	NT	NT	NT
U	1778	0.41	0.27	0.42	10.55	10.55	10.55
NT	1785	NT	NT	NT	NT	NT	NT
U	1836	0.73	0.23	0.33	8.74	8.74	8.74
U	1843	2.36	0.08	0.33	13.4	4.5	13.4

000246

Table 4 – CRU-5 Falling Head Test Computer Input Summary

Confined Solution

Aquifer Type	Well ID	Calculated Initial Drawdown (ft)	Radius of Casing (ft)	Radius of Well (ft)	Saturated Thickness (ft)	Effective Screen Length (ft)	Static Height in Well (ft)
NT	1019	NT	NT	NT	NT	NT	NT
U	1020	1.13	0.17	0.42	11	6	7.28
C	1024	1.76	0.17	0.42	7.1	7.1	16.77
U	1029	0.41	0.31	0.50	31	14.8	9.28
C	1033	0.39	0.31	0.50	5.5	5.5	10.69
NT	1045	NT	NT	NT	NT	NT	NT
U	1047	0.52	0.31	0.50	17.4	12.4	10.63
U	1064	0.75	0.17	0.50	31	16	16.89
NT	1072	NT	NT	NT	NT	NT	NT
U	1075	1.06	0.17	0.50	28	14	26.87
C	1077	1.07	0.17	0.50	12	12	26.52
U	1081	1.08	0.17	0.50	33	14.6	19.81
U	1082	1.08	0.17	0.50	24	16	18.59
U	1084	BD	0.31	0.50	33	14.6	8.62
U	1087	0.57	0.23	0.33	13.5	10.5	9.86
C	1111	0.28	0.15	0.25	1.5	1.5	5.11
U	1113	0.28	0.15	0.25	19.5	16.3	11.7
C	1134	1.89	0.08	0.33	5.95	5.75	11.33
U	1137	2.86	0.08	0.33	13	5.4	8.77
U	1145	4.27	0.08	0.33	20	13	14.69
C	1149	0.12	0.23	0.33	3	3	6.23
U	1152	0.78	0.20	0.33	10.2	7.2	5.12
C	1153	0.56	0.23	0.33	1.5	1.5	3.57
NT	1155	NT	NT	NT	NT	NT	NT
C	1177	0.29	0.24	0.42	10.5	10.5	14.82
C	1182	2.39	0.08	0.33	0.5	0.5	6.65
C	1204	2.39	0.08	0.33	5	5	11.58
U	1215	0.43	0.20	0.33	15.1	8.1	8.06
NT	1220	NT	NT	NT	NT	NT	NT
C	1227	0.26	0.20	0.33	3	3	5.38
C	1241	2.37	0.08	0.33	5.3	5.3	9.86
U	1263	0.26	0.20	0.33	13.5	7	4.89
U	1277	0.43	0.20	0.33	4.25	4.25	4.21
U	1279	0.59	0.17	0.33	14.4	6.4	8.61
U	1283	0.26	0.20	0.33	10.5	7.5	5.02
C	1293	2.36	0.08	0.33	4	4	7.47
U	1299	2.36	0.08	0.33	17.6	4.8	10.14
U	1301	2.36	0.08	0.33	12	6.5	8.03
NT	1304	NT	NT	NT	NT	NT	NT
U	1317	2.36	0.08	0.33	20	7.8	12.29
U	1324	BD	0.08	0.33	13.5	10.5	13.3
C	1332	1.89	0.08	0.33	2.7	2.7	12.35
C	1336	0.43	0.20	0.33	11.5	11.5	13.55
C	1338	0.34	0.20	0.33	4.75	4.75	5.46
C	1346	5.64	0.08	0.33	5	5	10.22
C	1351	1.89	0.08	0.33	5	5	10.15
C	1420	1.08	0.17	0.42	9.1	9.1	13.27
U	1444	2.36	0.08	0.33	15	8.3	8.92
U	1508	0.43	0.20	0.33	13.5	9.5	8.43
U	1509	0.43	0.20	0.33	20	17	14.97
U	1514	0.43	0.20	0.33	13.5	11	8.26
U	1606	0.42	0.27	0.42	20	13	12.59
C	1608	0.42	0.27	0.42	9	9	12.35

Unconfined Solution

Aquifer Type	Well ID	Calculated Initial Drawdown (ft)	Radius of Casing (ft)	Radius of Well (ft)	Saturated Thickness (ft)	Effective Screen Length (ft)	Static Height in Well (ft)
NT	1019	NT	NT	NT	NT	NT	NT
U	1020	1.13	0.17	0.42	7.28	6	7.28
C	1024	1.76	0.17	0.42	16.77	10.3	16.77
U	1029	0.41	0.31	0.50	9.28	9.28	9.28
C	1033	0.39	0.31	0.50	10.69	10.69	10.69
NT	1045	NT	NT	NT	NT	NT	NT
U	1047	0.52	0.31	0.50	10.63	10.63	10.63
U	1064	0.75	0.17	0.50	16.89	16	16.89
NT	1072	NT	NT	NT	NT	NT	NT
U	1075	1.06	0.17	0.50	26.87	14	26.87
C	1077	1.07	0.17	0.50	26.52	17	26.52
U	1081	1.08	0.17	0.50	19.81	14.6	19.81
U	1082	1.08	0.17	0.50	18.59	16	18.59
U	1084	BD	0.31	0.50	8.62	8.62	8.62
U	1087	0.57	0.23	0.33	9.86	9.86	9.86
C	1111	0.28	0.15	0.25	5.11	5.11	5.11
U	1113	0.28	0.15	0.25	11.7	11.7	11.7
C	1134	1.89	0.08	0.33	11.33	9	11.33
U	1137	2.86	0.08	0.33	8.77	5.4	8.77
U	1145	4.27	0.08	0.33	14.69	13	14.69
C	1149	0.12	0.23	0.33	6.23	6.23	6.23
U	1152	0.78	0.20	0.33	5.12	5.12	5.12
C	1153	0.56	0.23	0.33	3.57	3.57	3.57
NT	1155	NT	NT	NT	NT	NT	NT
C	1177	0.29	0.24	0.42	14.82	14.82	14.82
C	1182	2.39	0.08	0.33	6.65	5	6.65
C	1204	2.39	0.08	0.33	11.58	7	11.58
U	1215	0.43	0.20	0.33	8.06	8.06	8.06
NT	1220	NT	NT	NT	NT	NT	NT
C	1227	0.26	0.20	0.33	5.38	5.38	5.38
C	1241	2.37	0.08	0.33	9.86	6	9.86
U	1263	0.26	0.20	0.33	4.89	4.89	4.89
U	1277	0.43	0.20	0.33	4.21	4.21	4.21
U	1279	0.59	0.17	0.33	8.61	6.4	8.61
U	1283	0.26	0.20	0.33	5.02	5.02	5.02
C	1293	2.36	0.08	0.33	7.47	6.5	7.47
U	1299	2.36	0.08	0.33	10.14	4.8	10.14
U	1301	2.36	0.08	0.33	8.03	6.5	8.03
NT	1304	NT					
U	1317	2.36	0.08	0.33	12.29	7.8	12.29
U	1324	NT	NT	NT	NT	NT	NT
C	1332	1.89	0.08	0.33	12.35	6	12.35
C	1336	0.43	0.20	0.33	13.55	13.55	13.55
C	1338	0.34	0.20	0.33	5.46	5.46	5.46
C	1346	5.64	0.08	0.33	10.22	8.5	10.22
C	1351	1.89	0.08	0.33	10.15	9	10.15
C	1420	1.08	0.17	0.42	13.27	11.6	13.27
U	1444	2.36	0.08	0.33	8.92	8.3	8.92
U	1508	0.43	0.20	0.33	8.43	8.43	8.43
U	1509	0.43	0.20	0.33	14.97	14.97	14.97
U	1514	0.43	0.20	0.33	8.26	8.26	8.26
U	1606	0.42	0.27	0.42	12.59	12.59	12.59
C	1608	0.42	0.27	0.42	12.35	12.35	12.35
C	1675	0.43	0.20	0.33	2.92	2.92	2.92

Table 4 – CRU–5 Falling Head Test Computer Input Summary

Confined Solution

Aquifer Type	Well ID	Calculated Initial Drawdown (ft)	Radius of Casing (ft)	Radius of Well (ft)	Saturated Thickness (ft)	Effective Screen Length (ft)	Static Height in Well (ft)
U	1676	0.43	0.20	0.33	20	10.75	10.55
NT	1728	NT	NT	NT	NT	NT	NT
C	1733	1.76	0.17	0.42	5	2	9.8
NT	1754	NT	NT	NT	NT	NT	NT
U	1778	0.41	0.27	0.42	20	14	10.4
NT	1785	NT	NT	NT	NT	NT	NT
U	1836	0.73	0.23	0.33	15.16	9.16	8.72
U	1843	2.36	0.08	0.33	20	4.5	13.19

Unconfined Solution

Aquifer Type	Well ID	Calculated Initial Drawdown (ft)	Radius of Casing (ft)	Radius of Well (ft)	Saturated Thickness (ft)	Effective Screen Length (ft)	Static Height in Well (ft)
U	1676	0.43	0.20	0.33	10.55	10.55	10.55
NT	1728	NT	NT	NT	NT	NT	NT
C	1733	1.76	0.17	0.42	12.8	7	9.8
NT	1754	NT	NT	NT	NT	NT	NT
U	1778	0.41	0.27	0.42	10.4	10.4	10.4
NT	1785	NT	NT	NT	NT	NT	NT
U	1836	0.73	0.23	0.33	8.72	8.72	8.72
U	1843	2.36	0.08	0.33	13.19	4.5	13.19

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Table 5 – CRU – 5 Computer Slug Test Results

Well ID	Rising Head Tests: Bouwer – Rice Unconfined Aquifer, Test 1 K (ft/min)	Rising Head Tests: Bouwer – Rice Unconfined Aquifer, Test 2 K (ft/min)	Rising Head Tests: Cooper et al Confined Aquifer, Test 1 T (ft^2/min)	Rising Head Tests: Cooper et al Confined Aquifer, Test 2 T (ft^2/min)	Falling Head Tests: Bouwer – Rice Unconfined Aquifer, Test 1 K (ft/min)	Falling Head Tests: Bouwer – Rice Unconfined Aquifer, Test 2 K (ft/min)	Falling Head Tests: Cooper et al Confined Aquifer, Test 1 T (ft^2/min)	Falling Head Tests: Cooper et al Confined Aquifer, Test 2 T (ft^2/min)
1019					5.5090E-04			
1020	4.8110E-04				8.8750E-04		1.6930E-02	
1024	8.1950E-04		1.3600E-02		9.6031E-05			
1029					2.6860E-03		1.4390E-02	
1033	8.8640E-04		7.6480E-03					
1045					3.1733E-05			
1047	5.2520E-06							
1064	3.0013E-06							
1072					1.3880E-04			
1075	6.6455E-06				4.1630E-02		3.9340E-01	
1077					7.6080E-05			
1081	3.5750E-06				2.6757E-05			
1082	5.7543E-05							
1084	1.1648E-05				6.0517E-06			
1087	9.0210E-07				3.7790E-02		1.9380E-01	
1111	3.3990E-02		2.2500E-01		2.8547E-05			
1113					1.8450E-04		9.9470E-04	
1134	1.0710E-04		1.0160E-03		1.4610E-04			
1137	4.4919E-06				2.4324E-05			
1145	1.0710E-06				4.5070E-04		3.6610E-03	
1149	6.9680E-04		2.2350E-03		4.1000E-04			
1152	5.7350E-04				1.7940E-03		1.1550E-02	
1153	7.5682E-05		5.0550E-04					
1155					9.4390E-03		3.3840E-01	
1177	9.2370E-03		3.0560E-01		9.6460E-03		2.0540E-02	
1182	1.1690E-02		2.3180E-02		6.2440E-04		3.1360E-03	
1204	2.3380E-04		1.9110E-03		3.2920E-04			
1215	1.9110E-04							
1220					6.5440E-03		2.9610E-01	
1227	1.0350E-02		1.2460E-01		3.1270E-04		1.6060E-03	
1241	3.7936E-05		1.7560E-04		4.3810E-04			
1263	3.7590E-04				2.0700E-04			
1277					5.0721E-05			
1279					1.6620E-04			
1283	1.3450E-04				1.0470E-04		5.7600E-04	
1293	9.5149E-05		4.5690E-04		8.6554E-07			
1299	1.7155E-06				1.5433E-06			
1301	3.4197E-07							
1304							4.6250E-06	
1317	4.6962E-06							
1324	4.3630E-03				2.2280E-03		1.9090E-02	
1332	1.7570E-03		1.9210E-02		5.4610E-03		4.8980E-01	
1336	1.3700E-02		5.3700E-01		2.7620E-03		6.7690E-02	
1338	4.7400E-04		1.1920E-02		1.8270E-04		2.4430E-03	
1346	2.1020E-04		2.1620E-03		5.3520E-03		9.1940E-02	
1351	5.7850E-03		1.1180E-01		6.5710E-03		2.0650E-01	
1420	6.9270E-03		1.9060E-01		1.8727E-06			
1444	9.9065E-07				1.5230E-04			
1508	1.8550E-04				3.1192E-05			
1509					3.5160E-05			
1514	4.5413E-05				1.6040E-04			
1606	1.4635E-05				4.6730E-03		4.7620E-02	
1608	3.3770E-03							

Table 5 – CRU – 5 Computer Slug Test Results

Well ID	Rising Head Tests: Bouwer-Rice Unconfined Aquifer		Rising Head Tests: Cooper et al Confined Aquifer		Falling Head Tests: Bouwer-Rice Unconfined Aquifer		Falling Head Tests: Cooper et al Confined Aquifer	
	Test 1 K (ft/min)	Test 2 K (ft/min)	Test 1 T (ft^2/min)	Test 2 T (ft^2/min)	Test 1 K (ft/min)	Test 2 K (ft/min)	Test 1 T (ft^2/min)	Test 2 T (ft^2/min)
1676	1.3066E-05				5.3715E-05			
1728								
1733					1.1570E-04		1.5710E-03	
1754								
1778					2.2210E-04			
1785								
1836	3.4501E-05				5.8960E-04			
1843	5.1662E-06				4.5258E-06			

C – Confined Aquifer
U – Unconfined Aquifer
NT – Well Not Tested or Data Not Available
NA – Analysis Not Required
NV – Data Eratic or Not Valid for Analysis

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Table 6 – CRU-5 Slug Test Results by Well Number

Well ID	Material Type	Material Color	Dominant Material Description	Aquifer Type	Head Rising in Sand Pack	Rising Head Tests: Bouwer-Rice K (ft/day)	Rising Head Tests: Cooper et al K (ft/day)	Head Falling in Sand Pack	Falling Head Tests: Bouwer-Rice K (ft/day)	Falling Head Tests: Cooper et al K (ft/day)
1019	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
1020	Clay	Brown	Olive brown silty clay	U	NO	6.9278E-01	NA	NO	7.9330E-01	NA
1024	Gravel	Grey	Olive grey fine to coarse sand and gravel	C	NO	1.1801E+00	2.7583E+00	NO	1.2780E+00	3.4337E+00
1029	Clay	Grey	Olive grey gravelly clay	U	YES	NV	NA	YES	1.3828E-01	NA
1033	Sand	Grey	Grey silty sand	C	YES	1.2764E+00	2.0024E+00	YES	3.8678E+00	3.7676E+00
1045	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
1047	Clay	Grey	Grey sandy clay some silt and gravel	U	YES	7.5629E-03	NA	YES	4.5696E-02	NA
1064	Clay	Grey	Silty grey gravelly clay some silt	U	NO	4.3219E-03	NA	NO		NA
1072	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
1075	Clay	Brown	Olive brown clay some silt some gravel	U	NO	9.5695E-03	NA	NO	1.9987E-01	NA
1077	Gravel	Grey	Grey well graded gravel with sand	C	NO	NV	NV	NO	5.9947E+01	4.7208E+01
1081	Clay	Brown	greyish brown clay some gravel silt and sand	U	NO	5.1480E-03	NA	NO	1.0956E-01	NA
1082	Clay	Brown	Yellowish brown clay some silt trace gravel and sand	U	NO	8.2862E-02	NA	NO	3.8530E-02	NA
1084	Clay	Grey	Olive grey clay some gravel and sand trace silt	U	YES	1.6773E-02	NA	YES		NA
1087	Silt	Brown	Brown silt trace gravel	U	YES	1.2990E-03	NA	YES	8.7144E-03	NA
1111	Gravel	Brown	Brown clayey gravel some sand	C	YES	4.8946E+01	2.1600E+02	YES	5.4418E+01	1.8605E+02
1113	Clay	Grey	Brownish grey clay some sand	U	YES	NV	NA	YES	4.1108E-02	NA
1134	Sand	Brown	Brownish yellow fine sand	C	NO	1.5422E-01	2.4589E-01	NO	2.6568E-01	2.4073E-01
1137	Clay	Brown	Brownish yellow clay	U	NO	2.1038E-01	NA	NO	2.1038E-01	NA
1145	Clay	Brown	Brownish yellow clay	U	NO	1.5422E-03	NA	NO	3.5027E-02	NA
1149	Silt	Grey	Yellowish brown clayey silt and sand	C	YES	1.0034E+00	1.0728E+00	YES	6.4901E-01	1.7573E+00
1152	Clay	Brown	Yellowish brown silty clay	U	YES	8.2584E-01	NA	YES	5.9040E-01	NA
1153	Silt	Brown	Interbedded brown clay sand and silt	C	YES	1.0898E-01	4.8528E-01	YES	2.5834E+00	1.1088E+01
1155	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
1177	Sand	Brown	Brown sand trace gravel	C	YES	1.3301E+01	4.1911E+01	YES	1.3592E+01	4.6409E+01
1182	Gravel	Brown	Light olive brown clayey gravel	C	NO	1.6834E+01	6.6758E+01	NO	1.3890E+01	5.9155E+01
1204	Silt	Brown	Olive brown clayey silt	C	NO	3.3667E-01	5.5037E-01	NO	8.9914E-01	9.0317E-01
1215	Clay	Brown	Olive brown silty clay	U	YES	2.7518E-01	NA	YES	4.7405E-01	NA
1220	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
1227	Sand	Brown	Brownish yellow silty sand	C	YES	1.4904E+01	5.9808E+01	YES	9.4234E+00	1.4213E+02
1241	Sand	Brown	Brownish yellow silty sand	C	NO	5.4628E-02	4.7710E-02	NO	4.5029E-01	4.3635E-01
1263	Silt	Brown	Olive brown clayey silt trace sand	U	YES	5.4130E-01	NA	YES	6.3086E-01	NA
1277	Sand	Brown	Yellow brown sand trace gravel and clay	U	YES	NV	NA	YES	2.9808E-01	NA
1279	Clay	Brown	Yellowish brown silty clay some gravel	U	NO	NV	NA	NO	7.3038E-02	NA
1283	Clay	Brown	Grey to yellowish brown silty clay	U	YES	1.9368E-01	NA	YES	2.3933E-01	NA
1293	Sand	Brown	Yellowish brown clayey sand some gravel	C	NO	1.3701E-01	1.6448E-01	NO	1.5077E-01	2.0736E-01
1299	Clay	Grey	Grey clay trace sand and gravel	U	NO	2.4703E-03	NA	NO	1.2464E-03	NA
1301	Clay	Grey	Grey silty gravelly clay	U	NO	4.9244E-04	NA	NO	2.2224E-03	NA
1304	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
1317	Clay	Grey	Dark grey clay little gravel and sand	U	NO	6.7625E-03	NA	NO	NV	NA
1324	Clay	Grey	Dark grey clay little gravel trace sand	U	YES	6.2827E+00	NA	NO	NV	NA
1332	Sand	Grey	Olive grey silt and sand	C	NO	2.5301E+00	1.0245E+01	NO	3.2083E+00	1.0181E+01
1336	Sand	Brown	Brown well graded sand trace gravel	C	YES	1.9728E+01	6.7242E+01	YES	7.8638E+00	6.1331E+01
1338	Sand	Brown	Brown pooly graded sand trace gravel	C	YES	6.8256E-01	3.6136E+00	YES	3.9773E+00	2.0521E+01
1346	Silt	Brown	Light brown silt and sand	C	NO	3.0269E-01	6.2266E-01	NO	2.6309E-01	7.0358E-01
1351	Sand	Brown	Brown sand-silt mixture	C	NO	8.3304E+00	3.2198E+01	NO	7.7069E+00	2.6479E+01
1420	Sand	Brown	Olive brown silty sand	C	NO	9.9749E+00	3.0161E+01	NO	9.4622E+00	3.2677E+01
1444	Clay	Brown	Light olive brown silty clay trace gravel	U	NO	1.4265E-03	NA	NO	2.6967E-03	NA
1508	Clay	Brown	Light olive brown sandy clay	U	YES	2.6712E-01	NA	YES	2.1931E-01	NA
1509	Clay	Brown	Light olive brown silty clay	U	YES	NV	NA	YES	4.4916E-02	NA
1514	Clay	Brown	Light olive brown silty clay	U	YES	6.5395E-02	NA	YES	5.0630E-02	NA
1606	Clay	Grey	Grey to yellow brown silty clay	U	YES	2.1074E-02	NA	YES	2.3098E-01	NA
1608	Silt	Grey	Grey clayey silt trace gravel	C	YES	4.8629E+00	NV	YES	6.7291E+00	7.6192E+00
[illegible]	Gravel	Brown	Yellow brown clayey gravel	C	YES	3.9686E+01	4.5605E+01	YES	2.2753E-02	NV

Table 6 – CRU-5 Slug Test Results by Well Number

Well ID	Material Type	Material Color	Dominant Material Description	Aquifer Type	Rising Head Tests: Head Rising in Sand Pack	Rising Head Tests: Bouwer-Rice K (ft/day)	Rising Head Tests: Cooper et al K (ft/day)	Falling Head Tests: Head Falling in Sand Pack	Falling Head Tests: Bouwer-Rice K (ft/day)	Falling Head Tests: Cooper et al K (ft/day)
1676	Clay	Brown	Greyish brown silty clay trace gravel	U	NO	1.8815E-02	NA	YES	7.7350E-02	NA
1728	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
1733	Silt	Grey	Grey clayey silt with some gravel	C	NO	NV	NV	NO	1.6661E-01	4.5245E-01
1754	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
1778	Clay	Grey	Grey silty clay trace gravel	U	YES	NV	NA	YES	3.1982E-01	NA
1785	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
1836	Silt	Brown	Light olive brown clayey silt with intermitent sand lenses	U	YES	4.9681E-02	NA	YES	8.4902E-01	NA
1843	Clay	Grey	Grey silty clay with sand and gravel	U	NO	7.4393E-03	NA	NO	6.5172E-03	NA

C – Confined Aquifer
U – Unconfined Aquifer
NT – Well Not Tested or Data Not Available
NA – Analysis Not Required
NV – Data Erratic or Not Valid for Analysis

F:\USER\FRD089\AQTESOLV\PO37\SLUG\CRU5\CRU5.WK3

10/11/9

APPENDIX B

PACKER TEST DOCUMENTATION

Appendix B
Packer Test Documentation

CONTENTS

This appendix contains documentation relating to the packer test portion of the Glacial Till and Vadose Zone Hydraulic Investigation as listed below.

B.1 Calculation Package 16-8 . . . . . .

PARSONS
ERA PROJECT

ENGINEERING CALCULATIONS TITLE AND SUMMARY SHEET

Date DECEMBER 8, 1993

Sheet 1 of 6

Proj. Order No. 37 Calculation No. 16-8

Project Title TECHNICAL AND PROJECT MANAGEMENT TO SUPPORT CERCLA/RCRA UNIT 5 (TASK 3)

Calculation Subject PACKER TEST ANALYSIS Date Verified/Checked 1/4/94

STATUS: PRELIMINARY _____ FINAL X SUPERSEDED _____ VOID _____

STATEMENT OF PROBLEM

1. WATER INJECTION PRESSURE AND FLOW RATE DATA WAS RECORDED FOR THREE STEPS OF A CONSTANT HEAD PUMP-IN TEST AT ONE LOCATION IN CONJUNCTION WITH THE GLACIAL TILL/VADOSE ZONE INVESTIGATION. ANALYSIS IS PERFORMED IN THIS CALCULATION FOR BORING, N-1

SUMMARY OF CONCLUSIONS

1 BORING N-1 ; HYDRAULIC CONDUCTIVITY VALUES:
STEP 1 : $K = 1.31 \times 10^{-2}$ FT/DAY (4.62×10^{-6} cm/sec)
STEP 2 : $K = 2.63 \times 10^{-2}$ FT/DAY (9.28×10^{-6} cm/sec)
STEP 3 : $K = 8.76 \times 10^{-3}$ FT/DAY (3.09×10^{-6} cm/sec)

Originator's Signature and Date: DAN VOGEL

CHECKING METHOD

1. Review ✓
2. Alternate Calculation _____

Checker's Signature and Date: PAUL FRINK 1/4/94

Lead Discipline Engineer's Signature and Date: 1/13/94

Rev. No.	Sheet No.	Description	Reviser's Signature/Date	Checker's Signature/Date	Approved by Signature/Date

05/93 ENG080

PARSONS
ERA PROJECT

ENGINEERING CALCULATIONS BASIS SHEET

Revision No. Ø
Sheet 2 of 6

Proj. Order No. 37 Calculation No. 16-8

Project Title TECHNICAL AND PROJECT MANAGEMENT SUPPORT TO: CERCLA/RCRA UNI

Calculation Subject PACKER TEST ANALYSIS Date Verified/Checked 1/4/94

Prepared By: DON VOGEL Checked/Verified By: P. FRINK

Date 12/8/93

SUMMARY OF DATA SOURCES - CODES - ASSUMPTIONS

1. ELECTRONIC PRESSURE TRANSDUCER DATA WAS TAKEN FRO THE DOWN LOADED DATA LOGGER FILES:

2. REFERENCE LIST:

PROCEEDURE FOR CONSTANT HEAD HYDRAULIC CONDUCTIV TESTS IN SINGLE DRILL HOLES, U.S. DEPT. OF INTERIOR, EARTH MANUAL, PART II, 3RD EDITION, DENVER, CO: BUREAU OF RECLAMATION, 1990

GROUNDWATER AND WELLS, DRISCOLL, 1986

GROUNDWATER, FREEZE & CHERRY, 1979.

3. THE FOLLOWING ASSUMPTIONS ARE MADE:

1. THE AQUIFER IS HOMOGENEOUS, ISOTROPIC AND OF UNIFORM THICKNESS
2. THE WELL/TEST INTERVAL FULLY PENETRATES THE AQUIFER AND RECEIVES OR DELIVERS WATER TO THE ENTIRE THICKNESS
3. DISCHARGE IS CONSTANT AND HAS CONTINUED FOR SUFFICIENT DURATION TO REACH STEADY STATE
4. FLOW TO OR FROM THE TEST INTERVAL IS HORIZONTAL RADIAL AND LAMINAR.

REV	DATE	BY	CK	TITLE	PAGE NUMBER 3
Ø	1/4/99	DAV	TG	TECHNICAL AND PROJECT MANAGEMENT SUPPORT OF CPU-5 PACKER TEST ANALYSIS	COST CENTER CPU-5
				AUTHOR D. VOGEL SHEET 1 OF 1	OU PO-37

THE BASIS METHODOLOGY FOR THIS CALCULATION IS AS FOLLOWS:

1. HYDRAULIC CONDUCTIVITY, K VALUES WERE CALCULATED FROM THE CONSTANT RATE TEST USING THE EQUATION:

$$K = \frac{q}{2\pi L H} \ln \frac{L}{r}$$

THIS ANALYTICAL METHOD IS DESCRIBED IN U.S. BUREAU OF RECLAMATION, 7310, 1990

where

r = boring radius (ft)

q = constant head flow rate (FT^3/YR)

L = length of boring (ft)

$H = H_g + H_p$

H_g = gage pressure (ft)

H_p = distance from mid point of isolated interval to pressure gage elevation (ft)

K = hydraulic conductivity (FT/YR)

The above equation is valid where

$$L \geq 10r$$

or $\boxed{\frac{L}{r} \geq 10}$

PARSONS ERA PROJECT CALCULATION SHEET

REV	DATE	BY	CK	TITLE	PAGE NUMBER 4
0	1/4/91	DAV	TK	BORING N-1 PACKER TEST CALCULATION FOR HYDRAULIC CONDUCTIVITY	COST CENTER PO-37
				AUTHOR D. VOGEL SHEET 1 OF 3	OU 5

STEP 1 (12 psi)

HYDRAULIC CONDUCTIVITY, K CAN BE CALCULATED ACCORDING TO THE FOLLOWING RELATION: (USBR 1990)

$$K = \frac{q}{2\pi L H} \ln \frac{L}{r}$$

WHERE:

$q = 0.02$ gpm

$q = (0.02\ \text{gal/min})(0.1336\ \text{ft}^3/\text{gal})$

$= (2.67 \times 10^{-3}\ \text{ft}^3/\text{min})(5.25 \times 10^5\ \text{min/yr})$

$\boxed{q = 1.40 \times 10^3\ \text{ft}^3/\text{yr}}$

$\boxed{L = 5\ \text{ft}}$ = LENGTH OF TESTED INTERVAL

$H_G = 27.10$ ft = GRAVITY HEAD = 7.60 ft + 19.50 ft

$= (27.10\ \text{ft})(0.43\ \text{psi/ft}) = 11.65$ psi

WHERE: 7.60 ft = ELEVATION OF HOSE AND SWIVEL ABOVE GROUND SURFACE

19.50 ft = DEPTH FROM GROUND SURFACE TO MIDPOINT OF TESTED INTER.

H_P = INJECTION PRESSURE

$= 0.35$ psi $= (0.35\ \text{psi})(2.31\ \text{ft/psi})$

$= 0.81$ ft

$H_T = H_G + H_P = \boxed{27.91\ \text{ft}}$ = TOTAL DIFFERENTIAL HEAD

$\boxed{r = 0.25\ \text{ft}}$ = BOREHOLE RADIUS

$$K = \frac{(1.40 \times 10^3\ \text{ft}^3/\text{yr})}{2\pi(5\ \text{ft})(27.91\ \text{ft})} \ln\left[\frac{5\ \text{ft}}{0.25\ \text{ft}}\right] = \boxed{4.78\ \text{ft/yr}}$$

$= \boxed{1.310 \times 10^{-2}\ \text{ft/DAY}}$

$\left(\frac{30.48\ \text{cm}}{\text{ft}}\right)(1.310 \times 10^{-2}\ \frac{\text{ft}}{\text{DAY}})\ \frac{\text{DAY}}{24\ \text{hr}}\ \frac{\text{hr}}{(3600\ \text{sec})} = \boxed{4.62 \times 10^{-6}\ \text{cm/sec}}$

$L \geq 10r$ Check Validity

$\frac{L}{r} = \frac{5}{.25} = 20 \geq 10$

THEREFORE THE RELATION IS VALID FOR ALL THREE STEPS

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PARSONS ERA PROJECT CALCULATION SHEET

REV	DATE	BY	CK	TITLE	PAGE NUMBER 5
Ø	1/4/94	DAJ	[illegible]	BORING N-1 PACKER TEST CALCULATIONS	COST CENTER PO-37
				AUTHOR D. VOGEL SHEET 2 OF 3	OU 5

STEP 2 (15 psi)

$$K = \frac{q}{2\pi L H} \ln \frac{L}{r}$$

WHERE

$q = 0.05$ gpm

$q = (0.05\ \text{gal/min})(0.1336\ \text{ft}^3/\text{gal})$

$= (6.68 \times 10^{-3}\ \text{ft}^3/\text{min})(5.25 \times 10^5\ \text{min/yr})$

$q = 3.51 \times 10^3\ \text{ft}^3/\text{yr}$

$L = 5$ ft

$H_G = 27.1$ ft $= 11.65$ psi

$H_P = 15.00$ psi $- 11.65$ psi $= 3.35$ psi

$(3.35\ \text{psi})(2.31\ \text{ft/psi}) = 7.74$ ft

$H_T = 27.10 + 7.74 = 34.84$ ft $= H_T$

$r = 0.25$ ft

$$K = \frac{(3.51 \times 10^3\ \text{ft}^3/\text{yr})}{2\pi(5\ \text{ft})(34.84\ \text{ft})} \ln\left[\frac{5\ \text{ft}}{0.25\ \text{ft}}\right] = 9.60\ \text{ft/yr}$$

$$\frac{9.60}{365}\ \frac{\text{ft}}{\text{yr}}\ \frac{\text{yr}}{\text{day}} = 2.63 \times 10^{-2}\ \text{ft/day}$$

$$K = \frac{2.63 \times 10^{-2}\ \text{ft/day} \cdot 30.48\ \text{cm/ft}}{24\ \text{hr/day}\ \ 3600\ \text{sec/hr}} = 9.28 \times 10^{-6}\ \text{cm/sec}$$

ENG.021(03/91)

PARSONS ERA PROJECT CALCULATION SHEET

REV	DATE	BY	CK	TITLE	PAGE NUMBER 6
Ø	1/4/94	JNV	TK	BORING N-1 PACKER TEST CALCULATION	COST CENTER PO-37
				AUTHOR D. VOGEL SHEET 3 OF 3	OU 5

STEP 3 (18 psi)

$$K = \frac{q}{2\pi L H} \ln \frac{L}{r}$$

WHERE

$q = 0.02$ GPM $= 1.40 \times 10^{3}$ Ft³/yr

$L = 5$ Ft

$H_G = 27.1$ Ft

$H_P = 18.00$ psi $- 11.65$ psi $= 6.35$ psi

$(6.35 \text{ psi})(2.31 \text{ Ft/psi}) = 14.67$ Ft

$H_T = 27.10$ Ft $+ 14.67$ Ft $= 41.77$ Ft

$r = 0.25$ Ft

$$K = \frac{(1.40 \times 10^{3} \text{ Ft}^3/\text{yr})}{2\pi(5\text{ Ft})(41.77\text{ Ft})} \ln\left[\frac{5\text{ Ft}}{0.25\text{ Ft}}\right] = 3.196 \text{ Ft/yr}$$

$$K = \frac{3.196 \text{ Ft/yr}}{365 \text{ day/yr}} = 8.76 \times 10^{-3} \text{ Ft/day}$$

$$K = \frac{8.76 \times 10^{-3}}{24 \text{ hr/day}} \frac{30.48 \text{ cm/Ft}}{3600 \text{ sec/hr}} = 3.09 \times 10^{-6} \frac{\text{cm}}{\text{sec}}$$

Geometric Mean of three Steps

$$K_{GM} = \sqrt[3]{K_1 \cdot K_2 \cdot K_3} = \left[(4.62 \times 10^{-6})(9.28 \times 10^{-6})(3.09 \times 10^{-6})\right]^{1/3}$$

$$= 5.1 \times 10^{-6} \text{ cm/sec}$$

ENG.021(03/91)

APPENDIX C

YIELD TEST DOCUMENTATION

Appendix C
Yield Test Documentation

CONTENTS

This appendix contains documentation relating to the yield test portion of the Glacial Till and Vadose Zone Hydraulic Investigation as listed below.

C.1 Calculation Package 16-11, Sustainable Yield . . . . . .

PARSONS
ERA PROJECT

ENGINEERING CALCULATIONS TITLE AND SUMMARY SHEET

Date May 18, 1994
Sheet 1 of 19

Proj. Order No. 37 Calculation No. 16-11

Project Title Technical and Project Management Support to CERCLA/RCRA Unit 5, Task 331

Calculation Subject Sustainable Yield Date Verified/Checked

STATUS: PRELIMINARY X FINAL SUPERSEDED VOID

STATEMENT OF PROBLEM

1) Groundwater elevation data was recorded for step drawdown tests performed in conjunction with the Glacial Till/Vadose Zone Investigations. Analysis is performed in this calculation for five locations (wells 11214, 1339, 11112, 1077, 1785) to determine a 7 day sustainable yield. Tests at two other wells were inconclusive and no analysis is provided (1274, 1259).

SUMMARY OF CONCLUSIONS	Originator's Signature and Date
1. Sustainable yields varied between < 1 gpm and 2.5 gpm. For complete results see attached sheet.	5/18/94 Paul Frink

CHECKING METHOD		Checker's Signature and Date
1. Review	X	5/19/94 Amber Couch
2. Alternate Calculation		Lead Discipline Engineer's Signature and Date 5/20/94

Rev. No.	Sheet No.	Description	Reviser's Signature/Date	Checker's Signature/Date	Approved by Signature/Date

05/93 ENG080

PARSONS
ERA PROJECT

ENGINEERING CALCULATIONS BASIS SHEET

Revision No. 0
Sheet 2 of 19

Proj. Order No. 37 Calculation No. 16-11

Project Title Technical and Project management Support to CERCLA/RCRA Unit 5, Task 331

Calculation Subject Sustainable Yield Date Verified/Checked 5/19/94

Prepared By: Paul Frink Checked/Verified By: Amber Couch

Date May 18, 1994

SUMMARY OF DATA SOURCES - CODES - ASSUMPTIONS

1) Manual Water level elevations were used for the step rate pumping test analysis

2) Lotus data/graph files for individual tests are attached along with time-drawdown graphs. Path = ERAFS1:F:\USER\FRD144\GLACIAL\STEP\CALC*.WK3

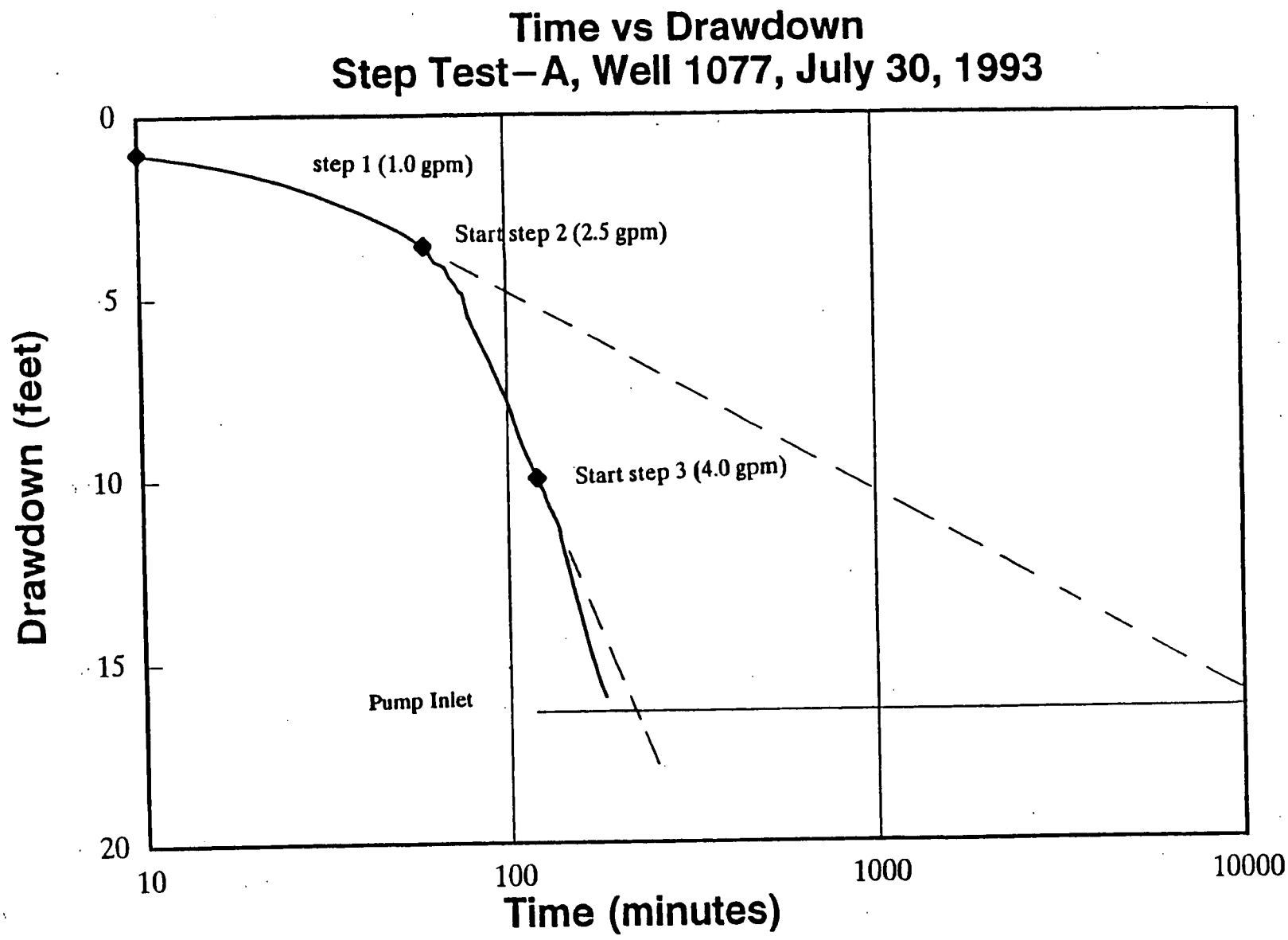
* = 1785STB, 1077ASTP, 13339YTA, 11112STP, 11214YT

3) It is assumed that the smallest discharge rate which has an extrapolated drawdown curve such that water level in the well would not dewater within 10,000 minutes represents the 7-day sustainable yield for the well being tested.

4) A sustainable discharge rate was not obtained for wells 1259 and 1274 during the step test. Sustainable yield is therefor conservatively estimated at < 1 gpm.

5) Results

Well No.	1077	1339	11214	11112	1785
Sustainable Yield (gpm)	< 1.0	1.85	2.5	2.0	1.5



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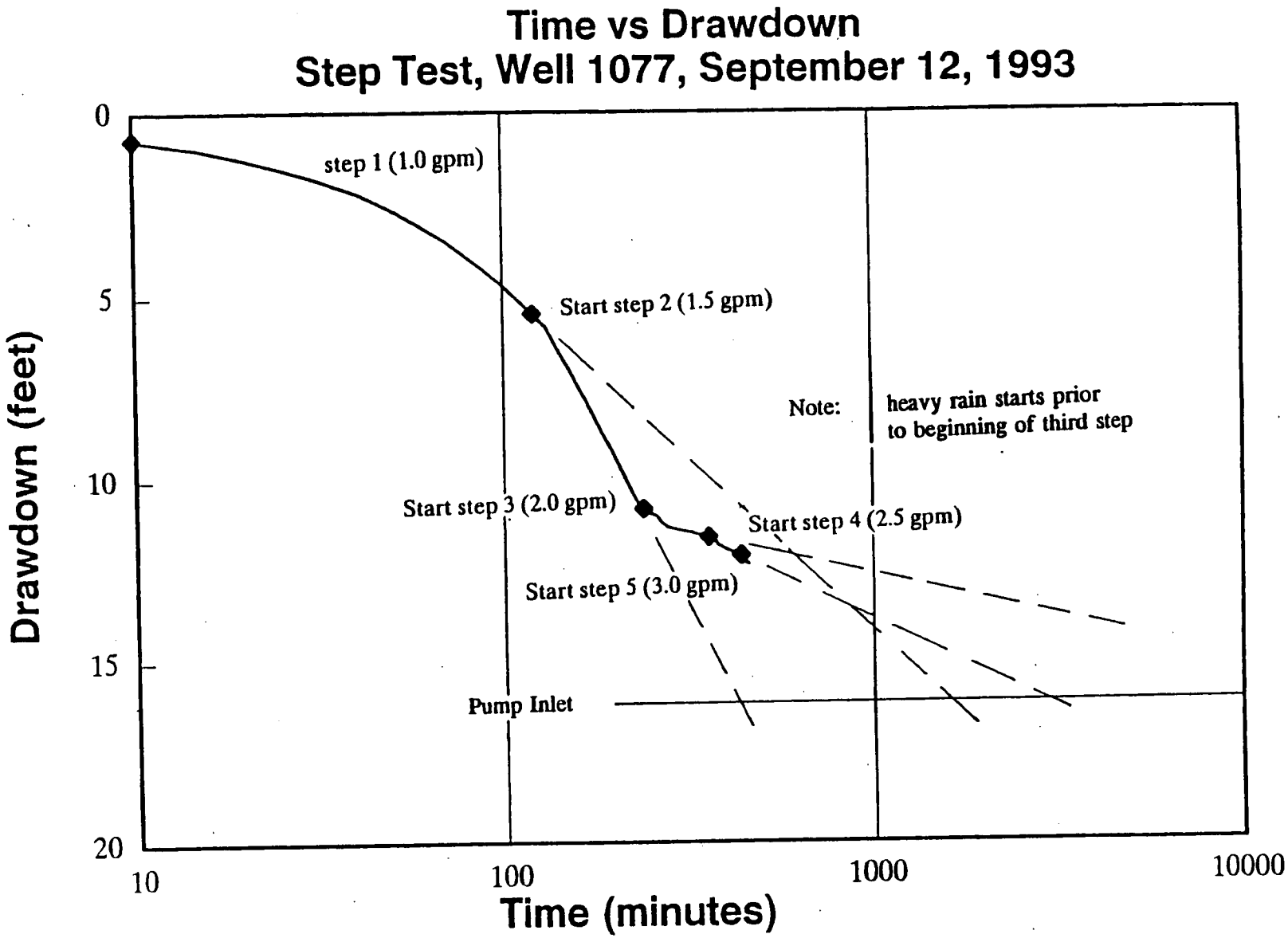
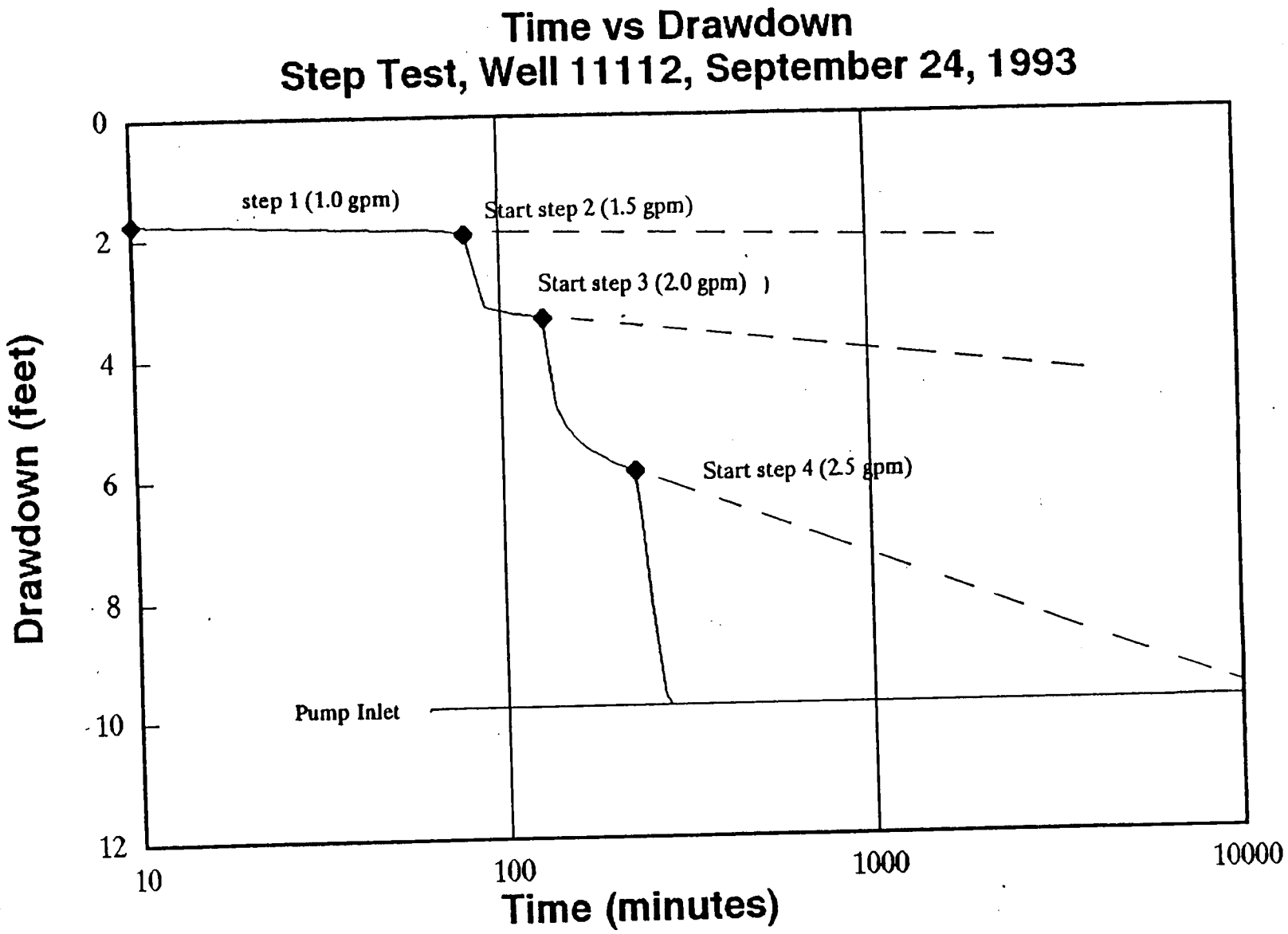
000264

3/19

002265


Time vs Drawdown
Step Test, Well 1077, September 12, 1993
Drawdown (feet)
0
5
10
15
20
10
100
1000
10000
Time (minutes)
step 1 (1.0 gpm)
Start step 2 (1.5 gpm)
Start step 3 (2.0 gpm)
Start step 4 (2.5 gpm)
Start step 5 (3.0 gpm)
Pump Inlet
Note:
heavy rain starts prior
to beginning of third step



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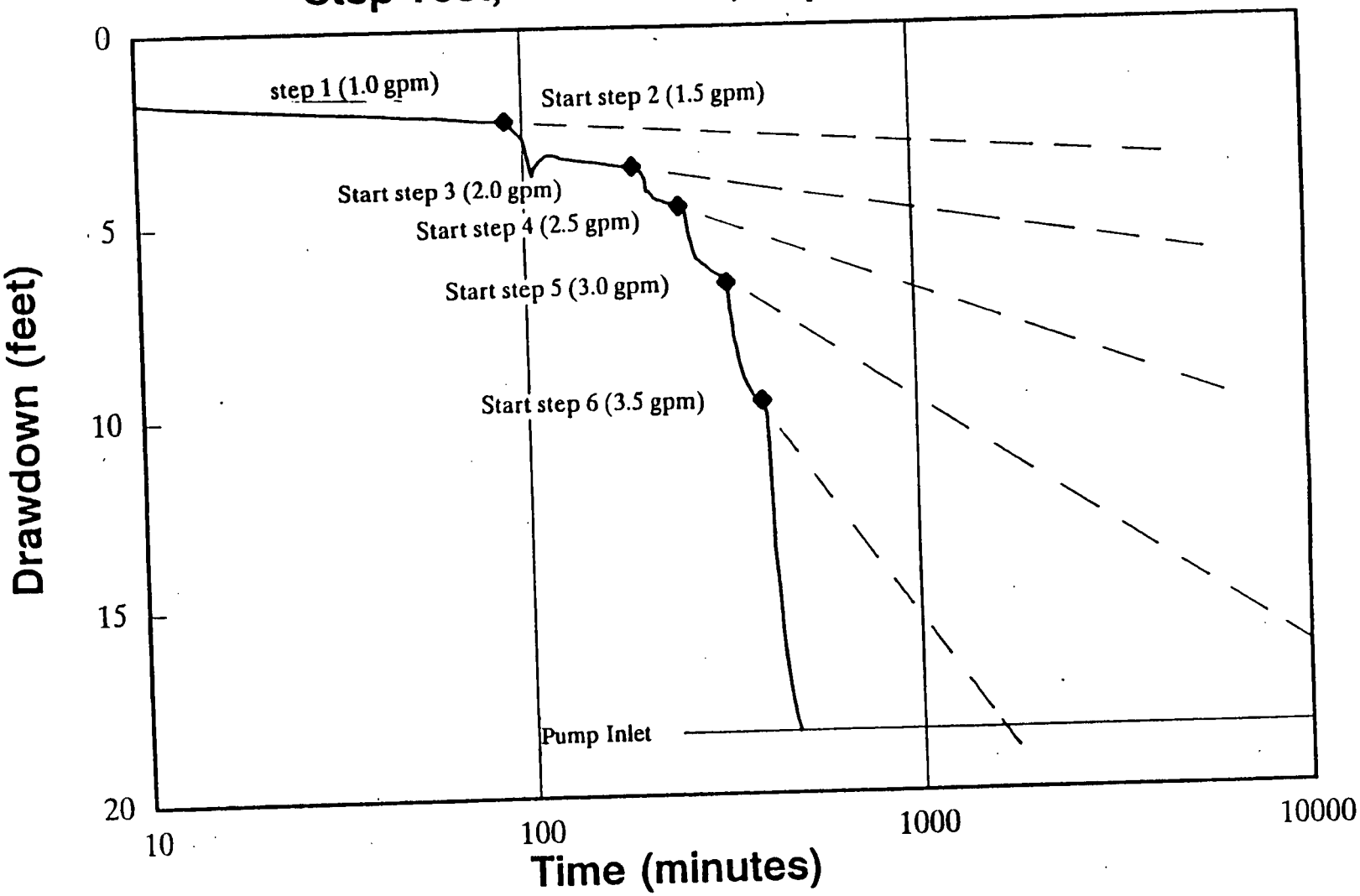
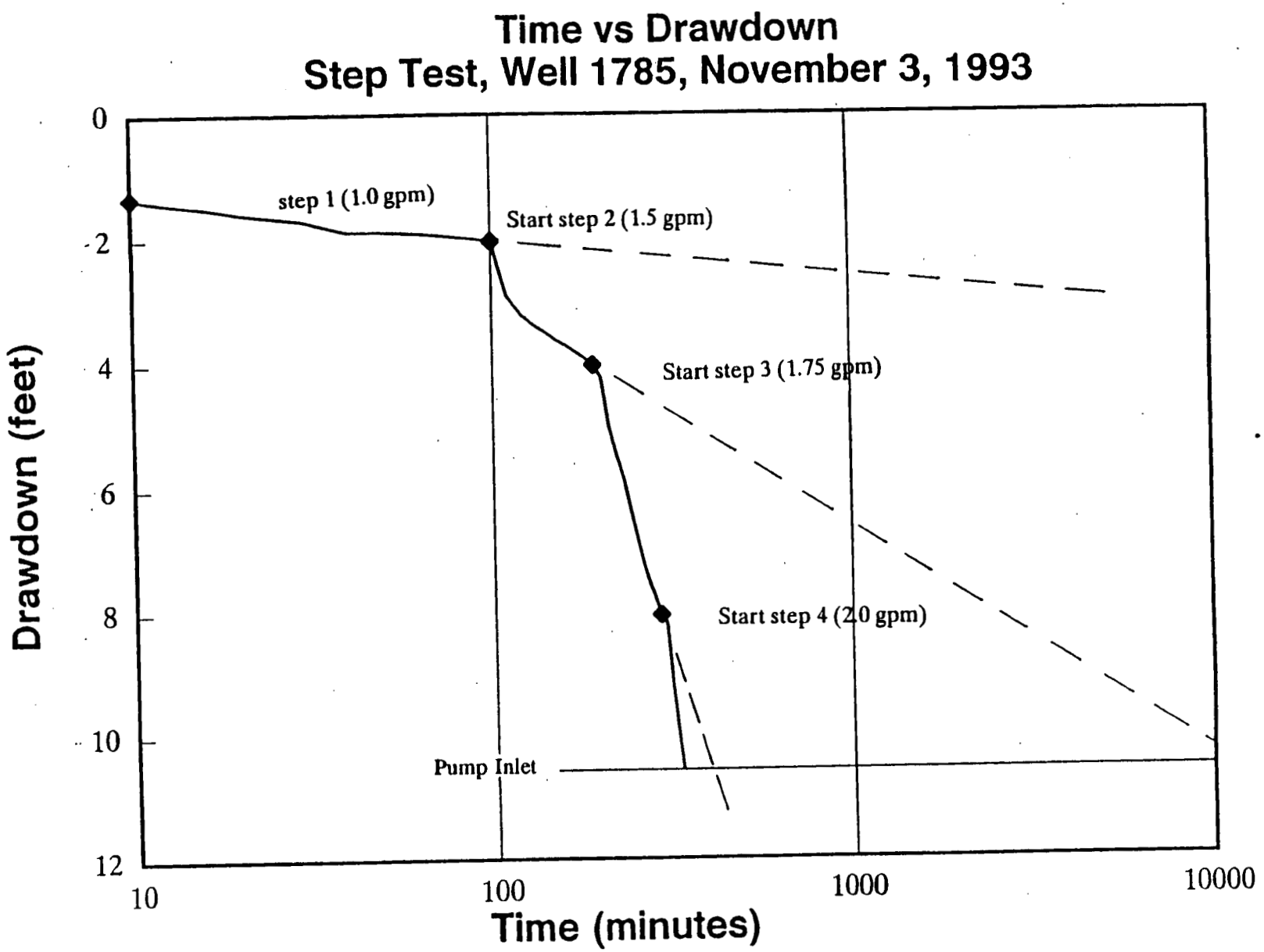
Time vs Drawdown
Step Test, Well 11214, September 2, 1993





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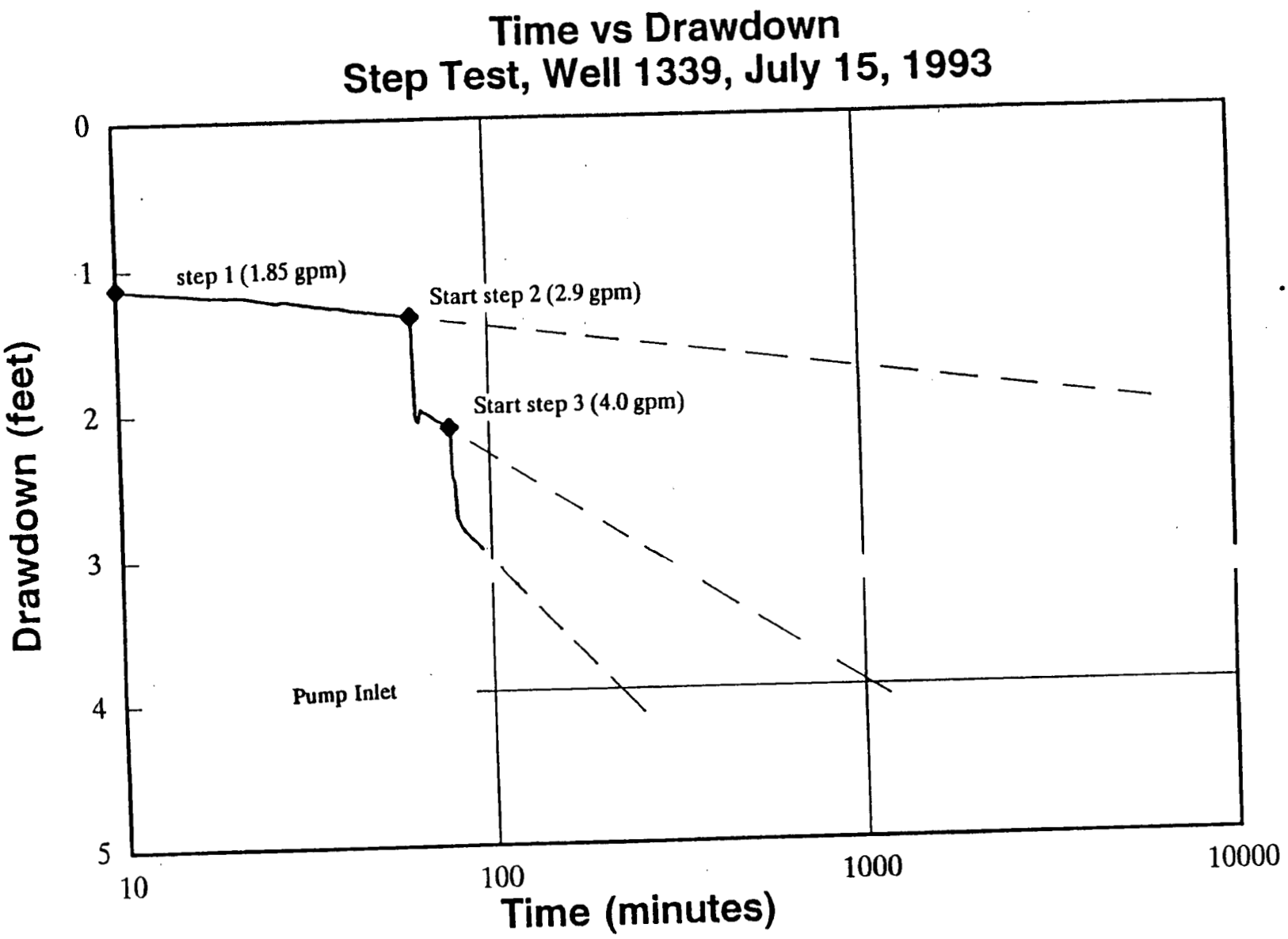
Time vs Drawdown
Step Test, Well 1339, July 15, 1993
Drawdown (feet)
0
1
2
3
4
5
step 1 (1.85 gpm)
Start step 2 (2.9 gpm)
Start step 3 (4.0 gpm)
Pump Inlet
10
100
1000
10000
Time (minutes)

Yield/Step Test : Well 1077 (Manual Water Level Data)
SWL = 7.12 Below MP

t (min)	water level	drawdown		
0	7.12	0		Step 1
2.3	7.66	−0.54	0.54	
6	7.93	−0.81	0.27	
10		−1	0.19	−1 continue step 1 (1.0 gpm)
14	8.33	−1.21	0.21	
17	8.5	−1.38	0.17	
20	8.67	−1.55	0.17	
25	8.94	−1.82	0.27	
30	9.21	−2.09	0.27	
40	9.75	−2.63	0.54	
51	10.25	−3.13	0.5	
60	10.7	−3.58	0.45	−3.58 Start step 2 (2.5 gpm)
64	11.13	−4.01	0.43	
68	11.25	−4.13	0.12	
70	11.55	−4.43	0.3	
72	11.69	−4.57	0.14	
75	11.96	−4.84	0.27	
76	12	−4.88	0.04	
78	12.56	−5.44	0.56	
80	12.85	−5.73	0.29	
90	13.97	−6.85	1.12	
100	15.02	−7.9	1.05	
110	16.22	−9.1	1.2	
120	17.1	−9.98	0.88	−9.98 Start step 3 (Start step 3 (4.0 gpm)
125	17.5	−10.38	0.4	
127	17.73	−10.61	0.23	
129	17.87	−10.75	0.14	
131	18	−10.88	0.13	
133	18.15	−11.03	0.15	
135	18.31	−11.19	0.16	
137	18.48	−11.36	0.17	
139	18.86	−11.74	0.38	
145	19.55	−12.43	0.69	
150	20.2	−13.08	0.65	
155	20.77	−13.65	0.57	
165	21.89	−14.77	1.12	
175	22.8	−15.68	0.91	
185	23.35	−16.23	0.55	
186	23.48	−16.36	0.13	Step 4

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Well 1077
Yield/Step Test B
August 12, 1993
S.W.L. = 11.34

	Time, t (Min.)	Depth to Water (Ft)		Drawdown (Ft)		
Step 1 Q = 1.0 GPM	0	11.34	0	0		
	0.5	11.45	0.11	−0.11	0.11	
	1	11.52	0.18	−0.18	0.07	
	2	11.61	0.27	−0.27	0.09	
	3	11.63	0.29	−0.29	0.02	
	4	11.68	0.34	−0.34	0.05	
	6	11.81	0.47	−0.47	0.13	
	8	11.93	0.59	−0.59	0.12	
	10	12.03	0.69	−0.69	0.1	−0.69 continue step 1 (1.0 gpm)
	15	12.29	0.95	−0.95	0.26	
	20	12.55	1.21	−1.21	0.26	
	25	12.8	1.46	−1.46	0.25	
	30	13.04	1.7	−1.7	0.24	
	40	13.47	2.13	−2.13	0.43	
	50	13.93	2.59	−2.59	0.46	
	60	14.39	3.05	−3.05	0.46	
	70	14.81	3.47	−3.47	0.42	
	80	15.23	3.89	−3.89	0.42	
	90	15.63	4.29	−4.29	0.4	
	100	16.04	4.7	−4.7	0.41	
	110	16.42	5.08	−5.08	0.38	
	120	16.83	5.49	−5.49	0.41	−5.49 Start step 2 (1.5 gpm)
	130	17.18	5.84	−5.84	0.35	
Step 2 Q = 1.5 GPM	140	17.79	6.45	−6.45	0.61	
	150	18.31	6.97	−6.97	0.52	
	160	18.85	7.51	−7.51	0.54	
	170	19.35	8.01	−8.01	0.5	
	180	19.84	8.5	−8.5	0.49	
	190	20.31	8.97	−8.97	0.47	
	200	20.71	9.37	−9.37	0.4	
	210	21.14	9.8	−9.8	0.43	
	220	21.6	10.26	−10.26	0.46	
	230	21.97	10.63	−10.63	0.37	
	240	22.19	10.85	−10.85	0.22	−10.85 Start step 3 (2.0 gpm)
	250	22.31	10.97	−10.97	0.12	
	260	22.37	11.03	−11.03	0.06	
Step 3 Q = 2.0 GPM	270	22.59	11.25	−11.25	0.22	
	280	22.71	11.37	−11.37	0.12	
	290	22.75	11.41	−11.41	0.04	
	300	22.77	11.43	−11.43	0.02	
	310	22.81	11.47	−11.47	0.04	
	320	22.82	11.48	−11.48	0.01	
	330	22.87	11.53	−11.53	0.05	
	340	22.91	11.57	−11.57	0.04	
	350	22.94	11.6	−11.6	0.03	
	360	22.98	11.64	−11.64	0.04	−11.64 Start step 4 (2.5 gpm)
	370	23.01	11.67	−11.67	0.03	
Step 4 Q = 2.5 GPM	380	23.17	11.83	−11.83	0.16	
	390	23.25	11.91	−11.91	0.08	
	400	23.31	11.97	−11.97	0.06	
	410	23.35	12.01	−12.01	0.04	
	420	23.38	12.04	−12.04	0.03	
	430	23.43	12.09	−12.09	0.05	
	440	23.47	12.13	−12.13	0.04	−12.13 Start step 5 (3.0 gpm)
Step 5 Q = 3.0	450	23.64	12.3	−12.3	0.17	
	460	23.71	12.37	−12.37	0.07	

Well 11112 (Plant 1) Step Test
September 24, 1993
S.W.L. = 3.43

	t	Depth to Water (feet)	Drawdown s		
Step 1 Q = 1GPM	0	3.43	0		
	1	4.45	1.02	−1.02	
	2	4.55	1.12	−1.12	
	3	4.64	1.21	−1.21	
	4	4.76	1.33	−1.33	
	5	4.88	1.45	−1.45	
	6	4.99	1.56	−1.56	
	8	5.12	1.69	−1.69	
	10	5.16	1.73	−1.73	−1.73 continue step 1 (1.0 gpr
	12	5.19	1.76	−1.76	
	14	5.21	1.78	−1.78	
	16	5.21	1.78	−1.78	
	18	5.21	1.78	−1.78	
	20	5.23	1.8	−1.8	
	30	5.26	1.83	−1.83	
	40	5.28	1.85	−1.85	
	50	5.3	1.87	−1.87	
	60	5.31	1.88	−1.88	
	70	5.32	1.89	−1.89	
Step 2 Q = 1.5 GPM	80	5.39	1.96	−1.96	−1.96 Start step 2 (1.5 gpm)
	91	6.6	3.17	−3.17	
	100	6.67	3.24	−3.24	
	110	6.72	3.29	−3.29	
	120	6.75	3.32	−3.32	
	130	6.79	3.36	−3.36	−3.36 Start step 3 (2.0 gpm)
Step 3 Q = 2.0 GPM	140	8.24	4.81	−4.81	
	150	8.62	5.19	−5.19	
	160	8.82	5.39	−5.39	
	170	8.97	5.54	−5.54	
	180	9.06	5.63	−5.63	
	190	9.13	5.7	−5.7	
	200	9.22	5.79	−5.79	
	210	9.26	5.83	−5.83	
	220	9.3	5.87	−5.87	
	230	9.34	5.91	−5.91	−5.91 Start step 4 (2.5 gpm)
Step 4 Q = 2.5 GPM	240	10.25	6.82	−6.82	
	250	11.49	8.06	−8.06	
	260	12.31	8.88	−8.88	
	270	13.11	9.68	−9.68	
	280	13.26	9.83	−9.83	

tR 11/19

Well 11214
Yield/Step Test : September, 2, 1993

S.W.L. = 5.07

	t (Min)	Depth to Water (Feet)	Drawdown, s (Feet)			
Step 1	0.5					
	1	5.96	0.89	-0.89		
	2	6.35	1.28	-1.28	0.39	
	3	6.44	1.37	-1.37	0.09	
	4	6.52	1.45	-1.45	0.08	
	5	6.56	1.49	-1.49	0.04	
	6	6.58	1.51	-1.51	0.02	
	8	6.66	1.59	-1.59	0.08	
	10	6.73	1.66	-1.66	0.07	-1.66 continue step 1 (1.0 gpm
	12	6.79	1.72	-1.72	0.06	
	15	6.86	1.79	-1.79	0.07	
	20	6.94	1.87	-1.87	0.08	
	25	7.02	1.95	-1.95	0.08	
	30	7.07	2	-2	0.05	
	35	7.11	2.04	-2.04	0.04	
	40	7.15	2.08	-2.08	0.04	
	45	7.19	2.12	-2.12	0.04	
	50	7.21	2.14	-2.14	0.02	
	60	7.26	2.19	-2.19	0.05	
	70	7.29	2.22	-2.22	0.03	
	80	7.37	2.3	-2.3	0.08	
	90	7.41	2.34	-2.34	0.04	
	100	7.43	2.36	-2.36	0.02	-2.36 Start step 2 (1.5 gpm)
Step 2	101	7.92	2.85	-2.85	0.49	
	102	8.12	3.05	-3.05	0.2	
	103	8.32	3.25	-3.25	0.2	
	104	8.49	3.42	-3.42	0.17	
	105	8.71	3.64	-3.64	0.22	
	106	8.87	3.8	-3.8	0.16	
	108	8.67	3.6	-3.6	-0.2	
	110	8.56	3.49	-3.49	-0.11	
	112	8.49	3.42	-3.42	-0.07	
	115	8.42	3.35	-3.35	-0.07	
	120	8.33	3.26	-3.26	-0.09	
	125	8.35	3.28	-3.28	0.02	
	130	8.43	3.36	-3.36	0.08	
	135	8.455	3.365	-3.365	0.025	
	140	8.48	3.41	-3.41	0.025	
	150	8.52	3.45	-3.45	0.04	
	160	8.54	3.47	-3.47	0.02	
	170	8.59	3.52	-3.52	0.05	
	180	8.63	3.56	-3.56	0.04	
	190	8.66	3.59	-3.59	0.03	
	200	8.69	3.62	-3.62	0.03	-3.62 Start step 3 (2.0 gpm)
Step 3	201	8.81	3.74	-3.74	0.12	
	202	8.87	3.8	-3.8	0.06	
	203	8.91	3.84	-3.84	0.04	
	204	8.97	3.9	-3.9	0.06	
	205	8.97	3.9	-3.9	0	
	206	9.21	4.14	-4.14	0.24	
	209	9.31	4.24	-4.24	0.1	
	210	9.32	4.25	-4.25	0.01	
	212	9.37	4.3	-4.3	0.05	
	215	9.4	4.33	-4.33	0.03	
	220	9.51	4.44	-4.44	0.11	
	225	9.56	4.49	-4.49	0.05	
	230	9.59	4.52	-4.52	0.03	
	240	9.64	4.57	-4.57	0.05	
	245	9.67	4.6	-4.6	0.03	
	250	9.7	4.63	-4.63	0.03	
	260	9.74	4.67	-4.67	0.04	-4.67 Start step 4 (2.5 gpm)
Step 4	261	9.9	4.83	-4.83	0.16	
	262	10.05	4.98	-4.98	0.15	
	263	10.15	5.08	-5.08	0.1	

	264	10.31	5.24	-5.24	0.16	
	265	10.42	5.35	-5.35	0.11	
	266	10.5	5.43	-5.43	0.08	
	268	10.57	5.5	-5.5	0.07	
	270	10.63	5.56	-5.56	0.06	
	275	10.85	5.78	-5.78	0.22	
	280	11.08	6.01	-6.01	0.23	
	285	11.16	6.09	-6.09	0.08	
	290	11.24	6.17	-6.17	0.08	
	300	11.29	6.22	-6.22	0.05	
	310	11.42	6.35	-6.35	0.13	
	320	11.5	6.43	-6.43	0.08	
	330	11.57	6.5	-6.5	0.07	
Step 5	331	11.75	6.68	-6.68	0.18	-6.68 Start step 5 (3.0 gpm)
	332	12.01	6.94	-6.94	0.26	
	333	12.23	7.16	-7.16	0.22	
	334	12.36	7.29	-7.29	0.13	
	335	12.45	7.38	-7.38	0.09	
	336	12.51	7.44	-7.44	0.06	
	338	12.67	7.6	-7.6	0.16	
	340	12.86	7.79	-7.79	0.19	
	345	13.16	8.09	-8.09	0.3	
	350	13.37	8.3	-8.3	0.21	
	360	13.8	8.73	-8.73	0.43	
	370	14.2	9.13	-9.13	0.4	
	380	14.47	9.4	-9.4	0.27	
	390	14.67	9.6	-9.6	0.2	
	400	14.78	9.71	-9.71	0.11	
	410	14.82	9.75	-9.75	0.04	-9.75 Start step 6 (3.5 gpm)
Step 6	411	15.13	10.06	-10.06	0.31	
	412	15.32	10.25	-10.25	0.19	
	413	15.49	10.42	-10.42	0.17	
	414	15.74	10.67	-10.67	0.25	
	415	15.95	10.88	-10.88	0.21	
	416	16.16	11.09	-11.09	0.21	
	418	16.63	11.56	-11.56	0.47	
	420	17.01	11.94	-11.94	0.38	
	422	17.8	12.73	-12.73	0.79	
	425	18.6	13.53	-13.53	0.8	
	430	18.96	13.89	-13.89	0.36	
	435	19.5	14.43	-14.43	0.54	
	440	20.17	15.1	-15.1	0.67	
	450	21.03	15.96	-15.96	0.86	
	460	21.95	16.88	-16.88	0.92	
	470	22.63	17.56	-17.56	0.68	
	480	23.15	18.08	-18.08	0.52	
	477	23.4	18.33	-18.33	0.25	
	480	23.42	18.35	-18.35	0.02	

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Well 11214
Yield/Step Test : September, 2, 1993

S.W.L. = 5.07

	t (Min)	Depth to Water (Feet)	Drawdown, s (Feet)			
Step 1	0.5					
	1	5.96	0.89	-0.89		
	2	6.35	1.28	-1.28	0.39	
	3	6.44	1.37	-1.37	0.09	
	4	6.52	1.45	-1.45	0.08	
	5	6.56	1.49	-1.49	0.04	
	6	6.58	1.51	-1.51	0.02	
	8	6.66	1.59	-1.59	0.08	
	10	6.73	1.66	-1.66	0.07	-1.66 continue step 1 (1.0 gpn
	12	6.79	1.72	-1.72	0.06	
	15	6.86	1.79	-1.79	0.07	
	20	6.94	1.87	-1.87	0.08	
	25	7.02	1.95	-1.95	0.08	
	30	7.07	2	-2	0.05	
	35	7.11	2.04	-2.04	0.04	
	40	7.15	2.08	-2.08	0.04	
	45	7.19	2.12	-2.12	0.04	
	50	7.21	2.14	-2.14	0.02	
	60	7.26	2.19	-2.19	0.05	
	70	7.29	2.22	-2.22	0.03	
	80	7.37	2.3	-2.3	0.08	
	90	7.41	2.34	-2.34	0.04	
	100	7.43	2.36	-2.36	0.02	-2.36 Start step 2 (1.5 gpm)
Step 2	101	7.92	2.85	-2.85	0.49	
	102	8.12	3.05	-3.05	0.2	
	103	8.32	3.25	-3.25	0.2	
	104	8.49	3.42	-3.42	0.17	
	105	8.71	3.64	-3.64	0.22	
	106	8.87	3.8	-3.8	0.16	
	108	8.87	3.6	-3.6	-0.2	
	110	8.56	3.49	-3.49	-0.11	
	112	8.49	3.42	-3.42	-0.07	
	115	8.42	3.35	-3.35	-0.07	
	120	8.33	3.26	-3.26	-0.09	
	125	8.35	3.28	-3.28	0.02	
	130	8.43	3.36	-3.36	0.08	
	135	8.455	3.385	-3.385	0.025	
	140	8.46	3.41	-3.41	0.025	
	150	8.52	3.45	-3.45	0.04	
	160	8.54	3.47	-3.47	0.02	
	170	8.59	3.52	-3.52	0.05	
	180	8.63	3.56	-3.56	0.04	
	190	8.66	3.59	-3.59	0.03	
	200	8.69	3.62	-3.62	0.03	-3.62 Start step 3 (2.0 gpm)
Step 3	201	8.81	3.74	-3.74	0.12	
	202	8.87	3.8	-3.8	0.06	
	203	8.91	3.84	-3.84	0.04	
	204	8.97	3.9	-3.9	0.06	
	205	8.97	3.9	-3.9	0	
	206	9.21	4.14	-4.14	0.24	
	209	9.31	4.24	-4.24	0.1	
	210	9.32	4.25	-4.25	0.01	
	212	9.37	4.3	-4.3	0.05	
	215	9.4	4.33	-4.33	0.03	
	220	9.51	4.44	-4.44	0.11	
	225	9.56	4.49	-4.49	0.05	
	230	9.59	4.52	-4.52	0.03	
	240	9.64	4.57	-4.57	0.05	
	245	9.67	4.6	-4.6	0.03	
	250	9.7	4.63	-4.63	0.03	
	260	9.74	4.67	-4.67	0.04	-4.67 Start step 4 (2.5 gpm)
Step 4	261	9.9	4.83	-4.83	0.16	
	262	10.05	4.98	-4.98	0.15	
	263	10.15	5.08	-5.08	0.1	

	264	10.31	5.24	-5.24	0.16	
	265	10.42	5.35	-5.35	0.11	
	266	10.5	5.43	-5.43	0.08	
	268	10.57	5.5	-5.5	0.07	
	270	10.63	5.56	-5.56	0.06	
	275	10.85	5.78	-5.78	0.22	
	280	11.08	6.01	-6.01	0.23	
	285	11.16	6.09	-6.09	0.08	
	290	11.24	6.17	-6.17	0.08	
	300	11.29	6.22	-6.22	0.05	
	310	11.42	6.35	-6.35	0.13	
	320	11.5	6.43	-6.43	0.08	
	330	11.57	6.5	-6.5	0.07	
Step 5	331	11.75	6.68	-6.68	0.18	-6.68 Start step 5 (3.0 gpm)
	332	12.01	6.94	-6.94	0.26	
	333	12.23	7.16	-7.16	0.22	
	334	12.36	7.29	-7.29	0.13	
	335	12.45	7.38	-7.38	0.09	
	336	12.51	7.44	-7.44	0.06	
	338	12.67	7.6	-7.6	0.16	
	340	12.86	7.79	-7.79	0.19	
	345	13.16	8.09	-8.09	0.3	
	350	13.37	8.3	-8.3	0.21	
	360	13.8	8.73	-8.73	0.43	
	370	14.2	9.13	-9.13	0.4	
	380	14.47	9.4	-9.4	0.27	
	390	14.67	9.6	-9.6	0.2	
	400	14.76	9.71	-9.71	0.11	
	410	14.82	9.75	-9.75	0.04	-9.75 Start step 6 (3.5 gpm)
Step 6	411	15.13	10.06	-10.06	0.31	
	412	15.32	10.25	-10.25	0.19	
	413	15.49	10.42	-10.42	0.17	
	414	15.74	10.67	-10.67	0.25	
	415	15.95	10.88	-10.88	0.21	
	416	16.16	11.09	-11.09	0.21	
	418	16.63	11.56	-11.56	0.47	
	420	17.01	11.94	-11.94	0.38	
	422	17.8	12.73	-12.73	0.79	
	425	18.6	13.53	-13.53	0.8	
	430	18.96	13.89	-13.89	0.36	
	435	19.5	14.43	-14.43	0.54	
	440	20.17	15.1	-15.1	0.67	
	450	21.03	15.96	-15.96	0.86	
	460	21.95	16.88	-16.88	0.92	
	470	22.63	17.56	-17.56	0.68	
	480	23.15	18.08	-18.08	0.52	
	477	23.4	18.33	-18.33	0.25	
	480	23.42	18.35	-18.35	0.02	

Well 1339
Yield/Step Test 1
July 15, 1993

SWL = 3.02

	t	s		
Step 1	0	0	0	
Q = 1.0 GPM	0.0083	0	0	0
	0.0166	0	0	0
	0.025	0	0	0
	0.0333	0	0	0
	0.0416	0	0	0
	0.05	0	0	0
	0.0583	0.006	-0.006	0.006
	0.0666	0	0	-0.006
	0.075	0.006	-0.006	0.006
	0.0833	0	0	-0.006
	0.0916	0.006	-0.006	0.006
	0.1	0	0	-0.006
	0.1083	0	0	0
	0.1166	0.006	-0.006	0.006
	0.125	0.016	-0.016	0.012
	0.1333	0.037	-0.037	0.019
	0.1416	0.044	-0.044	0.007
	0.15	0.063	-0.063	0.019
	0.1583	0.088	-0.088	0.025
	0.1666	0.151	-0.151	0.063
	0.175	0.221	-0.221	0.07
	0.1833	0.328	-0.328	0.107
	0.1916	0.467	-0.467	0.139
	0.2	0.568	-0.568	0.101
	0.2083	0.663	-0.663	0.095
	0.2166	0.732	-0.732	0.069
	0.225	0.802	-0.802	0.07
	0.2333	0.852	-0.852	0.05
	0.2416	0.884	-0.884	0.032
	0.25	0.915	-0.915	0.031
	0.2583	0.941	-0.941	0.026
	0.2666	0.966	-0.966	0.025
	0.275	0.997	-0.997	0.031
	0.2833	1.029	-1.029	0.032
	0.2916	1.061	-1.061	0.032
	0.3	1.067	-1.067	0.006
	0.3083	1.073	-1.073	0.006
	0.3166	1.105	-1.105	0.032
	0.325	1.105	-1.105	0
	0.3333	1.13	-1.13	0.025
	0.35	1.162	-1.162	0.032
	0.3666	1.181	-1.181	0.019
	0.3833	1.187	-1.187	0.006
	0.4	1.193	-1.193	0.006
	0.4166	1.2	-1.2	0.007
	0.4333	1.218	-1.218	0.018
	0.45	1.244	-1.244	0.026
	0.4666	1.25	-1.25	0.006
	0.4833	1.25	-1.25	0
	0.5	1.25	-1.25	0
	0.5166	1.25	-1.25	0
	0.5333	1.256	-1.256	0.006
	0.55	1.263	-1.263	0.007
	0.5666	1.282	-1.282	0.019
	0.5833	1.275	-1.275	-0.007
	0.6	1.275	-1.275	0
	0.6166	1.282	-1.282	0.007
	0.6333	1.269	-1.269	-0.013
	0.65	1.25	-1.25	-0.019
	0.6666	1.237	-1.237	-0.013
	0.6833	1.25	-1.25	0.013
	0.7	1.237	-1.237	-0.013
	0.7166	1.218	-1.218	-0.019
	0.7333	1.225	-1.225	0.007
	0.75	1.231	-1.231	0.006
	0.7666	1.206	-1.206	-0.025
	0.7833	1.231	-1.231	0.025
	0.8	1.212	-1.212	-0.019
	0.8166	1.218	-1.218	0.006
	0.8333	1.218	-1.218	0
	0.85	1.206	-1.206	-0.012
	0.8666	1.206	-1.206	0
	0.8833	1.212	-1.212	0.006
	0.9	1.206	-1.206	-0.006
	0.9166	1.218	-1.218	0.012
	0.9333	1.231	-1.231	0.013
	0.95	1.212	-1.212	-0.019

0.9666	1.218	−1.218	0.006	
0.9833	1.218	−1.218	0	
1	1.2	−1.2	−0.018	
1.2	1.225	−1.225	0.025	
1.4	1.098	−1.098	−0.127	
1.6	1.067	−1.067	−0.031	
1.8	1.067	−1.067	0	
2	1.073	−1.073	0.006	
2.2	1.042	−1.042	−0.031	
2.4	1.035	−1.035	−0.007	
2.6	1.042	−1.042	0.007	
2.8	1.042	−1.042	0	
3	1.016	−1.016	−0.026	
3.2	1.061	−1.061	0.045	
3.4	1.048	−1.048	−0.013	
3.6	1.061	−1.061	0.013	
3.8	1.061	−1.061	0	
4	1.061	−1.061	0	
4.2	1.067	−1.067	0.006	
4.4	1.067	−1.067	0	
4.6	1.073	−1.073	0.006	
4.8	1.073	−1.073	0	
5	1.08	−1.08	0.007	
5.2	1.08	−1.08	0	
5.4	1.08	−1.08	0	
5.6	1.086	−1.086	0.006	
5.8	1.086	−1.086	0	
6	1.086	−1.086	0	
6.2	1.092	−1.092	0.006	
6.4	1.092	−1.092	0	
6.6	1.092	−1.092	0	
6.8	1.098	−1.098	0.006	
7	1.098	−1.098	0	
7.2	1.098	−1.098	0	
7.4	1.105	−1.105	0.007	
7.6	1.105	−1.105	0	
7.8	1.111	−1.111	0.006	
8	1.111	−1.111	0	
8.2	1.111	−1.111	0	
8.4	1.111	−1.111	0	
8.6	1.111	−1.111	0	
8.8	1.117	−1.117	0.006	
9	1.117	−1.117	0	
9.2	1.117	−1.117	0	
9.4	1.117	−1.117	0	
9.6	1.124	−1.124	0.007	
9.8	1.124	−1.124	0	
10	1.124	−1.124	0	−1.124 continue step 1 (1.85 gp
11	1.136	−1.136	0.012	
12	1.149	−1.149	0.013	
13	1.155	−1.155	0.006	
14	1.162	−1.162	0.007	
15	1.168	−1.168	0.006	
16	1.174	−1.174	0.006	
17	1.181	−1.181	0.007	
18	1.187	−1.187	0.006	
19	1.187	−1.187	0	
20	1.193	−1.193	0.006	
21	1.187	−1.187	−0.006	
22	1.193	−1.193	0.006	
23	1.2	−1.2	0.007	
24	1.212	−1.212	0.012	
25	1.218	−1.218	0.006	
26	1.225	−1.225	0.007	
27	1.231	−1.231	0.006	
28	1.225	−1.225	−0.006	
29	1.225	−1.225	0	
30	1.237	−1.237	0.012	
31	1.237	−1.237	0	
32	1.25	−1.25	0.013	
33	1.25	−1.25	0	
34	1.256	−1.256	0.006	
35	1.263	−1.263	0.007	
36	1.263	−1.263	0	
37	1.269	−1.269	0.006	
38	1.275	−1.275	0.006	
39	1.275	−1.275	0	
40	1.275	−1.275	0	
41	1.282	−1.282	0.007	
42	1.288	−1.288	0.006	
43	1.294	−1.294	0.006	
44	1.294	−1.294	0	
45	1.301	−1.301	0.007	
46	1.301	−1.301	0	
47	1.307	−1.307	0.006	

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	48	1.307	-1.307	0	
	49	1.307	-1.307	0	
	50	1.313	-1.313	0.006	
	51	1.32	-1.32	0.007	
	52	1.32	-1.32	0	
	53	1.32	-1.32	0	
	54	1.326	-1.326	0.006	
	55	1.326	-1.326	0	
	56	1.326	-1.326	0	
	57	1.332	-1.332	0.006	
	58	1.332	-1.332	0	
	59	1.338	-1.338	0.006	
	60	1.345	-1.345	0.007	
Step 2	61	1.345	-1.345	0	
Q = 2.5 GPM	62	1.345	-1.345	0	-1.345 Start step 2 (2.9 gpm)
	63	2.046	-2.046	0.701	
	64	2.071	-2.071	0.025	
	65	1.989	-1.989	-0.082	
	66	2.008	-2.008	0.019	
	67	2.014	-2.014	0.006	
	68	2.027	-2.027	0.013	
	69	2.033	-2.033	0.006	
	70	2.046	-2.046	0.013	
	71	2.058	-2.058	0.012	
	72	2.065	-2.065	0.007	
	73	2.077	-2.077	0.012	
	74	2.084	-2.084	0.007	
	75	2.09	-2.09	0.006	
	76	2.103	-2.103	0.013	
	77	2.109	-2.109	0.006	
	78	2.115	-2.115	0.006	-2.115 Start step 3 (4.0 gpm)
	79	2.45	-2.45	0.335	
	80	2.475	-2.475	0.025	
	81	2.734	-2.734	0.259	
	82	2.765	-2.765	0.031	
	83	2.791	-2.791	0.026	
	84	2.81	-2.81	0.019	
	85	2.829	-2.829	0.019	
	86	2.841	-2.841	0.012	
	87	2.86	-2.86	0.019	
	88	2.873	-2.873	0.013	
	89	2.885	-2.885	0.012	
	90	2.898	-2.898	0.013	
	91	2.911	-2.911	0.013	
	92	2.917	-2.917	0.006	
	93	2.936	-2.936	0.019	
	94	2.949	-2.949	0.013	

Well 1785 : Step Test 2
November 3, 1993
S.W.L. = 8.27

	t, (Min)	DTW	s, (Feet)	
Step 1				
Q = 1 GPM	0	8.27	0	
	0.5	8.61	-0.34	
	1	8.75	-0.48	
	2	9.08	-0.81	
	3	9.18	-0.91	
	4	9.25	-0.98	
	5	9.32	-1.05	
	6	9.4	-1.13	
	8	9.51	-1.24	
	10	9.61	-1.34	-1.34 continue ste
	12	9.67	-1.4	
	14	9.72	-1.45	
	16	9.76	-1.49	
	18	9.81	-1.54	
	20	9.85	-1.58	
	30	9.97	-1.7	
	40	10.15	-1.88	
	50	10.15	-1.88	
	60	10.17	-1.9	
	70	10.2	-1.93	
	80	10.24	-1.97	
	90	10.27	-2	
	100	10.31	-2.04	-2.04 Start step 2
Step 2	110	11.18	-2.91	
Q = 1.5 GPM	120	11.49	-3.22	
	130	11.66	-3.39	
	140	11.78	-3.51	
	150	11.9	-3.63	
	160	12	-3.73	
	170	12.1	-3.83	
	180	12.19	-3.92	
	190	12.31	-4.04	-4.04 Start step 3
	200	12.5	-4.23	
Step 3	210	13.3	-5.03	
Q = 1.75 GPM	220	13.77	-5.5	
	230	14.12	-5.85	
	240	14.61	-6.34	
	250	15.07	-6.8	
	260	15.46	-7.19	
	270	15.77	-7.5	
	280	16.05	-7.78	
Step 4	290	16.33	-8.06	-8.06 Start step 4
Q = 2 GPM	300	16.45	-8.18	
	310	17.45	-9.18	
	320	18.23	-9.96	
	330	18.82	-10.55	

19/19

APPENDIX D

PUMPING TEST DATA AND DOCUMENTATION

Appendix D
Pumping Test Data and Documentation

This appendix contains data and documentation relating to the pumping test portion of the Glacial Till and Vadose Zone Hydraulic Investigation as listed below.

D.1 Pumping Test, Plant 1 Pad . . . . . .
- D.1.1 Water Level Measurement Forms . . . . . .
- D.1.2 Water Quality Measurement Forms . . . . . .
- D.1.3 Data Logger Files . . . . . .

D.2 Pumping Test, Waste Pit Area . . . . . .
- D.2.1 Water Level Measurement Forms . . . . . .
- D.2.2 Water Quality Measurement Forms . . . . . .
- D.2.3 Data Logger Files . . . . . .

D.3 Pumping Test, Plant 8 Area . . . . . .
- D.3.1 Water Level Measurement Forms . . . . . .
- D.3.2 Water Quality Measurement Forms . . . . . .
- D.3.3 Data Logger Files . . . . . .

D.4 Calculation Package 16-5, Constant Rate Pump Tests . . . . . .

D.5 Calculation Package 16-6, Theis Recovery Analysis . . . . . .

D.6 Calculation Package 16-10, Barometric Efficiency . . . . . .

D.7 Methods of Analysis . . . . . .

D.8 Weather Data . . . . . .

F-7333

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UMP INTAKE 12.9

DRAFT

Pumping Test and Yield Test
Water Level Measurement Form

Elevation (MSL): _____ top of casing

Observation well/piezometer no.: 1339 PW
Pumped well no.: 1339 PW
Project: 50 03.24

Pump/yield test performed by(Name): _____
Reference point measurements by: _____
Method of measurement: _____
Depth Correction: _____
Average Q at end of test _____ gpm r = ___ ft. r' = _____

b = _____

NHUS 8 CHANNEL
TEST #4
STEP #0

Date	Hour:Min	t (min)	t' (min)	t/t'	s (ft.)	s' (ft.)	(s_p - s')	Meter Reading (gals.)	Ave. Q	W.L m.scale	#Z Remarks	
9/26/93	13:10	0			0			2981.9	–	3.56		RAIN
	13:11	1			1.54			–	–	5.10		
	13:12	2			2.25			–	–	5.81		
	13:13	3			2.75			–	–	6.31		
	13:14	4			3.02			–	–	6.58		
	13:15	5			3.13			–	–	6.69		
	13:16	6			3.21			–	1.75	6.77	118/119	
	13:18	8			3.32			–	–	6.88	118/119	
	13:20	10			3.40			–	–	6.96		
	13:22	12			3.46			–	–	7.02		
	13:24	14			3.50			–	–	7.06		
	13:26	16			3.53			–	–	7.09		
	13:28	18			3.55			–	1.75	7.11	118/119	
	13:30	20			3.57			3017.4	–	7.13		
	13:40	30			3.68			3034.6	1.72	7.24	119	
	13:50	40			3.76			–	–	7.32		
	14:00	50			3.82			–	–	7.38		
	14:10	60			3.86			3086.7	–	7.42		
	14:40	90			3.95			3138.9	1.75	7.51	119	
	15:10	120			4.05			–	1.75	7.61		
	15:40	150			4.06			–	1.75	7.62		
	16:10	180			4.17			–	1.76	7.73		
	16:40	210			4.21			3367.5	1.76	7.77		
	17:10	240			4.25			3414.0	1.76	7.81		
	17:40	270			4.27			3472.5	1.75	7.83		

b = saturated thickness (ft)
r = distance from pumped well to observation well or piezometer (ft.)
Q = flow rate (gpm)

s = measured drawdown (ft.)
s' = residual drawdown (ft.) at t'
s_p = drawdown at end of pumping period (final s)
t = elapsed time since pumping began (min)
t' = elapsed time since pumping stopped (min)

Reference: Bureau of Reclamation (1981) and Stallman (1971)

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OU-5\PO-37\GTDPPT

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Rev. No: 0

000283

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Pumping Test and Yield Test
Water Level Measurement Form

Elevation (MSL): _____ top of casing

Observation well/piezometer no.: 1339 PW
Pumped well no.: 1339 PW
Project: 50 03.24

Pump/yield test performed by(Name): CREW 5
Reference point measurements by: CREW 5
Method of measurement: M-SCOPE
Depth Correction: —
Average Q at end of test _____ gpm r = ___ ft. r' = _____

b = _____

Date	Hour:Min	t (min)	t' (min)	t/t'	s (ft.)	s' (ft.)	(s_p - s')	Meter Reading (gals.)	Ave. Q	W.L M-SCOPE	HZ Remarks	
9/23/93	1310	"0"			0			2981.9	—	3.56	—	
	1810	300			4.40			3521.5	1.76	7.96	119/120	
	1840	330			4.43			3574.5	1.76	7.99	119	
	1910	360			4.45			3625.0	1.76	8.01	"	
	1940	390			4.48			3689.5	1.76	8.04	"	
	2010	420			4.49			3759.5	1.76	8.05	"	
	2040	450			4.49			3787.0	1.8	8.05	"	
	2110	480			4.42			3854.5	1.75	7.98	118	
	2140	510			4.41			3909.0	1.75	7.97	"	
	2210	540			4.41			3953.0	1.75	7.97	"	
	2240	570			4.41			4007.5	1.70	7.97	"	
	2310	600			4.58			4050.5	1.8	8.14	"	GPM WQ
	2340	630			4.55				1.75	8.11	118	
9/24/93	0010	670			4.58			4145.0	1.75	8.14	"	
	0040	690			4.60			4197.5	1.75	8.16	"	
	0110	720			4.62			—	—	8.18	"	739 WQ
	0115	725			—			4258.5	1.75	—	"	~~WQ~~
	0140	750			4.47			4301.4	1.70	8.03	"	H2O Rise
	0145	755			—			—	—	—	120	
	0152	762			—			—	1.75	—	"	
	0210	780			4.63			4353.4	1.75	8.19	"	
	0240	810			4.61			4405.0	1.75	8.17	"	
	0310	840			4.66			4458	1.75	8.22	"	BUCKET WQ
	0340	870			4.72			4510.5	1.75	8.28	"	
	0410	900			4.74			4563.5	1.75	8.30	"	

b = saturated thickness (ft)
r = distance from pumped well to observation well or piezometer (ft.)
Q = flow rate (gpm)
s = measured drawdown (ft.)
s' = residual drawdown (ft.) at t'
s_p = drawdown at end of pumping period (final s)
t = elapsed time since pumping began (min)
t' = elapsed time since pumping stopped (min)

Reference: Bureau of Reclamation (1981) and Stallman (1971)

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Pumping Test and Yield Test
Water Level Measurement Form

Elevation (MSL): _____ top of casing

Observation well/piezometer no.: 1339 PW1
Pumped well no.: 1339 PW
Project: 50.03.24

Pump/yield test performed by(Name): CREWS
Reference point measurements by: _____
Method of measurement: M-SCOPE
Depth Correction: _____
b = _____
Average Q at end of test _____ gpm r = ____ ft. r' = _____

Date	Hour:Min	t (min)	t' (min)	t/t'	s (ft.)	s' (ft.)	(s_p - s')	Meter Reading (gals.)	Ave. Q	n/L M-SCOPE	Remarks	
9/25	1310	60			0			2981.9	-	3.56	—	
9/26/93	0440	930			4.75			4616.5	1.75	8.31	120	
"	0510	960			4.77			4669.5	1.80	8.33	120	WQ
"	0530	980			—			—	1.75	—	118	
"	0540	990			4.73			4722	1.75	8.29	118/119	
"	0610	1020			4.76			4774.5	1.75	8.32	118/119	
"	0640	1050			4.75			4826.1	1.75	8.31	118/119	
"	0710	1080			4.73			4859.0	1.70	8.29	119	
"	0726	1096			-			—	1.75	—	120	
"	0740	1110			4.84			4943.5	1.75	8.40	120	
"	0810	1140			4.80			5007	1.75	8.36	120	
"	0840	1170			4.89			5046	1.75	8.45	120	WQ
"	0910	1200			4.92			5114	[illegible]	8.48	[illegible]	
"	0940	1230			4.90			5154	1.75	8.46	118	
"	1010	1260			4.91			5226	1.75	8.47	118	
"	1040	1290			4.93			5252.5	1.75	8.49	118	WQ
"	1110	1320			4.93			5318	1.75	8.49	118	
"	1140	1350			4.94			5372	1.75	8.50	118.5	
"	1210	1380			4.96			5413	1.75	8.52	118.5	Bucket [illegible]
"	1240	1410			4.65			5465	1.70	8.21	118.5	
"	1310	1440			4.93			5519	1.75	8.39	120	
"	1325	—						—	1.78	—	120	—
	13:40	1470			4.76			5576	1.675	8.32	120	
	13:52	—						—	1.75	—	122	
	1410	1500			4.98			5610	1.75	8.54	122	
	1440	1536			4.99			5671	1.75	8.55	122	

b = saturated thickness (ft)
r = distance from pumped well to observation well or piezometer (ft.)
Q = flow rate (gpm)
s = measured drawdown (ft.)
s' = residual drawdown (ft.) at t'
s_p = drawdown at end of pumping period (final s)
t = elapsed time since pumping began (min)
t' = elapsed time since pumping stopped (min)

Reference: Bureau of Reclamation (1981) and Stallman (1971)

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Pumping Test and Yield Test
Water Level Measurement Form

Elevation (MSL): _____ top of casing

Observation well/piezometer no.: 1335 PW
Pumped well no.: 1339 PW
Project: 50.03.24

Pump/yield test performed by(Name): CRUS
Reference point measurements by: WAW
Method of measurement: M-SCOPE
Depth Correction: N/A
b = _____
Average Q at end of test _____ gpm r = ___ ft. r' = _____

3.56 @ Time 0

Date	Hour:Min	t (min)	t' (min)	t/t'	s (ft.)	s' (ft.)	(s_p - s')	Meter Reading (gals.)	Ave. Q	WL M-SCOPE	Remarks HZ
9-26-93	1440	1530			4.99			5671	1.75	8.55	122
	1510	1560			5.01			5720.5	~1.72	8.57	122 Hz ~~1.75~~
	1540	1590			5.02			5777.0	1.75	8.58	1.756 gpm Buck
	1610	1620			5.05			5822.5	1.75	8.61	122-123 Hz
	1640	1650			5.05			5870.5	1.75	8.61	1.75 Gpm Buck
	1710	1680			5.06			5920.0	1.75	8.62	122-123 Hz
	1740	1710			5.07			5973.2	1.75	8.63	1.75 GPM Buck
	1810	1740			5.07			6025.5	1.75	8.63	122-123 Hz
	1840	1770			5.09			6087.7	1.75	8.65	1.75 GPM Buck
	1910	1800			5.11			6130.4	1.7-	8.67	122-123 Hz
	1940	1830			5.12			6182.8	1.75	8.68	Δ WATER TRUCK
	2010	1860			5.31			—	1.85	8.82	rate increase Δ water truck
	2020	1870			—			—	1.75	~~8.77~~	1.75 Restored
	2040	1890			5.17			6290.7	1.75	8.73	1.756 GPM Buck
	2110	1920			5.07			6341.2	1.75	8.63	=> 8.63
	2115	1925			—			—	1.75	—	123 Hz
	~~2140~~ 2133	~~1950~~ 1948			—			—	1.75	—	123 Hz
	2140	1950			5.22			6353.7	1.75	8.76	1.756 GPM Buck
	2210	1980			5.14			6445.6	1.75	8.70	122-123 Hz
	2240	2010			5.16			6497.6	1.70	8.72	1.756 GPM Buck
	2245	2015			—			—	1.75	—	123/124 Hz
	2310	2040			5.24			6550.7	1.8	8.80	122-123 Hz
	2340	3070			5.20			—	—	8.76	122/123 WATER DOWN
	2345	3075			—			6611.5	1.75	—	122/123
9/27/93	0010	~~3000~~	2100		5.18			6654.2	—	8.74	122/123

4.18

b = saturated thickness (ft)
r = distance from pumped well to observation well or piezometer (ft.)
Q = flow rate (gpm)
s = measured drawdown (ft.)
s' = residual drawdown (ft.) at t'
s_p = drawdown at end of pumping period (final s)
t = elapsed time since pumping began (min)
t' = elapsed time since pumping stopped (min)

Reference: Bureau of Reclamation (1981) and Stallman (1971)

2.38

3.55

4.23 ~~4.43~~

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Rev. No: 0

5.15 5.02 4.23 3.41

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Pumping Test and Yield Test
Water Level Measurement Form

Elevation (MSL): _____ top of casing

Observation well/piezometer no.: 1339 PW
Pumped well no.: 1339 PW
Project: 50.03.24

Pump/yield test performed by(Name): CREW 5
Reference point measurements by: ↓
Method of measurement: M-SCOPE
Depth Correction: —

b = _____

Average Q at end of test _____ gpm r = ___ ft. r' = _____

W.L. 3.56 @ TIME 0

Date	Hour:Min	t (min)	t' (min)	t/t'	s (ft.)	s' (ft.)	(s_p - s')	Meter Reading (gals.)	Ave. Q	W.L. M-SCOPE	HZ Remarks	
9/27/93	00:24	~~3014~~	2114		—			—	1.8	—	125	
"	00 27	~~3017~~	2117		—			—	1.75	—	124/123	
"	00 40	~~3030~~	2130		5.26			6706.4	-	8.82	124/123	
"	0110	~~3060~~	2160		5.28			6758.9	—	8.84	124/123	
"	0120	~~3070~~	2170		—			—	1.75	—	124/123	
"	0140	~~3090~~	2190		529			6811.5	—	8.85	124/123	WATER @ DONE
"	0150	~~3100~~	2200		-			—	1.75	—	124/123	
"	0210	~~3120~~	2220		5.28			—	—	8.84	124/123	
"	0215	~~3125~~	2225		—			6872.0	1.75	—	124/123	
"	0240	~~3150~~	2250		5.28			6916	1.75	8.84	124/123	
"	0310	~~3180~~	2280		5.30			6967.8	—	8.86	124/123	
"	0320	~~3190~~	2290		—			—	1.75	—	124/123	
"	0340	~~3210~~	2310		5.31			7020.1	—	8.87	124/123	WATER @ DONE
"	0350	~~3220~~	2320		—			—	1.75	—	124/123	BUCKET ✓
"	0410	~~3240~~	2340		5.36			7072.4	—	8.92	124/123	
"	0420	~~3250~~	2350		—			—	1.75	-	124/123	
"	0440	~~3270~~	2370		5.39			~~3275~~ 7133.1	1.75	8.95	124/123	
** "	0436	to 0455 hrs									Light Rain	
"	0510	~~3300~~	2400		5.40			7177.5	—	8.96	124/123	
"	0515	~~3305~~	2405		—			—	1.8	—	124/123	
"	0520	~~3310~~	2410		—			—	1.75	—	123/124	OK
* "	0540	~~3330~~	2430		5.59			7230.0	1.75	8.95	123/124	RAIN
"	0610	~~3360~~	2460		5.65			7284.5	1.75	9.21	118	SWITCH TANKS
** "	0630	~~3380~~	2490		—			—	1.75	—	123/124	Switch Tanks
"	0640	~~3390~~	2490		5.60			7337.9	—	9.16	123/124	

b = saturated thickness (ft)
r = distance from pumped well to observation well or piezometer (ft.)
Q = flow rate (gpm)
s = measured drawdown (ft.)
s' = residual drawdown (ft.) at t'
s_p = drawdown at end of pumping period (final s)
t = elapsed time since pumping began (min)
t' = elapsed time since pumping stopped (min)

Reference: Bureau of Reclamation (1981) and Stallman (1971)

* Switch Tanks higher pump rate for ~8 min (1.82 gpm for the total 30 min period 0540 → 0610 hrs).

** Rain from 0540 – 0630 & 0436 – 0455

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Rev No: 0

DRAFT

Pumping Test and Yield Test
Water Level Measurement Form

Elevation (MSL): _____ top of casing

Observation well/piezometer no.: 1339 PW1
Pumped well no.: 1339 PW1
Project: 50.03.24

Pump/yield test performed by(Name): CREW 5
Reference point measurements by: ↓
Method of measurement: M-SCOPE
Depth Correction: —
b = _____
Average Q at end of test _____ gpm r = ___ ft. r' = _____

W.L. 3.56 @ TIME 0

Date	Hour:Min	t (min)	t' (min)	t/t'	s (ft.)	s' (ft.)	(s, - s')	Meter Reading (gals.)	Ave. Q	W.L. M-SCOPE	Hz Remarks	
9/27/93	0650	~~3400~~	2500		—			~~+8~~ 72	1.28	—	123/124	
"	0700	~~3410~~	2510		—			—	1.75	—	121/122	
"	0710	~~3420~~	2520		5.58			7391.2	1.78	9.07	121/122	
"	0724	~~3434~~	2534		—			—	1.75	—	121	
"	0740	~~3450~~	2550		5.54			7466	1.75	9.10	121	W. Q
"	0810	~~3480~~	2580		5.47			7502	1.75	9.03	121	Bucket Check
"	0840	~~3510~~	2610		5.49			7565	1.75	9.05	121	
"	0910	~~3540~~	2640		5.50			7602	1.75	9.06	121	
"	0940	~~3570~~	2670		5.57			7655	1.75	9.07	121	Bucket Check
"	1010	~~3600~~	2700		5.51			7718	1.75	9.07	123/124	W.Q.
"	1040	~~3630~~	2730		5.54			7764	1.75	9.11	123/124	
"	1110	~~3660~~	2760		5.55			7812	1.75	9.12	123/124	
"	1140	~~3690~~	2790		5.57			7864	1.75	9.14	123/124	W/Q
"	1210	~~3720~~	2820		5.57			7927	1.75	9.14	123/124	
"	1240	~~3750~~	2850		5.57			7979	1.75	9.14	123/124	
"	1310	~~3780~~	2880		5.58			8022	1.75	9.15	123/124	Bucket OK
"	1340	~~3810~~	2910		5.61			8074	1.75	9.18	123/124	
correction of "t" = 2940 → "	1410	~~3840~~ 2940			5.61			8126	1.75	9.18	123/124	
"	1440	2970			5.64			8188	1.75	9.21	123/124	Bucket
	1510	3000			5.65			8239.8	1.75	9.21	123/124	
	1540	3030			5.65			8282.4	1.75	9.23	123/124	Bucket
	1610	3060			5.66			8334.9	1.75	9.23	123/124	
	1640	3090			5.67			8387.3	1.75	9.23	123/124	Bucket
	1710	3120			5.68			8449.8	1.75	9.25	123/124	
	1740	3150			5.69	5.70		8492.2	1.75	9.26		

b = saturated thickness (ft)
r = distance from pumped well to observation well or piezometer (ft.)
Q = flow rate (gpm)
s = measured drawdown (ft.)
s' = residual drawdown (ft.) at t'
s_e = drawdown at end of pumping period (final s)
t = elapsed time since pumping began (min)
t' = elapsed time since pumping stopped (min)

Reference: Bureau of Reclamation (1981) and Stallman (1971)

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4.13 ~~4.51~~ E-2
6.22 ~~4.26~~ ~~4.57~~ ~~7.28~~

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E-7333

DRAFT

Pumping Test and Yield Test
Water Level Measurement Form

PAGE 7 OF 11

Elevation (MSL): _____ top of casing

Observation well/piezometer no.: 1339 PW
Pumped well no.: 1339 PW
Project: 50.01.24

Pump/yield test performed by(Name): CRUS
Reference point measurements by: _____
Method of measurement: M SCOTT
Depth Correction: _____
b = _____
Average Q at end of test _____ gpm r = ___ ft. r' = _____

WATER LEVEL AT END 3.56 FT

3.85

Date	Hour:Min	t (min)	t' (min)	t/t'	s (ft.)	s' (ft.)	(s_p - s')	Meter Reading (gals.)	Ave. Q	WATER LEVEL	H_2 Remarks	
9/22/93	1753	3163			—			8513.0	1.9+	123/124		
	—	—			—			8528.5	1.7	120/121		
	1757	3167			—			8524.0	1.75+	118/119		
	—	—			—			8520.0	1.8	118		
	1804	3176			—			8536.0	1.75	116/117		
	1810	3180			~~5.78~~			8545.5	1.70	9.26	116/117	
	1827	3197			—			8575.5	1.71	—	123	
	1830	3200			—			8583.5	1.75	—	123/124	
	1840	3210			~~5.74~~	5.77		8597.6	1.75	9.33	123/124	BUMPER
	1910	3240			~~5.75~~	5.78		8650.3	1.75	9.34	123/124	
	1940	3270			~~5.76~~	5.79		8703.0	1.75	9.35	123/124	GPM 1.7495
	2010	3300			~~5.77~~	5.80		8755.7	1.75	9.36	123/124	
	2040	3330			~~5.78~~	5.81		8808.4	1.75	9.37	123/124	BUMPER
	2110	3360			~~5.79~~	5.81		8860.9	1.75	9.37	123/124	
	2140	3390			~~5.78~~	5.81		8913.4	1.75	9.37	123/124	
	2210	3420			~~5.79~~	5.82		8965.9	1.75	9.38	123/124	
	2240	3450			~~5.81~~	5.84		9018.3	1.75	9.40	123/124	BUMPER
	2310	3480			~~5.81~~	5.84		9070.8	1.75	9.40	123/124	
	2340	3510			~~5.84~~	5.87		9123.5	1.75	9.43	123/124	
9/23/93	0010	3540			~~5.85~~	5.88		9176.0	1.75	9.44	123/124	
	0040	3570			~~5.84~~			9226.5	1.78	9.43	124/125	WATER Q DROP
	0110	3600			~~5.96~~			9281.3	1.82	9.52	124/125	
	0134	3624			—			—	1.70	—	122	
	0136	3626			—			—	1.73	—	123	
	0140	3630			5.93			9334	1.75	9.49	124	

AFTER PC SOCKET TANK

AFTER ICE TO 100 GALL TANK

b = saturated thickness (ft)
r = distance from pumped well to observation well or piezometer (ft.)
Q = flow rate (gpm)
s = measured drawdown (ft.)
s' = residual drawdown (ft.) at t'
s_p = drawdown at end of pumping period (final s)
t = elapsed time since pumping began (min)
t' = elapsed time since pumping stopped (min)

* BASED ON CALC FROM FORM — RECORDS PUMPING DIVIDED BY TIME

Reference: Bureau of Reclamation (1981) and Stallman (1971)

2.31

~~3.56~~ ~~8.79~~ 4.48 ~~4.79~~ ~~4.75~~ 4.12 ~~8.44~~ ~~9.00~~ ~~4.18~~

2.33

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Rev. No: 0

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DRAFT

Pumping Test and Yield Test
Water Level Measurement Form

Elevation (MSL): _____ top of casing

Observation well/piezometer no.: 1339PW
Pumped well no.: 1339PW
Project: 50.07 29

Pump/yield test performed by(Name): CREW-5
Reference point measurements by: t
Method of measurement: M-SCOPE
Depth Correction: —
b = _____
Average Q at end of test _____ gpm r = ___ ft. r' = _____

W.L 3.56 @ TIME 0

Date	Hour:Min	t (min)	t' (min)	t/t'	s (ft.)	s' (ft.)	(s_p - s')	Meter Reading (gals.)	Ave. Q	W.L. M-SCOPE	HZ Remarks	
9/28/95	0210	3660			5.96			9387.0	—	9.52	124	
"	0220	3670			—			—	1.75	—	124	
"	0240	3690			5.97			9439.4	1.75	9.53	124	WATER Q DOWN
"	0310	3720			5.97			9492.0	1.75	9.53	124	
"	0340	3750			5.99			9545.1	1.75	9.55	124	
"	0407	3777			—			9598	1.8	—	120	MOVE HOSE
"	0410	3780			6.05			9599	1.75	9.61	118	
"	0440	3810			5.94			9650.3	1.75	9.50	118	WATER Q DOWN
"	0510	3840			6.03			9702.3	1.75	9.59	124	MOVE HOSE
"	0540	3870			6.08			9755.3	—	9.64	124	
"	0544	3874			—			—	—	—	118	MOVE HOSE
"	0557	3887			—			—	1.75	—	124	"
"	0610	3900			5.98			9807.3	1.75	9.54	124	
"	0640	3930			5.99			9859.0	1.75	9.55	124	WATER Q DOWN
"	0710	3960			6.00			9915	1.75	9.56	124	
"	0740	3990			6.00			9965	1.75	9.56	124	WATER Q DOWN
"	0810	4020			6.00			10,022	1.75	9.56	124	
"	0840	4050			6.10			10068	1.75	9.66	124	
"	0910	4080			6.10			10120	1.75	9.66	125	WATER Q DOWN
"	0940	4110			6.13			10184	1.75	9.69	125	
"	1010	4140			6.16			10227	1.75	9.72	125	BUCKET P.K.
	1040	4170			6.17			10280	1.75	9.73	125	"
	1110	4200			6.18			10332	1.75	9.74	125	WATER Q DOWN
	1140	4230			6.20			10387	1.77	9.76	125	
	1210	4260			6.20			10435	1.74	9.76	124/125	

b = saturated thickness (ft)
r = distance from pumped well to observation well or piezometer (ft.)
Q = flow rate (gpm)
s = measured drawdown (ft.)
s' = residual drawdown (ft.) at t'
s_p = drawdown at end of pumping period (final s)
t = elapsed time since pumping began (min)
t' = elapsed time since pumping stopped (min)

Reference: Bureau of Reclamation (1981) and Stallman (1971)

DRAFT

Pumping Test and Yield Test
Water Level Measurement Form

Elevation (MSL): _____ top of casing

Observation well/piezometer no.: 1339 PW
Pumped well no.: 1339 PW
Project: 50.03.24

Pump/yield test performed by(Name): CKU.S
Reference point measurements by: ↓
Method of measurement: M-SCOPE
Depth Correction: _____
b = _____
Average Q at end of test _____ gpm r = ___ ft. r' = _____

W.L. 3.56 @ T=0

Date	Hour:Min	t (min)	t' (min)	t/t'	s (ft.)	s' (ft.)	(s_p - s')	Meter Reading (gals.)	Ave. Q	W.L. M-SCOPE	H2 Remarks	
9-25-93	1240	4290			6.18			10495	1.75	9.74	124/125	Water Q Done
"	1310	4320			6.18			—	1.75	9.74	124/125	
"	1340	4350			6.19			10590	1.75	9.75	124/125	Budget check OK
"	1410	4380			6.20			10643	1.75	9.77	124/125	
"	1440	4410			6.22			10704	1.75	9.78	124/125	
"	1510	4440			6.23			10747	1.75	9.79	124/125	
	1540	4470			6.24			10799	1.75	9.80	124/125	
"	1610	4500			6.26			10851	1.75	9.82	124/125	Budget
"	1640	4530			6.26			10903	1.75	9.82	124/125	
"	1710	4560			6.28			10955	1.75	9.84	124/125	
"	1740	4590			6.30			11047	1.75	9.86	124/125	
"	1810	4620			6.59			11061	1.70	10.15	124/125	
"	1817	4627			-			-	1.75	-	121	[illegible]
"	1840	4650			7.45			11114.6	1.85	10.01	122	
"	1847	4657			6.34			11137.1	1.75	9.90	119	Changed TANK
"	1858	4668			6.24			11147	1.75	9.80	123	
"	1910	4680			6.28			11166	1.75	9.84	123	
"	1940	4710			6.30			11218	1.75	9.86	123	
"	2010	4740			6.31			11269	1.75	9.87	123	
	2040	4770			6.33			11321	1.75	9.89	123	
	2110	4800			6.33			11372.6	1.75	9.89	123	
	2140	4830			6.34			11424.3	1.70	9.50	123	BLEEDER
	2210	4860			6.39			11476.4	1.75	9.55	123/124	
	2240	4890			6.40			11528.7	1.75	9.56	123/124	
	2310	4920			6.42			11580.8	1.75	9.58	123/124	

b = saturated thickness (ft)
r = distance from pumped well to observation well or piezometer (ft.)
Q = flow rate (gpm)
s = measured drawdown (ft.)
s' = residual drawdown (ft.) at t'
s_p = drawdown at end of pumping period (final s)
t = elapsed time since pumping began (min)
t' = elapsed time since pumping stopped (min)

Reference: Bureau of Reclamation (1981) and Stallman (1971)

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3.06

E-2

DRAFT

Rev. No: 0

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Pumping Test and Yield Test
Water Level Measurement Form

Elevation (MSL): _____ top of casing

Observation well/piezometer no.: 1339 PW
Pumped well no.: 1339 PW
Project: 500.03.24

Pump/yield test performed by(Name): CRU-5
Reference point measurements by: ↓
Method of measurement: M-SCOPE
Depth Correction: _____
Average Q at end of test _____ gpm r = ___ ft. r' = _____

b = _____

W.L 356 @ TIME 0

Date	Hour:Min	t (min)	t' (min)	t/t'	s (ft.)	s' (ft.)	(s_p - s')	Meter Reading (gals.)	Ave. Q	WATER LEVEL M-SCOPE	Meter Remarks	
28-29	2340	4950			6.43			11,633.0	1.75	9.99	123/124	WATER BUCKET
9-29	0010	4980			6.44			11,685.0	1.75	10.00	123/124	
"	0040	5010			6.44			11737.5	1.75	10.00	123/124	
"	0110	5040			6.45			11789.5	1.75	10.01	123/124	
"	0140	5070			6.48			11841.5	1.73	10.04	123/124	WATER BUCKET
"	0210	5100			6.51			11893.7	1.74	10.07	123/124	
"	0218	5108			—			—	1.75	—	123/124	
"	0240	5130			6.53			11946.1	1.75	10.09	123/124	
"	0310	5160			6.53			11998.5	1.75	10.09	123/124	
"	0340	5190			6.54			12050.9	1.75	10.10	123/124	WATER BUCKET
"	0410	5220			6.56			12103.2	1.75	10.12	123/124	
"	0420	5230			—			—	1.75	—	118/119	MOVED HOSE
"	0428	5238			—			—	1.75	—	123/124	"
"	0450	5260			6.64			12179.5	1.75	10.20	123/124	
"	0510	5280			6.65			12208.3	1.75	10.21	123/124	
"	0540	5310			6.67			12261.1	1.75	10.23	123/124	WATER BUCKET
"	0610	5340			6.66			12313.6	1.75	10.22	123/124	
"	0640	5370			6.67			12364.5	1.75	10.23	123/124	
"	0710	5400			6.68			12420	1.75	10.24	123/124	
"	0740	5430			6.67			12472	1.75	10.23	123/124	WATER DOWN
"	0810	5460			6.71			12575	1.75	10.27	123/124	
"	0840	5490			6.71			12580		10.27	123/124	
"	0910	5520			6.71			12629		10.27	123/124	
"	0940	5550			6.73			12682		10.29	123/124	WATER + BUCKET
	1010	5580			6.71			12738		10.27	123/124	

b = saturated thickness (ft)
r = distance from pumped well to observation well or piezometer (ft.)
Q = flow rate (gpm)
s = measured drawdown (ft.)
s' = residual drawdown (ft.) at t'
s_p = drawdown at end of pumping period (final s)
t = elapsed time since pumping began (min)
t' = elapsed time since pumping stopped (min)

Reference: Bureau of Reclamation (1981) and Stallman (1971)

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Rev. No: 0

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Pumping Test and Yield Test
Water Level Measurement Form

Elevation (MSL): _____ top of casing

Observation well/piezometer no.: 1339 PW
Pumped well no.: 1339 PW
Project: 50.03.24

Pump/yield test performed by(Name): CRU-5
Reference point measurements by: ✓
Method of measurement: M-SCOPE
Depth Correction: _____

b = _____

Average Q at end of test _____ gpm r = ___ ft. r' = _____

W.L. @ T=0 3.56 Ft.

Date	Hour:Min	t (min)	t' (min)	t/t'	s (ft.)	s' (ft.)	(s, - s')	Meter Reading (gals.)	Ave. Q	Water Level M-Scope	NZ Remarks	
9-29-93	~~1040~~ ~~5610~~	5610			6.72			12,786	1.75	10.28	123/124	
"	1110	5640			6.73			12840	1.75	10.29	123/124	
"	1140	5670			6.73			12892	1.75	10.29	123/124	
"	1210	5700			6.74			12944	1.75	10.30	123/124	
"	1240	5730						12994				
"	1310	5760			—			~~13~~	—	10.31	123/124	
"	1318	5768			6.75			13060	1.75	~~10.31~~	123/124	
"	1340	~~5790~~			6.76			13100	1.75	10.32	123/124	WG
"	1410	~~5820~~			6.76			13152	1.75	10.32	123/124	
"	1446	5850			6.76			13204	1.75	10.32	123/124	
"	1510	5880			6.77			13254	1.75	10.33	123/124	
"	1515	5885					FINAL	13261.5	—	—	—	Stop pump Test To recovery

h = saturated thickness (ft)
r = distance from pumped well to observation well or piezometer (ft.)
Q = flow rate (gpm)

s = measured drawdown (ft.)
s' = residual drawdown (ft.) at t'
s_e = drawdown at end of pumping period (final s)
t = elapsed time since pumping began (min)
t' = elapsed time since pumping stopped (min)

Reference: Bureau of Reclamation (1981) and Stallman (1971)

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DRAFT

Pumping Test and Yield Test
Water Level Measurement Form
RECOVERY

PAGE 1 OF 2

Elevation (MSL): _____ top of casing

Observation well/piezometer no.: 1339 PW
Pumped well no.: 1339 PW
Project: 5-CS-24
TEST #4 STEP 1
RECHARGE

Pump/yield test performed by(Name): CRU-5
Reference point measurements by: V
Method of measurement: M. SCOPE
Depth Correction: _____
Average Q at end of test _____ gpm r = ___ ft. b = _____ r' = _____

WL @ t=0 = 3.56

Date	Hour:Min	t (min)	t' (min)	t/t'	s (ft.)	s' (ft.)	(s_p - s')	Meter Reading (gals.)	Ave. Q	Remarks
9/29/93	1515		0		10.33					13263.4 FLOW
			0.5		—					
	1516		1.0		8.69	5.09				
			1.5		8.18	4.62				
	1517		2		7.80	4.24				
			2.5		7.40	3.84				
	1518		3		7.13	3.57				
			3.5		6.94	3.28				
	1519		4		6.65	3.09				
			4.5		6.48	2.92				
	1520		5		6.33	2.77				
	1521		6		6.14	2.58				
	1523		8		5.90	2.34				5.99 @ t=7
	1525		10		5.80	2.24				
	1527		12		5.76	2.20				
	1529		14		5.73	2.17				
			16		5.71	2.15				
			18		5.70	2.14				
			20		5.68	2.12				
			30		5.64	2.08				
			40		5.61	2.05				
			50		5.59	2.03				
			60		5.57	2.01				
	1645		90		5.53	~~2.05~~	1.97			
	1715		120		5.50	~~2.03~~	1.94			

b = saturated thickness (ft)
r = distance from pumped well to observation well or piezometer (ft.)
Q = flow rate (gpm)
s = measured drawdown (ft.)
s' = residual drawdown (ft.) at t'
s_p = drawdown at end of pumping period (final s)
t = elapsed time since pumping began (min)
t' = elapsed time since pumping stopped (min)

Reference: Bureau of Reclamation (1981) and Stallman (1971)

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Pumping Test and Yield Test
Water Level Measurement Form

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RECOVERY

Elevation (MSL): _____ top of casing

Observation well/piezometer no.: 1339 PLU

Pumped well no.: 1339 PLU

Pump/yield test performed by(Name): CRU-5

Project: 50.05.24

Reference point measurements by: _____

Method of measurement: W. SCOTT

TEST 4 STEP 1

Depth Correction: _____

b = _____

Average Q at end of test _____ gpm r = ___ ft. r' = _____

Date	Hour:Min	t (min)	t' (min)	t/t'	s (ft.)	s' (ft.)	(s_p - s')	Meter Reading (gals.)	Ave. Q	Remarks
29SEP	1745		150		5.46	~~2.12~~	1.9			
	1815		180		5.44	~~2.14~~	1.88			
	1845		210		5.42	~~2.18~~	1.86			
	1915		240		5.41	~~2.19~~	1.85			
	1945		270		5.39	1.83				
	2015		300		5.38	1.82				
	2045		330		5.36	1.80				
	2115		360		5.35	1.79				
	2145		390		5.33	1.77				
	2215		420		5.32	1.76				
	2245		450		5.31	1.75				
	2315		480		5.31	1.75				

FIN

b = saturated thickness (ft)
r = distance from pumped well to observation well or piezometer (ft.)
Q = flow rate (gpm)
s = measured drawdown (ft.)
s' = residual drawdown (ft.) at t'
s_p = drawdown at end of pumping period (final s)
t = elapsed time since pumping began (min)
t' = elapsed time since pumping stopped (min)

Reference: Bureau of Reclamation (1981) and Stallman (1971)

ERAFS1\SYS:RSAPPS\RSDATA\
OU-5\PO-37\GTDPFPT

DRAFT

Rev. No: 0

000295

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

PUMPING WELL: 1339 PW

PIEZOMETER NUMBER: 1339

WATER LEVEL AT TIME 0: 3.59

DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
09-25-93	1038	0	3.60	0	
09-25-93	1304/1310	0	3.59	0	1.75 gpm
	1311	1	3.75	.16	
	1312	2	3.83	.24	
	1313	3	3.88	.29	
	1314	4	3.90	.31	
	1315	5	3.92	.33	
	1316	6	3.93	.34	
	1318	8	3.93	.34	
	1320	10	3.93	.34	
	1322	12	3.94	.35	
	1324	14	3.95	.36	
	1326	16	3.98	.39	
	1328	18	4.00	.41	
	1330	20	4.01	.42	
	1340	30	4.02	.43	
	1350	~~40~~ 40	4.03	.44	
	1400	~~50~~ 50	4.05	.46	
	1410	~~60~~ 60	~~4.08~~	.49	
	1440	~~90~~ 90	4.13	.54	
	1510	~~120~~ 120	4.22	.63	
	1540	~~150~~ 150	4.22	.63	
	1610	~~180~~ 180	4.24	0.65	
	1640	~~210~~ 210	4.27	0.68	
	1710	~~240~~ 240	4.28	0.69	
	1740	270 ~~300~~	4.29	0.70	
	1810	300	4.32	0.73	
	1840	330	4.34	0.75	

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

PUMPING WELL: 1339PW

PIEZOMETER NUMBER: 1339

WATER LEVEL AT TIME 0: 3.59

DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
25SEP93	1910	360	4.37	0.78	
	1940	390	4.38	0.79	
	2010	420	4.40	0.81	
	2040	450	4.41	0.82	
	2110	480	4.41	0.82	
	2140	510	4.42	0.83	
	2210	540	4.44	0.85	
	2240	570	4.44	0.85	
	2310	600	4.48	0.89	
	2340	630	4.50	0.91	
9/26/93	0010	660	4.50	0.91	
"	0040	690	4.51	0.92	
"	0110	720	4.53	0.94	
"	0140	750	4.53	0.94	
"	0210	780	4.56	0.97	
"	0240	810	4.56	0.97	
"	0310	840	4.57	0.98	
"	0340	870	4.59	1.00	
"	0410	900	4.60	1.01	
"	0440	930	4.61	1.02	
"	0510	960	4.63	1.04	
"	0540	990	4.62	1.03	
"	0610	1020	4.65	1.06	
"	0640	1050	4.65	1.06	
"	0710	1080	4.65	1.06	
	0740	1110	4.71	1.12	
	0810	1140	4.68	1.09	
	0840	1170	4.70	1.11	

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

PUMPING WELL: 1339 PW

PIEZOMETER NUMBER: 1339

WATER LEVEL AT TIME 0: 3.59

DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
9-26-93	9:10	1200	4.72	1.13	
	0940	1230	4.72	1.13	
	10:10	1260	4.74	1.15	
	10:40	1290	4.75	1.16	
	11:10	1320	4.74	1.15	
"	1140	1350	4.75	1.16	
	12:10	1380	4.76	1.17	
	12:40	1410	4.75	1.16	
	13:10	1440	4.77	1.18	
	1340	1470	4.77	1.18	
	14:10	1500	4.80	1.21	
	1440	1530	4.80	1.21	
	1510	1560	4.82	1.23	
	1540	1590	4.82	1.23	
	1610	1620	4.82	1.24	
	1640	1650	4.84	1.25	
	1710	1680	4.85	1.26	
	1740	1710	4.87	1.28	
	1810	1740	4.88	1.29	
	1840	1770	4.89	1.30	
	1910	1800	4.90	1.31	
	1940	1830	4.91	1.32	
	2010	1860	4.92	1.33	XFER
	2040	1890	4.91	1.32	
	2110	1920	4.93	1.34	
	2140	1950	4.96	1.37	
	2210	1980	4.95	1.36	
	2240	2010	4.94	1.35	

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

PUMPING WELL: 1339 PW

PIEZOMETER NUMBER: 1339

WATER LEVEL AT TIME 0: 3.59

DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
9/26/93	2310	2040	4.97	1.38	
"	2340	2070	4.99	1.40	
9-27-93	0010	~~3000~~ 2100	4.99	1.40	
9-27-93	0040	~~3030~~ 2130	5.01	1.42	
"	0110	~~3060~~ 2160	5.02	1.43	
"	0140	~~3090~~ 2190	5.03	1.44	
"	0210	~~3120~~ 2220	5.04	1.45	
"	0240	~~3150~~ 2250	5.04	1.45	
"	0310	~~3180~~ 2280	5.06	1.47	
"	0340	~~3210~~ 2310	5.07	1.48	
"	0410	~~3240~~ 2340	5.08	1.49	
"	0440	~~3270~~ 2370	5.09	1.50	
"	0510	~~3300~~ 2400	5.10	1.51	
"	0540	~~3330~~ 2430	5.11	1.52	
"	0610	~~3360~~ 2460	5.14	1.55	
"	0640	~~3390~~ 2490	5.14	1.55	
"	0710	~~3420~~ 2520	5.15	1.56	
"	0740	~~3450~~ 2550	5.15	1.56	
"	0810	~~3480~~ 2580	5.17	1.58	
"	0840	~~3510~~ 2610	5.17	1.58	
"	0910	~~3540~~ 2640	5.17	1.58	
"	0940	~~3570~~ 2670	5.19	1.60	
"	1010	~~3600~~ 2700	5.22	1.63	
"	1040	~~3630~~ 2730	5.21	1.62	
"	1110	~~3660~~ 2760	5.23	1.64	
"	1140	~~3690~~ 2790	5.22	1.63	
"	1210	~~3720~~ 2820	5.23	1.64	
"	1240	~~3750~~ 2850	5.23	1.64	

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

PUMPING WELL: 1339 PW

PIEZOMETER NUMBER: 1339

WATER LEVEL AT TIME 0: 3.54

DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
09-27-93	1310	~~3780~~ 2790	5.25	1.66	
"	1340	~~3810~~ 2810	5.25	1.66	
"	1410	2940	5.26	1.67	
"	1440	2970	5.27	1.68	
"	1510	3000	5.28	1.69	
"	1540	3030	5.30	1.71	
"	1610	3060	5.31	1.72	
"	1640	3090	5.31	1.72	
"	1710	3120	5.32	1.73	
"	1740	3150	5.33	1.74	
"	1810	3180	5.34	1.75	
"	1840	3210	5.36	1.77	
"	1910	3240	5.37	1.78	
"	1940	3270	5.38	1.79	
"	2010	3300	5.38	1.79	
"	2040	3330	5.39	1.80	
"	2110	3360	5.41	1.82	1.82
"	2140	3390	5.41	1.82	1.82
"	2210	3420	5.42	1.83	1.83
"	2240	3450	5.43	1.84	1.84
"	2310	3480	5.43	1.84	1.84
"	2340	3510	5.46	1.86	1.87
09-28-93	0010	3540	5.47	1.88	1.89
	0040	3570	5.45	1.86	1.86
	0110	3600	5.49	~~1.90~~	1.90
	0140	3630	5.50	1.91	
	0210	3660	5.50	1.91	
	0240	3690	5.52	1.93	

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

PUMPING WELL: 1339 PW

PIEZOMETER NUMBER: 1339

WATER LEVEL AT TIME 0: 3.59

DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
9-28-93	0310	3720	5.52	1.93	
"	0340	3750	5.54	1.95	
"	0410	3780	5.53	1.94	
"	0440	3810	5.54	1.95	
"	0510	3840	5.56	1.97	
"	0540	3870	5.57	1.98	
"	0610	3900	5.58	1.99	
"	0640	3930	5.59	2.00	
"	0710	3960	5.60	2.01	
"	0740	3990	5.60	2.01	
"	0810	4020	5.61	2.02	
	0840	4050	5.62	2.03	
	0910	4080	5.63	2.04	
	0940	4110	5.65	2.06	
"	1010	4140	5.66	2.07	
	1040	4170	5.66	2.07	
	1110	4200	5.69	2.10	
	1140	4230	5.67	2.08	
	1210	4260	5.68	2.09	
	1240	4290	5.71	2.12	
	1310	4320	5.71	2.12	
	1340	4350	5.74	2.15	
	1410	4380	5.73	2.14	
	1440	4410	5.76	2.17	
	1510	4440	5.74	2.15	
	1540	4470	5.75	2.16	
	1610	4500	5.76	2.17	
	1640	4530	5.78	2.19	

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

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PUMPING WELL: 1339Pu

PIEZOMETER NUMBER: 1339

WATER LEVEL AT TIME 0: 3.59

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DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
	1740	4590	5.80	2.21	
	1810	4620	5.80	2.21	
	1840	4650	5.82	2.23	
	1910	4680	5.82	2.23	
	1940	4710	5.82	2.23	
	2010	4740	5.82	2.23	
	2040	4770	5.84	2.25	
	2110	4800	5.85	2.26	
	2140	4830	5.86	2.27	
	2210	4860	5.87	2.28	
	2240	4850	5.88	2.29	
	2310	4920	5.89	2.30	
	2340	4950	5.89	2.30	
9-29-93	0010	4980	5.92	2.33	
	0040	5010	5.92	2.33	
	0110	5040	5.93	2.34	
	0140	5070	5.94	2.35	
	0210	5100	5.95	2.36	
	0240	5130	5.95	2.36	
	0310	5160	5.95	2.36	
	0340	5190	5.98	2.39	
	0410	5220	5.99	2.40	
	0450	5260	6.00	2.41	
	0510	5290	6.01	2.42	
	0540	5310	6.03	2.44	
	0610	5340	6.03	2.44	
	0640	5370	6.04	2.45	

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

PUMPING WELL: 1339 PW

PIEZOMETER NUMBER: 1339

WATER LEVEL AT TIME 0: 3.59

DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
9-29-93	710	5400	6.05	2.46	
9-29-93	0740	5430	6.08	2.49	
"	0810	5460	6.08	2.49	
"	0840	5490	6.09	2.50	
"	0910	5520	6.09	2.50	
"	0940	5550	6.09	2.50	
"	1010	5580	6.11	2.52	
"	1040	5610	6.11	2.52	
"	1110	5640	6.14	6.55	
"	1140	5670	6.14	6.55	
"	1210	5700	6.15	6.56	
"	1240	5730	6.15	6.56	
"	1310	5760	~~6.18~~ 6.15	~~6.59~~ 6.56	
"	1340	5790	6.18	6.59	
"	1410	5820	6.18	6.59	
"	1440	5850	6.19	6.60	
"	1510	5880	6.19	6.60	
"					

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

Test #4 Step #1

RECOVERY

PUMPING WELL: 1339 PW

PIEZOMETER NUMBER: 1339

WATER LEVEL AT TIME 0: 3.59

DATE	TIME	ELAPSED TIME	WATER LEVEL	~~DRAWDOWN~~ RECOVERY	COMMENTS
9-29-93	1515	0	6.19	—	
	1516	1	6.20	-0.01	
	1517	2	6.10	~~0.24~~ 0.09	
	1518	3	6.04	~~0.17~~ 0.15	
	1519	4	6.02	~~0.09~~ 0.13	
	1520	5	5.99	~~0.13~~ 0.20	
	1521	6	5.93	~~0.08~~ 0.26	
	1523	8	5.92	~~0.09~~ 0.27	
	1525	10	5.88	~~0.33~~ 0.31	
	1527	12	5.85	~~0.36~~ 0.34	
	1529	14	5.84	~~0.37~~ 0.35	
	1531	16	5.80	~~0.41~~ 0.39	
	1533	18	5.82	0.~~73~~ ~~39~~ 0.41	
	1535	20	5.80	~~0.44~~ 0.39 ~~0.43~~	
	1545	30	5.72	~~0.49~~ 0.47	
	1555	40	5.68	~~0.53~~ 0.51	
	1605	50	5.66	~~0.55~~ 0.53	
	1615	60	5.65	~~0.56~~ 0.54	
	1645	90	5.58	~~0.63~~ 0.61	
	1715	120	~~5.45~~ 5.54	~~0.67~~ 0.65	
	1745	150	5.52	~~0.70~~ 0.67	
	1815	180	5.49	~~0.72~~ 0.70	
	1845	210	5.47	~~0.74~~ 0.72	
	1915	240	5.45	~~0.77~~ 0.74	
	1945	270	5.44	0.75	
	2015	300	5.43	0.76	
	2045	330	5.41	0.78	
29SEP93	2115	360	5.40	0.79	

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

PUMPING WELL: 1339 PW

PIEZOMETER NUMBER: 1339

WATER LEVEL AT TIME 0: 3.59

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5.40 RECOVERY

DATE	TIME	ELAPSED TIME	WATER LEVEL	~~DRAWDOWN~~	COMMENTS
25SEP93	2145	390	5.38	0.81	
	2215	420	5.37	0.82	
	2245	450	5.36	0.83	
FIN	2315	480	5.35	0.84	

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PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

PUMPING WELL: 1339 PW

PIEZOMETER NUMBER: P 7 1B

WATER LEVEL AT TIME 0: ~~3.49~~ 3.63

page 1 of ___

DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
9-24-93	1115	0	3.49	0	
9-25-93	1030	0	3.62	0	
9-25-93	~~1306~~ 1310	0	3.63	0	Starting Test
	1311	1	3.66	.03	
		2	3.69	.06	
		3	3.71	.08	
		4	3.72	.09	
		5	3.74	.11	
		6	3.75	.12	
		8	3.77	.14	
		10	3.78	.15	
		12	3.80	.17	
		14	3.81	.18	
		16	3.82	.19	
		18	3.82	.19	
		20	3.83	.20	
		30	3.87	.24	
		40	3.92	.29	
		50	3.92	.29	
		60	3.95	.32	
		90	4.00	.37	
		120	4.03	.40	
		151	4.05	.42	
		180	4.10	.47	
	1640	210	4.10	0.47	
	1710	240	4.12	.49	
	1741	~~301~~ 271	4.14	.51	
	1811	301	4.16	.53	

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

PUMPING WELL: 1335 PW

PIEZOMETER NUMBER: PZ-113

WATER LEVEL AT TIME 0: 3.63

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DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
25 SEP 93	1840	330	4.16	.53	
25 SEP 93	1910	360	4.20	.57	
25 Sep 93	1940	390	4.20	.57	
"	2010	420	4.22	.59	
"	2040	450	4.24	.61	
"	2110	480	4.24	.61	
"	2140	510	4.25	.62	
"	2210	540	4.26	.63	
"	2240	570	4.27	.64	
"	2310	600	4.28	.65	
"	2340	630	4.31	.68	
26 SEP 93	0010	660	4.32	.69	
"	0040	690	4.34	.71	
"	0110	720	4.34	.71	
"	0140	750	4.35	.72	
"	0210	780	4.36	.73	
"	0240	810	4.38	.75	
"	0310	840	4.39	.76	
"	0340	870	4.40	.77	
"	0410	900	4.41	.78	
"	0440	930	4.42	.79	
"	0510	960	4.43	.80	
"	0540	990	4.44	.81	
"	0610	1020	4.46	.83	
"	0640	1050	4.46	.83	
"	0710	1080	4.45	.82	
"	740	1110	4.49	.86	
"	0810	1140	4.50	~~.85~~ .87	

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

PUMPING WELL: 1339 PW

PIEZOMETER NUMBER: PZ1B

WATER LEVEL AT TIME 0: 3.63

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DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
09-26-93	0840	1170	4.50	~~.85~~ .87	
"	0916	1200	4.52	.89	
"	0941	1231	4.54	~~.89~~ .91	
"	1010	1260	~~4.77~~ 4.54	~~.82~~ ~~.89~~ .91	
"	10:40	1290	4.55	~~.83~~ ~~.90~~ .92	
"	1110	1320	4.57	~~.92~~ .94	
9-26-93	1140	1350	4.55	~~.83~~ ~~.90~~ .92	
"	1210	1380	4.58	~~.93~~ .95	
"	1240	1410	4.58	~~.93~~ .95	
"	1310	1440	4.58	~~.93~~ .95	
"	1340	1470	4.61	~~.96~~ .98	
"	1410	1500	4.62	~~.97~~ .99	
"	1440	1530	4.63	~~.98~~ 1.00	
"	1510	~~1570~~ 1560	4.64	1.01	
9-26-93	1540	1590	4.64	1.01	
	1610	1620	4.66	1.03	
	16:40	1650	4.66	1.03	
	17:10	1680	4.66	1.03	
	17:40	1710	4.68	1.05	
	18:10	1740	4.68	1.05	
	18:40	1770	4.70	1.07	
	19:10	1800	4.71	1.08	
	19:40	1830	4.72	1.09	
	2010	1860	4.73	1.10	
	20:40	1890	4.73	1.10	
	21:10	1920	4.74	1.11	
	21:40	1950	4.75	1.12	
	22:10	1980	4.75	1.12	

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

PUMPING WELL: 1339 PW

PIEZOMETER NUMBER: PZ-1B

WATER LEVEL AT TIME 0: 3.63

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DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
9-26-93	2240	2010	4.78	1.15	
"	2310	2040	~~5.79~~ 4.79	1.16	
"	2340	2070	4.79	1.16	
9-27-93	0010	~~3000~~ 2100	4.80	1.17	
"	0040	~~3030~~ 2130	4.80	1.17	
"	0110	~~3060~~ 2160	4.82	1.19	
"	0140	~~3090~~ 2190	4.83	1.20	
"	0210	~~3120~~ 2220	4.84	1.21	
"	0240	~~3150~~ 2250	4.85	1.22	
"	0310	~~3180~~ 2280	4.86	1.23	
"	0340	~~3210~~ 2310	4.87	1.24	
"	0410	~~3240~~ 2340	4.88	1.25	
"	0440	~~3270~~ 2370	4.89	1.26	
"	0510	~~3300~~ 2400	4.89	1.26	
"	0540	~~3330~~ 2430	4.91	1.28	
"	0610	~~3360~~ 2460	4.92	1.29	
"	0640	~~3390~~ 2490	4.93	1.30	
"	0710	~~3420~~ 2520	4.94	1.31	
"	0740	~~3450~~ 2550	4.96	1.33	
"	0810	~~3480~~ 2580	4.97	1.34	
"	0840	~~3510~~ 2610	4.97	1.34	
"	0910	~~3540~~ 2640	4.97	1.34	
"	0940	~~3570~~ 2670	4.98	1.35	
"	1010	~~3600~~ 2700	4.99	1.36	
"	1040	~~3630~~ 2730	5.00	1.37	
"	1110	~~3660~~ 2760	5.01	1.38	
"	1140	~~3690~~ 2790	5.02	1.39	
	1210	~~3720~~ 2820	5.03	1.40	

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

PUMPING WELL: 1339 PW

PIEZOMETER NUMBER: PZ 1B

WATER LEVEL AT TIME 0: 3.63

DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
07-27-93	1240	~~3750~~ 2250	5.03	1.40	
	1310	~~3780~~ 2280	5.05	1.42	
	1340	~~3810~~ 2910	5.06	1.43	
	1410	~~3840~~ 2940	5.07	1.44	
	1440	2970	5.08	1.45	
	1510	3000	5.09	1.46	
	1540	3030	5.07	1.44	
	1610	3060	5.10	1.47	
	1640	3090	5.10	1.47	
	1710	3120	5.11	1.48	
	1740	3150	5.13	1.50	
	1810	3180	5.15	1.52	
	1840	3210	5.14	1.51	
	1910	3240	5.16	1.53	
	1941	3271	5.16	1.53	
	2010	3300	5.17	1.54	
	2040	3330	5.18	1.55	
	2110	3360	5.18	1.55	
	2140	3390	5.20	1.57	
	2210	~~3450~~ 3420	5.21	1.58	
	2240	~~3480~~ 3450	5.22	1.59	
	2310	~~3510~~ 3480	5.22	1.59	
	2340	~~3540~~ 3510	5.24	1.61	
07-28-93	0010	~~3570~~ 3540	5.25	1.62	
	0040	~~3600~~ 3570	5.26	1.63	
	0110	~~3630~~ 3600	5.27	1.64	
	0140	~~3660~~ 3630	5.28	1.65	
	0210	~~3690~~ 3660	5.28	1.65	

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

PUMPING WELL: 1334PW

PIEZOMETER NUMBER: PZ-1B

WATER LEVEL AT TIME 0: 3.63

DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
9-28-93	0240	3690	5.29	1.66	
"	0310	3720	5.31	1.68	
"	0340	3750	5.31	1.68	
"	0410	3780	5.32	1.69	
"	0440	3810	5.33	1.70	
"	0510	3840	5.34	1.71	
"	0540	3870	5.35	1.72	
"	0610	3900	5.36	1.73	
"	0640	3930	5.36	1.73	
"	0710	3960	5.38	1.75	
"	0740	3990	5.39	1.76	
"	0810	4020	5.40	1.77	
"	0840	4050	5.41	1.78	
"	0910	4080	5.42	1.79	
"	0940	4110	5.42	1.79	
"	1010	4140	5.43	1.80	
"	1040	4170	5.44	1.81	
"	1110	4200	5.46	1.83	
"	1140	4230	5.49	1.86	
"	1210	4260	5.47	1.84	
"	1240	4290	5.48	1.85	
9-28-93	1310	4320	5.49	1.86	
	1340	4350	5.50	1.87	
	1410	4380	5.51	1.88	
	1440	4410	5.51	1.88	
	1510	4440	5.52	1.89	
	1540	4470	5.52	1.89	
	1610	4500	5.53	1.90	

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

7333

PUMPING WELL: 1239 PW

PIEZOMETER NUMBER: PZ1B

WATER LEVEL AT TIME 0: 3.63

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DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
9-25-93	1640	4530	5.55	1.92	
	1710	4560	5.55	1.92	
	1740	4590	5.56	1.93	
	1810	4620	5.57	1.94	
	1840	4650	5.59	1.96	
	1910	4680	5.59	1.96	
	1940	4710	5.59	1.96	
	2010	4740	5.62	1.99	
	2040	4770	5.62	1.99	
	2110	4800	5.62	1.99	
	2140	4830	5.63	2.00	
	2210	4860	5.65	2.02	
	2240	4890	5.65	2.02	
	2310	4920	5.66	2.03	
	2340	4950	5.66	2.03	
9-29-93	0010	4980	5.68	2.05	
	0040	5010	5.69	2.06	
	0110	5040	5.70	2.07	
	0140	5070	5.71	2.08	
	0210	5100	5.72	2.09	
	0240	5130	5.73	2.10	
	0310	5160	5.74	2.11	
	0340	5190	5.75	2.12	
	0410	5220	5.75	2.12	
	0450	5260	5.76	2.13	
	0510	5280	5.77	2.14	
	0540	5310	5.78	2.15	
	0610	5340	5.79	2.16	

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

PUMPING WELL: 1331 PW

PIEZOMETER NUMBER: PZ-12

WATER LEVEL AT TIME 0: 3.63

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DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
[illegible]	0640	5370	5.80	2.17	
	0710	5400	5.81	2.18	
"	0740	5430	5.81	2.18	
"	0810	5460	5.83	2.20	
"	0840	5490	5.85	2.22	
"	0910	5520	5.85	2.22	
"	0940	5550	5.86	2.23	
"	1010	5580	5.86	2.23	
"	1040	5610	5.88	2.25	
"	1110	5640	5.88	2.25	
"	1140	5670	5.90	2.27	
"	1210	5700	5.91	2.28	
"	1240	5730	5.91	2.28	
	1310	5760	5.92	2.29	
	1340	5790	5.93	2.30	
	1410	5820	5.95	2.32	
	1440	5850	5.92	2.29	
	1510	5880	5.95		
	15185	LAST READING FOR			
	15126	TEST 4	STEP Ø		
	15137	DRAWD			
	15148				
	15159				
	1520				

000313

7333

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

PUMPING WELL 1334 PW

TEST 4 STEP 1

PIEZOMETER NUMBER: PZ-1B

1

WATER LEVEL AT TIME 0: 3.63

RECOVERY RECOVERY

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DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
	~~1515~~	~~5~~	~~5.55~~		
29SEP93	1515	0	5.55	—	
	1516	1	5.95	0.00	
	1517	2	5.93	0.02	
	1518	3	5.91	0.04	
	1519	4	5.89	0.06	
	1520	5	5.87	0.08	
	1521	6	5.86	0.09	
	1523	8	5.85	0.10	
	1525	10	5.81	0.14	
	1527	12	5.80	0.15	
	1529	14	5.79	0.16	
	1531	16	5.77	0.18	
	1533	18	5.76	0.19	
	1535	20	5.75	0.20	
	1545	30	5.71	0.24	
	1555	40	5.68	0.27 27	
	1605	50	5.66	0.29 29	
	1615	60	5.64	0.31 31	
	1645	90	5.61	.34	
	1715	120	5.57	.38	
	1745	150	5.54	.41	
	1815	180	5.51	.44	
	1845	210	5.50	.45	
	1915	240	5.47	.48	
	1945	270	5.47	.48	
	2015	300	5.45	.50	
29SEP93	2045	330	5.43	0.52	

000314

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

PUMPING WELL: 1339 PW

PIEZOMETER NUMBER: PZ-1B

WATER LEVEL AT TIME 0: 3.63 5.43 RECOVERY

DATE	TIME	ELAPSED TIME	WATER LEVEL	~~DRAWDOWN~~	COMMENTS
29 OCT 93	2115	360	5.42	.53	
	2145	390	5.41	.54	
	2215	420	5.40	.55	
	2245	450	5.39	.56	
	2315	480	5.38	.57	

7333

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

PUMPING WELL: 1339 PW

PIEZOMETER NUMBER: PZ1C

WATER LEVEL AT TIME 0: ~~11.77~~ 12.06

page 1 of ___

DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
9/:/93	~~11 14~~	~~0~~	~~12 12~~		
	1310	0	12.06	0	START TEST
	1320	10	12.06	0	
	1330	20	12.05	+.01	RECHARGE
	1340	30	12.04	+.02	
	1350	40	12.02	+0.04	
	1400	50	12.02	+0.04	
	1410	60	12.02	+0.04	
	1440	90	11.98	+0.08	
	1510	120	11.93	+0.13	
	1541	151	11.85	+0.17	
	1610	180	11.89	+0.17	
	1640	210	11.85	+0.23	
	1710	240	11.81	+0.25	
	1741	~~300~~ 271	11.78	+0.28	
	1811	301	11.75	+0.31	BAROMETER HAS FALLEN FROM 29.80-29.6 1.4 SuFe
	1840	330	11.73	+.33	RECHARGE
	1910	360	11.74	+.34	
	1940	390	11.67	+.41	
	2010	420	11.87	+.21	
	2040	450	11.62	+.37	
	2110	480	11.68	+.42	
	2140	510	11.15	+.91	
	2210	540	11.10	+.96	
	2240	570	11.05	+1.01	
	2310	600	11.01	+1.05	
	2340	630	11.00	+1.06	
9-26-93	0010	660	10.98	+1.08	

000316

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

PUMPING WELL: 1339 PW

PIEZOMETER NUMBER: PZ-1C

WATER LEVEL AT TIME 0: 12:06

DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
9-26-93	0040	690	10.95	+ 1.11	Recharging
"	0110	720	10.93	+ 1.13	"
"	0140	750	10.91	+ 1.15	"
"	0210	780	10.88	+ 1.18	"
"	0240	810	10.86	+ 1.20	"
"	0311	840	10.84	+ 1.22	"
"	0340	870	10.81	+ 1.25	
"	0410	900	10.79	+ 1.27	
"	0440	930	10.77	+ 1.29	
"	0510	960	10.75	+ 1.31	
"	0540	990	10.73	+ 1.33	
"	0610	1020	10.71	+ 1.35	
"	0640	1050	10.69	+ 1.37	
"	0710	1080	10.68	+ 1.38	
"	0740	1110	10.65	+ 1.41	
"	0810	1140	10.64	+ ~~1.40~~ 1.42	
"	0840	1170	10.62	+ ~~1.38~~ 1.44	
"	0910	1200	10.60	+ ~~1.36~~ 1.46	
"	0941	1231	10.58	+ ~~1.34~~ 1.48	
"	1010	1250	10.56	+ ~~1.32~~ 1.50	Cloudy + Windy
"	1040	1290	10.55	+ ~~1.31~~ 1.51	
"	1110	1320	10.52	+ ~~1.33~~ 1.54	
"	1140	1350	10.49	+ ~~1.36~~ 1.57	
"	1210	1380	10.49	+ ~~1.36~~ 1.57	
"	1240	1410	10.48	+ ~~1.37~~ 1.58	
9-26-93	13:10	1440	10.46	+ ~~1.39~~ 1.60	
"	13 40	1470	10.42	+ ~~1.43~~ 1.64	
	14:10	1500	10.42	~~1.43~~ 1.64	

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

PUMPING WELL: 1339 PW

PIEZOMETER NUMBER: PZ 1C

WATER LEVEL AT TIME 0: 12.06

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DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
9-26-93	1440	1530	10.41	~~1.44~~ 1.65	
"	1510	1560	10.38	~~1.47~~ 1.68	
"	1540	1590	10.36	~~1.49~~ 1.70	
"	16:10	1620	10.35	1.71	
"	16:40	1650	10.33	1.73	
"	17:10	1680	10.33	1.73	
"	17:40	1710	10.30	1.76	
"	18:10	1740	10.29	1.77	
"	18:40	1770	10.27	1.79	
"	19:10	1800	10.26	1.80	
"	19:40	1830	10.24	1.82	
"	20:12	1862	10.22	1.84	
"	20:40	1890	10.22	1.84	
"	21:10	1920	10.24	1.82	
"	2141	1951	10.18	1.88	
"	2210	1980	10.18	1.88	
"	2240	2010	10.17	1.89	
"	2310	2040	10.16	1.90	
"	2340	2070	10.15	1.91	
9-27-93	0010	~~3000~~ 2100	10.14	1.92	
"	0040	~~3030~~ 2130	10.13	1.93	
"	0110	~~3060~~ 2160	10.12	1.94	
"	0140	~~3090~~ 2190	10.10	1.96	
"	0210	~~3120~~ 2220	10.09	1.97	
"	0240	~~3150~~ 2250	10.08	1.98	
"	0310	~~3180~~ 2280	10.06	2.00	
"	0340	~~3210~~ 2310	10.05	2.01	
"	0410	~~3240~~ 2340	10.04	2.02	

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

PUMPING WELL: 1339 PW1

PIEZOMETER NUMBER: PZ-1C

WATER LEVEL AT TIME 0: 1206

DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
9-27-93	0440	~~3270~~ 2370	10.03	2.03	
"	0510	~~3300~~ 2400	10.02	2.04	
"	0540	~~3330~~ 2430	10.01	2.05	
"	0610	~~3360~~ 2460	10.00	2.06	
"	0640	~~3390~~ 2490	9.98	2.08	
"	0710	~~3420~~ 2520	9.97	2.09	
"	0740	~~3450~~ 2550	9.97	2.09	
"	0810	~~3480~~ 2580	9.97	2.09	
"	0840	~~3510~~ 2610	9.95	~~2.07~~ 2.11	
"	0910	~~3540~~ 2640	9.93	~~2.07~~ 2.13	
"	0940	~~3570~~ 2670	9.94	2.12	
"	1010	~~3600~~ 2700	9.91	2.15	
"	1040	~~3630~~ 2730	9.90	2.16	
9-27-93	1110	~~3660~~ 2760	9.89	~~2.15~~ 2.17	
"	1140	~~3690~~ 2790	9.89	~~2.15~~ 2.17	
	1210	~~3720~~ 2820	9.86	~~2.12~~ 2.20	
"	1240	~~3750~~ 2850	9.85	2.21	
	1310	~~3780~~ 2880	9.84	2.22	
	1340	~~3810~~ 2910	9.85	2.21	
	1410	~~3840~~ 2940	9.83	2.23	
	1440	2970	9.81	2.25	
	1510	3000	9.80	2.26	
	1540	3030	9.78	2.28	
	1610	3060	9.78	2.28	
	1640	3090	9.76	2.30	
	1710	3120	9.76	2.30	
	1740	3150	9.75	2.31	
	1810	3180	9.74	2.32	

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

PUMPING WELL: 1379 PW

PIEZOMETER NUMBER: PZ-1C

WATER LEVEL AT TIME 0: 12.06

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DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
9-27-93	1840	3210	9.72	2.34	
	1910	3240	9.72	2.34	
	1942	3272	9.70	2.36	
	2010	3300	9.70	2.36	
	2040	3330	9.68	2.38	
	2110	3360	9.68	2.38	
	2140	~~3420~~ 3390	9.67	2.37	
	2210	~~3456~~ 3420	9.66	2.40	
	2240	~~3480~~ 3450	9.65	2.41	
	2310	~~3510~~ 3480	9.64	2.42	
	2340	~~3540~~ 3510	9.64	2.42	
9-28-93	0010	~~3570~~ 3540	9.63	2.43	
	0040	~~3600~~ 3570	9.62	2.44	
	0110	~~3630~~ 3600	9.62	2.44	
	0140	~~3660~~ 3630	9.61	2.45	
	0210	~~3690~~ 3660	9.60	2.46	
	0240	~~3720~~ 3690	9.59	2.47	
	0310	~~3750~~ 3720	9.58	2.48	
	0340	~~3780~~ 3750	9.57	2.49	
	0410	~~3810~~ 3780	9.56	2.50	
	0440	~~3840~~ 3810	9.55	2.51	
	0510	~~3870~~ 3840	9.54	2.52	
	0540	~~3900~~ 3870	9.53	2.53	
	0610	~~3930~~ 3900	9.52	2.54	
	0640	~~3960~~ 3930	9.52	2.54	
	0710	~~3990~~ 3960	9.52	2.54	
	0740	~~4020~~ 3990	9.50	2.56	
	0810	4020	9.49	~~2.55~~ 2.57	

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

PUMPING WELL: 339 PW

PIEZOMETER NUMBER: PZ 1C

WATER LEVEL AT TIME 0: 12.06

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DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
9-28-93	0840	4050	9.43	2.58	
"	0910	4080	9.49	2.57	
"	0940	4110	9.46	2.60	
"	1010	4140	9.45	2.61	
"	1040	4170	9.45	2.61	
"	1110	4200	9.45	2.61	
9-28-93	1140	4230	9.45	2.61	
	1210	4260	9.43	2.63	
	1240	4290	9.42	2.64	
	1310	4320	9.42	2.64	
	1340	4350	9.40	2.66	
	1410	4380	9.39	2.67	
	1440	4410	9.39	2.67	
	1510	4440	9.37	2.69	
	1540	4470	9.36	2.70	
	1610	4500	9.36	2.70	
	1640	4530	9.37	2.69	
	1710	4560	9.34	2.72	
	1740	4590	9.35	2.71	
	1810	4620	9.33	2.73	
	1840	4650	9.32	2.74	
	1910	4680	9.32	2.74	
	1940	4710	9.30	2.76	
	2010	4740	9.29	2.77	
	2040	4770	9.29	2.77	
	2110	4800	9.28	2.78	
	2140	4830	9.28	2.78	
	2210	4860	9.28	2.78	

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

PUMPING WELL: 1339 PW

PIEZOMETER NUMBER: PZ-1C

WATER LEVEL AT TIME 0: 12.06

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DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
9-28-93	2240	4800	9.26	2.80	
"	2310	4920	9.26	2.80	
"	2340	4950	9.27	2.79	
9-29-93	0010	4980	9.26	2.80	
"	0040	5010	9.26	2.80	
"	0110	5040	9.24	2.82	
"	0140	5070	9.23	2.83	
"	0210	5100	9.22	2.84	
"	0240	5130	9.22	2.84	
"	0310	5160	9.21	2.85	
"	0340	5190	9.21	2.85	
"	0410	5220	9.20	2.86	
"	0450	5260	9.19	2.87	
"	0510	5280	9.18	2.88	
"	0540	5310	9.18	2.88	
"	0610	5340	9.17	2.89	
"	0640	5370	9.17	2.89	
"	0710	5400	9.16	2.90	
"	0740	5430	9.14	2.92	
"	0810	5460	9.13	2.93	
"	0840	5490	9.13	2.93	
"	0910	5520	9.12	2.94	
"	0940	5550	9.12	2.94	
"	1010	5580	9.11	2.95	
"	1040	5610	9.10	2.96	
"	1110	5640	9.09	2.97	
"	1140	5670	9.09	2.97	
"	1210	5700	9.08	2.98	

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

PUMPING WELL: 1339 PW

PIEZOMETER NUMBER: PZ1-C

WATER LEVEL AT TIME 0: 12.06

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DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
9-29-93	1240	5730	9.08	2.98	
	1310	5760	9.07	~~2.95~~ 2.99	
	1340	5790	9.06	~~2.94~~ 3.00	
	1410	5820	9.06	3.00	
	1440	5850	9.05	3.01	
				Recovery ?	
9/29/93	~~1500~~ 1515	0	9.05	0	Pump Shutoff
	~~1510~~ 1525	10	9.05	0	
	1545	30	9.04	0.01	
	~~1550~~ 1605	50	9.04	0.01	
	1615	60	9.04	0.01	
	1645	90	9.04	0.01	
	1715	120	9.03	0.02	
	1745	150	9.03	.02	
	1815	180	9.02	.03	
	1845	210	9.02	.03	
	1915	240	9.01	.04	
	1945	270	9.00	.05	
	2015	300	9.00	.05	
	2045	330	8.99	~~0.06~~ .06	
	2115	360	8.99	~~0.06~~ .06	
	2145	390	8.97	.08	
	2215	420	8.98	.07	
	2245	450	8.97	.08	
	2315	480	8.97	.08	

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

7333

PUMPING WELL: 1339 PW

PIEZOMETER NUMBER: PZ-1C

WATER LEVEL AT TIME 0: 12.06

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DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

PUMPING WELL: 1339 PW

PIEZOMETER NUMBER: PZ-1C

WATER LEVEL AT TIME 0: 12.06

DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

PUMPING WELL: 1339 PW

PIEZOMETER NUMBER: P22

WATER LEVEL AT TIME 0: 3.65 @ 30 min

page 1 of ___

DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
~~09-25-93~~	~~1026~~	~~0~~	~~3.50~~	NO START	
09-25-93	1340	30	3.65	~~+0.15~~ 0.0	Probable Rain In
09/25/93	1410	60	3.73	+ ~~0.27~~ .08	" Well
09/25/93	1440	90	3.73	+ ~~0.27~~ .08	"
09/25/93	1511	120	3.79	+ ~~.29~~ .14	"
"	1543	153	3.82	+.17	
"	1611	181	3.84	+.19	
"	1641	211	3.86	+ .21	
"	1711	241	3.88	+ .23	
"	1741	25 88 ~~30~~ 271	3.85	0.24	
"	1811	301	3.91	0.26	
"	~~1111~~ 1830	330	3.93	0.28	
"	1911	360	3.95	0.31	
"	1941	391	3.95	0.31	
"	2010	420	3.99	~~0.35~~ 0.34	
"	2040	450	3.99	~~0.35~~ 0.35	
"	2112	482	3.95	0.32	HEAVY RAIN.
"	2143	513	4.00	0.36	
"	2212	545	4.03	0.38	
"	2241	575	4.04	0.39	
9-25-93	2310	605	4.05	0.40	
"	2340	630	4.06	0.41	
9-26-93	0010	660	4.08	0.43	
	0040	690	4.08	0.43	
	0110	720	4.10	0.45	
	0140	750	4.11	0.46	
	0210	780	4.12	0.47	
	0240	810	4.13	0.48	

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

PUMPING WELL: 1339 PW

PIEZOMETER NUMBER: PZ2

WATER LEVEL AT TIME 0: 3.65

DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
9-26-93	0310	840	4.14	0.49	
"	0340	870	4.15	0.50	
"	0410	900	4.16	0.51	
"	0440	930	4.18	0.53	
"	0510	960	4.19	0.54	
"	0540	990	4.20	0.55	
"	0610	1020	4.20	0.55	
"	0640	1050	4.22	0.57	
"	0710	1080	4.22	0.57	
"	0740	1110	4.24	0.59	
	0810	1140	4.25	0.60	
	0840	1170	~~4.27~~ 4.26	~~0.62~~ 0.61	
	0910	1200	4.27	0.62	
	0942	1232	4.28	0.63	
	1010	~~1250~~ 1260	4.30	0.65	
	1040	1290	4.30	0.65	
	1110	1320	4.31	0.66	
"	1140	1350	4.31	0.66	
"	1210	1380	4.32	0.67	
	12:40	1410	4.32	0.67	
"	1310	1440	4.35	0.70	
"	1340	1470	4.36	0.71	
"	1410	1500	4.36	0.71	
"	1440	1530	4.37	.72	
"	1510	1560	4.39	.74	
9-26-93	15:40	1590	4.40	.75	
	16:10	1620	4.40	.75	
	16:40	1650	4.40	.75	

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

PUMPING WELL: 1339Pu

PIEZOMETER NUMBER: PZ2

WATER LEVEL AT TIME 0: 3.65

DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
9-26-93	17:10	1680	4.41	.76	
	17:40	1710	4.46	.81	
	18:10	1740	4.44	.79	
	18:40	1770	4.45	.80	
	19:10	1800	4.45	.80	
	19:40	1830	4.46	~~.79~~ .81	
	20:10	1860	4.48	.83	
	20:40	1890	4.48	.83	
	21:10	1920	4.50	0.85	
	21:40	1950	4.50	0.85	
	22:10	1980	4.52	0.87	
	22:40	2010	4.52	0.87	
	23:10	2040	4.54	0.89	
	23:40	2070	4.55	0.90	
9-27-93	00:10	~~3000~~ 2100	4.55	0.90	
"	00:40	~~3030~~ 2130	4.56	0.91	
"	01:10	~~3060~~ 2160	4.58	0.93	
"	01:40	~~3090~~ 2190	4.58	0.93	
"	02:10	~~3120~~ 2220	4.59	0.94	
"	02:40	~~3150~~ 2250	4.60	0.95	
"	03:10	~~3180~~ 2280	4.61	0.96	
"	03:40	~~3210~~ 2310	4.62	0.97	
"	04:10	~~3240~~ 2340	4.63	0.98	
"	04:40	~~3270~~ 2370	4.64	0.99	
"	05:10	~~3300~~ 2400	4.65	1.00	
"	05:40	~~3330~~ 2430	4.66	1.01	
"	06:10	~~3360~~ 2460	4.67	1.02	
"	06:40	~~3390~~ 2490	4.68	1.03	

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

PUMPING WELL: 1339 PW1

PIEZOMETER NUMBER: PZ-2

WATER LEVEL AT TIME 0: 3.65

DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
9-27-93	0710	~~3420~~ 2520	4.69	1.04	
	0740	~~3450~~ 2550	4.70	1.05	
	0810	~~3480~~ 2580	4.72	1.07	
	0840	~~3510~~ 2610	4.71	1.06	
	0910	~~3540~~ 2640	4.72	1.07	
	0940	~~3570~~ 2670	4.73	1.08	
	10:10	~~3600~~ 2700	4.74	1.09	
	1040	~~3630~~ 2730	4.76	1.11	
	1110	~~3660~~ 2760	4.76	1.11	
	1140	~~3690~~ 2790	4.76	1.11	
	1210	~~3720~~ 2820	4.78	1.13	
	1240	~~3750~~ ~~3740~~ 2850	4.80	1.15	
	13:10	~~3780~~ ~~3770~~ 2880	4.81	1.16	
	13:40	~~3810~~ 2910	4.81	1.16	
	1410	~~3840~~ 2940	4.82	1.17	
	1440	2970	4.82	1.17	
	1510	3000	4.82	1.17	
	1540	3030	4.84	1.19	
	1610	3060	4.84	1.19	
	1640	3090	4.85	1.20	
	1710	3120	4.86	1.21	
	1740	3150	4.87	1.22	
	1810	3180	4.88	1.23	
	1840	3210	4.89	1.24	
	1910	3240	4.90	1.25	
	1942	3272	4.91	1.26	
	2010	3300	4.92	1.27	
	2040	3330	4.93	1.28	

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

PUMPING WELL: 1 33 91 PW

PIEZOMETER NUMBER: PZ 2

WATER LEVEL AT TIME 0: 3.65

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DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
9-27-93	2110	3390	4.94	1.29	
	2140	3390	4.95	1.30	
	2210	~~3400~~ 3420	4.96	1.31	
	2240	~~3430~~ 3450	4.97	1.32	
	2310	~~3460~~ 3480	4.97	1.32	
	2340	3510	4.98	1.33	
9-28-93	0010	3540	4.99	1.34	
	0040	3570	5.00	1.35	
	0110	3600	5.02	1.37	
	0140	3630	5.02	1.37	
	0210	3660	5.03	1.38	
	0240	3690	5.04	1.39	
	0310	3720	5.05	1.40	
	0340	3750	5.06	1.41	
	0410	3780	5.08	1.43	
	0440	3810	5.08	1.43	
	0510	3840	5.08	1.43	
	0540	3870	5.10	1.45	
	0610	3900	5.12	1.47	
	0640	3930	5.11	1.46	
	0710	3960	5.12	1.47	
	0740	3990	5.14	1.49	
	0810	4020	5.15	1.50	
	0840	4050	5.15	1.50	
	0910	4080	5.16	1.51	
	0940	4110	5.17	1.52	
	1010	4140	5.18	1.53	
	1040	4170	5.19	1.54	

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

PUMPING WELL: 1339 pw

PIEZOMETER NUMBER: pZ2

WATER LEVEL AT TIME 0: 3.65

DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
9-28-93	1110	4200	5.23	1.58	
9-28-93	1140	4230	5.20	1.55	
"	1210	4260	5.21	1.56	
"	1240	4290	5.23	1.58	
"	1310	4320	5.24	1.59	
"	1340	4350	5.25	1.60	
"	1410	4380	5.25	1.60	
"	1440	4410	5.21	1.61	
"	1510	4440	5.26	1.61	
"	1540	4470	5.26	1.61	
"	1610	4500	5.28	1.63	
"	1640	4530	5.29	1.64	
"	1710	4560	5.30	1.65	
"	1740	4590	5.30	1.65	
"	1810	4620	5.31	1.66	
"	1840	4650	5.32	1.67	
"	1910	4680	5.33	1.68	
"	1940	4710	5.34	1.69	
"	2010	4740	5.35	1.70	
"	2040	4770	5.37	1.72	
"	2110	4800	5.37	1.72	
"	2140	4830	5.37	1.72	
"	2210	4860	5.39 ~~5.38~~	~~1.73~~ 1.74	
"	2240	4890	5.39	1.73	
"	2310	4920	5.40	1.75	
"	2340	4950	5.41	1.76	
9-29-93	0010	4980	5.42	1.77	
✓	0040	5010	5.45	1.80	

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

PUMPING WELL: 1339PW

PIEZOMETER NUMBER: PZ 2

WATER LEVEL AT TIME 0: 3.65

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DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
9-29-93	0110	5040	5.45	1.80	
"	0140	5070	5.45	1.80	
"	0210	5100	5.46	1.81	
"	0240	5130	5.49	1.83	
"	0310	5160	5.48	1.83	
"	0340	5190	5.49	1.84	
"	0410	5220	5.50	1.85	
"	0450	5260	5.51	1.86	
"	0510	5290	5.52	1.87	
"	0540	5310	5.53	1.88	
"	0610	5340	5.55	1.90	
"	0640	5370	5.55	1.90	
"	0710	5400	5.57	1.92	
"	0740	5430	5.57	1.92	
"	0810	5460	5.58	1.93	
"	0840	5490	5.59	1.94	
"	0910	5520	5.60	1.95	
"	0940	5550	5.61	1.96	
"	1010	5580	5.61	1.96	
"	1040	5610	5.62	1.97	
"	1110	5640	5.65	2.00	
"	1140	5670	5.65	2.00	
"	1210	5700	5.66	2.01	
"	1240	5730	5.66	2.01	
	1310	5760	5.67	2.02	
	1340	5790	5.68	2.03	
	1410	5820	5.68	2.03	
	1440	5850	5.68	2.03	

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

PUMPING WELL: 1339 PW

PIEZOMETER NUMBER: PZ-2

RECOVERY

WATER LEVEL AT TIME 0: 3.65

page 1 of ___

DATE	TIME	ELAPSED TIME	WATER LEVEL	~~DRAWDOWN~~ RECOVERY	COMMENTS
9/29/93	1510	5850	5.70	—	
	1515	0	5.71	-0.01	
	1516	1	5.69	0.01	
	1517	2	5.69	0.01	
	1518	3	5.67	0.03	
	1519	4	5.67	0.03	
	1520	5	5.65	0.05	
	1521	6	5.64	0.06	
	1523	8	5.63	0.07	
	1525	10	5.62	0.08	
	1527	12	5.61	0.09	
	1529	14	5.60	0.10	
	1531	16	5.59	0.11	
	1533	18	5.59	0.11	
	1535	20	5.58	0.12	
	1545	30	5.55	0.15	
	1555	40	5.53	0.17	
	1605	50	5.52	0.18	
	1615	60	5.50	0.20	
	1645	90	5.47	0.23	
	1715	120	5.43	0.27	
	1745	150	5.41	0.29	
	1815	180	5.39	0.31	
	1845	210	5.36	0.34	
	1915	240	5.35	0.35	
	1945	270	5.34	0.36	
	2015	300	5.32	0.38	
29SEP93	2045	330	5.31	0.39	

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

PUMPING WELL: 1339 PW

PIEZOMETER NUMBER: PZ-2

WATER LEVEL AT TIME 0: 3.65 5.31 RECOVERY

page 2 of 2

DATE	TIME	ELAPSED TIME	WATER LEVEL	~~DRAWDOWN~~	COMMENTS
29 OCT 93	2115	360	5.24	.42	
	2145	390	5.28	.43	
	2215	420	5.28	.43	
	2245	450	5.27	.44	
	2315	480	5.26	.45	

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PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

PUMPING WELL: 1337 PW

PIEZOMETER NUMBER: P23

WATER LEVEL AT TIME 0: ~~3.44~~ 3.46 @ 30 min.

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DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
~~09-25-93~~	~~1020~~	~~0~~	~~3.47~~	NO START	
→ 09-25-93	1340	30	3.46		RAINING HEAVY
09-25-93	1410	60	3.45	-0.01	
09-25-93	1440	90	3.45	-.01	
09-25-93	1511	123	3.39	-.07	
	1541	154	3.41	-.00	
	1611	181	3.48	+.02	
09-25-93	1642	212	3.49	+.03	
	1712	242	3.49	+.03	
	1741	DAM 25-Sep-93 ~~301~~ 271	3.50	0.04	
	1812	301	3.50	0.04	
	1840	331	3.51	0.05	
	1911	361	3.51	0.05	
	1941	391	3.52	0.06	
	2010	420	3.53	0.07	
	2040	450	3.52	.06	
	2114	484	3.00	0.46	HEAVY RAIN
	2144	514	3.00	0.46	
	2214	544	3.35	-.11	
	2242	574	3.42	-.04	
9-25-93	2310	604	3.47	-.01	
	2340	630	3.51	-.05	
9-26-93	0010	660	3.52	-.06	
"	0040	690	3.54	-.08	
"	0110	720	3.55	-.09	
"	0140	750	3.55	-.09	
"	0210	780	3.55	-.09	
"	0240	810	3.55	-.09	

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

PUMPING WELL: 1339 PW

PIEZOMETER NUMBER: PZ-3

WATER LEVEL AT TIME 0: 3.46 @ 30 MIN

DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
9-26-93	0310	840	3.54	-.08	
"	0340	870	3.54	-.08	
"	0410	900	3.54	-.08	
"	0440	930	3.54	-.08	
"	0510	960	3.54	-.08	
"	0540	990	3.54	-.08	
"	0610	1020	3.54	-.08	
"	0640	1050	3.54	-.08	
"	0710	1080	3.53	-.07	
"	740	1110	3.54	-.08	
"	0810	1140	3.54	-.08	
"	0840	1170	3.54	-.08	
"	0910	1200	3.55	-.09	
"	0942	1232	3.55	-.09	
"	10:10	1260	3.56	-.10	
"	10:40	1290	3.57	-.11	
"	11:10	1320	3.58	-.12	
9-26-93	1140	1350	3.58	-.12	
"	12:10	1380	3.58	-.12	
"	1240	1410	3.50	-.04	
"	13:10	1440	3.60	-.14	
"	13:40	1470	3.60	-.14	
"	14:10	1500	3.61	-.15	
"	1440	1530	3.61	.15	
"	1510	1560	3.61	.15	
9-26-93	15:40	1590	3.60	.14	
	16:10	1620	3.61	.15	
	16:40	1650	3.61	.15	

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

PUMPING WELL: 1337 AU

PIEZOMETER NUMBER: PZ-3

WATER LEVEL AT TIME 0: 3.46

DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
9-26-93	17:10	1680	3.62	0.16	
	17:40	1710	3.63	0.17	
	18:10	1740	3.63	0.17	
	18:40	1770	3.63	0.17	
	19:10	1800	3.64	0.18	
	19:40	1830	3.65	0.19	
	2010	1860	3.65	0.19	
	20:40	1890	3.65	0.19	
	21:10	1920	3.66	0.20	
	21:40	1950	3.67	0.21	
	2210	1980	3.67	0.21	
	2240	2010	3.67	0.21	
	2310	2040	3.68	0.22	
	2340	2070	3.69	0.23	
9-27-93	0010	~~3000~~ 2100	3.70	0.24	
"	0040	~~3030~~ 2130	3.70	0.24	
"	0110	~~3060~~ 2160	3.71	0.25	
"	0140	~~3090~~ 2190	3.72	0.26	
"	0210	~~3120~~ 2220	3.72	0.26	
"	0240	~~3150~~ 2250	3.72	0.26	
"	0310	~~3180~~ 2280	3.73	0.27	
"	0340	~~3210~~ 2310	3.74	0.28	
"	0410	~~3240~~ 2340	3.74	0.28	
"	0440	~~3270~~ 2370	3.75	0.29	
"	0510	~~3300~~ 2400	3.75	0.29	
"	0540	~~3330~~ 2430	3.76	0.30	
"	0610	~~3360~~ 2460	3.76	0.30	
"	0640	~~3390~~ 2490	3.77	0.31	

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

PUMPING WELL: 1339 PW1

PIEZOMETER NUMBER: PZ3

WATER LEVEL AT TIME 0: 3.46

DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
9-27-93	0710	~~3420~~ 2520	3.80	0.34	
	0740	~~3450~~ 2550	3.80	0.34	
	0810	~~3480~~ 2580	3.82	0.36	
	0840	~~3510~~ 2610	3.81	0.35	
	0910	~~3540~~ 2640	3.81	0.35	
	0940	~~3570~~ 2670	3.82	0.36	
	1010	~~3600~~ 2700	3.82	0.36	
	1040	~~3630~~ 2730	3.85	0.39	
	1110	~~3660~~ 2760	3.83	0.37	
09-27-93	1140	~~3690~~ 2790	3.83	0.37	
	1210	~~3720~~ 2820	3.85	0.39	
	1240	~~3750~~ ~~3740~~ 2850	3.86	.40	
	1310	~~3780~~ ~~3770~~ 2880	3.87	.41	
	1340	~~3810~~ 2910	3.87	.41	
	1410	~~3840~~ 2940	3.87	.41	
	1440	2970	3.88	.42	
	1510	3000	3.87	.41	
	1540	3030	3.88	.42	
	1610	3060	3.89	.43	
	1640	3090	3.89	.43	
	1710	3120	3.90	.44	
	1740	3150	3.91	.45	
	1810	3180	3.91	.45	
	1840	3210	3.92	.46	
	1910	3240	3.93	.47	
	1943	3273	3.93	0.47	
	2010	~~3300~~ 3300	3.94	0.48	
	2040	~~3330~~ 3330	3.94	0.48	

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

PUMPING WELL: 1339 fu

PIEZOMETER NUMBER: PZ 3

WATER LEVEL AT TIME 0: 3.46

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DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
9-27-93	2110	33 ~~40~~ 60	3.95	.49	
	2140	33 ~~70~~ 90	3.96	.50	
	2210	34 ~~00~~ 20	3.96	.50	
	2240	34 ~~30~~ 50	3.97	.51	
	2310	34 ~~60~~ 80	3.97	.51	
	2340	3510	3.98	.52	
9-28-93	0010	3540	3.99 ~~3.96~~	.52	
	0040	3570	3.99	.53	
	0110	3600	3.99	.53	
	0140	3630	4.00	.54	
	0210	3660	4.01	.55	
	0240	3690	4.01	.55	
	0310	3720	4.02	.56	
	0340	3750	4.03	.57	
	0410	3780	4.04	.58	
	0440	3810	4.04	.58	
	0510	3840	4.05	.59	
	0540	3870	4.05	.59	
	0610	3900	4.06	.60	
	0640	3930	4.07	.61	
	0710	3960	4.08	.62	
	0740	3990	4.08	.62	
	0810	4020	4.08	.62	
	0840	4050	4.08	.62	
	0910	4080	4.10	.64	
	0940	4110	4.11	.65	
	1010	4140	4.11	.65	
	1040	4170	4.12	.66	

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

PUMPING WELL: 133'P.W

PIEZOMETER NUMBER: P23

WATER LEVEL AT TIME 0: 3.46

DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
9-25-93	1110	4200	4.14	.65	
9-28-93	1140	4230	4.14	.68	
"	1210	4260	4.13	.67	
"	1240	4290	4.14	.68	
"	1310	4320	4.15	.69	
"	1340	4350	4.17	.71	
"	1410	4380	4.16	.70	
"	1440	4410	4.17	.71	
"	1510	4440	4.16	.70	
"	1540	4470	4.17	.71	
"	1610	4500	4.18	.72	
"	1640	4530	4.18	.72	
"	1710	4560	4.19	.73	
"	1740	4590	4.22	.76	
"	1810	4620	4.20	.74	
"	1840	4650	4.21	.75	
"	1910	4680	4.21	.75	
"	1940	4710	4.22	.76	
"	2060	4740	4.22	.76	
"	2040	4770	4.23	.77	
"	2110	4800	4.23	.77	
"	2140	4830	4.22	.76	
"	2210	4860	4.11 ~~4.09~~	.65	
"	2240	4890	4.09	.63	
"	2310	4920	4.10	.64	
"	2340	4950	4.11	.65	
9-29-93	2010	4980	4.13	.67	
"	0040	5610	4.15	.69	

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

PUMPING WELL: 1337 PW

PIEZOMETER NUMBER: PZ-3

WATER LEVEL AT TIME 0: 3.46

DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
3-29-93	0110	5040	4.15	.69	
"	0140	5070	4.15	.69	
"	0210	5100	4.17	.71	
"	0240	5130	4.18	.72	
"	0310	5160	4.19	.73	
"	0340	5190	4.20	.74	
"	0410	5220	4.22	.76	
"	0440	5260	4.24	.78	
"	0510	5290	4.25	.79	
"	0540	5310	4.26	.80	
"	0610	5340	4.26	.80	
"	0640	5370	4.29	.82	
"	0710	5400	4.29	.83	
"	0740	5430	4.30	.84	
"	0810	5460	4.31	.85	
"	0840	5490	4.32	.86	
"	0910	5520	4.33	.87	
"	0940	5550	4.34	.88	
"	1010	5580	4.35	.89	
"	1040	5610	4.35	.89	
"	1110	5640	4.36	.90	
"	1140	5670	4.37	.91	
"	1210	5700	4.38	.92	
"	1240	5730	4.39	.93	
	1310	5760	4.40	.94	
	1340	5790	4.39	.93	
	1410	5820	4.40	.94	
	1440	5850	4.41	.95	

7333

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

PUMPING WELL: 1339 PW

NOTE: LAST DRAWDOWN READING ON THIS PAGE

PIEZOMETER NUMBER: PZ-3

WATER LEVEL AT TIME 0: 3.46

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RECOVERY

DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
9-29-93	1510	5880	4.41	.95	
	1515	0	4.41	—	Recovery begins
	1516	1	4.41	0.00	
	1517	2	4.41	0.00	
	1518	3	4.41		
	1519	4	4.41		
	1520	5	4.41		
	1521	6	4.41		
	1523	8	4.41		
	1525	10	4.41		
	~~1622~~ 1527	12	4.41		
	~~1620~~ 1529	14	4.41		
	~~1636~~ 1531	16	4.41		
	~~1654~~ 1533	18	4.41		
	1535	20	4.41		
	1545	30	4.41		
	1555	40	4.41	✓	
	1605	50	4.41	0.00	
	1615	60	4.42	-0.01	
	1645	90	4.43	-0.02	
	1715	120	4.43	-0.02	
	1745	150	4.44	-0.03	
	1815	180	4.44		
	1845	210	4.44		
	1915	240	4.44	-0.03	
	1945	270	4.46	-0.05	
	2015	300	4.46	-0.05	
29SEP93	2045	330	4.46	-0.05	

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

PUMPING WELL: 1339 PW

PIEZOMETER NUMBER: PZ-3

WATER LEVEL AT TIME 0: 3.46

page 2 of

4.44 RECOVERY

DATE	TIME	ELAPSED TIME	WATER LEVEL	~~DRAWDOWN~~	COMMENTS
29 SEP 93	2115	360	4.47	-0.06	
	2145	390	4.48	-0.07	
	2215	420	4.48	-0.07	
	2245	450	4.48	-0.07	
	2315	480	4.49	-0.08	

000343

7333

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

PUMPING WELL: 1337 PW'

TEST 4 STEP 0

PIEZOMETER NUMBER: PZ4

1.75 GPM

WATER LEVEL AT TIME 0: ~~3.50~~ 3.63

118-119 HZ

page 1 of ___

DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
			3.50		
24-25-12	[illegible]	0	3.65	0	
	[illegible]		[illegible]	0	
	1310	"0"	3.63	~~.02~~ 0	"USE" START TEST
	1311	1	3.71	.08	
	1312	2	3.73	.10	
	1313	3	3.75	.12	
	1314	4	3.77	.14	
	1315	5	3.78	.15	
	1316	6	3.78	.15	
	1318	8	3.80	.17	1.75 GPM 118-119 HZ
	1320	10	3.80	.17	
	1322	12	3.81	.18	
	1324	14	3.82	.19	
	1326	16	3.82	.19	
	1328	18	[illegible]	.20	1.75 118-119 HZ
	1330	20	3.83	.20	
	1340	30	3.87	.24	
	1350	40	3.91	.28	
	1400	50	3.93	.30	
	1410	60	3.95	.32	
	1440	91	4.00	.37	
	1510	120	4.02	.39	
	1540	150	4.03	.40	
	1610	180	4.06	.43	
	1640	210	4.09	.46	
	1710	240	4.10	0.47	
	1740	~~300~~ 270	4.12	.49	

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

PUMPING WELL: 1339 PW

PIEZOMETER NUMBER: PZ-4

WATER LEVEL AT TIME 0: 3.63

DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
9-25-93	1810	300	4.12	0.49	
	1840	330	4.15	0.52	
	1910	360	4.16	0.53	
	1940	390	4.17	0.54	
9-25-93	2010	420	4.20	0.57	
	2040	450	4.22	0.59	
	2110	480	4.22	0.59	
	2140	510	4.22	0.59	
	2210	540	4.22	0.59	
	2240	570	4.25	0.62	
	2310	600	4.27	0.64	
	2340	630	4.29	0.66	
9-26-93	0010	660	4.31	0.68	
"	0040	690	4.31	0.68	
"	0110	720	4.32	0.69	
"	0140	750	4.34	0.71	
"	0210	780	4.35	0.72	
"	0240	810	4.35	0.72	
"	0310	840	4.37	0.74	
"	0340	870	4.38	0.75	
"	0410	900	4.39	0.76	
"	0440	930	4.40	0.77	
"	0510	960	4.41	0.78	
"	0540	990	4.42	0.79	
"	0610	1020	4.44	0.81	
"	0640	1050	4.44	0.81	
"	0710	1080	4.45	0.82	
"	0740	1110	4.45	0.82	

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

PUMPING WELL: 1339PW

PIEZOMETER NUMBER: PZ-4

WATER LEVEL AT TIME 0: 3.63

page 3 of ___

DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
09-26-93	0810	1140	4.45	0.82	
"	0840	1170	4.48	0.85	
"	0910	1200	4.52	0.89	
"	0940	1230	4.50	0.87	
"	1010	1260	4.50	0.87	
"	1040	1290	4.54	0.91	
09-26-93	1110	1320	4.54	0.91	
"	1140	1350	4.54	0.91	
"	1210	1380	4.54	0.91	
"	1240	1410	4.54	0.91	
"	1310	1440	4.56	0.93	
"	1340	1470	4.57	0.94	
"	1410	1500	4.57	0.94	
"	1440	1530	4.59	0.96	
"	1510	1560	4.60	0.97	
"	1540	1590	4.60	0.97	
"	1610	1620	4.61	0.98	
"	1640	1650	4.62	0.99	
"	1710	1680	4.63	1.00	
"	1740	1710	4.64	1.01	
"	1810	1740	4.65	1.02	
"	1840	1770	4.66	1.03	
"	1910	1800	4.67	1.04	
"	1940	1830	4.68	1.05	
"	2010	1860	4.68	1.05	
"	2040	1890	4.71	1.08	
"	2110	1920	4.72	1.09	
"	2140	1950	4.73	1.10	

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

PUMPING WELL: 1339 PW1

PIEZOMETER NUMBER: PZ4

WATER LEVEL AT TIME 0: 3.63

DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
09-26-93	2210	1980	4.74	1.11	
"	2240	2010	4.75	1.12	
"	2310	2040	4.75	1.12	
"	2340	2070	4.77	1.14	
9-27-93	0010	~~3000~~ 2100	4.77	1.14	
"	0040	~~3030~~ 2130	4.79	1.16	
"	0110	~~3060~~ 2160	4.78	1.15	
"	0140	~~3090~~ 2190	4.81	1.18	
"	0210	~~3120~~ 2220	4.82	1.19	
"	0240	~~3150~~ 2250	4.83	1.20	
"	0310	~~3180~~ 2280	4.83	1.20	
"	0340	~~3210~~ 2310	4.85	1.22	
"	0410	~~3240~~ 2340	4.85	1.22	
"	0440	~~3270~~ 2370	4.86	1.23	
"	0510	~~3300~~ 2400	4.88	1.25	
	0540	~~3330~~ 2430	4.88	1.25	
"	0610	~~3360~~ 2460	4.90	1.27	
"	0640	~~3390~~ 2490	4.91	1.28	
"	0710	~~3420~~ 2520	4.94	1.31	
"	0740	~~3450~~ 2550	4.93	1.30	
	0810	~~3480~~ 2580	4.95	1.32	
	0840	~~3510~~ 2610	4.94	1.31	
	0910	~~3540~~ 2640	4.96	1.33	
	0940	~~3570~~ 2670	4.98	1.35	
"	1010	~~3600~~ 2700	4.99	1.36	
	1040	~~3630~~ 2730	4.99	1.36	
"	1110	~~3660~~ 2760	4.99	1.36	
"	1140	~~3690~~ 2790	4.99	1.36	

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

PUMPING WELL: 1339 PW

PIEZOMETER NUMBER: PZ4

WATER LEVEL AT TIME 0: 3.63

DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN		COMMENTS
09-27-93	1210	~~3720~~ 2520	4.99	1.36		
"	1240	~~3750~~ 2850	4.77	1.36		
"	1310	~~3780~~ 2880	5.00	1.37		
"	1340	~~3810~~ 2910	5.02	1.39		
"	1410	2940	5.04	~~1.40~~	1.41	
"	1440	2970	5.04	~~1.40~~	1.41	
"	1510	3000	5.06	~~1.42~~	1.43	
"	1540	3030	5.06	~~1.42~~	1.43	
"	1610	3060	5.07	~~1.43~~	1.44	
"	1640	3090	5.08	~~1.44~~	1.45	
"	1710	3120	5.09	~~1.45~~	1.46	
"	1740	3150	5.10	~~1.46~~	1.47	
"	1810	3180	5.11	~~1.47~~	1.48	
"	1840	3210	5.12	1.48	1.49	
"	1910	3240	5.13	1.49	1.50	
"	1941	3271	5.14	1.50	1.51	
"	2011	3301	5.15	1.51	1.52	
"	2041	3331	5.15	1.51	1.52	
"	2111	3361	5.17	1.53	1.54	
"	2141	3391	5.18	1.54	1.55	
"	2211	3421	5.19	1.55	1.56	
"	2241	3451	5.19	1.55	1.56	
"	2310	3480	5.21	~~1.57~~	1.58	
"	2340	3510	5.22	~~1.58~~	1.59	
09-28-93	0010	3540	5.22	~~1.59~~	1.59	
"	0040	3570	5.23	~~1.59~~	1.60	
"	0110	3600	5.25	1.62		
"	0140	3630	5.26	1.63		

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

PUMPING WELL: 1359 PW

PIEZOMETER NUMBER: PZ 4

WATER LEVEL AT TIME 0: 3.63

page 1 of ___

DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
9-29-93	0210	3660	5.26	1.63	
"	0240	3690	5.26	1.63	
"	0310	3720	5.28	1.65	
"	0340	3750	5.29	1.66	
"	0410	3780	5.31	1.68	
"	0440	3810	5.30	1.67	
"	0510	3840	5.32	1.69	
"	0540	3870	5.32	1.69	
"	0610	3900	5.34	1.71	
"	0640	3930	5.34	1.71	
"	0710	3960	5.36	1.73	
"	0740	3990	5.38	1.75	
"	0810	4020	5.37	1.74	
	0840	4050	5.38	1.75	
	0910	4080	5.39	1.76	
	0940	4110	5.40	1.77	
"	1010	4140	5.42	1.79	
	1040	4170	5.43	1.80	
	1110	4200	5.45	1.82	
	1140	4230	5.43	1.80	
	1210	4260	5.45	1.82	
	1240	4290	5.45	1.82	
	1310	4320	5.46	1.83	
	1340	4350	5.47	1.84	
	1410	4380	5.48	1.85	
	1440	4410	5.48	1.85	
	1510	4440	5.50	1.87	
	1540	4470	5.51	1.88	

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

PUMPING WELL: 1339PW

PIEZOMETER NUMBER: P24

WATER LEVEL AT TIME 0: 3.63

DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
9-28-93	1610	4500	5.51	1.88	
	1640	4530	5.51	1.88	
	1710	4560	5.53	1.90	
	1740	4590	5.53	1.90	
	1810	4620	5.56	1.93	
	1840	4650	5.56	1.93	
	1910	4680	5.58	1.95	
	1940	4710	5.59	1.96	
	2010	4740	5.60	1.97	
	2040	4770	5.60	1.97	
	2110	4800	5.60	1.97	
	2140	4830	5.61	1.98	
	2210	4860	5.61	1.98	
	2241	4891	5.63	2.00	
	2310	4920	5.64	2.01	
	2340	4950	5.63	2.00	
9-29-93	0010	4980	5.66	2.03	
	0040	5010	5.67	2.04	
	0110	5040	5.67	2.04	
	0140	5070	5.69	2.06	
	0210	5100	5.69	2.06	
	0240	5130	5.70	2.07	
	0310	5160	5.71	2.08	
	0340	5190	5.72	2.09	
	0410	5220	5.73	2.10	
	0450	5260	5.75	2.12	
	0510	5280	5.76	2.13	
	0540	5310	5.76	2.13	

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

PUMPING WELL: 1337PW1

PIEZOMETER NUMBER: P34

WATER LEVEL AT TIME 0: 3.63

page 8 of ___

DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
9-29-94	0610	5340	5.77	2.14	
"	0640	5370	5.77	2.14	
"	710	5400	5.79	2.16	
"	0740	5430	5.80	2.17	
"	0810	5460	5.80	2.17	
"	0840	5490	5.82	2.19	
"	0910	5520	5.82	2.19	
"	0940	5550	5.84	2.21	
"	1010	5580	5.84	2.21	
"	1040	5610	5.86	2.23	
"	1110	5640	5.85	2.22	
"	1140	5670	5.86	2.23	
"	1210	5700	5.89	2.26	
"	1240	5730	5.88	2.25	
"	1310	5760	5.90	2.27	
"	1340	5790	5.91	2.28	
"	1410	5820	5.92	2.29	
"	1440	5850	5.94	2.31	
"	1510	5880	5.93	2.30	
	1645		5.58		

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

PAGE 1 OF

PUMPING WELL: 1339 PW

RECOVERY

TEST #7
SEQ. 1

PIEZOMETER NUMBER: P24

WATER LEVEL AT TIME 0: 3.63

page 1 of

DATE	TIME	ELAPSED TIME	WATER LEVEL	~~DRAWDOWN~~ RECOVERY	COMMENTS
9/29/93	1515	0	5.93	2.30	
	1516	1	5.90	2.27	
	1517	2	5.86	2.23	
	1518	3	5.84	2.21	
	1519	4	5.83	2.20	
	1520	5	5.81	2.18	
	1521	6	5.80	2.17	
	1523	8	5.77	2.14	
	1525	10	5.76	2.13	
	1527	12	5.74	2.11	
	1529	14	5.73	2.10	
	1531	16	5.72	2.09	
	1533	18	5.71	2.08	
	1535	20	5.71	2.08	
	—	25	—	—	
	1545	30	5.68	2.05	
	1555	40	5.66	2.03	
	1605	50	5.64	2.01	
	1615	60	5.63	2.00	
	1645	90	5.58	2.05	
	1715	120	5.55	2.08	
	1745	150	5.54	2.09	
	1815	180	5.50	2.13	
	1845	210	5.50	2.13	
	1915	240	5.48	2.15	
	1945	270	5.45	2.18	
	2015	300	5.45	2.18	
	2045	330	5.44	2.19	

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

PUMPING WELL: 1339 PW

PIEZOMETER NUMBER: ~~P23~~ PZ-4

WATER LEVEL AT TIME 0: 3.46

5.44 RECOVERY

page ~~10~~ 2 of ___

DATE	TIME	ELAPSED TIME	WATER LEVEL	~~DRAWDOWN~~	COMMENTS
29 SEP 93	2115	360	5.42	2.21	
	2145	390	5.41	2.22	
	2215	420	5.40	2.23	
	2245	450	5.38	2.25	
END	2315	480	5.42	2.21	

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

PUMPING WELL: ~~2055~~ 1339PW Hermit ID (2055 SOUT)

PIEZOMETER NUMBER: 2055 South (1055) Actual WELL #

WATER LEVEL AT TIME 0: _____

page 1 of ___

DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
9-25-93	15:38	138	12.34		Heavy rain
	18:15	305	12.34		
	1941	391	12.32		
	2141	511	12.32		
	2350	640	12.33		NO RAIN
9-26-93	0148	758	12.33		
"	0345	875	12.34		
"	0547	997	12.34		
"	0730	1100	12.37		
"	0936	1226	12.38		Cloudy + Windy
	11:17	1327	12.38		
"	13:35	1465	12.38		
9-26-93	15:23	1573	12.40		
"	17:43	1713	12.38		OVERCAST
"	19:43	1833	12.39		
"	21:43	1953	12.39		
9-27-93	01:49	~~3099~~ 2149	12.39		
"	03:49	~~3219~~ 2319	12.38		
"	05:58	~~3348~~ 2448 (129)	12.39 ~~12.38~~		RAIN
"	0801	~~3471~~ 2571	12.41		
"	9:59	~~3589~~ 2689 (164)	12.40		
"	11:43	~~3693~~ 2793	12.14		
"	1400	2930	12.41		
"	1735	3145	12.42		
"	1936	3266	12.42		
"	2137	3387	12.42		
9-28-93	0039	3564	12.44		
"	0222	3672	12.44		

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

PUMPING WELL: 1339 PW

PIEZOMETER NUMBER: 1336

WATER LEVEL AT TIME 0: _____

page 1 of ___

DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
9-25-93	15:46	156	7.96		Heavy rain
	18:13	301	7.85		
	19:46	336	7.77		
	21:47	517	7.65		
	23:40	630	7.38		NO RAIN
9-26-93	01:52	762	7.20		
"	03:48	878	7.11		
"	05:50	1000	7.08		
"	07:35	1105	7.09		
"	09:41	1231	7.12		Cloudy + windy
"	11:20	1300	7.11		
"	13:38	1438	7.12		
"	15:26	~~1546~~ 1576	4.13 ?		
"	15:44	1594	7.13		
9-26-93	17:48	1718	7.14		
"	19:48	1938	7.15		
"	21:46	2096	7.19		
9-27-93	01:52	~~3102~~ 2202	7.20		
"	03:54	~~3224~~ 2324	7.21		
"	06:01	~~3351~~ 2451	7.22		RAIN
"	08:06	~~3476~~ 2576	7.27		
"	10:03	~~3593~~ 2693	7.28		
"	11:48	~~3698~~ 2798	7.30		
"	~~1336~~ 1408	2938	7.32		
"	17:38	~~3268~~ 3148	7.36		
"	19:39	~~3389~~ 3261	7.38		
"	21:40	3390	7.38		
"	02:25	3675	7.40		

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

PUMPING WELL: 1339 PW

PIEZOMETER NUMBER: 1338

WATER LEVEL AT TIME 0: 5.43

page 1 of ___

DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
9-25-93	1421	71	5.43	0.0	
↓	1525	135	5.31	+ 0.12	Heavy rain (H2O Rise)
9-25-93	1647	~~221~~ 217	5.21	+ 0.22	Steady rain "
9-25-93	1746	276	5.17	+ 0.26	Steady rain "
	1850	340	5.12	+ 0.31	"
	1949	399	5.12	+ 0.31	"
	2051	450	5.12	+ 0.31	"
↓	2155	514	4.76	+ 0.67	"
9-25-93	2329	619	4.34	+ 1.09	No Rain "
9-26-93	0013	663	4.30	+ 1.13	"
"	0120	730	4.33	+ 1.10	"
"	0220	790	4.37	+ 1.06	"
"	0317	847	4.40	+ 1.03	"
"	0415	905	4.44	+ 0.99	"
"	0515	965	4.47	+ 0.96	
"	0620	1030	4.52	+ 0.91	
"	0717	1087	4.55	+ 0.88	
"	0825	1155	4.59	+ ~~0.92~~ 0.84	
"	914	1204	4.63	+ ~~0.96~~ 0.80	
"	1020	1270	4.64	~~+0.97~~ 0.79	
"	1120	1330	4.67	~~0.86~~ 0.76	
"	1219	1389	4.69	~~0.88~~ 0.74	
"	13:17	1447	4.71	~~0.90~~ 0.72	
"	14:17	1507	4.72	~~0.91~~ 0.71	
"	15:17	1567	4.74	~~0.93~~ 0.69	
"	16:17	1627	4.76	~~0.95~~ 0.67	
9-26-93	17:16	1688	4.78	~~0.97~~ 0.65	

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

PUMPING WELL: 1339 PW

PIEZOMETER NUMBER: 1338

WATER LEVEL AT TIME 0: 5.43

DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
9-26-93	18:16	1748	4.80	.63	
	19:16	1808	4.81	.62	
	20:23	1873	4.82	.61	
	21:17	1927	4.84	.59	
	22:18	1988	4.84	.59	
	23:14	2044	4.86	.57	
9-27-93	00:15	~~3005~~ 2105	4.86	.57	
"	0119	~~3065~~ 2169	4.87	.56	
"	0218	~~3128~~ 2228	4.88	.55	
"	0318	~~3188~~ 2288	4.88	.55	
"	0413	~~3243~~ 2343	4.88	.55	
"	0514	~~3304~~ 2404	4.88	.55	
"	0618	~~3368~~ 2468	4.88	.55	
"	0718	~~3428~~ 2528	4.89	.54	
"	0820	~~3490~~ 2590	4.93	.50	
"	0924	~~3554~~ 2654	4.93	.50	
"	1020	~~3610~~ 2710	4.95	~~.51~~ .48	
"	1114	~~3664~~ 2764	4.96	~~.52~~ .47	
"	1216	~~3726~~ 2826	4.98	~~.54~~ .45	
"	1317	~~3787~~ 2887	4.98	.45	
"	1410	2940	5.00	.43	
"	1518	3000	5.02	.41	
"	1617	3059	5.04	.39	
"	1718	3120	5.04	.39	
"	1817	3179	5.06	.37	
"	1917	3239	5.08	.35	
"	2018	3300	5.09	.34	
"	2117	3357	5.10	.33	

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

PUMPING WELL: 1339 PW

PIEZOMETER NUMBER: 1338

WATER LEVEL AT TIME 0: 5.43

page 3 of ___

DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
9-27-93	2218	3420	5.10	.33	
"	2318	3480	5.12	.31	
9-28-93	0023	3553	5.13	.30	
"	0116	3606	5.13	.30	
"	0214	3664	5.13	.30	
"	0316	3726	5.13	.30	
"	0415	3785	5.13	.30	
"	0513	3843	5.11	.32	
"	0614	3904	5.13	.30	
"	0716	3966	5.11	.32	
"	0816	4026	5.10	.33	
"	0916	4086	5.14	.29	
"	1016	4146	5.13	.30	
"	1116	4206	5.15	.28	
"	1216	4266	5.15	.28	
"	1317	4327	5.15	.28	
"	1416	4386	5.17	.26	
"	1516	4446	5.17	.26	
"	1617	4507	5.18	.25	
"	1716	4566	5.19	.24	
"	1816	4626	5.20	.23	
"	1916	4686	5.20	.23	
"	2019	4749	5.21	.22	
"	2118	4808	5.24	.19	
"	2218	4868	5.24	.19	
"	2321	4931	5.25	.18	
9-29-93	0015	4995	5.26	.17	
"	0116	5056	5.26	.17	

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

PUMPING WELL: 1339 PW

PIEZOMETER NUMBER: 1338

WATER LEVEL AT TIME 0: 5.43

DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
9-29-93	0214	5104	5.26	0.17	
"	0313	5163	5.26	0.17	
"	0513	5283	5.28	0.15	
"	0619	5349	5.28	0.15	
"	0722	5412	5.29	0.14	
"	0823	5473	5.29	0.14	
"	0918	5528	5.29	0.14	
"	1030	5600	5.29	0.14	
"	1116	5666	5.30	0.13	
"	1216	5706	5.29	0.14	
	1312	~~5760~~ 5762	5.29	0.14	
	1412	~~5820~~ 5822	5.30	0.13	

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

PUMPING WELL: 1339 PW

PIEZOMETER NUMBER: 1340

WATER LEVEL AT TIME 0: _____

page 1 of ___

DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
9-25-93	1543	143	8.19		Heavy rain
	18:11	301	8.13		
	1945	395	8.11		
	2145	515	8.16		
	2345	635	8.15		NO RAIN
9-26-93	0150	760	8.16		
"	0346	876	8.18		
"	0548	998	8.22		
"	0733	1103	8.31		
"	0938	1128	8.34		cloudy + windy
"	11:19	1229	8.42		
"	13:36	1366	8.42		
9-26 93	15:25	1575	8.42		
"	17:46	1716	8.45		
"	19:46	1936	8.42		
"	21:45	2095	8.49		
9-27-93	0151	~~3101~~ 2201	8.39		
"	0351	~~3221~~ 2319	8.37		
"	0559	~~3349~~ 2449	8.35		RAIN
"	0805	126 ~~3475~~ 2575	8.36		
"	10:01	116 ~~3591~~ 2691	8.41		
"	11:45	~~3695~~ 2795	8.43		
"	1405	2935	8.46		
"	1737	3147	8.52		
"	1938	3268	8.55		
"	2138	3388	8.62		
9-28-93	0035	3565	8.62		
"	0223	3673	8.58		

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

PUMPING WELL: 1339 PW1

PIEZOMETER NUMBER: 1340

WATER LEVEL AT TIME 0: _____

page 2 of ___

DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
9-28-93	0423	3793	8.56		
"	0621	3911	8.54		
"	0831	4041	8.54		
"	1040	4170	8.54		
"	~~1318~~ 1158	4248	8.59		
"	1428	4398	8.58		
"	1639	4529	8.62		
"	1838	4659	8.62		
"	2038	4809	8.65		
"	2235	4926	8.74		M. Scope - pipe water Rep
9-29-93	0029	4999	8.77		
"	0228	~~5148~~ 5112	8.79		
"	0430	5240	8.70		
"	0623	5353	8.80		
"	0823	5473	8.84		
"	1022	5592	8.85		
	1130	5660	8.85		
	1630	5960	8.82		

000361

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

PUMPING WELL: 1339PW

PIEZOMETER NUMBER: 1343

WATER LEVEL AT TIME 0: 2.92

page 1 of ___

DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
9-25-93	14:18	68	2.92		RAIN
9-25-93	15:10	120			
↓	15:29	139	2.90	+ 0.02	Heavy Rain (H2O / RIX)
9-25-93	16:51	221	2.89	+ 0.03	steady rain "
9-25-93	1750	280	2.88	+ 0.04	"
	1850	340	2.84	+ 0.08	"
	1945	395	2.81	+ 0.08	"
	2047	457	2.84	+ 0.08	"
	2149	519	2.87	+ 0.05	"
↓	2325	615	2.84	+ 0.08	No RAIN
9-26-93	0018	668	2.84	+ 0.08	"
"	0123	733	2.83	+ 0.09	"
"	0223	793	2.83	+ .09	"
"	0320	850	2.82	+ .10	"
"	0418	908	2.80	+ .12	"
"	0518	968	2.80	+ .12	
"	0623	1033	2.81	+ .11	
"	0714	1084	2.83	+ .09	
"	0823	1153	2.83	+ .09	
"	917	1207	2.85	+ .07	
"	1018	1268	2.84	+ .08	Cloudy & Windy
"	1118	1328	2.84	.08	
"	1218	1388	2.85	+ .07	
"	13:15	1445	2.84	.08	
"	14:13	1503	2.84	.08	
"	15:14	1564	2.84	.08	
9-26-93	16:14	1624	2.84	.08	

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

PUMPING WELL: 1339 PW

PIEZOMETER NUMBER: 1343

WATER LEVEL AT TIME 0: 2.92

DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
9-26-93	17:14	1684	2.82	.10	
	18:14	1744	2.80	.12	
	19:14	1804	2.78	.14	
	2020	1870	2.75	.17	
	21:14	1929	2.75	.17	
	2215	1985	2.74	.18	
	2318	2048	2.74	.18	
9-27-93	0018	~~3008~~ 2108	2.71	.21	
"	0117	~~3067~~ 2167	2.69	.23	
"	0221	~~3131~~ 2231	2.68	.24	
"	0321	~~3191~~ 2291	2.66	.26	
"	0416	~~3246~~ 2346	2.66	.26	
"	0517	~~3307~~ 2407	2.66	.26	
"	0621	~~3371~~ 2471	2.64	.28	
"	0715	~~3425~~ 2525	2.67	.25	
"	0815	~~3485~~ 2585	2.66	.26	
"	0922	~~3552~~ 2652	2.69	.23	
"	1019	~~3609~~ 2709	2.73	.19	
"	1112	~~3662~~ 2762	2.74	.18	
"	1214	~~3724~~ 2824	2.76	~~.20~~ .16	
"	1315	~~3783~~ 2885	2.78	.14	
"	1410	~~3840~~ 2940	2.79	.13	
"	1515	3005	2.78	.14	recalculate drawdown
	1615	3066	2.77	.15	
	1715	3120	2.76	.16	
	1814	3179	2.74	.18	
	1814	3239	2.74	.18	
	[illegible]	[illegible]	2.74	.18	

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

PUMPING WELL: 1339 PW

PIEZOMETER NUMBER: 1343

WATER LEVEL AT TIME 0: 2.92

page 3 of ___

DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
9-27-93	2114	3354	2.74	.18	
"	2215	3420	2.74	.18	
	2315	3480	2.72	.20	
9-28-93	0026	3556	2.72	.20	
"	0118	3608	2.71	.21	
"	0217	3667	2.69	.23	
"	0319	3729	2.69	.23	
"	0418	3788	2.68	.24	
"	0513	3843	2.67	.25	
"	0616	3906	2.68	.24	
"	0714	3964	2.68	.24	
"	0814	4024	2.67	~~.24~~ .25	
"	0914	4084	2.68	.24	
"	1014	4144	2.71	.21	
	1114	4204	2.72	.20	
"	1214	4264	2.76	.16	
"	1316	4326	2.81	.11	
"	1415	4385	2.84	.08	
"	1513	4443	2.82	.10	
"	1614	4504	2.79	.13	
"	1713	4563	2.74	.18	
"	1814	4624	2.70	.22	
"	1913	4683	2.68	.24	
"	2016	4746	2.67	.25	
"	2115	4805	2.68	.24	
"	2215	4865	2.69	.23	
"	2318	4928	2.69	.23	
9-29-93	0018	4985	2.69	.23	

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

PUMPING WELL: 1339PW

PIEZOMETER NUMBER: 1343

WATER LEVEL AT TIME 0: 2.92

DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
9-29-93	0119	5049	2.69	.23	
"	0218	5103	2.69	.23	
"	0319	5169	2.69	.23	
"	0518	5288	2.70	.22	
"	0624	5354	2.71	.21	
"	0720	5410	2.71	.21	
"	0819	~~5479~~ 5469	2.73	.19	
"	0914	~~5534~~ 5524	2.73	.19	
"	1015	5585	2.75	.17	
"	1114	~~5554~~ 5645	2.75	.17	
"	1210	5700	2.80	.12	
	1315	5765	2.82	.10	
	1415	5825	2.82	.10	S.

2.7 2.9
5.2 0.16

000365

PUMP TEST WATER QUALITY MEASUREMENTS

page 1 of ___

PUMPING WELL _____

DATE	TIME	ELAPSED TIME	pH	SPEC. COND.	TEMP	GALLONS / COMMENTS
9-25-93	14:56					Temp: 62 29.17
9-25-93	1557	165 min	7.52	0.784	19.0	3274 29.1 BEN
	1757	297 min	8.36	0.732	19.3	3485 29.6 in HG BEN
	1947	396	8.39	0.741	19.6	3685 29.55 in HG
	2330	620	7.40	0.746	19.6	No Rain 6682 29.06 in HG
T.S. 9/26/93	0125	735	8.23	0.734	19.5	
"	0330	860	7.33	0.760	19.4	55°F 29.07 in Hg
"	0523	973	7.23	0.733	19.1	57°F 29.01 in Hg
"	0715	1025	7.23	0.730	18.9	61°F, 29.15 in Hg
"	0728	1038				63°F, 29.15 in Hg
"	0845	1175	7.23	0.735	18.7	
"	1040	1390	7.24	0.721	18.8	61°F, 29.24 in Hg
"	1240	1410 1510	7.22	.732	18.6	
"	1410	1500	7.22	.710	18.8	61°F, 29.28 in Hg
"	1450	1540	7.35	.722	18.9	29.28 Common
"	1548	1558	7.27	0.715	18.9	61°F 29.25 Bin
"	1648	1658	7.22	0.733	19.0	
"	1746	1716	7.23	0.724	18.9	60 29.29
"	1846	1776	7.23	0.730	18.8	
"	2046		7.23	0.704	18.8	
"	2147		7.24	0.703	18.5	56°F 29.33 in Hg
"	2249		7.24	0.734	18.4	
"	2347		7.23	0.728	18.4	54°F 29.29 in Hg
9-27-93	0145	2195	7.25	0.731	18.4	52°F 29.35 in Hg

0003366

12333

000367

PUMP TEST W... E... QUALITY MEASUREMENTS

PUMPING WELL 1339 PW

page 2 of ___

DATE	TIME	ELAPSED TIME	pH	SPEC. COND.	TEMP	Temp	GALLONS / COMMENTS	
9.27.93	0344	~~3214~~ 2314	7.25	.726	18.5	52°F		29.21
"	0545	~~3335~~ 2435	7.25	.734	18.5	54°F		29.19
"	0748	~~3458~~ 2558	7.25	.721	18.2	54°F		29.19
9-27-93	0942	~~3572~~ 2672	7.25	.731	17.8	52°F		29.24
9-27-93	1144	~~3694~~ 2794	7.24	.720	18.3	54°F		29.29
"	1350	~~3820~~ 2920	7.24	.723	18.2	54°F		29.32
"	1546	3036	7.25	0.759	18.2	53°F		29.31
"	1947	3217	7.28	0.747	18.0	52°F		29.37
"	2047	3337	7.27	0.740	17.5	51°F		29.38
"	2246	3456	7.29	0.747	17.5	50°F		29.42
9.28.93	0048	3578	7.27	0.743	17.7	45°F		29.42
"	0244	3694	7.26	0.742	17.9	46°F		29.40
"	0445	3815	7.27	0.735	17.2	45°F		29.37
"	0645	3935	7.27	0.734	17.9	45°F		29.36
	0745	3995	7.28	0.737	17.8	46°F		29.37
	0921	4091	7.28	0.749	17.5	50°F		29.35
	1115	4205	7.27	0.742	17.7	57°F		29.38
9-28-93	1250	4300	7.30	0.735	18.5	62°F		29.41
	1420	4390	7.31	0.739	18.8	64°F		29.43
	1620	4510	7.33	0.735	18.8	65°F		29.44
	1821	4631	7.32	0.743	18.8°	65°F		29.41
9-28-93	2020	~~4755~~ 4750	7.31	0.725	18.5°C	57°F		29.43
	2150	4840	7.30	0.729	18.1	55°F		29.46
	2345	4955	7.31	.733	17.7	48°F		29.53

CORRECT ELAPSED TIMING

15
60
21
96

PUMP TEST WATER QUALITY MEASUREMENTS

PUMPING WELL 1339 PW

DATE	TIME	ELAPSED TIME	pH	SPEC. COND.	TEMP	~~Temp~~	GALLONS / COMMENTS	BP
9-29-93	0145	5075	7.29	0.722	17.5	41°F		29.55 in
"	0345	5195	7.28	0.734	17.6	41°F		29.56
"	0545	5315	7.28	0.736	17.3	39°F		29.57
	0745	5430	7.26	0.740	16.9	37°F	~~unavailable~~	29.61
"	0945	5555	7.29	0.736	16.7	45°F		29.64
"	1123	5653	7.32	0.725	17.5	54°F		29.67
	1424	~~582~~ 5834	7.33	0.728	17.8	56°F		29.64

SE2000
Environmental Logger
10/05 16:08

Unit# 1 Test 4

Setups:	INPUT 1	INPUT 2	INPUT 3	INPUT 4	INPUT 5	INPUT 6	INPUT 7
Type	Level (F)	Level (F)	Level (F)	Level (F)	Level (F)	Level (F)	Level (F)
Mode	Surface	Surface	Surface	Surface	Surface	Surface	Surface
I.D.	1339PW	1339	PZ1B	PZ4	PZ1C	PZ2	PZ3
Reference	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SG	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Linearity	0.096	0.008	0.106	0.006	0.007	-0.008	0.026
Scale factor	20.063	10.002	19.989	10.035	10.011	10.046	10.053
Offset	0.051	-0.002	-0.066	0.033	0.015	0.148	-0.019
Delay mSEC	50.000	50.000	50.000	50.000	50.000	50.000	50.000

Step 0 09/25 13:10:02

Elapsed Time	Input 1	Input 2	Input 3	Input 4	Input 5	Input 6	Input 7
0.0000	0.000	0.000	0.006	-0.003	0.003	0.000	0.003
0.0083	0.006	0.003	0.006	0.000	0.012	0.000	0.003
0.0166	0.006	0.003	0.006	0.000	0.015	0.000	0.003
0.0250	0.006	0.003	0.006	0.003	0.015	0.000	0.003
0.0333	0.000	0.003	0.006	0.000	0.015	0.003	0.003
0.0416	0.006	0.006	0.006	0.003	0.018	0.000	0.003
0.0500	0.006	0.003	0.006	0.000	0.018	0.003	0.000
0.0583	0.000	0.003	0.006	0.003	0.018	0.000	0.003
0.0666	0.006	0.003	0.006	0.003	0.018	0.000	0.003
0.0750	0.000	0.003	0.006	0.003	0.018	0.000	0.003
0.0833	0.000	0.003	0.006	0.000	0.018	0.003	0.003
0.0916	-0.006	0.006	0.006	0.003	0.018	0.000	0.003
0.1000	-0.006	0.003	0.006	0.000	0.018	0.000	0.003
0.1083	-0.031	0.003	0.006	0.003	0.022	0.000	0.000
0.1166	-0.050	0.003	0.006	0.000	0.018	0.000	0.003
0.1250	-0.063	0.003	0.006	0.003	0.022	0.000	0.003
0.1333	-0.088	0.003	0.006	0.000	0.022	0.003	0.003
0.1416	-0.126	0.003	0.006	0.000	0.022	0.000	0.003
0.1500	-0.158	0.000	0.006	0.000	0.022	0.000	0.003
0.1583	-0.190	0.000	0.006	0.000	0.022	0.000	0.003
0.1666	-0.221	0.000	0.006	-0.003	0.022	0.003	0.000
0.1750	-0.266	-0.003	0.006	0.000	0.022	0.000	0.003
0.1833	-0.304	-0.003	0.006	-0.003	0.022	0.000	0.003
0.1916	-0.335	-0.003	0.006	-0.003	0.022	0.000	0.003
0.2000	-0.373	-0.009	0.006	-0.003	0.022	0.000	0.000
0.2083	-0.411	-0.009	0.006	-0.003	0.022	0.000	0.003
0.2166	-0.450	-0.012	0.006	-0.006	0.022	0.000	0.003
0.2250	-0.481	-0.012	0.006	-0.006	0.022	-0.003	0.003
0.2333	-0.519	-0.015	0.006	-0.006	0.022	0.000	0.003
0.2416	-0.551	-0.015	0.006	-0.006	0.022	-0.003	0.003
0.2500	-0.583	-0.018	0.006	-0.009	0.022	-0.003	0.003
0.2583	-0.608	-0.022	0.006	-0.009	0.022	-0.003	0.003
0.2666	-0.640	-0.025	0.006	-0.012	0.022	-0.003	0.000
0.2750	-0.671	-0.025	0.006	-0.012	0.022	-0.006	0.003
0.2833	-0.697	-0.028	0.006	-0.012	0.022	-0.003	0.000
0.2916	-0.728	-0.031	0.006	-0.012	0.022	-0.006	0.003
0.3000	-0.760	-0.034	0.006	-0.015	0.022	-0.006	0.003

Elapsed Time	Input 1	Input 2	Input 3	Input 4	Input 5	Input 6	Input 7
0.3083	-0.785	-0.034	0.006	-0.015	0.025	-0.006	0.003
0.3166	-0.804	-0.037	0.006	-0.018	0.022	-0.006	0.003
0.3250	-0.830	-0.040	0.000	-0.018	0.025	-0.009	0.003
0.3333	-0.855	-0.040	0.006	-0.022	0.025	-0.006	0.003
0.3500	-0.893	-0.047	0.006	-0.022	0.022	-0.006	0.003
0.3666	-0.931	-0.050	0.000	-0.025	0.022	-0.006	0.003
0.3833	-0.969	-0.056	0.000	-0.028	0.022	-0.009	0.003
0.4000	-1.001	-0.059	0.000	-0.028	0.022	-0.009	0.003
0.4166	-1.039	-0.063	0.000	-0.031	0.022	-0.009	0.003
0.4333	-1.064	-0.066	0.000	-0.034	0.022	-0.009	0.003
0.4500	-1.096	-0.072	0.000	-0.034	0.022	-0.012	0.003
0.4666	-1.121	-0.075	0.000	-0.037	0.022	-0.012	0.003
0.4833	-1.147	-0.078	0.000	-0.037	0.022	-0.012	0.000
0.5000	-1.166	-0.081	0.000	-0.041	0.022	-0.012	0.003
0.5166	-1.191	-0.085	0.000	-0.041	0.022	-0.012	0.003
0.5333	-1.210	-0.088	0.000	-0.044	0.022	-0.015	0.003
0.5500	-1.229	-0.091	-0.006	-0.044	0.022	-0.015	0.003
0.5666	-1.248	-0.091	-0.006	-0.047	0.022	-0.015	0.003
0.5833	-1.267	-0.094	-0.006	-0.047	0.022	-0.015	0.003
0.6000	-1.280	-0.100	-0.006	-0.047	0.022	-0.015	0.003
0.6166	-1.299	-0.097	-0.006	-0.050	0.025	-0.015	0.003
0.6333	-1.311	-0.104	-0.006	-0.050	0.025	-0.015	0.003
0.6500	-1.330	-0.104	-0.006	-0.053	0.025	-0.019	0.003
0.6666	-1.343	-0.107	-0.006	-0.053	0.025	-0.019	0.003
0.6833	-1.362	-0.107	-0.006	-0.053	0.025	-0.019	0.003
0.7000	-1.375	-0.110	-0.006	-0.056	0.025	-0.019	0.003
0.7166	-1.387	-0.113	-0.006	-0.056	0.025	-0.019	0.003
0.7333	-1.400	-0.113	-0.012	-0.056	0.025	-0.019	0.003
0.7500	-1.419	-0.116	-0.012	-0.056	0.025	-0.019	0.003
0.7666	-1.432	-0.113	-0.012	-0.056	0.025	-0.022	0.003
0.7833	-1.444	-0.116	-0.012	-0.060	0.025	-0.022	0.003
0.8000	-1.457	-0.122	-0.012	-0.060	0.028	-0.022	0.003
0.8166	-1.476	-0.122	-0.012	-0.060	0.025	-0.022	0.003
0.8333	-1.476	-0.126	-0.012	-0.060	0.028	-0.022	0.003
0.8500	-1.470	-0.126	-0.012	-0.063	0.028	-0.022	0.003
0.8666	-1.501	-0.126	-0.018	-0.063	0.028	-0.022	0.003
0.8833	-1.495	-0.129	-0.018	-0.060	0.028	-0.025	0.003
0.9000	-1.514	-0.129	-0.018	-0.063	0.028	-0.025	0.003
0.9166	-1.520	-0.129	-0.018	-0.066	0.028	-0.025	0.003
0.9333	-1.540	-0.132	-0.018	-0.063	0.028	-0.025	0.003
0.9500	-1.546	-0.132	-0.018	-0.066	0.028	-0.025	0.003
0.9666	-1.552	-0.135	-0.018	-0.066	0.028	-0.025	0.003
0.9833	-1.578	-0.135	-0.018	-0.066	0.028	-0.025	0.003
1.0000	-1.578	-0.135	-0.018	-0.066	0.028	-0.025	0.003
1.2000	-1.723	-0.148	-0.025	-0.075	0.025	-0.028	0.003
1.4000	-1.869	-0.163	-0.031	-0.079	0.025	-0.028	0.003
1.6000	-2.002	-0.173	-0.037	-0.085	0.025	-0.031	0.003
1.8000	-2.129	-0.186	-0.044	-0.098	0.025	-0.034	0.003
2.0000	-2.255	-0.195	-0.050	-0.101	0.025	-0.038	0.003
2.2000	-2.370	-0.204	-0.056	-0.101	0.025	-0.041	0.003
2.4000	-2.477	-0.214	-0.056	-0.113	0.025	-0.041	0.003
2.6000	-2.560	-0.220	-0.063	-0.110	0.028	-0.044	0.003

Elapsed Time	Input 1	Input 2	Input 3	Input 4	Input 5	Input 6	Input 7
2.8000	-2.636	-0.227	-0.069	-0.113	0.028	-0.047	0.003
3.0000	-2.712	-0.239	-0.069	-0.120	0.028	-0.047	0.003
3.2000	-2.781	-0.252	-0.075	-0.123	0.025	-0.050	0.003
3.4000	-2.845	-0.245	-0.082	-0.123	0.025	-0.053	0.003
3.6000	-2.902	-0.249	-0.082	-0.126	0.028	-0.053	0.003
3.8000	-2.965	-0.252	-0.088	-0.129	0.028	-0.057	0.003
4.0000	-3.022	-0.258	-0.094	-0.132	0.031	-0.057	0.003
4.2000	-3.073	-0.261	-0.094	-0.136	0.028	-0.060	0.003
4.4000	-3.085	-0.268	-0.101	-0.136	0.028	-0.060	0.003
4.6000	-3.098	-0.268	-0.101	-0.136	0.031	-0.063	0.003
4.8000	-3.111	-0.268	-0.101	-0.136	0.031	-0.063	0.003
5.0000	-3.123	-0.271	-0.107	-0.139	0.031	-0.063	0.003
5.2000	-3.142	-0.274	-0.107	-0.142	0.031	-0.066	0.003
5.4000	-3.155	-0.277	-0.113	-0.142	0.031	-0.066	0.003
5.6000	-3.168	-0.277	-0.113	-0.142	0.034	-0.066	0.003
5.8000	-3.180	-0.277	-0.113	-0.145	0.034	-0.069	0.003
6.0000	-3.193	-0.286	-0.113	-0.148	0.034	-0.069	0.003
6.2000	-3.212	-0.290	-0.120	-0.148	0.034	-0.069	0.003
6.4000	-3.225	-0.286	-0.120	-0.148	0.034	-0.072	0.003
6.6000	-3.237	-0.286	-0.120	-0.151	0.034	-0.072	0.003
6.8000	-3.244	-0.290	-0.126	-0.151	0.034	-0.072	0.003
7.0000	-3.256	-0.293	-0.126	-0.155	0.034	-0.076	0.003
7.2000	-3.269	-0.293	-0.126	-0.155	0.034	-0.076	0.003
7.4000	-3.275	-0.296	-0.132	-0.155	0.037	-0.076	0.003
7.6000	-3.288	-0.299	-0.132	-0.158	0.037	-0.076	0.003
7.8000	-3.301	-0.296	-0.132	-0.158	0.037	-0.079	0.003
8.0000	-3.307	-0.299	-0.132	-0.158	0.034	-0.079	0.003
8.2000	-3.313	-0.302	-0.132	-0.158	0.037	-0.082	0.003
8.4000	-3.326	-0.302	-0.138	-0.158	0.037	-0.082	0.003
8.6000	-3.332	-0.305	-0.138	-0.161	0.037	-0.082	0.003
8.8000	-3.339	-0.305	-0.138	-0.161	0.037	-0.082	0.003
9.0000	-3.345	-0.305	-0.138	-0.164	0.037	-0.082	0.003
9.2000	-3.358	-0.309	-0.138	-0.164	0.041	-0.085	0.003
9.4000	-3.364	-0.309	-0.145	-0.164	0.041	-0.085	0.003
9.6000	-3.370	-0.312	-0.145	-0.164	0.041	-0.085	0.003
9.8000	-3.377	-0.315	-0.145	-0.164	0.041	-0.085	0.003
10.0000	-3.383	-0.315	-0.145	-0.164	0.041	-0.088	0.003
12.0000	-3.446	-0.324	-0.164	-0.174	0.037	-0.098	0.003
14.0000	-3.491	-0.334	-0.176	-0.186	0.041	-0.107	0.003
16.0000	-3.522	-0.356	-0.183	-0.193	0.044	-0.114	0.003
18.0000	-3.548	-0.368	-0.195	-0.199	0.044	-0.120	0.003
20.0000	-3.567	-0.372	-0.202	-0.208	0.047	-0.126	0.003
22.0000	-3.586	-0.381	-0.208	-0.215	0.047	-0.133	0.003
24.0000	-3.611	-0.391	-0.221	-0.218	0.050	-0.133	0.003
26.0000	-3.630	-0.397	-0.227	-0.227	0.053	-0.139	0.003
28.0000	-3.643	-0.403	-0.233	-0.234	0.056	-0.145	0.003
30.0000	-3.681	-0.413	-0.240	-0.237	0.056	-0.152	0.003
32.0000	-3.693	-0.416	-0.240	-0.243	0.060	-0.148	0.006
34.0000	-3.719	-0.425	-0.252	-0.246	0.063	-0.155	0.003
36.0000	-3.738	-0.432	-0.259	-0.253	0.066	-0.161	0.003
38.0000	-3.750	-0.438	-0.265	-0.256	0.069	-0.164	0.003
40.0000	-3.763	-0.444	-0.271	-0.259	0.069	-0.167	0.000

Elapsed Time	Input 1	Input 2	Input 3	Input 4	Input 5	Input 6	Input 7
42.0000	-3.769	-0.447	-0.271	-0.265	0.072	-0.177	0.003
44.0000	-3.782	-0.454	-0.277	-0.269	0.075	-0.180	0.000
46.0000	-3.788	-0.460	-0.284	-0.275	0.075	-0.183	0.006
48.0000	-3.801	-0.463	-0.290	-0.278	0.082	-0.190	0.019
50.0000	-3.807	-0.469	-0.290	-0.281	0.082	-0.196	0.025
52.0000	-3.820	-0.476	-0.296	-0.288	0.085	-0.199	0.025
54.0000	-3.826	-0.479	-0.303	-0.288	0.088	-0.202	0.025
56.0000	-3.833	-0.482	-0.303	-0.294	0.088	-0.209	0.025
58.0000	-3.845	-0.485	-0.309	-0.294	0.091	-0.212	0.025
60.0000	-3.852	-0.491	-0.315	-0.300	0.094	-0.215	0.025
62.0000	-3.858	-0.498	-0.322	-0.303	0.097	-0.218	0.025
64.0000	-3.871	-0.501	-0.322	-0.303	0.097	-0.221	0.177
66.0000	-3.877	-0.504	-0.322	-0.310	0.101	-0.224	0.162
68.0000	-3.877	-0.507	-0.328	-0.313	0.104	-0.228	0.139
70.0000	-3.883	-0.514	-0.334	-0.313	0.104	-0.231	0.117
72.0000	-3.890	-0.514	-0.334	-0.316	0.107	-0.237	0.098
74.0000	-3.896	-0.520	-0.334	-0.319	0.110	-0.237	0.079
76.0000	-3.902	-0.523	-0.341	-0.322	0.113	-0.243	0.066
78.0000	-3.909	-0.526	-0.347	-0.326	0.113	-0.247	0.054
80.0000	-3.915	-0.529	-0.347	-0.329	0.116	-0.247	0.041
82.0000	-3.921	-0.532	-0.353	-0.329	0.120	-0.253	0.031
84.0000	-3.928	-0.536	-0.353	-0.332	0.120	-0.256	0.022
86.0000	-3.934	-0.539	-0.360	-0.335	0.123	-0.256	0.015
88.0000	-3.934	-0.542	-0.360	-0.338	0.123	-0.259	0.009
90.0000	-3.940	-0.545	-0.360	-0.338	0.126	-0.259	0.006
92.0000	-3.947	-0.548	-0.366	-0.341	0.126	-0.266	0.003
94.0000	-3.953	-0.551	-0.366	-0.345	0.132	-0.266	0.000
96.0000	-3.959	-0.555	-0.372	-0.348	0.132	-0.269	0.041
98.0000	-3.959	-0.558	-0.372	-0.348	0.135	-0.272	0.038
100.000	-3.966	-0.561	-0.372	-0.351	0.139	-0.272	0.028
115.000	-3.991	-0.580	-0.391	-0.367	0.151	-0.275	0.123
130.000	-4.010	-0.592	-0.397	-0.383	0.164	-0.300	0.050
145.000	-4.042	-0.611	-0.416	-0.392	0.180	-0.316	0.015
160.000	-4.061	-0.627	-0.429	-0.402	0.192	-0.326	0.003
175.000	-4.137	-0.643	-0.442	-0.414	0.208	-0.335	-0.003
190.000	-4.162	-0.655	-0.454	-0.421	0.224	-0.345	0.015
205.000	-4.181	-0.665	-0.467	-0.430	0.237	-0.354	0.003
220.000	-4.200	-0.678	-0.473	-0.443	0.255	-0.361	-0.006
235.000	-4.213	-0.687	-0.486	-0.446	0.268	-0.370	-0.012
250.000	-4.232	-0.700	-0.492	-0.459	0.287	-0.380	-0.019
265.000	-4.238	-0.706	-0.499	-0.462	0.300	-0.389	-0.012
280.000	-4.257	-0.715	-0.511	-0.468	0.312	-0.395	-0.019
295.000	-4.358	-0.734	-0.518	-0.481	0.328	-0.405	-0.025
310.000	-4.377	-0.741	-0.530	-0.487	0.344	-0.414	-0.028
325.000	-4.384	-0.747	-0.530	-0.500	0.360	-0.424	-0.031
340.000	-4.403	-0.760	-0.543	-0.503	0.372	-0.430	-0.031
355.000	-4.422	-0.769	-0.555	-0.512	0.388	-0.437	-0.038
370.000	-4.434	-0.778	-0.562	-0.519	0.398	-0.443	-0.038
385.000	-4.447	-0.785	-0.568	-0.525	0.414	-0.452	-0.041
400.000	-4.447	-0.794	-0.581	-0.531	0.423	-0.459	-0.047
415.000	-4.453	-0.804	-0.587	-0.541	0.436	-0.468	-0.054
430.000	-4.453	-0.813	-0.593	-0.544	0.455	-0.471	-0.050

Elapsed Time	Input 1	Input 2	Input 3	Input 4	Input 5	Input 6	Input 7
445.000	-4.460	-0.816	-0.600	-0.550	0.467	-0.478	-0.054
460.000	-4.460	-0.823	-0.606	-0.557	0.480	-0.484	-0.047
475.000	-4.396	-0.826	-0.606	-0.557	0.496	-0.421	0.088
490.000	-4.384	-0.823	-0.587	-0.554	0.704	-0.383	0.479
505.000	-4.377	-0.829	-0.612	-0.566	0.926	-0.452	0.975
520.000	-4.377	-0.838	-0.619	-0.573	0.954	-0.491	0.359
535.000	-4.384	-0.845	-0.631	-0.579	0.970	-0.500	0.181
550.000	-4.384	-0.854	-0.638	-0.585	0.986	-0.513	0.136
565.000	-4.384	-0.857	-0.644	-0.588	1.001	-0.516	0.079
580.000	-4.352	-0.864	-0.650	-0.595	1.020	-0.519	0.044
595.000	-4.561	-0.879	-0.656	-0.604	1.039	-0.529	0.015
610.000	-4.580	-0.892	-0.669	-0.614	1.052	-0.532	0.000
625.000	-4.510	-0.892	-0.669	-0.617	1.068	-0.535	-0.015
640.000	-4.529	-0.898	-0.675	-0.623	1.080	-0.541	-0.028
655.000	-4.536	-0.905	-0.682	-0.626	1.096	-0.544	-0.038
670.000	-4.548	-0.911	-0.688	-0.636	1.106	-0.551	-0.047
685.000	-4.555	-0.917	-0.694	-0.639	1.118	-0.557	-0.054
700.000	-4.561	-0.924	-0.701	-0.645	1.128	-0.563	-0.060
715.000	-4.574	-0.930	-0.707	-0.652	1.137	-0.567	-0.063
730.000	-4.580	-0.936	-0.713	-0.655	1.150	-0.573	-0.066
745.000	-4.434	-0.933	-0.713	-0.658	1.163	-0.576	-0.066
760.000	-4.548	-0.942	-0.720	-0.664	1.175	-0.582	-0.066
775.000	-4.586	-0.949	-0.726	-0.674	1.188	-0.589	-0.066
790.000	-4.567	-0.955	-0.732	-0.677	1.197	-0.592	-0.066
805.000	-4.567	-0.961	-0.739	-0.680	1.210	-0.598	-0.063
820.000	-4.599	-0.968	-0.745	-0.690	1.223	-0.605	-0.063
835.000	-4.618	-0.974	-0.751	-0.693	1.232	-0.608	-0.060
850.000	-4.624	-0.977	-0.758	-0.699	1.245	-0.614	-0.057
865.000	-4.745	-0.990	-0.764	-0.709	1.254	-0.620	-0.057
880.000	-4.688	-0.996	-0.764	-0.712	1.267	-0.627	-0.054
895.000	-4.700	-0.999	-0.770	-0.718	1.276	-0.630	-0.050
910.000	-4.707	-1.006	-0.777	-0.721	1.286	-0.636	-0.050
925.000	-4.719	-1.012	-0.783	-0.728	1.298	-0.643	-0.047
940.000	-4.719	-1.015	-0.789	-0.731	1.308	-0.646	-0.044
955.000	-4.726	-1.021	-0.795	-0.737	1.317	-0.652	-0.044
970.000	-4.738	-1.028	-0.802	-0.740	1.327	-0.658	-0.044
985.000	-4.700	-1.031	-0.802	-0.747	1.340	-0.662	-0.041
1000.00	-4.688	-1.034	-0.808	-0.753	1.349	-0.665	-0.041
1015.00	-4.719	-1.040	-0.814	-0.756	1.359	-0.671	-0.041
1030.00	-4.726	-1.047	-0.821	-0.762	1.368	-0.677	-0.041
1045.00	-4.713	-1.050	-0.827	-0.769	1.377	-0.681	-0.044
1060.00	-4.707	-1.053	-0.827	-0.772	1.387	-0.687	-0.044
1075.00	-4.694	-1.056	-0.833	-0.775	1.396	-0.690	-0.044
1090.00	-4.738	-1.062	-0.840	-0.781	1.406	-0.696	-0.047
1105.00	-4.776	-1.072	-0.846	-0.788	1.415	-0.703	-0.047
1120.00	-4.764	-1.075	-0.846	-0.791	1.428	-0.706	-0.050
1135.00	-4.764	-1.081	-0.852	-0.797	1.434	-0.709	-0.050
1150.00	-4.764	-1.084	-0.859	-0.804	1.444	-0.715	-0.054
1165.00	-4.764	-1.091	-0.865	-0.807	1.453	-0.719	-0.057
1180.00	-4.757	-1.094	-0.871	-0.813	1.466	-0.725	-0.060
1195.00	-5.061	-1.116	-0.878	-0.823	1.472	-0.734	-0.063
1210.00	-4.840	-1.113	-0.884	-0.823	1.479	-0.738	-0.066

Elapsed Time	Input 1	Input 2	Input 3	Input 4	Input 5	Input 6	Input 7
1225.00	-4.859	-1.116	-0.884	-0.829	1.491	-0.741	-0.069
1240.00	-4.871	-1.122	-0.890	-0.946	1.498	-0.747	-0.073
1255.00	-4.878	-1.125	-0.897	-0.949	1.510	-0.750	-0.076
1270.00	-4.878	-1.132	-0.903	-0.956	1.517	-0.757	-0.079
1285.00	-4.884	-1.135	-0.909	-0.959	1.526	-0.757	-0.082
1300.00	-4.890	-1.141	-0.915	-0.965	1.536	-0.763	-0.085
1315.00	-4.897	-1.144	-0.915	-0.968	1.542	-0.769	-0.088
1330.00	-4.897	-1.154	-0.922	-0.975	1.548	-0.776	-0.092
1345.00	-4.909	-1.157	-0.922	-0.981	1.561	-0.779	-0.092
1360.00	-4.916	-1.163	-0.934	-0.984	1.570	-0.782	-0.095
1375.00	-4.922	-1.166	-0.934	-0.990	1.577	-0.788	-0.098
1390.00	-4.852	-1.166	-0.941	-0.990	1.589	-0.791	-0.098
1405.00	-4.580	-1.157	-0.934	-0.990	1.596	-0.795	-0.101
1420.00	-4.586	-1.157	-0.941	-0.994	1.605	-0.798	-0.101
1435.00	-4.770	-1.173	-0.947	-1.000	1.611	-0.801	-0.104
1450.00	-4.802	-1.179	-0.953	-1.006	1.621	-0.807	-0.108
1465.00	-4.726	-1.179	-0.953	-1.006	1.627	-0.810	-0.111
1480.00	-4.732	-1.185	-0.960	-1.013	1.637	-0.814	-0.114
1495.00	-4.935	-1.198	-0.966	-1.022	1.646	-0.823	-0.114
1510.00	-4.941	-1.113	-0.972	-1.025	1.652	-0.826	-0.117
1525.00	-4.947	-1.211	-0.979	-1.032	1.662	-0.829	-0.117
1540.00	-4.954	-1.217	-0.985	-1.041	1.668	-0.836	-0.120
1555.00	-4.966	-1.223	-0.991	-1.047	1.678	-0.842	-0.120
1570.00	-4.966	-1.226	-0.991	-1.051	1.684	-0.845	-0.123
1585.00	-4.985	-1.236	-0.998	-1.057	1.690	-0.852	-0.127
1600.00	-4.985	-1.239	-1.004	-1.060	1.700	-0.855	-0.130
1615.00	-5.004	-1.245	-1.010	-1.066	1.706	-0.861	-0.130
1630.00	-5.011	-1.248	-1.017	-1.070	1.716	-0.864	-0.133
1645.00	-5.017	-1.255	-1.023	-1.076	1.722	-0.871	-0.136
1660.00	-5.017	-1.261	-1.023	-1.079	1.728	-0.874	-0.139
1675.00	-5.023	-1.264	-1.029	-1.085	1.738	-0.880	-0.143
1690.00	-5.030	-1.270	-1.035	-1.092	1.741	-0.883	-0.143
1705.00	-5.036	-1.277	-1.042	-1.095	1.750	-0.890	-0.146
1720.00	-5.036	-1.280	-1.042	-1.098	1.757	-0.893	-0.149
1735.00	-5.036	-1.286	-1.048	-1.108	1.766	-0.899	-0.149
1750.00	-5.036	-1.289	-1.054	-1.111	1.776	-0.902	-0.152
1765.00	-5.042	-1.296	-1.061	-1.117	1.769	-0.909	-0.155
1780.00	-5.061	-1.299	-1.061	-1.120	1.779	-0.912	-0.155
1795.00	-5.068	-1.305	-1.067	-1.127	1.785	-0.918	-0.158
1810.00	-5.074	-1.311	-1.073	-1.130	1.792	-0.921	-0.162
1825.00	-5.074	-1.315	-1.080	-1.136	1.798	-0.928	-0.165
1840.00	-5.296	-1.327	-1.086	-1.142	1.804	-0.934	-0.168
1855.00	-5.378	-1.343	-1.092	-1.152	1.814	-0.940	-0.168
1870.00	-5.175	-1.340	-1.099	-1.155	1.820	-0.944	-0.171
1885.00	-5.156	-1.343	-1.099	-1.158	1.826	-0.950	-0.174
1900.00	-5.099	-1.343	-1.105	-1.158	1.836	-0.953	-0.177
1915.00	-4.928	-1.333	-1.105	-1.158	1.842	-0.956	-0.181
1930.00	-5.087	-1.343	-1.111	-1.165	1.848	-0.959	-0.184
1945.00	-5.150	-1.352	-1.118	-1.174	1.855	-0.966	-0.187
1960.00	-5.106	-1.359	-1.124	-1.177	1.867	-0.969	-0.187
1975.00	-5.106	-1.362	-1.124	-1.180	1.874	-0.972	-0.190
1990.00	-5.118	-1.365	-1.130	-1.187	1.880	-0.978	-0.193

Elapsed Time	Input 1	Input 2	Input 3	Input 4	Input 5	Input 6	Input 7
2005.00	-5.125	-1.371	-1.137	-1.190	1.886	-0.982	-0.197
2020.00	-5.188	-1.378	-1.137	-1.196	1.893	-0.988	-0.197
2035.00	-5.201	-1.384	-1.143	-1.199	1.899	-0.991	-0.200
2050.00	-5.144	-1.387	-1.149	-1.203	1.905	-0.994	-0.203
2065.00	-5.150	-1.390	-1.149	-1.209	1.912	-1.001	-0.203
2080.00	-5.125	-1.393	-1.155	-1.209	1.918	-1.004	-0.206
2095.00	-5.125	-1.397	-1.162	-1.215	1.924	-1.010	-0.209
2110.00	-5.131	-1.403	-1.162	-1.222	1.931	-1.013	-0.212
2125.00	-5.213	-1.409	-1.168	-1.228	1.937	-1.020	-0.216
2140.00	-5.220	-1.415	-1.174	-1.231	1.940	-1.023	-0.216
2155.00	-5.213	-1.419	-1.174	-1.241	1.950	-1.029	-0.219
2170.00	-5.226	-1.425	-1.181	-1.241	1.956	-1.032	-0.222
2185.00	-5.239	-1.431	-1.187	-1.247	1.962	-1.039	-0.222
2200.00	-5.213	-1.434	-1.193	-1.250	1.969	-1.042	-0.228
2215.00	-5.220	-1.438	-1.200	-1.256	1.972	-1.045	-0.232
2230.00	-5.226	-1.441	-1.206	-1.260	1.981	-1.051	-0.235
2245.00	-5.232	-1.447	-1.206	-1.266	1.984	-1.058	-0.238
2260.00	-5.232	-1.450	-1.212	-1.269	1.994	-1.058	-0.238
2275.00	-5.239	-1.456	-1.212	-1.275	2.000	-1.064	-0.241
2290.00	-5.245	-1.463	-1.219	-1.279	2.003	-1.067	-0.244
2305.00	-5.258	-1.466	-1.225	-1.285	2.010	-1.073	-0.247
2320.00	-5.283	-1.472	-1.231	-1.285	2.016	-1.077	-0.251
2335.00	-5.308	-1.479	-1.238	-1.291	2.025	-1.083	-0.254
2350.00	-5.315	-1.485	-1.238	-1.294	2.029	-1.086	-0.257
2365.00	-5.321	-1.491	-1.244	-1.301	2.035	-1.089	-0.257
2380.00	-5.334	-1.494	-1.250	-1.304	2.038	-1.096	-0.260
2395.00	-5.340	-1.497	-1.257	-1.310	2.044	-1.099	-0.263
2410.00	-5.353	-1.504	-1.257	-1.317	2.060	-1.105	-0.266
2425.00	-5.315	-1.507	-1.263	-1.320	2.057	-1.111	-0.270
2440.00	-5.346	-1.513	-1.269	-1.323	2.063	-1.115	-0.273
2455.00	-5.840	-1.542	-1.275	-1.339	2.070	-1.121	-0.276
2470.00	-5.511	-1.535	-1.282	-1.342	2.076	-1.127	-0.279
2485.00	-5.530	-1.538	-1.288	-1.345	2.079	-1.130	-0.282
2500.00	-5.561	-1.548	-1.294	-1.351	2.085	-1.137	-0.286
2515.00	-5.454	-1.548	-1.294	-1.355	2.092	-1.140	-0.289
2530.00	-5.454	-1.551	-1.301	-1.358	2.098	-1.143	-0.292
2545.00	-5.416	-1.554	-1.307	-1.361	2.101	-1.149	-0.295
2560.00	-5.403	-1.554	-1.307	-1.367	2.108	-1.153	-0.298
2575.00	-5.422	-1.561	-1.313	-1.370	2.114	-1.156	-0.301
2590.00	-5.422	-1.564	-1.320	-1.373	2.120	-1.159	-0.305
2605.00	-5.429	-1.570	-1.320	-1.380	2.127	-1.165	-0.308
2620.00	-5.441	-1.573	-1.326	-1.380	2.133	-1.168	-0.311
2635.00	-5.448	-1.579	-1.332	-1.386	2.139	-1.175	-0.314
2650.00	-5.441	-1.583	-1.332	-1.389	2.114	-1.178	-0.321
2665.00	-5.454	-1.589	-1.339	-1.396	2.120	-1.181	-0.321
2680.00	-5.435	-1.592	-1.345	-1.399	2.127	-1.187	-0.324
2695.00	-5.334	-1.589	-1.345	-1.402	2.133	-1.191	-0.327
2710.00	-5.486	-1.598	-1.351	-1.408	2.136	-1.197	-0.330
2725.00	-5.498	-1.605	-1.358	-1.415	2.142	-1.203	-0.336
2740.00	-5.498	-1.611	-1.364	-1:418	2.149	-1.203	-0.336
2755.00	-5.517	-1.614	-1.364	-1.424	2.155	-1.210	-0.343
2770.00	-5.517	-1.620	-1.370	-1.427	2.161	-1.213	-0.343

Elapsed Time	Input 1	Input 2	Input 3	Input 4	Input 5	Input 6	Input 7
2785.00	-5.524	-1.627	-1.377	-1.434	2.164	-1.216	-0.346
2800.00	-5.530	-1.630	-1.383	-1.437	2.171	-1.222	-0.352
2815.00	-5.543	-1.636	-1.383	-1.440	2.177	-1.225	-0.349
2830.00	-5.549	-1.643	-1.389	-1.446	2.180	-1.232	-0.355
2845.00	-5.536	-1.643	-1.395	-1.449	2.187	-1.238	-0.359
2860.00	-5.543	-1.652	-1.402	-1.456	2.193	-1.241	-0.362
2875.00	-5.549	-1.652	-1.402	-1.462	2.199	-1.244	-0.365
2890.00	-5.549	-1.655	-1.402	-1.465	2.206	-1.251	-0.368
2905.00	-5.561	-1.661	-1.414	-1.468	2.225	-1.251	-0.365
2920.00	-5.568	-1.668	-1.421	-1.475	2.228	-1.260	-0.378
2935.00	-5.479	-1.668	-1.421	-1.475	2.237	-1.263	-0.375
2950.00	-5.587	-1.677	-1.427	-1.484	2.240	-1.270	-0.381
2965.00	-5.599	-1.680	-1.433	-1.491	2.247	-1.273	-0.384
2980.00	-5.593	-1.687	-1.433	-1.491	2.253	-1.276	-0.384
2995.00	-5.599	-1.690	-1.440	-1.497	2.256	-1.279	-0.387
3010.00	-5.612	-1.696	-1.446	-1.503	2.259	-1.286	-0.390
3025.00	-5.612	-1.702	-1.452	-1.506	2.266	-1.289	-0.397
3040.00	-5.612	-1.706	-1.452	-1.510	2.272	-1.298	-0.400
3055.00	-5.625	-1.712	-1.459	-1.516	2.275	-1.301	-0.400
3070.00	-5.625	-1.715	-1.465	-1.519	2.281	-1.305	-0.403
3085.00	-5.625	-1.718	-1.465	-1.525	2.285	-1.308	-0.406
3100.00	-5.631	-1.725	-1.471	-1.529	2.294	-1.311	-0.409
3115.00	-5.637	-1.731	-1.478	-1.535	2.294	-1.314	-0.409
3130.00	-5.650	-1.731	-1.478	-1.538	2.300	-1.320	-0.413
3145.00	-5.650	-1.737	-1.484	-1.541	2.304	-1.327	-0.419
3160.00	-5.897	-1.753	-1.490	-1.551	2.313	-1.333	-0.419
3175.00	-5.675	-1.753	-1.497	-1.551	2.316	-1.340	-0.422
3190.00	-5.656	-1.753	-1.503	-1.557	2.319	-1.333	-0.425
3205.00	-5.707	-1.759	-1.503	-1.563	2.323	-1.340	-0.429
3220.00	-5.720	-1.762	-1.509	-1.567	2.332	-1.343	-0.432
3235.00	-5.732	-1.769	-1.515	-1.570	2.335	-1.346	-0.435
3250.00	-5.739	-1.775	-1.522	-1.576	2.338	-1.352	-0.438
3265.00	-5.745	-1.778	-1.522	-1.579	2.345	-1.355	-0.438
3280.00	-5.745	-1.784	-1.528	-1.586	2.348	-1.359	-0.444
3295.00	-5.745	-1.791	-1.534	-1.589	2.354	-1.362	-0.448
3310.00	-5.732	-1.794	-1.534	-1.595	2.360	-1.365	-0.448
3325.00	-5.758	-1.797	-1.541	-1.598	2.364	-1.368	-0.451
3340.00	-5.745	-1.800	-1.547	-1.601	2.367	-1.371	-0.454
3355.00	-5.751	-1.807	-1.553	-1.608	2.370	-1.378	-0.460
3370.00	-5.751	-1.810	-1.553	-1.614	2.373	-1.384	-0.464
3385.00	-5.764	-1.816	-1.560	-1.617	2.379	-1.390	-0.467
3400.00	-5.770	-1.819	-1.566	-1.620	2.383	-1.381	-0.470
3415.00	-5.777	-1.825	-1.566	-1.627	2.389	-1.387	-0.470
3430.00	-5.783	-1.832	-1.572	-1.630	2.392	-1.390	-0.473
3445.00	-5.789	-1.832	-1.579	-1.636	2.398	-1.393	-0.476
3460.00	-5.783	-1.838	-1.579	-1.639	2.405	-1.397	-0.479
3475.00	-5.789	-1.841	-1.585	-1.646	2.402	-1.403	-0.483
3490.00	-5.802	-1.844	-1.591	-1.649	2.405	-1.406	-0.486
3505.00	-5.808	-1.854	-1.598	-1.652	2.411	-1.409	-0.486
3520.00	-5.808	-1.857	-1.598	-1.658	2.414	-1.416	-0.492
3535.00	-5.821	-1.860	-1.604	-1.662	2.421	-1.419	-0.492
3550.00	-5.827	-1.866	-1.610	-1.668	2.424	-1.425	-0.495

Elapsed Time	Input 1	Input 2	Input 3	Input 4	Input 5	Input 6	Input 7
3565.00	-5.827	-1.870	-1.610	-1.671	2.430	-1.428	-0.498
3580.00	-5.821	-1.876	-1.617	-1.674	2.433	-1.431	-0.502
3595.00	-5.884	-1.882	-1.623	-1.681	2.436	-1.438	-0.505
3610.00	-5.897	-1.889	-1.629	-1.687	2.443	-1.441	-0.508
3625.00	-5.840	-1.892	-1.635	-1.690	2.446	-1.447	-0.511
3640.00	-5.891	-1.895	-1.635	-1.696	2.452	-1.450	-0.514
3655.00	-5.897	-1.901	-1.642	-1.703	2.455	-1.457	-0.514
3670.00	-5.903	-1.907	-1.642	-1.706	2.458	-1.463	-0.521
3685.00	-5.916	-1.911	-1.648	-1.709	2.465	-1.466	-0.524
3700.00	-5.910	-1.917	-1.654	-1.712	2.468	-1.469	-0.527
3715.00	-5.910	-1.917	-1.654	-1.722	2.474	-1.473	-0.527
3730.00	-5.922	-1.926	-1.667	-1.722	2.477	-1.479	-0.533
3745.00	-5.935	-1.929	-1.667	-1.728	2.484	-1.482	-0.533
3760.00	-5.941	-1.936	-1.673	-1.734	2.487	-1.488	-0.540
3775.00	-5.935	-1.939	-1.680	-1.738	2.490	-1.492	-0.540
3790.00	-5.916	-1.945	-1.680	-1.741	2.496	-1.495	-0.543
3805.00	-5.903	-1.945	-1.686	-1.744	2.503	-1.501	-0.546
3820.00	-5.884	-1.948	-1.686	-1.750	2.506	-1.507	-0.549
3835.00	-5.872	-1.952	-1.692	-1.753	2.509	-1.511	-0.552
3850.00	-6.024	-1.964	-1.699	-1.757	2.512	-1.514	-0.556
3865.00	-6.030	-1.970	-1.705	-1.766	2.518	-1.520	-0.559
3880.00	-5.891	-1.970	-1.705	-1.766	2.522	-1.523	-0.562
3895.00	-5.929	-1.970	-1.711	-1.772	2.528	-1.530	-0.565
3910.00	-5.922	-1.977	-1.718	-1.776	2.531	-1.530	-0.568
3925.00	-5.929	-1.980	-1.718	-1.782	2.537	-1.533	-0.572
3940.00	-5.922	-1.983	-1.724	-1.785	2.560	-1.539	-0.575
3955.00	-5.929	-1.989	-1.730	-1.788	2.563	-1.542	-0.578
3970.00	-5.941	-1.993	-1.730	-1.791	2.569	-1.549	-0.581
3985.00	-5.948	-1.996	-1.737	-1.798	2.572	-1.552	-0.584
4000.00	-5.954	-2.002	-1.737	-1.801	2.575	-1.558	-0.584
4015.00	-5.954	-2.005	-1.743	-1.807	2.582	-1.561	-0.584
4030.00	-5.960	-2.011	-1.749	-1.810	2.585	-1.568	-0.587
4045.00	-6.043	-2.021	-1.755	-1.817	2.591	-1.571	-0.591
4060.00	-6.049	-2.027	-1.755	-1.820	2.594	-1.577	-0.594
4075.00	-6.055	-2.030	-1.762	-1.826	2.598	-1.580	-0.597
4090.00	-6.055	-2.034	-1.768	-1.833	2.601	-1.587	-0.600
4105.00	-6.074	-2.040	-1.774	-1.839	2.607	-1.593	-0.607
4120.00	-6.074	-2.046	-1.781	-1.842	2.610	-1.599	-0.610
4135.00	-6.068	-2.049	-1.781	-1.845	2.616	-1.599	-0.610
4150.00	-6.100	-2.056	-1.787	-1.852	2.616	-1.606	-0.616
4165.00	-6.112	-2.062	-1.793	-1.855	2.623	-1.609	-0.619
4180.00	-6.125	-2.068	-1.800	-1.858	2.626	-1.615	-0.619
4195.00	-6.131	-2.071	-1.806	-1.864	2.632	-1.618	-0.626
4210.00	-6.119	-2.075	-1.806	-1.867	2.635	-1.621	-0.629
4225.00	-6.125	-2.081	-1.812	-1.871	2.642	-1.625	-0.632
4240.00	-6.100	-2.084	-1.819	-1.874	2.642	-1.631	-0.638
4255.00	-6.093	-2.087	-1.819	-1.877	2.648	-1.634	-0.638
4270.00	-6.100	-2.090	-1.825	-1.883	2.654	-1.637	-0.635
4285.00	-6.112	-2.097	-1.831	-1.886	2.654	-1.647	-0.645
4300.00	-6.125	-2.100	-1.831	-1.896	2.658	-1.650	-0.648
4315.00	-6.119	-2.103	-1.838	-1.899	2.661	-1.656	-0.651
4330.00	-6.125	-2.109	-1.844	-1.899	2.664	-1.659	-0.661

Elapsed Time	Input 1	Input 2	Input 3	Input 4	Input 5	Input 6	Input 7
4345.00	-6.119	-2.109	-1.844	-1.905	2.670	-1.663	-0.645
4360.00	-6.138	-2.119	-1.850	-1.902	2.677	-1.666	-0.648
4375.00	-6.157	-2.125	-1.857	-1.909	2.680	-1.672	-0.645
4390.00	-6.163	-2.125	-1.857	-1.915	2.683	-1.675	-0.654
4405.00	-6.150	-2.128	-1.863	-1.918	2.689	-1.678	-0.638
4420.00	-6.163	-2.138	-1.869	-1.924	2.692	-1.685	-0.645
4435.00	-6.169	-2.141	-1.875	-1.931	2.696	-1.691	-0.648
4450.00	-6.176	-2.144	-1.875	-1.928	2.702	-1.691	-0.651
4465.00	-6.182	-2.150	-1.882	-1.937	2.702	-1.697	-0.686
4480.00	-6.182	-2.150	-1.882	-1.943	2.708	-1.697	-0.661
4495.00	-6.201	-2.160	-1.888	-1.946	2.711	-1.704	-0.664
4510.00	-6.188	-2.166	-1.894	-1.950	2.714	-1.707	-0.664
4525.00	-6.207	-2.169	-1.901	-1.953	2.718	-1.713	-0.673
4540.00	-6.214	-2.172	-1.901	-1.959	2.721	-1.717	-0.676
4555.00	-6.220	-2.179	-1.907	-1.965	2.724	-1.723	-0.673
4570.00	-6.226	-2.182	-1.913	-1.969	2.730	-1.726	-0.676
4585.00	-6.233	-2.185	-1.913	-1.975	2.730	-1.736	-0.680
4600.00	-6.245	-2.191	-1.920	-1.978	2.733	-1.739	-0.683
4615.00	-6.549	-2.207	-1.926	-1.988	2.740	-1.742	-0.683
4630.00	-6.378	-2.213	-1.932	-1.991	2.743	-1.748	-0.686
4645.00	-6.397	-2.216	-1.939	-1.997	2.746	-1.755	-0.689
4660.00	-6.277	-2.216	-1.945	-1.997	2.749	-1.758	-0.692
4675.00	-6.220	-2.213	-1.945	-2.000	2.756	-1.758	-0.696
4690.00	-6.233	-2.220	-1.951	-2.007	2.759	-1.764	-0.699
4705.00	-6.239	-2.223	-1.951	-2.010	2.759	-1.783	-0.702
4720.00	-6.245	-2.226	-1.958	-2.016	2.759	-1.755	-0.702
4735.00	-6.252	-2.229	-1.958	-2.016	2.765	-1.755	-0.705
4750.00	-6.233	-2.232	-1.964	-2.022	2.768	-1.755	-0.708
4765.00	-6.258	-2.239	-1.945	-2.029	2.740	-1.761	-0.711
4780.00	-6.271	-2.242	-1.951	-2.032	2.746	-1.764	-0.721
4795.00	-6.277	-2.248	-1.958	-2.032	2.749	-1.767	-0.724
4810.00	-6.283	-2.254	-1.964	-2.045	2.752	-1.774	-0.715
4825.00	-6.290	-2.257	-1.964	-2.048	2.756	-1.777	-0.959
4840.00	-6.309	-2.264	-1.970	-2.048	2.759	-1.755	-0.737
4855.00	-6.340	-2.267	-1.977	-2.051	2.762	-1.761	-0.689
4870.00	-6.347	-2.273	-1.977	-2.060	2.762	-1.755	-0.670
4885.00	-6.353	-2.276	-1.983	-2.064	2.765	-1.761	-0.667
4900.00	-6.359	-2.283	-1.989	-2.067	2.768	-1.764	-0.667
4915.00	-6.365	-2.286	-1.995	-2.073	2.771	-1.770	-0.670
4930.00	-6.365	-2.292	-2.002	-2.076	2.781	-1.764	-0.673
4945.00	-6.372	-2.295	-2.002	-2.083	2.784	-1.770	-0.680
4960.00	-6.372	-2.302	-2.008	-2.089	2.787	-1.777	-0.683
4975.00	-6.378	-2.305	-2.014	-2.092	2.793	-1.780	-0.689
4990.00	-6.384	-2.311	-2.021	-2.092	2.797	-1.780	-0.692
5005.00	-6.391	-2.317	-2.021	-2.095	2.797	-1.786	-0.699
5020.00	-6.397	-2.317	-2.027	-2.105	2.803	-1.793	-0.702
5035.00	-6.397	-2.324	-2.033	-2.108	2.806	-1.796	-0.708
5050.00	-6.403	-2.327	-2.033	-2.114	2.809	-1.799	-0.711
5065.00	-6.416	-2.330	-2.040	-2.121	2.812	-1.805	-0.718
5080.00	-6.403	-2.336	-2.046	-2.121	2.812	-1.808	-0.721
5095.00	-6.448	-2.346	-2.052	-2.127	2.819	-1.815	-0.727
5110.00	-6.454	-2.352	-2.052	-2.130	2.825	-1.815	-0.734

Elapsed Time	Input 1	Input 2	Input 3	Input 4	Input 5	Input 6	Input 7
5125.00	-6.460	-2.355	-2.059	-2.136	2.825	-1.824	-0.740
5140.00	-6.467	-2.355	-2.065	-2.143	2.828	-1.827	-0.743
5155.00	-6.479	-2.365	-2.071	-2.146	2.835	-1.831	-0.750
5170.00	-6.486	-2.371	-2.071	-2.152	2.835	-1.837	-0.756
5185.00	-6.492	-2.374	-2.078	-2.152	2.841	-1.840	-0.765
5200.00	-6.479	-2.377	-2.084	-2.155	2.844	-1.843	-0.772
5215.00	-6.498	-2.384	-2.084	-2.165	2.844	-1.850	-0.775
5230.00	-6.695	-2.396	-2.090	-2.171	2.850	-1.853	-0.784
5245.00	-6.536	-2.393	-2.090	-2.174	2.854	-1.859	-0.794
5260.00	-6.581	-2.399	-2.096	-2.181	2.860	-1.862	-0.800
5275.00	-6.593	-2.402	-2.103	-2.187	2.860	-1.872	-0.810
5290.00	-6.600	-2.409	-2.109	-2.190	2.863	-1.875	-0.819
5305.00	-6.600	-2.415	-2.109	-2.193	2.869	-1.878	-0.823
5320.00	-6.517	-2.415	-2.115	-2.200	2.873	-1.884	-0.826
5335.00	-6.587	-2.421	-2.122	-2.206	2.876	-1.888	-0.826
5350.00	-6.600	-2.428	-2.128	-2.209	2.879	-1.894	-0.829
5365.00	-6.606	-2.434	-2.128	-2.212	2.882	-1.897	-0.839
5380.00	-6.612	-2.434	-2.134	-2.222	2.882	-1.903	-0.845
5395.00	-6.612	-2.440	-2.141	-2.225	2.891	-1.910	-0.851
5410.00	-6.612	-2.447	-2.141	-2.228	2.891	-1.913	-0.858
5425.00	-6.612	-2.450	-2.147	-2.235	2.895	-1.919	-0.861
5440.00	-6.619	-2.459	-2.153	-2.235	2.901	-1.919	-0.867
5455.00	-6.619	-2.462	-2.160	-2.241	2.904	-1.926	-0.873
5470.00	-6.625	-2.462	-2.166	-2.244	2.907	-1.929	-0.877
5485.00	-6.625	-2.469	-2.166	-2.250	2.910	-1.932	-0.880
5500.00	-6.631	-2.472	-2.172	-2.257	2.910	-1.941	-0.886
5515.00	-6.631	-2.478	-2.179	-2.260	2.914	-1.948	-0.889
5530.00	-6.644	-2.478	-2.185	-2.266	2.920	-1.951	-0.896
5545.00	-6.657	-2.488	-2.191	-2.269	2.926	-1.954	-0.899
5560.00	-6.631	-2.491	-2.198	-2.273	2.929	-1.957	-0.902
5575.00	-6.650	-2.494	-2.198	-2.279	2.929	-1.964	-0.905
5590.00	-6.657	-2.500	-2.204	-2.279	2.933	-1.967	-0.912
5605.00	-6.657	-2.503	-2.210	-2.288	2.939	-1.973	-0.912
5620.00	-6.663	-2.507	-2.210	-2.292	2.939	-1.979	-0.915
5635.00	-6.663	-2.513	-2.216	-2.298	2.942	-1.983	-0.918
5650.00	-6.663	-2.516	-2.223	-2.301	2.945	-1.986	-0.921
5665.00	-6.644	-2.519	-2.223	-2.304	2.948	-1.992	-0.915
5680.00	-6.650	-2.529	-2.229	-2.307	2.952	-1.995	-0.921
5695.00	-6.663	-2.529	-2.235	-2.317	2.958	-1.998	-0.918
5710.00	-6.669	-2.535	-2.235	-2.314	2.961	-2.002	-0.927
5725.00	-6.682	-2.538	-2.242	-2.320	2.964	-2.005	-0.931
5740.00	-6.682	-2.544	-2.248	-2.323	2.967	-2.008	-0.937
5755.00	-6.688	-2.548	-2.254	-2.330	2.967	-2.017	-0.937
5770.00	-6.701	-2.554	-2.254	-2.333	2.974	-2.017	-0.937
5785.00	-6.701	-2.557	-2.261	-2.336	2.974	-2.027	-0.943
5800.00	-6.676	-2.566	-2.261	-2.342	2.977	-2.027	-0.940
5815.00	-6.638	-2.570	-2.267	-2.342	2.983	-2.027	-0.943
5830.00	-6.650	-2.573	-2.273	-2.352	2.983	-2.036	-0.956
5845.00	-6.695	-2.582	-2.273	-2.349	2.989	-2.036	-0.950
5860.00	-6.714	-2.585	-2.280	-2.361	2.989	-2.046	-0.956
5875.00	-6.701	-2.589	-2.286	-2.364	2.996	-2.049	-0.959

SE2000
Environmental Logger
10/05 16:57

Unit# 1 Test 3

Setups:	INPUT 1	INPUT 2	INPUT 3	INPUT 4
Type	Level (F)	Level (F)	Level (F)	Level (F)
Mode	Surface	Surface	Surface	Surface
I.D.	1339PW	1339	PZ1B	PZ4
Reference	0.000	0.000	0.000	0.000
SG	1.000	1.000	1.000	1.000
Linearity	0.096	0.008	0.106	0.006
Scale factor	20.063	10.002	19.989	10.035
Offset	0.051	-0.002	-0.066	0.033
Delay mSEC	50.000	50.000	50.000	50.000

Step 0 09/24 11:40:00

Elapsed Time	Input 1	Input 2	Input 3	Input 4
0.0000	0.012	0.000	0.006	0.000
0.0083	0.019	0.000	0.006	0.003
0.0166	0.019	0.000	0.006	0.003
0.0250	0.019	0.000	0.006	0.003
0.0333	0.012	0.000	0.006	0.003
0.0416	0.012	0.000	0.006	0.003
0.0500	0.012	0.000	0.006	0.003
0.0583	0.012	0.000	0.006	0.003
0.0666	0.012	0.000	0.006	0.003
0.0750	0.000	0.000	0.006	0.003
0.0833	0.006	0.000	0.006	0.003
0.0916	0.000	0.000	0.006	0.003
0.1000	0.000	0.000	0.006	0.003
0.1083	-0.012	0.000	0.006	0.003
0.1166	-0.019	0.000	0.006	0.003
0.1250	-0.038	0.000	0.006	0.003
0.1333	-0.057	0.000	0.006	0.003
0.1416	-0.082	0.000	0.006	0.003
0.1500	-0.114	0.000	0.006	0.003
0.1583	-0.152	-0.003	0.006	0.003
0.1666	-0.171	-0.003	0.006	0.003
0.1750	-0.209	-0.003	0.006	0.000
0.1833	-0.234	-0.003	0.006	0.000
0.1916	-0.266	-0.006	0.006	0.000
0.2000	-0.291	-0.006	0.006	0.000
0.2083	-0.323	-0.009	0.006	0.000
0.2166	-0.348	-0.009	0.006	0.000
0.2250	-0.373	-0.012	0.006	-0.003
0.2333	-0.399	-0.012	0.006	-0.003
0.2416	-0.424	-0.015	0.006	-0.003
0.2500	-0.450	-0.015	0.006	-0.006
0.2583	-0.481	-0.018	0.006	-0.006
0.2666	-0.507	-0.022	0.006	-0.006
0.2750	-0.538	-0.022	0.006	-0.006
0.2833	-0.557	-0.025	0.006	-0.009
0.2916	-0.576	-0.025	0.006	-0.009
0.3000	-0.602	-0.028	0.006	-0.009
0.3083	-0.627	-0.031	0.006	-0.012
0.3166	-0.646	-0.031	0.006	-0.012
0.3250	-0.665	-0.034	0.006	-0.012
0.3333	-0.684	-0.034	0.006	-0.012
0.3500	-0.728	-0.041	0.006	-0.015
0.3666	-0.766	-0.044	0.006	-0.018
0.3833	-0.798	-0.047	0.006	-0.018
0.4000	-0.842	-0.050	0.006	-0.022
0.4166	-0.874	-0.053	0.000	-0.022
0.4333	-0.906	-0.056	0.000	-0.025
0.4500	-0.938	-0.059	0.000	-0.028
0.4666	-0.963	-0.063	0.000	-0.028
0.4833	-0.988	-0.066	0.000	-0.031
0.5000	-1.020	-0.069	0.000	-0.031
0.5166	-1.045	-0.072	0.000	-0.034
0.5333	-1.058	-0.075	0.000	-0.034
0.5500	-1.083	-0.078	0.000	-0.037
0.5666	-1.102	-0.081	0.000	-0.037
0.5833	-1.121	-0.085	0.000	-0.037
0.6000	-1.134	-0.085	0.000	-0.037
0.6166	-1.147	-0.088	-0.006	-0.041
0.6333	-1.153	-0.091	-0.006	-0.041
0.6500	-1.159	-0.091	-0.006	-0.041
0.6666	-1.166	-0.094	-0.006	-0.044
0.6833	-1.159	-0.094	-0.006	-0.044
0.7000	-1.159	-0.097	-0.006	-0.047
0.7166	-1.159	-0.097	-0.006	-0.044
0.7333	-1.153	-0.097	-0.006	-0.047
0.7500	-1.153	-0.097	-0.006	-0.047

Elapsed Time	Input 1	Input 2	Input 3	Input 4
0.7666	-1.147	-0.100	-0.006	-0.047
0.7833	-1.140	-0.100	-0.006	-0.047
0.8000	-1.134	-0.100	-0.006	-0.047
0.8166	-1.134	-0.100	-0.006	-0.047
0.8333	-1.128	-0.100	-0.006	-0.047
0.8500	-1.121	-0.104	-0.006	-0.047
0.8666	-1.121	-0.104	-0.012	-0.047
0.8833	-1.115	-0.104	-0.012	-0.047
0.9000	-1.109	-0.104	-0.012	-0.050
0.9166	-1.102	-0.104	-0.012	-0.050
0.9333	-1.102	-0.104	-0.012	-0.050
0.9500	-1.096	-0.104	-0.012	-0.050
0.9666	-1.090	-0.104	-0.012	-0.047
0.9833	-1.090	-0.104	-0.012	-0.047
1.0000	-1.083	-0.104	-0.012	-0.050
1.2000	-1.045	-0.104	-0.018	-0.050
1.4000	-1.020	-0.104	-0.018	-0.047
1.6000	-1.007	-0.104	-0.018	-0.047
1.8000	-1.026	-0.104	-0.025	-0.047
2.0000	-1.045	-0.107	-0.025	-0.050
2.2000	-1.052	-0.107	-0.025	-0.050
2.4000	-1.064	-0.110	-0.031	-0.050
2.6000	-1.077	-0.110	-0.031	-0.053
2.8000	-1.102	-0.113	-0.031	-0.056
3.0000	-1.134	-0.116	-0.031	-0.056
3.2000	-1.166	-0.119	-0.031	-0.060
3.4000	-1.191	-0.122	-0.037	-0.060
3.6000	-1.216	-0.126	-0.037	-0.063
3.8000	-1.242	-0.129	-0.037	-0.063
4.0000	-1.267	-0.132	-0.044	-0.066
4.2000	-1.286	-0.135	-0.044	-0.066
4.4000	-1.305	-0.138	-0.044	-0.069
4.6000	-1.324	-0.141	-0.050	-0.069
4.8000	-1.349	-0.145	-0.050	-0.069
5.0000	-1.375	-0.148	-0.050	-0.072
5.2000	-1.394	-0.148	-0.050	-0.075
5.4000	-1.419	-0.151	-0.050	-0.075
5.6000	-1.438	-0.154	-0.056	-0.079
5.8000	-1.463	-0.157	-0.056	-0.079
6.0000	-1.489	-0.160	-0.056	-0.082
6.2000	-1.508	-0.163	-0.056	-0.082
6.4000	-1.527	-0.163	-0.063	-0.085
6.6000	-1.546	-0.167	-0.063	-0.085
6.8000	-1.559	-0.170	-0.063	-0.085
7.0000	-1.571	-0.173	-0.063	-0.088
7.2000	-1.584	-0.173	-0.069	-0.091
7.4000	-1.590	-0.176	-0.069	-0.091
7.6000	-1.603	-0.176	-0.069	-0.091
7.8000	-1.603	-0.176	-0.069	-0.091
8.0000	-1.616	-0.179	-0.069	-0.094
8.2000	-1.616	-0.179	-0.075	-0.094
8.4000	-1.628	-0.182	-0.075	-0.094
8.6000	-1.628	-0.182	-0.075	-0.098
8.8000	-1.635	-0.186	-0.075	-0.098
9.0000	-1.641	-0.186	-0.075	-0.098
9.2000	-1.641	-0.186	-0.075	-0.098
9.4000	-1.647	-0.189	-0.075	-0.098
9.6000	-1.654	-0.189	-0.082	-0.101
9.8000	-1.654	-0.189	-0.082	-0.101
10.0000	-1.660	-0.189	-0.082	-0.101
11.0000	-1.679	-0.195	-0.094	-0.104
12.0000	-1.692	-0.201	-0.094	-0.104
13.0000	-1.704	-0.208	-0.101	-0.110
14.0000	-1.711	-0.211	-0.107	-0.113
15.0000	-1.717	-0.214	-0.113	-0.117
16.0000	-1.711	-0.217	-0.113	-0.117
17.0000	-1.711	-0.220	-0.113	-0.120
18.0000	-1.717	-0.223	-0.120	-0.123
19.0000	-1.723	-0.227	-0.126	-0.126
20.0000	-1.736	-0.230	-0.126	-0.129
21.0000	-1.749	-0.233	-0.126	-0.129
22.0000	-1.755	-0.239	-0.132	-0.132
23.0000	-1.761	-0.239	-0.138	-0.136
24.0000	-1.749	-0.239	-0.138	-0.136
25.0000	-1.749	-0.245	-0.138	-0.139
26.0000	-1.749	-0.245	-0.145	-0.139
27.0000	-1.749	-0.249	-0.145	-0.142
28.0000	-1.755	-0.252	-0.151	-0.145
29.0000	-1.755	-0.252	-0.151	-0.148
30.0000	-1.761	-0.204	-0.151	-0.148
31.0000	-1.761	-0.258	-0.151	-0.151
32.0000	-1.761	-0.258	-0.157	-0.155
33.0000	-1.768	-0.261	-0.157	-0.155
34.0000	-1.768	-0.261	-0.164	-0.158
35.0000	-1.768	-0.264	-0.164	-0.158
36.0000	-1.768	-0.268	-0.164	-0.158
37.0000	-1.774	-0.268	-0.164	-0.161
38.0000	-1.774	-0.271	-0.170	-0.164
39.0000	-1.780	-0.271	-0.170	-0.164
40.0000	-1.780	-0.274	-0.170	-0.167
41.0000	-1.780	-0.277	-0.176	-0.167
42.0000	-1.787	-0.277	-0.176	-0.170
43.0000	-1.787	-0.280	-0.176	-0.170
44.0000	-1.787	-0.280	-0.176	-0.174
45.0000	-1.793	-0.283	-0.176	-0.174
46.0000	-1.793	-0.283	-0.183	-0.177
47.0000	-1.793	-0.286	-0.183	-0.177
48.0000	-1.793	-0.286	-0.183	-0.177
49.0000	-1.799	-0.290	-0.183	-0.177
50.0000	-1.799	-0.299	-0.189	-0.177
51.0000	-1.799	-0.302	-0.189	-0.180
52.0000	-1.793	-0.299	-0.183	-0.183

Elapsed Time	Input 1	Input 2	Input 3	Input 4
53.0000	-1.793	-0.302	-0.183	-0.180
54.0000	-1.799	-0.302	-0.183	-0.183
55.0000	-1.806	-0.305	-0.189	-0.186
56.0000	-1.806	-0.309	-0.195	-0.183
57.0000	-1.812	-0.309	-0.195	-0.186
58.0000	-1.825	-0.309	-0.195	-0.189
59.0000	-1.812	-0.312	-0.195	-0.186
60.0000	-1.818	-0.315	-0.195	-0.189
61.0000	-1.818	-0.315	-0.202	-0.189
62.0000	-1.812	-0.315	-0.195	-0.189
63.0000	-1.818	-0.315	-0.202	-0.189
64.0000	-1.818	-0.318	-0.202	-0.193
65.0000	-1.818	-0.318	-0.202	-0.193
66.0000	-1.818	-0.321	-0.202	-0.193
67.0000	-1.825	-0.321	-0.202	-0.193
68.0000	-1.825	-0.321	-0.202	-0.193
69.0000	-1.825	-0.321	-0.202	-0.193
70.0000	-1.825	-0.321	-0.208	-0.196
71.0000	-1.863	-0.324	-0.208	-0.196
72.0000	-2.084	-0.340	-0.208	-0.205
73.0000	-2.275	-0.356	-0.214	-0.212
74.0000	-2.427	-0.365	-0.221	-0.218
75.0000	-2.579	-0.378	-0.227	-0.221
76.0000	-2.680	-0.384	-0.227	-0.227
77.0000	-2.756	-0.391	-0.233	-0.231
78.0000	-2.807	-0.394	-0.240	-0.234
79.0000	-2.845	-0.397	-0.240	-0.234
80.0000	-2.883	-0.403	-0.240	-0.237
81.0000	-2.908	-0.403	-0.246	-0.240
82.0000	-2.940	-0.406	-0.246	-0.240
83.0000	-2.971	-0.409	-0.246	-0.243
84.0000	-2.997	-0.413	-0.246	-0.243
85.0000	-3.016	-0.416	-0.252	-0.246
86.0000	-3.035	-0.416	-0.252	-0.250
87.0000	-3.047	-0.419	-0.259	-0.250
88.0000	-3.066	-0.422	-0.259	-0.253
89.0000	-3.079	-0.422	-0.259	-0.253
90.0000	-3.085	-0.425	-0.259	-0.253
91.0000	-3.098	-0.428	-0.265	-0.253
92.0000	-3.104	-0.428	-0.265	-0.256
93.0000	-3.111	-0.428	-0.259	-0.256
94.0000	-3.117	-0.432	-0.265	-0.259
95.0000	-3.130	-0.435	-0.271	-0.259
96.0000	-3.136	-0.435	-0.271	-0.259
97.0000	-3.136	-0.438	-0.271	-0.262
98.0000	-3.142	-0.438	-0.271	-0.262
99.0000	-3.149	-0.438	-0.271	-0.265
100.000	-3.155	-0.441	-0.277	-0.269
101.000	-3.161	-0.441	-0.277	-0.269
102.000	-3.168	-0.441	-0.277	-0.272
103.000	-3.174	-0.444	-0.277	-0.272
104.000	-3.180	-0.444	-0.277	-0.272
105.000	-3.180	-0.444	-0.284	-0.272
106.000	-3.187	-0.447	-0.284	-0.272
107.000	-3.193	-0.450	-0.284	-0.272
108.000	-3.193	-0.450	-0.284	-0.275
109.000	-3.199	-0.454	-0.290	-0.278
110.000	-3.206	-0.454	-0.290	-0.278
111.000	-3.206	-0.457	-0.290	-0.278
112.000	-3.212	-0.457	-0.290	-0.278
113.000	-3.212	-0.457	-0.290	-0.281
114.000	-3.218	-0.460	-0.296	-0.281
115.000	-3.218	-0.460	-0.296	-0.284
116.000	-3.225	-0.463	-0.296	-0.284
117.000	-3.231	-0.463	-0.296	-0.284
118.000	-3.231	-0.466	-0.303	-0.284
119.000	-3.231	-0.466	-0.303	-0.288
120.000	-3.237	-0.466	-0.303	-0.288
121.000	-3.244	-0.469	-0.303	-0.288
122.000	-3.250	-0.469	-0.309	-0.291
123.000	-3.250	-0.473	-0.303	-0.291
124.000	-3.256	-0.473	-0.309	-0.294
125.000	-3.263	-0.473	-0.309	-0.297
126.000	-3.263	-0.476	-0.309	-0.297
127.000	-3.263	-0.476	-0.309	-0.297
128.000	-3.269	-0.479	-0.309	-0.294
129.000	-3.269	-0.479	-0.315	-0.297
130.000	-3.275	-0.482	-0.309	-0.300
131.000	-3.434	-0.485	-0.315	-0.303
132.000	-3.712	-0.504	-0.322	-0.310
133.000	-3.915	-0.517	-0.328	-0.319
134.000	-4.010	-0.526	-0.328	-0.322
135.000	-4.137	-0.536	-0.334	-0.329
136.000	-4.251	-0.539	-0.341	-0.332
137.000	-4.365	-0.545	-0.341	-0.335
138.000	-4.390	-0.548	-0.347	-0.335
139.000	-4.510	-0.555	-0.347	-0.341
140.000	-4.637	-0.558	-0.353	-0.341
141.000	-4.669	-0.558	-0.353	-0.345
142.000	-4.783	-0.561	-0.353	-0.348
143.000	-4.808	-0.564	-0.360	-0.351
144.000	-4.827	-0.567	-0.360	-0.354
145.000	-4.833	-0.570	-0.366	-0.354
146.000	-4.947	-0.573	-0.366	-0.357
147.000	-4.960	-0.573	-0.366	-0.357
148.000	-4.973	-0.577	-0.372	-0.360
149.000	-4.979	-0.580	-0.372	-0.364
150.000	-4.985	-0.580	-0.372	-0.360
151.000	-5.087	-0.586	-0.379	-0.364
152.000	-5.099	-0.586	-0.379	-0.364
153.000	-5.106	-0.586	-0.379	-0.367
154.000	-5.118	-0.589	-0.379	-0.370

Elapsed Time	Input 1	Input 2	Input 3	Input 4
155.000	-5.125	-0.592	-0.385	-0.370
156.000	-5.131	-0.592	-0.385	-0.370
157.000	-5.137	-0.596	-0.385	-0.373
158.000	-5.137	-0.599	-0.391	-0.373
159.000	-5.239	-0.599	-0.385	-0.376
160.000	-5.245	-0.599	-0.391	-0.376
161.000	-5.258	-0.602	-0.391	-0.379
162.000	-5.264	-0.605	-0.398	-0.379
163.000	-5.270	-0.605	-0.398	-0.383
164.000	-5.270	-0.605	-0.398	-0.383
165.000	-5.277	-0.608	-0.398	-0.386
166.000	-5.277	-0.611	-0.404	-0.386
167.000	-5.283	-0.611	-0.404	-0.386
168.000	-5.378	-0.614	-0.404	-0.386
169.000	-5.384	-0.614	-0.404	-0.389
170.000	-5.391	-0.618	-0.404	-0.389
171.000	-5.397	-0.618	-0.410	-0.392
172.000	-5.397	-0.621	-0.410	-0.392
173.000	-5.403	-0.624	-0.410	-0.395
174.000	-5.403	-0.624	-0.410	-0.395
175.000	-5.410	-0.624	-0.416	-0.395
176.000	-5.410	-0.624	-0.410	-0.398
177.000	-5.416	-0.627	-0.416	-0.402
178.000	-5.416	-0.630	-0.416	-0.398
179.000	-5.416	-0.630	-0.416	-0.402
180.000	-5.416	-0.637	-0.416	-0.402
181.000	-5.416	-0.633	-0.423	-0.402
182.000	-5.511	-0.633	-0.423	-0.405
183.000	-5.511	-0.637	-0.423	-0.408
184.000	-5.517	-0.637	-0.423	-0.408
185.000	-5.524	-0.637	-0.423	-0.408
186.000	-5.524	-0.640	-0.423	-0.411
187.000	-5.530	-0.640	-0.429	-0.411
188.000	-5.530	-0.643	-0.429	-0.411
189.000	-5.536	-0.643	-0.429	-0.414
190.000	-5.536	-0.643	-0.429	-0.414
191.000	-5.543	-0.646	-0.429	-0.417
192.000	-5.543	-0.646	-0.429	-0.417
193.000	-5.543	-0.649	-0.435	-0.421
194.000	-5.536	-0.646	-0.429	-0.421
195.000	-5.536	-0.646	-0.429	-0.424
196.000	-5.543	-0.652	-0.435	-0.421
197.000	-5.549	-0.655	-0.435	-0.424
198.000	-5.549	-0.655	-0.442	-0.424
199.000	-5.549	-0.659	-0.442	-0.427
200.000	-5.644	-0.659	-0.442	-0.427
201.000	-5.650	-0.662	-0.448	-0.427
202.000	-5.657	-0.662	-0.442	-0.430
203.000	-5.657	-0.662	-0.448	-0.430
204.000	-5.657	-0.662	-0.448	-0.433
205.000	-5.663	-0.665	-0.448	-0.433
206.000	-5.663	-0.665	-0.448	-0.433
207.000	-5.663	-0.668	-0.448	-0.433
208.000	-5.663	-0.668	-0.454	-0.436
209.000	-5.663	-0.668	-0.448	-0.436
210.000	-5.663	-0.671	-0.454	-0.440
211.000	-5.663	-0.671	-0.454	-0.436
212.000	-5.663	-0.671	-0.454	-0.440
213.000	-5.663	-0.674	-0.454	-0.443
214.000	-5.669	-0.674	-0.454	-0.443
215.000	-5.663	-0.678	-0.461	-0.443
216.000	-5.669	-0.678	-0.461	-0.443
217.000	-5.669	-0.678	-0.461	-0.446
218.000	-5.669	-0.681	-0.461	-0.446
219.000	-5.669	-0.681	-0.461	-0.449
220.000	-5.669	-0.684	-0.467	-0.449
221.000	-5.669	-0.684	-0.467	-0.449
222.000	-5.676	-0.684	-0.467	-0.452
223.000	-5.669	-0.684	-0.467	-0.452
224.000	-5.669	-0.687	-0.467	-0.452
225.000	-5.676	-0.687	-0.467	-0.452
226.000	-5.676	-0.690	-0.467	-0.455
227.000	-5.676	-0.690	-0.473	-0.455
228.000	-5.771	-0.690	-0.473	-0.455
229.000	-5.771	-0.693	-0.473	-0.455
230.000	-5.771	-0.693	-0.473	-0.455
231.000	-5.777	-0.696	-0.473	-0.459
232.000	-5.777	-0.696	-0.480	-0.459
233.000	-5.783	-0.696	-0.473	-0.462
234.000	-5.783	-0.696	-0.480	-0.462
235.000	-5.783	-0.700	-0.480	-0.462
236.000	-5.783	-0.700	-0.480	-0.462
237.000	-6.074	-0.709	-0.480	-0.471
238.000	-6.271	-0.719	-0.486	-0.474
239.000	-6.435	-0.728	-0.486	-0.478
240.000	-6.593	-0.737	-0.492	-0.484
241.000	-6.745	-0.747	-0.499	-0.487
242.000	-6.967	-0.750	-0.499	-0.490
243.000	-7.144	-0.760	-0.505	-0.493
244.000	-7.283	-0.763	-0.505	-0.497
245.000	-7.328	-0.766	-0.505	-0.500
246.000	-7.454	-0.766	-0.505	-0.503
247.000	-7.587	-0.769	-0.505	-0.506
248.000	-7.714	-0.775	-0.511	-0.506
249.000	-7.752	-0.778	-0.518	-0.509
250.000	-7.878	-0.778	-0.518	-0.512
251.000	-7.999	-0.782	-0.524	-0.512
252.000	-8.030	-0.785	-0.524	-0.516
253.000	-8.157	-0.788	-0.524	-0.516
254.000	-8.271	-0.791	-0.530	-0.519
255.000	-8.302	-0.794	-0.530	-0.519
256.000	-8.422	-0.794	-0.530	-0.519

Elapsed Time	Input 1	Input 2	Input 3	Input 4
257.000	-8.441	-0.797	-0.530	-0.522
258.000	-8.568	-0.797	-0.536	-0.525
259.000	-8.593	-0.797	-0.536	-0.525
260.000	-8.714	-0.801	-0.536	-0.528
261.000	-8.726	-0.804	-0.536	-0.528
262.000	-8.853	-0.807	-0.543	-0.528
263.000	-8.872	-0.807	-0.543	-0.531
264.000	-8.998	-0.807	-0.543	-0.535
265.000	-9.125	-0.810	-0.549	-0.535
266.000	-9.137	-0.813	-0.549	-0.535
267.000	-9.251	-0.813	-0.549	-0.538
268.000	-9.258	-0.816	-0.549	-0.538
269.000	-9.384	-0.816	-0.549	-0.538
270.000	-9.498	-0.819	-0.555	-0.538
271.000	-9.612	-0.819	-0.555	-0.541
272.000	-9.618	-0.816	-0.549	-0.544
273.000	-9.606	-0.816	-0.549	-0.544
274.000	-9.606	-0.816	-0.549	-0.544
275.000	-9.612	-0.819	-0.555	-0.544
276.000	-9.618	-0.819	-0.562	-0.544
277.000	-9.618	-0.823	-0.562	-0.547
278.000	-9.618	-0.823	-0.562	-0.547
279.000	-9.618	-0.823	-0.562	-0.547
280.000	-9.618	-0.826	-0.568	-0.547
281.000	-9.618	-0.823	-0.568	-0.547

Elapsed Time	Input 1	Input 2	Input 3	Input 4

SE1000C
Environmental Logger
09/29 20:09

Unit# 01775 Test 3

Setups:	INPUT 1
Type	Level (F)
Mode	TOC
I.D.	01343
Reference	3.070
Linearity	0.110
Scale factor	20.070
Offset	-0.080
Delay mSEC	50.000

Step 0 09/24 11:15:01

Elapsed Time	Input 1	Elapsed Time	Input 1	Elapsed Time	Input 1	Elapsed Time	Input 1
0.0000	3.082	510.000	3.019	1020.00	2.936	1530.00	2.898
15.0000	3.089	525.000	3.006	1035.00	2.930	1545.00	2.905
30.0000	3.095	540.000	3.006	1050.00	2.930	1560.00	2.905
45.0000	3.095	555.000	3.012	1065.00	2.930	1575.00	2.892
60.0000	3.101	570.000	3.006	1080.00	2.930	1590.00	2.892
75.0000	3.101	585.000	3.006	1095.00	2.924	1605.00	2.892
90.0000	3.114	600.000	3.006	1110.00	2.924	1620.00	2.886
105.000	3.114	615.000	3.006	1125.00	2.930	1635.00	2.879
120.000	3.120	630.000	3.000	1140.00	2.930	1650.00	2.873
135.000	3.120	645.000	2.993	1155.00	2.930	1665.00	2.879
150.000	3.114	660.000	2.993	1170.00	2.930	1680.00	2.873
165.000	3.114	675.000	2.993	1185.00	2.924	1695.00	2.860
180.000	3.108	690.000	2.987	1200.00	2.924	1710.00	2.860
195.000	3.108	705.000	2.993	1215.00	2.924	1725.00	2.854
210.000	3.101	720.000	2.993	1230.00	2.924	1740.00	2.854
225.000	3.101	735.000	2.987	1245.00	2.924	1755.00	2.854
240.000	3.101	750.000	2.987	1260.00	2.930	1770.00	2.847
255.000	3.101	765.000	2.987	1275.00	2.930	1785.00	2.841
270.000	3.101	780.000	2.981	1290.00	2.930	1800.00	2.841
285.000	3.101	795.000	2.974	1305.00	2.930	1815.00	2.841
300.000	3.095	810.000	2.974	1320.00	2.930	1830.00	2.841
315.000	3.089	825.000	2.968	1335.00	2.936	1845.00	2.841
330.000	3.089	840.000	2.962	1350.00	2.930	1860.00	2.835
345.000	3.082	855.000	2.962	1365.00	2.930	1875.00	2.835
360.000	3.076	870.000	2.955	1380.00	2.930	1890.00	2.828
375.000	3.070	885.000	2.955	1395.00	2.930	1905.00	2.822
390.000	3.070	900.000	2.955	1410.00	2.936	1920.00	2.822
405.000	3.063	915.000	2.949	1425.00	2.930	1935.00	2.816
420.000	3.057	930.000	2.949	1440.00	2.930	1950.00	2.816
435.000	3.057	945.000	2.949	1455.00	2.924	1965.00	2.816
450.000	3.044	960.000	2.943	1470.00	2.917	1980.00	2.816
465.000	3.038	975.000	2.936	1485.00	2.917	1995.00	2.816
480.000	3.038	990.000	2.936	1500.00	2.905	2010.00	2.822
495.000	3.025	1005.00	2.936	1515.00	2.898	2025.00	2.828

Elapsed Time	Input 1	Elapsed Time	Input 1	Elapsed Time	Input 1	Elapsed Time	Input 1
2040.00	2.828	2805.00	2.809	3570.00	2.708	4335.00	2.708
2055.00	2.835	2820.00	2.809	3585.00	2.702	4350.00	2.714
2070.00	2.835	2835.00	2.809	3600.00	2.695	4365.00	2.721
2085.00	2.835	2850.00	2.809	3615.00	2.689	4380.00	2.727
2100.00	2.835	2865.00	2.809	3630.00	2.683	4395.00	2.733
2115.00	2.835	2880.00	2.816	3645.00	2.676	4410.00	2.733
2130.00	2.828	2895.00	2.816	3660.00	2.676	4425.00	2.733
2145.00	2.828	2910.00	2.816	3675.00	2.676	4440.00	2.740
2160.00	2.822	2925.00	2.822	3690.00	2.670	4455.00	2.740
2175.00	2.822	2940.00	2.816	3705.00	2.664	4470.00	2.740
2190.00	2.816	2955.00	2.816	3720.00	2.657	4485.00	2.746
2205.00	2.816	2970.00	2.816	3735.00	2.651	4500.00	2.752
2220.00	2.809	2985.00	2.816	3750.00	2.645	4515.00	2.752
2235.00	2.803	3000.00	2.816	3765.00	2.645	4530.00	2.759
2250.00	2.803	3015.00	2.816	3780.00	2.645	4545.00	2.759
2265.00	2.797	3030.00	2.816	3795.00	2.638	4560.00	2.752
2280.00	2.797	3045.00	2.816	3810.00	2.638	4575.00	2.752
2295.00	2.790	3060.00	2.822	3825.00	2.638	4590.00	2.746
2310.00	2.790	3075.00	2.822	3840.00	2.638	4605.00	2.740
2325.00	2.790	3090.00	2.822	3855.00	2.632	4620.00	2.740
2340.00	2.790	3105.00	2.816	3870.00	2.625	4635.00	2.733
2355.00	2.790	3120.00	2.816	3885.00	2.625	4650.00	2.733
2370.00	2.784	3135.00	2.816	3900.00	2.632	4665.00	2.727
2385.00	2.784	3150.00	2.816	3915.00	2.625	4680.00	2.727
2400.00	2.778	3165.00	2.816	3930.00	2.625	4695.00	2.727
2415.00	2.778	3180.00	2.809	3945.00	2.625	4710.00	2.721
2430.00	2.778	3195.00	2.803	3960.00	2.619	4725.00	2.714
2445.00	2.771	3210.00	2.803	3975.00	2.619	4740.00	2.714
2460.00	2.771	3225.00	2.803	3990.00	2.619	4755.00	2.714
2475.00	2.771	3240.00	2.797	4005.00	2.613	4770.00	2.714
2490.00	2.771	3255.00	2.790	4020.00	2.613	4785.00	2.714
2505.00	2.771	3270.00	2.784	4035.00	2.619	4800.00	2.714
2520.00	2.765	3285.00	2.778	4050.00	2.619	4815.00	2.714
2535.00	2.771	3300.00	2.778	4065.00	2.625	4830.00	2.708
2550.00	2.771	3315.00	2.771	4080.00	2.625	4845.00	2.708
2565.00	2.778	3330.00	2.765	4095.00	2.632	4860.00	2.708
2580.00	2.778	3345.00	2.765	4110.00	2.632	4875.00	2.702
2595.00	2.778	3360.00	2.759	4125.00	2.638	4890.00	2.702
2610.00	2.784	3375.00	2.752	4140.00	2.645	4905.00	2.702
2625.00	2.784	3390.00	2.752	4155.00	2.645	4920.00	2.708
2640.00	2.784	3405.00	2.746	4170.00	2.651	4935.00	2.708
2655.00	2.790	3420.00	2.740	4185.00	2.651	4950.00	2.708
2670.00	2.790	3435.00	2.733	4200.00	2.664	4965.00	2.708
2685.00	2.790	3450.00	2.733	4215.00	2.664	4980.00	2.708
2700.00	2.797	3465.00	2.733	4230.00	2.670	4995.00	2.702
2715.00	2.797	3480.00	2.733	4245.00	2.676	5010.00	2.702
2730.00	2.797	3495.00	2.727	4260.00	2.683	5025.00	2.702
2745.00	2.803	3510.00	2.727	4275.00	2.683	5040.00	2.695
2760.00	2.803	3525.00	2.721	4290.00	2.695	5055.00	2.689
2775.00	2.803	3540.00	2.714	4305.00	2.695	5070.00	2.689
2790.00	2.803	3555.00	2.714	4320.00	2.702	5085.00	2.683

Elapsed Time	Input 1	Elapsed Time	Input 1	Elapsed Time	Input 1	Elapsed Time	Input 1
5100.00	2.683	5865.00	2.765	6630.00	2.657	7395.00	2.803
5115.00	2.676	5880.00	2.778	6645.00	2.657	7410.00	2.803
5130.00	2.676	5895.00	2.790	6660.00	2.657	7425.00	2.797
5145.00	2.670	5910.00	2.797	6675.00	2.657	7440.00	2.797
5160.00	2.670	5925.00	2.809	6690.00	2.657	7455.00	2.784
5175.00	2.664	5940.00	2.816	6705.00	2.657	7470.00	2.771
5190.00	2.664	5955.00	2.816	6720.00	2.664	7485.00	2.759
5205.00	2.657	5970.00	2.816	6735.00	2.664	7500.00	2.752
5220.00	2.657	5985.00	2.809	6750.00	2.670	7515.00	2.752
5235.00	2.651	6000.00	2.809	6765.00	2.664	7530.00	2.746
5250.00	2.651	6015.00	2.797	6780.00	2.664		
5265.00	2.651	6030.00	2.790	6795.00	2.664		
5280.00	2.651	6045.00	2.784	6810.00	2.664		
5295.00	2.651	6060.00	2.771	6825.00	2.670		
5310.00	2.651	6075.00	2.752	6840.00	2.670		
5325.00	2.645	6090.00	2.740	6855.00	2.670		
5340.00	2.645	6105.00	2.727	6870.00	2.670		
5355.00	2.645	6120.00	2.721	6885.00	2.670		
5370.00	2.638	6135.00	2.708	6900.00	2.676		
5385.00	2.638	6150.00	2.695	6915.00	2.676		
5400.00	2.638	6165.00	2.689	6930.00	2.683		
5415.00	2.632	6180.00	2.676	6945.00	2.683		
5430.00	2.632	6195.00	2.670	6960.00	2.689		
5445.00	2.638	6210.00	2.664	6975.00	2.683		
5460.00	2.638	6225.00	2.657	6990.00	2.689		
5475.00	2.638	6240.00	2.651	7005.00	2.695		
5490.00	2.638	6255.00	2.651	7020.00	2.695		
5505.00	2.645	6270.00	2.651	7035.00	2.702		
5520.00	2.638	6285.00	2.645	7050.00	2.702		
5535.00	2.638	6300.00	2.638	7065.00	2.702		
5550.00	2.638	6315.00	2.645	7080.00	2.708		
5565.00	2.632	6330.00	2.645	7095.00	2.708		
5580.00	2.632	6345.00	2.645	7110.00	2.714		
5595.00	2.632	6360.00	2.651	7125.00	2.714		
5610.00	2.632	6375.00	2.657	7140.00	2.721		
5625.00	2.638	6390.00	2.664	7155.00	2.721		
5640.00	2.638	6405.00	2.664	7170.00	2.727		
5655.00	2.645	6420.00	2.664	7185.00	2.727		
5670.00	2.651	6435.00	2.670	7200.00	2.740		
5685.00	2.657	6450.00	2.670	7215.00	2.746		
5700.00	2.664	6465.00	2.664	7230.00	2.752		
5715.00	2.664	6480.00	2.664	7245.00	2.759		
5730.00	2.670	6495.00	2.664	7260.00	2.771		
5745.00	2.676	6510.00	2.664	7275.00	2.778		
5760.00	2.683	6525.00	2.657	7290.00	2.778		
5775.00	2.695	6540.00	2.657	7305.00	2.778		
5790.00	2.708	6555.00	2.657	7320.00	2.790		
5805.00	2.714	6570.00	2.657	7335.00	2.797		
5820.00	2.727	6585.00	2.657	7350.00	2.803		
5835.00	2.740	6600.00	2.657	7365.00	2.809		
5850.00	2.752	6615.00	2.651	7380.00	2.809		

ERAFS1\VOL1:GEOT\ENGDATA\
KEEP\D-LOGGER\11112\1343WL

03/22 3:52pm

SE2000
Environmental Logger
09/29 19:45

Unit# 2K-473 Test 3

Setups:	INPUT 1	INPUT 2
Type	Level (F)	Level (F)
Mode	TOC	TOC
I.D.	1340	2055SOUT
Reference	8.420	12.290
SG	1.000	1.000
Linearity	0.096	0.112
Scale factor	20.037	19.961
Offset	0.018	0.024
Delay mSEC	50.000	50.000

Step 0 09/23 17:30:01

Elapsed Time	Input 1	Input 2	Elapsed Time	Input 1	Input 2	Elapsed Time	Input 1	Input 2
0.0000	8.420	12.290	495.000	8.559	12.308	990.000	8.622	12.327
15.0000	8.420	12.283	510.000	8.565	12.308	1005.00	8.634	12.334
30.0000	8.432	12.290	525.000	8.565	12.308	1020.00	8.628	12.334
45.0000	8.445	12.290	540.000	8.565	12.308	1035.00	8.616	12.334
60.0000	8.457	12.296	555.000	8.565	12.308	1050.00	8.622	12.340
75.0000	8.464	12.296	570.000	8.565	12.308	1065.00	8.616	12.340
90.0000	8.470	12.296	585.000	8.565	12.308	1080.00	8.616	12.334
105.000	8.483	12.296	600.000	8.565	12.308	1095.00	8.609	12.334
120.000	8.489	12.296	615.000	8.559	12.308	1110.00	8.609	12.340
135.000	8.489	12.296	630.000	8.565	12.308	1125.00	8.616	12.340
150.000	8.495	12.296	645.000	8.559	12.308	1140.00	8.609	12.340
165.000	8.489	12.290	660.000	8.559	12.315	1155.00	8.616	12.346
180.000	8.502	12.296	675.000	8.565	12.315	1170.00	8.609	12.340
195.000	8.508	12.302	690.000	8.571	12.315	1185.00	8.603	12.340
210.000	8.521	12.302	705.000	8.571	12.315	1200.00	8.603	12.340
225.000	8.521	12.302	720.000	8.578	12.315	1215.00	8.603	12.340
240.000	8.521	12.302	735.000	8.571	12.315	1230.00	8.597	12.340
255.000	8.527	12.302	750.000	8.584	12.315	1245.00	8.597	12.340
270.000	8.533	12.302	765.000	8.590	12.315	1260.00	8.584	12.340
285.000	8.527	12.302	780.000	8.590	12.315	1275.00	8.571	12.340
300.000	8.533	12.302	795.000	8.590	12.315	1290.00	8.565	12.340
315.000	8.533	12.302	810.000	8.603	12.315	1305.00	8.552	12.340
330.000	8.540	12.302	825.000	8.603	12.321	1320.00	8.552	12.340
345.000	8.546	12.302	840.000	8.609	12.321	1335.00	8.552	12.340
360.000	8.546	12.308	855.000	8.609	12.321	1350.00	8.546	12.340
375.000	8.552	12.308	870.000	8.609	12.321	1365.00	8.540	12.340
390.000	8.559	12.308	885.000	8.609	12.321	1380.00	8.533	12.334
405.000	8.552	12.308	900.000	8.616	12.321	1395.00	8.533	12.334
420.000	8.559	12.308	915.000	8.622	12.321	1410.00	8.527	12.334
435.000	8.559	12.308	930.000	8.616	12.321	1425.00	8.527	12.334
450.000	8.565	12.308	945.000	8.616	12.321	1440.00	8.521	12.334
465.000	8.565	12.308	960.000	8.609	12.327	1455.00	8.527	12.334
480.000	8.559	12.308	975.000	8.616	12.327	1470.00	8.521	12.334

Elapsed Time	Input 1	Input 2	Elapsed Time	Input 1	Input 2	Elapsed Time	Input 1	Input 2
1485.00	8.514	12.334	2280.00	8.363	12.327	3075.00	8.078	12.315
1500.00	8.514	12.334	2295.00	8.363	12.334	3090.00	8.091	12.321
1515.00	8.508	12.334	2310.00	8.363	12.334	3105.00	8.103	12.321
1530.00	8.502	12.334	2325.00	8.369	12.334	3120.00	8.116	12.327
1545.00	8.502	12.334	2340.00	8.369	12.334	3135.00	8.103	12.321
1560.00	8.489	12.334	2355.00	8.369	12.334	3150.00	8.110	12.327
1575.00	8.489	12.334	2370.00	8.369	12.334	3165.00	8.110	12.321
1590.00	8.476	12.327	2385.00	8.363	12.334	3180.00	8.116	12.327
1605.00	8.489	12.327	2400.00	8.363	12.334	3195.00	8.116	12.327
1620.00	8.495	12.334	2415.00	8.356	12.334	3210.00	8.122	12.327
1635.00	8.495	12.334	2430.00	8.356	12.334	3225.00	8.122	12.327
1650.00	8.495	12.334	2445.00	8.350	12.334	3240.00	8.122	12.327
1665.00	8.495	12.334	2460.00	8.344	12.334	3255.00	8.116	12.327
1680.00	8.495	12.334	2475.00	8.350	12.334	3270.00	8.116	12.327
1695.00	8.489	12.334	2490.00	8.344	12.334	3285.00	8.110	12.327
1710.00	8.489	12.334	2505.00	8.337	12.334	3300.00	8.110	12.327
1725.00	8.495	12.334	2520.00	8.331	12.334	3315.00	8.103	12.327
1740.00	8.489	12.334	2535.00	8.325	12.334	3330.00	8.103	12.327
1755.00	8.495	12.334	2550.00	8.318	12.334	3345.00	8.110	12.327
1770.00	8.502	12.334	2565.00	8.299	12.334	3360.00	8.103	12.327
1785.00	8.495	12.334	2580.00	8.287	12.327	3375.00	8.110	12.327
1800.00	8.489	12.334	2595.00	8.280	12.327	3390.00	8.116	12.327
1815.00	8.489	12.334	2610.00	8.287	12.334	3405.00	8.116	12.334
1830.00	8.495	12.334	2625.00	8.287	12.334	3420.00	8.116	12.334
1845.00	8.489	12.334	2640.00	8.261	12.327	3435.00	8.122	12.334
1860.00	8.489	12.334	2655.00	8.255	12.327	3450.00	8.129	12.334
1875.00	8.476	12.334	2670.00	8.249	12.327	3465.00	8.129	12.334
1890.00	8.470	12.334	2685.00	8.249	12.327	3480.00	8.135	12.334
1905.00	8.464	12.334	2700.00	8.230	12.327	3495.00	8.135	12.365
1920.00	8.457	12.334	2715.00	8.217	12.327	3510.00	8.135	12.334
1935.00	8.451	12.334	2730.00	8.217	12.327	3525.00	8.135	12.334
1950.00	8.451	12.334	2745.00	8.198	12.327	3540.00	8.141	12.340
1965.00	8.445	12.334	2760.00	8.179	12.321	3555.00	8.148	12.334
1980.00	8.445	12.334	2775.00	8.173	12.321	3570.00	8.148	12.334
1995.00	8.438	12.334	2790.00	8.167	12.321	3585.00	8.148	12.334
2010.00	8.438	12.334	2805.00	8.160	12.321	3600.00	8.160	12.340
2025.00	8.426	12.334	2820.00	8.148	12.321	3615.00	8.167	12.340
2040.00	8.420	12.334	2835.00	8.141	12.321	3630.00	8.179	12.340
2055.00	8.413	12.334	2850.00	8.129	12.321	3645.00	8.179	12.340
2070.00	8.420	12.334	2865.00	8.122	12.321	3660.00	8.192	12.340
2085.00	8.407	12.334	2880.00	8.122	12.321	3675.00	8.198	12.340
2100.00	8.401	12.327	2895.00	8.116	12.321	3690.00	8.211	12.340
2115.00	8.394	12.327	2910.00	8.110	12.321	3705.00	8.217	12.346
2130.00	8.394	12.334	2925.00	8.103	12.321	3720.00	8.230	12.346
2145.00	8.394	12.334	2940.00	8.091	12.315	3735.00	8.236	12.353
2160.00	8.388	12.327	2955.00	8.078	12.315	3750.00	8.242	12.353
2175.00	8.388	12.334	2970.00	8.078	12.315	3765.00	8.255	12.353
2190.00	8.382	12.334	2985.00	8.072	12.315	3780.00	8.261	12.353
2205.00	8.382	12.327	3000.00	8.059	12.315	3795.00	8.274	12.353
2220.00	8.388	12.334	3015.00	8.059	12.315	3810.00	8.280	12.353
2235.00	8.382	12.334	3030.00	8.059	12.315	3825.00	8.287	12.353
2250.00	8.369	12.327	3045.00	8.065	12.315	3840.00	8.293	12.359
2265.00	8.363	12.327	3060.00	8.072	12.315	3855.00	8.293	12.359

Elapsed Time	Input 1	Input 2
3870.00	8.306	12.359
3885.00	8.312	12.359
3900.00	8.318	12.359
3915.00	8.318	12.359
3930.00	8.331	12.365
3945.00	8.331	12.365
3960.00	8.337	12.365
3975.00	8.337	12.365
3990.00	8.350	12.365
4005.00	8.356	12.365
4020.00	8.356	12.371
4035.00	8.356	12.365
4050.00	8.363	12.365
4065.00	8.369	12.371
4080.00	8.369	12.371
4095.00	8.369	12.371
4110.00	8.369	12.371
4125.00	8.369	12.371
4140.00	8.369	12.371
4155.00	8.363	12.371
4170.00	8.363	12.378
4185.00	8.363	12.378
4200.00	8.363	12.378
4215.00	8.369	12.378
4230.00	8.375	12.378
4245.00	8.375	12.378
4260.00	8.375	12.378
4275.00	8.382	12.378
4290.00	8.388	12.378
4305.00	8.388	12.378
4320.00	8.388	12.378
4335.00	8.388	12.378
4350.00	8.388	12.378
4365.00	8.388	12.378
4380.00	8.388	12.378
4395.00	8.388	12.378
4410.00	8.394	12.378
4425.00	8.401	12.378
4440.00	8.394	12.378
4455.00	8.401	12.378
4470.00	8.401	12.378
4485.00	8.394	12.378
4500.00	8.401	12.384
4515.00	8.407	12.384
4530.00	8.407	12.384
4545.00	8.413	12.384
4560.00	8.420	12.384
4575.00	8.420	12.384
4590.00	8.413	12.384
4605.00	8.413	12.384
4620.00	8.413	12.384
4635.00	8.413	12.384
4650.00	8.407	12.384

Elapsed Time	Input 1	Input 2
4665.00	8.394	12.384
4680.00	8.388	12.384
4695.00	8.388	12.384
4710.00	8.382	12.384
4725.00	8.382	12.384
4740.00	8.382	12.384
4755.00	8.369	12.384
4770.00	8.363	12.378
4785.00	8.356	12.378
4800.00	8.350	12.378
4815.00	8.344	12.378
4830.00	8.344	12.378
4845.00	8.344	12.378
4860.00	8.337	12.378
4875.00	8.331	12.378
4890.00	8.325	12.378
4905.00	8.325	12.378
4920.00	8.312	12.378
4935.00	8.306	12.378
4950.00	8.306	12.378
4965.00	8.306	12.378
4980.00	8.306	12.378
4995.00	8.299	12.378
5010.00	8.299	12.378
5025.00	8.280	12.378
5040.00	8.287	12.378
5055.00	8.287	12.378
5070.00	8.274	12.378
5085.00	8.268	12.378
5100.00	8.280	12.378
5115.00	8.280	12.378
5130.00	8.274	12.378
5145.00	8.287	12.384
5160.00	8.293	12.384
5175.00	8.293	12.384
5190.00	8.299	12.384
5205.00	8.306	12.384
5220.00	8.306	12.390
5235.00	8.312	12.384
5250.00	8.318	12.390
5265.00	8.331	12.384
5280.00	8.331	12.384
5295.00	8.337	12.390
5310.00	8.306	12.390
5325.00	8.356	12.390
5340.00	8.356	12.390
5355.00	8.363	12.397
5370.00	8.369	12.397
5385.00	8.369	12.390
5400.00	8.375	12.397
5415.00	8.382	12.397
5430.00	8.382	12.397
5445.00	8.388	12.397

Elapsed Time	Input 1	Input 2
5460.00	8.394	12.397
5475.00	8.401	12.403
5490.00	8.401	12.397
5505.00	8.413	12.397
5520.00	8.420	12.403
5535.00	8.420	12.403
5550.00	8.432	12.409
5565.00	8.420	12.403
5580.00	8.420	12.403
5595.00	8.413	12.403
5610.00	8.420	12.403
5625.00	8.420	12.403
5640.00	8.432	12.403
5655.00	8.438	12.403
5670.00	8.445	12.403
5685.00	8.451	12.403
5700.00	8.451	12.409
5715.00	8.451	12.403
5730.00	8.457	12.409
5745.00	8.457	12.409
5760.00	8.464	12.409
5775.00	8.464	12.409
5790.00	8.464	12.409
5805.00	8.476	12.409
5820.00	8.483	12.409
5835.00	8.483	12.409
5850.00	8.489	12.416
5865.00	8.495	12.409
5880.00	8.502	12.409
5895.00	8.502	12.416
5910.00	8.508	12.416
5925.00	8.514	12.416
5940.00	8.514	12.416
5955.00	8.521	12.416
5970.00	8.521	12.416
5985.00	8.533	12.416
6000.00	8.540	12.416
6015.00	8.552	12.416
6030.00	8.552	12.416
6045.00	8.552	12.422
6060.00	8.552	12.416
6075.00	8.552	12.416
6090.00	8.552	12.416
6105.00	8.552	12.416
6120.00	8.552	12.416
6135.00	8.552	12.416
6150.00	8.552	12.416
6165.00	8.546	12.416
6180.00	8.546	12.416
6195.00	8.546	12.416
6210.00	8.540	12.416
6225.00	8.540	12.416
6240.00	8.533	12.416

Elapsed Time	Input 1	Input 2
6255.00	8.540	12.416
6270.00	8.527	12.416
6285.00	8.527	12.416
6300.00	8.527	12.416
6315.00	8.527	12.416
6330.00	8.521	12.416
6345.00	8.521	12.416
6360.00	8.521	12.416
6375.00	8.521	12.416
6390.00	8.514	12.416
6405.00	8.508	12.416
6420.00	8.502	12.416
6435.00	8.502	12.416
6450.00	8.502	12.416
6465.00	8.502	12.416
6480.00	8.489	12.416
6495.00	8.489	12.416
6510.00	8.489	12.416
6525.00	8.489	12.416
6540.00	8.489	12.416
6555.00	8.495	12.416
6570.00	8.495	12.416
6585.00	8.483	12.416
6600.00	8.489	12.416
6615.00	8.483	12.416
6630.00	8.470	12.416
6645.00	8.464	12.416
6660.00	8.464	12.416
6675.00	8.464	12.416
6690.00	8.470	12.422
6705.00	8.464	12.422
6720.00	8.470	12.422
6735.00	8.476	12.422
6750.00	8.489	12.422
6765.00	8.489	12.422
6780.00	8.495	12.428
6795.00	8.502	12.428
6810.00	8.502	12.428
6825.00	8.495	12.428
6840.00	8.508	12.428
6855.00	8.521	12.434
6870.00	8.521	12.441
6885.00	8.521	12.434
6900.00	8.521	12.441
6915.00	8.527	12.441
6930.00	8.527	12.441
6945.00	8.533	12.434
6960.00	8.533	12.428
6975.00	8.533	12.441
6990.00	8.540	12.434
7005.00	8.540	12.441
7020.00	8.546	12.434
7035.00	8.546	12.447

Elapsed Time	Input 1	Input 2
7050.00	8.546	12.434
7065.00	8.540	12.434
7080.00	8.546	12.441
7095.00	8.540	12.434
7110.00	8.559	12.441
7125.00	8.552	12.434
7140.00	8.571	12.441
7155.00	8.565	12.441
7170.00	8.571	12.441
7185.00	8.571	12.441
7200.00	8.571	12.441
7215.00	8.571	12.441
7230.00	8.571	12.434
7245.00	8.571	12.434
7260.00	8.571	12.441
7275.00	8.571	12.441
7290.00	8.578	12.441
7305.00	8.571	12.434
7320.00	8.584	12.441
7335.00	8.584	12.434
7350.00	8.590	12.441
7365.00	8.590	12.441
7380.00	8.597	12.441
7395.00	8.609	12.441
7410.00	8.616	12.441
7425.00	8.634	12.441
7440.00	8.653	12.441
7455.00	8.660	12.441
7470.00	8.672	12.441
7485.00	8.679	12.441
7500.00	8.685	12.441
7515.00	8.691	12.441
7530.00	8.691	12.441
7545.00	8.691	12.447
7560.00	8.698	12.441
7575.00	8.698	12.441
7590.00	8.698	12.441
7605.00	8.704	12.441
7620.00	8.710	12.447
7635.00	8.704	12.441
7650.00	8.704	12.441
7665.00	8.704	12.441
7680.00	8.704	12.441
7695.00	8.710	12.441
7710.00	8.710	12.441
7725.00	8.717	12.447
7740.00	8.717	12.441
7755.00	8.723	12.447
7770.00	8.723	12.447
7785.00	8.729	12.447
7800.00	8.729	12.441
7815.00	8.736	12.447
7830.00	8.729	12.447

Elapsed Time	Input 1	Input 2
7845.00	8.729	12.447
7860.00	8.729	12.447
7875.00	8.729	12.447
7890.00	8.736	12.447
7905.00	8.736	12.447
7920.00	8.736	12.447
7935.00	8.736	12.447
7950.00	8.742	12.447
7965.00	8.748	12.447
7980.00	8.748	12.447
7995.00	8.761	12.447
8010.00	8.761	12.447
8025.00	8.767	12.447
8040.00	8.761	12.447
8055.00	8.767	12.447
8070.00	8.780	12.453
8085.00	8.780	12.453
8100.00	8.786	12.453
8115.00	8.786	12.453
8130.00	8.786	12.453
8145.00	8.793	12.460
8160.00	8.793	12.453
8175.00	8.793	12.460
8190.00	8.799	12.460
8205.00	8.805	12.460
8220.00	8.805	12.466
8235.00	8.812	12.466
8250.00	8.812	12.466
8265.00	8.818	12.472
8280.00	8.812	12.472
8295.00	8.818	12.479
8310.00	8.818	12.485
8325.00	8.818	12.472
8340.00	8.799	12.472
8355.00	8.812	12.485
8370.00	8.799	12.472
8385.00	8.812	12.485
8400.00	8.799	12.472
8415.00	8.793	12.466
8430.00	8.793	12.472
8445.00	8.793	12.472
8460.00	8.786	12.472
8475.00	8.799	12.479
8490.00	8.786	12.472
8505.00	8.786	12.472
8520.00	8.786	12.472
8535.00	8.786	12.472
8550.00	8.774	12.466
8565.00	8.774	12.472
8580.00	8.774	12.466

SE1000C
Environmental Logger
09/29 19:13

Unit# 01876 Test 1

Setups:	INPUT 1
Type	Level (F)
Mode	TOC
I.D.	01336

Reference	8.020
Linearity	0.110
Scale factor	20.090
Offset	0.040
Delay mSEC	50.000

Step 0 09/24 19:15:00

Elapsed Time	Input 1	Elapsed Time	Input 1	Elapsed Time	Input 1	Elapsed Time	Input 1
0.0000	8.020	510.000	8.026	1020.00	8.020	1530.00	7.740
15.0000	8.026	525.000	8.026	1035.00	8.013	1545.00	7.734
30.0000	8.026	540.000	8.026	1050.00	8.013	1560.00	7.721
45.0000	8.026	555.000	8.026	1065.00	8.013	1575.00	7.702
60.0000	8.032	570.000	8.026	1080.00	8.013	1590.00	7.670
75.0000	8.032	585.000	8.026	1095.00	8.007	1605.00	7.639
90.0000	8.032	600.000	8.026	1110.00	8.000	1620.00	7.601
105.000	8.032	615.000	8.020	1125.00	8.000	1635.00	7.563
120.000	8.032	630.000	8.026	1140.00	7.994	1650.00	7.531
135.000	8.032	645.000	8.026	1155.00	7.988	1665.00	7.499
150.000	8.032	660.000	8.026	1170.00	7.981	1680.00	7.461
165.000	8.032	675.000	8.026	1185.00	7.975	1695.00	7.429
180.000	8.039	690.000	8.026	1200.00	7.969	1710.00	7.398
195.000	8.032	705.000	8.020	1215.00	7.956	1725.00	7.366
210.000	8.039	720.000	8.020	1230.00	7.950	1740.00	7.340
225.000	8.039	735.000	8.026	1245.00	7.943	1755.00	7.315
240.000	8.039	750.000	8.026	1260.00	7.937	1770.00	7.290
255.000	8.039	765.000	8.026	1275.00	7.924	1785.00	7.271
270.000	8.032	780.000	8.026	1290.00	7.918	1800.00	7.252
285.000	8.039	795.000	8.026	1305.00	7.899	1815.00	7.232
300.000	8.039	810.000	8.026	1320.00	7.893	1830.00	7.220
315.000	8.039	825.000	8.032	1335.00	7.880	1845.00	7.207
330.000	8.032	840.000	8.026	1350.00	7.867	1860.00	7.194
345.000	8.032	855.000	8.026	1365.00	7.861	1875.00	7.182
360.000	8.032	870.000	8.026	1380.00	7.848	1890.00	7.169
375.000	8.032	885.000	8.026	1395.00	7.835	1905.00	7.156
390.000	8.032	900.000	8.026	1410.00	7.816	1920.00	7.144
405.000	8.032	915.000	8.026	1425.00	7.810	1935.00	7.137
420.000	8.032	930.000	8.026	1440.00	7.797	1950.00	7.131
435.000	8.032	945.000	8.026	1455.00	7.785	1965.00	7.125
450.000	8.032	960.000	8.026	1470.00	7.772	1980.00	7.118
465.000	8.032	975.000	8.026	1485.00	7.766	1995.00	7.112
480.000	8.026	990.000	8.026	1500.00	7.753	2010.00	7.112
495.000	8.026	1005.00	8.026	1515.00	7.747	2025.00	7.099

Elapsed Time	Input 1	Elapsed Time	Input 1	Elapsed Time	Input 1	Elapsed Time	Input 1
2040.00	7.099	2805.00	7.156	3570.00	7.239	4335.00	7.378
2055.00	7.099	2820.00	7.163	3585.00	7.239	4350.00	7.378
2070.00	7.093	2835.00	7.163	3600.00	7.252	4365.00	7.378
2085.00	7.099	2850.00	7.169	3615.00	7.252	4380.00	7.385
2100.00	7.093	2865.00	7.169	3630.00	7.252	4395.00	7.385
2115.00	7.093	2880.00	7.169	3645.00	7.258	4410.00	7.391
2130.00	7.086	2895.00	7.175	3660.00	7.264	4425.00	7.391
2145.00	7.093	2910.00	7.175	3675.00	7.264	4440.00	7.398
2160.00	7.093	2925.00	7.182	3690.00	7.271	4455.00	7.398
2175.00	7.093	2940.00	7.182	3705.00	7.271	4470.00	7.398
2190.00	7.093	2955.00	7.188	3720.00	7.277	4485.00	7.404
2205.00	7.093	2970.00	7.188	3735.00	7.277	4500.00	7.398
2220.00	7.093	2985.00	7.188	3750.00	7.283	4515.00	7.404
2235.00	7.093	3000.00	7.194	3765.00	7.290	4530.00	7.404
2250.00	7.099	3015.00	7.201	3780.00	7.290	4545.00	7.404
2265.00	7.099	3030.00	7.201	3795.00	7.290	4560.00	7.404
2280.00	7.099	3045.00	7.201	3810.00	7.296	4575.00	7.404
2295.00	7.099	3060.00	7.207	3825.00	7.296	4590.00	7.410
2310.00	7.099	3075.00	7.207	3840.00	7.302	4605.00	7.410
2325.00	7.099	3090.00	7.207	3855.00	7.302	4620.00	7.410
2340.00	7.105	3105.00	7.207	3870.00	7.302	4635.00	7.410
2355.00	7.105	3120.00	7.201	3885.00	7.309	4650.00	7.410
2370.00	7.099	3135.00	7.201	3900.00	7.309	4665.00	7.410
2385.00	7.105	3150.00	7.207	3915.00	7.309	4680.00	7.417
2400.00	7.105	3165.00	7.207	3930.00	7.315	4695.00	7.410
2415.00	7.112	3180.00	7.213	3945.00	7.315	4710.00	7.417
2430.00	7.112	3195.00	7.213	3960.00	7.321	4725.00	7.410
2445.00	7.118	3210.00	7.213	3975.00	7.328	4740.00	7.417
2460.00	7.112	3225.00	7.213	3990.00	7.328	4755.00	7.417
2475.00	7.112	3240.00	7.213	4005.00	7.328	4770.00	7.417
2490.00	7.112	3255.00	7.207	4020.00	7.328	4785.00	7.417
2505.00	7.118	3270.00	7.213	4035.00	7.328	4800.00	7.417
2520.00	7.118	3285.00	7.220	4050.00	7.328	4815.00	7.417
2535.00	7.125	3300.00	7.220	4065.00	7.328	4830.00	7.423
2550.00	7.125	3315.00	7.220	4080.00	7.334	4845.00	7.423
2565.00	7.118	3330.00	7.220	4095.00	7.334	4860.00	7.423
2580.00	7.125	3345.00	7.220	4110.00	7.340	4875.00	7.423
2595.00	7.125	3360.00	7.226	4125.00	7.347	4890.00	7.423
2610.00	7.125	3375.00	7.220	4140.00	7.347	4905.00	7.423
2625.00	7.125	3390.00	7.220	4155.00	7.347	4920.00	7.423
2640.00	7.131	3405.00	7.226	4170.00	7.353	4935.00	7.423
2655.00	7.131	3420.00	7.226	4185.00	7.353	4950.00	7.423
2670.00	7.131	3435.00	7.232	4200.00	7.353	4965.00	7.429
2685.00	7.137	3450.00	7.232	4215.00	7.359	4980.00	7.429
2700.00	7.137	3465.00	7.232	4230.00	7.359	4995.00	7.429
2715.00	7.137	3480.00	7.226	4245.00	7.359	5010.00	7.436
2730.00	7.144	3495.00	7.232	4260.00	7.359	5025.00	7.436
2745.00	7.150	3510.00	7.232	4275.00	7.366	5040.00	7.429
2760.00	7.150	3525.00	7.226	4290.00	7.372	5055.00	7.436
2775.00	7.156	3540.00	7.232	4305.00	7.372	5070.00	7.436
2790.00	7.156	3555.00	7.245	4320.00	7.378	5085.00	7.436

Elapsed Time	Input 1	Elapsed Time	Input 1	Elapsed Time	Input 1	Elapsed Time	Input 1
5100.00	7.429	5865.00	7.531	6630.00	7.601		
5115.00	7.436	5880.00	7.537	6645.00	7.601		
5130.00	7.436	5895.00	7.537	6660.00	7.607		
5145.00	7.442	5910.00	7.543	6675.00	7.607		
5160.00	7.442	5925.00	7.543	6690.00	7.601		
5175.00	7.442	5940.00	7.543	6705.00	7.601		
5190.00	7.448	5955.00	7.543	6720.00	7.601		
5205.00	7.448	5970.00	7.550	6735.00	7.601		
5220.00	7.448	5985.00	7.550	6750.00	7.607		
5235.00	7.448	6000.00	7.550	6765.00	7.607		
5250.00	7.455	6015.00	7.550	6780.00	7.607		
5265.00	7.461	6030.00	7.550	6795.00	7.601		
5280.00	7.436	6045.00	7.550	6810.00	7.601		
5295.00	7.461	6060.00	7.550	6825.00	7.601		
5310.00	7.467	6075.00	7.556	6840.00	7.607		
5325.00	7.467	6090.00	7.556	6855.00	7.607		
5340.00	7.474	6105.00	7.556	6870.00	7.607		
5355.00	7.467	6120.00	7.556	6885.00	7.607		
5370.00	7.474	6135.00	7.556	6900.00	7.601		
5385.00	7.474	6150.00	7.563	6915.00	7.607		
5400.00	7.474	6165.00	7.556	6930.00	7.607		
5415.00	7.474	6180.00	7.563	6945.00	7.607		
5430.00	7.474	6195.00	7.563	6960.00	7.607		
5445.00	7.480	6210.00	7.563	6975.00	7.607		
5460.00	7.480	6225.00	7.563	6990.00	7.613		
5475.00	7.480	6240.00	7.569	7005.00	7.613		
5490.00	7.480	6255.00	7.569	7020.00	7.613		
5505.00	7.486	6270.00	7.569	7035.00	7.607		
5520.00	7.480	6285.00	7.569				
5535.00	7.486	6300.00	7.569				
5550.00	7.486	6315.00	7.569				
5565.00	7.486	6330.00	7.569				
5580.00	7.493	6345.00	7.575				
5595.00	7.493	6360.00	7.575				
5610.00	7.499	6375.00	7.575				
5625.00	7.499	6390.00	7.575				
5640.00	7.499	6405.00	7.575				
5655.00	7.499	6420.00	7.582				
5670.00	7.505	6435.00	7.582				
5685.00	7.505	6450.00	7.582				
5700.00	7.505	6465.00	7.588				
5715.00	7.505	6480.00	7.588				
5730.00	7.512	6495.00	7.588				
5745.00	7.512	6510.00	7.588				
5760.00	7.512	6525.00	7.588				
5775.00	7.518	6540.00	7.588				
5790.00	7.512	6555.00	7.594				
5805.00	7.518	6570.00	7.594				
5820.00	7.518	6585.00	7.594				
5835.00	7.524	6600.00	7.594				
5850.00	7.524	6615.00	7.594				

ERAFS1\VOL1:GEOT\ENGDATA\
KEEP\D-LOGGER\11112\1336WL

03/22 4:09pm

SE1000B
Environmental Logger
09/29 19:32

Unit# 00143 Test# 1

INPUT 1: Level (F) TOC

Reference 5.48
Scale factor 10.04
Offset 0.01

Step# 0 09/23 17:30

Elapsed Time	Value 1	Elapsed Time	Input 1	Elapsed Time	Input 1	Elapsed Time	Input 1
0.0000	5.47	585.000	5.51	1170.00	5.51	1755.00	5.46
15.0000	5.47	600.000	5.51	1185.00	5.51	1770.00	5.46
30.0000	5.47	615.000	5.50	1200.00	5.50	1785.00	5.46
45.0000	5.48	630.000	5.51	1215.00	5.50	1800.00	5.46
60.0000	5.48	645.000	5.50	1230.00	5.50	1815.00	5.46
75.0000	5.48	660.000	5.50	1245.00	5.50	1830.00	5.46
90.0000	5.49	675.000	5.51	1260.00	5.49	1845.00	5.46
105.000	5.49	690.000	5.51	1275.00	5.49	1860.00	5.46
120.000	5.49	705.000	5.51	1290.00	5.48	1875.00	5.45
135.000	5.49	720.000	5.51	1305.00	5.48	1890.00	5.45
150.000	5.49	735.000	5.51	1320.00	5.48	1905.00	5.45
165.000	5.49	750.000	5.52	1335.00	5.48	1920.00	5.45
180.000	5.49	765.000	5.52	1350.00	5.48	1935.00	5.45
195.000	5.49	780.000	5.52	1365.00	5.48	1950.00	5.45
210.000	5.50	795.000	5.52	1380.00	5.47	1965.00	5.44
225.000	5.50	810.000	5.52	1395.00	5.47	1980.00	5.45
240.000	5.50	825.000	5.52	1410.00	5.47	1995.00	5.44
255.000	5.50	840.000	5.52	1425.00	5.47	2010.00	5.44
270.000	5.50	855.000	5.52	1440.00	5.47	2025.00	5.44
285.000	5.50	870.000	5.52	1455.00	5.47	2040.00	5.44
300.000	5.50	885.000	5.53	1470.00	5.47	2055.00	5.44
315.000	5.50	900.000	5.53	1485.00	5.46	2070.00	5.44
330.000	5.50	915.000	5.53	1500.00	5.47	2085.00	5.44
345.000	5.50	930.000	5.53	1515.00	5.46	2100.00	5.43
360.000	5.50	945.000	5.53	1530.00	5.46	2115.00	5.43
375.000	5.50	960.000	5.52	1545.00	5.46	2130.00	5.43
390.000	5.51	975.000	5.53	1560.00	5.45	2145.00	5.44
405.000	5.50	990.000	5.53	1575.00	5.45	2160.00	5.43
420.000	5.51	1005.00	5.53	1590.00	5.45	2175.00	5.43
435.000	5.51	1020.00	5.53	1605.00	5.46	2190.00	5.43
450.000	5.51	1035.00	5.52	1620.00	5.46	2205.00	5.43
465.000	5.51	1050.00	5.52	1635.00	5.46	2220.00	5.44
480.000	5.51	1065.00	5.52	1650.00	5.46	2235.00	5.43
495.000	5.50	1080.00	5.51	1665.00	5.46	2250.00	5.43
510.000	5.51	1095.00	5.51	1680.00	5.46	2265.00	5.43
525.000	5.51	1110.00	5.51	1695.00	5.46	2280.00	5.43
540.000	5.51	1125.00	5.51	1710.00	5.45	2295.00	5.43
555.000	5.51	1140.00	5.51	1725.00	5.46	2310.00	5.43
570.000	5.51	1155.00	5.51	1740.00	5.46	2325.00	5.44

Elapsed Time	Input 1	Elapsed Time	Input 1	Elapsed Time	Input 1	Elapsed Time	Input 1
2340.00	5.44	3135.00	4.73	3930.00	4.56	4725.00	4.75
2355.00	5.44	3150.00	4.61	3945.00	4.57	4740.00	4.75
2370.00	5.44	3165.00	4.51	3960.00	4.57	4755.00	4.75
2385.00	5.44	3180.00	4.42	3975.00	4.58	4770.00	4.75
2400.00	5.44	3195.00	4.36	3990.00	4.59	4785.00	4.75
2415.00	5.44	3210.00	4.31	4005.00	4.59	4800.00	4.74
2430.00	5.44	3225.00	4.27	4020.00	4.60	4815.00	4.74
2445.00	5.44	3240.00	4.24	4035.00	4.60	4830.00	4.75
2460.00	5.44	3255.00	4.22	4050.00	4.61	4845.00	4.75
2475.00	5.44	3270.00	4.20	4065.00	4.62	4860.00	4.75
2490.00	5.44	3285.00	4.20	4080.00	4.62	4875.00	4.75
2505.00	5.44	3300.00	4.20	4095.00	4.62	4890.00	4.75
2520.00	5.44	3315.00	4.20	4110.00	4.63	4905.00	4.75
2535.00	5.44	3330.00	4.21	4125.00	4.63	4920.00	4.75
2550.00	5.43	3345.00	4.22	4140.00	4.64	4935.00	4.75
2565.00	5.43	3360.00	4.23	4155.00	4.64	4950.00	4.75
2580.00	5.42	3375.00	4.24	4170.00	4.64	4965.00	4.76
2595.00	5.42	3390.00	4.25	4185.00	4.64	4980.00	4.76
2610.00	5.42	3405.00	4.26	4200.00	4.65	4995.00	4.76
2625.00	5.42	3420.00	4.27	4215.00	4.66	5010.00	4.76
2640.00	5.41	3435.00	4.28	4230.00	4.66	5025.00	4.76
2655.00	5.40	3450.00	4.29	4245.00	4.67	5040.00	4.76
2670.00	5.37	3465.00	4.29	4260.00	4.66	5055.00	4.76
2685.00	5.35	3480.00	4.31	4275.00	4.66	5070.00	4.76
2700.00	5.31	3495.00	4.31	4290.00	4.67	5085.00	4.76
2715.00	5.29	3510.00	4.32	4305.00	4.68	5100.00	4.77
2730.00	5.28	3525.00	4.32	4320.00	4.67	5115.00	4.77
2745.00	5.24	3540.00	4.34	4335.00	4.67	5130.00	4.77
2760.00	5.20	3555.00	4.34	4350.00	4.68	5145.00	4.78
2775.00	5.17	3570.00	4.35	4365.00	4.68	5160.00	4.78
2790.00	5.15	3585.00	4.36	4380.00	4.68	5175.00	4.79
2805.00	5.14	3600.00	4.37	4395.00	4.69	5190.00	4.79
2820.00	5.12	3615.00	4.38	4410.00	4.70	5205.00	4.80
2835.00	5.11	3630.00	4.39	4425.00	4.70	5220.00	4.80
2850.00	5.09	3645.00	4.40	4440.00	4.70	5235.00	4.81
2865.00	5.08	3660.00	4.41	4455.00	4.71	5250.00	4.81
2880.00	5.06	3675.00	4.42	4470.00	4.71	5265.00	4.82
2895.00	5.05	3690.00	4.43	4485.00	4.71	5280.00	4.82
2910.00	5.05	3705.00	4.44	4500.00	4.71	5295.00	4.83
2925.00	5.04	3720.00	4.45	4515.00	4.72	5310.00	4.83
2940.00	5.03	3735.00	4.46	4530.00	4.72	5325.00	4.84
2955.00	5.03	3750.00	4.47	4545.00	4.73	5340.00	4.84
2970.00	5.02	3765.00	4.48	4560.00	4.73	5355.00	4.84
2985.00	5.01	3780.00	4.49	4575.00	4.74	5370.00	4.85
3000.00	5.01	3795.00	4.50	4590.00	4.73	5385.00	4.85
3015.00	5.01	3810.00	4.51	4605.00	4.74	5400.00	4.86
3030.00	5.01	3825.00	4.51	4620.00	4.74	5415.00	4.86
3045.00	5.02	3840.00	4.52	4635.00	4.75	5430.00	4.86
3060.00	5.02	3855.00	4.52	4650.00	4.75	5445.00	4.87
3075.00	5.02	3870.00	4.53	4665.00	4.74	5460.00	4.87
3090.00	5.02	3885.00	4.54	4680.00	4.74	5475.00	4.87
3105.00	4.97	3900.00	4.55	4695.00	4.74	5490.00	4.88
3120.00	4.86	3915.00	4.56	4710.00	4.74	5505.00	4.89

Elapsed Time	Input 1	Elapsed Time	Input 1	Elapsed Time	Input 1	Elapsed Time	Input 1
5520.00	4.89	6315.00	5.00	7110.00	5.07	7905.00	5.16
5535.00	4.90	6330.00	5.00	7125.00	5.07	7920.00	5.15
5550.00	4.90	6345.00	5.00	7140.00	5.08	7935.00	5.15
5565.00	4.89	6360.00	5.00	7155.00	5.08	7950.00	5.16
5580.00	4.90	6375.00	5.00	7170.00	5.08	7965.00	5.16
5595.00	4.90	6390.00	5.00	7185.00	5.09	7980.00	5.16
5610.00	4.90	6405.00	5.00	7200.00	5.09	7995.00	5.17
5625.00	4.90	6420.00	5.00	7215.00	5.08	8010.00	5.17
5640.00	4.91	6435.00	5.00	7230.00	5.09	8025.00	5.17
5655.00	4.92	6450.00	5.00	7245.00	5.08	8040.00	5.17
5670.00	4.92	6465.00	5.00	7260.00	5.09	8055.00	5.17
5685.00	4.93	6480.00	5.00	7275.00	5.09	8070.00	5.18
5700.00	4.93	6495.00	5.00	7290.00	5.09	8085.00	5.18
5715.00	4.93	6510.00	5.00	7305.00	5.09	8100.00	5.18
5730.00	4.93	6525.00	5.00	7320.00	5.09	8115.00	5.18
5745.00	4.94	6540.00	5.01	7335.00	5.09	8130.00	5.18
5760.00	4.94	6555.00	5.01	7350.00	5.09	8145.00	5.18
5775.00	4.94	6570.00	5.01	7365.00	5.09	8160.00	5.18
5790.00	4.95	6585.00	5.01	7380.00	5.10	8175.00	5.18
5805.00	4.95	6600.00	5.01	7395.00	5.10	8190.00	5.18
5820.00	4.95	6615.00	5.01	7410.00	5.10	8205.00	5.18
5835.00	4.96	6630.00	5.00	7425.00	5.11	8220.00	5.18
5850.00	4.96	6645.00	5.00	7440.00	5.12	8235.00	5.19
5865.00	4.96	6660.00	5.00	7455.00	5.12	8250.00	5.18
5880.00	4.96	6675.00	5.00	7470.00	5.13	8265.00	5.19
5895.00	4.97	6690.00	5.01	7485.00	5.13	8280.00	5.19
5910.00	4.97	6705.00	5.01	7500.00	5.13	8295.00	5.19
5925.00	4.97	6720.00	5.01	7515.00	5.13	8310.00	5.19
5940.00	4.97	6735.00	5.02	7530.00	5.13	8325.00	5.19
5955.00	4.98	6750.00	5.02	7545.00	5.13	8340.00	5.19
5970.00	4.98	6765.00	5.02	7560.00	5.13	8355.00	5.19
5985.00	4.99	6780.00	5.03	7575.00	5.13	8370.00	5.19
6000.00	4.99	6795.00	5.03	7590.00	5.13	8385.00	5.18
6015.00	4.99	6810.00	5.03	7605.00	5.14	8400.00	5.18
6030.00	4.99	6825.00	5.03	7620.00	5.14	8415.00	5.18
6045.00	5.00	6840.00	5.03	7635.00	5.14	8430.00	5.18
6060.00	5.00	6855.00	5.04	7650.00	5.14	8445.00	5.18
6075.00	5.00	6870.00	5.04	7665.00	5.14	8460.00	5.18
6090.00	5.00	6885.00	5.04	7680.00	5.14	8475.00	5.19
6105.00	5.00	6900.00	5.04	7695.00	5.14	8490.00	5.18
6120.00	5.00	6915.00	5.04	7710.00	5.14	8505.00	5.19
6135.00	5.00	6930.00	5.05	7725.00	5.15	8520.00	5.19
6150.00	5.00	6945.00	5.05	7740.00	5.15	8535.00	5.18
6165.00	5.00	6960.00	5.05	7755.00	5.15	8550.00	5.18
6180.00	5.00	6975.00	5.06	7770.00	5.15	8565.00	5.18
6195.00	5.00	6990.00	5.05	7785.00	5.15	8580.00	5.18
6210.00	5.00	7005.00	5.06	7800.00	5.15		
6225.00	5.00	7020.00	5.06	7815.00	5.15		
6240.00	5.00	7035.00	5.06	7830.00	5.15		
6255.00	5.00	7050.00	5.06	7845.00	5.15		
6270.00	5.00	7065.00	5.07	7860.00	5.15		
6285.00	5.00	7080.00	5.06	7875.00	5.15		
6300.00	5.00	7095.00	5.06	7890.00	5.15		

ERAFS1\VOL1:GEOT\ENGDATA\
KEEP\D-LOGGER\11112\1338WL

03/22 4:14pm

SE2000
Environmental Logger
10/05 16:30

Unit# 1 Test 3

Setups:	INPUT 1	INPUT 2	INPUT 3	INPUT 4
Type	Level (F)	Level (F)	Level (F)	Level (F)
Mode	Surface	Surface	Surface	Surface
I.D.	1339PW	1339	PZ1B	PZ4
Reference	0.000	0.000	0.000	0.000
SG	1.000	1.000	1.000	1.000
Linearity	0.096	0.008	0.106	0.006
Scale factor	20.063	10.002	19.989	10.035
Offset	0.051	-0.002	-0.066	0.033
Delay mSEC	50.000	50.000	50.000	50.000

Step 1 09/24 16:22:00

Elapsed Time	Input 1	Input 2	Input 3	Input 4	Elapsed Time	Input 1	Input 2	Input 3	Input 4
0.0000	-9.606	-0.823	-0.555	-0.554	0.2750	-8.878	-0.816	-0.562	-0.547
0.0083	-9.599	-0.819	-0.562	-0.550	0.2833	-8.853	-0.816	-0.562	-0.547
0.0166	-9.599	-0.823	-0.562	-0.550	0.2916	-8.827	-0.816	-0.562	-0.544
0.0250	-9.606	-0.819	-0.562	-0.547	0.3000	-8.802	-0.816	-0.562	-0.547
0.0333	-9.599	-0.823	-0.555	-0.550	0.3083	-8.777	-0.816	-0.562	-0.544
0.0416	-9.599	-0.819	-0.562	-0.547	0.3166	-8.752	-0.816	-0.562	-0.547
0.0500	-9.593	-0.823	-0.562	-0.550	0.3250	-8.726	-0.816	-0.562	-0.544
0.0583	-9.580	-0.819	-0.562	-0.550	0.3333	-8.701	-0.816	-0.562	-0.547
0.0666	-9.561	-0.823	-0.562	-0.550	0.3500	-8.644	-0.813	-0.562	-0.547
0.0750	-9.536	-0.819	-0.562	-0.547	0.3666	-8.587	-0.813	-0.562	-0.547
0.0833	-9.511	-0.819	-0.562	-0.550	0.3833	-8.536	-0.813	-0.562	-0.544
0.0916	-9.479	-0.819	-0.562	-0.547	0.4000	-8.479	-0.813	-0.562	-0.544
0.1000	-9.447	-0.819	-0.562	-0.550	0.4166	-8.429	-0.813	-0.562	-0.544
0.1083	-9.422	-0.819	-0.562	-0.547	0.4333	-8.378	-0.810	-0.562	-0.544
0.1166	-9.391	-0.823	-0.562	-0.550	0.4500	-8.328	-0.810	-0.562	-0.544
0.1250	-9.359	-0.819	-0.562	-0.547	0.4666	-8.283	-0.810	-0.562	-0.544
0.1333	-9.334	-0.819	-0.562	-0.550	0.4833	-8.233	-0.807	-0.562	-0.541
0.1416	-9.302	-0.819	-0.562	-0.547	0.5000	-8.182	-0.807	-0.562	-0.541
0.1500	-9.277	-0.819	-0.562	-0.550	0.5166	-8.119	-0.807	-0.562	-0.541
0.1583	-9.245	-0.819	-0.562	-0.547	0.5333	-8.068	-0.804	-0.562	-0.541
0.1666	-9.213	-0.819	-0.562	-0.550	0.5500	-8.018	-0.804	-0.555	-0.538
0.1750	-9.188	-0.819	-0.562	-0.547	0.5666	-7.967	-0.804	-0.562	-0.538
0.1833	-9.163	-0.819	-0.562	-0.550	0.5833	-7.916	-0.801	-0.562	-0.538
0.1916	-9.131	-0.816	-0.562	-0.547	0.6000	-7.866	-0.801	-0.555	-0.538
0.2000	-9.106	-0.819	-0.562	-0.550	0.6166	-7.809	-0.801	-0.555	-0.538
0.2083	-9.081	-0.819	-0.562	-0.547	0.6333	-7.758	-0.797	-0.562	-0.535
0.2166	-9.055	-0.819	-0.562	-0.547	0.6500	-7.714	-0.797	-0.562	-0.538
0.2250	-9.030	-0.816	-0.562	-0.547	0.6666	-7.663	-0.797	-0.555	-0.535
0.2333	-9.005	-0.816	-0.562	-0.547	0.6833	-7.619	-0.794	-0.555	-0.535
0.2416	-8.979	-0.816	-0.562	-0.547	0.7000	-7.568	-0.794	-0.555	-0.535
0.2500	-8.954	-0.819	-0.562	-0.547	0.7166	-7.524	-0.791	-0.555	-0.535
0.2583	-8.929	-0.816	-0.562	-0.547	0.7333	-7.473	-0.791	-0.555	-0.531
0.2666	-8.903	-0.816	-0.562	-0.550	0.7500	-7.423	-0.791	-0.555	-0.531

Elapsed Time	Input 1	Input 2	Input 3	Input 4
0.7666	-7.372	-0.788	-0.555	-0.531
0.7833	-7.334	-0.788	-0.555	-0.531
0.8000	-7.290	-0.788	-0.555	-0.531
0.8166	-7.239	-0.785	-0.555	-0.528
0.8333	-7.195	-0.785	-0.555	-0.528
0.8500	-7.144	-0.782	-0.555	-0.528
0.8666	-7.100	-0.778	-0.555	-0.528
0.8833	-7.056	-0.782	-0.555	-0.525
0.9000	-7.011	-0.778	-0.555	-0.525
0.9166	-6.961	-0.778	-0.555	-0.525
0.9333	-6.923	-0.775	-0.555	-0.525
0.9500	-6.885	-0.775	-0.555	-0.525
0.9666	-6.853	-0.775	-0.555	-0.522
0.9833	-6.821	-0.772	-0.555	-0.522
1.0000	-6.790	-0.772	-0.555	-0.522
1.2000	-6.385	-0.756	-0.549	-0.512
1.4000	-6.036	-0.747	-0.549	-0.509
1.6000	-5.695	-0.734	-0.543	-0.503
1.8000	-5.384	-0.722	-0.536	-0.497
2.0000	-5.087	-0.709	-0.536	-0.490
2.2000	-4.802	-0.700	-0.530	-0.487
2.4000	-4.536	-0.687	-0.524	-0.481
2.6000	-4.289	-0.678	-0.524	-0.474
2.8000	-4.054	-0.668	-0.518	-0.471
3.0000	-3.839	-0.662	-0.511	-0.465
3.2000	-3.630	-0.649	-0.505	-0.462
3.4000	-3.434	-0.640	-0.505	-0.455
3.6000	-3.244	-0.633	-0.499	-0.452
3.8000	-3.060	-0.624	-0.499	-0.446
4.0000	-2.895	-0.614	-0.492	-0.443
4.2000	-2.737	-0.608	-0.486	-0.440
4.4000	-2.591	-0.599	-0.486	-0.433
4.6000	-2.439	-0.592	-0.480	-0.430
4.8000	-2.306	-0.586	-0.473	-0.427
5.0000	-2.186	-0.577	-0.473	-0.424
5.2000	-2.065	-0.570	-0.467	-0.421
5.4000	-1.958	-0.564	-0.467	-0.417
5.6000	-1.856	-0.558	-0.461	-0.414
5.8000	-1.761	-0.551	-0.461	-0.411
6.0000	-1.666	-0.548	-0.454	-0.408
6.2000	-1.584	-0.548	-0.454	-0.405
6.4000	-1.502	-0.542	-0.448	-0.402
6.6000	-1.425	-0.536	-0.448	-0.398
6.8000	-1.349	-0.532	-0.442	-0.395
7.0000	-1.280	-0.526	-0.442	-0.392
7.2000	-1.216	-0.523	-0.435	-0.389
7.4000	-1.159	-0.517	-0.435	-0.386
7.6000	-1.102	-0.514	-0.435	-0.383
7.8000	-1.045	-0.507	-0.429	-0.383
8.0000	-1.001	-0.504	-0.429	-0.379
8.2000	-0.963	-0.501	-0.423	-0.376
8.4000	-0.931	-0.498	-0.423	-0.373
8.6000	-0.893	-0.495	-0.423	-0.373
8.8000	-0.855	-0.491	-0.416	-0.373
9.0000	-0.823	-0.488	-0.416	-0.370
9.2000	-0.792	-0.485	-0.410	-0.370
9.4000	-0.766	-0.482	-0.410	-0.367
9.6000	-0.741	-0.479	-0.410	-0.367
9.8000	-0.722	-0.479	-0.404	-0.364
10.0000	-0.703	-0.476	-0.404	-0.364
11.0000	-0.621	-0.469	-0.398	-0.357
12.0000	-0.570	-0.460	-0.391	-0.351
13.0000	-0.519	-0.454	-0.391	-0.345
14.0000	-0.488	-0.447	-0.385	-0.341
15.0000	-0.462	-0.441	-0.379	-0.338
16.0000	-0.437	-0.438	-0.372	-0.335
17.0000	-0.418	-0.435	-0.366	-0.332
18.0000	-0.405	-0.432	-0.366	-0.329
19.0000	-0.392	-0.425	-0.360	-0.326
20.0000	-0.380	-0.422	-0.353	-0.322
21.0000	-0.373	-0.416	-0.353	-0.319
22.0000	-0.367	-0.413	-0.353	-0.316
23.0000	-0.361	-0.406	-0.347	-0.316
24.0000	-0.354	-0.406	-0.347	-0.313
25.0000	-0.348	-0.400	-0.341	-0.310
26.0000	-0.342	-0.400	-0.341	-0.307
27.0000	-0.342	-0.397	-0.334	-0.307
28.0000	-0.335	-0.397	-0.334	-0.310
29.0000	-0.335	-0.391	-0.328	-0.303
30.0000	-0.329	-0.384	-0.328	-0.300
31.0000	-0.323	-0.384	-0.322	-0.300
32.0000	-0.323	-0.381	-0.322	-0.300
33.0000	-0.323	-0.378	-0.322	-0.297
34.0000	-0.316	-0.375	-0.315	-0.297
35.0000	-0.316	-0.375	-0.315	-0.297
36.0000	-0.310	-0.372	-0.315	-0.294
37.0000	-0.310	-0.368	-0.315	-0.294
38.0000	-0.310	-0.365	-0.309	-0.294
39.0000	-0.304	-0.365	-0.309	-0.291
40.0000	-0.304	-0.365	-0.309	-0.288
41.0000	-0.304	-0.362	-0.309	-0.288
42.0000	-0.304	-0.359	-0.303	-0.284
43.0000	-0.297	-0.356	-0.303	-0.284
44.0000	-0.297	-0.356	-0.303	-0.284
45.0000	-0.291	-0.353	-0.296	-0.281
46.0000	-0.291	-0.353	-0.296	-0.281
47.0000	-0.291	-0.350	-0.296	-0.278
48.0000	-0.285	-0.350	-0.296	-0.278
49.0000	-0.285	-0.346	-0.290	-0.278
50.0000	-0.285	-0.346	-0.290	-0.278
51.0000	-0.285	-0.343	-0.290	-0.278
52.0000	-0.278	-0.343	-0.290	-0.275

ERAFS1\VOL1:GEOT\ENGDATA\
KEEP\D-LOGGER\1112\1339STEP.REC

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Elapsed Time	Input 1	Input 2	Input 3	Input 4
53.0000	-0.278	-0.340	-0.290	-0.275
54.0000	-0.278	-0.337	-0.284	-0.272
55.0000	-0.278	-0.337	-0.284	-0.272
56.0000	-0.278	-0.334	-0.284	-0.272
57.0000	-0.278	-0.334	-0.284	-0.272
58.0000	-0.272	-0.334	-0.277	-0.269
59.0000	-0.272	-0.331	-0.277	-0.269
60.0000	-0.272	-0.331	-0.277	-0.269
61.0000	-0.272	-0.327	-0.277	-0.269
62.0000	-0.259	-0.324	-0.271	-0.269
63.0000	-0.259	-0.324	-0.271	-0.269
64.0000	-0.259	-0.321	-0.265	-0.269
65.0000	-0.259	-0.321	-0.265	-0.269
66.0000	-0.259	-0.318	-0.265	-0.265
67.0000	-0.253	-0.318	-0.265	-0.265
68.0000	-0.259	-0.315	-0.265	-0.265
69.0000	-0.259	-0.318	-0.271	-0.262
70.0000	-0.259	-0.315	-0.265	-0.262
71.0000	-0.259	-0.315	-0.265	-0.259
72.0000	-0.259	-0.315	-0.265	-0.259
73.0000	-0.259	-0.312	-0.265	-0.259
74.0000	-0.253	-0.312	-0.265	-0.259
75.0000	-0.253	-0.312	-0.265	-0.259
76.0000	-0.253	-0.309	-0.265	-0.256
77.0000	-0.253	-0.309	-0.259	-0.256
78.0000	-0.253	-0.309	-0.259	-0.256
79.0000	-0.253	-0.309	-0.259	-0.256
80.0000	-0.253	-0.305	-0.259	-0.256
81.0000	-0.247	-0.305	-0.259	-0.256
82.0000	-0.247	-0.302	-0.259	-0.256
83.0000	-0.247	-0.302	-0.252	-0.256
84.0000	-0.247	-0.302	-0.252	-0.253
85.0000	-0.247	-0.302	-0.252	-0.250
86.0000	-0.247	-0.302	-0.252	-0.250
87.0000	-0.247	-0.302	-0.252	-0.250
88.0000	-0.240	-0.299	-0.252	-0.250
89.0000	-0.240	-0.299	-0.252	-0.250
90.0000	-0.240	-0.296	-0.252	-0.250
91.0000	-0.240	-0.296	-0.246	-0.250
92.0000	-0.240	-0.296	-0.246	-0.246
93.0000	-0.240	-0.296	-0.252	-0.246
94.0000	-0.240	-0.296	-0.246	-0.246
95.0000	-0.240	-0.293	-0.246	-0.246
96.0000	-0.240	-0.293	-0.246	-0.246
97.0000	-0.240	-0.293	-0.246	-0.246
98.0000	-0.234	-0.290	-0.246	-0.246
99.0000	-0.234	-0.290	-0.246	-0.246
100.000	-0.234	-0.290	-0.240	-0.243
101.000	-0.234	-0.290	-0.240	-0.243
102.000	-0.234	-0.286	-0.240	-0.243
103.000	-0.234	-0.286	-0.240	-0.243
104.000	-0.234	-0.286	-0.240	-0.243
105.000	-0.234	-0.286	-0.240	-0.243
106.000	-0.234	-0.283	-0.240	-0.243
107.000	-0.228	-0.286	-0.240	-0.240
108.000	-0.228	-0.283	-0.240	-0.240
109.000	-0.228	-0.283	-0.233	-0.240
110.000	-0.228	-0.280	-0.233	-0.237
111.000	-0.228	-0.280	-0.233	-0.240
112.000	-0.228	-0.280	-0.233	-0.237
113.000	-0.228	-0.280	-0.233	-0.237
114.000	-0.228	-0.280	-0.233	-0.237
115.000	-0.228	-0.280	-0.233	-0.237
116.000	-0.228	-0.280	-0.233	-0.237
117.000	-0.228	-0.280	-0.233	-0.237
118.000	-0.221	-0.277	-0.233	-0.237
119.000	-0.228	-0.277	-0.233	-0.237
120.000	-0.221	-0.277	-0.233	-0.237
121.000	-0.221	-0.274	-0.233	-0.234
122.000	-0.221	-0.274	-0.233	-0.234
123.000	-0.221	-0.274	-0.233	-0.234
124.000	-0.221	-0.274	-0.233	-0.234
125.000	-0.221	-0.274	-0.227	-0.234
126.000	-0.221	-0.274	-0.227	-0.234
127.000	-0.221	-0.274	-0.227	-0.234
128.000	-0.221	-0.271	-0.227	-0.231
129.000	-0.215	-0.271	-0.227	-0.231
130.000	-0.215	-0.271	-0.227	-0.231
131.000	-0.215	-0.271	-0.227	-0.231
132.000	-0.215	-0.271	-0.227	-0.227
133.000	-0.215	-0.271	-0.227	-0.227
134.000	-0.215	-0.268	-0.227	-0.227
135.000	-0.215	-0.268	-0.227	-0.227
136.000	-0.215	-0.268	-0.221	-0.227
137.000	-0.209	-0.264	-0.221	-0.227
138.000	-0.215	-0.268	-0.221	-0.227
139.000	-0.215	-0.264	-0.221	-0.227
140.000	-0.209	-0.261	-0.221	-0.227
141.000	-0.209	-0.261	-0.221	-0.227
142.000	-0.209	-0.261	-0.221	-0.227
143.000	-0.209	-0.261	-0.221	-0.227
144.000	-0.209	-0.261	-0.221	-0.227
145.000	-0.209	-0.261	-0.221	-0.227
146.000	-0.209	-0.258	-0.221	-0.227
147.000	-0.209	-0.261	-0.221	-0.224
148.000	-0.209	-0.258	-0.214	-0.224
149.000	-0.209	-0.258	-0.221	-0.224
150.000	-0.209	-0.258	-0.221	-0.224
151.000	-0.209	-0.258	-0.214	-0.221
152.000	-0.209	-0.258	-0.214	-0.221
153.000	-0.202	-0.258	-0.214	-0.221
154.000	-0.202	-0.258	-0.214	-0.221

ERAFS1\VOL1:GEOT\ENGDATA\
KEEP\D-LOGGER\11112\1339STEP.REC

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Elapsed Time	Input 1	Input 2	Input 3	Input 4
155.000	-0.202	-0.258	-0.214	-0.221
156.000	-0.202	-0.255	-0.214	-0.221
157.000	-0.202	-0.255	-0.214	-0.221
158.000	-0.202	-0.255	-0.214	-0.221
159.000	-0.202	-0.255	-0.214	-0.221
160.000	-0.202	-0.252	-0.214	-0.221
161.000	-0.202	-0.252	-0.214	-0.221
162.000	-0.202	-0.252	-0.214	-0.221
163.000	-0.202	-0.252	-0.214	-0.221
164.000	-0.202	-0.252	-0.214	-0.221
165.000	-0.202	-0.252	-0.208	-0.221
166.000	-0.202	-0.252	-0.208	-0.221
167.000	-0.202	-0.252	-0.208	-0.218
168.000	-0.196	-0.252	-0.208	-0.218
169.000	-0.196	-0.252	-0.208	-0.221
170.000	-0.196	-0.252	-0.208	-0.218
171.000	-0.196	-0.249	-0.208	-0.218
172.000	-0.196	-0.249	-0.208	-0.218
173.000	-0.196	-0.249	-0.208	-0.218
174.000	-0.196	-0.249	-0.208	-0.218
175.000	-0.196	-0.249	-0.208	-0.218
176.000	-0.196	-0.249	-0.208	-0.215
177.000	-0.196	-0.249	-0.208	-0.215
178.000	-0.196	-0.249	-0.208	-0.215
179.000	-0.196	-0.245	-0.208	-0.215
180.000	-0.196	-0.245	-0.202	-0.215
181.000	-0.196	-0.245	-0.202	-0.215
182.000	-0.196	-0.245	-0.202	-0.215
183.000	-0.196	-0.245	-0.202	-0.215
184.000	-0.190	-0.245	-0.202	-0.215
185.000	-0.190	-0.242	-0.202	-0.215
186.000	-0.190	-0.242	-0.202	-0.215
187.000	-0.190	-0.242	-0.202	-0.215
188.000	-0.190	-0.242	-0.202	-0.215
189.000	-0.190	-0.242	-0.202	-0.215
190.000	-0.190	-0.242	-0.202	-0.215
191.000	-0.190	-0.239	-0.202	-0.215
192.000	-0.190	-0.242	-0.202	-0.215
193.000	-0.190	-0.239	-0.202	-0.212
194.000	-0.190	-0.242	-0.202	-0.212
195.000	-0.190	-0.239	-0.202	-0.212
196.000	-0.190	-0.239	-0.202	-0.212
197.000	-0.190	-0.239	-0.202	-0.212
198.000	-0.190	-0.239	-0.202	-0.212
199.000	-0.190	-0.239	-0.202	-0.212
200.000	-0.190	-0.239	-0.202	-0.212
201.000	-0.190	-0.239	-0.202	-0.212
202.000	-0.190	-0.239	-0.195	-0.212
203.000	-0.190	-0.239	-0.195	-0.212
204.000	-0.183	-0.239	-0.202	-0.208
205.000	-0.183	-0.239	-0.195	-0.208
206.000	-0.183	-0.236	-0.195	-0.212
207.000	-0.183	-0.236	-0.195	-0.212
208.000	-0.183	-0.236	-0.195	-0.208
209.000	-0.183	-0.236	-0.195	-0.208
210.000	-0.183	-0.236	-0.195	-0.208
211.000	-0.183	-0.236	-0.195	-0.208
212.000	-0.183	-0.236	-0.195	-0.212
213.000	-0.183	-0.236	-0.195	-0.208
214.000	-0.183	-0.233	-0.195	-0.208
215.000	-0.183	-0.233	-0.195	-0.208
216.000	-0.183	-0.233	-0.195	-0.208
217.000	-0.183	-0.233	-0.195	-0.208
218.000	-0.183	-0.233	-0.195	-0.208
219.000	-0.183	-0.233	-0.195	-0.205
220.000	-0.183	-0.233	-0.195	-0.208
221.000	-0.183	-0.233	-0.195	-0.208
222.000	-0.183	-0.233	-0.195	-0.208
223.000	-0.183	-0.233	-0.195	-0.208
224.000	-0.183	-0.233	-0.195	-0.208
225.000	-0.183	-0.233	-0.195	-0.205
226.000	-0.183	-0.233	-0.195	-0.205
227.000	-0.183	-0.230	-0.195	-0.205
228.000	-0.183	-0.230	-0.195	-0.208
229.000	-0.183	-0.230	-0.189	-0.205
230.000	-0.177	-0.230	-0.189	-0.208
231.000	-0.177	-0.230	-0.189	-0.208
232.000	-0.177	-0.230	-0.189	-0.205
233.000	-0.177	-0.227	-0.189	-0.205
234.000	-0.177	-0.230	-0.189	-0.205
235.000	-0.177	-0.230	-0.189	-0.205
236.000	-0.177	-0.230	-0.189	-0.205
237.000	-0.177	-0.227	-0.189	-0.205
238.000	-0.177	-0.227	-0.189	-0.205
239.000	-0.177	-0.227	-0.189	-0.202
240.000	-0.177	-0.227	-0.189	-0.205
241.000	-0.177	-0.227	-0.189	-0.202
242.000	-0.177	-0.227	-0.189	-0.202
243.000	-0.177	-0.227	-0.189	-0.202
244.000	-0.177	-0.227	-0.189	-0.202
245.000	-0.177	-0.227	-0.189	-0.202
246.000	-0.177	-0.227	-0.189	-0.202
247.000	-0.177	-0.223	-0.189	-0.202
248.000	-0.177	-0.223	-0.189	-0.202
249.000	-0.177	-0.223	-0.189	-0.202
250.000	-0.171	-0.223	-0.189	-0.202
251.000	-0.177	-0.227	-0.189	-0.202
252.000	-0.177	-0.223	-0.189	-0.202
253.000	-0.177	-0.223	-0.183	-0.202
254.000	-0.171	-0.223	-0.189	-0.202
255.000	-0.177	-0.223	-0.189	-0.202
256.000	-0.171	-0.223	-0.189	-0.202

Elapsed Time	Input 1	Input 2	Input 3	Input 4
257.000	-0.171	-0.223	-0.183	-0.202
258.000	-0.171	-0.223	-0.183	-0.202
259.000	-0.171	-0.220	-0.183	-0.202
260.000	-0.171	-0.223	-0.183	-0.202
261.000	-0.171	-0.220	-0.183	-0.202
262.000	-0.171	-0.223	-0.189	-0.202
263.000	-0.171	-0.223	-0.183	-0.202
264.000	-0.171	-0.220	-0.189	-0.199
265.000	-0.171	-0.220	-0.183	-0.199
266.000	-0.171	-0.220	-0.183	-0.199
267.000	-0.171	-0.220	-0.183	-0.199
268.000	-0.171	-0.220	-0.183	-0.199
269.000	-0.171	-0.220	-0.183	-0.199
270.000	-0.171	-0.217	-0.183	-0.199
271.000	-0.171	-0.220	-0.183	-0.199
272.000	-0.171	-0.217	-0.183	-0.199
273.000	-0.171	-0.220	-0.183	-0.199
274.000	-0.171	-0.220	-0.183	-0.199
275.000	-0.171	-0.220	-0.183	-0.199
276.000	-0.171	-0.217	-0.183	-0.199
277.000	-0.171	-0.220	-0.183	-0.199
278.000	-0.171	-0.217	-0.183	-0.199
279.000	-0.164	-0.217	-0.183	-0.199
280.000	-0.171	-0.217	-0.183	-0.199
281.000	-0.164	-0.217	-0.183	-0.199
282.000	-0.164	-0.217	-0.183	-0.199
283.000	-0.171	-0.214	-0.183	-0.199
284.000	-0.171	-0.214	-0.183	-0.199
285.000	-0.171	-0.214	-0.183	-0.196
286.000	-0.171	-0.214	-0.183	-0.199
287.000	-0.171	-0.214	-0.183	-0.196
288.000	-0.164	-0.214	-0.183	-0.196
289.000	-0.164	-0.214	-0.176	-0.196
290.000	-0.164	-0.211	-0.176	-0.196
291.000	-0.164	-0.214	-0.176	-0.196
292.000	-0.164	-0.211	-0.176	-0.196
293.000	-0.164	-0.211	-0.183	-0.196
294.000	-0.164	-0.211	-0.176	-0.196
295.000	-0.164	-0.211	-0.176	-0.196
296.000	-0.164	-0.211	-0.176	-0.196
297.000	-0.164	-0.211	-0.176	-0.196
298.000	-0.164	-0.211	-0.176	-0.196
299.000	-0.164	-0.211	-0.176	-0.193
300.000	-0.164	-0.211	-0.176	-0.193
301.000	-0.164	-0.211	-0.176	-0.193
302.000	-0.164	-0.211	-0.176	-0.196
303.000	-0.164	-0.211	-0.176	-0.196
304.000	-0.164	-0.211	-0.176	-0.196
305.000	-0.164	-0.211	-0.176	-0.193
306.000	-0.164	-0.211	-0.176	-0.193
307.000	-0.164	-0.211	-0.176	-0.193
308.000	-0.164	-0.208	-0.176	-0.193
309.000	-0.164	-0.208	-0.176	-0.193
310.000	-0.164	-0.211	-0.176	-0.193
311.000	-0.164	-0.208	-0.176	-0.193
312.000	-0.158	-0.211	-0.176	-0.193
313.000	-0.164	-0.211	-0.176	-0.193
314.000	-0.164	-0.211	-0.176	-0.193
315.000	-0.164	-0.208	-0.176	-0.189
316.000	-0.164	-0.208	-0.176	-0.189
317.000	-0.164	-0.208	-0.176	-0.193
318.000	-0.158	-0.208	-0.176	-0.193
319.000	-0.164	-0.208	-0.176	-0.193
320.000	-0.158	-0.208	-0.176	-0.193
321.000	-0.164	-0.208	-0.176	-0.193
322.000	-0.158	-0.208	-0.176	-0.193
323.000	-0.158	-0.208	-0.176	-0.193
324.000	-0.158	-0.208	-0.176	-0.193
325.000	-0.158	-0.208	-0.170	-0.189
326.000	-0.158	-0.208	-0.170	-0.189
327.000	-0.158	-0.208	-0.176	-0.189
328.000	-0.158	-0.208	-0.176	-0.189
329.000	-0.158	-0.204	-0.170	-0.189
330.000	-0.158	-0.208	-0.170	-0.189
331.000	-0.158	-0.204	-0.170	-0.189
332.000	-0.158	-0.204	-0.170	-0.189
333.000	-0.158	-0.208	-0.170	-0.189
334.000	-0.158	-0.204	-0.170	-0.189
335.000	-0.158	-0.204	-0.170	-0.186
336.000	-0.158	-0.204	-0.170	-0.186
337.000	-0.158	-0.204	-0.170	-0.189
338.000	-0.158	-0.208	-0.170	-0.186
339.000	-0.158	-0.204	-0.170	-0.189
340.000	-0.158	-0.204	-0.170	-0.189
341.000	-0.158	-0.204	-0.170	-0.189
342.000	-0.158	-0.204	-0.170	-0.186
343.000	-0.158	-0.204	-0.170	-0.186
344.000	-0.158	-0.204	-0.170	-0.186
345.000	-0.158	-0.204	-0.170	-0.186
346.000	-0.158	-0.204	-0.170	-0.186
347.000	-0.158	-0.204	-0.170	-0.186
348.000	-0.158	-0.204	-0.170	-0.186
349.000	-0.158	-0.204	-0.170	-0.186
350.000	-0.158	-0.204	-0.170	-0.186
351.000	-0.158	-0.204	-0.170	-0.186
352.000	-0.158	-0.201	-0.170	-0.186
353.000	-0.158	-0.201	-0.170	-0.186
354.000	-0.158	-0.201	-0.170	-0.186
355.000	-0.158	-0.204	-0.170	-0.186
356.000	-0.158	-0.201	-0.170	-0.186
357.000	-0.152	-0.201	-0.170	-0.183
358.000	-0.158	-0.201	-0.170	-0.183

Elapsed Time	Input 1	Input 2	Input 3	Input 4
359.000	-0.152	-0.201	-0.170	-0.183
360.000	-0.152	-0.201	-0.170	-0.183
361.000	-0.152	-0.201	-0.170	-0.186
362.000	-0.152	-0.201	-0.170	-0.186
363.000	-0.152	-0.201	-0.170	-0.186
364.000	-0.152	-0.201	-0.164	-0.186
365.000	-0.152	-0.201	-0.164	-0.183
366.000	-0.152	-0.201	-0.164	-0.183
367.000	-0.152	-0.201	-0.164	-0.186
368.000	-0.152	-0.201	-0.170	-0.186
369.000	-0.152	-0.201	-0.164	-0.186
370.000	-0.152	-0.201	-0.164	-0.186
371.000	-0.152	-0.201	-0.164	-0.183
372.000	-0.152	-0.201	-0.170	-0.183
373.000	-0.152	-0.201	-0.164	-0.183
374.000	-0.152	-0.201	-0.170	-0.183
375.000	-0.152	-0.201	-0.164	-0.183
376.000	-0.152	-0.201	-0.164	-0.183
377.000	-0.152	-0.201	-0.164	-0.183
378.000	-0.152	-0.201	-0.164	-0.183
379.000	-0.152	-0.198	-0.164	-0.183
380.000	-0.152	-0.198	-0.164	-0.183
381.000	-0.152	-0.198	-0.164	-0.183
382.000	-0.152	-0.198	-0.164	-0.183
383.000	-0.152	-0.198	-0.164	-0.183
384.000	-0.152	-0.198	-0.164	-0.183
385.000	-0.152	-0.198	-0.164	-0.183
386.000	-0.152	-0.198	-0.164	-0.183
387.000	-0.152	-0.198	-0.164	-0.180
388.000	-0.152	-0.198	-0.164	-0.180
389.000	-0.152	-0.198	-0.164	-0.180
390.000	-0.152	-0.198	-0.164	-0.180
391.000	-0.152	-0.198	-0.164	-0.180
392.000	-0.152	-0.198	-0.164	-0.180
393.000	-0.152	-0.198	-0.164	-0.180
394.000	-0.152	-0.198	-0.164	-0.183
395.000	-0.152	-0.198	-0.164	-0.183
396.000	-0.152	-0.195	-0.164	-0.183
397.000	-0.152	-0.198	-0.164	-0.183
398.000	-0.152	-0.198	-0.164	-0.180
399.000	-0.152	-0.198	-0.164	-0.180
400.000	-0.152	-0.198	-0.164	-0.180
401.000	-0.152	-0.198	-0.164	-0.180
402.000	-0.152	-0.198	-0.164	-0.180
403.000	-0.152	-0.198	-0.164	-0.180
404.000	-0.152	-0.198	-0.164	-0.180
405.000	-0.152	-0.195	-0.164	-0.180
406.000	-0.145	-0.195	-0.164	-0.180
407.000	-0.145	-0.195	-0.164	-0.180
408.000	-0.145	-0.195	-0.164	-0.180
409.000	-0.145	-0.195	-0.164	-0.180
410.000	-0.145	-0.195	-0.157	-0.180
411.000	-0.145	-0.195	-0.157	-0.180
412.000	-0.145	-0.195	-0.157	-0.180
413.000	-0.145	-0.195	-0.164	-0.177
414.000	-0.145	-0.195	-0.157	-0.177
415.000	-0.145	-0.195	-0.164	-0.180
416.000	-0.145	-0.195	-0.157	-0.180
417.000	-0.145	-0.195	-0.157	-0.177
418.000	-0.145	-0.195	-0.164	-0.177
419.000	-0.145	-0.192	-0.164	-0.177
420.000	-0.145	-0.195	-0.157	-0.177
421.000	-0.145	-0.195	-0.157	-0.177
422.000	-0.145	-0.195	-0.157	-0.177
423.000	-0.145	-0.192	-0.157	-0.177
424.000	-0.145	-0.192	-0.157	-0.177
425.000	-0.145	-0.192	-0.157	-0.177
426.000	-0.145	-0.195	-0.157	-0.177
427.000	-0.145	-0.195	-0.157	-0.177
428.000	-0.145	-0.192	-0.164	-0.177
429.000	-0.145	-0.195	-0.157	-0.177
430.000	-0.145	-0.192	-0.157	-0.177
431.000	-0.145	-0.192	-0.157	-0.177
432.000	-0.145	-0.192	-0.157	-0.177
433.000	-0.145	-0.192	-0.157	-0.177
434.000	-0.145	-0.192	-0.157	-0.177
435.000	-0.145	-0.195	-0.157	-0.177
436.000	-0.145	-0.192	-0.157	-0.177
437.000	-0.145	-0.192	-0.157	-0.177
438.000	-0.145	-0.192	-0.157	-0.177
439.000	-0.145	-0.192	-0.157	-0.174
440.000	-0.145	-0.192	-0.157	-0.174
441.000	-0.145	-0.192	-0.157	-0.174
442.000	-0.145	-0.192	-0.157	-0.174
443.000	-0.145	-0.192	-0.157	-0.174
444.000	-0.145	-0.192	-0.157	-0.174
445.000	-0.145	-0.192	-0.157	-0.177
446.000	-0.145	-0.192	-0.157	-0.174
447.000	-0.145	-0.192	-0.157	-0.174
448.000	-0.145	-0.192	-0.157	-0.174
449.000	-0.145	-0.192	-0.157	-0.174
450.000	-0.145	-0.192	-0.157	-0.174
451.000	-0.145	-0.192	-0.157	-0.174
452.000	-0.145	-0.189	-0.157	-0.174
453.000	-0.145	-0.189	-0.157	-0.174
454.000	-0.145	-0.189	-0.157	-0.174
455.000	-0.139	-0.189	-0.157	-0.174
456.000	-0.139	-0.189	-0.157	-0.174
457.000	-0.145	-0.189	-0.157	-0.174
458.000	-0.139	-0.192	-0.157	-0.170
459.000	-0.139	-0.192	-0.157	-0.174
460.000	-0.139	-0.192	-0.157	-0.174

Elapsed Time	Input 1	Input 2	Input 3	Input 4
461.000	-0.145	-0.189	-0.157	-0.174
462.000	-0.139	-0.192	-0.157	-0.170
463.000	-0.139	-0.189	-0.157	-0.170
464.000	-0.145	-0.189	-0.157	-0.174
465.000	-0.139	-0.189	-0.157	-0.174
466.000	-0.139	-0.189	-0.157	-0.174
467.000	-0.139	-0.189	-0.157	-0.174
468.000	-0.139	-0.189	-0.157	-0.170
469.000	-0.139	-0.189	-0.157	-0.174
470.000	-0.139	-0.189	-0.157	-0.174
471.000	-0.139	-0.189	-0.157	-0.174
472.000	-0.139	-0.186	-0.151	-0.174
473.000	-0.139	-0.186	-0.151	-0.170
474.000	-0.139	-0.186	-0.157	-0.170
475.000	-0.139	-0.186	-0.157	-0.170
476.000	-0.139	-0.186	-0.157	-0.170
477.000	-0.139	-0.186	-0.157	-0.174
478.000	-0.139	-0.186	-0.151	-0.174
479.000	-0.139	-0.186	-0.151	-0.170
480.000	-0.139	-0.186	-0.151	-0.174
481.000	-0.139	-0.186	-0.151	-0.170
482.000	-0.139	-0.186	-0.151	-0.170
483.000	-0.139	-0.186	-0.151	-0.170
484.000	-0.139	-0.186	-0.151	-0.167
485.000	-0.139	-0.186	-0.151	-0.170
486.000	-0.139	-0.186	-0.151	-0.170
487.000	-0.139	-0.186	-0.151	-0.170
488.000	-0.139	-0.186	-0.151	-0.170
489.000	-0.139	-0.186	-0.151	-0.170
490.000	-0.139	-0.186	-0.151	-0.170
491.000	-0.139	-0.186	-0.151	-0.170
492.000	-0.139	-0.186	-0.151	-0.170
493.000	-0.139	-0.186	-0.151	-0.170
494.000	-0.139	-0.182	-0.151	-0.167
495.000	-0.139	-0.182	-0.151	-0.167
496.000	-0.139	-0.186	-0.151	-0.167
497.000	-0.139	-0.182	-0.151	-0.167
498.000	-0.139	-0.182	-0.151	-0.167
499.000	-0.139	-0.182	-0.151	-0.170
500.000	-0.139	-0.182	-0.151	-0.170
501.000	-0.139	-0.182	-0.151	-0.167
502.000	-0.139	-0.182	-0.151	-0.167
503.000	-0.139	-0.182	-0.151	-0.167
504.000	-0.139	-0.182	-0.151	-0.167
505.000	-0.139	-0.182	-0.151	-0.167
506.000	-0.139	-0.182	-0.151	-0.167
507.000	-0.139	-0.182	-0.151	-0.167
508.000	-0.139	-0.182	-0.151	-0.167
509.000	-0.139	-0.182	-0.151	-0.167
510.000	-0.139	-0.182	-0.151	-0.167
511.000	-0.139	-0.182	-0.151	-0.167
512.000	-0.133	-0.182	-0.151	-0.167
513.000	-0.139	-0.182	-0.151	-0.167
514.000	-0.139	-0.182	-0.151	-0.167
515.000	-0.139	-0.182	-0.151	-0.167
516.000	-0.139	-0.182	-0.151	-0.167
517.000	-0.139	-0.182	-0.151	-0.164
518.000	-0.133	-0.182	-0.151	-0.164
519.000	-0.133	-0.182	-0.151	-0.167
520.000	-0.133	-0.182	-0.151	-0.167
521.000	-0.133	-0.182	-0.151	-0.167
522.000	-0.133	-0.182	-0.151	-0.167
523.000	-0.133	-0.182	-0.151	-0.167
524.000	-0.133	-0.179	-0.151	-0.164
525.000	-0.133	-0.179	-0.151	-0.164
526.000	-0.133	-0.182	-0.151	-0.164
527.000	-0.139	-0.179	-0.151	-0.164
528.000	-0.139	-0.179	-0.151	-0.164
529.000	-0.133	-0.182	-0.151	-0.164
530.000	-0.133	-0.182	-0.151	-0.164
531.000	-0.133	-0.182	-0.145	-0.164
532.000	-0.133	-0.182	-0.151	-0.164
533.000	-0.133	-0.179	-0.145	-0.164
534.000	-0.133	-0.182	-0.151	-0.164
535.000	-0.133	-0.179	-0.145	-0.164
536.000	-0.133	-0.179	-0.151	-0.164
537.000	-0.133	-0.179	-0.145	-0.164
538.000	-0.133	-0.179	-0.151	-0.164
539.000	-0.133	-0.179	-0.145	-0.164
540.000	-0.133	-0.179	-0.145	-0.164
541.000	-0.133	-0.179	-0.145	-0.164
542.000	-0.133	-0.179	-0.145	-0.164
543.000	-0.133	-0.179	-0.145	-0.164
544.000	-0.133	-0.179	-0.145	-0.164
545.000	-0.133	-0.179	-0.151	-0.164
546.000	-0.133	-0.179	-0.145	-0.164
547.000	-0.133	-0.179	-0.151	-0.164
548.000	-0.133	-0.179	-0.145	-0.161
549.000	-0.133	-0.179	-0.151	-0.161
550.000	-0.133	-0.179	-0.145	-0.161
551.000	-0.133	-0.179	-0.145	-0.161
552.000	-0.133	-0.179	-0.145	-0.164
553.000	-0.133	-0.179	-0.145	-0.161
554.000	-0.133	-0.179	-0.145	-0.164
555.000	-0.133	-0.179	-0.145	-0.164
556.000	-0.133	-0.179	-0.145	-0.161
557.000	-0.133	-0.179	-0.145	-0.161
558.000	-0.133	-0.179	-0.145	-0.161
559.000	-0.133	-0.179	-0.145	-0.164
560.000	-0.133	-0.179	-0.145	-0.164
561.000	-0.133	-0.179	-0.145	-0.161
562.000	-0.133	-0.179	-0.145	-0.164

Elapsed Time	Input 1	Input 2	Input 3	Input 4
563.000	-0.133	-0.179	-0.145	-0.161
564.000	-0.133	-0.179	-0.145	-0.161
565.000	-0.133	-0.179	-0.145	-0.161
566.000	-0.133	-0.179	-0.145	-0.161
567.000	-0.133	-0.179	-0.145	-0.161
568.000	-0.133	-0.179	-0.145	-0.161
569.000	-0.133	-0.179	-0.145	-0.161
570.000	-0.126	-0.179	-0.145	-0.161
571.000	-0.133	-0.176	-0.145	-0.161
572.000	-0.133	-0.179	-0.145	-0.161
573.000	-0.133	-0.179	-0.145	-0.161
574.000	-0.133	-0.176	-0.145	-0.161
575.000	-0.133	-0.176	-0.145	-0.161
576.000	-0.133	-0.176	-0.145	-0.161
577.000	-0.133	-0.176	-0.145	-0.161
578.000	-0.126	-0.176	-0.145	-0.161
579.000	-0.126	-0.176	-0.145	-0.161
580.000	-0.126	-0.176	-0.145	-0.158
581.000	-0.133	-0.179	-0.145	-0.161
582.000	-0.126	-0.179	-0.145	-0.158
583.000	-0.126	-0.176	-0.145	-0.161
584.000	-0.126	-0.176	-0.145	-0.161
585.000	-0.133	-0.176	-0.145	-0.161
586.000	-0.126	-0.176	-0.145	-0.161
587.000	-0.126	-0.176	-0.145	-0.161
588.000	-0.126	-0.176	-0.145	-0.161
589.000	-0.126	-0.176	-0.145	-0.161
590.000	-0.126	-0.176	-0.138	-0.161
591.000	-0.126	-0.176	-0.145	-0.161
592.000	-0.126	-0.176	-0.145	-0.158
593.000	-0.126	-0.176	-0.145	-0.158
594.000	-0.133	-0.176	-0.145	-0.158
595.000	-0.126	-0.176	-0.145	-0.158
596.000	-0.126	-0.176	-0.145	-0.158
597.000	-0.126	-0.176	-0.145	-0.161
598.000	-0.126	-0.176	-0.145	-0.158
599.000	-0.126	-0.176	-0.145	-0.158
600.000	-0.126	-0.176	-0.145	-0.158
601.000	-0.126	-0.176	-0.145	-0.158
602.000	-0.126	-0.176	-0.145	-0.158
603.000	-0.126	-0.176	-0.145	-0.158
604.000	-0.126	-0.176	-0.145	-0.158
605.000	-0.126	-0.176	-0.145	-0.158
606.000	-0.126	-0.176	-0.145	-0.158
607.000	-0.126	-0.176	-0.145	-0.158
608.000	-0.126	-0.176	-0.145	-0.158
609.000	-0.126	-0.173	-0.138	-0.158
610.000	-0.126	-0.173	-0.145	-0.158
611.000	-0.126	-0.173	-0.145	-0.158
612.000	-0.126	-0.173	-0.138	-0.158
613.000	-0.126	-0.176	-0.145	-0.155
614.000	-0.126	-0.173	-0.145	-0.155
615.000	-0.126	-0.173	-0.145	-0.155
616.000	-0.126	-0.173	-0.145	-0.158
617.000	-0.126	-0.173	-0.138	-0.155
618.000	-0.126	-0.173	-0.138	-0.158
619.000	-0.126	-0.176	-0.145	-0.158
620.000	-0.126	-0.176	-0.138	-0.158
621.000	-0.126	-0.173	-0.138	-0.155
622.000	-0.126	-0.176	-0.138	-0.155
623.000	-0.126	-0.173	-0.145	-0.155
624.000	-0.126	-0.173	-0.145	-0.155
625.000	-0.126	-0.173	-0.145	-0.155
626.000	-0.126	-0.173	-0.138	-0.155
627.000	-0.126	-0.173	-0.138	-0.155
628.000	-0.126	-0.173	-0.145	-0.155
629.000	-0.126	-0.173	-0.145	-0.155
630.000	-0.126	-0.173	-0.145	-0.155
631.000	-0.126	-0.173	-0.138	-0.155
632.000	-0.126	-0.173	-0.138	-0.155
633.000	-0.126	-0.173	-0.145	-0.155
634.000	-0.126	-0.173	-0.138	-0.155
635.000	-0.126	-0.173	-0.138	-0.155
636.000	-0.126	-0.173	-0.138	-0.155
637.000	-0.126	-0.170	-0.138	-0.155
638.000	-0.126	-0.173	-0.138	-0.155
639.000	-0.126	-0.170	-0.138	-0.155
640.000	-0.126	-0.170	-0.138	-0.155
641.000	-0.126	-0.170	-0.138	-0.155
642.000	-0.126	-0.173	-0.138	-0.155
643.000	-0.126	-0.173	-0.138	-0.155
644.000	-0.126	-0.173	-0.138	-0.155
645.000	-0.126	-0.173	-0.138	-0.155
646.000	-0.126	-0.170	-0.138	-0.155
647.000	-0.126	-0.170	-0.138	-0.155
648.000	-0.126	-0.173	-0.138	-0.155
649.000	-0.126	-0.170	-0.138	-0.155
650.000	-0.120	-0.170	-0.138	-0.155
651.000	-0.126	-0.170	-0.138	-0.151
652.000	-0.126	-0.170	-0.138	-0.151
653.000	-0.120	-0.170	-0.138	-0.151
654.000	-0.126	-0.170	-0.138	-0.155
655.000	-0.120	-0.170	-0.138	-0.155
656.000	-0.126	-0.170	-0.138	-0.155
657.000	-0.126	-0.170	-0.138	-0.155
658.000	-0.120	-0.170	-0.138	-0.155
659.000	-0.120	-0.170	-0.138	-0.155
660.000	-0.120	-0.170	-0.138	-0.155
661.000	-0.126	-0.170	-0.138	-0.155
662.000	-0.126	-0.170	-0.138	-0.151
663.000	-0.120	-0.170	-0.138	-0.151
664.000	-0.120	-0.170	-0.138	-0.155

Elapsed Time	Input 1	Input 2	Input 3	Input 4
665.000	-0.120	-0.170	-0.138	-0.151
666.000	-0.120	-0.170	-0.138	-0.151
667.000	-0.120	-0.170	-0.138	-0.151
668.000	-0.120	-0.170	-0.138	-0.151
669.000	-0.120	-0.170	-0.138	-0.151
670.000	-0.120	-0.170	-0.138	-0.151
671.000	-0.120	-0.170	-0.138	-0.151
672.000	-0.120	-0.170	-0.138	-0.151
673.000	-0.120	-0.170	-0.138	-0.151
674.000	-0.120	-0.170	-0.138	-0.151
675.000	-0.120	-0.170	-0.138	-0.151
676.000	-0.120	-0.170	-0.138	-0.151
677.000	-0.120	-0.170	-0.138	-0.151
678.000	-0.120	-0.170	-0.138	-0.151
679.000	-0.120	-0.170	-0.138	-0.151
680.000	-0.120	-0.170	-0.138	-0.151
681.000	-0.120	-0.170	-0.138	-0.151
682.000	-0.120	-0.170	-0.138	-0.151
683.000	-0.120	-0.170	-0.138	-0.151
684.000	-0.120	-0.170	-0.138	-0.151
685.000	-0.120	-0.170	-0.138	-0.151
686.000	-0.120	-0.170	-0.138	-0.151
687.000	-0.120	-0.170	-0.138	-0.151
688.000	-0.120	-0.170	-0.138	-0.151
689.000	-0.120	-0.170	-0.138	-0.151
690.000	-0.120	-0.170	-0.138	-0.151
691.000	-0.120	-0.170	-0.138	-0.151
692.000	-0.120	-0.170	-0.138	-0.151
693.000	-0.120	-0.170	-0.138	-0.148
694.000	-0.120	-0.170	-0.138	-0.148
695.000	-0.120	-0.170	-0.138	-0.148
696.000	-0.120	-0.170	-0.138	-0.151
697.000	-0.120	-0.170	-0.138	-0.148
698.000	-0.120	-0.170	-0.138	-0.148
699.000	-0.120	-0.170	-0.138	-0.148
700.000	-0.120	-0.170	-0.138	-0.148
701.000	-0.120	-0.170	-0.138	-0.148
702.000	-0.120	-0.167	-0.138	-0.148
703.000	-0.120	-0.167	-0.138	-0.148
704.000	-0.120	-0.170	-0.138	-0.148
705.000	-0.120	-0.167	-0.138	-0.148
706.000	-0.120	-0.167	-0.132	-0.148
707.000	-0.120	-0.167	-0.132	-0.148
708.000	-0.120	-0.167	-0.132	-0.148
709.000	-0.120	-0.167	-0.132	-0.148
710.000	-0.120	-0.167	-0.132	-0.148
711.000	-0.120	-0.167	-0.132	-0.148
712.000	-0.120	-0.167	-0.132	-0.148
713.000	-0.120	-0.167	-0.132	-0.148
714.000	-0.120	-0.167	-0.132	-0.148
715.000	-0.120	-0.167	-0.138	-0.148
716.000	-0.120	-0.167	-0.132	-0.148
717.000	-0.120	-0.167	-0.132	-0.148
718.000	-0.120	-0.167	-0.132	-0.148
719.000	-0.120	-0.167	-0.132	-0.148
720.000	-0.120	-0.167	-0.132	-0.148
721.000	-0.120	-0.167	-0.138	-0.148
722.000	-0.120	-0.167	-0.138	-0.148
723.000	-0.120	-0.167	-0.132	-0.148
724.000	-0.120	-0.167	-0.132	-0.148
725.000	-0.120	-0.167	-0.132	-0.148
726.000	-0.120	-0.167	-0.132	-0.148
727.000	-0.120	-0.167	-0.132	-0.148
728.000	-0.120	-0.163	-0.132	-0.148
729.000	-0.120	-0.163	-0.132	-0.148
730.000	-0.120	-0.163	-0.132	-0.148
731.000	-0.120	-0.167	-0.132	-0.148
732.000	-0.120	-0.163	-0.132	-0.148
733.000	-0.120	-0.167	-0.132	-0.148
734.000	-0.114	-0.167	-0.132	-0.148
735.000	-0.120	-0.163	-0.132	-0.145
736.000	-0.120	-0.167	-0.132	-0.145
737.000	-0.120	-0.167	-0.132	-0.145
738.000	-0.120	-0.163	-0.132	-0.148
739.000	-0.120	-0.163	-0.132	-0.145
740.000	-0.120	-0.167	-0.132	-0.145
741.000	-0.120	-0.163	-0.132	-0.145
742.000	-0.120	-0.163	-0.132	-0.145
743.000	-0.120	-0.163	-0.132	-0.145
744.000	-0.120	-0.163	-0.132	-0.148
745.000	-0.120	-0.163	-0.132	-0.145
746.000	-0.120	-0.163	-0.132	-0.145
747.000	-0.114	-0.163	-0.132	-0.145
748.000	-0.120	-0.163	-0.132	-0.145
749.000	-0.120	-0.163	-0.132	-0.145
750.000	-0.114	-0.163	-0.132	-0.145
751.000	-0.120	-0.163	-0.132	-0.145
752.000	-0.114	-0.163	-0.138	-0.145
753.000	-0.120	-0.167	-0.132	-0.145
754.000	-0.120	-0.163	-0.132	-0.148
755.000	-0.120	-0.163	-0.132	-0.148
756.000	-0.114	-0.163	-0.132	-0.145
757.000	-0.114	-0.167	-0.132	-0.145
758.000	-0.120	-0.163	-0.132	-0.145
759.000	-0.114	-0.163	-0.132	-0.145
760.000	-0.114	-0.163	-0.132	-0.148
761.000	-0.114	-0.163	-0.132	-0.145
762.000	-0.120	-0.163	-0.132	-0.145
763.000	-0.120	-0.163	-0.132	-0.145
764.000	-0.114	-0.163	-0.132	-0.145
765.000	-0.114	-0.163	-0.132	-0.145
766.000	-0.114	-0.163	-0.132	-0.145

Elapsed Time	Input 1	Input 2	Input 3	Input 4
767.000	-0.114	-0.163	-0.132	-0.145
768.000	-0.114	-0.163	-0.132	-0.145
769.000	-0.120	-0.163	-0.132	-0.145
770.000	-0.114	-0.163	-0.132	-0.145
771.000	-0.114	-0.163	-0.132	-0.145
772.000	-0.114	-0.163	-0.132	-0.145
773.000	-0.114	-0.163	-0.132	-0.142
774.000	-0.114	-0.163	-0.132	-0.145
775.000	-0.114	-0.163	-0.132	-0.142
776.000	-0.114	-0.163	-0.132	-0.145
777.000	-0.120	-0.163	-0.132	-0.145
778.000	-0.120	-0.163	-0.132	-0.145
779.000	-0.114	-0.163	-0.132	-0.145
780.000	-0.114	-0.163	-0.132	-0.145
781.000	-0.114	-0.163	-0.132	-0.145
782.000	-0.114	-0.160	-0.132	-0.145
783.000	-0.114	-0.160	-0.132	-0.145
784.000	-0.114	-0.160	-0.132	-0.145
785.000	-0.114	-0.160	-0.132	-0.142
786.000	-0.114	-0.160	-0.132	-0.142
787.000	-0.114	-0.160	-0.132	-0.142
788.000	-0.114	-0.160	-0.132	-0.142
789.000	-0.114	-0.160	-0.132	-0.142
790.000	-0.114	-0.160	-0.132	-0.145
791.000	-0.114	-0.160	-0.132	-0.142
792.000	-0.114	-0.160	-0.132	-0.142
793.000	-0.114	-0.160	-0.132	-0.142
794.000	-0.114	-0.160	-0.132	-0.142
795.000	-0.114	-0.160	-0.132	-0.142
796.000	-0.114	-0.160	-0.132	-0.142
797.000	-0.114	-0.160	-0.132	-0.142
798.000	-0.114	-0.160	-0.132	-0.142
799.000	-0.114	-0.160	-0.132	-0.142
800.000	-0.114	-0.160	-0.132	-0.142
801.000	-0.114	-0.160	-0.132	-0.142
802.000	-0.114	-0.160	-0.132	-0.142
803.000	-0.114	-0.160	-0.132	-0.142
804.000	-0.114	-0.160	-0.132	-0.142
805.000	-0.114	-0.160	-0.132	-0.142
806.000	-0.114	-0.160	-0.132	-0.142
807.000	-0.114	-0.160	-0.132	-0.142
808.000	-0.114	-0.160	-0.132	-0.142
809.000	-0.114	-0.160	-0.132	-0.142
810.000	-0.114	-0.160	-0.132	-0.142
811.000	-0.114	-0.160	-0.132	-0.142
812.000	-0.114	-0.160	-0.132	-0.142
813.000	-0.114	-0.160	-0.132	-0.142
814.000	-0.114	-0.160	-0.132	-0.142
815.000	-0.114	-0.160	-0.132	-0.142
816.000	-0.114	-0.160	-0.132	-0.142
817.000	-0.114	-0.160	-0.132	-0.142

Elapsed Time	Input 1	Input 2	Input 3	Input 4
818.000	-0.114	-0.157	-0.132	-0.142
819.000	-0.114	-0.160	-0.126	-0.142
820.000	-0.114	-0.160	-0.126	-0.142
821.000	-0.114	-0.160	-0.132	-0.139
822.000	-0.114	-0.160	-0.132	-0.139
823.000	-0.114	-0.160	-0.132	-0.139
824.000	-0.114	-0.160	-0.132	-0.139
825.000	-0.114	-0.160	-0.126	-0.139
826.000	-0.114	-0.157	-0.132	-0.142
827.000	-0.114	-0.160	-0.132	-0.142
828.000	-0.114	-0.160	-0.126	-0.142
829.000	-0.114	-0.160	-0.132	-0.142
830.000	-0.114	-0.157	-0.132	-0.142
831.000	-0.114	-0.160	-0.132	-0.139
832.000	-0.114	-0.160	-0.132	-0.139
833.000	-0.114	-0.160	-0.126	-0.139
834.000	-0.114	-0.160	-0.132	-0.139
835.000	-0.114	-0.160	-0.126	-0.139
836.000	-0.114	-0.160	-0.132	-0.139
837.000	-0.114	-0.160	-0.126	-0.139
838.000	-0.114	-0.160	-0.132	-0.139
839.000	-0.114	-0.160	-0.132	-0.139
840.000	-0.114	-0.157	-0.126	-0.139
841.000	-0.114	-0.157	-0.126	-0.142
842.000	-0.114	-0.157	-0.126	-0.142
843.000	-0.114	-0.157	-0.126	-0.142
844.000	-0.114	-0.160	-0.132	-0.142
845.000	-0.114	-0.160	-0.126	-0.142
846.000	-0.114	-0.160	-0.126	-0.142
847.000	-0.114	-0.157	-0.126	-0.142
848.000	-0.114	-0.157	-0.126	-0.142
849.000	-0.114	-0.157	-0.126	-0.139
850.000	-0.114	-0.160	-0.126	-0.139
851.000	-0.114	-0.157	-0.132	-0.139
852.000	-0.114	-0.157	-0.126	-0.139
853.000	-0.114	-0.157	-0.126	-0.139
854.000	-0.107	-0.157	-0.126	-0.139
855.000	-0.114	-0.157	-0.126	-0.139
856.000	-0.114	-0.157	-0.126	-0.139
857.000	-0.114	-0.157	-0.126	-0.139
858.000	-0.114	-0.160	-0.126	-0.139
859.000	-0.114	-0.157	-0.126	-0.139
860.000	-0.114	-0.157	-0.126	-0.139
861.000	-0.114	-0.157	-0.126	-0.139
862.000	-0.107	-0.157	-0.126	-0.139
863.000	-0.114	-0.157	-0.126	-0.139
864.000	-0.114	-0.157	-0.126	-0.139
865.000	-0.114	-0.157	-0.126	-0.139
866.000	-0.114	-0.157	-0.126	-0.139
867.000	-0.114	-0.157	-0.126	-0.139
868.000	-0.114	-0.157	-0.126	-0.139

Elapsed Time	Input 1	Input 2	Input 3	Input 4
869.000	-0.107	-0.157	-0.126	-0.139
870.000	-0.114	-0.157	-0.126	-0.136
871.000	-0.114	-0.157	-0.126	-0.136
872.000	-0.107	-0.157	-0.126	-0.136
873.000	-0.114	-0.157	-0.126	-0.136
874.000	-0.107	-0.157	-0.126	-0.139
875.000	-0.114	-0.157	-0.126	-0.136
876.000	-0.114	-0.157	-0.126	-0.139
877.000	-0.114	-0.157	-0.126	-0.139
878.000	-0.107	-0.157	-0.126	-0.139
879.000	-0.107	-0.157	-0.126	-0.139
880.000	-0.107	-0.157	-0.126	-0.139
881.000	-0.107	-0.157	-0.126	-0.139
882.000	-0.107	-0.157	-0.126	-0.139
883.000	-0.107	-0.157	-0.126	-0.139
884.000	-0.114	-0.154	-0.126	-0.139
885.000	-0.107	-0.157	-0.126	-0.139
886.000	-0.114	-0.157	-0.126	-0.139
887.000	-0.114	-0.157	-0.126	-0.139
888.000	-0.107	-0.157	-0.126	-0.139
889.000	-0.107	-0.157	-0.126	-0.136
890.000	-0.107	-0.157	-0.126	-0.136
891.000	-0.107	-0.157	-0.126	-0.139
892.000	-0.107	-0.154	-0.126	-0.139
893.000	-0.107	-0.154	-0.126	-0.139
894.000	-0.107	-0.157	-0.126	-0.139
895.000	-0.107	-0.157	-0.126	-0.136
896.000	-0.114	-0.157	-0.126	-0.139
897.000	-0.114	-0.157	-0.126	-0.139
898.000	-0.107	-0.157	-0.126	-0.139
899.000	-0.107	-0.154	-0.126	-0.136
900.000	-0.107	-0.154	-0.126	-0.136
901.000	-0.107	-0.151	-0.126	-0.139
902.000	-0.107	-0.151	-0.126	-0.136
903.000	-0.107	-0.151	-0.126	-0.136
904.000	-0.107	-0.151	-0.126	-0.136
905.000	-0.107	-0.151	-0.126	-0.136
906.000	-0.107	-0.151	-0.126	-0.139
907.000	-0.107	-0.151	-0.126	-0.136
908.000	-0.107	-0.151	-0.126	-0.136
909.000	-0.107	-0.151	-0.126	-0.136
910.000	-0.114	-0.151	-0.126	-0.136
911.000	-0.107	-0.151	-0.126	-0.136
912.000	-0.107	-0.151	-0.126	-0.136
913.000	-0.107	-0.151	-0.126	-0.136
914.000	-0.107	-0.151	-0.126	-0.136
915.000	-0.107	-0.151	-0.126	-0.136
916.000	-0.107	-0.151	-0.126	-0.136
917.000	-0.107	-0.151	-0.126	-0.136
918.000	-0.107	-0.151	-0.126	-0.136
919.000	-0.107	-0.151	-0.126	-0.136
920.000	-0.107	-0.151	-0.126	-0.136
921.000	-0.107	-0.151	-0.126	-0.132
922.000	-0.107	-0.154	-0.126	-0.136
923.000	-0.107	-0.151	-0.126	-0.132
924.000	-0.107	-0.151	-0.126	-0.132
925.000	-0.107	-0.151	-0.126	-0.132
926.000	-0.107	-0.151	-0.126	-0.132
927.000	-0.107	-0.151	-0.126	-0.136
928.000	-0.107	-0.151	-0.126	-0.136
929.000	-0.107	-0.151	-0.126	-0.136
930.000	-0.107	-0.151	-0.126	-0.136
931.000	-0.107	-0.151	-0.126	-0.136
932.000	-0.107	-0.151	-0.126	-0.136
933.000	-0.107	-0.151	-0.126	-0.136
934.000	-0.107	-0.151	-0.126	-0.136
935.000	-0.107	-0.151	-0.126	-0.136
936.000	-0.107	-0.151	-0.126	-0.136
937.000	-0.107	-0.151	-0.126	-0.136
938.000	-0.107	-0.154	-0.126	-0.132
939.000	-0.107	-0.151	-0.126	-0.132
940.000	-0.107	-0.151	-0.126	-0.132
941.000	-0.107	-0.154	-0.126	-0.132
942.000	-0.107	-0.154	-0.126	-0.132
943.000	-0.107	-0.151	-0.126	-0.132
944.000	-0.107	-0.154	-0.126	-0.132
945.000	-0.107	-0.151	-0.126	-0.136
946.000	-0.107	-0.151	-0.126	-0.136
947.000	-0.107	-0.151	-0.126	-0.136
948.000	-0.107	-0.151	-0.126	-0.136
949.000	-0.107	-0.151	-0.126	-0.132
950.000	-0.107	-0.151	-0.126	-0.136
951.000	-0.107	-0.151	-0.126	-0.136
952.000	-0.107	-0.151	-0.126	-0.136
953.000	-0.107	-0.151	-0.126	-0.136
954.000	-0.107	-0.151	-0.126	-0.132
955.000	-0.107	-0.151	-0.126	-0.132
956.000	-0.107	-0.151	-0.126	-0.132
957.000	-0.107	-0.151	-0.126	-0.132
958.000	-0.107	-0.151	-0.126	-0.136
959.000	-0.107	-0.151	-0.126	-0.136
960.000	-0.107	-0.151	-0.126	-0.136
961.000	-0.107	-0.151	-0.126	-0.136
962.000	-0.107	-0.151	-0.126	-0.136
963.000	-0.107	-0.151	-0.126	-0.136
964.000	-0.107	-0.151	-0.126	-0.136
965.000	-0.107	-0.151	-0.126	-0.132
966.000	-0.107	-0.151	-0.126	-0.132
967.000	-0.107	-0.151	-0.126	-0.132
968.000	-0.107	-0.151	-0.126	-0.132
969.000	-0.107	-0.151	-0.120	-0.132
970.000	-0.107	-0.151	-0.126	-0.136

ERAFS1\VOL1:GEOT\ENGDATA\
KEEP\D-LOGGER\11112\1339STEP.REC

03/22 4:21pm

Elapsed Time	Input 1	Input 2	Input 3	Input 4
971.000	-0.107	-0.151	-0.126	-0.136
972.000	-0.107	-0.151	-0.126	-0.132
973.000	-0.107	-0.151	-0.126	-0.132
974.000	-0.107	-0.151	-0.126	-0.132
975.000	-0.107	-0.151	-0.120	-0.132
976.000	-0.107	-0.151	-0.126	-0.132
977.000	-0.107	-0.154	-0.126	-0.132
978.000	-0.107	-0.151	-0.126	-0.136
979.000	-0.107	-0.151	-0.126	-0.132
980.000	-0.107	-0.151	-0.126	-0.136
981.000	-0.107	-0.151	-0.126	-0.132
982.000	-0.107	-0.151	-0.126	-0.132
983.000	-0.107	-0.151	-0.126	-0.136
984.000	-0.107	-0.151	-0.120	-0.132
985.000	-0.107	-0.151	-0.126	-0.132
986.000	-0.107	-0.151	-0.126	-0.132
987.000	-0.107	-0.151	-0.126	-0.132
988.000	-0.107	-0.151	-0.126	-0.132
989.000	-0.107	-0.151	-0.126	-0.132
990.000	-0.107	-0.151	-0.126	-0.132
991.000	-0.107	-0.151	-0.120	-0.132
992.000	-0.107	-0.151	-0.126	-0.132
993.000	-0.107	-0.151	-0.126	-0.132
994.000	-0.107	-0.151	-0.126	-0.132
995.000	-0.107	-0.151	-0.126	-0.132
996.000	-0.107	-0.151	-0.120	-0.132
997.000	-0.107	-0.151	-0.126	-0.132
998.000	-0.107	-0.154	-0.126	-0.129
999.000	-0.107	-0.151	-0.126	-0.132
1000.00	-0.107	-0.151	-0.120	-0.132
1001.00	-0.107	-0.151	-0.126	-0.129
1002.00	-0.107	-0.151	-0.120	-0.129
1003.00	-0.107	-0.151	-0.126	-0.132
1004.00	-0.107	-0.151	-0.120	-0.132
1005.00	-0.107	-0.151	-0.120	-0.132
1006.00	-0.107	-0.151	-0.126	-0.132
1007.00	-0.107	-0.151	-0.120	-0.132
1008.00	-0.107	-0.151	-0.120	-0.132
1009.00	-0.107	-0.151	-0.120	-0.129
1010.00	-0.107	-0.151	-0.120	-0.132
1011.00	-0.107	-0.151	-0.120	-0.129
1012.00	-0.107	-0.151	-0.126	-0.129
1013.00	-0.107	-0.148	-0.120	-0.129
1014.00	-0.107	-0.151	-0.126	-0.132
1015.00	-0.107	-0.151	-0.126	-0.132
1016.00	-0.107	-0.151	-0.120	-0.129
1017.00	-0.107	-0.151	-0.120	-0.129
1018.00	-0.107	-0.151	-0.126	-0.129
1019.00	-0.107	-0.151	-0.120	-0.129
1020.00	-0.101	-0.151	-0.120	-0.129
1021.00	-0.101	-0.151	-0.120	-0.129
1022.00	-0.107	-0.151	-0.120	-0.129
1023.00	-0.107	-0.151	-0.120	-0.129
1024.00	-0.107	-0.151	-0.120	-0.129
1025.00	-0.107	-0.151	-0.120	-0.129
1026.00	-0.107	-0.151	-0.120	-0.129
1027.00	-0.107	-0.151	-0.120	-0.129
1028.00	-0.107	-0.151	-0.120	-0.129
1029.00	-0.101	-0.151	-0.120	-0.129
1030.00	-0.101	-0.151	-0.120	-0.129
1031.00	-0.101	-0.151	-0.120	-0.129
1032.00	-0.107	-0.148	-0.120	-0.129
1033.00	-0.107	-0.151	-0.120	-0.129
1034.00	-0.107	-0.151	-0.120	-0.126
1035.00	-0.107	-0.151	-0.120	-0.126
1036.00	-0.107	-0.151	-0.120	-0.129
1037.00	-0.101	-0.148	-0.113	-0.132
1038.00	-0.101	-0.148	-0.113	-0.129
1039.00	-0.101	-0.145	-0.113	-0.132
1040.00	-0.101	-0.148	-0.120	-0.129
1041.00	-0.101	-0.151	-0.120	-0.129
1042.00	-0.107	-0.148	-0.120	-0.129
1043.00	-0.107	-0.151	-0.120	-0.129
1044.00	-0.101	-0.148	-0.120	-0.129
1045.00	-0.107	-0.148	-0.120	-0.129
1046.00	-0.107	-0.151	-0.120	-0.129
1047.00	-0.101	-0.151	-0.120	-0.126
1048.00	-0.101	-0.151	-0.120	-0.129
1049.00	-0.107	-0.151	-0.120	-0.129
1050.00	-0.101	-0.151	-0.120	-0.129
1051.00	-0.101	-0.151	-0.120	-0.126
1052.00	-0.101	-0.151	-0.120	-0.126
1053.00	-0.107	-0.151	-0.120	-0.126
1054.00	-0.107	-0.151	-0.120	-0.126
1055.00	-0.107	-0.151	-0.120	-0.129
1056.00	-0.101	-0.148	-0.120	-0.129
1057.00	-0.101	-0.148	-0.120	-0.129
1058.00	-0.101	-0.148	-0.120	-0.129
1059.00	-0.107	-0.148	-0.120	-0.129
1060.00	-0.101	-0.151	-0.120	-0.129
1061.00	-0.101	-0.151	-0.120	-0.126
1062.00	-0.095	-0.148	-0.113	-0.129
1063.00	-0.101	-0.145	-0.113	-0.132
1064.00	-0.095	-0.148	-0.113	-0.129
1065.00	-0.095	-0.148	-0.113	-0.126
1066.00	-0.095	-0.148	-0.113	-0.129

ERAFS1\VOL1:GEOT\ENGDATA\
KEEP\D-LOGGER\11112\1339STEP.REC

03/22 4:21pm

DRAFT

Pumping Test and Yield Test
Water Level Measurement Form

Elevation (MSL): _____ top of casing

Observation well/piezometer no.: 11214
Pumped well no.: 11214
Project: 50.03.24

Pump/yield test performed by(Name): _____
Reference point measurements by: CREW 5 (AS, TA)
Method of measurement: M-SCOPE
Depth Correction: _____
Average Q at end of test _____ gpm r = ____ ft. r' = _____

b = _____

Date	Hour:Min	t (min)	t' (min)	t/t'	s (ft.)	s' (ft.)	(s_p - s')	Meter Reading (gals.)	Ave. Q	M-SCOPE W.L	HZ Remarks	
9/21/93	1331	0			—			0		5.17		TC) 1st STEPC
	1342	1			1.87			—		7.04		
	1343	2			2.31			—		7.48		
	1343	3			2.52			—	~~2.0~~ TC	7.69	~~125~~ TC	
	1344	4			2.68			—	2.0	7.85	125	
	1345	5			2.82			—	↓	7.99	"	
	1346	6			2.94			—	2.0	8.11	"	
	1348	8			3.14			—		8.31	"	
	1350	10			3.30			—		8.47	"	
	1352	12			3.42			—		8.59	"	
	1354	14			3.53			—		8.70	"	
	1356	16			3.62			—	↓	8.79	"	
	1358	18			3.71			—	2.0	8.88	"	
	1400	20			3.93			—	↓	9.10	"	
	1405	25			4.08			—	2.0	9.25	126	
	1410	30			4.17			—	2.0	9.34	"	
	1420	40			4.35			—	2.0	9.52	"	
	1430	50			4.48			100.3	2.0	9.65	127 @ 55min	
	1440	60			4.64			—	↓	9.81	"	
	1455	75			4.79			—	2.0	9.96	128	
	1510	90			4.90			—	2.05	10.07	"	
	1525	105			4.98			210.4	2.0	10.15	"	
	1540	120			5.06			240.5	2.0	10.23	"	
↓	1555	135			—			—	2.0	—	"	
9/21/93	1610	150			5.17			300.2	2.0	10.34	"	

b = saturated thickness (ft)
r = distance from pumped well to observation well or piezometer (ft.)
Q = flow rate (gpm)

s = measured drawdown (ft.)
s' = residual drawdown (ft.) at t'.
s_p = drawdown at end of pumping period (final s)
t = elapsed time since pumping began (min)
t' = elapsed time since pumping stopped (min)

Reference: Bureau of Reclamation (1981) and Stallman (1971)

DRAFT

Pumping Test and Yield Test
Water Level Measurement Form

Elevation (MSL): _____ top of casing

Observation well/piezometer no.: 11214
Pumped well no.: 11214
Project: 50.03.24

Pump/yield test performed by(Name): _____
Reference point measurements by: CREW 5 (AS.TR)
Method of measurement: M-SCOPE
Depth Correction: _____

water level at time 0 = 5.17

b = _____

Average Q at end of test _____ gpm r = ___ ft. r' = _____

W.L. 5.17 @ Time 0

Date	Hour:Min	t (min)	t' (min)	t/t'	s (ft.)	s' (ft.)	(s_p - s')	Meter Reading (gals.)	Ave. Q	M-SCOPE W.L.	HZ	Remarks
9/21/93	1640	180			5.31			185 min: 370 gal	2.0	10.48	129	CALI TEST
↑	1710	210			5.42			420	2.0	10.59	129	
	1740	240			5.50			245 min 490 gal	2.1	10.67	129	CALIB TEST
	1810	270			5.52			275 min 548 gal	1.9	10.69	130	31 290
	1840	300			5.67			305 min 609 gal	2.0	10.84	131	
	1910	330			5.73				2.0	10.90	"	1900 130
	1940	360			5.86			365 min 727.5 gal	2.0	11.03	132	CALI TEST
	2010	390			5.87			395 min 786.7	1.9	11.04	133	
	2040	420			5.96			43 min 856.6	2.0	11.13	133	
	2110	450			6.02			455 min 906.3 gal	1.9	11.19	133	134 211
	2140	480			6.11			485 min 966.1 gal	2.0	11.28	134	CAL TES
	2210	510			6.26			520 min 1038.6 gal	2.1	11.43	134	2218
	2240	540			6.26			545 min 1088.9	2.03	11.43	133	224 1.
↓	2310	570			6.26			575 ~~570~~ min 1148.5 gal	2.0	11.43	132	~~132~~
9/21/93	2340	600			6.30			603 min 1204 gal	2.0	11.47	132	CALI TE
9/22/93	~~2370~~ 0010	630			6.30			634 min 1265 gal	1.9	11.47	132	
	0017	637			—			—	2.0	—	134	
	0040	660			6.41			664 min 1322 gal	2.0	11.58	134	
	0110	~~720~~ 690			6.44			691 min 1380 gal	2.0	11.61	134	
	0140	720			6.47					11.64		CALIB TEST
	0210	750			6.5			751 min 1500 gal	2.0	11.67	134	
	0240	780			6.53			1565 gal	2.0	11.70		
	0311	810			6.57			1621 gal	2.0	11.74		
	0340	840			6.60			1685 gal	2.0	11.77		CALIB TEST
↓	0410	870			6.51			1740 gal	2.0	11.71	135	

b = saturated thickness (ft)
r = distance from pumped well to observation well or piezometer (ft.)
Q = flow rate (gpm)

s = measured drawdown (ft.)
s' = residual drawdown (ft.) at t'
s_p = drawdown at end of pumping period (final s)
t = elapsed time since pumping began (min)
t' = elapsed time since pumping stopped (min)

Reference: Bureau of Reclamation (1981) and Stallman (1971)

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DRAFT

Rev. No

000411

DRAFT

Pumping Test and Yield Test
Water Level Measurement Form

Elevation (MSL): _____ top of casing

Observation well/piezometer no.: 11214
Pumped well no.: 11214
Project: 50.03.24

Pump/yield test performed by(Name): _____
Reference point measurements by: AS, TR (Crew 5)
Method of measurement: m-Slope
Depth Correction: _____
Average Q at end of test _____ gpm r = ___ ft. r' = _____

b = _____

WL. 517 @ TIME 0

Date	Hour:Min	t (min)	t' (min)	t/t'	s (ft.)	s' (ft.)	(s_p - s')	Meter Reading (gals.)	Ave. Q	m-Slope w-ter	H2 Remarks	
9-22-93	0440	900 442			6.84			992 1804 gals	2.0	12.01		
9-22-93	0510	930			6.89			1866 gal	2.0	12.06		
"	0540	960			6.93			1932 1939	2.0	12.10		
"	0610	990			6.98			—	2.0	12.15		
"	0640	1020			7.01			—	2.0	12.18		
" "	0710	1050			7.03			—	2.0	12.20		
" "	0742	1082			7.07			2181		12.24		Bucket thru ck
" "	0753	1093			—			2200	2.05	—	136	Δ H2 70 135
	0757	1097			—			2208	2.05	—	135	Δ H2 70 134
	0759	1099			—			2213	2.00	—	134	✓
	0801	1101			—			2218	2.00	—	134	✓
	0811	1111			6.99			2237	—	12.16	—	✓
	0843	1143			7.01			2301	—	12.18	134	—
	0848	1148			—			2231	2.00	—	134	✓
	0912	1172			7.03			2357	2.00	12.20	133	
	0940	1200			7.04			2416	2.00	12.21	133	
	1010	1230			7.07			2475	2.00	12.24	133	
	1040	1260			7.09			2536	2.00	12.26	133	
	1110	1290			7.10			2610	2.00	12.27	133	
	1123	1303			—			2616	—	—	133	Bucket + check OK
	1137	1317			—			2646	2.00	—	133	—
	1140	1320			7.13			2654	2.00	12.30	133	
	1149	1329			—			—	—	—	—	CAL Bucket OK
	1210	1350			7.14			—	—	12.31	133	
	1215	1355			—			2721	2.0	—	—	

b = saturated thickness (ft)
r = distance from pumped well to observation well or piezometer (ft.)
Q = flow rate (gpm)
s = measured drawdown (ft.)
s' = residual drawdown (ft.) at t'
s_p = drawdown at end of pumping period (final s)
t = elapsed time since pumping began (min)
t' = elapsed time since pumping stopped (min)

Reference: Bureau of Reclamation (1981) and Stallman (1971)

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Pumping Test and Yield Test
Water Level Measurement Form

Elevation (MSL): _____ top of casing

Observation well/piezometer no.: 11214
Pumped well no.: 11214
Project: 50.03.24

Pump/yield test performed by(Name): _____
Reference point measurements by: TR. AS
Method of measurement: M-Scope
Depth Correction: _____
Average Q at end of test _____ gpm r = ___ ft. r' = _____

b = _____

WL. 5.17 @ TIME C

Date	Hour:Min	t (min)	t' (min)	t/t'	s (ft.)	s' (ft.)	(s_p - s')	Meter Reading (gals.)	Ave. Q	M-Scope	H_2 Remarks	
9/22/93	1240	1380			7.18			—	—	12.35	134	
	1250	1390			—			2790	2.0	—	134	
	1310	1410			7.20			—	2.0	12.37	134	
	1315	1415			—			2838.7	—	—	—	
	1340	1440			7.22			2887	—	12.39	134	
	1345	1445			—			—	2.0	—	134	
	1410	1470			7.24			2947.5	2.0	12.41	134	
	1440	1500			7.26			3005.5	2.0	12.43	134	
	1510	1530			7.28			—	2.0	12.45	134	
	1518	1538			—			3080.0	—	—	134	
	~~1540~~	~~1560~~			—			—	—	—	—	
	1530	1550			—			—	1.9		135	
	1540	1560			7.40			—		12.57	135	
	1545	1565			—			—				
	1600	1580			—			3162.5	—	—	135	
	1610	~~1598~~ 1590			7.42			—	2.0	12.59	135	
	1640	~~1640~~ 1620			7.43			—	2.0	12.60	135	
	1710	~~1670~~ 1660			7.46			—	2.0	12.63	135	
	1740	1680			7.48			—	2.0	12.65	135	
	1745	1685			—			3376.7	2.0	—	135	
	1810	1710			7.50			—	2.1	12.67	135	
	1815	1715			—			3437.6	2.0	—	134	
	1840	1740			7.51			3493.	2.0	12.68	134	
	1843	1743			--			—	—	—	133	
9/22/93	1910	1770			7.51			—	2.0	12.68	133	

b = saturated thickness (ft)
r = distance from pumped well to observation well or piezometer (ft.)
Q = flow rate (gpm)
s = measured drawdown (ft.)
s' = residual drawdown (ft.) at t'
s_p = drawdown at end of pumping period (final s)
t = elapsed time since pumping began (min)
t' = elapsed time since pumping stopped (min)

Reference: Bureau of Reclamation (1981) and Stallman (1971)

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Rev. No:

000413

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Pumping Test and Yield Test
Water Level Measurement Form

Elevation (MSL): _____ top of casing

Observation well/piezometer no.: 11214
Pumped well no.: 11214
Project: 50.03.24

Pump/yield test performed by(Name): _____
Reference point measurements by: TL. AS
Method of measurement: M-scope
Depth Correction: _____
Average Q at end of test _____ gpm r = ___ ft. r' = _____

b = _____

WL 5.17 @ TIME 0

Date	Hour:Min	t (min)	t' (min)	t/t'	s (ft.)	s' (ft.)	(s_p - s')	Meter Reading (gals.)	Ave. Q	M scope	HZ Remarks	
9/22/93	1915	1775			–			3558.7		~~12.68~~	133	
	1940	1800			7.51			–	2.0	12.68	133	
	1945	1805			–			3618.7			133	
	2010	1830			7.53			–	2.0	12.70	133	
	2020	1840			–			3688.4	2.0	–	133	
	2040	1860			7.55			–	2.0	12.72	133	
	2045	1865			–			3738.0	2.0	–	133	
	2110	1890			7.57			3797.7	2.0	12.74	133	
	2115	1895			–			3797.7	2.0	–	133	
	2140	1920			7.59			–	2.0	12.76	133	
	2145	1925			–			3857.3	2.0	–	133	
	2210	1950			7.61			–	2.0	12.78	133	
	2215	1955			–			3917.0	2.0	–	133	
	2240	1980			7.63			–	2.0	12.80	133	
	2245	1985			–			3976.5	2.0	–	133	
	2310	2010			7.64			–	2.0	12.81	133	
	2315	2015			–			4035.8	2.0	–	133	
	2340	2040			7.65			–	2.0	12.82	133	
9/22/93	2345	2045			–			4090		–	133	
9/23/93	0010	2070			7.65			4150	2.0	~~12.82~~	133	
	~~0015~~ 0035	2085			–			4178	2.0	–	133	
	0040	2100			7.67			–		12.84		
	0045	2105			–			4207	2.0	–		
	0110	2130			7.69			–		12.86		
9/23/93	0115	2135			–			4265	–	–		

b = saturated thickness (ft)
r = distance from pumped well to observation well or piezometer (ft.)
Q = flow rate (gpm)
s = measured drawdown (ft.)
s' = residual drawdown (ft.) at t'
s_p = drawdown at end of pumping period (final s)
t = elapsed time since pumping began (min)
t' = elapsed time since pumping stopped (min)

Reference: Bureau of Reclamation (1981) and Stallman (1971)

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Rev. No: 0

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Pumping Test and Yield Test
Water Level Measurement Form

Elevation (MSL): _____ top of casing

Observation well/piezometer no.: 11214
Pumped well no.: 11214
Project: SC.03.24

Pump/yield test performed by(Name): _____
Reference point measurements by: TR, AS
Method of measurement: M. Sight
Depth Correction: _____
b = _____
Average Q at end of test _____ gpm r = ___ ft. r² = _____

Date	Hour:Min	t (min)	t' (min)	t/t'	s (ft.)	s' (ft.)	(s_p - s')	Meter Reading (gals.)	Ave. Q	m Scope	Remarks HPT 2.
9-23-93	0140	2160			7.71			–	2.0	12.88	1
	0210	2190			7.69			–	2.0	12.86	
	0215	2195			–			4381	2.0	–	134
	0240	2220			7.74			–	~~2.0~~	12.91	
	0245	2225			–			4437	2.0	–	134
	0310	2250			7.75			–	–	12.92	
	0315	2255			–			4444	2.0	–	134
	0340	2280			7.75			–	–	12.92	
	0345	2285			–			4552	2.0	–	134
	0410	2310			7.77			–	–	12.94	
	0415	2315			–			4616	2.0	–	134
	0440	2340			7.77			–	–	12.94	
	0445	2345			–			4667	2.0	–	134
	0510	2370			7.77			–	–	12.94	
	0515	2375			–			4725	2.0	–	134
	0540	2400			7.83			–	–	13.00	
	0545	2405			–			4783	2.0	–	135
	0610	2430			7.83			–	–	13.00	
	0615	2435			–			4845	2.0	–	135
	0640	2460			7.83			–	–	13.00	
	0645	2465			–			4900	2.0	–	135
	0713	2493			8.06			–	1.95	13.23	135 Δ Hrs 135
	0714	2498			–			–	1.97	–	136 Δ to 13.
	0710	2499			–			4973	2.0	–	135
9-23-93	0720	2500			–			4975	2.0	–	134 Δ to 13.

b = saturated thickness (ft)
r = distance from pumped well to observation well or piezometer (ft.)
Q = flow rate (gpm)
s = measured drawdown (ft.)
s' = residual drawdown (ft.) at t'
s_p = drawdown at end of pumping period (final s)
t = elapsed time since pumping began (min)
t' = elapsed time since pumping stopped (min)

Reference: Bureau of Reclamation (1981) and Stallman (1971)

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000415

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Pumping Test and Yield Test
Water Level Measurement Form

Elevation (MSL): _____ top of casing

Observation well/piezometer no.: 11214
Pumped well no.: 11214
Project: 50.03.24

Pump/yield test performed by(Name): _____
Reference point measurements by: TR, AS
Method of measurement: M-Sloopf
Depth Correction: _____
Average Q at end of test _____ gpm r = ___ ft. r' = _____

b = _____

WL = 5.17 @ Time = 0

Date	Hour:Min	t (min)	t' (min)	t/t'	s (ft.)	s' (ft.)	$(s_p - s')$	Meter Reading (gals.)	Ave. Q	m-sloopf Hertz	Remarks
9/23/93	0728	2508			–			–	2.0	~~–~~ 134	–
	0731	2511			8.03			4997	–	13.20	– –
	0740	2520			8.04			5016	–	13.21	– –
	0750	2530			–			5034		– 134	Bucket check is slightly low.
	0752	2532			–			5038	1.95	– 134	[illegible]
	0753	2533			–			5040	1.95	– 134	–
	0753:32	2533			–			5041	–	– 134	–
	0755:37	2535			–			5044.9	–	– 134	–
	0757:37	2537			–			5048.9	–	– 134	Δ Hertz to 135
	0759:00	2539			–		5052.0	~~5050.70~~	–	– 135	Checking Q.
	0801:00	2541			–			5056.0	2.0	– 135	✓ Flow is 2.0.
	0811	2551			8.00			5079	–	13.17 135	–
	0815	2555			–			–	–	– –	Barometric 29.43, T = 63°
	0841	2581			8.02			5136	2.0	13.19 135	–
	0910	2610			8.04			5193	2.0	13.21 135	–
	0940	2640			8.07			5254		13.24 135	Bucket check [illegible]
	0955	2655			–			5279	2.0	– 135	Flow Q is [illegible]
	1010	2670			8.09			5310	–	13.27 135	
	1035	2695			–			5360.0	–	– 135	Check Q is [illegible]
	1037	2697			–			5364.0	2.0	– 135	Q is 2.0 ✓
	1040	2700			8.11			5373		13.28 135	
	1100	2720			–			–	2.0	– 134	–
	1140	2760			8.09			5434	2.0	13.26 134	–
	1140	2760			8.10				2.0	13.27 135	–
	1145	2765			–			5502.2	–	– –	CAL Bucket Test

b = saturated thickness (ft)
r = distance from pumped well to observation well or piezometer (ft.)
Q = flow rate (gpm)

s = measured drawdown (ft.)
s' = residual drawdown (ft.) at t'
s_p = drawdown at end of pumping period (final s)
t = elapsed time since pumping began (min)
t' = elapsed time since pumping stopped (min)

Reference: Bureau of Reclamation (1981) and Stallman (1971)

DRAFT

Pumping Test and Yield Test
Water Level Measurement Form

Elevation (MSL): _____ top of casing

Observation well/piezometer no.: 112/4
Pumped well no.: 112/4
Project: 50.03.24

Pump/yield test performed by(Name): _____
Reference point measurements by: _____
Method of measurement: _____
Depth Correction: _____
Average Q at end of test _____ gpm r = ___ ft. b = _____ r' = _____

WL 5.17 @ TIME 0

Date	Hour:Min	t (min)	t' (min)	t/t'	s (ft.)	s' (ft.)	(s_p - s')	Meter Reading (gals.)	Ave. Q	m Slope	Hertz	Remarks
3/23/93	~~1228~~ 1320	2800			8.15			5585	—	13.32	135	
04-23-93	1228	—						5585	2.0 gal/min		135	
"	1240	2820			8.16			—	—	13.33	135	
"	1245	2825			—			5621.1	2.0	—	135	
"	1310	2850			8.18			—	—	1335	—	
"	1313	2853			—			—	2.0	—	—	
"	1315	2855			—			5681	—	—	135/136	
"	1341	2881			8.18			—	—	13.35	135	Slows
"	1348	2888			—			—	—	—	135	Bucket [illegible]
"	1410	2910			8.19			5788	—	13.36	135	—
"	1420	2920			—			5805	1.95	—	135	[illegible] 136 [illegible]
"	1424	2924			—			5813	2.00	—	136	[illegible]
	1443	2943			8.26			5853	2.0	13.43	136	Bucket [illegible]
	1512	2972			8.26			5911	2.0	13.43	136	
	1542	3002			8.28			5973	—	13.45	136	[illegible]
	1545	3005			—			5976	—	—	136	—
	1548	3008			—			5982	2.0	—	136	[illegible]
	1610	3030			8.29			6030	—	13.46	136	—
	1612	3032			—			6034	2.0	—	136	[illegible]
	1641	3061			8.30			6090	—	13.47	136	—
	1642	3063			—			6094	2.0	—	136	—
	1710	3090			8.33			6148	2.0	13.50	136	[illegible]
	1740	3120			8.34			6207	2.0	13.51	136	[illegible]
	1810	3150			8.35			6273	2.0	13.52	136	[illegible]
04-23-93	1840	3180			8.36			6327	2.0	13.53	136	—

b = saturated thickness (ft)
r = distance from pumped well to observation well or piezometer (ft.)
Q = flow rate (gpm)
s = measured drawdown (ft.)
s' = residual drawdown (ft.) at t'
s_p = drawdown at end of pumping period (final s)
t = elapsed time since pumping began (min)
t' = elapsed time since pumping stopped (min)

Reference: Bureau of Reclamation (1981) and Stallman (1971)

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Rev. No

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Pumping Test and Yield Test
Water Level Measurement Form

Elevation (MSL): _____ top of casing

Observation well/piezometer no.: 11214
Pumped well no.: 11214
Project: 50.03.24

Pump/yield test performed by(Name): _____
Reference point measurements by: _____
Method of measurement: _____
Depth Correction: _____

b = _____

Average Q at end of test _____ gpm r = ___ ft. r' = _____ WL 5.17 @ Time = 0

Date	Hour:Min	Elapsed t (min)	t' (min)	t/t'	s (ft.)	s' (ft.)	(s_p - s')	Meter Reading (gals.)	Ave. Q	m-scope	Remarks Hertz
09-23-93	1910	3210			8.37			6384	2.0	13.54	136 Q is o.k.
	1940	3240			8.40			6447	1.99	13.57	136
	1950	3250			—			6467	1.99	—	137 10 Hertz to 137
	1954	3254			—			6473	2.05	—	137
	2011	3270			8.41			6498	2.00	13.58	137 Q is o.k
	2017	3277						6529	2.0	—	137 Q is o.k.
	2040	~~3400~~ 3300 JC			8.47			6571	2.00	13.64	137 Q is o.k
	2110	3300			8.49			6631	2.00	13.66	137 Q is o.k
	2140	3330			8.50			6700	2.00	13.67	137
	2210	3390			8.52					13.69	137
	2220	3400			—			6767	2.00	—	137
	2240	3420			8.53				2.00	13.70	137
	2245	3425			—			6875	2.00	—	137
9-	2310	3450			8.50			~~6875~~	2.00	13.67	
9-23-93	2340	3480			8.51			6932	2.00	13.68	137
9-24-93	0010	3510			8.53			6964	—	13.70	
"	0015	3515						6992	2.00		137
"	0040	3540			8.55			7021	—	13.72	
"	0045	3545						7050	2.00		137
"	0110	3570			8.56			7111	2.00	13.73	137
"	0140	3600			8.62			7175	2.00	13.79	137
"	0210				8.62			7239	2.00	13.79	137
"	0240				8.65			7287	2.00	13.82	138 Hertz to 138
"	0310				8.67			7350	2.00	13.84	138
"	0340				8.68			7406	2.00	13.85	138

b = saturated thickness (ft)
r = distance from pumped well to observation well or piezometer (ft.)
Q = flow rate (gpm)
s = measured drawdown (ft.)
s' = residual drawdown (ft.) at t'
s_p = drawdown at end of pumping period (final s)
t = elapsed time since pumping began (min)
t' = elapsed time since pumping stopped (min)

Reference: Bureau of Reclamation (1981) and Stallman (1971)

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Rev. No: 0

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Pumping Test and Yield Test
Water Level Measurement Form

Elevation (MSL): _____ top of casing

Observation well/piezometer no.: 11214
Pumped well no.: 11214
Project: 50.03.24

Pump/yield test performed by(Name): _____
Reference point measurements by: _____
Method of measurement: _____
Depth Correction: _____
Average Q at end of test _____ gpm r = ___ ft. r' = _____

b = _____

WL = 5.17 @ Time = Ø.

Date	Hour:Min	t (min)	t' (min)	t/t'	s (ft.)	s' (ft.)	(s_p - s')	Meter Reading (gals.)	Ave. Q	M scope	Horty	Remarks
9-24-93	0410				8.72			7466	2.0	13.89	138	
"	0440				8.76			7531	2.0	13.93	138	
"	0510				8.73			7584	2.0	13.90	138	
	0540				8.74			7645	2.0	13.91	138	
	0616				8.76			7706	2.0	13.93	138	
	0640				8.78			7764	2.0	13.95	138	
9-24-93	0712	3932			8.79			7837	2.0	13.96	138	
	0740	3960			8.81			7885	1.95	13.98	138	~~Δ Horty~~ Bve Check 8.1
	0750	3970			–			7905	–	–	139	Δ Horty to 139
	0756	3976			–			7917	1.95	–	139	Still too L
	0758	3978			–			7920	2.05	–	140	Δ Horty to 140
	0800	3980			–			7925	–	–	139	Δ to 139
	0802	3982			–			7929	2.00	–	139	Q is good
	0810	3990			8.80			7945	2.0	13.97	139	Q is good
	0840	4020			8.82			8009	2.0	13.99	139	✓
	0910	4050			8.84			8068	2.0	14.01	139	✓
	0940	4080			8.87			8133	2.02	14.04	140	Horty jump to 140.
	0945	4085			–			8137	2.00	–	139	Δ Hty to 139.
	1010	4110			8.83			8188	2.00	14.00	139	Q is ok
	1015	4115			–			8200	2.0	–	138/139	Bucket te
	1040	4140			8.88			8251	2.0	14.05	139	
	1110	4170			8.96			8302	2.15	14.13	139	
	1140	4200			9.15			8374	~~1.85~~ 2.15	14.32	138	
	1151	4211			–			8391	~~1.90~~ 2.10	–	137	138 → 1 Hz
9-24-93	1155	4215			–			–		–	136	137 → 13 Hz

b = saturated thickness (ft)
r = distance from pumped well to observation well or piezometer (ft.)
Q = flow rate (gpm)
s = measured drawdown (ft.) (50)
s' = residual drawdown (ft.) at t'
s_p = drawdown at end of pumping period (final s)
t = elapsed time since pumping began (min)
t' = elapsed time since pumping stopped (min)

Reference: Bureau of Reclamation (1981) and Stallman (1971)

DRAFT

Pumping Test and Yield Test
Water Level Measurement Form

E-7333

Elevation (MSL): _____ top of casing

Observation well/piezometer no.: 11214
Pumped well no.: 11214
Project: 50.03.24

Pump/yield test performed by(Name): _____
Reference point measurements by: _____
Method of measurement: _____
Depth Correction: _____
Average Q at end of test _____ gpm r = ___ ft. r' = _____

b = _____

WL = 5.17 @ T = 0

Date	Hour:Min	t (min)	t' (min)	t/t'	s (ft.)	s' (ft.)	(s_p - s')	Meter Reading (gals.)	Ave. Q	m slope	Hertz	Remarks
9-24-93	1158	4218						—	~~1.95~~ 2.10	—		137 → 136 Hz
	1202	4222						8416	2.10	—		136 → 134 Hz
	~~1210~~								~~2.05~~			~~134 → 136 Hz~~
9-24-93	1210	4230			9.04			8439	2.05	14.21		Hertz - 134
	1221	4241						8455	2.05	—	133	134 → 133 Hz
	1224	4244						8461	2.05	—	133	133 → 132 Hz
	1225	4245						8463	—	—	132	
	1226	4246						8465	2.00	—	132	Q is o.k.
	1227	4247						8467	2.00	—	132	Q is ok
	1240	4260			8.95			8497	—	14.12	132	Q is ok
	1243	4263						8499	—	—	132	Q is OK.
	1245	4265						8503	2.00	—	132	Q is good
	1252	4272						8517	<2.0	—	132	Q is low.
	1253	4273						8520	—	—	133	132 → 133 Hz
	1255	4275						8522	2.00	—	133	133 Hz is good
	1259	4279						8530	2.01	—	133	Q is high
	1300	4280						8532.5	—	—	132	133 → 132 Hz
	1302	4282						8536.5	2.00		132	Q is o.k.
	1312	4292			8.97			8557	—	14.14	132	Q is ok
	1340	4320			8.98			8612	—	14.15	132	
	1341	4321						8615	—	—	132	
	1343	4323						8619	2.00	—	132	Q is o.k.
	1412				8.98			8678	2.0	14.15	132	
	1440				8.99			8736	2.0	14.16	132	
	1510	4410			9.00			8794	2.0	14.17	132	

b = saturated thickness (ft)
r = distance from pumped well to observation well or piezometer (ft.)
Q = flow rate (gpm)
s = measured drawdown (ft.)
s' = residual drawdown (ft.) at t'
s_p = drawdown at end of pumping period (final s)
t = elapsed time since pumping began (min)
t' = elapsed time since pumping stopped (min)

Reference: Bureau of Reclamation (1981) and Stallman (1971)

DRAFT

Pg 12 of 20

Pumping Test and Yield Test
Water Level Measurement Form

Elevation (MSL): _____ top of casing

Observation well/piezometer no.: 11214
Pumped well no.: 11214
Project: 50.03.24

Pump/yield test performed by(Name): _____
Reference point measurements by: _____
Method of measurement: _____
Depth Correction: _____
Average Q at end of test _____ gpm r = ___ ft. r² = _____

b = _____

WL = 5.17 @ T = 0.

Date	Hour:Min	t (min)	t' (min)	t/t'	s (ft.)	s' (ft.)	$(s_p - s')$	Meter Reading (gals.)	Ave. Q	m Slope	Remarks (Hertz)	
09-24-93	1540	4440			8.98			8857	1.95	14.09	132	
	1548	4448			—			8865	—	—	133	132 → 133
	1556	4456			—			8880	2.0	—	133	o.k.
	1610	4470			9.05			—	2.0	14.22	133	o.k.
	1640	4500			9.05			8970		14.22	133	
	1710	4530			9.06			9033	2.00	14.23	133	Q is o.k
	1740	4560			9.07			9091	2.00	14.24	133	Q is o.k
	1810	4590			9.08			9157.0 1315 HRS	2.00	14.25	133	
	1840	4620			9.10			9216.5 1345 HRS	2.00	14.27	133	
	1910	4650			9.10			9276.0 1915 HRS	2.00	14.27	133	
	1940	4680			9.10			~~[illegible] HRS~~	2.00	14.27	133	Burst tank OK
	1950	4690			—			—	1.9	—	134	Reset HZ
	1955	4695			—			—	2.0	—	134	
	2000	4710			9.16			—	2.0	14.33	134	
	2040	4740			9.17			9455.1 2045 HRS	2.0	14.34	134	
	2110	4770			9.17			9515 2115 HRS	2.0	14.34	134	
	2140	~~[illegible]~~ 4803			9.18			9604.7 2203 HRS	2.0	14.35	134	Burst tank OK
	2210	4830			9.20			—	2.0	14.37	134	
	2240	4860			9.20			9690 2243 HRS	2.0	14.37	134	
	2310	4890			9.21			9754 2315 HRS	1.9	14.38	134	134 → 135 H
9-24-93	2340	4920			9.22			9808 2345 HRS	2.0	14.39	135	135 → 137 H
9-25-93	0010	4950			9.31			9870 0015 HRS	2.0	14.48	137	
"	0040	4980			9.33			9930 0045 HRS	2.0	14.50	137	
"	0110	5010			9.33			9990 0115 HRS	2.0	14.50	137	
"	0140	5040			9.34			10051 0145 HRS	2.0	14.51	137	

b = saturated thickness (ft)
r = distance from pumped well to observation well or piezometer (ft.)
Q = flow rate (gpm)
s = measured drawdown (ft.)
s' = residual drawdown (ft.) at t'
s_p = drawdown at end of pumping period (final s)
t = elapsed time since pumping began (min)
t' = elapsed time since pumping stopped (min)

Reference: Bureau of Reclamation (1981) and Stallman (1971)

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DRAFT

Rev. No:

000421

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Pumping Test and Yield Test
Water Level Measurement Form

Elevation (MSL): _____ top of casing

Observation well/piezometer no.: 11214
Pumped well no.: 11214
Project: 50.03.24

Pump/yield test performed by(Name): _____
Reference point measurements by: _____
Method of measurement: _____
Depth Correction: _____
b = _____
Average Q at end of test _____ gpm r = ____ ft. r' = _____

WL = 5.17 @ Time = 0

Date	Hour:Min	t (min)	t' (min)	t/t'	s (ft.)	s' (ft.)	(s_p - s')	Meter Reading (gals.)	Ave. Q	M scope	Remarks Hertz	
9-25-93	0210	5070			9.35			10111	2.00	14.52	137	
"	0240	5100			9.37			0245 ms 10176.44	2.00	14.54	137	
	0310	5130			9.34			10233	2.00	14.51	137	
"	0340	5160			9.37			10291	2.00	14.54	137	
"	0410	5190			9.31			10352	2.00	14.48	137	
"	0440	5220			9.34			10408	2.00	14.51	137	
"	0510	5250			9.35			10467	2.00	14.52	137	
"	0540	5280			9.35			10526	2.00	14.52	137	
"	0610	5310			9.37			10584	2.00	14.54	137	
"	0640	5340			9.39			10640	2.00	14.55	137	
"	0710	5370			9.39			—	1.95	14.56	137	
"	0715	~~5375~~ 5375			—			10713	—	—	138	137→138 Hz
9-25-93	0716	~~5376~~ 5376			—			10715	2.00	—	138	Q is o.k.
"	0743	5403			9.46			10761	2.00	14.63	138	Q is o.k.
"	0813	5433			9.47			10821	—	14.64	138	
"	0817	5437			—			10828	1.95	—	138	Q is low
"	0818	5438			—			10830	—	—	138	checking Q.
"	0820	5440			—			10834	2.00	—	138	Q is o.k.
"	0843	~~5463~~			9.48			10881	—	14.65	138	
"	0852	~~5472~~ 5472	SC		—			10897	2.00	—	138	Q is o.k.
"	0854	5474			—			~~10937~~	—	14.66	138	But it check o.k.
"	0912	5492			9.50			10937	2.00	14.67	138	Q is o.k.
"	0944	5524			9.52			11000	2.00	14.69	138	Q is o.k.
"	1013	5553			9.53			11059	2.00	14.70	138	Q is o.k.
9-25-93	1045	5585			9.54			11122	2.00	14.71	138	Q is ok

b = saturated thickness (ft)
r = distance from pumped well to observation well or piezometer (ft.)
Q = flow rate (gpm)
s = measured drawdown (ft.)
s' = residual drawdown (ft.) at t'
s_p = drawdown at end of pumping period (final s)
t = elapsed time since pumping began (min)
t' = elapsed time since pumping stopped (min)

Reference: Bureau of Reclamation (1981) and Stallman (1971)

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Pumping Test and Yield Test
Water Level Measurement Form

Elevation (MSL): _____ top of casing

Observation well/piezometer no.: 11214
Pumped well no.: 11214
Project: 50.03.24

Pump/yield test performed by(Name): _____
Reference point measurements by: _____
Method of measurement: _____
Depth Correction: _____ b = _____
Average Q at end of test _____ gpm r = ___ ft. r' = _____

WL = 5.17 at Time = 0.

Date	Hour:Min	t (min)	t' (min)	t/t'	s (ft.)	s' (ft.)	(s_p - s')	Meter Reading (gals.)	Ave. Q	m Slope	Hz	Remarks
9-25-93	1058	5598			—			11148	2.00	—	138	Bucket test
↑	1112	5672			9.58			11175	2.00	14.73	138	Q is o.k.
	1146	5646			9.57			11224	2.00	14.74	138	Q is o.k
	1210	5670			9.57			11292	2.00	14.74	138	Q is ok.
	1240	5700			9.58			11355	2.00	14.75	138	Q - ok
	1310	5730			9.60			11413	2.00	14.77	138	Q - ok
	1340	5760			9.60			11471	2.00	14.77	138	Q - ok
	1410	5790			9.63			11540	2.00	14.80	138	Q - ok
	1440	5820			9.63			11593	2.00	14.80	138	Hz 13
	1510	5850			9.65				2.00	14.82	137	
	1540	5880			9.65			11736 1555 Hrs	1.9	14.82	137	Hz 137 to 13
	1610	5910			9.71			—	2.00	14.88	137	Bucket test ok
	1640	5940			9.73			"	2.00	14.90	138	
	1710	5970			9.75			11896 1715 Hrs	2.00	14.92	138	
	1740	6000			9.76			11946	2.00	14.93	138	Bucket test ok
	1810	6030			9.83			12007 5	2.00	15.10	138	
	1840	6060			9.86			12070.	2.00	15.13	138	Hz 138 to 1
	~~1910~~ 1855	6090			—			—	2.05	—	137	Hz 137 to 1
	1855	6075			—			—	2.05	—	136	Hz 136 to
	1900	6080			—			—	2.0	—	135	Bucket test ok
	1910	6090			9.82			12141 1915 Hrs	2.0	14.99	135	
	1940	6120			9.82			12191	2.0	14.99	135	Bucket test ok
	2010	6150			9.85			—	2.0	15.02	135	
↓	2040	6180			9.8[illegible]			12311		15.02	135	
9/25/93	2115	[illegible]			[illegible]			12371	2.0	15.02	135	

b = saturated thickness (ft)
r = distance from pumped well to observation well or piezometer (ft.)
Q = flow rate (gpm)
s = measured drawdown (ft.)
s' = residual drawdown (ft.) at t'
s_p = drawdown at end of pumping period (final s)
t = elapsed time since pumping began (min)
t' = elapsed time since pumping stopped (min)

Reference: Bureau of Reclamation (1981) and Stallman (1971)

DRAFT

E-7333

Pumping Test and Yield Test
Water Level Measurement Form

Elevation (MSL): _____ top of casing

Observation well/piezometer no.: 11214
Pumped well no.: 11214
Project: 50.0324

Pump/yield test performed by(Name): _____
Reference point measurements by: CRW 5 (AS. TR)
Method of measurement: M-SCOPE
Depth Correction: _____
Average Q at end of test _____ gpm r = ___ ft. r' = _____

b = _____

Water Level 5.17 @ TIME = 0

Date	Hour:Min	t (min)	t' (min)	t/t'	s (ft.)	s' (ft.)	(s_p - s')	Meter Reading (gals.)	Ave. Q	M' SCOPE	HZ	Remarks
9/25/93	2140	6240			9.87			12431	2.0	15.04	135	BUCKET TEST OK
↑	2210	6270			9.88			12501 2315 HRS	2.0	15.05	135	
	2240	6300			9.90			1255.5	2.0	15.07	135	
↓	2310	6330			9.91			1262.5 2315 HRS	2.0	15.08	135	
9/25/93	2340	6360			9.88			1269.0	2.0	15.05	135	BUCKET TEST OK
9-26/93	0010	6390			9.92			1274.8 GALL 0011 HRS	2.0	15.09	135	
"	0040	6420			9.93			1279.0 GALS 0041 HRS	2.0	15.10	135	
"	0110	6450			9.95			1285.5 GALS 0111 HRS	2.0	15.12	135	
"	0140	6480			9.97			1291.5 GALS 0141 HRS	2.0	15.14	135	BUCKET TEST OK
"	0210	6510			10.03			1297.4 GALS 0211 HRS	2.0	15.20	136	UP 1 ON HRTZ
"	0240	6540			10.04			1303.3 GALS 0241 HRS	2.0	15.21	136	
"	0310	6570			10.06			1309.4 GALS 0311 HRS	2.0	15.23	136	
"	0340	6600			10.06			1315.1 GALS 0341 HRS	2.0	15.23	136	BUCKET TEST OK
"	0410	6630			10.08			1321.2 GAL 0411 HRS	2.0	15.25	136	
"	0440	6660			10.11			1326.6 GAL 0441 HRS	2.0	15.28	136	
"	0510	6690			10.13			1332.5 GAL 0511 HRS	2.0	15.30	136	
"	0540	6720			10.14			1334.4 GAL 0541 HRS	2.0	15.31	136	
"	0610	6750			10.15			1345.2 GAL 0611 HRS	2.0	15.32	136	
"	0640	6780			10.16			1351.3 GAL 0641 HRS	2.0	15.33	136	
"	0710	6810			10.18			GAL 0711 HRS	—	15.35	137	JRC
"	0715	6815			10.18			13579 GAL HRS	2.0	15.35	137	Q is o.k.
"	0730	6830			—			—	2.1	—	131	131 - 136 HZ
"	0740	6840			10.18			13630	2.0	15.35	136	BUCKET TEST OK
"	0810	6870			10.20			13690.5	2.0	15.37	136	
9/26/93	0920	6875			—			—	1.9	—	135	136 - 135 HZ

b = saturated thickness (ft)
r = distance from pumped well to observation well or piezometer (ft.)
Q = flow rate (gpm)

s = measured drawdown (ft.)
s' = residual drawdown (ft.) at t'
s_p = drawdown at end of pumping period (final s)
t = elapsed time since pumping began (min)
t' = elapsed time since pumping stopped (min)

Reference: Bureau of Reclamation (1981) and Stallman (1971)

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Pumping Test and Yield Test
Water Level Measurement Form

Elevation (MSL): _____ top of casing

Observation well/piezometer no.: 11214
Pumped well no.: 11214
Project: 50.03.24

Pump/yield test performed by(Name): _____
Reference point measurements by: CRU 5 (AS/TR)
Method of measurement: M-SCOPE
Depth Correction: _____
Average Q at end of test _____ gpm r = ___ ft. r' = _____

b = _____

H_2O Level Site Time

Date	Hour:Min	t (min)	t' (min)	t/t'	s (ft.)	s' (ft.)	(s_p - s')	Meter Reading (gals.)	Ave. Q	Scope	HZ	Remarks
9/26/93	0840	6900			10.20			13750	1.9	15.37	135	HZ to 136
9/26/93	0910	6930			10.19			13810	2.0	15.36	136	
↑	0940	6960			10.11			13868	1.9	15.23	136	HZ to 138
	0945	6965			—			—	2.0	—	138	
	0950	6970			—			13887.8	2.0	—	138	Bucket test OK
	1010	6990			10.14			13926.5	2.0	15.31	138	
	1040	7020			10.15			13984.5	2.0	15.32	138	
	1110	7050			10.16			14044.5	2.0	15.33	138	
	1140	7080			10.17	-		14101	2.0	15.34	138	Bucket test
	1210	7110			10.20			—	1.95	15.37	138	HZ to 13
	1240	7140			10.22			14218.5	2.0	15.43	139	
	1310	7170			10.27			—	2.0	15.43	139	
	1340	7200			10.31			14337.5	2.0	15.47	139	Bucket test OK
	1410	7230			10.32			14397	2.0	15.48	139	
	1440	7260			10.33			14456.5	2.0	15.49	139	
	1510	7290			10.34			14520.0	2.0	15.50	139	
	1540	7320			10.35			—	2.0	15.51	139	Bucket test OK
	1610	7350			10.53				2.0	15.70	139	
	1625	7365			—			14665.6	2.0	—	139	
	1640	7380			10.35			14695.5	2.0	15.52	139	
	1710	7410			10.37			—	2.0	15.54	139	
	1740	7440			10.38			14814.0	2.0	15.55	139	Bucket test OK
	1810	7470			10.36			14874	2.0	15.53	139	
↓	1840	7500			10.44			14934	2.0	15.61	139	
9/26/93	1910	7530			10.45			14993.5	2.0	15.62	139	

b = saturated thickness (ft)
r = distance from pumped well to observation well or piezometer (ft.)
Q = flow rate (gpm)
s = measured drawdown (ft.)
s' = residual drawdown (ft.) at t'
s_p = drawdown at end of pumping period (final s)
t = elapsed time since pumping began (min)
t' = elapsed time since pumping stopped (min)

Reference: Bureau of Reclamation (1981) and Stallman (1971)

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Rev. No: 0

000425

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Pumping Test and Yield Test
Water Level Measurement Form

E - 7333

Elevation (MSL): _____ top of casing

Observation well/piezometer no.: 11214
Pumped well no.: 11214
Project: 50.03.24

Pump/yield test performed by(Name): _____
Reference point measurements by: CRU 5 (AS/TR)
Method of measurement: M-Scope
Depth Correction: _____
Average Q at end of test _____ gpm r = ___ ft r' = _____

b = _____

W.L. = 5.17 @ Time = 0.

Date	Hour:Min	t (min)	t' (min)	t/t'	s (ft.)	s' (ft.)	(s_p - s')	Meter Reading (gals.)	Ave. Q	s'	HZ	Remarks
9/26/93	1940	7560			10.46			15053.0	2.0	15.63	139	
↑	2010	7590			10.46			—	2.0	15.63	139	
	2040	7620			10.48			15172.0	2.0	15.65	139	
	2110	7650			10.49			15231.5	2.0	15.66	139	
	2140	7680			10.50			15291.2	2.0	15.67	139	BUCKET TEST OK
	2210	7690			10.51			15350.2	1.95	15.68	139	HZ to 140
	2240	7720			10.54			15400.0	~~1.95~~	15.71	140	HZ to 141
↓	2310	7750			10.60			15471.0	2.01	15.78	140	HZ to 140
9-26-93	2340	7780			10.63			15543.0	2.00	15.81	141	HZ to 141
9-27-93	0010	7810			10.63			15600	2.00	15.81	141	
↑	0040	7840			10.78			15660	2.00	15.96	141	
	0110	7870			10.80			15720	2.00	15.98	141	
	0140	7900			10.73			[illegible]	2.00	15.91	139	HZ 141-139
	0210	7930			10.78			[illegible]	2.00	15.96	139	
	0240	7960			10.77			[illegible]	2.00	15.95	139	
	0310	7990			10.77			15911	2.00	15.95	139	HRTZ 138
	0340	8020			10.77			16031	2.00	15.95	139	
	0410	8050			10.79			16091	2.00	15.97	139	
	0440	8080			10.80			16151	2.00	15.98	139	
	0510	8110			10.82			16211	2.00	16.00	139	
	0540	8140			10.85			~~[illegible]~~	2.00	16.03	139	
	0610	8170			10.88			~~[illegible]~~	2.00	16.05	139	
	0640	8200			~~10.87~~			[illegible]	2.00	16.05	139	
↓	0710	8230			10.90			16466	2.05	16.07	139	JC
9-27-93	~~0740~~ 0720	~~8260~~ 8240	JC		—			16475	—	—	138	139 → 138 HZ

b = saturated thickness (ft)
r = distance from pumped well to observation well or piezometer (ft.)
Q = flow rate (gpm)
s = measured drawdown (ft.)
s' = residual drawdown (ft.) at t'
s_p = drawdown at end of pumping period (final s)
t = elapsed time since pumping began (min)
t' = elapsed time since pumping stopped (min)

Reference: Bureau of Reclamation (1981) and Stallman (1971)

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Pumping Test and Yield Test
Water Level Measurement Form

Elevation (MSL): _____ top of casing

Observation well/piezometer no.: 11214
Pumped well no.: 11214
Project: 50.03.24

Pump/yield test performed by(Name): _____
Reference point measurements by: _____
Method of measurement: _____
Depth Correction: _____

TOTAL GALLONS PUMPED 17456.7

b = _____

Average Q at end of test _____ gpm r = ___ ft. r' = _____

W.L = 5.17 @ T = 0.

Date	Hour:Min	t (min)	t' (min)	t/t'	s (ft.)	s' (ft.)	(s_p - s')	Meter Reading (gals.)	Ave. Q	m swpt	Remarks #2	Remarks #1
9/27/93	0729	8283			10.88			16520	2.05	16.05		138→137
	0744	8284			—			16525	2.00	—	137	Q is o.k
	0810	8310			10.86			16579	2.00	16.03	137	Q is ok
	0840	8340			10.88			16638	2.00	16.05	138	Q ok
	0910	8370			10.90			16699	2.00	16.07	138	Q ok
	0943	8400			10.92			16762	2.00	16.09	138	Q o.k.
	1010	8430			10.93			16817	2.00	16.10	138	16.1 ok
	1040	8460			10.95			16880	2.00	16.12	138	Q ok
	1110	8490			10.96			16940	2.00	16.13	138	Q ok
	1144	8524			10.97			17003	2.00	16.13	138	—
	1214	8554			10.98			17064	2.00	16.15	138	Q ok
	1240	8580			10.99			17120	2.00	16.16	138	
	1310	8610			11.00			17145	2.00	16.17	138	
	1342	8640			11.00			17241	—	16.17	138	
	1415	8670			11.01			17307	2.00	16.18	138	Q ok.
	1440	8700			11.02			17357	2.00	16.19	138	Q ok
	1510	8730			11.02			17413	2.00	16.17	138	Q ok
	1530	8750			11.01	0		17456.7	0	16.18	138	Stopped P
	1531					1				13.00		
	1532					2				13.98		
	1532.5				7.5	3				13.41		
	1533.0				7	4				13.76		
	1533.5				3.5	5				13.73		
	1534.0				4	6				13.70		
	1534.5				4.5	7			↓	13.12		

b = saturated thickness (ft)
r = distance from pumped well to observation well or piezometer (ft.)
Q = flow rate (gpm)
s = measured drawdown (ft.)
s' = residual drawdown (ft.) at t'
s_p = drawdown at end of pumping period (final s)
t = elapsed time since pumping began (min)
t' = elapsed time since pumping stopped (min)

Reference: Bureau of Reclamation (1981) and Stallman (1971)

DRAFT

Pumping Test and Yield Test
Water Level Measurement Form

E-7333

Elevation (MSL): _____ top of casing

Observation well/piezometer no.: 11214
Pumped well no.: 11214
Project: 50.03 24

Pump/yield test performed by(Name): _____
Reference point measurement by: CRJ S (AS.TR.)
Method of measurement: M-SCOPE
Depth Correction: _____
b = _____
Average Q at end of test _____ gpm r = ___ ft. r² = _____

RECOVERY

WATER LEVEL @ 5.17 T=0

Date	Hour:Min	t (min)	t' (min)	t/t'	s (ft.)	s' (ft.)	(s_p - s')	Meter Reading (gals.)	Ave. Q	M-SCOPE	Remarks
9/27/93	1535.0		5.0			8.49				13.66	
	1535.5		5.5			8.47				13.64	
	1536.0		6.0			8.46				13.63	
	1536.5		6.5			8.46				13.63	
	1537.0		7.0			8.45				13.62	
	1538.0		8.0			8.44				13.61	
	1540		10			8.42				13.59	
	1542		12			8.41				13.58	
	1544		14			8.39				13.56	
	1546		16			8.37				13.54	
	1548		18			8.35				13.52	
	1550		20			8.32				13.49	
	1600		30			8.25				13.42	
	1610		40			8.20				13.37	
	1620		50			8.15				13.32	
	1630		60			8.11				13.28	
	1700		90			8.01				13.18	
	1730		120			7.91				13.08	
	1800		150			7.84				13.01	
	1830		180			7.78				12.95	
	1900		210			7.72				12.89	
	1930		240			7.66				12.83	
	2000		270			7.60				12.77	
	2030		300			7.56				12.73	
9/27/93	2100		330			7.50				12.67	

b = saturated thickness (ft)
r = distance from pumped well to observation well or piezometer (ft.)
Q = flow rate (gpm)
s = measured drawdown (ft.)
s' = residual drawdown (ft.) at t'
s_p = drawdown at end of pumping period (final s)
t = elapsed time since pumping began (min)
t' = elapsed time since pumping stopped (min)

Reference: Bureau of Reclamation (1981) and Stallman (1971)

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OU-5\PO-37\GTIPFPT

DRAFT

Rev. No: 0

000428

DRAFT

Pumping Test and Yield Test
Water Level Measurement Form

Elevation (MSL): _____ top of casing

Observation well/piezometer no.: 11214
Pumped well no.: 11214
Project: 50.03 24

Pump/yield test performed by(Name): _____
Reference point measurements by: CRU-5 (AS. TR)
Method of measurement: M. SCOPE
Depth Correction: _____

b = _____

Average Q at end of test _____ gpm r = ___ ft. r^2 = _____

RECOVERY

Date	Hour:Min	t (min)	t' (min)	t/t'	s (ft.)	s' (ft.)	$(s_p - s')$	Meter Reading (gals.)	Ave. Q	M. SCOPE	Remarks
9/27/92	2130	~~30~~	360			7.46				12.63	
↑	2200		390			7.42				12.59	
↓	2230		420			7.37				12.54	
9/27/92	2300		450			7.33				12.50	

b = saturated thickness (ft)
r = distance from pumped well to observation well or piezometer (ft.)
Q = flow rate (gpm)
s = measured drawdown (ft.)
s' = residual drawdown (ft.) at t'
s_p = drawdown at end of pumping period (final s)
t = elapsed time since pumping began (min)
t' = elapsed time since pumping stopped (min)

Reference: Bureau of Reclamation (1981) and Stallman (1971)

ERAFS1\SYS:RSAPPS\RSDATA\.
OU-5\PO-37\GTIPFPT

DRAFT

Rev. No: 0

000429

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

R - 7333

PUMPING WELL ~~11215~~ 11214

PIEZOMETER NUMBER: 11213

WATER LEVEL AT TIME 0: ~~4.84~~ 4.85 at 1430 hours on 9/21/93.

DATE	TIME	ELAPSED TIME	WATER LEVEL Ft.	DRAWDOWN	COMMENTS
9/21/93	09:50	N/A	4.84	N/A	
~~9/21/93~~	~~10:~~	JR 9/21/93			
9/21/93	13:27	N/A	4.85	N/A	INITIAL T=0
9/21/93	13:40	0:01	5.19	.34	
9/21/93	13:42	0:02	5.38	.53	
9/21/93	13:43	0:03	5.55	.70	
9/21/93	13:44	0:04	5.68	.83	
9/21/93	13:45	0:05	5.82	.97	
9/21/93	13:46	0:06	5.92	1.07	
9/21/93	13:48	0:08	6.12	1.27	
9/21/93	13:50	0:10	6.23	1.38	
9/21/93	13:52	0:12	6.37	1.52	
9/21/93	13:54	0:14	6.45	1.60	
9/21/93	13:56	0:16	6.55	1.70	
9/21/93	13:58	0:18	6.63	1.78	
9/21/93	14:00	0:20	6.72	1.87	
9/21/93	14:05	0:25	6.89	2.04	
9/21/93	14:10	0:30	7.00	2.15	.5 HR
9/21/93	14:20	0:40	7.19	2.34	
9/21/93	14:30	0:50	7.32	2.47	
9/21/93	14:40	1:00	7.43	2.58	1.0 HOUR
9/21/93	14:55	1:15	7.56	2.71	
9/21/93	15:10	1:30	7.66	2.81	
9/21/93	15:25	1:45	7.75	2.90	
9/21/93	15:40	2:00	7.84	2.99	2.0 HOUR
9/21/93	16:10	2:30	7.95	3.10	
9/21/93	16:40	3:00	8.06	3.21	3.0 HOUR
9/21/93	17:10	3:30	8.18	3.33	

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

PUMPING WELL: 11214

PIEZOMETER NUMBER: 11213

WATER LEVEL AT TIME 0: 4.85 at 1430 hours on 9/21/93

DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
9/21/93	17:40	4:00	8.26	3.41	
9/21/93	18:10	4:30	8.34	3.49	
9-21-93	18:40	5:00	8.42	3.57	
9-21-93	19:10	5:30	8.49	3.64	
9-21-93	19:40	6:00	8.57	3.72	
9-21-93	20:10	6:30	8.63	3.78	
9-21-93	20:40	7:00	8.69	3.84	
9-21-93	21:10	7:30	8.75	3.90	
9-21-93	21:40	8:00	8.81	3.96	
9-21-93	22:10	8:30	8.88	4.03	
9-21-93	22:40	9:00	8.92	4.07	
9-21-93	23:10	9:30	8.96	4.11	
9-21-93	23:40	10:00	9.00	4.15	
9-22-93	00:10	10:30	9.03	4.18	
9-22-93	0040	11:00	9.06	4.24	
9-22-93	0110	11:30	9.10	4.28	
9-22-93	0140	12:00	9.15	4.33	
9-22-93	0210	12:30	9.17	4.35	
9-22-93	0240	13:00	9.20	4.38	
9-22-93	0310	13:30	9.22	4.40	
9-22-93	0340	14:00	9.27	4.45	
9-22-93	0410	14:30	9.28	4.46	
9-22-93	0440	15:00	9.32	4.50	
9-22-93	0510	15:30	[illegible]	4.55	
9-22-93	0540	16:00	9.40	4.58	
9-22-93	0610	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	9.48	4.66	
9-22-93	0710	17:30	9.51	4.69	

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

PUMPING WELL: 11 2:4

PIEZOMETER NUMBER: 11 2:3

WATER LEVEL AT TIME 0: 4.85 at 1340 hours on 9/21/93.

DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
09-22-93	0740	18:00	9.55	4.70	
09-22-93	0810	18:30	9.56	4.71	
09-22-93	0842	19:00	9.59	4.74	(29.60 in Hg @ 50°F.
09-22-93	0907	19:30	9.61	4.76	
09-22-93	0940	20:00	9.64	4.79	
09-22-93	1009	20:30	9.66	4.81	
09-22-93	1039	21:00	9.68	4.83	
9-22-93	1112	21:30	9.71	4.86	
"	1141	22:00	9.73	4.88	
"	~~1210~~	22:30	9.76	4.91	
"	1242	23:02	9.78	4.93	1382 minutes elapsed time
"	1309	23:29	9.80	4.95	
"	1340		~~10~~ 9.82	4.97	
"	1408		9.85	5.00	
	1438		9.86	5.01	
	1509		9.90	5.05	
9-22-93	1540	26:00	9.92	5.07	
9-22-93	1610	26:30	9.94	5.09	
9-22-93	1640	27:00	9.98	5.13	
9-22-93	1710	27:30	10.01	5.16	
9-22-93	1740	1680 minutes	10.03	5.18	
9-22-93	1810	1710	10.04	5.19	
9-22-93	1840	1740	10.07	5.22	
9-22-93	1910	1770	10.09	5.24	
9-22-93	1940	1800	10.11	5.26	
9-22-93	2010	1830	10.13	5.28	
9-22-93	2040	1860	10.15	5.30	
9-22-93	2110	1890	10.16	5.31	

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

PUMPING WELL: 11214

PIEZOMETER NUMBER: 11213

WATER LEVEL AT TIME 0: 4.85' @ 1340 hrs on 9/21/93.

DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
9-22-93	2140	1920	10.18	5.33	
9-22-93	2210	1950	10.21	5.36	
9/22/93	2240	1980	10.22	5.37	
9/22/93	2310	2010	10.25	5.40	
9/22/93	2340	2040	10.29	5.44	
9/23/93	0010	2070	10.30	5.45	
9-23-93	0040	2100	10.30	5.45	
9-23-93	0110	2130	10.31	5.46	
	0140	2160	10.37	5.52	
	0210	2190	10.35	5.50	
	0240	2220	10.37	5.52	
	0310	2250	10.40	5.55	
	0340	2280	10.41	5.56	
	0410	2310	10.41	5.56	
	0440	2340	10.43	5.58	
	0510	2370	10.47	5.62	
	0540	~~2300~~ 2400 JC	10.47	5.62	
	0610	~~2330~~ 2430	10.47	5.62	
	0640	~~2360~~ 2460	10.50	5.65	
	0710	~~2390~~ 2490	10.53	5.68	
	0740	~~2420~~ 2520	10.55	5.70	
	0810	~~2450~~ 2550	10.57	~~5.73~~ 5.72	JCurtis
	0839	~~2479~~ 2579	10.59	~~5.75~~ 5.74	JC
	0908	~~2508~~ 2608	10.61	~~5.77~~ 5.76	JC
	0939	~~2539~~ 2639	10.62	~~5.78~~ 5.77	JC
	1010	~~2~~ 2670 JC	10.64	~~5.80~~ 5.79	JC
	1040	2700	10.66	5.81	D.B.
	1110	2730	10.68	5.83	JC

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

PUMPING WELL: 11214

PIEZOMETER NUMBER: 11213

WATER LEVEL AT TIME 0: 4.85 @ 1340 on 9/21/93.

DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
9-23-93	1140	2760	10.69	~~5.83~~ 5.84	JC
9-23-93	1220	2800	10.71	~~5.85~~ 5.86	JC
9-23-93	1240	2820	10.72	~~5.86~~ 5.87	JC
9-23-93	1310	2850	10.75	~~5.89~~ 5.90	JC
9-23-93	1340	2880	10.76	~~5.90~~ 5.91	JC
9-23-93	1412	2912	10.78	5.93	JC
9-23-93	1440	2940	10.80	5.95	JC
9-23-93	1510	2970	10.82	5.97	
9-23-93	1540	3000	10.84	5.99	GB
9-23-93	1610	3030	10.86	6.01	GB
9-23-93	1640	3060	10.88	6.03	GB
9-23-93	1710	3090	10.90	6.05	GB
9-23-93	1740	31 ~~4020~~	10.92	6.07	
9-23-93	1810	31 ~~4050~~	10.93	6.08	
9-23-93	1840	31 ~~4080~~	10.94	6.09	
9-23-93	1910	32 ~~4110~~	10.96	6.11	
9-23-93	1940	32 ~~4140~~	10.98	6.13	
~~9-23-93~~	2010	32 ~~4170~~	10.99	6.14	FP
9-23-93	2040	33 ~~4200~~	11.01	6.16	
9-23-93	2110	33 ~~4230~~	11.02	6.17	
9-23-93	2140	33 ~~4260~~	11.04	6.19	
9-23-93	2210	33 ~~4290~~	11.06	6.21	
9/23/93	2240	3420	11.07	6.22	
9-23-93	2310	3450	11.09	6.24	
9-23-93	2340	3480	11.10	6.25	
9-24-93	0010	3510	11.11	6.26	
9-24-93	0040	3540	11.14	6.29	
9-24-93	0110	3570	11.15	6.30	

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

PUMPING WELL: 11214

PIEZOMETER NUMBER: 11213

WATER LEVEL AT TIME 0: 4.85 @ 1340 ON 9/21/93

DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
9-24-93	0140	3600	11.20	6.35	
"	0210	3630	11.20	6.35	
"	0240	3660	11.21	6.36	
"	0310	3690	11.21	6.36	
"	0340	3720	11.24	6.39	
"	0410	3750	11.25	6.40	
"	0440	3780	11.28	6.43	
"	0510	3810	11.30	6.45	
"	0540	3840	11.31	6.46	
"	0610	3870	11.32	6.47	
"	0640	3900	11.34	6.49	
9-24-93	0710	3930	11.34	6.49	
	0810	3990	11.37	6.52	J Curtis
	0840	4020	11.39	6.54	J Curtis
	0910	4050	11.40	6.55	JRC
	0940	4080	11.42	6.57	JRC
	1010	4110	11.43	6.58	DK
	1040	4140	11.45	6.60	JRC
	1110	4170	11.47	6.62	JRC
	1140	4200	11.49	6.64	JRC
	1211	4231	11.51	6.66	JRC
	1240	4260	11.52	6.67	JRC
	1310	4290	11.53	6.68	JRC
	1340	4320	11.54	6.69	JRC
	1410	~~4350~~	11.56	6.71	
	1440	~~4400~~ 4380	11.57	6.72	
	1510	4410	11.58	6.73	JRC
	1540	4440	11.59	6.74	JRC

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

PUMPING WELL: 11214

PIEZOMETER NUMBER: 11213

WATER LEVEL AT TIME 0: 4.85

DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
9-24-93	1610	4470	11.60	6.75	JR
	1640	4500	11.62	6.77	JRC
9-24-93	1710	4530	11.64	6.79	
	1740	4560	11.65	6.80	JRC
9-24-93	1810	4590	11.67	6.82	
9-24-93	1840	4620	11.68	6.83	
	1910	4650	11.69	6.84	JRC
	1940	4680	11.71	6.85	
	2010	4710	11.73	6.87	
	2040	4740	11.75	6.89	
	2110	4770	11.76	6.90	
	2140	4800	11.77	6.91	
	2210	4830	11.79	6.93	
	2240	4860	11.81	6.95	
	2310	4890	11.81	6.95	
9-24-93	2340	4920	11.81	6.95	
9-25-93	0010	4950	11.84	6.98	
	0040	4980	11.85	6.99	
	0110	5010	11.88	7.02	
	0140	5040	11.90	7.04	
	0210	5070	11.91	7.05	
	0240	5100	11.91	7.05	
	0310	5130	11.94	7.08	
	0340	5160	11.94	7.08	
	0410	5190	11.96	7.10	
	0440	5230	11.96	7.10	
	0510	5260	11.98	7.12	
9-25-93	0540	5290	11.99	~~7.15~~ 7.14	

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

PUMPING WELL: [illegible]

PIEZOMETER NUMBER: [illegible]

WATER LEVEL AT TIME 0: [illegible]

DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
[illegible]	[illegible]10	5320	12.01	~~7.15~~ 7.16	
	[illegible]40	5350	12.02	~~7.16~~ 7.17	
	0710	5380	12.02	~~7.16~~ 7.17	
	0741	5401	12.04	~~7.18~~ 7.19	JRC
	0810	5430	12.05	7.20	JRC
	0841	5461	12.07	7.22	JRC
	0910	5490	12.09	7.24	JRC
	0940	5520	12.10	7.25	JRC
	1010		12.12	7.27	
	1043	5580	12.13	7.28	JRC
	1110		12.15	7.30	
	1143	5640	12.16	7.31	JRC
	1210	5670	12.17	7.32	JRC
	1241	5701	12.18	7.33	JRC
	1310	5730	12.20	7.35	
	1340	5760	12.21	7.36	
	1410	5790	12.22	7.37	
	1440	5820	12.24	7.39	
	1510	5850	12.25	7.40	
	1540	5880	12.27	7.42	Drawdown & E-Time Curves
	1610	5910	12.29	7.44	
	1640	5940	12.30	7.45	
	1710	5970	12.32	7.47	
	1740	6000	12.34	7.49	
	1810	6030	12.37	7.52	
	1840	6060	12.37	7.52	
	1910	6090	12.39	7.54	
9/25/93	1940	6120	12.40	7.55	

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

PUMPING WELL: 11214

PIEZOMETER NUMBER: 11213

WATER LEVEL AT TIME 0: 4.85

DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
9/25/93	2010	6150	12.41	7.56	
	2040	6180	12.42	7.57	
	2140	6240	12.44	7.59	
	2240	6270	12.47	7.62	
	2240	6300	12.48	7.63	
	2310	6330	12.50	7.65	
9/25/93	2340	6360	12.50	7.65	
9/26/93	0010	6390	12.54	7.69	
"	0040	6420	12.53	7.68	
	0110	6450	12.55	7.70	
	0140	6480	12.58	7.73	
	0210	6510	12.59	7.74	
	0240	6540	12.60	7.75	
	0310	6570	12.62	7.77	
	0340	6600	12.63	7.78	
	0410	6630	12.65	7.80	
	0440	6660	12.66	7.81	
	0510	6690	12.67	7.82	
	0540	6720	12.69	7.84	
	0610	6750	12.70	7.85	
	0640	6780	12.72	7.87	
	0710	6810	12.72	7.87	
	0740	6840	12.73	7.88	
	0810	6870	12.75	7.90	
	0840	6900	12.76	7.91	
	0910	6930	12.78	7.93	
	0940	6960	12.78	7.93	
	1010	6990	12.79	7.94	

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

PUMPING WELL: 11214

PIEZOMETER NUMBER: 11213

WATER LEVEL AT TIME 0: 4.85

DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
9/26/93	1040	7020	12.80	7.95	
	1110	7050	12.81	7.96	JRC
	1140	7080	12.83	7.98	JRC
	1210	7110	12.84	7.99	
	1240	7140	12.85	8.00	
	1310	7170	12.86	8.01	
	1340	7200	12.88	8.03	
	1410	7230	12.89	8.04	
	1440	7260	12.91	8.06	
	1510	7290	12.92	8.07	
	1540	7320	12.93	8.08	
	1610	7350	12.96	8.11	
	1640	7380	12.98	8.13	
	1710	7410	12.98	8.13	
	1740	7440	12.98	8.13	
	1810	7470	13.01	8.16	
	1840	7500	13.02	8.17	
	1910	7530	13.03	8.18	
	1940	7560	13.04	8.19	
	2010	7590	13.05	8.20	
	2040	7620	13.06	8.21	
	2110	7650	13.08	8.23	
	2140	7680	13.10	8.25	
	2210	7710	13.11	8.26	
	2240	7740	13.11	8.28	
	2310	7770	13.14	8.31	
9-26-93	2340	7800	13.17	8.34	
9-27-93	0010	7830	13.17	8.34	

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM 7333

PUMPING WELL 11214

PIEZOMETER NUMBER 11213

WATER LEVEL AT TIME 0: 4.85

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DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
9-27-93	0040	7860	13.14	8.36	
	0110	7880	13.20	8.37	
	0140	7920	13.22	8.39	
	0210	7950	13.24	8.41	
	0240	7980	13.25	8.42	
	0310	8010	13.27	8.44	
	0340	8040	13.27	8.44	
	0410	8070	13.29	8.46	
	0440	8100	13.31	8.48	
	0510	8130	13.31	8.48	
	0540	8160	13.34	8.51	
	0610	8190	13.35	8.52	
	0640	8220	13.37	8.54	
	0710	8250	13.38	8.53 ✓	JC
	0740	8280	13.39	8.54 ✓	JC
	0810	8310	13.40	8.55	JC
	0840	~~0~~ 8340	13.41	8.56	JC
	0910		13.42	8.57	
	0940	8400	13.44	8.59	JC
	1010	8430	13.46	8.61	
	1040	8460	13.48	8.63	
	1110	8490	13.49	8.64	
	1140	8520	13.50	8.65	JC
	1210	8550	13.51	8.66	JRC
	1240	8580	13.53	8.68	
	1310		13.54	8.69	
	1340	8640	13.55	8.70	JRC
9/27/93	1410	8670	13.57	8.72	JRC

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

PUMPING WELL: 11214

PIEZOMETER NUMBER: 11213

WATER LEVEL AT TIME 0: 4.85

PAGE 12 OF 13

DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
9/27/93	1440	8700	13.58	8.73	
	1510	8730	13.59	8.74	
	1530	0	13.60	8.75	STOP Pump/Start Recover
	1531	1	13.57	8.72	
	1532	2	13.54	8.69	
	1533	3	13.51	8.66	
	1534	4	13.48	8.63	
	1535	5	13.46	8.61	
	1536	6	13.45	8.60	
	1538	8	13.42	8.57	
	1540	10	13.40	8.55	
	1542	12	13.38	8.53	
	1544	14	13.36	8.51	
	1546	16	13.34	8.49	
	1548	18	13.33	8.48	
	1550	20	13.31	8.46	
	1600	30	13.23	8.38	
	1610	40	13.17	8.32	
	1620	50	13.11	8.26	
	1630	60	13.06	8.21	
	1700	90	12.95	8.10	
	1730	120	12.85	8.00	
	1800	150	12.77	7.92	
	1830	180	12.70	7.85	
	1900	210	12.63	7.78	
	1930	240	12.57	7.72	
	2000	270	12.56	7.71	
	2030	300	12.46	7.61	
9/27/93	2100	330	12.41	7.56	

000441

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

PUMPING WELL: 11214

PIEZOMETER NUMBER: 11213

WATER LEVEL AT TIME 0: 4.85

DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
9/27/93	2130	360	12.37	7.52	
↑	2200	390	12.32	7.47	
↓	2230	420	12.27	~~6.52~~ 7.42	
9/27/93	2300	450	12.24	7.39	

TH 9-29-93

E-7333

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

Note: Measure water level from top of outer protective casing.

PUMPING WELL: 11214

PIEZOMETER NUMBER: 11122

WATER LEVEL AT TIME 0: 4.98 @ 1340 on 9/21/93

DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
9-21-93	0942	N/A	4.36	N/A	Pre-start up inner casing
	1103	N/A	4.40	N/A	Pre-start up outer casing
	1328	N/A	4.91	N/A	" " " " "
*	1340	0	4.98	—	Time = 0 start test
	1341	1	4.98	0	
	1342	2	NK	NK	bad m-scope
	1343	3	NK	NK	bad m-scope
	1345	~~4~~ 5	6.25	1.27	
	1348	~~5~~ 8	6.35	~~.10~~ 1.37	
	1350	~~6~~ 10	6.48	~~.13~~ 1.50	
	1352	12	6.60	~~.12~~ 1.62	
	1354	14	6.71	~~.11~~ 1.73	
	1356	16	6.81	~~.10~~ 1.83	
	1358	18	6.90	~~.09~~ 1.92	
	1359	19	6.99	~~.09~~ 2.01	
	1404	~~23~~ 24	7.16	~~.15~~ 2.18	
	1410	30	7.27	~~.11~~ 2.29	
	1420	40	7.45	~~.18~~ 2.47	
	1430	50	7.58	~~.13~~ 2.60	
	1440	60	7.70	~~.12~~ 2.72	
	1455	75	7.82	~~.12~~ 2.84	
	1510	90	7.92	2.94	
	1525	105	8.01	3.03	
	1540	120	8.09	3.11	
	1610	150	8.21	3.22	
	1640	180	8.30	3.32	
▼	1710	210	8.42	3.44	
9-21-93	1740	240	8.50	3.52	

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

PUMPING WELL: 11214

PIEZOMETER NUMBER: 11122

WATER LEVEL AT TIME 0: 4.95 @ 1340 on 9/21/93

DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
9/21/93	1810	270	8.50	3.58	
	1840	300	8.65	3.68	
	1910	330	8.72	3.74	
	1940	360	8.80	3.82	
	2010	390	8.84	3.86	
	2040	420	8.92	3.94	
	2110	450	8.96	3.98	
	2140	480	9.03	4.05	
	2210	510	9.10	4.12	
	2240	540	9.13	4.15	
	2310	570	9.18	4.20	
	2340	600	9.21	4.23	
9-22-93	0010	630	9.24	4.26	
	0040	660	9.26	4.28	
	0110	690	9.35	4.37	
	0140	720	9.35	4.37	
	0210	750	9.37	4.34	
	0240	780	9.41	4.43	
	0310	810	9.44	4.46	
	0340	840	9.48	4.50	
	0410	870	9.51	4.53	
	0440	900	9.57	4.59	
	0510	930	9.60	4.62	
	0540	960	9.65	4.67	
	0610	990	9.70	4.72	
	0640	1020	9.75	4.77	
	0710	1050	9.76	4.78	
	0741	1081	9.76	4.78	

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

PUMPING WELL: 11214

PIEZOMETER NUMBER: 11122

WATER LEVEL AT TIME 0: 4.48 @ 1340 cm 9/21/93

DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
9-22-93	0810 ~~1012~~	1112	9.77	4.79	
"	0840	1140	9.79	4.81	
"	0910	~~1450~~ 1170	9.81	4.8~~8~~3 JC	
"	0940	1200	9.84	4.86	
"	1010	1230	9.86	4.88	
"	1050	1270	9.90	4.92	
"	1110	1290	9.91	4.93	
"	1140	1320	9.93	4.95	
"	1210	1350	9.96	4.98	
"	1240	1380	9.98	5.00	
"	1310	1410	10.00	5.02	
"	1340	1440	10.02	5.04	
"	1410	1470	10.04	5.06	
"	1440	1500	10.07	5.09	
"	1510	1530	10.09	5.11	
"	1540	1560	10.13	5.15	
"	1610	1590	10.15	5.17	
"	1640	1620	10.18	5.20	
"	1710	1650	10.20	5.22	
"	1740	1680	10.22	5.24	
"	1810	1710	10.24	5.26	
"	1840	1740	10.26	5.28	
"	1910	1770	10.28	5.30	
"	1940	1800	10.30	5.32	
"	2010	1830	10.32	5.34	
"	2040	1860	10.34	5.36	
"	2110	1890	10.36	5.38	
"	2140	1920	10.38	5.40	

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

PUMPING WELL: 11214

PIEZOMETER NUMBER: 11122

WATER LEVEL AT TIME 0: 4.98 @1340 on 9/21/93

DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
9-22-93	2210	1950	10.40	5.42	
9/22/93	2240	1980	10.41	5.43	
9/22/93	2310	2010	10.42	5.44	
9/22/93	2340	2040	10.46	~~5.50~~ 5.48	JC
9/23/93	0010	2070	10.49	~~5.53~~ 5.51	
9-23-93	0040	2100	10.50	~~5.54~~ 5.52	
9-23-93	0110	2130	10.55	~~5.59~~ ~~5.61~~ 5.57	JC
9-23-93	0140	2160	10.57	~~5.61~~ ~~5.63~~ 5.59	
9-23-93	0210	2190	10.56	~~5.60~~ ~~5.62~~ 5.58	
9-23-93	0240	2220	10.59	~~5.63~~ 5.61	JC
9-23-93	0310	2250	10.61	~~5.65~~ 5.63	
9-23-93	0340	2280	10.62	~~5.66~~ 5.64	
9-23-93	0410	2310	10.63	~~5.67~~ 5.65	
9-23-93	0440	2340	10.66	~~5.70~~ 5.68	
9-23-93	0510	2370	10.68	~~5.72~~ 5.70	
9-23-93	0540	2400	10.69	~~5.73~~ 5.71	
9-23-93	0610	2430	10.70	~~5.74~~ 5.72	
9-23-93	0640	2460	10.71	~~5.75~~ 5.73	
9-23-93	0710	2490	10.73	~~5.77~~ 5.75	
9-23-93	0740	2520	10.75	~~5.79~~ 5.77	
9-23-93	0810	2550	10.75	~~5.79~~ 5.77	
9-23-93	0840	2580	10.78	~~5.82~~ 5.80	
"	0910	2610	10.79	~~5.83~~ 5.81	
"	0941	2641	10.81	~~5.85~~ 5.83	
"	1011	2671	10.84	~~5.88~~ 5.86	JC
"	1040	2700	10.85	5.87	JC
"	1110	2730	10.87	5.89	JC
9-23-93	1140	2760	10.88	5.90	JC

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

PUMPING WELL: 11214

PIEZOMETER NUMBER: 11122

WATER LEVEL AT TIME 0: 4.98' @ 1340 on 9/21/93

DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
9-23-93	12[illegible]	2800	10.91	5.93	
"	1240	2820	10.92	5.94	
"	1310	2850	10.94	5.96	
	1340	2880	10.95	5.97	J Curtis
	1410	2910	10.96	5.98	J Curtis
	1440	2940	10.99	6.01 ~~5.01~~ AC 9-23-93	J Curtis
	1510	2970	11.01	6.03 ~~5.03~~ AC 9-23-93	J Curtis
	1540	3000	11.03	6.05 ~~5.05~~ AC 9-23-93	A. Cleeter
	1610	~~300~~ 3030	11.04	6.06	A. Cleeter
	1640	~~3040~~ 3060	11.06	6.08	A. Cleeter
	1710	~~3070~~ 3090	11.08	6.10	A. Cleeter
	1740	3120 ~~4020~~	11.10	~~6.13~~ 6.12	A. Cleeter
	1810	3150	11.11	~~6.14~~ 6.13	A. Cleeter
	1840	3180	11.12	~~6.15~~ 6.14	A. Cleeter
	1910	3210	11.14	~~6.17~~ 6.16	A. Cleeter
	1940	3240	11.16	6.18	
	2010	3270	11.17	6.19	J Curtis
	2040	3300	11.19	6.21	J Curtis
	2110	3330	11.21	6.23	J Curtis
	2140	3360	11.23	6.25	
	2210	3390	11.26	6.28	
	2240	3420	11.27	6.29	
	2310	3450	11.27	6.29	
9-23-93	2340	3480	11.28	6.30	
9-24-93	0010	3510	11.33	6.35	
"	0040	3540	11.35	6.37	
"	0110	3570	11.37	6.39	
"	0140	3600	11.38	6.40	

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

PUMPING WELL: ~~H22~~ 11214

PIEZOMETER NUMBER: 22

WATER LEVEL AT TIME 0: 4.98

DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
	0210	3630	11.41	6.43	
	0240	3660	11.46	6.48	
	0310	3690	11.49	6.51	
	0340	3720	11.51	6.53	
	0410	3750	11.54	6.56	
	0440	3780	11.55	6.57	
	0510	3810	11.53	6.55	
	0540	3840	11.52	6.54	
	0610	3870	11.53	6.55	
	0640	3900	11.55	6.57	
	0710	3930	11.54	6.56	
	0740	3960	11.55	6.57	
	0810	3990	11.57	6.59	
	0840	4020	11.58	6.60	A Cleeter
	9:10	4050	11.60	6.62	"
	9:40	4080	11.62	6.64	"
	10:40	4140	11.64	6.66	"
	1110	4170	11.66	6.68	
	1141	4200 ~~4230~~	11.71	6.73	
	1210	4230 ~~4260~~	11.71	6.73	JRC
	1240	4260 ~~4290~~	11.72	6.74	A Cleeter
	1310	4290	11.71	6.73	"
	1340	4320	11.71	6.73	"
	1410	4350	11.74	6.76	"
	1440	4380	11.76	6.78	"
	1510	4410	11.77	6.79	"
	1540	4440	11.77	6.79	
	1610	4470	11.79	6.81	
	1640	4500	11.81	6.83	"
	1710	4530	11.81	6.83	T Amelan

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

PUMPING WELL: 11214

PIEZOMETER NUMBER: 11122

WATER LEVEL AT TIME 0: 4.98

DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
6-24-92	1740	4560	11.85	6.87	
	1810	4590	11.84	6.86	JRC
	1840	4620	11.85	6.857	
	1910	4650	11.87	6.89	
	1940	4680	11.87	6.89	
	2010	4710	11.90	6.92	
	2040	4740	11.93	6.95	
	2110	4770	11.93	6.95	
	2140	~~5100~~ 4800	11.94	6.96	
	2210	4830	11.95	6.97	
	2240	4860	11.96	6.98	
	2310	4890	12.00	~~7.02~~	
	2340	4920	12.03	7.05	
	2410	4950	12.03	7.09	
	0040	4980	12.04	7.06	
	0110	5010	12.07	7.09	
	0140	5040	12.08	7.10	
	0210	5070	12.11	7.13	
	0240	5100	12.12	7.14	
	0310	5130	12.12	7.14	
	0340	5160	12.13	7.15	
	0410	5190	12.14	7.16	
	0440	5220	12.17	7.19	
	0510	5250	12.17	7.19	
	0540	5280	12.18	7.20	
	0610	5310	12.19	7.21	
	0640	5340	12.20	7.22	
	0710	5370	12.19	7.21	

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

PUMPING WELL: 11214

PIEZOMETER NUMBER: 11122

WATER LEVEL AT TIME 0: 4.98

DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
9-25-93	0739	5399	12.22	7.24	JRC
	0810	5430	12.22	7.24	JRC
	0840	5460	12.25	7.27	JRC
	0910	5490	12.26	7.28	
	0940	5520	12.28	7.30	JRC
	1010	5550	12.29	7.31	JRC
	1040	5580	12.31	7.33	JRC
	1110	5610	12.32	7.34	JRC
	1142	5640	12.34	7.36	JRC
	1209	5669	12.35	7.37	JRC
	1240	5700	12.36	7.38	JRC
1340	~~1340~~	5760	12.38	7.40	JRC
	1410	5790	12.40	7.42	
	1440	5820	12.41	~~7.41~~	7.43 JC
	1510	~~5920~~ 5850	12.42	~~7.42~~	7.44 JC
	1540	5880	12.44	7.46	
	1610	5910	12.45	~~7.48~~	~~7.47~~ JC
	1640	5940	12.48	~~7.51~~	7.50 JC
	1710	5970	12.49	~~7.50~~	7.51 JC
	1740	6000	12.50	~~7.55~~	7.52 JC
	1810	6030	12.54	~~7.57~~	7.56 JC
	1840	6060	12.56	~~7.59~~	7.58 JC
	1910	6090	12.56	~~7.59~~	7.58 JC
	1940	6120	12.57	~~7.60~~	7.59 JC
	2010	6150	12.59	~~7.62~~	7.61 JC
	2040	6180	12.60	~~7.65~~	7.62 JC
	2110	6210	~~12.62~~	~~7.65~~	No pic, taken
9/25/93	2140	6240	12.62	~~7.65~~	7.64 JC

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

PUMPING WELL: 11214

PIEZOMETER NUMBER: 11122

WATER LEVEL AT TIME 0: 4.98

DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
9/25/93	2210	6270	12.64	~~7.67~~	7.66 JC
	2240	6300	12.66	~~7.69~~	7.68 JC
	2310	6330	12.67	~~7.70~~	7.69 JC
9/25/93	2340	6360	12.67	~~7.70~~	7.69 JC
9/26/93	0010	6390	12.72	~~7.75~~	7.74 JC
	0040	6420	12.73	~~7.76~~	7.75 JC
	0110	6450	12.74	~~7.77~~	7.76 JC
	0140	6480	12.75	~~7.78~~	7.77 JC
	0210	6510	12.79	~~7.82~~	7.81 JC
	0240	6540	12.80	~~7.83~~	7.82 JC
	0310	6570	12.81	~~7.84~~	7.83 JC
	0340	6600	12.83	~~7.86~~	7.85 JC
	0410	6630	12.82	~~7.85~~	7.84 JC
	0440	6660	12.86	~~7.89~~	7.88 JC
	0510	6690	12.89	~~7.92~~	7.91 JC
	0540	6720	12.91	~~7.94~~	7.93 JC
	0610	6750	12.91	~~7.94~~	7.93 JC
	0640	6780	12.92	~~7.95~~	7.94 JC
	0710	6810	12.90	7.92	JC
	0740	6840	12.91	7.93	JC
	0810	6870	12.93	7.95	JRC
	0840	6900	12.93	7.95	
	0910	6930	12.95	~~7.97~~	7.97 JRC
	0940	6960	12.94	7.96	JRC
	1010	6990	12.96	7.98	JRC
	1040	7020	12.97	7.99	JRC
	1110	7050	12.98	8.00	JRC
9/26/93	1140	7080	12.99	8.01	JRC

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

PUMPING WELL: 1124

PIEZOMETER NUMBER: 1122

WATER LEVEL AT TIME 0: 4.98

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DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
9-26-93	1210	7110	13.~~70~~ 01	8.03	
	1240	7140	13.03	8.~~06~~ 05	JRC
	1310	7170	12.99	8.01	JRC
	1340	7200	13.05	8.07	
	1410	7230	13.06	8.08	
	1440	7260	13.08	8.10	
	1510	7290	13.10	8.12	
	1540	7320	13.11	8.13	
	1610	7350	13.16	8.18	
	1640	7380	13.15	8.17	
	1710	7410	13.15	8.17	
	1740	7440	13.17	8.19	
	1810	7470	13.19	8.21	
	1840	7500	13.20	8.22	
	1910	7530	13.21	8.23	
	1940	7560	13.23	8.25	
	2010	7590	13.24	8.26	
	2040	7620	13.25	8.27	
	2110	7650	13.28	8.30	
	2140	7680	13.28	~~8.38~~ 8.30	JC
	2210	7710	13.27	~~8.37~~ 8.29	
	2240	7740	13.28	~~8.38~~ 8.30	
	2310	7770	13.30	~~8.40~~ 8.32	
9-26-93	2340	7800	13.35	~~8.45~~ 8.37	
9-27-93	0010	7830	13.37	~~8.47~~ 8.39	
	0040	7860	13.39	~~8.49~~ 8.41	
	0110	7890	13.39	~~8.49~~ 8.41	
	0140	7920	13.43	~~8.53~~ 8.45	JC

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PUMPING TEST – PIEZOMETER WATER LEVEL MEASUREMENT FORM - 7333

PUMPING WELL 11214

PIEZOMETER NUMBER 11172

WATER LEVEL AT TIME 0: 4.98

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DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
9-27-93	0210	7950	13.44	~~8.54~~ 8.46	JC
9-27-93	0240	7980	13.45	~~8.55~~ 8.47	
	0310	8010	13.47	~~8.57~~ 8.49	
	0340	8040	13.47	~~8.57~~ 8.49	
	0410	8070	13.49	~~8.59~~ 8.51	
	0440	8100	13.50	~~8.60~~ 8.52	
	0510	8130	13.53	~~8.63~~ 8.55	
	0540	8160	13.55	~~8.65~~ 8.57	
	0610	8190	13.53	~~8.63~~ 8.55	
	0640	8220	13.57	~~8.67~~ 8.59	JC
	0710	8250	13.56	8.58 ✓	JRC
	0740	8280	13.57	8.59 ✓	JC
	0810	8310	13.57	8.59	
	0840		13.58	8.60	
	0910	8370	13.60	8.62	JRC
	0940	8400	13.62	8.64	JRC
	1010	8430	13.62	8.64	JRC
	1040	8460	13.64	8.66	JRC
	1110	8490	13.65	8.67	JRC
	1140	8520	13.67	8.69	JRC
	1210	8550	13.68	8.70	JRC
	1240	8580	13.69	8.71	JRC
	1310	8610	13.70	8.72	
	1340	8640	13.70	8.72	
	1410	8670	13.72	8.74	JC
				~~8.74~~	
				~~8.74~~	

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

PUMPING WELL: 11214

(K-65 Recovery Test)

09-27-93

PIEZOMETER NUMBER: 11122

WATER LEVEL AT TIME 0: 4.98

DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
09-27-93	1530	0	13.75		D. BRINSON
"	1531	01	13.76		"
"	1532	02	13.55		"
"	1533	03	13.50		"
"	1534	04	13.44		"
"	1535	05	13.40		"
"	1536	06	13.36		"
"	1538	08	13.34		"
"	1540	10	13.32		"
"	1542	12	13.30		"
"	1544	14	13.26		"
"	1546	16	13.25		D BRINSON
"	1548	18	13.23		
"	1550	20	13.22		
"	1600	30	13.17		
"	1610	40	13.10		
"	1620	50	13.08		
"	1630	1:00 = 60	13.02		
"	1700	90	12.91		
"	1730	120	12.83		
"	1800	150	12.71		
"	1830	180	12.63		
"	1900	210	12.60		
"	1930	240	12.57		
"	2000	270	12.52		
"	2080	300	12.48		
	2100	330	12.41		
	2130	360	12.38		

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

PUMPING WELL: 11214

PIEZOMETER NUMBER: 11122

WATER LEVEL AT TIME 0: 4.98

DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
9-27-93	2200	390	12.33	7.35	
"	2230	420	12.28	7.30	
"	2300	450	12.24	7.26	

RI/FS

FIELD ACTIVITY DAILY LOG

DAILY LOG	DATE	9	8	93
	NO.	NA		
	SHEET	1	OF	

PROJECT NAME CLU-5 Pump Test Piezometers | PROJECT NO. 50.03.24

FIELD ACTIVITY SUBJECT: P 11124 WASTE PIT

0700 On site, dress out

0730-1030 Obtaining permits and getting new vehicle

1045 Checked on drillers at Penn Drill. Rig ready to go after Decon and changing hammer.

1100 Putting cement cap on 11222.

1105 Having problems keeping rig running, truck engine.

1130-1300 Lunch

1300 Rig broke down

1334 Moving rig onto 11124. Tom E. ~~(LanTech)~~ IH and Kurt W. (RADTech) okd all piezometer locations. 08:4-8-93

1437 Waiting on Tom E. to do rig inspection

1500 Tom E. Passed rig. Ready to start

1513 Collected samples 30908A11124 01 and 02

1515 Collected samples 30908A11124 03 and 04

1517 Collected sample 30908A11124 05

1525 Collected sample 30908A11124 06. Getting poor recovery. Driller looking for traps for spoon. Currently at 6.0 ft.

1558 Collected samples 30908A11124 -07 and 08

1600 Don Vogel-Parsons stopped by.

METER CALIBRATION

PID Calibration Gas # 110J92-3
PID S/N 930089 (10.2 eV) 0 Cal. to 100 ppm
By meter S/N 52747 passed cal. check using Sucra
& meter S/N NA passed cal. check using NA

VISITORS ON SITE: Don Vogel-Parsons

CHANGES FROM PLANS AND SPECIFICATIONS AND OTHER SPECIAL ORDERS AND IMPORTANT DECISIONS: NA

WEATHER CONDITIONS: Overcast 75°

IMPORTANT TELEPHONE CALLS: NA

PERSONNEL ON SITE: M. McFarland, M. Bentley, B. Anderson

SUPERVISOR: O. Costello DATE: 9-8-93

ESI FORM 0133A Rev. 1/91

RI/FS

FIELD ACTIVITY DAILY LOG

DAILY LOG		
DATE	9	8
NO.	NA	
SHEET	2	OF

PROJECT NAME | PROJECT NO.

FIELD ACTIVITY SUBJECT:

1600 Cont. Said to keep a sharp eye on lithology as they are trying to subdivide the aquifer with silt and clay layers.

1608 Collected sampler 3C908A11124 - 9 - 11. Outside of spoon wet and muddy. 7.5-9.0.

1617 Drove 9.0-10.5, poured water out of spoon. Definitely some water in hole at ± 9.0 ft. Collected sampler 3C908A11124 - 12 - 14.

1626 Collected sampler 3C908A11124 15-17

1645 Worked on hammer, augering down to 12.0.

1648 Collected sampler 3C908A11124 - 18-20. Stopped here for day, in clay.

1700-1800 Secured sampler in truck, dress out, went home.

METER CALIBRATION

PID Calibration Gas # See P1
PID S/N (eV) Cal. to ppm
By meter S/N passed cal. check using
meter S/N passed cal. check using

VISITORS ON SITE: See P1

CHANGES FROM PLANS AND SPECIFICATIONS, AND OTHER SPECIAL ORDERS AND IMPORTANT DECISIONS: See P1

WEATHER CONDITIONS: See P1

IMPORTANT TELEPHONE CALLS: See P1

PERSONNEL ON SITE:

SUPERVISOR: O. Costello DATE: 9-8-97

ASI FORM 0155A Rev. 1/91

000457

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

PUMPING WELL: ~~11214~~ 11214 ok ok

Note: Measure water levels from top of outer-protective casing.

PIEZOMETER NUMBER: 11124

WATER LEVEL AT TIME 0: 5.59

page 1 of 13

DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
9-21-93	0944	N/A	~~4.86~~ 5.58	N/A	Pre-start up
	1059	N/A	5.59	N/A	Pre-start up (outer casing)
	1324	Na	5.60	Na	Pre Start up
	1340	0	5.59	N/A	Time = Ø.
	1341	1	5.59		
	1342	2	5.58		
	1343	3	5.58		
	1344	4	5.58		
	1345	5	5.58		
	1346	6	5.58		
	1348	8	5.58		
	1350	10	5.58		
	1352	12	5.58		
	1354	14	5.58		
	1356	16	5.58		
	1358	18	5.58		
	1405	25	5.60		
	1410	30	5.59		
	1420	40	5.59	N/A	
	1430	50	5.60	.01	
	1440	60	5.60	.01	
	1455	75	5.61	.02	
	1510	90	5.61	.02	
	1525	105	5.60	.01	
	1540	120	5.62	.03	
	1610	150	5.62	.03	
	1640	180	5.63	.04	
	1711	211	5.64	.05	

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

PUMPING WELL: 11214

PIEZOMETER NUMBER: 11124

WATER LEVEL AT TIME 0: 5.59

DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
9/21/93	1741	241	5.65	0.06	
9/21/93	1810	270	5.66	0.07	
9/21/93	1840	300	5.68	0.09	
9/21/93	1910	330	5.69	0.10	
9/21/93	1940	360	5.70	0.11	
9/21/93	2010	390	5.71	0.12	
9/21/93	2040	420	5.73	0.14	
9/21/93	2110	450	5.75	0.16	
9/21/93	2140	480	5.77	0.18	
9/21/93	2210	510	5.79	0.20	
9/21/93	2240	540	5.80	0.21	
9/21/93	2310	570	5.82	0.23	
9/21/93	2340	600	5.85	0.26	
9-22-93	0010	630	5.87	0.28	
9-22-93	0110	690	5.88	0.29	
9-22-93	0140	720	5.90	0.31	
" "	0210	750	5.92	0.33	
" "	0240	780	5.95	0.36	
" "	0310	810	5.95	0.36	
" "	0340	840	5.99	0.40	
"	0410	870	6.00	0.41	
"	0440	900	6.01	0.42	
"	0510	930	6.02	0.43	
"	0540	960	6.04	0.45	
"	0610	990	6.06	0.47	
"	0640	1020	6.08	0.49	
9-22-93	0710	1050	6.10	0.51	
9-22-93	0740	1080	6.11	0.52	

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

PUMPING WELL: 1214

PIEZOMETER NUMBER: 1124

WATER LEVEL AT TIME 0: 5.59

DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
09-22-93	0810	1110	6.13	.54	
09-22-93	0840	1140	6.15	.56	
09-22-93	0908	1168	6.16	.57	
09-22-93	0937	1200	6.18	.59	
09-22-93	1008	1230	6.20	.61	
09-22-93	1040	1260	6.22	.63	
09-22-93	1114	1294	6.23	.64	
09-22-93	1139	1319	6.24	.65	
"	1210	1350	6.25	.66	
"	1240	1380	6.27	.68	
"	1310	1410	6.28	.69	
"	1340	1440	6.30	.71	
"	1410	~~1510~~ 1470	6.31	.72	
"	1440	~~1540~~ 1500	6.33	.74	
	1510	~~1570~~ 1530	6.35	.76	
"	1539	1559	6.35	.76	
"	1610	1590	6.36	.77	
"	1640	1620	6.38	.79	
"	1710	1650	6.40	.81	
"	1740	1680	6.41	.82	
"	1810	1710	6.42	.83	
"	1840	1740	6.43	.84	
"	1910	1770	6.44	.85	
"	1940	1800	6.45	.86	
"	2010	1830	6.46	.87	
"	2040	1860	6.48	.89	
"	2110	1890	6.50	.91	
9/22/93	2140	1920	6.51	.92	

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

PUMPING WELL: 11214

PIEZOMETER NUMBER: 11124

WATER LEVEL AT TIME 0: 5.59

DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
9/22/93	2210	1950	6.52	.93	
↑	2240	1980	6.53	.94	
↓	2310	2010	6.54	.95	
9/22/93	2340	2040	6.55	.96	
9/23/93	0010	2070	6.57	.98	
	0040	2100	6.58	.99	
	0110	2130	6.59	1.0	
	0140	2160	6.60	1.01	
	0210	2190 JC	6.61	1.02	
	0240	~~2230~~ 2220	6.62	1.03	
	0310	~~2260~~ 2250	6.62	1.03	
	0340	~~2290~~ 2280	6.63	1.04	
	0410	~~2320~~ 2310	6.64	1.05	
	0440	~~2350~~ 2340	6.66	1.07	
	0510	~~2380~~ 2370	6.67	1.08	
	0540	~~2410~~ 2400	6.68	1.09	
	0610	~~2440~~ 2430	6.69	1.10	
	0640	~~2470~~ 2460	6.71	1.12	
09-23-93	0710	~~2500~~ 2490	6.71	1.12	D.B.
	0739	~~2529~~ 2519	6.72	1.13	JC
	0808	~~2558~~ 2548	6.74	1.15	
	0839	~~2589~~ 2580	6.74	1.15	D.B.
	0911	2611 JC	6.75	1.16	JC
	0940	2640	6.77	1.18	JC
	1011	2671	6.78	1.19	JC
	1040	2700	6.78	1.19	JC
	1110	2730	6.79	1.20	JC
	1140	2760	6.80	1.21	DB

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

PUMPING WELL: 11214

PIEZOMETER NUMBER: 11124

WATER LEVEL AT TIME 0: 5.59

DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
09-23-93	1220	2800	6.82	1.23	
09-23-93	1240	2820	6.82	1.23	
09-23-93	1310	2850	6.82	1.23	
09-23-93	1340	2880	6.84	1.25	
"	1410		6.85	1.26	
"	1440		6.86	1.27	
"	1510	2970	6.86	1.27	
"	1540	3000	6.88	1.29	
"	1610	3030	6.89	1.30	
"	1640	~~307~~ 3060 9-23-93	6.90	1.31	A. Cleeter
"	1710	3090	6.91	1.32	A. Cleeter
"	1740	~~3120~~ 3120	6.91	1.32	A. Cleeter
"	1810	3150	6.91	1.32	A. Cleeter
"	1840	3180	6.93	1.34	A. Cleeter
"	1910	3210	6.93	1.34	A. Cleeter
"	1940	3240	6.94	1.35	
"	2010	3270	6.94	1.35	
"	2040	3300	6.96	1.37	
"	2110	3330	6.98	1.39	
"	2140	3360	6.96	1.37	
"	2210	3390	6.98	1.39	
"	2240	3420	6.98	1.39	
"	2310	3450	6.99	1.40	
"	2340	3480	7.01	1.42	
9-24-93	0010	3510	7.01	1.42	
"	0040	3540	7.01	1.42	
"	0110	3570	7.02	1.43	
	0140	3600	7.04	1.45	

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

PUMPING WELL: 11214

PIEZOMETER NUMBER: 11124

WATER LEVEL AT TIME 0: 5.59

DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
9-24-93	0210	3630	7.06	1.47	
"	0240	3660	7.05	1.46	
"	0310	3690	7.05	1.46	
"	0340	3720	7.06	1.47	
"	0410	3750	7.05	1.46	
"	0440	3780	7.10	1.51	
"	0510	3810	7.09	1.49	
"	0540	3840	7.10	1.51	
"	0610	3870	7.10	1.51	
"	0640	3900	7.10	1.51	
"	0711	3930	7.10	1.51	
"	0740	3960	7.10	1.51	
	0810	3990	7.12	1.53	
	0840	4020	7.12	1.53	
	0910	4050	7.12	1.53	
	0940	4080	7.14	1.55	JRC
	1010	4110	7.14	1.55	
	1040	4140	7.14	1.55	JRC
	1110	4170	7.15	1.56	
	1140	4200	7.16	1.57	
	1210	4230	7.16	1.57	
	1240	4260	7.17	1.58	JRC
	1310	4290	7.18	1.59	JRC
	1340	4320	7.18	1.59	
	1410	4350	7.19	~~2.01~~	1.60
	1440	4380	7.19	~~2.01~~	1.60
	1510	4410	7.19	~~2.01~~	JRC 1.60
	1540	4440	7.20	~~2.02~~	1.61

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

PUMPING WELL: 11214

PIEZOMETER NUMBER: 11174

WATER LEVEL AT TIME 0: 5.59

DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN		COMMENTS
9-24-93	1610	4470	7.21	~~2.03~~	1.62	JC
9-24-93	1640	4500	7.23	~~2.05~~	1.64	↑
9-24-93	1710	4530	7.23	~~2.05~~	1.64	
9-24-93	1740	4560	7.24	~~2.06~~	1.65	
9/24/93	1810	4590	7.22	~~2.04~~	1.63	
9/24/93	1840	4620	7.24	~~2.06~~	1.65	
9-24-93	1910	4650	7.23	~~2.05~~	1.64	
	1940	4680	7.24	~~2.06~~	1.65	
	2010	4710	7.26	~~2.08~~	1.67	
	2040	4740	7.24	~~2.06~~	1.65	
	2110	4770	7.28	~~2.10~~	1.69	
	2140	4800	7.29	~~2.11~~	1.70	
9-24-93	2210	4830	7.26	~~2.08~~	1.67	
9/24/93	2240	4860	7.26	~~2.08~~	1.67	
9-24-93	2310	4890	7.28	~~2.10~~	1.69	
9-24-93	2340	4920	7.27	~~2.09~~	1.68	
9-25-93	0010	4950	7.27	~~2.09~~	1.68	
"	0040	4980	7.28	~~2.10~~	1.69	
"	0110	5010	7.29	~~2.11~~	1.70	
"	0140	5040	7.29	~~2.11~~	1.70	
"	0210	5070	7.30	~~2.12~~	1.71	
"	0240	5100	7.30	~~2.12~~	1.71	
"	0310	5130	7.33	~~2.15~~	1.74	
"	0340	5160	7.31	~~2.13~~	1.72	
"	0410	5190	7.31	~~2.13~~	1.72	
"	0440	5220	7.32	~~2.14~~	1.73	
"	0510	5250	7.31	~~2.13~~	1.72	
	0540	5280	7.33	~~2.15~~	1.74	
"	0610	5310	7.33	~~2.15~~	1.74	
"	0640	5340	7.34	~~2.16~~	1.75	
"	0710	5370	7.34	~~2.16~~	1.75	JC

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

PUMPING WELL: 11214

PIEZOMETER NUMBER: 11124

WATER LEVEL AT TIME 0: 5.59

DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
9-25-93	0740	5400	7.34	~~2.16~~	JRC 1.75
	0811	5431	7.34	~~2.16~~	JRC 1.75
	0840	5460	7.34	~~2.16~~	JRC 1.75
	0910	5490	7.35	~~2.17~~	1.76
	0940	5520	7.34	~~2.16~~	JRC 1.75
	~~5.68~~ 1010	5550	7.36	~~2.18~~	1.77
	1042	5580	7.36	~~2.18~~	JRC 1.77
	1110	5610	7.36	~~2.18~~	1.77
	1140	5640	7.36	~~2.18~~	JRC 1.77
	1210	5670	7.36	~~2.18~~	JRC 1.77
	1240	5700	7.37	~~2.19~~	1.78
	1309	5730	7.36	~~2.18~~	JRC 1.77
	1337	5750	7.37	~~2.19~~	JRC 1.78
	1409	5780	7.37	~~2.19~~	1.78
	1440	5810	7.38	~~2.20~~	1.79
	1510	5840	7.38	~~2.20~~	1.79
	1540	5870	7.38	~~2.20~~	1.79
	1610	5910	7.39	~~2.21~~	1.80
	1640	5940	7.40	~~2.22~~	1.81
	1710	5970	7.40	~~2.22~~	1.81
	1740	6000	7.41	~~2.23~~	1.82
	1810	6030	7.40	~~2.22~~	1.81
	1840	6060	7.40	~~2.22~~	1.81
	1910	6090	7.41	~~2.23~~	1.82
	1940	6120	7.41	~~2.23~~	1.82
	2010	6150	7.41	~~2.23~~	1.82
	2040	6180	7.41	~~2.23~~	1.82
9/25/93	2110	6210	~~7.41~~	~~2.23~~	No reading

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

PUMPING WELL: 11214

PIEZOMETER NUMBER: 11124

WATER LEVEL AT TIME 0: 5.59

DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
9/25/93	2140	6240	7.41	~~2.25~~	1.82 JRC
↑	2210	6270	7.41	~~2.25~~	1.83 ↑
	2240	6300	7.42	~~2.24~~	1.83
↓	2310	6330	7.41	~~2.25~~	1.82
9/25/93	2340	6360	7.41	~~2.23~~	1.82
9/26/93	0010	6390	7.40	~~2.22~~	1.81
"	0040	6420	7.41	~~2.23~~	1.82
"	0110	6450	7.41	~~2.23~~	1.82
"	0140	6480	7.41	~~2.23~~	1.82
"	0210	6510	7.40	~~2.22~~	1.81
"	0240	6540	7.41	~~2.23~~	1.82
"	0310	6570	7.41	~~2.23~~	1.82
"	0340	6600	7.40	~~2.22~~	1.81
"	0410	6630	7.41	~~2.23~~	1.82
"	0440	6660	7.41	~~2.23~~	1.82
"	0510	6690	7.41	~~2.23~~	1.82
"	0540	6720	7.41	~~2.23~~	1.82
"	0610	6750	7.41	~~2.23~~	1.82
"	0640	6780	7.42	~~2.24~~	1.83
"	0710	6810	7.41	~~2.23~~	1.82
"	0740	6840	7.42	~~2.24~~	1.83 ↓
"	0810	6870	7.42	~~2.24~~	1.83 JRC
"	0840	6900	7.43	~~2.25~~	JRC 1.84
"	0910	6930	7.43	1.84	
"	0940	6960	7.43	1.84	JRC
"	1010	6990	7.44	1.85	
"	1040	7020	7.44	1.85	JRC
9/26/93	1110	7050	7.43	1.84	JRC

PUMPING TEST – PIEZOMETER WATER LEVEL MEASUREMENT FORM

PUMPING WELL 11214

PIEZOMETER NUMBER: 11124

WATER LEVEL AT TIME 0: 5.59

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DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
9-26-93	1140	7080	7.45	1.86	JRC
	1210	7110	7.45	1.86	
	1240	7140	7.45	1.86	JRC
	1310	7170	7.45	1.86	
	1340	7200	7.46	1.87	
	1410	7230	7.46	1.87	
	1440	7260	7.46	1.87	
	1510	7290	7.47	1.88	
	1540	7320	7.47	1.88	
	1610	7350	7.48	1.89	
	1640	7380	7.50	1.91	
	1710	7410	7.47	1.88	
	1740	7440	7.48	1.89	
	1810	7470	7.49	1.90	
	1840	7500	7.51	1.92	
	1910	7530	7.51	1.92	
	1940	7560	7.50	1.91	
	2010	7590	7.51	1.91	
	2040	7620	7.51	1.91	
	2110	7650	7.52	1.92	
	2140	7680	7.51	1.91	
	2210	7710	7.52	1.92	
	2240	7740	7.54	1.94	
	2310	7770	7.55	1.95	
	2340	7800	7.51	1.91	
9-27-93	0010	7830	7.51	1.91	JMM
	0040	7860	7.51	1.91	
	0110	7890	7.51	1.91	

PUMPING TEST - PIEZOMETER WATER LEVEL MEASSUREMENT FORM

7322

PUMPING WELL 11214

PIEZOMETER NUMBER: 11124

WATER LEVEL AT TIME 0: 5.59

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DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
9-27-93	0140	7920	7.52	1.92	
	0210	7950	7.53	1.93	
	0240	7980	7.56	1.96	
	0310	8010	7.52	1.92	
	0340	8040	7.53	1.93	
	0410	8070	7.54	1.94	
	0440	8100	7.53	1.85	
	0510	8130	7.57	1.99	
	0540	8160	7.60	2.02	
	0610	8190	7.62	2.02	
	0640	8220	7.56	1.98	
9-27-93	0710	8250	7.54	1.95	✓ JRC
	0740	8280	7.54	1.95	✓ JRC
	0810	908310	7.55	1.96	
	0840	8340	7.55	1.96	
	0910		7.55	1.96	
	0940	8400	7.55	1.96	JRC
	1010	8430	7.56	1.97	JRC
	1040	8460	7.56	1.97	JRC
	1110	8490	7.57	1.98	
	1140	8520	7.56	1.97	JRC
	1210	8550	7.57	1.98	JRC
	1240	8580	7.57	1.98	JRC
	1310	8610	7.58	1.99	
	1340	8640	7.58	1.99	
	1410 ~~[illegible]~~ JC	8670	7.58	1.99	JC
	1440	8700	7.58	1.99	JRC
9/27/93	1510	8730	7.58	1.99	TA

000468

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

PUMPING WELL: 11214

PIEZOMETER NUMBER: 11124

WATER LEVEL AT TIME 0: 5.59

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DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
9-27-13	1530	0	7.59	2.00	
"	1531	1	7.60	2.01	
	1532	2	7.60	2.01	
"	1533	3	7.60	2.01	
"	1534	4	7.59	2.00	
"	1535	5	7.59	2.00	
"	1536	6	7.58	1.99	
"	1538	8	7.58	1.99	
"	1540	10	7.58	1.99	
	1542	12	7.59	2.00	
"	1544	14	7.59	2.00	
	1546	16	7.59	2.00	
"	1548	18	7.59	2.00	
"	1550	20	7.59	2.00	
"	1600	30	7.59	2.00	
"	1610	40	7.59	2.00	
"	1620	50	7.60	2.01	
"	1630	60	7.60	2.01	
	~~1640~~ 1700	90	7.59	2.00	
	~~1650~~ 1730	120	7.60	2.01	
	1800	150	7.61	2.02	
	1830	180	7.61	2.02	
	1900	210	7.61	2.02	
	1930	240	7.60	2.01	
	2000	270	7.62	2.03	
	2030	300	7.62	2.03	
	2100	330	7.60	2.01	
	2130	360	7.62	2.03	

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

7333

PUMPING WELL: 11214

PIEZOMETER NUMBER: 11124

WATER LEVEL AT TIME 0: 5.59

DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
9-27-93	2200	390	7.63	2.04	
"	2230	420	7.62	2.03	
"	2300	450	7.61	2.02	

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

Note: Measure water levels from top of outer-protective casing

PUMPING WELL: 11214

PIEZOMETER NUMBER: 11125

WATER LEVEL AT TIME 0: 5.28' @ Time = 1341 on 9-21-93.

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DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
9-21-93	0940	N/A	4.61	N/A	Pre-start up (inner casing)
[Jim Curtis]	1050	N/A	5.27	N/A	pre-start up (outer casing)
	1330	N/A	5.28	N/A	" " " " "
Time = Ø	1341	N/A	5.28	N/A	Start Test (time = 0)
	1342	1 minute	5.28	0	Reading every 1 minute
	1343	2 minutes	5.29	0.01	
	1344	3 minutes	5.29	0.01	
	1345	4	5.30	0.02	
	1346 SC	5	5.31	0.03	
	1347	6	5.32	0.04	Reading every 2 minutes
	1349	8	5.36	0.08	
	1351	10	5.40	0.12	
	1353 SC	12	5.45	0.17	
	1355	14	5.50	0.22	
	1357	16	5.56	0.28	
	1359	18 minutes	5.61	0.33	
	1401	20	5.66	0.38	Reading every 5 minutes.
	1406	25	5.78	0.50	
	1411	30	5.90	0.62	Reading every 10 minutes.
	1421	40	6.12	0.84	
	1431	50	6.26	0.98	~~Reading every minutes~~ SC
	1441	60	6.39	1.11	Reading every ~~20~~ 15 minutes
	1456	75	6.54	1.26	
	1511	90	6.68	1.40	
	1526	105	6.76	1.48	Reading every 30 minutes
	1540	119	6.86	1.58	
	1610	149	7.01	1.73	
	1641	180	7.10	1.82	

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

PUMPING WELL: 11214

PIEZOMETER NUMBER: 11125

WATER LEVEL AT TIME 0: 5.38'

DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
9/21/93	1710	210	7.20	1.92	
	1740	240	7.29	2.01	
	1810	270	7.36	2.08	
	1840	300	7.43	2.15	
	1910	330	7.50	2.22	
	1940	360	7.56	2.28	
	2010	390	7.61	2.33	
	2040	420	7.67	2.39	
	2110	450	7.72	2.44	
	2140	480	7.76	2.48	
	2210	510	7.80	2.52	
	2240	540	7.84	2.56	
	2310	570	7.87	2.59	
9-21-93	2340	600	7.91	2.63	
9-22-93	0010	630	7.93	2.65	
	0040	660	7.96	2.68	
	0110	690	7.99	2.71	
	0140	720	8.03	2.75	
	0210	750	8.07	2.79	
	0240	780	8.12	2.84	
	0310	810	8.13	2.85	
	0340	840	8.18	2.90	
	0410	870	8.18	2.90	
	0440	900	8.23	2.95	
	0510	930	8.30	3.02	
	0540	960	8.33	3.05	
	0610	990	8.34	3.06	
	0640	1020	8.36	3.08	

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

PUMPING WELL: 11214

PIEZOMETER NUMBER: 11125

WATER LEVEL AT TIME 0: 5.25

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DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
09-22-93	0710	~~1050~~ 1049	8.37	3.09	[J. Curtis]
"	0741	1080	8.35	3.07	
"	0810	1109 ~~2009~~	8.36	3.08	
"	0839	1138	8.38	3.10	
"	0908	1167	8.40	3.12	
"	0939	1198	8.42	3.14	
	1011	1230	8.44	3.16	
	1041	1260	8.46	3.18	
"	1111	1290	8.47	3.19	
"	1141	1320	8.49	3.21	
"	1210	1350	8.51	3.23	
"	1240	1380	8.53	3.25	
"	1310	1410	8.54	3.26	
"	1340	1440	8.55	3.27	
"	1410	1470	8.57	3.29	
"	1440	1500	8.58	3.30	
"	1510	1530	8.60	3.32	
"	1540	1560	8.62	3.34	
"	1610	1590	8.63	3.35	
"	1640	1620	8.64	3.36	
"	1710	1650	8.66	3.38	
"	1740	1680	8.68	3.40	
"	1810	1710	8.69	3.41	
"	1840	1740	8.70	3.42	
"	1910	1770	8.72	3.44	
"	1940	1800	8.73	3.45	
"	2010	1830	8.75	3.47	
"	2040	1860	8.76	3.48	

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

PUMPING WELL: 11214

PIEZOMETER NUMBER: 11125

WATER LEVEL AT TIME 0: 5.28

DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
9-22-93	2110	1890	8.77	3.49	
"	2140	1920	8.78	3.50	
"	2210	1950	8.79	3.51	
"	2240	1980	8.80	3.52	
"	2310	2010	8.82	3.54	
9/22/93	2340	2040	8.84	3.56	
9/23/93	0010	2070	8.85	3.57	
	0040	2100	8.86	3.58	
	0110	2130	8.89	3.61	
	0140	2160	8.90	3.62	
	0210	2190	8.91	3.63	
	0240	2220	8.91	3.63	
	0310	2250	8.94	3.66	
	0340	2280	8.95	3.67	
	0410	2310	8.96	3.68	
	0440	2340	8.97	3.69	
	0510	2370	8.98	3.70	
	0540	2400	9.00	3.72	
	0610	2430	9.00	3.72	
	0640	2460	9.01	3.73	
	0710	2490	9.01	3.73	x
	0741	2521	9.00	3.72	x
	0810	2550	9.01	3.73	x
	0840	2580	9.02	3.74	x
	0910	2610	9.02	3.74	x
	0943	2643	9.03	3.75	x
	1012	2672	9.04	3.76	x
9-23-93	1040	2700	9.05	3.77	x

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

PUMPING WELL: 11214

PIEZOMETER NUMBER: 11125

WATER LEVEL AT TIME 0: 5.28 @ 1340 on 9/21/03

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DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
9-23-93	1110	2730	9.06	3.78	JCurtis
"	1140	2760	9.07	3.79	JC
"	1200	2800	9.08	3.80	TC
"	1240	2820	9.08	3.80	TC
"	1310	2850	9.10	3.82	TC
	1340	2880	9.10	3.82	J Curtis
	~~13~~ 1409	2909	9.11	3.83	J Curtis
	1440	2940	9.12	3.84	J Curtis
	1510	2970	9.13	3.85	J Curtis
	1540	3000	9.13	3.85	J. Curtis
	1610	3030	9.14	3.86	A. Cleeder
	16:40	~~3060~~ 3060.0 AC 9-23-93	9.16	3.88	A. Cleeder
	1710	3090	9.16	3.88	J. Curtis
	1740	3120	9.16	3.88	J. Curtis
	1810	3150	9.18	3.90	D Arthur
	1840	3180	9.18	3.90	J Curtis
	19:40	3240	9.20	3.92	A Cleeder
	2010	3270	9.21	3.93	J Curtis
	2040	3300	9.21	3.93	J. Curtis
	2110	3330	9.22	3.94	J Curtis
	2140	3360	9.24	3.96	
	2210	3390	9.25	3.97	
	2240	3420	9.25	3.97	
	2310	3450	9.26	3.98	
	2340	3480	9.29	4.01	
	0010	3510	9.29	4.01	
	0040	3540	9.30	4.02	
	0110	3570	9.31	4.03	

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

PUMPING WELL: 11214

PIEZOMETER NUMBER: 11125

WATER LEVEL AT TIME 0: 5.28

DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
9-24-93	0140	3600	9.29	4.01	
	0210	3630	9.31	4.03	
	0240	3660	9.32	4.04	
	0310	3690	9.32	4.06	
	0340	3720	9.34	4.06	
	0410	3750	9.34	4.06	
	0440	3780	9.35	4.07	
	0510	3810	9.36	4.08	
	0540	3840	9.36	4.08	
	0610	3870	9.37	~~4.08~~ 4.09	
	0640	3900	9.38	~~4.09~~ 4.10	
	0710	3930	9.36	4.08	J Curtis
	0740	3960	9.38	4.10	A Cloater
	0810	3990	9.37	4.09	H Cloater
	0840	4020	9.39	4.11	"
	0910	4050	9.40	4.12	"
	0940	4080	9.40	4.12	"
	1010	4110	9.41	4.13	"
	1040	4140	9.41	4.13	J Curtis
	1110	4170	9.41	4.13	JRC
	1140	4200	9.42	4.14	JRC
	1210	4230	9.43	4.15	JRC
	1240	4260	9.44	4.16	A Cloater
	1310	4290	9.44	4.16	"
	1340	4320	9.45	4.17	"
	1410	4350	9.45	4.17	"
	1440	4380	9.46	4.18	"
	1510	4410	9.47	4.19	"

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

PUMPING WELL: 112 [illegible]

PIEZOMETER NUMBER: 11[illegible]

WATER LEVEL AT TIME 0: [illegible]

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DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
9-24-93	1540	4440	9.47	4.19	H.O. [illegible]
	1610	4470	9.48	4.20	"
	1640	4500	9.48	4.20	"
	1710	4530	9.48	4.20	[illegible]
9-24-93	1740	4560	9.50	4.22	
	1810	4590	9.50	4.22	JRC
	1840	4620	9.50	4.22	JRC
	1910	4650	9.50	4.22	
	1940	4680	9.51	4.23	
	2010	4710	9.52	4.24	
	2040	4740	9.53	4.25	
	2110	4770	9.53	4.25	
	2140	4800	9.54	4.26	
	2210	4830	9.54	4.26	
	2240	4860	9.55	4.27	
	2310	4890	9.56	4.28	
	2340	4920	9.56	4.28	
	2410	4950	9.56	4.28	
	0040	4980	9.57	4.29	
	0110	5010	9.57	4.29	
	0140	5040	9.58	4.30	
	0210	5070	9.58	4.30	
	0240	5100	9.59	4.31	
	0310	5130	9.59	4.31	
	0340	5160	9.42	4.34	
	0410	5190	9.61	4.33	
	0440	5220	9.61	4.33	
	0510	5250	9.62	4.34	

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

PUMPING WELL: 11214

PIEZOMETER NUMBER: 11125

WATER LEVEL AT TIME 0: 5.28

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DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
9/25/93	0540	5280	9.62	4.34	
	0610	5310	9.63	4.35	
	0640	5340	9.63	4.35	
	~~0600~~ 0710	5370	9.64	4.36	
	0738	5398	9.64	4.36	JRC
	0810	5430	9.65	4.37	
	0840	5460	9.65	4.37	JRC
	0910	5490	9.66	4.38	JRC
	0939	5519	9.66	4.38	JRC
	1010	5550	9.68	4.40	JRC
	1040	5580	9.67	4.39	JRC
	1110	5610	9.68	4.40	JRC
	1141	~~5640~~ 5641	9.69	4.41	JRC
	1208	5668	9.69	4.41	JRC
	1240	5700	9.69	4.41	JRC
	1310	5730	9.70	4.42	JRC
	1340	5760	9.70	4.42	JRC
	1410	5790	9.71	4.43	
	1440	5820	9.71	4.43	
	1510	5920	9.72	4.44	
	1540	5880	9.73	4.45	time adjusted to correct
	1610	5916	9.74	4.46	
	1640	5940	9.74	4.46	
	1710	5970	9.74	4.46	
	1740	6000	9.74	4.46	
	1810	6030	9.75	4.47	
	1840	6060	9.75	4.47	
9/25/93	1910	6090	9.75	4.47	

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

PUMPING WELL: 11124

PIEZOMETER NUMBER: 11125

WATER LEVEL AT TIME 0: 5.28

DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
9/25/93	1940	6120	9.76	4.48	
	2010	6150	9.77	4.49	
	2040	6180	9.77	4.49	
	2110				No reading taken (BD)
	2140	[illegible]	[illegible]	[illegible]	
	2210	6270	9.79	4.51	
	2240	6300	9.79	4.51	
	2310	6330	9.80	4.52	
9/25/93	2340	6360	9.80	4.52	
9/26/93	0010	6390	9.82	4.54	
	0040	6420	9.82	4.54	
	0110	6450	9.83	4.55	
	0140	6480	9.82	4.54	
	0210	6510	9.84	4.56	
	0240	6540	9.84	4.56	
	0310	6570	9.85	4.57	
	0340	6600	9.85	4.57	
	0410	6630	9.83	4.55	
	0440	6660	9.85	4.57	
	0510	6690	9.81	4.59	
	0540	6720	9.87	4.59	
	0610	6750	9.87	4.59	
	0640	6780	9.86	4.58	
	0709	6810	9.85	4.57	JRC
	0740	6840	9.85	4.57	JRC
	0810	6870	9.86	4.58	JRC
	0840	6900	9.87	4.59	
	0910	6930	9.87	4.59	JRC

PUMPING TEST - PIEZOMETER WATER LEVEL MEASSUREMENT FORM

PUMPING WELL 11214

PIEZOMETER NUMBER 11125

WATER LEVEL AT TIME 0: 5.28

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DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN		COMMENTS
09-26-93	0940	6960	9.87	4.59	JRC	
	1010	6990	9.87	4.59	JRC	
	1040	7020	9.87	4.59	JRC	
	1110	7050	9.87	4.59	JRC	
	1140	7080	9.88	4.60	JRC	
	1210	7110	9.89	4.61		
	1240	7140	9.89	4.61	JRC	
	1310	7170	9.90	4.62	JRC	
	1340	7200	9.90	4.62		
	1410	7230	9.92	4.64		
	1440	7260	9.92	4.64		
	1510	7290	9.92	4.64		
	1540	7320	9.92	4.64		
	1610	7350	9.93	4.65		
	1640	7380	9.92	4.64		
	1710	7410	9.93	4.65		
	1740	7440	9.95	4.67		
	1810	7470	9.94	4.66		
	1840	7500	9.95	4.67		
	1910	7530	9.97	4.69		
	1940	7560	9.97	4.69		
	2010	7590	9.97	4.69		
	2040	7620	9.97	4.69		
	2110	7650	9.98	4.70		
	2140	7680	9.98	4.70		
	2210	7710	9.98	4.70		
	2240	7740	9.99	4.71		
	2310	7770	9.99	4.71		
	2340	~~8000~~ 7800	10.00	4.72		

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

PUMPING WELL: 1214

PIEZOMETER NUMBER: 1125

WATER LEVEL AT TIME 0: 5.28

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DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
9-27-93	0010	7830	10.00	4.72	
	0040	7860	10.00	4.72	
	0110	7890	9.98	4.70	
	0140	7920	10.02	4.74	
	0210	7950	10.02	4.74	
	0240	7980	10.04	4.76	
	0310	8010	10.03	4.75	
	0340	8040	10.03	4.75	
	0410	8070	10.03	4.75	
	0440	8100	10.03	4.75	
	0510	8130	10.05	4.77	
	0540	8160	10.05	4.77	
	0610	8190	10.05	~~4.77~~ 4.77	
	0640	8220	10.05	~~4.77~~ 4.77	
	0710	8250	10.03	4.75 ✓	JC
	0740	8280	10.03	4.75 ✓	JC
	0810	8310	10.03	4.75	
	0840	8340	10.04	~~4.76~~ 4.76	
	0910	8370	10.04	4.76	JC
	0940	8400	10.04	4.76	JRC
	1010	8430	10.05	4.77	JRC
	1040	8460	10.05	4.77	JRC
	1110	8490	10.05	4.77	JRC
	1140	8520	10.05	4.77	JRC
	1210	8550	10.06	4.78	JRC
	1240	8580	10.06	4.78	JRC
	1310	8610	10.07	4.79	
	1340	8640	10.07	4.79	

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

PUMPING WELL: 11214

PIEZOMETER NUMBER: 11125

WATER LEVEL AT TIME 0: 5.28

page 12 of

DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
9/27/07	~~12~~ 1410	8670	10.07	4.79	
	1510	8730	10.08	4.80	
	~~151~~		~~10.08~~	~~4.80~~	

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

PUMPING WELL: 11214

PIEZOMETER NUMBER: 11125

WATER LEVEL AT TIME 0: 5.28

DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
4/27/93	1530	0	10.08		
	1531	1	10.08		
	1532	2	10.09		
	1533	3	10.09		
	1534	4	10.09		
	1535	5	10.09		
	1536	6	10.09		
	1538	8	10.08		
	1540	10	10.08		
	1542	12	10.08		
	1544	14	10.08		
	1546	16	10.08		
	1548	18	10.08		
	1550	20	10.08		
	1600	30	10.08		
	1610	40	10.08		
	1620	50	10.09		
	1630	60	10.09		
	1700	90	10.10	4.82'	
	1730	120	10.10		
	1800	150	10.10		
	1830	180	10.11		
	1900	210	10.11		
	1930	240	10.12		
	2000	270	10.11		
	2030	300	10.12		
	2100	330	10.11		
	2130	360	10.12		

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

PUMPING WELL: 11214

PIEZOMETER NUMBER: 11125

WATER LEVEL AT TIME 0: 5.28

DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
9-27-93	2200	390	10.13	4.85	
"	2230	420	10.12	4.86	
"	2300	450	10.12	4.86	

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

PUMPING WELL: 11214

PIEZOMETER NUMBER: 11077

WATER LEVEL AT TIME 0: _____

page 1 of ___

DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
9-21-93	1441				On Permit, test started at
9-21-93	1501		12.08		approx 1055 minutes
9-21-93	1555		12.09		
9-21-93	1720		12.08		
9-21-93	1814		12.10		
9-21-93	1913		12.11		
9-21-93	~~1916~~ 2016		12.12		
9-21-93	2116		12.13		
9-21-93	2214		12.14		
9-21-93	2315		12.14		
9-22-93	0013		12.14		
9-22-93	0115		12.15		
" "	0215		12.16		
" "	0315		12.16		
	0416		12.16		
	0515		12.16		
"	0615		12.16		
"	0715		12.16		
"	0819		12.17		
"	0916		12.17		
"	1017		12.19		
"	1121		12.19		
"	1217		12.18		
"	1350		12.16		
"	1512		12.17		
9-22-93	1613		12.15		
	1713		12.16		
9-22-93	1813		12.15		

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

PUMPING WELL: 11214

PIEZOMETER NUMBER: 11077

WATER LEVEL AT TIME 0: 12.08

DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
9-22-93	1913		12.12		
9-22-93	2014		12.12		
9-22-93	2114		12.14		
9-22-93	2214		12.13		
9-22-93	2316		12.13		
9-23-93	0014		12.12		
9-23-93	115		12.15		
9-23-93	0215		12.12		
9-23-93	0315		12.13		
	414		12.12		
	0514		12.12		
	0615		12.12		
"	0733		12.12		DB
	0839		12.11		JCurtis
"	0930		12.12		DB
	1043		12.13		
	1153		12.15		JCurtis
"	1245		12.16		D. Brinson
	1352		12.17		
	1452		12.15		JCurtis
9-23-93	1615		12.15		GB
9-23-93	1712		12.14		
9-23-93	1816		12.15		GB
9-23-93	1913		12.17		
9-23-93	2016		12.19		
9-23-93	2115		12.20		
9-23-93	2217		12.22		
9-23-93	2314		12.22		

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

PUMPING WELL: 11214

PIEZOMETER NUMBER: 11077

WATER LEVEL AT TIME 0: 12.08

page 3 of ___

DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
9-24-93	00 16		12.21		
"	0116		12.23		
"	0216		12.23		
"	0314		12.24		
"	0414		12.23		
"	0514		12.25		
	0613		12.26		
	0721		12.25		J Curtis
	0820		12.28		
	0915		12.28		
	1017		1228		
	1120		12.28		
	1219		12.27		
	1317		12.26		JRC
	1414		12.26		AMleon
	1516		12.25		
9-24-93	1613		12.25		
9-24-93	1718		12.24		
9-24-93	1812		12.23		
9-24-93	1911		12.22		
9-24-93	2017		12.22		
9-24-93	2114		12.22		
"	2212		12.22		
"	2313		12.22		
	0017		1221		
"	0117		12.19		
	0213		12.18		
	0313		12.18		

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

PUMPING WELL: 11214

PIEZOMETER NUMBER: 11027

WATER LEVEL AT TIME 0: 12.08

DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
9-25-93	0413		12.16		
9-25-93	0513		12.16		
	0613		12.15		
9-25-93	0722		12.14		
	0914		12.14		
	1017		12.13		JRC
	1121		12.12		JRC
	1218		12.12		Raining
	1317		12.10		JRC
	1418		12.09		
	1528		12.08		
9-25-93	1615		12.04		
9-25-93	1712		12.02		
9-25-93	1812		12.01		
9-25-93	1914		11.99		
	2015		11.98		
	2115		NA		Heavy Rain Lightning
	2213		12.00		
9/25/93	[illegible]		12.01		
9/26	0012		12.02		
	0118		11.99		
	0218		12.01		
	0316		12.02		
	[illegible]		[illegible]		
	0516		12.02		
	0614		12.05		
	0722		12.05		JRC
9/26/93	0814		12.07		JRC

PUMPING TEST – PIEZOMETER WATER LEVEL MEASUREMENT FORM

7339

PUMPING WELL 11214

PIEZOMETER NUMBER: 11027

WATER LEVEL AT TIME 0: 12

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DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
9/26/93	0915		12.09		
	1014		12.10		
	1122		12.14		JC
	1222		12.14		
	1310		12.14		
	1415		12.15		
	1516		12.15		
	1614		12.17		
	1713		12.17		
	1815		12.17		
	1911		12.18		
	2014		12.18		
	2112		12.19		
	2211		12.20		
	2313		12.19		
9/27/93	0016		12.18		
	0116		12.18		
	0219		12.19		
	0315		12.19		
	0415		12.19		
	0515		12.14		
	0615		12.15		
	0728		12.13		JC
	0820		12.14		JC
	0925		12.17		
	1021		12.17		JRC
	~~1019~~ 1117		12.20		
	1220		12.20		JRC
9/27/93	1320		12.21		

000489

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

PUMPING WELL: 11214

PIEZOMETER NUMBER: 11027

WATER LEVEL AT TIME 0: _____

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DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
9/27/93	1420		12.20	.12	JC
9-27-93	1707		12.24		
"	1905		12.27		
"	2105		12.29		
"	2305		12.31		

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

PUMPING WELL: 11214

PIEZOMETER NUMBER: 1077

WATER LEVEL AT TIME 0: _____

page 1

DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	~~COMMENTS~~ Unit
9-21-93	1508		9.23		
9-21-93	1558		9.23		
9-21-93	1723		9.24		
9-21-93	1817		9.24		
9-21-93	1916		9.27		
9-21-93	2020		9.27		
9-21-93	2117		9.28		
9-21-93	2217		9.29		
9-21-93	2320		9.27		
9-22-93	0016		9.27		
" "	0118		9.28	900 minutes	
"	0218		9.28		
" "	0319		9.29		
" "	0420		9.30		
" "	0520		9.29		
"	0619		9.29		
"	0719		9.28		
09-22-93	0819		9.29		
" "	0919		9.27		
" "	1020		9.28		
" "	1124		9.29		
"	1219		9.28		
"	1354		9.24		
"	1517		9.22		
9-22-93	1615		9.20		
9-22-93	1716		9.21		
9-22-93	1816		9.19		
9-22-93	1917		9.15		

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

PUMPING WELL: 11214

PIEZOMETER NUMBER: [illegible]

WATER LEVEL AT TIME 0: 9.23

DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
9-22-93	2017		9.12		
9-22-93	2116		9.14		
9-22-93	2217		9.14		
9-23-93	0018		9.11		
9-23-93	2117		9.10		
9-23-93	0217		9.10		
9-23-93	[illegible]		9.10		
9-23	0417		9.05		
9-23-93	0517		9.05		
9-23-93	0617		9.07		
9-23-93	0738		9.10		DB
9-23-93	0742		9.08		JCurtis
9-23-93	0934		9.07		[illegible]
	1047		9.09		
	1156		9.10		JCurtis
9-23-93	1249		9.11		D. Benson
	1355		9.12		
	1455		9.08		JCurtis
9-23-93	1621		9.06		
9-23-93	1715		9.06		
9-23-93	1819		9.08		
9-23-93	1915		9.11		
9-23-93	2018		9.12		
9-23-93	2120		9.15		
9-23-93	2221		9.14		
9-23-93	2317		9.15		
9-24-93	0018		9.16		
"	0118		9.17		

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

PUMPING WELL: 1121-

PIEZOMETER NUMBER: 077

WATER LEVEL AT TIME 0: 9.23

DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
9-24-93	0220		9.18		
"	0317		9.18		
"	0417		9.18		
"	0517		9.18		
	0615		9.18		
	0724		9.19		J Curtis
	0823		9.21		Time 0823
	0[illegible]7		9.21		
	1021		9.21		
	1123		9.19		
	1221		9.19		
	1320		9.17		SRC
	1417		9.16		A Cleeder
	1526		9.11		"
9-24-93	1615		9.11		
9-24-93	1714		9.08		
	1815		9.07		
	1914		9.07		
	2019		9.04		
	2116		9.06		
9-24-93	2214		9.06		
	2315		9.05		
9-25-93	0016		9.02		
"	0118		9.00		
	0216		8.99		
	0319		8.96		
	0416		8.92		
"	0516		8.94		

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

PUMPING WELL: 11214

PIEZOMETER NUMBER: 1077

WATER LEVEL AT TIME 0: 9.23

DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
9/25	0615		8.92		
9/25/93	0730		8.90		
9-25-93	0916		8.90		
	1020		8.88		JRC
	1123		8.86		JRC
	1220		8.82		Raining
	1319		8.81		JRC
	1420		8.80		
	1531		8.72		
	1617		8.70		
9-25-93	1716		8.66		
9-25-93	1815		8.64		
	1915		8.61		
	2015		NA Lightning		
	2115		NA		Heavy Rain Lighting
	2215		8.66		
9/25/93	2315		8.68		
9/26/93	2415		8.69		
	0121		8.92		
	0319		8.69		
	0414		8.68		
	0519		8.69		
	0619		8.72		
	0725		8.75		JRC
	0816		8.78		JRC
	0916		8.81		
	1016		8.83		
	1124		8.88		JRC

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

7333

PUMPING WELL 11214

PIEZOMETER NUMBER: 1077

WATER LEVEL AT TIME 0: 9.23

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DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
9/26/93	1224		8.88		
"	1311		8.89		
9/26/93	1417		8.88		
"	1518		8.88		
	1617		8.88		
	1715		8.88		
	1817		8.89		
	1917		8.90		
	2017		8.89		
	2114		8.91		
	2213		8.90		
	2315		8.88		
9-27-93	0019		8.86		
	0119		8.84		
	0221		8.82		
	0319		8.82		
	0419		8.79		
	0521		8.76		
	0621		8.75		
	0730		8.77		JC
	0822		8.78		JC
	0929		8.80		
	1024		8.82		JC
	1119		8.83		
	1222		8.86		JC
	1322		8.87		
	1422		8.87	-.36	JC
9/27/93	1709		8.91		

000495

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

PUMPING WELL: 1214

PIEZOMETER NUMBER: 1077

WATER LEVEL AT TIME 0: 9.23

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DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
9-27-93	1909	8	8.96		
"	2108		8.88		
"	2308		8.99		

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

PUMPING WELL: 11214

PIEZOMETER NUMBER: 11645

WATER LEVEL AT TIME 0: _____

page 1 of ___

DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
			~~6.49~~		
9-21-93	1514		6.49		
9-21-93	1600		6.51		
9-21-93	1729		6.50		
[illegible]	1821		6.50		
9-21-93	1921		6.51		
9-21-93	2025		6.51		
9-21-93	2122		6.52		
9-21-93	2221		6.52		
9-21-93	2325		6.53		
9-22-93	0022		6.55		
" "	0122		6.53	700 minutes	
"	0222		6.56		
"	0323		6.56		
"	0425		6.55		
"	0526		6.55		
"	0625		6.56		
"	0725		6.56		
"	0825		6.57		
"	0923		6.58		
"	1024		6.59		
"	1129		6.57		
"	1224		6.57		
"	1357		6.58		
"	1520		6.57		
9-22-93	1619		6.57		
9-22-93	1721		6.57		

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

PUMPING WELL: [illegible]

PIEZOMETER NUMBER: [illegible]

WATER LEVEL AT TIME 0: [illegible]

DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
9-22-93	1822		10.11		
9-22-93	1924		10.10		
9-22-93	2024		10.10		
9-22-93	2123		10.11		
9-22-93	2224		10.11		
9-22-93	2323		10.11		
[illegible]	[illegible]		10.12		
9-23-93	0124		10.11		
	0225		10.12		
	0325		10.12		
	0423		10.12		
"	0523		10.12		
"	0623		10.12		
"	0746		10.12		DB
"	0850		10.13		J Curtis
"	0941		10.14		
	1052		10.14		
	1202		10.15		J Curtis
9-23-93	1258		10.15		D. BRINSON
	1402		10.15		
	1500		10.13		J Curtis
9-23-93	1626		10.13		
9-23-93	1722		10.12		
9-23-93	1828		10.14		
9-23-93	1922		10.15		
9-23-93	2027		10.16		
9-23-93	2124		10.17		
9-23-93	2225		10.19		

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

PUMPING WELL: 112-

PIEZOMETER NUMBER: 126

WATER LEVEL AT TIME 0: ~~10.10~~

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DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
9-23-93	2322		10.19		
9-24-93	0026		10.17		
"	0126		10.18		
"	0227		10.17		
"	0326		10.17		
"	0428		10.17		
	0528		10.19		
	0623		10.19		
	0730		10.18		
"	0830		10.18		
	0923		10.18		
	1027		10.18		
	1130		10.17		
	1228		10.16		
	1327		10.16	JRC	
	1423		10.17		
	1525		10.15		
9-24-93	1621		10.14		
9-24-93	1725		10.15		
	1821		10.15		
	1919		10.15		
	2025		10.14		
	2122		10.14		
	2220		10.16		
	2320		10.16		
9-25-93	0024		10.15		
"	0126		10.14		
9-25-93	0225		10.14		

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

PUMPING WELL: 11214

PIEZOMETER NUMBER: 11216

WATER LEVEL AT TIME 0: —

DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
9-25-93	0332		10.13		
"	0427		10.12		
"	0525		10.13		
	0620		10.13		
09-25-93	0740		10.14		
"	0923		10.15		
	1024		10.13		JRC
	1127		10.13		JRC
	1227		10.17		Raining
	1324		10.11		JRC
	1425		10.10		
	1536		10.09		
	1627		10.07		
[illegible]	[illegible]		10.07		
[illegible]	[illegible]		10.07		
	1921		10.08		
	2021		NA Lightning		
	2121		NA		Heavy Rain - Lightning
	2224		10.10		
9-25-93	2318		10.10		
9-26-93	0016		10.08		
"	0128		10.05		
"	0228		10.04		
	0325		10.04		
	0425		10.03		
	0525		10.01		
	0624		10.00		
9-26-93	0730		9.98		JRC

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM **7333**

PUMPING WELL 11214

PIEZOMETER NUMBER: 11216

WATER LEVEL AT TIME 0: —

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DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
9/26/03	0824		9.98		JRC
	0922		9.98		
	1021		9.98		
	1128		10.00		JRC
	1228		9.99		
	1315		9.98		
	1424		9.97		
9-26-93	1524		9.97		
	1622		9.97		
	1721		9.97		
	1822		9.97		
	1918		9.97		
	2022		9.98		
	2119		9.98		
	2218		9.98		
9-26-93	2314		9.98		
9-27-93	0026		9.96		
	0126		9.96		
	0230		9.97		
	0325		9.93		
	0420		9.95		
	0525		9.97		
	0627		9.95		
	0735		9.96		JC
	0828		9.98		JC
	0934		9.99		
	1032		10.00		JC
	1126		10.01		
	1231		10.02		JC
9/27/93	1332		10.03		

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

PUMPING WELL: 1/214

PIEZOMETER NUMBER: 1/216

WATER LEVEL AT TIME 0: _____

DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
9/27/93	1427		10.02		JC
"	1714		10.04		
"	1914		10.06		
"	2112		10.07		
"	2313		10.07		

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

PUMPING WELL: 11214

PIEZOMETER NUMBER: 1010

WATER LEVEL AT TIME 0: _____

DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
9/21/93	1621		9.41		
9-21-93	1735		9.41		
9-21-93	1829		9.42		
9-21-93	1927		9.42		
9-21-93	2030		9.42		
9-21-93	2127		9.42		
9-21-93	2227		9.42		
9-21-93	2332		9.42		
9-22-93	0031		9.42		
"	0130		9.41		
"	0230		9.42		
"	0330		9.42		
"	0431		9.43		
	0531		9.43		
"	0630		9.43		
	0727		9.42		
09-22-93	0831		9.43		
"	0931		9.42		
"	1035		9.42		
"	1139		9.43		
"	1240		9.42		
"	1404		9.42		
"	1528		9.41		
9-22-93	1626		9.43		
9-22-93	1727		9.42		
9-22-93	1825		9.41		
9-22-93	1928		9.41		
9-22-93	2028		9.41		

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

PUMPING WELL: 1214

PIEZOMETER NUMBER: 210

WATER LEVEL AT TIME 0: 9.41

DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
9-22-93	2127		9.41		
9-22-93	2226		9.41		
9-22-93	2325		9.41		
9-23-93	0026		9.42		
9-23-93	0123		9.41		
	0227		9.41		
	0325		9.41		
	0426		9.44		
	0526		9.44		
	0626		9.44		
"	0750		9.46		DB
	0855		9.43		JCurtis
	0947		9.44		DC
	1055		9.44		
	1205		9.44		J Curtis
09-23-93	1259		9.44		D. Benson
	1406		9.45		
	1502		9.43		J Curtis
9-23-93	1630		9.42		C Ball
9-23-93	1725		9.44		
9-23-93	1832		9.45		[illegible]
9-23-93	1925		9.45		
9-23-93	2029		9.45		
9-23-93	2128		9.41		
9-23-93	2226		9.44		
9-24-93	0030		9.46		
"	0130		9.46		
"	0231		9.45		
	0323		9.46		

000504

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

PUMPING WELL: 11314

PIEZOMETER NUMBER: 1010

WATER LEVEL AT TIME 0: 9.41

DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
9-24-93	0333		9.46		
"	0433		9.46		
"	0533		9.47		
	0628		9.47		
	0734		9.46		
	0835		9.46		
	[illegible]		9.46		
	1031		9.46		
	1134		9.45		
	1231		9.45		
	1331		9.45		JRC
	1426		9.45		A Clepter
	1527		9.44		"
9-24-93	1621		9.44		
9-24-93	1729		9.45		
9-24-93	1824		9.45		
9-24-93	1922		9.45		
9-24-93	2028		9.45		
	1125		9.45		
9-24-93	1223		9.46		
9-24-93	1323		9.45		
9-25-93	0030		9.44		
"	0130		9.44		
	0230		9.44		
	0336		9.43		
	0428		9.42		
	0529		9.44		
	0623		9.44		
9-25-93	0743		9.44		

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

PUMPING WELL: 11214

PIEZOMETER NUMBER: 1010

WATER LEVEL AT TIME 0: —

DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
9-25-93	0926		9.45		
	1027		9.44		JRC
	1130		9.44		JRC
	1232		9.42		Raining
	1326		9.42		JRC
	1539		9.41		
	1626		9.41		
	1725		9.42		
	1823		9.41		
	1923		9.41		
9-25-93	2023		NA Lightning		
	2123		NA		Lighting · Heavy Rain
	2224		9.40		
9-25-93	2321		9.40		
9-26-93	0024		9.41		
9-26-93	0132		9.39		
	0328		9.40		
	0427		9.40		
	0532		9.40		
	0630		9.40		
	0733		9.40		JRC
	0826		9.41		JRC
	0924		9.41		
	1022		9.41		
	1130		9.43		JRC
	1229		9.41		
	1316		9.41		
9-26-93	1427		9.39		

PUMPING TEST – PIEZOMETER WATER LEVEL MEASUREMENT FORM

PUMPING WELL: 11214

PIEZOMETER NUMBER: 1010

WATER LEVEL AT TIME 0: _____

Page 5 of 5

DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
9-26-93	1527		9.40		
9-26-93	1625		9.39		Bell
9-26-93	1724		9.39		
9-26-93	1824		9.40		
9-26-93	1920		9.40		
9-26-93	2025		9.39		
9-26-93	2122		9.40		
	2221		9.35		
	2322		9.38		
9-27-93	0030		9.38		
	0130		9.39		
	0235		9.39		
	0329		9.37		
	0430		9.37		
	0532		9.38		
	0633		9.37		
	0738		9.37		JC
	0831		9.37		JC
	0936		9.37		
	1035		9.38		JC
	1128		9.39		
	1234		9.39		JC
	1334		9.40		
	1430		9.38		JC
	1717		9.39		
	1917		9.40		
	2115		9.40		
	2315		9.40		

4

PUMP TEST WATER QUALITY MEASUREMENTS

PUMPING WELL 11214

DATE	TIME	ELAPSED TIME	pH	SPEC. COND.	TEMP	COMMENTS
9-21-93	1406		6.86	1.22	16.2°c	
9-21-93	1542		6.84	1.26	16.4°c	
9-21-93	1745	4:05	6.81	1.27	15.6°c	
9-21-93	1947	6:07	6.81	1.27	14.9°c	
9-21-93	2147	8:07	6.81	1.26	14.7°c	
9-21-93	2350	16:10	6.77	1.29	15.0°c	
" 22-93	0145		6.90	1.27	13.5°c	
9-22-93	0345		[illegible]	1.25	13.1	
9-22-93	0545		6.90	1.28	13.1	
9-22-93	0749	18 hours 4 minutes	7.09	1.28	13.1°c	JC + DB
9-22-93	0945		6.97	1.25	13.8°c	
9-22-93	1147		6.97	1.28	15.1°c	D.B.
9-22-93	1345		6.95	1.26	16.0	[illegible]
9-22-93	1545	26 hours 5 min	6.94	1.26	15.9°c	[illegible] JC
9/22/93	1745	1685 min	7.06	1.26	15.8°c	AS : GB
9-22-93	1945	1805 min	6.98	1.25	15.2°c	
9-22-93	2145	1925 min	6.90	1.26	14.6°c	
9-22-93	2340	2040 min	6.70	1.31	14.6°c	
9-23-93	0140	2140 MIN	6.72	1.27	14.5	
9-23-93	0345	2255 min	6.77	1.24	14.5	MM
9-23-93	0545	2405	6.75	1.24	14.4	MM
9-23-93	0746	JC 9/23/93	~~7.98~~	1.27	14.2	Jim Curtis / Curtis — pH not accurate! forgot to remove cap on pH bulb.
9-23-93	0947	JC 9/23/93	~~8.01~~	1.28	14.7	
9-23-93	1120		6.79	1.28	15.0	JC

PUMP TEST WATER QUALITY MEASUREMENTS

PUMPING WELL 11214

DATE	TIME	ELAPSED TIME	pH	SPEC. COND.	TEMP	COMMENTS
9-23-93	1154	2774	6.75	1.24	15.0 °C	(29.48 mm Hg, 68 °F)
9-23-93	1346		6.77	1.25	15.1	
9-23-93	1545	3005	6.79	1.26	15.2°C	
9-23-93	1745	3125	6.80	1.28	15.7°C	
9-23-93	1945	3245	6.73	1.26	15.1°C	
9-23-93	2145	3365	6.71	1.26	15.1°C	
9-23-93	2345	~~3485~~	6.77	1.26	14.2°	
9-24-93	0145	3605	6.76	1.28	13.8°C	
9-24-93	0345	3725	6.72	1.28	13.2°C	
9-24-93	0545	3845	6.65	1.27	13.1°C	
9-24-93	0744	3964	6.76	1.28	12.8°C	(29.59 mm Hg, 48 °F)
9-24-93	1015	~~3995~~ 4115	6.70	1.26	13.7°C	
9-24-93	1315	~~4075~~ 4295	6.70	1.25	15.4°C	SPC
9-24-93	1515	4415	6.75	1.25	15.6°C	
9-24-93	1745	4565	6.78	1.26	15.5°C	
9-24-93	1745	4685	6.79	1.26	15.0°C	
9-24-93	2145	4805	6.70	1.27	14.5°C	
9-24-93	2345	5025	6.72	1.27	14.5°C	
9-25-93	0145	5145	6.60	1.26	14.4°C	
09-25-93	0345	5265	6.67	1.26	14.5	
9-25-93	0545	5385	6.54	1.27	14.5	

PUMP TEST WATER QUALITY MEASUREMENTS

PUMPING WELL 11214

DATE	TIME	ELAPSED TIME	pH	SPEC. COND.	TEMP	COMMENTS
09-25-93	0851	5471	6.60	1.26	14.4°	JRC
	1050	5590 ✓	6.54	1.29	14.5	JRC
	1235	5695 ✓	6.54	1.29	14.6	JRC
	1135	5815 ✓	6.56	1.29	14.6	
	1545	5885 ✓	6.52	1.23	15.3°C	
	1745	6015 ✓	6.65	1.25	16.0°C	
	1950	~~6210~~ 6130 JC	6.63	1.27	15.8°C	
	2150	~~6320~~	6.64	1.25	15.7°C	
9-25-93	2330	~~6420~~ 6480	6.63	1.27	15.5°C	
9-26-93	0140	~~6590~~ ~~6510~~	6.63	1.27	15.6°C	
	0340	~~6790~~ 6600	6.60	1.28	15.3	
	0540	~~6910~~ 6720	6.65	1.27	15.0	
	0739	6840	6.58	1.29	149	
	0940	6960 ✓	6.59	1.29	14.8	JRC
	1150	7090	6.56	1.27	14.9	JRC
	1330	7190	6.53	1.25	14.8	
	1545	7315 ~~7365~~ 7445	6.54	1.25	15.2	
	1745	~~7465~~ 7445	6.55	1.26	15.4	
	1829	7489	6.57	1.26	15.15	
9-26-93	1945	~~7605~~ 7566	6.51	1.22	14.8°C	
	2145	7685	6.54	1.25	14.5°C	
9-26-93	2330	7790	6.52	1.24	14.4°C	
9-27-93	0140	7920	6.53	1.30	14.1°C	
	0340	8040	6.54	1.25	13.9°C	

000530

2338

PUMP TEST WATER QUALITY MEASUREMENTS

PUMPING WELL mw 11214

DATE	TIME	ELAPSED TIME	pH	SPEC. COND.	TEMP	COMMENTS
9 27-93	0540	8160	6.57	1.27	11.02	
	0747		6.62	1.29	14.3	
	0946		6.52	1.25	14.2	
	1145		6.53	1.26	14.3	
	15					
	1530		6.54	1.27	14.2	

000511

SE2000
Environmental Logger
10/01 10:14

Unit# 159 Test 2

Setups:	INPUT 1	INPUT 2	INPUT 3	INPUT 4	INPUT 5
Type	Level (F)	Level (F)	Level (F)	Level (F)	Level (F)
Mode	Surface	Surface	Surface	Surface	Surface
I.D.	11214	11213	11122	11125	11124
Reference	0.000	0.000	0.000	0.000	0.000
SG	1.000	1.000	1.000	1.000	1.000
Linearity	0.111	0.112	0.024	0.021	-0.007
Scale factor	19.968	20.070	10.051	10.051	9.992
Offset	0.029	-0.073	-0.003	0.041	0.011
Delay mSEC	50.000	50.000	50.000	50.000	50.000

Step 0 09/21 13:44:50

Elapsed Time	Input 1	Input 2	Input 3	Input 4	Input 5
0.0000	0.006	0.000	-0.028	0.006	-0.006
0.0083	0.006	0.000	-0.028	0.003	-0.006
0.0166	0.012	0.000	-0.028	0.003	-0.003
0.0250	0.006	0.006	-0.025	0.003	-0.003
0.0333	0.012	0.000	-0.031	0.006	-0.003
0.0416	0.012	0.006	-0.028	0.003	-0.003
0.0500	0.006	0.000	-0.028	0.003	-0.003
0.0583	0.006	0.000	-0.025	0.003	-0.003
0.0666	0.012	0.000	-0.028	0.003	-0.003
0.0750	0.006	0.000	-0.025	0.003	-0.003
0.0833	0.006	0.000	-0.022	0.003	-0.003
0.0916	0.006	0.000	-0.022	0.003	-0.003
0.1000	0.006	0.000	-0.022	0.003	-0.003
0.1083	-0.006	0.000	-0.022	0.003	-0.003
0.1166	-0.025	0.000	-0.022	0.003	-0.003
0.1250	-0.031	0.000	-0.028	0.003	-0.003
0.1333	-0.044	0.000	-0.028	0.003	-0.003
0.1416	-0.069	0.000	-0.025	0.003	-0.003
0.1500	-0.107	0.000	-0.028	0.003	-0.003
0.1583	-0.139	0.000	-0.028	0.003	-0.003
0.1666	-0.152	0.000	-0.031	0.003	-0.003
0.1750	-0.190	0.000	-0.028	0.003	-0.003
0.1833	-0.215	0.000	-0.031	0.003	-0.003
0.1916	-0.253	0.000	-0.028	0.003	-0.003
0.2000	-0.272	0.000	-0.025	0.003	-0.003
0.2083	-0.310	0.000	-0.028	0.003	-0.003
0.2166	-0.336	0.000	-0.028	0.003	-0.003
0.2250	-0.348	-0.006	-0.031	0.003	-0.003
0.2333	-0.374	-0.006	-0.031	0.003	-0.003
0.2416	-0.399	-0.006	-0.035	0.003	-0.003
0.2500	-0.418	-0.006	-0.031	0.003	-0.003
0.2583	-0.437	-0.006	-0.031	0.003	-0.003
0.2666	-0.456	-0.006	-0.035	0.003	-0.003

Elapsed Time	Input 1	Input 2	Input 3	Input 4	Input 5
0.2750	-0.475	-0.012	-0.038	0.003	-0.003
0.2833	-0.494	-0.012	-0.038	0.003	-0.003
0.2916	-0.520	-0.012	-0.038	0.003	-0.003
0.3000	-0.532	-0.019	-0.038	0.003	-0.003
0.3083	-0.558	-0.019	-0.041	0.003	-0.003
0.3166	-0.577	-0.019	-0.035	0.003	-0.003
0.3250	-0.589	-0.019	-0.044	0.003	-0.003
0.3333	-0.608	-0.019	-0.041	0.003	-0.003
0.3500	-0.647	-0.025	-0.044	0.006	-0.003
0.3666	-0.685	-0.031	-0.047	0.003	-0.003
0.3833	-0.716	-0.031	-0.051	0.003	-0.003
0.4000	-0.754	-0.038	-0.054	0.006	-0.003
0.4166	-0.786	-0.044	-0.057	0.003	-0.003
0.4333	-0.824	-0.044	-0.060	0.006	-0.003
0.4500	-0.862	-0.050	-0.060	0.006	-0.003
0.4666	-0.900	-0.057	-0.063	0.006	-0.003
0.4833	-0.932	-0.057	-0.070	0.006	-0.003
0.5000	-0.964	-0.063	-0.076	0.006	-0.003
0.5166	-1.002	-0.070	-0.076	0.003	-0.003
0.5333	-1.027	-0.076	-0.082	0.006	-0.003
0.5500	-1.059	-0.076	-0.086	0.006	-0.003
0.5666	-1.090	-0.082	-0.092	0.006	-0.003
0.5833	-1.122	-0.089	-0.095	0.006	-0.003
0.6000	-1.154	-0.095	-0.098	0.006	-0.003
0.6166	-1.173	-0.101	-0.098	0.006	-0.003
0.6333	-1.198	-0.108	-0.108	0.006	-0.003
0.6500	-1.224	-0.108	-0.111	0.006	-0.003
0.6666	-1.249	-0.114	-0.118	0.006	-0.003
0.6833	-1.268	-0.120	-0.121	0.006	0.000
0.7000	-1.293	-0.120	-0.124	0.006	-0.003
0.7166	-1.319	-0.133	-0.130	0.006	-0.003
0.7333	-1.338	-0.133	-0.134	0.003	-0.003
0.7500	-1.363	-0.140	-0.140	0.006	0.000
0.7666	-1.382	-0.146	-0.146	0.003	-0.003
0.7833	-1.401	-0.152	-0.150	0.003	-0.003
0.8000	-1.420	-0.152	-0.156	0.003	-0.003
0.8166	-1.446	-0.159	-0.159	0.003	-0.003
0.8333	-1.465	-0.165	-0.169	0.003	-0.003
0.8500	-1.490	-0.171	-0.169	0.006	0.000
0.8666	-1.509	-0.178	-0.175	0.006	-0.003
0.8833	-1.522	-0.178	-0.178	0.006	-0.003
0.9000	-1.547	-0.184	-0.185	0.003	-0.003
0.9166	-1.566	-0.190	-0.188	0.003	-0.003
0.9333	-1.579	-0.197	-0.194	0.000	-0.003
0.9500	-1.598	-0.197	-0.201	0.003	-0.003
0.9666	-1.617	-0.203	-0.207	0.003	-0.003
0.9833	-1.636	-0.210	-0.213	0.006	-0.003
1.0000	-1.655	-0.216	-0.213	0.003	-0.003

Elapsed Time	Input 1	Input 2	Input 3	Input 4	Input 5
18.0000	-3.658	-1.743	-1.965	-0.318	-0.006
20.0000	-3.848	-1.826	-2.051	-0.366	0.000
22.0000	-3.943	-1.915	-2.141	-0.420	-0.006
24.0000	-4.019	-1.979	-2.211	-0.471	-0.006
26.0000	-4.038	-2.030	-2.265	-0.515	-0.006
28.0000	-4.070	-2.074	-2.303	-0.563	-0.006
30.0000	-4.114	-2.112	-2.348	-0.604	0.003
32.0000	-4.159	-2.157	-2.389	-0.649	-0.009
34.0000	-4.197	-2.195	-2.428	-0.690	-0.009
36.0000	-4.229	-2.221	-2.466	-0.728	-0.003
38.0000	-4.267	-2.259	-2.498	-0.770	-0.009
40.0000	-4.298	-2.297	-2.527	-0.805	0.003
42.0000	-4.330	-2.322	-2.559	-0.840	-0.003
44.0000	-4.355	-2.348	-2.584	-0.875	-0.003
46.0000	-4.381	-2.380	-2.610	-0.907	0.000
48.0000	-4.406	-2.405	-2.635	-0.942	0.000
50.0000	-4.425	-2.431	-2.657	-0.970	0.000
52.0000	-4.450	-2.450	-2.677	-0.996	-0.003
54.0000	-4.469	-2.469	-2.696	-1.021	-0.003
56.0000	-4.507	-2.488	-2.721	-1.050	0.000
58.0000	-4.552	-2.513	-2.744	-1.075	-0.003
60.0000	-4.590	-2.539	-2.772	-1.094	0.000
62.0000	-4.621	-2.558	-2.795	-1.120	-0.009
64.0000	-4.640	-2.577	-2.817	-1.142	-0.012
66.0000	-4.659	-2.602	-2.836	-1.164	-0.012
68.0000	-4.678	-2.615	-2.855	-1.187	0.037
70.0000	-4.697	-2.634	-2.868	-1.206	-0.012
72.0000	-4.710	-2.647	-2.887	-1.225	-0.015
74.0000	-4.729	-2.660	-2.900	-1.241	-0.012
76.0000	-4.742	-2.672	-2.913	-1.260	0.015
78.0000	-4.755	-2.685	-2.925	-1.276	-0.012
80.0000	-4.774	-2.704	-2.941	-1.295	-0.015
82.0000	-4.780	-2.710	-2.951	-1.308	-0.012
84.0000	-4.799	-2.723	-2.964	-1.323	-0.012
86.0000	-4.812	-2.736	-2.976	-1.339	-0.012
88.0000	-4.831	-2.749	-2.989	-1.352	-0.012
90.0000	-4.843	-2.755	-2.999	-1.368	-0.015
92.0000	-4.856	-2.768	-3.011	-1.381	-0.015
94.0000	-4.869	-2.780	-3.021	-1.397	-0.015
96.0000	-4.875	-2.793	-3.034	-1.413	-0.015
98.0000	-4.888	-2.806	-3.043	-1.425	-0.015
100.000	-4.900	-2.812	-3.056	-1.438	-0.015
115.000	-4.976	-2.895	-3.130	-1.533	-0.022
130.000	-5.040	-2.965	-3.196	-1.610	-0.025
145.000	-5.103	-3.029	-3.257	-1.683	-0.034
160.000	-5.147	-3.073	-3.311	-1.740	-0.028
175.000	-5.211	-3.130	-3.366	-1.791	-0.028
190.000	-5.293	-3.194	-3.426	-1.839	-0.044

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Elapsed Time	Input 1	Input 2	Input 3	Input 4	Input 5
205.000	-5.350	-3.251	-3.474	-1.887	-0.053
220.000	-5.388	-3.302	-3.522	-1.931	-0.059
235.000	-5.426	-3.347	-3.560	-1.973	-0.066
250.000	-5.464	-3.404	-3.630	-2.011	-0.072
265.000	-5.451	-3.417	-3.624	-2.049	-0.082
280.000	-5.527	-3.461	-3.665	-2.084	-0.088
295.000	-5.597	-3.499	-3.710	-2.116	-0.097
310.000	-5.629	-3.537	-3.742	-2.151	-0.104
325.000	-5.654	-3.569	-3.777	-2.179	-0.110
340.000	-5.692	-3.607	-3.809	-2.214	-0.119
355.000	-5.781	-3.646	-3.853	-2.243	-0.126
370.000	-5.686	-3.677	-3.869	-2.275	-0.135
385.000	-5.800	-3.709	-3.908	-2.303	-0.142
400.000	-5.857	-3.741	-3.940	-2.329	-0.151
415.000	-5.889	-3.766	-3.971	-2.358	-0.160
430.000	-5.914	-3.798	-4.000	-2.383	-0.167
445.000	-5.939	-3.830	-4.026	-2.405	-0.176
460.000	-6.003	-3.855	-4.058	-2.424	-0.186
475.000	-6.041	-3.887	-4.086	-2.447	-0.195
490.000	-6.117	-3.913	-4.115	-2.466	-0.205
505.000	-6.180	-3.951	-4.156	-2.485	-0.217
520.000	-6.167	-3.970	-4.179	-2.507	-0.224
535.000	-6.180	-3.995	-4.195	-2.526	-0.233
550.000	-6.167	-4.014	-4.211	-2.545	-0.239
565.000	-6.180	-4.033	-4.227	-2.564	-0.249
580.000	-6.205	-4.046	-4.246	-2.580	-0.255
595.000	-6.224	-4.065	-4.265	-2.599	-0.265
610.000	-6.136	-4.084	-4.274	-2.615	-0.243
625.000	-6.224	-4.097	-4.294	-2.631	-0.252
640.000	-6.307	-4.116	-4.319	-2.637	-0.277
655.000	-6.326	-4.135	-4.338	-2.650	-0.284
670.000	-6.345	-4.154	-4.354	-2.666	-0.293
685.000	-6.357	-4.167	-4.370	-2.682	-0.302
700.000	-6.370	-4.186	-4.386	-2.698	-0.293
715.000	-6.389	-4.199	-4.402	-2.714	-0.306
730.000	-6.402	-4.218	-4.415	-2.723	-0.306
745.000	-6.421	-4.231	-4.434	-2.746	-0.315
760.000	-6.440	-4.250	-4.447	-2.762	-0.325
775.000	-6.452	-4.262	-4.463	-2.777	-0.334
790.000	-6.471	-4.281	-4.479	-2.793	-0.350
805.000	-6.490	-4.294	-4.498	-2.809	-0.359
820.000	-6.503	-4.313	-4.510	-2.822	-0.362
835.000	-6.516	-4.326	-4.526	-2.835	-0.375
850.000	-6.497	-4.345	-4.536	-2.847	-0.416
865.000	-6.452	-4.351	-4.539	-2.863	-0.422
880.000	-6.465	-4.364	-4.549	-2.857	-0.432
895.000	-6.756	-4.390	-4.612	-2.879	-0.438
910.000	-6.782	-4.415	-4.635	-2.867	-0.441

Elapsed Time	Input 1	Input 2	Input 3	Input 4	Input 5
2365.00	-7.529	-5.509	-5.693	-3.640	-1.098
2380.00	-7.535	-5.521	-5.706	-3.643	-1.104
2395.00	-7.529	-5.521	-5.716	-3.652	-1.110
2410.00	-7.516	-5.534	-5.725	-3.655	-1.110
2425.00	-7.523	-5.540	-5.732	-3.659	-1.117
2440.00	-7.523	-5.547	-5.738	-3.662	-1.123
2455.00	-7.523	-5.553	-5.747	-3.671	-1.129
2470.00	-7.516	-5.559	-5.776	-3.674	-1.136
2485.00	-7.523	-5.572	-5.795	-3.681	-1.142
2500.00	-7.535	-5.585	-5.811	-3.690	-1.145
2515.00	-7.542	-5.591	-5.811	-3.694	-1.151
2530.00	-7.542	-5.598	-5.802	-3.697	-1.158
2545.00	-7.542	-5.604	-5.821	-3.703	-1.161
2560.00	-7.535	-5.610	-5.830	-3.706	-1.167
2575.00	-7.542	-5.617	-5.840	-3.709	-1.170
2590.00	-7.548	-5.623	-5.846	-3.716	-1.177
2605.00	-7.542	-5.623	-5.859	-3.719	-1.183
2620.00	-7.535	-5.629	-5.869	-3.725	-1.186
2635.00	-7.542	-5.629	-5.878	-3.729	-1.196
2650.00	-7.542	-5.636	-5.878	-3.735	-1.211
2665.00	-7.548	-5.636	-5.897	-3.738	-1.218
2680.00	-7.542	-5.636	-5.907	-3.741	-1.224
2695.00	-7.542	-5.636	-5.916	-3.744	-1.230
2710.00	-7.548	-5.642	-5.926	-3.751	-1.234
2725.00	-7.542	-5.636	-5.929	-3.754	-1.240
2740.00	-7.542	-5.642	-5.936	-3.757	-1.246
2755.00	-7.548	-5.655	-5.942	-3.764	-1.249
2770.00	-7.561	-5.661	-5.951	-3.767	-1.256
2785.00	-7.567	-5.668	-5.961	-3.770	-1.259
2800.00	-7.567	-5.668	-5.971	-3.776	-1.265
2815.00	-7.567	-5.668	-5.983	-3.779	-1.271
2830.00	-7.573	-5.674	-5.990	-3.786	-1.275
2845.00	-7.573	-5.680	-5.999	-3.789	-1.281
2860.00	-7.567	-5.674	-6.009	-3.792	-1.284
2875.00	-7.573	-5.674	-6.015	-3.795	-1.287
2890.00	-7.567	-5.668	-6.018	-3.802	-1.281
2905.00	-7.561	-5.668	-6.031	-3.805	-1.284
2920.00	-7.554	-5.661	-6.038	-3.808	-1.300
2935.00	-8.023	-5.661	-6.057	-3.814	-1.306
2950.00	-8.016	-5.655	-6.063	-3.818	-1.303
2965.00	-8.004	-5.642	-6.069	-3.821	-1.306
2980.00	-8.004	-5.642	-6.079	-3.824	-1.322
2995.00	-7.997	-5.642	-6.089	-3.830	-1.325
3010.00	-7.997	-5.636	-6.098	-3.830	-1.322
3025.00	-7.985	-5.629	-6.104	-3.837	-1.325
3040.00	-7.985	-5.629	-6.111	-3.840	-1.335
3055.00	-7.972	-5.617	-6.117	-3.846	-1.338
3070.00	-7.966	-5.610	-6.130	-3.849	-1.335

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Elapsed Time	Input 1	Input 2	Input 3	Input 4	Input 5
3085.00	-7.972	-5.623	-6.140	-3.853	-1.341
3100.00	-7.972	-5.623	-6.149	-3.859	-1.347
3115.00	-7.959	-5.610	-6.156	-3.859	-1.350
3130.00	-7.959	-5.617	-6.162	-3.865	-1.347
3145.00	-7.978	-5.636	-6.171	-3.869	-1.353
3160.00	-7.991	-5.648	-6.181	-3.872	-1.357
3175.00	-7.997	-5.655	-6.184	-3.878	-1.363
3190.00	-8.010	-5.661	-6.194	-3.881	-1.372
3205.00	-8.004	-5.668	-6.200	-3.884	-1.376
3220.00	-8.016	-5.680	-6.210	-3.888	-1.372
3235.00	-8.023	-5.680	-6.216	-3.894	-1.376
3250.00	-8.023	-5.687	-6.226	-3.897	-1.391
3265.00	-8.029	-5.687	-6.242	-3.900	-1.394
3280.00	-8.023	-5.687	-6.251	-3.903	-1.398
3295.00	-8.029	-5.693	-6.261	-3.907	-1.404
3310.00	-8.282	-5.706	-6.267	-3.910	-1.410
3325.00	-8.295	-5.712	-6.273	-3.916	-1.413
3340.00	-8.289	-5.712	-6.283	-3.919	-1.413
3355.00	-8.289	-5.718	-6.293	-3.923	-1.420
3370.00	-8.295	-5.718	-6.299	-3.926	-1.420
3385.00	-8.295	-5.725	-6.309	-3.929	-1.426
3400.00	-8.289	-5.718	-6.318	-3.932	-1.426
3415.00	-8.289	-5.725	-6.321	-3.935	-1.432
3430.00	-8.295	-5.725	-6.331	-3.938	-1.439
3445.00	-8.289	-5.731	-6.334	-3.942	-1.442
3460.00	-8.295	-5.731	-6.337	-3.948	-1.448
3475.00	-8.295	-5.737	-6.347	-3.951	-1.451
3490.00	-8.295	-5.737	-6.353	-3.954	-1.451
3505.00	-8.301	-5.744	-6.363	-3.958	-1.454
3520.00	-8.295	-5.744	-6.369	-3.961	-1.454
3535.00	-8.295	-5.744	-6.375	-3.964	-1.458
3550.00	-8.295	-5.744	-6.385	-3.970	-1.458
3565.00	-8.295	-5.750	-6.391	-3.973	-1.461
3580.00	-8.295	-5.750	-6.404	-3.977	-1.467
3595.00	-8.282	-5.737	-6.411	-3.980	-1.473
3610.00	-8.289	-5.744	-6.420	-3.983	-1.483
3625.00	-8.289	-5.744	-6.430	-3.986	-1.489
3640.00	-8.282	-5.744	-6.436	-3.986	-1.445
3655.00	-8.282	-5.744	-6.446	-3.993	-1.448
3670.00	-8.282	-5.744	-6.452	-3.996	-1.495
3685.00	-8.282	-5.744	-6.462	-3.999	-1.499
3700.00	-8.276	-5.737	-6.471	-4.002	-1.508
3715.00	-8.270	-5.744	-6.477	-4.005	-1.511
3730.00	-8.270	-5.744	-6.487	-4.008	-1.514
3745.00	-8.270	-5.737	-6.493	-4.012	-1.518
3760.00	-8.263	-5.731	-6.503	-4.015	-1.521
3775.00	-8.612	-5.737	-6.509	-4.018	-1.524
3790.00	-8.618	-5.744	-6.519	-4.021	-1.521

Elapsed Time	Input 1	Input 2	Input 3	Input 4	Input 5
3805.00	-8.631	-5.750	-6.525	-4.024	-1.524
3820.00	-8.637	-5.744	-6.532	-4.028	-1.521
3835.00	-8.643	-5.750	-6.541	-4.031	-1.527
3850.00	-8.656	-5.750	-6.548	-4.037	-1.533
3865.00	-8.662	-5.757	-6.557	-4.037	-1.537
3880.00	-8.669	-5.757	-6.563	-4.043	-1.546
3895.00	-8.675	-5.763	-6.573	-4.047	-1.546
3910.00	-8.681	-5.769	-6.579	-4.047	-1.549
3925.00	-8.688	-5.776	-6.586	-4.053	-1.552
3940.00	-8.694	-5.776	-6.592	-4.056	-1.514
3955.00	-8.700	-5.776	-6.602	-4.059	-1.518
3970.00	-8.650	-5.782	-6.602	-4.063	-1.562
3985.00	-8.700	-5.776	-6.614	-4.066	-1.565
4000.00	-8.707	-5.782	-6.624	-4.069	-1.568
4015.00	-8.713	-5.788	-6.630	-4.072	-1.571
4030.00	-8.719	-5.788	-6.640	-4.075	-1.571
4045.00	-8.732	-5.782	-6.646	-4.082	-1.574
4060.00	-8.757	-5.776	-6.659	-4.082	-1.578
4075.00	-8.770	-5.776	-6.665	-4.088	-1.581
4090.00	-8.738	-5.782	-6.669	-4.091	-1.590
4105.00	-8.738	-5.788	-6.672	-4.094	-1.593
4120.00	-8.757	-5.795	-6.681	-4.098	-1.596
4135.00	-8.757	-5.782	-6.688	-4.101	-1.596
4150.00	-8.846	-5.776	-6.707	-4.104	-1.600
4165.00	-8.858	-5.776	-6.716	-4.110	-1.603
4180.00	-9.023	-5.763	-6.742	-4.110	-1.606
4195.00	-9.048	-5.757	-6.764	-4.113	-1.606
4210.00	-9.061	-5.750	-6.771	-4.117	-1.609
4225.00	-8.934	-5.750	-6.764	-4.120	-1.612
4240.00	-8.915	-5.757	-6.767	-4.123	-1.615
4255.00	-8.852	-5.763	-6.764	-4.126	-1.615
4270.00	-8.858	-5.763	-6.767	-4.132	-1.619
4285.00	-8.871	-5.757	-6.777	-4.132	-1.622
4300.00	-8.865	-5.750	-6.780	-4.136	-1.622
4315.00	-8.871	-5.744	-6.790	-4.139	-1.625
4330.00	-8.871	-5.744	-6.796	-4.142	-1.628
4345.00	-8.871	-5.737	-6.803	-4.145	-1.631
4360.00	-8.871	-5.731	-6.809	-4.148	-1.634
4375.00	-8.871	-5.725	-6.815	-4.152	-1.638
4390.00	-8.877	-5.712	-6.818	-4.155	-1.641
4405.00	-8.877	-6.074	-6.828	-4.158	-1.641
4420.00	-8.789	-6.068	-6.822	-4.161	-1.644
4435.00	-8.795	-6.068	-6.822	-4.164	-1.644
4450.00	-8.827	-6.062	-6.831	-4.167	-1.647
4465.00	-8.928	-6.049	-6.854	-4.167	-1.653
4480.00	-8.928	-6.043	-6.863	-4.171	-1.647
4495.00	-8.934	-6.036	-6.869	-4.174	-1.650
4510.00	-8.934	-6.030	-6.876	-4.177	-1.653

Elapsed Time	Input 1	Input 2	Input 3	Input 4	Input 5
4525.00	-8.941	-6.030	-6.882	-4.180	-1.656
4540.00	-8.941	-6.024	-6.885	-4.183	-1.660
4555.00	-8.953	-6.017	-6.892	-4.183	-1.663
4570.00	-8.865	-6.017	-6.892	-4.187	-1.663
4585.00	-8.960	-6.017	-6.905	-4.190	-1.666
4600.00	-8.972	-6.011	-6.914	-4.193	-1.675
4615.00	-8.972	-6.004	-6.920	-4.196	-1.679
4630.00	-8.979	-5.998	-6.927	-4.199	-1.682
4645.00	-8.972	-5.992	-6.933	-4.202	-1.682
4660.00	-8.979	-5.985	-6.940	-4.206	-1.682
4675.00	-8.985	-5.973	-6.946	-4.206	-1.685
4690.00	-9.017	-5.966	-6.952	-4.209	-1.679
4705.00	-9.036	-5.966	-6.962	-4.212	-1.679
4720.00	-9.042	-5.966	-6.971	-4.215	-1.691
4735.00	-9.042	-5.973	-6.978	-4.218	-1.694
4750.00	-9.048	-5.973	-6.984	-4.222	-1.698
4765.00	-9.048	-5.973	-6.991	-4.222	-1.701
4780.00	-9.061	-5.973	-6.997	-4.228	-1.694
4795.00	-9.055	-5.973	-7.003	-4.228	-1.694
4810.00	-9.061	-5.966	-7.007	-4.231	-1.701
4825.00	-9.074	-5.960	-7.016	-4.234	-1.701
4840.00	-9.080	-5.966	-7.022	-4.237	-1.707
4855.00	-9.080	-5.960	-7.029	-4.241	-1.707
4870.00	-9.080	-5.966	-7.035	-4.244	-1.716
4885.00	-9.086	-5.973	-7.042	-4.244	-1.716
4900.00	-9.093	-5.960	-7.051	-4.250	-1.716
4915.00	-9.099	-5.960	-7.058	-4.250	-1.716
4930.00	-9.188	-5.960	-7.073	-4.253	-1.723
4945.00	-9.194	-6.208	-7.083	-4.257	-1.723
4960.00	-9.194	-6.202	-7.089	-4.260	-1.726
4975.00	-9.194	-6.195	-7.096	-4.260	-1.729
4990.00	-9.200	-6.182	-7.105	-4.263	-1.726
5005.00	-9.207	-6.176	-7.112	-4.266	-1.726
5020.00	-9.213	-6.163	-7.118	-4.269	-1.720
5035.00	-9.219	-6.157	-7.128	-4.269	-1.723
5050.00	-9.219	-6.151	-7.134	-4.276	-1.732
5065.00	-9.226	-6.151	-7.140	-4.276	-1.735
5080.00	-9.232	-6.144	-7.147	-4.279	-1.732
5095.00	-9.238	-6.138	-7.153	-4.282	-1.732
5110.00	-9.238	-6.132	-7.159	-4.285	-1.739
5125.00	-9.245	-6.125	-7.169	-4.288	-1.742
5140.00	-9.232	-6.113	-7.175	-4.292	-1.735
5155.00	-9.169	-6.100	-7.166	-4.295	-1.739
5170.00	-9.175	-6.100	-7.172	-4.285	-1.754
5185.00	-9.188	-6.106	-7.179	-4.295	-1.757
5200.00	-9.200	-6.087	-7.185	-4.304	-1.754
5215.00	-9.213	-6.341	-7.191	-4.304	-1.757
5230.00	-9.219	-6.335	-7.201	-4.307	-1.761

Elapsed Time	Input 1	Input 2	Input 3	Input 4	Input 5
5245.00	-9.219	-6.335	-7.204	-4.311	-1.761
5260.00	-9.226	-6.322	-7.210	-4.311	-1.764
5275.00	-9.232	-6.316	-7.217	-4.314	-1.767
5290.00	-9.232	-6.316	-7.223	-4.317	-1.770
5305.00	-9.245	-6.303	-7.230	-4.320	-1.773
5320.00	-9.251	-6.303	-7.236	-4.320	-1.770
5335.00	-9.257	-6.303	-7.242	-4.323	-1.773
5350.00	-9.257	-6.297	-7.249	-4.326	-1.773
5365.00	-9.270	-6.278	-7.258	-4.330	-1.773
5380.00	-9.314	-6.577	-7.268	-4.330	-1.780
5395.00	-9.333	-6.570	-7.277	-4.333	-1.783
5410.00	-9.346	-6.570	-7.284	-4.336	-1.783
5425.00	-9.352	-6.564	-7.293	-4.339	-1.786
5440.00	-9.358	-6.570	-7.300	-4.342	-1.786
5455.00	-9.365	-6.564	-7.309	-4.346	-1.789
5470.00	-9.327	-6.557	-7.309	-4.346	-1.789
5485.00	-9.377	-6.551	-7.322	-4.349	-1.792
5500.00	-9.384	-6.545	-7.328	-4.352	-1.795
5515.00	-9.396	-6.538	-7.338	-4.355	-1.795
5530.00	-9.403	-6.532	-7.344	-4.358	-1.799
5545.00	-9.409	-6.526	-7.351	-4.358	-1.802
5560.00	-9.415	-6.519	-7.357	-4.361	-1.802
5575.00	-9.422	-6.513	-7.363	-4.365	-1.805
5590.00	-9.428	-6.507	-7.370	-4.368	-1.805
5605.00	-9.434	-6.500	-7.379	-4.368	-1.808
5620.00	-9.447	-6.488	-7.386	-4.371	-1.808
5635.00	-9.447	-6.475	-7.392	-4.374	-1.811
5650.00	-9.453	-6.468	-7.402	-4.377	-1.811
5665.00	-9.453	-6.456	-7.408	-4.381	-1.814
5680.00	-9.460	-6.437	-7.414	-4.384	-1.814
5695.00	-9.466	-6.577	-7.418	-4.384	-1.817
5710.00	-9.472	-6.577	-7.427	-4.387	-1.817
5725.00	-9.472	-6.577	-7.434	-4.390	-1.817
5740.00	-9.479	-6.570	-7.437	-4.393	-1.821
5755.00	-9.485	-6.551	-7.446	-4.393	-1.821
5770.00	-9.491	-6.538	-7.453	-4.396	-1.824
5785.00	-9.498	-6.532	-7.459	-4.400	-1.824
5800.00	-9.504	-6.513	-7.465	-4.403	-1.827
5815.00	-9.504	-6.494	-7.472	-4.406	-1.827
5830.00	-9.510	-6.646	-7.481	-4.406	-1.827
5845.00	-9.517	-6.627	-7.485	-4.409	-1.830
5860.00	-9.523	-6.615	-7.491	-4.412	-1.830
5875.00	-9.529	-6.596	-7.500	-4.416	-1.830
5890.00	-9.536	-6.723	-7.507	-4.416	-1.833
5905.00	-9.586	-6.723	-7.520	-4.419	-1.833
5920.00	-9.593	-6.704	-7.526	-4.422	-1.827
5935.00	-9.605	-6.691	-7.536	-4.425	-1.830
5950.00	-9.618	-6.678	-7.545	-4.425	-1.827

ERAFS1\VOL1:GEOT\ENGDATA\
KEEP\D-LOGGER\11214\11214.PT

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Elapsed Time	Input 1	Input 2	Input 3	Input 4	Input 5
5965.00	-9.631	-6.659	-7.551	-4.428	-1.827
5980.00	-9.637	-6.659	-7.561	-4.431	-1.833
5995.00	-9.643	-6.646	-7.567	-4.435	-1.833
6010.00	-9.656	-6.640	-7.574	-4.435	-1.840
6025.00	-9.808	-6.634	-7.606	-4.438	-1.840
6040.00	-9.821	-6.615	-7.615	-4.441	-1.830
6055.00	-9.840	-6.767	-7.628	-4.444	-1.833
6070.00	-9.713	-6.742	-7.618	-4.447	-1.836
6085.00	-9.700	-6.742	-7.618	-4.447	-1.836
6100.00	-9.700	-6.735	-7.625	-4.451	-1.836
6115.00	-9.707	-6.723	-7.631	-4.454	-1.840
6130.00	-9.681	-6.882	-7.634	-4.454	-1.840
6145.00	-9.726	-6.882	-7.647	-4.457	-1.840
6160.00	-9.732	-6.888	-7.653	-4.457	-1.855
6175.00	-9.732	-6.888	-7.660	-4.463	-1.858
6190.00	-9.738	-6.894	-7.669	-4.463	-1.855
6205.00	-9.738	-6.913	-7.673	-4.466	-1.862
6220.00	-9.745	-6.913	-7.679	-4.470	-1.862
6235.00	-9.751	-6.926	-7.685	-4.473	-1.865
6250.00	-9.751	-6.926	-7.695	-4.473	-1.865
6265.00	-9.757	-6.932	-7.698	-4.476	-1.862
6280.00	-9.764	-6.926	-7.704	-4.476	-1.858
6295.00	-9.770	-6.926	-7.714	-4.476	-1.858
6310.00	-9.783	-6.932	-7.724	-4.476	-1.855
6325.00	-9.789	-6.932	-7.727	-4.476	-1.855
6340.00	-9.789	-6.926	-7.733	-4.479	-1.852
6355.00	-9.783	-6.926	-7.739	-4.479	-1.852
6370.00	-9.789	-6.920	-7.746	-4.482	-1.852
6385.00	-9.795	-6.913	-7.752	-4.482	-1.852
6400.00	-9.802	-6.907	-7.759	-4.486	-1.849
6415.00	-9.808	-6.907	-7.765	-4.486	-1.852
6430.00	-9.814	-6.901	-7.771	-4.489	-1.855
6445.00	-9.827	-6.901	-7.778	-4.492	-1.855
6460.00	-9.833	-6.894	-7.787	-4.482	-1.846
6475.00	-9.846	-6.901	-7.794	-4.492	-1.846
6490.00	-9.890	-6.901	-7.803	-4.495	-1.846
6505.00	-9.903	-6.901	-7.813	-4.498	-1.849
6520.00	-9.915	-6.907	-7.822	-4.498	-1.846
6535.00	-9.922	-6.901	-7.829	-4.498	-1.849
6550.00	-9.928	-6.907	-7.838	-4.505	-1.849
6565.00	-9.934	-6.907	-7.845	-4.505	-1.849
6580.00	-9.934	-6.907	-7.851	-4.508	-1.852
6595.00	-9.941	-6.913	-7.857	-4.511	-1.852
6610.00	-9.953	-6.913	-7.864	-4.511	-1.852
6625.00	-9.960	-6.907	-7.873	-4.514	-1.852
6640.00	-9.972	-6.913	-7.880	-4.514	-1.849
6655.00	-9.985	-6.913	-7.889	-4.517	-1.852
6670.00	-9.991	-6.920	-7.896	-4.514	-1.852

Elapsed Time	Input 1	Input 2	Input 3	Input 4	Input 5
6685.00	-10.004	-6.920	-7.902	-4.520	-1.852
6700.00	-10.004	-7.091	-7.908	-4.520	-1.855
6715.00	-10.017	-7.104	-7.918	-4.524	-1.855
6730.00	-10.023	-7.104	-7.924	-4.524	-1.855
6745.00	-10.029	-7.117	-7.931	-4.527	-1.858
6760.00	-10.042	-7.123	-7.940	-4.533	-1.865
6775.00	-10.048	-7.129	-7.947	-4.530	-1.868
6790.00	-10.048	-7.142	-7.953	-4.540	-1.865
6805.00	-10.061	-7.149	-7.959	-4.540	-1.868
6820.00	-10.080	-7.155	-7.969	-4.540	-1.881
6835.00	-10.074	-7.161	-7.975	-4.543	-1.881
6850.00	-10.080	-7.174	-7.982	-4.543	-1.881
6865.00	-10.080	-7.180	-7.985	-4.546	-1.884
6880.00	-10.061	-7.193	-7.991	-4.549	-1.884
6895.00	-10.029	-7.199	-7.991	-4.549	-1.887
6910.00	-10.055	-7.212	-8.001	-4.552	-1.890
6925.00	-10.061	-7.218	-8.004	-4.552	-1.890
6940.00	-10.061	-7.638	-8.014	-4.555	-1.890
6955.00	-9.979	-7.638	-8.004	-4.555	-1.893
6970.00	-10.004	-7.644	-8.010	-4.559	-1.887
6985.00	-10.017	-7.657	-8.017	-4.559	-1.890
7000.00	-10.023	-7.663	-8.023	-4.562	-1.896
7015.00	-10.029	-7.670	-8.029	-4.565	-1.900
7030.00	-10.036	-7.670	-8.033	-4.565	-1.900
7045.00	-10.042	-7.676	-8.039	-4.568	-1.903
7060.00	-10.048	-7.682	-8.049	-4.575	-1.906
7075.00	-10.048	-7.682	-8.052	-4.571	-1.906
7090.00	-10.061	-7.695	-8.058	-4.575	-1.906
7105.00	-10.074	-7.701	-8.065	-4.578	-1.909
7120.00	-10.124	-7.701	-8.074	-4.578	-1.909
7135.00	-10.131	-7.701	-8.080	-4.581	-1.909
7150.00	-10.143	-7.701	-8.087	-4.581	-1.912
7165.00	-10.150	-7.708	-8.096	-4.584	-1.912
7180.00	-10.156	-7.714	-8.103	-4.587	-1.915
7195.00	-10.175	-7.708	-8.112	-4.590	-1.915
7210.00	-10.181	-7.714	-8.119	-4.590	-1.915
7225.00	-10.181	-7.708	-8.125	-4.594	-1.918
7240.00	-10.194	-7.714	-8.131	-4.594	-1.918
7255.00	-10.200	-7.701	-8.138	-4.597	-1.922
7270.00	-10.200	-7.701	-8.144	-4.600	-1.922
7285.00	-10.207	-7.701	-8.151	-4.600	-1.925
7300.00	-10.213	-7.701	-8.157	-4.603	-1.925
7315.00	-10.219	-7.708	-8.163	-4.603	-1.928
7330.00	-10.194	-7.714	-8.166	-4.606	-1.928
7345.00	-10.289	-7.714	-8.186	-4.606	-1.931
7360.00	-10.232	-7.714	-8.186	-4.610	-1.918
7375.00	-10.238	-7.714	-8.189	-4.613	-1.922
7390.00	-10.245	-7.720	-8.195	-4.613	-1.922

Elapsed Time	Input 1	Input 2	Input 3	Input 4	Input 5
7405.00	-10.251	-7.727	-8.202	-4.616	-1.925
7420.00	-10.257	-7.727	-8.205	-4.616	-1.925
7435.00	-10.257	-7.727	-8.211	-4.619	-1.925
7450.00	-10.295	-7.727	-8.224	-4.619	-1.931
7465.00	-10.301	-7.727	-8.230	-4.622	-1.934
7480.00	-10.308	-7.727	-8.237	-4.622	-1.934
7495.00	-10.314	-7.727	-8.240	-4.625	-1.937
7510.00	-10.314	-7.733	-8.246	-4.625	-1.937
7525.00	-10.320	-7.733	-8.253	-4.629	-1.937
7540.00	-10.327	-7.739	-8.262	-4.632	-1.937
7555.00	-10.333	-7.739	-8.265	-4.632	-1.941
7570.00	-10.320	-7.739	-8.268	-4.635	-1.944
7585.00	-10.339	-7.739	-8.281	-4.635	-1.947
7600.00	-10.346	-7.739	-8.284	-4.635	-1.944
7615.00	-10.352	-7.746	-8.291	-4.638	-1.947
7630.00	-10.358	-7.752	-8.297	-4.641	-1.944
7645.00	-10.358	-7.752	-8.300	-4.641	-1.947
7660.00	-10.371	-7.759	-8.310	-4.645	-1.950
7675.00	-10.377	-7.765	-8.316	-4.648	-1.950
7690.00	-10.384	-7.765	-8.323	-4.648	-1.953
7705.00	-10.390	-7.759	-8.329	-4.651	-1.956
7720.00	-10.428	-7.759	-8.339	-4.651	-1.956
7735.00	-10.441	-7.759	-8.345	-4.654	-1.956
7750.00	-10.485	-7.759	-8.358	-4.654	-1.956
7765.00	-10.491	-7.746	-8.364	-4.657	-1.959
7780.00	-10.498	-7.739	-8.374	-4.657	-1.956
7795.00	-10.510	-7.733	-8.380	-4.657	-1.959
7810.00	-10.510	-7.727	-8.386	-4.660	-1.956
7825.00	-10.523	-7.727	-8.393	-4.664	-1.959
7840.00	-10.523	-7.727	-8.399	-4.664	-1.959
7855.00	-10.561	-7.720	-8.409	-4.667	-1.963
7870.00	-10.668	-7.708	-8.431	-4.667	-1.969
7885.00	-10.681	-7.701	-8.444	-4.670	-1.969
7900.00	-10.700	-7.689	-8.450	-4.673	-1.972
7915.00	-10.612	-7.676	-8.447	-4.673	-1.975
7930.00	-10.618	-7.682	-8.453	-4.664	-1.969
7945.00	-10.624	-7.682	-8.460	-4.673	-1.969
7960.00	-10.631	-7.676	-8.469	-4.676	-1.982
7975.00	-10.637	-7.676	-8.476	-4.676	-1.982
7990.00	-10.643	-7.670	-8.479	-4.683	-1.969
8005.00	-10.649	-7.663	-8.488	-4.683	-1.969
8020.00	-10.643	-7.663	-8.491	-4.683	-1.985
8035.00	-10.649	-7.651	-8.501	-4.686	-1.985
8050.00	-10.662	-7.644	-8.507	-4.686	-1.985
8065.00	-10.668	-7.651	-8.514	-4.689	-1.988
8080.00	-10.675	-7.644	-8.520	-4.692	-1.985
8095.00	-10.675	-7.638	-8.527	-4.695	-1.985
8110.00	-10.687	-7.638	-8.536	-4.699	-1.978

Elapsed Time	Input 1	Input 2	Input 3	Input 4	Input 5
8125.00	-10.694	-7.631	-8.542	-4.699	-1.978
8140.00	-10.700	-7.612	-8.549	-4.695	-1.947
8155.00	-10.713	-7.625	-8.555	-4.702	-1.950
8170.00	-10.725	-7.619	-8.565	-4.702	-1.950
8185.00	-10.738	-7.606	-8.574	-4.705	-1.950
8200.00	-10.751	-7.606	-8.581	-4.705	-1.953
8215.00	-10.757	-7.612	-8.590	-4.708	-1.953
8230.00	-10.770	-7.619	-8.597	-4.714	-1.997
8245.00	-10.776	-7.612	-8.606	-4.714	-1.997
8260.00	-10.782	-7.619	-8.613	-4.714	-2.001
8275.00	-10.744	-7.625	-8.613	-4.718	-2.001
8290.00	-10.725	-7.631	-8.616	-4.718	-2.001
8305.00	-10.732	-7.638	-8.622	-4.718	-2.004
8320.00	-10.738	-7.644	-8.628	-4.721	-2.004
8335.00	-10.751	-7.644	-8.638	-4.724	-2.007
8350.00	-10.763	-7.651	-8.644	-4.724	-2.007
8365.00	-10.770	-7.657	-8.651	-4.724	-2.007
8380.00	-10.782	-7.670	-8.657	-4.727	-2.010
8395.00	-10.789	-7.663	-8.664	-4.727	-2.010
8410.00	-10.795	-7.676	-8.673	-4.730	-2.010
8425.00	-10.795	-7.682	-8.679	-4.734	-2.013
8440.00	-10.801	-7.689	-8.679	-4.734	-2.013
8455.00	-10.808	-7.689	-8.686	-4.737	-2.013
8470.00	-10.820	-7.695	-8.695	-4.740	-2.007
8485.00	-10.820	-7.695	-8.702	-4.737	-2.007
8500.00	-10.827	-7.701	-8.708	-4.740	-2.010
8515.00	-10.839	-7.701	-8.714	-4.743	-2.010
8530.00	-10.846	-7.708	-8.724	-4.746	-2.019
8545.00	-10.858	-7.714	-8.730	-4.743	-2.019
8560.00	-10.865	-7.714	-8.737	-4.749	-2.026
8575.00	-10.865	-7.720	-8.743	-4.756	-2.023
8590.00	-10.865	-7.727	-8.746	-4.753	-2.026
8605.00	-10.871	-7.727	-8.753	-4.753	-2.026
8620.00	-10.877	-7.733	-8.762	-4.753	-2.029
8635.00	-10.884	-7.739	-8.775	-4.759	-2.032
8650.00	-10.884	-7.746	-8.775	-4.762	-2.032
8665.00	-10.884	-7.739	-8.781	-4.759	-2.032
8680.00	-10.890	-7.739	-8.788	-4.762	-2.032
8695.00	-10.890	-7.733	-8.794	-4.762	-2.032
8710.00	-10.896	-7.733	-8.801	-4.765	-2.032
8725.00	-10.877	-7.739	-8.801	-4.765	-2.035
8740.00	-10.884	-8.114	-8.810	-4.772	-2.035

SE2000
Environmental Logger
10/01 10:44

Unit# 159 Test 2

Setups:	INPUT 1	INPUT 2	INPUT 3	INPUT 4	INPUT 5
Type	Level (F)	Level (F)	Level (F)	Level (F)	Level (F)
Mode	Surface	Surface	Surface	Surface	Surface
I.D.	11214	11213	11122	11125	11124
Reference	0.000	0.000	0.000	0.000	0.000
SG	1.000	1.000	1.000	1.000	1.000
Linearity	0.111	0.112	0.024	0.021	-0.007
Scale factor	19.968	20.070	10.051	10.051	9.992
Offset	0.029	-0.073	-0.003	0.041	0.011
Delay mSEC	50.000	50.000	50.000	50.000	50.000

Step 1 09/27 15:35:50

Elapsed Time	Input 1	Input 2	Input 3	Input 4	Input 5
0.0000	-10.877	-8.108	-8.813	-4.765	-2.023
0.0083	-10.877	-8.108	-8.813	-4.772	-2.019
0.0166	-10.871	-8.108	-8.813	-4.772	-2.016
0.0250	-10.877	-8.108	-8.813	-4.769	-2.016
0.0333	-10.871	-8.108	-8.813	-4.769	-2.016
0.0416	-10.877	-8.108	-8.813	-4.769	-2.013
0.0500	-10.871	-8.108	-8.813	-4.769	-2.013
0.0583	-10.871	-8.108	-8.813	-4.772	-2.013
0.0666	-10.877	-8.108	-8.813	-4.769	-2.010
0.0750	-10.871	-8.108	-8.813	-4.772	-2.010
0.0833	-10.877	-8.108	-8.813	-4.772	-2.010
0.0916	-10.877	-8.108	-8.813	-4.772	-2.010
0.1000	-10.871	-8.108	-8.813	-4.772	-2.007
0.1083	-10.871	-8.108	-8.813	-4.772	-2.007
0.1166	-10.871	-8.108	-8.813	-4.769	-2.007
0.1250	-10.858	-8.108	-8.810	-4.772	-2.010
0.1333	-10.846	-8.108	-8.810	-4.772	-2.010
0.1416	-10.827	-8.108	-8.813	-4.772	-2.007
0.1500	-10.808	-8.108	-8.813	-4.769	-2.010
0.1583	-10.782	-8.108	-8.810	-4.769	-2.010
0.1666	-10.757	-8.108	-8.813	-4.769	-2.007
0.1750	-10.738	-8.108	-8.810	-4.769	-2.007
0.1833	-10.713	-8.108	-8.810	-4.772	-2.010
0.1916	-10.694	-8.108	-8.810	-4.769	-2.010
0.2000	-10.675	-8.108	-8.813	-4.772	-2.010
0.2083	-10.656	-8.108	-8.810	-4.772	-2.010
0.2166	-10.631	-8.108	-8.813	-4.772	-2.010
0.2250	-10.618	-8.108	-8.810	-4.772	-2.010
0.2333	-10.612	-8.108	-8.810	-4.772	-2.010
0.2416	-10.593	-8.108	-8.810	-4.769	-2.010
0.2500	-10.580	-8.108	-8.810	-4.772	-2.010
0.2583	-10.561	-8.108	-8.810	-4.772	-2.010
0.2666	-10.542	-8.108	-8.810	-4.772	-2.010
0.2750	-10.529	-8.108	-8.810	-4.769	-2.010
0.2833	-10.510	-8.108	-8.810	-4.769	-2.007
0.2916	-10.491	-8.108	-8.810	-4.772	-2.007

Elapsed Time	Input 1	Input 2	Input 3	Input 4	Input 5
0.3000	-10.472	-8.108	-8.810	-4.769	-2.010
0.3083	-10.460	-8.108	-8.807	-4.769	-2.010
0.3166	-10.441	-8.108	-8.807	-4.769	-2.010
0.3250	-10.422	-8.108	-8.807	-4.769	-2.010
0.3333	-10.403	-8.108	-8.807	-4.769	-2.010
0.3500	-10.371	-8.108	-8.807	-4.769	-2.010
0.3666	-10.339	-8.108	-8.804	-4.769	-2.010
0.3833	-10.308	-8.108	-8.804	-4.769	-2.010
0.4000	-10.276	-8.114	-8.804	-4.769	-2.010
0.4166	-10.245	-8.108	-8.801	-4.769	-2.010
0.4333	-10.213	-8.108	-8.801	-4.769	-2.010
0.4500	-10.181	-8.108	-8.797	-4.769	-2.007
0.4666	-10.150	-8.108	-8.797	-4.769	-2.007
0.4833	-10.118	-8.114	-8.794	-4.769	-2.007
0.5000	-10.093	-8.114	-8.794	-4.769	-2.010
0.5166	-10.061	-8.114	-8.794	-4.769	-2.007
0.5333	-10.029	-8.114	-8.791	-4.769	-2.007
0.5500	-10.004	-8.114	-8.791	-4.769	-2.007
0.5666	-9.972	-8.114	-8.791	-4.769	-2.007
0.5833	-9.947	-8.114	-8.788	-4.769	-2.007
0.6000	-9.922	-8.108	-8.788	-4.769	-2.007
0.6166	-9.896	-8.108	-8.785	-4.769	-2.007
0.6333	-9.871	-8.114	-8.781	-4.769	-2.007
0.6500	-9.846	-8.114	-8.781	-4.769	-2.007
0.6666	-9.821	-8.108	-8.778	-4.769	-2.007
0.6833	-9.802	-8.114	-8.778	-4.769	-2.007
0.7000	-9.776	-8.114	-8.775	-4.769	-2.007
0.7166	-9.751	-8.108	-8.772	-4.769	-2.007
0.7333	-9.732	-8.108	-8.772	-4.769	-2.007
0.7500	-9.707	-8.108	-8.772	-4.769	-2.007
0.7666	-9.681	-8.114	-8.769	-4.769	-2.007
0.7833	-9.662	-8.108	-8.765	-4.769	-2.007
0.8000	-9.643	-8.108	-8.765	-4.769	-2.007
0.8166	-9.618	-8.108	-8.762	-4.769	-2.007
0.8333	-9.593	-8.108	-8.759	-4.769	-2.007
0.8500	-9.574	-8.108	-8.759	-4.769	-2.007
0.8666	-9.555	-8.108	-8.759	-4.769	-2.007
0.8833	-9.536	-8.108	-8.753	-4.772	-2.007
0.9000	-9.510	-8.108	-8.753	-4.769	-2.007
0.9166	-9.491	-8.108	-8.753	-4.769	-2.007
0.9333	-9.472	-8.114	-8.750	-4.772	-2.007
0.9500	-9.453	-8.108	-8.746	-4.769	-2.007
0.9666	-9.434	-8.108	-8.743	-4.769	-2.007
0.9833	-9.422	-8.108	-8.727	-4.769	-2.007
1.0000	-9.403	-8.108	-8.740	-4.769	-2.001
1.2000	-9.200	-8.108	-8.708	-4.769	-2.010
1.4000	-9.036	-8.108	-8.689	-4.769	-2.010
1.6000	-8.896	-8.114	-8.660	-4.769	-2.019
1.8000	-8.801	-8.114	-8.635	-4.769	-2.013
2.0000	-8.719	-8.114	-8.609	-4.769	-2.007
2.2000	-8.662	-8.114	-8.587	-4.769	-2.013

Elapsed Time	Input 1	Input 2	Input 3	Input 4	Input 5
2.4000	-8.605	-8.114	-8.568	-4.769	-2.016
2.6000	-8.567	-8.114	-8.549	-4.727	-2.016
2.8000	-8.536	-8.108	-8.533	-4.762	-2.013
3.0000	-8.517	-8.114	-8.517	-4.769	-2.004
3.2000	-8.498	-8.114	-8.507	-4.769	-2.016
3.4000	-8.479	-8.114	-8.491	-4.769	-2.010
3.6000	-8.466	-8.114	-8.482	-4.765	-2.013
3.8000	-8.447	-8.114	-8.460	-4.769	-2.010
4.0000	-8.441	-8.114	-8.463	-4.769	-2.013
4.2000	-8.434	-8.114	-8.453	-4.772	-2.016
4.4000	-8.428	-8.114	-8.447	-4.769	-2.016
4.6000	-8.422	-8.114	-8.444	-4.769	-2.013
4.8000	-8.415	-8.114	-8.434	-4.769	-2.007
5.0000	-8.409	-8.114	-8.431	-4.769	-2.010
5.2000	-8.403	-8.114	-8.425	-4.769	-2.010
5.4000	-8.403	-8.121	-8.418	-4.769	-2.013
5.6000	-8.396	-8.121	-8.418	-4.769	-2.010
5.8000	-8.390	-8.121	-8.409	-4.769	-2.007
6.0000	-8.390	-8.121	-8.409	-4.769	-2.013
6.2000	-8.384	-8.121	-8.405	-4.769	-2.013
6.4000	-8.384	-8.121	-8.399	-4.769	-2.010
6.6000	-8.377	-8.121	-8.396	-4.769	-2.013
6.8000	-8.377	-8.121	-8.393	-4.769	-2.013
7.0000	-8.371	-8.121	-8.393	-4.769	-2.013
7.2000	-8.371	-8.121	-8.390	-4.769	-2.010
7.4000	-8.365	-8.121	-8.383	-4.769	-2.010
7.6000	-8.358	-8.127	-8.383	-4.769	-2.010
7.8000	-8.358	-8.121	-8.374	-4.769	-2.010
8.0000	-8.352	-8.127	-8.377	-4.769	-2.010
8.2000	-8.352	-8.127	-8.374	-4.769	-2.010
8.4000	-8.352	-8.127	-8.370	-4.769	-2.010
8.6000	-8.346	-8.127	-8.367	-4.769	-2.007
8.8000	-8.346	-8.133	-8.367	-4.769	-2.010
9.0000	-8.339	-8.133	-8.361	-4.769	-2.013
9.2000	-8.339	-8.133	-8.364	-4.772	-2.013
9.4000	-8.339	-8.133	-8.361	-4.772	-2.010
9.6000	-8.333	-8.133	-8.358	-4.775	-2.010
9.8000	-8.333	-8.133	-8.354	-4.769	-2.004
10.0000	-8.333	-8.140	-8.351	-4.772	-2.023
12.0000	-8.314	-8.146	-8.332	-4.772	-2.019
14.0000	-8.295	-8.152	-8.313	-4.772	-2.019
16.0000	-8.276	-8.159	-8.294	-4.772	-2.019
18.0000	-8.257	-8.159	-8.281	-4.772	-2.026
20.0000	-8.244	-8.165	-8.268	-4.775	-2.019
22.0000	-8.232	-8.165	-8.253	-4.772	-2.016
24.0000	-8.219	-8.172	-8.237	-4.772	-2.016
26.0000	-8.200	-8.172	-8.227	-4.772	-2.016
28.0000	-8.187	-8.178	-8.214	-4.769	-2.016
30.0000	-8.175	-8.178	-8.202	-4.772	-2.019
32.0000	-8.168	-8.178	-8.192	-4.775	-2.023
34.0000	-8.156	-8.178	-8.179	-4.775	-2.019

Elapsed Time	Input 1	Input 2	Input 3	Input 4	Input 5
36.0000	-8.143	-8.184	-8.173	-4.775	-2.023
38.0000	-8.137	-8.178	-8.160	-4.775	-2.019
40.0000	-8.124	-8.178	-8.147	-4.775	-2.019
42.0000	-8.111	-8.178	-8.141	-4.775	-2.019
44.0000	-8.105	-8.178	-8.131	-4.775	-2.016
46.0000	-8.092	-8.172	-8.119	-4.769	-2.016
48.0000	-8.086	-8.172	-8.112	-4.775	-2.016
50.0000	-8.073	-8.165	-8.106	-4.775	-2.019
52.0000	-8.067	-8.159	-8.096	-4.775	-2.019
54.0000	-8.054	-8.152	-8.087	-4.778	-2.016
56.0000	-8.048	-8.140	-8.080	-4.775	-2.016
58.0000	-8.035	-8.133	-8.071	-4.775	-2.016
60.0000	-8.029	-8.127	-8.061	-4.778	-2.026
62.0000	-8.023	-8.114	-8.055	-4.775	-2.026
64.0000	-8.016	-8.108	-8.049	-4.778	-2.026
66.0000	-8.010	-8.102	-8.042	-4.781	-2.026
68.0000	-7.997	-8.095	-8.033	-4.778	-2.026
70.0000	-7.991	-8.089	-8.029	-4.778	-2.026
72.0000	-7.985	-8.076	-8.020	-4.781	-2.026
74.0000	-7.978	-8.070	-8.014	-4.778	-2.026
76.0000	-7.972	-8.063	-8.007	-4.778	-2.026
78.0000	-7.966	-8.057	-8.001	-4.778	-2.026
80.0000	-7.959	-8.044	-7.994	-4.778	-2.026
82.0000	-7.947	-8.038	-7.985	-4.778	-2.026
84.0000	-7.947	-8.032	-7.982	-4.781	-2.026
86.0000	-7.940	-8.025	-7.975	-4.778	-2.026
88.0000	-7.934	-8.019	-7.969	-4.781	-2.026
90.0000	-7.928	-8.013	-7.963	-4.778	-2.023
92.0000	-7.915	-8.006	-7.956	-4.781	-2.023
94.0000	-7.915	-8.000	-7.950	-4.781	-2.023
96.0000	-7.909	-7.994	-7.943	-4.778	-2.023
98.0000	-7.902	-7.987	-7.940	-4.781	-2.023
100.000	-7.896	-7.981	-7.931	-4.781	-2.023
115.000	-7.858	-7.930	-7.892	-4.784	-2.029
130.000	-7.814	-7.892	-7.854	-4.784	-2.032
145.000	-7.776	-7.854	-7.816	-4.784	-2.035
160.000	-7.744	-7.816	-7.781	-4.788	-2.026
175.000	-7.713	-7.778	-7.749	-4.788	-2.029
190.000	-7.681	-7.746	-7.717	-4.791	-2.032
205.000	-7.649	-7.714	-7.689	-4.791	-2.032
220.000	-7.618	-7.682	-7.660	-4.794	-2.045
235.000	-7.592	-7.651	-7.631	-4.794	-2.048
250.000	-7.561	-7.625	-7.602	-4.794	-2.038
265.000	-7.535	-7.600	-7.577	-4.794	-2.038
280.000	-7.510	-7.568	-7.551	-4.797	-2.042
295.000	-7.485	-7.542	-7.526	-4.797	-2.045
310.000	-7.459	-7.517	-7.500	-4.800	-2.048
325.000	-7.440	-7.498	-7.478	-4.804	-2.051
340.000	-7.415	-7.473	-7.456	-4.804	-2.048
355.000	-7.390	-7.447	-7.430	-4.804	-2.051
370.000	-7.371	-7.422	-7.408	-4.807	-2.048

Elapsed Time	Input 1	Input 2	Input 3	Input 4	Input 5
385.000	-7.345	-7.403	-7.386	-4.807	-2.051
400.000	-7.326	-7.384	-7.363	-4.807	-2.054
415.000	-7.307	-7.358	-7.341	-4.810	-2.054
430.000	-7.282	-7.339	-7.319	-4.810	-2.057
445.000	-7.263	-7.314	-7.300	-4.810	-2.057
460.000	-7.244	-7.295	-7.281	-4.810	-2.060
475.000	-7.219	-7.269	-7.258	-4.810	-2.064
490.000	-7.200	-7.250	-7.239	-4.813	-2.064
505.000	-7.181	-7.231	-7.217	-4.813	-2.067
520.000	-7.162	-7.212	-7.198	-4.813	-2.067
535.000	-7.143	-7.193	-7.179	-4.816	-2.070
550.000	-7.124	-7.174	-7.159	-4.816	-2.070
565.000	-7.105	-7.155	-7.140	-4.816	-2.073
580.000	-7.086	-7.129	-7.121	-4.819	-2.073
595.000	-7.067	-7.117	-7.105	-4.819	-2.073
610.000	-7.048	-7.098	-7.086	-4.819	-2.076
625.000	-7.029	-7.079	-7.067	-4.819	-2.076
640.000	-7.016	-7.060	-7.048	-4.823	-2.076
655.000	-6.997	-7.040	-7.032	-4.823	-2.079
670.000	-6.978	-7.021	-7.016	-4.826	-2.079
685.000	-6.959	-7.009	-6.997	-4.826	-2.079
700.000	-6.940	-6.990	-6.978	-4.826	-2.079
715.000	-6.927	-6.971	-6.962	-4.826	-2.079
730.000	-6.908	-6.951	-6.946	-4.826	-2.083
745.000	-6.889	-6.939	-6.927	-4.826	-2.083
760.000	-6.877	-6.920	-6.911	-4.826	-2.083
775.000	-6.858	-6.901	-6.892	-4.826	-2.083
790.000	-6.839	-6.888	-6.876	-4.829	-2.086
805.000	-6.826	-6.869	-6.860	-4.829	-2.086
820.000	-6.807	-6.850	-6.841	-4.829	-2.086
835.000	-6.788	-6.831	-6.825	-4.829	-2.089
850.000	-6.775	-6.818	-6.809	-4.829	-2.089
865.000	-6.756	-6.805	-6.796	-4.832	-2.089
880.000	-6.744	-6.786	-6.777	-4.832	-2.092
895.000	-6.731	-6.774	-6.761	-4.832	-2.092
910.000	-6.712	-6.754	-6.745	-4.832	-2.092
925.000	-6.699	-6.735	-6.729	-4.832	-2.092
940.000	-6.680	-6.723	-6.713	-4.832	-2.095
955.000	-6.668	-6.710	-6.697	-4.832	-2.092
970.000	-6.649	-6.691	-6.681	-4.832	-2.095
985.000	-6.636	-6.678	-6.665	-4.835	-2.095
1000.00	-6.617	-6.659	-6.650	-4.835	-2.095
1015.00	-6.598	-6.646	-6.637	-4.835	-2.095
1030.00	-6.585	-6.627	-6.618	-4.832	-2.095
1045.00	-6.573	-6.615	-6.605	-4.835	-2.095
1060.00	-6.560	-6.602	-19.827	-8.844	-6.669
1075.00	-6.547	-6.583	-6.560	-4.734	-2.095
1090.00	-6.528	-6.564	-6.544	-4.765	-2.089
1105.00	-6.516	-6.557	-6.528	-4.784	-2.095
1120.00	-6.497	-6.538	-6.513	-4.791	-2.095
1135.00	-6.490	-6.526	-6.500	-4.797	-2.095

Elapsed Time	Input 1	Input 2	Input 3	Input 4	Input 5
1150.00	-6.471	-6.513	-6.484	-4.800	-2.095
1165.00	-6.459	-6.500	-6.471	-4.804	-2.098
1180.00	-6.446	-6.488	-6.455	-4.804	-2.098
1195.00	-6.433	-6.468	-6.442	-4.804	-2.098
1210.00	-6.421	-6.462	-6.433	-4.807	-2.102
1225.00	-6.408	-6.443	-6.411	-4.800	-2.105
1240.00	-6.395	-6.430	-6.398	-4.804	-2.108
1255.00	-6.383	-6.418	-6.385	-4.804	-2.108
1270.00	-6.364	-6.411	-6.375	-4.804	-2.111
1285.00	-6.357	-6.392	-6.356	-4.800	-2.108
1300.00	-6.338	-6.379	-6.344	-4.804	-2.114
1315.00	-6.326	-6.367	-6.331	-4.800	-2.117
1330.00	-6.313	-6.354	-6.312	-4.797	-2.114
1345.00	-6.294	-6.341	-6.299	-4.797	-2.114
1360.00	-6.281	-6.322	-6.283	-4.791	-2.108
1375.00	-6.269	-6.310	-6.273	-4.791	-2.111
1390.00	-6.250	-6.284	-6.248	-4.781	-2.108
1405.00	-6.237	-6.284	-6.242	-4.788	-2.114
1420.00	-6.224	-6.265	-6.222	-4.784	-2.111
1435.00	-6.205	-6.252	-6.210	-4.781	-2.111
1450.00	-6.193	-6.233	-6.194	-4.778	-2.108
1465.00	-6.180	-6.214	-6.181	-4.772	-2.108
1480.00	-6.167	-6.208	-6.165	-4.772	-2.111
1495.00	-6.148	-6.189	-6.152	-4.769	-2.111
1510.00	-6.136	-6.176	-6.136	-4.765	-2.114
1525.00	-6.123	-6.163	-6.124	-4.765	-2.111
1540.00	-6.104	-6.151	-6.111	-4.759	-2.111
1555.00	-6.091	-6.132	-6.095	-4.759	-2.111
1570.00	-6.079	-6.119	-6.079	-4.753	-2.111
1585.00	-6.066	-6.106	-6.069	-4.753	-2.111
1600.00	-6.047	-6.087	-6.050	-4.746	-2.111
1615.00	-6.034	-6.074	-6.038	-4.746	-2.111
1630.00	-6.022	-6.062	-6.025	-4.740	-2.111
1645.00	-6.009	-6.049	-6.009	-4.737	-2.111
1660.00	-5.990	-6.030	-5.996	-4.734	-2.111
1675.00	-5.977	-6.017	-5.980	-4.730	-2.111
1690.00	-5.965	-6.004	-5.967	-4.727	-2.111
1705.00	-5.952	-5.992	-5.955	-4.724	-2.114
1720.00	-5.939	-5.979	-5.942	-4.721	-2.114
1735.00	-5.920	-5.966	-5.926	-4.718	-2.114
1750.00	-5.908	-5.947	-5.913	-4.714	-2.117
1765.00	-5.895	-5.941	-5.900	-4.711	-2.117
1780.00	-5.882	-5.928	-5.888	-4.708	-2.117
1795.00	-5.870	-5.909	-5.875	-4.708	-2.117
1810.00	-5.857	-5.903	-5.862	-4.705	-2.120
1825.00	-5.844	-5.884	-5.849	-4.702	-2.120
1840.00	-5.832	-5.871	-5.834	-4.699	-2.120
1855.00	-5.819	-5.858	-5.821	-4.695	-2.120
1870.00	-5.806	-5.846	-5.808	-4.689	-2.120
1885.00	-5.787	-5.833	-5.792	-4.686	-2.124
1900.00	-5.775	-5.820	-5.779	-4.683	-2.124

Elapsed Time	Input 1	Input 2	Input 3	Input 4	Input 5
1915.00	-5.762	-5.807	-5.767	-4.680	-2.124
1930.00	-5.749	-5.788	-5.754	-4.676	-2.124
1945.00	-5.737	-5.776	-5.738	-4.673	-2.127
1960.00	-5.724	-5.763	-5.725	-4.670	-2.127
1975.00	-5.711	-5.750	-5.712	-4.664	-2.127
1990.00	-5.699	-5.737	-5.700	-4.660	-2.127
2005.00	-5.686	-5.725	-5.687	-4.657	-2.127
2020.00	-5.667	-5.712	-5.671	-4.651	-2.127
2035.00	-5.654	-5.699	-5.658	-4.648	-2.130
2050.00	-5.642	-5.687	-5.645	-4.645	-2.130
2065.00	-5.629	-5.668	-5.633	-4.641	-2.130
2080.00	-5.616	-5.655	-5.620	-4.635	-2.130
2095.00	-5.603	-5.648	-5.607	-4.632	-2.130
2110.00	-5.591	-5.629	-5.594	-4.629	-2.130
2125.00	-5.578	-5.617	-5.582	-4.622	-2.130
2140.00	-5.565	-5.604	-5.569	-4.619	-2.133
2155.00	-5.553	-5.591	-5.556	-4.616	-2.133
2170.00	-5.540	-5.585	-5.543	-4.613	-2.133
2185.00	-5.527	-5.566	-5.531	-4.606	-2.133
2200.00	-5.515	-5.553	-5.518	-4.603	-2.133
2215.00	-5.502	-5.540	-5.505	-4.597	-2.136
2230.00	-5.489	-5.528	-5.489	-4.594	-2.136
2245.00	-5.477	-5.515	-5.480	-4.590	-2.136
2260.00	-5.464	-5.502	-5.467	-4.584	-2.136
2275.00	-5.451	-5.490	-5.451	-4.581	-2.136
2290.00	-5.439	-5.477	-5.438	-4.575	-2.136
2305.00	-5.426	-5.464	-5.425	-4.571	-2.136
2320.00	-5.413	-5.451	-5.413	-4.568	-2.136
2335.00	-5.401	-5.439	-5.400	-4.562	-2.136
2350.00	-5.388	-5.426	-5.390	-4.559	-2.139
2365.00	-5.375	-5.413	-5.374	-4.555	-2.139
2380.00	-5.363	-5.401	-5.362	-4.549	-2.139
2395.00	-5.344	-5.388	-5.349	-4.546	-2.139
2410.00	-5.337	-5.375	-5.336	-4.540	-2.143
2425.00	-5.325	-5.362	-5.327	-4.536	-2.143
2440.00	-5.312	-5.350	-5.311	-4.533	-2.143
2455.00	-5.299	-5.337	-5.298	-4.527	-2.143
2470.00	-5.287	-5.331	-5.285	-4.524	-2.143
2485.00	-5.274	-5.318	-5.276	-4.520	-2.143
2500.00	-5.261	-5.305	-5.260	-4.514	-2.143
2515.00	-5.249	-5.292	-5.247	-4.511	-2.143
2530.00	-5.236	-5.280	-5.237	-4.508	-2.143
2545.00	-5.223	-5.267	-5.225	-4.505	-2.143
2560.00	-5.217	-5.261	-5.218	-4.501	-2.143
2575.00	-5.204	-5.248	-5.205	-4.498	-2.146
2590.00	-5.198	-5.235	-5.193	-4.495	-2.146
2605.00	-5.179	-5.223	-5.174	-4.489	-2.149
2620.00	-5.166	-5.210	-5.164	-4.482	-2.152
2635.00	-5.154	-5.197	-5.145	-4.479	-2.152
2650.00	-5.141	-5.178	-5.135	-4.470	-2.152
2665.00	-5.122	-5.165	-5.116	-4.463	-2.149

Elapsed Time	Input 1	Input 2	Input 3	Input 4	Input 5
2680.00	-5.116	-5.159	-5.110	-4.463	-2.155
2695.00	-5.103	-5.146	-5.097	-4.460	-2.158
2710.00	-5.084	-5.121	-5.078	-4.451	-2.152
2725.00	-5.071	-5.108	-5.065	-4.444	-2.152
2740.00	-5.059	-5.095	-5.052	-4.441	-2.155
2755.00	-5.046	-5.083	-5.037	-4.435	-2.152
2770.00	-5.033	-5.076	-5.027	-4.435	-2.155
2785.00	-5.014	-5.057	-5.014	-4.428	-2.155
2800.00	-5.002	-5.045	-4.995	-4.422	-2.149
2815.00	-4.989	-5.038	-4.982	-4.422	-2.152
2830.00	-4.976	-5.013	-4.970	-4.412	-2.149
2845.00	-4.957	-5.000	-4.954	-4.403	-2.149
2860.00	-4.945	-4.987	-4.941	-4.400	-2.152
2875.00	-4.926	-4.968	-4.925	-4.396	-2.152
2890.00	-4.913	-4.962	-4.912	-4.390	-2.152
2905.00	-4.900	-4.943	-4.896	-4.387	-2.155
2920.00	-4.888	-4.936	-4.883	-4.384	-2.155
2935.00	-4.875	-4.911	-4.868	-4.374	-2.152
2950.00	-4.862	-4.892	-4.858	-4.368	-2.149
2965.00	-4.850	-4.886	-4.845	-4.365	-2.155
2980.00	-4.837	-4.873	-4.826	-4.361	-2.158
2995.00	-4.818	-4.860	-4.813	-4.355	-2.158
3010.00	-4.805	-4.841	-4.797	-4.349	-2.161
3025.00	-4.793	-4.828	-4.785	-4.346	-2.161
3040.00	-4.780	-4.816	-4.769	-4.339	-2.161
3055.00	-4.761	-4.803	-4.753	-4.336	-2.165
3070.00	-4.748	-4.790	-4.743	-4.330	-2.165
3085.00	-4.735	-4.771	-4.727	-4.323	-2.165
3100.00	-4.716	-4.758	-4.711	-4.320	-2.165
3115.00	-4.704	-4.746	-4.699	-4.311	-2.168
3130.00	-4.691	-4.733	-4.686	-4.307	-2.168
3145.00	-4.678	-4.714	-4.670	-4.301	-2.168
3160.00	-4.659	-4.701	-4.657	-4.298	-2.168
3175.00	-4.647	-4.688	-4.644	-4.292	-2.168
3190.00	-4.634	-4.676	-4.628	-4.285	-2.168
3205.00	-4.621	-4.663	-4.616	-4.279	-2.168
3220.00	-4.602	-4.644	-4.600	-4.272	-2.168
3235.00	-4.590	-4.631	-4.587	-4.269	-2.171
3250.00	-4.577	-4.619	-4.571	-4.263	-2.171
3265.00	-4.564	-4.606	-4.558	-4.257	-2.171
3280.00	-4.545	-4.587	-4.545	-4.250	-2.171
3295.00	-4.533	-4.574	-4.530	-4.244	-2.171
3310.00	-4.520	-4.561	-4.517	-4.241	-2.171
3325.00	-4.507	-4.549	-4.501	-4.234	-2.171
3340.00	-4.495	-4.529	-4.488	-4.228	-2.171
3355.00	-4.482	-4.517	-4.475	-4.222	-2.171
3370.00	-4.463	-4.504	-4.459	-4.218	-2.174
3385.00	-4.450	-4.491	-4.447	-4.212	-2.171
3400.00	-4.438	-4.479	-4.434	-4.206	-2.171
3415.00	-4.419	-4.460	-4.418	-4.199	-2.174
3430.00	-4.406	-4.447	-4.402	-4.193	-2.174

Elapsed Time	Input 1	Input 2	Input 3	Input 4	Input 5
3445.00	-4.393	-4.434	-4.389	-4.190	-2.174
3460.00	-4.381	-4.415	-4.373	-4.183	-2.174
3475.00	-4.362	-4.402	-4.361	-4.174	-2.174
3490.00	-4.349	-4.390	-4.345	-4.171	-2.174
3505.00	-4.336	-4.377	-4.329	-4.164	-2.174
3520.00	-4.317	-4.358	-4.316	-4.158	-2.171
3535.00	-4.305	-4.345	-4.300	-4.152	-2.174
3550.00	-4.292	-4.332	-4.287	-4.145	-2.174
3565.00	-4.279	-4.320	-4.274	-4.142	-2.174
3580.00	-4.267	-4.301	-4.258	-4.136	-2.174
3595.00	-4.248	-4.288	-4.243	-4.129	-2.174
3610.00	-4.235	-4.275	-4.230	-4.123	-2.174
3625.00	-4.216	-4.262	-4.214	-4.117	-2.174
3640.00	-4.203	-4.243	-4.201	-4.110	-2.174
3655.00	-4.191	-4.231	-4.185	-4.104	-2.177
3670.00	-4.178	-4.218	-4.172	-4.098	-2.177
3685.00	-4.159	-4.205	-4.156	-4.091	-2.177
3700.00	-4.146	-4.186	-4.144	-4.085	-2.177
3715.00	-4.133	-4.173	-4.128	-4.078	-2.177
3730.00	-4.121	-4.161	-4.115	-4.072	-2.177
3745.00	-4.108	-4.148	-4.102	-4.066	-2.177
3760.00	-4.095	-4.135	-4.089	-4.059	-2.177
3775.00	-4.076	-4.116	-4.074	-4.053	-2.180
3790.00	-4.064	-4.103	-4.058	-4.043	-2.180
3805.00	-4.051	-4.091	-4.042	-4.037	-2.180
3820.00	-4.038	-4.078	-4.032	-4.034	-2.180
3835.00	-4.019	-4.059	-4.016	-4.024	-2.180
3850.00	-4.007	-4.046	-4.003	-4.018	-2.180
3865.00	-3.994	-4.033	-3.987	-4.012	-2.180
3880.00	-3.975	-4.021	-3.971	-4.005	-2.180
3895.00	-3.962	-4.008	-3.959	-3.999	-2.180
3910.00	-3.950	-3.989	-3.943	-3.993	-2.180
3925.00	-3.937	-3.976	-3.930	-3.986	-2.184
3940.00	-3.924	-3.964	-3.914	-3.980	-2.180
3955.00	-3.912	-3.951	-3.901	-3.973	-2.180
3970.00	-3.899	-3.938	-3.889	-3.967	-2.180
3985.00	-3.886	-3.932	-3.879	-3.964	-2.184
4000.00	-3.874	-3.913	-3.866	-3.958	-2.187
4015.00	-3.861	-3.900	-3.850	-3.948	-2.190
4030.00	-3.848	-3.887	-3.834	-3.945	-2.193
4045.00	-3.836	-3.874	-3.825	-3.938	-2.193
4060.00	-3.823	-3.862	-3.809	-3.929	-2.196
4075.00	-3.810	-3.849	-3.793	-3.923	-2.196
4090.00	-3.791	-3.830	-3.774	-3.913	-2.196
4105.00	-3.772	-3.817	-3.761	-3.907	-2.196
4120.00	-3.760	-3.798	-3.745	-3.900	-2.199
4135.00	-3.747	-3.785	-3.729	-3.891	-2.196
4150.00	-3.728	-3.773	-3.710	-3.881	-2.196
4165.00	-3.715	-3.754	-3.697	-3.872	-2.199
4180.00	-3.696	-3.735	-3.681	-3.862	-2.193

SE2000
Environmental Logger
09/30 18:06

Unit# 159 Test 0

Setups:	INPUT 1	INPUT 2	INPUT 3	INPUT 4
Type	Level (F)	Level (F)	Level (F)	Level (F)
Mode	TOC	TOC	TOC	TOC
I.D.	11213918	11124918	11122918	11125918
Reference	0.000	-8.211	-23.625	-10.312
SG	1.000	1.000	1.000	1.000
Linearity	0.112	-0.007	0.024	0.021
Scale factor	20.070	9.993	10.052	10.052
Offset	-0.073	0.012	-0.003	0.041
Delay mSEC	50.000	50.000	50.000	50.000

Step 0 09/18 19:43:38

Elapsed Time	Input 1	Input 2	Input 3	Input 4
0.0000	-0.006	0.000	0.000	0.000
1.0000	-0.006	0.000	-0.003	0.007
2.0000	0.000	0.000	-0.006	0.010
3.0000	0.000	0.000	-0.003	0.010
4.0000	0.000	0.003	0.000	0.013
5.0000	0.000	0.003	-0.003	0.016
6.0000	0.000	0.003	-0.003	0.019
7.0000	0.000	0.003	-0.006	0.019
8.0000	0.000	0.003	-0.006	0.023
9.0000	0.000	0.003	-0.006	0.026
10.0000	-0.006	0.003	-0.006	0.026
11.0000	0.000	0.003	-0.006	0.029
12.0000	-0.006	0.003	-0.006	0.032
13.0000	-0.006	0.003	-0.009	0.032
14.0000	-0.006	0.003	-0.009	0.032
15.0000	-0.006	0.003	-0.009	0.035
16.0000	-0.006	0.003	-0.009	0.035
17.0000	-0.006	0.003	-0.009	0.038
18.0000	-0.006	0.003	-0.006	0.038
19.0000	-0.006	0.003	-0.009	0.038
20.0000	-0.006	0.003	-0.009	0.041
21.0000	-0.006	0.003	-0.006	0.041
22.0000	-0.006	0.003	-0.009	0.041
23.0000	-0.006	0.003	-0.006	0.045
24.0000	-0.006	0.003	-0.006	0.045
25.0000	-0.006	0.003	-0.009	0.045
26.0000	-0.006	0.003	-0.006	0.045
27.0000	-0.006	0.003	-0.009	0.048
28.0000	-0.006	0.003	-0.006	0.048
29.0000	-0.006	0.003	-0.009	0.048
30.0000	-0.006	0.003	-0.009	0.048
31.0000	-0.006	0.003	-0.009	0.048
32.0000	-0.006	0.003	-0.009	0.048
33.0000	-0.006	0.003	-0.013	0.048
34.0000	-0.012	0.003	-0.013	0.051
35.0000	-0.012	0.003	-0.013	0.048
36.0000	-0.012	0.003	-0.013	0.051
37.0000	-0.012	0.003	-0.016	0.051
38.0000	-0.012	0.003	-0.016	0.051
39.0000	-0.012	0.003	-0.016	0.051
40.0000	-0.012	0.003	-0.016	0.051
41.0000	-0.006	0.003	-0.016	0.051
42.0000	-0.012	0.003	-0.016	0.051
43.0000	-0.012	0.003	-0.016	0.051
44.0000	-0.006	0.003	-0.016	0.054
45.0000	-0.012	0.003	-0.016	0.051
46.0000	-0.012	0.003	-0.016	0.054
47.0000	-0.006	0.003	-0.016	0.054
48.0000	-0.006	0.003	-0.016	0.054
49.0000	-0.012	0.006	-0.016	0.054
50.0000	-0.012	0.006	-0.016	0.054
51.0000	-0.012	0.003	-0.016	0.054
52.0000	-0.012	0.006	-0.019	0.054
53.0000	-0.012	0.003	-0.019	0.054
54.0000	-0.012	0.003	-0.019	0.054
55.0000	-0.012	0.006	-0.019	0.054
56.0000	-0.012	0.006	-0.019	0.051
57.0000	-0.012	0.003	-0.019	0.054
58.0000	-0.012	0.003	-0.019	0.054
59.0000	-0.012	0.006	-0.019	0.054
60.0000	-0.012	0.006	-0.019	0.054
61.0000	-0.012	0.006	-0.019	0.054
62.0000	-0.012	0.003	-0.019	0.054
63.0000	-0.012	0.003	-0.019	0.054
64.0000	-0.012	0.003	-0.019	0.054
65.0000	-0.012	0.006	-0.019	0.054
66.0000	-0.012	0.006	-0.019	0.054
67.0000	-0.012	0.006	-0.019	0.054
68.0000	-0.012	0.006	-0.022	0.054
69.0000	-0.012	0.003	-0.022	0.054

ERAFS1\VOL1:GEOT\ENGDATA\
KEEP\D-LOGGER\11214\BACKGND.WL2

03/23 9:37am

Elapsed Time	Input 1	Input 2	Input 3	Input 4
70.0000	-0.012	0.006	-0.022	0.054
71.0000	-0.012	0.006	-0.022	0.054
72.0000	-0.012	0.006	-0.019	0.054
73.0000	-0.012	0.006	-0.022	0.054
74.0000	-0.012	0.006	-0.022	0.054
75.0000	-0.012	0.006	-0.022	0.054
76.0000	-0.012	0.006	-0.022	0.054
77.0000	-0.012	0.006	-0.022	0.054
78.0000	-0.012	0.006	-0.022	0.054
79.0000	-0.012	0.006	-0.022	0.054
80.0000	-0.012	0.006	-0.022	0.054
81.0000	-0.012	0.006	-0.022	0.054
82.0000	-0.019	0.006	-0.022	0.051
83.0000	-0.019	0.006	-0.022	0.051
84.0000	-0.019	0.006	-0.022	0.054
85.0000	-0.012	0.006	-0.025	0.054
86.0000	-0.019	0.006	-0.022	0.051
87.0000	-0.012	0.006	-0.022	0.051
88.0000	-0.019	0.006	-0.025	0.051
89.0000	-0.019	0.006	-0.022	0.051
90.0000	-0.012	0.006	-0.022	0.051
91.0000	-0.012	0.006	-0.022	0.051
92.0000	-0.012	0.006	-0.022	0.051
93.0000	-0.012	0.006	-0.022	0.054
94.0000	-0.012	0.006	-0.019	0.054
95.0000	-0.012	0.006	-0.019	0.054
96.0000	-0.012	0.006	-0.019	0.051
97.0000	-0.012	0.006	-0.019	0.051
98.0000	-0.012	0.010	-0.022	0.054
99.0000	-0.012	0.010	-0.022	0.054
100.0000	-0.012	0.006	-0.022	0.051
101.0000	-0.019	0.006	-0.022	0.051
102.0000	-0.019	0.006	-0.025	0.051
103.0000	-0.019	0.006	-0.025	0.051
104.0000	-0.019	0.006	-0.025	0.051
105.0000	-0.019	0.006	-0.025	0.051
106.0000	-0.019	0.006	-0.025	0.051
107.0000	-0.019	0.006	-0.025	0.051
108.0000	-0.019	0.010	-0.025	0.051
109.0000	-0.019	0.006	-0.028	0.051
110.0000	-0.019	0.006	-0.028	0.048
111.0000	-0.019	0.006	-0.028	0.048
112.0000	-0.019	0.006	-0.028	0.048
113.0000	-0.019	0.006	-0.028	0.048
114.0000	-0.019	0.006	-0.028	0.048
115.0000	-0.019	0.010	-0.028	0.048
116.0000	-0.019	0.010	-0.028	0.048
117.0000	-0.025	0.006	-0.028	0.048
118.0000	-0.019	0.010	-0.031	0.048
119.0000	-0.025	0.010	-0.031	0.048
120.0000	-0.025	0.006	-0.031	0.048
121.0000	-0.025	0.006	-0.031	0.048
122.0000	-0.025	0.006	-0.031	0.048
123.0000	-0.025	0.006	-0.031	0.045
124.0000	-0.025	0.010	-0.031	0.048
125.0000	-0.025	0.010	-0.028	0.048
126.0000	-0.025	0.006	-0.031	0.048
127.0000	-0.019	0.010	-0.031	0.045
128.0000	-0.025	0.010	-0.028	0.048
129.0000	-0.019	0.010	-0.028	0.048
130.0000	-0.019	0.010	-0.028	0.048
131.0000	-0.025	0.010	-0.028	0.045
132.0000	-0.019	0.010	-0.028	0.045
133.0000	-0.019	0.010	-0.028	0.048
134.0000	-0.025	0.010	-0.028	0.045
135.0000	-0.019	0.010	-0.025	0.048
136.0000	-0.019	0.010	-0.028	0.048
137.0000	-0.019	0.010	-0.028	0.048
138.0000	-0.019	0.010	-0.025	0.045
139.0000	-0.019	0.010	-0.025	0.048
140.0000	-0.019	0.010	-0.025	0.048
141.0000	-0.019	0.010	-0.025	0.048
142.0000	-0.019	0.010	-0.025	0.048
143.0000	-0.019	0.010	-0.028	0.048
144.0000	-0.019	0.010	-0.025	0.048
145.0000	-0.019	0.010	-0.025	0.048
146.0000	-0.019	0.010	-0.025	0.048
147.0000	-0.019	0.010	-0.028	0.048
148.0000	-0.019	0.010	-0.028	0.048
149.0000	-0.019	0.010	-0.025	0.048
150.0000	-0.019	0.010	-0.028	0.048
151.0000	-0.019	0.010	-0.028	0.045
152.0000	-0.025	0.010	-0.031	0.045
153.0000	-0.025	0.010	-0.028	0.045
154.0000	-0.025	0.010	-0.031	0.045
155.0000	-0.025	0.010	-0.031	0.045
156.0000	-0.025	0.010	-0.031	0.045
157.0000	-0.025	0.010	-0.031	0.045
158.0000	-0.025	0.010	-0.031	0.045
159.0000	-0.025	0.010	-0.034	0.041
160.0000	-0.025	0.010	-0.034	0.045
161.0000	-0.025	0.010	-0.034	0.045
162.0000	-0.031	0.010	-0.034	0.045
163.0000	-0.031	0.010	-0.034	0.041
164.0000	-0.025	0.010	-0.034	0.041
165.0000	-0.025	0.010	-0.038	0.041
166.0000	-0.025	0.010	-0.034	0.041
167.0000	-0.031	0.010	-0.034	0.041
168.0000	-0.031	0.010	-0.034	0.041
169.0000	-0.031	0.010	-0.034	0.041
170.0000	-0.031	0.010	-0.038	0.041
171.0000	-0.031	0.013	-0.034	0.041
172.0000	-0.031	0.010	-0.038	0.041
173.0000	-0.031	0.010	-0.038	0.041

Elapsed Time	Input 1	Input 2	Input 3	Input 4
174.0000	-0.031	0.013	-0.038	0.041
175.0000	-0.031	0.013	-0.038	0.038
176.0000	-0.031	0.013	-0.038	0.038
177.0000	-0.031	0.010	-0.038	0.038
178.0000	-0.031	0.010	-0.041	0.038
179.0000	-0.031	0.010	-0.041	0.038
180.0000	-0.031	0.010	-0.041	0.038
181.0000	-0.031	0.010	-0.041	0.038
182.0000	-0.038	0.010	-0.041	0.038
183.0000	-0.038	0.010	-0.041	0.035
184.0000	-0.031	0.010	-0.041	0.038
185.0000	-0.031	0.010	-0.041	0.035
186.0000	-0.031	0.013	-0.041	0.038
187.0000	-0.031	0.010	-0.041	0.035
188.0000	-0.031	0.013	-0.041	0.035
189.0000	-0.031	0.013	-0.041	0.035
190.0000	-0.031	0.010	-0.041	0.035
191.0000	-0.031	0.010	-0.041	0.035
192.0000	-0.031	0.013	-0.041	0.035
193.0000	-0.031	0.013	-0.041	0.035
194.0000	-0.031	0.013	-0.041	0.035
195.0000	-0.031	0.013	-0.041	0.035
196.0000	-0.031	0.013	-0.041	0.035
197.0000	-0.031	0.013	-0.041	0.035
198.0000	-0.038	0.013	-0.041	0.035
199.0000	-0.031	0.013	-0.041	0.035
200.0000	-0.031	0.010	-0.041	0.035
201.0000	-0.031	0.013	-0.041	0.035
202.0000	-0.031	0.013	-0.041	0.035
203.0000	-0.031	0.013	-0.038	0.035
204.0000	-0.031	0.013	-0.041	0.035
205.0000	-0.031	0.013	-0.038	0.035
206.0000	-0.031	0.013	-0.041	0.035
207.0000	-0.031	0.013	-0.038	0.035
208.0000	-0.031	0.013	-0.041	0.035
209.0000	-0.031	0.013	-0.041	0.035
210.0000	-0.031	0.013	-0.038	0.035
211.0000	-0.031	0.013	-0.041	0.032
212.0000	-0.031	0.013	-0.038	0.035
213.0000	-0.031	0.013	-0.041	0.035
214.0000	-0.031	0.013	-0.041	0.035
215.0000	-0.031	0.013	-0.041	0.032
216.0000	-0.031	0.013	-0.041	0.032
217.0000	-0.031	0.013	-0.041	0.032
218.0000	-0.031	0.013	-0.041	0.032
219.0000	-0.031	0.013	-0.038	0.035
220.0000	-0.031	0.013	-0.038	0.032
221.0000	-0.031	0.013	-0.038	0.035
222.0000	-0.031	0.013	-0.038	0.035
223.0000	-0.031	0.013	-0.038	0.035
224.0000	-0.031	0.013	-0.038	0.035
225.0000	-0.031	0.013	-0.038	0.035

Elapsed Time	Input 1	Input 2	Input 3	Input 4
226.0000	-0.031	0.013	-0.038	0.035
227.0000	-0.031	0.013	-0.038	0.035
228.0000	-0.031	0.013	-0.038	0.035
229.0000	-0.031	0.013	-0.038	0.035
230.0000	-0.031	0.013	-0.038	0.035
231.0000	-0.031	0.013	-0.038	0.035
232.0000	-0.031	0.013	-0.038	0.035
233.0000	-0.031	0.013	-0.038	0.035
234.0000	-0.031	0.013	-0.038	0.035
235.0000	-0.031	0.013	-0.041	0.035
236.0000	-0.031	0.016	-0.038	0.035
237.0000	-0.031	0.013	-0.041	0.035
238.0000	-0.031	0.016	-0.041	0.032
239.0000	-0.031	0.016	-0.041	0.032
240.0000	-0.031	0.013	-0.041	0.032
241.0000	-0.038	0.016	-0.041	0.032
242.0000	-0.038	0.013	-0.044	0.032
243.0000	-0.038	0.013	-0.041	0.032
244.0000	-0.038	0.016	-0.044	0.032
245.0000	-0.038	0.013	-0.044	0.032
246.0000	-0.038	0.013	-0.041	0.032
247.0000	-0.038	0.013	-0.044	0.032
248.0000	-0.038	0.016	-0.041	0.032
249.0000	-0.038	0.013	-0.044	0.032
250.0000	-0.038	0.016	-0.044	0.032
251.0000	-0.038	0.013	-0.048	0.029
252.0000	-0.038	0.013	-0.044	0.029
253.0000	-0.038	0.016	-0.044	0.032
254.0000	-0.038	0.013	-0.044	0.029
255.0000	-0.038	0.016	-0.044	0.032
256.0000	-0.038	0.016	-0.044	0.032
257.0000	-0.038	0.016	-0.044	0.029
258.0000	-0.038	0.016	-0.048	0.029
259.0000	-0.038	0.016	-0.044	0.029
260.0000	-0.038	0.016	-0.044	0.029
261.0000	-0.038	0.016	-0.044	0.029
262.0000	-0.038	0.016	-0.044	0.029
263.0000	-0.038	0.016	-0.044	0.029
264.0000	-0.038	0.016	-0.048	0.029
265.0000	-0.038	0.016	-0.044	0.029
266.0000	-0.038	0.016	-0.044	0.029
267.0000	-0.038	0.016	-0.044	0.029
268.0000	-0.038	0.016	-0.044	0.029
269.0000	-0.038	0.016	-0.044	0.029
270.0000	-0.038	0.016	-0.044	0.029
271.0000	-0.038	0.016	-0.044	0.029
272.0000	-0.038	0.016	-0.044	0.029
273.0000	-0.038	0.016	-0.044	0.029
274.0000	-0.038	0.016	-0.044	0.029
275.0000	-0.038	0.016	-0.044	0.029
276.0000	-0.038	0.016	-0.044	0.029
277.0000	-0.038	0.016	-0.048	0.029

Elapsed Time	Input 1	Input 2	Input 3	Input 4
278.0000	-0.038	0.016	-0.044	0.029
279.0000	-0.038	0.016	-0.048	0.029
280.0000	-0.038	0.016	-0.048	0.029
281.0000	-0.038	0.016	-0.048	0.029
282.0000	-0.038	0.016	-0.048	0.029
283.0000	-0.038	0.016	-0.048	0.029
284.0000	-0.038	0.016	-0.048	0.029
285.0000	-0.038	0.016	-0.048	0.026
286.0000	-0.044	0.016	-0.048	0.026
287.0000	-0.038	0.016	-0.048	0.026
288.0000	-0.038	0.016	-0.048	0.026
289.0000	-0.044	0.016	-0.048	0.026
290.0000	-0.038	0.016	-0.048	0.026
291.0000	-0.038	0.016	-0.048	0.026
292.0000	-0.044	0.016	-0.051	0.026
293.0000	-0.038	0.016	-0.051	0.026
294.0000	-0.044	0.016	-0.051	0.026
295.0000	-0.044	0.016	-0.051	0.026
296.0000	-0.044	0.016	-0.051	0.026
297.0000	-0.044	0.016	-0.051	0.026
298.0000	-0.044	0.016	-0.051	0.026
299.0000	-0.044	0.016	-0.051	0.023
300.0000	-0.044	0.016	-0.051	0.023
301.0000	-0.044	0.016	-0.051	0.023
302.0000	-0.044	0.016	-0.051	0.023
303.0000	-0.044	0.016	-0.051	0.023
304.0000	-0.044	0.016	-0.051	0.026
305.0000	-0.044	0.016	-0.051	0.023
306.0000	-0.044	0.016	-0.051	0.023
307.0000	-0.044	0.016	-0.051	0.023
308.0000	-0.044	0.016	-0.051	0.023
309.0000	-0.044	0.016	-0.051	0.023
310.0000	-0.044	0.016	-0.051	0.023
311.0000	-0.044	0.016	-0.051	0.023
312.0000	-0.044	0.016	-0.051	0.023
313.0000	-0.044	0.016	-0.051	0.023
314.0000	-0.044	0.016	-0.051	0.023
315.0000	-0.044	0.016	-0.051	0.023
316.0000	-0.044	0.016	-0.051	0.023
317.0000	-0.044	0.019	-0.051	0.023
318.0000	-0.044	0.016	-0.054	0.023
319.0000	-0.044	0.016	-0.054	0.023
320.0000	-0.044	0.019	-0.054	0.023
321.0000	-0.044	0.016	-0.054	0.023
322.0000	-0.044	0.016	-0.054	0.023
323.0000	-0.044	0.019	-0.051	0.023
324.0000	-0.044	0.019	-0.051	0.023
325.0000	-0.044	0.016	-0.054	0.023
326.0000	-0.044	0.016	-0.054	0.023
327.0000	-0.044	0.016	-0.054	0.019
328.0000	-0.044	0.016	-0.054	0.019
329.0000	-0.044	0.016	-0.054	0.019
330.0000	-0.044	0.019	-0.051	0.023
331.0000	-0.044	0.019	-0.051	0.019
332.0000	-0.044	0.019	-0.054	0.019
333.0000	-0.044	0.016	-0.051	0.019
334.0000	-0.044	0.019	-0.051	0.019
335.0000	-0.044	0.016	-0.051	0.019
336.0000	-0.044	0.016	-0.054	0.019
337.0000	-0.044	0.016	-0.051	0.019
338.0000	-0.044	0.019	-0.054	0.019
339.0000	-0.044	0.016	-0.054	0.019
340.0000	-0.044	0.019	-0.054	0.019
341.0000	-0.044	0.019	-0.054	0.019
342.0000	-0.050	0.016	-0.054	0.019
343.0000	-0.050	0.019	-0.054	0.019
344.0000	-0.044	0.016	-0.054	0.019
345.0000	-0.044	0.019	-0.054	0.019
346.0000	-0.044	0.019	-0.054	0.019
347.0000	-0.044	0.019	-0.054	0.019
348.0000	-0.044	0.019	-0.054	0.019
349.0000	-0.044	0.019	-0.054	0.019
350.0000	-0.044	0.019	-0.054	0.019
351.0000	-0.044	0.019	-0.054	0.019
352.0000	-0.044	0.019	-0.054	0.019
353.0000	-0.044	0.019	-0.054	0.019
354.0000	-0.044	0.019	-0.054	0.019
355.0000	-0.044	0.019	-0.054	0.019
356.0000	-0.044	0.019	-0.054	0.019
357.0000	-0.044	0.019	-0.054	0.019
358.0000	-0.044	0.019	-0.054	0.019
359.0000	-0.044	0.019	-0.054	0.019
360.0000	-0.044	0.019	-0.054	0.019
361.0000	-0.044	0.019	-0.054	0.019
362.0000	-0.044	0.019	-0.054	0.019
363.0000	-0.044	0.019	-0.054	0.019
364.0000	-0.044	0.019	-0.054	0.019
365.0000	-0.044	0.019	-0.054	0.019
366.0000	-0.044	0.019	-0.054	0.019
367.0000	-0.044	0.019	-0.054	0.019
368.0000	-0.044	0.019	-0.054	0.019
369.0000	-0.044	0.019	-0.054	0.019
370.0000	-0.044	0.019	-0.054	0.019
371.0000	-0.044	0.019	-0.054	0.019
372.0000	-0.044	0.019	-0.054	0.019
373.0000	-0.044	0.019	-0.054	0.016
374.0000	-0.044	0.019	-0.054	0.019
375.0000	-0.044	0.019	-0.054	0.016
376.0000	-0.044	0.019	-0.054	0.016
377.0000	-0.044	0.019	-0.057	0.019
378.0000	-0.044	0.019	-0.054	0.019
379.0000	-0.044	0.019	-0.054	0.019
380.0000	-0.050	0.019	-0.057	0.016
381.0000	-0.050	0.019	-0.057	0.016

Elapsed Time	Input 1	Input 2	Input 3	Input 4
382.0000	-0.050	0.019	-0.057	0.016
383.0000	-0.050	0.019	-0.057	0.016
384.0000	-0.050	0.019	-0.057	0.016
385.0000	-0.050	0.019	-0.057	0.016
386.0000	-0.050	0.019	-0.057	0.016
387.0000	-0.050	0.019	-0.057	0.016
388.0000	-0.050	0.019	-0.057	0.016
389.0000	-0.050	0.019	-0.057	0.016
390.0000	-0.050	0.019	-0.057	0.016
391.0000	-0.050	0.019	-0.057	0.016
392.0000	-0.050	0.019	-0.057	0.016
393.0000	-0.050	0.019	-0.057	0.016
394.0000	-0.050	0.019	-0.060	0.016
395.0000	-0.050	0.019	-0.060	0.016
396.0000	-0.050	0.019	-0.060	0.016
397.0000	-0.050	0.019	-0.060	0.016
398.0000	-0.050	0.019	-0.060	0.013
399.0000	-0.050	0.019	-0.060	0.016
400.0000	-0.050	0.019	-0.057	0.016
401.0000	-0.050	0.022	-0.057	0.016
402.0000	-0.050	0.019	-0.057	0.016
403.0000	-0.050	0.019	-0.057	0.016
404.0000	-0.050	0.019	-0.057	0.016
405.0000	-0.050	0.022	-0.057	0.016
406.0000	-0.050	0.019	-0.057	0.013
407.0000	-0.050	0.019	-0.057	0.016
408.0000	-0.050	0.019	-0.057	0.013
409.0000	-0.050	0.019	-0.060	0.013
410.0000	-0.050	0.019	-0.057	0.013
411.0000	-0.050	0.019	-0.060	0.013
412.0000	-0.050	0.019	-0.060	0.013
413.0000	-0.050	0.019	-0.060	0.013
414.0000	-0.050	0.019	-0.060	0.013
415.0000	-0.057	0.019	-0.060	0.013
416.0000	-0.050	0.019	-0.060	0.013
417.0000	-0.057	0.019	-0.060	0.013
418.0000	-0.050	0.019	-0.060	0.013
419.0000	-0.050	0.019	-0.060	0.013
420.0000	-0.057	0.019	-0.060	0.013
421.0000	-0.050	0.019	-0.060	0.013
422.0000	-0.050	0.022	-0.060	0.013
423.0000	-0.057	0.019	-0.060	0.013
424.0000	-0.050	0.019	-0.063	0.010
425.0000	-0.050	0.019	-0.063	0.013
426.0000	-0.057	0.019	-0.063	0.013
427.0000	-0.057	0.019	-0.063	0.013
428.0000	-0.057	0.019	-0.063	0.010
429.0000	-0.050	0.019	-0.060	0.010
430.0000	-0.057	0.022	-0.060	0.013
431.0000	-0.050	0.022	-0.060	0.010
432.0000	-0.050	0.019	-0.063	0.010
433.0000	-0.057	0.022	-0.063	0.013
434.0000	-0.050	0.022	-0.063	0.010
435.0000	-0.050	0.022	-0.063	0.013
436.0000	-0.050	0.022	-0.060	0.010
437.0000	-0.050	0.019	-0.060	0.010
438.0000	-0.050	0.022	-0.060	0.010
439.0000	-0.050	0.022	-0.060	0.010
440.0000	-0.050	0.022	-0.060	0.010
441.0000	-0.050	0.022	-0.063	0.010
442.0000	-0.050	0.022	-0.060	0.010
443.0000	-0.050	0.019	-0.063	0.010
444.0000	-0.057	0.019	-0.063	0.010
445.0000	-0.057	0.022	-0.063	0.010
446.0000	-0.057	0.022	-0.063	0.010
447.0000	-0.057	0.022	-0.063	0.010
448.0000	-0.057	0.022	-0.063	0.010
449.0000	-0.057	0.022	-0.063	0.010
450.0000	-0.057	0.022	-0.063	0.010
451.0000	-0.050	0.022	-0.063	0.010
452.0000	-0.050	0.022	-0.063	0.010
453.0000	-0.050	0.022	-0.063	0.010
454.0000	-0.050	0.022	-0.060	0.010
455.0000	-0.050	0.022	-0.060	0.010
456.0000	-0.050	0.019	-0.060	0.010
457.0000	-0.050	0.022	-0.060	0.010
458.0000	-0.050	0.022	-0.060	0.010
459.0000	-0.050	0.022	-0.060	0.010
460.0000	-0.050	0.022	-0.060	0.010
461.0000	-0.050	0.019	-0.060	0.010
462.0000	-0.050	0.022	-0.060	0.010
463.0000	-0.050	0.022	-0.060	0.010
464.0000	-0.050	0.022	-0.060	0.010
465.0000	-0.050	0.019	-0.060	0.010
466.0000	-0.057	0.022	-0.060	0.010
467.0000	-0.057	0.019	-0.063	0.010
468.0000	-0.050	0.019	-0.063	0.010
469.0000	-0.050	0.022	-0.063	0.010
470.0000	-0.050	0.022	-0.060	0.010
471.0000	-0.050	0.019	-0.063	0.010
472.0000	-0.057	0.022	-0.063	0.010
473.0000	-0.057	0.022	-0.063	0.010
474.0000	-0.057	0.022	-0.063	0.010
475.0000	-0.057	0.022	-0.063	0.010
476.0000	-0.057	0.022	-0.063	0.010
477.0000	-0.057	0.022	-0.063	0.010
478.0000	-0.057	0.022	-0.063	0.007
479.0000	-0.057	0.022	-0.063	0.010
480.0000	-0.057	0.022	-0.063	0.007
481.0000	-0.057	0.022	-0.063	0.010
482.0000	-0.057	0.022	-0.063	0.007
483.0000	-0.057	0.022	-0.063	0.010
484.0000	-0.050	0.022	-0.063	0.007
485.0000	-0.050	0.022	-0.063	0.007

Elapsed Time	Input 1	Input 2	Input 3	Input 4
486.0000	-0.050	0.022	-0.063	0.007
487.0000	-0.050	0.022	-0.063	0.010
488.0000	-0.050	0.022	-0.063	0.010
489.0000	-0.050	0.022	-0.063	0.010
490.0000	-0.057	0.022	-0.063	0.010
491.0000	-0.057	0.022	-0.063	0.010
492.0000	-0.050	0.022	-0.063	0.007
493.0000	-0.057	0.022	-0.063	0.010
494.0000	-0.057	0.022	-0.063	0.007
495.0000	-0.057	0.022	-0.063	0.007
496.0000	-0.057	0.022	-0.063	0.007
497.0000	-0.057	0.022	-0.063	0.007
498.0000	-0.057	0.022	-0.063	0.007
499.0000	-0.050	0.022	-0.063	0.007
500.0000	-0.057	0.022	-0.063	0.007
501.0000	-0.057	0.022	-0.063	0.007
502.0000	-0.057	0.022	-0.063	0.007
503.0000	-0.057	0.022	-0.066	0.007
504.0000	-0.057	0.022	-0.066	0.007
505.0000	-0.057	0.022	-0.063	0.007
506.0000	-0.057	0.022	-0.063	0.007
507.0000	-0.050	0.022	-0.063	0.007
508.0000	-0.057	0.022	-0.063	0.007
509.0000	-0.057	0.022	-0.063	0.007
510.0000	-0.057	0.022	-0.063	0.007
511.0000	-0.057	0.022	-0.066	0.007
512.0000	-0.057	0.022	-0.066	0.007
513.0000	-0.057	0.022	-0.066	0.007
514.0000	-0.057	0.022	-0.066	0.007
515.0000	-0.057	0.022	-0.066	0.007
516.0000	-0.057	0.022	-0.066	0.007
517.0000	-0.057	0.022	-0.066	0.007
518.0000	-0.057	0.022	-0.066	0.007
519.0000	-0.057	0.022	-0.066	0.007
520.0000	-0.057	0.022	-0.066	0.007
521.0000	-0.057	0.022	-0.066	0.007
522.0000	-0.057	0.022	-0.066	0.003
523.0000	-0.057	0.022	-0.066	0.007
524.0000	-0.057	0.022	-0.066	0.003
525.0000	-0.057	0.022	-0.066	0.007
526.0000	-0.057	0.022	-0.066	0.007
527.0000	-0.057	0.022	-0.066	0.007
528.0000	-0.057	0.022	-0.066	0.007
529.0000	-0.057	0.022	-0.066	0.007
530.0000	-0.057	0.022	-0.066	0.003
531.0000	-0.057	0.022	-0.066	0.003
532.0000	-0.057	0.022	-0.066	0.003
533.0000	-0.057	0.022	-0.066	0.007
534.0000	-0.057	0.022	-0.066	0.003
535.0000	-0.057	0.022	-0.066	0.003
536.0000	-0.057	0.022	-0.066	0.003
537.0000	-0.057	0.022	-0.066	0.007

Elapsed Time	Input 1	Input 2	Input 3	Input 4
538.0000	-0.057	0.022	-0.066	0.007
539.0000	-0.057	0.022	-0.066	0.007
540.0000	-0.057	0.022	-0.066	0.007
541.0000	-0.057	0.022	-0.066	0.007
542.0000	-0.057	0.022	-0.066	0.007
543.0000	-0.057	0.022	-0.066	0.003
544.0000	-0.057	0.022	-0.066	0.007
545.0000	-0.057	0.022	-0.063	0.003
546.0000	-0.057	0.022	-0.063	0.003
547.0000	-0.057	0.022	-0.063	0.007
548.0000	-0.057	0.022	-0.063	0.007
549.0000	-0.057	0.022	-0.063	0.007
550.0000	-0.050	0.022	-0.063	0.007
551.0000	-0.050	0.022	-0.063	0.007
552.0000	-0.050	0.022	-0.060	0.007
553.0000	-0.050	0.022	-0.060	0.007
554.0000	-0.050	0.022	-0.060	0.007
555.0000	-0.050	0.022	-0.060	0.007
556.0000	-0.050	0.022	-0.063	0.007
557.0000	-0.050	0.022	-0.063	0.007
558.0000	-0.057	0.022	-0.060	0.007
559.0000	-0.057	0.022	-0.063	0.007
560.0000	-0.050	0.022	-0.063	0.007
561.0000	-0.057	0.022	-0.063	0.007
562.0000	-0.050	0.022	-0.060	0.007
563.0000	-0.050	0.022	-0.060	0.007
564.0000	-0.050	0.022	-0.060	0.007
565.0000	-0.050	0.022	-0.060	0.007
566.0000	-0.050	0.022	-0.057	0.010
567.0000	-0.050	0.022	-0.060	0.010
568.0000	-0.050	0.022	-0.060	0.010
569.0000	-0.050	0.022	-0.060	0.010
570.0000	-0.050	0.022	-0.060	0.007
571.0000	-0.050	0.022	-0.060	0.010
572.0000	-0.050	0.022	-0.060	0.010
573.0000	-0.050	0.022	-0.060	0.010
574.0000	-0.050	0.022	-0.060	0.010
575.0000	-0.050	0.022	-0.060	0.010
576.0000	-0.050	0.022	-0.060	0.010
577.0000	-0.050	0.022	-0.057	0.010
578.0000	-0.050	0.022	-0.057	0.010
579.0000	-0.050	0.022	-0.060	0.010
580.0000	-0.050	0.022	-0.060	0.010
581.0000	-0.050	0.022	-0.060	0.010
582.0000	-0.050	0.022	-0.060	0.010
583.0000	-0.050	0.022	-0.060	0.010
584.0000	-0.050	0.022	-0.060	0.010
585.0000	-0.050	0.026	-0.060	0.010
586.0000	-0.050	0.022	-0.060	0.010
587.0000	-0.057	0.022	-0.060	0.010
588.0000	-0.050	0.022	-0.063	0.010
589.0000	-0.050	0.022	-0.060	0.010

Elapsed Time	Input 1	Input 2	Input 3	Input 4
590.0000	-0.050	0.022	-0.063	0.010
591.0000	-0.050	0.022	-0.060	0.010
592.0000	-0.050	0.022	-0.060	0.010
593.0000	-0.050	0.022	-0.060	0.010
594.0000	-0.050	0.022	-0.060	0.010
595.0000	-0.050	0.022	-0.060	0.010
596.0000	-0.050	0.022	-0.060	0.007
597.0000	-0.050	0.022	-0.060	0.010
598.0000	-0.050	0.022	-0.060	0.010
599.0000	-0.057	0.022	-0.063	0.010
600.0000	-0.057	0.022	-0.063	0.007
601.0000	-0.050	0.022	-0.063	0.010
602.0000	-0.057	0.022	-0.063	0.010
603.0000	-0.057	0.022	-0.063	0.010
604.0000	-0.057	0.022	-0.063	0.007
605.0000	-0.057	0.022	-0.063	0.007
606.0000	-0.057	0.022	-0.063	0.007
607.0000	-0.057	0.022	-0.063	0.007
608.0000	-0.057	0.022	-0.063	0.007
609.0000	-0.057	0.022	-0.063	0.007
610.0000	-0.057	0.026	-0.063	0.007
611.0000	-0.050	0.022	-0.063	0.007
612.0000	-0.057	0.022	-0.066	0.007
613.0000	-0.057	0.022	-0.063	0.007
614.0000	-0.057	0.022	-0.066	0.007
615.0000	-0.057	0.022	-0.063	0.007
616.0000	-0.057	0.022	-0.063	0.007
617.0000	-0.050	0.022	-0.063	0.007
618.0000	-0.050	0.022	-0.063	0.007
619.0000	-0.057	0.022	-0.063	0.007
620.0000	-0.057	0.022	-0.063	0.007
621.0000	-0.057	0.026	-0.063	0.007
622.0000	-0.057	0.022	-0.063	0.007
623.0000	-0.057	0.022	-0.063	0.007
624.0000	-0.057	0.022	-0.066	0.007
625.0000	-0.057	0.022	-0.063	0.007
626.0000	-0.057	0.022	-0.063	0.007
627.0000	-0.057	0.022	-0.063	0.007
628.0000	-0.057	0.022	-0.063	0.007
629.0000	-0.057	0.022	-0.063	0.007
630.0000	-0.057	0.022	-0.063	0.007
631.0000	-0.050	0.022	-0.063	0.007
632.0000	-0.050	0.022	-0.063	0.007
633.0000	-0.050	0.026	-0.063	0.007
634.0000	-0.050	0.022	-0.063	0.007
635.0000	-0.057	0.026	-0.063	0.007
636.0000	-0.057	0.022	-0.063	0.007
637.0000	-0.050	0.022	-0.063	0.007
638.0000	-0.057	0.026	-0.063	0.007
639.0000	-0.050	0.026	-0.063	0.007
640.0000	-0.057	0.026	-0.063	0.007
641.0000	-0.057	0.022	-0.063	0.007

Elapsed Time	Input 1	Input 2	Input 3	Input 4
642.0000	-0.057	0.022	-0.063	0.007
643.0000	-0.057	0.022	-0.063	0.007
644.0000	-0.057	0.026	-0.063	0.007
645.0000	-0.057	0.026	-0.063	0.007
646.0000	-0.057	0.026	-0.063	0.007
647.0000	-0.057	0.022	-0.063	0.007
648.0000	-0.050	0.022	-0.063	0.007
649.0000	-0.057	0.022	-0.063	0.007
650.0000	-0.050	0.022	-0.063	0.007
651.0000	-0.050	0.026	-0.063	0.007
652.0000	-0.050	0.026	-0.063	0.007
653.0000	-0.057	0.026	-0.063	0.007
654.0000	-0.050	0.026	-0.063	0.007
655.0000	-0.050	0.026	-0.063	0.007
656.0000	-0.057	0.026	-0.063	0.007
657.0000	-0.057	0.026	-0.063	0.007
658.0000	-0.057	0.026	-0.063	0.007
659.0000	-0.057	0.026	-0.063	0.007
660.0000	-0.057	0.022	-0.063	0.007
661.0000	-0.057	0.026	-0.063	0.007
662.0000	-0.057	0.026	-0.063	0.007
663.0000	-0.057	0.026	-0.063	0.007
664.0000	-0.057	0.026	-0.063	0.007
665.0000	-0.050	0.026	-0.063	0.007
666.0000	-0.050	0.022	-0.063	0.007
667.0000	-0.050	0.026	-0.063	0.007
668.0000	-0.050	0.026	-0.063	0.007
669.0000	-0.050	0.026	-0.063	0.007
670.0000	-0.050	0.022	-0.063	0.007
671.0000	-0.050	0.026	-0.063	0.007
672.0000	-0.050	0.026	-0.060	0.007
673.0000	-0.050	0.026	-0.063	0.007
674.0000	-0.050	0.022	-0.060	0.007
675.0000	-0.050	0.026	-0.060	0.010
676.0000	-0.050	0.022	-0.060	0.010
677.0000	-0.050	0.026	-0.060	0.007
678.0000	-0.050	0.022	-0.060	0.010
679.0000	-0.050	0.022	-0.060	0.007
680.0000	-0.050	0.026	-0.060	0.010
681.0000	-0.050	0.026	-0.060	0.010
682.0000	-0.050	0.026	-0.060	0.010
683.0000	-0.050	0.026	-0.060	0.010
684.0000	-0.050	0.026	-0.060	0.010
685.0000	-0.050	0.026	-0.060	0.010
686.0000	-0.050	0.026	-0.060	0.010
687.0000	-0.050	0.026	-0.060	0.010
688.0000	-0.050	0.026	-0.060	0.010
689.0000	-0.050	0.026	-0.060	0.010
690.0000	-0.050	0.026	-0.060	0.010
691.0000	-0.050	0.026	-0.060	0.010
692.0000	-0.050	0.026	-0.060	0.010
693.0000	-0.050	0.026	-0.063	0.010

Elapsed Time	Input 1	Input 2	Input 3	Input 4
694.0000	-0.050	0.022	-0.063	0.007
695.0000	-0.050	0.026	-0.063	0.010
696.0000	-0.050	0.026	-0.063	0.010
697.0000	-0.050	0.026	-0.063	0.007
698.0000	-0.050	0.026	-0.063	0.010
699.0000	-0.050	0.026	-0.060	0.010
700.0000	-0.050	0.026	-0.060	0.010
701.0000	-0.050	0.026	-0.060	0.010
702.0000	-0.050	0.026	-0.060	0.010
703.0000	-0.050	0.026	-0.060	0.010
704.0000	-0.050	0.026	-0.060	0.010
705.0000	-0.050	0.026	-0.057	0.010
706.0000	-0.050	0.026	-0.060	0.010
707.0000	-0.050	0.026	-0.060	0.010
708.0000	-0.050	0.026	-0.057	0.010
709.0000	-0.050	0.026	-0.060	0.010
710.0000	-0.050	0.026	-0.060	0.010
711.0000	-0.050	0.026	-0.060	0.010
712.0000	-0.050	0.026	-0.060	0.010
713.0000	-0.050	0.026	-0.060	0.010
714.0000	-0.050	0.026	-0.060	0.010
715.0000	-0.050	0.026	-0.057	0.010
716.0000	-0.050	0.026	-0.060	0.010
717.0000	-0.050	0.026	-0.060	0.010
718.0000	-0.050	0.026	-0.060	0.010
719.0000	-0.050	0.026	-0.057	0.010
720.0000	-0.050	0.026	-0.060	0.010
721.0000	-0.050	0.026	-0.060	0.010
722.0000	-0.050	0.026	-0.060	0.010
723.0000	-0.050	0.026	-0.060	0.010
724.0000	-0.050	0.026	-0.060	0.010
725.0000	-0.050	0.026	-0.060	0.010
726.0000	-0.050	0.026	-0.060	0.010
727.0000	-0.050	0.026	-0.060	0.010
728.0000	-0.050	0.026	-0.060	0.010
729.0000	-0.050	0.029	-0.063	0.010
730.0000	-0.050	0.026	-0.060	0.010
731.0000	-0.050	0.026	-0.060	0.010
732.0000	-0.050	0.026	-0.060	0.010
733.0000	-0.050	0.026	-0.063	0.010
734.0000	-0.050	0.029	-0.063	0.010
735.0000	-0.057	0.026	-0.063	0.010
736.0000	-0.050	0.026	-0.063	0.010
737.0000	-0.050	0.026	-0.063	0.010
738.0000	-0.050	0.026	-0.063	0.010
739.0000	-0.050	0.026	-0.063	0.010
740.0000	-0.050	0.029	-0.063	0.010
741.0000	-0.050	0.026	-0.060	0.010
742.0000	-0.050	0.029	-0.063	0.010
743.0000	-0.050	0.026	-0.063	0.010
744.0000	-0.050	0.029	-0.063	0.010
745.0000	-0.050	0.029	-0.063	0.010
746.0000	-0.050	0.029	-0.063	0.010
747.0000	-0.050	0.029	-0.063	0.010
748.0000	-0.050	0.029	-0.063	0.010
749.0000	-0.057	0.029	-0.063	0.010
750.0000	-0.050	0.029	-0.063	0.007
751.0000	-0.050	0.029	-0.063	0.010
752.0000	-0.057	0.029	-0.063	0.010
753.0000	-0.050	0.029	-0.063	0.010
754.0000	-0.050	0.029	-0.063	0.010
755.0000	-0.050	0.029	-0.063	0.010
756.0000	-0.050	0.029	-0.063	0.010
757.0000	-0.050	0.029	-0.063	0.007
758.0000	-0.050	0.029	-0.063	0.007
759.0000	-0.050	0.029	-0.063	0.007
760.0000	-0.050	0.029	-0.063	0.010
761.0000	-0.050	0.029	-0.063	0.010
762.0000	-0.050	0.029	-0.060	0.010
763.0000	-0.050	0.029	-0.063	0.010
764.0000	-0.050	0.029	-0.060	0.010
765.0000	-0.050	0.029	-0.060	0.010
766.0000	-0.050	0.032	-0.063	0.010
767.0000	-0.050	0.029	-0.063	0.010
768.0000	-0.050	0.032	-0.063	0.010
769.0000	-0.050	0.032	-0.063	0.010
770.0000	-0.050	0.032	-0.063	0.010
771.0000	-0.050	0.032	-0.063	0.010
772.0000	-0.050	0.032	-0.063	0.010
773.0000	-0.050	0.032	-0.063	0.010
774.0000	-0.050	0.032	-0.063	0.010
775.0000	-0.050	0.032	-0.063	0.010
776.0000	-0.050	0.032	-0.063	0.010
777.0000	-0.050	0.032	-0.063	0.010
778.0000	-0.050	0.032	-0.063	0.010
779.0000	-0.050	0.032	-0.063	0.010
780.0000	-0.050	0.032	-0.063	0.010
781.0000	-0.050	0.032	-0.063	0.010
782.0000	-0.050	0.032	-0.063	0.010
783.0000	-0.050	0.032	-0.063	0.007
784.0000	-0.050	0.032	-0.063	0.010
785.0000	-0.050	0.032	-0.063	0.010
786.0000	-0.050	0.032	-0.063	0.010
787.0000	-0.050	0.032	-0.063	0.010
788.0000	-0.050	0.032	-0.063	0.010
789.0000	-0.050	0.032	-0.063	0.007
790.0000	-0.050	0.032	-0.063	0.010
791.0000	-0.050	0.032	-0.063	0.010
792.0000	-0.050	0.032	-0.063	0.010
793.0000	-0.050	0.032	-0.063	0.010
794.0000	-0.050	0.032	-0.063	0.010
795.0000	-0.050	0.032	-0.063	0.010
796.0000	-0.050	0.032	-0.060	0.010
797.0000	-0.050	0.032	-0.060	0.010

Elapsed Time	Input 1	Input 2	Input 3	Input 4
798.0000	-0.050	0.032	-0.063	0.010
799.0000	-0.050	0.032	-0.060	0.010
800.0000	-0.050	0.032	-0.060	0.010
801.0000	-0.050	0.032	-0.060	0.010
802.0000	-0.044	0.035	-0.060	0.010
803.0000	-0.044	0.032	-0.060	0.010
804.0000	-0.044	0.032	-0.060	0.010
805.0000	-0.044	0.032	-0.060	0.010
806.0000	-0.044	0.032	-0.060	0.010
807.0000	-0.044	0.032	-0.060	0.010
808.0000	-0.050	0.032	-0.060	0.010
809.0000	-0.050	0.032	-0.060	0.010
810.0000	-0.050	0.032	-0.060	0.010
811.0000	-0.050	0.032	-0.060	0.013
812.0000	-0.050	0.032	-0.060	0.010
813.0000	-0.050	0.032	-0.060	0.010
814.0000	-0.050	0.032	-0.060	0.010
815.0000	-0.050	0.032	-0.060	0.010
816.0000	-0.050	0.032	-0.060	0.010
817.0000	-0.050	0.032	-0.060	0.010
818.0000	-0.044	0.032	-0.060	0.010
819.0000	-0.050	0.032	-0.060	0.010
820.0000	-0.050	0.032	-0.060	0.010
821.0000	-0.044	0.032	-0.060	0.010
822.0000	-0.044	0.032	-0.060	0.010
823.0000	-0.050	0.032	-0.060	0.013
824.0000	-0.044	0.032	-0.060	0.010
825.0000	-0.044	0.032	-0.057	0.013
826.0000	-0.044	0.035	-0.057	0.013
827.0000	-0.044	0.032	-0.060	0.010
828.0000	-0.044	0.032	-0.057	0.013
829.0000	-0.044	0.032	-0.057	0.013
830.0000	-0.044	0.032	-0.060	0.010
831.0000	-0.044	0.032	-0.057	0.013
832.0000	-0.044	0.032	-0.057	0.013
833.0000	-0.044	0.032	-0.057	0.013
834.0000	-0.044	0.032	-0.057	0.013
835.0000	-0.044	0.032	-0.057	0.013
836.0000	-0.044	0.032	-0.057	0.013
837.0000	-0.044	0.032	-0.057	0.013
838.0000	-0.044	0.032	-0.057	0.013
839.0000	-0.044	0.032	-0.057	0.013
840.0000	-0.044	0.032	-0.057	0.013
841.0000	-0.044	0.032	-0.060	0.010
842.0000	-0.044	0.032	-0.057	0.013
843.0000	-0.044	0.032	-0.057	0.013
844.0000	-0.044	0.032	-0.057	0.013
845.0000	-0.044	0.032	-0.057	0.013
846.0000	-0.044	0.035	-0.057	0.013
847.0000	-0.044	0.035	-0.054	0.013
848.0000	-0.044	0.032	-0.057	0.013
849.0000	-0.044	0.032	-0.057	0.013
850.0000	-0.044	0.035	-0.054	0.013
851.0000	-0.044	0.032	-0.057	0.013
852.0000	-0.044	0.035	-0.054	0.016
853.0000	-0.044	0.032	-0.054	0.013
854.0000	-0.044	0.032	-0.057	0.013
855.0000	-0.044	0.032	-0.057	0.013
856.0000	-0.044	0.032	-0.054	0.013
857.0000	-0.044	0.032	-0.054	0.013
858.0000	-0.044	0.032	-0.054	0.013
859.0000	-0.044	0.032	-0.054	0.013
860.0000	-0.044	0.035	-0.054	0.013
861.0000	-0.044	0.032	-0.057	0.013
862.0000	-0.044	0.035	-0.054	0.016
863.0000	-0.044	0.035	-0.057	0.013
864.0000	-0.044	0.032	-0.057	0.013
865.0000	-0.044	0.035	-0.057	0.013
866.0000	-0.044	0.032	-0.057	0.013
867.0000	-0.044	0.032	-0.057	0.013
868.0000	-0.044	0.032	-0.054	0.013
869.0000	-0.044	0.035	-0.057	0.013
870.0000	-0.044	0.032	-0.057	0.013
871.0000	-0.044	0.032	-0.057	0.013
872.0000	-0.044	0.035	-0.057	0.016
873.0000	-0.044	0.032	-0.057	0.013
874.0000	-0.038	0.035	-0.057	0.016
875.0000	-0.038	0.035	-0.057	0.016
876.0000	-0.038	0.035	-0.054	0.016
877.0000	-0.044	0.032	-0.054	0.013
878.0000	-0.044	0.032	-0.054	0.013
879.0000	-0.044	0.035	-0.057	0.013
880.0000	-0.050	0.032	-0.060	0.013
881.0000	-0.050	0.029	-0.057	0.013
882.0000	-0.050	0.029	-0.057	0.010
883.0000	-0.050	0.032	-0.057	0.010
884.0000	-0.050	0.032	-0.057	0.010
885.0000	-0.044	0.032	-0.057	0.013
886.0000	-0.044	0.032	-0.057	0.013
887.0000	-0.044	0.035	-0.057	0.013
888.0000	-0.044	0.035	-0.060	0.013
889.0000	-0.044	0.032	-0.060	0.013
890.0000	-0.038	0.035	-0.057	0.013
891.0000	-0.044	0.035	-0.057	0.013
892.0000	-0.044	0.032	-0.057	0.013
893.0000	-0.044	0.032	-0.060	0.013
894.0000	-0.044	0.038	-0.054	0.013
895.0000	-0.044	0.035	-0.057	0.013
896.0000	-0.044	0.038	-0.054	0.013
897.0000	-0.044	0.035	-0.057	0.013
898.0000	-0.044	0.035	-0.057	0.013
899.0000	-0.044	0.035	-0.057	0.013
900.0000	-0.044	0.032	-0.054	0.013
901.0000	-0.044	0.035	-0.054	0.013

Elapsed Time	Input 1	Input 2	Input 3	Input 4
902.0000	-0.044	0.035	-0.054	0.013
903.0000	-0.038	0.038	-0.054	0.013
904.0000	-0.038	0.035	-0.054	0.013
905.0000	-0.038	0.035	-0.054	0.016
906.0000	-0.038	0.035	-0.051	0.013
907.0000	-0.038	0.035	-0.051	0.016
908.0000	-0.038	0.035	-0.051	0.016
909.0000	-0.038	0.035	-0.051	0.016
910.0000	-0.038	0.035	-0.054	0.016
911.0000	-0.044	0.035	-0.054	0.016
912.0000	-0.038	0.035	-0.054	0.016
913.0000	-0.038	0.035	-0.051	0.016
914.0000	-0.044	0.035	-0.054	0.016
915.0000	-0.044	0.032	-0.057	0.013
916.0000	-0.038	0.035	-0.054	0.016
917.0000	-0.038	0.035	-0.054	0.016
918.0000	-0.038	0.038	-0.054	0.016
919.0000	-0.038	0.032	-0.054	0.016
920.0000	-0.038	0.029	-0.057	0.016
921.0000	-0.044	0.032	-0.054	0.016
922.0000	-0.044	0.035	-0.054	0.016
923.0000	-0.038	0.035	-0.054	0.016
924.0000	-0.038	0.035	-0.057	0.016
925.0000	-0.038	0.032	-0.051	0.016
926.0000	-0.038	0.035	-0.054	0.016
927.0000	-0.038	0.035	-0.054	0.016
928.0000	-0.038	0.035	-0.051	0.016
929.0000	-0.038	0.035	-0.051	0.016
930.0000	-0.038	0.035	-0.051	0.016
931.0000	-0.038	0.035	-0.051	0.016
932.0000	-0.038	0.035	-0.051	0.016
933.0000	-0.038	0.035	-0.051	0.016
934.0000	-0.038	0.035	-0.051	0.016
935.0000	-0.038	0.035	-0.054	0.016
936.0000	-0.031	0.038	-0.051	0.016
937.0000	-0.038	0.035	-0.051	0.016
938.0000	-0.038	0.032	-0.051	0.016
939.0000	-0.038	0.035	-0.051	0.016
940.0000	-0.038	0.029	-0.051	0.016
941.0000	-0.038	0.032	-0.051	0.019
942.0000	-0.038	0.032	-0.051	0.019
943.0000	-0.038	0.035	-0.051	0.016
944.0000	-0.031	0.035	-0.051	0.019
945.0000	-0.031	0.035	-0.051	0.016
946.0000	-0.031	0.035	-0.051	0.019
947.0000	-0.038	0.032	-0.051	0.016
948.0000	-0.031	0.035	-0.051	0.019
949.0000	-0.031	0.038	-0.048	0.019
950.0000	-0.038	0.035	-0.048	0.016
951.0000	-0.038	0.035	-0.051	0.019
952.0000	-0.038	0.035	-0.051	0.019
953.0000	-0.038	0.038	-0.048	0.019
954.0000	-0.038	0.038	-0.051	0.019
955.0000	-0.038	0.038	-0.051	0.019
956.0000	-0.038	0.035	-0.051	0.019
957.0000	-0.038	0.038	-0.054	0.019
958.0000	-0.038	0.032	-0.054	0.019
959.0000	-0.038	0.035	-0.051	0.019
960.0000	-0.031	0.038	-0.051	0.019
961.0000	-0.038	0.035	-0.051	0.016
962.0000	-0.038	0.032	-0.054	0.016
963.0000	-0.038	0.032	-0.051	0.016
964.0000	-0.038	0.032	-0.048	0.016
965.0000	-0.038	0.032	-0.051	0.019
966.0000	-0.038	0.035	-0.054	0.019
967.0000	-0.038	0.035	-0.051	0.019
968.0000	-0.038	0.035	-0.051	0.019
969.0000	-0.038	0.029	-0.054	0.016
970.0000	-0.038	0.035	-0.051	0.019
971.0000	-0.038	0.035	-0.051	0.016
972.0000	-0.031	0.038	-0.051	0.019
973.0000	-0.038	0.038	-0.051	0.019
974.0000	-0.031	0.038	-0.051	0.019
975.0000	-0.038	0.032	-0.051	0.019
976.0000	-0.038	0.035	-0.051	0.019
977.0000	-0.038	0.038	-0.051	0.019
978.0000	-0.038	0.032	-0.051	0.016
979.0000	-0.038	0.035	-0.051	0.019
980.0000	-0.038	0.035	-0.054	0.019
981.0000	-0.038	0.035	-0.054	0.019
982.0000	-0.038	0.038	-0.054	0.019
983.0000	-0.038	0.035	-0.057	0.016
984.0000	-0.038	0.035	-0.054	0.016
985.0000	-0.038	0.041	-0.051	0.023
986.0000	-0.044	0.032	-0.057	0.016
987.0000	-0.038	0.035	-0.051	0.016
988.0000	-0.038	0.038	-0.054	0.016
989.0000	-0.044	0.032	-0.057	0.013
990.0000	-0.044	0.032	-0.057	0.016
991.0000	-0.044	0.032	-0.054	0.013
992.0000	-0.038	0.035	-0.054	0.016
993.0000	-0.038	0.038	-0.054	0.016
994.0000	-0.038	0.035	-0.054	0.016
995.0000	-0.038	0.035	-0.054	0.016
996.0000	-0.038	0.038	-0.054	0.016
997.0000	-0.038	0.038	-0.054	0.019
998.0000	-0.038	0.038	-0.054	0.016
999.0000	-0.038	0.035	-0.057	0.016
1000.0000	-0.038	0.038	-0.054	0.016
1001.0000	-0.038	0.032	-0.057	0.016
1002.0000	-0.038	0.035	-0.057	0.016
1003.0000	-0.038	0.035	-0.054	0.016
1004.0000	-0.038	0.038	-0.057	0.016
1005.0000	-0.038	0.035	-0.054	0.016

Elapsed Time	Input 1	Input 2	Input 3	Input 4
1006.0000	-0.044	0.035	-0.057	0.016
1007.0000	-0.044	0.032	-0.057	0.016
1008.0000	-0.038	0.038	-0.051	0.016
1009.0000	-0.038	0.038	-0.054	0.016
1010.0000	-0.038	0.038	-0.057	0.016
1011.0000	-0.038	0.038	-0.054	0.016
1012.0000	-0.044	0.035	-0.057	0.016
1013.0000	-0.038	0.035	-0.057	0.016
1014.0000	-0.044	0.035	-0.057	0.016
1015.0000	-0.044	0.035	-0.057	0.016
1016.0000	-0.044	0.035	-0.057	0.013
1017.0000	-0.044	0.035	-0.057	0.016
1018.0000	-0.044	0.029	-0.057	0.013
1019.0000	-0.038	0.035	-0.057	0.013
1020.0000	-0.044	0.038	-0.054	0.016
1021.0000	-0.038	0.041	-0.057	0.016
1022.0000	-0.044	0.035	-0.060	0.013
1023.0000	-0.038	0.038	-0.057	0.016
1024.0000	-0.038	0.035	-0.060	0.013
1025.0000	-0.044	0.032	-0.057	0.013
1026.0000	-0.038	0.035	-0.054	0.013
1027.0000	-0.038	0.038	-0.054	0.016
1028.0000	-0.038	0.038	-0.057	0.013
1029.0000	-0.038	0.038	-0.054	0.013
1030.0000	-0.044	0.035	-0.060	0.013
1031.0000	-0.044	0.026	-0.060	0.013
1032.0000	-0.044	0.032	-0.060	0.013
1033.0000	-0.044	0.035	-0.057	0.016
1034.0000	-0.044	0.029	-0.060	0.013
1035.0000	-0.044	0.032	-0.060	0.013
1036.0000	-0.044	0.035	-0.054	0.013
1037.0000	-0.044	0.035	-0.060	0.013
1038.0000	-0.044	0.035	-0.060	0.013
1039.0000	-0.044	0.029	-0.063	0.010
1040.0000	-0.044	0.029	-0.060	0.010
1041.0000	-0.044	0.035	-0.057	0.013
1042.0000	-0.044	0.038	-0.060	0.013
1043.0000	-0.044	0.038	-0.063	0.013
1044.0000	-0.044	0.038	-0.057	0.013
1045.0000	-0.044	0.038	-0.057	0.013
1046.0000	-0.044	0.032	-0.060	0.010
1047.0000	-0.050	0.032	-0.057	0.007
1048.0000	-0.050	0.029	-0.057	0.010
1049.0000	-0.050	0.032	-0.060	0.010
1050.0000	-0.044	0.038	-0.057	0.013
1051.0000	-0.044	0.035	-0.063	0.010
1052.0000	-0.044	0.035	-0.054	0.010
1053.0000	-0.044	0.035	-0.063	0.010
1054.0000	-0.044	0.032	-0.063	0.010
1055.0000	-0.044	0.035	-0.054	0.010
1056.0000	-0.044	0.035	-0.060	0.010
1057.0000	-0.044	0.035	-0.060	0.010
1058.0000	-0.044	0.035	-0.063	0.010
1059.0000	-0.044	0.032	-0.060	0.010
1060.0000	-0.044	0.035	-0.057	0.010
1061.0000	-0.044	0.035	-0.063	0.010
1062.0000	-0.044	0.038	-0.063	0.010
1063.0000	-0.044	0.041	-0.057	0.013
1064.0000	-0.050	0.038	-0.063	0.010
1065.0000	-0.050	0.032	-0.060	0.007
1066.0000	-0.050	0.035	-0.069	0.010
1067.0000	-0.050	0.035	-0.066	0.007
1068.0000	-0.050	0.035	-0.060	0.007
1069.0000	-0.044	0.035	-0.066	0.007
1070.0000	-0.050	0.035	-0.066	0.007
1071.0000	-0.050	0.035	-0.066	0.007
1072.0000	-0.050	0.032	-0.066	0.007
1073.0000	-0.050	0.032	-0.069	0.003
1074.0000	-0.050	0.038	-0.066	0.007
1075.0000	-0.050	0.035	-0.066	0.007
1076.0000	-0.050	0.035	-0.063	0.007
1077.0000	-0.050	0.038	-0.063	0.007
1078.0000	-0.057	0.029	-0.066	0.003
1079.0000	-0.050	0.035	-0.066	0.007
1080.0000	-0.050	0.035	-0.066	0.007
1081.0000	-0.050	0.035	-0.063	0.007
1082.0000	-0.050	0.035	-0.066	0.007
1083.0000	-0.050	0.038	-0.063	0.003
1084.0000	-0.050	0.035	-0.066	0.007
1085.0000	-0.050	0.029	-0.066	0.003
1086.0000	-0.050	0.038	-0.063	0.007
1087.0000	-0.050	0.035	-0.063	0.003
1088.0000	-0.050	0.032	-0.066	0.007
1089.0000	-0.050	0.032	-0.069	0.003
1090.0000	-0.050	0.029	-0.066	0.003
1091.0000	-0.050	0.032	-0.063	0.003
1092.0000	-0.050	0.035	-0.063	0.007
1093.0000	-0.044	0.035	-0.063	0.007
1094.0000	-0.044	0.035	-0.066	0.003
1095.0000	-0.050	0.035	-0.063	0.007
1096.0000	-0.044	0.035	-0.063	0.007
1097.0000	-0.044	0.038	-0.066	0.007
1098.0000	-0.050	0.035	-0.066	0.007
1099.0000	-0.050	0.035	-0.063	0.007
1100.0000	-0.050	0.032	-0.066	0.007
1101.0000	-0.050	0.035	-0.063	0.007
1102.0000	-0.050	0.029	-0.066	0.003
1103.0000	-0.050	0.035	-0.066	0.003
1104.0000	-0.050	0.035	-0.063	0.007
1105.0000	-0.050	0.032	-0.063	0.007
1106.0000	-0.050	0.035	-0.066	0.007
1107.0000	-0.050	0.032	-0.066	0.003
1108.0000	-0.044	0.038	-0.060	0.007
1109.0000	-0.044	0.038	-0.063	0.007

Elapsed Time	Input 1	Input 2	Input 3	Input 4
1110.0000	-0.044	0.041	-0.066	0.007
1111.0000	-0.050	0.038	-0.066	0.007
1112.0000	-0.050	0.035	-0.066	0.003
1113.0000	-0.057	0.029	-0.069	0.003
1114.0000	-0.050	0.035	-0.066	0.003
1115.0000	-0.050	0.032	-0.069	0.000
1116.0000	-0.050	0.032	-0.066	0.003
1117.0000	-0.050	0.035	-0.069	0.003
1118.0000	-0.057	0.032	-0.066	0.003
1119.0000	-0.050	0.038	-0.066	0.003
1120.0000	-0.050	0.032	-0.069	0.003
1121.0000	-0.050	0.035	-0.069	0.003
1122.0000	-0.050	0.035	-0.069	0.003
1123.0000	-0.050	0.035	-0.069	0.003
1124.0000	-0.057	0.035	-0.073	0.003
1125.0000	-0.057	0.029	-0.069	0.000
1126.0000	-0.057	0.032	-0.069	0.003
1127.0000	-0.057	0.032	-0.069	0.000
1128.0000	-0.050	0.035	-0.069	0.003
1129.0000	-0.050	0.035	-0.066	0.003
1130.0000	-0.050	0.032	-0.069	0.003
1131.0000	-0.050	0.035	-0.069	0.000
1132.0000	-0.050	0.038	-0.066	0.003
1133.0000	-0.057	0.032	-0.073	0.000
1134.0000	-0.057	0.032	-0.069	0.000
1135.0000	-0.057	0.032	-0.069	0.000
1136.0000	-0.050	0.035	-0.066	0.000
1137.0000	-0.050	0.032	-0.066	0.000
1138.0000	-0.050	0.032	-0.069	0.000
1139.0000	-0.050	0.035	-0.069	0.000
1140.0000	-0.057	0.032	-0.069	0.000
1141.0000	-0.057	0.032	-0.066	0.000
1142.0000	-0.057	0.032	-0.069	0.000
1143.0000	-0.057	0.032	-0.073	0.000
1144.0000	-0.050	0.035	-0.069	0.000
1145.0000	-0.050	0.035	-0.069	0.003
1146.0000	-0.050	0.038	-0.069	0.003
1147.0000	-0.057	0.035	-0.069	0.000
1148.0000	-0.050	0.038	-0.066	0.000
1149.0000	-0.050	0.038	-0.069	0.000
1150.0000	-0.057	0.029	-0.069	0.000
1151.0000	-0.050	0.035	-0.066	0.000
1152.0000	-0.050	0.032	-0.066	0.000
1153.0000	-0.050	0.035	-0.069	0.000
1154.0000	-0.050	0.038	-0.066	0.003
1155.0000	-0.050	0.038	-0.069	0.003
1156.0000	-0.050	0.035	-0.066	0.000
1157.0000	-0.044	0.038	-0.063	0.003
1158.0000	-0.050	0.035	-0.063	0.000
1159.0000	-0.050	0.035	-0.069	0.003
1160.0000	-0.050	0.032	-0.069	0.003
1161.0000	-0.050	0.032	-0.066	0.003

Elapsed Time	Input 1	Input 2	Input 3	Input 4*
1162.0000	-0.050	0.035	-0.066	0.003
1163.0000	-0.050	0.038	-0.063	0.003
1164.0000	-0.050	0.038	-0.060	0.003
1165.0000	-0.050	0.035	-0.066	0.003
1166.0000	-0.050	0.032	-0.066	0.000
1167.0000	-0.050	0.032	-0.073	0.000
1168.0000	-0.050	0.035	-0.060	0.000
1169.0000	-0.050	0.032	-0.063	0.000
1170.0000	-0.050	0.035	-0.069	0.000
1171.0000	-0.050	0.035	-0.063	0.003
1172.0000	-0.050	0.032	-0.069	0.003
1173.0000	-0.050	0.035	-0.066	0.003
1174.0000	-0.050	0.032	-0.066	0.003
1175.0000	-0.050	0.038	-0.069	0.003
1176.0000	-0.050	0.038	-0.073	0.003
1177.0000	-0.050	0.035	-0.066	0.000
1178.0000	-0.050	0.035	-0.069	0.003
1179.0000	-0.057	0.029	-0.076	0.000
1180.0000	-0.050	0.032	-0.073	0.000
1181.0000	-0.050	0.035	-0.069	0.000
1182.0000	-0.050	0.032	-0.069	0.000
1183.0000	-0.050	0.035	-0.066	0.000
1184.0000	-0.050	0.038	-0.069	0.003
1185.0000	-0.050	0.035	-0.069	0.003
1186.0000	-0.050	0.032	-0.069	0.003
1187.0000	-0.050	0.035	-0.073	0.003
1188.0000	-0.050	0.038	-0.069	0.003
1189.0000	-0.050	0.035	-0.069	0.003
1190.0000	-0.050	0.038	-0.060	0.003
1191.0000	-0.050	0.035	-0.073	0.000
1192.0000	-0.050	0.029	-0.073	0.000
1193.0000	-0.050	0.035	-0.069	0.003
1194.0000	-0.050	0.038	-0.069	0.000
1195.0000	-0.050	0.038	-0.069	0.003
1196.0000	-0.050	0.032	-0.069	0.003
1197.0000	-0.050	0.035	-0.069	0.003
1198.0000	-0.057	0.029	-0.066	0.000
1199.0000	-0.057	0.026	-0.076	-0.003
1200.0000	-0.057	0.026	-0.069	-0.003
1201.0000	-0.050	0.032	-0.073	0.000
1202.0000	-0.050	0.029	-0.069	0.000
1203.0000	-0.057	0.029	-0.069	0.000
1204.0000	-0.057	0.032	-0.066	0.000
1205.0000	-0.050	0.035	-0.069	0.000
1206.0000	-0.050	0.032	-0.076	0.000
1207.0000	-0.050	0.032	-0.066	0.003
1208.0000	-0.050	0.032	-0.069	0.003
1209.0000	-0.050	0.035	-0.069	0.000
1210.0000	-0.050	0.032	-0.063	0.000
1211.0000	-0.050	0.032	-0.073	0.003
1212.0000	-0.050	0.035	-0.073	0.000
1213.0000	-0.050	0.038	-0.069	0.003

Elapsed Time	Input 1	Input 2	Input 3	Input 4
1214.0000	-0.050	0.035	-0.066	0.003
1215.0000	-0.050	0.032	-0.073	0.000
1216.0000	-0.050	0.035	-0.069	0.000
1217.0000	-0.050	0.032	-0.063	0.000
1218.0000	-0.050	0.029	-0.073	0.000
1219.0000	-0.057	0.029	-0.066	0.000
1220.0000	-0.050	0.032	-0.073	0.000
1221.0000	-0.050	0.032	-0.073	0.000
1222.0000	-0.050	0.032	-0.076	0.000
1223.0000	-0.050	0.032	-0.066	0.000
1224.0000	-0.050	0.032	-0.073	0.000
1225.0000	-0.057	0.026	-0.069	0.000
1226.0000	-0.050	0.026	-0.063	0.000
1227.0000	-0.050	0.035	-0.069	0.003
1228.0000	-0.050	0.032	-0.063	0.000
1229.0000	-0.050	0.029	-0.069	0.000
1230.0000	-0.050	0.038	-0.063	0.003
1231.0000	-0.050	0.035	-0.066	0.000
1232.0000	-0.050	0.032	-0.069	0.000
1233.0000	-0.057	0.029	-0.076	0.000
1234.0000	-0.057	0.029	-0.073	0.000
1235.0000	-0.050	0.029	-0.073	0.000
1236.0000	-0.057	0.032	-0.063	0.000
1237.0000	-0.057	0.029	-0.066	0.000
1238.0000	-0.050	0.035	-0.069	0.003
1239.0000	-0.050	0.035	-0.063	0.003
1240.0000	-0.050	0.038	-0.063	0.003
1241.0000	-0.050	0.038	-0.073	0.000
1242.0000	-0.050	0.032	-0.076	0.000
1243.0000	-0.050	0.035	-0.073	0.000
1244.0000	-0.050	0.035	-0.073	0.000
1245.0000	-0.050	0.038	-0.073	0.003
1246.0000	-0.050	0.038	-0.069	0.003
1247.0000	-0.057	0.035	-0.073	0.000
1248.0000	-0.050	0.035	-0.073	0.000
1249.0000	-0.050	0.035	-0.076	0.000
1250.0000	-0.057	0.029	-0.076	-0.003
1251.0000	-0.057	0.029	-0.073	-0.003
1252.0000	-0.063	0.022	-0.079	-0.006
1253.0000	-0.057	0.026	-0.076	-0.006
1254.0000	-0.057	0.026	-0.069	-0.003
1255.0000	-0.057	0.026	-0.073	-0.003
1256.0000	-0.063	0.026	-0.076	-0.003
1257.0000	-0.057	0.022	-0.079	-0.003
1258.0000	-0.057	0.029	-0.069	-0.003
1259.0000	-0.057	0.029	-0.073	-0.003
1260.0000	-0.057	0.029	-0.076	-0.003
1261.0000	-0.057	0.029	-0.076	-0.003
1262.0000	-0.050	0.029	-0.076	-0.003
1263.0000	-0.057	0.032	-0.073	0.000
1264.0000	-0.050	0.035	-0.069	0.000
1265.0000	-0.050	0.032	-0.069	-0.003
1266.0000	-0.050	0.029	-0.069	0.000
1267.0000	-0.050	0.032	-0.063	0.000
1268.0000	-0.050	0.032	-0.063	-0.003
1269.0000	-0.057	0.029	-0.073	-0.003
1270.0000	-0.057	0.029	-0.069	-0.003
1271.0000	-0.057	0.029	-0.073	-0.003
1272.0000	-0.050	0.032	-0.069	-0.003
1273.0000	-0.050	0.032	-0.069	0.000
1274.0000	-0.057	0.032	-0.073	0.000
1275.0000	-0.057	0.032	-0.069	0.000
1276.0000	-0.057	0.032	-0.069	0.000
1277.0000	-0.050	0.032	-0.069	0.000
1278.0000	-0.050	0.035	-0.066	0.000
1279.0000	-0.050	0.032	-0.073	0.000
1280.0000	-0.050	0.032	-0.069	-0.003
1281.0000	-0.050	0.032	-0.073	0.000
1282.0000	-0.057	0.026	-0.073	-0.003
1283.0000	-0.057	0.032	-0.073	0.000
1284.0000	-0.057	0.032	-0.073	0.000
1285.0000	-0.057	0.029	-0.073	-0.003
1286.0000	-0.057	0.032	-0.076	0.000
1287.0000	-0.050	0.035	-0.073	0.000
1288.0000	-0.057	0.035	-0.069	0.000
1289.0000	-0.057	0.032	-0.073	0.000
1290.0000	-0.057	0.035	-0.066	0.000
1291.0000	-0.050	0.032	-0.069	-0.003
1292.0000	-0.050	0.032	-0.073	0.000
1293.0000	-0.050	0.035	-0.069	0.000
1294.0000	-0.050	0.035	-0.066	0.000
1295.0000	-0.050	0.029	-0.069	0.000
1296.0000	-0.050	0.032	-0.069	0.000
1297.0000	-0.050	0.032	-0.069	-0.003
1298.0000	-0.050	0.032	-0.066	0.000
1299.0000	-0.050	0.032	-0.069	0.000
1300.0000	-0.050	0.032	-0.073	0.000
1301.0000	-0.050	0.035	-0.066	0.000
1302.0000	-0.050	0.029	-0.066	0.000
1303.0000	-0.050	0.029	-0.069	0.000
1304.0000	-0.050	0.035	-0.069	0.000
1305.0000	-0.050	0.032	-0.066	0.000
1306.0000	-0.050	0.032	-0.069	0.000
1307.0000	-0.057	0.029	-0.073	-0.003
1308.0000	-0.050	0.029	-0.066	-0.003
1309.0000	-0.057	0.026	-0.073	0.000
1310.0000	-0.057	0.029	-0.073	0.000
1311.0000	-0.050	0.029	-0.073	0.000
1312.0000	-0.057	0.029	-0.069	0.000
1313.0000	-0.050	0.029	-0.069	0.000
1314.0000	-0.050	0.029	-0.069	0.000
1315.0000	-0.050	0.032	-0.069	0.000
1316.0000	-0.050	0.029	-0.073	0.000
1317.0000	-0.057	0.029	-0.073	0.000

Elapsed Time	Input 1	Input 2	Input 3	Input 4
1318.0000	-0.050	0.029	-0.073	0.000
1319.0000	-0.057	0.029	-0.073	0.000
1320.0000	-0.057	0.029	-0.069	0.000
1321.0000	-0.050	0.032	-0.073	0.000
1322.0000	-0.050	0.029	-0.069	0.000
1323.0000	-0.057	0.029	-0.073	0.000
1324.0000	-0.050	0.029	-0.069	0.000
1325.0000	-0.050	0.029	-0.069	0.000
1326.0000	-0.050	0.032	-0.069	0.000
1327.0000	-0.050	0.029	-0.069	0.000
1328.0000	-0.050	0.029	-0.069	-0.003
1329.0000	-0.057	0.029	-0.069	0.000
1330.0000	-0.050	0.029	-0.069	0.000
1331.0000	-0.057	0.029	-0.073	0.000
1332.0000	-0.057	0.026	-0.069	0.000
1333.0000	-0.057	0.029	-0.069	0.000
1334.0000	-0.057	0.029	-0.069	0.000
1335.0000	-0.057	0.029	-0.069	0.000
1336.0000	-0.057	0.029	-0.069	0.000
1337.0000	-0.050	0.029	-0.069	0.000
1338.0000	-0.050	0.029	-0.069	0.000
1339.0000	-0.050	0.029	-0.069	0.000
1340.0000	-0.050	0.029	-0.069	0.000
1341.0000	-0.050	0.029	-0.066	0.000
1342.0000	-0.050	0.029	-0.066	0.000
1343.0000	-0.050	0.029	-0.066	0.000
1344.0000	-0.050	0.029	-0.066	0.000
1345.0000	-0.050	0.029	-0.063	0.000
1346.0000	-0.050	0.029	-0.063	0.000
1347.0000	-0.050	0.029	-0.066	0.003
1348.0000	-0.050	0.029	-0.066	0.000
1349.0000	-0.050	0.029	-0.066	0.000
1350.0000	-0.050	0.029	-0.063	0.000
1351.0000	-0.050	0.029	-0.066	0.003
1352.0000	-0.050	0.029	-0.066	0.003
1353.0000	-0.057	0.029	-0.066	0.000
1354.0000	-0.050	0.029	-0.069	0.000
1355.0000	-0.050	0.032	-0.066	0.000
1356.0000	-0.057	0.029	-0.066	0.000
1357.0000	-0.057	0.029	-0.066	0.000
1358.0000	-0.050	0.029	-0.069	0.000
1359.0000	-0.057	0.029	-0.066	0.003
1360.0000	-0.057	0.029	-0.066	0.000
1361.0000	-0.050	0.029	-0.066	0.003
1362.0000	-0.057	0.029	-0.069	0.000
1363.0000	-0.050	0.029	-0.069	0.000
1364.0000	-0.050	0.029	-0.069	0.003
1365.0000	-0.050	0.029	-0.066	0.000
1366.0000	-0.050	0.029	-0.066	0.000
1367.0000	-0.050	0.029	-0.066	0.000
1368.0000	-0.050	0.029	-0.066	0.003
1369.0000	-0.050	0.029	-0.066	0.003

Elapsed Time	Input 1	Input 2	Input 3	Input 4
1370.0000	-0.050	0.029	-0.063	0.003
1371.0000	-0.050	0.029	-0.066	0.003
1372.0000	-0.050	0.029	-0.063	0.003
1373.0000	-0.050	0.029	-0.066	0.003
1374.0000	-0.050	0.029	-0.063	0.003
1375.0000	-0.050	0.029	-0.066	0.003
1376.0000	-0.050	0.029	-0.066	0.003
1377.0000	-0.050	0.029	-0.066	0.003
1378.0000	-0.050	0.029	-0.066	0.003
1379.0000	-0.050	0.029	-0.066	0.003
1380.0000	-0.050	0.029	-0.063	0.003
1381.0000	-0.050	0.029	-0.063	0.003
1382.0000	-0.044	0.029	-0.063	0.003
1383.0000	-0.044	0.029	-0.063	0.003
1384.0000	-0.050	0.029	-0.063	0.003
1385.0000	-0.050	0.029	-0.063	0.003
1386.0000	-0.050	0.029	-0.063	0.007
1387.0000	-0.050	0.029	-0.063	0.003
1388.0000	-0.044	0.029	-0.063	0.003
1389.0000	-0.050	0.029	-0.063	0.003
1390.0000	-0.050	0.029	-0.063	0.003
1391.0000	-0.050	0.029	-0.063	0.003
1392.0000	-0.050	0.029	-0.063	0.007
1393.0000	-0.050	0.029	-0.063	0.003
1394.0000	-0.050	0.029	-0.063	0.007
1395.0000	-0.050	0.029	-0.066	0.003
1396.0000	-0.050	0.029	-0.063	0.007
1397.0000	-0.050	0.026	-0.063	0.007
1398.0000	-0.050	0.029	-0.063	0.003
1399.0000	-0.050	0.029	-0.063	0.007
1400.0000	-0.050	0.029	-0.063	0.007
1401.0000	-0.050	0.029	-0.063	0.007
1402.0000	-0.050	0.029	-0.063	0.007
1403.0000	-0.050	0.029	-0.063	0.007
1404.0000	-0.050	0.029	-0.063	0.007
1405.0000	-0.050	0.029	-0.063	0.003
1406.0000	-0.050	0.029	-0.066	0.007
1407.0000	-0.050	0.029	-0.063	0.007
1408.0000	-0.050	0.029	-0.063	0.007
1409.0000	-0.050	0.029	-0.063	0.007
1410.0000	-0.050	0.029	-0.063	0.007
1411.0000	-0.050	0.029	-0.063	0.007
1412.0000	-0.050	0.029	-0.060	0.007
1413.0000	-0.044	0.029	-0.060	0.007
1414.0000	-0.050	0.029	-0.063	0.007
1415.0000	-0.050	0.029	-0.060	0.007
1416.0000	-0.050	0.029	-0.060	0.007
1417.0000	-0.050	0.029	-0.063	0.007
1418.0000	-0.050	0.029	-0.063	0.007
1419.0000	-0.050	0.029	-0.063	0.007
1420.0000	-0.050	0.029	-0.060	0.007
1421.0000	-0.050	0.029	-0.063	0.007

Elapsed Time	Input 1	Input 2	Input 3	Input 4
1422.0000	-0.050	0.026	-0.063	0.007
1423.0000	-0.050	0.029	-0.060	0.007
1424.0000	-0.050	0.026	-0.060	0.007
1425.0000	-0.050	0.029	-0.063	0.007
1426.0000	-0.050	0.026	-0.063	0.007
1427.0000	-0.050	0.026	-0.063	0.007
1428.0000	-0.050	0.026	-0.063	0.007
1429.0000	-0.050	0.026	-0.066	0.007
1430.0000	-0.050	0.026	-0.060	0.007
1431.0000	-0.050	0.029	-0.063	0.007
1432.0000	-0.050	0.026	-0.066	0.003
1433.0000	-0.050	0.029	-0.063	0.003
1434.0000	-0.050	0.029	-0.063	0.003
1435.0000	-0.050	0.026	-0.063	0.007
1436.0000	-0.057	0.026	-0.063	0.007
1437.0000	-0.050	0.026	-0.066	0.007
1438.0000	-0.050	0.029	-0.063	0.007
1439.0000	-0.057	0.026	-0.066	0.007
1440.0000	-0.050	0.026	-0.063	0.003
1441.0000	-0.057	0.026	-0.063	0.003
1442.0000	-0.050	0.026	-0.063	0.003
1443.0000	-0.050	0.026	-0.063	0.003
1444.0000	-0.050	0.026	-0.063	0.003
1445.0000	-0.050	0.026	-0.066	0.003
1446.0000	-0.050	0.026	-0.063	0.003
1447.0000	-0.050	0.026	-0.066	0.003
1448.0000	-0.057	0.026	-0.063	0.003
1449.0000	-0.050	0.026	-0.063	0.003
1450.0000	-0.050	0.026	-0.066	0.003
1451.0000	-0.050	0.026	-0.063	0.003
1452.0000	-0.050	0.026	-0.066	0.003
1453.0000	-0.057	0.026	-0.066	0.003
1454.0000	-0.057	0.026	-0.063	0.003
1455.0000	-0.050	0.026	-0.063	0.003
1456.0000	-0.050	0.026	-0.066	0.003
1457.0000	-0.050	0.029	-0.066	0.003
1458.0000	-0.050	0.026	-0.063	0.003
1459.0000	-0.050	0.026	-0.066	0.003
1460.0000	-0.050	0.026	-0.066	0.003
1461.0000	-0.057	0.026	-0.066	0.003
1462.0000	-0.057	0.026	-0.066	0.003
1463.0000	-0.057	0.026	-0.066	0.003
1464.0000	-0.050	0.026	-0.066	0.003
1465.0000	-0.050	0.026	-0.066	0.003
1466.0000	-0.057	0.026	-0.066	0.003
1467.0000	-0.050	0.026	-0.066	0.003
1468.0000	-0.050	0.026	-0.063	0.003
1469.0000	-0.057	0.026	-0.063	0.003
1470.0000	-0.050	0.026	-0.063	0.003
1471.0000	-0.050	0.026	-0.063	0.003
1472.0000	-0.050	0.026	-0.063	0.003
1473.0000	-0.050	0.026	-0.063	0.003
1474.0000	-0.050	0.026	-0.066	0.003
1475.0000	-0.050	0.026	-0.066	0.003
1476.0000	-0.050	0.026	-0.066	0.003
1477.0000	-0.050	0.026	-0.069	0.003
1478.0000	-0.057	0.026	-0.066	0.003
1479.0000	-0.057	0.026	-0.066	0.003
1480.0000	-0.057	0.026	-0.066	0.003
1481.0000	-0.057	0.026	-0.069	0.003
1482.0000	-0.057	0.026	-0.066	0.003
1483.0000	-0.057	0.026	-0.066	0.003
1484.0000	-0.050	0.026	-0.066	0.003
1485.0000	-0.057	0.026	-0.069	0.003
1486.0000	-0.057	0.026	-0.066	0.003
1487.0000	-0.057	0.026	-0.066	0.003
1488.0000	-0.050	0.026	-0.066	0.003
1489.0000	-0.050	0.026	-0.063	0.003
1490.0000	-0.057	0.026	-0.063	0.003
1491.0000	-0.057	0.026	-0.063	0.003
1492.0000	-0.057	0.026	-0.063	0.003
1493.0000	-0.057	0.026	-0.066	0.003
1494.0000	-0.050	0.026	-0.066	0.003
1495.0000	-0.057	0.026	-0.066	0.003
1496.0000	-0.050	0.026	-0.066	0.003
1497.0000	-0.050	0.026	-0.066	0.003
1498.0000	-0.050	0.026	-0.063	0.003
1499.0000	-0.057	0.026	-0.063	0.003
1500.0000	-0.050	0.026	-0.063	0.003
1501.0000	-0.050	0.026	-0.063	0.003
1502.0000	-0.057	0.026	-0.060	0.003
1503.0000	-0.050	0.026	-0.063	0.003
1504.0000	-0.050	0.026	-0.063	0.003
1505.0000	-0.057	0.026	-0.063	0.003
1506.0000	-0.050	0.026	-0.066	0.003
1507.0000	-0.050	0.026	-0.063	0.003
1508.0000	-0.057	0.026	-0.063	0.003
1509.0000	-0.050	0.026	-0.066	0.003
1510.0000	-0.050	0.026	-0.066	0.003
1511.0000	-0.050	0.026	-0.063	0.003
1512.0000	-0.050	0.026	-0.066	0.003
1513.0000	-0.057	0.026	-0.066	0.003
1514.0000	-0.050	0.026	-0.063	0.003
1515.0000	-0.057	0.026	-0.066	0.003
1516.0000	-0.050	0.026	-0.066	0.003
1517.0000	-0.057	0.026	-0.066	0.007
1518.0000	-0.050	0.026	-0.066	0.003
1519.0000	-0.050	0.026	-0.066	0.003
1520.0000	-0.057	0.026	-0.063	0.003
1521.0000	-0.050	0.026	-0.066	0.003
1522.0000	-0.050	0.026	-0.063	0.003
1523.0000	-0.050	0.026	-0.066	0.003
1524.0000	-0.050	0.026	-0.063	0.007
1525.0000	-0.050	0.026	-0.063	0.007

Elapsed Time	Input 1	Input 2	Input 3	Input 4
1526.0000	-0.050	0.026	-0.066	0.003
1527.0000	-0.050	0.026	-0.063	0.003
1528.0000	-0.050	0.026	-0.060	0.007
1529.0000	-0.050	0.026	-0.063	0.003
1530.0000	-0.050	0.026	-0.063	0.007
1531.0000	-0.050	0.026	-0.060	0.007
1532.0000	-0.050	0.026	-0.060	0.007
1533.0000	-0.050	0.026	-0.060	0.007
1534.0000	-0.050	0.026	-0.060	0.007
1535.0000	-0.050	0.026	-0.063	0.007
1536.0000	-0.050	0.026	-0.060	0.007
1537.0000	-0.050	0.026	-0.060	0.007
1538.0000	-0.050	0.026	-0.060	0.007
1539.0000	-0.050	0.026	-0.063	0.007
1540.0000	-0.050	0.026	-0.063	0.007
1541.0000	-0.050	0.026	-0.063	0.007
1542.0000	-0.050	0.026	-0.063	0.007
1543.0000	-0.050	0.026	-0.063	0.007
1544.0000	-0.050	0.026	-0.060	0.007
1545.0000	-0.050	0.026	-0.060	0.007
1546.0000	-0.050	0.029	-0.063	0.007
1547.0000	-0.050	0.026	-0.060	0.007
1548.0000	-0.050	0.029	-0.060	0.007
1549.0000	-0.050	0.026	-0.060	0.007
1550.0000	-0.050	0.029	-0.063	0.007
1551.0000	-0.050	0.026	-0.060	0.007
1552.0000	-0.050	0.029	-0.063	0.007
1553.0000	-0.050	0.026	-0.063	0.007
1554.0000	-0.050	0.026	-0.063	0.007
1555.0000	-0.057	0.026	-0.060	0.007
1556.0000	-0.050	0.026	-0.063	0.007
1557.0000	-0.050	0.029	-0.063	0.007
1558.0000	-0.057	0.026	-0.063	0.007
1559.0000	-0.050	0.029	-0.066	0.007
1560.0000	-0.057	0.026	-0.063	0.007
1561.0000	-0.050	0.029	-0.063	0.007
1562.0000	-0.050	0.026	-0.063	0.007
1563.0000	-0.050	0.026	-0.063	0.007
1564.0000	-0.050	0.026	-0.063	0.007
1565.0000	-0.050	0.026	-0.063	0.007
1566.0000	-0.050	0.029	-0.063	0.007
1567.0000	-0.050	0.026	-0.063	0.007
1568.0000	-0.050	0.026	-0.063	0.007
1569.0000	-0.050	0.026	-0.063	0.003
1570.0000	-0.050	0.026	-0.063	0.007
1571.0000	-0.050	0.026	-0.063	0.007
1572.0000	-0.050	0.026	-0.060	0.003
1573.0000	-0.050	0.029	-0.060	0.007
1574.0000	-0.050	0.026	-0.063	0.003
1575.0000	-0.050	0.029	-0.060	0.007
1576.0000	-0.050	0.029	-0.060	0.007
1577.0000	-0.050	0.029	-0.063	0.007
1578.0000	-0.050	0.029	-0.060	0.007
1579.0000	-0.050	0.029	-0.060	0.007
1580.0000	-0.050	0.026	-0.060	0.007
1581.0000	-0.050	0.026	-0.060	0.007
1582.0000	-0.050	0.026	-0.060	0.007
1583.0000	-0.044	0.029	-0.060	0.007
1584.0000	-0.050	0.026	-0.060	0.007
1585.0000	-0.050	0.029	-0.057	0.007
1586.0000	-0.050	0.029	-0.060	0.007
1587.0000	-0.050	0.029	-0.060	0.007
1588.0000	-0.050	0.029	-0.057	0.010
1589.0000	-0.050	0.029	-0.060	0.007
1590.0000	-0.050	0.026	-0.060	0.007
1591.0000	-0.050	0.029	-0.060	0.007
1592.0000	-0.050	0.029	-0.060	0.010
1593.0000	-0.050	0.029	-0.060	0.010
1594.0000	-0.050	0.029	-0.060	0.010
1595.0000	-0.050	0.029	-0.060	0.010
1596.0000	-0.050	0.029	-0.060	0.007
1597.0000	-0.050	0.026	-0.060	0.007
1598.0000	-0.050	0.029	-0.060	0.010
1599.0000	-0.050	0.029	-0.060	0.010
1600.0000	-0.050	0.026	-0.060	0.010
1601.0000	-0.050	0.029	-0.060	0.010
1602.0000	-0.050	0.029	-0.060	0.007
1603.0000	-0.050	0.029	-0.063	0.007
1604.0000	-0.050	0.029	-0.060	0.010
1605.0000	-0.050	0.029	-0.060	0.010
1606.0000	-0.050	0.029	-0.060	0.010
1607.0000	-0.050	0.029	-0.060	0.007
1608.0000	-0.050	0.029	-0.060	0.007
1609.0000	-0.050	0.029	-0.060	0.007
1610.0000	-0.050	0.029	-0.060	0.010
1611.0000	-0.050	0.026	-0.060	0.010
1612.0000	-0.050	0.026	-0.060	0.007
1613.0000	-0.050	0.026	-0.063	0.007
1614.0000	-0.050	0.026	-0.060	0.010
1615.0000	-0.050	0.026	-0.060	0.007
1616.0000	-0.050	0.029	-0.060	0.010
1617.0000	-0.050	0.026	-0.060	0.010
1618.0000	-0.050	0.026	-0.060	0.010
1619.0000	-0.050	0.026	-0.057	0.010
1620.0000	-0.050	0.026	-0.060	0.010
1621.0000	-0.050	0.026	-0.060	0.010
1622.0000	-0.050	0.026	-0.057	0.010
1623.0000	-0.050	0.026	-0.060	0.010
1624.0000	-0.050	0.026	-0.060	0.010
1625.0000	-0.050	0.029	-0.060	0.010
1626.0000	-0.050	0.026	-0.057	0.010
1627.0000	-0.050	0.026	-0.057	0.010
1628.0000	-0.050	0.029	-0.060	0.010
1629.0000	-0.050	0.026	-0.060	0.010

Elapsed Time	Input 1	Input 2	Input 3	Input 4
1630.0000	-0.050	0.029	-0.060	0.010
1631.0000	-0.050	0.026	-0.060	0.010
1632.0000	-0.050	0.029	-0.060	0.010
1633.0000	-0.050	0.029	-0.060	0.010
1634.0000	-0.050	0.026	-0.060	0.010
1635.0000	-0.050	0.029	-0.060	0.010
1636.0000	-0.050	0.029	-0.060	0.010
1637.0000	-0.050	0.026	-0.060	0.010
1638.0000	-0.050	0.026	-0.060	0.010
1639.0000	-0.050	0.029	-0.060	0.010
1640.0000	-0.044	0.026	-0.060	0.010
1641.0000	-0.050	0.026	-0.057	0.010
1642.0000	-0.050	0.026	-0.060	0.010
1643.0000	-0.044	0.029	-0.057	0.010
1644.0000	-0.050	0.026	-0.057	0.010
1645.0000	-0.050	0.029	-0.057	0.010
1646.0000	-0.050	0.026	-0.060	0.010
1647.0000	-0.050	0.026	-0.060	0.010
1648.0000	-0.050	0.029	-0.057	0.010
1649.0000	-0.050	0.029	-0.057	0.010
1650.0000	-0.050	0.026	-0.060	0.010
1651.0000	-0.050	0.029	-0.057	0.010
1652.0000	-0.050	0.026	-0.057	0.010
1653.0000	-0.050	0.029	-0.057	0.010
1654.0000	-0.050	0.029	-0.057	0.010
1655.0000	-0.050	0.026	-0.060	0.010
1656.0000	-0.050	0.026	-0.057	0.010
1657.0000	-0.050	0.029	-0.057	0.010
1658.0000	-0.044	0.029	-0.057	0.010
1659.0000	-0.050	0.026	-0.057	0.010
1660.0000	-0.044	0.026	-0.057	0.010
1661.0000	-0.044	0.026	-0.057	0.010
1662.0000	-0.044	0.026	-0.057	0.010
1663.0000	-0.044	0.026	-0.054	0.010
1664.0000	-0.044	0.026	-0.054	0.010
1665.0000	-0.044	0.026	-0.057	0.010
1666.0000	-0.044	0.029	-0.054	0.010
1667.0000	-0.044	0.029	-0.057	0.010
1668.0000	-0.050	0.026	-0.057	0.010
1669.0000	-0.050	0.026	-0.057	0.010
1670.0000	-0.050	0.026	-0.057	0.010
1671.0000	-0.050	0.026	-0.060	0.010
1672.0000	-0.050	0.026	-0.057	0.010
1673.0000	-0.050	0.026	-0.057	0.010
1674.0000	-0.050	0.026	-0.057	0.010
1675.0000	-0.050	0.026	-0.057	0.010
1676.0000	-0.050	0.026	-0.057	0.010
1677.0000	-0.044	0.026	-0.057	0.010
1678.0000	-0.044	0.026	-0.054	0.010
1679.0000	-0.044	0.026	-0.054	0.010
1680.0000	-0.044	0.026	-0.054	0.013
1681.0000	-0.044	0.026	-0.054	0.013
1682.0000	-0.044	0.026	-0.054	0.010
1683.0000	-0.044	0.026	-0.054	0.013
1684.0000	-0.044	0.026	-0.054	0.013
1685.0000	-0.044	0.026	-0.054	0.013
1686.0000	-0.044	0.026	-0.054	0.013
1687.0000	-0.044	0.026	-0.054	0.013
1688.0000	-0.044	0.026	-0.057	0.013
1689.0000	-0.044	0.026	-0.057	0.013
1690.0000	-0.044	0.026	-0.054	0.013
1691.0000	-0.044	0.026	-0.057	0.013
1692.0000	-0.044	0.026	-0.057	0.013
1693.0000	-0.044	0.026	-0.057	0.013
1694.0000	-0.044	0.029	-0.057	0.013
1695.0000	-0.044	0.026	-0.057	0.013
1696.0000	-0.044	0.026	-0.054	0.013
1697.0000	-0.044	0.026	-0.054	0.013
1698.0000	-0.044	0.026	-0.054	0.013
1699.0000	-0.044	0.029	-0.057	0.013
1700.0000	-0.044	0.026	-0.057	0.013
1701.0000	-0.044	0.026	-0.054	0.013
1702.0000	-0.044	0.029	-0.057	0.013
1703.0000	-0.044	0.026	-0.057	0.013
1704.0000	-0.044	0.026	-0.057	0.013
1705.0000	-0.044	0.026	-0.057	0.013
1706.0000	-0.044	0.026	-0.057	0.013
1707.0000	-0.044	0.026	-0.057	0.013
1708.0000	-0.044	0.026	-0.057	0.013
1709.0000	-0.044	0.026	-0.054	0.013
1710.0000	-0.044	0.029	-0.057	0.013
1711.0000	-0.044	0.029	-0.057	0.013
1712.0000	-0.044	0.029	-0.057	0.013
1713.0000	-0.044	0.029	-0.057	0.013
1714.0000	-0.044	0.026	-0.057	0.013
1715.0000	-0.050	0.026	-0.057	0.013
1716.0000	-0.050	0.026	-0.057	0.013
1717.0000	-0.050	0.026	-0.057	0.013
1718.0000	-0.050	0.029	-0.057	0.013
1719.0000	-0.044	0.026	-0.057	0.013
1720.0000	-0.050	0.026	-0.057	0.013
1721.0000	-0.050	0.029	-0.057	0.013
1722.0000	-0.050	0.029	-0.057	0.013
1723.0000	-0.050	0.026	-0.060	0.013
1724.0000	-0.050	0.029	-0.060	0.013
1725.0000	-0.050	0.029	-0.060	0.013
1726.0000	-0.050	0.029	-0.057	0.010
1727.0000	-0.050	0.026	-0.060	0.013
1728.0000	-0.050	0.029	-0.057	0.013
1729.0000	-0.044	0.029	-0.057	0.013
1730.0000	-0.044	0.029	-0.057	0.013
1731.0000	-0.044	0.029	-0.057	0.013
1732.0000	-0.044	0.029	-0.057	0.013
1733.0000	-0.050	0.029	-0.057	0.010

Elapsed Time	Input 1	Input 2	Input 3	Input 4
1734.0000	-0.044	0.026	-0.057	0.013
1735.0000	-0.050	0.029	-0.060	0.013
1736.0000	-0.050	0.029	-0.057	0.013
1737.0000	-0.050	0.029	-0.060	0.013
1738.0000	-0.050	0.026	-0.057	0.010
1739.0000	-0.050	0.029	-0.057	0.013
1740.0000	-0.050	0.026	-0.060	0.010
1741.0000	-0.050	0.026	-0.060	0.010
1742.0000	-0.050	0.029	-0.060	0.010
1743.0000	-0.050	0.026	-0.060	0.010
1744.0000	-0.050	0.026	-0.060	0.013
1745.0000	-0.050	0.026	-0.060	0.010
1746.0000	-0.050	0.026	-0.057	0.010
1747.0000	-0.050	0.029	-0.057	0.010
1748.0000	-0.050	0.026	-0.060	0.010
1749.0000	-0.050	0.029	-0.060	0.010
1750.0000	-0.050	0.029	-0.057	0.010
1751.0000	-0.050	0.029	-0.060	0.010
1752.0000	-0.050	0.029	-0.060	0.010
1753.0000	-0.050	0.026	-0.057	0.010
1754.0000	-0.050	0.026	-0.060	0.010
1755.0000	-0.050	0.029	-0.060	0.010
1756.0000	-0.050	0.026	-0.060	0.010
1757.0000	-0.050	0.029	-0.057	0.010
1758.0000	-0.050	0.029	-0.057	0.010
1759.0000	-0.050	0.029	-0.057	0.013
1760.0000	-0.044	0.029	-0.057	0.010
1761.0000	-0.044	0.029	-0.057	0.010
1762.0000	-0.044	0.029	-0.057	0.010
1763.0000	-0.050	0.029	-0.057	0.010
1764.0000	-0.050	0.029	-0.057	0.010
1765.0000	-0.044	0.029	-0.057	0.010
1766.0000	-0.050	0.029	-0.054	0.010
1767.0000	-0.044	0.029	-0.054	0.010
1768.0000	-0.050	0.029	-0.057	0.010
1769.0000	-0.044	0.029	-0.057	0.010
1770.0000	-0.050	0.029	-0.057	0.010
1771.0000	-0.050	0.029	-0.057	0.013
1772.0000	-0.050	0.029	-0.060	0.010
1773.0000	-0.050	0.029	-0.057	0.010
1774.0000	-0.050	0.029	-0.057	0.010
1775.0000	-0.050	0.029	-0.057	0.010
1776.0000	-0.050	0.029	-0.057	0.010
1777.0000	-0.050	0.029	-0.057	0.010
1778.0000	-0.050	0.026	-0.057	0.010
1779.0000	-0.050	0.029	-0.060	0.010
1780.0000	-0.050	0.029	-0.060	0.010
1781.0000	-0.050	0.029	-0.060	0.010
1782.0000	-0.050	0.029	-0.060	0.010
1783.0000	-0.050	0.029	-0.060	0.010
1784.0000	-0.050	0.026	-0.060	0.010
1785.0000	-0.050	0.026	-0.060	0.010
1786.0000	-0.050	0.026	-0.060	0.010
1787.0000	-0.050	0.029	-0.060	0.010
1788.0000	-0.050	0.026	-0.060	0.010
1789.0000	-0.050	0.026	-0.060	0.010
1790.0000	-0.050	0.026	-0.060	0.010
1791.0000	-0.050	0.029	-0.060	0.010
1792.0000	-0.050	0.029	-0.060	0.010
1793.0000	-0.050	0.026	-0.060	0.010
1794.0000	-0.050	0.026	-0.060	0.010
1795.0000	-0.050	0.026	-0.060	0.010
1796.0000	-0.050	0.026	-0.060	0.010
1797.0000	-0.050	0.026	-0.057	0.010
1798.0000	-0.044	0.026	-0.057	0.010
1799.0000	-0.050	0.029	-0.057	0.010
1800.0000	-0.044	0.029	-0.057	0.010
1801.0000	-0.044	0.029	-0.057	0.010
1802.0000	-0.044	0.029	-0.054	0.010
1803.0000	-0.044	0.029	-0.054	0.013
1804.0000	-0.044	0.029	-0.057	0.010
1805.0000	-0.044	0.029	-0.057	0.010
1806.0000	-0.044	0.029	-0.057	0.010
1807.0000	-0.050	0.029	-0.057	0.010
1808.0000	-0.050	0.029	-0.057	0.010
1809.0000	-0.050	0.026	-0.060	0.010
1810.0000	-0.050	0.029	-0.060	0.010
1811.0000	-0.050	0.029	-0.060	0.010
1812.0000	-0.050	0.029	-0.060	0.010
1813.0000	-0.050	0.029	-0.060	0.010
1814.0000	-0.050	0.029	-0.060	0.010
1815.0000	-0.050	0.029	-0.063	0.010
1816.0000	-0.050	0.029	-0.063	0.010
1817.0000	-0.057	0.029	-0.060	0.010
1818.0000	-0.050	0.026	-0.060	0.010
1819.0000	-0.050	0.029	-0.063	0.010
1820.0000	-0.050	0.029	-0.060	0.010
1821.0000	-0.050	0.029	-0.060	0.010
1822.0000	-0.050	0.029	-0.060	0.010
1823.0000	-0.050	0.029	-0.060	0.010
1824.0000	-0.050	0.029	-0.060	0.010
1825.0000	-0.050	0.029	-0.060	0.010
1826.0000	-0.050	0.029	-0.060	0.010
1827.0000	-0.050	0.029	-0.060	0.007
1828.0000	-0.050	0.029	-0.060	0.007
1829.0000	-0.050	0.029	-0.060	0.007
1830.0000	-0.050	0.029	-0.060	0.007
1831.0000	-0.050	0.029	-0.060	0.007
1832.0000	-0.050	0.029	-0.060	0.007
1833.0000	-0.050	0.029	-0.060	0.007
1834.0000	-0.050	0.029	-0.060	0.010
1835.0000	-0.050	0.029	-0.060	0.010
1836.0000	-0.050	0.026	-0.060	0.007
1837.0000	-0.050	0.029	-0.060	0.007

Elapsed Time	Input 1	Input 2	Input 3	Input 4
1838.0000	-0.050	0.029	-0.060	0.007
1839.0000	-0.050	0.029	-0.060	0.007
1840.0000	-0.050	0.029	-0.060	0.007
1841.0000	-0.050	0.029	-0.060	0.007
1842.0000	-0.050	0.029	-0.060	0.007
1843.0000	-0.050	0.029	-0.060	0.007
1844.0000	-0.050	0.029	-0.060	0.007
1845.0000	-0.050	0.029	-0.060	0.007
1846.0000	-0.050	0.029	-0.060	0.007
1847.0000	-0.050	0.029	-0.063	0.007
1848.0000	-0.057	0.029	-0.063	0.007
1849.0000	-0.057	0.029	-0.063	0.007
1850.0000	-0.057	0.029	-0.063	0.007
1851.0000	-0.057	0.029	-0.063	0.007
1852.0000	-0.057	0.029	-0.066	0.007
1853.0000	-0.057	0.029	-0.063	0.007
1854.0000	-0.057	0.029	-0.063	0.007
1855.0000	-0.057	0.026	-0.066	0.007
1856.0000	-0.057	0.026	-0.063	0.003
1857.0000	-0.057	0.029	-0.066	0.003
1858.0000	-0.057	0.029	-0.066	0.007
1859.0000	-0.057	0.029	-0.063	0.003
1860.0000	-0.057	0.029	-0.063	0.007
1861.0000	-0.057	0.029	-0.066	0.007
1862.0000	-0.057	0.029	-0.066	0.007
1863.0000	-0.057	0.029	-0.063	0.003
1864.0000	-0.057	0.026	-0.066	0.003
1865.0000	-0.057	0.026	-0.063	0.003
1866.0000	-0.057	0.029	-0.066	0.003
1867.0000	-0.057	0.029	-0.063	0.003
1868.0000	-0.057	0.029	-0.063	0.007
1869.0000	-0.057	0.032	-0.063	0.007
1870.0000	-0.057	0.029	-0.066	0.003
1871.0000	-0.057	0.029	-0.066	0.003
1872.0000	-0.057	0.029	-0.066	0.003
1873.0000	-0.057	0.029	-0.066	0.003
1874.0000	-0.057	0.029	-0.066	0.003
1875.0000	-0.057	0.029	-0.066	0.003
1876.0000	-0.057	0.029	-0.066	0.003
1877.0000	-0.057	0.029	-0.066	0.003
1878.0000	-0.057	0.029	-0.066	0.003
1879.0000	-0.057	0.029	-0.066	0.003
1880.0000	-0.057	0.029	-0.066	0.003
1881.0000	-0.063	0.029	-0.069	0.003
1882.0000	-0.063	0.029	-0.069	0.000
1883.0000	-0.063	0.029	-0.069	0.003
1884.0000	-0.063	0.029	-0.073	0.003
1885.0000	-0.063	0.029	-0.073	0.000
1886.0000	-0.063	0.029	-0.073	0.000
1887.0000	-0.063	0.029	-0.069	0.000
1888.0000	-0.063	0.029	-0.069	0.000
1889.0000	-0.063	0.029	-0.069	0.000
1890.0000	-0.063	0.029	-0.073	0.000
1891.0000	-0.063	0.029	-0.073	0.000
1892.0000	-0.063	0.029	-0.073	0.000
1893.0000	-0.063	0.029	-0.073	0.000
1894.0000	-0.063	0.029	-0.073	0.000
1895.0000	-0.063	0.029	-0.073	-0.003
1896.0000	-0.063	0.029	-0.076	-0.003
1897.0000	-0.069	0.029	-0.076	-0.003
1898.0000	-0.069	0.029	-0.076	-0.003
1899.0000	-0.069	0.029	-0.076	-0.003
1900.0000	-0.069	0.029	-0.076	-0.003
1901.0000	-0.069	0.029	-0.076	-0.003
1902.0000	-0.063	0.029	-0.076	-0.003
1903.0000	-0.069	0.029	-0.076	-0.003
1904.0000	-0.069	0.029	-0.076	-0.003
1905.0000	-0.069	0.029	-0.076	-0.003
1906.0000	-0.069	0.029	-0.076	-0.003
1907.0000	-0.069	0.029	-0.076	-0.003
1908.0000	-0.069	0.029	-0.076	-0.006
1909.0000	-0.063	0.029	-0.073	-0.003
1910.0000	-0.063	0.029	-0.073	-0.003
1911.0000	-0.063	0.029	-0.073	-0.006
1912.0000	-0.063	0.029	-0.073	-0.006
1913.0000	-0.063	0.029	-0.073	-0.006
1914.0000	-0.063	0.029	-0.073	-0.006
1915.0000	-0.063	0.029	-0.073	-0.003
1916.0000	-0.063	0.029	-0.073	-0.006
1917.0000	-0.063	0.029	-0.073	-0.006
1918.0000	-0.063	0.029	-0.073	-0.006
1919.0000	-0.063	0.029	-0.073	-0.006
1920.0000	-0.063	0.029	-0.073	-0.006
1921.0000	-0.069	0.029	-0.073	-0.006
1922.0000	-0.063	0.026	-0.073	-0.006
1923.0000	-0.063	0.029	-0.073	-0.006
1924.0000	-0.063	0.026	-0.073	-0.006
1925.0000	-0.063	0.029	-0.069	-0.006
1926.0000	-0.063	0.029	-0.069	-0.003
1927.0000	-0.063	0.029	-0.069	-0.006
1928.0000	-0.063	0.026	-0.069	-0.003
1929.0000	-0.063	0.029	-0.069	-0.006
1930.0000	-0.063	0.026	-0.069	-0.006
1931.0000	-0.063	0.029	-0.069	-0.003
1932.0000	-0.063	0.029	-0.069	-0.003
1933.0000	-0.057	0.026	-0.069	-0.003
1934.0000	-0.057	0.026	-0.066	-0.003
1935.0000	-0.057	0.026	-0.066	-0.003
1936.0000	-0.057	0.029	-0.066	-0.003
1937.0000	-0.057	0.029	-0.066	-0.003
1938.0000	-0.057	0.026	-0.063	-0.003
1939.0000	-0.057	0.029	-0.063	-0.003
1940.0000	-0.057	0.029	-0.066	-0.003
1941.0000	-0.057	0.029	-0.063	0.000

Elapsed Time	Input 1	Input 2	Input 3	Input 4
1942.0000	-0.057	0.029	-0.063	-0.003
1943.0000	-0.057	0.029	-0.066	-0.003
1944.0000	-0.057	0.029	-0.066	-0.003
1945.0000	-0.057	0.026	-0.066	-0.003
1946.0000	-0.057	0.026	-0.063	-0.003
1947.0000	-0.057	0.026	-0.066	0.000
1948.0000	-0.057	0.026	-0.066	0.000
1949.0000	-0.057	0.026	-0.066	0.000
1950.0000	-0.057	0.026	-0.066	0.000
1951.0000	-0.057	0.026	-0.066	0.000
1952.0000	-0.057	0.026	-0.066	0.000
1953.0000	-0.057	0.026	-0.063	0.000
1954.0000	-0.057	0.026	-0.063	0.000
1955.0000	-0.057	0.026	-0.066	0.000
1956.0000	-0.057	0.026	-0.066	0.000
1957.0000	-0.063	0.026	-0.066	0.000
1958.0000	-0.063	0.026	-0.066	0.000
1959.0000	-0.063	0.026	-0.069	0.000
1960.0000	-0.063	0.026	-0.069	0.000
1961.0000	-0.063	0.026	-0.069	-0.003
1962.0000	-0.063	0.026	-0.069	-0.003
1963.0000	-0.063	0.026	-0.069	0.000
1964.0000	-0.063	0.026	-0.069	-0.003
1965.0000	-0.063	0.026	-0.073	-0.003
1966.0000	-0.063	0.026	-0.069	-0.003
1967.0000	-0.063	0.026	-0.069	-0.003
1968.0000	-0.063	0.026	-0.073	-0.003
1969.0000	-0.063	0.026	-0.073	-0.003
1970.0000	-0.063	0.026	-0.069	-0.003
1971.0000	-0.063	0.026	-0.069	-0.003
1972.0000	-0.063	0.026	-0.069	-0.003
1973.0000	-0.063	0.026	-0.069	-0.003
1974.0000	-0.057	0.026	-0.069	-0.003
1975.0000	-0.063	0.026	-0.069	-0.003
1976.0000	-0.063	0.026	-0.069	-0.003
1977.0000	-0.063	0.026	-0.069	-0.003
1978.0000	-0.063	0.026	-0.069	-0.003
1979.0000	-0.063	0.026	-0.069	-0.003
1980.0000	-0.063	0.026	-0.069	-0.003
1981.0000	-0.063	0.026	-0.069	-0.003
1982.0000	-0.057	0.026	-0.069	-0.003
1983.0000	-0.063	0.026	-0.069	-0.003
1984.0000	-0.063	0.029	-0.069	-0.003
1985.0000	-0.057	0.026	-0.066	-0.003
1986.0000	-0.057	0.026	-0.066	-0.003
1987.0000	-0.063	0.026	-0.066	-0.003
1988.0000	-0.057	0.026	-0.066	-0.003
1989.0000	-0.057	0.026	-0.066	-0.003
1990.0000	-0.057	0.026	-0.066	0.000
1991.0000	-0.057	0.026	-0.066	0.000
1992.0000	-0.057	0.029	-0.066	-0.003
1993.0000	-0.057	0.029	-0.063	0.000
1994.0000	-0.057	0.026	-0.063	0.000
1995.0000	-0.057	0.029	-0.063	0.000
1996.0000	-0.057	0.029	-0.066	0.000
1997.0000	-0.057	0.026	-0.063	0.000
1998.0000	-0.057	0.026	-0.066	0.000
1999.0000	-0.057	0.026	-0.066	0.000
2000.0000	-0.057	0.026	-0.066	0.000
2001.0000	-0.057	0.026	-0.066	0.000
2002.0000	-0.057	0.026	-0.066	0.000
2003.0000	-0.057	0.026	-0.066	0.000
2004.0000	-0.057	0.026	-0.069	0.000
2005.0000	-0.057	0.026	-0.069	0.000
2006.0000	-0.057	0.026	-0.066	0.000
2007.0000	-0.057	0.026	-0.069	0.000
2008.0000	-0.057	0.026	-0.066	0.000
2009.0000	-0.057	0.026	-0.066	0.000
2010.0000	-0.057	0.026	-0.066	0.000
2011.0000	-0.057	0.026	-0.066	0.000
2012.0000	-0.057	0.026	-0.063	0.000
2013.0000	-0.050	0.029	-0.063	0.000
2014.0000	-0.057	0.026	-0.060	0.000
2015.0000	-0.050	0.026	-0.063	0.003
2016.0000	-0.050	0.029	-0.060	0.003
2017.0000	-0.057	0.029	-0.060	0.003
2018.0000	-0.050	0.026	-0.063	0.003
2019.0000	-0.057	0.029	-0.060	0.003
2020.0000	-0.057	0.029	-0.060	0.003
2021.0000	-0.050	0.026	-0.060	0.003
2022.0000	-0.050	0.026	-0.063	0.003
2023.0000	-0.050	0.026	-0.063	0.003
2024.0000	-0.050	0.029	-0.063	0.003
2025.0000	-0.050	0.029	-0.063	0.003
2026.0000	-0.050	0.026	-0.063	0.003
2027.0000	-0.057	0.026	-0.063	0.003
2028.0000	-0.057	0.026	-0.063	0.003
2029.0000	-0.050	0.026	-0.063	0.003
2030.0000	-0.057	0.026	-0.063	0.003
2031.0000	-0.057	0.026	-0.060	0.003
2032.0000	-0.050	0.026	-0.060	0.003
2033.0000	-0.050	0.026	-0.063	0.003
2034.0000	-0.050	0.026	-0.060	0.003
2035.0000	-0.050	0.026	-0.060	0.003
2036.0000	-0.050	0.026	-0.060	0.003
2037.0000	-0.050	0.026	-0.060	0.003
2038.0000	-0.050	0.026	-0.060	0.003
2039.0000	-0.050	0.026	-0.057	0.003
2040.0000	-0.050	0.026	-0.057	0.007
2041.0000	-0.050	0.026	-0.057	0.007
2042.0000	-0.050	0.026	-0.057	0.007
2043.0000	-0.050	0.026	-0.057	0.007
2044.0000	-0.050	0.026	-0.060	0.007
2045.0000	-0.050	0.026	-0.060	0.007

Elapsed Time	Input 1	Input 2	Input 3	Input 4
2046.0000	-0.050	0.026	-0.060	0.007
2047.0000	-0.057	0.026	-0.060	0.007
2048.0000	-0.050	0.026	-0.063	0.003
2049.0000	-0.057	0.026	-0.063	0.007
2050.0000	-0.050	0.026	-0.063	0.007
2051.0000	-0.057	0.026	-0.066	0.003
2052.0000	-0.057	0.026	-0.066	0.003
2053.0000	-0.057	0.026	-0.066	0.003
2054.0000	-0.057	0.026	-0.066	0.003
2055.0000	-0.057	0.026	-0.066	0.003
2056.0000	-0.063	0.026	-0.066	0.003
2057.0000	-0.057	0.026	-0.066	0.003
2058.0000	-0.063	0.026	-0.069	0.003
2059.0000	-0.063	0.026	-0.066	0.003
2060.0000	-0.063	0.026	-0.069	0.003
2061.0000	-0.063	0.026	-0.069	0.003
2062.0000	-0.063	0.026	-0.069	0.003
2063.0000	-0.063	0.026	-0.069	0.003
2064.0000	-0.063	0.026	-0.069	0.000
2065.0000	-0.063	0.026	-0.069	0.000
2066.0000	-0.063	0.026	-0.069	0.000
2067.0000	-0.063	0.026	-0.073	0.000
2068.0000	-0.063	0.026	-0.073	0.000
2069.0000	-0.063	0.026	-0.073	0.000
2070.0000	-0.063	0.026	-0.073	0.000
2071.0000	-0.063	0.026	-0.073	0.000
2072.0000	-0.063	0.026	-0.069	0.000
2073.0000	-0.063	0.026	-0.069	0.000
2074.0000	-0.063	0.026	-0.069	0.000
2075.0000	-0.063	0.026	-0.069	0.000
2076.0000	-0.063	0.026	-0.073	0.000
2077.0000	-0.063	0.026	-0.073	-0.003
2078.0000	-0.063	0.026	-0.073	0.000
2079.0000	-0.063	0.026	-0.069	-0.003
2080.0000	-0.063	0.026	-0.073	-0.003
2081.0000	-0.063	0.026	-0.069	0.000
2082.0000	-0.063	0.026	-0.069	-0.003
2083.0000	-0.063	0.026	-0.069	-0.003
2084.0000	-0.057	0.026	-0.069	-0.003
2085.0000	-0.063	0.026	-0.069	-0.003
2086.0000	-0.063	0.026	-0.069	-0.003
2087.0000	-0.063	0.026	-0.069	-0.003
2088.0000	-0.063	0.026	-0.066	-0.003
2089.0000	-0.063	0.026	-0.069	-0.003
2090.0000	-0.063	0.026	-0.069	-0.003
2091.0000	-0.063	0.026	-0.069	-0.003
2092.0000	-0.063	0.026	-0.069	-0.003
2093.0000	-0.063	0.026	-0.069	-0.003
2094.0000	-0.057	0.026	-0.069	-0.003
2095.0000	-0.063	0.026	-0.066	-0.003
2096.0000	-0.057	0.026	-0.066	-0.003
2097.0000	-0.057	0.026	-0.066	0.000
2098.0000	-0.057	0.026	-0.066	0.000
2099.0000	-0.057	0.026	-0.066	0.000
2100.0000	-0.057	0.026	-0.066	0.000
2101.0000	-0.057	0.026	-0.066	0.000
2102.0000	-0.057	0.026	-0.066	-0.003
2103.0000	-0.057	0.026	-0.066	0.000
2104.0000	-0.057	0.026	-0.066	0.000
2105.0000	-0.057	0.026	-0.063	0.000
2106.0000	-0.057	0.026	-0.063	0.000
2107.0000	-0.057	0.026	-0.063	0.000
2108.0000	-0.050	0.026	-0.063	0.000
2109.0000	-0.050	0.026	-0.063	0.000
2110.0000	-0.050	0.029	-0.060	0.000
2111.0000	-0.050	0.026	-0.063	0.000
2112.0000	-0.050	0.026	-0.063	0.000
2113.0000	-0.050	0.026	-0.063	0.000
2114.0000	-0.057	0.026	-0.063	0.000
2115.0000	-0.057	0.026	-0.063	0.000
2116.0000	-0.057	0.026	-0.063	0.000
2117.0000	-0.057	0.026	-0.063	0.000
2118.0000	-0.057	0.026	-0.063	0.003
2119.0000	-0.057	0.026	-0.063	0.003
2120.0000	-0.057	0.026	-0.066	0.003
2121.0000	-0.057	0.026	-0.066	0.000
2122.0000	-0.057	0.026	-0.066	0.000
2123.0000	-0.057	0.026	-0.066	0.000
2124.0000	-0.057	0.026	-0.066	0.000
2125.0000	-0.063	0.026	-0.069	0.000
2126.0000	-0.063	0.026	-0.069	0.000
2127.0000	-0.063	0.026	-0.069	0.000
2128.0000	-0.063	0.026	-0.069	0.000
2129.0000	-0.057	0.026	-0.069	0.000
2130.0000	-0.057	0.026	-0.066	0.000
2131.0000	-0.063	0.026	-0.069	0.000
2132.0000	-0.057	0.026	-0.066	0.000
2133.0000	-0.057	0.026	-0.066	0.000
2134.0000	-0.057	0.026	-0.066	0.000
2135.0000	-0.057	0.026	-0.066	0.000
2136.0000	-0.057	0.026	-0.066	0.000
2137.0000	-0.057	0.026	-0.066	0.000
2138.0000	-0.057	0.026	-0.066	0.000
2139.0000	-0.057	0.026	-0.066	0.000
2140.0000	-0.057	0.026	-0.066	0.000
2141.0000	-0.057	0.026	-0.066	0.000
2142.0000	-0.057	0.026	-0.066	0.000
2143.0000	-0.057	0.026	-0.063	0.000
2144.0000	-0.050	0.026	-0.063	0.003
2145.0000	-0.050	0.026	-0.060	0.000
2146.0000	-0.050	0.026	-0.060	0.003
2147.0000	-0.050	0.026	-0.060	0.003
2148.0000	-0.050	0.026	-0.060	0.003
2149.0000	-0.050	0.029	-0.060	0.003

Elapsed Time	Input 1	Input 2	Input 3	Input 4
2150.0000	-0.057	0.026	-0.063	0.003
2151.0000	-0.057	0.026	-0.063	0.003
2152.0000	-0.057	0.026	-0.063	0.003
2153.0000	-0.057	0.026	-0.063	0.003
2154.0000	-0.057	0.026	-0.066	0.003
2155.0000	-0.057	0.026	-0.063	0.003
2156.0000	-0.057	0.026	-0.063	0.000
2157.0000	-0.050	0.026	-0.063	0.003
2158.0000	-0.050	0.026	-0.063	0.003
2159.0000	-0.057	0.026	-0.060	0.003
2160.0000	-0.057	0.026	-0.060	0.003
2161.0000	-0.057	0.026	-0.063	0.003
2162.0000	-0.057	0.026	-0.063	0.003
2163.0000	-0.057	0.026	-0.063	0.003
2164.0000	-0.057	0.026	-0.063	0.003
2165.0000	-0.050	0.026	-0.063	0.003
2166.0000	-0.050	0.026	-0.063	0.003
2167.0000	-0.050	0.026	-0.060	0.003
2168.0000	-0.050	0.026	-0.060	0.003
2169.0000	-0.057	0.026	-0.063	0.003
2170.0000	-0.050	0.026	-0.060	0.003
2171.0000	-0.050	0.026	-0.063	0.003
2172.0000	-0.050	0.026	-0.060	0.003
2173.0000	-0.057	0.029	-0.063	0.003
2174.0000	-0.057	0.026	-0.063	0.003
2175.0000	-0.057	0.026	-0.063	0.003
2176.0000	-0.057	0.026	-0.066	0.003
2177.0000	-0.057	0.026	-0.066	0.003
2178.0000	-0.057	0.026	-0.066	0.003
2179.0000	-0.057	0.026	-0.063	0.003
2180.0000	-0.050	0.026	-0.063	0.003
2181.0000	-0.050	0.026	-0.060	0.003
2182.0000	-0.050	0.026	-0.063	0.003
2183.0000	-0.050	0.026	-0.063	0.003
2184.0000	-0.050	0.026	-0.060	0.003
2185.0000	-0.050	0.029	-0.060	0.007
2186.0000	-0.050	0.026	-0.060	0.003
2187.0000	-0.057	0.026	-0.063	0.003
2188.0000	-0.050	0.026	-0.063	0.003
2189.0000	-0.050	0.026	-0.060	0.003
2190.0000	-0.050	0.026	-0.060	0.003
2191.0000	-0.050	0.026	-0.060	0.007
2192.0000	-0.057	0.026	-0.063	0.003
2193.0000	-0.057	0.026	-0.060	0.007
2194.0000	-0.057	0.026	-0.063	0.003
2195.0000	-0.050	0.026	-0.063	0.003
2196.0000	-0.057	0.026	-0.063	0.003
2197.0000	-0.050	0.026	-0.063	0.007
2198.0000	-0.057	0.026	-0.063	0.007
2199.0000	-0.050	0.026	-0.063	0.003
2200.0000	-0.057	0.026	-0.063	0.003
2201.0000	-0.057	0.026	-0.063	0.003
2202.0000	-0.057	0.026	-0.066	0.003
2203.0000	-0.057	0.026	-0.063	0.003
2204.0000	-0.057	0.026	-0.063	0.007
2205.0000	-0.050	0.026	-0.063	0.003
2206.0000	-0.050	0.026	-0.063	0.003
2207.0000	-0.050	0.026	-0.060	0.003
2208.0000	-0.050	0.026	-0.060	0.007
2209.0000	-0.050	0.026	-0.060	0.007
2210.0000	-0.050	0.026	-0.060	0.007
2211.0000	-0.050	0.029	-0.060	0.007
2212.0000	-0.057	0.029	-0.060	0.003
2213.0000	-0.050	0.026	-0.063	0.007
2214.0000	-0.057	0.026	-0.063	0.007
2215.0000	-0.050	0.026	-0.063	0.007
2216.0000	-0.050	0.026	-0.060	0.007
2217.0000	-0.050	0.026	-0.060	0.003
2218.0000	-0.050	0.026	-0.057	0.007
2219.0000	-0.050	0.026	-0.057	0.007
2220.0000	-0.050	0.026	-0.057	0.007
2221.0000	-0.050	0.026	-0.057	0.007
2222.0000	-0.050	0.029	-0.057	0.007
2223.0000	-0.050	0.026	-0.057	0.007
2224.0000	-0.050	0.026	-0.057	0.007
2225.0000	-0.050	0.026	-0.057	0.007
2226.0000	-0.050	0.026	-0.060	0.007
2227.0000	-0.050	0.026	-0.057	0.007
2228.0000	-0.050	0.026	-0.057	0.007
2229.0000	-0.044	0.026	-0.057	0.007
2230.0000	-0.044	0.026	-0.054	0.010
2231.0000	-0.044	0.026	-0.054	0.010
2232.0000	-0.044	0.026	-0.054	0.010
2233.0000	-0.044	0.026	-0.054	0.010
2234.0000	-0.044	0.026	-0.051	0.010
2235.0000	-0.038	0.026	-0.051	0.010
2236.0000	-0.038	0.026	-0.051	0.010
2237.0000	-0.038	0.026	-0.048	0.013
2238.0000	-0.038	0.026	-0.048	0.013
2239.0000	-0.038	0.026	-0.048	0.013
2240.0000	-0.031	0.026	-0.044	0.013
2241.0000	-0.031	0.026	-0.044	0.013
2242.0000	-0.031	0.026	-0.044	0.016
2243.0000	-0.031	0.026	-0.044	0.016
2244.0000	-0.031	0.026	-0.044	0.016
2245.0000	-0.031	0.026	-0.041	0.016
2246.0000	-0.031	0.026	-0.044	0.016
2247.0000	-0.031	0.029	-0.044	0.016
2248.0000	-0.038	0.026	-0.044	0.016
2249.0000	-0.038	0.026	-0.044	0.016
2250.0000	-0.038	0.026	-0.048	0.016
2251.0000	-0.038	0.029	-0.048	0.016
2252.0000	-0.038	0.029	-0.051	0.016
2253.0000	-0.044	0.026	-0.051	0.016

Elapsed Time	Input 1	Input 2	Input 3	Input 4
2254.0000	-0.044	0.029	-0.051	0.016
2255.0000	-0.044	0.026	-0.054	0.016
2256.0000	-0.044	0.026	-0.054	0.016
2257.0000	-0.044	0.029	-0.054	0.016
2258.0000	-0.044	0.026	-0.054	0.016
2259.0000	-0.044	0.026	-0.054	0.016
2260.0000	-0.044	0.026	-0.054	0.016
2261.0000	-0.044	0.026	-0.057	0.013
2262.0000	-0.044	0.026	-0.057	0.016
2263.0000	-0.050	0.029	-0.057	0.016
2264.0000	-0.050	0.026	-0.057	0.013
2265.0000	-0.050	0.029	-0.057	0.013
2266.0000	-0.050	0.026	-0.057	0.013
2267.0000	-0.050	0.026	-0.057	0.013
2268.0000	-0.050	0.026	-0.060	0.013
2269.0000	-0.050	0.029	-0.060	0.013
2270.0000	-0.050	0.026	-0.057	0.013
2271.0000	-0.050	0.026	-0.060	0.013
2272.0000	-0.050	0.029	-0.057	0.013
2273.0000	-0.050	0.029	-0.060	0.013
2274.0000	-0.050	0.029	-0.060	0.013
2275.0000	-0.050	0.026	-0.060	0.013
2276.0000	-0.050	0.026	-0.060	0.010
2277.0000	-0.050	0.026	-0.060	0.010
2278.0000	-0.050	0.026	-0.060	0.010
2279.0000	-0.050	0.026	-0.060	0.010
2280.0000	-0.050	0.026	-0.060	0.013
2281.0000	-0.050	0.026	-0.060	0.010
2282.0000	-0.050	0.029	-0.060	0.010
2283.0000	-0.050	0.026	-0.060	0.010
2284.0000	-0.050	0.026	-0.060	0.010
2285.0000	-0.050	0.029	-0.060	0.010
2286.0000	-0.057	0.026	-0.063	0.010
2287.0000	-0.057	0.026	-0.066	0.010
2288.0000	-0.057	0.029	-0.066	0.010
2289.0000	-0.057	0.026	-0.066	0.010
2290.0000	-0.057	0.026	-0.066	0.007
2291.0000	-0.057	0.026	-0.063	0.007
2292.0000	-0.057	0.022	-0.060	0.003
2293.0000	-0.057	0.026	-0.063	0.007
2294.0000	-0.050	0.029	-0.063	0.007
2295.0000	-0.050	0.029	-0.063	0.007
2296.0000	-0.050	0.029	-0.060	0.007
2297.0000	-0.050	0.029	-0.060	0.007
2298.0000	-0.050	0.029	-0.060	0.007
2299.0000	-0.050	0.029	-0.060	0.007
2300.0000	-0.050	0.029	-0.060	0.007
2301.0000	-0.050	0.029	-0.060	0.007
2302.0000	-0.050	0.029	-0.060	0.007
2303.0000	-0.050	0.029	-0.060	0.007
2304.0000	-0.050	0.026	-0.060	0.007
2305.0000	-0.050	0.026	-0.060	0.007

Elapsed Time	Input 1	Input 2	Input 3	Input 4
2306.0000	-0.057	0.029	-0.063	0.007
2307.0000	-0.057	0.029	-0.063	0.007
2308.0000	-0.057	0.026	-0.063	0.007
2309.0000	-0.057	0.026	-0.066	0.007
2310.0000	-0.057	0.026	-0.066	0.007
2311.0000	-0.057	0.026	-0.066	0.007
2312.0000	-0.057	0.026	-0.066	0.003
2313.0000	-0.057	0.026	-0.066	0.003
2314.0000	-0.057	0.026	-0.066	0.007
2315.0000	-0.057	0.026	-0.063	0.003
2316.0000	-0.057	0.026	-0.066	0.003
2317.0000	-0.057	0.026	-0.063	0.003
2318.0000	-0.057	0.026	-0.066	0.003
2319.0000	-0.057	0.026	-0.066	0.003
2320.0000	-0.057	0.026	-0.066	0.003
2321.0000	-0.057	0.026	-0.066	0.003
2322.0000	-0.063	0.026	-0.069	0.003
2323.0000	-0.057	0.026	-0.069	0.003
2324.0000	-0.057	0.029	-0.069	0.003
2325.0000	-0.057	0.029	-0.069	0.003
2326.0000	-0.063	0.029	-0.069	0.003
2327.0000	-0.063	0.029	-0.069	0.003
2328.0000	-0.050	0.026	-0.060	0.003
2329.0000	-0.050	0.029	-0.057	0.003
2330.0000	-0.050	0.026	-0.060	0.003
2331.0000	-0.050	0.026	-0.060	0.003
2332.0000	-0.050	0.026	-0.060	0.003
2333.0000	-0.050	0.029	-0.057	0.003
2334.0000	-0.050	0.029	-0.057	0.003
2335.0000	-0.050	0.029	-0.060	0.003
2336.0000	-0.050	0.029	-0.057	0.003
2337.0000	-0.050	0.029	-0.057	0.003
2338.0000	-0.044	0.029	-0.057	0.007
2339.0000	-0.050	0.029	-0.057	0.003
2340.0000	-0.044	0.029	-0.057	0.003
2341.0000	-0.044	0.026	-0.057	0.007
2342.0000	-0.044	0.029	-0.057	0.003
2343.0000	-0.044	0.029	-0.057	0.007
2344.0000	-0.050	0.026	-0.057	0.007
2345.0000	-0.050	0.029	-0.057	0.007
2346.0000	-0.044	0.029	-0.057	0.007
2347.0000	-0.044	0.026	-0.057	0.007
2348.0000	-0.044	0.029	-0.057	0.007
2349.0000	-0.044	0.029	-0.057	0.007
2350.0000	-0.044	0.029	-0.057	0.007
2351.0000	-0.050	0.029	-0.057	0.007
2352.0000	-0.044	0.029	-0.057	0.007
2353.0000	-0.044	0.029	-0.057	0.007
2354.0000	-0.050	0.029	-0.057	0.007
2355.0000	-0.050	0.029	-0.057	0.007
2356.0000	-0.044	0.029	-0.057	0.007
2357.0000	-0.044	0.029	-0.057	0.010

Elapsed Time	Input 1	Input 2	Input 3	Input 4
2358.0000	-0.044	0.029	-0.057	0.007
2359.0000	-0.044	0.029	-0.057	0.010
2360.0000	-0.044	0.029	-0.054	0.010
2361.0000	-0.044	0.029	-0.057	0.010
2362.0000	-0.044	0.029	-0.057	0.010
2363.0000	-0.044	0.029	-0.057	0.010
2364.0000	-0.044	0.029	-0.054	0.010
2365.0000	-0.044	0.029	-0.054	0.010
2366.0000	-0.044	0.029	-0.054	0.010
2367.0000	-0.044	0.029	-0.054	0.010
2368.0000	-0.038	0.029	-0.054	0.010
2369.0000	-0.038	0.029	-0.054	0.010
2370.0000	-0.038	0.029	-0.054	0.010
2371.0000	-0.038	0.029	-0.051	0.013
2372.0000	-0.038	0.032	-0.051	0.013
2373.0000	-0.038	0.032	-0.051	0.013
2374.0000	-0.038	0.032	-0.048	0.013
2375.0000	-0.038	0.032	-0.051	0.013
2376.0000	-0.038	0.032	-0.051	0.013
2377.0000	-0.038	0.032	-0.051	0.013
2378.0000	-0.038	0.032	-0.051	0.013
2379.0000	-0.038	0.032	-0.051	0.013
2380.0000	-0.038	0.032	-0.051	0.013
2381.0000	-0.038	0.032	-0.051	0.013
2382.0000	-0.038	0.032	-0.051	0.016
2383.0000	-0.031	0.032	-0.048	0.016
2384.0000	-0.038	0.032	-0.048	0.016
2385.0000	-0.031	0.035	-0.048	0.016
2386.0000	-0.031	0.035	-0.048	0.016
2387.0000	-0.031	0.035	-0.048	0.019
2388.0000	-0.031	0.035	-0.048	0.016
2389.0000	-0.031	0.035	-0.048	0.019
2390.0000	-0.031	0.035	-0.048	0.019
2391.0000	-0.031	0.035	-0.051	0.019
2392.0000	-0.031	0.035	-0.044	0.019
2393.0000	-0.031	0.032	-0.044	0.019
2394.0000	-0.031	0.032	-0.048	0.019
2395.0000	-0.031	0.035	-0.048	0.019
2396.0000	-0.031	0.035	-0.048	0.019
2397.0000	-0.038	0.035	-0.051	0.019
2398.0000	-0.031	0.035	-0.051	0.019
2399.0000	-0.031	0.035	-0.051	0.019
2400.0000	-0.038	0.035	-0.048	0.019
2401.0000	-0.031	0.035	-0.048	0.019
2402.0000	-0.031	0.032	-0.048	0.019
2403.0000	-0.031	0.035	-0.048	0.019
2404.0000	-0.031	0.035	-0.051	0.019
2405.0000	-0.031	0.035	-0.048	0.019
2406.0000	-0.031	0.035	-0.048	0.019
2407.0000	-0.031	0.032	-0.048	0.019
2408.0000	-0.038	0.032	-0.048	0.019
2409.0000	-0.031	0.032	-0.048	0.019

Elapsed Time	Input 1	Input 2	Input 3	Input 4
2410.0000	-0.038	0.032	-0.048	0.019
2411.0000	-0.038	0.029	-0.051	0.019
2412.0000	-0.038	0.032	-0.048	0.019
2413.0000	-0.038	0.029	-0.048	0.019
2414.0000	-0.038	0.032	-0.048	0.019
2415.0000	-0.031	0.029	-0.048	0.019
2416.0000	-0.038	0.029	-0.051	0.019
2417.0000	-0.038	0.032	-0.048	0.019
2418.0000	-0.038	0.029	-0.051	0.019
2419.0000	-0.038	0.032	-0.051	0.019
2420.0000	-0.038	0.032	-0.051	0.019
2421.0000	-0.038	0.032	-0.051	0.019
2422.0000	-0.038	0.035	-0.051	0.019
2423.0000	-0.038	0.035	-0.051	0.019
2424.0000	-0.038	0.032	-0.054	0.016
2425.0000	-0.038	0.032	-0.051	0.019
2426.0000	-0.038	0.035	-0.051	0.019
2427.0000	-0.031	0.041	-0.051	0.019
2428.0000	-0.038	0.041	-0.051	0.019
2429.0000	-0.038	0.038	-0.048	0.019
2430.0000	-0.038	0.041	-0.051	0.019
2431.0000	-0.038	0.038	-0.054	0.019
2432.0000	-0.038	0.038	-0.051	0.019
2433.0000	-0.038	0.035	-0.051	0.019
2434.0000	-0.038	0.035	-0.051	0.016
2435.0000	-0.038	0.035	-0.054	0.016
2436.0000	-0.038	0.038	-0.051	0.019
2437.0000	-0.038	0.038	-0.054	0.019
2438.0000	-0.038	0.038	-0.054	0.019
2439.0000	-0.038	0.038	-0.054	0.016
2440.0000	-0.038	0.035	-0.054	0.016
2441.0000	-0.038	0.038	-0.051	0.019
2442.0000	-0.038	0.035	-0.051	0.016
2443.0000	-0.038	0.035	-0.051	0.016
2444.0000	-0.038	0.032	-0.054	0.016
2445.0000	-0.038	0.035	-0.054	0.016
2446.0000	-0.038	0.035	-0.054	0.016
2447.0000	-0.038	0.035	-0.054	0.016
2448.0000	-0.038	0.035	-0.054	0.016
2449.0000	-0.038	0.035	-0.054	0.016
2450.0000	-0.038	0.032	-0.054	0.016
2451.0000	-0.038	0.032	-0.054	0.016
2452.0000	-0.038	0.032	-0.054	0.016
2453.0000	-0.038	0.035	-0.054	0.016
2454.0000	-0.038	0.032	-0.054	0.016
2455.0000	-0.038	0.032	-0.051	0.016
2456.0000	-0.038	0.032	-0.054	0.016
2457.0000	-0.038	0.032	-0.054	0.013
2458.0000	-0.038	0.032	-0.051	0.013
2459.0000	-0.038	0.032	-0.051	0.016
2460.0000	-0.038	0.032	-0.051	0.016
2461.0000	-0.038	0.032	-0.051	0.016

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Elapsed Time	Input 1	Input 2	Input 3	Input 4
2462.0000	-0.038	0.032	-0.051	0.016
2463.0000	-0.038	0.032	-0.051	0.016
2464.0000	-0.038	0.032	-0.051	0.016
2465.0000	-0.038	0.032	-0.051	0.016
2466.0000	-0.038	0.035	-0.051	0.016
2467.0000	-0.038	0.035	-0.048	0.016
2468.0000	-0.031	0.035	-0.051	0.016
2469.0000	-0.031	0.038	-0.051	0.019
2470.0000	-0.038	0.035	-0.051	0.016
2471.0000	-0.038	0.035	-0.051	0.016
2472.0000	-0.038	0.035	-0.051	0.016
2473.0000	-0.038	0.035	-0.051	0.016
2474.0000	-0.038	0.035	-0.051	0.016
2475.0000	-0.038	0.035	-0.048	0.016
2476.0000	-0.038	0.038	-0.048	0.016
2477.0000	-0.031	0.038	-0.048	0.016
2478.0000	-0.038	0.035	-0.051	0.016
2479.0000	-0.031	0.035	-0.051	0.016
2480.0000	-0.031	0.038	-0.048	0.016
2481.0000	-0.038	0.035	-0.051	0.016
2482.0000	-0.031	0.035	-0.048	0.016
2483.0000	-0.031	0.038	-0.048	0.016
2484.0000	-0.031	0.038	-0.044	0.016
2485.0000	-0.031	0.035	-0.051	0.016
2486.0000	-0.038	0.035	-0.048	0.016
2487.0000	-0.038	0.035	-0.048	0.016
2488.0000	-0.038	0.035	-0.051	0.016
2489.0000	-0.038	0.035	-0.051	0.016
2490.0000	-0.038	0.044	-0.051	0.016
2491.0000	-0.038	0.038	-0.051	0.013
2492.0000	-0.038	0.038	-0.054	0.016
2493.0000	-0.038	0.038	-0.054	0.016
2494.0000	-0.038	0.038	-0.054	0.013
2495.0000	-0.038	0.038	-0.054	0.016
2496.0000	-0.038	0.041	-0.054	0.013
2497.0000	-0.038	0.041	-0.057	0.016
2498.0000	-0.050	0.035	-0.054	0.013
2499.0000	-0.044	0.035	-0.054	0.010
2500.0000	-0.044	0.035	-0.054	0.013
2501.0000	-0.044	0.029	-0.054	0.010
2502.0000	-0.044	0.032	-0.057	0.010
2503.0000	-0.044	0.035	-0.060	0.013
2504.0000	-0.044	0.038	-0.051	0.013
2505.0000	-0.038	0.038	-0.051	0.013
2506.0000	-0.038	0.038	-0.051	0.013
2507.0000	-0.038	0.038	-0.054	0.013
2508.0000	-0.044	0.038	-0.054	0.010
2509.0000	-0.044	0.029	-0.057	0.007
2510.0000	-0.044	0.035	-0.054	0.010
2511.0000	-0.044	0.035	-0.054	0.010
2512.0000	-0.038	0.038	-0.060	0.013
2513.0000	-0.044	0.035	-0.063	0.010
2514.0000	-0.050	0.029	-0.060	0.007
2515.0000	-0.044	0.029	-0.057	0.007
2516.0000	-0.044	0.029	-0.057	0.007
2517.0000	-0.044	0.026	-0.057	0.007
2518.0000	-0.044	0.026	-0.057	0.007
2519.0000	-0.044	0.029	-0.057	0.007
2520.0000	-0.044	0.029	-0.057	0.010
2521.0000	-0.044	0.032	-0.060	0.007
2522.0000	-0.044	0.035	-0.060	0.010
2523.0000	-0.044	0.032	-0.063	0.007
2524.0000	-0.044	0.032	-0.057	0.007
2525.0000	-0.044	0.038	-0.060	0.010
2526.0000	-0.044	0.032	-0.060	0.010
2527.0000	-0.038	0.035	-0.060	0.010
2528.0000	-0.044	0.032	-0.063	0.007
2529.0000	-0.044	0.032	-0.063	0.007
2530.0000	-0.044	0.032	-0.063	0.007
2531.0000	-0.044	0.029	-0.063	0.007
2532.0000	-0.050	0.029	-0.057	0.007
2533.0000	-0.044	0.032	-0.066	0.007
2534.0000	-0.044	0.038	-0.063	0.010
2535.0000	-0.044	0.038	-0.063	0.007
2536.0000	-0.050	0.032	-0.063	0.007
2537.0000	-0.050	0.032	-0.066	0.003
2538.0000	-0.050	0.032	-0.063	0.003
2539.0000	-0.050	0.029	-0.063	0.003
2540.0000	-0.044	0.035	-0.066	0.007
2541.0000	-0.050	0.029	-0.066	0.003
2542.0000	-0.050	0.026	-0.057	0.000
2543.0000	-0.050	0.029	-0.057	0.003
2544.0000	-0.044	0.035	-0.057	0.007
2545.0000	-0.044	0.035	-0.054	0.007
2546.0000	-0.044	0.038	-0.060	0.007
2547.0000	-0.044	0.038	-0.060	0.007
2548.0000	-0.044	0.035	-0.063	0.003
2549.0000	-0.057	0.035	-0.063	0.007
2550.0000	-0.050	0.032	-0.069	0.003
2551.0000	-0.050	0.035	-0.069	0.003
2552.0000	-0.050	0.035	-0.069	0.003
2553.0000	-0.050	0.032	-0.066	0.003
2554.0000	-0.050	0.032	-0.066	0.003
2555.0000	-0.050	0.032	-0.066	0.003
2556.0000	-0.050	0.032	-0.066	0.003
2557.0000	-0.050	0.032	-0.066	0.003
2558.0000	-0.050	0.032	-0.066	0.003
2559.0000	-0.050	0.032	-0.066	0.003
2560.0000	-0.050	0.032	-0.066	0.000
2561.0000	-0.050	0.035	-0.069	0.000
2562.0000	-0.057	0.032	-0.069	0.000
2563.0000	-0.057	0.035	-0.069	0.000
2564.0000	-0.057	0.032	-0.069	-0.003
2565.0000	-0.057	0.032	-0.069	-0.003

Elapsed Time	Input 1	Input 2	Input 3	Input 4
2566.0000	-0.057	0.032	-0.069	-0.003
2567.0000	-0.057	0.029	-0.069	-0.003
2568.0000	-0.057	0.029	-0.069	-0.003
2569.0000	-0.050	0.032	-0.069	-0.003
2570.0000	-0.050	0.032	-0.066	0.000
2571.0000	-0.050	0.032	-0.066	-0.003
2572.0000	-0.050	0.032	-0.063	0.000
2573.0000	-0.050	0.032	-0.063	0.000
2574.0000	-0.050	0.032	-0.066	0.000
2575.0000	-0.050	0.032	-0.066	-0.003
2576.0000	-0.050	0.029	-0.066	0.000
2577.0000	-0.050	0.032	-0.066	0.000
2578.0000	-0.050	0.032	-0.063	-0.003
2579.0000	-0.050	0.032	-0.063	0.000
2580.0000	-0.044	0.032	-0.063	0.000
2581.0000	-0.050	0.026	-0.063	-0.003
2582.0000	-0.050	0.026	-0.063	0.000
2583.0000	-0.050	0.032	-0.063	0.000
2584.0000	-0.044	0.035	-0.063	0.000
2585.0000	-0.044	0.035	-0.063	0.000
2586.0000	-0.050	0.032	-0.063	0.000
2587.0000	-0.050	0.032	-0.063	0.000
2588.0000	-0.050	0.032	-0.063	0.000
2589.0000	-0.050	0.032	-0.066	0.000
2590.0000	-0.050	0.022	-0.066	-0.003
2591.0000	-0.050	0.022	-0.063	0.000
2592.0000	-0.050	0.022	-0.066	-0.003
2593.0000	-0.050	0.022	-0.066	0.000
2594.0000	-0.050	0.019	-0.066	-0.003
2595.0000	-0.057	0.019	-0.066	-0.003
2596.0000	-0.057	0.016	-0.066	-0.003
2597.0000	-0.057	0.016	-0.069	-0.003
2598.0000	-0.057	0.016	-0.066	-0.003
2599.0000	-0.057	0.016	-0.069	-0.003
2600.0000	-0.057	0.016	-0.066	-0.003
2601.0000	-0.057	0.016	-0.066	-0.003
2602.0000	-0.057	0.019	-0.066	-0.003
2603.0000	-0.057	0.019	-0.066	-0.003
2604.0000	-0.057	0.019	-0.066	-0.003
2605.0000	-0.057	0.019	-0.069	-0.006
2606.0000	-0.057	0.016	-0.069	-0.006
2607.0000	-0.057	0.016	-0.069	-0.006
2608.0000	-0.057	0.016	-0.066	-0.006
2609.0000	-0.057	0.016	-0.069	-0.006
2610.0000	-0.057	0.019	-0.069	-0.006
2611.0000	-0.057	0.016	-0.069	-0.006
2612.0000	-0.057	0.019	-0.069	-0.006
2613.0000	-0.057	0.019	-0.069	-0.006
2614.0000	-0.057	0.019	-0.069	-0.006
2615.0000	-0.057	0.019	-0.069	-0.006
2616.0000	-0.057	0.016	-0.069	-0.006
2617.0000	-0.057	0.019	-0.066	-0.006
2618.0000	-0.057	0.019	-0.066	-0.006
2619.0000	-0.057	0.019	-0.066	-0.006
2620.0000	-0.057	0.019	-0.069	-0.006
2621.0000	-0.050	0.019	-0.066	-0.006
2622.0000	-0.063	0.013	-0.066	-0.009
2623.0000	-0.063	0.013	-0.063	-0.009
2624.0000	-0.057	0.019	-0.066	-0.006
2625.0000	-0.057	0.019	-0.066	-0.006
2626.0000	-0.057	0.019	-0.066	-0.006
2627.0000	-0.050	0.019	-0.073	-0.006
2628.0000	-0.057	0.019	-0.063	-0.006
2629.0000	-0.057	0.019	-0.069	-0.006
2630.0000	-0.057	0.019	-0.063	-0.006
2631.0000	-0.057	0.019	-0.063	-0.006
2632.0000	-0.057	0.019	-0.063	-0.006
2633.0000	-0.057	0.019	-0.073	-0.006
2634.0000	-0.057	0.019	-0.073	-0.006
2635.0000	-0.057	0.019	-0.073	-0.006
2636.0000	-0.057	0.019	-0.073	-0.006
2637.0000	-0.057	0.019	-0.073	-0.006
2638.0000	-0.057	0.019	-0.066	-0.006
2639.0000	-0.057	0.019	-0.069	-0.006
2640.0000	-0.057	0.019	-0.066	-0.006

SE2000
Environmental Logger
09/30 18:06

Unit# 159 Test 0

Setups:	INPUT 1	INPUT 2	INPUT 3	INPUT 4
Type	Level (F)	Level (F)	Level (F)	Level (F)
Mode	TOC	TOC	TOC	TOC
I.D.	11213918	11124918	11122918	11125918
Reference	0.000	0.000	0.000	0.000
SG	1.000	1.000	1.000	1.000
Linearity	0.112	0.000	0.000	0.000
Scale factor	20.070	16.000	16.000	16.000
Offset	-0.073	4.000	4.000	4.000
Delay mSEC	50.000	50.000	50.000	50.000

Step 0 09/18 19:43:38

Elapsed Time	Input 1	Input 2	Input 3	Input 4	Elapsed Time	Input 1	Input 2	Input 3	Input 4
0.0000	-0.006	-3.961	-28.459	-7.356	34.0000	-0.012	-3.956	-28.479	-7.275
1.0000	-0.006	-3.961	-28.464	-7.345	35.0000	-0.012	-3.956	-28.479	-7.280
2.0000	0.000	-3.961	-28.469	-7.340	36.0000	-0.012	-3.956	-28.479	-7.275
3.0000	0.000	-3.961	-28.464	-7.340	37.0000	-0.012	-3.956	-28.484	-7.275
4.0000	0.000	-3.956	-28.459	-7.335	38.0000	-0.012	-3.956	-28.484	-7.275
5.0000	0.000	-3.956	-28.464	-7.330	39.0000	-0.012	-3.956	-28.484	-7.275
6.0000	0.000	-3.956	-28.464	-7.325	40.0000	-0.012	-3.956	-28.484	-7.275
7.0000	0.000	-3.956	-28.469	-7.325	41.0000	-0.006	-3.956	-28.484	-7.275
8.0000	0.000	-3.956	-28.469	-7.320	42.0000	-0.012	-3.956	-28.484	-7.275
9.0000	0.000	-3.956	-28.469	-7.315	43.0000	-0.012	-3.956	-28.484	-7.275
10.0000	-0.006	-3.956	-28.469	-7.315	44.0000	-0.006	-3.956	-28.484	-7.270
11.0000	0.000	-3.956	-28.469	-7.310	45.0000	-0.012	-3.956	-28.484	-7.275
12.0000	-0.006	-3.956	-28.469	-7.305	46.0000	-0.012	-3.956	-28.484	-7.270
13.0000	-0.006	-3.956	-28.474	-7.305	47.0000	-0.006	-3.956	-28.484	-7.270
14.0000	-0.006	-3.956	-28.474	-7.305	48.0000	-0.006	-3.956	-28.484	-7.270
15.0000	-0.006	-3.956	-28.474	-7.300	49.0000	-0.012	-3.951	-28.484	-7.270
16.0000	-0.006	-3.956	-28.474	-7.300	50.0000	-0.012	-3.951	-28.484	-7.270
17.0000	-0.006	-3.956	-28.474	-7.295	51.0000	-0.012	-3.956	-28.484	-7.270
18.0000	-0.006	-3.956	-28.469	-7.295	52.0000	-0.012	-3.951	-28.489	-7.270
19.0000	-0.006	-3.956	-28.474	-7.295	53.0000	-0.012	-3.956	-28.489	-7.270
20.0000	-0.006	-3.956	-28.474	-7.290	54.0000	-0.012	-3.956	-28.489	-7.270
21.0000	-0.006	-3.956	-28.469	-7.290	55.0000	-0.012	-3.951	-28.489	-7.270
22.0000	-0.006	-3.956	-28.474	-7.290	56.0000	-0.012	-3.951	-28.489	-7.275
23.0000	-0.006	-3.956	-28.469	-7.285	57.0000	-0.012	-3.956	-28.489	-7.270
24.0000	-0.006	-3.956	-28.469	-7.285	58.0000	-0.012	-3.956	-28.489	-7.270
25.0000	-0.006	-3.956	-28.474	-7.285	59.0000	-0.012	-3.951	-28.489	-7.270
26.0000	-0.006	-3.956	-28.469	-7.285	60.0000	-0.012	-3.951	-28.489	-7.270
27.0000	-0.006	-3.956	-28.474	-7.280	61.0000	-0.012	-3.951	-28.489	-7.270
28.0000	-0.006	-3.956	-28.469	-7.280	62.0000	-0.012	-3.956	-28.489	-7.270
29.0000	-0.006	-3.956	-28.474	-7.280	63.0000	-0.012	-3.956	-28.489	-7.270
30.0000	-0.006	-3.956	-28.474	-7.280	64.0000	-0.012	-3.956	-28.489	-7.270
31.0000	-0.006	-3.956	-28.474	-7.280	65.0000	-0.012	-3.951	-28.489	-7.270
32.0000	-0.006	-3.956	-28.474	-7.280	66.0000	-0.012	-3.951	-28.489	-7.270
33.0000	-0.006	-3.956	-28.479	-7.280	67.0000	-0.012	-3.951	-28.489	-7.270

Elapsed Time	Input 1	Input 2	Input 3	Input 4
68.0000	-0.012	-3.951	-28.494	-7.270
69.0000	-0.012	-3.956	-28.494	-7.270
70.0000	-0.012	-3.951	-28.494	-7.270
71.0000	-0.012	-3.951	-28.494	-7.270
72.0000	-0.012	-3.951	-28.489	-7.270
73.0000	-0.012	-3.951	-28.494	-7.270
74.0000	-0.012	-3.951	-28.494	-7.270
75.0000	-0.012	-3.951	-28.494	-7.270
76.0000	-0.012	-3.951	-28.494	-7.270
77.0000	-0.012	-3.951	-28.494	-7.270
78.0000	-0.012	-3.951	-28.494	-7.270
79.0000	-0.012	-3.951	-28.494	-7.270
80.0000	-0.012	-3.951	-28.494	-7.270
81.0000	-0.012	-3.951	-28.494	-7.270
82.0000	-0.019	-3.951	-28.494	-7.275
83.0000	-0.019	-3.951	-28.494	-7.275
84.0000	-0.019	-3.951	-28.494	-7.270
85.0000	-0.012	-3.951	-28.499	-7.270
86.0000	-0.019	-3.951	-28.494	-7.275
87.0000	-0.012	-3.951	-28.494	-7.275
88.0000	-0.019	-3.951	-28.499	-7.275
89.0000	-0.019	-3.951	-28.494	-7.275
90.0000	-0.012	-3.951	-28.494	-7.275
91.0000	-0.012	-3.951	-28.494	-7.275
92.0000	-0.012	-3.951	-28.494	-7.275
93.0000	-0.012	-3.951	-28.494	-7.270
94.0000	-0.012	-3.951	-28.489	-7.270
95.0000	-0.012	-3.951	-28.489	-7.270
96.0000	-0.012	-3.951	-28.489	-7.275
97.0000	-0.012	-3.951	-28.489	-7.275
98.0000	-0.012	-3.945	-28.494	-7.270
99.0000	-0.012	-3.945	-28.494	-7.270
100.000	-0.012	-3.951	-28.494	-7.275
101.000	-0.019	-3.951	-28.494	-7.275
102.000	-0.019	-3.951	-28.499	-7.275
103.000	-0.019	-3.951	-28.499	-7.275
104.000	-0.019	-3.951	-28.499	-7.275
105.000	-0.019	-3.951	-28.499	-7.275
106.000	-0.019	-3.951	-28.499	-7.275
107.000	-0.019	-3.951	-28.499	-7.275
108.000	-0.019	-3.945	-28.499	-7.275
109.000	-0.019	-3.951	-28.504	-7.275
110.000	-0.019	-3.951	-28.504	-7.280
111.000	-0.019	-3.951	-28.504	-7.280
112.000	-0.019	-3.951	-28.504	-7.280
113.000	-0.019	-3.951	-28.504	-7.280
114.000	-0.019	-3.951	-28.504	-7.280
115.000	-0.019	-3.945	-28.504	-7.280
116.000	-0.019	-3.945	-28.504	-7.280
117.000	-0.025	-3.951	-28.504	-7.280
118.000	-0.019	-3.945	-28.509	-7.280
119.000	-0.025	-3.945	-28.509	-7.280
120.000	-0.025	-3.951	-28.509	-7.280
121.000	-0.025	-3.951	-28.509	-7.280
122.000	-0.025	-3.951	-28.509	-7.280
123.000	-0.025	-3.951	-28.509	-7.285
124.000	-0.025	-3.945	-28.509	-7.280
125.000	-0.025	-3.945	-28.504	-7.280
126.000	-0.025	-3.951	-28.509	-7.280
127.000	-0.019	-3.945	-28.509	-7.285
128.000	-0.025	-3.945	-28.504	-7.280
129.000	-0.019	-3.945	-28.504	-7.280
130.000	-0.019	-3.945	-28.504	-7.280
131.000	-0.025	-3.945	-28.504	-7.285
132.000	-0.019	-3.945	-28.504	-7.285
133.000	-0.019	-3.945	-28.504	-7.280
134.000	-0.025	-3.945	-28.504	-7.285
135.000	-0.019	-3.945	-28.499	-7.280
136.000	-0.019	-3.945	-28.504	-7.280
137.000	-0.019	-3.945	-28.504	-7.280
138.000	-0.019	-3.945	-28.499	-7.285
139.000	-0.019	-3.945	-28.499	-7.280
140.000	-0.019	-3.945	-28.499	-7.280
141.000	-0.019	-3.945	-28.499	-7.280
142.000	-0.019	-3.945	-28.499	-7.280
143.000	-0.019	-3.945	-28.504	-7.280
144.000	-0.019	-3.945	-28.499	-7.280
145.000	-0.019	-3.945	-28.499	-7.280
146.000	-0.019	-3.945	-28.499	-7.280
147.000	-0.019	-3.945	-28.504	-7.280
148.000	-0.019	-3.945	-28.504	-7.280
149.000	-0.019	-3.945	-28.499	-7.280
150.000	-0.019	-3.945	-28.504	-7.280
151.000	-0.019	-3.945	-28.504	-7.285
152.000	-0.025	-3.945	-28.509	-7.285
153.000	-0.025	-3.945	-28.504	-7.285
154.000	-0.025	-3.945	-28.509	-7.285
155.000	-0.025	-3.945	-28.509	-7.285
156.000	-0.025	-3.945	-28.509	-7.285
157.000	-0.025	-3.945	-28.509	-7.285
158.000	-0.025	-3.945	-28.509	-7.285
159.000	-0.025	-3.945	-28.514	-7.290
160.000	-0.025	-3.945	-28.514	-7.285
161.000	-0.025	-3.945	-28.514	-7.285
162.000	-0.031	-3.945	-28.514	-7.285
163.000	-0.031	-3.945	-28.514	-7.290
164.000	-0.025	-3.945	-28.514	-7.290
165.000	-0.025	-3.945	-28.520	-7.290
166.000	-0.025	-3.945	-28.514	-7.290
167.000	-0.031	-3.945	-28.514	-7.290
168.000	-0.031	-3.945	-28.514	-7.290
169.000	-0.031	-3.945	-28.514	-7.290
170.000	-0.031	-3.945	-28.520	-7.290
171.000	-0.031	-3.940	-28.514	-7.290

ERAFS1\VOL1:GEOT\ENGDATA\
KEEP\D-LOGGER\11214\BACKGNC.WL

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Elapsed Time	Input 1	Input 2	Input 3	Input 4
172.000	-0.031	-3.945	-28.520	-7.290
173.000	-0.031	-3.945	-28.520	-7.290
174.000	-0.031	-3.940	-28.520	-7.290
175.000	-0.031	-3.940	-28.520	-7.295
176.000	-0.031	-3.940	-28.520	-7.295
177.000	-0.031	-3.945	-28.520	-7.295
178.000	-0.031	-3.945	-28.525	-7.295
179.000	-0.031	-3.945	-28.525	-7.295
180.000	-0.031	-3.945	-28.525	-7.295
181.000	-0.031	-3.945	-28.525	-7.295
182.000	-0.038	-3.945	-28.525	-7.295
183.000	-0.038	-3.945	-28.525	-7.300
184.000	-0.031	-3.945	-28.525	-7.295
185.000	-0.031	-3.945	-28.525	-7.300
186.000	-0.031	-3.940	-28.525	-7.295
187.000	-0.031	-3.945	-28.525	-7.300
188.000	-0.031	-3.940	-28.525	-7.300
189.000	-0.031	-3.940	-28.525	-7.300
190.000	-0.031	-3.945	-28.525	-7.300
191.000	-0.031	-3.945	-28.525	-7.300
192.000	-0.031	-3.940	-28.525	-7.300
193.000	-0.031	-3.940	-28.525	-7.300
194.000	-0.031	-3.940	-28.525	-7.300
195.000	-0.031	-3.940	-28.525	-7.300
196.000	-0.031	-3.940	-28.525	-7.300
197.000	-0.031	-3.940	-28.525	-7.300
198.000	-0.038	-3.940	-28.525	-7.300
199.000	-0.031	-3.940	-28.525	-7.300
200.000	-0.031	-3.945	-28.525	-7.300
201.000	-0.031	-3.940	-28.525	-7.300
202.000	-0.031	-3.940	-28.525	-7.300
203.000	-0.031	-3.940	-28.520	-7.300
204.000	-0.031	-3.940	-28.525	-7.300
205.000	-0.031	-3.940	-28.520	-7.300
206.000	-0.031	-3.940	-28.525	-7.300
207.000	-0.031	-3.940	-28.520	-7.300
208.000	-0.031	-3.940	-28.525	-7.300
209.000	-0.031	-3.940	-28.525	-7.300
210.000	-0.031	-3.940	-28.520	-7.300
211.000	-0.031	-3.940	-28.525	-7.305
212.000	-0.031	-3.940	-28.520	-7.300
213.000	-0.031	-3.940	-28.525	-7.300
214.000	-0.031	-3.940	-28.525	-7.300
215.000	-0.031	-3.940	-28.525	-7.305
216.000	-0.031	-3.940	-28.525	-7.305
217.000	-0.031	-3.940	-28.525	-7.305
218.000	-0.031	-3.940	-28.525	-7.305
219.000	-0.031	-3.940	-28.520	-7.300
220.000	-0.031	-3.940	-28.520	-7.305
221.000	-0.031	-3.940	-28.520	-7.300
222.000	-0.031	-3.940	-28.520	-7.300
223.000	-0.031	-3.940	-28.520	-7.300
224.000	-0.031	-3.940	-28.520	-7.300
225.000	-0.031	-3.940	-28.520	-7.300
226.000	-0.031	-3.940	-28.520	-7.300
227.000	-0.031	-3.940	-28.520	-7.300
228.000	-0.031	-3.940	-28.520	-7.300
229.000	-0.031	-3.940	-28.520	-7.300
230.000	-0.031	-3.940	-28.520	-7.300
231.000	-0.031	-3.940	-28.520	-7.300
232.000	-0.031	-3.940	-28.520	-7.300
233.000	-0.031	-3.940	-28.520	-7.300
234.000	-0.031	-3.940	-28.520	-7.300
235.000	-0.031	-3.940	-28.525	-7.300
236.000	-0.031	-3.935	-28.520	-7.300
237.000	-0.031	-3.940	-28.525	-7.300
238.000	-0.031	-3.935	-28.525	-7.305
239.000	-0.031	-3.935	-28.525	-7.305
240.000	-0.031	-3.940	-28.525	-7.305
241.000	-0.038	-3.935	-28.525	-7.305
242.000	-0.038	-3.940	-28.530	-7.305
243.000	-0.038	-3.940	-28.525	-7.305
244.000	-0.038	-3.935	-28.530	-7.305
245.000	-0.038	-3.940	-28.530	-7.305
246.000	-0.038	-3.940	-28.525	-7.305
247.000	-0.038	-3.940	-28.530	-7.305
248.000	-0.038	-3.935	-28.525	-7.305
249.000	-0.038	-3.940	-28.530	-7.305
250.000	-0.038	-3.935	-28.530	-7.305
251.000	-0.038	-3.940	-28.535	-7.310
252.000	-0.038	-3.940	-28.530	-7.310
253.000	-0.038	-3.935	-28.530	-7.305
254.000	-0.038	-3.940	-28.530	-7.310
255.000	-0.038	-3.935	-28.530	-7.305
256.000	-0.038	-3.935	-28.530	-7.305
257.000	-0.038	-3.935	-28.530	-7.310
258.000	-0.038	-3.935	-28.535	-7.310
259.000	-0.038	-3.935	-28.530	-7.310
260.000	-0.038	-3.935	-28.530	-7.310
261.000	-0.038	-3.935	-28.530	-7.310
262.000	-0.038	-3.935	-28.530	-7.310
263.000	-0.038	-3.935	-28.530	-7.310
264.000	-0.038	-3.935	-28.535	-7.310
265.000	-0.038	-3.935	-28.530	-7.310
266.000	-0.038	-3.935	-28.530	-7.310
267.000	-0.038	-3.935	-28.530	-7.310
268.000	-0.038	-3.935	-28.530	-7.310
269.000	-0.038	-3.935	-28.530	-7.310
270.000	-0.038	-3.935	-28.530	-7.310
271.000	-0.038	-3.935	-28.530	-7.310
272.000	-0.038	-3.935	-28.530	-7.310
273.000	-0.038	-3.935	-28.530	-7.310
274.000	-0.038	-3.935	-28.530	-7.310
275.000	-0.038	-3.935	-28.530	-7.310

Elapsed Time	Input 1	Input 2	Input 3	Input 4
276.000	-0.038	-3.935	-28.530	-7.310
277.000	-0.038	-3.935	-28.535	-7.310
278.000	-0.038	-3.935	-28.530	-7.310
279.000	-0.038	-3.935	-28.535	-7.310
280.000	-0.038	-3.935	-28.535	-7.310
281.000	-0.038	-3.935	-28.535	-7.310
282.000	-0.038	-3.935	-28.535	-7.310
283.000	-0.038	-3.935	-28.535	-7.310
284.000	-0.038	-3.935	-28.535	-7.310
285.000	-0.038	-3.935	-28.535	-7.315
286.000	-0.044	-3.935	-28.535	-7.315
287.000	-0.038	-3.935	-28.535	-7.315
288.000	-0.038	-3.935	-28.535	-7.315
289.000	-0.044	-3.935	-28.535	-7.315
290.000	-0.038	-3.935	-28.535	-7.315
291.000	-0.038	-3.935	-28.535	-7.315
292.000	-0.044	-3.935	-28.540	-7.315
293.000	-0.038	-3.935	-28.540	-7.315
294.000	-0.044	-3.935	-28.540	-7.315
295.000	-0.044	-3.935	-28.540	-7.315
296.000	-0.044	-3.935	-28.540	-7.315
297.000	-0.044	-3.935	-28.540	-7.315
298.000	-0.044	-3.935	-28.540	-7.315
299.000	-0.044	-3.935	-28.540	-7.320
300.000	-0.044	-3.935	-28.540	-7.320
301.000	-0.044	-3.935	-28.540	-7.320
302.000	-0.044	-3.935	-28.540	-7.320
303.000	-0.044	-3.935	-28.540	-7.320
304.000	-0.044	-3.935	-28.540	-7.315
305.000	-0.044	-3.935	-28.540	-7.320
306.000	-0.044	-3.935	-28.540	-7.320
307.000	-0.044	-3.935	-28.540	-7.320
308.000	-0.044	-3.935	-28.540	-7.320
309.000	-0.044	-3.935	-28.540	-7.320
310.000	-0.044	-3.935	-28.540	-7.320
311.000	-0.044	-3.935	-28.540	-7.320
312.000	-0.044	-3.935	-28.540	-7.320
313.000	-0.044	-3.935	-28.540	-7.320
314.000	-0.044	-3.935	-28.540	-7.320
315.000	-0.044	-3.935	-28.540	-7.320
316.000	-0.044	-3.935	-28.540	-7.320
317.000	-0.044	-3.930	-28.540	-7.320
318.000	-0.044	-3.935	-28.545	-7.320
319.000	-0.044	-3.935	-28.545	-7.320
320.000	-0.044	-3.930	-28.545	-7.320
321.000	-0.044	-3.935	-28.545	-7.320
322.000	-0.044	-3.935	-28.545	-7.320
323.000	-0.044	-3.930	-28.540	-7.320
324.000	-0.044	-3.930	-28.540	-7.320
325.000	-0.044	-3.935	-28.545	-7.320
326.000	-0.044	-3.935	-28.545	-7.320
327.000	-0.044	-3.935	-28.545	-7.325

Elapsed Time	Input 1	Input 2	Input 3	Input 4
328.000	-0.044	-3.935	-28.545	-7.325
329.000	-0.044	-3.935	-28.545	-7.325
330.000	-0.044	-3.930	-28.540	-7.320
331.000	-0.044	-3.930	-28.540	-7.325
332.000	-0.044	-3.930	-28.545	-7.325
333.000	-0.044	-3.935	-28.540	-7.325
334.000	-0.044	-3.930	-28.540	-7.325
335.000	-0.044	-3.935	-28.540	-7.325
336.000	-0.044	-3.935	-28.545	-7.325
337.000	-0.044	-3.935	-28.540	-7.325
338.000	-0.044	-3.930	-28.545	-7.325
339.000	-0.044	-3.935	-28.545	-7.325
340.000	-0.044	-3.930	-28.545	-7.325
341.000	-0.044	-3.930	-28.545	-7.325
342.000	-0.050	-3.935	-28.545	-7.325
343.000	-0.050	-3.930	-28.545	-7.325
344.000	-0.044	-3.935	-28.545	-7.325
345.000	-0.044	-3.930	-28.545	-7.325
346.000	-0.044	-3.930	-28.545	-7.325
347.000	-0.044	-3.930	-28.545	-7.325
348.000	-0.044	-3.930	-28.545	-7.325
349.000	-0.044	-3.930	-28.545	-7.325
350.000	-0.044	-3.930	-28.545	-7.325
351.000	-0.044	-3.930	-28.545	-7.325
352.000	-0.044	-3.930	-28.545	-7.325
353.000	-0.044	-3.930	-28.545	-7.325
354.000	-0.044	-3.930	-28.545	-7.325
355.000	-0.044	-3.930	-28.545	-7.325
356.000	-0.044	-3.930	-28.545	-7.325
357.000	-0.044	-3.930	-28.545	-7.325
358.000	-0.044	-3.930	-28.545	-7.325
359.000	-0.044	-3.930	-28.545	-7.325
360.000	-0.044	-3.930	-28.545	-7.325
361.000	-0.044	-3.930	-28.545	-7.325
362.000	-0.044	-3.930	-28.545	-7.325
363.000	-0.044	-3.930	-28.545	-7.325
364.000	-0.044	-3.930	-28.545	-7.325
365.000	-0.044	-3.930	-28.545	-7.325
366.000	-0.044	-3.930	-28.545	-7.325
367.000	-0.044	-3.930	-28.545	-7.325
368.000	-0.044	-3.930	-28.545	-7.325
369.000	-0.044	-3.930	-28.545	-7.325
370.000	-0.044	-3.930	-28.545	-7.325
371.000	-0.044	-3.930	-28.545	-7.325
372.000	-0.044	-3.930	-28.545	-7.325
373.000	-0.044	-3.930	-28.545	-7.330
374.000	-0.044	-3.930	-28.545	-7.325
375.000	-0.044	-3.930	-28.545	-7.330
376.000	-0.044	-3.930	-28.545	-7.330
377.000	-0.044	-3.930	-28.550	-7.325
378.000	-0.044	-3.930	-28.545	-7.325
379.000	-0.044	-3.930	-28.545	-7.325

Elapsed Time	Input 1	Input 2	Input 3	Input 4
380.000	-0.050	-3.930	-28.550	-7.330
381.000	-0.050	-3.930	-28.550	-7.330
382.000	-0.050	-3.930	-28.550	-7.330
383.000	-0.050	-3.930	-28.550	-7.330
384.000	-0.050	-3.930	-28.550	-7.330
385.000	-0.050	-3.930	-28.550	-7.330
386.000	-0.050	-3.930	-28.550	-7.330
387.000	-0.050	-3.930	-28.550	-7.330
388.000	-0.050	-3.930	-28.550	-7.330
389.000	-0.050	-3.930	-28.550	-7.330
390.000	-0.050	-3.930	-28.550	-7.330
391.000	-0.050	-3.930	-28.550	-7.330
392.000	-0.050	-3.930	-28.550	-7.330
393.000	-0.050	-3.930	-28.550	-7.330
394.000	-0.050	-3.930	-28.555	-7.330
395.000	-0.050	-3.930	-28.555	-7.330
396.000	-0.050	-3.930	-28.555	-7.330
397.000	-0.050	-3.930	-28.555	-7.330
398.000	-0.050	-3.930	-28.555	-7.335
399.000	-0.050	-3.930	-28.555	-7.330
400.000	-0.050	-3.930	-28.550	-7.330
401.000	-0.050	-3.925	-28.550	-7.330
402.000	-0.050	-3.930	-28.550	-7.330
403.000	-0.050	-3.930	-28.550	-7.330
404.000	-0.050	-3.930	-28.550	-7.330
405.000	-0.050	-3.925	-28.550	-7.330
406.000	-0.050	-3.930	-28.550	-7.335
407.000	-0.050	-3.930	-28.550	-7.330
408.000	-0.050	-3.930	-28.550	-7.335
409.000	-0.050	-3.930	-28.555	-7.335
410.000	-0.050	-3.930	-28.550	-7.335
411.000	-0.050	-3.930	-28.555	-7.335
412.000	-0.050	-3.930	-28.555	-7.335
413.000	-0.050	-3.930	-28.555	-7.335
414.000	-0.050	-3.930	-28.555	-7.335
415.000	-0.057	-3.930	-28.555	-7.335
416.000	-0.050	-3.930	-28.555	-7.335
417.000	-0.057	-3.930	-28.555	-7.335
418.000	-0.050	-3.930	-28.555	-7.335
419.000	-0.050	-3.930	-28.555	-7.335
420.000	-0.057	-3.930	-28.555	-7.335
421.000	-0.050	-3.930	-28.555	-7.335
422.000	-0.050	-3.925	-28.555	-7.335
423.000	-0.057	-3.930	-28.555	-7.335
424.000	-0.050	-3.930	-28.560	-7.340
425.000	-0.050	-3.930	-28.560	-7.335
426.000	-0.057	-3.930	-28.560	-7.335
427.000	-0.057	-3.930	-28.560	-7.335
428.000	-0.057	-3.930	-28.560	-7.340
429.000	-0.050	-3.930	-28.555	-7.340
430.000	-0.057	-3.925	-28.555	-7.335
431.000	-0.050	-3.925	-28.555	-7.340
432.000	-0.050	-3.930	-28.560	-7.340
433.000	-0.057	-3.925	-28.560	-7.335
434.000	-0.050	-3.925	-28.560	-7.340
435.000	-0.050	-3.925	-28.560	-7.335
436.000	-0.050	-3.925	-28.555	-7.340
437.000	-0.050	-3.930	-28.555	-7.340
438.000	-0.050	-3.925	-28.555	-7.340
439.000	-0.050	-3.925	-28.555	-7.340
440.000	-0.050	-3.925	-28.555	-7.340
441.000	-0.050	-3.925	-28.560	-7.340
442.000	-0.050	-3.925	-28.555	-7.340
443.000	-0.050	-3.930	-28.560	-7.340
444.000	-0.057	-3.930	-28.560	-7.340
445.000	-0.057	-3.925	-28.560	-7.340
446.000	-0.057	-3.925	-28.560	-7.340
447.000	-0.057	-3.925	-28.560	-7.340
448.000	-0.057	-3.925	-28.560	-7.340
449.000	-0.057	-3.925	-28.560	-7.340
450.000	-0.057	-3.925	-28.560	-7.340
451.000	-0.050	-3.925	-28.560	-7.340
452.000	-0.050	-3.925	-28.560	-7.340
453.000	-0.050	-3.925	-28.560	-7.340
454.000	-0.050	-3.925	-28.555	-7.340
455.000	-0.050	-3.925	-28.555	-7.340
456.000	-0.050	-3.930	-28.555	-7.340
457.000	-0.050	-3.925	-28.555	-7.340
458.000	-0.050	-3.925	-28.555	-7.340
459.000	-0.050	-3.925	-28.555	-7.340
460.000	-0.050	-3.925	-28.555	-7.340
461.000	-0.050	-3.930	-28.555	-7.340
462.000	-0.050	-3.925	-28.555	-7.340
463.000	-0.050	-3.925	-28.555	-7.340
464.000	-0.050	-3.925	-28.555	-7.340
465.000	-0.050	-3.930	-28.555	-7.340
466.000	-0.057	-3.925	-28.555	-7.340
467.000	-0.057	-3.930	-28.560	-7.340
468.000	-0.050	-3.930	-28.560	-7.340
469.000	-0.050	-3.925	-28.560	-7.340
470.000	-0.050	-3.925	-28.555	-7.340
471.000	-0.050	-3.930	-28.560	-7.340
472.000	-0.057	-3.925	-28.560	-7.340
473.000	-0.057	-3.925	-28.560	-7.340
474.000	-0.057	-3.925	-28.560	-7.340
475.000	-0.057	-3.925	-28.560	-7.340
476.000	-0.057	-3.925	-28.560	-7.340
477.000	-0.057	-3.925	-28.560	-7.340
478.000	-0.057	-3.925	-28.560	-7.345
479.000	-0.057	-3.925	-28.560	-7.340
480.000	-0.057	-3.925	-28.560	-7.345
481.000	-0.057	-3.925	-28.560	-7.340
482.000	-0.057	-3.925	-28.560	-7.345
483.000	-0.057	-3.925	-28.560	-7.340

Elapsed Time	Input 1	Input 2	Input 3	Input 4
484.000	-0.050	-3.925	-28.560	-7.345
485.000	-0.050	-3.925	-28.560	-7.345
486.000	-0.050	-3.925	-28.560	-7.345
487.000	-0.050	-3.925	-28.560	-7.340
488.000	-0.050	-3.925	-28.560	-7.340
489.000	-0.050	-3.925	-28.560	-7.340
490.000	-0.057	-3.925	-28.560	-7.340
491.000	-0.057	-3.925	-28.560	-7.340
492.000	-0.050	-3.925	-28.560	-7.345
493.000	-0.057	-3.925	-28.560	-7.340
494.000	-0.057	-3.925	-28.560	-7.345
495.000	-0.057	-3.925	-28.560	-7.345
496.000	-0.057	-3.925	-28.560	-7.345
497.000	-0.057	-3.925	-28.560	-7.345
498.000	-0.057	-3.925	-28.560	-7.345
499.000	-0.050	-3.925	-28.560	-7.345
500.000	-0.057	-3.925	-28.560	-7.345
501.000	-0.057	-3.925	-28.560	-7.345
502.000	-0.057	-3.925	-28.560	-7.345
503.000	-0.057	-3.925	-28.565	-7.345
504.000	-0.057	-3.925	-28.565	-7.345
505.000	-0.057	-3.925	-28.560	-7.345
506.000	-0.057	-3.925	-28.560	-7.345
507.000	-0.050	-3.925	-28.560	-7.345
508.000	-0.057	-3.925	-28.560	-7.345
509.000	-0.057	-3.925	-28.560	-7.345
510.000	-0.057	-3.925	-28.560	-7.345
511.000	-0.057	-3.925	-28.565	-7.345
512.000	-0.057	-3.925	-28.565	-7.345
513.000	-0.057	-3.925	-28.565	-7.345
514.000	-0.057	-3.925	-28.565	-7.345
515.000	-0.057	-3.925	-28.565	-7.345
516.000	-0.057	-3.925	-28.565	-7.345
517.000	-0.057	-3.925	-28.565	-7.345
518.000	-0.057	-3.925	-28.565	-7.345
519.000	-0.057	-3.925	-28.565	-7.345
520.000	-0.057	-3.925	-28.565	-7.345
521.000	-0.057	-3.925	-28.565	-7.345
522.000	-0.057	-3.925	-28.565	-7.351
523.000	-0.057	-3.925	-28.565	-7.345
524.000	-0.057	-3.925	-28.565	-7.351
525.000	-0.057	-3.925	-28.565	-7.345
526.000	-0.057	-3.925	-28.565	-7.345
527.000	-0.057	-3.925	-28.565	-7.345
528.000	-0.057	-3.925	-28.565	-7.345
529.000	-0.057	-3.925	-28.565	-7.345
530.000	-0.057	-3.925	-28.565	-7.351
531.000	-0.057	-3.925	-28.565	-7.351
532.000	-0.057	-3.925	-28.565	-7.351
533.000	-0.057	-3.925	-28.565	-7.345
534.000	-0.057	-3.925	-28.565	-7.351
535.000	-0.057	-3.925	-28.565	-7.351
536.000	-0.057	-3.925	-28.565	-7.351
537.000	-0.057	-3.925	-28.565	-7.345
538.000	-0.057	-3.925	-28.565	-7.345
539.000	-0.057	-3.925	-28.565	-7.345
540.000	-0.057	-3.925	-28.565	-7.345
541.000	-0.057	-3.925	-28.565	-7.345
542.000	-0.057	-3.925	-28.565	-7.345
543.000	-0.057	-3.925	-28.565	-7.351
544.000	-0.057	-3.925	-28.565	-7.345
545.000	-0.057	-3.925	-28.560	-7.351
546.000	-0.057	-3.925	-28.560	-7.351
547.000	-0.057	-3.925	-28.560	-7.345
548.000	-0.057	-3.925	-28.560	-7.345
549.000	-0.057	-3.925	-28.560	-7.345
550.000	-0.050	-3.925	-28.560	-7.345
551.000	-0.050	-3.925	-28.560	-7.345
552.000	-0.050	-3.925	-28.555	-7.345
553.000	-0.050	-3.925	-28.555	-7.345
554.000	-0.050	-3.925	-28.555	-7.345
555.000	-0.050	-3.925	-28.555	-7.345
556.000	-0.050	-3.925	-28.560	-7.345
557.000	-0.050	-3.925	-28.560	-7.345
558.000	-0.057	-3.925	-28.555	-7.345
559.000	-0.057	-3.925	-28.560	-7.345
560.000	-0.050	-3.925	-28.560	-7.345
561.000	-0.057	-3.925	-28.560	-7.345
562.000	-0.050	-3.925	-28.555	-7.345
563.000	-0.050	-3.925	-28.555	-7.345
564.000	-0.050	-3.925	-28.555	-7.345
565.000	-0.050	-3.925	-28.555	-7.345
566.000	-0.050	-3.925	-28.550	-7.340
567.000	-0.050	-3.925	-28.555	-7.340
568.000	-0.050	-3.925	-28.555	-7.340
569.000	-0.050	-3.925	-28.555	-7.340
570.000	-0.050	-3.925	-28.555	-7.345
571.000	-0.050	-3.925	-28.555	-7.340
572.000	-0.050	-3.925	-28.555	-7.340
573.000	-0.050	-3.925	-28.555	-7.340
574.000	-0.050	-3.925	-28.555	-7.340
575.000	-0.050	-3.925	-28.555	-7.340
576.000	-0.050	-3.925	-28.555	-7.340
577.000	-0.050	-3.925	-28.550	-7.340
578.000	-0.050	-3.925	-28.550	-7.340
579.000	-0.050	-3.925	-28.555	-7.340
580.000	-0.050	-3.925	-28.555	-7.340
581.000	-0.050	-3.925	-28.555	-7.340
582.000	-0.050	-3.925	-28.555	-7.340
583.000	-0.050	-3.925	-28.555	-7.340
584.000	-0.050	-3.925	-28.555	-7.340
585.000	-0.050	-3.920	-28.555	-7.340
586.000	-0.050	-3.925	-28.555	-7.340
587.000	-0.057	-3.925	-28.555	-7.340

Elapsed Time	Input 1	Input 2	Input 3	Input 4
588.000	-0.050	-3.925	-28.560	-7.340
589.000	-0.050	-3.925	-28.555	-7.340
590.000	-0.050	-3.925	-28.560	-7.340
591.000	-0.050	-3.925	-28.555	-7.340
592.000	-0.050	-3.925	-28.555	-7.340
593.000	-0.050	-3.925	-28.555	-7.340
594.000	-0.050	-3.925	-28.555	-7.340
595.000	-0.050	-3.925	-28.555	-7.340
596.000	-0.050	-3.925	-28.555	-7.345
597.000	-0.050	-3.925	-28.555	-7.340
598.000	-0.050	-3.925	-28.555	-7.340
599.000	-0.057	-3.925	-28.560	-7.340
600.000	-0.057	-3.925	-28.560	-7.345
601.000	-0.050	-3.925	-28.560	-7.340
602.000	-0.057	-3.925	-28.560	-7.340
603.000	-0.057	-3.925	-28.560	-7.340
604.000	-0.057	-3.925	-28.560	-7.345
605.000	-0.057	-3.925	-28.560	-7.345
606.000	-0.057	-3.925	-28.560	-7.345
607.000	-0.057	-3.925	-28.560	-7.345
608.000	-0.057	-3.925	-28.560	-7.345
609.000	-0.057	-3.925	-28.560	-7.345
610.000	-0.057	-3.920	-28.560	-7.345
611.000	-0.050	-3.925	-28.560	-7.345
612.000	-0.057	-3.925	-28.565	-7.345
613.000	-0.057	-3.925	-28.560	-7.345
614.000	-0.057	-3.925	-28.565	-7.345
615.000	-0.057	-3.925	-28.560	-7.345
616.000	-0.057	-3.925	-28.560	-7.345
617.000	-0.050	-3.925	-28.560	-7.345
618.000	-0.050	-3.925	-28.560	-7.345
619.000	-0.057	-3.925	-28.560	-7.345
620.000	-0.057	-3.925	-28.560	-7.345
621.000	-0.057	-3.920	-28.560	-7.345
622.000	-0.057	-3.925	-28.560	-7.345
623.000	-0.057	-3.925	-28.560	-7.345
624.000	-0.057	-3.925	-28.565	-7.345
625.000	-0.057	-3.925	-28.560	-7.345
626.000	-0.057	-3.925	-28.560	-7.345
627.000	-0.057	-3.925	-28.560	-7.345
628.000	-0.057	-3.925	-28.560	-7.345
629.000	-0.057	-3.925	-28.560	-7.345
630.000	-0.057	-3.925	-28.560	-7.345
631.000	-0.050	-3.925	-28.560	-7.345
632.000	-0.050	-3.925	-28.560	-7.345
633.000	-0.050	-3.920	-28.560	-7.345
634.000	-0.050	-3.925	-28.560	-7.345
635.000	-0.057	-3.920	-28.560	-7.345
636.000	-0.057	-3.925	-28.560	-7.345
637.000	-0.050	-3.925	-28.560	-7.345
638.000	-0.057	-3.920	-28.560	-7.345
639.000	-0.050	-3.920	-28.560	-7.345
640.000	-0.057	-3.920	-28.560	-7.345
641.000	-0.057	-3.925	-28.560	-7.345
642.000	-0.057	-3.925	-28.560	-7.345
643.000	-0.057	-3.925	-28.560	-7.345
644.000	-0.057	-3.920	-28.560	-7.345
645.000	-0.057	-3.920	-28.560	-7.345
646.000	-0.057	-3.920	-28.560	-7.345
647.000	-0.057	-3.925	-28.560	-7.345
648.000	-0.050	-3.925	-28.560	-7.345
649.000	-0.057	-3.925	-28.560	-7.345
650.000	-0.050	-3.925	-28.560	-7.345
651.000	-0.050	-3.920	-28.560	-7.345
652.000	-0.050	-3.920	-28.560	-7.345
653.000	-0.057	-3.920	-28.560	-7.345
654.000	-0.050	-3.920	-28.560	-7.345
655.000	-0.050	-3.920	-28.560	-7.345
656.000	-0.057	-3.920	-28.560	-7.345
657.000	-0.057	-3.920	-28.560	-7.345
658.000	-0.057	-3.920	-28.560	-7.345
659.000	-0.057	-3.920	-28.560	-7.345
660.000	-0.057	-3.925	-28.560	-7.345
661.000	-0.057	-3.920	-28.560	-7.345
662.000	-0.057	-3.920	-28.560	-7.345
663.000	-0.057	-3.920	-28.560	-7.345
664.000	-0.057	-3.920	-28.560	-7.345
665.000	-0.050	-3.920	-28.560	-7.345
666.000	-0.050	-3.925	-28.560	-7.345
667.000	-0.050	-3.920	-28.560	-7.345
668.000	-0.050	-3.920	-28.560	-7.345
669.000	-0.050	-3.920	-28.560	-7.345
670.000	-0.050	-3.925	-28.560	-7.345
671.000	-0.050	-3.920	-28.560	-7.345
672.000	-0.050	-3.920	-28.555	-7.345
673.000	-0.050	-3.920	-28.560	-7.345
674.000	-0.050	-3.925	-28.555	-7.345
675.000	-0.050	-3.920	-28.555	-7.340
676.000	-0.050	-3.925	-28.555	-7.340
677.000	-0.050	-3.920	-28.555	-7.345
678.000	-0.050	-3.925	-28.555	-7.340
679.000	-0.050	-3.925	-28.555	-7.345
680.000	-0.050	-3.920	-28.555	-7.340
681.000	-0.050	-3.920	-28.555	-7.340
682.000	-0.050	-3.920	-28.555	-7.340
683.000	-0.050	-3.920	-28.555	-7.340
684.000	-0.050	-3.920	-28.555	-7.340
685.000	-0.050	-3.920	-28.555	-7.340
686.000	-0.050	-3.920	-28.555	-7.340
687.000	-0.050	-3.920	-28.555	-7.340
688.000	-0.050	-3.920	-28.555	-7.340
689.000	-0.050	-3.920	-28.555	-7.340
690.000	-0.050	-3.920	-28.555	-7.340
691.000	-0.050	-3.920	-28.555	-7.340

Elapsed Time	Input 1	Input 2	Input 3	Input 4
692.000	-0.050	-3.920	-28.555	-7.340
693.000	-0.050	-3.920	-28.560	-7.340
694.000	-0.050	-3.925	-28.560	-7.345
695.000	-0.050	-3.920	-28.560	-7.340
696.000	-0.050	-3.920	-28.560	-7.340
697.000	-0.050	-3.920	-28.560	-7.345
698.000	-0.050	-3.920	-28.560	-7.340
699.000	-0.050	-3.920	-28.555	-7.340
700.000	-0.050	-3.920	-28.555	-7.340
701.000	-0.050	-3.920	-28.555	-7.340
702.000	-0.050	-3.920	-28.555	-7.340
703.000	-0.050	-3.920	-28.555	-7.340
704.000	-0.050	-3.920	-28.555	-7.340
705.000	-0.050	-3.920	-28.550	-7.340
706.000	-0.050	-3.920	-28.555	-7.340
707.000	-0.050	-3.920	-28.555	-7.340
708.000	-0.050	-3.920	-28.550	-7.340
709.000	-0.050	-3.920	-28.555	-7.340
710.000	-0.050	-3.920	-28.555	-7.340
711.000	-0.050	-3.920	-28.555	-7.340
712.000	-0.050	-3.920	-28.555	-7.340
713.000	-0.050	-3.920	-28.555	-7.340
714.000	-0.050	-3.920	-28.555	-7.340
715.000	-0.050	-3.920	-28.550	-7.340
716.000	-0.050	-3.920	-28.555	-7.340
717.000	-0.050	-3.920	-28.555	-7.340
718.000	-0.050	-3.920	-28.555	-7.340
719.000	-0.050	-3.920	-28.550	-7.340
720.000	-0.050	-3.920	-28.555	-7.340
721.000	-0.050	-3.920	-28.555	-7.340
722.000	-0.050	-3.920	-28.555	-7.340
723.000	-0.050	-3.920	-28.555	-7.340
724.000	-0.050	-3.920	-28.555	-7.340
725.000	-0.050	-3.920	-28.555	-7.340
726.000	-0.050	-3.920	-28.555	-7.340
727.000	-0.050	-3.920	-28.555	-7.340
728.000	-0.050	-3.920	-28.555	-7.340
729.000	-0.050	-3,915	-28.560	-7.340
730.000	-0.050	-3.920	-28.555	-7.340
731.000	-0.050	-3.920	-28.555	-7.340
732.000	-0.050	-3.920	-28.555	-7.340
733.000	-0.050	-3.920	-28.560	-7.340
734.000	-0.050	-3.915	-28.560	-7.340
735.000	-0.057	-3.920	-28.560	-7.340
736.000	-0.050	-3.920	-28.560	-7.340
737.000	-0.050	-3.920	-28.560	-7.340
738.000	-0.050	-3.920	-28.560	-7.340
739.000	-0.050	-3.920	-28.560	-7.340
740.000	-0.050	-3.915	-28.560	-7.340
741.000	-0.050	-3.920	-28.555	-7.340
742.000	-0.050	-3.915	-28.560	-7.340
743.000	-0.050	-3.920	-28.560	-7.340
744.000	-0.050	-3.915	-28.560	-7.340
745.000	-0.050	-3.915	-28.560	-7.340
746.000	-0.050	-3.915	-28.560	-7.340
747.000	-0.050	-3.915	-28.560	-7.340
748.000	-0.050	-3.915	-28.560	-7.340
749.000	-0.057	-3.915	-28.560	-7.340
750.000	-0.050	-3.915	-28.560	-7.345
751.000	-0.050	-3.915	-28.560	-7.340
752.000	-0.057	-3.915	-28.560	-7.340
753.000	-0.050	-3.915	-28.560	-7.340
754.000	-0.050	-3.915	-28.560	-7.340
755.000	-0.050	-3.915	-28.560	-7.340
756.000	-0.050	-3.915	-28.560	-7.340
757.000	-0.050	-3.915	-28.560	-7.345
758.000	-0.050	-3.915	-28.560	-7.345
759.000	-0.050	-3.915	-28.560	-7.345
760.000	-0.050	-3.915	-28.560	-7.340
761.000	-0.050	-3.915	-28.560	-7.340
762.000	-0.050	-3.915	-28.555	-7.340
763.000	-0.050	-3.915	-28.560	-7.340
764.000	-0.050	-3.915	-28.555	-7.340
765.000	-0.050	-3.915	-28.555	-7.340
766.000	-0.050	-3.910	-28.560	-7.340
767.000	-0.050	-3.915	-28.560	-7.340
768.000	-0.050	-3.910	-28.560	-7.340
769.000	-0.050	-3.910	-28.560	-7.340
770.000	-0.050	-3.910	-28.560	-7.340
771.000	-0.050	-3.910	-28.560	-7.340
772.000	-0.050	-3.910	-28.560	-7.340
773.000	-0.050	-3.910	-28.560	-7.340
774.000	-0.050	-3.910	-28.560	-7.340
775.000	-0.050	-3.910	-28.560	-7.340
776.000	-0.050	-3.910	-28.560	-7.340
777.000	-0.050	-3.910	-28.560	-7.340
778.000	-0.050	-3.910	-28.560	-7.340
779.000	-0.050	-3.910	-28.560	-7.340
780.000	-0.050	-3.910	-28.560	-7.340
781.000	-0.050	-3.910	-28.560	-7.340
782.000	-0.050	-3.910	-28.560	-7.340
783.000	-0.050	-3.910	-28.560	-7.345
784.000	-0.050	-3.910	-28.560	-7.340
785.000	-0.050	-3.910	-28.560	-7.340
786.000	-0.050	-3.910	-28.560	-7.340
787.000	-0.050	-3.910	-28.560	-7.340
788.000	-0.050	-3.910	-28.560	-7.340
789.000	-0.050	-3.910	-28.560	-7.345
790.000	-0.050	-3.910	-28.560	-7.340
791.000	-0.050	-3.910	-28.560	-7.340
792.000	-0.050	-3.910	-28.560	-7.340
793.000	-0.050	-3.910	-28.560	-7.340
794.000	-0.050	-3.910	-28.560	-7.340
795.000	-0.050	-3.910	-28.560	-7.340

Elapsed Time	Input 1	Input 2	Input 3	Input 4
796.000	-0.050	-3.910	-28.555	-7.340
797.000	-0.050	-3.910	-28.555	-7.340
798.000	-0.050	-3.910	-28.560	-7.340
799.000	-0.050	-3.910	-28.555	-7.340
800.000	-0.050	-3.910	-28.555	-7.340
801.000	-0.050	-3.910	-28.555	-7.340
802.000	-0.044	-3.905	-28.555	-7.340
803.000	-0.044	-3.910	-28.555	-7.340
804.000	-0.044	-3.910	-28.555	-7.340
805.000	-0.044	-3.910	-28.555	-7.340
806.000	-0.044	-3.910	-28.555	-7.340
807.000	-0.044	-3.910	-28.555	-7.340
808.000	-0.050	-3.910	-28.555	-7.340
809.000	-0.050	-3.910	-28.555	-7.340
810.000	-0.050	-3.910	-28.555	-7.340
811.000	-0.050	-3.910	-28.555	-7.335
812.000	-0.050	-3.910	-28.555	-7.340
813.000	-0.050	-3.910	-28.555	-7.340
814.000	-0.050	-3.910	-28.555	-7.340
815.000	-0.050	-3.910	-28.555	-7.340
816.000	-0.050	-3.910	-28.555	-7.340
817.000	-0.050	-3.910	-28.555	-7.340
818.000	-0.044	-3.910	-28.555	-7.340
819.000	-0.050	-3.910	-28.555	-7.340
820.000	-0.050	-3.910	-28.555	-7.340
821.000	-0.044	-3.910	-28.555	-7.340
822.000	-0.044	-3.910	-28.555	-7.340
823.000	-0.050	-3.910	-28.555	-7.335
824.000	-0.044	-3.910	-28.555	-7.340
825.000	-0.044	-3.910	-28.550	-7.335
826.000	-0.044	-3.905	-28.550	-7.335
827.000	-0.044	-3.910	-28.555	-7.340
828.000	-0.044	-3.910	-28.550	-7.335
829.000	-0.044	-3.910	-28.550	-7.335
830.000	-0.044	-3.910	-28.555	-7.340
831.000	-0.044	-3.910	-28.550	-7.335
832.000	-0.044	-3.910	-28.550	-7.335
833.000	-0.044	-3.910	-28.550	-7.335
834.000	-0.044	-3.910	-28.550	-7.335
835.000	-0.044	-3.910	-28.550	-7.335
836.000	-0.044	-3.910	-28.550	-7.335
837.000	-0.044	-3.910	-28.550	-7.335
838.000	-0.044	-3.910	-28.550	-7.335
839.000	-0.044	-3.910	-28.550	-7.335
840.000	-0.044	-3.910	-28.550	-7.335
841.000	-0.044	-3.910	-28.555	-7.340
842.000	-0.044	-3.910	-28.550	-7.335
843.000	-0.044	-3.910	-28.550	-7.335
844.000	-0.044	-3.910	-28.550	-7.335
845.000	-0.044	-3.910	-28.550	-7.335
846.000	-0.044	-3.905	-28.550	-7.335
847.000	-0.044	-3.905	-28.545	-7.335
848.000	-0.044	-3.910	-28.550	-7.335
849.000	-0.044	-3.910	-28.550	-7.335
850.000	-0.044	-3.905	-28.545	-7.335
851.000	-0.044	-3.910	-28.550	-7.335
852.000	-0.044	-3.905	-28.545	-7.330
853.000	-0.044	-3.910	-28.545	-7.335
854.000	-0.044	-3.910	-28.550	-7.335
855.000	-0.044	-3.910	-28.550	-7.335
856.000	-0.044	-3.910	-28.545	-7.335
857.000	-0.044	-3.910	-28.545	-7.335
858.000	-0.044	-3.910	-28.545	-7.335
859.000	-0.044	-3.910	-28.545	-7.335
860.000	-0.044	-3.905	-28.545	-7.335
861.000	-0.044	-3.910	-28.550	-7.335
862.000	-0.044	-3.905	-28.545	-7.330
863.000	-0.044	-3.905	-28.550	-7.335
864.000	-0.044	-3.910	-28.550	-7.335
865.000	-0.044	-3.905	-28.550	-7.335
866.000	-0.044	-3.910	-28.550	-7.335
867.000	-0.044	-3.910	-28.550	-7.335
868.000	-0.044	-3.910	-28.545	-7.335
869.000	-0.044	-3.905	-28.550	-7.335
870.000	-0.044	-3.910	-28.550	-7.335
871.000	-0.044	-3.910	-28.550	-7.335
872.000	-0.044	-3.905	-28.550	-7.330
873.000	-0.044	-3.910	-28.550	-7.335
874.000	-0.038	-3.905	-28.550	-7.330
875.000	-0.038	-3.905	-28.550	-7.330
876.000	-0.038	-3.905	-28.545	-7.330
877.000	-0.044	-3.910	-28.545	-7.335
878.000	-0.044	-3.910	-28.545	-7.335
879.000	-0.044	-3.905	-28.550	-7.335
880.000	-0.050	-3.910	-28.555	-7.335
881.000	-0.050	-3.915	-28.550	-7.335
882.000	-0.050	-3.915	-28.550	-7.340
883.000	-0.050	-3.910	-28.550	-7.340
884.000	-0.050	-3.910	-28.550	-7.340
885.000	-0.044	-3.910	-28.550	-7.335
886.000	-0.044	-3.910	-28.550	-7.335
887.000	-0.044	-3.905	-28.550	-7.335
888.000	-0.044	-3.905	-28.555	-7.335
889.000	-0.044	-3.910	-28.555	-7.335
890.000	-0.038	-3.905	-28.550	-7.335
891.000	-0.044	-3.905	-28.550	-7.335
892.000	-0.044	-3.910	-28.550	-7.335
893.000	-0.044	-3.910	-28.555	-7.335
894.000	-0.044	-3.900	-28.545	-7.335
895.000	-0.044	-3.905	-28.550	-7.335
896.000	-0.044	-3.900	-28.545	-7.335
897.000	-0.044	-3.905	-28.550	-7.335
898.000	-0.044	-3.905	-28.550	-7.335
899.000	-0.044	-3.905	-28.550	-7.335

Elapsed Time	Input 1	Input 2	Input 3	Input 4
900.000	-0.044	-3.910	-28.545	-7.335
901.000	-0.044	-3.905	-28.545	-7.335
902.000	-0.044	-3.905	-28.545	-7.335
903.000	-0.038	-3.900	-28.545	-7.335
904.000	-0.038	-3.905	-28.545	-7.335
905.000	-0.038	-3.905	-28.545	-7.330
906.000	-0.038	-3.905	-28.540	-7.335
907.000	-0.038	-3.905	-28.540	-7.330
908.000	-0.038	-3.905	-28.540	-7.330
909.000	-0.038	-3.905	-28.540	-7.330
910.000	-0.038	-3.905	-28.545	-7.330
911.000	-0.044	-3.905	-28.545	-7.330
912.000	-0.038	-3.905	-28.545	-7.330
913.000	-0.038	-3.905	-28.540	-7.330
914.000	-0.044	-3.905	-28.545	-7.330
915.000	-0.044	-3.910	-28.550	-7.335
916.000	-0.038	-3.905	-28.545	-7.330
917.000	-0.038	-3.905	-28.545	-7.330
918.000	-0.038	-3.900	-28.545	-7.330
919.000	-0.038	-3.910	-28.545	-7.330
920.000	-0.038	-3.915	-28.550	-7.330
921.000	-0.044	-3.910	-28.545	-7.330
922.000	-0.044	-3.905	-28.545	-7.330
923.000	-0.038	-3.905	-28.545	-7.330
924.000	-0.038	-3.905	-28.550	-7.330
925.000	-0.038	-3.910	-28.540	-7.330
926.000	-0.038	-3.905	-28.545	-7.330
927.000	-0.038	-3.905	-28.545	-7.330
928.000	-0.038	-3.905	-28.540	-7.330
929.000	-0.038	-3.905	-28.540	-7.330
930.000	-0.038	-3.905	-28.540	-7.330
931.000	-0.038	-3.905	-28.540	-7.330
932.000	-0.038	-3.905	-28.540	-7.330
933.000	-0.038	-3.905	-28.540	-7.330
934.000	-0.038	-3.905	-28.540	-7.330
935.000	-0.038	-3.905	-28.545	-7.330
936.000	-0.031	-3.900	-28.540	-7.330
937.000	-0.038	-3.905	-28.540	-7.330
938.000	-0.038	-3.910	-28.540	-7.330
939.000	-0.038	-3.905	-28.540	-7.330
940.000	-0.038	-3.915	-28.540	-7.330
941.000	-0.038	-3.910	-28.540	-7.325
942.000	-0.038	-3.910	-28.540	-7.325
943.000	-0.038	-3.905	-28.540	-7.330
944.000	-0.031	-3.905	-28.540	-7.325
945.000	-0.031	-3.905	-28.540	-7.330
946.000	-0.031	-3.905	-28.540	-7.325
947.000	-0.038	-3.910	-28.540	-7.330
948.000	-0.031	-3.905	-28.540	-7.325
949.000	-0.031	-3.900	-28.535	-7.325
950.000	-0.038	-3.905	-28.535	-7.330
951.000	-0.038	-3.905	-28.540	-7.325
952.000	-0.038	-3.905	-28.540	-7.325
953.000	-0.038	-3.900	-28.535	-7.325
954.000	-0.038	-3.900	-28.540	-7.325
955.000	-0.038	-3.900	-28.540	-7.325
956.000	-0.038	-3.905	-28.540	-7.325
957.000	-0.038	-3.900	-28.545	-7.325
958.000	-0.038	-3.910	-28.545	-7.325
959.000	-0.038	-3.905	-28.540	-7.325
960.000	-0.031	-3.900	-28.540	-7.325
961.000	-0.038	-3.905	-28.540	-7.330
962.000	-0.038	-3.910	-28.545	-7.330
963.000	-0.038	-3.910	-28.540	-7.330
964.000	-0.038	-3.910	-28.535	-7.330
965.000	-0.038	-3.910	-28.540	-7.325
966.000	-0.038	-3.905	-28.545	-7.325
967.000	-0.038	-3.905	-28.540	-7.325
968.000	-0.038	-3.905	-28.540	-7.325
969.000	-0.038	-3.915	-28.545	-7.330
970.000	-0.038	-3.905	-28.540	-7.325
971.000	-0.038	-3.905	-28.540	-7.330
972.000	-0.031	-3.900	-28.540	-7.325
973.000	-0.038	-3.900	-28.540	-7.325
974.000	-0.031	-3.900	-28.540	-7.325
975.000	-0.038	-3.910	-28.540	-7.325
976.000	-0.038	-3.905	-28.540	-7.325
977.000	-0.038	-3.900	-28.540	-7.325
978.000	-0.038	-3.910	-28.540	-7.330
979.000	-0.038	-3.905	-28.540	-7.325
980.000	-0.038	-3.905	-28.545	-7.325
981.000	-0.038	-3.905	-28.545	-7.325
982.000	-0.038	-3.900	-28.545	-7.325
983.000	-0.038	-3.905	-28.550	-7.330
984.000	-0.038	-3.905	-28.545	-7.330
985.000	-0.038	-3.895	-28.540	-7.320
986.000	-0.044	-3.910	-28.550	-7.330
987.000	-0.038	-3.905	-28.540	-7.330
988.000	-0.038	-3.900	-28.545	-7.330
989.000	-0.044	-3.910	-28.550	-7.335
990.000	-0.044	-3.910	-28.550	-7.330
991.000	-0.044	-3.910	-28.545	-7.335
992.000	-0.038	-3.905	-28.545	-7.330
993.000	-0.038	-3.900	-28.545	-7.330
994.000	-0.038	-3.905	-28.545	-7.330
995.000	-0.038	-3.905	-28.545	-7.330
996.000	-0.038	-3.900	-28.545	-7.330
997.000	-0.038	-3.900	-28.545	-7.325
998.000	-0.038	-3.900	-28.545	-7.330
999.000	-0.038	-3.905	-28.550	-7.330
1000.00	-0.038	-3.900	-28.545	-7.330
1001.00	-0.038	-3.910	-28.550	-7.330
1002.00	-0.038	-3.905	-28.550	-7.330
1003.00	-0.038	-3.905	-28.545	-7.330

Elapsed Time	Input 1	Input 2	Input 3	Input 4
1004.00	-0.038	-3.900	-28.550	-7.330
1005.00	-0.038	-3.905	-28.545	-7.330
1006.00	-0.044	-3.905	-28.550	-7.330
1007.00	-0.044	-3.910	-28.550	-7.330
1008.00	-0.038	-3.900	-28.540	-7.330
1009.00	-0.038	-3.900	-28.545	-7.330
1010.00	-0.038	-3.900	-28.550	-7.330
1011.00	-0.038	-3.900	-28.545	-7.330
1012.00	-0.044	-3.905	-28.550	-7.330
1013.00	-0.038	-3.905	-28.550	-7.330
1014.00	-0.044	-3.905	-28.550	-7.330
1015.00	-0.044	-3.905	-28.550	-7.330
1016.00	-0.044	-3.905	-28.550	-7.335
1017.00	-0.044	-3.905	-28.550	-7.330
1018.00	-0.044	-3.915	-28.550	-7.335
1019.00	-0.038	-3.905	-28.550	-7.335
1020.00	-0.044	-3.900	-28.545	-7.330
1021.00	-0.038	-3.895	-28.550	-7.330
1022.00	-0.044	-3.905	-28.555	-7.335
1023.00	-0.038	-3.900	-28.550	-7.330
1024.00	-0.038	-3.905	-28.555	-7.335
1025.00	-0.044	-3.910	-28.550	-7.335
1026.00	-0.038	-3.905	-28.545	-7.335
1027.00	-0.038	-3.900	-28.545	-7.330
1028.00	-0.038	-3.900	-28.550	-7.335
1029.00	-0.038	-3.900	-28.545	-7.335
1030.00	-0.044	-3.905	-28.555	-7.335
1031.00	-0.044	-3.920	-28.555	-7.335
1032.00	-0.044	-3.910	-28.555	-7.335
1033.00	-0.044	-3.905	-28.550	-7.330
1034.00	-0.044	-3.915	-28.555	-7.335
1035.00	-0.044	-3.910	-28.555	-7.335
1036.00	-0.044	-3.905	-28.545	-7.335
1037.00	-0.044	-3.905	-28.555	-7.335
1038.00	-0.044	-3.905	-28.555	-7.335
1039.00	-0.044	-3.915	-28.560	-7.340
1040.00	-0.044	-3.915	-28.555	-7.340
1041.00	-0.044	-3.905	-28.550	-7.335
1042.00	-0.044	-3.900	-28.555	-7.335
1043.00	-0.044	-3.900	-28.560	-7.335
1044.00	-0.044	-3.900	-28.550	-7.335
1045.00	-0.044	-3.900	-28.550	-7.335
1046.00	-0.044	-3.910	-28.555	-7.340
1047.00	-0.050	-3.910	-28.550	-7.345
1048.00	-0.050	-3.915	-28.550	-7.340
1049.00	-0.050	-3.910	-28.555	-7.340
1050.00	-0.044	-3.900	-28.550	-7.335
1051.00	-0.044	-3.905	-28.560	-7.340
1052.00	-0.044	-3.905	-28.545	-7.340
1053.00	-0.044	-3.905	-28.560	-7.340
1054.00	-0.044	-3.910	-28.560	-7.340
1055.00	-0.044	-3.905	-28.545	-7.340
1056.00	-0.044	-3.905	-28.555	-7.340
1057.00	-0.044	-3.905	-28.555	-7.340
1058.00	-0.044	-3.905	-28.560	-7.340
1059.00	-0.044	-3.910	-28.555	-7.340
1060.00	-0.044	-3.905	-28.550	-7.340
1061.00	-0.044	-3.905	-28.560	-7.340
1062.00	-0.044	-3.900	-28.560	-7.340
1063.00	-0.044	-3.895	-28.550	-7.335
1064.00	-0.050	-3.900	-28.560	-7.340
1065.00	-0.050	-3.910	-28.555	-7.345
1066.00	-0.050	-3.905	-28.570	-7.340
1067.00	-0.050	-3.905	-28.565	-7.345
1068.00	-0.050	-3.905	-28.555	-7.345
1069.00	-0.044	-3.905	-28.565	-7.345
1070.00	-0.050	-3.905	-28.565	-7.345
1071.00	-0.050	-3.905	-28.565	-7.345
1072.00	-0.050	-3.910	-28.565	-7.345
1073.00	-0.050	-3.910	-28.570	-7.351
1074.00	-0.050	-3.900	-28.565	-7.345
1075.00	-0.050	-3.905	-28.565	-7.345
1076.00	-0.050	-3.905	-28.560	-7.345
1077.00	-0.050	-3.900	-28.560	-7.345
1078.00	-0.057	-3.915	-28.565	-7.351
1079.00	-0.050	-3.905	-28.565	-7.345
1080.00	-0.050	-3.905	-28.565	-7.345
1081.00	-0.050	-3.905	-28.560	-7.345
1082.00	-0.050	-3.905	-28.565	-7.345
1083.00	-0.050	-3.900	-28.560	-7.351
1084.00	-0.050	-3.905	-28.565	-7.345
1085.00	-0.050	-3.915	-28.565	-7.351
1086.00	-0.050	-3.900	-28.560	-7.345
1087.00	-0.050	-3.905	-28.560	-7.351
1088.00	-0.050	-3.910	-28.565	-7.345
1089.00	-0.050	-3.910	-28.570	-7.351
1090.00	-0.050	-3.915	-28.565	-7.351
1091.00	-0.050	-3.910	-28.560	-7.351
1092.00	-0.050	-3.905	-28.560	-7.345
1093.00	-0.044	-3.905	-28.560	-7.345
1094.00	-0.044	-3.905	-28.565	-7.351
1095.00	-0.050	-3.905	-28.560	-7.345
1096.00	-0.044	-3.905	-28.560	-7.345
1097.00	-0.044	-3.900	-28.565	-7.345
1098.00	-0.050	-3.905	-28.565	-7.345
1099.00	-0.050	-3.905	-28.560	-7.345
1100.00	-0.050	-3.910	-28.565	-7.345
1101.00	-0.050	-3.905	-28.560	-7.345
1102.00	-0.050	-3.915	-28.565	-7.351
1103.00	-0.050	-3.905	-28.565	-7.351
1104.00	-0.050	-3.905	-28.560	-7.345
1105.00	-0.050	-3.910	-28.560	-7.345
1106.00	-0.050	-3.905	-28.565	-7.345
1107.00	-0.050	-3.910	-28.565	-7.351

Elapsed Time	Input 1	Input 2	Input 3	Input 4
1108.00	-0.044	-3.900	-28.555	-7.345
1109.00	-0.044	-3.900	-28.560	-7.345
1110.00	-0.044	-3.895	-28.565	-7.345
1111.00	-0.050	-3.900	-28.565	-7.345
1112.00	-0.050	-3.905	-28.565	-7.351
1113.00	-0.057	-3.915	-28.570	-7.351
1114.00	-0.050	-3.905	-28.565	-7.351
1115.00	-0.050	-3.910	-28.570	-7.356
1116.00	-0.050	-3.910	-28.565	-7.351
1117.00	-0.050	-3.905	-28.570	-7.351
1118.00	-0.057	-3.910	-28.565	-7.351
1119.00	-0.050	-3.900	-28.565	-7.351
1120.00	-0.050	-3.910	-28.570	-7.351
1121.00	-0.050	-3.905	-28.570	-7.351
1122.00	-0.050	-3.905	-28.570	-7.351
1123.00	-0.050	-3.905	-28.570	-7.351
1124.00	-0.057	-3.905	-28.575	-7.351
1125.00	-0.057	-3.915	-28.570	-7.356
1126.00	-0.057	-3.910	-28.570	-7.351
1127.00	-0.057	-3.910	-28.570	-7.356
1128.00	-0.050	-3.905	-28.570	-7.351
1129.00	-0.050	-3.905	-28.565	-7.351
1130.00	-0.050	-3.910	-28.570	-7.351
1131.00	-0.050	-3.905	-28.570	-7.356
1132.00	-0.050	-3.900	-28.565	-7.351
1133.00	-0.057	-3.910	-28.575	-7.356
1134.00	-0.057	-3.910	-28.570	-7.356
1135.00	-0.057	-3.910	-28.570	-7.356
1136.00	-0.050	-3.905	-28.565	-7.356
1137.00	-0.050	-3.910	-28.565	-7.356
1138.00	-0.050	-3.910	-28.570	-7.356
1139.00	-0.050	-3.905	-28.570	-7.356
1140.00	-0.057	-3.910	-28.570	-7.356
1141.00	-0.057	-3.910	-28.565	-7.356
1142.00	-0.057	-3.910	-28.570	-7.356
1143.00	-0.057	-3.910	-28.575	-7.356
1144.00	-0.050	-3.905	-28.570	-7.356
1145.00	-0.050	-3.905	-28.570	-7.351
1146.00	-0.050	-3.900	-28.570	-7.351
1147.00	-0.057	-3.905	-28.570	-7.356
1148.00	-0.050	-3.900	-28.565	-7.356
1149.00	-0.050	-3.900	-28.570	-7.356
1150.00	-0.057	-3.915	-28.570	-7.356
1151.00	-0.050	-3.905	-28.565	-7.356
1152.00	-0.050	-3.910	-28.565	-7.356
1153.00	-0.050	-3.905	-28.570	-7.356
1154.00	-0.050	-3.900	-28.565	-7.351
1155.00	-0.050	-3.900	-28.570	-7.351
1156.00	-0.050	-3.905	-28.565	-7.356
1157.00	-0.044	-3.900	-28.560	-7.351
1158.00	-0.050	-3.905	-28.560	-7.356
1159.00	-0.050	-3.905	-28.570	-7.351
1160.00	-0.050	-3.910	-28.570	-7.351
1161.00	-0.050	-3.910	-28.565	-7.351
1162.00	-0.050	-3.905	-28.565	-7.351
1163.00	-0.050	-3.900	-28.560	-7.351
1164.00	-0.050	-3.900	-28.555	-7.351
1165.00	-0.050	-3.905	-28.565	-7.351
1166.00	-0.050	-3.910	-28.565	-7.356
1167.00	-0.050	-3.910	-28.575	-7.356
1168.00	-0.050	-3.905	-28.555	-7.356
1169.00	-0.050	-3.910	-28.560	-7.356
1170.00	-0.050	-3.905	-28.570	-7.356
1171.00	-0.050	-3.905	-28.560	-7.351
1172.00	-0.050	-3.910	-28.570	-7.351
1173.00	-0.050	-3.905	-28.565	-7.351
1174.00	-0.050	-3.910	-28.565	-7.351
1175.00	-0.050	-3.900	-28.570	-7.351
1176.00	-0.050	-3.900	-28.575	-7.351
1177.00	-0.050	-3.905	-28.565	-7.356
1178.00	-0.050	-3.905	-28.570	-7.351
1179.00	-0.057	-3.915	-28.580	-7.356
1180.00	-0.050	-3.910	-28.575	-7.356
1181.00	-0.050	-3.905	-28.570	-7.356
1182.00	-0.050	-3.910	-28.570	-7.356
1183.00	-0.050	-3.905	-28.565	-7.356
1184.00	-0.050	-3.900	-28.570	-7.351
1185.00	-0.050	-3.905	-28.570	-7.351
1186.00	-0.050	-3.910	-28.570	-7.351
1187.00	-0.050	-3.905	-28.575	-7.351
1188.00	-0.050	-3.900	-28.570	-7.351
1189.00	-0.050	-3.905	-28.570	-7.351
1190.00	-0.050	-3.900	-28.555	-7.351
1191.00	-0.050	-3.905	-28.575	-7.356
1192.00	-0.050	-3.915	-28.575	-7.356
1193.00	-0.050	-3.905	-28.570	-7.351
1194.00	-0.050	-3.900	-28.570	-7.356
1195.00	-0.050	-3.900	-28.570	-7.351
1196.00	-0.050	-3.910	-28.570	-7.351
1197.00	-0.050	-3.905	-28.570	-7.351
1198.00	-0.057	-3.915	-28.565	-7.356
1199.00	-0.057	-3.920	-28.580	-7.361
1200.00	-0.057	-3.920	-28.570	-7.361
1201.00	-0.050	-3.910	-28.575	-7.356
1202.00	-0.050	-3.915	-28.570	-7.356
1203.00	-0.057	-3.915	-28.570	-7.356
1204.00	-0.057	-3.910	-28.565	-7.356
1205.00	-0.050	-3.905	-28.570	-7.356
1206.00	-0.050	-3.910	-28.580	-7.356
1207.00	-0.050	-3.910	-28.565	-7.351
1208.00	-0.050	-3.910	-28.570	-7.351
1209.00	-0.050	-3.905	-28.570	-7.356
1210.00	-0.050	-3.910	-28.560	-7.356
1211.00	-0.050	-3.910	-28.575	-7.351

Elapsed Time	Input 1	Input 2	Input 3	Input 4
1212.00	-0.050	-3.905	-28.575	-7.356
1213.00	-0.050	-3.900	-28.570	-7.351
1214.00	-0.050	-3.905	-28.565	-7.351
1215.00	-0.050	-3.910	-28.575	-7.356
1216.00	-0.050	-3.905	-28.570	-7.356
1217.00	-0.050	-3.910	-28.560	-7.356
1218.00	-0.050	-3.915	-28.575	-7.356
1219.00	-0.057	-3.915	-28.565	-7.356
1220.00	-0.050	-3.910	-28.575	-7.356
1221.00	-0.050	-3.910	-28.575	-7.356
1222.00	-0.050	-3.910	-28.580	-7.356
1223.00	-0.050	-3.910	-28.565	-7.356
1224.00	-0.050	-3.910	-28.575	-7.356
1225.00	-0.057	-3.920	-28.570	-7.356
1226.00	-0.050	-3.920	-28.560	-7.356
1227.00	-0.050	-3.905	-28.570	-7.351
1228.00	-0.050	-3.910	-28.560	-7.356
1229.00	-0.050	-3.915	-28.570	-7.356
1230.00	-0.050	-3.900	-28.560	-7.351
1231.00	-0.050	-3.905	-28.565	-7.356
1232.00	-0.050	-3.910	-28.570	-7.356
1233.00	-0.057	-3.915	-28.580	-7.356
1234.00	-0.057	-3.915	-28.575	-7.356
1235.00	-0.050	-3.915	-28.575	-7.356
1236.00	-0.057	-3.910	-28.560	-7.356
1237.00	-0.057	-3.915	-28.565	-7.356
1238.00	-0.050	-3.905	-28.570	-7.351
1239.00	-0.050	-3.905	-28.560	-7.351
1240.00	-0.050	-3.900	-28.560	-7.351
1241.00	-0.050	-3.900	-28.575	-7.356
1242.00	-0.050	-3.910	-28.580	-7.356
1243.00	-0.050	-3.905	-28.575	-7.356
1244.00	-0.050	-3.905	-28.575	-7.356
1245.00	-0.050	-3.900	-28.575	-7.351
1246.00	-0.050	-3.900	-28.570	-7.351
1247.00	-0.057	-3.905	-28.575	-7.356
1248.00	-0.050	-3.905	-28.575	-7.356
1249.00	-0.050	-3.905	-28.580	-7.356
1250.00	-0.057	-3.915	-28.580	-7.361
1251.00	-0.057	-3.915	-28.575	-7.361
1252.00	-0.063	-3.925	-28.585	-7.366
1253.00	-0.057	-3.920	-28.580	-7.366
1254.00	-0.057	-3.920	-28.570	-7.361
1255.00	-0.057	-3.920	-28.575	-7.361
1256.00	-0.063	-3.920	-28.580	-7.361
1257.00	-0.057	-3.925	-28.585	-7.361
1258.00	-0.057	-3.915	-28.570	-7.361
1259.00	-0.057	-3.915	-28.575	-7.361
1260.00	-0.057	-3.915	-28.580	-7.361
1261.00	-0.057	-3.915	-28.580	-7.361
1262.00	-0.050	-3.915	-28.580	-7.361
1263.00	-0.057	-3.910	-28.575	-7.356
1264.00	-0.050	-3.905	-28.570	-7.356
1265.00	-0.050	-3.910	-28.570	-7.361
1266.00	-0.050	-3.915	-28.570	-7.356
1267.00	-0.050	-3.910	-28.560	-7.356
1268.00	-0.050	-3.910	-28.560	-7.361
1269.00	-0.057	-3.915	-28.575	-7.361
1270.00	-0.057	-3.915	-28.570	-7.361
1271.00	-0.057	-3.915	-28.575	-7.361
1272.00	-0.050	-3.910	-28.570	-7.361
1273.00	-0.050	-3.910	-28.570	-7.356
1274.00	-0.057	-3.910	-28.575	-7.356
1275.00	-0.057	-3.910	-28.570	-7.356
1276.00	-0.057	-3.910	-28.570	-7.356
1277.00	-0.050	-3.910	-28.570	-7.356
1278.00	-0.050	-3.905	-28.565	-7.356
1279.00	-0.050	-3.910	-28.575	-7.356
1280.00	-0.050	-3.910	-28.570	-7.361
1281.00	-0.050	-3.910	-28.575	-7.356
1282.00	-0.057	-3.920	-28.575	-7.361
1283.00	-0.057	-3.910	-28.575	-7.356
1284.00	-0.057	-3.910	-28.575	-7.356
1285.00	-0.057	-3.915	-28.575	-7.361
1286.00	-0.057	-3.910	-28.580	-7.356
1287.00	-0.050	-3.905	-28.575	-7.356
1288.00	-0.057	-3.905	-28.570	-7.356
1289.00	-0.057	-3.910	-28.575	-7.356
1290.00	-0.057	-3.905	-28.565	-7.356
1291.00	-0.050	-3.910	-28.570	-7.361
1292.00	-0.050	-3.910	-28.575	-7.356
1293.00	-0.050	-3.905	-28.570	-7.356
1294.00	-0.050	-3.905	-28.565	-7.356
1295.00	-0.050	-3.915	-28.570	-7.356
1296.00	-0.050	-3.910	-28.570	-7.356
1297.00	-0.050	-3.910	-28.570	-7.361
1298.00	-0.050	-3.910	-28.565	-7.356
1299.00	-0.050	-3.910	-28.570	-7.356
1300.00	-0.050	-3.910	-28.575	-7.356
1301.00	-0.050	-3.905	-28.565	-7.356
1302.00	-0.050	-3.915	-28.565	-7.356
1303.00	-0.050	-3.915	-28.570	-7.356
1304.00	-0.050	-3.905	-28.570	-7.356
1305.00	-0.050	-3.910	-28.565	-7.356
1306.00	-0.050	-3.910	-28.570	-7.356
1307.00	-0.057	-3.915	-28.575	-7.361
1308.00	-0.050	-3.915	-28.565	-7.361
1309.00	-0.057	-3.920	-28.575	-7.356
1310.00	-0.057	-3.915	-28.575	-7.356
1311.00	-0.050	-3.915	-28.575	-7.356
1312.00	-0.057	-3.915	-28.570	-7.356
1313.00	-0.050	-3.915	-28.570	-7.356
1314.00	-0.050	-3.915	-28.570	-7.356
1315.00	-0.050	-3.910	-28.570	-7.356

Elapsed Time	Input 1	Input 2	Input 3	Input 4
1316.00	-0.050	-3.915	-28.575	-7.356
1317.00	-0.057	-3.915	-28.575	-7.356
1318.00	-0.050	-3.915	-28.575	-7.356
1319.00	-0.057	-3.915	-28.575	-7.356
1320.00	-0.057	-3.915	-28.570	-7.356
1321.00	-0.050	-3.910	-28.575	-7.356
1322.00	-0.050	-3.915	-28.570	-7.356
1323.00	-0.057	-3.915	-28.575	-7.356
1324.00	-0.050	-3.915	-28.570	-7.356
1325.00	-0.050	-3.915	-28.570	-7.356
1326.00	-0.050	-3.910	-28.570	-7.356
1327.00	-0.050	-3.915	-28.570	-7.356
1328.00	-0.050	-3.915	-28.570	-7.361
1329.00	-0.057	-3.915	-28.570	-7.356
1330.00	-0.050	-3.915	-28.570	-7.356
1331.00	-0.057	-3.915	-28.575	-7.356
1332.00	-0.057	-3.920	-28.570	-7.356
1333.00	-0.057	-3.915	-28.570	-7.356
1334.00	-0.057	-3.915	-28.570	-7.356
1335.00	-0.057	-3.915	-28.570	-7.356
1336.00	-0.057	-3.915	-28.570	-7.356
1337.00	-0.050	-3.915	-28.570	-7.356
1338.00	-0.050	-3.915	-28.570	-7.356
1339.00	-0.050	-3.915	-28.570	-7.356
1340.00	-0.050	-3.915	-28.570	-7.356
1341.00	-0.050	-3.915	-28.565	-7.356
1342.00	-0.050	-3.915	-28.565	-7.356
1343.00	-0.050	-3.915	-28.565	-7.356
1344.00	-0.050	-3.915	-28.565	-7.356
1345.00	-0.050	-3.915	-28.560	-7.356
1346.00	-0.050	-3.915	-28.560	-7.356
1347.00	-0.050	-3.915	-28.565	-7.351
1348.00	-0.050	-3.915	-28.565	-7.356
1349.00	-0.050	-3.915	-28.565	-7.356
1350.00	-0.050	-3.915	-28.560	-7.356
1351.00	-0.050	-3.915	-28.565	-7.351
1352.00	-0.050	-3.915	-28.565	-7.351
1353.00	-0.057	-3.915	-28.565	-7.356
1354.00	-0.050	-3.915	-28.570	-7.356
1355.00	-0.050	-3.910	-28.565	-7.356
1356.00	-0.057	-3.915	-28.565	-7.356
1357.00	-0.057	-3.915	-28.565	-7.356
1358.00	-0.050	-3.915	-28.570	-7.356
1359.00	-0.057	-3.915	-28.565	-7.351
1360.00	-0.057	-3.915	-28.565	-7.356
1361.00	-0.050	-3.915	-28.565	-7.351
1362.00	-0.057	-3.915	-28.570	-7.356
1363.00	-0.050	-3.915	-28.570	-7.356
1364.00	-0.050	-3.915	-28.570	-7.351
1365.00	-0.050	-3.915	-28.565	-7.356
1366.00	-0.050	-3.915	-28.565	-7.356
1367.00	-0.050	-3.915	-28.565	-7.356

Elapsed Time	Input 1	Input 2	Input 3	Input 4
1368.00	-0.050	-3.915	-28.565	-7.351
1369.00	-0.050	-3.915	-28.565	-7.351
1370.00	-0.050	-3.915	-28.560	-7.351
1371.00	-0.050	-3.915	-28.565	-7.351
1372.00	-0.050	-3.915	-28.560	-7.351
1373.00	-0.050	-3.915	-28.565	-7.351
1374.00	-0.050	-3.915	-28.560	-7.351
1375.00	-0.050	-3.915	-28.565	-7.351
1376.00	-0.050	-3.915	-28.565	-7.351
1377.00	-0.050	-3.915	-28.565	-7.351
1378.00	-0.050	-3.915	-28.565	-7.351
1379.00	-0.050	-3.915	-28.565	-7.351
1380.00	-0.050	-3.915	-28.560	-7.351
1381.00	-0.050	-3.915	-28.560	-7.351
1382.00	-0.044	-3.915	-28.560	-7.351
1383.00	-0.044	-3.915	-28.560	-7.351
1384.00	-0.050	-3.915	-28.560	-7.351
1385.00	-0.050	-3.915	-28.560	-7.351
1386.00	-0.050	-3.915	-28.560	-7.345
1387.00	-0.050	-3.915	-28.560	-7.351
1388.00	-0.044	-3.915	-28.560	-7.351
1389.00	-0.050	-3.915	-28.560	-7.351
1390.00	-0.050	-3.915	-28.560	-7.351
1391.00	-0.050	-3.915	-28.560	-7.351
1392.00	-0.050	-3.915	-28.560	-7.345
1393.00	-0.050	-3.915	-28.560	-7.351
1394.00	-0.050	-3.915	-28.560	-7.345
1395.00	-0.050	-3.915	-28.565	-7.351
1396.00	-0.050	-3.915	-28.560	-7.345
1397.00	-0.050	-3.920	-28.560	-7.345
1398.00	-0.050	-3.915	-28.560	-7.351
1399.00	-0.050	-3.915	-28.560	-7.345
1400.00	-0.050	-3.915	-28.560	-7.345
1401.00	-0.050	-3.915	-28.560	-7.345
1402.00	-0.050	-3.915	-28.560	-7.345
1403.00	-0.050	-3.915	-28.560	-7.345
1404.00	-0.050	-3.915	-28.560	-7.345
1405.00	-0.050	-3.915	-28.560	-7.351
1406.00	-0.050	-3.915	-28.565	-7.345
1407.00	-0.050	-3.915	-28.560	-7.345
1408.00	-0.050	-3.915	-28.560	-7.345
1409.00	-0.050	-3.915	-28.560	-7.345
1410.00	-0.050	-3.915	-28.560	-7.345
1411.00	-0.050	-3.915	-28.560	-7.345
1412.00	-0.050	-3.915	-28.555	-7.345
1413.00	-0.044	-3.915	-28.555	-7.345
1414.00	-0.050	-3.915	-28.560	-7.345
1415.00	-0.050	-3.915	-28.555	-7.345
1416.00	-0.050	-3.915	-28.555	-7.345
1417.00	-0.050	-3.915	-28.560	-7.345
1418.00	-0.050	-3.915	-28.560	-7.345
1419.00	-0.050	-3.915	-28.560	-7.345

Elapsed Time	Input 1	Input 2	Input 3	Input 4
1420.00	-0.050	-3.915	-28.555	-7.345
1421.00	-0.050	-3.915	-28.560	-7.345
1422.00	-0.050	-3.920	-28.560	-7.345
1423.00	-0.050	-3.915	-28.555	-7.345
1424.00	-0.050	-3.920	-28.555	-7.345
1425.00	-0.050	-3.915	-28.560	-7.345
1426.00	-0.050	-3.920	-28.560	-7.345
1427.00	-0.050	-3.920	-28.560	-7.345
1428.00	-0.050	-3.920	-28.560	-7.345
1429.00	-0.050	-3.920	-28.565	-7.345
1430.00	-0.050	-3.920	-28.555	-7.345
1431.00	-0.050	-3.915	-28.560	-7.345
1432.00	-0.050	-3.920	-28.565	-7.351
1433.00	-0.050	-3.915	-28.560	-7.351
1434.00	-0.050	-3.915	-28.560	-7.351
1435.00	-0.050	-3.920	-28.560	-7.345
1436.00	-0.057	-3.920	-28.560	-7.345
1437.00	-0.050	-3.920	-28.565	-7.345
1438.00	-0.050	-3.915	-28.560	-7.345
1439.00	-0.057	-3.920	-28.565	-7.345
1440.00	-0.050	-3.920	-28.560	-7.351
1441.00	-0.057	-3.920	-28.560	-7.351
1442.00	-0.050	-3.920	-28.560	-7.351
1443.00	-0.050	-3.920	-28.560	-7.351
1444.00	-0.050	-3.920	-28.560	-7.351
1445.00	-0.050	-3.920	-28.565	-7.351
1446.00	-0.050	-3.920	-28.560	-7.351
1447.00	-0.050	-3.920	-28.565	-7.351
1448.00	-0.057	-3.920	-28.560	-7.351
1449.00	-0.050	-3.920	-28.560	-7.351
1450.00	-0.050	-3.920	-28.565	-7.351
1451.00	-0.050	-3.920	-28.560	-7.351
1452.00	-0.050	-3.920	-28.565	-7.351
1453.00	-0.057	-3.920	-28.565	-7.351
1454.00	-0.057	-3.920	-28.560	-7.351
1455.00	-0.050	-3.920	-28.560	-7.351
1456.00	-0.050	-3.920	-28.565	-7.351
1457.00	-0.050	-3.915	-28.565	-7.351
1458.00	-0.050	-3.920	-28.560	-7.351
1459.00	-0.050	-3.920	-28.565	-7.351
1460.00	-0.050	-3.920	-28.565	-7.351
1461.00	-0.057	-3.920	-28.565	-7.351
1462.00	-0.057	-3.920	-28.565	-7.351
1463.00	-0.057	-3.920	-28.565	-7.351
1464.00	-0.050	-3.920	-28.565	-7.351
1465.00	-0.050	-3.920	-28.565	-7.351
1466.00	-0.057	-3.920	-28.565	-7.351
1467.00	-0.050	-3.920	-28.565	-7.351
1468.00	-0.050	-3.920	-28.560	-7.351
1469.00	-0.057	-3.920	-28.560	-7.351
1470.00	-0.050	-3.920	-28.560	-7.351
1471.00	-0.050	-3.920	-28.560	-7.351
1472.00	-0.050	-3.920	-28.560	-7.351
1473.00	-0.050	-3.920	-28.560	-7.351
1474.00	-0.050	-3.920	-28.565	-7.351
1475.00	-0.050	-3.920	-28.565	-7.351
1476.00	-0.050	-3.920	-28.565	-7.351
1477.00	-0.050	-3.920	-28.570	-7.351
1478.00	-0.057	-3.920	-28.565	-7.351
1479.00	-0.057	-3.920	-28.565	-7.351
1480.00	-0.057	-3.920	-28.565	-7.351
1481.00	-0.057	-3.920	-28.570	-7.351
1482.00	-0.057	-3.920	-28.565	-7.351
1483.00	-0.057	-3.920	-28.565	-7.351
1484.00	-0.050	-3.920	-28.565	-7.351
1485.00	-0.057	-3.920	-28.570	-7.351
1486.00	-0.057	-3.920	-28.565	-7.351
1487.00	-0.057	-3.920	-28.565	-7.351
1488.00	-0.050	-3.920	-28.565	-7.351
1489.00	-0.050	-3.920	-28.560	-7.351
1490.00	-0.057	-3.920	-28.560	-7.351
1491.00	-0.057	-3.920	-28.560	-7.351
1492.00	-0.057	-3.920	-28.560	-7.351
1493.00	-0.057	-3.920	-28.565	-7.351
1494.00	-0.050	-3.920	-28.565	-7.351
1495.00	-0.057	-3.920	-28.565	-7.351
1496.00	-0.050	-3.920	-28.565	-7.351
1497.00	-0.050	-3.920	-28.565	-7.351
1498.00	-0.050	-3.920	-28.560	-7.351
1499.00	-0.057	-3.920	-28.560	-7.351
1500.00	-0.050	-3.920	-28.560	-7.351
1501.00	-0.050	-3.920	-28.560	-7.351
1502.00	-0.057	-3.920	-28.555	-7.351
1503.00	-0.050	-3.920	-28.560	-7.351
1504.00	-0.050	-3.920	-28.560	-7.351
1505.00	-0.057	-3.920	-28.560	-7.351
1506.00	-0.050	-3.920	-28.565	-7.351
1507.00	-0.050	-3.920	-28.560	-7.351
1508.00	-0.057	-3.920	-28.560	-7.351
1509.00	-0.050	-3.920	-28.565	-7.351
1510.00	-0.050	-3.920	-28.565	-7.351
1511.00	-0.050	-3.920	-28.560	-7.351
1512.00	-0.050	-3.920	-28.565	-7.351
1513.00	-0.057	-3.920	-28.565	-7.351
1514.00	-0.050	-3.920	-28.560	-7.351
1515.00	-0.057	-3.920	-28.565	-7.351
1516.00	-0.050	-3.920	-28.565	-7.351
1517.00	-0.057	-3.920	-28.565	-7.345
1518.00	-0.050	-3.920	-28.565	-7.351
1519.00	-0.050	-3.920	-28.565	-7.351
1520.00	-0.057	-3.920	-28.560	-7.351
1521.00	-0.050	-3.920	-28.565	-7.351
1522.00	-0.050	-3.920	-28.560	-7.351
1523.00	-0.050	-3.920	-28.565	-7.351

Elapsed Time	Input 1	Input 2	Input 3	Input 4
1524.00	-0.050	-3.920	-28.560	-7.345
1525.00	-0.050	-3.920	-28.560	-7.345
1526.00	-0.050	-3.920	-28.565	-7.351
1527.00	-0.050	-3.920	-28.560	-7.351
1528.00	-0.050	-3.920	-28.555	-7.345
1529.00	-0.050	-3.920	-28.560	-7.351
1530.00	-0.050	-3.920	-28.560	-7.345
1531.00	-0.050	-3.920	-28.555	-7.345
1532.00	-0.050	-3.920	-28.555	-7.345
1533.00	-0.050	-3.920	-28.555	-7.345
1534.00	-0.050	-3.920	-28.555	-7.345
1535.00	-0.050	-3.920	-28.560	-7.345
1536.00	-0.050	-3.920	-28.555	-7.345
1537.00	-0.050	-3.920	-28.555	-7.345
1538.00	-0.050	-3.920	-28.555	-7.345
1539.00	-0.050	-3.920	-28.560	-7.345
1540.00	-0.050	-3.920	-28.560	-7.345
1541.00	-0.050	-3.920	-28.560	-7.345
1542.00	-0.050	-3.920	-28.560	-7.345
1543.00	-0.050	-3.920	-28.560	-7.345
1544.00	-0.050	-3.920	-28.555	-7.345
1545.00	-0.050	-3.920	-28.555	-7.345
1546.00	-0.050	-3.915	-28.560	-7.345
1547.00	-0.050	-3.920	-28.555	-7.345
1548.00	-0.050	-3.915	-28.555	-7.345
1549.00	-0.050	-3.920	-28.555	-7.345
1550.00	-0.050	-3.915	-28.560	-7.345
1551.00	-0.050	-3.920	-28.555	-7.345
1552.00	-0.050	-3.915	-28.560	-7.345
1553.00	-0.050	-3.920	-28.560	-7.345
1554.00	-0.050	-3.920	-28.560	-7.345
1555.00	-0.057	-3.920	-28.555	-7.345
1556.00	-0.050	-3.920	-28.560	-7.345
1557.00	-0.050	-3.915	-28.560	-7.345
1558.00	-0.057	-3.920	-28.560	-7.345
1559.00	-0.050	-3.915	-28.565	-7.345
1560.00	-0.057	-3.920	-28.560	-7.345
1561.00	-0.050	-3.915	-28.560	-7.345
1562.00	-0.050	-3.920	-28.560	-7.345
1563.00	-0.050	-3.920	-28.560	-7.345
1564.00	-0.050	-3.920	-28.560	-7.345
1565.00	-0.050	-3.920	-28.560	-7.345
1566.00	-0.050	-3.915	-28.560	-7.345
1567.00	-0.050	-3.920	-28.560	-7.345
1568.00	-0.050	-3.920	-28.560	-7.345
1569.00	-0.050	-3.920	-28.560	-7.351
1570.00	-0.050	-3.920	-28.560	-7.345
1571.00	-0.050	-3.920	-28.560	-7.345
1572.00	-0.050	-3.920	-28.555	-7.351
1573.00	-0.050	-3.915	-28.555	-7.345
1574.00	-0.050	-3.920	-28.560	-7.351
1575.00	-0.050	-3.915	-28.555	-7.345

Elapsed Time	Input 1	Input 2	Input 3	Input 4
1576.00	-0.050	-3.915	-28.555	-7.345
1577.00	-0.050	-3.915	-28.560	-7.345
1578.00	-0.050	-3.915	-28.555	-7.345
1579.00	-0.050	-3.915	-28.555	-7.345
1580.00	-0.050	-3.920	-28.555	-7.345
1581.00	-0.050	-3.920	-28.555	-7.345
1582.00	-0.050	-3.920	-28.555	-7.345
1583.00	-0.044	-3.915	-28.555	-7.345
1584.00	-0.050	-3.920	-28.555	-7.345
1585.00	-0.050	-3.915	-28.550	-7.345
1586.00	-0.050	-3.915	-28.555	-7.345
1587.00	-0.050	-3.915	-28.555	-7.345
1588.00	-0.050	-3.915	-28.550	-7.340
1589.00	-0.050	-3.915	-28.555	-7.345
1590.00	-0.050	-3.920	-28.555	-7.345
1591.00	-0.050	-3.915	-28.555	-7.345
1592.00	-0.050	-3.915	-28.555	-7.340
1593.00	-0.050	-3.915	-28.555	-7.340
1594.00	-0.050	-3.915	-28.555	-7.340
1595.00	-0.050	-3.915	-28.555	-7.340
1596.00	-0.050	-3.915	-28.555	-7.345
1597.00	-0.050	-3.920	-28.555	-7.345
1598.00	-0.050	-3.915	-28.555	-7.340
1599.00	-0.050	-3.915	-28.555	-7.340
1600.00	-0.050	-3.920	-28.555	-7.340
1601.00	-0.050	-3.915	-28.555	-7.340
1602.00	-0.050	-3.915	-28.555	-7.345
1603.00	-0.050	-3.915	-28.560	-7.345
1604.00	-0.050	-3.915	-28.555	-7.340
1605.00	-0.050	-3.915	-28.555	-7.340
1606.00	-0.050	-3.915	-28.555	-7.340
1607.00	-0.050	-3.915	-28.555	-7.345
1608.00	-0.050	-3.915	-28.555	-7.345
1609.00	-0.050	-3.915	-28.555	-7.345
1610.00	-0.050	-3.915	-28.555	-7.340
1611.00	-0.050	-3.920	-28.555	-7.340
1612.00	-0.050	-3.920	-28.555	-7.345
1613.00	-0.050	-3.920	-28.560	-7.345
1614.00	-0.050	-3.920	-28.555	-7.340
1615.00	-0.050	-3.920	-28.555	-7.345
1616.00	-0.050	-3.915	-28.555	-7.340
1617.00	-0.050	-3.920	-28.555	-7.340
1618.00	-0.050	-3.920	-28.555	-7.340
1619.00	-0.050	-3.920	-28.550	-7.340
1620.00	-0.050	-3.920	-28.555	-7.340
1621.00	-0.050	-3.920	-28.555	-7.340
1622.00	-0.050	-3.920	-28.550	-7.340
1623.00	-0.050	-3.920	-28.555	-7.340
1624.00	-0.050	-3.920	-28.555	-7.340
1625.00	-0.050	-3.915	-28.555	-7.340
1626.00	-0.050	-3.920	-28.550	-7.340
1627.00	-0.050	-3.920	-28.550	-7.340

Elapsed Time	Input 1	Input 2	Input 3	Input 4
1628.00	-0.050	-3.915	-28.555	-7.340
1629.00	-0.050	-3.920	-28.555	-7.340
1630.00	-0.050	-3.915	-28.555	-7.340
1631.00	-0.050	-3.920	-28.555	-7.340
1632.00	-0.050	-3.915	-28.555	-7.340
1633.00	-0.050	-3.915	-28.555	-7.340
1634.00	-0.050	-3.920	-28.555	-7.340
1635.00	-0.050	-3.915	-28.555	-7.340
1636.00	-0.050	-3.915	-28.555	-7.340
1637.00	-0.050	-3.920	-28.555	-7.340
1638.00	-0.050	-3.920	-28.555	-7.340
1639.00	-0.050	-3.915	-28.555	-7.340
1640.00	-0.044	-3.920	-28.555	-7.340
1641.00	-0.050	-3.920	-28.550	-7.340
1642.00	-0.050	-3.920	-28.555	-7.340
1643.00	-0.044	-3.915	-28.550	-7.340
1644.00	-0.050	-3.920	-28.550	-7.340
1645.00	-0.050	-3.915	-28.550	-7.340
1646.00	-0.050	-3.920	-28.555	-7.340
1647.00	-0.050	-3.920	-28.555	-7.340
1648.00	-0.050	-3.915	-28.550	-7.340
1649.00	-0.050	-3.915	-28.550	-7.340
1650.00	-0.050	-3.920	-28.555	-7.340
1651.00	-0.050	-3.915	-28.550	-7.340
1652.00	-0.050	-3.920	-28.550	-7.340
1653.00	-0.050	-3.915	-28.550	-7.340
1654.00	-0.050	-3.915	-28.550	-7.340
1655.00	-0.050	-3.920	-28.555	-7.340
1656.00	-0.050	-3.920	-28.550	-7.340
1657.00	-0.050	-3.915	-28.550	-7.340
1658.00	-0.044	-3.915	-28.550	-7.340
1659.00	-0.050	-3.920	-28.550	-7.340
1660.00	-0.044	-3.920	-28.550	-7.340
1661.00	-0.044	-3.920	-28.550	-7.340
1662.00	-0.044	-3.920	-28.550	-7.340
1663.00	-0.044	-3.920	-28.545	-7.340
1664.00	-0.044	-3.920	-28.545	-7.340
1665.00	-0.044	-3.920	-28.550	-7.340
1666.00	-0.044	-3.915	-28.545	-7.340
1667.00	-0.044	-3.915	-28.550	-7.340
1668.00	-0.050	-3.920	-28.550	-7.340
1669.00	-0.050	-3.920	-28.550	-7.340
1670.00	-0.050	-3.920	-28.550	-7.340
1671.00	-0.050	-3.920	-28.555	-7.340
1672.00	-0.050	-3.920	-28.550	-7.340
1673.00	-0.050	-3.920	-28.550	-7.340
1674.00	-0.050	-3.920	-28.550	-7.340
1675.00	-0.050	-3.920	-28.550	-7.340
1676.00	-0.050	-3.920	-28.550	-7.340
1677.00	-0.044	-3.920	-28.550	-7.340
1678.00	-0.044	-3.920	-28.545	-7.340
1679.00	-0.044	-3.920	-28.545	-7.340
1680.00	-0.044	-3.920	-28.545	-7.335
1681.00	-0.044	-3.920	-28.545	-7.335
1682.00	-0.044	-3.920	-28.545	-7.340
1683.00	-0.044	-3.920	-28.545	-7.335
1684.00	-0.044	-3.920	-28.545	-7.335
1685.00	-0.044	-3.920	-28.545	-7.335
1686.00	-0.044	-3.920	-28.545	-7.335
1687.00	-0.044	-3.920	-28.545	-7.335
1688.00	-0.044	-3.920	-28.550	-7.335
1689.00	-0.044	-3.920	-28.550	-7.335
1690.00	-0.044	-3.920	-28.545	-7.335
1691.00	-0.044	-3.920	-28.550	-7.335
1692.00	-0.044	-3.920	-28.550	-7.335
1693.00	-0.044	-3.920	-28.550	-7.335
1694.00	-0.044	-3.915	-28.550	-7.335
1695.00	-0.044	-3.920	-28.550	-7.335
1696.00	-0.044	-3.920	-28.545	-7.335
1697.00	-0.044	-3.920	-28.545	-7.335
1698.00	-0.044	-3.920	-28.545	-7.335
1699.00	-0.044	-3.915	-28.550	-7.335
1700.00	-0.044	-3.920	-28.550	-7.335
1701.00	-0.044	-3.920	-28.545	-7.335
1702.00	-0.044	-3.915	-28.550	-7.335
1703.00	-0.044	-3.920	-28.550	-7.335
1704.00	-0.044	-3.920	-28.550	-7.335
1705.00	-0.044	-3.920	-28.550	-7.335
1706.00	-0.044	-3.920	-28.550	-7.335
1707.00	-0.044	-3.920	-28.550	-7.335
1708.00	-0.044	-3.920	-28.550	-7.335
1709.00	-0.044	-3.920	-28.545	-7.335
1710.00	-0.044	-3.915	-28.550	-7.335
1711.00	-0.044	-3.915	-28.550	-7.335
1712.00	-0.044	-3.915	-28.550	-7.335
1713.00	-0.044	-3.915	-28.550	-7.335
1714.00	-0.044	-3.920	-28.550	-7.335
1715.00	-0.050	-3.920	-28.550	-7.335
1716.00	-0.050	-3.920	-28.550	-7.335
1717.00	-0.050	-3.920	-28.550	-7.335
1718.00	-0.050	-3.915	-28.550	-7.335
1719.00	-0.044	-3.920	-28.550	-7.335
1720.00	-0.050	-3.920	-28.550	-7.335
1721.00	-0.050	-3.915	-28.550	-7.335
1722.00	-0.050	-3.915	-28.550	-7.335
1723.00	-0.050	-3.920	-28.555	-7.335
1724.00	-0.050	-3.915	-28.555	-7.335
1725.00	-0.050	-3.915	-28.555	-7.335
1726.00	-0.050	-3.915	-28.550	-7.340
1727.00	-0.050	-3.920	-28.555	-7.335
1728.00	-0.050	-3.915	-28.550	-7.335
1729.00	-0.044	-3.915	-28.550	-7.335
1730.00	-0.044	-3.915	-28.550	-7.335
1731.00	-0.044	-3.915	-28.550	-7.335

Elapsed Time	Input 1	Input 2	Input 3	Input 4
1732.00	-0.044	-3.915	-28.550	-7.335
1733.00	-0.050	-3.915	-28.550	-7.340
1734.00	-0.044	-3.920	-28.550	-7.335
1735.00	-0.050	-3.915	-28.555	-7.335
1736.00	-0.050	-3.915	-28.550	-7.335
1737.00	-0.050	-3.915	-28.555	-7.335
1738.00	-0.050	-3.920	-28.550	-7.340
1739.00	-0.050	-3.915	-28.550	-7.335
1740.00	-0.050	-3.920	-28.555	-7.340
1741.00	-0.050	-3.920	-28.555	-7.340
1742.00	-0.050	-3.915	-28.555	-7.340
1743.00	-0.050	-3.920	-28.555	-7.340
1744.00	-0.050	-3.920	-28.555	-7.335
1745.00	-0.050	-3.920	-28.555	-7.340
1746.00	-0.050	-3.920	-28.550	-7.340
1747.00	-0.050	-3.915	-28.550	-7.340
1748.00	-0.050	-3.920	-28.555	-7.340
1749.00	-0.050	-3.915	-28.555	-7.340
1750.00	-0.050	-3.915	-28.550	-7.340
1751.00	-0.050	-3.915	-28.555	-7.340
1752.00	-0.050	-3.915	-28.555	-7.340
1753.00	-0.050	-3.920	-28.550	-7.340
1754.00	-0.050	-3.920	-28.555	-7.340
1755.00	-0.050	-3.915	-28.555	-7.340
1756.00	-0.050	-3.920	-28.555	-7.340
1757.00	-0.050	-3.915	-28.550	-7.340
1758.00	-0.050	-3.915	-28.550	-7.340
1759.00	-0.050	-3.915	-28.550	-7.335
1760.00	-0.044	-3.915	-28.550	-7.340
1761.00	-0.044	-3.915	-28.550	-7.340
1762.00	-0.044	-3.915	-28.550	-7.340
1763.00	-0.050	-3.915	-28.550	-7.340
1764.00	-0.050	-3.915	-28.550	-7.340
1765.00	-0.044	-3.915	-28.550	-7.340
1766.00	-0.050	-3.915	-28.545	-7.340
1767.00	-0.044	-3.915	-28.545	-7.340
1768.00	-0.050	-3.915	-28.550	-7.340
1769.00	-0.044	-3.915	-28.550	-7.340
1770.00	-0.050	-3.915	-28.550	-7.340
1771.00	-0.050	-3.915	-28.550	-7.335
1772.00	-0.050	-3.915	-28.555	-7.340
1773.00	-0.050	-3.915	-28.550	-7.340
1774.00	-0.050	-3.915	-28.550	-7.340
1775.00	-0.050	-3.915	-28.550	-7.340
1776.00	-0.050	-3.915	-28.550	-7.340
1777.00	-0.050	-3.915	-28.550	-7.340
1778.00	-0.050	-3.920	-28.550	-7.340
1779.00	-0.050	-3.915	-28.555	-7.340
1780.00	-0.050	-3.915	-28.555	-7.340
1781.00	-0.050	-3.915	-28.555	-7.340
1782.00	-0.050	-3.915	-28.555	-7.340
1783.00	-0.050	-3.915	-28.555	-7.340
1784.00	-0.050	-3.920	-28.555	-7.340
1785.00	-0.050	-3.920	-28.555	-7.340
1786.00	-0.050	-3.920	-28.555	-7.340
1787.00	-0.050	-3.915	-28.555	-7.340
1788.00	-0.050	-3.920	-28.555	-7.340
1789.00	-0.050	-3.920	-28.555	-7.340
1790.00	-0.050	-3.920	-28.555	-7.340
1791.00	-0.050	-3.915	-28.555	-7.340
1792.00	-0.050	-3.915	-28.555	-7.340
1793.00	-0.050	-3.920	-28.555	-7.340
1794.00	-0.050	-3.920	-28.555	-7.340
1795.00	-0.050	-3.920	-28.555	-7.340
1796.00	-0.050	-3.920	-28.555	-7.340
1797.00	-0.050	-3.920	-28.550	-7.340
1798.00	-0.044	-3.920	-28.550	-7.340
1799.00	-0.050	-3.915	-28.550	-7.340
1800.00	-0.044	-3.915	-28.550	-7.340
1801.00	-0.044	-3.915	-28.550	-7.340
1802.00	-0.044	-3.915	-28.545	-7.340
1803.00	-0.044	-3.915	-28.545	-7.335
1804.00	-0.044	-3.915	-28.550	-7.340
1805.00	-0.044	-3.915	-28.550	-7.340
1806.00	-0.044	-3.915	-28.550	-7.340
1807.00	-0.050	-3.915	-28.550	-7.340
1808.00	-0.050	-3.915	-28.550	-7.340
1809.00	-0.050	-3.920	-28.555	-7.340
1810.00	-0.050	-3.915	-28.555	-7.340
1811.00	-0.050	-3.915	-28.555	-7.340
1812.00	-0.050	-3.915	-28.555	-7.340
1813.00	-0.050	-3.915	-28.555	-7.340
1814.00	-0.050	-3.915	-28.555	-7.340
1815.00	-0.050	-3.915	-28.560	-7.340
1816.00	-0.050	-3.915	-28.560	-7.340
1817.00	-0.057	-3.915	-28.555	-7.340
1818.00	-0.050	-3.920	-28.555	-7.340
1819.00	-0.050	-3.915	-28.560	-7.340
1820.00	-0.050	-3.915	-28.555	-7.340
1821.00	-0.050	-3.915	-28.555	-7.340
1822.00	-0.050	-3.915	-28.555	-7.340
1823.00	-0.050	-3.915	-28.555	-7.340
1824.00	-0.050	-3.915	-28.555	-7.340
1825.00	-0.050	-3.915	-28.555	-7.340
1826.00	-0.050	-3.915	-28.555	-7.340
1827.00	-0.050	-3.915	-28.555	-7.345
1828.00	-0.050	-3.915	-28.555	-7.345
1829.00	-0.050	-3.915	-28.555	-7.345
1830.00	-0.050	-3.915	-28.555	-7.345
1831.00	-0.050	-3.915	-28.555	-7.345
1832.00	-0.050	-3.915	-28.555	-7.345
1833.00	-0.050	-3.915	-28.555	-7.345
1834.00	-0.050	-3.915	-28.555	-7.340
1835.00	-0.050	-3.915	-28.555	-7.340

Elapsed Time	Input 1	Input 2	Input 3	Input 4
1836.00	-0.050	-3.920	-28.555	-7.345
1837.00	-0.050	-3.915	-28.555	-7.345
1838.00	-0.050	-3.915	-28.555	-7.345
1839.00	-0.050	-3.915	-28.555	-7.345
1840.00	-0.050	-3.915	-28.555	-7.345
1841.00	-0.050	-3.915	-28.555	-7.345
1842.00	-0.050	-3.915	-28.555	-7.345
1843.00	-0.050	-3.915	-28.555	-7.345
1844.00	-0.050	-3.915	-28.555	-7.345
1845.00	-0.050	-3.915	-28.555	-7.345
1846.00	-0.050	-3.915	-28.555	-7.345
1847.00	-0.050	-3.915	-28.560	-7.345
1848.00	-0.057	-3.915	-28.560	-7.345
1849.00	-0.057	-3.915	-28.560	-7.345
1850.00	-0.057	-3.915	-28.560	-7.345
1851.00	-0.057	-3.915	-28.560	-7.345
1852.00	-0.057	-3.915	-28.565	-7.345
1853.00	-0.057	-3.915	-28.560	-7.345
1854.00	-0.057	-3.915	-28.560	-7.345
1855.00	-0.057	-3.920	-28.565	-7.345
1856.00	-0.057	-3.920	-28.560	-7.351
1857.00	-0.057	-3.915	-28.565	-7.351
1858.00	-0.057	-3.915	-28.565	-7.345
1859.00	-0.057	-3.915	-28.560	-7.351
1860.00	-0.057	-3.915	-28.560	-7.345
1861.00	-0.057	-3.915	-28.565	-7.345
1862.00	-0.057	-3.915	-28.565	-7.345
1863.00	-0.057	-3.915	-28.560	-7.351
1864.00	-0.057	-3.920	-28.565	-7.351
1865.00	-0.057	-3.920	-28.560	-7.351
1866.00	-0.057	-3.915	-28.565	-7.351
1867.00	-0.057	-3.915	-28.560	-7.351
1868.00	-0.057	-3.915	-28.560	-7.345
1869.00	-0.057	-3.910	-28.560	-7.345
1870.00	-0.057	-3.915	-28.565	-7.351
1871.00	-0.057	-3.915	-28.565	-7.351
1872.00	-0.057	-3.915	-28.565	-7.351
1873.00	-0.057	-3.915	-28.565	-7.351
1874.00	-0.057	-3.915	-28.565	-7.351
1875.00	-0.057	-3.915	-28.565	-7.351
1876.00	-0.057	-3.915	-28.565	-7.351
1877.00	-0.057	-3.915	-28.565	-7.351
1878.00	-0.057	-3.915	-28.565	-7.351
1879.00	-0.057	-3.915	-28.565	-7.351
1880.00	-0.057	-3.915	-28.565	-7.351
1881.00	-0.063	-3.915	-28.570	-7.351
1882.00	-0.063	-3.915	-28.570	-7.356
1883.00	-0.063	-3.915	-28.570	-7.351
1884.00	-0.063	-3.915	-28.575	-7.351
1885.00	-0.063	-3.915	-28.575	-7.356
1886.00	-0.063	-3.915	-28.575	-7.356
1887.00	-0.063	-3.915	-28.570	-7.356
1888.00	-0.063	-3.915	-28.570	-7.356
1889.00	-0.063	-3.915	-28.570	-7.356
1890.00	-0.063	-3.915	-28.575	-7.356
1891.00	-0.063	-3.915	-28.575	-7.356
1892.00	-0.063	-3.915	-28.575	-7.356
1893.00	-0.063	-3.915	-28.575	-7.356
1894.00	-0.063	-3.915	-28.575	-7.356
1895.00	-0.063	-3.915	-28.575	-7.361
1896.00	-0.063	-3.915	-28.580	-7.361
1897.00	-0.069	-3.915	-28.580	-7.361
1898.00	-0.069	-3.915	-28.580	-7.361
1899.00	-0.069	-3.915	-28.580	-7.361
1900.00	-0.069	-3.915	-28.580	-7.361
1901.00	-0.069	-3.915	-28.580	-7.361
1902.00	-0.063	-3.915	-28.580	-7.361
1903.00	-0.069	-3.915	-28.580	-7.361
1904.00	-0.069	-3.915	-28.580	-7.361
1905.00	-0.069	-3.915	-28.580	-7.361
1906.00	-0.069	-3.915	-28.580	-7.361
1907.00	-0.069	-3.915	-28.580	-7.361
1908.00	-0.069	-3.915	-28.580	-7.366
1909.00	-0.063	-3.915	-28.575	-7.361
1910.00	-0.063	-3.915	-28.575	-7.361
1911.00	-0.063	-3.915	-28.575	-7.366
1912.00	-0.063	-3.915	-28.575	-7.366
1913.00	-0.063	-3.915	-28.575	-7.366
1914.00	-0.063	-3.915	-28.575	-7.366
1915.00	-0.063	-3.915	-28.575	-7.361
1916.00	-0.063	-3.915	-28.575	-7.366
1917.00	-0.063	-3.915	-28.575	-7.366
1918.00	-0.063	-3.915	-28.575	-7.366
1919.00	-0.063	-3.915	-28.575	-7.366
1920.00	-0.063	-3.915	-28.575	-7.366
1921.00	-0.069	-3.915	-28.575	-7.366
1922.00	-0.063	-3.920	-28.575	-7.366
1923.00	-0.063	-3.915	-28.575	-7.366
1924.00	-0.063	-3.920	-28.575	-7.366
1925.00	-0.063	-3.915	-28.570	-7.366
1926.00	-0.063	-3.915	-28.570	-7.361
1927.00	-0.063	-3.915	-28.570	-7.366
1928.00	-0.063	-3.920	-28.570	-7.361
1929.00	-0.063	-3.915	-28.570	-7.366
1930.00	-0.063	-3.920	-28.570	-7.366
1931.00	-0.063	-3.915	-28.570	-7.361
1932.00	-0.063	-3.915	-28.570	-7.361
1933.00	-0.057	-3.920	-28.570	-7.361
1934.00	-0.057	-3.920	-28.565	-7.361
1935.00	-0.057	-3.920	-28.565	-7.361
1936.00	-0.057	-3.915	-28.565	-7.361
1937.00	-0.057	-3.915	-28.565	-7.361
1938.00	-0.057	-3.920	-28.560	-7.361
1939.00	-0.057	-3.915	-28.560	-7.361

Elapsed Time	Input 1	Input 2	Input 3	Input 4
1940.00	-0.057	-3.915	-28.565	-7.361
1941.00	-0.057	-3.915	-28.560	-7.356
1942.00	-0.057	-3.915	-28.560	-7.361
1943.00	-0.057	-3.915	-28.565	-7.361
1944.00	-0.057	-3.915	-28.565	-7.361
1945.00	-0.057	-3.920	-28.565	-7.361
1946.00	-0.057	-3.920	-28.560	-7.361
1947.00	-0.057	-3.920	-28.565	-7.356
1948.00	-0.057	-3.920	-28.565	-7.356
1949.00	-0.057	-3.920	-28.565	-7.356
1950.00	-0.057	-3.920	-28.565	-7.356
1951.00	-0.057	-3.920	-28.565	-7.356
1952.00	-0.057	-3.920	-28.565	-7.356
1953.00	-0.057	-3.920	-28.560	-7.356
1954.00	-0.057	-3.920	-28.560	-7.356
1955.00	-0.057	-3.920	-28.565	-7.356
1956.00	-0.057	-3.920	-28.565	-7.356
1957.00	-0.063	-3.920	-28.565	-7.356
1958.00	-0.063	-3.920	-28.565	-7.356
1959.00	-0.063	-3.920	-28.570	-7.356
1960.00	-0.063	-3.920	-28.570	-7.356
1961.00	-0.063	-3.920	-28.570	-7.361
1962.00	-0.063	-3.920	-28.570	-7.361
1963.00	-0.063	-3.920	-28.570	-7.356
1964.00	-0.063	-3.920	-28.570	-7.361
1965.00	-0.063	-3.920	-28.575	-7.361
1966.00	-0.063	-3.920	-28.570	-7.361
1967.00	-0.063	-3.920	-28.570	-7.361
1968.00	-0.063	-3.920	-28.575	-7.361
1969.00	-0.063	-3.920	-28.575	-7.361
1970.00	-0.063	-3.920	-28.570	-7.361
1971.00	-0.063	-3.920	-28.570	-7.361
1972.00	-0.063	-3.920	-28.570	-7.361
1973.00	-0.063	-3.920	-28.570	-7.361
1974.00	-0.057	-3.920	-28.570	-7.361
1975.00	-0.063	-3.920	-28.570	-7.361
1976.00	-0.063	-3.920	-28.570	-7.361
1977.00	-0.063	-3.920	-28.570	-7.361
1978.00	-0.063	-3.920	-28.570	-7.361
1979.00	-0.063	-3.920	-28.570	-7.361
1980.00	-0.063	-3.920	-28.570	-7.361
1981.00	-0.063	-3.920	-28.570	-7.361
1982.00	-0.057	-3.920	-28.570	-7.361
1983.00	-0.063	-3.920	-28.570	-7.361
1984.00	-0.063	-3.915	-28.570	-7.361
1985.00	-0.057	-3.920	-28.565	-7.361
1986.00	-0.057	-3.920	-28.565	-7.361
1987.00	-0.063	-3.920	-28.565	-7.361
1988.00	-0.057	-3.920	-28.565	-7.361
1989.00	-0.057	-3.920	-28.565	-7.361
1990.00	-0.057	-3.920	-28.565	-7.356
1991.00	-0.057	-3.920	-28.565	-7.356

Elapsed Time	Input 1	Input 2	Input 3	Input 4
1992.00	-0.057	-3.915	-28.565	-7.361
1993.00	-0.057	-3.915	-28.560	-7.356
1994.00	-0.057	-3.920	-28.560	-7.356
1995.00	-0.057	-3.915	-28.560	-7.356
1996.00	-0.057	-3.915	-28.565	-7.356
1997.00	-0.057	-3.920	-28.560	-7.356
1998.00	-0.057	-3.920	-28.565	-7.356
1999.00	-0.057	-3.920	-28.565	-7.356
2000.00	-0.057	-3.920	-28.565	-7.356
2001.00	-0.057	-3.920	-28.565	-7.356
2002.00	-0.057	-3.920	-28.565	-7.356
2003.00	-0.057	-3.920	-28.565	-7.356
2004.00	-0.057	-3.920	-28.570	-7.356
2005.00	-0.057	-3.920	-28.570	-7.356
2006.00	-0.057	-3.920	-28.565	-7.356
2007.00	-0.057	-3.920	-28.570	-7.356
2008.00	-0.057	-3.920	-28.565	-7.356
2009.00	-0.057	-3.920	-28.565	-7.356
2010.00	-0.057	-3.920	-28.565	-7.356
2011.00	-0.057	-3.920	-28.565	-7.356
2012.00	-0.057	-3.920	-28.560	-7.356
2013.00	-0.050	-3.915	-28.560	-7.356
2014.00	-0.057	-3.920	-28.555	-7.356
2015.00	-0.050	-3.920	-28.560	-7.351
2016.00	-0.050	-3.915	-28.555	-7.351
2017.00	-0.057	-3.915	-28.555	-7.351
2018.00	-0.050	-3.920	-28.560	-7.351
2019.00	-0.057	-3.915	-28.555	-7.351
2020.00	-0.057	-3.915	-28.555	-7.351
2021.00	-0.050	-3.920	-28.555	-7.351
2022.00	-0.050	-3.920	-28.560	-7.351
2023.00	-0.050	-3.920	-28.560	-7.351
2024.00	-0.050	-3.915	-28.560	-7.351
2025.00	-0.050	-3.915	-28.560	-7.351
2026.00	-0.050	-3.920	-28.560	-7.351
2027.00	-0.057	-3.920	-28.560	-7.351
2028.00	-0.057	-3.920	-28.560	-7.351
2029.00	-0.050	-3.920	-28.560	-7.351
2030.00	-0.057	-3.920	-28.560	-7.351
2031.00	-0.057	-3.920	-28.555	-7.351
2032.00	-0.050	-3.920	-28.555	-7.351
2033.00	-0.050	-3.920	-28.560	-7.351
2034.00	-0.050	-3.920	-28.555	-7.351
2035.00	-0.050	-3.920	-28.555	-7.351
2036.00	-0.050	-3.920	-28.555	-7.351
2037.00	-0.050	-3.920	-28.555	-7.351
2038.00	-0.050	-3.920	-28.555	-7.351
2039.00	-0.050	-3.920	-28.550	-7.351
2040.00	-0.050	-3.920	-28.550	-7.345
2041.00	-0.050	-3.920	-28.550	-7.345
2042.00	-0.050	-3.920	-28.550	-7.345
2043.00	-0.050	-3.920	-28.550	-7.345

Elapsed Time	Input 1	Input 2	Input 3	Input 4
2044.00	-0.050	-3.920	-28.555	-7.345
2045.00	-0.050	-3.920	-28.555	-7.345
2046.00	-0.050	-3.920	-28.555	-7.345
2047.00	-0.057	-3.920	-28.555	-7.345
2048.00	-0.050	-3.920	-28.560	-7.351
2049.00	-0.057	-3.920	-28.560	-7.345
2050.00	-0.050	-3.920	-28.560	-7.345
2051.00	-0.057	-3.920	-28.565	-7.351
2052.00	-0.057	-3.920	-28.565	-7.351
2053.00	-0.057	-3.920	-28.565	-7.351
2054.00	-0.057	-3.920	-28.565	-7.351
2055.00	-0.057	-3.920	-28.565	-7.351
2056.00	-0.063	-3.920	-28.565	-7.351
2057.00	-0.057	-3.920	-28.565	-7.351
2058.00	-0.063	-3.920	-28.570	-7.351
2059.00	-0.063	-3.920	-28.565	-7.351
2060.00	-0.063	-3.920	-28.570	-7.351
2061.00	-0.063	-3.920	-28.570	-7.351
2062.00	-0.063	-3.920	-28.570	-7.351
2063.00	-0.063	-3.920	-28.570	-7.351
2064.00	-0.063	-3.920	-28.570	-7.356
2065.00	-0.063	-3.920	-28.570	-7.356
2066.00	-0.063	-3.920	-28.570	-7.356
2067.00	-0.063	-3.920	-28.575	-7.356
2068.00	-0.063	-3.920	-28.575	-7.356
2069.00	-0.063	-3.920	-28.575	-7.356
2070.00	-0.063	-3.920	-28.575	-7.356
2071.00	-0.063	-3.920	-28.575	-7.356
2072.00	-0.063	-3.920	-28.570	-7.356
2073.00	-0.063	-3.920	-28.570	-7.356
2074.00	-0.063	-3.920	-28.570	-7.356
2075.00	-0.063	-3.920	-28.570	-7.356
2076.00	-0.063	-3.920	-28.575	-7.356
2077.00	-0.063	-3.920	-28.575	-7.361
2078.00	-0.063	-3.920	-28.575	-7.356
2079.00	-0.063	-3.920	-28.570	-7.361
2080.00	-0.063	-3.920	-28.575	-7.361
2081.00	-0.063	-3.920	-28.570	-7.356
2082.00	-0.063	-3.920	-28.570	-7.361
2083.00	-0.063	-3.920	-28.570	-7.361
2084.00	-0.057	-3.920	-28.570	-7.361
2085.00	-0.063	-3.920	-28.570	-7.361
2086.00	-0.063	-3.920	-28.570	-7.361
2087.00	-0.063	-3.920	-28.570	-7.361
2088.00	-0.063	-3.920	-28.565	-7.361
2089.00	-0.063	-3.920	-28.570	-7.361
2090.00	-0.063	-3.920	-28.570	-7.361
2091.00	-0.063	-3.920	-28.570	-7.361
2092.00	-0.063	-3.920	-28.570	-7.361
2093.00	-0.063	-3.920	-28.570	-7.361
2094.00	-0.057	-3.920	-28.570	-7.361
2095.00	-0.063	-3.920	-28.565	-7.361
2096.00	-0.057	-3.920	-28.565	-7.361
2097.00	-0.057	-3.920	-28.565	-7.356
2098.00	-0.057	-3.920	-28.565	-7.356
2099.00	-0.057	-3.920	-28.565	-7.356
2100.00	-0.057	-3.920	-28.565	-7.356
2101.00	-0.057	-3.920	-28.565	-7.356
2102.00	-0.057	-3.920	-28.565	-7.361
2103.00	-0.057	-3.920	-28.565	-7.356
2104.00	-0.057	-3.920	-28.565	-7.356
2105.00	-0.057	-3.920	-28.560	-7.356
2106.00	-0.057	-3.920	-28.560	-7.356
2107.00	-0.057	-3.920	-28.560	-7.356
2108.00	-0.050	-3.920	-28.560	-7.356
2109.00	-0.050	-3.920	-28.560	-7.356
2110.00	-0.050	-3.915	-28.555	-7.356
2111.00	-0.050	-3.920	-28.560	-7.356
2112.00	-0.050	-3.920	-28.560	-7.356
2113.00	-0.050	-3.920	-28.560	-7.356
2114.00	-0.057	-3.920	-28.560	-7.356
2115.00	-0.057	-3.920	-28.560	-7.356
2116.00	-0.057	-3.920	-28.560	-7.356
2117.00	-0.057	-3.920	-28.560	-7.356
2118.00	-0.057	-3.920	-28.560	-7.351
2119.00	-0.057	-3.920	-28.560	-7.351
2120.00	-0.057	-3.920	-28.565	-7.351
2121.00	-0.057	-3.920	-28.565	-7.356
2122.00	-0.057	-3.920	-28.565	-7.356
2123.00	-0.057	-3.920	-28.565	-7.356
2124.00	-0.057	-3.920	-28.565	-7.356
2125.00	-0.063	-3.920	-28.570	-7.356
2126.00	-0.063	-3.920	-28.570	-7.356
2127.00	-0.063	-3.920	-28.570	-7.356
2128.00	-0.063	-3.920	-28.570	-7.356
2129.00	-0.057	-3.920	-28.570	-7.356
2130.00	-0.057	-3.920	-28.565	-7.356
2131.00	-0.063	-3.920	-28.570	-7.356
2132.00	-0.057	-3.920	-28.565	-7.356
2133.00	-0.057	-3.920	-28.565	-7.356
2134.00	-0.057	-3.920	-28.565	-7.356
2135.00	-0.057	-3.920	-28.565	-7.356
2136.00	-0.057	-3.920	-28.565	-7.356
2137.00	-0.057	-3.920	-28.565	-7.356
2138.00	-0.057	-3.920	-28.565	-7.356
2139.00	-0.057	-3.920	-28.565	-7.356
2140.00	-0.057	-3.920	-28.565	-7.356
2141.00	-0.057	-3.920	-28.565	-7.356
2142.00	-0.057	-3.920	-28.565	-7.356
2143.00	-0.057	-3.920	-28.560	-7.356
2144.00	-0.050	-3.920	-28.560	-7.351
2145.00	-0.050	-3.920	-28.555	-7.356
2146.00	-0.050	-3.920	-28.555	-7.351
2147.00	-0.050	-3.920	-28.555	-7.351

Elapsed Time	Input 1	Input 2	Input 3	Input 4
2148.00	-0.050	-3.920	-28.555	-7.351
2149.00	-0.050	-3.915	-28.555	-7.351
2150.00	-0.057	-3.920	-28.560	-7.351
2151.00	-0.057	-3.920	-28.560	-7.351
2152.00	-0.057	-3.920	-28.560	-7.351
2153.00	-0.057	-3.920	-28.560	-7.351
2154.00	-0.057	-3.920	-28.565	-7.351
2155.00	-0.057	-3.920	-28.560	-7.351
2156.00	-0.057	-3.920	-28.560	-7.356
2157.00	-0.050	-3.920	-28.560	-7.351
2158.00	-0.050	-3.920	-28.560	-7.351
2159.00	-0.057	-3.920	-28.555	-7.351
2160.00	-0.057	-3.920	-28.555	-7.351
2161.00	-0.057	-3.920	-28.560	-7.351
2162.00	-0.057	-3.920	-28.560	-7.351
2163.00	-0.057	-3.920	-28.560	-7.351
2164.00	-0.057	-3.920	-28.560	-7.351
2165.00	-0.050	-3.920	-28.560	-7.351
2166.00	-0.050	-3.920	-28.560	-7.351
2167.00	-0.050	-3.920	-28.555	-7.351
2168.00	-0.050	-3.920	-28.555	-7.351
2169.00	-0.057	-3.920	-28.560	-7.351
2170.00	-0.050	-3.920	-28.555	-7.351
2171.00	-0.050	-3.920	-28.560	-7.351
2172.00	-0.050	-3.920	-28.555	-7.351
2173.00	-0.057	-3.915	-28.560	-7.351
2174.00	-0.057	-3.920	-28.560	-7.351
2175.00	-0.057	-3.920	-28.560	-7.351
2176.00	-0.057	-3.920	-28.565	-7.351
2177.00	-0.057	-3.920	-28.565	-7.351
2178.00	-0.057	-3.920	-28.565	-7.351
2179.00	-0.057	-3.920	-28.560	-7.351
2180.00	-0.050	-3.920	-28.560	-7.351
2181.00	-0.050	-3.920	-28.555	-7.351
2182.00	-0.050	-3.920	-28.560	-7.351
2183.00	-0.050	-3.920	-28.560	-7.351
2184.00	-0.050	-3.920	-28.555	-7.351
2185.00	-0.050	-3.915	-28.555	-7.345
2186.00	-0.050	-3.920	-28.555	-7.351
2187.00	-0.057	-3.920	-28.560	-7.351
2188.00	-0.050	-3.920	-28.560	-7.351
2189.00	-0.050	-3.920	-28.555	-7.351
2190.00	-0.050	-3.920	-28.555	-7.351
2191.00	-0.050	-3.920	-28.555	-7.345
2192.00	-0.057	-3.920	-28.560	-7.351
2193.00	-0.057	-3.920	-28.555	-7.345
2194.00	-0.057	-3.920	-28.560	-7.351
2195.00	-0.050	-3.920	-28.560	-7.351
2196.00	-0.057	-3.920	-28.560	-7.351
2197.00	-0.050	-3.920	-28.560	-7.345
2198.00	-0.057	-3.920	-28.560	-7.345
2199.00	-0.050	-3.920	-28.560	-7.351
2200.00	-0.057	-3.920	-28.560	-7.351
2201.00	-0.057	-3.920	-28.560	-7.351
2202.00	-0.057	-3.920	-28.565	-7.351
2203.00	-0.057	-3.920	-28.560	-7.351
2204.00	-0.057	-3.920	-28.560	-7.345
2205.00	-0.050	-3.920	-28.560	-7.351
2206.00	-0.050	-3.920	-28.560	-7.351
2207.00	-0.050	-3.920	-28.555	-7.351
2208.00	-0.050	-3.920	-28.555	-7.345
2209.00	-0.050	-3.920	-28.555	-7.345
2210.00	-0.050	-3.920	-28.555	-7.345
2211.00	-0.050	-3.915	-28.555	-7.345
2212.00	-0.057	-3.915	-28.555	-7.351
2213.00	-0.050	-3.920	-28.560	-7.345
2214.00	-0.057	-3.920	-28.560	-7.345
2215.00	-0.050	-3.920	-28.560	-7.345
2216.00	-0.050	-3.920	-28.555	-7.345
2217.00	-0.050	-3.920	-28.555	-7.351
2218.00	-0.050	-3.920	-28.550	-7.345
2219.00	-0.050	-3.920	-28.550	-7.345
2220.00	-0.050	-3.920	-28.550	-7.345
2221.00	-0.050	-3.920	-28.550	-7.345
2222.00	-0.050	-3.915	-28.550	-7.345
2223.00	-0.050	-3.920	-28.550	-7.345
2224.00	-0.050	-3.920	-28.550	-7.345
2225.00	-0.050	-3.920	-28.550	-7.345
2226.00	-0.050	-3.920	-28.555	-7.345
2227.00	-0.050	-3.920	-28.550	-7.345
2228.00	-0.050	-3.920	-28.550	-7.345
2229.00	-0.044	-3.920	-28.550	-7.345
2230.00	-0.044	-3.920	-28.545	-7.340
2231.00	-0.044	-3.920	-28.545	-7.340
2232.00	-0.044	-3.920	-28.545	-7.340
2233.00	-0.044	-3.920	-28.545	-7.340
2234.00	-0.044	-3.920	-28.540	-7.340
2235.00	-0.038	-3.920	-28.540	-7.340
2236.00	-0.038	-3.920	-28.540	-7.340
2237.00	-0.038	-3.920	-28.535	-7.335
2238.00	-0.038	-3.920	-28.535	-7.335
2239.00	-0.038	-3.920	-28.535	-7.335
2240.00	-0.031	-3.920	-28.530	-7.335
2241.00	-0.031	-3.920	-28.530	-7.335
2242.00	-0.031	-3.920	-28.530	-7.330
2243.00	-0.031	-3.920	-28.530	-7.330
2244.00	-0.031	-3.920	-28.530	-7.330
2245.00	-0.031	-3.920	-28.525	-7.330
2246.00	-0.031	-3.920	-28.530	-7.330
2247.00	-0.031	-3.915	-28.530	-7.330
2248.00	-0.038	-3.920	-28.530	-7.330
2249.00	-0.038	-3.920	-28.530	-7.330
2250.00	-0.038	-3.920	-28.535	-7.330
2251.00	-0.038	-3.915	-28.535	-7.330

Elapsed Time	Input 1	Input 2	Input 3	Input 4
2252.00	-0.038	-3.915	-28.540	-7.330
2253.00	-0.044	-3.920	-28.540	-7.330
2254.00	-0.044	-3.915	-28.540	-7.330
2255.00	-0.044	-3.920	-28.545	-7.330
2256.00	-0.044	-3.920	-28.545	-7.330
2257.00	-0.044	-3.915	-28.545	-7.330
2258.00	-0.044	-3.920	-28.545	-7.330
2259.00	-0.044	-3.920	-28.545	-7.330
2260.00	-0.044	-3.920	-28.545	-7.330
2261.00	-0.044	-3.920	-28.550	-7.335
2262.00	-0.044	-3.920	-28.550	-7.330
2263.00	-0.050	-3.915	-28.550	-7.330
2264.00	-0.050	-3.920	-28.550	-7.335
2265.00	-0.050	-3.915	-28.550	-7.335
2266.00	-0.050	-3.920	-28.550	-7.335
2267.00	-0.050	-3.920	-28.550	-7.335
2268.00	-0.050	-3.920	-28.555	-7.335
2269.00	-0.050	-3.915	-28.555	-7.335
2270.00	-0.050	-3.920	-28.550	-7.335
2271.00	-0.050	-3.920	-28.555	-7.335
2272.00	-0.050	-3.915	-28.550	-7.335
2273.00	-0.050	-3.915	-28.555	-7.335
2274.00	-0.050	-3.915	-28.555	-7.335
2275.00	-0.050	-3.920	-28.555	-7.335
2276.00	-0.050	-3.920	-28.555	-7.340
2277.00	-0.050	-3.920	-28.555	-7.340
2278.00	-0.050	-3.920	-28.555	-7.340
2279.00	-0.050	-3.920	-28.555	-7.340
2280.00	-0.050	-3.920	-28.555	-7.335
2281.00	-0.050	-3.920	-28.555	-7.340
2282.00	-0.050	-3.915	-28.555	-7.340
2283.00	-0.050	-3.920	-28.555	-7.340
2284.00	-0.050	-3.920	-28.555	-7.340
2285.00	-0.050	-3.915	-28.555	-7.340
2286.00	-0.057	-3.920	-28.560	-7.340
2287.00	-0.057	-3.920	-28.565	-7.340
2288.00	-0.057	-3.915	-28.565	-7.340
2289.00	-0.057	-3.920	-28.565	-7.340
2290.00	-0.057	-3.920	-28.565	-7.345
2291.00	-0.057	-3.920	-28.560	-7.345
2292.00	-0.057	-3.925	-28.555	-7.351
2293.00	-0.057	-3.920	-28.560	-7.345
2294.00	-0.050	-3.915	-28.560	-7.345
2295.00	-0.050	-3.915	-28.560	-7.345
2296.00	-0.050	-3.915	-28.555	-7.345
2297.00	-0.050	-3.915	-28.555	-7.345
2298.00	-0.050	-3.915	-28.555	-7.345
2299.00	-0.050	-3.915	-28.555	-7.345
2300.00	-0.050	-3.915	-28.555	-7.345
2301.00	-0.050	-3.915	-28.555	-7.345
2302.00	-0.050	-3.915	-28.555	-7.345
2303.00	-0.050	-3.915	-28.555	-7.345

Elapsed Time	Input 1	Input 2	Input 3	Input 4
2304.00	-0.050	-3.920	-28.555	-7.345
2305.00	-0.050	-3.920	-28.555	-7.345
2306.00	-0.057	-3.915	-28.560	-7.345
2307.00	-0.057	-3.915	-28.560	-7.345
2308.00	-0.057	-3.920	-28.560	-7.345
2309.00	-0.057	-3.920	-28.565	-7.345
2310.00	-0.057	-3.920	-28.565	-7.345
2311.00	-0.057	-3.920	-28.565	-7.345
2312.00	-0.057	-3.920	-28.565	-7.351
2313.00	-0.057	-3.920	-28.565	-7.351
2314.00	-0.057	-3.920	-28.565	-7.345
2315.00	-0.057	-3.920	-28.560	-7.351
2316.00	-0.057	-3.920	-28.565	-7.351
2317.00	-0.057	-3.920	-28.560	-7.351
2318.00	-0.057	-3.920	-28.565	-7.351
2319.00	-0.057	-3.920	-28.565	-7.351
2320.00	-0.057	-3.920	-28.565	-7.351
2321.00	-0.057	-3.920	-28.565	-7.351
2322.00	-0.063	-3.920	-28.570	-7.351
2323.00	-0.057	-3.920	-28.570	-7.351
2324.00	-0.057	-3.915	-28.570	-7.351
2325.00	-0.057	-3.915	-28.570	-7.351
2326.00	-0.063	-3.915	-28.570	-7.351
2327.00	-0.063	-3.915	-28.570	-7.351
2328.00	-0.050	-3.920	-28.555	-7.351
2329.00	-0.050	-3.915	-28.550	-7.351
2330.00	-0.050	-3.920	-28.555	-7.351
2331.00	-0.050	-3.920	-28.555	-7.351
2332.00	-0.050	-3.920	-28.555	-7.351
2333.00	-0.050	-3.915	-28.550	-7.351
2334.00	-0.050	-3.915	-28.550	-7.351
2335.00	-0.050	-3.915	-28.555	-7.351
2336.00	-0.050	-3.915	-28.550	-7.351
2337.00	-0.050	-3.915	-28.550	-7.351
2338.00	-0.044	-3.915	-28.550	-7.345
2339.00	-0.050	-3.915	-28.550	-7.351
2340.00	-0.044	-3.915	-28.550	-7.351
2341.00	-0.044	-3.920	-28.550	-7.345
2342.00	-0.044	-3.915	-28.550	-7.351
2343.00	-0.044	-3.915	-28.550	-7.345
2344.00	-0.050	-3.920	-28.550	-7.345
2345.00	-0.050	-3.915	-28.550	-7.345
2346.00	-0.044	-3.915	-28.550	-7.345
2347.00	-0.044	-3.920	-28.550	-7.345
2348.00	-0.044	-3.915	-28.550	-7.345
2349.00	-0.044	-3.915	-28.550	-7.345
2350.00	-0.044	-3.915	-28.550	-7.345
2351.00	-0.050	-3.915	-28.550	-7.345
2352.00	-0.044	-3.915	-28.550	-7.345
2353.00	-0.044	-3.915	-28.550	-7.345
2354.00	-0.050	-3.915	-28.550	-7.345
2355.00	-0.050	-3.915	-28.550	-7.345

Elapsed Time	Input 1	Input 2	Input 3	Input 4
2356.00	-0.044	-3.915	-28.550	-7.345
2357.00	-0.044	-3.915	-28.550	-7.340
2358.00	-0.044	-3.915	-28.550	-7.345
2359.00	-0.044	-3.915	-28.550	-7.340
2360.00	-0.044	-3.915	-28.545	-7.340
2361.00	-0.044	-3.915	-28.550	-7.340
2362.00	-0.044	-3.915	-28.550	-7.340
2363.00	-0.044	-3.915	-28.550	-7.340
2364.00	-0.044	-3.915	-28.545	-7.340
2365.00	-0.044	-3.915	-28.545	-7.340
2366.00	-0.044	-3.915	-28.545	-7.340
2367.00	-0.044	-3.915	-28.545	-7.340
2368.00	-0.038	-3.915	-28.545	-7.340
2369.00	-0.038	-3.915	-28.545	-7.340
2370.00	-0.038	-3.915	-28.545	-7.340
2371.00	-0.038	-3.915	-28.540	-7.335
2372.00	-0.038	-3.910	-28.540	-7.335
2373.00	-0.038	-3.910	-28.540	-7.335
2374.00	-0.038	-3.910	-28.535	-7.335
2375.00	-0.038	-3.910	-28.540	-7.335
2376.00	-0.038	-3.910	-28.540	-7.335
2377.00	-0.038	-3.910	-28.540	-7.335
2378.00	-0.038	-3.910	-28.540	-7.335
2379.00	-0.038	-3.910	-28.540	-7.335
2380.00	-0.038	-3.910	-28.540	-7.335
2381.00	-0.038	-3.910	-28.540	-7.335
2382.00	-0.038	-3.910	-28.540	-7.330
2383.00	-0.031	-3.910	-28.535	-7.330
2384.00	-0.038	-3.910	-28.535	-7.330
2385.00	-0.031	-3.905	-28.535	-7.330
2386.00	-0.031	-3.905	-28.535	-7.330
2387.00	-0.031	-3.905	-28.535	-7.325
2388.00	-0.031	-3.905	-28.535	-7.330
2389.00	-0.031	-3.905	-28.535	-7.325
2390.00	-0.031	-3.905	-28.535	-7.325
2391.00	-0.031	-3.905	-28.540	-7.325
2392.00	-0.031	-3.905	-28.530	-7.325
2393.00	-0.031	-3.910	-28.530	-7.325
2394.00	-0.031	-3.910	-28.535	-7.325
2395.00	-0.031	-3.905	-28.535	-7.325
2396.00	-0.031	-3.905	-28.535	-7.325
2397.00	-0.038	-3.905	-28.540	-7.325
2398.00	-0.031	-3.905	-28.540	-7.325
2399.00	-0.031	-3.905	-28.540	-7.325
2400.00	-0.038	-3.905	-28.535	-7.325
2401.00	-0.031	-3.905	-28.535	-7.325
2402.00	-0.031	-3.910	-28.535	-7.325
2403.00	-0.031	-3.905	-28.535	-7.325
2404.00	-0.031	-3.905	-28.540	-7.325
2405.00	-0.031	-3.905	-28.535	-7.325
2406.00	-0.031	-3.905	-28.535	-7.325
2407.00	-0.031	-3.910	-28.535	-7.325
2408.00	-0.038	-3.910	-28.535	-7.325
2409.00	-0.031	-3.910	-28.535	-7.325
2410.00	-0.038	-3.910	-28.535	-7.325
2411.00	-0.038	-3.915	-28.540	-7.325
2412.00	-0.038	-3.910	-28.535	-7.325
2413.00	-0.038	-3.915	-28.535	-7.325
2414.00	-0.038	-3.910	-28.535	-7.325
2415.00	-0.031	-3.915	-28.535	-7.325
2416.00	-0.038	-3.915	-28.540	-7.325
2417.00	-0.038	-3.910	-28.535	-7.325
2418.00	-0.038	-3.915	-28.540	-7.325
2419.00	-0.038	-3.910	-28.540	-7.325
2420.00	-0.038	-3.910	-28.540	-7.325
2421.00	-0.038	-3.910	-28.540	-7.325
2422.00	-0.038	-3.905	-28.540	-7.325
2423.00	-0.038	-3.905	-28.540	-7.325
2424.00	-0.038	-3.910	-28.545	-7.330
2425.00	-0.038	-3.910	-28.540	-7.325
2426.00	-0.038	-3.905	-28.540	-7.325
2427.00	-0.031	-3.895	-28.540	-7.325
2428.00	-0.038	-3.895	-28.540	-7.325
2429.00	-0.038	-3.900	-28.535	-7.325
2430.00	-0.038	-3.895	-28.540	-7.325
2431.00	-0.038	-3.900	-28.545	-7.325
2432.00	-0.038	-3.900	-28.540	-7.325
2433.00	-0.038	-3.905	-28.540	-7.325
2434.00	-0.038	-3.905	-28.540	-7.330
2435.00	-0.038	-3.905	-28.545	-7.330
2436.00	-0.038	-3.900	-28.540	-7.325
2437.00	-0.038	-3.900	-28.545	-7.325
2438.00	-0.038	-3.900	-28.545	-7.325
2439.00	-0.038	-3.900	-28.545	-7.330
2440.00	-0.038	-3.905	-28.545	-7.330
2441.00	-0.038	-3.900	-28.540	-7.325
2442.00	-0.038	-3.905	-28.540	-7.330
2443.00	-0.038	-3.905	-28.540	-7.330
2444.00	-0.038	-3.910	-28.545	-7.330
2445.00	-0.038	-3.905	-28.545	-7.330
2446.00	-0.038	-3.905	-28.545	-7.330
2447.00	-0.038	-3.905	-28.545	-7.330
2448.00	-0.038	-3.905	-28.545	-7.330
2449.00	-0.038	-3.905	-28.545	-7.330
2450.00	-0.038	-3.910	-28.545	-7.330
2451.00	-0.038	-3.910	-28.545	-7.330
2452.00	-0.038	-3.910	-28.545	-7.330
2453.00	-0.038	-3.905	-28.545	-7.330
2454.00	-0.038	-3.910	-28.545	-7.330
2455.00	-0.038	-3.910	-28.540	-7.330
2456.00	-0.038	-3.910	-28.545	-7.330
2457.00	-0.038	-3.910	-28.545	-7.335
2458.00	-0.038	-3.910	-28.540	-7.335
2459.00	-0.038	-3.910	-28.540	-7.330

SE2000
Environmental Logger
10/21 14:20

Unit# 2K-473 Test 0

Setups:	INPUT 1	INPUT 2	INPUT 3	INPUT 4
Type	Level (F)	Level (F)	Level (F)	Level (F)
Mode	Surface	Surface	Surface	Surface
I.D.	11214	11213	11122	11125
Reference	-3.696	-3.735	-3.681	-3.862
SG	1.000	1.000	1.000	1.000
Linearity	0.111	0.112	0.024	0.021
Scale factor	19.968	20.070	10.051	10.051
Offset	0.029	-0.073	-0.003	0.041
Delay mSEC	50.000	50.000	50.000	50.000

Step 0 09/30 13:40:00

Elapsed Time	Input 1	Input 2	Input 3	Input 4
0.0000	-3.683	-3.715	-3.681	-3.852
15.0000	-3.670	-3.709	-3.661	-3.846
30.0000	-3.651	-3.690	-3.646	-3.836
45.0000	-3.639	-3.677	-3.630	-3.830
60.0000	-3.626	-3.658	-3.614	-3.820
75.0000	-3.607	-3.646	-3.591	-3.811
90.0000	-3.594	-3.633	-3.582	-3.801
105.000	-3.575	-3.614	-3.563	-3.795
120.000	-3.563	-3.601	-3.547	-3.785
135.000	-3.550	-3.582	-3.537	-3.776
150.000	-3.531	-3.570	-3.518	-3.770
165.000	-3.519	-3.551	-3.502	-3.757
180.000	-3.500	-3.538	-3.490	-3.747
195.000	-3.481	-3.519	-3.471	-3.738
210.000	-3.468	-3.506	-3.455	-3.731
225.000	-3.449	-3.487	-3.439	-3.719
240.000	-3.436	-3.475	-3.426	-3.709
255.000	-3.424	-3.456	-3.407	-3.700
270.000	-3.405	-3.443	-3.394	-3.687
285.000	-3.392	-3.430	-3.382	-3.681
300.000	-3.380	-3.411	-3.366	-3.671
315.000	-3.367	-3.398	-3.353	-3.659
330.000	-3.348	-3.379	-3.337	-3.649
345.000	-3.335	-3.367	-3.324	-3.640
360.000	-3.323	-3.354	-3.312	-3.630
375.000	-3.310	-3.341	-3.302	-3.621
390.000	-3.291	-3.329	-3.286	-3.611
405.000	-3.278	-3.316	-3.274	-3.598
420.000	-3.272	-3.297	-3.261	-3.589
435.000	-3.253	-3.284	-3.248	-3.579
450.000	-3.241	-3.272	-3.232	-3.570
465.000	-3.222	-3.253	-3.216	-3.557
480.000	-3.215	-3.246	-3.207	-3.548
495.000	-3.203	-3.234	-3.197	-3.538
510.000	-3.190	-3.221	-3.181	-3.529
525.000	-3.184	-3.208	-3.172	-3.516
540.000	-3.165	-3.189	-3.156	-3.506
555.000	-3.152	-3.176	-3.143	-3.494
570.000	-3.146	-3.176	-3.140	-3.487
585.000	-3.133	-3.164	-3.127	-3.475
600.000	-3.120	-3.151	-3.115	-3.465
615.000	-3.108	-3.138	-3.102	-3.452
630.000	-3.095	-3.126	-3.089	-3.443
645.000	-3.083	-3.113	-3.080	-3.430
660.000	-3.070	-3.100	-3.060	-3.421
675.000	-3.057	-3.088	-3.054	-3.408
690.000	-3.045	-3.075	-3.038	-3.399
705.000	-3.032	-3.062	-3.025	-3.386
720.000	-3.019	-3.050	-3.016	-3.376
735.000	-3.013	-3.043	-3.006	-3.367
750.000	-3.007	-3.031	-2.997	-3.354
765.000	-2.994	-3.018	-2.987	-3.345
780.000	-2.988	-3.012	-2.978	-3.332
795.000	-2.969	-2.999	-2.965	-3.322
810.000	-2.962	-2.986	-2.952	-3.310
825.000	-2.950	-2.974	-2.940	-3.297
840.000	-2.937	-2.967	-2.930	-3.288
855.000	-2.925	-2.948	-2.914	-3.275
870.000	-2.906	-2.936	-2.898	-3.262
885.000	-2.893	-2.923	-2.886	-3.249
900.000	-2.887	-2.910	-2.876	-3.237
915.000	-2.880	-2.904	-2.870	-3.224
930.000	-2.868	-2.891	-2.857	-3.211
945.000	-2.849	-2.878	-2.841	-3.199
960.000	-2.842	-2.866	-2.832	-3.189
975.000	-2.830	-2.853	-2.819	-3.177
990.000	-2.817	-2.840	-2.806	-3.164
1005.00	-2.804	-2.828	-2.793	-3.151

Elapsed Time	Input 1	Input 2	Input 3	Input 4
1020.00	-2.792	-2.815	-2.784	-3.142
1035.00	-2.786	-2.802	-2.774	-3.129
1050.00	-2.773	-2.796	-2.762	-3.119
1065.00	-2.760	-2.783	-2.752	-3.110
1080.00	-2.754	-2.771	-2.742	-3.097
1095.00	-2.741	-2.764	-2.733	-3.088
1110.00	-2.735	-2.752	-2.723	-3.078
1125.00	-2.722	-2.745	-2.714	-3.066
1140.00	-2.710	-2.733	-2.701	-3.056
1155.00	-2.710	-2.733	-2.698	-3.047
1170.00	-2.697	-2.714	-2.685	-3.034
1185.00	-2.684	-2.707	-2.669	-3.024
1200.00	-2.678	-2.695	-2.660	-3.015
1215.00	-2.665	-2.682	-2.653	-3.002
1230.00	-2.659	-2.675	-2.644	-2.993
1245.00	-2.646	-2.669	-2.634	-2.980
1260.00	-2.634	-2.656	-2.622	-2.967
1275.00	-2.621	-2.644	-2.609	-2.955
1290.00	-2.609	-2.631	-2.596	-2.942
1305.00	-2.602	-2.625	-2.590	-2.929
1320.00	-2.590	-2.606	-2.574	-2.913
1335.00	-2.577	-2.593	-2.561	-2.901
1350.00	-2.564	-2.587	-2.548	-2.888
1365.00	-2.552	-2.568	-2.536	-2.872
1380.00	-2.539	-2.561	-2.523	-2.859
1395.00	-2.533	-2.549	-2.513	-2.847
1410.00	-2.533	-2.542	-2.510	-2.840
1425.00	-2.507	-2.530	-2.494	-2.821
1440.00	-2.495	-2.517	-2.475	-2.805
1455.00	-2.488	-2.504	-2.472	-2.793
1470.00	-2.463	-2.479	-2.447	-2.774
1485.00	-2.463	-2.479	-2.450	-2.771
1500.00	-2.451	-2.466	-2.434	-2.752
1515.00	-2.444	-2.460	-2.428	-2.745
1530.00	-2.438	-2.454	-2.421	-2.739
1545.00	-2.425	-2.441	-2.409	-2.723
1560.00	-2.419	-2.434	-2.402	-2.714
1575.00	-2.419	-2.434	-2.402	-2.704
1590.00	-2.413	-2.422	-2.393	-2.691
1605.00	-2.400	-2.422	-2.383	-2.682
1620.00	-2.394	-2.409	-2.374	-2.672
1635.00	-2.387	-2.403	-2.367	-2.660
1650.00	-2.381	-2.396	-2.361	-2.653
1665.00	-2.368	-2.384	-2.354	-2.641
1680.00	-2.362	-2.377	-2.348	-2.628
1695.00	-2.356	-2.365	-2.335	-2.618
1710.00	-2.343	-2.358	-2.329	-2.609
1725.00	-2.330	-2.346	-2.313	-2.596
1740.00	-2.330	-2.339	-2.310	-2.587
1755.00	-2.324	-2.339	-2.310	-2.577
1770.00	-2.324	-2.333	-2.307	-2.568
1785.00	-2.318	-2.327	-2.300	-2.558

Elapsed Time	Input 1	Input 2	Input 3	Input 4
1800.00	-2.305	-2.314	-2.291	-2.549
1815.00	-2.299	-2.314	-2.285	-2.542
1830.00	-2.293	-2.301	-2.275	-2.533
1845.00	-2.286	-2.295	-2.269	-2.523
1860.00	-2.286	-2.295	-2.269	-2.517
1875.00	-2.280	-2.289	-2.262	-2.507
1890.00	-2.267	-2.276	-2.250	-2.498
1905.00	-2.261	-2.270	-2.246	-2.488
1920.00	-2.248	-2.257	-2.230	-2.479
1935.00	-2.236	-2.244	-2.218	-2.469
1950.00	-2.229	-2.244	-2.218	-2.463
1965.00	-2.229	-2.238	-2.215	-2.457
1980.00	-2.223	-2.232	-2.208	-2.447
1995.00	-2.223	-2.238	-2.208	-2.447
2010.00	-2.229	-2.232	-2.208	-2.441
2025.00	-2.223	-2.232	-2.208	-2.441
2040.00	-2.217	-2.225	-2.202	-2.434
2055.00	-2.217	-2.225	-2.199	-2.431
2070.00	-2.210	-2.219	-2.195	-2.428
2085.00	-2.191	-2.206	-2.176	-2.422
2100.00	-2.185	-2.193	-2.170	-2.419
2115.00	-2.166	-2.174	-2.148	-2.406
2130.00	-2.166	-2.174	-2.151	-2.396
2145.00	-2.153	-2.162	-2.138	-2.387
2160.00	-2.147	-2.155	-2.132	-2.377
2175.00	-2.141	-2.149	-2.125	-2.371
2190.00	-2.122	-2.136	-2.110	-2.361
2205.00	-2.128	-2.136	-2.110	-2.355
2220.00	-2.122	-2.130	-2.106	-2.346
2235.00	-2.109	-2.117	-2.097	-2.333
2250.00	-2.103	-2.117	-2.091	-2.327
2265.00	-2.109	-2.117	-2.091	-2.320
2280.00	-2.097	-2.105	-2.081	-2.311
2295.00	-2.090	-2.098	-2.075	-2.301
2310.00	-2.084	-2.092	-2.068	-2.292
2325.00	-2.078	-2.079	-2.059	-2.285
2340.00	-2.071	-2.079	-2.059	-2.276
2355.00	-2.071	-2.079	-2.059	-2.269
2370.00	-2.065	-2.073	-2.052	-2.263
2385.00	-2.059	-2.067	-2.043	-2.250
2400.00	-2.052	-2.060	-2.040	-2.247
2415.00	-2.052	-2.060	-2.040	-2.238
2430.00	-2.046	-2.048	-2.030	-2.231
2445.00	-2.040	-2.041	-2.021	-2.222
2460.00	-2.021	-2.029	-2.008	-2.212
2475.00	-2.014	-2.022	-2.001	-2.200
2490.00	-2.014	-2.022	-2.005	-2.187
2505.00	-2.021	-2.029	-2.005	-2.178
2520.00	-2.008	-2.016	-1.995	-2.165
2535.00	-2.002	-2.010	-1.989	-2.155
2550.00	-1.995	-2.003	-1.982	-2.146
2565.00	-1.989	-1.997	-1.976	-2.136

Elapsed Time	Input 1	Input 2	Input 3	Input 4
2460.00	-0.038	-3.910	-28.540	-7.330
2461.00	-0.038	-3.910	-28.540	-7.330
2462.00	-0.038	-3.910	-28.540	-7.330
2463.00	-0.038	-3.910	-28.540	-7.330
2464.00	-0.038	-3.910	-28.540	-7.330
2465.00	-0.038	-3.910	-28.540	-7.330
2466.00	-0.038	-3.905	-28.540	-7.330
2467.00	-0.038	-3.905	-28.535	-7.330
2468.00	-0.031	-3.905	-28.540	-7.330
2469.00	-0.031	-3.900	-28.540	-7.325
2470.00	-0.038	-3.905	-28.540	-7.330
2471.00	-0.038	-3.905	-28.540	-7.330
2472.00	-0.038	-3.905	-28.540	-7.330
2473.00	-0.038	-3.905	-28.540	-7.330
2474.00	-0.038	-3.905	-28.540	-7.330
2475.00	-0.038	-3.905	-28.535	-7.330
2476.00	-0.038	-3.900	-28.535	-7.330
2477.00	-0.031	-3.900	-28.535	-7.330
2478.00	-0.038	-3.905	-28.540	-7.330
2479.00	-0.031	-3.905	-28.540	-7.330
2480.00	-0.031	-3.900	-28.535	-7.330
2481.00	-0.038	-3.905	-28.540	-7.330
2482.00	-0.031	-3.905	-28.535	-7.330
2483.00	-0.031	-3.900	-28.535	-7.330
2484.00	-0.031	-3.900	-28.530	-7.330
2485.00	-0.031	-3.905	-28.540	-7.330
2486.00	-0.038	-3.905	-28.535	-7.330
2487.00	-0.038	-3.905	-28.535	-7.330
2488.00	-0.038	-3.905	-28.540	-7.330
2489.00	-0.038	-3.905	-28.540	-7.330
2490.00	-0.038	-3.890	-28.540	-7.330
2491.00	-0.038	-3.900	-28.540	-7.335
2492.00	-0.038	-3.900	-28.545	-7.330
2493.00	-0.038	-3.900	-28.545	-7.330
2494.00	-0.038	-3.900	-28.545	-7.335
2495.00	-0.038	-3.900	-28.545	-7.330
2496.00	-0.038	-3.895	-28.545	-7.335
2497.00	-0.038	-3.895	-28.550	-7.330
2498.00	-0.050	-3.905	-28.545	-7.335
2499.00	-0.044	-3.905	-28.545	-7.340
2500.00	-0.044	-3.905	-28.545	-7.335
2501.00	-0.044	-3.915	-28.545	-7.340
2502.00	-0.044	-3.910	-28.550	-7.340
2503.00	-0.044	-3.905	-28.555	-7.335
2504.00	-0.044	-3.900	-28.540	-7.335
2505.00	-0.038	-3.900	-28.540	-7.335
2506.00	-0.038	-3.900	-28.540	-7.335
2507.00	-0.038	-3.900	-28.545	-7.335
2508.00	-0.044	-3.900	-28.545	-7.340
2509.00	-0.044	-3.915	-28.550	-7.345
2510.00	-0.044	-3.905	-28.545	-7.340
2511.00	-0.044	-3.905	-28.545	-7.340
2512.00	-0.038	-3.900	-28.555	-7.335
2513.00	-0.044	-3.905	-28.560	-7.340
2514.00	-0.050	-3.915	-28.555	-7.345
2515.00	-0.044	-3.915	-28.550	-7.345
2516.00	-0.044	-3.915	-28.550	-7.345
2517.00	-0.044	-3.920	-28.550	-7.345
2518.00	-0.044	-3.920	-28.550	-7.345
2519.00	-0.044	-3.915	-28.550	-7.345
2520.00	-0.044	-3.915	-28.550	-7.340
2521.00	-0.044	-3.910	-28.555	-7.345
2522.00	-0.044	-3.905	-28.555	-7.340
2523.00	-0.044	-3.910	-28.560	-7.345
2524.00	-0.044	-3.910	-28.550	-7.345
2525.00	-0.044	-3.900	-28.555	-7.340
2526.00	-0.044	-3.910	-28.555	-7.340
2527.00	-0.038	-3.905	-28.555	-7.340
2528.00	-0.044	-3.910	-28.560	-7.345
2529.00	-0.044	-3.910	-28.560	-7.345
2530.00	-0.044	-3.910	-28.560	-7.345
2531.00	-0.044	-3.915	-28.560	-7.345
2532.00	-0.050	-3.915	-28.550	-7.345
2533.00	-0.044	-3.910	-28.565	-7.345
2534.00	-0.044	-3.900	-28.560	-7.340
2535.00	-0.044	-3.900	-28.560	-7.345
2536.00	-0.050	-3.910	-28.560	-7.345
2537.00	-0.050	-3.910	-28.565	-7.351
2538.00	-0.050	-3.910	-28.560	-7.351
2539.00	-0.050	-3.915	-28.560	-7.351
2540.00	-0.044	-3.905	-28.565	-7.345
2541.00	-0.050	-3.915	-28.565	-7.351
2542.00	-0.050	-3.920	-28.550	-7.356
2543.00	-0.050	-3.915	-28.550	-7.351
2544.00	-0.044	-3.905	-28.550	-7.345
2545.00	-0.044	-3.905	-28.545	-7.345
2546.00	-0.044	-3.900	-28.555	-7.345
2547.00	-0.044	-3.900	-28.555	-7.345
2548.00	-0.044	-3.905	-28.560	-7.351
2549.00	-0.057	-3.905	-28.560	-7.345
2550.00	-0.050	-3.910	-28.570	-7.351
2551.00	-0.050	-3.905	-28.570	-7.351
2552.00	-0.050	-3.905	-28.570	-7.351
2553.00	-0.050	-3.910	-28.565	-7.351
2554.00	-0.050	-3.910	-28.565	-7.351
2555.00	-0.050	-3.910	-28.565	-7.351
2556.00	-0.050	-3.910	-28.565	-7.351
2557.00	-0.050	-3.910	-28.565	-7.351
2558.00	-0.050	-3.910	-28.565	-7.351
2559.00	-0.050	-3.910	-28.565	-7.351
2560.00	-0.050	-3.910	-28.565	-7.356
2561.00	-0.050	-3.905	-28.570	-7.356
2562.00	-0.057	-3.910	-28.570	-7.356
2563.00	-0.057	-3.905	-28.570	-7.356

Elapsed Time	Input 1	Input 2	Input 3	Input 4
2564.00	-0.057	-3.910	-28.570	-7.361
2565.00	-0.057	-3.910	-28.570	-7.361
2566.00	-0.057	-3.910	-28.570	-7.361
2567.00	-0.057	-3.915	-28.570	-7.361
2568.00	-0.057	-3.915	-28.570	-7.361
2569.00	-0.050	-3.910	-28.570	-7.361
2570.00	-0.050	-3.910	-28.565	-7.356
2571.00	-0.050	-3.910	-28.565	-7.361
2572.00	-0.050	-3.910	-28.560	-7.356
2573.00	-0.050	-3.910	-28.560	-7.356
2574.00	-0.050	-3.910	-28.565	-7.356
2575.00	-0.050	-3.910	-28.565	-7.361
2576.00	-0.050	-3.915	-28.565	-7.356
2577.00	-0.050	-3.910	-28.565	-7.356
2578.00	-0.050	-3.910	-28.560	-7.361
2579.00	-0.050	-3.910	-28.560	-7.356
2580.00	-0.044	-3.910	-28.560	-7.356
2581.00	-0.050	-3.920	-28.560	-7.361
2582.00	-0.050	-3.920	-28.560	-7.356
2583.00	-0.050	-3.910	-28.560	-7.356
2584.00	-0.044	-3.905	-28.560	-7.356
2585.00	-0.044	-3.905	-28.560	-7.356
2586.00	-0.050	-3.910	-28.560	-7.356
2587.00	-0.050	-3.910	-28.560	-7.356
2588.00	-0.050	-3.910	-28.560	-7.356
2589.00	-0.050	-3.910	-28.565	-7.356
2590.00	-0.050	-3.925	-28.565	-7.361
2591.00	-0.050	-3.925	-28.560	-7.356
2592.00	-0.050	-3.925	-28.565	-7.361
2593.00	-0.050	-3.925	-28.565	-7.356
2594.00	-0.050	-3.930	-28.565	-7.361
2595.00	-0.057	-3.930	-28.565	-7.361
2596.00	-0.057	-3.935	-28.565	-7.361
2597.00	-0.057	-3.935	-28.570	-7.361
2598.00	-0.057	-3.935	-28.565	-7.361
2599.00	-0.057	-3.935	-28.570	-7.361
2600.00	-0.057	-3.935	-28.565	-7.361
2601.00	-0.057	-3.935	-28.565	-7.361
2602.00	-0.057	-3.930	-28.565	-7.361
2603.00	-0.057	-3.930	-28.565	-7.361
2604.00	-0.057	-3.930	-28.565	-7.361
2605.00	-0.057	-3.930	-28.570	-7.366
2606.00	-0.057	-3.935	-28.570	-7.366
2607.00	-0.057	-3.935	-28.570	-7.366
2608.00	-0.057	-3.935	-28.565	-7.366
2609.00	-0.057	-3.935	-28.570	-7.366
2610.00	-0.057	-3.930	-28.570	-7.366
2611.00	-0.057	-3.935	-28.570	-7.366
2612.00	-0.057	-3.930	-28.570	-7.366
2613.00	-0.057	-3.930	-28.570	-7.366
2614.00	-0.057	-3.930	-28.570	-7.366
2615.00	-0.057	-3.930	-28.570	-7.366
2616.00	-0.057	-3.935	-28.570	-7.366
2617.00	-0.057	-3.930	-28.565	-7.366
2618.00	-0.057	-3.930	-28.565	-7.366
2619.00	-0.057	-3.930	-28.565	-7.366
2620.00	-0.057	-3.930	-28.570	-7.366
2621.00	-0.050	-3.930	-28.565	-7.366
2622.00	-0.063	-3.940	-28.565	-7.371
2623.00	-0.063	-3.940	-28.560	-7.371
2624.00	-0.057	-3.930	-28.565	-7.366
2625.00	-0.057	-3.930	-28.565	-7.366
2626.00	-0.057	-3.930	-28.565	-7.366
2627.00	-0.050	-3.930	-28.575	-7.366
2628.00	-0.057	-3.930	-28.560	-7.366
2629.00	-0.057	-3.930	-28.570	-7.366
2630.00	-0.057	-3.930	-28.560	-7.366
2631.00	-0.057	-3.930	-28.560	-7.366
2632.00	-0.057	-3.930	-28.560	-7.366
2633.00	-0.057	-3.930	-28.575	-7.366
2634.00	-0.057	-3.930	-28.575	-7.366
2635.00	-0.057	-3.930	-28.575	-7.366
2636.00	-0.057	-3.930	-28.575	-7.366
2637.00	-0.057	-3.930	-28.575	-7.366
2638.00	-0.057	-3.930	-28.565	-7.366
2639.00	-0.057	-3.930	-28.570	-7.366
2640.00	-0.057	-3.930	-28.565	-7.366

Elapsed Time	Input 1	Input 2	Input 3	Input 4
2580.00	-1.989	-1.997	-1.976	-2.133
2595.00	-1.983	-1.990	-1.970	-2.127
2610.00	-1.976	-1.984	-1.960	-2.117
2625.00	-1.964	-1.971	-1.954	-2.111
2640.00	-1.958	-1.959	-1.941	-2.101
2655.00	-1.951	-1.959	-1.935	-2.095
2670.00	-1.945	-1.952	-1.928	-2.086
2685.00	-1.932	-1.940	-1.922	-2.076
2700.00	-1.932	-1.940	-1.916	-2.070
2715.00	-1.920	-1.927	-1.906	-2.063
2730.00	-1.913	-1.921	-1.896	-2.057
2745.00	-1.913	-1.921	-1.896	-2.047
2760.00	-1.913	-1.914	-1.896	-2.044
2775.00	-1.907	-1.914	-1.893	-2.038
2790.00	-1.901	-1.908	-1.887	-2.035
2805.00	-1.901	-1.902	-1.881	-2.028
2820.00	-1.888	-1.895	-1.874	-2.019
2835.00	-1.882	-1.889	-1.865	-2.013
2850.00	-1.875	-1.883	-1.861	-2.006
2865.00	-1.875	-1.876	-1.858	-2.000
2880.00	-1.863	-1.870	-1.852	-1.990
2895.00	-1.856	-1.864	-1.842	-1.984
2910.00	-1.850	-1.857	-1.833	-1.978
2925.00	-1.844	-1.845	-1.823	-1.968
2940.00	-1.825	-1.832	-1.807	-1.959
2955.00	-1.812	-1.819	-1.795	-1.946
2970.00	-1.806	-1.819	-1.792	-1.940
2985.00	-1.812	-1.819	-1.792	-1.936
3000.00	-1.806	-1.819	-1.792	-1.930
3015.00	-1.799	-1.807	-1.779	-1.921
3030.00	-1.793	-1.800	-1.776	-1.914
3045.00	-1.787	-1.800	-1.772	-1.908
3060.00	-1.781	-1.787	-1.763	-1.902
3075.00	-1.774	-1.781	-1.757	-1.892
3090.00	-1.768	-1.775	-1.753	-1.886
3105.00	-1.768	-1.768	-1.750	-1.879
3120.00	-1.762	-1.768	-1.744	-1.873
3135.00	-1.755	-1.762	-1.741	-1.867
3150.00	-1.749	-1.756	-1.734	-1.860
3165.00	-1.749	-1.749	-1.731	-1.854
3180.00	-1.743	-1.749	-1.728	-1.848
3195.00	-1.736	-1.743	-1.722	-1.841
3210.00	-1.736	-1.743	-1.722	-1.838
3225.00	-1.730	-1.737	-1.718	-1.832
3240.00	-1.730	-1.730	-1.715	-1.829
3255.00	-1.717	-1.724	-1.706	-1.819
3270.00	-1.711	-1.718	-1.699	-1.813
3285.00	-1.705	-1.711	-1.693	-1.806
3300.00	-1.705	-1.705	-1.690	-1.800
3315.00	-1.698	-1.705	-1.683	-1.794
3330.00	-1.698	-1.699	-1.683	-1.791
3345.00	-1.692	-1.699	-1.680	-1.784
3360.00	-1.692	-1.692	-1.677	-1.781
3375.00	-1.686	-1.692	-1.674	-1.778
3390.00	-1.686	-1.692	-1.674	-1.771
3405.00	-1.686	-1.686	-1.671	-1.768
3420.00	-1.679	-1.686	-1.664	-1.762
3435.00	-1.679	-1.680	-1.667	-1.759
3450.00	-1.673	-1.680	-1.661	-1.756
3465.00	-1.673	-1.673	-1.658	-1.749
3480.00	-1.667	-1.667	-1.652	-1.746
3495.00	-1.660	-1.661	-1.648	-1.740
3510.00	-1.660	-1.661	-1.645	-1.737
3525.00	-1.654	-1.661	-1.642	-1.733
3540.00	-1.654	-1.654	-1.639	-1.730
3555.00	-1.648	-1.648	-1.632	-1.724
3570.00	-1.641	-1.642	-1.629	-1.718
3585.00	-1.629	-1.635	-1.620	-1.711
3600.00	-1.629	-1.629	-1.617	-1.705
3615.00	-1.629	-1.629	-1.613	-1.702
3630.00	-1.622	-1.629	-1.613	-1.699
3645.00	-1.622	-1.623	-1.607	-1.692
3660.00	-1.616	-1.616	-1.601	-1.686
3675.00	-1.604	-1.610	-1.597	-1.683
3690.00	-1.597	-1.597	-1.585	-1.673
3705.00	-1.597	-1.597	-1.585	-1.667
3720.00	-1.591	-1.591	-1.582	-1.664
3735.00	-1.585	-1.584	-1.575	-1.660
3750.00	-1.585	-1.578	-1.569	-1.651
3765.00	-1.578	-1.578	-1.566	-1.645
3780.00	-1.578	-1.578	-1.566	-1.645
3795.00	-1.578	-1.578	-1.566	-1.641
3810.00	-1.572	-1.572	-1.559	-1.638
3825.00	-1.566	-1.565	-1.556	-1.632
3840.00	-1.566	-1.559	-1.550	-1.626
3855.00	-1.559	-1.559	-1.547	-1.622
3870.00	-1.553	-1.553	-1.543	-1.616
3885.00	-1.553	-1.546	-1.540	-1.613
3900.00	-1.540	-1.546	-1.534	-1.607
3915.00	-1.540	-1.540	-1.531	-1.603
3930.00	-1.534	-1.534	-1.528	-1.600
3945.00	-1.528	-1.527	-1.518	-1.591
3960.00	-1.528	-1.527	-1.518	-1.591
3975.00	-1.528	-1.527	-1.518	-1.588
3990.00	-1.521	-1.521	-1.512	-1.581
4005.00	-1.521	-1.521	-1.512	-1.581
4020.00	-1.515	-1.515	-1.505	-1.578
4035.00	-1.509	-1.508	-1.499	-1.572
4050.00	-1.502	-1.508	-1.493	-1.565
4065.00	-1.502	-1.502	-1.489	-1.562
4080.00	-1.496	-1.496	-1.483	-1.556
4095.00	-1.496	-1.496	-1.483	-1.553
4110.00	-1.490	-1.496	-1.480	-1.549
4125.00	-1.483	-1.489	-1.470	-1.543

Elapsed Time	Input 1	Input 2	Input 3	Input 4
4140.00	-1.471	-1.470	-1.451	-1.530
4155.00	-1.471	-1.470	-1.454	-1.527
4170.00	-1.471	-1.470	-1.454	-1.524
4185.00	-1.464	-1.470	-1.451	-1.521
4200.00	-1.458	-1.458	-1.442	-1.511
4215.00	-1.452	-1.451	-1.432	-1.505
4230.00	-1.445	-1.445	-1.426	-1.499
4245.00	-1.433	-1.439	-1.416	-1.492
4260.00	-1.427	-1.432	-1.410	-1.489
4275.00	-1.420	-1.426	-1.403	-1.480
4290.00	-1.414	-1.413	-1.394	-1.473
4305.00	-1.408	-1.407	-1.388	-1.467
4320.00	-1.401	-1.401	-1.381	-1.461
4335.00	-1.389	-1.388	-1.368	-1.448
4350.00	-1.382	-1.388	-1.359	-1.442
4365.00	-1.370	-1.375	-1.349	-1.435
4380.00	-1.363	-1.369	-1.343	-1.426
4395.00	-1.357	-1.362	-1.337	-1.419
4410.00	-1.351	-1.350	-1.327	-1.413
4425.00	-1.344	-1.350	-1.324	-1.407
4440.00	-1.338	-1.343	-1.318	-1.400
4455.00	-1.332	-1.337	-1.314	-1.394
4470.00	-1.325	-1.331	-1.308	-1.388
4485.00	-1.325	-1.324	-1.305	-1.384
4500.00	-1.319	-1.318	-1.298	-1.378
4515.00	-1.313	-1.312	-1.292	-1.372
4530.00	-1.306	-1.305	-1.289	-1.365
4545.00	-1.300	-1.305	-1.283	-1.362
4560.00	-1.300	-1.299	-1.279	-1.356
4575.00	-1.294	-1.293	-1.276	-1.353
4590.00	-1.294	-1.293	-1.273	-1.346
4605.00	-1.294	-1.286	-1.273	-1.343
4620.00	-1.287	-1.286	-1.270	-1.340
4635.00	-1.275	-1.274	-1.260	-1.334
4650.00	-1.275	-1.274	-1.257	-1.327
4665.00	-1.275	-1.274	-1.257	-1.324
4680.00	-1.275	-1.267	-1.257	-1.321
4695.00	-1.275	-1.267	-1.254	-1.321
4710.00	-1.268	-1.267	-1.254	-1.318
4725.00	-1.268	-1.261	-1.248	-1.312
4740.00	-1.262	-1.255	-1.244	-1.308
4755.00	-1.256	-1.255	-1.241	-1.305
4770.00	-1.256	-1.248	-1.238	-1.302
4785.00	-1.256	-1.248	-1.238	-1.296
4800.00	-1.249	-1.248	-1.235	-1.296
4815.00	-1.249	-1.242	-1.232	-1.292
4830.00	-1.249	-1.242	-1.235	-1.289
4845.00	-1.243	-1.236	-1.229	-1.286
4860.00	-1.237	-1.236	-1.225	-1.283
4875.00	-1.237	-1.236	-1.219	-1.277
4890.00	-1.231	-1.229	-1.219	-1.277
4905.00	-1.237	-1.229	-1.222	-1.277

Elapsed Time	Input 1	Input 2	Input 3	Input 4
4920.00	-1.231	-1.229	-1.219	-1.273
4935.00	-1.224	-1.223	-1.209	-1.267
4950.00	-1.224	-1.217	-1.209	-1.264
4965.00	-1.218	-1.217	-1.206	-1.261
4980.00	-1.218	-1.210	-1.200	-1.254
4995.00	-1.212	-1.210	-1.200	-1.254
5010.00	-1.212	-1.204	-1.194	-1.248
5025.00	-1.205	-1.197	-1.190	-1.245
5040.00	-1.199	-1.197	-1.184	-1.239
5055.00	-1.193	-1.191	-1.178	-1.232
5070.00	-1.186	-1.185	-1.174	-1.229
5085.00	-1.186	-1.178	-1.171	-1.226
5100.00	-1.180	-1.172	-1.165	-1.223
5115.00	-1.174	-1.172	-1.162	-1.216
5130.00	-1.167	-1.166	-1.155	-1.213
5145.00	-1.161	-1.159	-1.149	-1.207
5160.00	-1.161	-1.153	-1.146	-1.200
5175.00	-1.155	-1.153	-1.143	-1.197
5190.00	-1.155	-1.153	-1.143	-1.194
5205.00	-1.148	-1.147	-1.136	-1.191
5220.00	-1.148	-1.140	-1.133	-1.185
5235.00	-1.142	-1.134	-1.127	-1.181
5250.00	-1.136	-1.134	-1.124	-1.178
5265.00	-1.136	-1.134	-1.120	-1.175
5280.00	-1.136	-1.128	-1.120	-1.172
5295.00	-1.129	-1.128	-1.117	-1.169
5310.00	-1.136	-1.128	-1.120	-1.169
5325.00	-1.129	-1.128	-1.114	-1.166
5340.00	-1.129	-1.121	-1.111	-1.162
5355.00	-1.129	-1.128	-1.117	-1.162
5370.00	-1.129	-1.128	-1.117	-1.162
5385.00	-1.129	-1.121	-1.114	-1.162
5400.00	-1.123	-1.115	-1.108	-1.156
5415.00	-1.123	-1.121	-1.108	-1.153
5430.00	-1.117	-1.115	-1.104	-1.153
5445.00	-1.117	-1.115	-1.104	-1.150
5460.00	-1.117	-1.115	-1.104	-1.150
5475.00	-1.123	-1.121	-1.108	-1.150
5490.00	-1.123	-1.115	-1.104	-1.150
5505.00	-1.117	-1.115	-1.101	-1.150
5520.00	-1.117	-1.115	-1.101	-1.147
5535.00	-1.117	-1.115	-1.101	-1.147
5550.00	-1.123	-1.115	-1.104	-1.147
5565.00	-1.117	-1.115	-1.101	-1.143
5580.00	-1.110	-1.109	-1.095	-1.140
5595.00	-1.104	-1.102	-1.089	-1.134
5610.00	-1.098	-1.096	-1.082	-1.128
5625.00	-1.098	-1.096	-1.076	-1.124
5640.00	-1.091	-1.090	-1.073	-1.121
5655.00	-1.091	-1.090	-1.069	-1.118
5670.00	-1.085	-1.083	-1.066	-1.112
5685.00	-1.079	-1.071	-1.057	-1.105

Elapsed Time	Input 1	Input 2	Input 3	Input 4
5700.00	-1.072	-1.071	-1.050	-1.099
5715.00	-1.072	-1.071	-1.054	-1.102
5730.00	-1.066	-1.064	-1.047	-1.096
5745.00	-1.066	-1.064	-1.041	-1.093
5760.00	-1.060	-1.058	-1.038	-1.089
5775.00	-1.053	-1.052	-1.031	-1.086
5790.00	-1.047	-1.045	-1.028	-1.077
5805.00	-1.041	-1.039	-1.019	-1.070
5820.00	-1.035	-1.033	-1.015	-1.064
5835.00	-1.028	-1.033	-1.009	-1.061
5850.00	-1.028	-1.026	-1.006	-1.058
5865.00	-1.028	-1.026	-1.006	-1.055
5880.00	-1.028	-1.026	-1.006	-1.055
5895.00	-1.028	-1.026	-1.003	-1.051
5910.00	-1.016	-1.020	-0.996	-1.045
5925.00	-1.016	-1.013	-0.993	-1.042
5940.00	-1.016	-1.013	-0.993	-1.042
5955.00	-1.016	-1.013	-0.993	-1.039
5970.00	-1.009	-1.007	-0.993	-1.036
5985.00	-1.016	-1.007	-0.993	-1.036
6000.00	-1.016	-1.013	-0.996	-1.036
6015.00	-1.016	-1.007	-0.993	-1.036
6030.00	-1.022	-1.013	-0.999	-1.036
6045.00	-1.028	-1.020	-1.009	-1.039
6060.00	-1.028	-1.020	-1.006	-1.042
6075.00	-1.028	-1.026	-1.009	-1.042
6090.00	-1.035	-1.033	-1.012	-1.045
6105.00	-1.035	-1.033	-1.019	-1.048
6120.00	-1.047	-1.039	-1.025	-1.051
6135.00	-1.053	-1.045	-1.031	-1.058
6150.00	-1.053	-1.052	-1.034	-1.058
6165.00	-1.053	-1.052	-1.034	-1.061
6180.00	-1.053	-1.052	-1.034	-1.061
6195.00	-1.053	-1.052	-1.034	-1.061
6210.00	-1.053	-1.045	-1.031	-1.058
6225.00	-1.047	-1.045	-1.031	-1.058
6240.00	-1.047	-1.045	-1.028	-1.055
6255.00	-1.047	-1.045	-1.031	-1.055
6270.00	-1.041	-1.039	-1.025	-1.051
6285.00	-1.041	-1.039	-1.025	-1.051
6300.00	-1.047	-1.045	-1.031	-1.055
6315.00	-1.066	-1.064	-1.050	-1.067
6330.00	-1.072	-1.071	-1.054	-1.070
6345.00	-1.079	-1.077	-1.060	-1.077
6360.00	-1.079	-1.083	-1.063	-1.080
6375.00	-1.091	-1.083	-1.069	-1.086
6390.00	-1.091	-1.090	-1.076	-1.089
6405.00	-1.091	-1.090	-1.073	-1.089
6420.00	-1.091	-1.083	-1.073	-1.089
6435.00	-1.091	-1.083	-1.069	-1.089
6450.00	-1.091	-1.090	-1.073	-1.086
6465.00	-1.085	-1.083	-1.069	-1.089
6480.00	-1.085	-1.083	-1.066	-1.086
6495.00	-1.085	-1.083	-1.066	-1.086
6510.00	-1.085	-1.077	-1.063	-1.083
6525.00	-1.085	-1.083	-1.066	-1.086
6540.00	-1.085	-1.083	-1.066	-1.086
6555.00	-1.085	-1.083	-1.063	-1.083
6570.00	-1.079	-1.077	-1.063	-1.083
6585.00	-1.079	-1.077	-1.063	-1.080
6600.00	-1.079	-1.077	-1.063	-1.080
6615.00	-1.079	-1.077	-1.060	-1.077
6630.00	-1.072	-1.071	-1.057	-1.074
6645.00	-1.066	-1.064	-1.050	-1.070
6660.00	-1.066	-1.064	-1.050	-1.070
6675.00	-1.072	-1.071	-1.050	-1.070
6690.00	-1.072	-1.064	-1.054	-1.070
6705.00	-1.072	-1.071	-1.054	-1.070
6720.00	-1.072	-1.064	-1.050	-1.070
6735.00	-1.072	-1.071	-1.054	-1.070
6750.00	-1.072	-1.071	-1.054	-1.070
6765.00	-1.072	-1.071	-1.054	-1.070
6780.00	-1.072	-1.071	-1.057	-1.070
6795.00	-1.072	-1.071	-1.057	-1.074
6810.00	-1.072	-1.071	-1.057	-1.070
6825.00	-1.072	-1.071	-1.057	-1.070
6840.00	-1.072	-1.071	-1.057	-1.070
6855.00	-1.072	-1.071	-1.057	-1.070
6870.00	-1.072	-1.071	-1.057	-1.070
6885.00	-1.079	-1.077	-1.063	-1.077
6900.00	-1.079	-1.083	-1.063	-1.080
6915.00	-1.085	-1.083	-1.069	-1.083
6930.00	-1.085	-1.090	-1.069	-1.083
6945.00	-1.085	-1.090	-1.069	-1.086
6960.00	-1.085	-1.090	-1.066	-1.086
6975.00	-1.085	-1.090	-1.066	-1.083
6990.00	-1.079	-1.083	-1.063	-1.080
7005.00	-1.079	-1.083	-1.060	-1.080
7020.00	-1.072	-1.077	-1.057	-1.074
7035.00	-1.079	-1.077	-1.057	-1.077
7050.00	-1.072	-1.077	-1.054	-1.074
7065.00	-1.072	-1.071	-1.050	-1.067
7080.00	-1.066	-1.071	-1.047	-1.067
7095.00	-1.060	-1.064	-1.041	-1.061
7110.00	-1.053	-1.058	-1.031	-1.058
7125.00	-1.047	-1.052	-1.025	-1.051
7140.00	-1.041	-1.045	-1.022	-1.048
7155.00	-1.035	-1.039	-1.012	-1.042
7170.00	-1.035	-1.039	-1.009	-1.039
7185.00	-1.028	-1.033	-1.006	-1.036
7200.00	-1.022	-1.026	-0.996	-1.029
7215.00	-1.016	-1.020	-0.990	-1.023
7230.00	-1.016	-1.020	-0.990	-1.023
7245.00	-1.009	-1.013	-0.984	-1.020

Elapsed Time	Input 1	Input 2	Input 3	Input 4
7260.00	-1.003	-1.007	-0.980	-1.013
7275.00	-1.003	-1.001	-0.974	-1.010
7290.00	-0.997	-1.007	-0.974	-1.010
7305.00	-0.990	-0.994	-0.968	-1.001
7320.00	-0.990	-0.994	-0.964	-0.997
7335.00	-0.990	-1.001	-0.968	-1.001
7350.00	-0.990	-0.994	-0.968	-0.997
7365.00	-0.990	-1.001	-0.968	-0.997
7380.00	-0.990	-0.994	-0.968	-0.997
7395.00	-0.990	-0.994	-0.964	-0.994
7410.00	-0.984	-0.988	-0.961	-0.988
7425.00	-0.984	-0.988	-0.961	-0.988
7440.00	-0.984	-0.988	-0.961	-0.988
7455.00	-0.971	-0.975	-0.952	-0.982
7470.00	-0.971	-0.982	-0.952	-0.982
7485.00	-0.971	-0.975	-0.949	-0.978
7500.00	-0.965	-0.969	-0.945	-0.975
7515.00	-0.959	-0.963	-0.939	-0.969
7530.00	-0.959	-0.963	-0.939	-0.966
7545.00	-0.959	-0.963	-0.939	-0.966
7560.00	-0.959	-0.963	-0.939	-0.966
7575.00	-0.959	-0.963	-0.939	-0.963
7590.00	-0.959	-0.963	-0.942	-0.963
7605.00	-0.959	-0.963	-0.942	-0.966
7620.00	-0.959	-0.963	-0.942	-0.963
7635.00	-0.959	-0.956	-0.939	-0.963
7650.00	-0.959	-0.963	-0.942	-0.963
7665.00	-0.959	-0.963	-0.942	-0.963
7680.00	-0.959	-0.963	-0.942	-0.963
7695.00	-0.959	-0.963	-0.942	-0.963
7710.00	-0.965	-0.963	-0.945	-0.966
7725.00	-0.959	-0.963	-0.945	-0.963
7740.00	-0.959	-0.963	-0.945	-0.963
7755.00	-0.959	-0.956	-0.939	-0.959
7770.00	-0.959	-0.956	-0.942	-0.959
7785.00	-0.959	-0.956	-0.942	-0.959
7800.00	-0.959	-0.956	-0.942	-0.959
7815.00	-0.959	-0.956	-0.939	-0.956
7830.00	-0.952	-0.956	-0.939	-0.953
7845.00	-0.952	-0.950	-0.936	-0.953
7860.00	-0.952	-0.950	-0.933	-0.950
7875.00	-0.952	-0.950	-0.936	-0.953
7890.00	-0.946	-0.950	-0.933	-0.950
7905.00	-0.946	-0.944	-0.929	-0.947
7920.00	-0.946	-0.944	-0.929	-0.947
7935.00	-0.940	-0.937	-0.926	-0.944
7950.00	-0.940	-0.937	-0.923	-0.940
7965.00	-0.940	-0.937	-0.923	-0.940
7980.00	-0.940	-0.937	-0.923	-0.940
7995.00	-0.940	-0.937	-0.923	-0.940
8010.00	-0.940	-0.937	-0.920	-0.940
8025.00	-0.933	-0.937	-0.920	-0.937
8040.00	-0.927	-0.931	-0.910	-0.931
8055.00	-0.921	-0.918	-0.907	-0.928
8070.00	-0.921	-0.925	-0.907	-0.924
8085.00	-0.914	-0.918	-0.901	-0.921
8100.00	-0.921	-0.918	-0.901	-0.921
8115.00	-0.921	-0.918	-0.901	-0.921
8130.00	-0.921	-0.918	-0.904	-0.921
8145.00	-0.921	-0.918	-0.901	-0.918
8160.00	-0.921	-0.925	-0.907	-0.924
8175.00	-0.921	-0.925	-0.907	-0.924
8190.00	-0.921	-0.925	-0.907	-0.921
8205.00	-0.921	-0.918	-0.904	-0.921
8220.00	-0.921	-0.925	-0.907	-0.921
8235.00	-0.927	-0.925	-0.910	-0.921
8250.00	-0.927	-0.931	-0.914	-0.924
8265.00	-0.927	-0.925	-0.914	-0.924
8280.00	-0.933	-0.931	-0.917	-0.928
8295.00	-0.933	-0.931	-0.917	-0.928
8310.00	-0.933	-0.931	-0.920	-0.931
8325.00	-0.933	-0.937	-0.920	-0.931
8340.00	-0.927	-0.931	-0.914	-0.931
8355.00	-0.921	-0.925	-0.907	-0.924
8370.00	-0.921	-0.925	-0.904	-0.921
8385.00	-0.927	-0.925	-0.907	-0.921
8400.00	-0.921	-0.925	-0.904	-0.921
8415.00	-0.921	-0.925	-0.904	-0.921
8430.00	-0.921	-0.918	-0.901	-0.918
8445.00	-0.914	-0.918	-0.898	-0.915
8460.00	-0.914	-0.912	-0.894	-0.912
8475.00	-0.914	-0.912	-0.891	-0.909
8490.00	-0.914	-0.912	-0.891	-0.909
8505.00	-0.908	-0.912	-0.891	-0.909
8520.00	-0.908	-0.912	-0.885	-0.902
8535.00	-0.908	-0.906	-0.882	-0.902
8550.00	-0.902	-0.906	-0.882	-0.902
8565.00	-0.902	-0.906	-0.879	-0.899
8580.00	-0.895	-0.899	-0.872	-0.893
8595.00	-0.889	-0.893	-0.863	-0.890
8610.00	-0.876	-0.880	-0.853	-0.880
8625.00	-0.876	-0.880	-0.847	-0.877
8640.00	-0.870	-0.874	-0.840	-0.871
8655.00	-0.864	-0.868	-0.834	-0.861
8670.00	-0.851	-0.855	-0.824	-0.858
8685.00	-0.845	-0.849	-0.818	-0.848
8700.00	-0.845	-0.842	-0.812	-0.845
8715.00	-0.832	-0.836	-0.805	-0.839
8730.00	-0.832	-0.829	-0.802	-0.832
8745.00	-0.832	-0.829	-0.802	-0.832

SE1000C
Environmental Logger
10/21 14:35

Unit# 01879 Test 0

Setups:	INPUT 1
Type	Level (F)
Mode	Surface
I.D.	11124
Reference	-2.190
Linearity	-0.010
Scale factor	9.990
Offset	0.010
Delay mSEC	50.000

Step 0 09/30 13:40:00

Elapsed Time	Input 1	Elapsed Time	Input 1	Elapsed Time	Input 1	Elapsed Time	Input 1
0.0000	-2.193	570.000	-2.180	1140.00	-2.155	1710.00	-2.123
15.0000	-2.196	585.000	-2.180	1155.00	-2.155	1725.00	-2.120
30.0000	-2.199	600.000	-2.180	1170.00	-2.155	1740.00	-2.120
45.0000	-2.199	615.000	-2.180	1185.00	-2.155	1755.00	-2.117
60.0000	-2.199	630.000	-2.177	1200.00	-2.155	1770.00	-2.117
75.0000	-2.199	645.000	-2.177	1215.00	-2.155	1785.00	-2.114
90.0000	-2.199	660.000	-2.177	1230.00	-2.155	1800.00	-2.114
105.000	-2.199	675.000	-2.177	1245.00	-2.155	1815.00	-2.111
120.000	-2.199	690.000	-2.177	1260.00	-2.152	1830.00	-2.111
135.000	-2.199	705.000	-2.177	1275.00	-2.152	1845.00	-2.111
150.000	-2.199	720.000	-2.174	1290.00	-2.155	1860.00	-2.108
165.000	-2.199	735.000	-2.174	1305.00	-2.149	1875.00	-2.108
180.000	-2.199	750.000	-2.174	1320.00	-2.152	1890.00	-2.104
195.000	-2.199	765.000	-2.174	1335.00	-2.152	1905.00	-2.104
210.000	-2.199	780.000	-2.174	1350.00	-2.149	1920.00	-2.104
225.000	-2.199	795.000	-2.174	1365.00	-2.152	1935.00	-2.101
240.000	-2.199	810.000	-2.171	1380.00	-2.149	1950.00	-2.101
255.000	-2.199	825.000	-2.171	1395.00	-2.149	1965.00	-2.098
270.000	-2.196	840.000	-2.171	1410.00	-2.149	1980.00	-2.098
285.000	-2.196	855.000	-2.171	1425.00	-2.145	1995.00	-2.098
300.000	-2.196	870.000	-2.171	1440.00	-2.145	2010.00	-2.098
315.000	-2.193	885.000	-2.167	1455.00	-2.145	2025.00	-2.095
330.000	-2.193	900.000	-2.167	1470.00	-2.139	2040.00	-2.095
345.000	-2.193	915.000	-2.167	1485.00	-2.139	2055.00	-2.095
360.000	-2.190	930.000	-2.167	1500.00	-2.136	2070.00	-2.092
375.000	-2.190	945.000	-2.167	1515.00	-2.139	2085.00	-2.092
390.000	-2.190	960.000	-2.164	1530.00	-2.139	2100.00	-2.089
405.000	-2.190	975.000	-2.164	1545.00	-2.133	2115.00	-2.086
420.000	-2.186	990.000	-2.164	1560.00	-2.136	2130.00	-2.086
435.000	-2.186	1005.00	-2.164	1575.00	-2.133	2145.00	-2.086
450.000	-2.186	1020.00	-2.161	1590.00	-2.133	2160.00	-2.082
465.000	-2.183	1035.00	-2.161	1605.00	-2.133	2175.00	-2.082
480.000	-2.183	1050.00	-2.161	1620.00	-2.133	2190.00	-2.079
495.000	-2.183	1065.00	-2.158	1635.00	-2.130	2205.00	-2.076
510.000	-2.183	1080.00	-2.158	1650.00	-2.127	2220.00	-2.076
525.000	-2.183	1095.00	-2.158	1665.00	-2.127	2235.00	-2.076
540.000	-2.180	1110.00	-2.158	1680.00	-2.127	2250.00	-2.073
555.000	-2.180	1125.00	-2.158	1695.00	-2.123	2265.00	-2.073

Elapsed Time	Input 1	Elapsed Time	Input 1	Elapsed Time	Input 1	Elapsed Time	Input 1
2280.00	-2.070	3105.00	-2.000	3930.00	-1.906	4755.00	-1.796
2295.00	-2.070	3120.00	-1.997	3945.00	-1.900	4770.00	-1.796
2310.00	-2.070	3135.00	-1.997	3960.00	-1.900	4785.00	-1.792
2325.00	-2.067	3150.00	-1.994	3975.00	-1.900	4800.00	-1.789
2340.00	-2.067	3165.00	-1.994	3990.00	-1.900	4815.00	-1.789
2355.00	-2.063	3180.00	-1.991	4005.00	-1.896	4830.00	-1.786
2370.00	-2.063	3195.00	-1.988	4020.00	-1.896	4845.00	-1.783
2385.00	-2.060	3210.00	-1.988	4035.00	-1.893	4860.00	-1.780
2400.00	-2.060	3225.00	-1.985	4050.00	-1.893	4875.00	-1.780
2415.00	-2.060	3240.00	-1.985	4065.00	-1.893	4890.00	-1.777
2430.00	-2.057	3255.00	-1.982	4080.00	-1.893	4905.00	-1.774
2445.00	-2.057	3270.00	-1.982	4095.00	-1.890	4920.00	-1.774
2460.00	-2.054	3285.00	-1.978	4110.00	-1.890	4935.00	-1.770
2475.00	-2.054	3300.00	-1.975	4125.00	-1.887	4950.00	-1.767
2490.00	-2.054	3315.00	-1.975	4140.00	-1.887	4965.00	-1.764
2505.00	-2.051	3330.00	-1.972	4155.00	-1.887	4980.00	-1.764
2520.00	-2.051	3345.00	-1.969	4170.00	-1.884	4995.00	-1.761
2535.00	-2.048	3360.00	-1.969	4185.00	-1.881	5010.00	-1.758
2550.00	-2.048	3375.00	-1.966	4200.00	-1.881	5025.00	-1.758
2565.00	-2.048	3390.00	-1.966	4215.00	-1.878	5040.00	-1.755
2580.00	-2.045	3405.00	-1.963	4230.00	-1.878	5055.00	-1.751
2595.00	-2.045	3420.00	-1.963	4245.00	-1.878	5070.00	-1.748
2610.00	-2.041	3435.00	-1.963	4260.00	-1.874	5085.00	-1.748
2625.00	-2.041	3450.00	-1.959	4275.00	-1.871	5100.00	-1.745
2640.00	-2.041	3465.00	-1.956	4290.00	-1.868	5115.00	-1.742
2655.00	-2.038	3480.00	-1.956	4305.00	-1.868	5130.00	-1.742
2670.00	-2.038	3495.00	-1.953	4320.00	-1.865	5145.00	-1.739
2685.00	-2.035	3510.00	-1.953	4335.00	-1.862	5160.00	-1.736
2700.00	-2.035	3525.00	-1.950	4350.00	-1.862	5175.00	-1.733
2715.00	-2.035	3540.00	-1.950	4365.00	-1.859	5190.00	-1.733
2730.00	-2.032	3555.00	-1.947	4380.00	-1.859	5205.00	-1.729
2745.00	-2.032	3570.00	-1.947	4395.00	-1.855	5220.00	-1.726
2760.00	-2.029	3585.00	-1.944	4410.00	-1.852	5235.00	-1.726
2775.00	-2.029	3600.00	-1.944	4425.00	-1.849	5250.00	-1.723
2790.00	-2.029	3615.00	-1.941	4440.00	-1.849	5265.00	-1.720
2805.00	-2.029	3630.00	-1.941	4455.00	-1.846	5280.00	-1.717
2820.00	-2.026	3645.00	-1.937	4470.00	-1.843	5295.00	-1.717
2835.00	-2.026	3660.00	-1.937	4485.00	-1.843	5310.00	-1.714
2850.00	-2.022	3675.00	-1.934	4500.00	-1.840	5325.00	-1.711
2865.00	-2.022	3690.00	-1.931	4515.00	-1.840	5340.00	-1.707
2880.00	-2.022	3705.00	-1.931	4530.00	-1.837	5355.00	-1.707
2895.00	-2.019	3720.00	-1.928	4545.00	-1.833	5370.00	-1.704
2910.00	-2.019	3735.00	-1.928	4560.00	-1.830	5385.00	-1.701
2925.00	-2.019	3750.00	-1.925	4575.00	-1.827	5400.00	-1.701
2940.00	-2.016	3765.00	-1.925	4590.00	-1.827	5415.00	-1.698
2955.00	-2.013	3780.00	-1.922	4605.00	-1.824	5430.00	-1.695
2970.00	-2.013	3795.00	-1.919	4620.00	-1.821	5445.00	-1.692
2985.00	-2.013	3810.00	-1.919	4635.00	-1.818	5460.00	-1.692
3000.00	-2.010	3825.00	-1.915	4650.00	-1.815	5475.00	-1.692
3015.00	-2.010	3840.00	-1.915	4665.00	-1.811	5490.00	-1.688
3030.00	-2.010	3855.00	-1.912	4680.00	-1.808	5505.00	-1.685
3045.00	-2.007	3870.00	-1.912	4695.00	-1.808	5520.00	-1.685
3060.00	-2.004	3885.00	-1.909	4710.00	-1.805	5535.00	-1.682
3075.00	-2.004	3900.00	-1.909	4725.00	-1.802	5550.00	-1.682
3090.00	-2.000	3915.00	-1.906	4740.00	-1.799	5565.00	-1.679

Elapsed Time	Input 1	Elapsed Time	Input 1	Elapsed Time	Input 1	Elapsed Time	Input 1
5580.00	-1.679	6405.00	-1.562	7230.00	-1.496	8055.00	-1.414
5595.00	-1.676	6420.00	-1.559	7245.00	-1.493	8070.00	-1.411
5610.00	-1.676	6435.00	-1.559	7260.00	-1.493	8085.00	-1.408
5625.00	-1.673	6450.00	-1.559	7275.00	-1.490	8100.00	-1.408
5640.00	-1.670	6465.00	-1.556	7290.00	-1.490	8115.00	-1.408
5655.00	-1.670	6480.00	-1.553	7305.00	-1.487	8130.00	-1.405
5670.00	-1.666	6495.00	-1.553	7320.00	-1.487	8145.00	-1.405
5685.00	-1.666	6510.00	-1.553	7335.00	-1.487	8160.00	-1.405
5700.00	-1.663	6525.00	-1.550	7350.00	-1.484	8175.00	-1.402
5715.00	-1.660	6540.00	-1.550	7365.00	-1.484	8190.00	-1.402
5730.00	-1.657	6555.00	-1.547	7380.00	-1.480	8205.00	-1.399
5745.00	-1.657	6570.00	-1.544	7395.00	-1.480	8220.00	-1.399
5760.00	-1.654	6585.00	-1.544	7410.00	-1.477	8235.00	-1.395
5775.00	-1.651	6600.00	-1.544	7425.00	-1.477	8250.00	-1.395
5790.00	-1.651	6615.00	-1.540	7440.00	-1.474	8265.00	-1.395
5805.00	-1.647	6630.00	-1.537	7455.00	-1.474	8280.00	-1.392
5820.00	-1.644	6645.00	-1.537	7470.00	-1.471	8295.00	-1.392
5835.00	-1.641	6660.00	-1.537	7485.00	-1.471	8310.00	-1.392
5850.00	-1.641	6675.00	-1.534	7500.00	-1.468	8325.00	-1.389
5865.00	-1.638	6690.00	-1.531	7515.00	-1.468	8340.00	-1.389
5880.00	-1.635	6705.00	-1.531	7530.00	-1.465	8355.00	-1.389
5895.00	-1.635	6720.00	-1.528	7545.00	-1.462	8370.00	-1.389
5910.00	-1.629	6735.00	-1.528	7560.00	-1.462	8385.00	-1.389
5925.00	-1.629	6750.00	-1.528	7575.00	-1.458	8400.00	-1.389
5940.00	-1.625	6765.00	-1.525	7590.00	-1.455	8415.00	-1.389
5955.00	-1.622	6780.00	-1.525	7605.00	-1.455	8430.00	-1.386
5970.00	-1.622	6795.00	-1.521	7620.00	-1.452	8445.00	-1.386
5985.00	-1.619	6810.00	-1.521	7635.00	-1.452	8460.00	-1.386
6000.00	-1.616	6825.00	-1.518	7650.00	-1.449	8475.00	-1.386
6015.00	-1.613	6840.00	-1.518	7665.00	-1.449	8490.00	-1.386
6030.00	-1.613	6855.00	-1.515	7680.00	-1.446	8505.00	-1.383
6045.00	-1.610	6870.00	-1.515	7695.00	-1.446	8520.00	-1.383
6060.00	-1.607	6885.00	-1.515	7710.00	-1.443	8535.00	-1.383
6075.00	-1.607	6900.00	-1.515	7725.00	-1.443	8550.00	-1.383
6090.00	-1.603	6915.00	-1.512	7740.00	-1.439	8565.00	-1.380
6105.00	-1.600	6930.00	-1.512	7755.00	-1.439	8580.00	-1.380
6120.00	-1.597	6945.00	-1.512	7770.00	-1.436	8595.00	-1.376
6135.00	-1.594	6960.00	-1.512	7785.00	-1.436	8610.00	-1.376
6150.00	-1.594	6975.00	-1.512	7800.00	-1.436	8625.00	-1.373
6165.00	-1.591	6990.00	-1.512	7815.00	-1.433	8640.00	-1.373
6180.00	-1.588	7005.00	-1.509	7830.00	-1.433	8655.00	-1.370
6195.00	-1.588	7020.00	-1.509	7845.00	-1.430	8670.00	-1.370
6210.00	-1.584	7035.00	-1.509	7860.00	-1.430	8685.00	-1.367
6225.00	-1.581	7050.00	-1.509	7875.00	-1.430	8700.00	-1.367
6240.00	-1.581	7065.00	-1.506	7890.00	-1.427	8715.00	-1.364
6255.00	-1.578	7080.00	-1.506	7905.00	-1.427	8730.00	-1.364
6270.00	-1.578	7095.00	-1.506	7920.00	-1.424	8745.00	-1.361
6285.00	-1.575	7110.00	-1.503	7935.00	-1.424		
6300.00	-1.572	7125.00	-1.503	7950.00	-1.421		
6315.00	-1.572	7140.00	-1.503	7965.00	-1.421		
6330.00	-1.569	7155.00	-1.499	7980.00	-1.417		
6345.00	-1.569	7170.00	-1.499	7995.00	-1.417		
6360.00	-1.569	7185.00	-1.499	8010.00	-1.417		
6375.00	-1.566	7200.00	-1.496	8025.00	-1.414		
6390.00	-1.566	7215.00	-1.496	8040.00	-1.414		

SE2000
Environmental Logger
09/29 10:31

Unit# 2K-114 Test 1

Setups:	INPUT 1	INPUT 2
Type	Level (F)	Level (F)
Mode	TOC	TOC
I.D.	1774PT	1645PT
Reference	0.000	0.000
SG	1.000	1.000
Linearity	0.001	0.115
Scale factor	9.980	19.961
Offset	-0.017	0.026
Delay mSEC	50.000	50.000

Step 0 09/20 18:45:01

Elapsed Time	Input 1	Input 2	Elapsed Time	Input 1	Input 2	Elapsed Time	Input 1	Input 2
0.0000	0.012	-0.012	495.000	0.050	0.037	990.000	0.195	0.094
15.0000	0.009	-0.006	510.000	0.050	0.037	1005.00	0.107	0.094
30.0000	0.009	-0.006	525.000	0.047	0.044	1020.00	0.075	0.100
45.0000	0.009	0.000	540.000	0.053	0.044	1035.00	0.242	0.100
60.0000	0.012	0.000	555.000	0.053	0.044	1050.00	0.163	0.100
75.0000	0.012	0.000	570.000	0.053	0.044	1065.00	0.091	0.100
90.0000	0.015	0.000	585.000	0.050	0.044	1080.00	0.107	0.100
105.000	0.015	0.006	600.000	0.053	0.044	1095.00	0.135	0.100
120.000	0.018	0.006	615.000	0.053	0.050	1110.00	0.132	0.100
135.000	0.018	0.006	630.000	0.056	0.050	1125.00	0.097	0.107
150.000	0.018	0.006	645.000	0.059	0.050	1140.00	0.119	0.107
165.000	0.025	0.012	660.000	0.053	0.056	1155.00	0.138	0.107
180.000	0.025	0.012	675.000	0.056	0.056	1170.00	0.138	0.107
195.000	0.025	0.012	690.000	0.056	0.056	1185.00	0.255	0.113
210.000	0.028	0.012	705.000	0.066	0.056	1200.00	0.122	0.107
225.000	0.025	0.018	720.000	0.066	0.063	1215.00	0.220	0.113
240.000	0.028	0.018	735.000	0.059	0.063	1230.00	0.148	0.107
255.000	0.034	0.018	750.000	0.062	0.063	1245.00	0.119	0.113
270.000	0.031	0.018	765.000	0.069	0.069	1260.00	0.122	0.113
285.000	0.034	0.025	780.000	0.072	0.069	1275.00	0.148	0.113
300.000	0.037	0.025	795.000	0.075	0.069	1290.00	0.144	0.113
315.000	0.037	0.025	810.000	0.091	0.075	1305.00	0.132	0.119
330.000	0.037	0.025	825.000	0.075	0.075	1320.00	0.144	0.119
345.000	0.040	0.031	840.000	0.081	0.075	1335.00	0.148	0.119
360.000	0.040	0.031	855.000	0.085	0.081	1350.00	0.151	0.119
375.000	0.047	0.031	870.000	0.097	0.081	1365.00	0.151	0.119
390.000	0.044	0.031	885.000	0.081	0.081	1380.00	0.154	0.126
405.000	0.047	0.031	900.000	0.107	0.075	1395.00	0.154	0.126
420.000	0.050	0.031	915.000	0.088	0.088	1410.00	0.154	0.126
435.000	0.050	0.037	930.000	0.100	0.088	1425.00	0.154	0.126
450.000	0.047	0.037	945.000	0.094	0.088	1440.00	0.157	0.132
465.000	0.044	0.037	960.000	0.075	0.088	1455.00	0.157	0.132
480.000	0.047	0.037	975.000	0.154	0.094	1470.00	0.160	0.132

ERAFS1\VOL1:GEOT\ENGDATA\
KEEP\D-LOGGER\11214\17741645.WL

03/23 10:49am

Elapsed Time	Input 1	Input 2	Elapsed Time	Input 1	Input 2	Elapsed Time	Input 1	Input 2
1485.00	0.160	0.132	2250.00	0.258	0.189	3015.00	0.176	0.182
1500.00	0.166	0.138	2265.00	0.261	0.189	3030.00	0.170	0.182
1515.00	0.166	0.138	2280.00	0.261	0.189	3045.00	0.176	0.182
1530.00	0.166	0.138	2295.00	0.270	0.189	3060.00	0.173	0.182
1545.00	0.170	0.138	2310.00	0.264	0.189	3075.00	0.170	0.189
1560.00	0.170	0.138	2325.00	0.267	0.189	3090.00	0.170	0.182
1575.00	0.176	0.145	2340.00	0.270	0.189	3105.00	0.170	0.189
1590.00	0.179	0.145	2355.00	0.261	0.189	3120.00	0.166	0.189
1605.00	0.179	0.145	2370.00	0.270	0.195	3135.00	0.166	0.182
1620.00	0.185	0.151	2385.00	0.267	0.195	3150.00	0.160	0.189
1635.00	0.188	0.151	2400.00	0.277	0.195	3165.00	0.160	0.182
1650.00	0.195	0.151	2415.00	0.251	0.195	3180.00	0.157	0.189
1665.00	0.192	0.151	2430.00	0.289	0.201	3195.00	0.160	0.189
1680.00	0.198	0.151	2445.00	0.255	0.201	3210.00	0.160	0.182
1695.00	0.198	0.151	2460.00	0.270	0.201	3225.00	0.157	0.182
1710.00	0.198	0.151	2475.00	0.299	0.201	3240.00	0.157	0.182
1725.00	0.198	0.151	2490.00	0.286	0.201	3255.00	0.151	0.182
1740.00	0.204	0.151	2505.00	0.274	0.201	3270.00	0.154	0.176
1755.00	0.204	0.157	2520.00	0.261	0.208	3285.00	0.148	0.182
1770.00	0.204	0.157	2535.00	0.242	0.201	3300.00	0.148	0.182
1785.00	0.204	0.157	2550.00	0.264	0.201	3315.00	0.144	0.176
1800.00	0.211	0.157	2565.00	0.270	0.201	3330.00	0.144	0.182
1815.00	0.207	0.157	2580.00	0.251	0.201	3345.00	0.141	0.182
1830.00	0.211	0.157	2595.00	0.277	0.195	3360.00	0.141	0.182
1845.00	0.214	0.157	2610.00	0.264	0.195	3375.00	0.138	0.182
1860.00	0.214	0.157	2625.00	0.267	0.195	3390.00	0.138	0.182
1875.00	0.217	0.163	2640.00	0.274	0.195	3405.00	0.138	0.182
1890.00	0.217	0.163	2655.00	0.248	0.189	3420.00	0.138	0.182
1905.00	0.223	0.163	2670.00	0.261	0.189	3435.00	0.135	0.176
1920.00	0.217	0.163	2685.00	0.255	0.189	3450.00	0.125	0.170
1935.00	0.220	0.163	2700.00	0.248	0.189	3465.00	0.125	0.176
1950.00	0.223	0.163	2715.00	0.242	0.189	3480.00	0.122	0.176
1965.00	0.226	0.170	2730.00	0.242	0.189	3495.00	0.122	0.176
1980.00	0.229	0.170	2745.00	0.239	0.189	3510.00	0.116	0.182
1995.00	0.229	0.170	2760.00	0.236	0.189	3525.00	0.116	0.176
2010.00	0.233	0.176	2775.00	0.223	0.189	3540.00	0.113	0.176
2025.00	0.236	0.176	2790.00	0.226	0.189	3555.00	0.110	0.176
2040.00	0.236	0.176	2805.00	0.233	0.195	3570.00	0.110	0.176
2055.00	0.239	0.176	2820.00	0.229	0.195	3585.00	0.107	0.182
2070.00	0.239	0.176	2835.00	0.229	0.195	3600.00	0.103	0.182
2085.00	0.242	0.176	2850.00	0.220	0.189	3615.00	0.103	0.182
2100.00	0.242	0.176	2865.00	0.217	0.182	3630.00	0.100	0.182
2115.00	0.248	0.176	2880.00	0.211	0.182	3645.00	0.100	0.182
2130.00	0.248	0.182	2895.00	0.207	0.182	3660.00	0.103	0.189
2145.00	0.248	0.176	2910.00	0.201	0.182	3675.00	0.100	0.189
2160.00	0.248	0.182	2925.00	0.198	0.182	3690.00	0.100	0.189
2175.00	0.251	0.182	2940.00	0.192	0.182	3705.00	0.100	0.189
2190.00	0.251	0.176	2955.00	0.192	0.182	3720.00	0.100	0.195
2205.00	0.251	0.182	2970.00	0.188	0.176	3735.00	0.103	0.189
2220.00	0.255	0.189	2985.00	0.185	0.182	3750.00	0.097	0.189
2235.00	0.258	0.189	3000.00	0.182	0.176	3765.00	0.097	0.195

Elapsed Time	Input 1	Input 2	Elapsed Time	Input 1	Input 2	Elapsed Time	Input 1	Input 2
3780.00	0.097	0.195	4545.00	0.154	0.252	5310.00	0.274	0.315
3795.00	0.103	0.195	4560.00	0.157	0.252	5325.00	0.264	0.315
3810.00	0.100	0.195	4575.00	0.163	0.258	5340.00	0.280	0.315
3825.00	0.103	0.195	4590.00	0.166	0.258	5355.00	0.280	0.315
3840.00	0.100	0.195	4605.00	0.170	0.258	5370.00	0.274	0.315
3855.00	0.103	0.195	4620.00	0.176	0.258	5385.00	0.261	0.315
3870.00	0.100	0.195	4635.00	0.176	0.264	5400.00	0.280	0.315
3885.00	0.110	0.201	4650.00	0.179	0.264	5415.00	0.277	0.315
3900.00	0.100	0.201	4665.00	0.182	0.264	5430.00	0.261	0.315
3915.00	0.107	0.201	4680.00	0.185	0.264	5445.00	0.280	0.315
3930.00	0.113	0.208	4695.00	0.188	0.271	5460.00	0.270	0.315
3945.00	0.110	0.208	4710.00	0.195	0.264	5475.00	0.283	0.315
3960.00	0.113	0.208	4725.00	0.195	0.264	5490.00	0.280	0.315
3975.00	0.119	0.214	4740.00	0.195	0.264	5505.00	0.274	0.308
3990.00	0.116	0.214	4755.00	0.198	0.271	5520.00	0.274	0.308
4005.00	0.116	0.214	4770.00	0.201	0.271	5535.00	0.277	0.308
4020.00	0.125	0.214	4785.00	0.207	0.271	5550.00	0.258	0.308
4035.00	0.110	0.214	4800.00	0.204	0.271	5565.00	0.264	0.302
4050.00	0.129	0.214	4815.00	0.207	0.277	5580.00	0.258	0.302
4065.00	0.122	0.214	4830.00	0.211	0.277	5595.00	0.242	0.302
4080.00	0.119	0.214	4845.00	0.211	0.277	5610.00	0.242	0.302
4095.00	0.122	0.214	4860.00	0.214	0.277	5625.00	0.242	0.302
4110.00	0.119	0.214	4875.00	0.214	0.277	5640.00	0.239	0.302
4125.00	0.113	0.214	4890.00	0.217	0.277	5655.00	0.242	0.302
4140.00	0.119	0.214	4905.00	0.220	0.277	5670.00	0.229	0.302
4155.00	0.116	0.214	4920.00	0.220	0.277	5685.00	0.236	0.302
4170.00	0.116	0.214	4935.00	0.220	0.277	5700.00	0.223	0.302
4185.00	0.138	0.214	4950.00	0.223	0.283	5715.00	0.220	0.302
4200.00	0.132	0.208	4965.00	0.226	0.283	5730.00	0.220	0.296
4215.00	0.113	0.208	4980.00	0.226	0.283	5745.00	0.217	0.302
4230.00	0.110	0.214	4995.00	0.229	0.283	5760.00	0.214	0.302
4245.00	0.107	0.214	5010.00	0.229	0.290	5775.00	0.207	0.296
4260.00	0.110	0.214	5025.00	0.236	0.290	5790.00	0.207	0.296
4275.00	0.110	0.214	5040.00	0.236	0.290	5805.00	0.201	0.296
4290.00	0.113	0.220	5055.00	0.239	0.296	5820.00	0.198	0.296
4305.00	0.110	0.220	5070.00	0.242	0.296	5835.00	0.198	0.290
4320.00	0.110	0.227	5085.00	0.242	0.296	5850.00	0.192	0.296
4335.00	0.113	0.227	5100.00	0.248	0.296	5865.00	0.192	0.296
4350.00	0.113	0.227	5115.00	0.251	0.296	5880.00	0.188	0.296
4365.00	0.116	0.233	5130.00	0.255	0.302	5895.00	0.185	0.296
4380.00	0.119	0.233	5145.00	0.261	0.302	5910.00	0.182	0.302
4395.00	0.122	0.239	5160.00	0.261	0.302	5925.00	0.182	0.296
4410.00	0.125	0.239	5175.00	0.264	0.302	5940.00	0.179	0.296
4425.00	0.129	0.239	5190.00	0.267	0.302	5955.00	0.182	0.296
4440.00	0.132	0.245	5205.00	0.267	0.308	5970.00	0.176	0.296
4455.00	0.135	0.245	5220.00	0.267	0.308	5985.00	0.173	0.302
4470.00	0.138	0.245	5235.00	0.270	0.315	6000.00	0.173	0.302
4485.00	0.141	0.245	5250.00	0.277	0.315	6015.00	0.170	0.302
4500.00	0.144	0.252	5265.00	0.258	0.321	6030.00	0.170	0.302
4515.00	0.148	0.252	5280.00	0.264	0.315	6045.00	0.170	0.302
4530.00	0.151	0.252	5295.00	0.264	0.321	6060.00	0.170	0.302

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KEEP\D-LOGGER\11214\17741645.WL

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Elapsed Time	Input 1	Input 2	Elapsed Time	Input 1	Input 2	Elapsed Time	Input 1	Input 2
6075.00	0.166	0.302	6840.00	0.000	0.290	7605.00	-0.258	0.145
6090.00	0.166	0.302	6855.00	-0.009	0.290	7620.00	-0.261	0.145
6105.00	0.163	0.296	6870.00	-0.009	0.290	7635.00	-0.258	0.138
6120.00	0.160	0.296	6885.00	-0.018	0.283	7650.00	-0.261	0.132
6135.00	0.160	0.296	6900.00	-0.022	0.283	7665.00	-0.261	0.132
6150.00	0.157	0.296	6915.00	-0.028	0.283	7680.00	-0.258	0.132
6165.00	0.154	0.296	6930.00	-0.031	0.277	7695.00	-0.261	0.126
6180.00	0.151	0.296	6945.00	-0.044	0.277	7710.00	-0.261	0.119
6195.00	0.148	0.290	6960.00	-0.047	0.277	7725.00	-0.255	0.119
6210.00	0.148	0.290	6975.00	-0.050	0.271	7740.00	-0.255	0.113
6225.00	0.144	0.290	6990.00	-0.062	0.264	7755.00	-0.258	0.113
6240.00	0.138	0.290	7005.00	-0.072	0.264	7770.00	-0.255	0.107
6255.00	0.135	0.290	7020.00	-0.078	0.258	7785.00	-0.251	0.100
6270.00	0.132	0.290	7035.00	-0.088	0.258	7800.00	-0.251	0.100
6285.00	0.129	0.283	7050.00	-0.091	0.252	7815.00	-0.251	0.094
6300.00	0.125	0.283	7065.00	-0.097	0.252	7830.00	-0.255	0.094
6315.00	0.122	0.283	7080.00	-0.110	0.245	7845.00	-0.251	0.088
6330.00	0.119	0.290	7095.00	-0.119	0.245	7860.00	-0.248	0.081
6345.00	0.113	0.283	7110.00	-0.125	0.239	7875.00	-0.248	0.081
6360.00	0.110	0.283	7125.00	-0.135	0.239	7890.00	-0.242	0.081
6375.00	0.107	0.283	7140.00	-0.141	0.233	7905.00	-0.239	0.075
6390.00	0.100	0.283	7155.00	-0.151	0.233	7920.00	-0.236	0.075
6405.00	0.097	0.283	7170.00	-0.157	0.233	7935.00	-0.233	0.075
6420.00	0.091	0.283	7185.00	-0.166	0.227	7950.00	-0.226	0.069
6435.00	0.088	0.277	7200.00	-0.173	0.220	7965.00	-0.223	0.063
6450.00	0.085	0.277	7215.00	-0.185	0.220	7980.00	-0.220	0.069
6465.00	0.085	0.283	7230.00	-0.192	0.214	7995.00	-0.214	0.063
6480.00	0.078	0.283	7245.00	-0.201	0.214	8010.00	-0.211	0.063
6495.00	0.075	0.277	7260.00	-0.207	0.208	8025.00	-0.204	0.056
6510.00	0.069	0.277	7275.00	-0.211	0.201	8040.00	-0.195	0.056
6525.00	0.066	0.277	7290.00	-0.223	0.208	8055.00	-0.192	0.050
6540.00	0.062	0.277	7305.00	-0.233	0.201	8070.00	-0.185	0.050
6555.00	0.059	0.283	7320.00	-0.233	0.201	8085.00	-0.179	0.044
6570.00	0.056	0.277	7335.00	-0.233	0.201	8100.00	-0.179	0.044
6585.00	0.056	0.277	7350.00	-0.239	0.201	8115.00	-0.170	0.044
6600.00	0.053	0.277	7365.00	-0.239	0.201	8130.00	-0.160	0.044
6615.00	0.050	0.283	7380.00	-0.242	0.201	8145.00	-0.157	0.037
6630.00	0.047	0.277	7395.00	-0.245	0.201	8160.00	-0.148	0.031
6645.00	0.047	0.302	7410.00	-0.248	0.195	8175.00	-0.144	0.031
6660.00	0.044	0.302	7425.00	-0.245	0.195	8190.00	-0.141	0.031
6675.00	0.040	0.296	7440.00	-0.251	0.189	8205.00	-0.135	0.025
6690.00	0.034	0.296	7455.00	-0.248	0.189	8220.00	-0.135	0.025
6705.00	0.031	0.296	7470.00	-0.248	0.182	8235.00	-0.122	0.025
6720.00	0.025	0.296	7485.00	-0.251	0.182	8250.00	-0.116	0.018
6735.00	0.028	0.296	7500.00	-0.251	0.176	8265.00	-0.107	0.018
6750.00	0.025	0.296	7515.00	-0.251	0.170	8280.00	-0.103	0.012
6765.00	0.018	0.296	7530.00	-0.255	0.170	8295.00	-0.097	0.012
6780.00	0.018	0.296	7545.00	-0.255	0.163	8310.00	-0.078	0.012
6795.00	0.015	0.296	7560.00	-0.255	0.157	8325.00	-0.078	0.006
6810.00	0.006	0.296	7575.00	-0.255	0.157	8340.00	-0.081	0.006
6825.00	0.003	0.290	7590.00	-0.258	0.151	8355.00	-0.094	0.000

Elapsed Time	Input 1	Input 2	Elapsed Time	Input 1	Input 2	Elapsed Time	Input 1	Input 2
8370.00	-0.078	-0.006	9135.00	-0.015	-0.145	9900.00	-0.062	-0.170
8385.00	-0.085	-0.006	9150.00	-0.022	-0.145	9915.00	-0.062	-0.163
8400.00	-0.069	-0.012	9165.00	-0.031	-0.151	9930.00	-0.059	-0.163
8415.00	-0.059	-0.012	9180.00	-0.028	-0.157	9945.00	-0.062	-0.163
8430.00	-0.066	-0.018	9195.00	-0.025	-0.157	9960.00	-0.053	-0.163
8445.00	-0.059	-0.018	9210.00	-0.034	-0.157	9975.00	-0.034	-0.163
8460.00	-0.062	-0.025	9225.00	-0.037	-0.163	9990.00	-0.044	-0.163
8475.00	-0.059	-0.025	9240.00	-0.040	-0.163	10005.0	-0.040	-0.163
8490.00	-0.053	-0.031	9255.00	-0.044	-0.163	10020.0	-0.031	-0.157
8505.00	-0.047	-0.031	9270.00	-0.047	-0.170	10035.0	-0.031	-0.163
8520.00	-0.050	-0.031	9285.00	-0.050	-0.170	10050.0	-0.031	-0.157
8535.00	-0.044	-0.037	9300.00	-0.056	-0.176	10065.0	-0.028	-0.157
8550.00	-0.044	-0.037	9315.00	-0.059	-0.182	10080.0	-0.028	-0.157
8565.00	-0.037	-0.037	9330.00	-0.062	-0.182	10095.0	-0.022	-0.157
8580.00	-0.037	-0.044	9345.00	-0.069	-0.176	10110.0	-0.018	-0.151
8595.00	-0.034	-0.044	9360.00	-0.072	-0.182	10125.0	-0.012	-0.151
8610.00	-0.034	-0.050	9375.00	-0.072	-0.182	10140.0	-0.009	-0.145
8625.00	-0.031	-0.050	9390.00	-0.075	-0.182	10155.0	-0.006	-0.145
8640.00	-0.031	-0.050	9405.00	-0.075	-0.189	10170.0	-0.003	-0.145
8655.00	-0.025	-0.056	9420.00	-0.078	-0.182	10185.0	0.000	-0.145
8670.00	-0.025	-0.056	9435.00	-0.078	-0.182	10200.0	0.006	-0.145
8685.00	-0.022	-0.056	9450.00	-0.081	-0.189	10215.0	0.009	-0.138
8700.00	-0.022	-0.063	9465.00	-0.078	-0.189	10230.0	0.012	-0.138
8715.00	-0.015	-0.063	9480.00	-0.081	-0.189	10245.0	0.015	-0.138
8730.00	-0.015	-0.069	9495.00	-0.078	-0.182	10260.0	0.025	-0.138
8745.00	-0.012	-0.069	9510.00	-0.078	-0.182	10275.0	0.031	-0.132
8760.00	-0.012	-0.069	9525.00	-0.075	-0.182	10290.0	0.034	-0.132
8775.00	-0.009	-0.075	9540.00	-0.081	-0.182	10305.0	0.034	-0.132
8790.00	-0.006	-0.075	9555.00	-0.078	-0.182	10320.0	0.034	-0.132
8805.00	-0.003	-0.075	9570.00	-0.069	-0.182	10335.0	0.040	-0.132
8820.00	-0.003	-0.081	9585.00	-0.066	-0.182	10350.0	0.050	-0.132
8835.00	0.000	-0.081	9600.00	-0.006	-0.176	10365.0	0.050	-0.132
8850.00	0.000	-0.081	9615.00	-0.053	-0.176	10380.0	0.053	-0.126
8865.00	0.003	-0.081	9630.00	-0.075	-0.176	10395.0	0.056	-0.132
8880.00	0.003	-0.088	9645.00	-0.107	-0.176	10410.0	0.059	-0.132
8895.00	0.006	-0.088	9660.00	-0.110	-0.176	10425.0	0.059	-0.132
8910.00	0.006	-0.094	9675.00	-0.166	-0.176	10440.0	0.062	-0.132
8925.00	0.003	-0.100	9690.00	-0.091	-0.176	10455.0	0.066	-0.132
8940.00	0.006	-0.107	9705.00	-0.100	-0.176	10470.0	0.066	-0.126
8955.00	0.003	-0.107	9720.00	-0.085	-0.176	10485.0	0.069	-0.132
8970.00	0.006	-0.107	9735.00	-0.097	-0.176	10500.0	0.072	-0.132
8985.00	0.006	-0.113	9750.00	-0.081	-0.176	10515.0	0.069	-0.132
9000.00	0.003	-0.113	9765.00	-0.062	-0.170	10530.0	0.072	-0.132
9015.00	0.003	-0.119	9780.00	-0.078	-0.170	10545.0	0.075	-0.132
9030.00	0.000	-0.119	9795.00	-0.003	-0.170	10560.0	0.072	-0.132
9045.00	0.000	-0.126	9810.00	-0.154	-0.170	10575.0	0.072	-0.132
9060.00	-0.006	-0.132	9825.00	-0.066	-0.170	10590.0	0.069	-0.132
9075.00	-0.009	-0.132	9840.00	-0.078	-0.170	10605.0	0.069	-0.132
9090.00	-0.003	-0.132	9855.00	-0.081	-0.170	10620.0	0.072	-0.132
9105.00	-0.012	-0.138	9870.00	-0.081	-0.170	10635.0	0.069	-0.132
9120.00	-0.012	-0.138	9885.00	-0.062	-0.170	10650.0	0.069	-0.132

Elapsed Time	Input 1	Input 2	Elapsed Time	Input 1	Input 2	Elapsed Time	Input 1	Input 2
10665.0	0.069	-0.132	11430.0	0.056	-0.088	12195.0	0.245	0.006
10680.0	0.066	-0.132	11445.0	0.075	-0.088	12210.0	0.245	0.006
10695.0	0.066	-0.132	11460.0	0.081	-0.088	12225.0	0.248	0.012
10710.0	0.066	-0.132	11475.0	0.062	-0.088	12240.0	0.251	0.012
10725.0	0.062	-0.132	11490.0	0.069	-0.081	12255.0	0.255	0.018
10740.0	0.059	-0.138	11505.0	0.066	-0.081	12270.0	0.258	0.018
10755.0	0.059	-0.132	11520.0	0.069	-0.081	12285.0	0.261	0.018
10770.0	0.059	-0.132	11535.0	0.069	-0.081	12300.0	0.270	0.018
10785.0	0.059	-0.132	11550.0	0.069	-0.081	12315.0	0.267	0.025
10800.0	0.059	-0.132	11565.0	0.078	-0.081	12330.0	0.274	0.025
10815.0	0.056	-0.132	11580.0	0.081	-0.081			
10830.0	0.050	-0.138	11595.0	0.085	-0.075			
10845.0	0.056	-0.132	11610.0	0.088	-0.075			
10860.0	0.053	-0.132	11625.0	0.081	-0.069			
10875.0	0.050	-0.138	11640.0	0.094	-0.069			
10890.0	0.050	-0.138	11655.0	0.097	-0.063			
10905.0	0.047	-0.138	11670.0	0.097	-0.063			
10920.0	0.044	-0.138	11685.0	0.100	-0.056			
10935.0	0.047	-0.132	11700.0	0.110	-0.050			
10950.0	0.034	-0.138	11715.0	0.110	-0.050			
10965.0	0.053	-0.132	11730.0	0.116	-0.044			
10980.0	0.034	-0.132	11745.0	0.125	-0.044			
10995.0	0.037	-0.132	11760.0	0.132	-0.044			
11010.0	0.028	-0.126	11775.0	0.135	-0.037			
11025.0	0.044	-0.126	11790.0	0.141	-0.037			
11040.0	0.085	-0.126	11805.0	0.151	-0.031			
11055.0	0.034	-0.126	11820.0	0.154	-0.031			
11070.0	-0.028	-0.119	11835.0	0.157	-0.031			
11085.0	0.012	-0.119	11850.0	0.163	-0.031			
11100.0	0.037	-0.119	11865.0	0.170	-0.025			
11115.0	0.091	-0.113	11880.0	0.173	-0.025			
11130.0	0.050	-0.113	11895.0	0.176	-0.025			
11145.0	0.025	-0.113	11910.0	0.185	-0.025			
11160.0	0.025	-0.113	11925.0	0.185	-0.018			
11175.0	0.050	-0.113	11940.0	0.192	-0.018			
11190.0	0.025	-0.113	11955.0	0.192	-0.018			
11205.0	0.015	-0.113	11970.0	0.195	-0.018			
11220.0	0.053	-0.107	11985.0	0.201	-0.012			
11235.0	0.040	-0.107	12000.0	0.204	-0.012			
11250.0	0.037	-0.107	12015.0	0.207	-0.012			
11265.0	0.034	-0.107	12030.0	0.211	-0.006			
11280.0	0.072	-0.100	12045.0	0.217	-0.006			
11295.0	0.053	-0.100	12060.0	0.223	-0.006			
11310.0	0.028	-0.107	12075.0	0.220	-0.006			
11325.0	0.072	-0.100	12090.0	0.223	-0.006			
11340.0	-0.022	-0.100	12105.0	0.229	0.000			
11355.0	0.062	-0.094	12120.0	0.229	0.000			
11370.0	-0.009	-0.094	12135.0	0.233	0.000			
11385.0	0.132	-0.094	12150.0	0.236	0.000			
11400.0	0.059	-0.088	12165.0	0.239	0.006			
11415.0	0.085	-0.088	12180.0	0.239	0.006			

ERAFS1\VOL1:GEOT\ENGDATA\
KEEP\D-LOGGER\11214\17741645.WL

03/23 10:49am

SE1000C
Environmental Logger
09/29 20:05

Unit# 01775 Test 2

Setups:	INPUT 1
Type	Level (F)
Mode	TOC
I.D.	11216

Reference	0.000
Linearity	0.110
Scale factor	19.960
Offset	0.020
Delay mSEC	50.000

Step 0 09/20 20:00:01

Elapsed Time	Input 1	Elapsed Time	Input 1	Elapsed Time	Input 1	Elapsed Time	Input 1
0.0000	0.031	495.000	0.063	990.000	0.088	1485.00	0.100
15.0000	0.037	510.000	0.063	1005.00	0.088	1500.00	0.100
30.0000	0.044	525.000	0.063	1020.00	0.088	1515.00	0.107
45.0000	0.050	540.000	0.063	1035.00	0.088	1530.00	0.107
60.0000	0.050	555.000	0.063	1050.00	0.088	1545.00	0.107
75.0000	0.056	570.000	0.063	1065.00	0.088	1560.00	0.107
90.0000	0.056	585.000	0.069	1080.00	0.088	1575.00	0.107
105.000	0.056	600.000	0.069	1095.00	0.088	1590.00	0.107
120.000	0.063	615.000	0.069	1110.00	0.094	1605.00	0.107
135.000	0.056	630.000	0.069	1125.00	0.088	1620.00	0.107
150.000	0.063	645.000	0.069	1140.00	0.088	1635.00	0.107
165.000	0.063	660.000	0.075	1155.00	0.088	1650.00	0.100
180.000	0.056	675.000	0.075	1170.00	0.082	1665.00	0.100
195.000	0.056	690.000	0.075	1185.00	0.088	1680.00	0.100
210.000	0.056	705.000	0.075	1200.00	0.088	1695.00	0.094
225.000	0.063	720.000	0.075	1215.00	0.088	1710.00	0.100
240.000	0.063	735.000	0.082	1230.00	0.088	1725.00	0.100
255.000	0.063	750.000	0.082	1245.00	0.088	1740.00	0.100
270.000	0.063	765.000	0.082	1260.00	0.088	1755.00	0.100
285.000	0.063	780.000	0.082	1275.00	0.088	1770.00	0.100
300.000	0.063	795.000	0.082	1290.00	0.088	1785.00	0.100
315.000	0.063	810.000	0.082	1305.00	0.088	1800.00	0.100
330.000	0.063	825.000	0.082	1320.00	0.088	1815.00	0.100
345.000	0.063	840.000	0.088	1335.00	0.094	1830.00	0.100
360.000	0.063	855.000	0.088	1350.00	0.094	1845.00	0.100
375.000	0.063	870.000	0.088	1365.00	0.100	1860.00	0.100
390.000	0.063	885.000	0.088	1380.00	0.100	1875.00	0.100
405.000	0.063	900.000	0.088	1395.00	0.100	1890.00	0.100
420.000	0.063	915.000	0.094	1410.00	0.100	1905.00	0.100
435.000	0.063	930.000	0.088	1425.00	0.100	1920.00	0.100
450.000	0.063	945.000	0.088	1440.00	0.100	1935.00	0.107
465.000	0.063	960.000	0.088	1455.00	0.100	1950.00	0.107
480.000	0.063	975.000	0.088	1470.00	0.100	1965.00	0.107

Elapsed Time	Input 1	Elapsed Time	Input 1	Elapsed Time	Input 1
1980.00	0.107	2745.00	0.094	3510.00	0.082
1995.00	0.107	2760.00	0.088	3525.00	0.082
2010.00	0.107	2775.00	0.082	3540.00	0.082
2025.00	0.107	2790.00	0.075	3555.00	0.082
2040.00	0.107	2805.00	0.075	3570.00	0.088
2055.00	0.107	2820.00	0.075	3585.00	0.094
2070.00	0.107	2835.00	0.069	3600.00	0.094
2085.00	0.107	2850.00	0.069	3615.00	0.094
2100.00	0.100	2865.00	0.069	3630.00	0.094
2115.00	0.100	2880.00	0.075	3645.00	0.100
2130.00	0.100	2895.00	0.075	3660.00	0.100
2145.00	0.100	2910.00	0.075	3675.00	0.100
2160.00	0.107	2925.00	0.075	3690.00	0.100
2175.00	0.107	2940.00	0.075	3705.00	0.100
2190.00	0.107	2955.00	0.082	3720.00	0.100
2205.00	0.107	2970.00	0.082	3735.00	0.107
2220.00	0.107	2985.00	0.082	3750.00	0.107
2235.00	0.100	3000.00	0.088	3765.00	0.107
2250.00	0.100	3015.00	0.094	3780.00	0.107
2265.00	0.100	3030.00	0.094	3795.00	0.107
2280.00	0.100	3045.00	0.094		
2295.00	0.100	3060.00	0.094		
2310.00	0.100	3075.00	0.094		
2325.00	0.107	3090.00	0.094		
2340.00	0.107	3105.00	0.094		
2355.00	0.113	3120.00	0.094		
2370.00	0.113	3135.00	0.094		
2385.00	0.113	3150.00	0.094		
2400.00	0.113	3165.00	0.094		
2415.00	0.107	3180.00	0.094		
2430.00	0.107	3195.00	0.094		
2445.00	0.107	3210.00	0.088		
2460.00	0.107	3225.00	0.088		
2475.00	0.107	3240.00	0.082		
2490.00	0.100	3255.00	0.082		
2505.00	0.100	3270.00	0.088		
2520.00	0.094	3285.00	0.088		
2535.00	0.094	3300.00	0.094		
2550.00	0.088	3315.00	0.094		
2565.00	0.088	3330.00	0.094		
2580.00	0.088	3345.00	0.088		
2595.00	0.088	3360.00	0.082		
2610.00	0.082	3375.00	0.075		
2625.00	0.082	3390.00	0.075		
2640.00	0.082	3405.00	0.075		
2655.00	0.082	3420.00	0.075		
2670.00	0.082	3435.00	0.082		
2685.00	0.082	3450.00	0.082		
2700.00	0.082	3465.00	0.082		
2715.00	0.088	3480.00	0.082		
2730.00	0.088	3495.00	0.082		

SE2000
Environmental Logger
10/05 17:07

Unit# 1 Test 2

Setups:	INPUT 1
Type	Level (F)
Mode	TOC
I.D.	11077PT
Reference	0.000
SG	1.000
Linearity	0.006
Scale factor	10.039
Offset	0.014
Delay mSEC	50.000

Step 0 09/20 20:00:01

Elapsed Time	Input 1	Elapsed Time	Input 1	Elapsed Time	Input 1	Elapsed Time	Input 1
0.0000	0.000	495.000	0.018	990.000	0.079	1485.00	0.098
15.0000	0.003	510.000	0.022	1005.00	0.079	1500.00	0.101
30.0000	0.006	525.000	0.022	1020.00	0.082	1515.00	0.094
45.0000	0.006	540.000	0.025	1035.00	0.085	1530.00	0.098
60.0000	0.006	555.000	0.025	1050.00	0.085	1545.00	0.101
75.0000	0.009	570.000	0.025	1065.00	0.082	1560.00	0.101
90.0000	0.009	585.000	0.028	1080.00	0.085	1575.00	0.107
105.000	0.012	600.000	0.028	1095.00	0.085	1590.00	0.107
120.000	0.012	615.000	0.031	1110.00	0.085	1605.00	0.113
135.000	0.012	630.000	0.037	1125.00	0.085	1620.00	0.110
150.000	0.015	645.000	0.037	1140.00	0.069	1635.00	0.110
165.000	0.012	660.000	0.041	1155.00	0.072	1650.00	0.107
180.000	0.015	675.000	0.044	1170.00	0.075	1665.00	0.107
195.000	0.015	690.000	0.044	1185.00	0.075	1680.00	0.110
210.000	0.015	705.000	0.047	1200.00	0.066	1695.00	0.110
225.000	0.015	720.000	0.047	1215.00	0.069	1710.00	0.113
240.000	0.018	735.000	0.050	1230.00	0.069	1725.00	0.117
255.000	0.015	750.000	0.056	1245.00	0.069	1740.00	0.117
270.000	0.018	765.000	0.056	1260.00	0.069	1755.00	0.117
285.000	0.018	780.000	0.056	1275.00	0.069	1770.00	0.117
300.000	0.018	795.000	0.060	1290.00	0.072	1785.00	0.120
315.000	0.018	810.000	0.060	1305.00	0.072	1800.00	0.120
330.000	0.018	825.000	0.063	1320.00	0.072	1815.00	0.120
345.000	0.018	840.000	0.066	1335.00	0.075	1830.00	0.123
360.000	0.022	855.000	0.066	1350.00	0.079	1845.00	0.123
375.000	0.022	870.000	0.069	1365.00	0.082	1860.00	0.123
390.000	0.022	885.000	0.069	1380.00	0.085	1875.00	0.123
405.000	0.022	900.000	0.072	1395.00	0.088	1890.00	0.123
420.000	0.022	915.000	0.075	1410.00	0.088	1905.00	0.126
435.000	0.018	930.000	0.075	1425.00	0.091	1920.00	0.129
450.000	0.018	945.000	0.075	1440.00	0.094	1935.00	0.132
465.000	0.018	960.000	0.079	1455.00	0.091	1950.00	0.139
480.000	0.018	975.000	0.082	1470.00	0.094	1965.00	0.136

ERAFS1\VOL1:GEOT\ENGDATA\
KEEP\D-LOGGER\11214\11077.WL

03/23 2:10pm

Elapsed Time	Input 1	Elapsed Time	Input 1	Elapsed Time	Input 1
1980.00	0.139	2745.00	0.126	3510.00	0.079
1995.00	0.145	2760.00	0.123	3525.00	0.079
2010.00	0.142	2775.00	0.110	3540.00	0.075
2025.00	0.142	2790.00	0.107	3555.00	0.079
2040.00	0.142	2805.00	0.104	3570.00	0.082
2055.00	0.145	2820.00	0.104	3585.00	0.085
2070.00	0.145	2835.00	0.101	3600.00	0.085
2085.00	0.145	2850.00	0.101	3615.00	0.085
2100.00	0.142	2865.00	0.098	3630.00	0.088
2115.00	0.142	2880.00	0.094	3645.00	0.091
2130.00	0.145	2895.00	0.098	3660.00	0.091
2145.00	0.151	2910.00	0.094	3675.00	0.091
2160.00	0.155	2925.00	0.094	3690.00	0.088
2175.00	0.155	2940.00	0.098	3705.00	0.091
2190.00	0.158	2955.00	0.101	3720.00	0.094
2205.00	0.158	2970.00	0.094	3735.00	0.094
2220.00	0.155	2985.00	0.104	3750.00	0.098
2235.00	0.151	3000.00	0.107	3765.00	0.098
2250.00	0.151	3015.00	0.104	3780.00	0.091
2265.00	0.151	3030.00	0.104		
2280.00	0.155	3045.00	0.104		
2295.00	0.158	3060.00	0.101		
2310.00	0.158	3075.00	0.107		
2325.00	0.161	3090.00	0.098		
2340.00	0.161	3105.00	0.107		
2355.00	0.167	3120.00	0.107		
2370.00	0.167	3135.00	0.101		
2385.00	0.167	3150.00	0.101		
2400.00	0.164	3165.00	0.101		
2415.00	0.161	3180.00	0.101		
2430.00	0.155	3195.00	0.091		
2445.00	0.158	3210.00	0.094		
2460.00	0.158	3225.00	0.091		
2475.00	0.151	3240.00	0.085		
2490.00	0.151	3255.00	0.091		
2505.00	0.151	3270.00	0.094		
2520.00	0.145	3285.00	0.098		
2535.00	0.142	3300.00	0.101		
2550.00	0.139	3315.00	0.101		
2565.00	0.136	3330.00	0.094		
2580.00	0.136	3345.00	0.088		
2595.00	0.129	3360.00	0.079		
2610.00	0.129	3375.00	0.072		
2625.00	0.126	3390.00	0.082		
2640.00	0.126	3405.00	0.079		
2655.00	0.123	3420.00	0.079		
2670.00	0.126	3435.00	0.082		
2685.00	0.123	3450.00	0.079		
2700.00	0.126	3465.00	0.075		
2715.00	0.132	3480.00	0.079		
2730.00	0.129	3495.00	0.079		

SE2000
Environmental Logger
09/29 10:24

Unit# 2K-114 Test 0

Setups:	INPUT 1
Type	Level (F)
Mode	TOC
I.D.	11214BK
Reference	0.000
SG	1.000
Linearity	0.111
Scale factor	19.968
Offset	0.029
Delay mSEC	50.000

Step 0 09/15 17:39:25

Elapsed Time	Input 1	Elapsed Time	Input 1	Elapsed Time	Input 1	Elapsed Time	Input 1
0.0000	0.000	465.000	0.012	930.000	0.025	1395.00	0.063
15.0000	0.000	480.000	0.012	945.000	0.025	1410.00	0.056
30.0000	0.006	495.000	0.012	960.000	0.025	1425.00	0.050
45.0000	0.000	510.000	0.012	975.000	0.025	1440.00	0.044
60.0000	-0.018	525.000	0.012	990.000	0.012	1455.00	0.044
75.0000	-0.012	540.000	0.012	1005.00	0.063	1470.00	0.044
90.0000	-0.006	555.000	0.006	1020.00	0.037	1485.00	0.044
105.000	-0.006	570.000	0.006	1035.00	0.031	1500.00	0.044
120.000	-0.006	585.000	0.006	1050.00	0.031	1515.00	0.037
135.000	-0.006	600.000	0.006	1065.00	0.025	1530.00	0.037
150.000	-0.006	615.000	0.000	1080.00	0.025	1545.00	0.037
165.000	0.000	630.000	0.006	1095.00	0.018	1560.00	0.037
180.000	-0.006	645.000	0.000	1110.00	0.018	1575.00	0.037
195.000	0.000	660.000	0.006	1125.00	0.018	1590.00	0.037
210.000	0.000	675.000	0.000	1140.00	0.012	1605.00	0.037
225.000	0.000	690.000	0.000	1155.00	0.012	1620.00	0.037
240.000	0.000	705.000	0.000	1170.00	-0.164	1635.00	0.037
255.000	0.000	720.000	0.000	1185.00	-0.006	1650.00	0.037
270.000	0.000	735.000	0.000	1200.00	0.360	1665.00	0.044
285.000	0.000	750.000	0.000	1215.00	-0.025	1680.00	0.037
300.000	0.000	765.000	0.006	1230.00	0.411	1695.00	0.037
315.000	0.006	780.000	0.006	1245.00	0.310	1710.00	0.037
330.000	0.012	795.000	0.006	1260.00	0.664	1725.00	0.037
345.000	0.012	810.000	0.006	1275.00	0.360	1740.00	0.037
360.000	0.012	825.000	0.006	1290.00	0.253	1755.00	0.037
375.000	0.012	840.000	0.006	1305.00	0.240	1770.00	0.037
390.000	0.018	855.000	0.012	1320.00	0.120	1785.00	0.037
405.000	0.012	870.000	0.012	1335.00	0.044	1800.00	0.037
420.000	0.012	885.000	0.018	1350.00	0.037	1815.00	0.037
435.000	0.012	900.000	0.018	1365.00	0.063	1830.00	0.037
450.000	0.012	915.000	0.031	1380.00	0.069	1845.00	0.037

Elapsed Time	Input 1	Elapsed Time	Input 1	Elapsed Time	Input 1	Elapsed Time	Input 1
1860.00	0.037	2595.00	0.069	3330.00	0.113	4065.00	1.360
1875.00	0.037	2610.00	0.069	3345.00	0.107	4080.00	1.151
1890.00	0.037	2625.00	0.069	3360.00	0.113	4095.00	0.999
1905.00	0.031	2640.00	0.069	3375.00	0.107	4110.00	0.873
1920.00	0.037	2655.00	0.069	3390.00	0.107	4125.00	0.759
1935.00	0.037	2670.00	0.069	3405.00	0.113	4140.00	0.664
1950.00	0.037	2685.00	0.069	3420.00	0.107	4155.00	0.588
1965.00	0.037	2700.00	0.069	3435.00	0.107	4170.00	0.525
1980.00	0.037	2715.00	0.063	3450.00	0.107	4185.00	0.480
1995.00	0.037	2730.00	0.063	3465.00	0.107	4200.00	0.442
2010.00	0.037	2745.00	0.063	3480.00	0.107	4215.00	0.417
2025.00	0.037	2760.00	0.063	3495.00	0.107	4230.00	0.398
2040.00	0.037	2775.00	0.063	3510.00	0.107	4245.00	0.373
2055.00	0.037	2790.00	0.050	3525.00	0.107	4260.00	0.354
2070.00	0.037	2805.00	0.056	3540.00	0.107	4275.00	0.341
2085.00	0.037	2820.00	0.139	3555.00	0.113	4290.00	0.322
2100.00	0.037	2835.00	0.158	3570.00	0.113	4305.00	0.310
2115.00	0.037	2850.00	0.234	3585.00	0.113	4320.00	0.303
2130.00	0.037	2865.00	0.449	3600.00	0.113	4335.00	0.297
2145.00	0.037	2880.00	0.632	3615.00	0.113	4350.00	0.291
2160.00	0.037	2895.00	0.759	3630.00	0.113	4365.00	0.291
2175.00	0.037	2910.00	0.449	3645.00	0.120	4380.00	0.284
2190.00	0.044	2925.00	0.544	3660.00	0.120	4395.00	0.278
2205.00	0.050	2940.00	0.404	3675.00	0.120	4410.00	0.272
2220.00	0.044	2955.00	0.297	3690.00	0.120	4425.00	0.265
2235.00	0.044	2970.00	0.246	3705.00	0.113	4440.00	0.265
2250.00	0.050	2985.00	0.215	3720.00	0.113	4455.00	0.259
2265.00	0.050	3000.00	0.189	3735.00	0.120	4470.00	0.259
2280.00	0.056	3015.00	0.177	3750.00	0.120	4485.00	0.253
2295.00	0.056	3030.00	0.164	3765.00	0.120	4500.00	0.253
2310.00	0.056	3045.00	0.151	3780.00	0.259	4515.00	0.253
2325.00	0.063	3060.00	0.145	3795.00	0.215	4530.00	0.246
2340.00	0.056	3075.00	0.145	3810.00	0.373	4545.00	0.246
2355.00	0.056	3090.00	0.139	3825.00	0.430	4560.00	0.240
2370.00	0.056	3105.00	0.139	3840.00	0.310	4575.00	0.246
2385.00	0.063	3120.00	0.139	3855.00	0.417	4590.00	0.246
2400.00	0.063	3135.00	0.132	3870.00	0.297	4605.00	0.240
2415.00	0.063	3150.00	0.132	3885.00	0.253	4620.00	0.234
2430.00	0.069	3165.00	0.132	3900.00	0.221	4635.00	0.234
2445.00	0.069	3180.00	0.132	3915.00	0.221	4650.00	0.234
2460.00	0.075	3195.00	0.126	3930.00	0.221	4665.00	0.234
2475.00	0.069	3210.00	0.126	3945.00	0.221	4680.00	0.234
2490.00	0.069	3225.00	0.120	3960.00	0.208	4695.00	0.227
2505.00	0.075	3240.00	0.120	3975.00	0.468	4710.00	0.227
2520.00	0.069	3255.00	0.120	3990.00	0.525	4725.00	0.227
2535.00	0.069	3270.00	0.120	4005.00	2.131	4740.00	0.221
2550.00	0.069	3285.00	0.120	4020.00	2.669	4755.00	0.221
2565.00	0.069	3300.00	0.113	4035.00	2.681	4770.00	0.221
2580.00	0.069	3315.00	0.113	4050.00	1.688	4785.00	0.221

Elapsed Time	Input 1	Elapsed Time	Input 1	Elapsed Time	Input 1	Elapsed Time	Input 1
4800.00	0.221	5535.00	0.208	6270.00	0.221	7005.00	0.202
4815.00	0.221	5550.00	0.208	6285.00	0.221	7020.00	0.208
4830.00	0.215	5565.00	0.202	6300.00	0.215		
4845.00	0.215	5580.00	0.202	6315.00	0.215		
4860.00	0.215	5595.00	0.202	6330.00	0.208		
4875.00	0.215	5610.00	0.208	6345.00	0.202		
4890.00	0.215	5625.00	0.202	6360.00	0.202		
4905.00	0.215	5640.00	0.202	6375.00	0.208		
4920.00	0.208	5655.00	0.202	6390.00	0.215		
4935.00	0.208	5670.00	0.202	6405.00	0.208		
4950.00	0.208	5685.00	0.202	6420.00	0.208		
4965.00	0.208	5700.00	0.202	6435.00	0.215		
4980.00	0.208	5715.00	0.202	6450.00	0.215		
4995.00	0.215	5730.00	0.202	6465.00	0.215		
5010.00	0.215	5745.00	0.202	6480.00	0.221		
5025.00	0.215	5760.00	0.208	6495.00	0.215		
5040.00	0.215	5775.00	0.208	6510.00	0.208		
5055.00	0.208	5790.00	0.208	6525.00	0.208		
5070.00	0.215	5805.00	0.208	6540.00	0.208		
5085.00	0.208	5820.00	0.215	6555.00	0.215		
5100.00	0.208	5835.00	0.215	6570.00	0.208		
5115.00	0.215	5850.00	0.215	6585.00	0.215		
5130.00	0.215	5865.00	0.215	6600.00	0.221		
5145.00	0.215	5880.00	0.215	6615.00	0.215		
5160.00	0.215	5895.00	0.215	6630.00	0.221		
5175.00	0.215	5910.00	0.215	6645.00	0.221		
5190.00	0.215	5925.00	0.208	6660.00	0.227		
5205.00	0.215	5940.00	0.215	6675.00	0.227		
5220.00	0.215	5955.00	0.215	6690.00	0.234		
5235.00	0.215	5970.00	0.215	6705.00	0.221		
5250.00	0.215	5985.00	0.215	6720.00	0.221		
5265.00	0.215	6000.00	0.215	6735.00	0.215		
5280.00	0.215	6015.00	0.215	6750.00	0.215		
5295.00	0.221	6030.00	0.221	6765.00	0.208		
5310.00	0.221	6045.00	0.221	6780.00	0.221		
5325.00	0.215	6060.00	0.221	6795.00	0.221		
5340.00	0.221	6075.00	0.221	6810.00	0.227		
5355.00	0.221	6090.00	0.221	6825.00	0.234		
5370.00	0.221	6105.00	0.221	6840.00	0.234		
5385.00	0.221	6120.00	0.221	6855.00	0.227		
5400.00	0.221	6135.00	0.221	6870.00	0.227		
5415.00	0.221	6150.00	0.221	6885.00	0.227		
5430.00	0.215	6165.00	0.221	6900.00	0.227		
5445.00	0.215	6180.00	0.221	6915.00	0.227		
5460.00	0.215	6195.00	0.221	6930.00	0.221		
5475.00	0.215	6210.00	0.221	6945.00	0.221		
5490.00	0.215	6225.00	0.221	6960.00	0.215		
5505.00	0.208	6240.00	0.221	6975.00	0.208		
5520.00	0.208	6255.00	0.221	6990.00	0.202		

SE2000
Environmental Logger
10/01 10:08

Unit# 159 Test 1

Setups:	INPUT 1	INPUT 2	INPUT 3	INPUT 4	INPUT 5
Type	Level (F)	Level (F)	Level (F)	Level (F)	Level (F)
Mode	Surface	Surface	Surface	Surface	Surface
I.D.	11214	11213	11122	11125	11124
Reference	0.000	0.000	0.000	0.000	0.000
SG	1.000	1.000	1.000	1.000	1.000
Linearity	0.111	0.112	0.024	0.021	-0.007
Scale factor	19.968	20.070	10.051	10.051	9.992
Offset	0.029	-0.073	-0.003	0.041	0.011
Delay mSEC	50.000	50.000	50.000	50.000	50.000

Step 0 09/20 18:15:01

Elapsed Time	Input 1	Input 2	Input 3	Input 4	Input 5
0.0000	0.000	-0.006	0.000	0.003	-0.003
15.0000	-0.006	-0.006	-0.003	0.000	0.000
30.0000	-0.006	-0.006	-0.003	-0.003	0.006
45.0000	0.000	0.000	-0.003	0.000	0.006
60.0000	0.000	0.000	-0.003	0.000	0.009
75.0000	0.000	0.000	0.000	0.000	0.009
90.0000	0.000	0.000	-0.003	0.000	0.009
105.000	-0.006	-0.006	-0.006	0.000	0.015
120.000	-0.006	-0.006	-0.009	-0.003	0.018
135.000	-0.012	-0.012	-0.012	-0.006	0.018
150.000	-0.012	-0.012	-0.012	-0.009	0.018
165.000	-0.012	-0.012	-0.015	-0.009	0.018
180.000	-0.012	-0.012	-0.012	-0.009	0.022
195.000	-0.012	-0.019	-0.019	-0.012	0.022
210.000	-0.019	-0.019	-0.019	-0.012	0.022
225.000	-0.012	-0.012	-0.019	-0.015	0.022
240.000	-0.012	-0.012	-0.015	-0.012	0.022
255.000	-0.019	-0.019	-0.015	-0.012	0.025
270.000	-0.012	-0.012	-0.019	-0.012	0.022
285.000	-0.012	-0.012	-0.015	-0.012	0.025
300.000	-0.012	-0.012	-0.015	-0.012	0.031
315.000	-0.012	-0.012	-0.015	-0.012	0.031
330.000	-0.019	-0.019	-0.019	-0.015	0.031
345.000	-0.019	-0.019	-0.022	-0.015	0.031
360.000	-0.019	-0.019	-0.022	-0.015	0.031
375.000	-0.019	-0.019	-0.022	-0.019	0.031
390.000	-0.019	-0.019	-0.025	-0.019	0.031
405.000	-0.019	-0.019	-0.022	-0.019	0.037
420.000	-0.012	-0.019	-0.019	-0.019	0.041
435.000	-0.012	-0.019	-0.019	-0.015	0.041
450.000	-0.019	-0.019	-0.022	-0.015	0.044
465.000	-0.019	-0.019	-0.022	-0.019	0.044
480.000	-0.025	-0.025	-0.022	-0.019	0.044

Elapsed Time	Input 1	Input 2	Input 3	Input 4	Input 5
495.000	-0.019	-0.019	-0.022	-0.019	0.044
510.000	-0.019	-0.019	-0.022	-0.019	0.063
525.000	-0.019	-0.019	-0.022	-0.019	0.063
540.000	-0.019	-0.019	-0.022	-0.019	0.063
555.000	-0.019	-0.025	-0.025	-0.019	0.063
570.000	-0.019	-0.019	-0.019	-0.019	0.059
585.000	-0.019	-0.019	-0.019	-0.019	0.063
600.000	-0.019	-0.019	-0.022	-0.019	0.066
615.000	-0.019	-0.019	-0.022	-0.015	0.063
630.000	-0.019	-0.025	-0.025	-0.019	0.066
645.000	-0.025	-0.025	-0.028	-0.022	0.066
660.000	-0.025	-0.025	-0.028	-0.022	0.066
675.000	-0.025	-0.025	-0.028	-0.022	0.069
690.000	-0.025	-0.031	-0.031	-0.025	0.069
705.000	-0.031	-0.031	-0.031	-0.025	0.069
720.000	-0.031	-0.031	-0.031	-0.028	0.069
735.000	-0.031	-0.031	-0.035	-0.031	0.069
750.000	-0.031	-0.038	-0.038	-0.031	0.069
765.000	-0.038	-0.038	-0.038	-0.035	0.069
780.000	-0.038	-0.038	-0.041	-0.035	0.069
795.000	-0.038	-0.038	-0.041	-0.035	0.066
810.000	-0.038	-0.038	-0.038	-0.035	0.066
825.000	-0.038	-0.038	-0.044	-0.038	0.066
840.000	-0.044	-0.044	-0.044	-0.041	0.066
855.000	-0.044	-0.044	-0.047	-0.041	0.066
870.000	-0.044	-0.044	-0.047	-0.044	0.066
885.000	-0.038	-0.044	-0.044	-0.041	0.069
900.000	-0.044	-0.044	-0.044	-0.044	0.069
915.000	-0.044	-0.044	-0.047	-0.041	0.069
930.000	-0.050	-0.050	-0.051	-0.044	0.069
945.000	0.025	-0.012	-0.003	-0.031	0.085

SE2000
Environmental Logger
09/29 19:37

Unit# 2K-473 Test 2

Setups:	INPUT 1
Type	Level (F)
Mode	TOC
I.D.	1010PT
Reference	0.000
SG	1.000
Linearity	10.780
Scale factor	20.094
Offset	0.035
Delay mSEC	50.000

Step 0 09/20 20:00:01

Elapsed Time	Input 1	Elapsed Time	Input 1	Elapsed Time	Input 1	Elapsed Time	Input 1
0.0000	0.028	495.000	0.035	990.000	0.056	1485.00	0.049
15.0000	0.035	510.000	0.035	1005.00	0.056	1500.00	0.049
30.0000	0.035	525.000	0.035	1020.00	0.056	1515.00	0.049
45.0000	0.035	540.000	0.042	1035.00	0.056	1530.00	0.049
60.0000	0.035	555.000	0.035	1050.00	0.056	1545.00	0.049
75.0000	0.035	570.000	0.042	1065.00	0.056	1560.00	0.049
90.0000	0.035	585.000	0.042	1080.00	0.063	1575.00	0.049
105.000	0.035	600.000	0.042	1095.00	0.063	1590.00	0.049
120.000	0.035	615.000	0.042	1110.00	0.056	1605.00	0.049
135.000	0.035	630.000	0.042	1125.00	0.056	1620.00	0.049
150.000	0.035	645.000	0.049	1140.00	0.056	1635.00	0.042
165.000	0.035	660.000	0.042	1155.00	0.063	1650.00	0.035
180.000	0.028	675.000	0.042	1170.00	0.056	1665.00	0.035
195.000	0.035	690.000	0.042	1185.00	0.063	1680.00	0.042
210.000	0.035	705.000	0.042	1200.00	0.063	1695.00	0.049
225.000	0.035	720.000	0.042	1215.00	0.056	1710.00	0.049
240.000	0.035	735.000	0.049	1230.00	0.049	1725.00	0.049
255.000	0.035	750.000	0.049	1245.00	0.049	1740.00	0.042
270.000	0.035	765.000	0.049	1260.00	0.049	1755.00	0.042
285.000	0.035	780.000	0.049	1275.00	0.049	1770.00	0.042
300.000	0.035	795.000	0.049	1290.00	0.049	1785.00	0.049
315.000	0.035	810.000	0.049	1305.00	0.049	1800.00	0.049
330.000	0.035	825.000	0.056	1320.00	0.049	1815.00	0.042
345.000	0.035	840.000	0.063	1335.00	0.056	1830.00	0.049
360.000	0.035	855.000	0.056	1350.00	0.049	1845.00	0.049
375.000	0.035	870.000	0.063	1365.00	0.049	1860.00	0.042
390.000	0.035	885.000	0.063	1380.00	0.049	1875.00	0.049
405.000	0.035	900.000	0.063	1395.00	0.049	1890.00	0.042
420.000	0.035	915.000	0.063	1410.00	0.049	1905.00	0.049
435.000	0.035	930.000	0.056	1425.00	0.049	1920.00	0.056
450.000	0.035	945.000	0.056	1440.00	0.049	1935.00	0.056
465.000	0.035	960.000	0.056	1455.00	0.042	1950.00	0.049
480.000	0.035	975.000	0.056	1470.00	0.049	1965.00	0.049

Elapsed Time	Input 1	Elapsed Time	Input 1	Elapsed Time	Input 1
1980.00	0.049	2745.00	0.049	3510.00	0.042
1995.00	0.049	2760.00	0.042	3525.00	0.035
2010.00	0.049	2775.00	0.028	3540.00	0.035
2025.00	0.049	2790.00	0.028	3555.00	0.042
2040.00	0.042	2805.00	0.035	3570.00	0.042
2055.00	0.049	2820.00	0.042	3585.00	0.049
2070.00	0.049	2835.00	0.035	3600.00	0.042
2085.00	0.042	2850.00	0.042	3615.00	0.042
2100.00	0.042	2865.00	0.035	3630.00	0.049
2115.00	0.035	2880.00	0.035	3645.00	0.049
2130.00	0.042	2895.00	0.042	3660.00	0.049
2145.00	0.056	2910.00	0.035	3675.00	0.042
2160.00	0.056	2925.00	0.042	3690.00	0.042
2175.00	0.049	2940.00	0.042	3705.00	0.042
2190.00	0.049	2955.00	0.049	3720.00	0.049
2205.00	0.049	2970.00	0.042	3735.00	0.049
2220.00	0.042	2985.00	0.049	3750.00	0.049
2235.00	0.042	3000.00	0.056	3765.00	0.049
2250.00	0.042	3015.00	0.049	3780.00	0.049
2265.00	0.049	3030.00	0.042		
2280.00	0.056	3045.00	0.042		
2295.00	0.056	3060.00	0.042		
2310.00	0.056	3075.00	0.056		
2325.00	0.056	3090.00	0.035		
2340.00	0.063	3105.00	0.056		
2355.00	0.063	3120.00	0.049		
2370.00	0.070	3135.00	0.042		
2385.00	0.056	3150.00	0.049		
2400.00	0.056	3165.00	0.042		
2415.00	0.056	3180.00	0.042		
2430.00	0.056	3195.00	0.021		
2445.00	0.063	3210.00	0.042		
2460.00	0.063	3225.00	0.035		
2475.00	0.049	3240.00	0.035		
2490.00	0.049	3255.00	0.035		
2505.00	0.056	3270.00	0.042		
2520.00	0.049	3285.00	0.056		
2535.00	0.042	3300.00	0.049		
2550.00	0.042	3315.00	0.049		
2565.00	0.042	3330.00	0.035		
2580.00	0.049	3345.00	0.035		
2595.00	0.042	3360.00	0.021		
2610.00	0.042	3375.00	0.014		
2625.00	0.049	3390.00	0.049		
2640.00	0.049	3405.00	0.035		
2655.00	0.049	3420.00	0.035		
2670.00	0.056	3435.00	0.042		
2685.00	0.049	3450.00	0.035		
2700.00	0.056	3465.00	0.028		
2715.00	0.056	3480.00	0.035		
2730.00	0.049	3495.00	0.035		

-7333

DRAFT

Pumping Test and Yield Test
Water Level Measurement Form

Elevation (MSL): _____ top of casing

Observation well/piezometer no.: 1785
Pumped well no.: 1785
Project: _____

Pump/yield test performed by(Name): _____
Reference point measurements by: _____
Method of measurement: _____
Depth Correction: _____
Average Q at end of test _____ gpm r = ____ ft. r' = _____

b = _____

AS
~~7:30~~ Time
8:23 Time

Date	Hour:Min	t (min)	t' (min)	t/t'	s (ft.)	s' (ft.)	(s_p - s')	Meter Reading (gals.)	Ave. Q	Remarks 1.5 gpm
11-4	1330	.5						196860		8.80
		1.0								9.11
		1.5								9.31
		2.0								9.48
		2.5								9.61
		3.0							1.5	9.72 118/119
		3.5			1.61					9.84
		4.0								9.97
		5.0								10.20
		6.0								10.41
		8.0								10.82
		10.0								11.21'
		12.0								11.50' 119/120
		14							1.5	11.77 120
		16			3.76'					11.99 121/12
		18			4.00'					12.23
		20								12.42 123
		22								12.63
		24								12.82
		26			4.76'					12.99 124
		28			4.91'					13.14'
	1400	30			5.02					13.25' 126
		40			5.55					13.78'
		50			5.99					14.22' 126/12
	1430	60			6.34'			197720	1.5	14.57'

b = saturated thickness (ft)
r = distance from pumped well to observation well or piezometer (ft.)
Q = flow rate (gpm)
s = measured drawdown (ft.)
s' = residual drawdown (ft.) at t'
s_p = drawdown at end of pumping period (final s)
t = elapsed time since pumping began (min)
t' = elapsed time since pumping stopped (min)

Reference: Bureau of Reclamation (1981) and Stallman (1971)

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DRAFT

Rev. No: 0

000612

DRAFT

Pumping Test and Yield Test
Water Level Measurement Form

Elevation (MSL): _____ top of casing

Observation well/piezometer no.: _____
Pumped well no.: _____
Project: _____

Pump/yield test performed by(Name): _____
Reference point measurements by: _____
Method of measurement: _____
Depth Correction: _____

b = _____

Average Q at end of test _____ gpm r = ___ ft. r' = _____

8.23 time (

Date	Hour:Min	t (min)	t' (min)	t/t'	s (ft.)	s' (ft.)	(s_p - s')	Meter Reading (gals.)	Ave. Q	Remarks
11-4	1500	90						19819	1.5	15.26
11-4	1530	120						19862	1.5	15.81
"	1600	~~150~~						19905		16.25
"	1630	180								16.61
"	1700	210						19993		16.99
"	1730	240						20049		17.43
"	1800	270						20081	1.5	17.63
"	1830	300						20125		17.83
"	1900	330						20169		18.35
"	1930	360						20211		18.91
"	1945									19.11 - inter
										1.5 gpm over
										1.25 start afte
										recovery

h = saturated thickness (ft)
r = distance from pumped well to observation well or piezometer (ft.)
Q = flow rate (gpm)
s = measured drawdown (ft.)
s' = residual drawdown (ft.) at t'
s_p = drawdown at end of pumping period (final s)
t = elapsed time since pumping began (min)
t' = elapsed time since pumping stopped (min)

Reference: Bureau of Reclamation (1981) and Stallman (1971)

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E-2

DRAFT

Rev. No: 1

000613

DRAFT

1.5 Recovery

Pumping Test and Yield Test

Water Level Measurement Form

Elevation (MSL): _____ top of casing

Observation well/piezometer no.: _____

Pumped well no.: _____

Pump/yield test performed by(Name): _____

Project: _____

Reference point measurements by: _____

Method of measurement: _____

Depth Correction: _____

b = _____

Average Q at end of test _____ gpm r = ___ ft. r² = _____

Start time 19:47

Date	Hour:Min	t (min)	t' (min)	t/t'	s (ft.)	s' (ft.)	(s_p - s')	Water level Meter Reading (gals.)	Ave. Q	Remarks
11.4	.5							18.02		1.5 recovery
	1.0							–		
	1.5							–		
	2.0							15.69		
	2.5							–		
	3.0							14.17		
	3.5							–		
	4.0							13.04		
	5.0							11.84		
	6.0							10.92		
	7.0							–		
	8.0							–		
	9.0							–		
	10.0							9.89		
	12							–		
	14							8.68		
	16							–		
	18							8.54		
	20							–		
	22							–		
	24							8.47		
	26							–		
	28							–		
	30							8.44		
	40							8.42		

b = saturated thickness (ft)
r = distance from pumped well to observation well or piezometer (ft.)
Q = flow rate (gpm)
s = measured drawdown (ft.)
s' = residual drawdown (ft.) at t'
s_p = drawdown at end of pumping period (final s)
t = elapsed time since pumping began (min)
t' = elapsed time since pumping stopped (min)

Reference: Bureau of Reclamation (1981) and Stallman (1971)

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DRAFT

Rev. No: 0

DRAFT

1.5 Recovery

Pumping Test and Yield Test

Water Level Measurement Form

Elevation (MSL): _____ top of casing

Observation well/piezometer no.: _____

Pumped well no.: _____

Pump/yield test performed by(Name): _____

Project: _____

Reference point measurements by: _____

Method of measurement: _____

Depth Correction: _____

b = _____

Average Q at end of test _____ gpm r = ____ ft. r' = _____

Date	Hour:Min	t (min)	t' (min)	t/t'	s (ft.)	s' (ft.)	$(s_p - s')$	water level ~~Meter Reading~~ (gals.)	Ave. Q	Remarks
11-4	60							8.40		
"	90							8.35		Recovery over

b = saturated thickness (ft)

r = distance from pumped well to observation well or piezometer (ft.)

Q = flow rate (gpm)

s = measured drawdown (ft.)

s' = residual drawdown (ft.) at t'

s_p = drawdown at end of pumping period (final s)

t = elapsed time since pumping began (min)

t' = elapsed time since pumping stopped (min)

Reference: Bureau of Reclamation (1981) and Stallman (1971)

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E-2

DRAFT

Rev. No

000615

-7333

DRAFT

1.25 Pump Test

Pumping Test and Yield Test
Water Level Measurement Form

Elevation (MSL): _____ top of casing

Observation well/piezometer no.: _____

Pumped well no.: 1785

Pump/yield test performed by(Name): Pump test

Project: _____

Reference point measurements by: _____

Method of measurement: _____

Depth Correction: _____

b = _____

Average Q at end of test _____ gpm r = ___ ft. r' = _____

Start 22:00
Meter Read 2017

Date	Hour:Min	t (min)	t' (min)	t/t'	s (ft.)	s' (ft.)	(s_p - s')	Meter Reading (gals.)	Ave. Q	W.L	Remarks
11-4	22:00	.5							1.25	8.88	115 Hz
	22:01	1.0								9.05	
		1.5									
	22 02	2.0								9.21	
		2.5									
	22 03	3.0								9.31	
		3.5									
	22 04	4.0							1.25	9.43	110 Hz
		4.5									
	22:05	5.0								9.50	
	22 06	6.0								9.59	
	22:07	7.0									
	22:08	8.0									
	22:09	9.0								9.71	
	22:10	10.0									
	22:12	12.0								9.73	
	22:14	14.0							1.25	9.73	106-107 Hz
	22:16	16.0									
	22:18	18.0								9.73	
	22:20	20.0								9.74	
	22:25	25.0								9.76	
	22:30	30.0								9.78	
	22:35	35.0								9.79	
	22:40	40.0								9.81	
11.4	22:50	50.0								9.83	

b = saturated thickness (ft)
r = distance from pumped well to observation well or piezometer (ft.)
Q = flow rate (gpm)
s = measured drawdown (ft.)
s' = residual drawdown (ft.) at t'
s_p = drawdown at end of pumping period (final s)
t = elapsed time since pumping began (min)
t' = elapsed time since pumping stopped (min)

Reference: Bureau of Reclamation (1981) and Stallman (1971)

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DRAFT

Rev. No: 0

000616

DRAFT

Pumping Test and Yield Test
Water Level Measurement Form

Elevation (MSL): _____ top of casing

Observation well/piezometer no.: _____
Pumped well no.: _____
Project: _____

Pump/yield test performed by(Name): _____
Reference point measurements by: _____
Method of measurement: _____
Depth Correction: _____
Average Q at end of test _____ gpm r = ___ ft. r' = _____

b = _____

Zero Time Well 8.3

Date	Hour:Min	t (min)	t' (min)	t/t'	s (ft.)	s' (ft.)	(s_p - s')	Meter Reading (gals.)	Ave. Q	Remarks (MSCOPE)	
11-4	23:00	60								9.85	
11-4	23:30	90								9.90	
11-4	24:00	120								9.92	
11-5	00:30	150								10.10	
	0100	180								10.15	
	0130	210								10.19	
	0200	240								10.21	
	0230	270								10.25	
	0300	300			1.93'				1.25	10.28	
	0330	330								10.30	
	0400	360								10.31	
	0430	390								10.34	
	0500	420								10.37	
	0530	450								10.53	
	0600	480								10.60	
	0630	510								10.64	
	0700	540					07:00	20850	1.25	0.67	108//
	0730	570						20862		10.81	
	0800	600						20899	1.25	10.84	
	0830	630						20936	1.20	10.85	
	0900	660			2.53'			20973	1.25	10.88	110
	0930	690			2.60			21009	1.25	10.95	110
11-5	1000	720			2.75'			21047	1.25	11.10	109/11
11-5	1030	750			2.87			21085	1.25	11.17	109
11-5	1100	780			2.85'			21122	1.25	11.20	109/11

b = saturated thickness (ft)
r = distance from pumped well to observation well or piezometer (ft.)
Q = flow rate (gpm)
s = measured drawdown (ft.)
s' = residual drawdown (ft.) at t'
s_p = drawdown at end of pumping period (final s)
t = elapsed time since pumping began (min)
t' = elapsed time since pumping stopped (min)

Reference: Bureau of Reclamation (1981) and Stallman (1971)

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000017

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Pumping Test and Yield Test
Water Level Measurement Form

Elevation (MSL): _____ top of casing

Observation well/piezometer no.: 1785
Pumped well no.: 1735
Project: _____

Pump/yield test performed by(Name): _____
Reference point measurements by: _____
Method of measurement: _____
Depth Correction: _____
Average Q at end of test _____ gpm r = ___ ft. r² = _____

b = _____

[8.35' Time Zero

Date	Hour:Min	t (min)	t' (min)	t/t'	s (ft.)	s' (ft.)	(s_p - s')	Meter Reading (gals.)	Ave. Q	Remarks MS Zero	Remarks HZ
11-5	1130	810			2.90'			21159	1.25	11.25	109/110
	1200	840						21197	1.25	11.29	110
	1230	870						21234	1.25	11.30	110
11-5	1300	900			2.97'			21271	1.21	11.32	110
11-5	1330	930			3.06'			21308	1.25	11.41	111/1
11-5	1400	960			3.18'			21345	1.25	11.53'	112/1
11-5	1430	990			3.32'			21384	1.25	11.67'	113
11-5	1500	1020			3.35'			21423	1.25	11.70'	112/11
11-5	1530	1050			3.45'			21463	1.27	11.80'	~~111/112~~
11-5	1600	1080			3.41'			21499	1.25	11.76'	110/11
11-5	1630	1110			3.46			21537	1.25	11.81'	110/11
11-5	1700	1140			3.51'			21576	1.25	11.86'	110/11
11-5	1730	1170			3.51'			21614	1.25	11.86'	110/11
11-5	1830	1230			3.57			21699	1.25	11.92	112-H
"	1900	1260			3.72			21726	1.25	12.07	112-113
"	1930	1290			3.84			21764	1.25	12.19	116-112
"	2000	1320			3.85			21800	~~1.25~~ 1.25	12.20	110-11
"	2030	1350			3.85			21849	1.25	12.20	110-111
"	2100	1380			3.86			21874	1.25	12.21	110
"	2130	1410			3.88			21900		12.23	110 H
"	2200	1440			3.96			21946		12.31	110 H
"	2230	1470			3.96			21982		12.31	112-11
"	~~2300~~ 2300	1500			4.07			22017		12.42	112-113
"	2330	1530			4.12			22053		12.47	112-11
11-5-93	0000	1560			4.39			2210		12.77	112-113

b = saturated thickness (ft)
r = distance from pumped well to observation well or piezometer (ft.)
Q = flow rate (gpm)
s = measured drawdown (ft.)
s' = residual drawdown (ft.) at t'
s_p = drawdown at end of pumping period (final s)
t = elapsed time since pumping began (min)
t' = elapsed time since pumping stopped (min)

Reference: Bureau of Reclamation (1981) and Stallman (1971)

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Rev. No: 0

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Pumping Test and Yield Test
Water Level Measurement Form

Elevation (MSL): _____ top of casing

Observation well/piezometer no.: _____
Pumped well no.: _____
Project: _____

Pump/yield test performed by(Name): _____
Reference point measurements by: _____
Method of measurement: _____
Depth Correction: _____

b = _____

Average Q at end of test _____ gpm r = ___ ft. r' = _____

8.35' lev... at Sw...

Date	Hour:Min	t (min)	t' (min)	t/t'	s (ft.)	s' (ft.)	(s_p - s')	Meter Reading (gals.)	Ave. Q	Remarks	
11-6	0030	1590			4.10			22134	1.25	12.45	110/11
	0100	1620			4.31			22168	1.25	12.66	110/11
	0130	1650			4.33			22205	1.25	12.68	110/11
	0200	1680			4.33			22242	1.25	12.68	110/11
	0230	1710			4.35			22289	1.25	12.70	110/11
	0300	1740			4.35			22315	1.25	12.70	110/11
	0330	1770			4.34			22359	1.25	12.69	110/11
	0400	1800			4.36			22388	1.25	12.71	110/11
	0430	1830			4.48			22422	1.25	12.83	110/11
	0500	1860			4.68			22461	1.25	~~12~~ 13.03	110/11
	0530	1890			4.68			22512	1.25	13.03	110/11
	0600	1920			4.66			22539	1.25	13.03	110/11
	0630	1950			4.66			22571	1.25	13.03	110/11
	0700	1980			4.68			22611	1.25	13.03	110/11
	0730	2010			4.74			22644	1.25	13.14	
	0800	2040			4.79			[illegible]	1.25	13.14	
11-6	0830	2070			4.82			22719	1.25	13.21	112/
11-6	[illegible]	2100			4.92			22756	1.25	13.27	112/
11-6	0930	2130			5.19			22794	1.25	13.54	112
11-6	1000	2160			5.27			22830	1.25	13.62	112
11-6	1030	2190			5.35			22870	1.25	13.65	
	1100	2220			5.29			22908	1.25	13.64	11
	1130	2250			5.33			22945	1.25	~~13.88~~	13.6
	1200	2280			5.35			22982	1.25	13.70	113
11-6	1230	2310			5.41			23019	1.25	[illegible]	

b = saturated thickness (ft)
r = distance from pumped well to observation well or piezometer (ft.)
Q = flow rate (gpm)
s = measured drawdown (ft.)
s' = residual drawdown (ft.) at t'
s_p = drawdown at end of pumping period (final s)
t = elapsed time since pumping began (min)
t' = elapsed time since pumping stopped (min)

Reference: Bureau of Reclamation (1981) and Stallman (1971)

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Rev.

000619

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Pumping Test and Yield Test
Water Level Measurement Form

Elevation (MSL): _____ top of casing

Observation well/piezometer no.: _____
Pumped well no.: _____
Project: _____

Pump/yield test performed by(Name): _____
Reference point measurements by: _____
Method of measurement: _____
Depth Correction: _____

b = _____

Average Q at end of test _____ gpm r = ___ ft. r' = _____

Date	Hour:Min	t (min)	t' (min)	t/t'	s (ft.)	s' (ft.)	(s_p - s')	Meter Reading (gals.)	Ave. Q	Remarks	
11-6	1300	[illegible]			5.53			23056	1.25	13.88'	115
11-6	1330	2370			5.56'			23094	1.25	13.91'	115
11-6	1400	2400			5.80'			23132	1.27	14.15'	112
11-6	1430	2430			5.76'			23170	1.25	14.11	113
11-6	1500	2460			5.81'			23207	1.25	14.16	112
11/6/92	1530	2490			5.82			23245	1.25	14.17	
11-6	1600	2520			5.83				1.25	14.17	
"	1630	2550			5.95			23316	1.25	14.29	116-117
"	1700	2580			6.09			23352	1.25	14.44	116-117
"	1730	2610			6.10			23388	1.25	14.45	
"	1800	2640			6.12			23422	1.25	14.47	118 H
"	1830	2670			6.48			23460	~~1.25~~	14.83	114-115
"	1900	2700			6.45			23496	1.25	14.80	
"	1930	2730			6.45			23532		14.80	114-115
"	2000	2760			6.61			23568		14.96	
"	2030	2790			6.64			23604		14.99	
"	2100	2820			6.62			23640		14.97	117 H
"	2130	2850			6.72			23675		15.07	
"	2200	2880			6.74			23710		15.09	118-11[illegible]
"	2230	2910			~~6.96~~ 6.90			23746		15.25	
"	2300	2940			6.97			23782		15.32	
11-7	~~0000~~ 2330	2970			7.28			23818		15.63	
11-7	0000	3000			7.42			~~23~~ 23855		15.77	
	0030	3030			7.43			23893		15.78	
	0100	3060			7.46			23929		15.81	

b = saturated thickness (ft)
r = distance from pumped well to observation well or piezometer (ft.)
Q = flow rate (gpm)

s = measured drawdown (ft.)
s' = residual drawdown (ft.) at t'
s_p = drawdown at end of pumping period (final s)
t = elapsed time since pumping began (min)
t' = elapsed time since pumping stopped (min)

Reference: Bureau of Reclamation (1981) and Stallman (1971)

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DRAFT

DRAFT

P5

Pumping Test and Yield Test
Water Level Measurement Form

Elevation (MSL): _____ top of casing

Observation well/piezometer no.: _____
Pumped well no.: _____
Project: _____

Pump/yield test performed by(Name): _____
Reference point measurements by: _____
Method of measurement: _____
Depth Correction: _____
Average Q at end of test _____ gpm r = ___ ft. r' = _____

b = _____

8.35 ·
Time 0 Level

Date	Hour:Min	t (min)	t' (min)	t/t'	s (ft.)	s' (ft.)	(s_p - s')	Meter Reading (gals.)	Ave. Q	Remarks	
11-7	0130	3090			7.60	7.49		23965	1.25		15.84
	0200	~~4020~~	3120		7.80	7.67		24001			16.04
	0230	~~4050~~	3150		8.06	7.95		24039		121/122 Hz	16.30
	0300	~~4080~~	3180		~~8.01~~	7.90		24075			16.25
	0330	~~4110~~	3210		~~8.07~~	7.96		24112			16.25
	0400	3240			8.47	8.3[illegible]		24149		122/123 Hz	16.71
	0430	3270			~~8.68~~	8.57		24187		121/122 Hz	16.92
	0500	3300			~~8.80~~	8.75		24225			17.10
	0530	3330			~~8.90~~	8.79		24264			17.14
	0600	3360			~~8.95~~	8.84		~~24~~ 24300			17.19
	0630	3390			~~9.17~~	9.03		24 [illegible]			17.[illegible]
	0700	3420			~~9.17~~	9.33		24374			17.68
11-7	0730	3450			~~9.57~~	9.45		24409	1.25	125	17.80
11-7	0800	3480			9.37			24445	1.25	123/124	17.72
11-7	0830	3510			9.71			24483		123/124	18.06
11-7	0900	3540			9.96			24522	1.25	123/124	18.31
11-7	0930	3570			10.01			24560	1.25	123/124	18.36
11-7	1000	3600			10.16			24597	1.25	123/124	18.51
11-7	1030	3630			~~10.72~~	10.51		24634.5	1.25	123/124	18.71
11-7	1100	3660			10.51			24672	1.25	123/124	18.85
11-7	1130									Test over	

b = saturated thickness (ft)
r = distance from pumped well to observation well or piezometer (ft.)
Q = flow rate (gpm)
s = measured drawdown (ft.)
s' = residual drawdown (ft.) at t'
s_p = drawdown at end of pumping period (final s)
t = elapsed time since pumping began (min)
t' = elapsed time since pumping stopped (min)

Reference: Bureau of Reclamation (1981) and Stallman (1971)

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DRAFT

Rev. No

000621

DRAFT

1.25 Recovery

Pumping Test and Yield Test
Water Level Measurement Form

Elevation (MSL): _____ top of casing

Observation well/piezometer no.: _____
Pumped well no.: _____
Project: _____

Pump/yield test performed by(Name): _____
Reference point measurements by: _____
Method of measurement: _____
Depth Correction: _____
Average Q at end of test _____ gpm r = ___ ft. r' = _____

b = _____

19.19' + T pump SHUT OFF

Date	Hour:Min	t (min)	t' (min)	t/t'	Recovery s (ft.)	s' (ft.)	$(s_p - s')$	Meter Reading (gals.)	Ave. Q	Remarks W.L
		1.5								[illegible]
	1125	1.0								17.73
		[illegible]								[illegible]
		[illegible]								[illegible]
		[illegible]								[illegible]
		3.0								15.35'
		3.5								[illegible]
		4.0								14.30
		5.0								[illegible]
		6.0								13.14'
		8.0								[illegible]
	1125	[illegible]								[illegible]
		[illegible]								11.17'
		[illegible]								[illegible]
		[illegible]								[illegible]
		[illegible]								[illegible]
	1145	[illegible]								[illegible]
		[illegible]								9.58'
		40								9.25'
		50								9.07
	1225	[illegible]								9.01
	[illegible]	[illegible]								8.92
	1325	60								8.87
	1355	150								8.86
	1425	180								8.34
	1455	210								8.81

b = saturated thickness (ft)
r = distance from pumped well to observation well or piezometer (ft.)
Q = flow rate (gpm)

s = measured drawdown (ft.)
s' = residual drawdown (ft.) at t'
s_p = drawdown at end of pumping period (final s)
t = elapsed time since pumping began (min)
t' = elapsed time since pumping stopped (min)

Reference: Bureau of Reclamation (1981) and Stallman (1971)

1525 240 8.80

DRAFT

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OU-5\PO-37\OTIPPPT

Rev. No: 0

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

PUMPING WELL: 1785

PIEZOMETER NUMBER: ~~[illegible]~~ P2117

WATER LEVEL AT TIME 0: ~~[illegible]~~ 6.50

DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
11-4	1433	~~62~~	6.52	.02	1.5gpm
"	15:02	~~1 37~~ 92	6.51	.01	
"	15:32	~~2 02~~ 122	6.51	.01	
"	16:00	150	6.51	.01	
"	16:30	180	6.51	.01	
"	17:02	212	6.51	.01	
"	17:31	241	6.52	.02	
"	18:19	271	6.52	.02	
	18:32	284	6.52	.02	
	19:04		6.52	.02	
	1932		6.51		
	1947		6.52		Stop Shutdown
	2 min		6.52		
	3 min		6.52		
	4.		6.52		
	5.		6.52		Well Recovery Chart
	6		6.52		
	10		6.52		
	14		6.52		
	18		6.52		
	24		6.52		
	30		6.52		
	40		6.52		
	60		6.52		
	90		6.52		
	~~Stopped well down~~			92	

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

PUMPING WELL: 1755

PIEZOMETER NUMBER: 1111S PZ1A

WATER LEVEL AT TIME 0: ~~6.46~~ 6.52

DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
11/5/93	2400	120	6.51	+.01	1.25 gpm
	0034	150	6.52	-.0	
	0105	180	6.52	-.0	
	0130	210	6.52	-.0	
	0200	240	6.52	-0	
	0230	270	6.52	-0	
	0300	300	6.52	-0-	
	0330	330	6.52	-0	
	0400	360	6.52	-0-	
	0430	390	6.53	.01	
	0500	420	6.52	.0	
	0530	450	6.54	.02	
	0600	480	6.54	.02	
	0630	510	6.52	0	
	0700	540	6.52	0	
	0730	570	6.52	0	D.H.
	0800	600	6.51	+.01	
	0830	630	6.52	0	
	0900	660	6.53	.01	
	0930	690	6.53	.01	
	1000	720	6.53	.01	
	1030	750	6.52	0	
	1100	780	6.52	.0	
	1130	810	6.53	.01	
	1200	840	6.53	.01	
	1230	870	6.54	.02	
	1300	900	6.54	.02	
	1330	930	6.54	.02	

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

PUMPING WELL: 1785

PIEZOMETER NUMBER: 1118 04 PZ1A

WATER LEVEL AT TIME 0: ~~6.46~~ 6.52

DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
11/5	1400	960	6.55	.03	1.25 gpm
	1430	990	6.54	.02	
	1500	1020	6.55	.03	
	1537	1057	6.53	.01	
	1604	1084	6.53	.01	
	1630	1110	6.53	.01	
	1700	1140	6.53	.01	
	1730	1170	6.53	.01	
	1800	1200	6.54	.02	
	1830	1230	6.54	.02	
	1900	1260	6.54	.02	
	1930	1290	6.54	.02	
	2000	1320	6.54	.02	
	2030	1350	6.54	.02	
	2100	1380	6.54	.02	
	2130	1410	6.54	.02	
	2200	1440	6.54	.02	
	2230	1470	6.54	.02	
	2300	1500	6.54	.02	
	2330	1530	6.54	.02	
11-6-92	0000	1560	6.55	.03	
	0030	1590	6.54	.02	
	0100	1620	6.54	.02	
	0130	1650	6.54	.02	
	0200	1680	6.54	.02	
	0230	1710	6.54	.02	
	0300	1740	6.55	.03	
	0330	1770	6.55	.03	

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

PUMPING WELL: 785

PIEZOMETER NUMBER: 1118 PZ1A

WATER LEVEL AT TIME 0: 6.46 6.52

DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
	0400	~~6.55~~ 1800	6.55	~~.033~~ ~~.33~~ .03	1.25 gpm
	0430	1830	6.55	~~.33~~ .03	
	0500	1860	6.55	~~.33~~ .03	
	0530	1890	6.55	~~.33~~ .03	
	0600	1920	6.55	~~.33~~ .03	
	0630	1950	6.55	~~.33~~ .03	
	0700	1980	6.55	~~.33~~ .03	
	0730	2010	6.54	.02	
	0800	2040	6.54	.02	
	0830	2070	6.54	.02	
	0900	2100	6.55	.03	
	0930	2130	6.55	.03	
	1000	2160	6.55	.03	
	1030	2190	6.55	.03	
	1100	2220	6.55	.03	
	1130	2250	6.55	.03	
	1200	2280	6.55	.03	
	1230	2310	6.55	.03	
	1300	2340	6.55	.03	
	1330	2370	6.55	.03	
	1400	2400	6.55	.03	
	1430	2430	6.55	.03	
	1500	2460	6.55	.03	
	1530	2490	6.56	.04	
	1600	2520	6.55	.03	
11/6/93	1630	2550	6.55	.03	
	1700	2580	6.56	.04	
	1730	2610	6.55	.03	

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

PUMPING WELL: 1785

PIEZOMETER NUMBER: PZ-1A

WATER LEVEL AT TIME 0: 6.4652

DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
11/6	1800	2640	6.56	.04	1.25gpm
"	1830	2670	6.56	.04	
"	1900	2700	6.56	.04	
"	1930	2730	6.55	.03	
"	2000	2760	6.55	.03	
"	2030	2790	6.56	.04	
"	2100	2820	6.56	.04	
"	2130	2850	6.56	.04	
"	2200	2880	6.56	.04	
"	2230	2910	6.56	.04	
"	2300	2940	6.56	.04	
	2330	2970	6.56	.04	
11/7	0000	3000	6.57	.05	
	0030	3030	6.57	.05	
	0100	3060	6.57	.05	
	0130	3090	6.57	.05	
	0200	3120	6.57	.05	
	0230	3150	6.57	.05	
	0300	3180	6.57	.05	
	0330	3210	6.57	.05	
	0400	3240	6.57	.05	
	0430	3270	6.57	.05	
	0500	3300	6.57	.05	
	0530	3330	6.57	.05	
	0600	3360	6.57	.05	
	0630	3390	6.57	.05	
	0700	3420	6.58	.06	
	0730	3450	6.58	.06	

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

PUMPING WELL: 1785

PIEZOMETER NUMBER: PZ-1A

WATER LEVEL AT TIME 0: 6.52

DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
11-7-93	0800	3480	6.58	.06	1.25 gpm
	0830	3510	6.58	.06	
	0900	3540	6.58	.06	
	0930	3570	6.58	.06	
	1000	3600	6.58	.06	
	1030	3630	6.58	.06	
	1100	3660	6.58	.06	
					Test stopped

000628

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

PUMPING WELL: 1785

PIEZOMETER NUMBER: PZ1B

WATER LEVEL AT TIME 0: 6.60

DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
11/4/93	13:30	~~6.60~~	6.60		1.5 gpm
	13:31	1 min	6.59	+0.01	
	13:32	2 min	6.58	+0.02	
	13:33	3 min	6.58	+0.02	
	13:34	4 min	6.58	+0.02	
	13:35	5 min	6.59	+0.01	
	13:36	6 min	6.60	0.00	
	13:38	8 min	6.62	0.02	
	13:40	10 min	6.63	0.03	
	13:42	12 min	6.64	0.04	
	13:44	14 min	6.65	0.05	
	13:46	16 min	6.66	0.06	
	13:48	18 min	6.67	0.07	
	13:50	20 min	6.68	0.08	
	14:00	30 min	6.72	0.12	
	14:10	40 min	6.74	0.14	
	14:20	50 min	6.78	0.18	
	14:30	~~1hr~~ 60	6.79	0.19	
	15:00	~~1:30~~ 90	6.84	0.24	
	15:30	~~2:00~~ 120	6.88	0.28	
	16:00		6.91	.31	
	16:30		6.93	.33	
	17:00	210	6.96	.36	
	17:29	239	6.97	.37	
	17:58	268	6.98	.38	
	18:30	~~290~~ 300	7.00	.40	
	19:01	331	7.01	.41	
	19:30	360	7.03	.43	

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

PUMPING WELL: 1785

PIEZOMETER NUMBER: P 213 RECOVERY CHART

WATER LEVEL AT TIME 0: 7.05

DATE	TIME	ELAPSED TIME	WATER LEVEL	~~DRAWDOWN~~ up	COMMENTS
11-4-93	19:47		7.05	~~0~~	.45
	19:49	2 min	7.05	~~0~~	.45
		3 min	7.04	~~.01~~	.44
		4 min	7.03	~~.02~~	.43
		5 min	7.01	~~.04~~	.41
		6 min	7.00	~~.05~~	.40
		10 min	6.95	~~.1~~	.35
		14 min	6.87	~~.18~~	.27
		18 min	6.81	~~.24~~	.21
		25 min.	6.77	~~.28~~	.17
		30 min	6.72	~~.33~~	.17
		40 min	6.69	~~.36~~	.09
		60 min	6.62	~~.43~~	.02
		90 min	6.67	~~.38~~	? .07
			~~7.24~~		

000620

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

PUMPING WELL: 1785

PIEZOMETER NUMBER: P213

WATER LEVEL AT TIME 0: 6.69

START TIME 22:00 HRS

DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
1-1-4	22:01	1	6.69	00	1.25 gpm
	22:02	2	6.68	+ .01	
	22:03	3	6.70	-.01	
	22:04	4	6.71	.02	
	22:05	5	6.74	.05	
	22:07	7	6.77	.08	
	22:09	9	6.80	.11	
	22:11	11	6.81	.12	
	22:13	13	6.82	.13	
	22:15	15	6.83	.14	
	22:20	20	6.83	.14	
	22:25	25	6.84	.15	
	22:30	30	6.85	.16	
	22:35	35	6.87	.18	
	22:40	40	6.87	.18	
	22:50	50	6.88	.19	
	23:00	60	6.90	.20	
	23:30	90	6.91	.21	
1-1-5	24:00	120	6.95	-.24	
	[illegible]	15	3.75	+2.94	Rainwater entering well
	0101	180	6.95	-.24	
	0132	210	6.76	07	
	0200	240	6.81	.12	
	0230	270	6.85	.16	
	0303	300	6.91	.21	
	0330	330	6.95	.24	
	0400	360	6.98	.27	
	0430	390	7.00	.29	

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

PUMPING WELL: 1785

PIEZOMETER NUMBER: PZ-1B

WATER LEVEL AT TIME 0: ~~6.89~~ 6.69

DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
11-5-93	0500	420	7.02	.31	1.25 gpm
	0530	450	7.04	.33	
	0600	480	7.07	.36	
	0630	510	7.07	.36	
	0700	540	7.08	.37	
	0730	570	7.10	.41	D.H.
	0800	600	7.11	.42	
	0830	630	7.12	.43	
	0900	660	7.12	.43	
	0930	690	7.12	.43	
	1000	720	7.15	.46	
	1030	750	7.16	.47	
	1100	780	7.17	.48	
	1130	810	7.19	.50	
	1200	840	7.20	.51	
	1230	870	7.20	.51	
	1300	900	7.20	.51	
	1330	930	7.21	.52	
	1400	960	7.21	.52	
	1430	990	7.21	.52	
	1500	~~1000~~ 1020	7.22	.53	
	1533	1053	7.24	.55	
	1600	1080	7.24	.55	
	1630	1110	7.25	.56	
	1700	1140	7.26	.57	
	1730	1170	7.26	.57	
	1800	1200	7.26	.57	
	1830	1230	7.27	.58	

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

PUMPING WELL: 1785

PIEZOMETER NUMBER: P2-1B

WATER LEVEL AT TIME 0: 6.69

DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
11/5/93	1900	1260	7.28	.59	1.25 gpm
	1930	1290	7.29	.60	
	2000	1320	7.29	.60	↓
	2030	1350	7.29	.60	
	2100	1380	7.29	.60	
	2130	1410	7.29	.60	
	2200	1440	7.29	.60	
	2230	1470	7.29	.60	
	2300	1500	7.30	.61	
	2330	1530	7.30	.61	
11-6-93	0000	1560	7.30	.61	
	0030	1590	7.32	.63	
	0100	1620	7.32	.63	
	0130	1650	7.32	.63	
	0200	1680	7.32	.63	
	0230	1710	7.32	.63	
	0300	1740	7.32	.63	
	0330	1770	7.30	.61	
	0400	1800	7.30	.61	
	0430	1830	7.30	.61	
	0500	1860	7.31	.62	
	0530	1890	7.32	.63	
	0600	1920	7.33	.64	
	0630	1950	7.33	.64	
	0700	1980	7.33	.64	
	0730	2010	7.33	.64	
	0800	2040	7.34	.65	
	0830	2070	7.35	.66	

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

PUMPING WELL: 1785

PIEZOMETER NUMBER: PZ - 1B

WATER LEVEL AT TIME 0: 6.69

DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
11-6-93	0900	2100	7.35	.66	1.25 gpm
	0930	2130	7.38	.69	↓
	1000	2160	7.39	.70	
	1030	2190	7.40	.71	
	1100	2220	7.39	.70	
	1130	2250	7.40	.71	
	1200	2280	7.39	.70	
	1230	2310	7.36	.67	
	1300	2340	7.35	.66	
	1330	2370	7.35	.66	
	1400	2400	7.35	.66	
	1430	2430	7.37	.68	
	1500	2460	7.37	.68	
	1530	2490	7.37	.68	
	1600	2520	7.37	.68	
11-6	1630	2550	7.37	.68	
	1700	2580	7.39	.70	
	1730	2610	7.39	.70	
"	1800	2640	7.39	.70	
"	1830	2670	7.40	.71	
"	1900	2700	7.41	.72	
"	1930	2730	7.40	.71	
"	2000	2760	7.41	.72	
"	2030	2790	7.41	.72	
"	2100	2820	7.41	.72	
"	2130	2850	7.42	.73	
"	2200	2880	7.42	.73	
"	2230	2910	7.42	.73	

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

PUMPING WELL: 1785

PIEZOMETER NUMBER: PZ-113

WATER LEVEL AT TIME 0: 6.69

DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
11/6/93	2300	2940	7.42	.73	1.25 gpm
	2330	2970	7.42	.73	
11-7-93	0000	3000	7.44	.75	
	0030	3030	7.43	.74	
	0100	3060	7.43	.74	
	0130	3090	7.43	.74	
	0200	3120	7.43	.74	
	0230	3150	7.45	.76	
	0300	3180	7.45	.76	
	0330	3210	7.45	.76	
	0400	3240	7.45	.76	
	0430	3270	7.46	.77	
	0500	3300	7.47	.78	
	0530	3330	7.47	.78	
	0600	3360	7.47	.78	
	0630	3390	7.48	.79	
	0700	3420	7.48	.79	
	0730	3450	7.48	.79	
	0800	3480	7.49	.80	
	0830	3510	7.49	.80	
	0900	3540	7.49	.80	
	0930	3570	7.50	.81	
	1000	3600	7.50	.81	
	1030	3630	7.50	.81	
	1100	3660	7.50	.81	
					Test over

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

PUMPING WELL: 785

Recovery of Pump Test 1.
(1.25 GPM Test)

PIEZOMETER NUMBER: 02 1B

WATER LEVEL AT TIME 0: 11:25 ~~11:27~~ 7.55

Recovery

DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
11-7-93	1126	1	7.53	+.02	
	1127	2	7.51	+.04	
	1128	3	7.49	+.06	
	1129	4	7.48	+.07	
	1130	5	7.47	+.08	
	1131	6	7.46	+.09	
	1133	8	7.45	+.10	
	1135	10	7.44	+.11	
	1137	12	7.43	+.12	
	1139	14	7.41	+.14	
	1141	16	7.40	+.15	
	1143	18	7.39	+.16	
	1145	20	7.38	+.17	
	1155	30	7.34	+.21	
	1205	40	7.31	+.24	
	1215	50	7.29	+.26	
	1225	60	7.27	+.28	
	1255	90	7.22	+.33	
	1325	120	7.18	+.37	
	1355	150	7.17	+.38	
	1425	180	7.14	+.41	
	1455	210	7.12	+.43	
	1525	240			

000636

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

PUMPING WELL: 1785

PIEZOMETER NUMBER: PZ-1C

WATER LEVEL AT TIME 0: ~~7.77~~ 5.90

DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
11-4-93	1431	61	5.91	.01	~~1.25 gpm~~
	15:02	~~132~~ 92	5.81	+.09	1.5 gpm
	15:30	~~200~~ 120	5.82	+.08	
			5.85	+.05	
			5.86	+.04	
	16:02	212	5.88	+.02	
	17:31	241	5.90	.00	
	18:00	270	5.91	-.01	
	18:31	~~297~~ 301	5.93	-.03	
	19:02	333 11/4/93	5.95	-.05	1.5
	1931		5.97	-.07	~~1.25~~ stopped
11-5-93	2400	120	6.05	-.15	1.25 gpm
	0035	150	0	+5.90	*Well flooded
	0100	180	0	+5.90	with rain water.
	0130	210	0	+5.90	
	0200	240	0	+5.90	
	0230	270	0	+5.90	
	0300	300	0	+5.90	
	0330	330	0	+5.90	
	~~0360~~ 0400	360	0	+5.90	
	~~0390~~ 2430	390	0	+5.90	
	0500	420	1.70	+4.20	
	0530	450	2.10	+3.80	
	0600	480	2.90	+3.00	
	0630	510	3.52	+2.38	2.29 2.3
	0700	540	3.95	+1.95	2.1' D.H.
	0730	570	4.38	+1.52	
	0800	600	4.70	+1.20	

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

PUMPING WELL: 1785

PIEZOMETER NUMBER: P2-1C

WATER LEVEL AT TIME 0: ~~4.97~~ or 5.99

DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
11/5	0830	630	4.97	+ .93	1.25 gpm
	0900	660	5.16	+ .74	
	0930	690	5.36	+ .54	
	1000	720	5.51	+ ~~.48~~ .39	
	1030	750	5.62	+ ~~.37~~ .28	
	1100	780	5.74	+ ~~.25~~ .16	
	1130	810	5.82	+ ~~.17~~ .08	
	1200	840	5.90	0	
	1230	870	5.98	.08	
	1300	900	6.04	.14	
	1330	930	6.10	20	
	1400	960	6.15	.25	
	1430	990	6.18	28	
	1500	1020	6.21	.31	
	1535	1055	6.27	.37	
	1602	1082	6.31	.41	
	1632	1112	6.34	.44	
	1700	1140	6.37	.47	
	1730	1170	6.40	.50	
	1800	1200	6.43	.53	
	1830	1230	6.45	.55	
	1900	1260	6.47	.57	
	1930	1290	6.49	.59	
	2000	1320	6.51	.61	
	2030	1350	6.52	.62	
	2100	1380	6.55	.65	
	2130	1410	6.56	.66	
	2200	1440	6.58	.68	

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

PUMPING WELL: _____

PIEZOMETER NUMBER: PZ-1L

WATER LEVEL AT TIME 0: ~~9.77~~ 5.90

DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
	2230	1470	659	.69	1.25 gpm
	2300	1500	6.61	.71	
	2330	1530	6.61	.71	
11-6-93	0000	1560	6.63	.73	
	0030	1590	6.64	.74	
	0100	1620	6.64	.74	
	0130	1650	6.65	.75	
	0200	1680	6.67	.77	
	0230	1710	6.68	.78	
	0300	1740	6.68	.78	
	0330	1770	6.69	.79	
	~~0330~~ 0400	1800	6.70	.80	
	0430	1830	6.70	.8	
	0500	1860	6.72	.82	
	0530	1890	6.72	.82	
	0600	1920	6.74	.84	
	0630	1950	6.73	.83	
	0700	1980	6.75	.85	
	0730	2010	6.74	.84	
	0800	2040	6.75	.85	
	0830	2070	6.74	.84	
	0900	2100	6.76	.86	
	0930	2130	6.76	.86	
	1000	2160	6.76	.86	
	1030	2190	6.80	.90	
	1100	2220	6.80	.90	
	1130	2250	6.80	.90	
	1200	2280	6.82	.92	

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

PUMPING WELL: 1785

PIEZOMETER NUMBER: PZ-1C

WATER LEVEL AT TIME 0: ~~9.91~~ 5.90 DW

DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
11-6	1230	2380	6.81	.91	1.25 gpm
	1300	2340	6.82	.92	
	1330	2370	6.82	.92	
	1400	2400	6.82	.92	
	1430	2430	6.83	.93	
	1500	2460	6.83	.93	
	1530	2490	6.84	.94	
	1600	2520	6.84	.94	
	1630	2550	6.85	.95	
	1700	2580	6.85	.95	
11-6	1730	2610	6.87	.97	
"	1800	2640	6.87	.97	
"	1830	2670	6.87	.97	
"	1900	2700	6.88	.98	
"	1930	2730	6.88	.98	
"	2000	2760	6.88	.98	
"	2030	2790	6.89	.99	
"	2100	2820	6.89	.99	
"	2130	2850	6.89	.99	
"	2200	2880	6.90	1.00	
"	2230	2910	6.91	1.01	
	2300	2940	6.91	1.01	
	2330	2970	6.91	1.01	
11-7	0000	3000	6.92	1.02	
	0030	3030	6.92	1.02	
	0100	3060	6.92	1.02	
	0130	3090	6.92	1.02	
	0200	3120	6.93	1.03	

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

PUMPING WELL: 1785

PIEZOMETER NUMBER: PZ-1C

WATER LEVEL AT TIME 0: ~~9.97~~ 5.90

DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
11-7	0230	~~3120~~ 3150	6.93	1.03	1.25 gpm
	0300	~~3150~~ 3180	6.94	1.04	
	0330	~~3180~~ 3210	6.95	1.05	
	0400	3240	6.95	1.05	
	0430	3270	6.95	1.05	
	0500	3300	6.95	1.05	
	0530	3330	6.97	~~1.08~~ 1.07	
	0600	3360	6.98	~~1.07~~ 1.08	
	0630	3390	6.97	1.07	
	0700	3420	6.98	1.08	
	0730	3450	6.98	1.08	
	0800	3480	6.98	1.08	
	0830	3510	6.98	1.08	
	0900	3540	6.98	1.08	
	0930	3570	6.99	1.09	
	1000	3600	6.99	1.09	
	1030	3630	6.99	1.09	
	1100	3660	7.00	1.10	
					Test stopped

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

PUMPING WELL: 1785

PIEZOMETER NUMBER: P2-2

WATER LEVEL AT TIME 0: ~~6.45'~~ 6.41'

DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
11-4	1434	64	6.55	.14	1.5 gpm
"	15:05	1:35	6.57	.16	
"	15:31	1:22	6.61	.20	
"	16:00	150	6.65	.24	
11-4	16:30	180	6.66	.25	
11-4	17:00	210	6.68	.27	
11-4	17:30	240	6.70	.29	
11-4	18:00	260	6.70	.29	
11 4	18:32	292	6.71	.30	
11-4	19:02	322	6.72	.31	
11-4	19:30	350	6.75	.34	
		Stopped well down			Test stopped pump well water level reached pump intake. Restart test at 1.25 gpm – data on next page.

000642

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

PUMPING WELL: 1785

PIEZOMETER NUMBER: PZ-2

WATER LEVEL AT TIME 0: 6.53

1.25 gpm

DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
11-4-93	23:00	60	6.65	.02	1.25 gpm
	23:30	90	6.67	.04	↓
11-5-93	00:00	120	6.68	.05	
	00.30	150	6.67	.04	
	0100	180	6.73	.20	RAINING (water [illegible])
	0130	210	~~3.37~~ 6.73	.20	
	0200	240	6.75	.22	
	0230	270	6.75	.22	
	0300	300	6.77	.24	
	0330	330	6.77	.24	
	0400	360	6.77	.24	
	0430	390	6.77	.24	
	0500	420	6.80	.27	
	0530	450	6.81	.28	
	0600	480	6.82	.29	
	0630	510	6.83	.30	
	0700	540	6.84	.31	
	0730	570	6.84	.31	DH
	0800	600	6.85	.32	
	0830	630	6.87	.34	
11-5	0900	660	6.90	.37	
	0930	690	6.91	.38	
	1000	720	6.90	.37	
	1030	750	6.89	.36	
	1100	780	6.91	.38	
	1130	810	6.94	.41	
	1200	840	6.95	.42	
	1230	870	6.96	.43	

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

PUMPING WELL: _____

PIEZOMETER NUMBER: [illegible]

WATER LEVEL AT TIME 0: 6.53

DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
11-5-93	1300	900	6.95	.42	1.25 gpm
	1330	930	6.96	.43	
	1400	960	6.95	.42	
	1430	990	6.94	.41	
	1500	1020	6.95	.42	
11-5-93	1530	1050	6.96	.43	
11-5	[illegible]	1080	6.98	.45	
11-5	1630	1110	7.00	.47	
11-5	1700	1140	[illegible]	.46	
11-5	1730	1170	7.00	.47	
11-5	2000	1320	7.01	.48	
11-5	2030	1350	7.02	.49	
"	2100	1380	7.01	.48	
11-5	2130	1410	7.02	.49	
11-5	2200	1440	7.02	.49	
11-5	2230	1470	7.02	.49	
11-5	2300	1500	7.02	.49	
11-5	2330	1530	7.03	.50	
11-6	2400/0000	1560	7.03	.50	
	0030	1590	7.02	.49	
	0100	1620	7.05	.52	
	0130	1650	7.04	.51	
	0200	1680	7.03	.50	
	0230	1710	7.04	.51	
	0300	1740	7.04	.51	
	0330	1770	7.04	.51	
	0400	1800	7.04	.51	
	0430	1830	7.04	.51	

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

PUMPING WELL: 1785

PIEZOMETER NUMBER: PZ-2

WATER LEVEL AT TIME 0: 6.53

DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
11-6-93	0500	1860	7.06	.53	1.25 gpm
	0530	1890	7.06	.53	
	0600	1920	7.05	.52	
	0630	1950	7.05	.52	
	0700	1980	7.06	.53	
	0730	2010	7.08	.55	
	0800	2040	7.10	.57	
	0830	2070	7.12	.59	
	0900	2100	7.13	.60	
	0930	2130	7.13	.60	
	1000	2160	7.13	.60	
	1030	2190	7.14	.61	
	1100	2220	7.14	.61	
	1130	2250	7.12	.59	
	1200	2280	7.11	.58	
	1230	2310	7.09	.56	
	1300	2340	7.08	.55	
	1330	2370	7.08	.55	
	1400	2400	7.09	.56	
	1430	2430	7.09	.56	
	1500	2460	7.09	.56	
	1530	2490	7.10	.57	
	1600	2520	7.11	.58	
11-6	1630	2550	7.12	.59	
	1700	2580	7.12	.59	
	1730	2610	7.13	.60	
"	1800	2640	7.12	.59	
"	1830	2670	7.13	.60	

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

PUMPING WELL: _____

PIEZOMETER NUMBER: PZ-2

WATER LEVEL AT TIME 0: 6.59

DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
11-6	1900	2700	7.13	.60	1.25 gpm
"	1930	2730	7.13	.60	↓
"	2000	2760	7.13	.60	
"	2030	2790	7.14	.61	
"	2100	2820	7.14	.61	
"	2130	2850	7.14	.61	
"	2200	2880	7.14	.61	
"	2230	2910	7.15	.62	
"	2300	2940	7.15	.62	
	2330	2970	7.15	.62	
11-7	0000	3000	7.16	.63	
	0030	3030	7.16	.63	
	0100	3060	7.17	.64	
	0130	3090	7.16	.63	
	0200	3120	7.17	.64	
	0230	3150	7.18	.65	
	0300	3180	7.17	.64	
	0330	~~4120~~ 3210	7.17	.65	
	0400	~~4150~~ 3240	7.18	.65	
	0430	3270	7.20	.67	
	0500	3300	7.20	.67	
	0530	3330	7.19	.66	
	0600	3360	7.19	.66	
	0630	3390	7.20	.67	
	0700	3420	7.20	.67	
	0730	3450	7.20	.67	
	0800	3480	7.21	.68	
	0830	3510	7.21	.68	

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

PUMPING WELL: 1785

PIEZOMETER NUMBER: PZ-2

WATER LEVEL AT TIME 0: 6.59

DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
11-7-99	0900	3540	7.21	.68	1 2= gpm
	0930	3570	7.22	.69	
	1000	3600	7.22	.69	
	1030	3630	7.22	.69	
	1100	3660	7.23	.70	
					Pump Test stopped

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

PUMPING WELL: 1785

PIEZOMETER NUMBER: 1224 D.96 p73

WATER LEVEL AT TIME 0: ~~8.65~~ 8.63

DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
11/4/93	14:31	1 hr 1 min	8.67	.04	1.5 gpm
11-4-93	1505	95	8.70	.07	
11-4-93	1600	1	8.72	.	
11-4-93	16:05	155 min	8.73	.10	
"	16:30	~~2 1/min~~	8.78	.15	
11-4-93	17:04	214 m	8.79	.16	
11-4-93	18:00	263	8.79	.16	
11-4-93	18:36	296	8.81	.18	
11-4-93	19:06	326	8.81	.18	
11-4-93	19:36	356	8.84	.22	
		— Stopped —			Test over

000648

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

PUMPING WELL: 1785

PIEZOMETER NUMBER: 1224-PZ3

WATER LEVEL AT TIME 0: 8.74

DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
11-4-93	23:00	60	8.77	.03	1.25 gpm
11-4-93	23:30	90	8.79	.05	
11-5-93	00:02	120	8.80	.06	
	0037	150	8.81	.07	
	0102	180	8.82	.08	
	0131	210	8.83	.09	
	0200	240	8.84	.10	
	0230	270	8.85	.11	
	0300	300	8.85	.11	
	0330	330	8.85	.11	
	0400	360	8.87	.13	
	0430	390	8.85	.11	
	0500	420	8.87	.13	
	0530	450	8.87	.13	
	0600	480	8.90	.16	
	0630	510	8.92	.18	
	0700	540	8.91	.17	
	0735	575	8.92	.18	
11-5	0803	603	8.94	.20	
	0832	632	8.93	.19	
	0904	664	8.94	.20	
11-5	0931	691	8.94	.20	
11-5	1000	720	8.96	.22	
11-5	1030	750	8.97	.23	
11-5	1100	780	8.98	.24	
11-5	1130	810	8.98	.24	
	1200	840	8.97	.23	
	1230	870	8.98	.24	

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

PAGE 2

PUMPING WELL 1785

PIEZOMETER NUMBER: 1294 P23

WATER LEVEL AT TIME 0: 8.74

DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
11/5	1300	900	8.98	.24	1.25 gpm
	1330	930	8.98	.24	
11-5	1400	960	9.00	.26	
11-5	1430	990	9.00	.26	
11-5	1500	1020	9.02	.28	
11-5	1530	1050	9.02	.28'	
11-5	1600	1080	9.02	.28'	
11-5	1630	1110	9.03	.29'	
11-5	1700	1140	9.01	.27'	
11-5 93	1730	1170	9.05	.31'	
11-5	1800	1200	9.05	.31'	
11-5	1830	1230	9.06	.32'	
11-5	1900	1260	9.05	.31'	
11-5	1930	1290	9.06	.32'	
11-5	2000	1320	9.07	.33'	
11-5	2030	1350	9.07	.33'	
"	2100	1380	9.07	.33	
11-5	2130	1410	9.07	.33	
11-5	2200	1440	9.08	.34	
11-5	2230	1470	9.08	.34	
11-5	2300	1500	9.08	.34	
11-5	2330	1530	9.08	.34	
11-6	0000	1560	9.06	.32	
	0030	1590	9.07	~~0.0~~ .33	
	0100	1620	9.08	~~0~~ .34	
	0130	1650	9.08	.34	
	0200	1680	9.08	.34	
	0230	1710	9.08	.34	

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM PHASE 3

PUMPING WELL: _____

PIEZOMETER NUMBER: 1224 PZ3

WATER LEVEL AT TIME 0: 8.74'

DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
11-5-93	0300	1740	9.08	.34	1.25 gpm
	0330	1770	9.08	.34	
	0400	1800	9.08	.34	
	0430	1830	9.08	.34	
	~~0400~~ 0500	1860	9.10	.36	
	0530	1890	9.10	.36	
	0600	1920	9.10	.36	
	0630	1950	9.10	.36	
11-6	0700	1980	9.10	.36	
	0730	2010	9.11	.37	
	0800	2040	9.12	.38	
	0830	2070	9.15	.41	
	0900	2100	9.15	.41	
	0930	2130	9.15	.41	
	1000	2160	9.16	.42	
	1030	2190	9.18	.44	
	1100	2220	9.14	.40	
	1130	2250	9.14	.40	
11-6	1200	2280	9.14	.40	
11-6	1230	2310	9.13	.39	
11-6	1300	2340	9.13	.39	
11-6	1330	2370	9.14	.40	
11-6	1400	2400	9.14	.40	
11-6	1430	2430	9.15	.41	
11-6	1500	2460	9.18	.44	
	1530	2490	9.15	.41	
11-6	1600	2520	9.15	.41	
11-6	1630	2550	9.15	.41	

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

PUMPING WELL _____

PIEZOMETER NUMBER 1224 φZ3

WATER LEVEL AT TIME 0: 8.74

DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
11-6	1700	2580	9.16	.42	1.25 gpm
"	1730	2610	9.17	.43	
"	1800	2640	9.17	.43	
"	1830	2670	9.18	.44	
"	1900	2700	9.18	.44	
"	1930	2730	9.18	.44	
"	2000	2760	9.18	.44	
"	2030	2790	9.18	.44	
"	2100	2820	9.18	.44	
"	2130	2850	9.20	.46	
"	2200	2880	9.19	.45	
"	2230	2910	9.20	.46	
"	2300	2940	9.20	.46	
	2330	2970	9.20	.46	
11->	0000	3000	9.20	.46	
	0030	3030	9.20	.46	
	0100	3060	9.22	.48	
	0130	3090	~~9.20~~ 9.21	.47	
	0200	3120	9.21	.47	
	0230	3150	9.23	.49	
	0300	3180	9.22	.48	
	0330	3210	9.20	.46	
	0400	3240	9.22	.48	
	0430	3270	9.21	.47	
	0500	3300	9.22	.48	
	0530	3330	9.23	.49	
	0600	3360	9.21	.46	
	0630	3390	9.23	.48	

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

PUMPING WELL: _____

PIEZOMETER NUMBER: 1224 p23

WATER LEVEL AT TIME 0: 8.74

DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
11-7-93	0700	3420	9.22	.47	1.25gpm
	0730	3450	9.23	.48	
	0800	3480	~~9.23~~ 9.23 MS	~~.48~~ .48 MS	
	0830	3510	9.24	.49	
	0900	3540	9.30	.55	
11-7-93	0930	3570	9.27	~~.52~~ .52	
	1000	3600	9.26	~~.51~~ .51	
	1030	3630	9.29	.54	
11-7	1100	3660	9.31	.56	

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

PUMPING WELL: 1785

PIEZOMETER NUMBER: PZ-4

WATER LEVEL AT TIME 0: ~~6.76~~ 6.73

DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
11-4-93	13:30	0	6.73	0	1.5 gpm
	13:31	1	6.72	+.01	
	13:32	2	6.75	-.02	
	13:33	3	6.76	-.03	
	13:34	4	6.77	-.04	
	13:36	6	6.79	-.06	
	1338	8	6.82	-.09	
	1340	10	6.83	-.10	
	1342	12	6.85	-.12	
	1344	14	6.86	-.13	
	1346	16	6.86	-.13	
	1348	18	6.87	-.14	
	1350	20	6.89	-.16	
	1352	22	6.90	-.17	
	1400	30	6.92	-.19	
	1410	40	6.95	-.22	
	1420	50	6.99	-.26	
	1430	60	7.03	-.30	
	1502	72	7.06	-.33	
	1530	100	7.08	-.35	
	1605	155	7.12	-.39	
	1635	185	7.15	-.42	
	17:03	213	7.16	-.43	
	17:33	243	7.18	-.45	
	18:03	273	7.19	-.46	
	18:34	304	7.21	-.48	
	19:05	335	7.22	-.49	
	1934		7.25		Test Stopped

start over at 1.2

000654

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

PFGE1

PUMPING WELL: 1785

PIEZOMETER NUMBER: PZ-4

WATER LEVEL AT TIME 0: 6.86

DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
11/4/93	2139	0	6.86	0	
	2201	1	6.86	0	
	2202	2	6.90	-.04	
	2203	3	6.92	-.06	
	2204	4	6.93	-.07	
	2205	5	6.95	-.09	
	2207	7	6.98	-.12	
	2209	9	6.99	-.13	
	2211	11	7.01	-.15	
	2213	13	7.02	-.16	
	2215	15	7.02	-.16	
	2220	20	7.03	-.17	
	2225	25	7.05	-.19	
	2230	30	7.06	-.20	
	2235	35	7.07	-.21	
	2240	40	7.08	-.22	
	2250	50	7.08	-.22	
	~~2260~~ 2300	60	7.10	-.24	
	90	90	7.12	-.26	
	2400	120	7.12	-.26	
11-5-93	0040	150	7.18	-.26	
	0109	180	7.20	-.28	
	0131	210	7.14	-.22	
	0200	240	7.22	-.30	
	0230	270	7.23	-.31	
	0300	300	7.24	-.32	
	0330	330	7.24	-.32	
	~~0360~~ 0400	360	7.25	-.33	

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

PUMPING WELL: 1785

PAGE 2

PIEZOMETER NUMBER: PZ-4

WATER LEVEL AT TIME 0: 6.86

DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
11-5-93	0430	390	7.25	~~-.33~~ .39	
	0500	420	7.25	~~-.33~~ .39	
	0530	450	7.27	~~-.35~~ .41	
	0600	480	7.30	~~.38~~ -.44	
	0630	510	7.30	~~.38~~ -.44	
	0700	540	7.30	~~.38~~ -.44	
11-5	0731	571	7.34	-.48	
11-5	0801	601	7.35	-.49	
11-5	0830	630	7.34	-.48	
11-5	0900	660	7.34	-.48	
	0930	690	7.35	-.49	
11-5	1000	720	7.39	-.53	
11-5	1030	750	7.39	-.53	
11-5	1100	780	7.40	-.54	
11-5	1130	810	7.40	-.54	
	1200	840	7.40	-.54	
	1230	870	7.40	-.54	
11-5	1300	900	7.40	-.54	
11-5	1330	930	7.41	-.55	
11-5	1400	960	7.42	-.56	
11-5	1430	990	7.44	-.58	
11-5	1500	1020	7.45	-.59	
	1538	1058	7.46	-.60	
	1605	1085	7.46	-.60	
	1630	1110	7.47	-.61	
	1700	1140	7.48	-.62	
	1730	1170	7.47	-.61	
	1800	1200	7.48	-.62	

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

PAGE 3

PUMPING WELL:_____

PIEZOMETER NUMBER: P2-4

WATER LEVEL AT TIME 0: 6.86

DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
	1830	1230	7.48	-.62	
	1900	1260	7.49	-.63	
	1930	1290	7.51	-.65	
	2000	1320	7.50	-.64	
	2030	1350	7.51	-.65	
	2100	1380	7.54	-.68	
	2130	1410	7.51	-.65	
	2200	1440	7.51	-.65	
	2230	1470	7.51	-.65	
	2300	1500	7.51	-.65	
	2330	1530	7.52	-.66	
11-6-93	0000	1560	7.53	-.67	
	0030	1590	7.53	-.67	
	0100	1620	7.53	-.67	
	0130	1650	7.53	-.67	
	0200	1680	7.53	-.67	
	0230	1710	7.53	-.67	
	0300	1740	7.53	-.67	
	0330	1770	7.53	-.67	
	0400	1800	7.53	-.67	
	0430	1830	7.52	-.66	
	0500	1860	7.53	-.67	
	0530	1890	7.55	-.69	
	0600	1920	7.54	-.68	
	0630	1950	7.54	-.68	
	0700	1980	7.55	-.69	
	0730	2010	7.56	-.70	
	0800	2040	7.56	-.70	

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

PAGE 4

PUMPING WELL: 1785

PIEZOMETER NUMBER: P2-4

WATER LEVEL AT TIME 0: 6.86

DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
-6	0830	2070	7.55	-.69	
11-6	0900	2100	7.56	-.70	
11-6	0930	2130	7.58	-.72	
11-6	1000	2160	7.59	-.73	
11-6	1030	2190	7.57	-.71	
	1100	2220	7.57	-.71	
	1130	2250	7.57	-.71	
11-6	1200	2280	7.58	-.72	
11-6	1230	2310	7.58	-.72	
11-6	1300	2340	7.59	-.73	
11-6	1330	2370	7.58	-.72	
11-6	1400	2400	7.59	-.73	
11-6	1430	2430	7.58	-.72	
11-6	1500	2460	7.59	-.73	
11-6	1530	2490	7.58	-.72	
11-6	1600	2520	7.59	-.73	
11-6	1630	2550	7.59	-.73	
11-6	1700	2580	7.60	-.74	
"	1730	2610	7.60	-.74	
"	1800	2640	7.61	-.75	
"	1830	2670	7.62	-.76	
"	1900	2700	7.62	-.76	
"	1930	2730	7.62	-.76	
"	2000	2760	7.63	-.77	
"	2030	2790	7.63	-.77	
"	2100	2820	7.64	-.78	
"	2130	2850	7.63	-.77	
"	2200	2880	7.63	-.77	

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

Page 5

PUMPING WELL: 1785

PIEZOMETER NUMBER: PZ 4

WATER LEVEL AT TIME 0: 6.86

DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
11-6	2230	2910	7.63	-.77	
"	2300	2940	7.64	-.78	
	2330	2970	7.64	-.78	
11-7	0000	3000	7.65	-.79	
	0030	3030	7.65	-.79	
	0100	3060	7.65	-.79	
	0130	3090	7.66	-.80	
	0200	3120	7.66	-.80	
	0230	3150	7.66	-.80	
	0300	3180	7.66	-.80	
	0330	3210	7.65	-.79	
	0400	3240	7.66	-.80	
	0430	3270	7.67	-.81	
	0500	3300	7.70	-.84	
	0530	3330	7.70	-.84	
	0600	3360	7.68	-.82	
	0630	3390	7.68	-.82	
	0700	3420	7.70	-.84	
11-7	0730	3450	7.72	-.86	
11-7	0800	3480	7.71	-.85	
11-7	0830	3510	7.72	-.86	
11-7	0900	3540	7.72	-.86	
11-7	0930	3540	7.72	-.86	
11-7	1000	3570	7.73	-.87	
11-7	1030	3600	7.72	-.86	
	1100	3630	7.72	-.86	

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

Recovery of Pump Test 1.25

PUMPING WELL: _____

PIEZOMETER NUMBER: P2-4

WATER LEVEL AT TIME 0: 1125 - 7.72

DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
11-7	1126	1	7.71	-.85	Recovery
	1127	2	7.70	-.84	
	1128	3	7.68	-.82	
	1129	4	7.67	-.81	
	1130	5	7.65	-.79	
	1131	6	7.65	-.79	
	1133	8	7.64	-.78	
	1135	10	7.63	-.77	
	1137	12	7.62	-.76	
	1139	14	7.61	-.75	
	1141	16	7.60	-.74	
	1143	18	7.59	-.73	
	1145	20	7.57	-.71	
	1155	30	7.57	-.71	
	1205	40	7.50	-.64	
	1215	50	7.47	-.61	
	1225	60	7.45	-.59	
	1255	90	7.39	-.53	
	1325	120	7.36	-.50	
	1355	150	7.34	-.48	
11-7	1425	180	7.31	-.45	
	1455	210	7.29	-.43	
	1525	240	7.28	-.42	

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

PUMPING WELL 1785

PIEZOMETER NUMBER: 1232

WATER LEVEL AT TIME 0: ~~8.73~~ 8.68

DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
11-4	15:08	1:38	8.83	.15	1.5gpm
11-4	15:36	126	8.85	.17	
11-4	16:02	152	8.89	.21	
11-4	16:32	182	8.91	.23	
11-4	17:02	212	8.92	.24	
11-4	17:32	242	8.95	.27	
11-4	18:00	261	8.95	.27	
11-4	18:33	253	8.96	.28	
11-4	19:03	323	9.00	.32	
11-4	19:32	352	9.01	.33	
	Stopped	well	down		Test stopped

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

PUMPING WELL 1785

PIEZOMETER NUMBER 1232

WATER LEVEL AT TIME 0: 8.82

DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
11-4-93	23:00	60	8.90	.08	1.25 gpm
	23:00	90	8.92	.10	
11-5-93	2400	120	8.95	.13	
	0.30	150	[illegible]	.14	
	0103	180	8.97	.15	
	0133	210	9.00	-.18	
	0200	240	9.00	-.18	
	0230	270	9.02	-.20	
	0300	300	9.02	-.20	
	0330	330	9.03	-.21	
	0400	360	9.04	.22	
	0430	390	9.05	-.23	
	0500	420	9.05	.23	
	0530	450	9.06	-.24	
	0600	480	9.07	.25	
	0630	510	9.08	.26	
	0700	540	9.10	.28	
	0730	570	9.10	.28	
	0800	600	9.10	.28	DH
	0830	630	9.11	.29	MS
	0900	660	9.12	.30	
	0930	690	9.12	.30	
	1000	720	9.13	.31	
	1030	750	9.13	.31	
	1100	780	9.16	.34	
	1130	810	9.16	.34	
	1200	840	9.16	.34	
	1230	870	9.17	.35	

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

PUMPING WELL 1785 ~~1232~~

PIEZOMETER NUMBER 1232

WATER LEVEL AT TIME 0: 8.82

DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
11-5-93	1300	900	9.17	.35	1.25 gpm
	1330	930	9.18	.36	
	1400	960	9.18	.36	
	1430	990	9.18	.36	
	1500	1020	9.20	.38	
11-5	1530	1050	9.20	.38	
11-5	1600	1080	9.21	.39	
11-5	1630	1110	9.22	.40	
11-5	1700	1140	9.22	.40	
11-5	1730	1170	9.24	.42	
11-5	1800	1200	9.24	.42	
11-5	1830	1230	9.25	.43	
11-5	1900	1260	9.25	.43	
11-5	1930	1290	9.26	.44	
11-5	2000	1320	9.26	.44	
11-5	2030	1350	9.26	.44	
"	2100	1380	9.26	.44	
11-5	2130	1410	9.27	.45	
11-5	2200	1440	9.27	.45	
11-5	2230	1470	9.27	.45	
11-5	2300	1500	9.27	.45	
11-5	2330	1530	9.28	.46	
11-6	0000	1560	9.29	.47	
	0030	1590	9.29	.47	
	0100	1620	9.29	.47	
	0130	1650	9.28	.46	
	0200	1680	9.29	.47	
	0230	1710	9.29	.47	

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

PUMPING WELL: _____

PIEZOMETER NUMBER 1232

WATER LEVEL AT TIME 0: _____

DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
11-6-93	0300	1740	9.29	.47	1.25 gpm
	0330	1770	9.29	.48	
	0400	1800	9.28	.47	
	0430	1830	9.28	.47	
	0500	1860	9.29	.48	
	0530	1890	9.30	.49	
	0600	1920	9.30	.49	
	0630	1950	9.31	.50	
	0700	1980	9.30	.49	
	0730	2010	9.32	.51	
	0800	2040	9.31	.50	
	0830	2070	9.32	.51	
	0900	2100	9.32	.51	
	0930	2130	9.32	.51	
	1000	2160	9.33	.52	
	1030	2190	9.34	.53	
	1100	2220	9.34	.53	
	1130	2250	9.33	.52	
	1200	2280	9.33	.52	
	1230	2310	9.32	.51	
	1300	2340	9.32	.51	
	1330	2370	9.33	.52	
	1400	2400	9.33	.52	
	1430	2430	9.33	.52	
	1500	2460	9.33	.52	
	1530	2490	9.32	.51	
	1600	2520	9.35	.54	
11-6	1630	2550	9.35	.54	

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

PUMPING WELL _____

PIEZOMETER NUMBER 1232

WATER LEVEL AT TIME 0: _____

DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
11-6	1700	2580	9.36	.55	1.25 gpm
"	1730	2610	9.36	.55	
"	1800	2640	9.37	.56	
"	1830	2670	9.37	.56	
"	1900	2700	9.38	.57	
"	1930	2730	9.38	.57	
"	2000	2760	9.38	.57	
"	2030	2790	9.39	.58	
"	2100	2820	9.38	.57	
"	2130	2850	9.39	.58	
"	2200	2880	9.39	.58	
"	2230	2910	9.39	.58	
"	2300	2940	9.39	.58	
	2330	2970	9.40	.59	
11-7	0000	3000	9.40	.59	
	0030	3030	9.41	.60	
	0100	3060	9.41	.60	
	0130	3090	9.41	.60	
	0200	3120	9.41	.60	
	0230	3150	9.42	.61	
	0300	3180	9.42	.61	
	0330	3210	9.42	.61	
	0400	3240	9.42	.61	
	0430	3270	9.43	.62	
	0500	3300	9.43	.62	
	0530	3330	9.43	.62	
	0600	3360	9.43	.62	
	0630	3390	9.45	.64	

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

PUMPING WELL _____

PIEZOMETER NUMBER R32

WATER LEVEL AT TIME 0: _____

DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
11-7-93	0700	3420	9.45	.64	1.25 gpm
	0730	3450	9.45	.64	
	0800	3480	9.45	.64	
	0830	3510	9.46	.65	
	0900	3540	9.46	.65	
	0930	3570	9.47	.66	
	1000	3600	9.47	.66	
	1030	3630	9.47	.66	
	1100	3660	9.47	.66	
					Test stopped

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

PUMPING WELL 1785

PIEZOMETER NUMBER 1228

WATER LEVEL AT TIME 0: 6.48'

DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
11/4/93	14:39	1:09	6.45	.03	1.5 gpm
11-4-93	1507	97	6.47	.01	
11-4-93	1533	123	6.51	.03	
"	16:03	153	~~6.50~~ 6.51	.03	
"	16:30	183	6.52	.04	
"	17:02	215	6.52	.04	
"	17:30	243	6.53	.05	
11-4-93	1800	265	6.55	.07	
11-4-93	18:35	295	6.55	.07	
11-4-93	19:05	325	6.55	.07	
11-4-93	19:34	354	6.53	.10	
~~11-5-93~~	~~0001~~		Stopped See next pg.		

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

Page 1 of

PUMPING WELL 1785

PIEZOMETER NUMBER: 1228

WATER LEVEL AT TIME 0: 6.55

DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
11-4-93	23:00	60	6.55	0	1.25 gpm
11-4-93	23:30	90	6.68	.13	
11-5-93	00:01	120	6.68	.13	
	0037	150	6.57	.02	
	0105	180	6.60	.05	
	0131	210	6.60	.05	
	0200	240	6.60	.05	
	0230	270	6.63	.08	
	0300	300	6.61	.06	
	0330	330	6.64	.09	
	0400	360	6.67	.12	
	0430	390	6.68	.13	
	0500	~~6.67~~ 420	6.67	.12	
	0530	450	6.70	.15	
	0600	480	6.70	.15	
	0630	510	6.70	.15	
	0700	540	6.71	.16	
	0732	572	6.73	.18	
	0804	604	6.72	.17	
	0833	633	6.72	.17	
	0900	660	6.72	.17	
	0933	693	6.72	.17	
11-5	1004	724	6.73	.18	
11-5	1030	750	6.73	.18	
11-5	100	780	6.75	.20	
11-5	1130	810	6.75	.20	
	1200	840	6.74	.19	
	1230	870	6.74	.19	

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PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

Page 2 of

PUMPING WELL 1785

PIEZOMETER NUMBER 1728

WATER LEVEL AT TIME 0: 6.55'

DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
11-5	1300	900	6.75'	.20'	1.25 gpm
11-5	1330	930	6.74'	.19'	
11-5	1400	960	6.79'	.24'	
11-5	1430	990	6.79	.24'	
11-5	1500	1020	6.77	.22'	
11-5	1530	1050	6.74	.19'	
11-5	1600	1080	6.79	.24'	
11-5	1630	1110	6.80	.25'	
11-5	1700	1140	6.80	.25	
11-5	1730	1170	6.80	.25'	
11-5	1800	1200	6.80	.25	
11-5	1830	1230	6.80	.25'	
11-5	1900	1260	6.81	.26'	
11-5	1930	1290	6.88	.33'	
11-5	2000	1320	6.87	.32'	
11-5	2030	1350	6.83	.28'	
"	2100	1380	6.84	.29	
11-5	2130	1410	6.82	.27	
11-5	2200	1440	6.83	.28	
11-5	2230	1470	6.83	.28	
11-5	2300	1500	6.83	.28	
11-5	2330	1530	6.86	.31	
11-6	2400	1560	6.88	.33	
	0030	1590	6.88	.33	
	0100	1620	6.85	.30	
	0130	1650	6.86	.31	
	0200	1680	6.88	.33	
	0230	1710	6.88	.33	

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

Page 3 of

PUMPING WELL: 1785

PIEZOMETER NUMBER: 1728

WATER LEVEL AT TIME 0: 6.55'

DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
11-6-93	0300	1740	6.88	.33	1.25 gpm
	0330	1770	6.89	.34	
	0400	1800	6.88	.33	
	0430	1830	6.89	.34	
	0500	1860	6.88	33	
	0530	1890	6.88	.33	
	0600	1920	6.88	33	
	0630	1950	6.90	.35	
	0700	1980	6.92	.37	
11-6	0730	2010	6.90	.35	
	0800	2040	6.93	.38	
11-6	0830	2070	6.92	.37	
11-6	0900	2100	6.96	.41	
	0930	2130	6.94	.39	
11-6	1000	2160	6.93	.38	
11-6	1030	2190	6.90	.35	
	1100	2220	6.89	.34	
	1130	2250	6.90	.35	
11-6	1200	2280	6.91	.36	
11-6	1230	2310	6.90	.35	
11-6	1300	2340	6.94	.39	
11-6	1330	2370	6.96	.41	
11-6	1400	2400	6.92	.37	
11-6	1430	2430	6.98	.43	
11-6	1500	2460	6.95	.40	
11-6	1530	2490	6.95	.40	
11-6	1600	2520	6.92	.37	
11-6	1630	2550	6.92	.37	

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

Page 4

PUMPING WELL: _____

PIEZOMETER NUMBER 1228

WATER LEVEL AT TIME 0: 6.55

DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
11/6	1700	2580	6.94	.39	1.25 gpm
"	1730	2610	6.95	.40	
"	1800	2640	6.94	.39	
"	1830	2670	6.96	.41	
"	1900	2700	6.97	.42	
"	1930	2730	6.96	.41	
"	2000	2760	6.96	.41	
"	2030	2790	6.96	.41	
"	2100	2820	6.97	.42	
"	2130	2850	6.99	.44	
"	2200	2880	6.99	.44	
"	2230	2910	6.98	.43	
"	2300	2940	6.97	.42	
"	2330	2970	6.97	.42	
11-7	2400	3000	6.97	.42	
	0030	3030	6.97	.42	
	0100	3060	7.00	.45	
	0130	3090	7.01	.46	
	0200	3120	7.01	.46	
	0230	3150	6.98	.43	
	0300	3180	6.99	.44	
	0330	3210	6.98	.43	
	0400	3240	7.00	.45	
	0430	3270	7.02	.47	
	0500	3300	7.02	.47	
	0530	3330	6.99	.44	
	0600	3360	7.00	.45	
	0630	3390	7.02	.47	

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

Page 5

PUMPING WELL _____

PIEZOMETER NUMBER 1228

WATER LEVEL AT TIME 0: 6.55

DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
11-7	0700	3420	7.04	.49	1.25 gpm
11-7	0730	3450	7.05'	.50	
11-7	0800	3480	7.03'	.48	
11-7	0830	3510	7.04'	.49	
11-7	0900	3540	7.04'	.49	
11-7	0930	3570	7.04'	.49	
11-7	1000	3600	7.04'	.49	
11-7	1030	3630	7.04'	.49	
11-7	1100	3660	7.05'	.50	
					Test over

000672

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

PUMPING WELL: 1785

PIEZOMETER NUMBER: 1233

WATER LEVEL AT TIME 0: ~~6.93~~ 6.81

1.5 gpm Pump Ra

DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
11/4	1435	65	6.98'	.17	
	15:10	1:10	7:00	.19	
	15:30	1:30	7.03	.22	
	16:05	1 53	7.06	.25	
11/4	16:35	185	7.10	.29	
	17:04	214	7.11	.30	
	17:34	244	7:13	.32	
	18:04	264	7:14	.33	
	1835	305	7:16	.35	
	19:06	336	7:18	.37	
	19:35		7:20	.39	1.5 Test over
					1.25 To start
					following recov

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

Page 1 of 1

PUMPING WELL: 1785

PIEZOMETER NUMBER: 1233

WATER LEVEL AT TIME 0: 6.94

DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
11-4-93	2141	2	6.94		1.25 pump Test
	2205		7.07		
	23:30		7.10	.16	
11-05-93	2019	120	7.10	.16	
	0040	150	7.14	.20	
	0109	180	7.17	.23	
	0130	210	7.12	.18	
	0200	240	7.12	.18	
	0230	270	7.20	.26	
	0302	300	7.21	.25	
	0330	330	7.21	.25	
	0400	360	7.21	.25	
	0430	390	7.22	.26	
	0500	420	7.23	.27	
	0530	450	7.25	.29	
	0600	480	7.25	.29	
	0630	510	7.27	.31	
	0700	540	7.28	.32	
	0732	572	7.29	.35	
11-5	0802	602	7.30	.36	
	0831	631	7.30	.36	
11-5	0901	661	7.31	.37	
11-5	0932	692	7.31	.37	
11-5	1000	720	7.33	.39	
11-5	1030	750	7.33	.39	
11-5	1100	780	7.38	.44	
11-5	1130	810	7.38	.44	
	1200	840	7.36	.42	

7833

Pg. 1

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

PUMPING WELL: 1285

PIEZOMETER NUMBER: 1233

WATER LEVEL AT TIME 0: 6.94

DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
11/5	1230	870	7.36	.42	1.25 pump Rate
11-5	1300	900	7.38	.44	
11-5	1330	930	7.39	.45	
11-5	1400	960	7.39	.45	
11-5	1430	990	7.41	.47	
11-5	1500	1020	7.41	.47	
11-5	1541	1050	7.41	.47	
11-5	1600	1080	7.42	.48	
	1630	1110	7.43	.49	
11-5	1700	1140	7.43	.49	
11-5	1730	1170	7.45	.51	
"	1800	1200	7.45	.51	
"	1830	1230	7.45	.51	
"	1900	1260	7.45	.51	
"	1930	1290	7.46	.52	
"	2000	1320	7.46	.52	
"	2030	1350	7.46	.52	
"	2100	1380	7.46	.52	
"	2130	1410	7.47	.53	
	2200	1440	7.47	.53	
	2230	1470	7.47	.53	
	2300	1500	7.47	.53	
	2330	1530	7.48	.54	
11-6-93	0000	1560	7.50	.56	
	0030	1590	7.50	.56	
	0100	1620	7.50	.56	
	0130	1650	7.50	.56	
	0200	1680	7.50	.56	

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

~~Page 3~~

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PUMPING WELL: 735

PIEZOMETER NUMBER: 1233

WATER LEVEL AT TIME 0: 6.94

DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
11-6-93	0230	1710	7.50	.56	1.25 gpm
11-6-93	0300	1740	7.50	.56	
	0330	1770	7.50	.56	
	0400	1800	7.50	.56	
	0430	1830	7.50	.56	
	0500	1860	7.50	.56	
	0530	1890	7.52	.58	
	0600	1920	7.52	.58	
	0630	1950	7.52	.58	
	0700	1980	7.52	.58	
	0730	2010	7.51	.57	
	0800	2040	7.52	.58	
	0830	2070	7.52	.58	
11-6-93	0900	2100	7.52	.58	
11-6-93	0930	2130	7.52	.58	
11-6	1000	2160	7.53	.59	
11-6	1030	2190	7.53	.59	
	1100	2220	7.53	.59	
	1130	2250	7.53	.59	
11-6	1200	2280	7.55	.61	
11-6	1230	2310	7.53	.59	
11-6	1300	2340	7.52	.58	
11-6	1330	2370	7.53	.59	
11-6	1400	2400	7.53	.59	
11-6	1430	2430	7.55	.61	
11-6	1500	2460	7.53	.59	
11/6/93	1530	2490	7.55	.61	
	1600	2520	7.54	.60	

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

Page 4

PUMPING WELL: _____

PIEZOMETER NUMBER: 1233

WATER LEVEL AT TIME 0: 6.94

DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
11-6	1630	2550	7.55	.61	1.25 gpm
11-6	1700	2580	7.56	.62	
11-6	1730	2610	7.56	.62	
"	1800	2640	7.57	.63	
"	1830	2670	7.57	.63	
"	1900	2700	7.58	.64	
"	1930	2730	7.58	.64	
"	2000	2760	7.58	.64	
"	2030	2790	7.58	.64	
"	2100	2820	7.58	.64	
"	2130	2850	7.59	.65	
"	2200	2880	7.59	.65	
"	2230	2910	7.59	.65	
"	2300	2940	7.60	.66	
11-7	2330	2970	7.60	.66	
	2400 (0000)	3000	7.62	.68	
	0030	3030	7.62	.68	
	0100	3060	7.62	.68	
	0130	3090	7.62	.68	
	0200	3120	7.62	.68	
	0230	3150	7.62	.68	
	0300	3180	7.62	.68	
	0330	3210	7.63	.69	
	0400	3240	7.64	.70	
	0430	3270	7.64	.70	
	0500	3300	7.65	.71	
	0530	3330	7.65	.71	
	0600	3360	7.65	.71	

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

Page 5

PUMPING WELL: _____

PIEZOMETER NUMBER: 1233

WATER LEVEL AT TIME 0: 6.94

DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
11-7	0630	3390	7.66	.72	1.25 gpm
	0700	3420	7.66	.72	
11-7	0730	3450	7.65	.71	
11-7	0800	3480	7.66	.72	
	0830	3510	7.67	.73	
11-7	0900	3540	7.67	.73	
11-7	0930	3570	7.68	.74	
11-7	1000	3600	7.68	.74	
11-7	1030	3630	7.67	.73	
11-7	1100	3660	7.68	.74	

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

PUMPING WELL 1785

PIEZOMETER NUMBER 1241 D.H. 11/4/93

WATER LEVEL AT TIME 0: ~~10.75~~ 10.72

DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
11/4/93	14:40	1:10	10.70	+0.02	
"	15:30		10.69		
"	16 30		10.69		
"	17 38	2:48	10.69		
11/4/93	18:45	3 05	10:69		
11/4/93	19 41	3 61	10:69		
11/5/93	01:00	150	10.65	+.07	
11/5/93	0500	420	10.67	+.05	
	0900	660	10.71	+.01	700 minutes
	1300	900	10.75	.03	
11-5-93	1700	1140	10.79	.07	
11-5	2100	1380	10.84	.12	
11-6	0100	1620	10.85	.13	
	0500	1860	10.85	.13	
	0900	2100	10.86	.14	
	1300	2340	10.85	.13	
11/6	1700	2580	10.86	.14	
11-6	2100	2820	10.90	.18	
11-7	0100	3060	10.92	.20	
	0500	3300	10.93	.21	
	0900	3540	10.93	.21	

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

PUMPING WELL 1785

PIEZOMETER NUMBER: 1230

WATER LEVEL AT TIME 0: 8.44'

DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
11/4/93	14:36	1:06	8.43	+0.01	
"	15:30		8.43		
"	16 30		8.43		
"	1730		8.43		
11/4/93	18:40	300	8:43		
11/4/93	19:33	358	8.43		
11/5/93	01:00	150	8.42	+.02	
11/5/93	0500	420	8.44	+.0	
	0900	660	8.43	+.01	
	1300	900	8.43	+01	
11-5-93	1700	1140	8.46	.02	
11-5-93	2100	1380	8.46	.02	
11-6	0100	1620	8.47	.03	
	0500	1860	8.47	.03	
	0900	2100	8.48	.04	
	1300	2340	8.48	.04	
11-6	1700	2580	8.50	.06	
11-6	2100	2820	8.52	.08	
11-7	0100	3060	8.53	.09	
	0500	3300	8.53	.09	
	0900	3540	8.54	.10	

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

PUMPING WELL 1785

PIEZOMETER NUMBER 1219

WATER LEVEL AT TIME 0: 8.32'

DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
11/4/93	14:33	1:03	8.32	.00	
"	15:30		8.33	.00	
"	1630		8.34	.00	
"	1730		8.34	.00	
11/4/93	18:33	298	8:34	.00	
11/4/93	19:37	357	8:34	.00	
11/5/93	01:00	150	8.33	-.01	
	0500	420	8.32	00	
	0900	660	8.31	+.01	
	1300	900	8.32	.0	
11-5-93	1700	1140	8.34	.02	
11-5	2100	1380	8.34	.02	
11-6	0100	0100	8.34	.02	
	0500	0500	8.35	.03	
	0900	2100	8.37	.05	
	1300	2340	8.37	.05	
11/6	1700	2580	8.38	.06	
11-6	2100	2820	8.39	.07	
11-7	~~3060~~ 0100	3060	8.37	.05	
	0500	3300	8.37	.05	
	0900	3540	8.34	.02	

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

PUMPING WELL: 1795

PIEZOMETER NUMBER: 1231

WATER LEVEL AT TIME 0: ~~7.47'~~ ~~9.28'~~ 9.24'

DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
11-4	1438	68	9.25	.01	
11-4	16:39	139	9.29	.05	
11-4	17:36	246	9.29	.05	
"	18:40		9.31	.07	
"	19.40		9.33	.09	
11/5	0105	155	9.34	.10	
	0500	420	9.38	.14	
11-5	0903	663	9.42	.18	
11-5	1300	900	9.46	.22	
11-5-93	1700	1140	9.50	.26	
11-5	2100	1380	9.54	.30	
11-6	0100	1620	9.57	.33	
11-6	0500	1860	9.58	.34	
11-6	0900	2100	9.61	.37	
11-6	1300	2340	9.62	.38	
"	1700	2580	9.64	.40	
11-6	2100	2820	9.67	.43	
11-7	0100	3060	9.69	.45	
11-7	0500	3300	9.68	.44	
11-7	0900	3546	9.69	.45	

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

PUMPING WELL: 1785

PIEZOMETER NUMBER: 1234

WATER LEVEL AT TIME 0: ~~9.76~~ 9.74'

DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
11-4	1436	66	9.73	+.01	
11-4	16:37	139	9.72	.02	
11-4	17:34	244	9.73	.03	
"	18 36		9.73	.03	
"	19 37		9.73	.03	
11/15	0125	150	9.76	~~.01~~ .02	
11/15	0500	420	9.77	~~.02~~ .03	
11-5	0902	662	9.80	.06	
11-5	1300	900	9.82	.08	
11-5-93	1700	1140	9.83	.09	
11-5	2100	1380	9.87	.13	
11-6	0100	1620	9.88	.14	
11-6	0500	1860	9.90	.16	
11-6	0900	2100	9.95	.21	
11-6	1300	2340	9.95	.21	
"	1700	2580	9.96	.22	
11-6	2100	2820	9.98	.24	
11-7	0100	3060	~~9.97~~ 10.00	.26	
11-7	0500	3300	10.03	.29	
11-7	0900	3540	10.06	.32	

PUMPING TEST – PIEZOMETER WATER LEVEL MEASSUREMENT FORM

PUMPING WELL 1785

PIEZOMETER NUMBER 1240 D.H. 11/4/93

WATER LEVEL AT TIME 0: ~~10.26~~ 10.24

DATE	TIME	ELAPSED TIME	WATER LEVEL	DRAWDOWN	COMMENTS
11/4/93	14:38	1:08	10.24	0.00	
11-4-93	~~15:03~~ 15:30		10.24	0.00	
"	16 30		10.26	0.00	
"	17:30		10.26	0.00	
11-4-93	18:48	302	10.26	0.00	
11-4-93	19:39	354	10.27	0.03	
11-5-93	01:00	~~12~~ 150	10.25	.01	
	~~0538~~				
11-5-93	0500	420	10.26	.02	
	0900	660	10.27	.03	
	1300	900	10.24	0	
11-5-93	1700	1140	10.26	.02	
11-5	2100	1380	10.27	.03	
11-6	0100	1620	10.26	.02	
	0500	~~16~~ 1860	10.27	.03	
	0900	2100	10.29	.05	
~~11-6~~	~~0930~~	~~2130~~			
11-6	1300	2340	10.29	.05	
11-6	1700	2580	10.34	.10	
11-6	2100	2820	10.36	.12	
11-7	0100	3060	10.38	.14	
	0500	3300	10.34	.10	
11-7	0900	3540	10.41	.17	
	~~0930~~	35			

000684

PUMP TEST WATER QUALITY MEASUREMENTS

PUMPING WELL 1785

page 1 of ___

DATE	TIME	ELAPSED TIME	pH	SPEC. COND.	TEMP	GALLONS / COMMENTS	
11-4-93	1500	120 MIN	6.87	1.27	15.5	180 Gal Temp	Tues 34 Gal Gw. press .05
"	1704	244	6.69	1.27	15.0	55	29.18
"	19:04	364	6.71	1.26	15.4	58	29.14
	23:04		6.72	1.29	15.6	56	29.10
11-5-93	0110		6.77	1.32	15.6	55°	29.07
	0307		6.71	1.33	15.6°C	55°	29.06
	0505		6.71	1.31	15.8°C	55°C	29.05
	0700		6.70	1.30	15.5°C	54°F	29.06
	0903		6.61	1.29	15.5°C	55°F	29.07
11-5	1108		6.58	1.28	15.9°C	52°F	29.10
11-5	1300	900	6.60	1.27	15.6°C	54°F	29.11
11-5	1500	1070	6.62	1.30	15.7°C	53°F	29.13
11-5	1700	1140	6.66	1.27	15.4°C	43°F	29.13
11.5	2000	1340	6.59	1.30	13.7	39°F	29.26
11-6	0100	1620	6.70	1.31	14.7°	38°	29.29
11-6	0300	KT 11-5-93 ~~11-6~~ 1740	6.69	1.32	14.1°	36°F	29.30
11-6	0500	1860	6.66	1.31	13.8°C	36°F	29.30
11-6	0700	1980	6.69	1.33	15°C	36°F	29.32
11-6	0900	2100	6.50	1.31	14.1	35°F	29.36
11-6	1100	2220	6.75	1.30	14.6	35°F	29.36
11-6	1300	2350	6.76	1.32	14.1°C	35°	29.35
11-6	1500	2470	6.66	1.31	13.9°C	33°F	29.35
"	1700	2580	6.78	1.28	13.9	33°F	29.40
"	1900	2700	6.75	1.25	15.1	32°F	29.40

000685

PUMP TEST WATER QUALITY MEASUREMENTS

PUMPING WELL _____

page ___ of ___

DATE	TIME	ELAPSED TIME	pH	SPEC. COND.	TEMP	GALLONS / COMMENTS	
						Temp	Bar Press
11-6	2200	2940	6.72	1.25	15.6	32 °F	29.48
11-7	0100		6.74	1.28	15.9	28 °F	29.54
	0300		6.73	1.28	16.1	28 °F	29.57
	0500		6.75	1.27	15.2	28 °F	29.59
	0700		6.78	1.29	15.8	30 °F	29.62
	0900		6.73	1.28	15.7	32 °F	29.67

000686

SE2000
Environmental Logger
11/08 15:34

Unit# 159 Test 2

Setups:	INPUT 1	INPUT 2	INPUT 3	INPUT 4	INPUT 5	INPUT 6	INPUT 7
Type	Level (F)	Level (F)	Level (F)	Level (F)	Level (F)	Level (F)	Level (F)
Mode	TOC	TOC	TOC	TOC	TOC	TOC	TOC
I.D.	1785	PZ-1B	PZ-4	PZ-2	PZ-1A	PZ-1C	1232
Reference	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SG	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Linearity	0.117	0.082	0.107	0.112	0.106	0.096	0.096
Scale factor	20.005	20.019	20.094	19.961	19.989	20.037	20.063
Offset	-0.005	0.081	0.035	0.024	-0.066	0.018	0.051
Delay mSEC	50.000	50.000	50.000	50.000	50.000	50.000	50.000

Step 0 11/04 21:58:22

Elapsed Time	Input 1	Input 2	Input 3	Input 4	Input 5	Input 6	Input 7
0.0000	0.000	-0.006	-0.012	-0.012	0.000	0.000	-0.012
0.0083	0.000	-0.006	-0.012	-0.012	0.000	0.000	-0.012
0.0166	0.000	-0.006	-0.012	-0.012	0.000	0.000	-0.012
0.0250	0.000	-0.006	-0.012	-0.012	0.000	0.000	-0.012
0.0333	0.000	-0.012	-0.012	-0.012	0.000	0.000	-0.012
0.0416	0.000	-0.006	-0.012	-0.012	-0.006	0.000	-0.012
0.0500	0.006	-0.006	-0.012	-0.012	0.000	0.000	-0.012
0.0583	0.019	-0.006	-0.012	-0.012	0.000	0.000	-0.012
0.0666	0.019	-0.006	-0.012	-0.012	-0.006	0.000	-0.012
0.0750	0.031	-0.006	-0.006	-0.012	0.000	0.000	-0.012
0.0833	0.038	-0.006	-0.012	-0.012	0.000	0.000	-0.012
0.0916	0.050	-0.006	-0.012	-0.012	0.000	0.000	-0.012
0.1000	0.057	-0.006	-0.012	-0.012	0.000	0.000	-0.012
0.1083	0.063	-0.006	-0.006	-0.012	0.000	0.000	-0.012
0.1166	0.069	-0.012	-0.012	-0.012	0.000	0.000	-0.012
0.1250	0.076	-0.006	-0.012	-0.012	0.000	0.000	-0.012
0.1333	0.082	-0.006	-0.012	-0.012	0.000	0.000	-0.012
0.1416	0.088	-0.006	-0.012	-0.012	0.000	0.000	-0.012
0.1500	0.101	-0.006	-0.012	-0.012	0.000	0.000	-0.012
0.1583	0.107	-0.012	-0.012	-0.012	0.000	0.000	-0.012
0.1666	0.107	-0.006	-0.012	-0.012	0.000	0.000	-0.012
0.1750	0.120	-0.006	-0.012	-0.012	0.000	-0.006	-0.019
0.1833	0.126	-0.006	-0.012	-0.012	0.000	0.000	-0.012
0.1916	0.126	-0.006	-0.012	-0.012	0.000	0.000	-0.012
0.2000	0.139	-0.006	-0.012	-0.012	0.000	0.000	-0.012
0.2083	0.145	-0.006	-0.012	-0.012	-0.006	0.000	-0.012
0.2166	0.158	-0.006	-0.012	-0.012	0.000	-0.006	-0.012
0.2250	0.158	-0.006	-0.006	-0.012	-0.006	0.000	-0.012
0.2333	0.164	-0.006	-0.006	-0.012	0.000	0.000	-0.012
0.2416	0.171	-0.006	-0.006	-0.012	0.000	0.000	-0.012
0.2500	0.177	-0.006	-0.006	-0.012	0.000	0.000	-0.012
0.2583	0.184	-0.006	-0.006	-0.006	0.000	0.000	-0.012
0.2666	0.190	-0.006	-0.006	-0.012	0.000	0.000	-0.012
0.2750	0.203	-0.006	-0.006	-0.012	0.000	0.000	-0.012
0.2833	0.209	-0.006	-0.006	-0.012	0.000	0.000	-0.012
0.2916	0.215	-0.006	-0.006	-0.012	0.000	0.000	-0.012
0.3000	0.215	-0.006	-0.006	-0.012	0.000	0.000	-0.012
0.3083	0.222	-0.006	-0.012	-0.012	0.000	0.000	-0.012
0.3166	0.228	-0.006	-0.006	-0.012	0.000	0.000	-0.012

Elapsed Time	Input 1	Input 2	Input 3	Input 4	Input 5	Input 6	Input 7
0.3250	0.234	-0.006	-0.006	-0.012	0.000	0.000	-0.012
0.3333	0.241	-0.006	-0.006	-0.012	0.000	0.000	-0.012
0.3500	0.247	-0.006	-0.006	-0.012	0.000	0.000	-0.012
0.3666	0.260	-0.006	-0.006	-0.012	0.000	0.000	-0.012
0.3833	0.272	-0.006	-0.006	-0.012	0.000	0.000	-0.012
0.4000	0.279	-0.006	-0.006	-0.012	0.000	0.000	-0.012
0.4166	0.291	-0.006	-0.006	-0.012	0.000	0.000	-0.012
0.4333	0.304	-0.006	0.000	-0.012	0.000	0.000	-0.012
0.4500	0.310	-0.006	-0.006	-0.012	0.000	0.000	-0.012
0.4666	0.317	-0.006	0.000	-0.012	0.000	0.000	-0.012
0.4833	0.323	-0.006	0.000	-0.006	0.000	0.000	-0.012
0.5000	0.336	-0.006	0.000	-0.012	0.000	0.000	-0.012
0.5166	0.342	-0.006	0.000	-0.012	0.000	0.000	-0.012
0.5333	0.355	-0.006	0.000	-0.012	0.000	0.000	-0.012
0.5500	0.361	-0.006	0.000	-0.012	0.000	0.000	-0.012
0.5666	0.374	-0.006	0.000	-0.012	-0.006	0.000	-0.012
0.5833	0.374	-0.006	0.000	-0.012	0.000	0.000	-0.012
0.6000	0.387	-0.006	0.000	-0.012	0.000	0.000	-0.012
0.6166	0.393	-0.006	0.000	-0.012	0.000	0.000	-0.012
0.6333	0.399	-0.006	0.006	-0.012	0.000	0.000	-0.012
0.6500	0.412	-0.006	0.006	-0.012	0.000	0.000	-0.012
0.6666	0.418	-0.006	0.000	-0.012	0.000	0.000	-0.019
0.6833	0.431	-0.006	0.006	-0.012	0.000	0.000	-0.012
0.7000	0.437	-0.006	0.006	-0.012	0.000	0.000	-0.012
0.7166	0.444	-0.006	0.006	-0.006	0.000	0.000	-0.012
0.7333	0.450	-0.006	0.006	-0.012	0.000	0.000	-0.012
0.7500	0.456	-0.006	0.006	-0.012	0.000	0.000	-0.012
0.7666	0.469	0.000	0.012	-0.012	0.000	0.000	-0.012
0.7833	0.475	-0.006	0.006	-0.012	0.000	0.000	-0.012
0.8000	0.482	0.000	0.012	-0.012	0.000	0.000	-0.012
0.8166	0.488	-0.006	0.006	-0.012	0.000	0.000	-0.012
0.8333	0.494	0.000	0.012	-0.012	0.000	0.000	-0.012
0.8500	0.501	0.000	0.012	-0.012	0.000	0.000	-0.012
0.8666	0.507	-0.006	0.012	-0.006	0.000	0.000	-0.012
0.8833	0.513	0.000	0.012	-0.012	-0.006	0.000	-0.012
0.9000	0.520	0.000	0.012	-0.012	0.000	-0.006	-0.019
0.9166	0.532	-0.006	0.012	-0.006	0.000	-0.006	-0.012
0.9333	0.539	0.000	0.012	-0.012	-0.006	0.000	-0.012
0.9500	0.545	0.000	0.012	-0.012	0.000	0.000	-0.012
0.9666	0.551	0.000	0.012	-0.012	0.000	0.000	-0.012
0.9833	0.558	0.000	0.019	-0.012	-0.006	0.000	-0.012
1.0000	0.564	0.000	0.012	-0.012	0.000	0.000	-0.012
1.2000	0.640	0.000	0.025	-0.006	0.000	-0.006	-0.012
1.4000	0.697	0.000	0.031	-0.006	0.000	0.000	-0.012
1.6000	0.742	0.006	0.038	-0.006	0.000	0.000	-0.012
1.8000	0.774	0.012	0.044	-0.006	-0.006	0.000	-0.012
2.0000	0.805	0.019	0.044	-0.006	-0.006	-0.006	-0.012
2.2000	0.831	0.019	0.050	-0.006	0.000	0.000	-0.012
2.4000	0.850	0.025	0.057	-0.006	0.000	0.000	-0.012
2.6000	0.869	0.025	0.057	0.000	0.000	0.000	-0.012
2.8000	0.894	0.031	0.063	0.000	0.000	0.000	-0.012
3.0000	0.919	0.031	0.063	0.000	-0.006	0.000	-0.012
3.2000	0.938	0.038	0.070	0.000	0.000	0.000	-0.012
3.4000	0.957	0.038	0.070	0.000	0.000	0.000	-0.012

Elapsed Time	Input 1	Input 2	Input 3	Input 4	Input 5	Input 6	Input 7
3.6000	0.977	0.044	0.076	0.000	0.000	0.000	-0.012
3.8000	1.002	0.044	0.076	0.006	0.000	0.000	-0.012
4.0000	1.015	0.050	0.082	0.000	0.000	0.000	-0.012
4.2000	1.040	0.050	0.082	0.000	0.000	0.000	-0.012
4.4000	1.053	0.057	0.082	0.000	0.000	0.000	-0.012
4.6000	1.078	0.057	0.089	0.006	0.000	0.000	-0.006
4.8000	1.091	0.057	0.089	0.006	0.000	0.000	-0.006
5.0000	1.103	0.063	0.089	0.006	-0.006	0.000	-0.006
5.2000	1.129	0.063	0.095	0.006	0.000	0.000	-0.006
5.4000	1.141	0.063	0.095	0.006	0.000	0.000	-0.006
5.6000	1.154	0.069	0.101	0.012	0.000	0.000	-0.006
5.8000	1.173	0.069	0.101	0.012	0.000	0.000	-0.006
6.0000	1.186	0.076	0.101	0.012	-0.006	0.000	-0.006
6.2000	1.205	0.076	0.108	0.012	0.000	0.000	-0.006
6.4000	1.218	0.076	0.108	0.012	0.000	0.000	-0.006
6.6000	1.230	0.082	0.114	0.019	-0.006	0.000	0.000
6.8000	1.243	0.082	0.114	0.019	-0.006	0.000	-0.006
7.0000	1.256	0.088	0.114	0.019	0.000	0.000	-0.006
7.2000	1.268	0.088	0.114	0.019	-0.006	0.000	-0.006
7.4000	1.281	0.088	0.114	0.019	0.000	0.000	-0.006
7.6000	1.294	0.088	0.121	0.019	-0.006	0.000	0.000
7.8000	1.300	0.095	0.127	0.019	0.000	0.000	0.000
8.0000	1.306	0.095	0.121	0.019	0.000	0.000	0.000
8.2000	1.319	0.095	0.121	0.019	-0.006	0.000	0.000
8.4000	1.325	0.101	0.127	0.025	0.000	0.000	0.000
8.6000	1.338	0.101	0.127	0.025	0.000	0.000	0.000
8.8000	1.338	0.101	0.133	0.025	0.000	0.000	0.000
9.0000	1.344	0.101	0.133	0.025	0.000	0.000	0.000
9.2000	1.344	0.101	0.133	0.025	0.000	0.000	0.000
9.4000	1.344	0.107	0.133	0.025	0.000	0.000	0.000
9.6000	1.344	0.107	0.133	0.025	-0.006	0.000	0.000
9.8000	1.344	0.107	0.133	0.031	0.000	0.000	0.000
10.0000	1.351	0.114	0.140	0.025	0.000	0.000	0.006
12.0000	1.357	0.120	0.152	0.038	0.012	0.006	0.019
14.0000	1.338	0.133	0.159	0.044	0.012	0.006	0.019
16.0000	1.332	0.133	0.165	0.044	0.012	0.006	0.025
18.0000	1.351	0.139	0.165	0.050	0.012	0.006	0.025
20.0000	1.357	0.145	0.172	0.050	0.000	0.000	0.025
22.0000	1.376	0.152	0.178	0.057	0.012	0.006	0.031
24.0000	1.382	0.158	0.184	0.057	0.012	0.006	0.038
26.0000	1.389	0.158	0.191	0.063	0.012	0.006	0.044
28.0000	1.402	0.164	0.191	0.069	0.012	0.006	0.044
30.0000	1.402	0.164	0.197	0.069	0.012	0.006	0.044
32.0000	1.414	0.171	0.197	0.076	0.012	0.012	0.050
34.0000	1.414	0.177	0.203	0.076	0.012	0.012	0.050
36.0000	1.421	0.183	0.210	0.082	0.012	0.012	0.057
38.0000	1.427	0.183	0.210	0.082	0.012	0.012	0.057
40.0000	1.433	0.183	0.210	0.088	0.012	0.012	0.063
42.0000	1.440	0.190	0.216	0.088	0.012	0.012	0.063
44.0000	1.440	0.190	0.216	0.088	0.012	0.012	0.069
46.0000	1.446	0.190	0.223	0.095	0.012	0.012	0.069
48.0000	1.452	0.196	0.223	0.095	0.012	0.012	0.069
50.0000	1.459	0.196	0.229	0.095	0.018	0.019	0.069
52.0000	1.465	0.196	0.229	0.095	0.012	0.019	0.069

Elapsed Time	Input 1	Input 2	Input 3	Input 4	Input 5	Input 6	Input 7
54.0000	1.465	0.196	0.229	0.095	0.012	0.019	0.069
56.0000	1.465	0.203	0.229	0.101	0.018	0.019	0.076
58.0000	1.465	0.203	0.229	0.101	0.012	0.019	0.069
60.0000	1.478	0.203	0.229	0.101	0.012	0.025	0.076
62.0000	1.478	0.209	0.235	0.101	0.012	0.019	0.076
64.0000	1.484	0.209	0.235	0.101	0.012	0.019	0.076
66.0000	1.490	0.209	0.242	0.107	0.012	0.025	0.082
68.0000	1.490	0.215	0.248	0.114	0.012	0.025	0.088
70.0000	1.497	0.215	0.248	0.114	0.012	0.025	0.088
72.0000	1.497	0.222	0.248	0.114	0.012	0.025	0.088
74.0000	1.503	0.222	0.248	0.120	0.012	0.025	0.088
76.0000	1.509	0.222	0.248	0.120	0.012	0.025	0.095
78.0000	1.509	0.222	0.254	0.120	0.018	0.031	0.095
80.0000	1.509	0.228	0.254	0.120	0.012	0.031	0.095
82.0000	1.522	0.228	0.261	0.120	0.012	0.031	0.095
84.0000	1.522	0.228	0.254	0.126	0.012	0.031	0.095
86.0000	1.528	0.228	0.254	0.126	0.012	0.031	0.095
88.0000	1.528	0.228	0.261	0.126	0.012	0.031	0.101
90.0000	1.528	0.228	0.261	0.126	0.012	0.031	0.101
92.0000	1.535	0.234	0.254	0.126	0.012	0.031	0.101
94.0000	1.528	0.234	0.261	0.126	0.012	0.031	0.101
96.0000	1.535	0.234	0.261	0.126	0.012	0.038	0.101
98.0000	1.535	0.234	0.267	0.126	0.012	0.038	0.101
100.000	1.535	0.234	0.261	0.126	0.012	0.038	0.101
115.000	1.554	0.247	0.274	0.139	0.012	0.038	0.114
130.000	1.566	0.253	0.280	0.145	0.012	0.050	0.120
145.000	1.636	0.266	0.293	0.152	0.012	-3.864	0.133
160.000	1.706	0.107	0.305	0.158	0.012	-6.636	0.139
175.000	1.750	0.076	0.318	0.171	0.012	-6.630	0.146
190.000	1.769	0.082	0.331	0.183	0.012	-6.630	0.158
205.000	1.782	0.076	0.337	0.190	0.012	-6.630	0.165
220.000	1.814	0.095	0.344	0.196	0.012	-6.630	0.177
235.000	1.833	0.101	0.350	0.202	0.012	-6.630	0.177
250.000	1.852	0.120	0.356	0.209	0.012	-6.630	0.184
265.000	1.871	0.145	0.363	0.215	0.012	-6.624	0.184
280.000	1.884	0.177	0.369	0.221	0.012	-6.592	0.196
295.000	1.896	0.209	0.369	0.221	0.012	-6.516	0.203
310.000	1.915	0.234	0.376	0.228	0.012	-6.433	0.209
325.000	1.909	0.253	0.376	0.234	0.018	-6.357	0.209
340.000	1.915	0.260	0.382	0.234	0.012	-6.280	0.215
355.000	1.941	0.279	0.382	0.234	0.018	-6.204	0.215
370.000	1.947	0.285	0.388	0.234	0.018	-6.128	0.215
385.000	1.960	0.291	0.382	0.240	0.018	-6.045	0.222
400.000	1.966	0.310	0.401	0.247	0.012	-5.905	0.228
415.000	1.979	0.317	0.401	0.247	0.012	-5.250	0.228
430.000	2.048	0.329	0.401	0.253	0.018	-4.677	0.228
445.000	2.125	0.348	0.414	0.259	0.018	-4.169	0.241
460.000	2.188	0.367	0.420	0.266	0.012	-3.698	0.241
475.000	2.213	0.367	0.427	0.272	0.012	-3.310	0.247
490.000	2.226	0.387	0.427	0.278	0.018	-2.961	0.254
505.000	2.245	0.387	0.433	0.285	0.018	-2.656	0.260
520.000	2.270	0.399	0.439	0.291	0.018	-2.376	0.266
535.000	2.277	0.399	0.446	0.291	0.018	-2.128	0.273
550.000	2.315	0.406	0.446	0.297	0.018	-1.906	0.273

Elapsed Time	Input 1	Input 2	Input 3	Input 4	Input 5	Input 6	Input 7
565.000	2.404	0.412	0.458	0.304	0.018	-1.696	0.273
580.000	2.429	0.412	0.458	0.304	0.018	-1.518	0.285
595.000	2.435	0.418	0.465	0.304	0.018	-1.359	0.279
610.000	2.454	0.425	0.465	0.310	0.018	-1.213	0.292
625.000	2.467	0.425	0.471	0.310	0.018	-1.080	0.292
640.000	2.480	0.425	0.471	0.310	0.018	-0.978	0.292
655.000	2.492	0.431	0.471	0.316	0.018	-0.876	0.292
670.000	2.499	0.431	0.465	0.316	0.018	-0.775	0.292
685.000	2.549	0.437	0.478	0.316	0.018	-0.686	0.298
700.000	2.587	0.437	0.484	0.329	0.012	-0.609	0.304
715.000	2.676	0.456	0.497	0.335	0.012	-0.527	0.311
730.000	2.746	0.469	0.503	0.342	0.018	-0.457	0.311
745.000	2.771	0.469	0.509	0.348	0.018	-0.393	0.323
760.000	2.790	0.469	0.516	0.354	0.018	-0.336	0.323
775.000	2.809	0.482	0.522	0.361	0.018	-0.279	0.336
790.000	2.809	0.475	0.516	0.354	0.012	-0.247	0.336
805.000	2.854	0.482	0.522	0.361	0.012	-0.196	0.336
820.000	2.873	0.482	0.529	0.361	0.012	-0.165	0.336
835.000	2.911	0.494	0.529	0.367	0.012	-0.127	0.343
850.000	2.917	0.488	0.529	0.367	0.018	-0.076	0.343
865.000	2.923	0.494	0.535	0.367	0.012	-0.038	0.349
880.000	2.930	0.494	0.529	0.367	0.018	0.000	0.349
895.000	2.936	0.494	0.535	0.373	0.018	0.038	0.349
910.000	2.949	0.501	0.541	0.373	0.012	0.063	0.349
925.000	3.012	0.501	0.541	0.380	0.018	0.088	0.355
940.000	3.031	0.507	0.541	0.380	0.018	0.120	0.355
955.000	3.126	0.513	0.548	0.386	0.012	0.146	0.362
970.000	3.145	0.513	0.554	0.392	0.006	0.165	0.355
985.000	3.253	0.520	0.560	0.392	0.025	0.190	0.368
1000.00	3.329	0.526	0.567	0.399	0.006	0.209	0.362
1015.00	3.329	0.539	0.580	0.405	0.018	0.235	0.381
1030.00	3.298	0.532	0.573	0.411	0.018	0.247	0.381
1045.00	3.399	0.545	0.586	0.411	0.025	0.273	0.393
1060.00	3.424	0.545	0.586	0.418	0.025	0.292	0.400
1075.00	3.367	0.545	0.586	0.418	0.025	0.304	0.400
1090.00	3.386	0.551	0.592	0.424	0.025	0.323	0.406
1105.00	3.405	0.551	0.592	0.430	0.025	0.343	0.406
1120.00	3.431	0.558	0.599	0.437	0.018	0.355	0.412
1135.00	3.469	0.564	0.605	0.443	0.025	0.368	0.419
1150.00	3.469	0.564	0.605	0.443	0.025	0.381	0.419
1165.00	3.443	0.564	0.605	0.443	0.025	0.393	0.419
1180.00	3.443	0.571	0.605	0.443	0.025	0.406	0.419
1195.00	3.450	0.571	0.605	0.443	0.025	0.419	0.419
1210.00	3.443	0.571	0.605	0.443	0.037	0.431	0.425
1225.00	3.456	0.571	0.611	0.449	0.025	0.451	0.425
1240.00	3.589	0.577	0.618	0.456	0.025	0.457	0.425
1255.00	3.627	0.577	0.618	0.456	0.025	0.470	0.431
1270.00	3.741	0.583	0.624	0.456	0.025	0.482	0.431
1285.00	3.855	0.590	0.631	0.462	0.025	0.489	0.438
1300.00	3.919	0.596	0.637	0.462	0.025	0.501	0.431
1315.00	3.805	0.596	0.631	0.468	0.025	0.514	0.438
1330.00	3.798	0.590	0.631	0.462	0.025	0.520	0.438
1345.00	3.805	0.596	0.631	0.468	0.025	0.533	0.438
1360.00	3.824	0.590	0.631	0.462	0.025	0.539	0.438

Elapsed Time	Input 1	Input 2	Input 3	Input 4	Input 5	Input 6	Input 7
1375.00	3.817	0.596	0.631	0.462	0.025	0.552	0.438
1390.00	3.836	0.596	0.631	0.468	0.025	0.559	0.444
1405.00	3.843	0.596	0.631	0.468	0.025	0.559	0.444
1420.00	3.881	0.596	0.637	0.468	0.025	0.571	0.444
1435.00	3.912	0.596	0.637	0.468	0.025	0.578	0.444
1450.00	3.938	0.596	0.637	0.468	0.025	0.584	0.444
1465.00	3.938	0.596	0.637	0.468	0.025	0.590	0.444
1480.00	4.008	0.596	0.637	0.468	0.025	0.603	0.451
1495.00	4.046	0.602	0.643	0.468	0.025	0.603	0.451
1510.00	4.052	0.602	0.643	0.475	0.025	0.609	0.451
1525.00	4.071	0.602	0.643	0.475	0.025	0.616	0.451
1540.00	4.141	0.602	0.643	0.475	0.031	0.622	0.451
1555.00	4.261	0.609	0.656	0.475	0.025	0.628	0.451
1570.00	4.369	0.615	0.662	0.481	0.025	0.635	0.457
1585.00	4.248	0.615	0.656	0.487	0.025	0.641	0.463
1600.00	4.248	0.615	0.656	0.487	0.025	0.641	0.463
1615.00	4.261	0.615	0.656	0.487	0.031	0.647	0.463
1630.00	4.274	0.621	0.662	0.487	0.025	0.654	0.463
1645.00	4.261	0.615	0.656	0.487	0.031	0.660	0.463
1660.00	4.267	0.621	0.662	0.487	0.031	0.667	0.463
1675.00	4.274	0.615	0.656	0.487	0.025	0.667	0.463
1690.00	4.280	0.621	0.656	0.487	0.031	0.673	0.463
1705.00	4.280	0.615	0.656	0.487	0.031	0.679	0.470
1720.00	4.305	0.615	0.656	0.487	0.031	0.679	0.463
1735.00	4.293	0.609	0.650	0.487	0.031	0.686	0.463
1750.00	4.305	0.609	0.650	0.481	0.031	0.686	0.457
1765.00	4.299	0.609	0.650	0.481	0.031	0.692	0.463
1780.00	4.286	0.609	0.643	0.481	0.031	0.698	0.457
1795.00	4.293	0.609	0.650	0.487	0.031	0.698	0.463
1810.00	4.293	0.609	0.650	0.487	0.031	0.705	0.463
1825.00	4.375	0.609	0.650	0.487	0.031	0.711	0.463
1840.00	4.508	0.615	0.656	0.487	0.031	0.711	0.463
1855.00	4.616	0.621	0.662	0.494	0.031	0.717	0.470
1870.00	4.629	0.621	0.662	0.494	0.031	0.717	0.470
1885.00	4.629	0.621	0.662	0.494	0.031	0.724	0.476
1900.00	4.629	0.628	0.662	0.500	0.031	0.730	0.476
1915.00	4.616	0.628	0.669	0.500	0.031	0.730	0.476
1930.00	4.610	0.628	0.669	0.506	0.031	0.730	0.476
1945.00	4.616	0.628	0.669	0.500	0.031	0.736	0.476
1960.00	4.610	0.628	0.669	0.506	0.031	0.736	0.476
1975.00	4.597	0.628	0.669	0.500	0.037	0.743	0.482
1990.00	4.698	0.634	0.669	0.506	0.037	0.743	0.482
2005.00	4.730	0.634	0.669	0.506	0.025	0.743	0.476
2020.00	4.736	0.634	0.675	0.513	0.025	0.736	0.482
2035.00	4.724	0.634	0.675	0.513	0.031	0.743	0.489
2050.00	4.736	0.634	0.675	0.513	0.037	0.755	0.482
2065.00	4.736	0.640	0.675	0.513	0.037	0.762	0.489
2080.00	4.831	0.640	0.682	0.513	0.037	0.768	0.489
2095.00	4.851	0.640	0.682	0.519	0.037	0.768	0.495
2110.00	4.933	0.647	0.688	0.519	0.031	0.755	0.495
2125.00	5.053	0.653	0.694	0.519	0.031	0.762	0.495
2140.00	5.180	0.659	0.694	0.525	0.031	0.762	0.495
2155.00	5.205	0.659	0.701	0.525	0.031	0.768	0.501
2170.00	5.224	0.659	0.701	0.525	0.031	0.768	0.501

Elapsed Time	Input 1	Input 2	Input 3	Input 4	Input 5	Input 6	Input 7
2185.00	5.243	0.659	0.701	0.532	0.031	0.768	0.501
2200.00	5.243	0.659	0.701	0.532	0.031	0.774	0.501
2215.00	5.231	0.659	0.701	0.532	0.031	0.781	0.508
2230.00	5.275	0.659	0.701	0.532	0.037	0.724	0.501
2245.00	5.281	0.659	0.701	0.532	0.037	0.730	0.501
2260.00	5.275	0.659	0.701	0.532	0.037	0.736	0.501
2275.00	5.281	0.653	0.694	0.532	0.037	0.736	0.501
2290.00	5.326	0.659	0.694	0.525	0.031	0.819	0.501
2305.00	5.345	0.659	0.694	0.525	0.037	0.825	0.501
2320.00	5.370	0.653	0.694	0.525	0.037	0.825	0.501
2335.00	5.478	0.659	0.694	0.525	0.037	0.825	0.501
2350.00	5.491	0.653	0.694	0.525	0.037	0.825	0.501
2365.00	5.497	0.659	0.694	0.525	0.044	0.832	0.495
2380.00	5.535	0.659	0.694	0.525	0.044	0.832	0.501
2395.00	5.674	0.659	0.701	0.532	0.037	0.832	0.508
2410.00	5.826	0.666	0.707	0.538	0.044	0.832	0.508
2425.00	5.668	0.666	0.707	0.532	0.044	0.838	0.508
2440.00	5.693	0.666	0.707	0.538	0.044	0.838	0.508
2455.00	5.750	0.666	0.707	0.538	0.044	0.844	0.514
2470.00	5.750	0.672	0.707	0.538	0.044	0.838	0.514
2485.00	5.744	0.672	0.713	0.544	0.044	0.844	0.514
2500.00	5.763	0.672	0.707	0.544	0.044	0.844	0.520
2515.00	5.763	0.672	0.713	0.544	0.044	0.851	0.520
2530.00	5.820	0.672	0.713	0.544	0.044	0.851	0.520
2545.00	5.877	0.678	0.713	0.551	0.044	0.851	0.520
2560.00	5.953	0.685	0.720	0.551	0.044	0.857	0.527
2575.00	6.029	0.685	0.726	0.557	0.044	0.857	0.527
2590.00	6.042	0.691	0.733	0.557	0.044	0.863	0.533
2605.00	6.048	0.691	0.726	0.563	0.044	0.863	0.533
2620.00	6.048	0.691	0.733	0.563	0.044	0.870	0.533
2635.00	6.054	0.691	0.733	0.563	0.044	0.870	0.533
2650.00	6.194	0.697	0.733	0.570	0.044	0.870	0.539
2665.00	6.339	0.697	0.739	0.570	0.044	0.870	0.546
2680.00	6.384	0.704	0.745	0.576	0.050	0.876	0.546
2695.00	6.371	0.704	0.745	0.576	0.050	0.876	0.546
2710.00	6.371	0.710	0.745	0.576	0.050	0.876	0.552
2725.00	6.384	0.710	0.745	0.576	0.050	0.882	0.552
2740.00	6.441	0.710	0.745	0.583	0.050	0.882	0.552
2755.00	6.542	0.710	0.752	0.583	0.050	0.889	0.552
2770.00	6.574	0.710	0.752	0.583	0.050	0.889	0.559
2785.00	6.580	0.716	0.752	0.589	0.050	0.889	0.559
2800.00	6.580	0.716	0.752	0.583	0.050	0.895	0.559
2815.00	6.568	0.716	0.752	0.583	0.050	0.895	0.559
2830.00	6.568	0.716	0.752	0.589	0.050	0.895	0.559
2845.00	6.650	0.716	0.752	0.589	0.050	0.902	0.559
2860.00	6.656	0.716	0.752	0.589	0.037	0.895	0.552
2875.00	6.682	0.716	0.758	0.589	0.050	0.902	0.559
2890.00	6.770	0.716	0.758	0.589	0.050	0.908	0.559
2905.00	6.840	0.723	0.758	0.595	0.050	0.908	0.565
2920.00	6.846	0.723	0.758	0.595	0.050	0.908	0.565
2935.00	6.865	0.723	0.758	0.595	0.050	0.914	0.565
2950.00	6.979	0.723	0.758	0.595	0.050	0.914	0.565
2965.00	7.144	0.729	0.764	0.595	0.056	0.914	0.571
2980.00	7.290	0.735	0.771	0.602	0.056	0.914	0.571

Elapsed Time	Input 1	Input 2	Input 3	Input 4	Input 5	Input 6	Input 7
2995.00	7.340	0.735	0.777	0.602	0.056	0.921	0.571
3010.00	7.378	0.735	0.777	0.602	0.056	0.921	0.578
3025.00	7.378	0.735	0.777	0.608	0.056	0.921	0.578
3040.00	7.391	0.735	0.777	0.608	0.056	0.921	0.578
3055.00	7.404	0.735	0.777	0.608	0.056	0.927	0.578
3070.00	7.410	0.742	0.777	0.608	0.056	0.927	0.578
3085.00	7.416	0.735	0.777	0.608	0.056	0.927	0.578
3100.00	7.524	0.742	0.777	0.608	0.056	0.933	0.578
3115.00	7.594	0.742	0.777	0.614	0.056	0.933	0.584
3130.00	7.581	0.748	0.784	0.614	0.056	0.933	0.584
3145.00	7.822	0.748	0.790	0.614	0.056	0.933	0.584
3160.00	7.879	0.748	0.790	0.614	0.063	0.940	0.590
3175.00	7.872	0.748	0.790	0.621	0.056	0.940	0.590
3190.00	7.714	0.748	0.790	0.614	0.063	0.940	0.584
3205.00	7.809	0.748	0.784	0.614	0.063	0.946	0.590
3220.00	8.005	0.748	0.790	0.621	0.063	0.946	0.590
3235.00	8.252	0.754	0.796	0.621	0.063	0.946	0.590
3250.00	8.467	0.761	0.803	0.621	0.063	0.952	0.590
3265.00	8.480	0.767	0.803	0.627	0.063	0.952	0.597
3280.00	8.550	0.761	0.803	0.627	0.063	0.952	0.597
3295.00	8.657	0.767	0.809	0.633	0.063	0.959	0.603
3310.00	8.695	0.767	0.803	0.627	0.069	0.959	0.603
3325.00	8.708	0.767	0.809	0.633	0.069	0.959	0.603
3340.00	8.638	0.767	0.809	0.640	0.069	0.959	0.603
3355.00	8.752	0.774	0.809	0.633	0.069	0.965	0.609
3370.00	8.771	0.774	0.815	0.640	0.069	0.965	0.609
3385.00	8.904	0.774	0.815	0.640	0.069	0.965	0.609
3400.00	8.968	0.774	0.815	0.640	0.069	0.971	0.609
3415.00	9.183	0.774	0.815	0.640	0.069	0.971	0.609
3430.00	9.322	0.780	0.822	0.646	0.075	0.971	0.616
3445.00	9.373	0.780	0.822	0.646	0.075	0.971	0.616
3460.00	9.385	0.780	0.822	0.646	0.069	0.978	0.616
3475.00	9.423	0.780	0.822	0.646	0.075	0.978	0.616
3490.00	9.259	0.780	0.815	0.652	0.075	0.978	0.622
3505.00	9.487	0.786	0.822	0.652	0.075	0.978	0.622
3520.00	9.778	0.793	0.828	0.659	0.075	0.984	0.628
3535.00	9.866	0.799	0.835	0.659	0.075	0.984	0.628
3550.00	9.917	0.793	0.835	0.659	0.075	0.984	0.628
3565.00	9.917	0.793	0.828	0.659	0.069	0.984	0.622
3580.00	9.974	0.793	0.835	0.659	0.075	0.990	0.628
3595.00	10.050	0.799	0.835	0.665	0.075	0.990	0.628
3610.00	10.094	0.793	0.835	0.659	0.082	0.997	0.628
3625.00	10.234	0.793	0.835	0.659	0.082	0.997	0.628
3640.00	10.328	0.799	0.835	0.665	0.082	0.997	0.635
3655.00	10.341	0.799	0.835	0.659	0.082	0.997	0.635
3670.00	10.626	0.793	0.835	0.659	0.075	1.003	0.628
3685.00	10.765	0.793	0.835	0.659	0.075	1.003	0.628

SE2000
Environmental Logger
11/08 16:17

Unit# 159 Test 2

Setups:	INPUT 1	INPUT 2	INPUT 3	INPUT 4	INPUT 5	INPUT 6	INPUT 7
Type	Level (F)	Level (F)	Level (F)	Level (F)	Level (F)	Level (F)	Level (F)
Mode	TOC	TOC	TOC	TOC	TOC	TOC	TOC
I.D.	1785	PZ-1B	PZ-4	PZ-2	PZ-1A	PZ-1C	1232
Reference	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SG	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Linearity	0.117	0.082	0.107	0.112	0.106	0.096	0.096
Scale factor	20.005	20.019	20.094	19.961	19.989	20.037	20.063
Offset	-0.005	0.081	0.035	0.024	-0.066	0.018	0.051
Delay mSEC	50.000	50.000	50.000	50.000	50.000	50.000	50.000

Step 1 11/07 11:25:31

Elapsed Time	Input 1	Input 2	Input 3	Input 4	Input 5	Input 6	Input 7
0.0000	10.784	0.843	0.809	0.659	0.069	0.997	0.622
0.0083	10.784	0.843	0.809	0.659	0.069	1.003	0.622
0.0166	10.784	0.843	0.809	0.659	0.069	1.003	0.628
0.0250	10.784	0.843	0.809	0.659	0.063	0.997	0.622
0.0333	10.784	0.837	0.815	0.659	0.069	1.003	0.622
0.0416	10.784	0.837	0.815	0.659	0.069	1.003	0.622
0.0500	10.784	0.843	0.815	0.659	0.069	1.003	0.622
0.0583	10.784	0.837	0.815	0.659	0.069	1.003	0.622
0.0666	10.784	0.837	0.835	0.659	0.069	1.003	0.622
0.0750	10.784	0.837	0.828	0.659	0.069	1.003	0.622
0.0833	10.784	0.837	0.822	0.659	0.069	1.003	0.622
0.0916	10.784	0.837	0.796	0.659	0.069	1.003	0.622
0.1000	10.784	0.837	0.828	0.659	0.063	1.003	0.628
0.1083	10.784	0.837	0.822	0.659	0.069	1.003	0.622
0.1166	10.784	0.837	0.828	0.659	0.069	1.003	0.628
0.1250	10.784	0.837	0.828	0.659	0.069	1.003	0.622
0.1333	10.784	0.837	0.847	0.659	0.069	1.003	0.628
0.1416	10.784	0.837	0.879	0.659	0.069	1.003	0.622
0.1500	10.784	0.837	0.892	0.659	0.069	1.003	0.628
0.1583	10.784	0.837	0.886	0.659	0.063	1.003	0.622
0.1666	10.784	0.837	0.879	0.659	0.069	1.003	0.622
0.1750	10.784	0.837	0.879	0.659	0.069	1.003	0.622
0.1833	10.784	0.837	0.873	0.659	0.069	0.997	0.622
0.1916	10.784	0.837	0.866	0.659	0.069	0.997	0.622
0.2000	10.784	0.837	0.860	0.659	0.069	1.003	0.622
0.2083	10.784	0.837	0.854	0.659	0.069	1.003	0.622
0.2166	10.784	0.837	0.841	0.659	0.069	1.003	0.622
0.2250	10.784	0.837	0.835	0.659	0.069	1.003	0.622
0.2333	10.784	0.837	0.835	0.659	0.069	1.003	0.622
0.2416	10.784	0.837	0.835	0.659	0.069	1.003	0.622
0.2500	10.778	0.837	0.835	0.659	0.063	1.003	0.622
0.2583	10.765	0.837	0.828	0.659	0.069	1.003	0.622
0.2666	10.752	0.837	0.784	0.659	0.069	1.003	0.628
0.2750	10.740	0.831	0.752	0.659	0.069	1.003	0.622
0.2833	10.721	0.831	0.841	0.659	0.069	1.003	0.622
0.2916	10.708	0.837	0.866	0.659	0.063	1.003	0.628

Elapsed Time	Input 1	Input 2	Input 3	Input 4	Input 5	Input 6	Input 7
0.3000	10.695	0.837	0.866	0.659	0.069	1.003	0.622
0.3083	10.683	0.831	0.860	0.659	0.069	1.003	0.622
0.3166	10.664	0.837	0.860	0.659	0.063	1.003	0.622
0.3250	10.651	0.831	0.860	0.659	0.069	1.003	0.628
0.3333	10.639	0.831	0.854	0.659	0.069	1.003	0.622
0.3500	10.620	0.831	0.854	0.659	0.069	0.997	0.628
0.3666	10.588	0.831	0.847	0.659	0.069	1.003	0.628
0.3833	10.563	0.831	0.847	0.659	0.063	1.003	0.622
0.4000	10.537	0.831	0.841	0.659	0.069	1.003	0.622
0.4166	10.506	0.831	0.841	0.659	0.069	0.997	0.622
0.4333	10.480	0.831	0.841	0.659	0.069	1.003	0.622
0.4500	10.455	0.831	0.841	0.659	0.069	1.003	0.622
0.4666	10.430	0.831	0.841	0.659	0.069	1.003	0.622
0.4833	10.404	0.831	0.841	0.659	0.069	1.003	0.622
0.5000	10.373	0.831	0.841	0.659	0.069	1.003	0.622
0.5166	10.347	0.831	0.841	0.659	0.069	1.003	0.622
0.5333	10.322	0.831	0.835	0.659	0.069	1.003	0.622
0.5500	10.297	0.831	0.847	0.659	0.069	1.003	0.622
0.5666	10.271	0.831	0.835	0.659	0.069	0.997	0.622
0.5833	10.240	0.831	0.841	0.659	0.069	1.003	0.622
0.6000	10.215	0.824	0.835	0.659	0.069	1.003	0.622
0.6166	10.189	0.831	0.835	0.659	0.069	1.003	0.622
0.6333	10.164	0.824	0.835	0.659	0.063	1.003	0.622
0.6500	10.139	0.824	0.835	0.659	0.069	0.997	0.622
0.6666	10.113	0.824	0.828	0.659	0.069	1.003	0.622
0.6833	10.082	0.824	0.835	0.659	0.069	1.003	0.622
0.7000	10.056	0.824	0.822	0.659	0.069	1.003	0.628
0.7166	10.031	0.824	0.828	0.659	0.063	0.997	0.622
0.7333	10.006	0.824	0.828	0.659	0.069	1.003	0.622
0.7500	9.974	0.824	0.835	0.659	0.063	1.003	0.622
0.7666	9.949	0.824	0.828	0.659	0.069	0.997	0.622
0.7833	9.923	0.824	0.835	0.659	0.069	1.003	0.622
0.8000	9.898	0.824	0.828	0.659	0.069	1.003	0.628
0.8166	9.873	0.824	0.828	0.659	0.063	1.003	0.622
0.8333	9.841	0.824	0.828	0.659	0.069	1.003	0.622
0.8500	9.816	0.824	0.835	0.659	0.063	0.997	0.622
0.8666	9.790	0.824	0.835	0.659	0.069	1.003	0.622
0.8833	9.765	0.824	0.828	0.659	0.069	1.003	0.622
0.9000	9.734	0.824	0.835	0.659	0.069	1.003	0.622
0.9166	9.708	0.824	0.835	0.659	0.063	1.003	0.622
0.9333	9.677	0.824	0.828	0.659	0.069	1.003	0.622
0.9500	9.727	0.824	0.841	0.659	0.069	1.003	0.622
0.9666	9.620	0.824	0.828	0.659	0.069	1.003	0.628
0.9833	9.588	0.824	0.828	0.659	0.069	1.003	0.622
1.0000	9.563	0.824	0.828	0.659	0.063	1.003	0.622
1.2000	9.221	0.818	0.828	0.659	0.063	1.003	0.622
1.4000	8.892	0.818	0.828	0.659	0.069	0.997	0.622
1.6000	8.562	0.812	0.796	0.659	0.063	0.997	0.622
1.8000	8.252	0.805	0.809	0.659	0.069	1.003	0.622
2.0000	7.961	0.805	0.815	0.659	0.063	0.997	0.622
2.2000	7.663	0.805	0.828	0.659	0.069	1.003	0.622

ERAFS1\VOL1:GEOT\ENGDATA\
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Elapsed Time	Input 1	Input 2	Input 3	Input 4	Input 5	Input 6	Input 7
2.4000	7.461	0.799	0.815	0.659	0.069	1.003	0.622
2.6000	7.353	0.799	0.809	0.659	0.069	0.997	0.622
2.8000	7.245	0.793	0.803	0.659	0.063	1.003	0.622
3.0000	7.144	0.793	0.809	0.652	0.069	0.997	0.622
3.2000	7.043	0.786	0.803	0.652	0.069	0.997	0.622
3.4000	6.941	0.786	0.796	0.652	0.069	1.003	0.622
3.6000	6.846	0.786	0.803	0.652	0.063	0.997	0.622
3.8000	6.745	0.780	0.796	0.652	0.069	1.003	0.622
4.0000	6.650	0.780	0.790	0.652	0.069	0.997	0.622
4.2000	6.549	0.780	0.790	0.652	0.069	1.003	0.622
4.4000	6.454	0.774	0.790	0.652	0.069	1.003	0.616
4.6000	6.352	0.774	0.790	0.646	0.069	1.003	0.622
4.8000	6.257	0.774	0.790	0.646	0.069	0.997	0.622
5.0000	6.162	0.774	0.784	0.646	0.063	0.997	0.622
5.2000	6.067	0.767	0.784	0.646	0.063	1.003	0.616
5.4000	5.978	0.767	0.777	0.646	0.063	1.003	0.616
5.6000	5.883	0.767	0.777	0.646	0.069	1.003	0.616
5.8000	5.795	0.761	0.777	0.646	0.063	0.997	0.616
6.0000	5.712	0.761	0.784	0.646	0.063	1.003	0.616
6.2000	5.630	0.761	0.777	0.646	0.069	1.003	0.616
6.4000	5.548	0.754	0.777	0.646	0.063	1.003	0.616
6.6000	5.472	0.754	0.777	0.646	0.063	0.997	0.616
6.8000	5.395	0.754	0.771	0.646	0.069	1.003	0.616
7.0000	5.313	0.754	0.771	0.646	0.063	1.003	0.616
7.2000	5.237	0.748	0.771	0.646	0.063	1.003	0.616
7.4000	5.161	0.748	0.764	0.646	0.063	1.003	0.616
7.6000	5.091	0.748	0.771	0.646	0.069	1.003	0.609
7.8000	5.015	0.748	0.764	0.640	0.063	1.003	0.616
8.0000	4.946	0.748	0.771	0.640	0.069	1.003	0.616
8.2000	4.882	0.748	0.771	0.640	0.063	1.003	0.609
8.4000	4.812	0.748	0.764	0.640	0.069	1.003	0.616
8.6000	4.749	0.742	0.758	0.640	0.069	0.997	0.616
8.8000	4.692	0.742	0.758	0.640	0.069	1.003	0.609
9.0000	4.622	0.735	0.758	0.640	0.069	1.003	0.609
9.2000	4.559	0.735	0.758	0.640	0.063	0.997	0.616
9.4000	4.496	0.735	0.752	0.633	0.063	0.997	0.609
9.6000	4.426	0.735	0.752	0.633	0.063	1.003	0.616
9.8000	4.369	0.735	0.758	0.640	0.063	1.003	0.609
10.0000	4.305	0.735	0.771	0.640	0.069	1.003	0.616
12.0000	3.703	0.729	0.745	0.633	0.075	1.003	0.616
14.0000	3.209	0.710	0.733	0.627	0.082	1.003	0.609
16.0000	2.790	0.704	0.733	0.627	0.082	1.003	0.609
18.0000	2.423	0.697	0.707	0.621	0.082	1.003	0.609
20.0000	2.131	0.685	0.713	0.614	0.082	1.003	0.603
22.0000	1.884	0.678	0.688	0.608	0.082	1.003	0.597
24.0000	1.668	0.666	0.682	0.602	0.082	1.003	0.597
26.0000	1.503	0.659	0.669	0.602	0.082	1.003	0.590
28.0000	1.370	0.653	0.662	0.595	0.082	1.003	0.590
30.0000	1.249	0.647	0.624	0.589	0.082	1.003	0.584
32.0000	1.160	0.640	0.650	0.589	0.082	1.003	0.584
34.0000	1.078	0.634	0.643	0.583	0.082	1.003	0.578

Elapsed Time	Input 1	Input 2	Input 3	Input 4	Input 5	Input 6	Input 7
36.0000	1.015	0.628	0.637	0.576	0.082	1.003	0.578
38.0000	0.957	0.621	0.624	0.576	0.075	1.003	0.571
40.0000	0.907	0.615	0.624	0.570	0.082	1.003	0.565
42.0000	0.862	0.609	0.618	0.563	0.082	1.003	0.565
44.0000	0.824	0.602	0.611	0.563	0.075	1.003	0.559
46.0000	0.786	0.602	0.605	0.557	0.082	1.003	0.559
48.0000	0.761	0.596	0.599	0.551	0.082	1.003	0.552
50.0000	0.742	0.590	0.592	0.551	0.082	1.003	0.546
52.0000	0.723	0.583	0.592	0.544	0.082	0.997	0.546
54.0000	0.704	0.577	0.586	0.544	0.082	0.997	0.546
56.0000	0.685	0.577	0.586	0.544	0.082	0.997	0.539
58.0000	0.672	0.577	0.580	0.538	0.082	0.997	0.539
60.0000	0.659	0.571	0.573	0.538	0.082	0.997	0.533
62.0000	0.647	0.564	0.573	0.532	0.082	0.997	0.533
64.0000	0.640	0.564	0.567	0.525	0.082	0.997	0.527
66.0000	0.628	0.558	0.560	0.519	0.082	0.997	0.527
68.0000	0.621	0.551	0.554	0.519	0.082	0.997	0.520
70.0000	0.615	0.551	0.554	0.513	0.082	0.997	0.520
72.0000	0.609	0.545	0.554	0.513	0.082	0.997	0.514
74.0000	0.602	0.545	0.548	0.513	0.082	0.990	0.514
76.0000	0.596	0.539	0.541	0.513	0.082	0.990	0.514
78.0000	0.596	0.539	0.541	0.506	0.082	0.997	0.508
80.0000	0.590	0.532	0.541	0.506	0.082	0.997	0.508
82.0000	0.583	0.532	0.535	0.500	0.082	0.990	0.501
84.0000	0.583	0.526	0.535	0.500	0.082	0.990	0.501
86.0000	0.577	0.526	0.529	0.494	0.082	0.990	0.501
88.0000	0.577	0.526	0.529	0.494	0.082	0.990	0.495
90.0000	0.571	0.520	0.529	0.494	0.082	0.990	0.495
92.0000	0.571	0.520	0.522	0.487	0.082	0.990	0.495
94.0000	0.564	0.513	0.516	0.487	0.082	0.990	0.489
96.0000	0.564	0.513	0.516	0.481	0.082	0.984	0.489
98.0000	0.558	0.507	0.516	0.481	0.082	0.984	0.482
100.000	0.551	0.507	0.509	0.481	0.082	0.990	0.482
115.000	0.532	0.494	0.497	0.468	0.082	0.984	0.470
130.000	0.520	0.475	0.478	0.449	0.082	0.978	0.451
145.000	0.507	0.469	0.465	0.443	0.082	0.971	0.444
160.000	0.488	0.450	0.452	0.430	0.082	0.965	0.431
175.000	0.475	0.437	0.446	0.418	0.088	0.959	0.419
190.000	0.469	0.425	0.433	0.405	0.088	0.952	0.412
205.000	0.456	0.418	0.420	0.399	0.088	0.946	0.400
220.000	0.450	0.406	0.414	0.392	0.094	0.946	0.393
235.000	0.437	0.399	0.401	0.380	0.094	0.940	0.381
250.000	0.425	0.387	0.388	0.373	0.094	0.933	0.374
265.000	0.418	0.387	0.388	0.367	0.101	0.927	0.368
280.000	0.412	0.374	0.376	0.361	0.101	0.921	0.362
295.000	0.406	0.367	0.369	0.354	0.101	0.914	0.355
310.000	0.399	0.361	0.363	0.348	0.101	0.908	0.349
325.000	0.387	0.355	0.356	0.342	0.107	0.902	0.343
340.000	0.380	0.342	0.350	0.329	0.107	0.895	0.336
355.000	0.380	0.342	0.344	0.329	0.107	0.889	0.330
370.000	0.374	0.342	0.344	0.329	0.113	0.882	0.330

Elapsed Time	Input 1	Input 2	Input 3	Input 4	Input 5	Input 6	Input 7
385.000	0.367	0.336	0.331	0.316	0.113	0.882	0.323
400.000	0.361	0.329	0.331	0.316	0.113	0.870	0.317
415.000	0.355	0.323	0.325	0.316	0.113	0.870	0.311
430.000	0.355	0.323	0.318	0.310	0.119	0.863	0.311
445.000	0.348	0.317	0.318	0.310	0.119	0.857	0.304
460.000	0.342	0.310	0.312	0.297	0.119	0.851	0.298
475.000	0.329	0.298	0.299	0.285	0.119	0.844	0.285
490.000	0.329	0.298	0.299	0.285	0.126	0.838	0.285
505.000	0.329	0.298	0.299	0.285	0.126	0.832	0.285
520.000	0.329	0.298	0.293	0.285	0.126	0.825	0.285
535.000	0.323	0.291	0.286	0.278	0.126	0.825	0.279
550.000	0.317	0.285	0.286	0.278	0.126	0.819	0.279
565.000	0.317	0.285	0.280	0.272	0.082	0.813	0.273
580.000	0.310	0.279	0.280	0.272	0.082	0.806	0.273
595.000	0.310	0.279	0.280	0.272	0.082	0.800	0.273
610.000	0.310	0.279	0.274	0.266	0.082	0.800	0.266
625.000	0.304	0.272	0.274	0.266	0.082	0.794	0.266
640.000	0.304	0.272	0.267	0.259	0.082	0.787	0.260
655.000	0.298	0.266	0.261	0.259	0.082	0.781	0.254
670.000	0.291	0.260	0.261	0.253	0.082	0.781	0.254
685.000	0.291	0.260	0.261	0.253	0.082	0.774	0.254
700.000	0.285	0.253	0.254	0.247	0.082	0.768	0.247
715.000	0.285	0.253	0.254	0.247	0.082	0.762	0.247
730.000	0.285	0.253	0.248	0.247	0.082	0.755	0.247
745.000	0.279	0.247	0.242	0.240	0.082	0.755	0.241
760.000	0.272	0.247	0.242	0.240	0.082	0.749	0.235
775.000	0.272	0.247	0.242	0.240	0.082	0.743	0.235
790.000	0.279	0.247	0.242	0.240	0.082	0.743	0.235
805.000	0.272	0.241	0.242	0.234	0.082	0.736	0.235
820.000	0.272	0.241	0.242	0.240	0.082	0.730	0.235
835.000	0.266	0.241	0.235	0.234	0.082	0.730	0.235
850.000	0.266	0.241	0.235	0.234	0.082	0.724	0.228
865.000	0.266	0.234	0.235	0.228	0.082	0.717	0.228
880.000	0.266	0.234	0.229	0.228	0.082	0.717	0.228
895.000	0.266	0.234	0.229	0.228	0.082	0.711	0.228
910.000	0.260	0.228	0.229	0.221	0.082	0.711	0.222
925.000	0.253	0.228	0.223	0.221	0.082	0.705	0.222
940.000	0.253	0.222	0.216	0.215	0.082	0.698	0.209
955.000	0.253	0.228	0.223	0.221	0.082	0.698	0.215
970.000	0.247	0.222	0.216	0.209	0.082	0.692	0.215
985.000	0.247	0.215	0.210	0.209	0.082	0.692	0.209
1000.00	0.241	0.215	0.210	0.209	0.082	0.686	0.209
1015.00	0.241	0.209	0.210	0.202	0.082	0.679	0.203
1030.00	0.241	0.209	0.210	0.202	0.082	0.673	0.203
1045.00	0.241	0.209	0.210	0.202	0.082	0.673	0.203
1060.00	0.241	0.209	0.203	0.202	0.082	0.667	0.203
1075.00	0.234	0.203	0.203	0.202	0.082	0.667	0.203
1090.00	0.234	0.209	0.203	0.202	0.082	0.667	0.196
1105.00	0.228	0.203	0.197	0.196	0.082	0.660	0.196
1120.00	0.228	0.203	0.197	0.196	0.082	0.660	0.190
1135.00	0.228	0.196	0.197	0.196	0.082	0.654	0.196

Elapsed Time	Input 1	Input 2	Input 3	Input 4	Input 5	Input 6	Input 7
1150.00	0.228	0.196	0.191	0.190	0.082	0.647	0.190
1165.00	0.222	0.196	0.191	0.190	0.082	0.647	0.190
1180.00	0.228	0.196	0.197	0.196	0.082	0.641	0.196
1195.00	0.222	0.196	0.191	0.196	0.082	0.641	0.190
1210.00	0.222	0.196	0.191	0.190	0.082	0.635	0.190
1225.00	0.228	0.196	0.191	0.190	0.082	0.635	0.190
1240.00	0.222	0.196	0.191	0.190	0.082	0.628	0.190
1255.00	0.222	0.196	0.191	0.190	0.082	0.628	0.190
1270.00	0.228	0.196	0.191	0.196	0.082	0.628	0.196
1285.00	0.222	0.196	0.191	0.190	0.082	0.628	0.190
1300.00	0.222	0.190	0.191	0.190	0.082	0.622	0.190
1315.00	0.222	0.190	0.191	0.190	0.082	0.622	0.184
1330.00	0.222	0.190	0.191	0.190	0.082	0.616	0.184
1345.00	0.215	0.190	0.184	0.190	0.082	0.616	0.184
1360.00	0.215	0.190	0.184	0.183	0.082	0.616	0.177
1375.00	0.215	0.183	0.184	0.183	0.082	0.609	0.184
1390.00	0.215	0.190	0.184	0.183	0.088	0.609	0.184
1405.00	0.215	0.190	0.184	0.183	0.088	0.609	0.184

SE2000
Environmental Logger
11/09 16:45

Unit# 159 Test 1

Setups:	INPUT 1	INPUT 2	INPUT 3	INPUT 4	INPUT 5	INPUT 6	INPUT 7
Type	Level (F)	Level (F)	Level (F)	Level (F)	Level (F)	Level (F)	Level (F)
Mode	TOC	TOC	TOC	TOC	TOC	TOC	TOC
I.D.	1785	PZ-1B	PZ-4	PZ-2	PZ-1A	PZ-1C	1232
Reference	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SG	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Linearity	0.117	0.082	0.107	0.112	0.106	0.096	0.096
Scale factor	20.005	20.019	20.094	19.961	19.989	20.037	20.063
Offset	-0.005	0.081	0.035	0.024	-0.066	0.018	0.051
Delay mSEC	50.000	50.000	50.000	50.000	50.000	50.000	50.000

Step 1 11/04 19:44:32

Elapsed Time	Input 1	Input 2	Input 3	Input 4	Input 5	Input 6	Input 7
0.0000	10.854	0.482	0.516	0.354	0.018	0.076	0.324
0.0083	10.848	0.482	0.516	0.354	0.018	0.076	0.324
0.0166	10.854	0.482	0.516	0.354	0.018	0.076	0.324
0.0250	10.854	0.482	0.516	0.354	0.018	0.076	0.324
0.0333	10.854	0.482	0.516	0.354	0.018	0.076	0.324
0.0416	10.854	0.482	0.516	0.354	0.018	0.076	0.324
0.0500	10.848	0.482	0.516	0.354	0.018	0.076	0.324
0.0583	10.835	0.482	0.516	0.354	0.018	0.076	0.324
0.0666	10.822	0.482	0.516	0.354	0.018	0.076	0.324
0.0750	10.810	0.482	0.516	0.354	0.018	0.076	0.324
0.0833	10.791	0.482	0.516	0.354	0.018	0.076	0.324
0.0916	10.778	0.482	0.516	0.354	0.018	0.076	0.324
0.1000	10.765	0.482	0.516	0.354	0.018	0.076	0.324
0.1083	10.753	0.482	0.516	0.354	0.018	0.076	0.324
0.1166	10.734	0.482	0.516	0.354	0.018	0.076	0.324
0.1250	10.721	0.482	0.516	0.354	0.018	0.076	0.324
0.1333	10.702	0.482	0.516	0.354	0.018	0.076	0.324
0.1416	10.690	0.482	0.516	0.354	0.018	0.076	0.324
0.1500	10.677	0.482	0.516	0.354	0.025	0.076	0.324
0.1583	10.664	0.482	0.516	0.354	0.018	0.076	0.324
0.1666	10.645	0.482	0.522	0.354	0.018	0.076	0.324
0.1750	10.633	0.482	0.516	0.354	0.025	0.076	0.324
0.1833	10.620	0.482	0.516	0.354	0.018	0.076	0.324
0.1916	10.607	0.482	0.516	0.354	0.018	0.076	0.324
0.2000	10.595	0.482	0.516	0.354	0.018	0.076	0.324
0.2083	10.576	0.482	0.516	0.354	0.018	0.076	0.324
0.2166	10.563	0.482	0.516	0.354	0.018	0.076	0.324
0.2250	10.550	0.482	0.516	0.354	0.018	0.076	0.324
0.2333	10.538	0.482	0.516	0.354	0.018	0.076	0.324
0.2416	10.519	0.482	0.516	0.354	0.025	0.076	0.324
0.2500	10.506	0.482	0.516	0.354	0.018	0.076	0.324
0.2583	10.493	0.482	0.516	0.354	0.018	0.076	0.324
0.2666	10.481	0.482	0.516	0.354	0.018	0.076	0.324
0.2750	10.468	0.482	0.516	0.361	0.018	0.076	0.324
0.2833	10.449	0.482	0.516	0.354	0.018	0.076	0.324
0.2916	10.436	0.482	0.516	0.354	0.018	0.076	0.324

Elapsed Time	Input 1	Input 2	Input 3	Input 4	Input 5	Input 6	Input 7
0.3000	10.424	0.482	0.516	0.354	0.018	0.076	0.324
0.3083	10.411	0.482	0.516	0.354	0.018	0.076	0.324
0.3166	10.398	0.482	0.516	0.354	0.018	0.076	0.324
0.3250	10.379	0.482	0.516	0.354	0.018	0.076	0.324
0.3333	10.367	0.482	0.516	0.354	0.018	0.076	0.324
0.3500	10.341	0.482	0.516	0.354	0.025	0.076	0.324
0.3666	10.310	0.482	0.516	0.354	0.018	0.076	0.324
0.3833	10.285	0.482	0.516	0.354	0.025	0.076	0.324
0.4000	10.253	0.482	0.516	0.354	0.018	0.076	0.324
0.4166	10.228	0.482	0.509	0.354	0.018	0.076	0.324
0.4333	10.202	0.482	0.516	0.354	0.018	0.076	0.324
0.4500	10.171	0.469	0.516	0.354	0.025	0.076	0.324
0.4666	10.145	0.482	0.516	0.354	0.018	0.076	0.324
0.4833	10.114	0.482	0.516	0.354	0.025	0.076	0.324
0.5000	10.082	0.482	0.516	0.354	0.018	0.076	0.324
0.5166	10.057	0.482	0.516	0.354	0.018	0.076	0.324
0.5333	10.025	0.488	0.516	0.354	0.018	0.076	0.324
0.5500	10.000	0.482	0.516	0.354	0.018	0.076	0.324
0.5666	9.968	0.482	0.516	0.354	0.018	0.076	0.324
0.5833	9.943	0.482	0.516	0.354	0.025	0.076	0.324
0.6000	9.911	0.482	0.516	0.354	0.018	0.076	0.324
0.6166	9.886	0.482	0.516	0.354	0.018	0.076	0.324
0.6333	9.854	0.482	0.516	0.354	0.018	0.076	0.324
0.6500	9.829	0.482	0.516	0.354	0.018	0.076	0.324
0.6666	9.797	0.482	0.516	0.354	0.025	0.076	0.324
0.6833	9.766	0.482	0.509	0.354	0.025	0.076	0.324
0.7000	9.740	0.482	0.516	0.354	0.018	0.076	0.324
0.7166	9.709	0.482	0.516	0.354	0.025	0.076	0.324
0.7333	9.683	0.482	0.516	0.354	0.018	0.076	0.317
0.7500	9.652	0.482	0.509	0.354	0.018	0.076	0.324
0.7666	9.626	0.482	0.509	0.354	0.018	0.076	0.324
0.7833	9.595	0.482	0.509	0.354	0.018	0.076	0.324
0.8000	9.563	0.482	0.509	0.354	0.018	0.076	0.324
0.8166	9.538	0.482	0.509	0.354	0.018	0.076	0.324
0.8333	9.506	0.482	0.509	0.354	0.018	0.076	0.324
0.8500	9.481	0.482	0.509	0.354	0.018	0.076	0.324
0.8666	9.455	0.482	0.509	0.354	0.025	0.076	0.324
0.8833	9.424	0.482	0.509	0.354	0.018	0.076	0.324
0.9000	9.392	0.482	0.509	0.354	0.018	0.076	0.324
0.9166	9.367	0.475	0.509	0.354	0.018	0.076	0.324
0.9333	9.335	0.482	0.509	0.354	0.018	0.076	0.324
0.9500	9.310	0.482	0.509	0.354	0.025	0.076	0.324
0.9666	9.278	0.482	0.509	0.354	0.018	0.076	0.324
0.9833	9.253	0.482	0.509	0.354	0.018	0.076	0.324
1.0000	9.221	0.475	0.509	0.354	0.018	0.076	0.324
1.2000	8.873	0.482	0.509	0.354	0.018	0.076	0.324
1.4000	8.537	0.482	0.509	0.354	0.018	0.076	0.324
1.6000	8.214	0.482	0.503	0.354	0.018	0.076	0.324
1.8000	7.904	0.475	0.497	0.354	0.018	0.076	0.324
2.0000	7.588	0.475	0.497	0.354	0.018	0.076	0.324
2.2000	7.296	0.475	0.497	0.354	0.018	0.076	0.324

Elapsed Time	Input 1	Input 2	Input 3	Input 4	Input 5	Input 6	Input 7
2.4000	7.011	0.475	0.490	0.354	0.018	0.076	0.324
2.6000	6.720	0.469	0.490	0.354	0.018	0.076	0.324
2.8000	6.441	0.469	0.490	0.354	0.018	0.076	0.324
3.0000	6.156	0.469	0.484	0.354	0.018	0.076	0.324
3.2000	5.877	0.469	0.484	0.354	0.018	0.076	0.324
3.4000	5.617	0.463	0.478	0.354	0.018	0.076	0.324
3.6000	5.364	0.463	0.478	0.354	0.018	0.076	0.324
3.8000	5.117	0.456	0.478	0.354	0.018	0.076	0.324
4.0000	4.895	0.463	0.471	0.354	0.018	0.076	0.324
4.2000	4.667	0.456	0.471	0.348	0.018	0.076	0.324
4.4000	4.439	0.456	0.465	0.348	0.018	0.076	0.324
4.6000	4.204	0.456	0.465	0.348	0.018	0.076	0.324
4.8000	3.982	0.450	0.458	0.348	0.018	0.076	0.324
5.0000	3.760	0.450	0.458	0.348	0.018	0.076	0.317
5.2000	3.558	0.444	0.458	0.348	0.018	0.076	0.324
5.4000	3.367	0.444	0.458	0.348	0.018	0.076	0.324
5.6000	3.177	0.444	0.452	0.348	0.018	0.076	0.324
5.8000	2.993	0.437	0.446	0.348	0.018	0.076	0.317
6.0000	2.816	0.437	0.446	0.348	0.018	0.076	0.324
6.2000	2.632	0.431	0.446	0.348	0.018	0.076	0.317
6.4000	2.473	0.431	0.439	0.342	0.018	0.082	0.317
6.6000	2.309	0.431	0.439	0.342	0.018	0.076	0.324
6.8000	2.144	0.425	0.433	0.342	0.018	0.076	0.317
7.0000	1.985	0.425	0.433	0.342	0.018	0.076	0.317
7.2000	1.827	0.425	0.427	0.342	0.018	0.076	0.317
7.4000	1.674	0.418	0.427	0.342	0.018	0.076	0.324
7.6000	1.541	0.418	0.420	0.342	0.018	0.076	0.317
7.8000	1.414	0.418	0.420	0.342	0.018	0.076	0.317
8.0000	1.294	0.412	0.414	0.335	0.018	0.076	0.317
8.2000	1.173	0.412	0.414	0.335	0.018	0.076	0.317
8.4000	1.065	0.406	0.407	0.335	0.018	0.076	0.317
8.6000	0.958	0.406	0.407	0.335	0.018	0.076	0.317
8.8000	0.862	0.406	0.401	0.335	0.025	0.082	0.317
9.0000	0.761	0.399	0.395	0.335	0.018	0.076	0.311
9.2000	0.672	0.399	0.395	0.335	0.025	0.082	0.311
9.4000	0.577	0.393	0.395	0.335	0.018	0.082	0.317
9.6000	0.494	0.393	0.388	0.329	0.018	0.076	0.311
9.8000	0.406	0.393	0.388	0.329	0.018	0.082	0.311
10.0000	0.336	0.393	0.382	0.329	0.018	0.076	0.317
12.0000	-0.234	0.361	0.344	0.316	0.037	0.082	0.317
14.0000	-0.514	0.323	0.293	0.304	0.037	0.082	0.311
16.0000	-0.628	0.285	0.261	0.291	0.037	0.088	0.298
18.0000	-0.685	0.266	0.242	0.278	0.037	0.088	0.292
20.0000	-0.710	0.247	0.223	0.266	0.037	0.088	0.285
22.0000	-0.729	0.228	0.210	0.259	0.037	0.088	0.279
24.0000	-0.742	0.215	0.191	0.247	0.037	0.088	0.266
26.0000	-0.755	0.203	0.178	0.240	0.018	0.082	0.254
28.0000	-0.761	0.190	0.165	0.228	0.018	0.082	0.241
30.0000	-0.767	0.184	0.159	0.221	0.037	0.088	0.247
32.0000	-0.774	0.171	0.146	0.215	0.037	0.088	0.241
34.0000	-0.780	0.164	0.140	0.202	0.037	0.088	0.228

Elapsed Time	Input 1	Input 2	Input 3	Input 4	Input 5	Input 6	Input 7
36.0000	-0.786	0.152	0.127	0.202	0.037	0.088	0.222
38.0000	-0.786	0.152	0.127	0.196	0.037	0.088	0.222
40.0000	-0.793	0.139	0.121	0.196	0.037	0.088	0.222
42.0000	-0.793	0.139	0.114	0.190	0.037	0.088	0.216
44.0000	-0.799	0.133	0.101	0.183	0.037	0.088	0.209
46.0000	-0.799	0.126	0.101	0.183	0.037	0.088	0.203
48.0000	-0.799	0.120	0.089	0.171	0.037	0.088	0.203
50.0000	-0.805	0.114	0.082	0.164	0.037	0.088	0.196
52.0000	-0.805	0.107	0.076	0.164	0.037	0.088	0.190
54.0000	-0.812	0.101	0.070	0.158	0.037	0.088	0.184
56.0000	-0.812	0.095	0.070	0.152	0.037	0.088	0.184
58.0000	-0.818	0.088	0.063	0.152	0.037	0.088	0.177
60.0000	-0.818	0.082	0.057	0.145	0.037	0.088	0.171
62.0000	-0.818	0.076	0.050	0.139	0.037	0.088	0.165
64.0000	-0.824	0.069	0.044	0.133	0.037	0.088	0.165
66.0000	-0.824	0.069	0.044	0.133	0.037	0.088	0.158
68.0000	-0.831	0.063	0.038	0.126	0.037	0.088	0.158
70.0000	-0.831	0.063	0.031	0.126	0.037	0.088	0.152
72.0000	-0.831	0.057	0.031	0.126	0.037	0.088	0.152
74.0000	-0.837	0.057	0.025	0.120	0.037	0.088	0.146
76.0000	-0.469	0.050	0.031	0.114	0.037	0.088	0.139
78.0000	-0.095	0.069	0.070	0.114	0.037	0.088	0.139
80.0000	0.031	0.088	0.089	0.120	0.037	0.088	0.139
82.0000	0.076	0.101	0.101	0.120	0.037	0.088	0.133
84.0000	0.101	0.114	0.108	0.120	0.037	0.095	0.133
86.0000	0.114	0.120	0.114	0.126	0.037	0.095	0.133
88.0000	0.120	0.120	0.121	0.126	0.037	0.095	0.133
90.0000	0.126	0.120	0.121	0.126	0.037	0.095	0.133
92.0000	0.126	0.126	0.121	0.126	0.037	0.095	0.133
94.0000	0.133	0.126	0.121	0.126	0.037	0.088	0.133
96.0000	0.133	0.133	0.127	0.126	0.037	0.095	0.133
98.0000	0.139	0.126	0.121	0.126	0.037	0.095	0.133
100.000	0.139	0.133	0.127	0.133	0.037	0.095	0.133

SE2000
Environmental Logger
11/09 16:36

Unit# 159 Test 1

Setups:	INPUT 1	INPUT 2	INPUT 3	INPUT 4	INPUT 5	INPUT 6	INPUT 7
Type	Level (F)	Level (F)	Level (F)	Level (F)	Level (F)	Level (F)	Level (F)
Mode	TOC	TOC	TOC	TOC	TOC	TOC	TOC
I.D.	1785	PZ-1B	PZ-4	PZ-2	PZ-1A	PZ-1C	1232
Reference	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SG	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Linearity	0.117	0.082	0.107	0.112	0.106	0.096	0.096
Scale factor	20.005	20.019	20.094	19.961	19.989	20.037	20.063
Offset	-0.005	0.081	0.035	0.024	-0.066	0.018	0.051
Delay mSEC	50.000	50.000	50.000	50.000	50.000	50.000	50.000

Step 0 11/04 13:30:01

Elapsed Time	Input 1	Input 2	Input 3	Input 4	Input 5	Input 6	Input 7
0.0000	0.000	0.050	-0.012	-0.006	0.000	-0.006	-0.012
0.0083	0.000	0.050	-0.012	-0.006	0.000	-0.006	-0.012
0.0166	0.000	0.050	-0.012	-0.006	-0.006	-0.006	-0.012
0.0250	0.000	0.050	-0.012	-0.006	0.000	-0.006	-0.012
0.0333	0.000	0.050	-0.012	-0.006	0.000	-0.006	-0.012
0.0416	0.000	0.050	-0.012	-0.006	0.006	0.000	-0.012
0.0500	0.012	0.050	-0.012	0.000	0.000	-0.006	-0.012
0.0583	0.012	0.050	-0.012	-0.006	0.000	-0.006	-0.012
0.0666	0.012	0.050	-0.012	-0.006	0.000	0.000	-0.012
0.0750	0.019	0.050	-0.012	0.000	0.000	-0.006	-0.012
0.0833	0.025	0.050	-0.012	-0.006	0.000	0.000	-0.012
0.0916	0.031	0.050	-0.012	-0.006	0.000	-0.006	-0.012
0.1000	0.050	0.050	-0.012	-0.006	0.000	-0.006	-0.012
0.1083	0.057	0.044	-0.012	0.000	0.000	-0.006	-0.012
0.1166	0.076	0.050	-0.012	-0.006	0.000	0.000	-0.012
0.1250	0.076	0.050	-0.012	-0.006	0.000	0.000	-0.012
0.1333	0.088	0.044	-0.012	0.000	0.000	-0.006	-0.012
0.1416	0.101	0.044	-0.012	-0.006	0.000	0.000	-0.012
0.1500	0.120	0.050	-0.012	0.000	0.000	0.000	-0.012
0.1583	0.126	0.044	-0.012	-0.006	0.000	-0.006	-0.012
0.1666	0.139	0.044	-0.012	0.000	0.000	-0.006	-0.012
0.1750	0.152	0.044	-0.012	0.000	0.000	-0.006	-0.012
0.1833	0.164	0.044	-0.012	0.000	0.000	0.000	-0.012
0.1916	0.177	0.044	-0.012	0.000	0.000	-0.006	-0.012
0.2000	0.190	0.044	-0.012	0.000	0.000	0.000	-0.012
0.2083	0.196	0.044	-0.012	0.000	0.000	0.000	-0.012
0.2166	0.203	0.044	-0.012	0.000	0.000	-0.006	-0.012
0.2250	0.209	0.044	-0.012	-0.006	0.000	-0.006	-0.012
0.2333	0.228	0.044	-0.012	-0.006	0.000	0.000	-0.006
0.2416	0.234	0.044	-0.012	0.000	0.000	0.000	-0.012
0.2500	0.241	0.044	-0.012	0.000	0.000	0.000	-0.012
0.2583	0.260	0.044	-0.012	-0.006	0.000	-0.006	-0.012
0.2666	0.272	0.044	-0.012	-0.006	0.000	0.000	-0.012
0.2750	0.279	0.044	-0.012	0.000	0.006	0.000	-0.012
0.2833	0.298	0.044	-0.012	-0.006	0.000	0.000	-0.012
0.2916	0.304	0.044	-0.012	-0.006	0.000	0.000	-0.012
0.3000	0.317	0.044	-0.012	-0.006	0.000	0.000	-0.012

Elapsed Time	Input 1	Input 2	Input 3	Input 4	Input 5	Input 6	Input 7
0.3083	0.329	0.038	-0.012	-0.006	0.000	0.000	-0.012
0.3166	0.329	0.038	-0.012	-0.006	0.000	-0.006	-0.012
0.3250	0.355	0.038	-0.012	0.000	0.000	-0.006	-0.012
0.3333	0.361	0.044	-0.012	-0.006	0.000	-0.006	-0.012
0.3500	0.380	0.038	-0.006	0.000	0.006	-0.006	-0.012
0.3666	0.406	0.038	-0.012	-0.006	0.000	0.000	-0.012
0.3833	0.425	0.038	-0.012	-0.006	0.006	-0.006	-0.012
0.4000	0.444	0.038	-0.012	-0.006	0.000	-0.006	-0.012
0.4166	0.469	0.038	-0.012	-0.006	0.000	-0.006	-0.012
0.4333	0.482	0.038	-0.012	-0.006	0.000	-0.006	-0.012
0.4500	0.494	0.038	-0.012	-0.006	0.000	0.000	-0.012
0.4666	0.507	0.038	-0.006	0.000	0.000	-0.006	-0.012
0.4833	0.520	0.038	-0.006	0.000	0.000	-0.006	-0.012
0.5000	0.526	0.038	-0.006	-0.006	0.000	0.000	-0.012
0.5166	0.539	0.038	-0.006	-0.006	0.000	-0.006	-0.012
0.5333	0.552	0.038	-0.006	0.000	0.000	-0.006	-0.012
0.5500	0.564	0.031	-0.006	-0.006	0.000	0.000	-0.012
0.5666	0.571	0.031	-0.006	-0.006	0.000	-0.006	-0.012
0.5833	0.583	0.031	-0.006	-0.006	0.000	-0.006	-0.012
0.6000	0.596	0.031	-0.006	-0.006	0.006	0.000	-0.012
0.6166	0.609	0.031	-0.006	-0.006	0.000	0.000	-0.012
0.6333	0.615	0.031	-0.006	-0.006	0.000	-0.006	-0.012
0.6500	0.628	0.031	-0.006	0.000	0.000	-0.006	-0.012
0.6666	0.634	0.031	-0.006	-0.006	0.000	-0.006	-0.012
0.6833	0.647	0.031	-0.006	0.000	0.000	0.000	-0.012
0.7000	0.653	0.031	-0.006	-0.006	0.006	-0.006	-0.012
0.7166	0.666	0.031	-0.006	-0.006	0.000	-0.006	-0.012
0.7333	0.678	0.031	-0.006	-0.006	0.000	-0.006	-0.012
0.7500	0.685	0.025	-0.006	0.000	0.006	0.000	-0.012
0.7666	0.697	0.031	0.000	-0.006	0.000	-0.006	-0.012
0.7833	0.710	0.031	-0.006	-0.006	0.000	-0.006	-0.012
0.8000	0.716	0.025	0.000	-0.006	0.000	0.000	-0.012
0.8166	0.729	0.031	0.000	-0.006	0.000	0.000	-0.012
0.8333	0.742	0.031	0.000	0.000	0.000	-0.006	-0.012
0.8500	0.748	0.025	0.000	-0.006	0.000	0.000	-0.012
0.8666	0.761	0.031	0.000	0.000	0.000	0.000	-0.012
0.8833	0.767	0.031	0.000	0.000	0.000	-0.006	-0.006
0.9000	0.780	0.031	0.000	0.000	0.000	0.000	-0.012
0.9166	0.786	0.025	0.000	-0.006	0.000	-0.006	-0.012
0.9333	0.799	0.025	0.000	0.000	0.006	0.000	-0.012
0.9500	0.805	0.031	0.000	0.000	0.006	0.000	-0.012
0.9666	0.818	0.025	0.000	0.000	0.000	-0.006	-0.012
0.9833	0.824	0.025	0.000	0.000	0.000	0.000	-0.012
1.0000	0.837	0.025	0.000	0.000	0.000	0.000	-0.012
1.2000	0.938	0.025	-0.006	-0.006	0.000	-0.006	-0.012
1.4000	1.021	0.025	0.006	0.000	0.000	-0.006	-0.012
1.6000	1.097	0.025	0.012	0.000	0.000	0.000	-0.012
1.8000	1.154	0.019	0.025	0.000	0.000	-0.006	-0.012
2.0000	1.211	0.019	0.019	0.000	0.000	-0.006	-0.012
2.2000	1.268	0.019	-0.019	0.000	0.000	0.000	-0.012
2.4000	1.319	0.019	0.019	0.000	0.000	-0.006	-0.012
2.6000	1.370	0.019	0.031	0.000	0.000	-0.006	-0.012

Elapsed Time	Input 1	Input 2	Input 3	Input 4	Input 5	Input 6	Input 7
2.8000	1.421	0.025	0.031	0.000	0.000	-0.006	-0.012
3.0000	1.465	0.025	0.031	0.000	0.000	0.000	-0.012
3.2000	1.509	0.025	0.019	0.000	0.000	-0.006	-0.012
3.4000	1.554	0.025	0.057	0.006	0.006	-0.006	-0.006
3.6000	1.605	0.025	0.038	0.006	0.000	-0.006	-0.012
3.8000	1.649	0.025	0.038	0.006	0.000	-0.006	-0.006
4.0000	1.700	0.031	0.044	0.006	0.000	-0.006	-0.006
4.2000	1.744	0.031	0.012	0.006	0.000	-0.006	-0.006
4.4000	1.788	0.031	0.038	0.006	0.000	-0.006	-0.012
4.6000	1.833	0.031	0.044	0.006	0.000	-0.006	-0.012
4.8000	1.871	0.031	0.076	0.006	0.000	0.000	-0.006
5.0000	1.922	0.031	0.057	0.006	0.000	0.000	-0.006
5.2000	1.966	0.038	0.057	0.012	0.000	-0.006	-0.006
5.4000	2.010	0.038	0.057	0.012	0.000	-0.006	-0.006
5.6000	2.055	0.038	0.057	0.012	0.006	-0.006	-0.006
5.8000	2.099	0.038	0.063	0.012	0.000	0.000	-0.006
6.0000	2.144	0.038	0.057	0.012	0.000	0.000	-0.006
6.2000	2.194	0.044	0.070	0.012	0.000	0.000	-0.006
6.4000	2.239	0.044	0.057	0.012	0.000	0.000	-0.006
6.6000	2.283	0.044	0.063	0.012	0.000	-0.006	-0.006
6.8000	2.328	0.050	0.070	0.012	0.000	-0.006	-0.006
7.0000	2.372	0.050	0.070	0.012	0.000	0.000	-0.006
7.2000	2.416	0.050	0.076	0.012	0.000	0.000	0.000
7.4000	2.461	0.057	0.076	0.019	0.000	0.000	-0.006
7.6000	2.505	0.057	0.076	0.019	0.006	0.000	0.000
7.8000	2.543	0.057	0.076	0.019	0.000	-0.006	-0.006
8.0000	2.575	0.057	0.108	0.019	0.000	-0.006	0.000
8.2000	2.607	0.057	0.076	0.019	0.000	0.000	-0.006
8.4000	2.645	0.063	0.082	0.019	0.000	-0.006	0.000
8.6000	2.683	0.063	0.082	0.019	0.006	0.000	-0.006
8.8000	2.714	0.063	0.082	0.019	0.006	0.000	0.000
9.0000	2.752	0.063	0.082	0.019	0.006	0.000	0.000
9.2000	2.790	0.063	0.089	0.019	0.006	0.000	0.000
9.4000	2.828	0.069	0.089	0.025	0.000	0.000	0.000
9.6000	2.860	0.063	0.082	0.019	0.000	0.000	0.000
9.8000	2.892	0.069	0.089	0.019	0.000	0.000	0.000
10.0000	2.930	0.069	0.108	0.025	0.000	0.000	0.000
12.0000	3.241	0.088	0.133	0.038	0.018	0.000	0.019
14.0000	3.501	0.101	0.133	0.044	0.018	0.000	0.019
16.0000	3.716	0.107	0.152	0.044	0.006	0.000	0.012
18.0000	3.957	0.120	0.159	0.050	0.018	0.006	0.025
20.0000	4.166	0.126	0.165	0.057	0.018	0.006	0.031
22.0000	4.382	0.139	0.165	0.063	0.018	0.006	0.031
24.0000	4.572	0.145	0.172	0.063	0.018	0.006	0.038
26.0000	4.730	0.152	0.178	0.069	0.025	0.006	0.038
28.0000	4.863	0.158	0.191	0.076	0.025	0.006	0.044
30.0000	4.977	0.164	0.203	0.076	0.018	0.006	0.050
32.0000	5.085	0.177	0.203	0.088	0.018	0.006	0.057
34.0000	5.187	0.184	0.210	0.088	0.025	0.012	0.063
36.0000	5.288	0.190	0.216	0.095	0.025	0.012	0.063
38.0000	5.383	0.190	0.223	0.095	0.025	0.012	0.063
40.0000	5.516	0.196	0.235	0.101	0.025	0.012	0.069

Elapsed Time	Input 1	Input 2	Input 3	Input 4	Input 5	Input 6	Input 7
42.0000	5.630	0.196	0.242	0.101	0.025	0.012	0.069
44.0000	5.732	0.203	0.248	0.107	0.025	0.012	0.076
46.0000	5.820	0.209	0.254	0.107	0.025	0.012	0.076
48.0000	5.896	0.215	0.254	0.114	0.025	0.012	0.082
50.0000	5.972	0.215	0.261	0.120	0.025	0.012	0.088
52.0000	6.036	0.222	0.254	0.120	0.025	0.012	0.088
54.0000	6.105	0.228	0.261	0.126	0.025	0.019	0.088
56.0000	6.162	0.234	0.261	0.126	0.025	0.019	0.095
58.0000	6.238	0.234	0.267	0.126	0.025	0.019	0.095
60.0000	6.308	0.234	0.267	0.133	0.025	0.019	0.095
62.0000	6.365	0.241	0.274	0.133	0.025	-0.044	0.101
64.0000	6.416	0.241	0.274	0.133	0.031	-0.076	0.101
66.0000	6.473	0.247	0.280	0.139	0.031	-0.082	0.108
68.0000	6.517	0.253	0.286	0.145	0.031	-0.082	0.108
70.0000	6.568	0.253	0.286	0.145	0.031	-0.082	0.108
72.0000	6.612	0.253	0.286	0.145	0.031	-0.082	0.108
74.0000	6.650	0.253	0.286	0.145	0.031	-0.082	0.114
76.0000	6.688	0.260	0.293	0.145	0.031	-0.082	0.114
78.0000	6.726	0.260	0.293	0.152	0.031	-0.082	0.120
80.0000	6.777	0.266	0.299	0.152	0.031	-0.082	0.120
82.0000	6.827	0.272	0.305	0.158	0.031	-0.082	0.127
84.0000	6.872	0.272	0.305	0.164	0.031	-0.082	0.133
86.0000	6.916	0.279	0.312	0.164	0.031	-0.082	0.133
88.0000	6.954	0.279	0.312	0.171	0.031	-0.076	0.133
90.0000	6.986	0.279	0.318	0.171	0.031	-0.076	0.133
92.0000	7.030	0.285	0.325	0.171	0.031	-0.076	0.139
94.0000	7.056	0.285	0.318	0.177	0.031	-0.076	0.139
96.0000	7.081	0.291	0.318	0.177	0.031	-0.076	0.146
98.0000	7.106	0.291	0.325	0.177	0.031	-0.069	0.146
100.000	7.132	0.291	0.325	0.183	0.031	-0.069	0.146
115.000	7.436	0.310	0.344	0.196	0.031	-0.063	0.165
130.000	7.727	0.329	0.363	0.215	0.031	-0.057	0.177
145.000	7.936	0.348	0.382	0.234	0.031	-0.050	0.196
160.000	8.107	0.361	0.395	0.240	0.031	-0.038	0.209
175.000	8.284	0.380	0.414	0.259	0.031	-0.025	0.228
190.000	8.461	0.393	0.427	0.272	0.031	-0.019	0.235
205.000	8.601	0.399	0.433	0.278	0.031	-0.012	0.247
220.000	8.778	0.406	0.439	0.285	0.031	0.000	0.254
235.000	9.120	0.418	0.452	0.291	0.031	0.006	0.260
250.000	9.253	0.425	0.458	0.297	0.031	0.012	0.266
265.000	9.335	0.425	0.465	0.304	0.037	0.025	0.273
280.000	9.430	0.437	0.471	0.310	0.037	0.031	0.285
295.000	9.506	0.444	0.478	0.316	0.037	0.038	0.292
310.000	9.848	0.450	0.484	0.323	0.037	0.050	0.298
325.000	10.031	0.463	0.497	0.335	0.037	0.057	0.311
340.000	10.322	0.469	0.503	0.342	0.037	0.063	0.311
355.000	10.569	0.475	0.509	0.348	0.037	0.069	0.317
370.000	10.803	0.488	0.516	0.354	0.037	0.076	0.330

SE2000
Environmental Logger
11/01 09:49

Unit# 159 Test 1

Setups:	INPUT 1	INPUT 2	INPUT 3	INPUT 4	INPUT 5	INPUT 6	INPUT 7
Type	Level (F)	Level (F)	Level (F)	Level (F)	Level (F)	Level (F)	Level (F)
Mode	Surface	Surface	Surface	Surface	Surface	Surface	Surface
I.D.	1785	PZ1B	PZ1C	PZ1A	PZ2	PZ4	1232
Reference	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SG	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Linearity	0.117	0.082	0.096	0.106	0.112	0.107	0.096
Scale factor	20.005	20.019	20.037	19.989	19.961	20.094	20.063
Offset	-0.005	0.081	0.018	-0.066	0.024	0.035	0.051
Delay mSEC	50.000	50.000	50.000	50.000	50.000	50.000	50.000

Step 0 10/25 18:30:01

Elapsed Time	Input 1	Input 2	Input 3	Input 4	Input 5	Input 6	Input 7
0.0000	-0.006	0.000	0.031	0.006	-0.006	-0.006	-0.006
15.0000	-0.006	0.000	0.031	0.000	-0.012	-0.012	-0.006
30.0000	-0.012	-0.006	0.038	0.000	-0.012	-0.019	-0.012
45.0000	-0.012	-0.006	0.044	0.000	-0.012	-0.019	-0.006
60.0000	-0.012	-0.012	0.050	0.000	-0.018	-0.025	-0.012
75.0000	-0.012	-0.006	0.057	0.000	-0.018	-0.025	-0.012
90.0000	-0.019	-0.012	0.063	0.000	-0.018	-0.031	-0.012
105.000	-0.019	-0.012	0.069	0.000	-0.018	-0.025	-0.012
120.000	-0.019	-0.012	0.069	-0.006	-0.018	-0.025	-0.012
135.000	-0.019	-0.012	0.082	-0.006	-0.018	-0.031	-0.012
150.000	-0.019	-0.012	0.082	-0.006	-0.018	-0.031	-0.012
165.000	-0.019	-0.012	0.088	-0.006	-0.018	-0.031	-0.012
180.000	-0.019	-0.012	0.095	-0.006	-0.018	-0.031	-0.006
195.000	-0.019	-0.012	0.101	-0.006	-0.018	-0.031	-0.019
210.000	-0.019	-0.019	0.107	-0.006	-0.025	-0.038	-0.019
225.000	-0.019	-0.019	0.114	-0.006	-0.025	-0.038	-0.012
240.000	-0.025	-0.019	0.114	-0.006	-0.025	-0.038	-0.019
255.000	-0.025	-0.019	0.120	-0.006	-0.025	-0.031	-0.019
270.000	-0.019	-0.012	0.127	-0.012	-0.018	-0.031	-0.019
285.000	-0.019	-0.012	0.133	-0.012	-0.018	-0.031	-0.012
300.000	-0.019	-0.012	0.139	-0.012	-0.018	-0.031	-0.012
315.000	-0.019	-0.019	0.146	-0.012	-0.025	-0.031	-0.019
330.000	-0.019	-0.012	0.146	-0.012	-0.018	-0.031	-0.019
345.000	-0.025	-0.019	0.152	-0.012	-0.025	-0.038	-0.019
360.000	-0.025	-0.019	0.158	-0.012	-0.025	-0.038	-0.019
375.000	-0.025	-0.019	0.165	-0.012	-0.018	-0.038	-0.019
390.000	-0.019	-0.019	0.171	-0.012	-0.018	-0.031	-0.019
405.000	-0.025	-0.019	0.171	-0.012	-0.025	-0.038	-0.019
420.000	-0.025	-0.019	0.177	-0.012	-0.025	-0.038	-0.019
435.000	-0.025	-0.019	0.184	-0.012	-0.025	-0.038	-0.019
450.000	-0.025	-0.019	0.184	-0.012	-0.025	-0.038	-0.019
465.000	-0.025	-0.019	0.190	-0.012	-0.025	-0.038	-0.019
480.000	-0.025	-0.019	0.196	-0.012	-0.025	-0.038	-0.025
495.000	-0.025	-0.019	0.203	-0.012	-0.025	-0.038	-0.019
510.000	-0.025	-0.019	0.209	-0.012	-0.025	-0.038	-0.019
525.000	-0.031	-0.025	0.215	-0.018	-0.031	-0.044	-0.025
540.000	-0.031	-0.025	0.215	-0.018	-0.031	-0.044	-0.025

Elapsed Time	Input 1	Input 2	Input 3	Input 4	Input 5	Input 6	Input 7
555.000	-0.025	-0.019	0.222	-0.018	-0.025	-0.044	-0.019
570.000	-0.025	-0.025	0.228	-0.018	-0.025	-0.044	-0.025
585.000	-0.025	-0.025	0.235	-0.018	-0.031	-0.044	-0.025
600.000	-0.025	-0.019	0.241	-0.018	-0.025	-0.038	-0.025
615.000	-0.031	-0.025	0.241	-0.018	-0.031	-0.044	-0.025
630.000	-0.025	-0.025	0.247	-0.018	-0.031	-0.044	-0.025
645.000	-0.031	-0.025	0.254	-0.018	-0.031	-0.044	-0.025
660.000	-0.031	-0.025	0.254	-0.018	-0.031	-0.044	-0.025
675.000	-0.031	-0.025	0.260	-0.018	-0.031	-0.044	-0.025
690.000	-0.031	-0.025	0.266	-0.018	-0.031	-0.050	-0.025
705.000	-0.031	-0.025	0.266	-0.018	-0.031	-0.044	-0.025
720.000	-0.031	-0.025	0.273	-0.018	-0.031	-0.044	-0.025
735.000	-0.038	-0.025	0.279	-0.025	-0.031	-0.044	-0.031
750.000	-0.038	-0.031	0.285	-0.025	-0.037	-0.050	-0.031
765.000	-0.031	-0.031	0.285	-0.018	-0.037	-0.044	-0.031
780.000	-0.031	-0.025	0.292	-0.025	-0.031	-0.050	-0.025
795.000	-0.031	-0.031	0.298	-0.025	-0.031	-0.050	-0.025
810.000	-0.038	-0.031	0.304	-0.025	-0.037	-0.050	-0.031
825.000	-0.038	-0.031	0.304	-0.025	-0.037	-0.050	-0.031
840.000	-0.038	-0.031	0.311	-0.025	-0.037	-0.050	-0.031
855.000	-0.038	-0.038	0.317	-0.025	-0.037	-0.057	-0.031
870.000	-0.038	-0.038	0.317	-0.025	-0.037	-0.050	-0.038
885.000	-0.038	-0.038	0.323	-0.025	-0.037	-0.057	-0.038
900.000	-0.038	-0.038	0.323	-0.025	-0.037	-0.057	-0.031
915.000	-0.044	-0.038	0.330	-0.025	-0.037	-0.057	-0.038
930.000	-0.044	-0.038	0.330	-0.025	-0.044	-0.057	-0.031
945.000	-0.044	-0.038	0.336	-0.031	-0.044	-0.057	-0.038
960.000	-0.044	-0.038	0.343	-0.031	-0.044	-0.057	-0.038
975.000	-0.019	-0.038	0.343	-0.031	-0.044	-0.057	-0.038
990.000	-0.044	-0.038	0.349	-0.031	-0.044	-0.063	-0.038
1005.00	-0.044	-0.038	0.349	-0.031	-0.044	-0.057	-0.038
1020.00	-0.044	-0.044	0.349	-0.031	-0.050	-0.063	-0.044
1035.00	-0.050	-0.044	0.349	-0.037	-0.050	-0.070	-0.044
1050.00	-0.050	-0.050	0.355	-0.044	-0.050	-0.070	-0.044
1065.00	-0.050	-0.050	0.362	-0.037	-0.050	-0.070	-0.044
1080.00	-0.050	-0.044	0.368	-0.037	-0.044	-0.063	-0.044
1095.00	-0.044	-0.044	0.374	-0.037	-0.044	-0.057	-0.038
1110.00	-0.044	-0.044	0.374	-0.037	-0.044	-0.057	-0.038
1125.00	-0.044	-0.044	0.381	-0.037	-0.037	-0.057	-0.031
1140.00	-0.044	-0.044	0.381	-0.037	-0.044	-0.057	-0.031
1155.00	-0.044	-0.044	0.387	-0.037	-0.037	-0.050	-0.031
1170.00	-0.038	-0.038	0.393	-0.037	-0.037	-0.050	-0.031
1185.00	-0.038	-0.038	0.393	-0.037	-0.037	-0.044	-0.025
1200.00	-0.038	-0.038	0.400	-0.037	-0.037	-0.050	-0.031
1215.00	-0.044	-0.044	0.406	-0.037	-0.037	-0.050	-0.031
1230.00	-0.044	-0.031	0.412	-0.037	-0.037	-0.044	-0.031

SE2000
Environmental Logger
11/01 09:45

Unit# 159 Test 0

Setups:	INPUT 1
Type	Level (F)
Mode	TOC
I.D.	1785
Reference	0.000
SG	1.000
Linearity	0.117
Scale factor	20.005
Offset	-0.005
Delay mSEC	50.000

Step 0 10/22.12:00:01

Elapsed Time	Input 1	Elapsed Time	Input 1	Elapsed Time	Input 1	Elapsed Time	Input 1
0.0000	0.012	495.000	0.000	990.000	0.019	1485.00	0.050
15.0000	0.012	510.000	0.000	1005.00	0.025	1500.00	0.050
30.0000	0.012	525.000	0.000	1020.00	0.025	1515.00	0.044
45.0000	0.006	540.000	0.000	1035.00	0.025	1530.00	0.044
60.0000	0.006	555.000	0.000	1050.00	0.025	1545.00	0.044
75.0000	0.006	570.000	0.000	1065.00	0.031	1560.00	0.044
90.0000	0.000	585.000	0.000	1080.00	0.031	1575.00	0.038
105.000	0.000	600.000	0.006	1095.00	0.031	1590.00	0.038
120.000	-0.006	615.000	0.006	1110.00	0.031	1605.00	0.031
135.000	-0.006	630.000	0.006	1125.00	0.031	1620.00	0.031
150.000	-0.006	645.000	0.006	1140.00	0.025	1635.00	0.031
165.000	-0.006	660.000	0.006	1155.00	0.031	1650.00	0.031
180.000	-0.006	675.000	0.012	1170.00	0.031	1665.00	0.025
195.000	-0.012	690.000	0.012	1185.00	0.031	1680.00	0.025
210.000	-0.012	705.000	0.012	1200.00	0.038	1695.00	0.025
225.000	-0.012	720.000	0.012	1215.00	0.038	1710.00	0.025
240.000	-0.012	735.000	0.012	1230.00	0.038	1725.00	0.025
255.000	-0.012	750.000	0.012	1245.00	0.044	1740.00	0.025
270.000	-0.012	765.000	0.012	1260.00	0.044	1755.00	0.025
285.000	-0.012	780.000	0.012	1275.00	0.044	1770.00	0.025
300.000	-0.012	795.000	0.012	1290.00	0.050	1785.00	0.025
315.000	-0.012	810.000	0.012	1305.00	0.044	1800.00	0.025
330.000	-0.012	825.000	0.012	1320.00	0.044	1815.00	0.031
345.000	-0.012	840.000	0.012	1335.00	0.050	1830.00	0.025
360.000	-0.012	855.000	0.019	1350.00	0.044	1845.00	0.025
375.000	-0.012	870.000	0.012	1365.00	0.044	1860.00	0.025
390.000	-0.012	885.000	0.012	1380.00	0.050	1875.00	0.031
405.000	-0.006	900.000	0.012	1395.00	0.050	1890.00	0.031
420.000	-0.006	915.000	0.012	1410.00	0.044	1905.00	0.031
435.000	-0.006	930.000	0.019	1425.00	0.050	1920.00	0.038
450.000	-0.006	945.000	0.019	1440.00	0.050	1935.00	0.038
465.000	-0.006	960.000	0.019	1455.00	0.057	1950.00	0.038
480.000	-0.006	975.000	0.019	1470.00	0.057	1965.00	0.038

Elapsed Time	Input 1	Elapsed Time	Input 1	Elapsed Time	Input 1	Elapsed Time	Input 1
1980.00	0.038	2745.00	0.063	3510.00	0.082	4275.00	0.120
1995.00	0.038	2760.00	0.063	3525.00	0.082	4290.00	0.120
2010.00	0.038	2775.00	0.063	3540.00	0.082	4305.00	0.126
2025.00	0.038	2790.00	0.063	3555.00	0.082	4320.00	0.126
2040.00	0.044	2805.00	0.069	3570.00	0.082	4335.00	0.126
2055.00	0.044	2820.00	0.069	3585.00	0.088	4350.00	0.126
2070.00	0.044	2835.00	0.063	3600.00	0.082	4365.00	0.120
2085.00	0.038	2850.00	0.069	3615.00	0.082	4380.00	0.120
2100.00	0.044	2865.00	0.069	3630.00	0.082	4395.00	0.120
2115.00	0.044	2880.00	0.069	3645.00	0.082	4410.00	0.114
2130.00	0.038	2895.00	0.069	3660.00	0.082	4425.00	0.114
2145.00	0.044	2910.00	0.069	3675.00	0.088	4440.00	0.114
2160.00	0.038	2925.00	0.069	3690.00	0.082	4455.00	0.095
2175.00	0.038	2940.00	0.069	3705.00	0.088	4470.00	0.095
2190.00	0.038	2955.00	0.069	3720.00	0.088	4485.00	0.095
2205.00	0.038	2970.00	0.063	3735.00	0.088	4500.00	0.095
2220.00	0.038	2985.00	0.063	3750.00	0.088	4515.00	0.095
2235.00	0.038	3000.00	0.063	3765.00	0.088	4530.00	0.082
2250.00	0.044	3015.00	0.063	3780.00	0.088	4545.00	0.082
2265.00	0.044	3030.00	0.057	3795.00	0.088	4560.00	0.082
2280.00	0.044	3045.00	0.057	3810.00	0.088	4575.00	0.082
2295.00	0.044	3060.00	0.057	3825.00	0.088	4590.00	0.082
2310.00	0.044	3075.00	0.057	3840.00	0.095	4605.00	0.082
2325.00	0.044	3090.00	0.057	3855.00	0.095		
2340.00	0.044	3105.00	0.057	3870.00	0.095		
2355.00	0.044	3120.00	0.057	3885.00	0.095		
2370.00	0.044	3135.00	0.050	3900.00	0.101		
2385.00	0.044	3150.00	0.050	3915.00	0.101		
2400.00	0.044	3165.00	0.050	3930.00	0.107		
2415.00	0.044	3180.00	0.050	3945.00	0.107		
2430.00	0.044	3195.00	0.057	3960.00	0.107		
2445.00	0.050	3210.00	0.057	3975.00	0.114		
2460.00	0.050	3225.00	0.057	3990.00	0.114		
2475.00	0.044	3240.00	0.057	4005.00	0.107		
2490.00	0.044	3255.00	0.057	4020.00	0.114		
2505.00	0.044	3270.00	0.063	4035.00	0.114		
2520.00	0.050	3285.00	0.063	4050.00	0.114		
2535.00	0.050	3300.00	0.069	4065.00	0.114		
2550.00	0.050	3315.00	0.069	4080.00	0.114		
2565.00	0.057	3330.00	0.069	4095.00	0.114		
2580.00	0.057	3345.00	0.069	4110.00	0.114		
2595.00	0.057	3360.00	0.076	4125.00	0.120		
2610.00	0.057	3375.00	0.076	4140.00	0.120		
2625.00	0.057	3390.00	0.076	4155.00	0.120		
2640.00	0.057	3405.00	0.076	4170.00	0.120		
2655.00	0.057	3420.00	0.076	4185.00	0.120		
2670.00	0.057	3435.00	0.076	4200.00	0.120		
2685.00	0.057	3450.00	0.076	4215.00	0.126		
2700.00	0.057	3465.00	0.076	4230.00	0.126		
2715.00	0.063	3480.00	0.076	4245.00	0.126		
2730.00	0.063	3495.00	0.076	4260.00	0.126		

SE2000
Environmental Logger
11/17 16:46

Unit# 2K-490 Test 0

Setups:	INPUT 1	INPUT 2
Type	Level (F)	Level (F)
Mode	Surface	Surface
I.D.	1234	1231
Reference	0.000	0.000
SG	1.000	1.000
Linearity	0.083	0.095
Scale factor	20.127	20.049
Offset	0.013	0.009
Delay mSEC	50.000	50.000

Step 0 10/26 10:15:01

Elapsed Time	Input 1	Input 2	Elapsed Time	Input 1	Input 2	Elapsed Time	Input 1	Input 2
0.0000	-0.019	0.000	495.000	-0.038	-0.025	990.000	-0.082	-0.063
15.0000	-0.025	-0.006	510.000	-0.044	-0.025	1005.00	-0.088	-0.063
30.0000	-0.025	-0.006	525.000	-0.044	-0.025	1020.00	-0.088	-0.063
45.0000	-0.025	-0.006	540.000	-0.044	-0.031	1035.00	-0.088	-0.063
60.0000	-0.025	-0.006	555.000	-0.044	-0.031	1050.00	-0.088	-0.063
75.0000	-0.031	-0.006	570.000	-0.050	-0.031	1065.00	-0.088	-0.063
90.0000	-0.025	-0.006	585.000	-0.050	-0.031	1080.00	-0.095	-0.063
105.000	-0.031	-0.006	600.000	-0.050	-0.031	1095.00	-0.095	-0.063
120.000	-0.025	-0.006	615.000	-0.050	-0.031	1110.00	-0.095	-0.069
135.000	-0.031	0.000	630.000	-0.050	-0.031	1125.00	-0.095	-0.069
150.000	-0.025	0.000	645.000	-0.050	-0.031	1140.00	-0.095	-0.069
165.000	-0.025	0.000	660.000	-0.057	-0.037	1155.00	-0.095	-0.063
180.000	-0.025	0.006	675.000	-0.063	-0.044	1170.00	-0.095	-0.069
195.000	-0.025	0.006	690.000	-0.063	-0.044	1185.00	-0.095	-0.069
210.000	-0.025	0.006	705.000	-0.063	-0.044	1200.00	-0.101	-0.069
225.000	-0.025	0.006	720.000	-0.063	-0.050	1215.00	-0.101	-0.069
240.000	-0.025	0.012	735.000	-0.063	-0.050	1230.00	-0.101	-0.075
255.000	-0.025	0.012	750.000	-0.069	-0.050	1245.00	-0.101	-0.075
270.000	-0.025	0.006	765.000	-0.069	-0.050	1260.00	-0.101	-0.075
285.000	-0.025	0.006	780.000	-0.069	-0.050	1275.00	-0.101	-0.075
300.000	-0.025	0.006	795.000	-0.069	-0.056	1290.00	-0.101	-0.075
315.000	-0.031	0.006	810.000	-0.069	-0.056	1305.00	-0.107	-0.075
330.000	-0.031	0.000	825.000	-0.076	-0.056	1320.00	-0.107	-0.075
345.000	-0.031	0.000	840.000	-0.076	-0.056	1335.00	-0.107	-0.082
360.000	-0.031	-0.006	855.000	-0.076	-0.056	1350.00	-0.107	-0.082
375.000	-0.031	-0.006	870.000	-0.076	-0.056	1365.00	-0.107	-0.082
390.000	-0.031	-0.012	885.000	-0.076	-0.056	1380.00	-0.107	-0.082
405.000	-0.031	-0.018	900.000	-0.082	-0.056	1395.00	-0.114	-0.088
420.000	-0.031	-0.018	915.000	-0.082	-0.056	1410.00	-0.114	-0.088
435.000	-0.038	-0.018	930.000	-0.082	-0.056	1425.00	-0.114	-0.088
450.000	-0.038	-0.018	945.000	-0.082	-0.063	1440.00	-0.114	-0.088
465.000	-0.038	-0.025	960.000	-0.082	-0.063	1455.00	-0.114	-0.094
480.000	-0.038	-0.025	975.000	-0.082	-0.063	1470.00	-0.120	-0.094

ERAFS1\VOL1:GEOT\ENGDATA\
KEEP\D-LOGGER\1785\1234.WL0

03/23 3:38pm

Elapsed Time	Input 1	Input 2	Elapsed Time	Input 1	Input 2	Elapsed Time	Input 1	Input 2
1485.00	-0.114	-0.094	2250.00	-0.158	-0.139	3015.00	-0.177	-0.151
1500.00	-0.120	-0.101	2265.00	-0.158	-0.139	3030.00	-0.177	-0.151
1515.00	-0.120	-0.101	2280.00	-0.158	-0.139	3045.00	-0.177	-0.151
1530.00	-0.120	-0.107	2295.00	-0.164	-0.132	3060.00	-0.177	-0.151
1545.00	-0.120	-0.107	2310.00	-0.164	-0.132	3075.00	-0.177	-0.151
1560.00	-0.120	-0.113	2325.00	-0.164	-0.132	3090.00	-0.177	-0.151
1575.00	-0.120	-0.113	2340.00	-0.164	-0.132	3105.00	-0.177	-0.145
1590.00	-0.120	-0.113	2355.00	-0.164	-0.132	3120.00	-0.171	-0.151
1605.00	-0.126	-0.120	2370.00	-0.164	-0.132	3135.00	-0.171	-0.151
1620.00	-0.126	-0.126	2385.00	-0.164	-0.132	3150.00	-0.171	-0.151
1635.00	-0.126	-0.126	2400.00	-0.164	-0.126	3165.00	-0.171	-0.158
1650.00	-0.126	-0.126	2415.00	-0.164	-0.132	3180.00	-0.171	-0.158
1665.00	-0.126	-0.126	2430.00	-0.164	-0.126	3195.00	-0.171	-0.151
1680.00	-0.126	-0.126	2445.00	-0.164	-0.132	3210.00	-0.171	-0.158
1695.00	-0.126	-0.126	2460.00	-0.164	-0.132	3225.00	-0.177	-0.158
1710.00	-0.126	-0.126	2475.00	-0.164	-0.132	3240.00	-0.177	-0.164
1725.00	-0.126	-0.120	2490.00	-0.164	-0.132	3255.00	-0.177	-0.164
1740.00	-0.126	-0.120	2505.00	-0.164	-0.132	3270.00	-0.171	-0.164
1755.00	-0.133	-0.120	2520.00	-0.164	-0.132	3285.00	-0.177	-0.164
1770.00	-0.133	-0.120	2535.00	-0.164	-0.126	3300.00	-0.177	-0.170
1785.00	-0.133	-0.120	2550.00	-0.164	-0.126	3315.00	-0.177	-0.170
1800.00	-0.133	-0.126	2565.00	-0.164	-0.126	3330.00	-0.177	-0.177
1815.00	-0.133	-0.126	2580.00	-0.164	-0.132	3345.00	-0.177	-0.177
1830.00	-0.133	-0.132	2595.00	-0.164	-0.132	3360.00	-0.177	-0.177
1845.00	-0.139	-0.132	2610.00	-0.164	-0.132	3375.00	-0.177	-0.177
1860.00	-0.139	-0.139	2625.00	-0.164	-0.126	3390.00	-0.184	-0.177
1875.00	-0.139	-0.139	2640.00	-0.164	-0.126	3405.00	-0.184	-0.183
1890.00	-0.139	-0.145	2655.00	-0.164	-0.126	3420.00	-0.190	-0.189
1905.00	-0.139	-0.145	2670.00	-0.171	-0.126	3435.00	-0.184	-0.189
1920.00	-0.139	-0.145	2685.00	-0.171	-0.132	3450.00	-0.184	-0.189
1935.00	-0.145	-0.145	2700.00	-0.164	-0.126	3465.00	-0.184	-0.196
1950.00	-0.145	-0.145	2715.00	-0.171	-0.126	3480.00	-0.184	-0.202
1965.00	-0.145	-0.145	2730.00	-0.164	-0.126	3495.00	-0.184	-0.202
1980.00	-0.145	-0.145	2745.00	-0.171	-0.126	3510.00	-0.190	-0.208
1995.00	-0.145	-0.145	2760.00	-0.171	-0.132	3525.00	-0.190	-0.208
2010.00	-0.145	-0.145	2775.00	-0.171	-0.132	3540.00	-0.190	-0.208
2025.00	-0.145	-0.145	2790.00	-0.171	-0.126	3555.00	-0.190	-0.215
2040.00	-0.152	-0.145	2805.00	-0.171	-0.126	3570.00	-0.190	-0.215
2055.00	-0.152	-0.145	2820.00	-0.171	-0.132	3585.00	-0.196	-0.215
2070.00	-0.152	-0.145	2835.00	-0.171	-0.132	3600.00	-0.196	-0.215
2085.00	-0.152	-0.139	2850.00	-0.171	-0.132	3615.00	-0.196	-0.221
2100.00	-0.152	-0.145	2865.00	-0.171	-0.132	3630.00	-0.196	-0.221
2115.00	-0.152	-0.139	2880.00	-0.177	-0.126	3645.00	-0.196	-0.221
2130.00	-0.158	-0.145	2895.00	-0.177	-0.132	3660.00	-0.203	-0.227
2145.00	-0.158	-0.139	2910.00	-0.177	-0.132	3675.00	-0.203	-0.227
2160.00	-0.158	-0.139	2925.00	-0.177	-0.132	3690.00	-0.203	-0.234
2175.00	-0.158	-0.139	2940.00	-0.171	-0.132	3705.00	-0.209	-0.234
2190.00	-0.158	-0.139	2955.00	-0.177	-0.139	3720.00	-0.209	-0.240
2205.00	-0.158	-0.139	2970.00	-0.177	-0.145	3735.00	-0.209	-0.240
2220.00	-0.158	-0.139	2985.00	-0.177	-0.145	3750.00	-0.209	-0.240
2235.00	-0.158	-0.139	3000.00	-0.177	-0.145	3765.00	-0.215	-0.240

ERAFS1\VOL1:GEOT\ENGDATA\
KEEP\D-LOGGER\1785\1234.WL0

03/23 3:38pm

Elapsed Time	Input 1	Input 2	Elapsed Time	Input 1	Input 2	Elapsed Time	Input 1	Input 2
3780.00	-0.215	-0.246						
3795.00	-0.215	-0.246						
3810.00	-0.222	-0.253						
3825.00	-0.222	-0.253						
3840.00	-0.222	-0.253						
3855.00	-0.222	-0.259						
3870.00	-0.228	-0.259						
3885.00	-0.228	-0.265						
3900.00	-0.228	-0.265						
3915.00	-0.234	-0.265						
3930.00	-0.234	-0.265						
3945.00	-0.234	-0.272						
3960.00	-0.234	-0.272						
3975.00	-0.234	-0.272						
3990.00	-0.241	-0.278						
4005.00	-0.241	-0.259						
4020.00	-0.241	-0.278						
4035.00	-0.247	-0.284						
4050.00	-0.247	-0.284						
4065.00	-0.247	-0.278						
4080.00	-0.247	-0.284						
4095.00	-0.247	-0.284						
4110.00	-0.253	-0.284						
4125.00	-0.253	-0.284						
4140.00	-0.253	-0.284						
4155.00	-0.260	-0.284						
4170.00	-0.260	-0.291						
4185.00	-0.260	-0.284						
4200.00	-0.266	-0.291						
4215.00	-0.266	-0.291						
4230.00	-0.272	-0.297						
4245.00	-0.272	-0.297						
4260.00	-0.272	-0.297						
4275.00	-0.272	-0.297						
4290.00	-0.272	-0.297						
4305.00	-0.279	-0.297						
4320.00	-0.285	-0.297						
4335.00	-0.285	-0.297						

SE2000
Environmental Logger
11/17 17:22

Unit# 2K-473 Test 1

Setups:	INPUT 1
Type	Level (F)
Mode	Surface
I.D.	1224
Reference	0.000
SG	1.000
Linearity	0.115
Scale factor	19.961
Offset	0.026
Delay mSEC	50.000

Step 0 11/04 13:45:01

Elapsed Time	Input 1	Elapsed Time	Input 1	Elapsed Time	Input 1	Elapsed Time	Input 1
0.0000	-0.006	570.000	-0.151	1140.00	-0.302	1710.00	-0.415
15.0000	-0.025	585.000	-0.151	1155.00	-0.308	1725.00	-0.428
30.0000	-0.037	600.000	-0.157	1170.00	-0.308	1740.00	-0.428
45.0000	-0.050	615.000	-0.163	1185.00	-0.308	1755.00	-0.428
60.0000	-0.056	630.000	-0.163	1200.00	-0.321	1770.00	-0.428
75.0000	-0.075	645.000	-0.176	1215.00	-0.327	1785.00	-0.434
90.0000	-0.088	660.000	-0.176	1230.00	-0.327	1800.00	-0.428
105.000	-0.100	675.000	-0.195	1245.00	-0.327	1815.00	-0.428
120.000	-0.113	690.000	-0.201	1260.00	-0.340	1830.00	-0.428
135.000	-0.094	705.000	-0.207	1275.00	-0.346	1845.00	-0.434
150.000	-0.138	720.000	-0.201	1290.00	-0.346	1860.00	-0.434
165.000	-0.151	735.000	-0.214	1305.00	-0.346	1875.00	-0.434
180.000	-0.157	750.000	-0.220	1320.00	-0.352	1890.00	-0.434
195.000	-0.157	765.000	-0.220	1335.00	-0.352	1905.00	-0.434
210.000	-0.144	780.000	-0.226	1350.00	-0.352	1920.00	-0.441
225.000	-0.163	795.000	-0.226	1365.00	-0.359	1935.00	-0.441
240.000	-0.170	810.000	-0.226	1380.00	-0.352	1950.00	-0.441
255.000	-0.176	825.000	-0.239	1395.00	-0.352	1965.00	-0.441
270.000	-0.176	840.000	-0.233	1410.00	-0.365	1980.00	-0.441
285.000	-0.189	855.000	-0.233	1425.00	-0.365	1995.00	-0.434
300.000	-0.195	870.000	-0.239	1440.00	-0.365	2010.00	-0.441
315.000	-0.195	885.000	-0.195	1455.00	-0.365	2025.00	-0.441
330.000	-0.207	900.000	-0.245	1470.00	-0.378	2040.00	-0.441
345.000	-0.207	915.000	-0.252	1485.00	-0.378	2055.00	-0.447
360.000	-0.220	930.000	-0.258	1500.00	-0.384	2070.00	-0.447
375.000	-0.207	945.000	-0.258	1515.00	-0.384	2085.00	-0.453
390.000	-0.189	960.000	-0.264	1530.00	-0.396	2100.00	-0.453
405.000	-0.170	975.000	-0.270	1545.00	-0.396	2115.00	-0.453
420.000	-0.151	990.000	-0.270	1560.00	-0.403	2130.00	-0.453
435.000	-0.132	1005.00	-0.283	1575.00	-0.403	2145.00	-0.459
450.000	-0.119	1020.00	-0.289	1590.00	-0.403	2160.00	-0.459
465.000	-0.113	1035.00	-0.239	1605.00	-0.409	2175.00	-0.459
480.000	-0.113	1050.00	-0.289	1620.00	-0.415	2190.00	-0.459
495.000	-0.107	1065.00	-0.289	1635.00	-0.422	2205.00	-0.453
510.000	-0.107	1080.00	-0.296	1650.00	-0.415	2220.00	-0.453
525.000	-0.126	1095.00	-0.296	1665.00	-0.415	2235.00	-0.447
540.000	-0.138	1110.00	-0.302	1680.00	-0.415	2250.00	-0.453
555.000	-0.132	1125.00	-0.302	1695.00	-0.422	2265.00	-0.453

Elapsed Time	Input 1	Elapsed Time	Input 1	Elapsed Time	Input 1	Elapsed Time	Input 1
2280.00	-0.453	3120.00	-0.529	3960.00	-0.604	4800.00	-0.390
2295.00	-0.459	3135.00	-0.529	3975.00	-0.611	4815.00	-0.384
2310.00	-0.459	3150.00	-0.535	3990.00	-0.611	4830.00	-0.378
2325.00	-0.453	3165.00	-0.535	4005.00	-0.623	4845.00	-0.378
2340.00	-0.459	3180.00	-0.535	4020.00	-0.617	4860.00	-0.378
2355.00	-0.459	3195.00	-0.541	4035.00	-0.630	4875.00	-0.371
2370.00	-0.459	3210.00	-0.541	4050.00	-0.617	4890.00	-0.371
2385.00	-0.466	3225.00	-0.541	4065.00	-0.617	4905.00	-0.371
2400.00	-0.466	3240.00	-0.541	4080.00	-0.617	4920.00	-0.365
2415.00	-0.472	3255.00	-0.541	4095.00	-0.623	4935.00	-0.359
2430.00	-0.472	3270.00	-0.548	4110.00	-0.617	4950.00	-0.359
2445.00	-0.472	3285.00	-0.541	4125.00	-0.623	4965.00	-0.365
2460.00	-0.472	3300.00	-0.548	4140.00	-0.623	4980.00	-0.365
2475.00	-0.472	3315.00	-0.548	4155.00	-0.661	4995.00	-0.365
2490.00	-0.478	3330.00	-0.548	4170.00	-0.623	5010.00	-0.365
2505.00	-0.478	3345.00	-0.541	4185.00	-0.617	5025.00	-0.359
2520.00	-0.478	3360.00	-0.554	4200.00	-0.611	5040.00	-0.359
2535.00	-0.478	3375.00	-0.554	4215.00	-0.598	5055.00	-0.359
2550.00	-0.478	3390.00	-0.554	4230.00	-0.585	5070.00	-0.352
2565.00	-0.485	3405.00	-0.554	4245.00	-0.567	5085.00	-0.352
2580.00	-0.485	3420.00	-0.554	4260.00	-0.554	5100.00	-0.346
2595.00	-0.485	3435.00	-0.554	4275.00	-0.548	5115.00	-0.346
2610.00	-0.491	3450.00	-0.560	4290.00	-0.535	5130.00	-0.346
2625.00	-0.485	3465.00	-0.560	4305.00	-0.529	5145.00	-0.340
2640.00	-0.491	3480.00	-0.560	4320.00	-0.516	5160.00	-0.340
2655.00	-0.491	3495.00	-0.567	4335.00	-0.516	5175.00	-0.340
2670.00	-0.491	3510.00	-0.567	4350.00	-0.504	5190.00	-0.333
2685.00	-0.491	3525.00	-0.567	4365.00	-0.497	5205.00	-0.333
2700.00	-0.497	3540.00	-0.567	4380.00	-0.497	5220.00	-0.340
2715.00	-0.497	3555.00	-0.567	4395.00	-0.491	5235.00	-0.333
2730.00	-0.497	3570.00	-0.573	4410.00	-0.485	5250.00	-0.327
2745.00	-0.491	3585.00	-0.567	4425.00	-0.478	5265.00	-0.333
2760.00	-0.497	3600.00	-0.573	4440.00	-0.472	5280.00	-0.327
2775.00	-0.491	3615.00	-0.573	4455.00	-0.466	5295.00	-0.327
2790.00	-0.491	3630.00	-0.579	4470.00	-0.459	5310.00	-0.327
2805.00	-0.491	3645.00	-0.579	4485.00	-0.459	5325.00	-0.327
2820.00	-0.491	3660.00	-0.579	4500.00	-0.453	5340.00	-0.321
2835.00	-0.491	3675.00	-0.579	4515.00	-0.447	5355.00	-0.327
2850.00	-0.491	3690.00	-0.579	4530.00	-0.441	5370.00	-0.327
2865.00	-0.491	3705.00	-0.579	4545.00	-0.441	5385.00	-0.327
2880.00	-0.491	3720.00	-0.579	4560.00	-0.434	5400.00	-0.327
2895.00	-0.497	3735.00	-0.585	4575.00	-0.428	5415.00	-0.333
2910.00	-0.497	3750.00	-0.585	4590.00	-0.428	5430.00	-0.327
2925.00	-0.504	3765.00	-0.585	4605.00	-0.422	5445.00	-0.327
2940.00	-0.491	3780.00	-0.592	4620.00	-0.422	5460.00	-0.327
2955.00	-0.510	3795.00	-0.592	4635.00	-0.415	5475.00	-0.333
2970.00	-0.504	3810.00	-0.592	4650.00	-0.409	5490.00	-0.333
2985.00	-0.510	3825.00	-0.592	4665.00	-0.403	5505.00	-0.327
3000.00	-0.510	3840.00	-0.598	4680.00	-0.403	5520.00	-0.327
3015.00	-0.510	3855.00	-0.598	4695.00	-0.403	5535.00	-0.327
3030.00	-0.510	3870.00	-0.598	4710.00	-0.403	5550.00	-0.327
3045.00	-0.516	3885.00	-0.598	4725.00	-0.396	5565.00	-0.327
3060.00	-0.522	3900.00	-0.604	4740.00	-0.396	5580.00	-0.327
3075.00	-0.522	3915.00	-0.604	4755.00	-0.390		
3090.00	-0.522	3930.00	-0.604	4770.00	-0.390		
3105.00	-0.529	3945.00	-0.604	4785.00	-0.390		

SE2000
Environmental Logger
11/17 16:57

Unit# 2K-490 Test 1

Setups:	INPUT 1	INPUT 2
Type	Level (F)	Level (F)
Mode	Surface	Surface
I.D.	1234	1231
Reference	0.000	0.000
SG	1.000	1.000
Linearity	0.083	0.095
Scale factor	20.127	20.049
Offset	0.013	0.009
Delay mSEC	50.000	50.000

Step 0 11/04 13:48:32

Elapsed Time	Input 1	Input 2	Elapsed Time	Input 1	Input 2	Elapsed Time	Input 1	Input 2
0.0000	0.025	-0.189	495.000	-0.006	-0.272	990.000	-0.031	-0.347
15.0000	0.012	-0.202	510.000	-0.006	-0.272	1005.00	-0.038	-0.354
30.0000	0.019	-0.202	525.000	-0.012	-0.272	1020.00	-0.038	-0.354
45.0000	0.019	-0.202	540.000	-0.006	-0.265	1035.00	-0.038	-0.354
60.0000	0.019	-0.202	555.000	-0.012	-0.272	1050.00	-0.038	-0.360
75.0000	0.025	-0.208	570.000	-0.012	-0.272	1065.00	-0.038	-0.360
90.0000	0.025	-0.215	585.000	-0.012	-0.272	1080.00	-0.038	-0.360
105.000	0.025	-0.221	600.000	-0.006	-0.272	1095.00	-0.044	-0.366
120.000	0.025	-0.227	615.000	-0.012	-0.278	1110.00	-0.044	-0.366
135.000	0.025	-0.227	630.000	-0.006	-0.278	1125.00	-0.044	-0.366
150.000	0.025	-0.240	645.000	-0.012	-0.284	1140.00	-0.044	-0.366
165.000	0.019	-0.246	660.000	-0.012	-0.291	1155.00	-0.050	-0.373
180.000	0.019	-0.253	675.000	-0.012	-0.291	1170.00	-0.044	-0.373
195.000	0.025	-0.253	690.000	-0.012	-0.291	1185.00	-0.050	-0.373
210.000	0.019	-0.253	705.000	-0.012	-0.297	1200.00	-0.050	-0.379
225.000	0.019	-0.259	720.000	-0.012	-0.303	1215.00	-0.050	-0.385
240.000	0.019	-0.259	735.000	-0.019	-0.303	1230.00	-0.057	-0.385
255.000	0.019	-0.259	750.000	-0.019	-0.303	1245.00	-0.057	-0.392
270.000	0.019	-0.265	765.000	-0.019	-0.309	1260.00	-0.057	-0.392
285.000	0.019	-0.272	780.000	-0.019	-0.316	1275.00	-0.063	-0.398
300.000	0.012	-0.272	795.000	-0.019	-0.316	1290.00	-0.057	-0.392
315.000	0.012	-0.278	810.000	-0.025	-0.316	1305.00	-0.063	-0.398
330.000	0.006	-0.284	825.000	-0.025	-0.322	1320.00	-0.063	-0.404
345.000	0.006	-0.291	840.000	-0.025	-0.322	1335.00	-0.063	-0.404
360.000	0.006	-0.291	855.000	-0.025	-0.322	1350.00	-0.063	-0.404
375.000	0.006	-0.297	870.000	-0.025	-0.322	1365.00	-0.063	-0.404
390.000	0.006	-0.291	885.000	-0.025	-0.322	1380.00	-0.069	-0.411
405.000	0.000	-0.291	900.000	-0.025	-0.328	1395.00	-0.069	-0.404
420.000	0.000	-0.291	915.000	-0.025	-0.328	1410.00	-0.069	-0.411
435.000	0.000	-0.284	930.000	-0.031	-0.335	1425.00	-0.076	-0.411
450.000	0.000	-0.284	945.000	-0.031	-0.335	1440.00	-0.076	-0.417
465.000	0.000	-0.278	960.000	-0.031	-0.341	1455.00	-0.076	-0.417
480.000	-0.006	-0.272	975.000	-0.031	-0.341	1470.00	-0.076	-0.417

ERAFS1\VOL1:GEOT\ENGDATA\
KEEP\D-LOGGER\1785\1234.WL1

03/23 3:50pm

Elapsed Time	Input 1	Input 2	Elapsed Time	Input 1	Input 2	Elapsed Time	Input 1	Input 2
1485.00	-0.076	-0.423	2250.00	-0.152	-0.518	3015.00	-0.209	-0.575
1500.00	-0.076	-0.423	2265.00	-0.152	-0.518	3030.00	-0.209	-0.575
1515.00	-0.082	-0.430	2280.00	-0.152	-0.518	3045.00	-0.209	-0.582
1530.00	-0.082	-0.430	2295.00	-0.152	-0.525	3060.00	-0.215	-0.582
1545.00	-0.082	-0.436	2310.00	-0.158	-0.525	3075.00	-0.215	-0.582
1560.00	-0.082	-0.436	2325.00	-0.158	-0.525	3090.00	-0.215	-0.588
1575.00	-0.088	-0.442	2340.00	-0.158	-0.525	3105.00	-0.215	-0.588
1590.00	-0.088	-0.449	2355.00	-0.158	-0.525	3120.00	-0.215	-0.588
1605.00	-0.095	-0.449	2370.00	-0.158	-0.525	3135.00	-0.215	-0.594
1620.00	-0.095	-0.455	2385.00	-0.164	-0.531	3150.00	-0.222	-0.594
1635.00	-0.095	-0.461	2400.00	-0.164	-0.531	3165.00	-0.222	-0.594
1650.00	-0.095	-0.461	2415.00	-0.164	-0.531	3180.00	-0.222	-0.600
1665.00	-0.095	-0.461	2430.00	-0.164	-0.531	3195.00	-0.222	-0.600
1680.00	-0.095	-0.468	2445.00	-0.164	-0.537	3210.00	-0.222	-0.600
1695.00	-0.101	-0.468	2460.00	-0.164	-0.537	3225.00	-0.222	-0.607
1710.00	-0.101	-0.468	2475.00	-0.164	-0.537	3240.00	-0.222	-0.607
1725.00	-0.101	-0.474	2490.00	-0.171	-0.537	3255.00	-0.228	-0.607
1740.00	-0.107	-0.474	2505.00	-0.171	-0.537	3270.00	-0.228	-0.607
1755.00	-0.107	-0.480	2520.00	-0.171	-0.544	3285.00	-0.228	-0.613
1770.00	-0.107	-0.480	2535.00	-0.171	-0.544	3300.00	-0.228	-0.613
1785.00	-0.114	-0.480	2550.00	-0.171	-0.544	3315.00	-0.234	-0.613
1800.00	-0.114	-0.480	2565.00	-0.177	-0.550	3330.00	-0.234	-0.613
1815.00	-0.107	-0.487	2580.00	-0.177	-0.550	3345.00	-0.234	-0.613
1830.00	-0.114	-0.487	2595.00	-0.177	-0.550	3360.00	-0.234	-0.619
1845.00	-0.114	-0.487	2610.00	-0.184	-0.550	3375.00	-0.234	-0.619
1860.00	-0.120	-0.493	2625.00	-0.184	-0.550	3390.00	-0.241	-0.619
1875.00	-0.120	-0.493	2640.00	-0.184	-0.550	3405.00	-0.241	-0.619
1890.00	-0.120	-0.493	2655.00	-0.184	-0.556	3420.00	-0.241	-0.626
1905.00	-0.120	-0.493	2670.00	-0.184	-0.556	3435.00	-0.241	-0.619
1920.00	-0.120	-0.493	2685.00	-0.190	-0.556	3450.00	-0.241	-0.626
1935.00	-0.126	-0.493	2700.00	-0.190	-0.556	3465.00	-0.247	-0.626
1950.00	-0.126	-0.499	2715.00	-0.190	-0.556	3480.00	-0.247	-0.626
1965.00	-0.126	-0.499	2730.00	-0.190	-0.556	3495.00	-0.247	-0.626
1980.00	-0.133	-0.499	2745.00	-0.190	-0.556	3510.00	-0.247	-0.632
1995.00	-0.133	-0.499	2760.00	-0.190	-0.556	3525.00	-0.247	-0.632
2010.00	-0.133	-0.499	2775.00	-0.190	-0.556	3540.00	-0.247	-0.632
2025.00	-0.133	-0.499	2790.00	-0.196	-0.556	3555.00	-0.247	-0.632
2040.00	-0.133	-0.506	2805.00	-0.196	-0.556	3570.00	-0.253	-0.638
2055.00	-0.139	-0.506	2820.00	-0.196	-0.556	3585.00	-0.253	-0.638
2070.00	-0.139	-0.506	2835.00	-0.196	-0.556	3600.00	-0.253	-0.638
2085.00	-0.139	-0.512	2850.00	-0.196	-0.556	3615.00	-0.253	-0.638
2100.00	-0.139	-0.512	2865.00	-0.196	-0.563	3630.00	-0.253	-0.638
2115.00	-0.145	-0.512	2880.00	-0.196	-0.563	3645.00	-0.260	-0.645
2130.00	-0.139	-0.512	2895.00	-0.203	-0.563	3660.00	-0.260	-0.645
2145.00	-0.139	-0.512	2910.00	-0.203	-0.563	3675.00	-0.260	-0.645
2160.00	-0.145	-0.518	2925.00	-0.203	-0.563	3690.00	-0.260	-0.645
2175.00	-0.145	-0.518	2940.00	-0.203	-0.569	3705.00	-0.260	-0.645
2190.00	-0.145	-0.518	2955.00	-0.203	-0.569	3720.00	-0.266	-0.645
2205.00	-0.145	-0.518	2970.00	-0.203	-0.569	3735.00	-0.266	-0.651
2220.00	-0.145	-0.518	2985.00	-0.203	-0.575	3750.00	-0.266	-0.651
2235.00	-0.152	-0.518	3000.00	-0.209	-0.575	3765.00	-0.266	-0.651

E-173

Elapsed Time	Input 1	Input 2
3780.00	-0.266	-0.651
3795.00	-0.266	-0.651
3810.00	-0.266	-0.657
3825.00	-0.272	-0.657
3840.00	-0.272	-0.657
3855.00	-0.272	-0.664
3870.00	-0.272	-0.664
3885.00	-0.279	-0.664
3900.00	-0.279	-0.664
3915.00	-0.279	-0.670
3930.00	-0.279	-0.670
3945.00	-0.279	-0.670
3960.00	-0.285	-0.670
3975.00	-0.285	-0.670
3990.00	-0.285	-0.676
4005.00	-0.285	-0.676
4020.00	-0.285	-0.683
4035.00	-0.285	-0.683
4050.00	-0.291	-0.683
4065.00	-0.291	-0.683
4080.00	-0.291	-0.683
4095.00	-0.291	-0.683
4110.00	-0.291	-0.689
4125.00	-0.298	-0.689
4140.00	-0.298	-0.689
4155.00	-0.298	-0.689
4170.00	-0.298	-0.683
4185.00	-0.298	-0.683
4200.00	-0.298	-0.689
4215.00	-0.304	-0.683
4230.00	-0.304	-0.683
4245.00	-0.304	-0.676
4260.00	-0.304	-0.670
4275.00	-0.304	-0.670
4290.00	-0.304	-0.664
4305.00	-0.304	-0.657
4320.00	-0.310	-0.657
4335.00	-0.310	-0.651
4350.00	-0.310	-0.645
4365.00	-0.310	-0.645
4380.00	-0.310	-0.638
4395.00	-0.310	-0.638
4410.00	-0.310	-0.632
4425.00	-0.310	-0.632
4440.00	-0.310	-0.626
4455.00	-0.310	-0.619
4470.00	-0.310	-0.619
4485.00	-0.317	-0.613
4500.00	-0.317	-0.613
4515.00	-0.310	-0.607
4530.00	-0.317	-0.607
4545.00	-0.317	-0.607
4560.00	-0.317	-0.600
4575.00	-0.317	-0.600
4590.00	-0.310	-0.600
4605.00	-0.317	-0.594
4620.00	-0.317	-0.594
4635.00	-0.310	-0.594
4650.00	-0.310	-0.588
4665.00	-0.310	-0.588
4680.00	-0.310	-0.588
4695.00	-0.310	-0.588
4710.00	-0.310	-0.582
4725.00	-0.310	-0.582
4740.00	-0.317	-0.582
4755.00	-0.310	-0.575
4770.00	-0.310	-0.575
4785.00	-0.310	-0.575
4800.00	-0.310	-0.575
4815.00	-0.310	-0.569
4830.00	-0.310	-0.569
4845.00	-0.310	-0.569
4860.00	-0.310	-0.569
4875.00	-0.310	-0.563
4890.00	-0.310	-0.563
4905.00	-0.310	-0.563
4920.00	-0.310	-0.563
4935.00	-0.310	-0.556
4950.00	-0.310	-0.556
4965.00	-0.310	-0.563
4980.00	-0.310	-0.556
4995.00	-0.310	-0.556
5010.00	-0.310	-0.556
5025.00	-0.310	-0.556
5040.00	-0.310	-0.556
5055.00	-0.304	-0.556
5070.00	-0.310	-0.556
5085.00	-0.304	-0.550
5100.00	-0.304	-0.550
5115.00	-0.304	-0.544
5130.00	-0.304	-0.550
5145.00	-0.304	-0.544
5160.00	-0.304	-0.544
5175.00	-0.304	-0.544
5190.00	-0.304	-0.544
5205.00	-0.304	-0.537
5220.00	-0.304	-0.544
5235.00	-0.304	-0.537
5250.00	-0.304	-0.537
5265.00	-0.304	-0.537
5280.00	-0.298	-0.537
5295.00	-0.298	-0.531
5310.00	-0.298	-0.537
5325.00	-0.298	-0.531
5340.00	-0.298	-0.531
5355.00	-0.298	-0.531
5370.00	-0.298	-0.531
5385.00	-0.298	-0.531
5400.00	-0.298	-0.531
5415.00	-0.298	-0.531
5430.00	-0.298	-0.531
5445.00	-0.298	-0.537
5460.00	-0.304	-0.537
5475.00	-0.304	-0.537
5490.00	-0.304	-0.537
5505.00	-0.304	-0.531
5520.00	-0.304	-0.531
5535.00	-0.304	-0.531
5550.00	-0.304	-0.531
5565.00	-0.304	-0.531
5580.00	-0.304	-0.531

ERAFS1\VOL1:GEOT\ENGDATA\
KEEP\D-LOGGER\1785\1234.WL1

03/23 3:50pm

SE1000C
Environmental Logger
11/17 19:06

Unit# 01775 Test 5

Setups:	INPUT 1
Type	Level (F)
Mode	Surface
I.D.	01233

Reference	0.000
Linearity	0.110
Scale factor	20.070
Offset	-0.070
Delay mSEC	50.000

Step 0 11/04 14:30:08

Elapsed Time	Input 1	Elapsed Time	Input 1	Elapsed Time	Input 1	Elapsed Time	Input 1
0.0000	0.000	585.000	-0.291	1170.00	-0.513	1755.00	-0.653
15.0000	-0.057	600.000	-0.304	1185.00	-0.513	1770.00	-0.653
30.0000	-0.095	615.000	-0.310	1200.00	-0.520	1785.00	-0.659
45.0000	-0.126	630.000	-0.317	1215.00	-0.526	1800.00	-0.659
60.0000	-0.158	645.000	-0.329	1230.00	-0.532	1815.00	-0.659
75.0000	-0.183	660.000	-0.342	1245.00	-0.539	1830.00	-0.665
90.0000	-0.202	675.000	-0.348	1260.00	-0.545	1845.00	-0.659
105.000	-0.215	690.000	-0.367	1275.00	-0.551	1860.00	-0.665
120.000	-0.241	705.000	-0.374	1290.00	-0.558	1875.00	-0.665
135.000	-0.253	720.000	-0.380	1305.00	-0.551	1890.00	-0.665
150.000	-0.272	735.000	-0.386	1320.00	-0.558	1905.00	-0.665
165.000	-0.285	750.000	-0.393	1335.00	-0.558	1920.00	-0.672
180.000	-0.304	765.000	-0.399	1350.00	-0.564	1935.00	-0.672
195.000	-0.317	780.000	-0.405	1365.00	-0.564	1950.00	-0.672
210.000	-0.323	795.000	-0.405	1380.00	-0.564	1965.00	-0.672
225.000	-0.329	810.000	-0.412	1395.00	-0.564	1980.00	-0.672
240.000	-0.342	825.000	-0.418	1410.00	-0.570	1995.00	-0.672
255.000	-0.348	840.000	-0.424	1425.00	-0.577	2010.00	-0.672
270.000	-0.355	855.000	-0.424	1440.00	-0.577	2025.00	-0.678
285.000	-0.367	870.000	-0.424	1455.00	-0.583	2040.00	-0.678
300.000	-0.367	885.000	-0.431	1470.00	-0.577	2055.00	-0.678
315.000	-0.380	900.000	-0.431	1485.00	-0.596	2070.00	-0.684
330.000	-0.386	915.000	-0.437	1500.00	-0.596	2085.00	-0.684
345.000	-0.393	930.000	-0.437	1515.00	-0.596	2100.00	-0.691
360.000	-0.405	945.000	-0.450	1530.00	-0.602	2115.00	-0.684
375.000	-0.412	960.000	-0.450	1545.00	-0.608	2130.00	-0.691
390.000	-0.355	975.000	-0.463	1560.00	-0.608	2145.00	-0.691
405.000	-0.260	990.000	-0.463	1575.00	-0.615	2160.00	-0.691
420.000	-0.209	1005.00	-0.469	1590.00	-0.621	2175.00	-0.684
435.000	-0.171	1020.00	-0.475	1605.00	-0.621	2190.00	-0.691
450.000	-0.139	1035.00	-0.488	1620.00	-0.627	2205.00	-0.691
465.000	-0.152	1050.00	-0.488	1635.00	-0.634	2220.00	-0.691
480.000	-0.158	1065.00	-0.488	1650.00	-0.640	2235.00	-0.691
495.000	-0.158	1080.00	-0.494	1665.00	-0.640	2250.00	-0.684
510.000	-0.152	1095.00	-0.501	1680.00	-0.640	2265.00	-0.684
525.000	-0.209	1110.00	-0.501	1695.00	-0.640	2280.00	-0.684
540.000	-0.241	1125.00	-0.507	1710.00	-0.640	2295.00	-0.684
555.000	-0.266	1140.00	-0.507	1725.00	-0.640	2310.00	-0.684
570.000	-0.272	1155.00	-0.513	1740.00	-0.646	2325.00	-0.684

Elapsed Time	Input 1	Elapsed Time	Input 1	Elapsed Time	Input 1	Elapsed Time	Input 1
2340.00	-0.691	3180.00	-0.773	4020.00	-0.856	4860.00	-0.412
2355.00	-0.691	3195.00	-0.773	4035.00	-0.856	4875.00	-0.412
2370.00	-0.691	3210.00	-0.773	4050.00	-0.862	4890.00	-0.412
2385.00	-0.697	3225.00	-0.780	4065.00	-0.862	4905.00	-0.405
2400.00	-0.697	3240.00	-0.780	4080.00	-0.862	4920.00	-0.405
2415.00	-0.697	3255.00	-0.780	4095.00	-0.862	4935.00	-0.399
2430.00	-0.703	3270.00	-0.780	4110.00	-0.862	4950.00	-0.399
2445.00	-0.703	3285.00	-0.780	4125.00	-0.862	4965.00	-0.399
2460.00	-0.703	3300.00	-0.786	4140.00	-0.862	4980.00	-0.399
2475.00	-0.703	3315.00	-0.786	4155.00	-0.862	4995.00	-0.399
2490.00	-0.703	3330.00	-0.786	4170.00	-0.862	5010.00	-0.399
2505.00	-0.710	3345.00	-0.786	4185.00	-0.862	5025.00	-0.393
2520.00	-0.710	3360.00	-0.786	4200.00	-0.862	5040.00	-0.393
2535.00	-0.710	3375.00	-0.786	4215.00	-0.818	5055.00	-0.386
2550.00	-0.710	3390.00	-0.786	4230.00	-0.773	5070.00	-0.386
2565.00	-0.710	3405.00	-0.786	4245.00	-0.741	5085.00	-0.386
2580.00	-0.716	3420.00	-0.792	4260.00	-0.716	5100.00	-0.386
2595.00	-0.716	3435.00	-0.792	4275.00	-0.691	5115.00	-0.380
2610.00	-0.716	3450.00	-0.792	4290.00	-0.672	5130.00	-0.374
2625.00	-0.722	3465.00	-0.799	4305.00	-0.653	5145.00	-0.374
2640.00	-0.722	3480.00	-0.799	4320.00	-0.634	5160.00	-0.367
2655.00	-0.729	3495.00	-0.799	4335.00	-0.627	5175.00	-0.367
2670.00	-0.729	3510.00	-0.805	4350.00	-0.615	5190.00	-0.367
2685.00	-0.729	3525.00	-0.805	4365.00	-0.602	5205.00	-0.361
2700.00	-0.729	3540.00	-0.805	4380.00	-0.589	5220.00	-0.367
2715.00	-0.729	3555.00	-0.805	4395.00	-0.577	5235.00	-0.367
2730.00	-0.729	3570.00	-0.805	4410.00	-0.570	5250.00	-0.361
2745.00	-0.735	3585.00	-0.811	4425.00	-0.564	5265.00	-0.355
2760.00	-0.729	3600.00	-0.811	4440.00	-0.551	5280.00	-0.355
2775.00	-0.729	3615.00	-0.811	4455.00	-0.545	5295.00	-0.355
2790.00	-0.729	3630.00	-0.811	4470.00	-0.539	5310.00	-0.348
2805.00	-0.729	3645.00	-0.818	4485.00	-0.526	5325.00	-0.355
2820.00	-0.729	3660.00	-0.818	4500.00	-0.520	5340.00	-0.348
2835.00	-0.729	3675.00	-0.818	4515.00	-0.513	5355.00	-0.348
2850.00	-0.729	3690.00	-0.818	4530.00	-0.507	5370.00	-0.348
2865.00	-0.729	3705.00	-0.818	4545.00	-0.501	5385.00	-0.348
2880.00	-0.729	3720.00	-0.818	4560.00	-0.501	5400.00	-0.348
2895.00	-0.729	3735.00	-0.818	4575.00	-0.488	5415.00	-0.348
2910.00	-0.735	3750.00	-0.824	4590.00	-0.488	5430.00	-0.348
2925.00	-0.735	3765.00	-0.824	4605.00	-0.482	5445.00	-0.342
2940.00	-0.735	3780.00	-0.830	4620.00	-0.475	5460.00	-0.348
2955.00	-0.735	3795.00	-0.830	4635.00	-0.475	5475.00	-0.342
2970.00	-0.741	3810.00	-0.830	4650.00	-0.463	5490.00	-0.348
2985.00	-0.741	3825.00	-0.830	4665.00	-0.463	5505.00	-0.348
3000.00	-0.741	3840.00	-0.837	4680.00	-0.450	5520.00	-0.342
3015.00	-0.741	3855.00	-0.837	4695.00	-0.450	5535.00	-0.342
3030.00	-0.741	3870.00	-0.837	4710.00	-0.450	5550.00	-0.336
3045.00	-0.748	3885.00	-0.843	4725.00	-0.450	5565.00	-0.336
3060.00	-0.748	3900.00	-0.837	4740.00	-0.443	5580.00	-0.336
3075.00	-0.754	3915.00	-0.843	4755.00	-0.437	5595.00	-0.336
3090.00	-0.754	3930.00	-0.843	4770.00	-0.437	5610.00	-7.724
3105.00	-0.761	3945.00	-0.849	4785.00	-0.437	5625.00	-7.724
3120.00	-0.761	3960.00	-0.849	4800.00	-0.431	5640.00	-7.724
3135.00	-0.761	3975.00	-0.849	4815.00	-0.424	5655.00	-7.724
3150.00	-0.761	3990.00	-0.849	4830.00	-0.424	5670.00	-7.724
3165.00	-0.767	4005.00	-0.849	4845.00	-0.418	5685.00	-7.724

Elapsed Time	Input 1	Elapsed Time	Input 1	Elapsed Time	Input 1	Elapsed Time	Input 1
5700.00	-7.724	6540.00	-7.724	7380.00	-7.724	8220.00	-7.724
5715.00	-7.724	6555.00	-7.724	7395.00	-7.724	8235.00	-7.724
5730.00	-7.724	6570.00	-7.724	7410.00	-7.724	8250.00	-7.724
5745.00	-7.724	6585.00	-7.724	7425.00	-7.724	8265.00	-7.724
5760.00	-7.724	6600.00	-7.724	7440.00	-7.724	8280.00	-7.724
5775.00	-7.724	6615.00	-7.724	7455.00	-7.724	8295.00	-7.724
5790.00	-7.724	6630.00	-7.724	7470.00	-7.724	8310.00	-7.724
5805.00	-7.724	6645.00	-7.724	7485.00	-7.724	8325.00	-7.724
5820.00	-7.724	6660.00	-7.724	7500.00	-7.724	8340.00	-7.724
5835.00	-7.724	6675.00	-7.724	7515.00	-7.724	8355.00	-7.724
5850.00	-7.724	6690.00	-7.724	7530.00	-7.724	8370.00	-7.724
5865.00	-7.724	6705.00	-7.724	7545.00	-7.724	8385.00	-7.724
5880.00	-7.724	6720.00	-7.724	7560.00	-7.724	8400.00	-7.724
5895.00	-7.724	6735.00	-7.724	7575.00	-7.724	8415.00	-7.724
5910.00	-7.724	6750.00	-7.724	7590.00	-7.724	8430.00	-7.724
5925.00	-7.724	6765.00	-7.724	7605.00	-7.724	8445.00	-7.724
5940.00	-7.724	6780.00	-7.724	7620.00	-7.724	8460.00	-7.724
5955.00	-7.724	6795.00	-7.724	7635.00	-7.724	8475.00	-7.724
5970.00	-7.724	6810.00	-7.724	7650.00	-7.724	8490.00	-7.724
5985.00	-7.724	6825.00	-7.724	7665.00	-7.724	8505.00	-7.724
6000.00	-7.724	6840.00	-7.724	7680.00	-7.724	8520.00	-7.724
6015.00	-7.724	6855.00	-7.724	7695.00	-7.724	8535.00	-7.724
6030.00	-7.724	6870.00	-7.724	7710.00	-7.724	8550.00	-7.724
6045.00	-7.724	6885.00	-7.724	7725.00	-7.724	8565.00	-7.724
6060.00	-7.724	6900.00	-7.724	7740.00	-7.724	8580.00	-7.724
6075.00	-7.724	6915.00	-7.724	7755.00	-7.724	8595.00	-7.724
6090.00	-7.724	6930.00	-7.724	7770.00	-7.724	8610.00	-7.724
6105.00	-7.724	6945.00	-7.724	7785.00	-7.724	8625.00	-7.724
6120.00	-7.724	6960.00	-7.724	7800.00	-7.724	8640.00	-7.724
6135.00	-7.724	6975.00	-7.724	7815.00	-7.724	8655.00	-7.724
6150.00	-7.724	6990.00	-7.724	7830.00	-7.724	8670.00	-7.724
6165.00	-7.724	7005.00	-7.724	7845.00	-7.724	8685.00	-7.724
6180.00	-7.724	7020.00	-7.724	7860.00	-7.724	8700.00	-7.724
6195.00	-7.724	7035.00	-7.724	7875.00	-7.724	8715.00	-7.724
6210.00	-7.724	7050.00	-7.724	7890.00	-7.724	8730.00	-7.724
6225.00	-7.724	7065.00	-7.724	7905.00	-7.724	8745.00	-7.724
6240.00	-7.724	7080.00	-7.724	7920.00	-7.724	8760.00	-7.724
6255.00	-7.724	7095.00	-7.724	7935.00	-7.724	8775.00	-7.724
6270.00	-7.724	7110.00	-7.724	7950.00	-7.724	8790.00	-7.724
6285.00	-7.724	7125.00	-7.724	7965.00	-7.724	8805.00	-7.724
6300.00	-7.724	7140.00	-7.724	7980.00	-7.724	8820.00	-7.724
6315.00	-7.724	7155.00	-7.724	7995.00	-7.724	8835.00	-7.724
6330.00	-7.724	7170.00	-7.724	8010.00	-7.724	8850.00	-7.724
6345.00	-7.724	7185.00	-7.724	8025.00	-7.724	8865.00	-7.724
6360.00	-7.724	7200.00	-7.724	8040.00	-7.724	8880.00	-7.724
6375.00	-7.724	7215.00	-7.724	8055.00	-7.724	8895.00	-7.724
6390.00	-7.724	7230.00	-7.724	8070.00	-7.724	8910.00	-7.724
6405.00	-7.724	7245.00	-7.724	8085.00	-7.724	8925.00	-7.724
6420.00	-7.724	7260.00	-7.724	8100.00	-7.724	8940.00	-7.724
6435.00	-7.724	7275.00	-7.724	8115.00	-7.724	8955.00	-7.724
6450.00	-7.724	7290.00	-7.724	8130.00	-7.724	8970.00	-7.724
6465.00	-7.724	7305.00	-7.724	8145.00	-7.724	8985.00	-7.724
6480.00	-7.724	7320.00	-7.724	8160.00	-7.724	9000.00	-7.724
6495.00	-7.724	7335.00	-7.724	8175.00	-7.724	9015.00	-7.724
6510.00	-7.724	7350.00	-7.724	8190.00	-7.724	9030.00	-7.724
6525.00	-7.724	7365.00	-7.724	8205.00	-7.724	9045.00	-7.724

Elapsed Time	Input 1	Elapsed Time	Input 1	Elapsed Time	Input 1	Elapsed Time	Input 1
9060.00	-7.724	9900.00	-7.724	10740.0	-7.724	11580.0	-7.724
9075.00	-7.724	9915.00	-7.724	10755.0	-7.724	11595.0	-7.724
9090.00	-7.724	9930.00	-7.724	10770.0	-7.724	11610.0	-7.724
9105.00	-7.724	9945.00	-7.724	10785.0	-7.724	11625.0	-7.724
9120.00	-7.724	9960.00	-7.724	10800.0	-7.724	11640.0	-7.724
9135.00	-7.724	9975.00	-7.724	10815.0	-7.724	11655.0	-7.724
9150.00	-7.724	9990.00	-7.724	10830.0	-7.724	11670.0	-7.724
9165.00	-7.724	10005.0	-7.724	10845.0	-7.724	11685.0	-7.724
9180.00	-7.724	10020.0	-7.724	10860.0	-7.724	11700.0	-7.724
9195.00	-7.724	10035.0	-7.724	10875.0	-7.724	11715.0	-7.724
9210.00	-7.724	10050.0	-7.724	10890.0	-7.724	11730.0	-7.724
9225.00	-7.724	10065.0	-7.724	10905.0	-7.724	11745.0	-7.724
9240.00	-7.724	10080.0	-7.724	10920.0	-7.724	11760.0	-7.724
9255.00	-7.724	10095.0	-7.724	10935.0	-7.724	11775.0	-7.724
9270.00	-7.724	10110.0	-7.724	10950.0	-7.724	11790.0	-7.724
9285.00	-7.724	10125.0	-7.724	10965.0	-7.724	11805.0	-7.724
9300.00	-7.724	10140.0	-7.724	10980.0	-7.724	11820.0	-7.724
9315.00	-7.724	10155.0	-7.724	10995.0	-7.724	11835.0	-7.724
9330.00	-7.724	10170.0	-7.724	11010.0	-7.724	11850.0	-7.724
9345.00	-7.724	10185.0	-7.724	11025.0	-7.724	11865.0	-7.724
9360.00	-7.724	10200.0	-7.724	11040.0	-7.724	11880.0	-7.724
9375.00	-7.724	10215.0	-7.724	11055.0	-7.724	11895.0	-7.724
9390.00	-7.724	10230.0	-7.724	11070.0	-7.724	11910.0	-7.724
9405.00	-7.724	10245.0	-7.724	11085.0	-7.724	11925.0	-7.724
9420.00	-7.724	10260.0	-7.724	11100.0	-7.724	11940.0	-7.724
9435.00	-7.724	10275.0	-7.724	11115.0	-7.724	11955.0	-7.724
9450.00	-7.724	10290.0	-7.724	11130.0	-7.724	11970.0	-7.724
9465.00	-7.724	10305.0	-7.724	11145.0	-7.724	11985.0	-7.724
9480.00	-7.724	10320.0	-7.724	11160.0	-7.724	12000.0	-7.724
9495.00	-7.724	10335.0	-7.724	11175.0	-7.724	12015.0	-7.724
9510.00	-7.724	10350.0	-7.724	11190.0	-7.724	12030.0	-7.724
9525.00	-7.724	10365.0	-7.724	11205.0	-7.724	12045.0	-7.724
9540.00	-7.724	10380.0	-7.724	11220.0	-7.724	12060.0	-7.724
9555.00	-7.724	10395.0	-7.724	11235.0	-7.724	12075.0	-7.724
9570.00	-7.724	10410.0	-7.724	11250.0	-7.724	12090.0	-7.724
9585.00	-7.724	10425.0	-7.724	11265.0	-7.724	12105.0	-7.724
9600.00	-7.724	10440.0	-7.724	11280.0	-7.724	12120.0	-7.724
9615.00	-7.724	10455.0	-7.724	11295.0	-7.724	12135.0	-7.724
9630.00	-7.724	10470.0	-7.724	11310.0	-7.724	12150.0	-7.724
9645.00	-7.724	10485.0	-7.724	11325.0	-7.724	12165.0	-7.724
9660.00	-7.724	10500.0	-7.724	11340.0	-7.724	12180.0	-7.724
9675.00	-7.724	10515.0	-7.724	11355.0	-7.724	12195.0	-7.724
9690.00	-7.724	10530.0	-7.724	11370.0	-7.724	12210.0	-7.724
9705.00	-7.724	10545.0	-7.724	11385.0	-7.724	12225.0	-7.724
9720.00	-7.724	10560.0	-7.724	11400.0	-7.724	12240.0	-7.724
9735.00	-7.724	10575.0	-7.724	11415.0	-7.724	12255.0	-7.724
9750.00	-7.724	10590.0	-7.724	11430.0	-7.724	12270.0	-7.724
9765.00	-7.724	10605.0	-7.724	11445.0	-7.724	12285.0	-7.724
9780.00	-7.724	10620.0	-7.724	11460.0	-7.724	12300.0	-7.724
9795.00	-7.724	10635.0	-7.724	11475.0	-7.724	12315.0	-7.724
9810.00	-7.724	10650.0	-7.724	11490.0	-7.724	12330.0	-7.724
9825.00	-7.724	10665.0	-7.724	11505.0	-7.724	12345.0	-7.724
9840.00	-7.724	10680.0	-7.724	11520.0	-7.724	12360.0	-7.724
9855.00	-7.724	10695.0	-7.724	11535.0	-7.724	12375.0	-7.724
9870.00	-7.724	10710.0	-7.724	11550.0	-7.724	12390.0	-7.724
9885.00	-7.724	10725.0	-7.724	11565.0	-7.724	12405.0	-7.724

Elapsed Time	Input 1	Elapsed Time	Input 1	Elapsed Time	Input 1	Elapsed Time	Input 1
12420.0	-7.724	13260.0	-7.724	14100.0	-7.724	14940.0	-7.724
12435.0	-7.724	13275.0	-7.724	14115.0	-7.724	14955.0	-7.724
12450.0	-7.724	13290.0	-7.724	14130.0	-7.724	14970.0	-7.724
12465.0	-7.724	13305.0	-7.724	14145.0	-7.724	14985.0	-7.724
12480.0	-7.724	13320.0	-7.724	14160.0	-7.724	15000.0	-7.724
12495.0	-7.724	13335.0	-7.724	14175.0	-7.724	15015.0	-7.724
12510.0	-7.724	13350.0	-7.724	14190.0	-7.724	15030.0	-7.724
12525.0	-7.724	13365.0	-7.724	14205.0	-7.724	15045.0	-7.724
12540.0	-7.724	13380.0	-7.724	14220.0	-7.724	15060.0	-7.724
12555.0	-7.724	13395.0	-7.724	14235.0	-7.724	15075.0	-7.724
12570.0	-7.724	13410.0	-7.724	14250.0	-7.724	15090.0	-7.724
12585.0	-7.724	13425.0	-7.724	14265.0	-7.724	15105.0	-7.724
12600.0	-7.724	13440.0	-7.724	14280.0	-7.724	15120.0	-7.724
12615.0	-7.724	13455.0	-7.724	14295.0	-7.724	15135.0	-7.724
12630.0	-7.724	13470.0	-7.724	14310.0	-7.724	15150.0	-7.724
12645.0	-7.724	13485.0	-7.724	14325.0	-7.724	15165.0	-7.724
12660.0	-7.724	13500.0	-7.724	14340.0	-7.724	15180.0	-7.724
12675.0	-7.724	13515.0	-7.724	14355.0	-7.724	15195.0	-7.724
12690.0	-7.724	13530.0	-7.724	14370.0	-7.724	15210.0	-7.724
12705.0	-7.724	13545.0	-7.724	14385.0	-7.724	15225.0	-7.724
12720.0	-7.724	13560.0	-7.724	14400.0	-7.724	15240.0	-7.724
12735.0	-7.724	13575.0	-7.724	14415.0	-7.724	15255.0	-7.724
12750.0	-7.724	13590.0	-7.724	14430.0	-7.724	15270.0	-7.724
12765.0	-7.724	13605.0	-7.724	14445.0	-7.724	15285.0	-7.724
12780.0	-7.724	13620.0	-7.724	14460.0	-7.724	15300.0	-7.724
12795.0	-7.724	13635.0	-7.724	14475.0	-7.724	15315.0	-7.724
12810.0	-7.724	13650.0	-7.724	14490.0	-7.724	15330.0	-7.724
12825.0	-7.724	13665.0	-7.724	14505.0	-7.724	15345.0	-7.724
12840.0	-7.724	13680.0	-7.724	14520.0	-7.724	15360.0	-7.724
12855.0	-7.724	13695.0	-7.724	14535.0	-7.724	15375.0	-7.724
12870.0	-7.724	13710.0	-7.724	14550.0	-7.724	15390.0	-7.724
12885.0	-7.724	13725.0	-7.724	14565.0	-7.724	15405.0	-7.724
12900.0	-7.724	13740.0	-7.724	14580.0	-7.724	15420.0	-7.724
12915.0	-7.724	13755.0	-7.724	14595.0	-7.724	15435.0	-7.724
12930.0	-7.724	13770.0	-7.724	14610.0	-7.724	15450.0	-7.724
12945.0	-7.724	13785.0	-7.724	14625.0	-7.724	15465.0	-7.724
12960.0	-7.724	13800.0	-7.724	14640.0	-7.724	15480.0	-7.724
12975.0	-7.724	13815.0	-7.724	14655.0	-7.724	15495.0	-7.724
12990.0	-7.724	13830.0	-7.724	14670.0	-7.724	15510.0	-7.724
13005.0	-7.724	13845.0	-7.724	14685.0	-7.724	15525.0	-7.724
13020.0	-7.724	13860.0	-7.724	14700.0	-7.724	15540.0	-7.724
13035.0	-7.724	13875.0	-7.724	14715.0	-7.724	15555.0	-7.724
13050.0	-7.724	13890.0	-7.724	14730.0	-7.724	15570.0	-7.724
13065.0	-7.724	13905.0	-7.724	14745.0	-7.724	15585.0	-7.724
13080.0	-7.724	13920.0	-7.724	14760.0	-7.724	15600.0	-7.724
13095.0	-7.724	13935.0	-7.724	14775.0	-7.724	15615.0	-7.724
13110.0	-7.724	13950.0	-7.724	14790.0	-7.724	15630.0	-7.724
13125.0	-7.724	13965.0	-7.724	14805.0	-7.724	15645.0	-7.724
13140.0	-7.724	13980.0	-7.724	14820.0	-7.724	15660.0	-7.724
13155.0	-7.724	13995.0	-7.724	14835.0	-7.724	15675.0	-7.724
13170.0	-7.724	14010.0	-7.724	14850.0	-7.724	15690.0	-7.724
13185.0	-7.724	14025.0	-7.724	14865.0	-7.724	15705.0	-7.724
13200.0	-7.724	14040.0	-7.724	14880.0	-7.724	15720.0	-7.724
13215.0	-7.724	14055.0	-7.724	14895.0	-7.724	15735.0	-7.724
13230.0	-7.724	14070.0	-7.724	14910.0	-7.724	15750.0	-7.724
13245.0	-7.724	14085.0	-7.724	14925.0	-7.724	15765.0	-7.724

Elapsed Time	Input 1	Elapsed Time	Input 1	Elapsed Time	Input 1	Elapsed Time	Input 1
15780.0	-7.724	16620.0	-7.724	17460.0	-7.724	18300.0	-7.724
15795.0	-7.724	16635.0	-7.724	17475.0	-7.724	18315.0	-7.724
15810.0	-7.724	16650.0	-7.724	17490.0	-7.724	18330.0	-7.724
15825.0	-7.724	16665.0	-7.724	17505.0	-7.724	18345.0	-7.724
15840.0	-7.724	16680.0	-7.724	17520.0	-7.724	18360.0	-7.724
15855.0	-7.724	16695.0	-7.724	17535.0	-7.724	18375.0	-7.724
15870.0	-7.724	16710.0	-7.724	17550.0	-7.724	18390.0	-7.724
15885.0	-7.724	16725.0	-7.724	17565.0	-7.724	18405.0	-7.724
15900.0	-7.724	16740.0	-7.724	17580.0	-7.724	18420.0	-7.724
15915.0	-7.724	16755.0	-7.724	17595.0	-7.724	18435.0	-7.724
15930.0	-7.724	16770.0	-7.724	17610.0	-7.724	18450.0	-7.724
15945.0	-7.724	16785.0	-7.724	17625.0	-7.724	18465.0	-7.724
15960.0	-7.724	16800.0	-7.724	17640.0	-7.724	18480.0	-7.724
15975.0	-7.724	16815.0	-7.724	17655.0	-7.724	18495.0	-7.724
15990.0	-7.724	16830.0	-7.724	17670.0	-7.724	18510.0	-7.724
16005.0	-7.724	16845.0	-7.724	17685.0	-7.724	18525.0	-7.724
16020.0	-7.724	16860.0	-7.724	17700.0	-7.724	18540.0	-7.724
16035.0	-7.724	16875.0	-7.724	17715.0	-7.724	18555.0	-7.724
16050.0	-7.724	16890.0	-7.724	17730.0	-7.724	18570.0	-7.724
16065.0	-7.724	16905.0	-7.724	17745.0	-7.724	18585.0	-7.724
16080.0	-7.724	16920.0	-7.724	17760.0	-7.724	18600.0	-7.724
16095.0	-7.724	16935.0	-7.724	17775.0	-7.724	18615.0	-7.724
16110.0	-7.724	16950.0	-7.724	17790.0	-7.724	18630.0	-7.724
16125.0	-7.724	16965.0	-7.724	17805.0	-7.724	18645.0	-7.724
16140.0	-7.724	16980.0	-7.724	17820.0	-7.724	18660.0	-7.724
16155.0	-7.724	16995.0	-7.724	17835.0	-7.724	18675.0	-7.724
16170.0	-7.724	17010.0	-7.724	17850.0	-7.724	18690.0	-7.724
16185.0	-7.724	17025.0	-7.724	17865.0	-7.724	18705.0	-7.724
16200.0	-7.724	17040.0	-7.724	17880.0	-7.724	18720.0	-7.724
16215.0	-7.724	17055.0	-7.724	17895.0	-7.724	18735.0	-7.724
16230.0	-7.724	17070.0	-7.724	17910.0	-7.724	18750.0	-7.724
16245.0	-7.724	17085.0	-7.724	17925.0	-7.724	18765.0	-7.724
16260.0	-7.724	17100.0	-7.724	17940.0	-7.724	18780.0	-7.724
16275.0	-7.724	17115.0	-7.724	17955.0	-7.724	18795.0	-7.724
16290.0	-7.724	17130.0	-7.724	17970.0	-7.724	18810.0	-7.724
16305.0	-7.724	17145.0	-7.724	17985.0	-7.724	18825.0	-7.724
16320.0	-7.724	17160.0	-7.724	18000.0	-7.724	18840.0	-7.724
16335.0	-7.724	17175.0	-7.724	18015.0	-7.724	18855.0	-7.724
16350.0	-7.724	17190.0	-7.724	18030.0	-7.724	18870.0	-7.724
16365.0	-7.724	17205.0	-7.724	18045.0	-7.724	18885.0	-7.724
16380.0	-7.724	17220.0	-7.724	18060.0	-7.724	18900.0	-7.724
16395.0	-7.724	17235.0	-7.724	18075.0	-7.724	18915.0	-7.724
16410.0	-7.724	17250.0	-7.724	18090.0	-7.724	18930.0	-7.724
16425.0	-7.724	17265.0	-7.724	18105.0	-7.724	18945.0	-7.724
16440.0	-7.724	17280.0	-7.724	18120.0	-7.724	18960.0	-7.724
16455.0	-7.724	17295.0	-7.724	18135.0	-7.724	18975.0	-7.724
16470.0	-7.724	17310.0	-7.724	18150.0	-7.724		
16485.0	-7.724	17325.0	-7.724	18165.0	-7.724		
16500.0	-7.724	17340.0	-7.724	18180.0	-7.724		
16515.0	-7.724	17355.0	-7.724	18195.0	-7.724		
16530.0	-7.724	17370.0	-7.724	18210.0	-7.724		
16545.0	-7.724	17385.0	-7.724	18225.0	-7.724		
16560.0	-7.724	17400.0	-7.724	18240.0	-7.724		
16575.0	-7.724	17415.0	-7.724	18255.0	-7.724		
16590.0	-7.724	17430.0	-7.724	18270.0	-7.724		
16605.0	-7.724	17445.0	-7.724	18285.0	-7.724		

SE1000C
Environmental Logger
11/17 19:01

Unit# 01775 Test 4

Setups:	INPUT 1
Type	Level (F)
Mode	Surface
I.D.	01233
Reference	0.000
Linearity	0.110
Scale factor	20.070
Offset	-0.070
Delay mSEC	50.000

Step 0 10/25 18:30:01

Elapsed Time	Input 1	Elapsed Time	Input 1	Elapsed Time	Input 1	Elapsed Time	Input 1
0.0000	-0.012	525.000	-0.038	1050.00	-0.063	1575.00	-0.107
15.0000	-0.012	540.000	-0.038	1065.00	-0.063	1590.00	-0.107
30.0000	-0.012	555.000	-0.031	1080.00	-0.057	1605.00	-0.107
45.0000	-0.012	570.000	-0.038	1095.00	-0.050	1620.00	-0.120
60.0000	-0.019	585.000	-0.038	1110.00	-0.050	1635.00	-0.120
75.0000	-0.019	600.000	-0.031	1125.00	-0.050	1650.00	-0.120
90.0000	-0.019	615.000	-0.038	1140.00	-0.050	1665.00	-0.120
105.000	-0.019	630.000	-0.038	1155.00	-0.050	1680.00	-0.120
120.000	-0.019	645.000	-0.038	1170.00	-0.050	1695.00	-0.120
135.000	-0.019	660.000	-0.038	1185.00	-0.044	1710.00	-0.120
150.000	-0.025	675.000	-0.038	1200.00	-0.044	1725.00	-0.120
165.000	-0.025	690.000	-0.038	1215.00	-0.044	1740.00	-0.126
180.000	-0.025	705.000	-0.038	1230.00	-0.044	1755.00	-0.126
195.000	-0.025	720.000	-0.038	1245.00	-0.050	1770.00	-0.126
210.000	-0.025	735.000	-0.038	1260.00	-0.063	1785.00	-0.126
225.000	-0.025	750.000	-0.044	1275.00	-0.145	1800.00	-0.120
240.000	-0.025	765.000	-0.044	1290.00	-0.152	1815.00	-0.120
255.000	-0.025	780.000	-0.038	1305.00	-0.139	1830.00	-0.120
270.000	-0.025	795.000	-0.044	1320.00	-0.177	1845.00	-0.120
285.000	-0.025	810.000	-0.044	1335.00	-0.158	1860.00	-0.120
300.000	-0.025	825.000	-0.044	1350.00	-0.139	1875.00	-0.120
315.000	-0.025	840.000	-0.044	1365.00	-0.133	1890.00	-0.126
330.000	-0.025	855.000	-0.050	1380.00	-0.126	1905.00	-0.126
345.000	-0.031	870.000	-0.050	1395.00	-0.120	1920.00	-0.126
360.000	-0.025	885.000	-0.050	1410.00	-0.120	1935.00	-0.120
375.000	-0.025	900.000	-0.050	1425.00	-0.114	1950.00	-0.126
390.000	-0.025	915.000	-0.050	1440.00	-0.114	1965.00	-0.126
405.000	-0.031	930.000	-0.050	1455.00	-0.114	1980.00	-0.126
420.000	-0.031	945.000	-0.050	1470.00	-0.107	1995.00	-0.126
435.000	-0.031	960.000	-0.050	1485.00	-0.114	2010.00	-0.126
450.000	-0.031	975.000	-0.057	1500.00	-0.114	2025.00	-0.126
465.000	-0.031	990.000	-0.057	1515.00	-0.114	2040.00	-0.126
480.000	-0.031	1005.00	-0.050	1530.00	-0.107	2055.00	-0.126
495.000	-0.031	1020.00	-0.057	1545.00	-0.107	2070.00	-0.126
510.000	-0.031	1035.00	-0.057	1560.00	-0.107	2085.00	-0.126

Elapsed Time	Input 1	Elapsed Time	Input 1	Elapsed Time	Input 1	Elapsed Time	Input 1
2100.00	-0.120	2895.00	-0.266	3690.00	-0.177	4485.00	-0.469
2115.00	-0.126	2910.00	-0.260	3705.00	-0.183	4500.00	-0.475
2130.00	-0.126	2925.00	-0.260	3720.00	-0.183	4515.00	-0.475
2145.00	-0.126	2940.00	-0.253	3735.00	-0.177	4530.00	-0.481
2160.00	-0.126	2955.00	-0.253	3750.00	-0.171	4545.00	-0.481
2175.00	-0.133	2970.00	-0.247	3765.00	-0.183	4560.00	-0.488
2190.00	-0.133	2985.00	-0.240	3780.00	-0.183	4575.00	-0.488
2205.00	-0.133	3000.00	-0.240	3795.00	-0.183	4590.00	-0.494
2220.00	-0.139	3015.00	-0.234	3810.00	-0.183	4605.00	-0.501
2235.00	-0.133	3030.00	-0.234	3825.00	-0.183	4620.00	-0.501
2250.00	-0.133	3045.00	-0.228	3840.00	-0.177	4635.00	-0.507
2265.00	-0.133	3060.00	-0.221	3855.00	-0.215	4650.00	-0.513
2280.00	-0.164	3075.00	-0.221	3870.00	-0.247	4665.00	-0.513
2295.00	-0.158	3090.00	-0.221	3885.00	-0.266	4680.00	-0.513
2310.00	-0.164	3105.00	-0.215	3900.00	-0.279	4695.00	-0.513
2325.00	-0.158	3120.00	-0.215	3915.00	-0.298	4710.00	-0.513
2340.00	-0.164	3135.00	-0.215	3930.00	-0.310	4725.00	-0.520
2355.00	-0.164	3150.00	-0.209	3945.00	-0.323	4740.00	-0.513
2370.00	-0.164	3165.00	-0.209	3960.00	-0.336	4755.00	-0.526
2385.00	-0.196	3180.00	-0.209	3975.00	-0.336	4770.00	-0.526
2400.00	-0.228	3195.00	-0.202	3990.00	-0.342	4785.00	-0.526
2415.00	-0.247	3210.00	-0.202	4005.00	-0.348	4800.00	-0.532
2430.00	-0.266	3225.00	-0.202	4020.00	-0.355	4815.00	-0.539
2445.00	-0.279	3240.00	-0.202	4035.00	-0.355	4830.00	-0.545
2460.00	-0.298	3255.00	-0.196	4050.00	-0.355	4845.00	-0.539
2475.00	-0.304	3270.00	-0.196	4065.00	-0.361	4860.00	-0.545
2490.00	-0.329	3285.00	-0.196	4080.00	-0.367	4875.00	-0.545
2505.00	-0.348	3300.00	-0.196	4095.00	-0.374	4890.00	-0.545
2520.00	-0.367	3315.00	-0.190	4110.00	-0.380	4905.00	-0.545
2535.00	-0.380	3330.00	-0.190	4125.00	-0.380	4920.00	-0.551
2550.00	-0.393	3345.00	-0.190	4140.00	-0.386	4935.00	-0.551
2565.00	-0.380	3360.00	-0.190	4155.00	-0.393	4950.00	-0.558
2580.00	-0.342	3375.00	-0.190	4170.00	-0.393	4965.00	-0.551
2595.00	-0.317	3390.00	-0.190	4185.00	-0.399	4980.00	-0.558
2610.00	-0.298	3405.00	-0.190	4200.00	-0.405	4995.00	-0.545
2625.00	-0.285	3420.00	-0.190	4215.00	-0.405	5010.00	-0.520
2640.00	-0.272	3435.00	-0.183	4230.00	-0.412	5025.00	-0.501
2655.00	-0.260	3450.00	-0.183	4245.00	-0.418	5040.00	-0.481
2670.00	-0.253	3465.00	-0.183	4260.00	-0.418	5055.00	-0.475
2685.00	-0.247	3480.00	-0.183	4275.00	-0.424	5070.00	-0.462
2700.00	-0.260	3495.00	-0.183	4290.00	-0.424	5085.00	-0.456
2715.00	-0.285	3510.00	-0.183	4305.00	-0.424	5100.00	-0.450
2730.00	-0.310	3525.00	-0.177	4320.00	-0.424	5115.00	-0.443
2745.00	-0.329	3540.00	-0.183	4335.00	-0.431	5130.00	-0.437
2760.00	-0.342	3555.00	-0.177	4350.00	-0.437	5145.00	-0.431
2775.00	-0.355	3570.00	-0.177	4365.00	-0.443	5160.00	-0.431
2790.00	-0.374	3585.00	-0.177	4380.00	-0.450	5175.00	-0.437
2805.00	-0.361	3600.00	-0.171	4395.00	-0.450	5190.00	-0.431
2820.00	-0.336	3615.00	-0.177	4410.00	-0.456	5205.00	-0.431
2835.00	-0.310	3630.00	-0.183	4425.00	-0.456	5220.00	-0.431
2850.00	-0.298	3645.00	-0.177	4440.00	-0.462	5235.00	-0.424
2865.00	-0.285	3660.00	-0.177	4455.00	-0.469	5250.00	-0.418
2880.00	-0.279	3675.00	-0.177	4470.00	-0.469	5265.00	-0.418

SE2000
Environmental Logger
11/17 17:14

Unit# 2K-473 Test 0

Setups:	INPUT 1
Type	Level (F)
Mode	Surface
I.D.	1224

Reference	0.000
SG	1.000
Linearity	0.115
Scale factor	19.961
Offset	0.026
Delay mSEC	50.000

Step 0 10/22 12:00:01

Elapsed Time	Input 1	Elapsed Time	Input 1	Elapsed Time	Input 1	Elapsed Time	Input 1
0.0000	-0.063	495.000	-0.056	990.000	-0.075	1485.00	-0.107
15.0000	-0.063	510.000	-0.056	1005.00	-0.075	1500.00	-0.107
30.0000	-0.063	525.000	-0.063	1020.00	-0.075	1515.00	-0.100
45.0000	-0.063	540.000	-0.056	1035.00	-0.075	1530.00	-0.100
60.0000	-0.056	555.000	-0.056	1050.00	-0.081	1545.00	-0.094
75.0000	-0.056	570.000	-0.056	1065.00	-0.081	1560.00	-0.094
90.0000	-0.056	585.000	-0.056	1080.00	-0.081	1575.00	-0.088
105.000	-0.050	600.000	-0.063	1095.00	-0.081	1590.00	-0.088
120.000	-0.050	615.000	-0.063	1110.00	-0.081	1605.00	-0.088
135.000	-0.050	630.000	-0.063	1125.00	-0.081	1620.00	-0.094
150.000	-0.050	645.000	-0.063	1140.00	-0.081	1635.00	-0.094
165.000	-0.050	660.000	-0.063	1155.00	-0.081	1650.00	-0.094
180.000	-0.050	675.000	-0.063	1170.00	-0.081	1665.00	-0.094
195.000	-0.044	690.000	-0.063	1185.00	-0.088	1680.00	-0.088
210.000	-0.044	705.000	-0.069	1200.00	-0.088	1695.00	-0.094
225.000	-0.044	720.000	-0.063	1215.00	-0.088	1710.00	-0.088
240.000	-0.044	735.000	-0.063	1230.00	-0.088	1725.00	-0.088
255.000	-0.050	750.000	-0.063	1245.00	-0.094	1740.00	-0.088
270.000	-0.050	765.000	-0.063	1260.00	-0.094	1755.00	-0.094
285.000	-0.050	780.000	-0.069	1275.00	-0.094	1770.00	-0.094
300.000	-0.050	795.000	-0.063	1290.00	-0.100	1785.00	-0.094
315.000	-0.050	810.000	-0.063	1305.00	-0.100	1800.00	-0.094
330.000	-0.050	825.000	-0.069	1320.00	-0.094	1815.00	-0.094
345.000	-0.050	840.000	-0.069	1335.00	-0.100	1830.00	-0.094
360.000	-0.056	855.000	-0.069	1350.00	-0.100	1845.00	-0.088
375.000	-0.056	870.000	-0.069	1365.00	-0.107	1860.00	-0.088
390.000	-0.050	885.000	-0.069	1380.00	-0.107	1875.00	-0.088
405.000	-0.056	900.000	-0.063	1395.00	-0.107	1890.00	-0.088
420.000	-0.056	915.000	-0.069	1410.00	-0.107	1905.00	-0.094
435.000	-0.050	930.000	-0.069	1425.00	-0.107	1920.00	-0.094
450.000	-0.050	945.000	-0.069	1440.00	-0.113	1935.00	-0.094
465.000	-0.050	960.000	-0.069	1455.00	-0.107	1950.00	-0.094
480.000	-0.056	975.000	-0.075	1470.00	-0.107	1965.00	-0.094

Elapsed Time	Input 1	Elapsed Time	Input 1	Elapsed Time	Input 1	Elapsed Time	Input 1
1980.00	-0.094	2745.00	-0.119	3510.00	-0.138	4275.00	-0.182
1995.00	-0.094	2760.00	-0.119	3525.00	-0.138	4290.00	-0.182
2010.00	-0.094	2775.00	-0.119	3540.00	-0.132	4305.00	-0.182
2025.00	-0.100	2790.00	-0.119	3555.00	-0.138	4320.00	-0.176
2040.00	-0.100	2805.00	-0.119	3570.00	-0.144	4335.00	-0.182
2055.00	-0.094	2820.00	-0.126	3585.00	-0.144	4350.00	-0.176
2070.00	-0.100	2835.00	-0.126	3600.00	-0.144	4365.00	-0.182
2085.00	-0.094	2850.00	-0.126	3615.00	-0.138	4380.00	-0.176
2100.00	-0.094	2865.00	-0.126	3630.00	-0.138	4395.00	-0.170
2115.00	-0.094	2880.00	-0.132	3645.00	-0.138	4410.00	-0.176
2130.00	-0.094	2895.00	-0.126	3660.00	-0.138	4425.00	-0.170
2145.00	-0.094	2910.00	-0.126	3675.00	-0.138	4440.00	-0.170
2160.00	-0.094	2925.00	-0.126	3690.00	-0.138	4455.00	-0.163
2175.00	-0.094	2940.00	-0.126	3705.00	-0.138	4470.00	-0.163
2190.00	-0.094	2955.00	-0.126	3720.00	-0.138	4485.00	-0.163
2205.00	-0.094	2970.00	-0.119	3735.00	-0.132	4500.00	-0.170
2220.00	-0.094	2985.00	-0.119	3750.00	-0.138	4515.00	-0.170
2235.00	-0.094	3000.00	-0.113	3765.00	-0.138	4530.00	-0.170
2250.00	-0.094	3015.00	-0.113	3780.00	-0.144	4545.00	-0.170
2265.00	-0.100	3030.00	-0.113	3795.00	-0.144	4560.00	-0.163
2280.00	-0.100	3045.00	-0.119	3810.00	-0.138	4575.00	-0.157
2295.00	-0.100	3060.00	-0.119	3825.00	-0.138	4590.00	-0.176
2310.00	-0.100	3075.00	-0.119	3840.00	-0.144	4605.00	-0.176
2325.00	-0.100	3090.00	-0.119	3855.00	-0.151	4620.00	-0.176
2340.00	-0.100	3105.00	-0.119	3870.00	-0.151	4635.00	-0.176
2355.00	-0.094	3120.00	-0.113	3885.00	-0.151	4650.00	-0.170
2370.00	-0.088	3135.00	-0.119	3900.00	-0.151	4665.00	-0.170
2385.00	-0.100	3150.00	-0.119	3915.00	-0.157	4680.00	-0.157
2400.00	-0.094	3165.00	-0.126	3930.00	-0.157	4695.00	-0.170
2415.00	-0.094	3180.00	-0.119	3945.00	-0.163	4710.00	-0.170
2430.00	-0.094	3195.00	-0.119	3960.00	-0.157	4725.00	-0.176
2445.00	-0.100	3210.00	-0.126	3975.00	-0.163	4740.00	-0.163
2460.00	-0.100	3225.00	-0.126	3990.00	-0.163	4755.00	-0.176
2475.00	-0.100	3240.00	-0.126	4005.00	-0.163	4770.00	-0.176
2490.00	-0.100	3255.00	-0.126	4020.00	-0.163	4785.00	-0.176
2505.00	-0.100	3270.00	-0.126	4035.00	-0.170	4800.00	-0.182
2520.00	-0.100	3285.00	-0.132	4050.00	-0.163	4815.00	-0.176
2535.00	-0.100	3300.00	-0.126	4065.00	-0.163	4830.00	-0.176
2550.00	-0.107	3315.00	-0.119	4080.00	-0.163	4845.00	-0.163
2565.00	-0.107	3330.00	-0.132	4095.00	-0.163	4860.00	-0.176
2580.00	-0.107	3345.00	-0.132	4110.00	-0.163	4875.00	-0.182
2595.00	-0.113	3360.00	-0.138	4125.00	-0.170	4890.00	-0.176
2610.00	-0.113	3375.00	-0.138	4140.00	-0.170	4905.00	-0.176
2625.00	-0.113	3390.00	-0.132	4155.00	-0.176	4920.00	-0.176
2640.00	-0.113	3405.00	-0.138	4170.00	-0.170	4935.00	-0.182
2655.00	-0.107	3420.00	-0.132	4185.00	-0.170	4950.00	-0.176
2670.00	-0.113	3435.00	-0.132	4200.00	-0.176	4965.00	-0.182
2685.00	-0.107	3450.00	-0.132	4215.00	-0.176	4980.00	-0.182
2700.00	-0.107	3465.00	-0.138	4230.00	-0.176	4995.00	-0.176
2715.00	-0.113	3480.00	-0.138	4245.00	-0.182	5010.00	-0.176
2730.00	-0.113	3495.00	-0.138	4260.00	-0.182	5025.00	-0.176

Elapsed Time	Input 1	Elapsed Time	Input 1	Elapsed Time	Input 1	Elapsed Time	Input 1
5040.00	-0.176	5805.00	-0.207	6570.00	-0.252	7335.00	-0.346
5055.00	-0.182	5820.00	-0.201	6585.00	-0.245	7350.00	-0.333
5070.00	-0.182	5835.00	-0.201	6600.00	-0.252	7365.00	-0.327
5085.00	-0.182	5850.00	-0.189	6615.00	-0.252	7380.00	-0.321
5100.00	-0.182	5865.00	-0.195	6630.00	-0.252	7395.00	-0.321
5115.00	-0.182	5880.00	-0.195	6645.00	-0.252	7410.00	-0.321
5130.00	-0.182	5895.00	-0.195	6660.00	-0.245	7425.00	-0.321
5145.00	-0.176	5910.00	-0.195	6675.00	-0.252	7440.00	-0.333
5160.00	-0.182	5925.00	-0.195	6690.00	-0.252	7455.00	-0.340
5175.00	-0.182	5940.00	-0.195	6705.00	-0.252	7470.00	-0.352
5190.00	-0.182	5955.00	-0.195	6720.00	-0.252	7485.00	-0.359
5205.00	-0.189	5970.00	-0.201	6735.00	-0.252	7500.00	-0.359
5220.00	-0.189	5985.00	-0.201	6750.00	-0.252	7515.00	-0.371
5235.00	-0.189	6000.00	-0.214	6765.00	-0.252	7530.00	-0.378
5250.00	-0.189	6015.00	-0.233	6780.00	-0.252	7545.00	-0.371
5265.00	-0.189	6030.00	-0.239	6795.00	-0.252	7560.00	-0.371
5280.00	-0.189	6045.00	-0.252	6810.00	-0.252	7575.00	-0.365
5295.00	-0.189	6060.00	-0.245	6825.00	-0.252	7590.00	-0.359
5310.00	-0.189	6075.00	-0.245	6840.00	-0.252	7605.00	-0.352
5325.00	-0.189	6090.00	-0.245	6855.00	-0.252	7620.00	-0.346
5340.00	-0.189	6105.00	-0.239	6870.00	-0.258	7635.00	-0.340
5355.00	-0.189	6120.00	-0.239	6885.00	-0.258	7650.00	-0.346
5370.00	-0.189	6135.00	-0.233	6900.00	-0.258	7665.00	-0.346
5385.00	-0.189	6150.00	-0.239	6915.00	-0.258	7680.00	-0.340
5400.00	-0.195	6165.00	-0.239	6930.00	-0.258	7695.00	-0.346
5415.00	-0.189	6180.00	-0.233	6945.00	-0.264	7710.00	-0.327
5430.00	-0.195	6195.00	-0.233	6960.00	-0.258	7725.00	-0.340
5445.00	-0.195	6210.00	-0.239	6975.00	-0.264	7740.00	-0.333
5460.00	-0.195	6225.00	-0.239	6990.00	-0.264	7755.00	-0.333
5475.00	-0.195	6240.00	-0.239	7005.00	-0.270	7770.00	-0.333
5490.00	-0.195	6255.00	-0.239	7020.00	-0.264	7785.00	-0.333
5505.00	-0.189	6270.00	-0.239	7035.00	-0.270	7800.00	-0.333
5520.00	-0.195	6285.00	-0.233	7050.00	-0.270	7815.00	-0.321
5535.00	-0.195	6300.00	-0.233	7065.00	-0.270	7830.00	-0.321
5550.00	-0.195	6315.00	-0.233	7080.00	-0.270	7845.00	-0.321
5565.00	-0.201	6330.00	-0.239	7095.00	-0.270	7860.00	-0.321
5580.00	-0.201	6345.00	-0.245	7110.00	-0.277	7875.00	-0.321
5595.00	-0.201	6360.00	-0.245	7125.00	-0.289	7890.00	-0.321
5610.00	-0.201	6375.00	-0.245	7140.00	-0.302	7905.00	-0.321
5625.00	-0.201	6390.00	-0.245	7155.00	-0.308	7920.00	-0.315
5640.00	-0.201	6405.00	-0.252	7170.00	-0.315	7935.00	-0.315
5655.00	-0.201	6420.00	-0.252	7185.00	-0.321	7950.00	-0.315
5670.00	-0.207	6435.00	-0.245	7200.00	-0.327	7965.00	-0.315
5685.00	-0.214	6450.00	-0.252	7215.00	-0.333	7980.00	-0.308
5700.00	-0.214	6465.00	-0.252	7230.00	-0.346	7995.00	-0.302
5715.00	-0.214	6480.00	-0.233	7245.00	-0.352	8010.00	-0.308
5730.00	-0.201	6495.00	-0.252	7260.00	-0.359	8025.00	-0.308
5745.00	-0.214	6510.00	-0.252	7275.00	-0.371	8040.00	-0.302
5760.00	-0.220	6525.00	-0.252	7290.00	-0.371	8055.00	-0.308
5775.00	-0.220	6540.00	-0.245	7305.00	-0.365	8070.00	-0.289
5790.00	-0.220	6555.00	-0.245	7320.00	-0.346	8085.00	-0.302

Elapsed Time	Input 1	Elapsed Time	Input 1	Elapsed Time	Input 1	Elapsed Time	Input 1
8100.00	-0.302	8865.00	-0.378	9630.00	-0.504		
8115.00	-0.302	8880.00	-0.384	9645.00	-0.510		
8130.00	-0.302	8895.00	-0.390	9660.00	-0.516		
8145.00	-0.302	8910.00	-0.384	9675.00	-0.516		
8160.00	-0.302	8925.00	-0.390	9690.00	-0.516		
8175.00	-0.302	8940.00	-0.396	9705.00	-0.522		
8190.00	-0.302	8955.00	-0.396	9720.00	-0.516		
8205.00	-0.289	8970.00	-0.403	9735.00	-0.510		
8220.00	-0.296	8985.00	-0.403	9750.00	-0.504		
8235.00	-0.296	9000.00	-0.403	9765.00	-0.497		
8250.00	-0.289	9015.00	-0.403	9780.00	-0.504		
8265.00	-0.296	9030.00	-0.409	9795.00	-0.466		
8280.00	-0.289	9045.00	-0.409	9810.00	-0.497		
8295.00	-0.289	9060.00	-0.409	9825.00	-0.491		
8310.00	-0.289	9075.00	-0.415	9840.00	-0.491		
8325.00	-0.289	9090.00	-0.415	9855.00	-0.491		
8340.00	-0.296	9105.00	-0.422	9870.00	-0.459		
8355.00	-0.296	9120.00	-0.422	9885.00	-0.485		
8370.00	-0.289	9135.00	-0.428	9900.00	-0.491		
8385.00	-0.296	9150.00	-0.441	9915.00	-0.491		
8400.00	-0.289	9165.00	-0.441	9930.00	-0.491		
8415.00	-0.296	9180.00	-0.441	9945.00	-0.491		
8430.00	-0.296	9195.00	-0.396	9960.00	-0.478		
8445.00	-0.289	9210.00	-0.396	9975.00	-0.478		
8460.00	-0.283	9225.00	-0.428	9990.00	-0.472		
8475.00	-0.296	9240.00	-0.441				
8490.00	-0.302	9255.00	-0.459				
8505.00	-0.296	9270.00	-0.466				
8520.00	-0.296	9285.00	-0.466				
8535.00	-0.289	9300.00	-0.459				
8550.00	-0.289	9315.00	-0.466				
8565.00	-0.289	9330.00	-0.472				
8580.00	-0.302	9345.00	-0.478				
8595.00	-0.308	9360.00	-0.478				
8610.00	-0.321	9375.00	-0.472				
8625.00	-0.327	9390.00	-0.485				
8640.00	-0.346	9405.00	-0.478				
8655.00	-0.346	9420.00	-0.485				
8670.00	-0.340	9435.00	-0.485				
8685.00	-0.359	9450.00	-0.485				
8700.00	-0.359	9465.00	-0.491				
8715.00	-0.352	9480.00	-0.491				
8730.00	-0.352	9495.00	-0.491				
8745.00	-0.352	9510.00	-0.472				
8760.00	-0.352	9525.00	-0.497				
8775.00	-0.359	9540.00	-0.504				
8790.00	-0.346	9555.00	-0.504				
8805.00	-0.371	9570.00	-0.504				
8820.00	-0.371	9585.00	-0.510				
8835.00	-0.378	9600.00	-0.510				
8850.00	-0.371	9615.00	-0.510				

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PARSONS
ERA PROJECT

ENGINEERING CALCULATIONS TITLE AND SUMMARY SHEET

Date November 15, 1993
Sheet 1 of 54

Proj. Order No. 37 Calculation No. 16-5

Project Title Technical and Project Management Support to CERCLA/RCRA Unit 5, Task 331

Calculation Subject Constant Rate Pump Test Analysis Date Verified/Checked 1-18-94

STATUS: PRELIMINARY ____ FINAL X SUPERSEDED ____ VOID ____

STATEMENT OF PROBLEM

1) Constant Rate Pumping Tests were performed at three separate locations on site as part of the Glacial Till/Vadose Zone Investigation. Using applicable methods of analysis, calculate aquifer parameters for Hydraulic Conductivity, Storativity and Anisotropy.

SUMMARY OF CONCLUSIONS	Originator's Signature and Date
1. Test data was analyzed using the methods of Theis (1935), Cooper-Jacob (1946, Hantush-Jacob (1955) and Neuman (1974). Results for each of the pumping tests are listed on attached summary sheets.	Paul Frink 11-15-93

CHECKING METHOD		Checker's Signature and Date
1. Review	X	Dianne Dornoff 1-18-94
2. Alternate Calculation	____	Lead Discipline Engineer's Signature and Date: S/ 1/26/94

Rev. No.	Sheet No.	Description	Reviser's Signature/Date	Checker's Signature/Date	Approved by Signature/Date

5/93 ENG080

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PARSONS
ERA PROJECT

COMPUTER CALCULATION SUMMARY SHEET

CRU: 5 PO: 37 Job Number: 7663-0037-11115-331

Computer Code: AQTESOLV Version: 1.10

Code Verification Status: Verification Complete

Description of Program: AQTESOLV is an industry standard software package which allows the analysis of pump test data by several accepted methods. The program uses either Marquart non-linear least squares curve matching technique or visual fit to obtain values for hydraulic parameters

Source of Data: AQTESOLV input files (see filenames attached) derived from Data logger files, Field Activity Daily Logs, Well Installation Records and Visual Soil Classification Logs.

Purpose/Description of Calculation: To estimate hydraulic parameters (hydraulic conductivity, storage coefficient, etc.) for each pumping test performed.

Run Performed By: Paul Frink

Date/Time of Run: Various

Computer Time of Run: Up to 1 minute depending on the quality and amount of data.

Input Filename: See attached

Output Filename: None, hardcopy of matched curves attached

Files Saved to Diskname: F:\USER\FRD144\GLACIAL\AQTESOLV\ Disk Location: Server

Results: See Attached Sheets

Performed By: [signature] Date: 11-15-93

Checked By: [signature] Date: 1-18-94

Approved By: Date:

12/92 ENG095

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PARSONS
ERA PROJECT

ENGINEERING CALCULATIONS BASIS SHEET

Revision No. 0
Sheet 2 of 351

Proj. Order No. 37 Calculation No. 16-5

Project Title Technical and Project management Support to CERCLA/RCRA Unit 5, Task 331

Calculation Subject Constant Rate Pump Test Analysis Date Verified/Checked 1-18-94

Prepared By: Paul Frink Checked/Verified By: Dianne Daniel

Date November 15, 1993

SUMMARY OF DATA SOURCES - CODES - ASSUMPTIONS

1) Drawdown measurements by data logger were used for the constant rate pumping test analysis

2) Reference list:

(1) Analysis and Evaluation of Pumping Test Data, Kruseman and de Ridder, pg 61-65, 101-105.

(2) Groundwater and Wells, Driscoll, pgs 218.

(3) AQTESOLV documentation, Version 1.10

3) Lotus Calculation/Graph Files are:

Path = F:\USER\FRD144\GLACIAL\...

11214PT\11214PTU.WK3, 1785PT\1785PTU.WK3 and 1339PT\11112PTU.WK3

4) Input Files for AQTESOLV are:

Path = F:\USER\FRD144\GLACIAL\AQTESOLV\XXXXX.YYY

where: XXXXX = the well number

.YYY = the type of analysis

.NIN = Unconfined (Neuman)

.CIN = Confined (Theis, Cooper-Jacob)

.SIN = Semi-confined (Hantush-Jacob)

5) The following assumptions are made for all methods of analysis:

(1) The aquifer is homogeneous, of infinite areal extent and uniform thickness.

(2) Prior to pumping, the piezometric surface is essentially horizontal.

(3) The applicable uniform aquifer thickness is equal to the saturated thickness at the respective piezometer or well being analyzed.

(4) The aquifer is pumped at a constant rate.

(5) The effects of minor precipitation during the pumping test are negligible.

(6) During the pump test, the aquifer (sand body) responds as an unconfined aquifer and is therefor not effected by changes in atmospheric pressure.

(7) Data during the first 1 to 8 minutes is influenced by the effects of well storage and is neglected.

(8) Data after approximately 700 minutes is neglected due to the effect of boundaries.

6) The following additional assumptions are made for the Neuman Analysis:

(1) The aquifer is unconfined, and anisotropic with respect to conductivity.

7) The following additional assumptions are made for the Theis and Cooper-Jacob Analysis:

(1) The aquifer is confined and isotropic.

(2) The pumped well fully penetrates the aquifer.

(3) Data taken after the deviation from the Theis Type curve due to the effects of delayed yield and the presence of boundaries is not used to curve fit.

8) The following additional assumptions are made for the Hantush-Jacob Analysis:

(1) The aquifer is semi-confined

(2) Hydraulic head in the unpumped aquifer above the aquitard remains constant during pumping of the lower aquifer.

(3) The rate of leakage into the pumped aquifer is proportional to the hydraulic gradient across the aquitard.

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CALCULATION SHEET

REV	BY	DATE	CK	DATE	TITLE:	
1	PR	11-18-93	DMO	1-18-94	Technical and Project Management Support of CRU-5	
					Constant Rate Pump Test Analysis	CRU-5
					AUTHOR P. Frink SHEET 4 OF 34	PO-37

1) Four separate methods of analysis are used in this calculation based on the response of each pump test.

Pump test	primary method	secondary method	additional method
11112 (unconfined)	Neuman	Theis	-
11214 (semi-confined)	Hantush-Jacob	Theis	Neuman
1785 (confined)	Theis	Cooper-Jacob	-

2) The basic methodology is as follows:

(1) A well diagram for each pumping well and piezometer is constructed using boring logs and well installation records. These diagrams show the well geometry and surrounding lithology.

(2) Barometric Pressure is plotted against water level during the CRT to verify that pressures changes occurring during the CRT do not have a significant effect on the CRT data. To analyze for the possible effects of changing barometric pressure, barometric pressure is plotted over time along with the indicated water level in each pumping well during the constant rate test. This information is presented on the attached sheets. During the time shown by the figures, each well exhibits a steady decline in level (increasing drawdown) due to the effects of pumping. During this period the trend in barometric pressure reversed several times without a corresponding effect on the trend of the level decline. Barometric pressure, therefore, is not considered to have an influence on the measured water levels during the pumping tests and a calculation of barometric efficiency is not warranted.

(3) The trend in static water level during a period of non-pumping is analyzed to determine if a correction for background trend is necessary. Pumping test 1785 (Plant 2/3) required a correction of 0.0316 ft/day. Pumping test 11112 (Plant 1 Pad) required a correction factor of 0.12 ft/day

3) For the Neuman analysis:

(1) Input parameters are selected for each well and a AQTESOLV input file is assembled using data logger water level data (corrected for background trend if necessary).

(2) Individual Neuman type curves are calculated for tests where the pumping well only partially penetrates the sand body. Where the aquifer is not a constant thickness between the test well and piezometer, the thickness at the piezometer is used and an equivalent screen length is calculated for the test well.

(3) A visual solution is calculated for each pumping well and piezometer. This solution provides values of Transmissivity (T) in ft^2/min, Storage Coefficient (S), Specific Yield (S_Y), and Curve parameter, Beta (B). Additional manual calculations for anisotropy, horizontal and vertical hydraulic conductivity are performed by the summary spreadsheet.

$K_h = (T*1440)/D$ where: D = original saturated thickness
r = distance to the test well

$K_v/K_h = B(D/r)^2$

$K_v = K_h(K_v/K_h)$

4) For the Theis and Cooper-Jacob analysis:

(1) Using the well diagrams and the drawdown data, an AQTESOLV input file is assembled.

(2) A solution is calculated for each pumping well and piezometer using the AQTESOLV automatic parameter estimation algorithm. The curve fit is manually adjusted visually, if necessary, to produce values for T and S. Additional manual calculations are made for horizontal conductivity by the summary spread sheet as shown above.

(3) If required the Theis input file is analyzed by Cooper-Jacob method. A solution is calculated for each pumping well and piezometer using the AQTESOLV automatic parameter estimation algorithm. The curve fit is manually adjusted visually, if necessary, to produce values for T and S. Additional manual calculations are made for horizontal conductivity by the summary spread sheet as shown above.

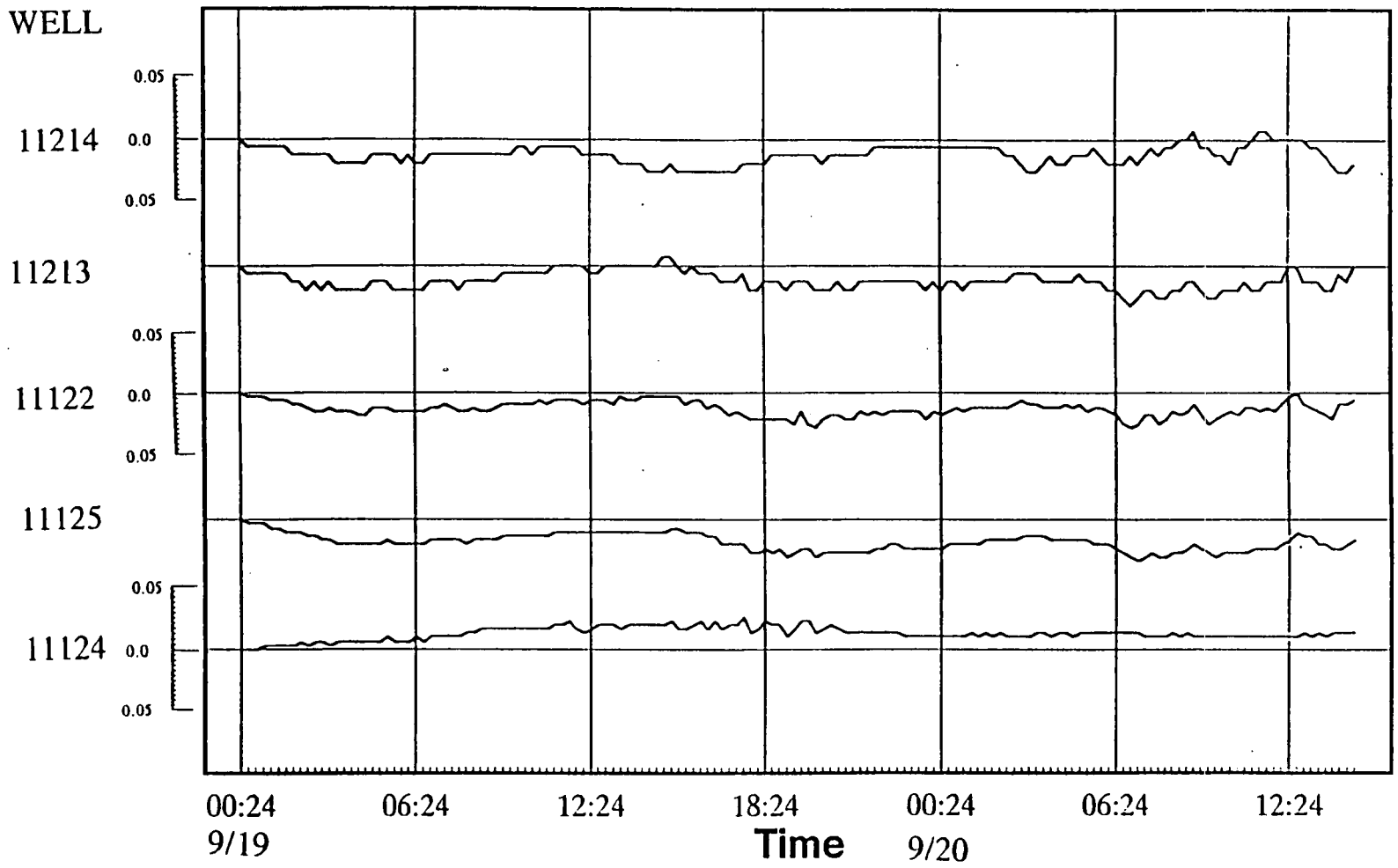
5) For the Hantush-Jacob analysis (pump test 11214):

(1) Using the well diagrams an AQTESOLV input file is assembled.

(2) A solution is calculated for each pumping well and piezometer using the AQTESOLV automatic parameter estimation algorithm. The curve fit is manually adjusted visually, if necessary, to produce values for T and S. Additional calculations are made for horizontal conductivity on the summary spreadsheet as shown above.

Summary spreadsheets are prepared for each pump test listing the estimated parameters and subsequent manual calculations. AQTESOLV output plots are printed for each final parameter estimation and are attached. The AQTESOLV input files are archived.

Background Trend, Pump Test 11214
September 19–20, 1993



GLACIAL/11214PT/BACKGND2.WK3

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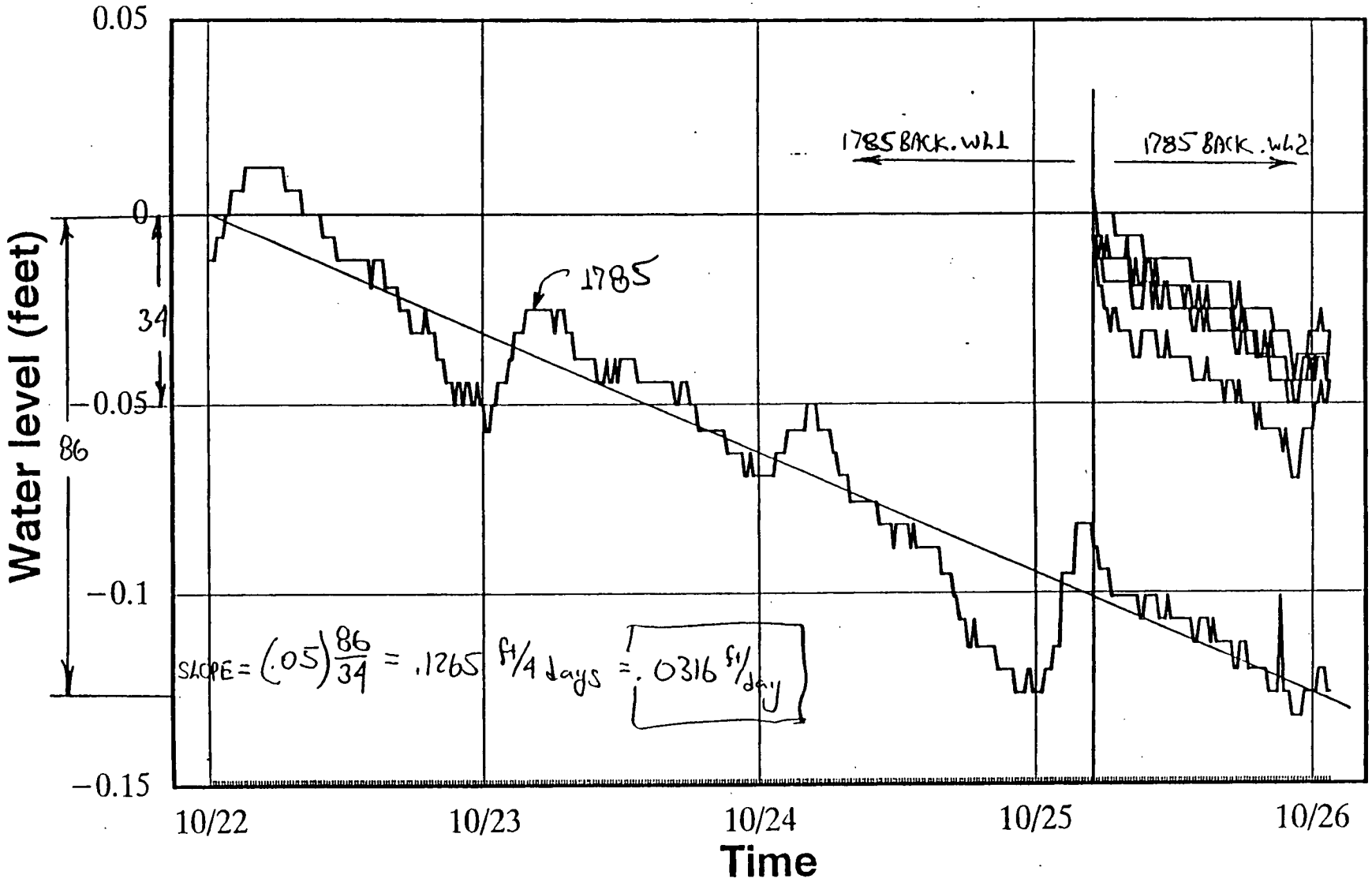
Background Trend, Pump Test 1785
October 22–26, 1993



___ 1785 ___ 11120 ___ 1232 ___ 11118 ___ 11121 ___ 11211

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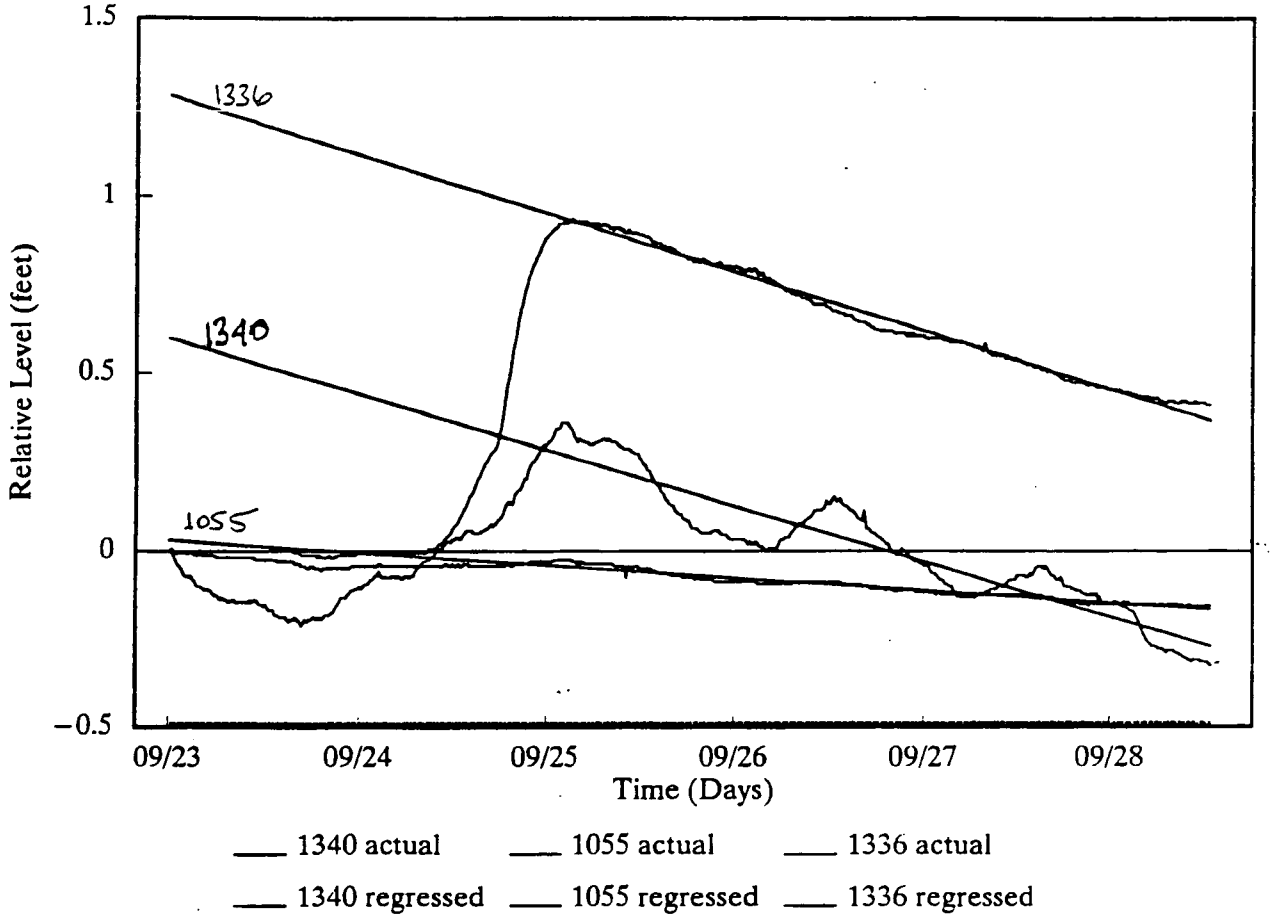
1.5
1
0.5
0
−0.5
Relative Level (feet)
1336
1340
1055
09/23
09/24
09/25
09/26
09/27
09/28
Time (Days)
1340 actual
1055 actual
1336 actual
1340 regressed
1055 regressed
1336 regressed

PARSONS
ERA PROJECT

CALCULATION SHEET

REV	DATE	BY	CK	TITLE	PAGE NUMBER
0	[illegible]	[illegible]	1-18-94	PUMP TEST 1112 BACKGROUND TREND	10
					COST CENTER [illegible]
				AUTHOR P. FRINK SHEET 10 OF 54	OU - 5

File: F:/USER/FRD144/GWACINK/1339/BACKGND (1st page attached

input from: ① Data logger files 10551340 & 1336WL
② weather data file

① Plot well level between 21:00 9/25 and 615 9/29
This period overlaps between yield and CRTs and subsequent recovery periods. These outlying wells respond continuously over this time frame.

② Slopes of water level trend are generated by data regression and averaged.

1340 -.157 ft/day
1055 -.036 ft/day
1336 -.166 ft/day
$\boxed{-.120 \text{ ft/day}}$

③ Correction factor is applied to the CRT data

ENG. 021 (03/91)

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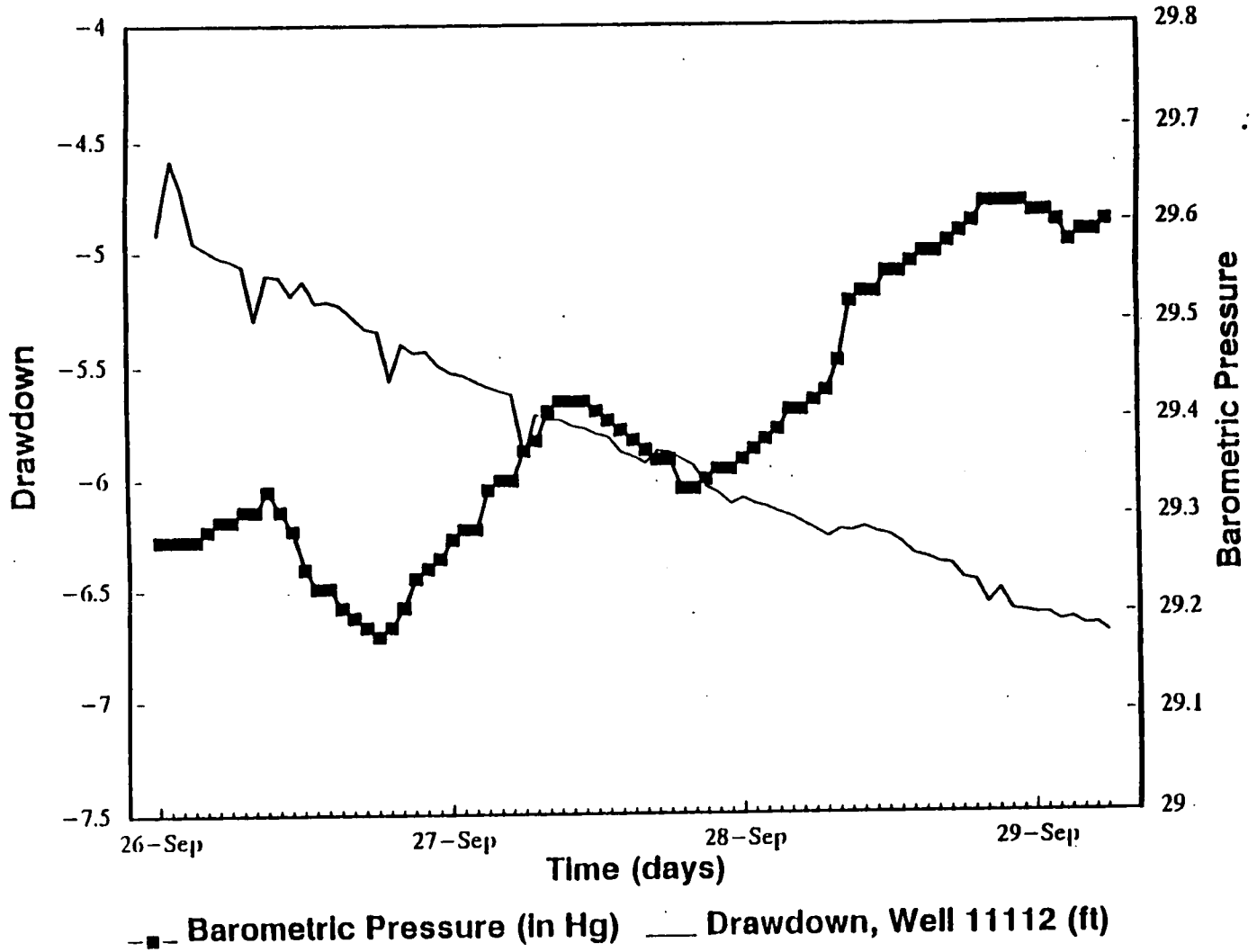
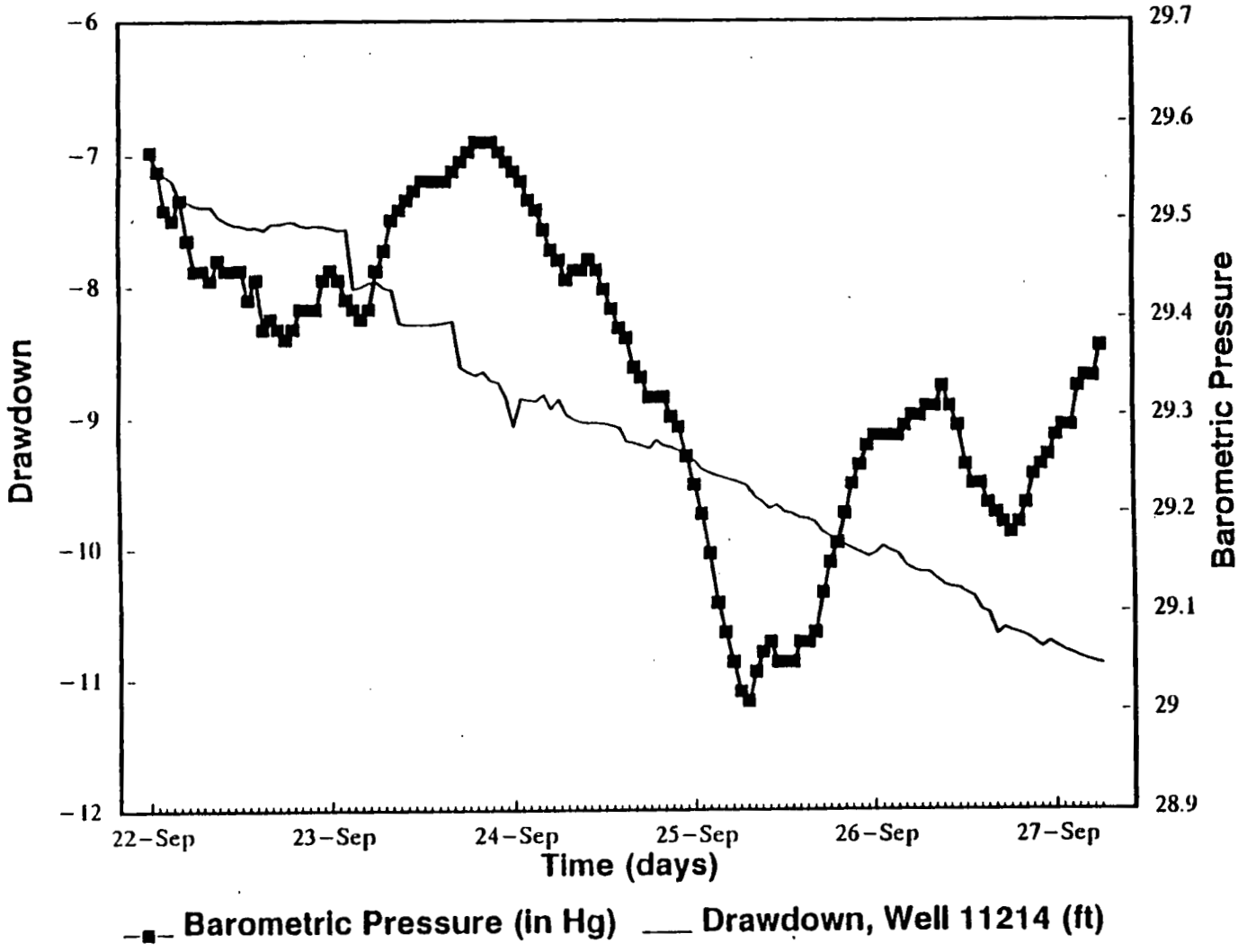
Regression Output 1340:		Regression Output 1055:		Regression Output 1336:	
Constant	5386.53	Constant	1223.42	Constant	5680.312
Std Err of Y Est	0.060282	Std Err of Y Est	0.007861	Std Err of Y Est	0.017094
R Squared	0.86886	R Squared	0.952614	R Squared	0.989201
No. of Observations	327	No. of Observations	327	No. of Observations	327
Degrees of Freedom	325	Degrees of Freedom	325	Degrees of Freedom	325
X Coefficient(s)	-0.15732	X Coefficient(s)	-0.03573	X Coefficient(s)	-0.16588
Std Err of Coef.	0.00339	Std Err of Coef.	0.000442	Std Err of Coef.	0.000961

		1340		1055		1336		Precip
Date	Time	actual	regressed	actual	regressed	actual	regressed	(in/hr)
09/23	17:30	0	0.59839	0	0.030825	0	1.281605	0
09/23	17:45	0	0.596751	0.007	0.030453	0	1.279877	0
09/23	18:00	-0.012	0.595112	0	0.030081	0	1.278149	0
09/23	18:15	-0.025	0.593473	0	0.029709	0	1.276421	0
09/23	18:30	-0.037	0.591835	-0.006	0.029336	0	1.274693	0
09/23	18:45	-0.044	0.590196	-0.006	0.028964	0	1.272966	0
09/23	19:00	-0.05	0.588557	-0.006	0.028592	0	1.271236	0
09/23	19:15	-0.063	0.586918	-0.006	0.02822	0	1.26951	0
09/23	19:30	-0.069	0.58528	-0.006	0.027848	0	1.267782	0
09/23	19:45	-0.069	0.583641	-0.006	0.027475	0	1.266054	0
09/23	20:00	-0.075	0.582002	-0.006	0.027103	0	1.264326	0
09/23	20:15	-0.069	0.580364	0	0.026731	0	1.262598	0
09/23	20:30	-0.082	0.578725	-0.006	0.026359	0	1.26087	0
09/23	20:45	-0.088	0.577086	-0.012	0.025986	0	1.259142	0
09/23	21:00	-0.101	0.575447	-0.012	0.025614	0	1.257414	0
09/23	21:15	-0.101	0.573809	-0.012	0.025242	0	1.255686	0
09/23	21:30	-0.101	0.57217	-0.012	0.02487	0	1.253958	0
09/23	21:45	-0.107	0.570531	-0.012	0.024497	0	1.25223	0
09/23	22:00	-0.113	0.568892	-0.012	0.024125	0	1.250503	0
09/23	22:15	-0.107	0.567254	-0.012	0.023753	0	1.248775	0
09/23	22:30	-0.113	0.565615	-0.012	0.023381	0	1.247047	0
09/23	22:45	-0.113	0.563976	-0.012	0.023009	0	1.245319	0
09/23	23:00	-0.12	0.562337	-0.012	0.022636	0	1.243591	0
09/23	23:15	-0.126	0.560699	-0.012	0.022264	0	1.241863	0
09/23	23:30	-0.126	0.55906	-0.018	0.021892	0	1.240135	0
09/23	23:45	-0.132	0.557421	-0.018	0.02152	0	1.238407	0
09/24	00:00	-0.139	0.555782	-0.018	0.021147	0	1.236679	0
09/24	00:15	-0.132	0.554144	-0.018	0.020775	0	1.234951	0
09/24	00:30	-0.139	0.552505	-0.018	0.020403	0	1.233223	0
09/24	00:45	-0.139	0.550866	-0.018	0.020031	0	1.231495	0
09/24	01:00	-0.145	0.549227	-0.018	0.019658	0	1.229768	0
09/24	01:15	-0.145	0.547589	-0.018	0.019286	0	1.22804	0
09/24	01:30	-0.139	0.54595	-0.018	0.018914	0	1.226312	0
09/24	01:45	-0.139	0.544311	-0.018	0.018542	0	1.224584	0
09/24	02:00	-0.145	0.542672	-0.018	0.01817	0	1.222856	0
09/24	02:15	-0.145	0.541034	-0.018	0.017797	0	1.221128	0
09/24	02:30	-0.145	0.539395	-0.018	0.017425	0	1.2194	0
09/24	02:45	-0.145	0.537756	-0.018	0.017053	0	1.217672	0
09/24	03:00	-0.145	0.536118	-0.018	0.016681	0	1.215944	0
09/24	03:15	-0.145	0.534479	-0.018	0.016308	0	1.214216	0
09/24	03:30	-0.145	0.53284	-0.018	0.015936	0	1.212488	0
09/24	03:45	-0.139	0.531201	-0.018	0.015564	0	1.21076	0
09/24	04:00	-0.145	0.529563	-0.018	0.015192	0	1.209033	0
09/24	04:15	-0.139	0.527924	-0.018	0.014819	0	1.207305	0
09/24	04:30	-0.139	0.526285	-0.025	0.014447	0	1.205577	0
09/24	04:45	-0.145	0.524646	-0.025	0.014075	0	1.203849	0
09/24	05:00	-0.151	0.523008	-0.025	0.013703	0	1.202121	0
09/24	05:15	-0.151	0.521369	-0.025	0.01333	0	1.200393	0
09/24	05:30	-0.158	0.51973	-0.025	0.012958	0	1.198665	0
09/24	05:45	-0.151	0.518091	-0.025	0.012586	0	1.196937	0
09/24	06:00	-0.164	0.516453	-0.025	0.012214	0	1.195209	0
09/24	06:15	-0.17	0.514814	-0.025	0.011842	0	1.193481	0
09/24	06:30	-0.17	0.513175	-0.025	0.011469	0	1.191753	0
09/24	06:45	-0.17	0.511536	-0.025	0.011097	0	1.190025	0
09/24	07:00	-0.183	0.509898	-0.025	0.010725	0	1.188297	0
09/24	07:15	-0.183	0.508259	-0.031	0.010353	0	1.18657	0
09/24	07:30	-0.189	0.50662	-0.031	0.00998	0	1.184842	0
09/24	07:45	-0.189	0.504981	-0.031	0.009608	0	1.183114	0
09/24	08:00	-0.189	0.503343	-0.031	0.009236	0	1.181386	0.55
09/24	08:15	-0.189	0.501704	-0.031	0.008864	0	1.179658	0.55

ORIGINAL / 1339 PGS. BACKGROUND, ETC.

000274


-4
-4.5
-5
-5.5
-6
-6.5
-7
-7.5
Drawdown
29.8
29.7
29.6
29.5
29.4
29.3
29.2
29.1
29
Barometric Pressure
26-Sep
27-Sep
28-Sep
29-Sep
Time (days)
Barometric Pressure (in Hg)
Drawdown, Well 11112 (ft)



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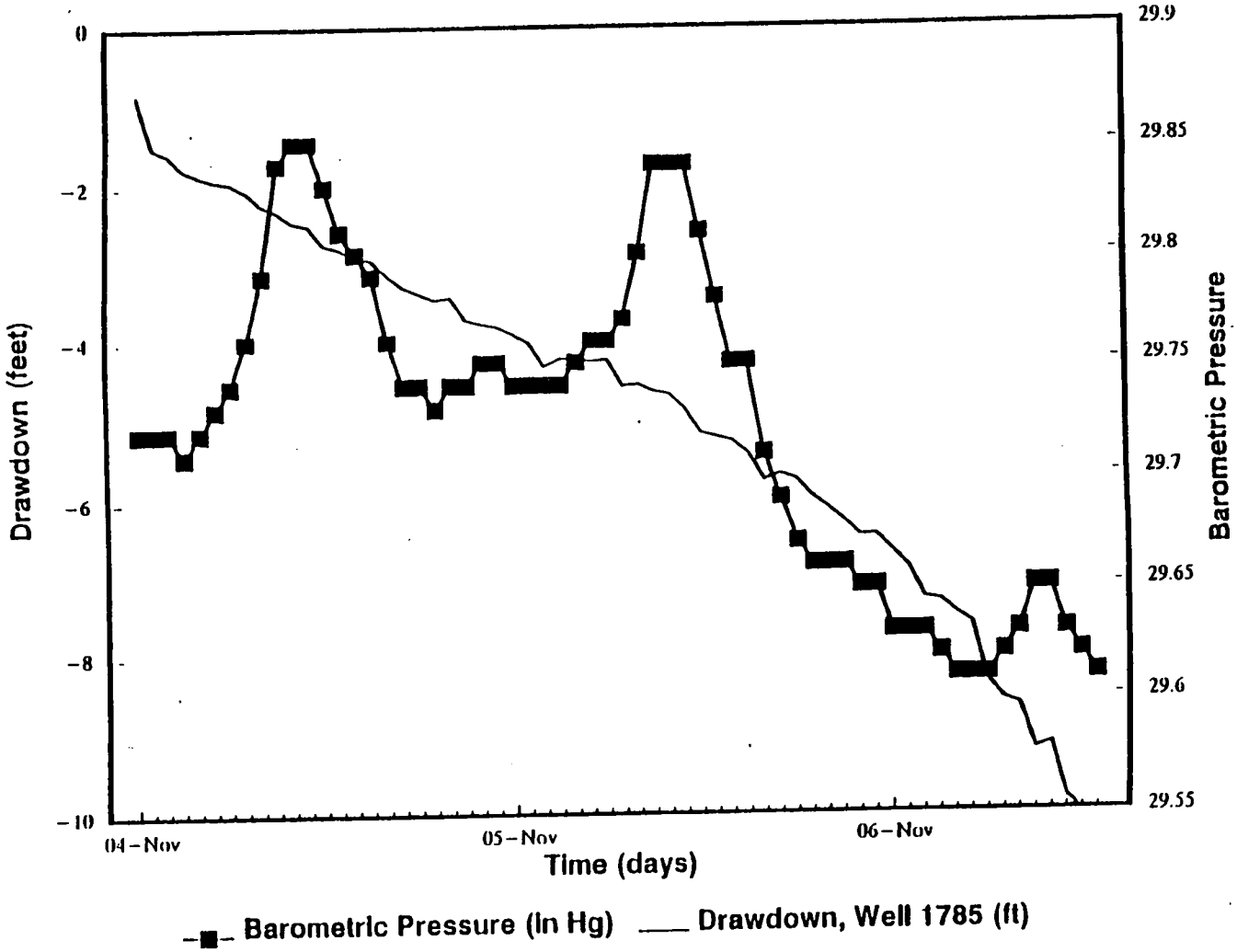
0007246



14/54

Well Number	11214
Pumping Rate	0.267 ft^3/min
Aquifer Thickness @ Pumping Well	18 ft (unconfined)
Part. Penetration @ Pumping Well	55.56 % (unconfined)

Neuman Analysis (unconfined)

Input						Partial Penetration		AQTESOLV Results				Calculated Results		
						Effec. T.W.	Effec. T.W.	Storativity			Beta			
Well Number	Well Type	Dist. to Pumping Well (ft)	Local Aquifer Thickness (ft)	Top Screen (ft)	Bottom Screen (ft)	Top Screen (ft)	Bottom Screen (ft)	Transmissivity T (ft^2/min)	S	Specific Yield Sy	B	Horiz. Cond. Kh (ft/day)	Anisotropy Kv/Kh	Vertical Cond. Kv (ft/day)
11214	T.W.	0.417	18	8	18	8.0	18	0.02525	0.1055	0.1625	0.06	2.02	111.7955	225.8268
11213	Piez.	11.15	12.25	1.25	12.25	5.4	12.25	0.03143	0.000831	0.000494	0.03	3.694629	0.036211	0.133787
11122	Piez.	9.7	15.25	5.25	15.25	6.8	15.25	0.04057	0.001401	0.002303	0.004	3.830872	0.009887	0.037875
11125	Piez.	19.65	6.75	0.75	6.75	3.0	6.75	0.01932	0.003132	0.009032	0.1	4.1216	0.0118	0.048635
11124	Piez.	12.16	0.83	1.75	2.6	2.1	2.6	0.009607	0.3639	1.498	0.8	16.66757	0.003727	0.062123
All Wells Geometric Mean												4.556502		0.321921
Wells 11213, 11122 & 11125 Geometric Mean												3.87833		0.062696
Wells 11213, 11122 & 11125 Mean														
Wells 11213, 11122 & 11125 Mean									0.001788					

Theis Analysis (confined)

Input				AQTESOLV		Results
				Storativity		
Well Number	Well Type	Dist. to Pumping Well (ft)	Local Aquifer Thickness (ft)	Transmissivity T (ft^2/min)	S	Horiz. Cond. Kh (ft/day)
11214	T.W.	0.417	10	0.03006	0.233	4.32864
11213	Piez.	11.15	12.25	0.03173	0.000829	3.729894
11122	Piez.	9.7	11.25	0.03156	0.000806	4.03968
11125	Piez.	19.65	6.25	0.02451	0.003237	5.647104
11124	Piez.	12.16	0.83	0.02451	0.3058	42.52337
All Wells Geometric Mean						6.901916
Wells 11213, 11122 & 11125 Geometric Mean						4.39835

Hantush Analysis (semi-confined)

Input				AQTESOLV		Results
				Storativity		
Well Number	Well Type	Dist. to Pumping Well (ft)	Local Aquifer Thickness (ft)	Transmissivity T (ft^2/min)	S	Horiz. Cond. Kh (ft/day)
11214	T.W.	0.417	10	0.03058	0.2194	4.40352
11213	Piez.	11.15	12.25	0.03177	0.000827	3.734596
11122	Piez.	9.7	11.25	0.03072	0.008387	3.93216
11125	Piez.	19.65	6.25	0.02441	0.002931	5.624064
11124	Piez.	12.16	0.83	0.0246	0.3063	42.67952
All Wells Geometric Mean						6.889519
Wells 11213, 11122 & 11125 Geometric Mean						4.354868

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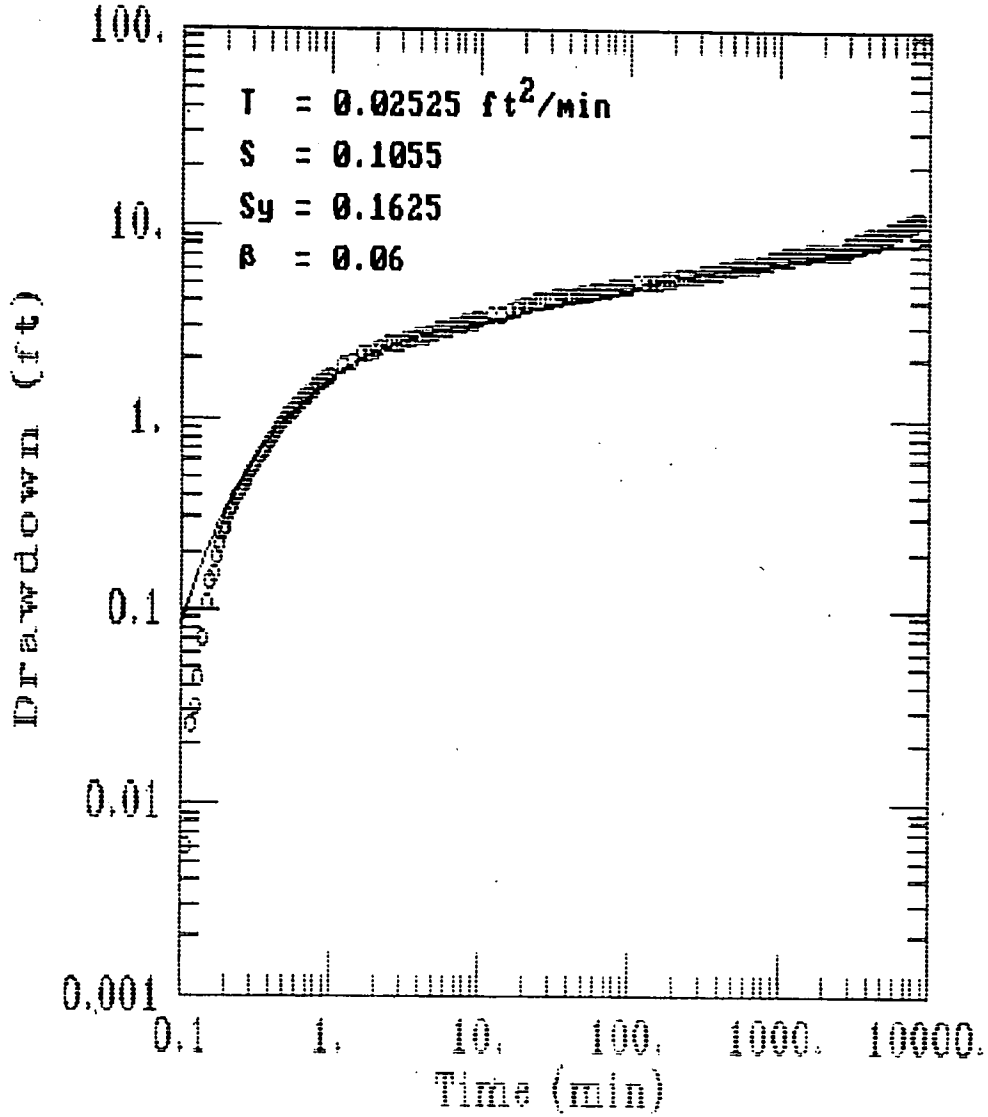
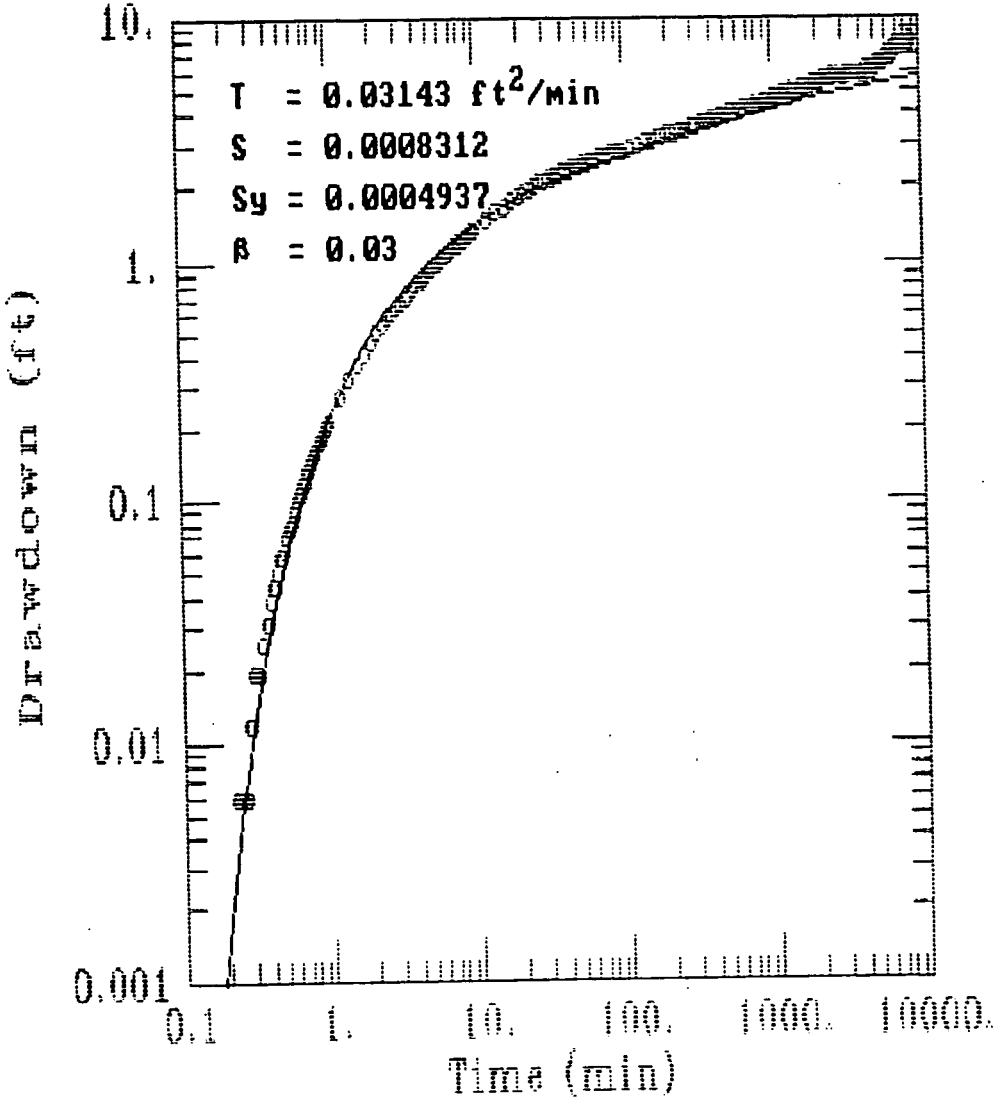
Pumping Test 11214, Well 11214, Neuman



000748

Test 11214, Well 11213, Neuman Analysis



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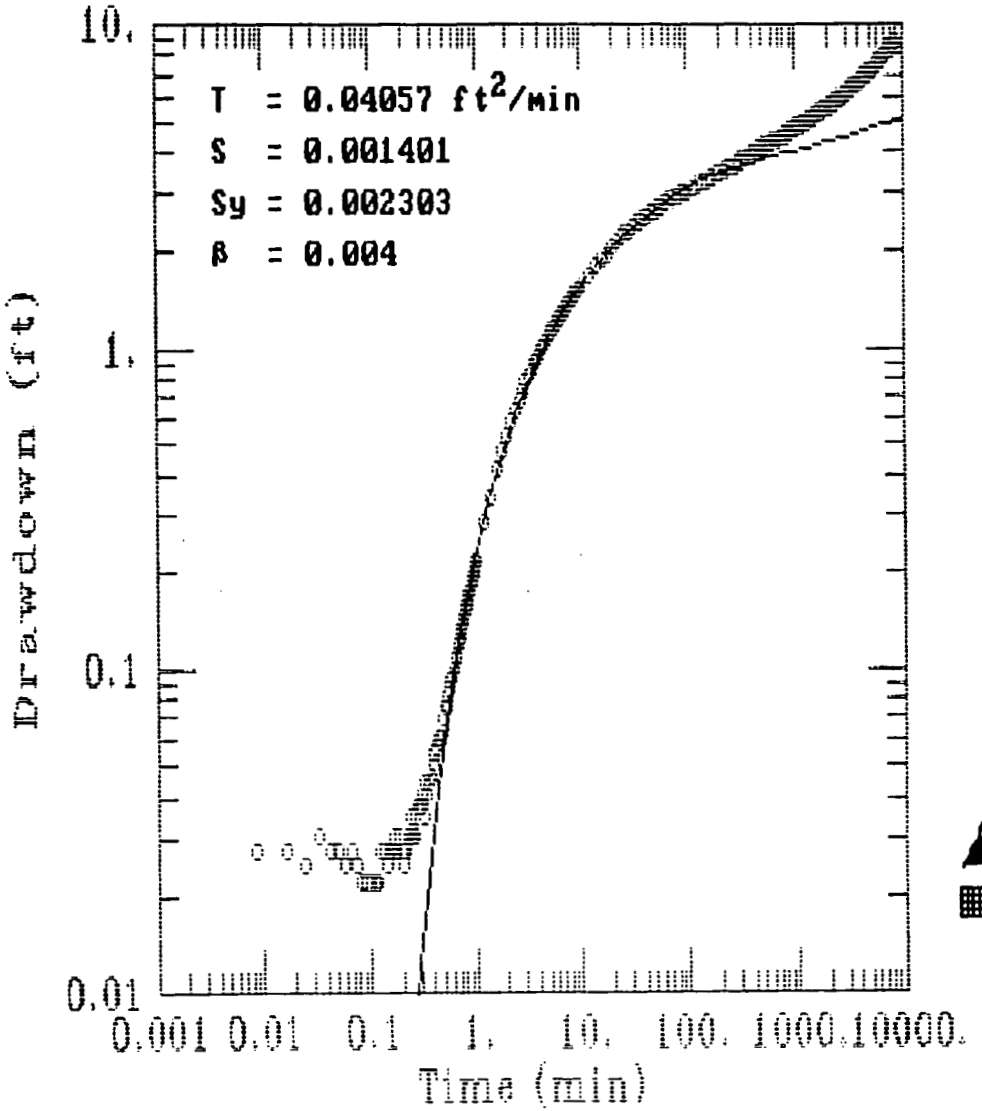
Test 11214, Well 11122, Neuman Analysis



AQTESOLV

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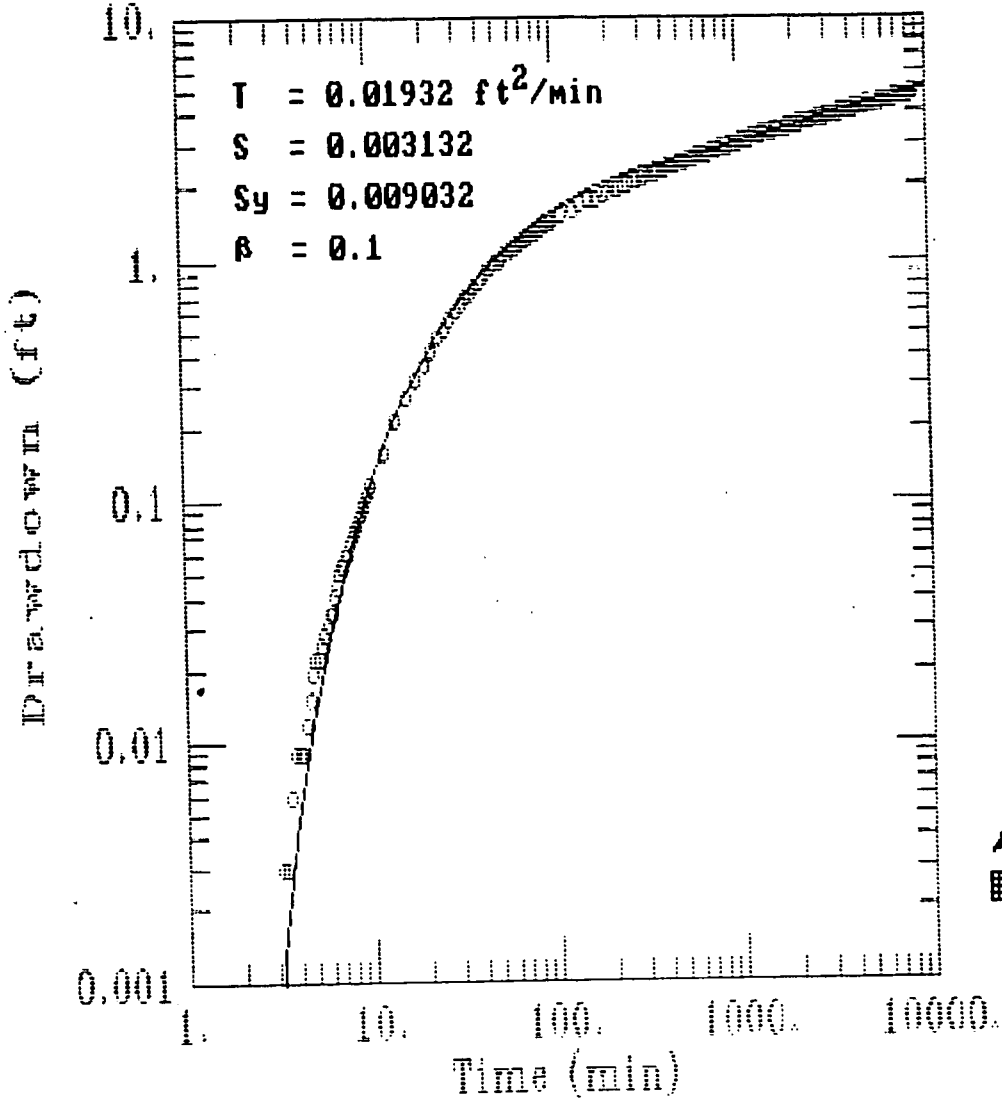
Test 11214, Well 11125, Neuman Analysis



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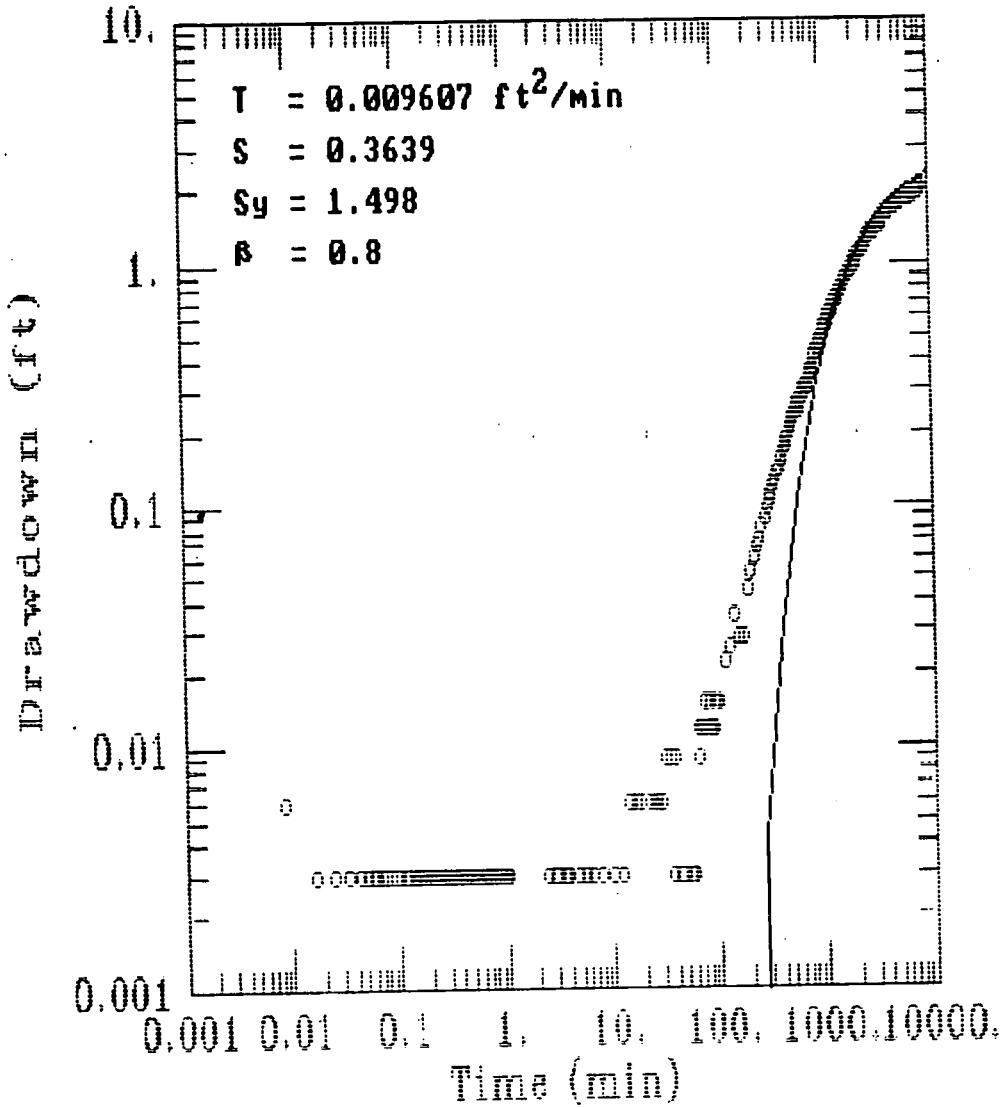
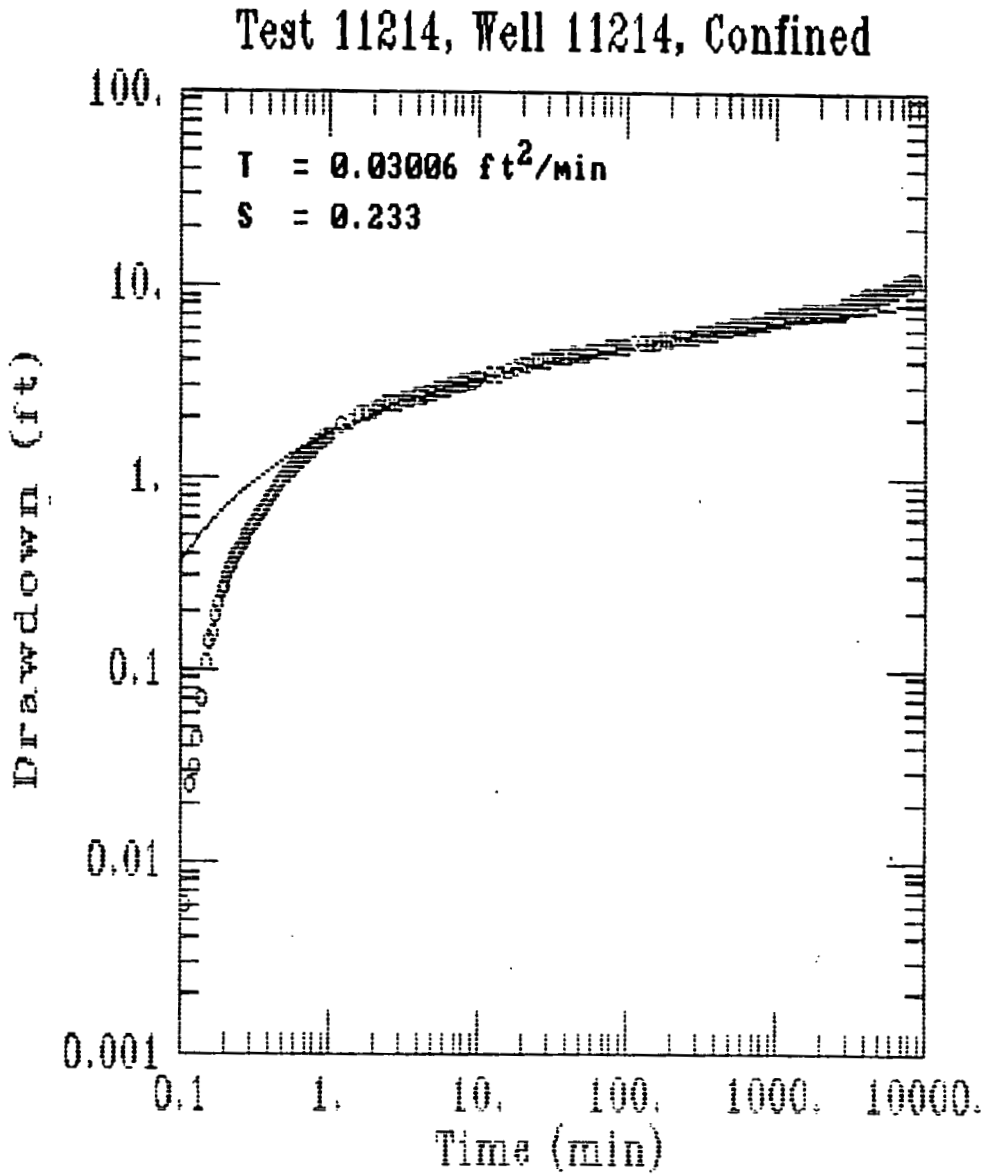
Test 11214, Well 11124, Neuman Analysis





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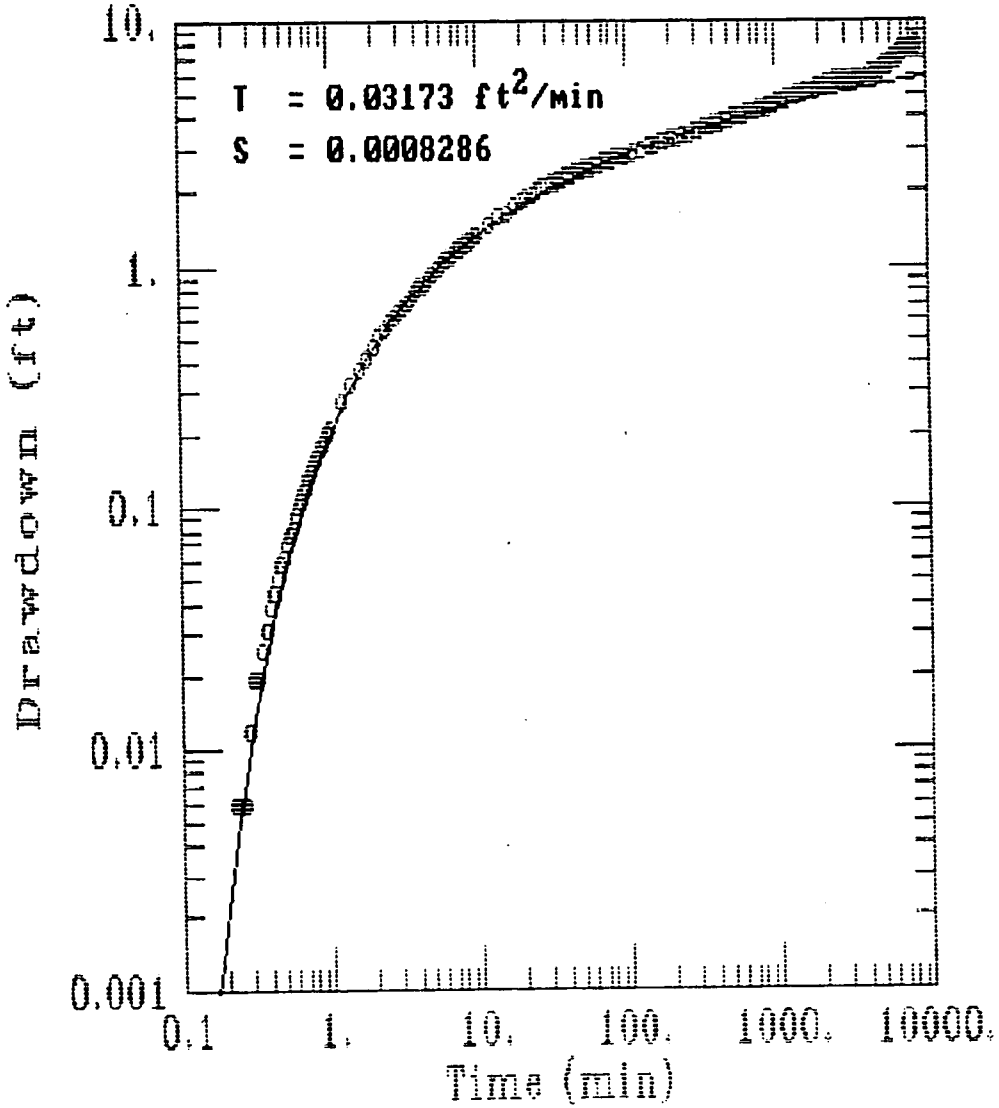
Test 11214, Well 11213, Confined



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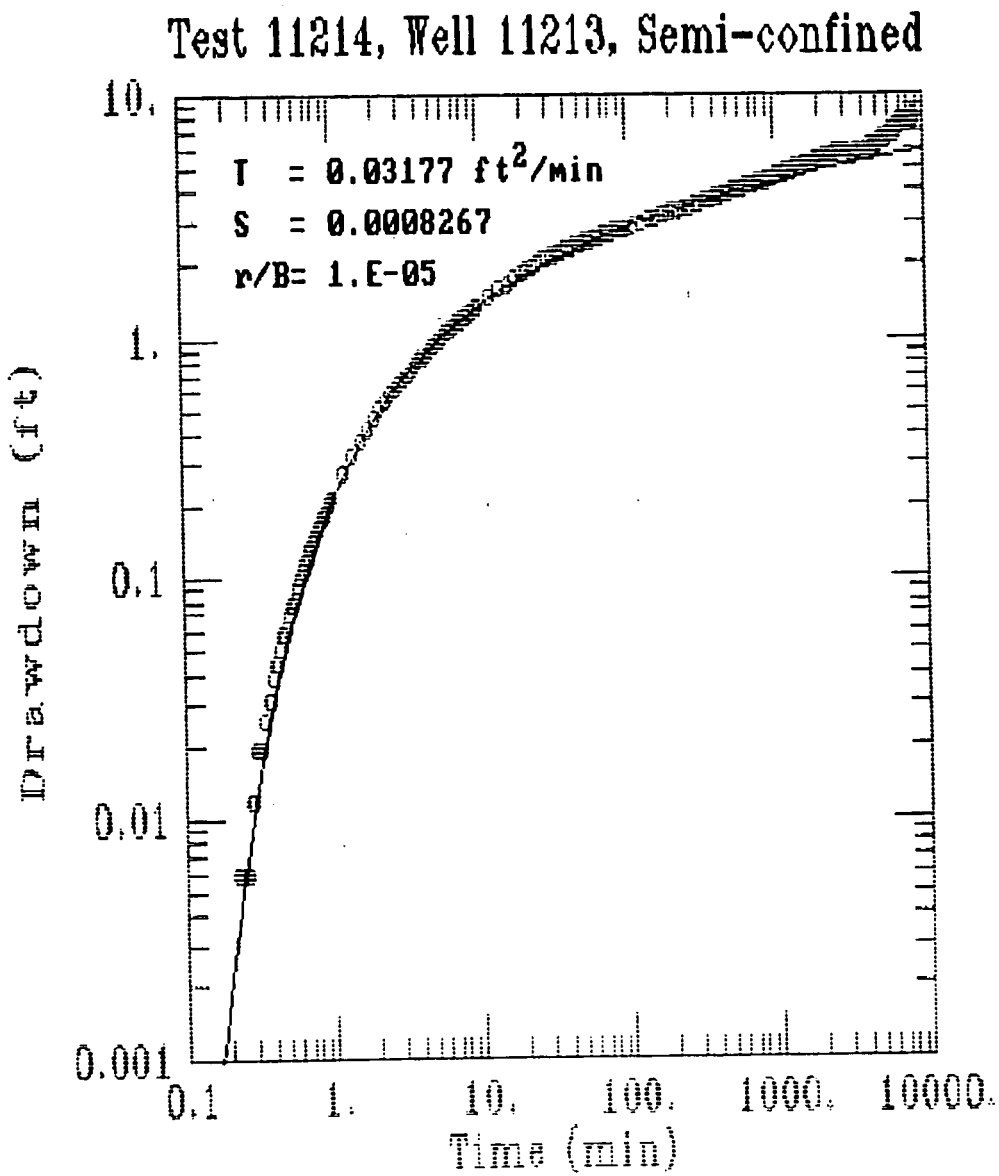
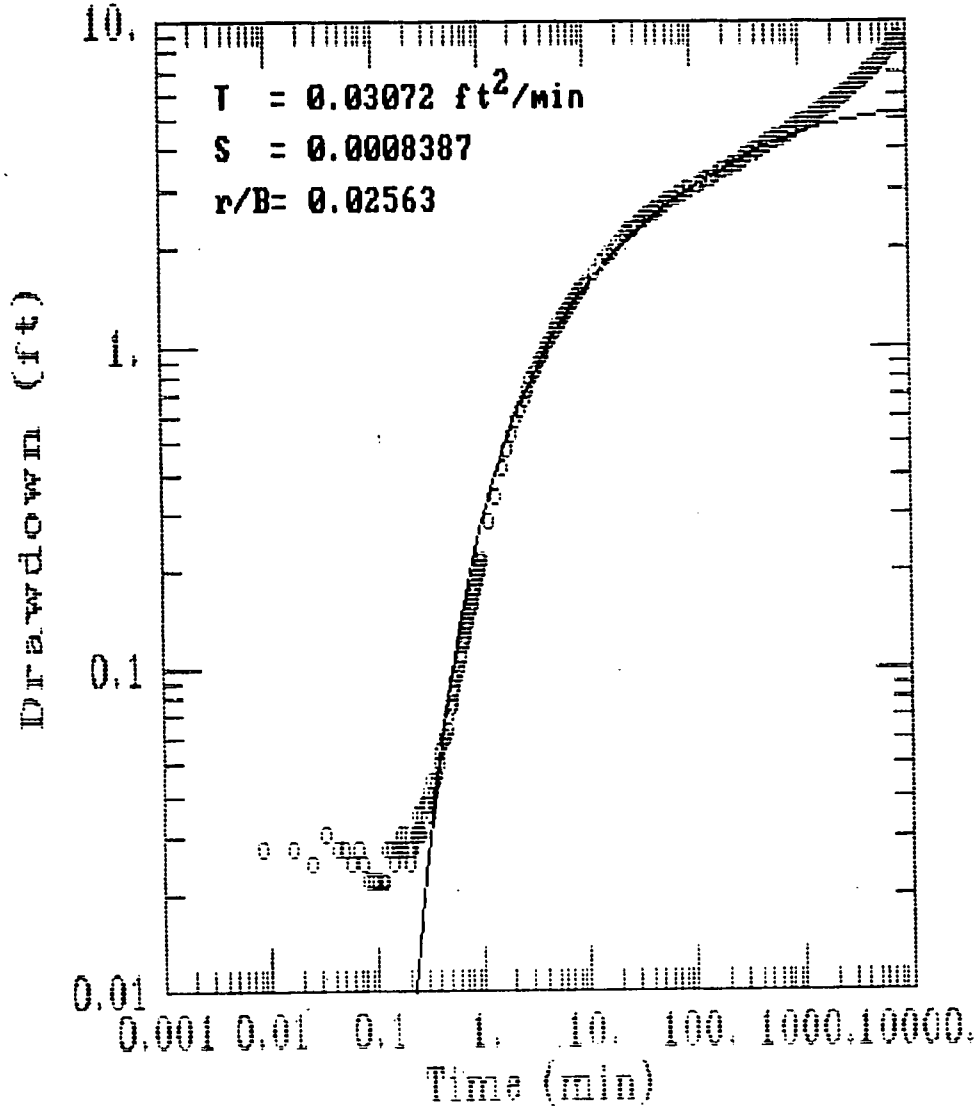
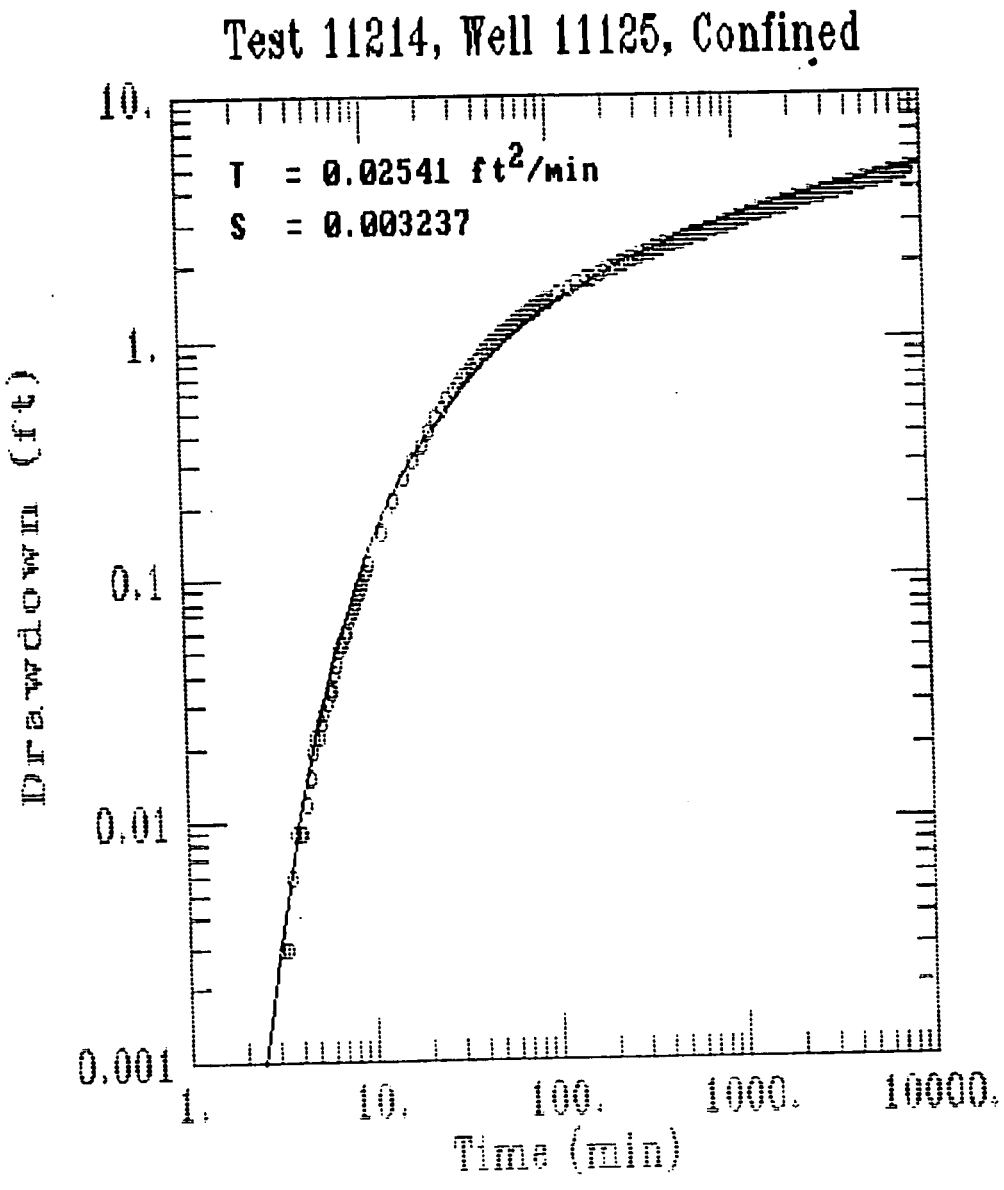

Test 11214, Well 11213, Semi-confined
T = 0.03177 ft²/min
S = 0.0008267
r/B= 1.E-05
Drawdown (ft)
10.
1.
0.1
0.01
0.001
0.1
1.
10.
100.
1000.
10000.
Time (min)

000750

Test 11214, Well 11122, Semi-confined



29/5-162



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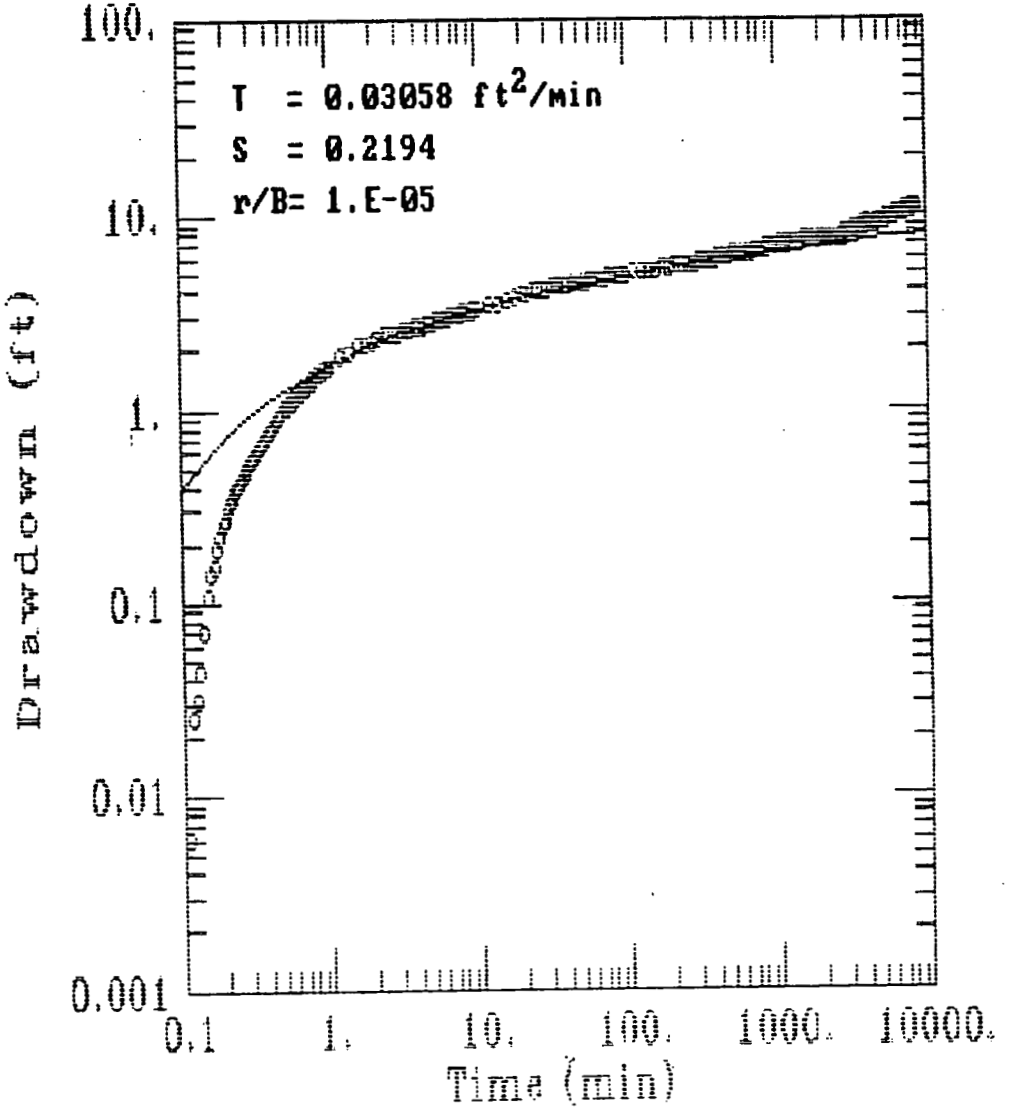
Test 11214, Well 11214, Semi-confined



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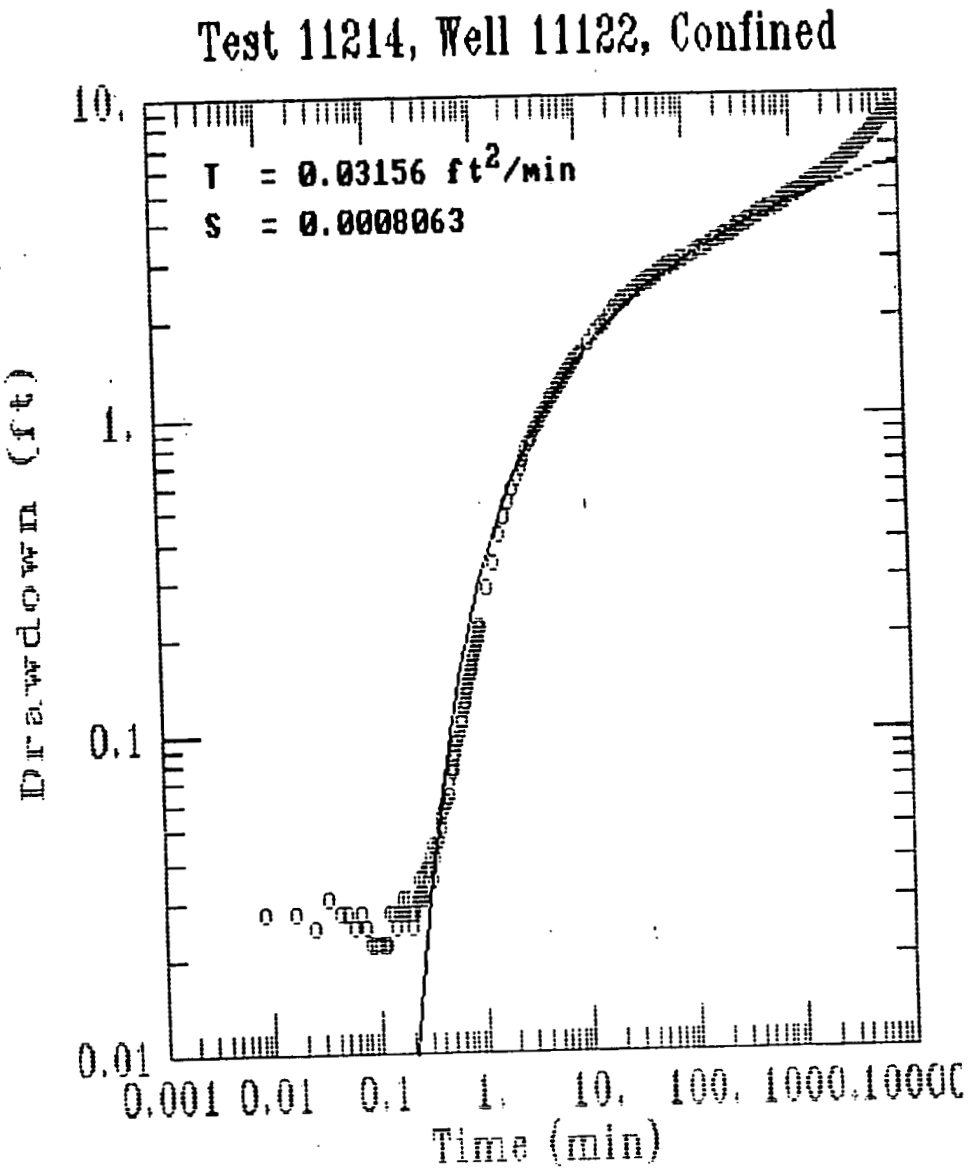
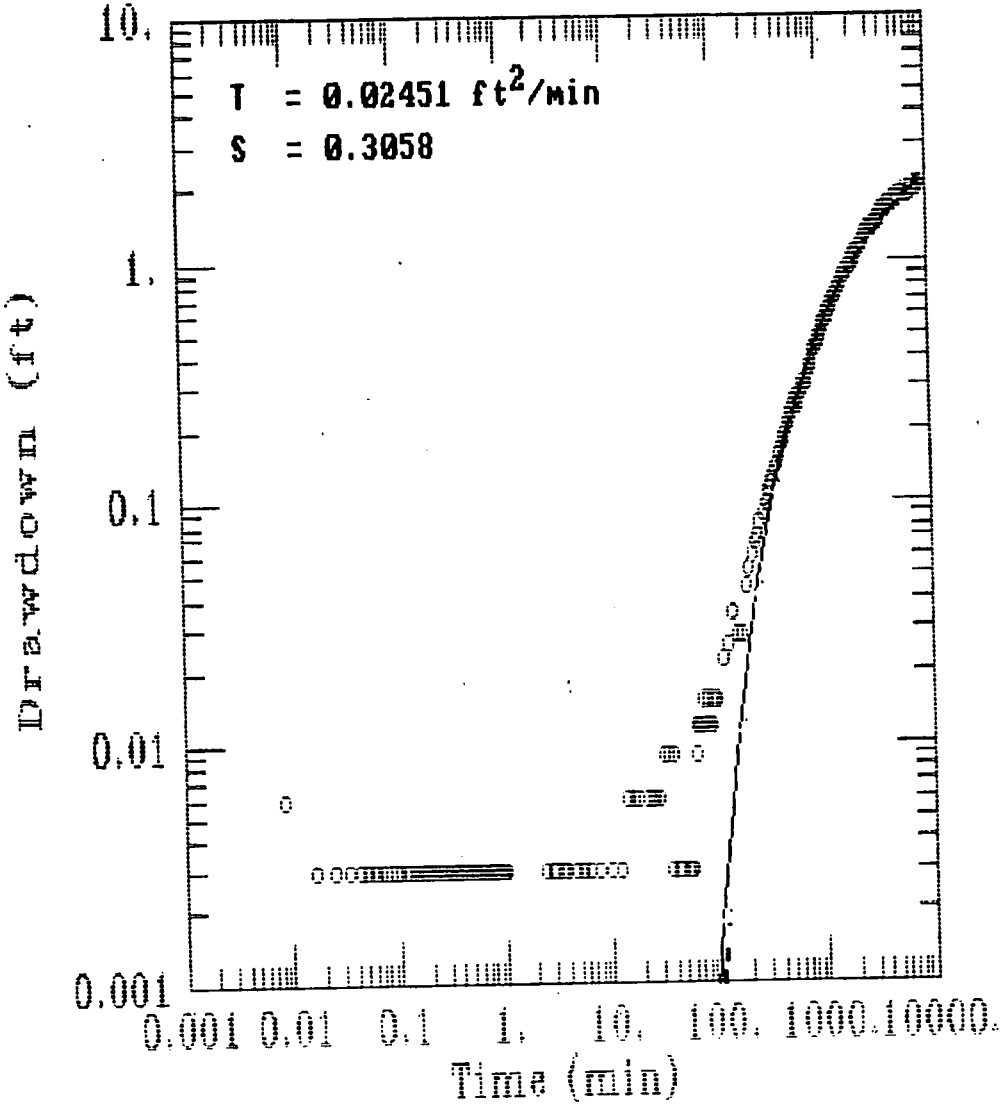

Test 11214, Well 11122, Confined
T = 0.03156 ft²/min
S = 0.0008063
Drawdown (ft)
10.
1.
0.1
0.01
0.001 0.01 0.1 1. 10. 100. 1000.10000
Time (min)

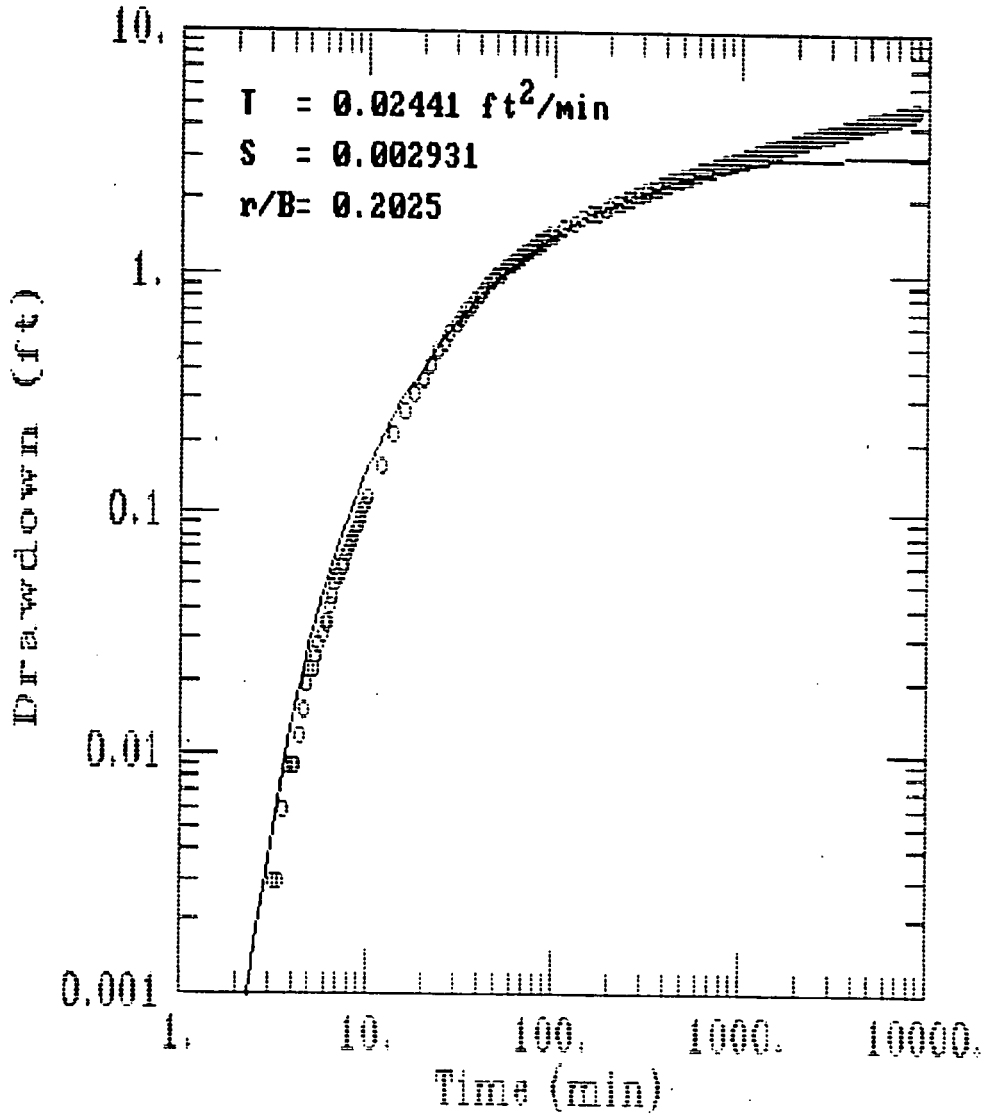
092000

Test 11214, Well 11124, Confined



23/51

Test 11214, Well 11125, Semi-confined



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11-23 33

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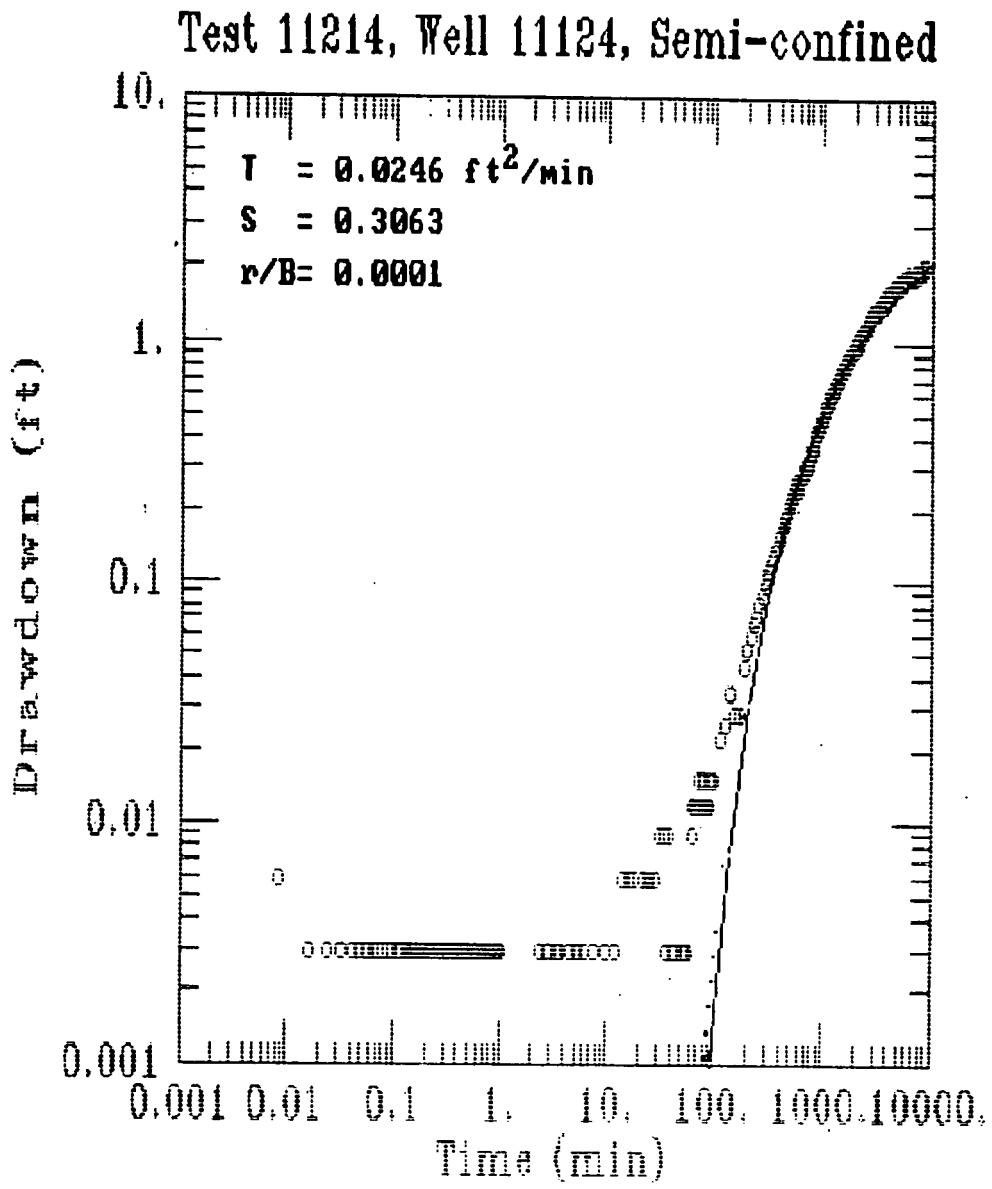
0007762



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Well Number	11112
Pumping Rate	0.234 ft^3/min
Aquifer Thickness @ Pumping Well	10 ft
Part. Penetration @ Pumpimg Well	100.00 %

Neuman Analysis

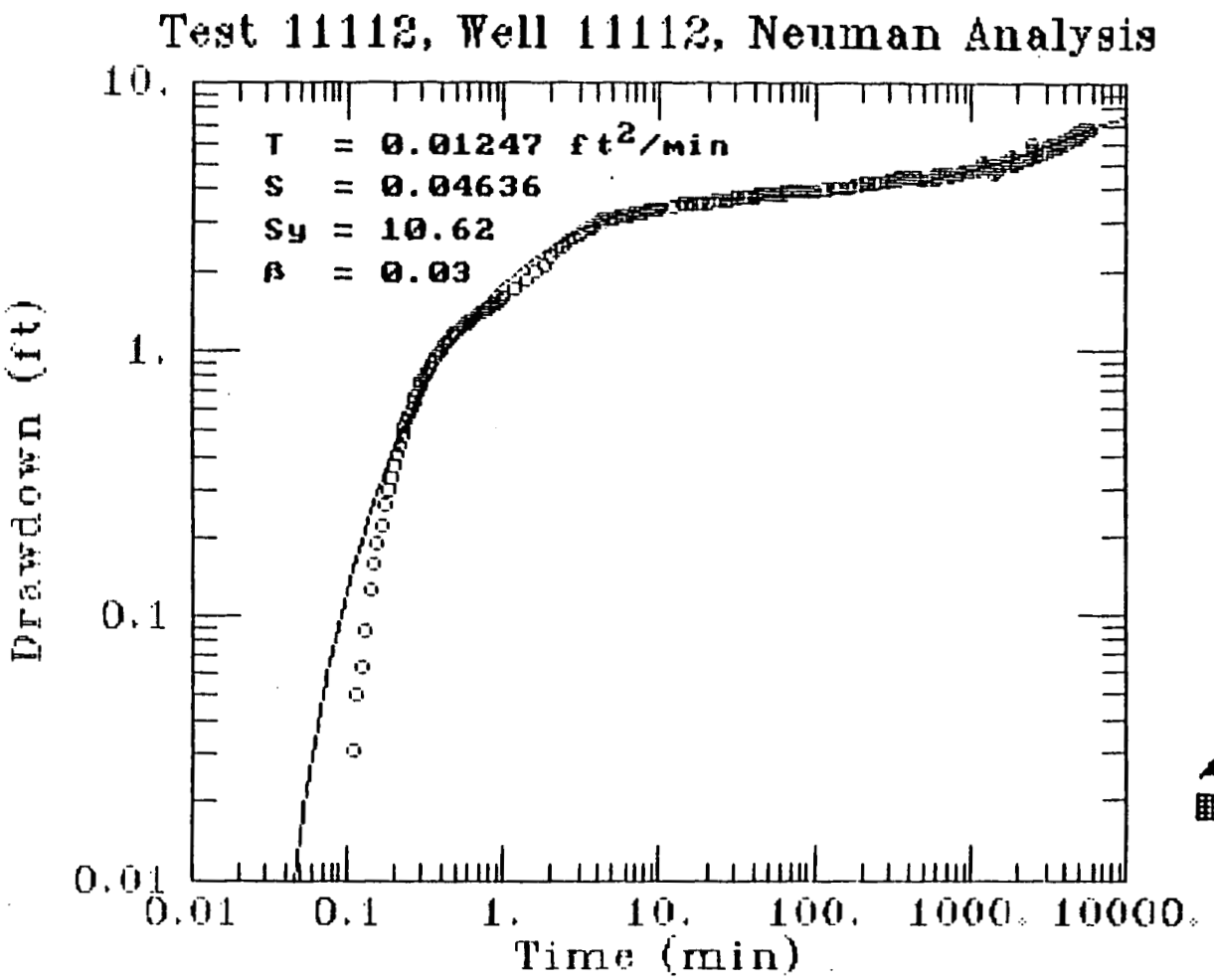
Input						Partial Penetration		AQTESOLV Results				Calculated Results		
Well Number	Well Type	Dist. to Pumping Well (ft)	Local Aquifer Thickness (ft)	Top Screen (ft)	Bottom Screen (ft)	Effec. P.W. Top Screen (ft)	Effec. P.W. Bottom Screen (ft)	Transmissivity T (ft^2/min)	Storativity S	Specific Yield Sy	Beta B	Horiz. Cond. Kh (ft/day)	Anisotrpy Kv/Kh	Vertical Cond. Kv (ft/day)
11112	P.W.	0.417	10	4	14	n/a	n/a	0.01247	0.04636	10.62	0.03	1.79568	17.25239	30.97976
1339	Piez.	2.67	8	5	12	n/a	n/a	0.113	0.01587	0.1067	0.06	20.34	0.538653	10.95619
11114	Piez.	9.99	13.2	4	16.5	n/a	n/a	0.1108	0.006033	0.02802	0.2	12.08727	0.349178	4.22061
11209	Piez.	10.18	17	6.5	20.5	n/a	n/a	0.1381	0.002053	0.02405	0.2	11.69788	0.557741	6.524384
11115	Piez.	10.96	n/a	19.5	20.5	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
11116	Piez.	19.97	8.1	5.5	12.5	n/a	n/a	0.188	0.000855	0.007421	0.8	33.42222	0.131615	4.398851
11208	Piez.	49.67	9.5	5.5	12.5	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
All Wells Geometric Mean												11.15347		8.371405
1339, 11114 & 11209 & 11116 Geometric Mean												17.60781		6.03571
1339, 11114 & 11209 & 11116 Mean													0.394296	
1339, 11114 & 11209 & 11116 Mean									0.006203					

Theis Analysis

Input				AQTESOLV		Results
Well Number	Well Type	Dist. to Pumping Well (ft)	Local Aquifer Thickness (ft)	Transmissivity T (ft^2/min)	Storativity S	Horiz. Cond. Kh (ft/day)
11112	P.W.	0.5	10	0.0257	0.04846	3.7008
1339	Piez.	3	8	0.2142	0.01543	38.556
11114	Piez.	9.99	13.2	0.2288	0.008522	24.96
11209	Piez.	10.18	17	0.3807	0.002441	32.24753
11115	Piez.	10.96	n/a	n/a	n/a	n/a
11116	Piez.	19.97	8.1	0.6757	0.002027	120.1244
11208	Piez.	49.67	9.5	n/a	n/a	n/a
All Wells Geometric Mean						25.57501
1339, 11114 & 11209 & 11116 Geo. Mean						43.94061

000263

7333 3/5-1



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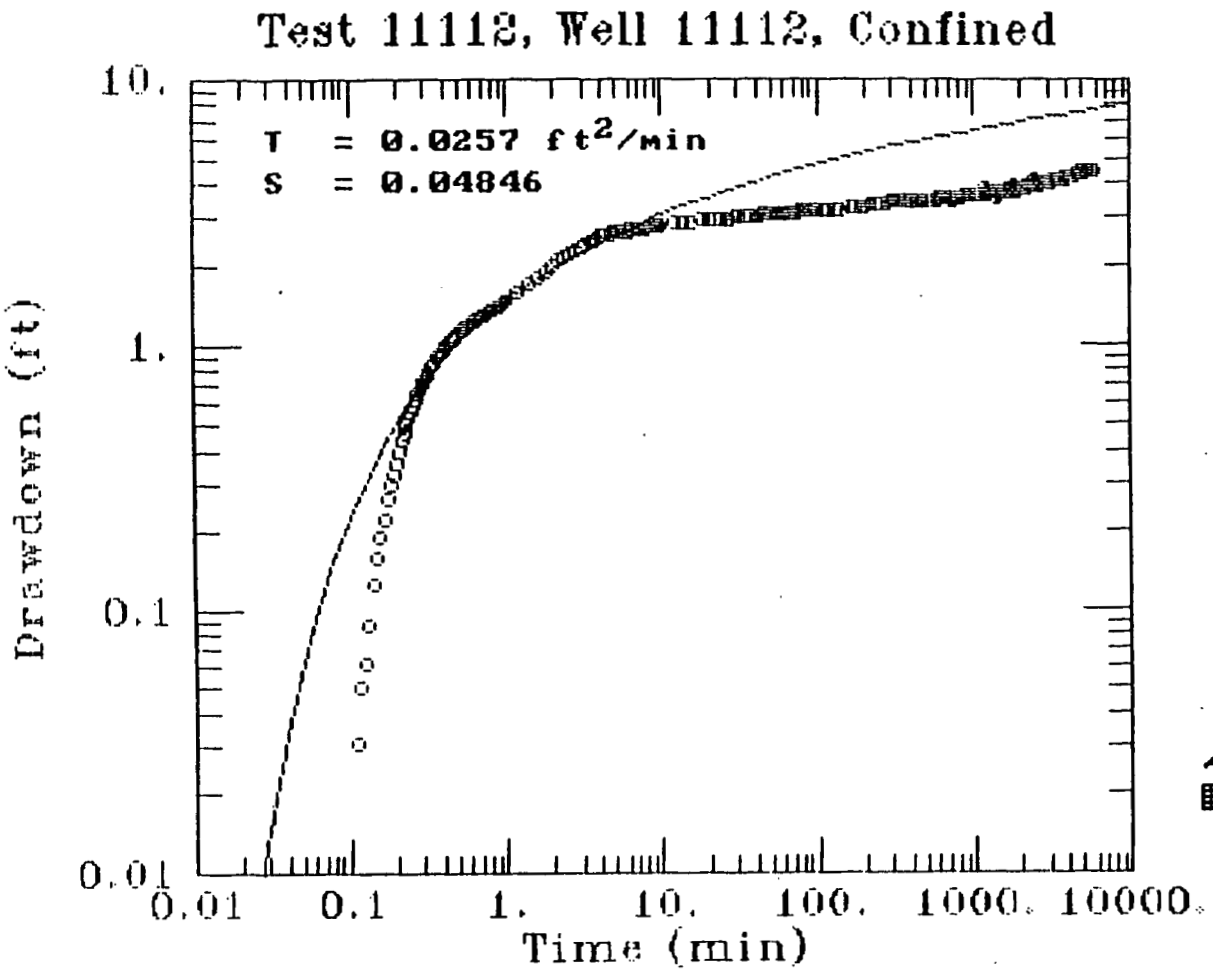

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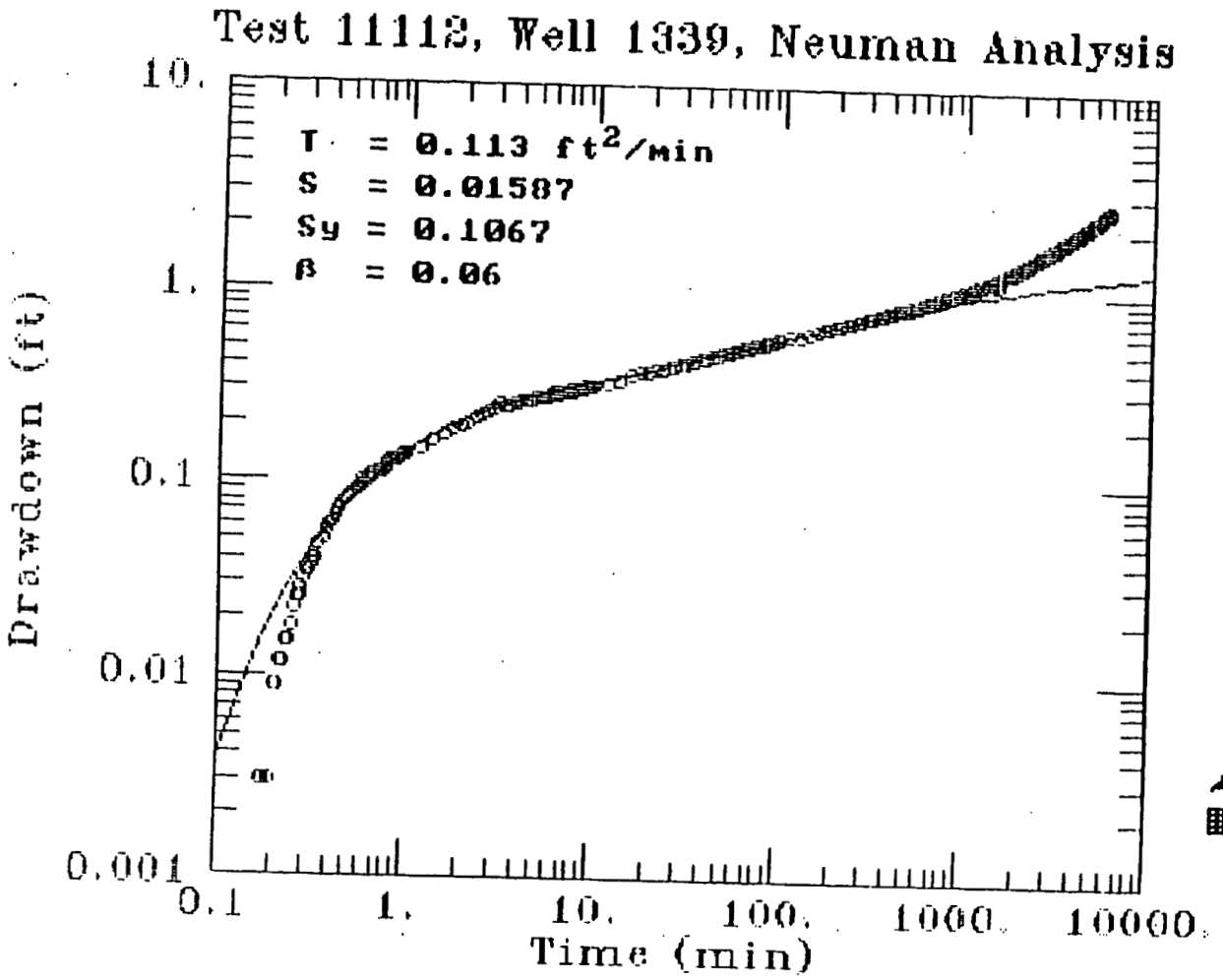

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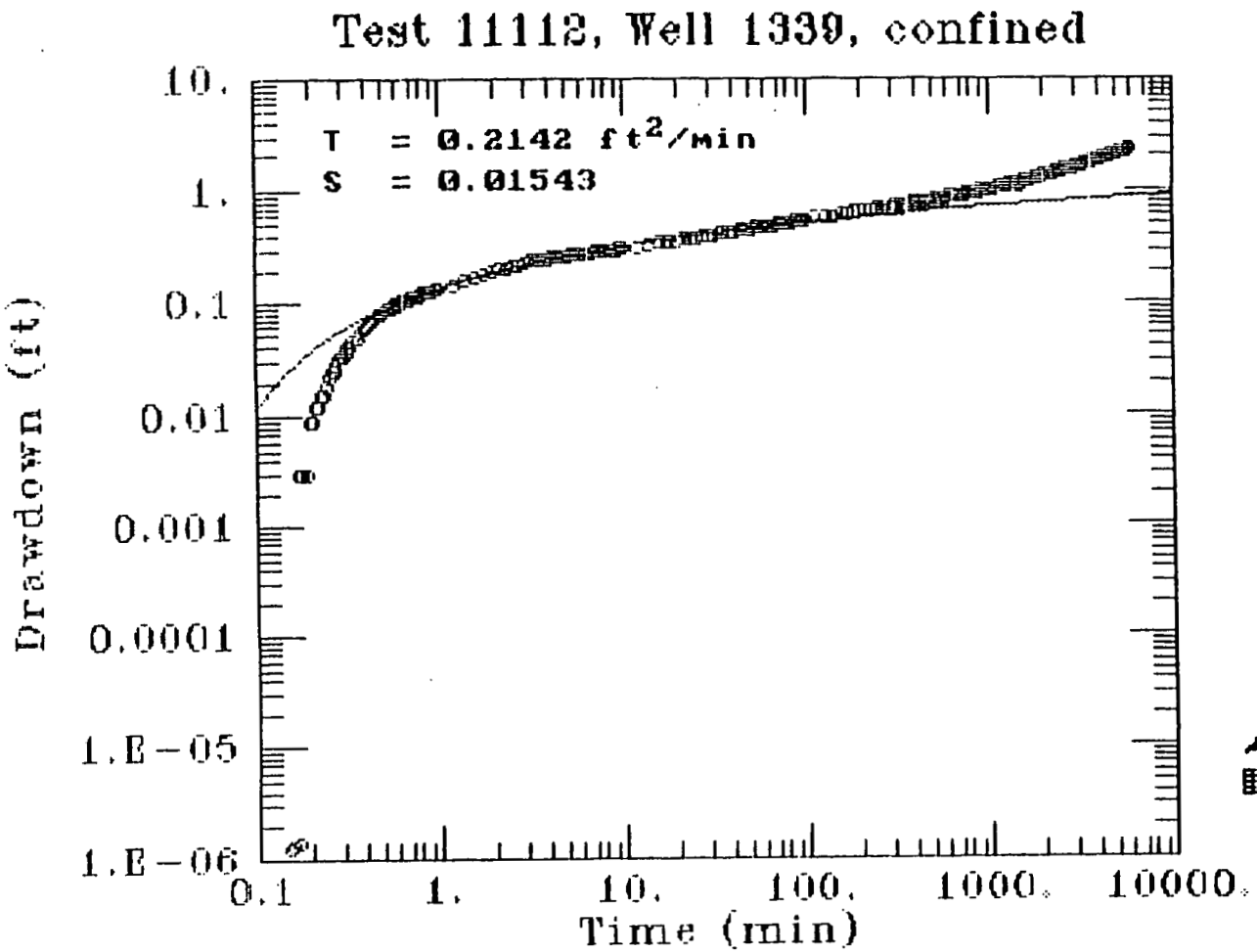

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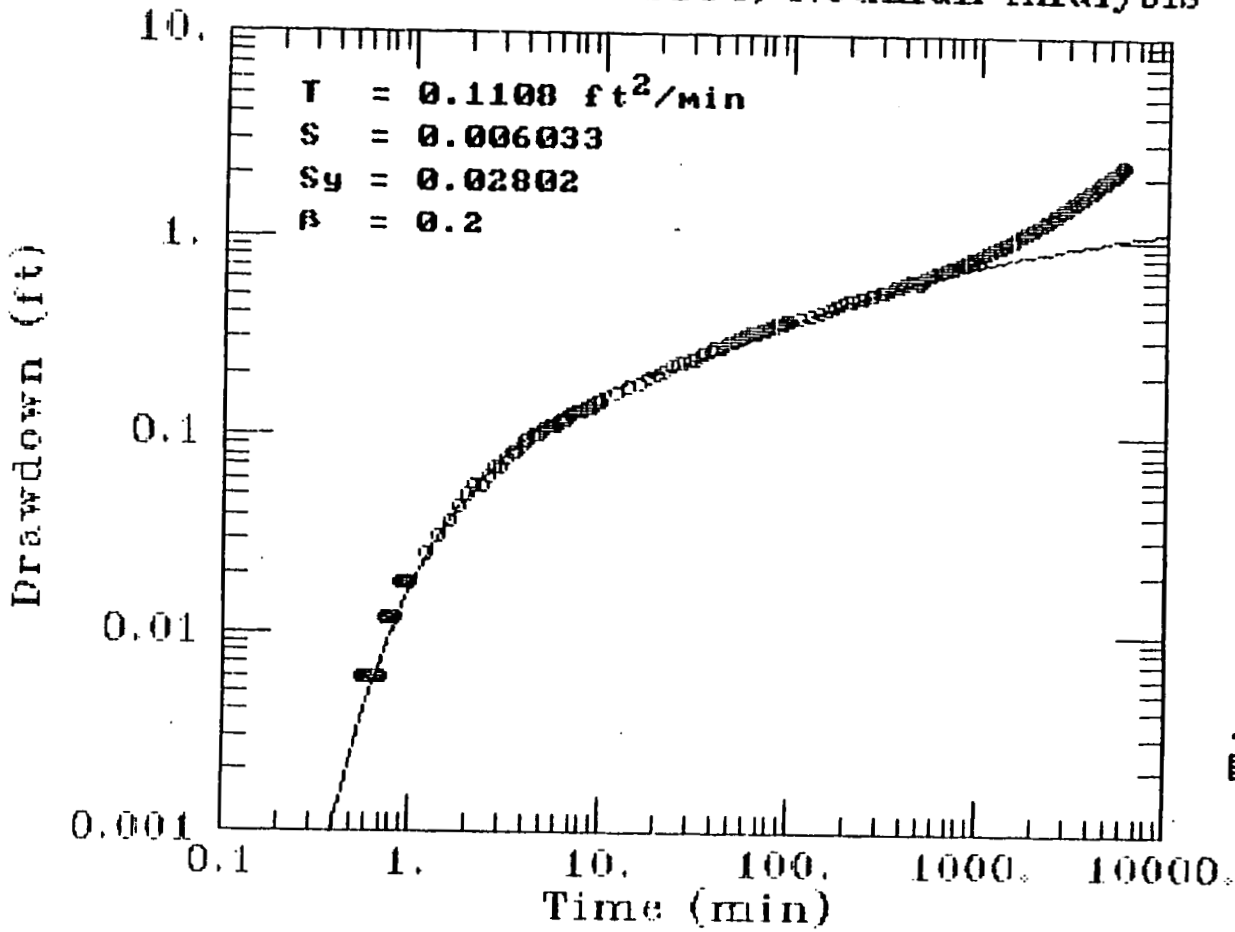
Test 11112, Well 11114, Neuman Analysis



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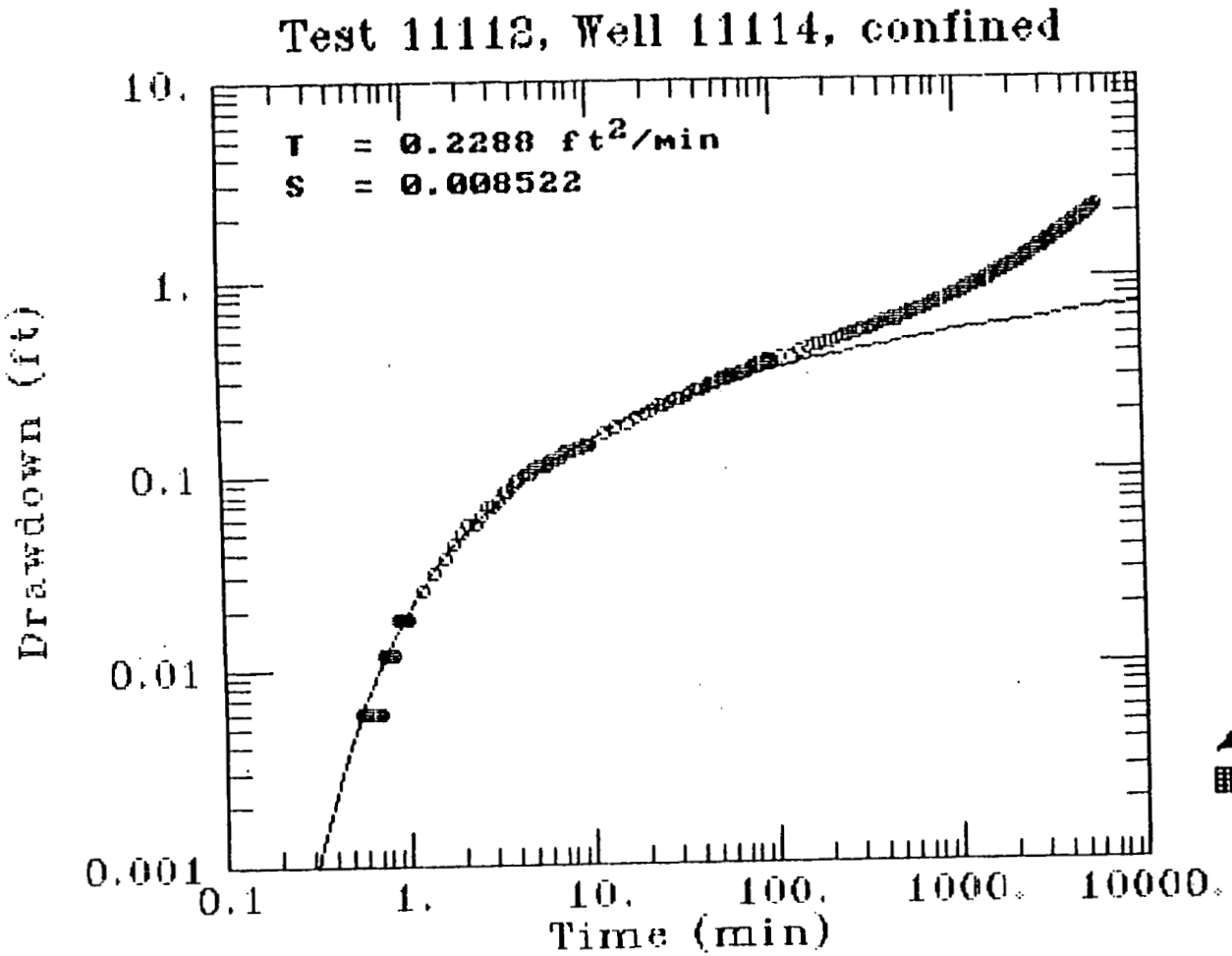

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Modeling Group

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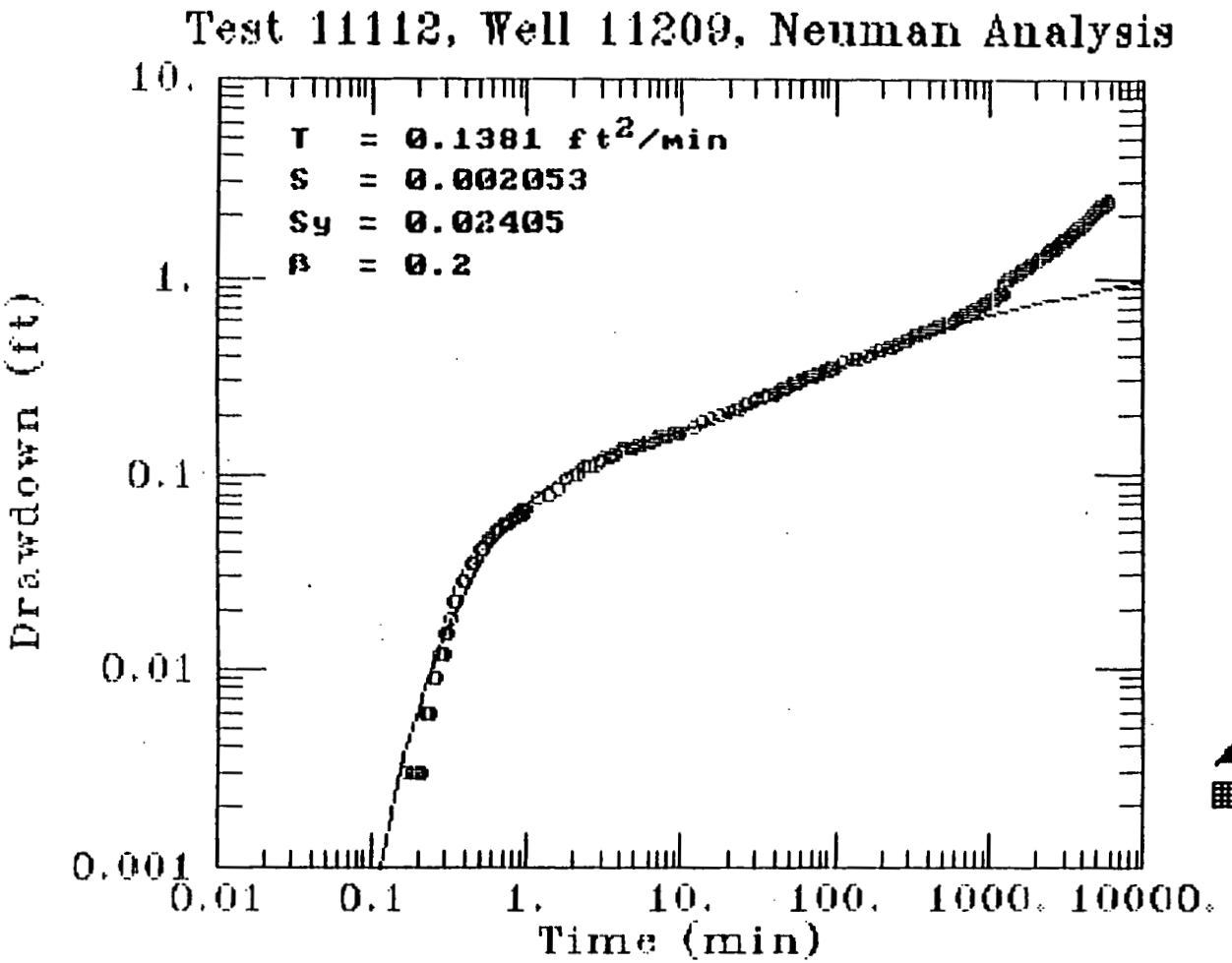

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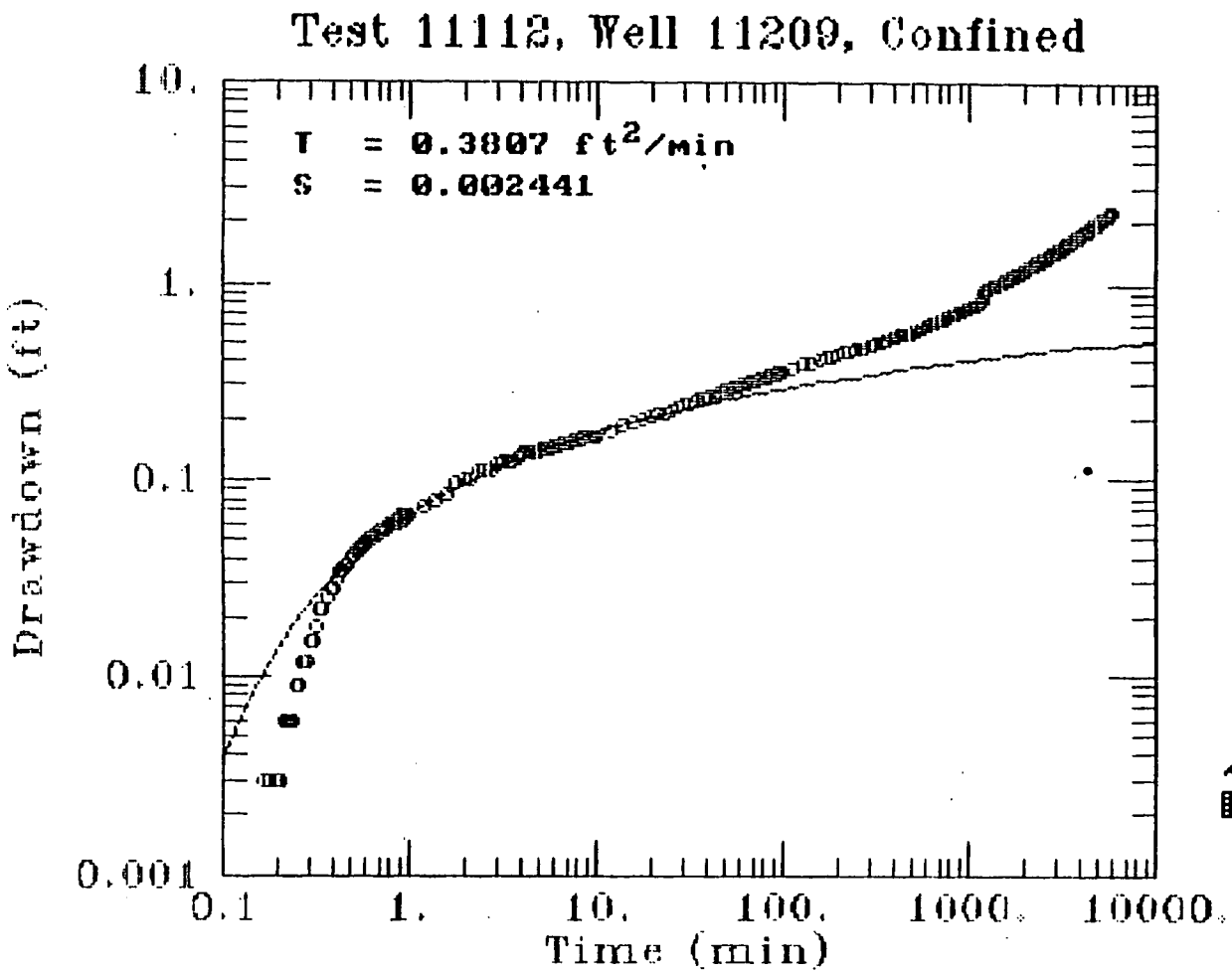

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Modeling Group

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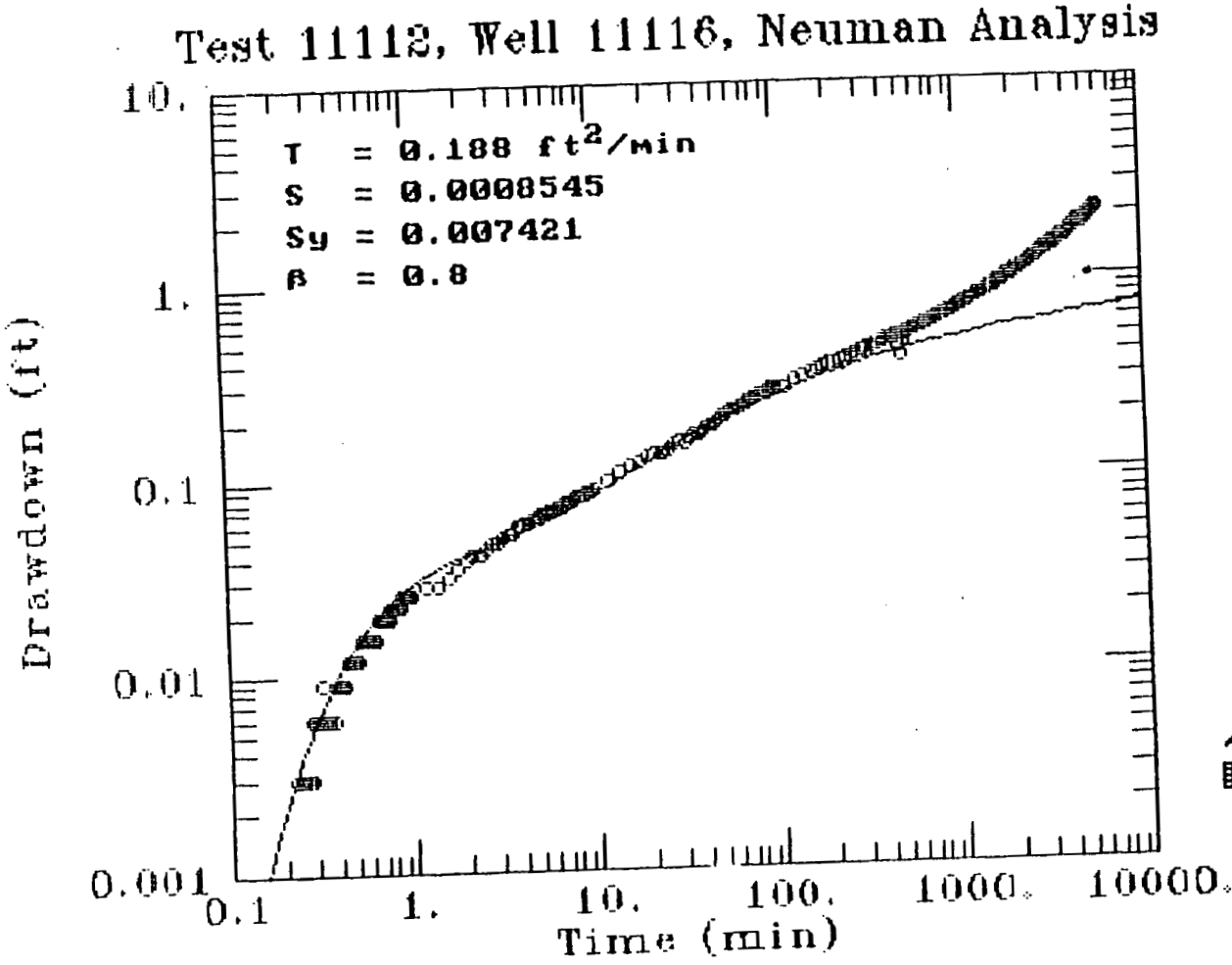

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Modeling Group

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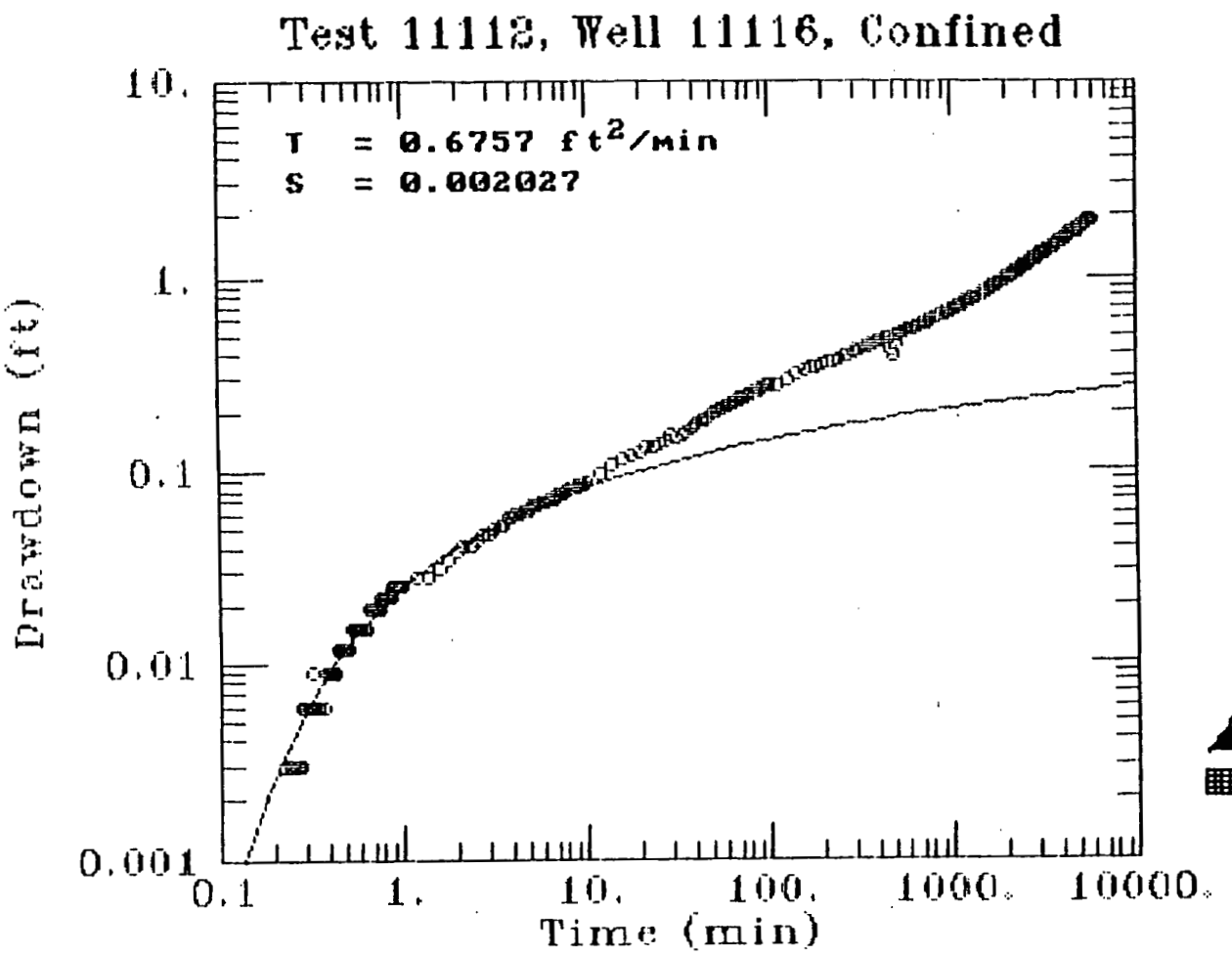

AQTESOLV

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Modeling Group

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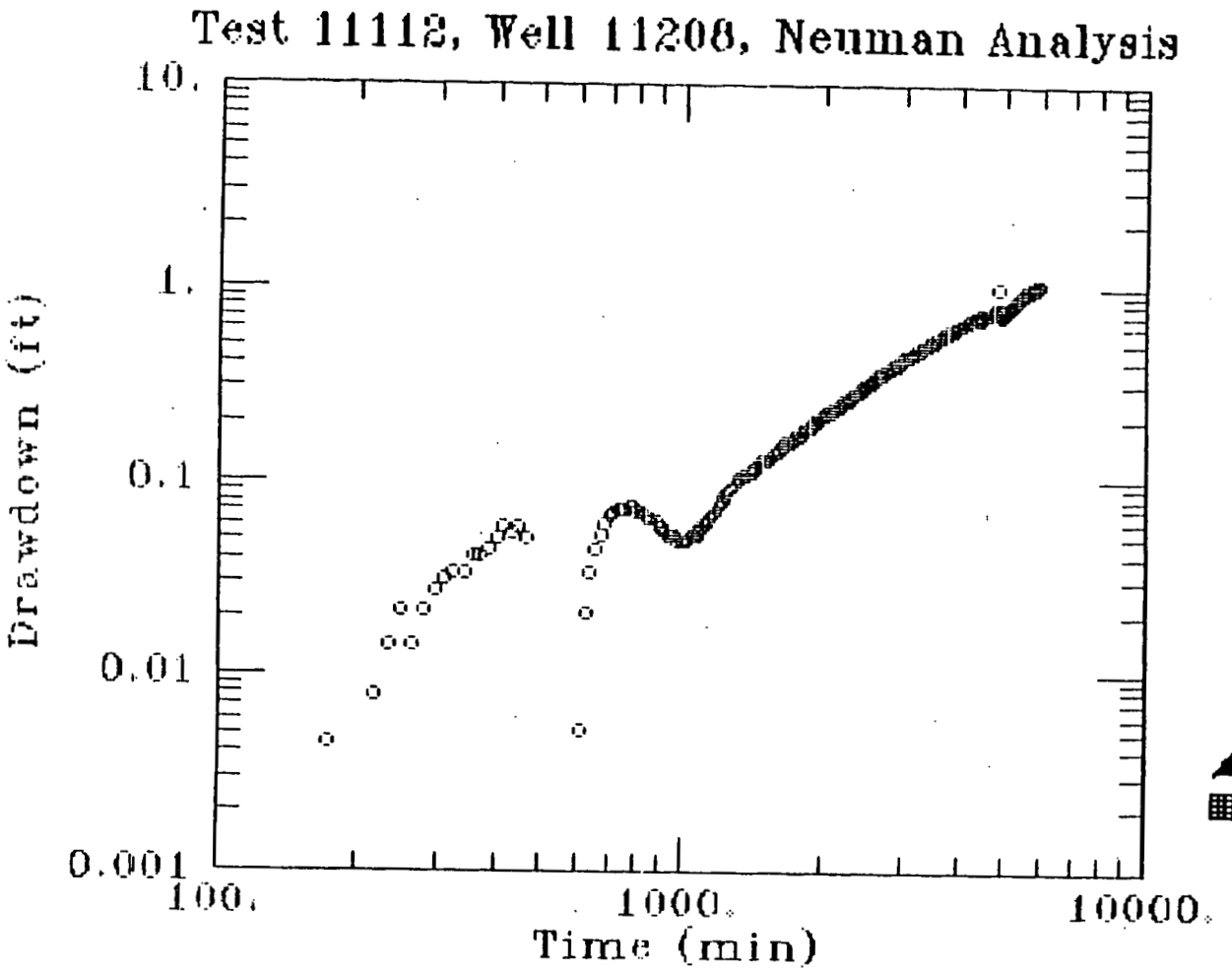

AQTESOLV

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Modeling Group

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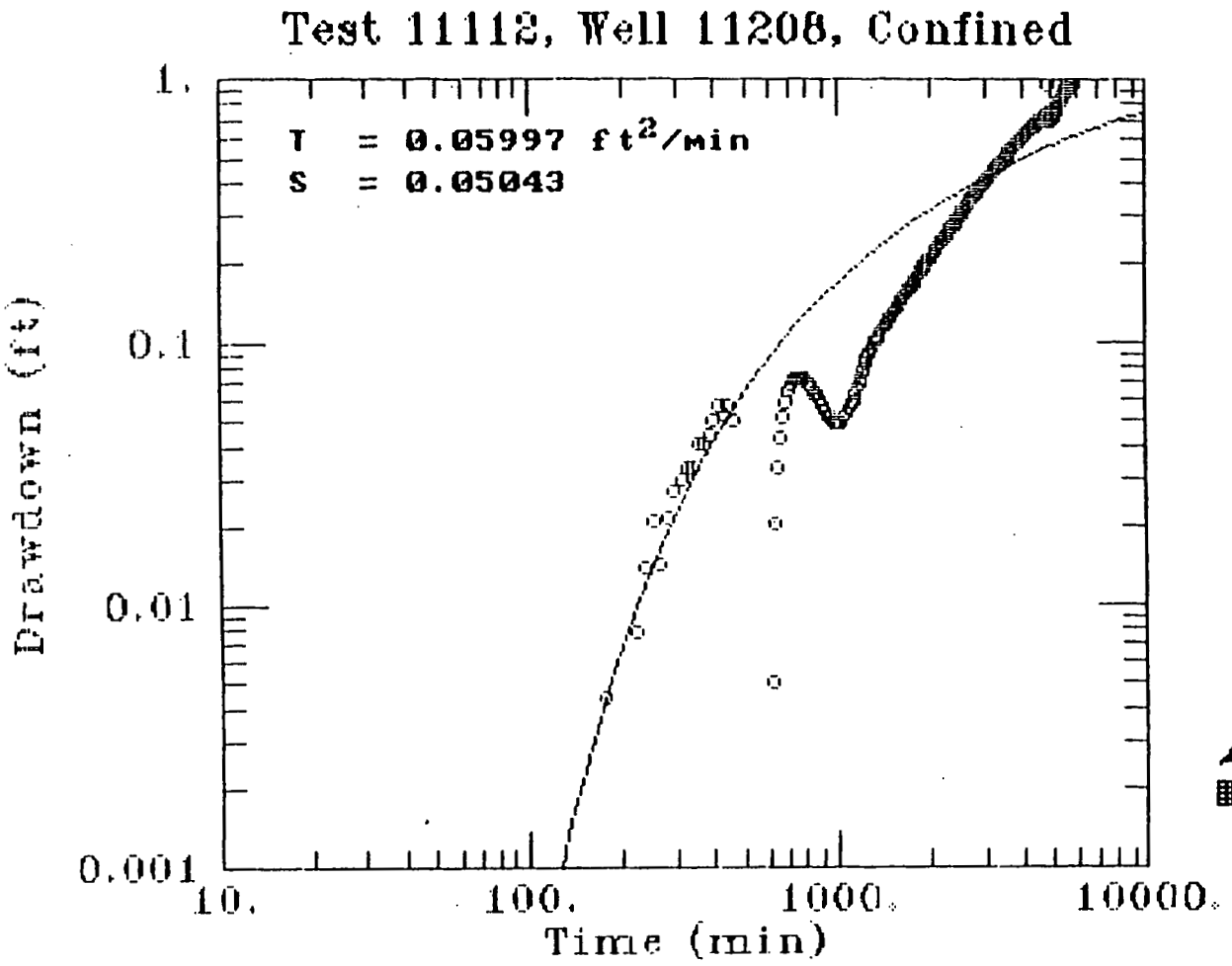

AQTESOLV

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Modeling Group

000775

2338

Well Number	1785
Pumping Rate	0.167 ft^3/min
Aquifer Thickness @ Pumping Well	10 ft
Part. Penetration @ Pumpimg Well	100.00 %

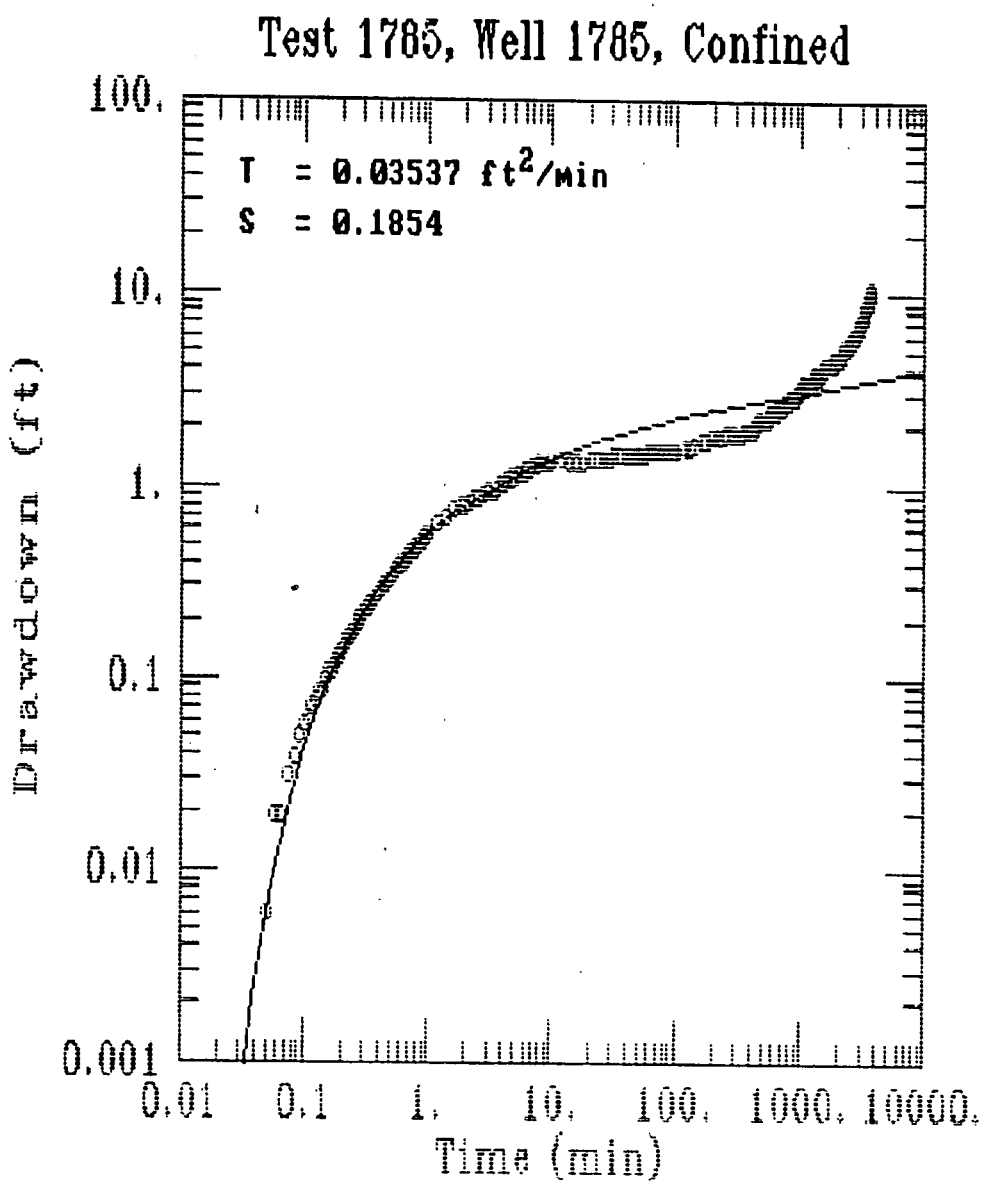
Theis Analysis

Input				AQTESOLV		Results
Well Number	Well Type	Dist. to Pumping Well (ft)	Local Aquifer Thickness (ft)	Transmissivity T (ft^2/min)	Storativity S	Horiz. Cond. Kh (ft/day)
1785	P.W.	0.25	10	0.03537	0.01854	5.09328
11118	Piez.	10.82	n/a	n/a	n/a	n/a
11119	Piez.	10.18	n/a	n/a	n/a	n/a
11120	Piez.	10.58	17	0.2144	0.008497	18.16094
11121	Piez.	29.67	15.5	0.2897	0.00374	26.91406
11211	Piez.	11.27	11.25	0.2146	0.004049	27.4688
1232	Piez.	31.46	17	0.22	0.007468	18.63529
All Wells Geometric Mean						16.63636
11120, 11121 & 11211 & 1232 Geo. Mean						22.36523
11120, 11121 & 11211 & 1232 Mean					0.005939	

Cooper - Jacob Analysis

Input				AQTESOLV			Results
Well Number	Well Type	Dist. to Pumping Well (ft)	Local Aquifer Thickness (ft)	Transmissivity T (ft^2/min)	Storativity S	time after which t (note # 1)	Horiz. Cond. Kh (ft/day)
1785	P.W.	0.25	10	0.03873	0.1503	0.606361	5.57712
11118	Piez.	10.82	n/a	n/a	n/a	n/a	n/a
11119	Piez.	10.18	n/a	n/a	n/a	n/a	n/a
11120	Piez.	10.58	17	0.2356	0.006588	7.825096	19.95671
11121	Piez.	29.67	15.5	0.3134	0.003196	22.4431	29.11587
11211	Piez.	11.27	11.25	0.2409	0.002783	3.668295	30.8352
1232	Piez.	31.46	17	0.3216	0.004706	36.20707	27.24141
All Wells Geometric Mean							19.36337
11120, 11121 & 11211 & 1232 Geo. Mean							26.43162
11120, 11121 & 11211 & 1232 Mean					0.004318		

Note 1) represents the time in days after which the assumption of this method are valid



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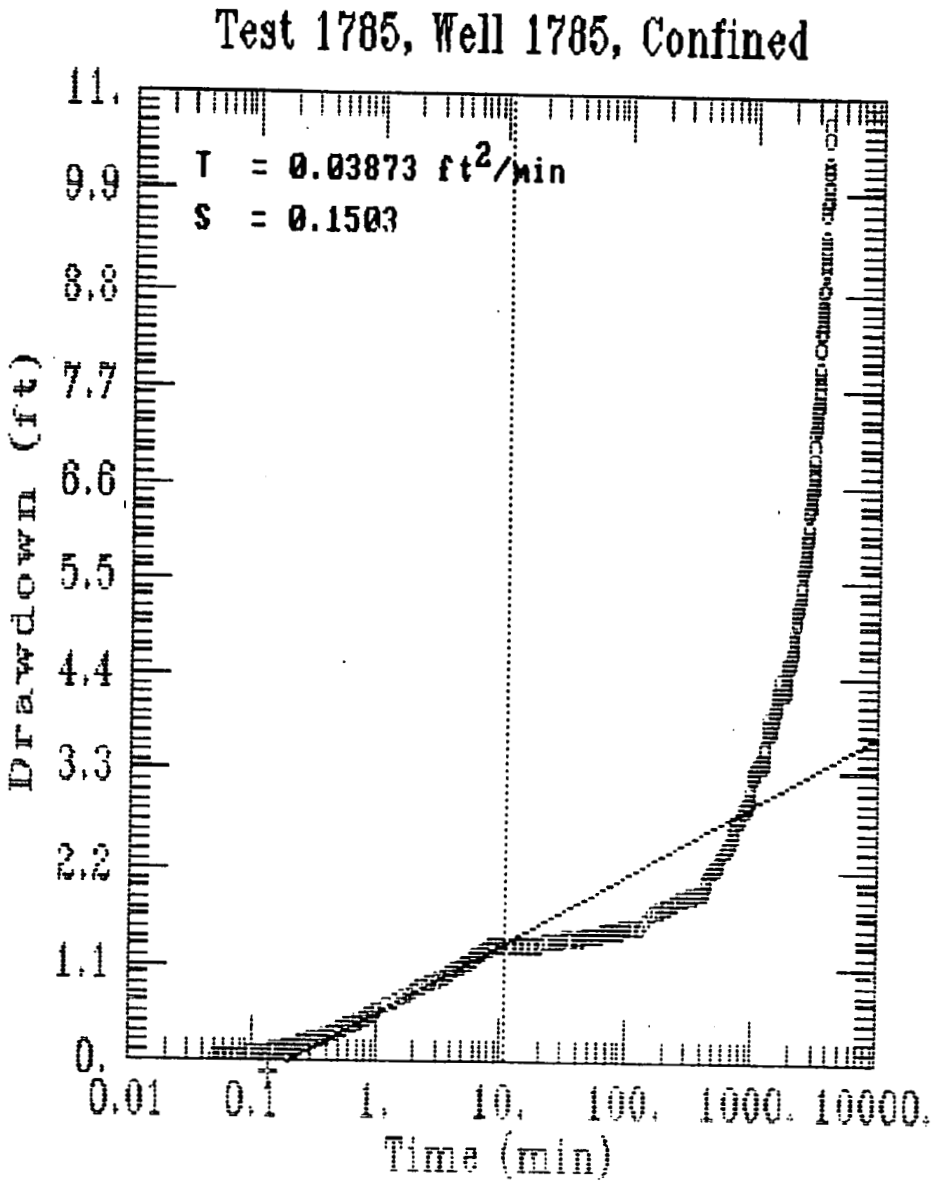
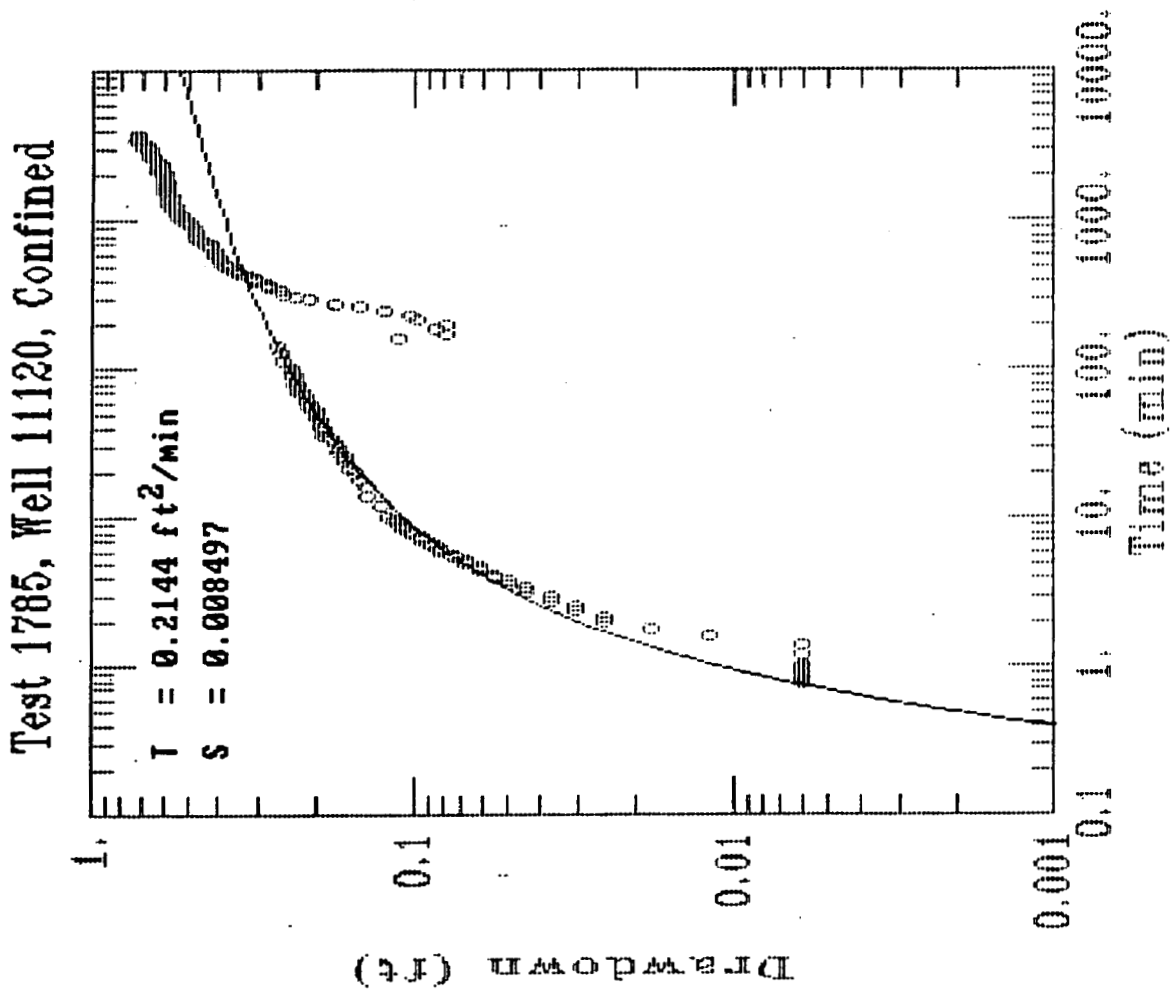
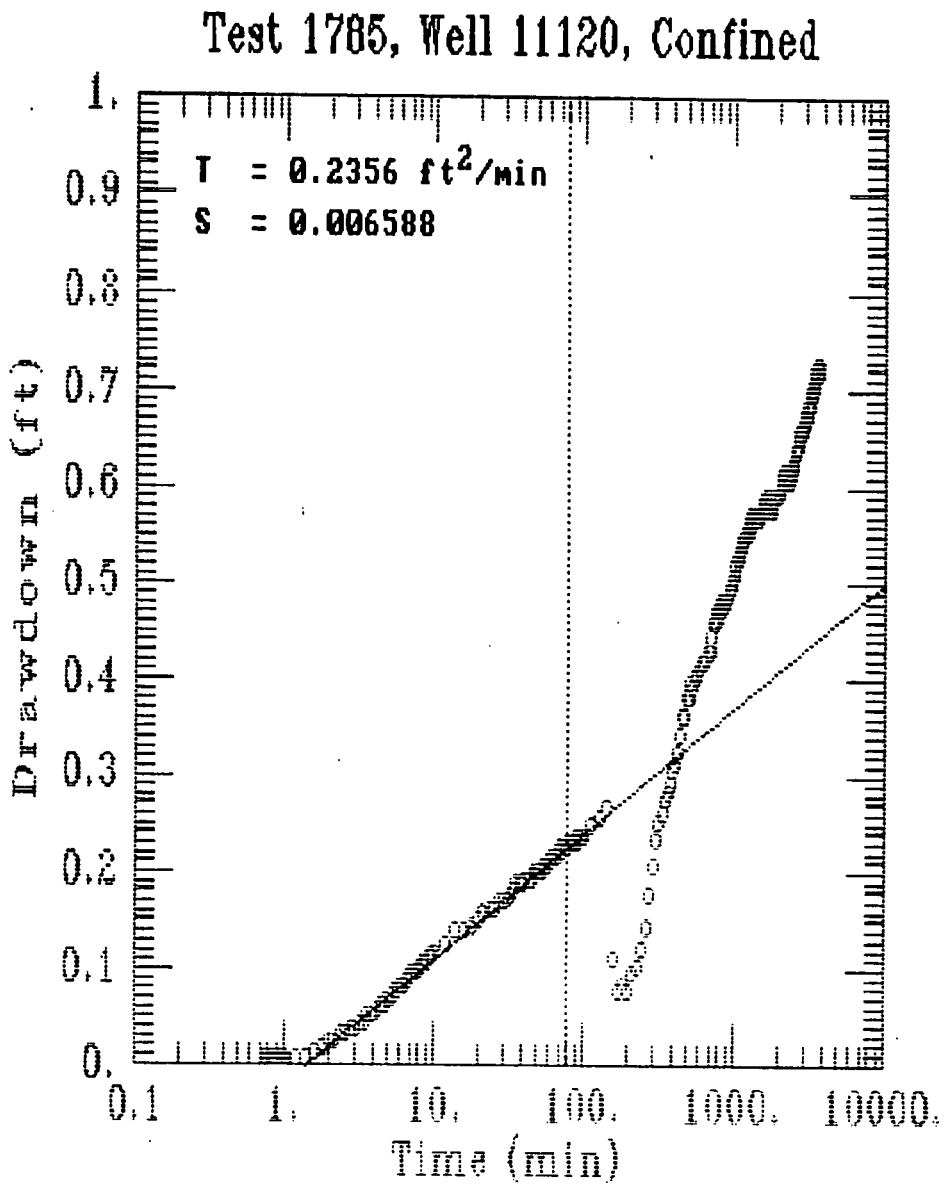

Test 1785, Well 1785, Confined
T = 0.03873 ft²/min
S = 0.1503
Drawdown (ft)
11.
9.9
8.8
7.7
6.6
5.5
4.4
3.3
2.2
1.1
0.
0.01
0.1
1.
10.
100.
1000.
10000.
Time (min)

97/5A
13


Test 1785, Well 11120, Confined
T = 0.2144 ft²/min
S = 0.008497
Drawdown (ft)
1.
0.1
0.01
0.001
0.1
1.
10.
100.
1000.
10000.
Time (min)

000180


Test 1785, Well 11120, Confined
T = 0.2356 ft²/min
S = 0.006588
Drawdown (ft)
1.
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.
0.1
1.
10.
100.
1000.
10000.
Time (min)

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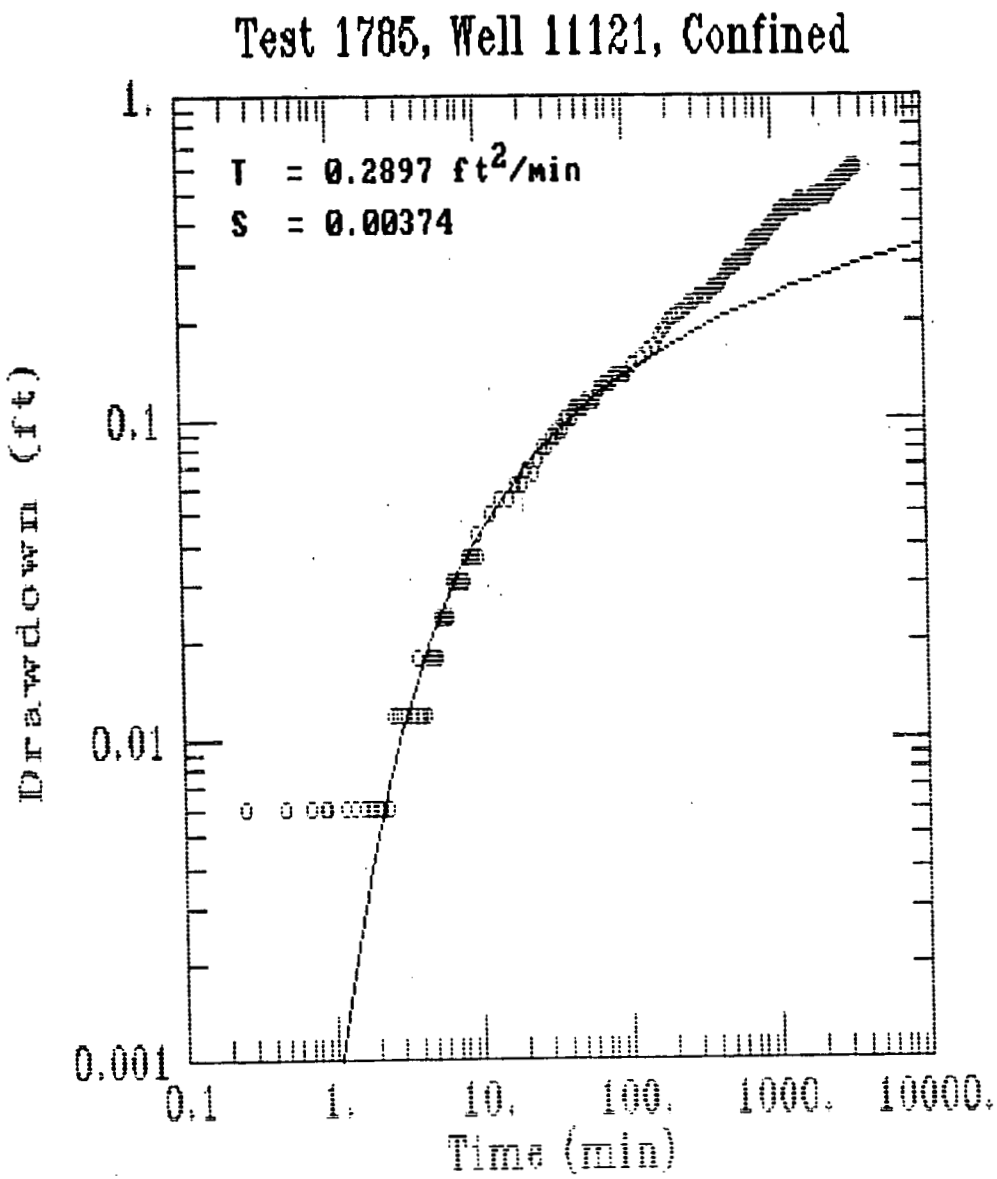
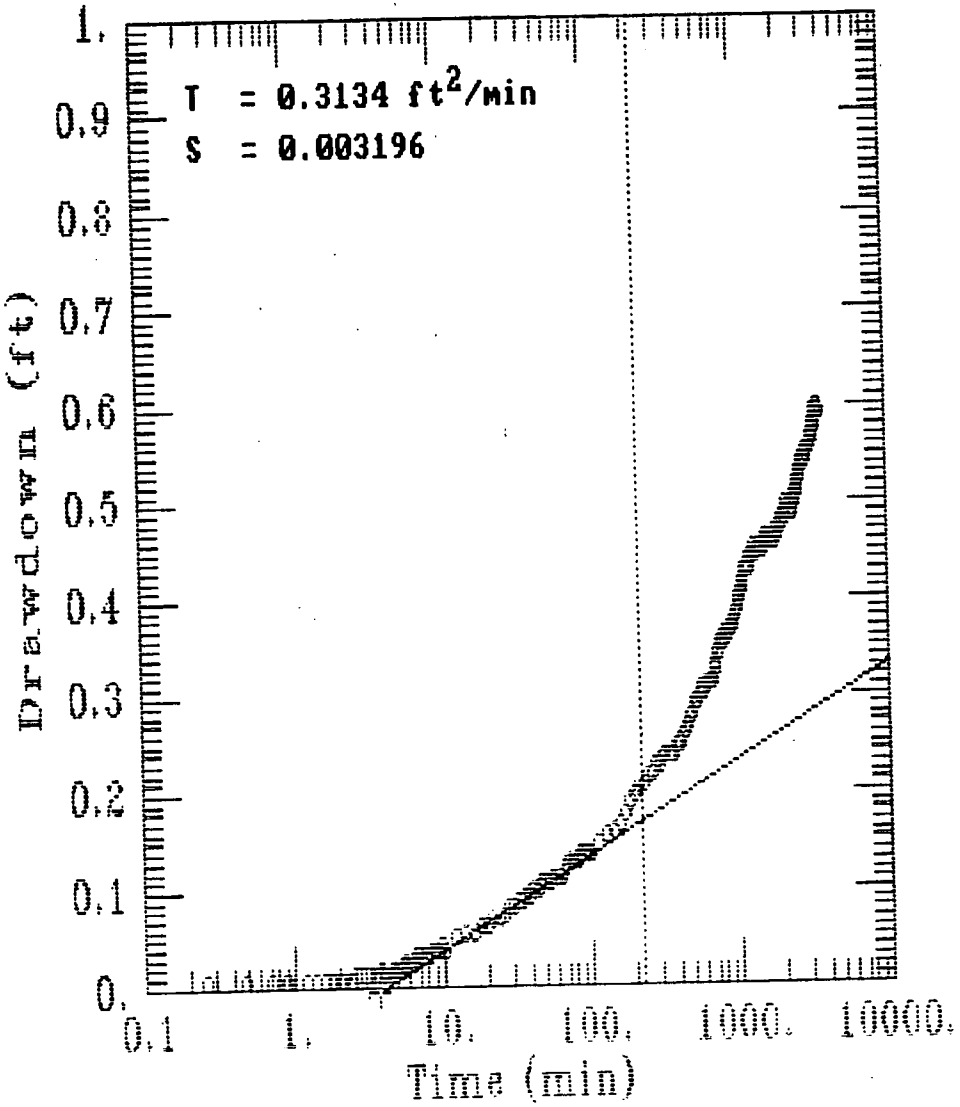
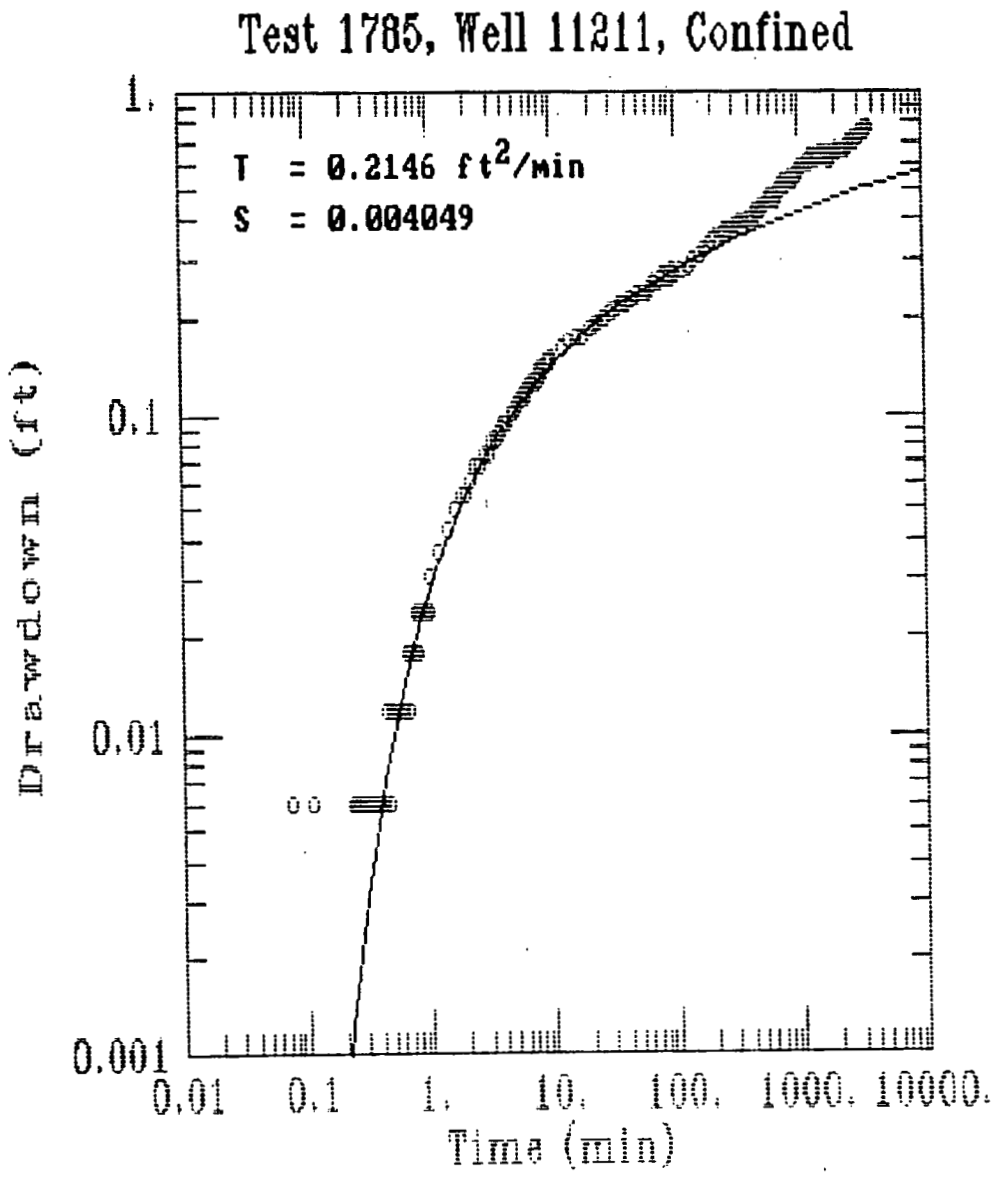

Test 1785, Well 11121, Confined
T = 0.2897 ft²/min
S = 0.00374
Drawdown (ft)
1.
0.1
0.01
0.001
0.1
1.
10.
100.
1000.
10000.
Time (min)

000782

Test 1785, Well 11121, Confined





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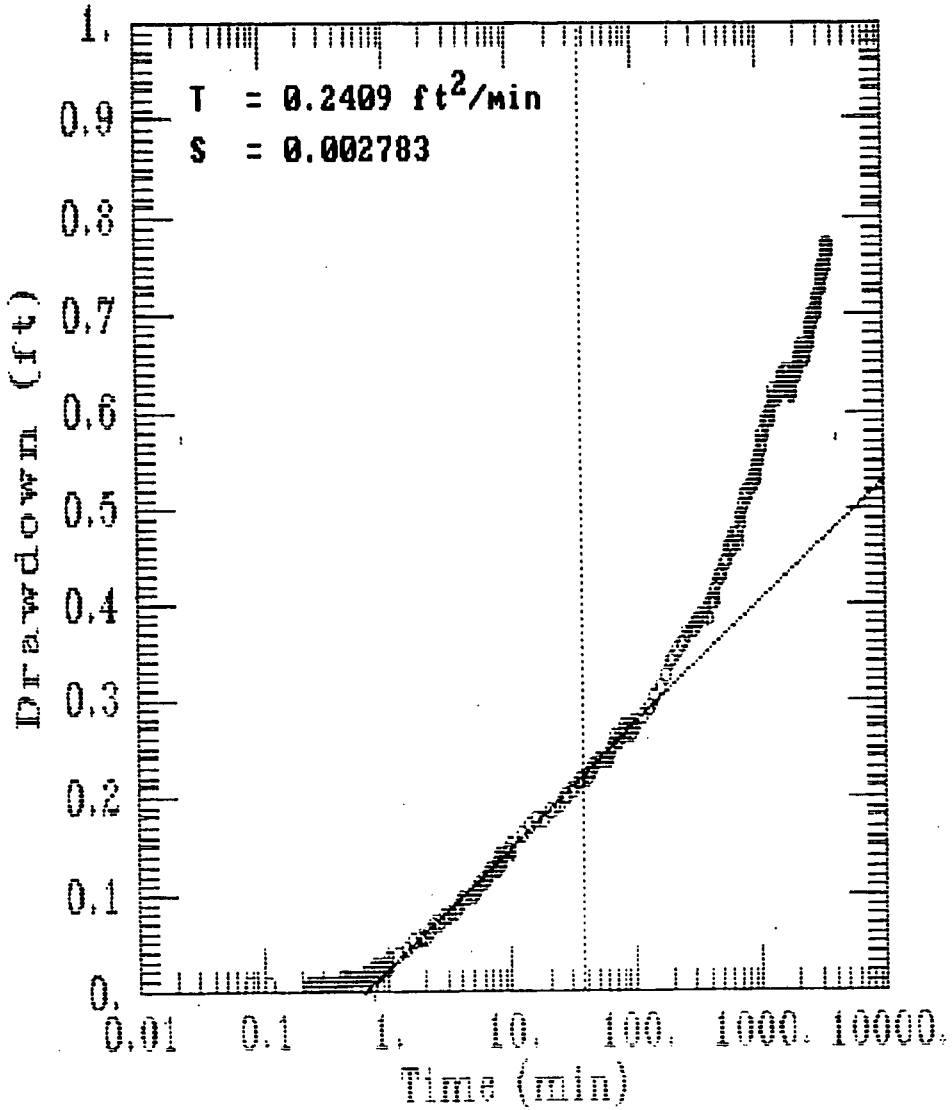
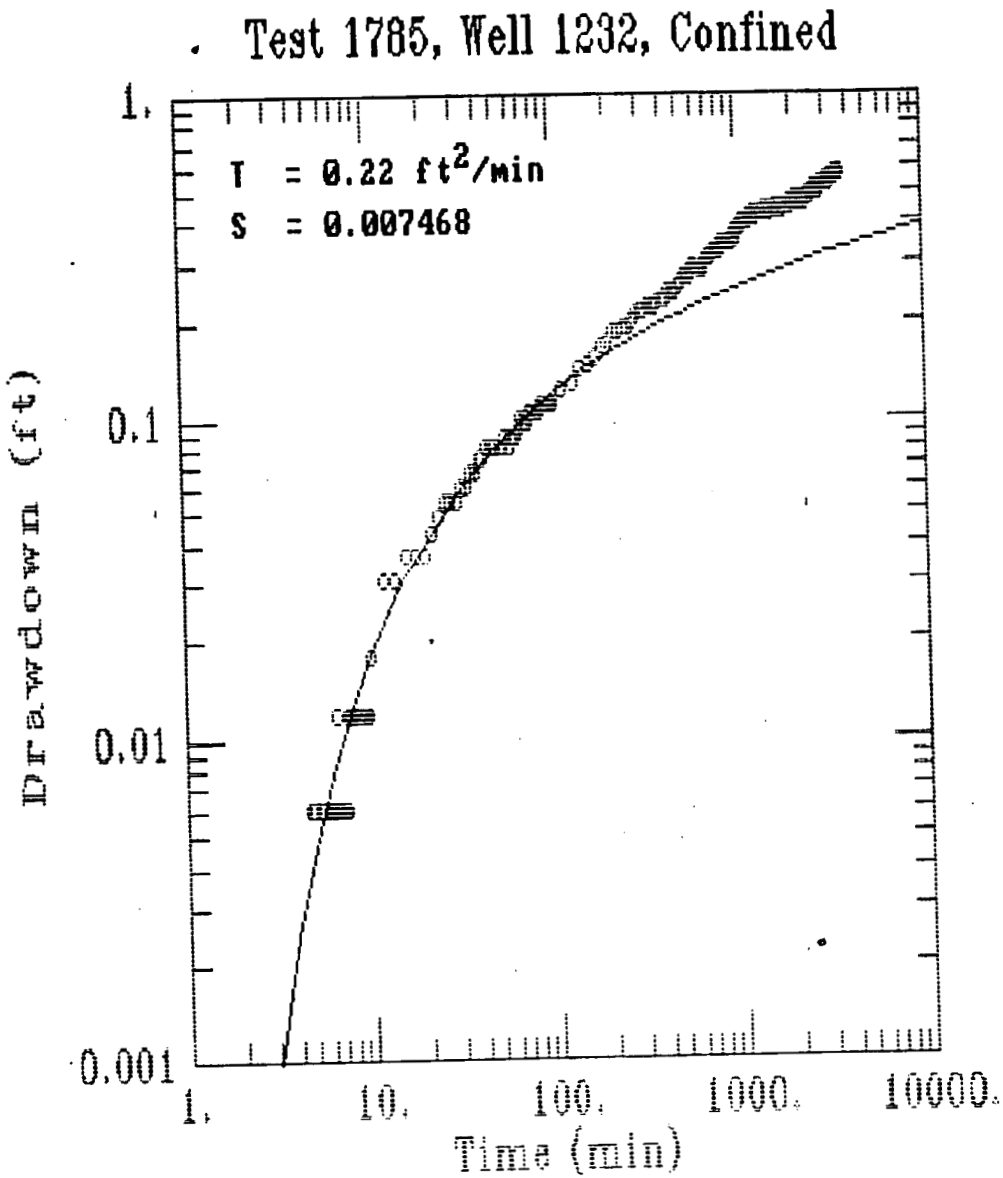
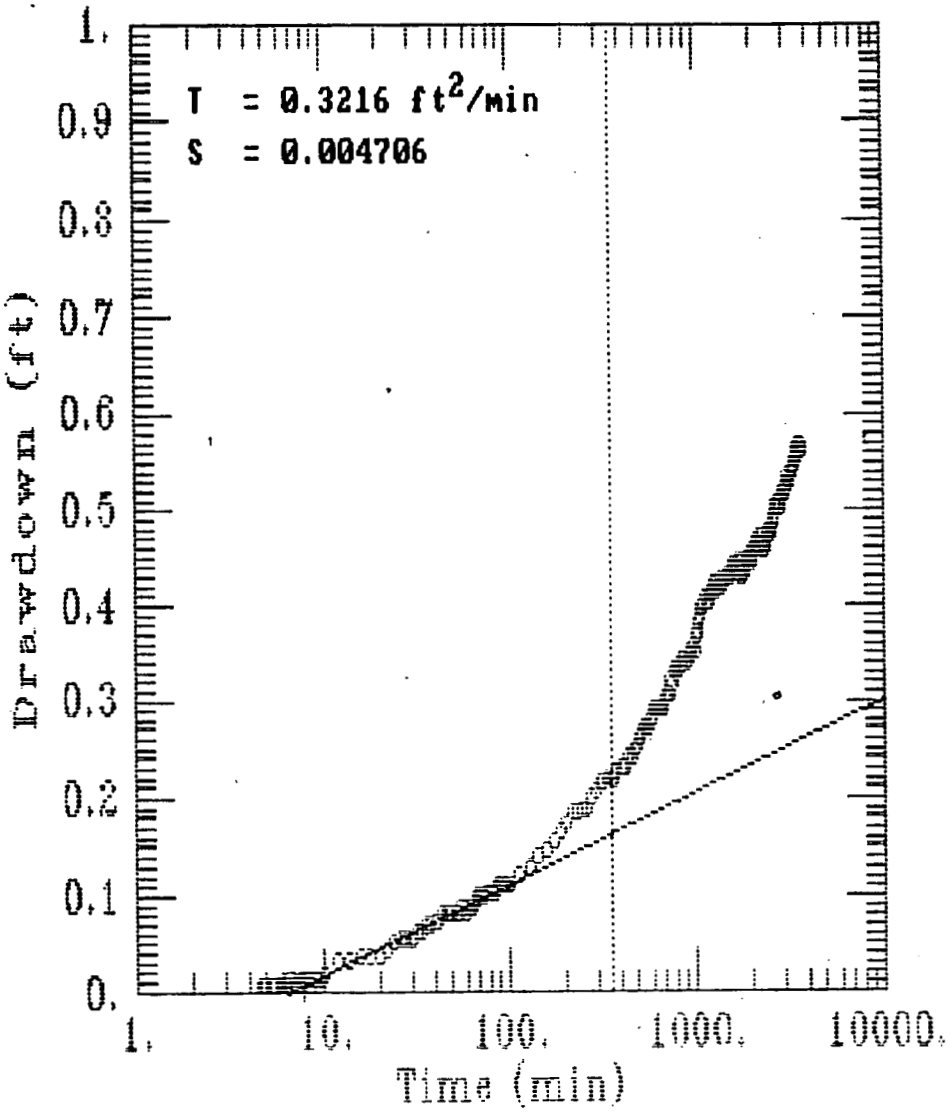
Test 1785, Well 11211, Confined




Test 1785, Well 1232, Confined
T = 0.22 ft²/min
S = 0.007468
Drawdown (ft)
1.
0.1
0.01
0.001
1.
10.
100.
1000.
10000.
Time (min)

000285

Test 1785, Well 1232, Confined



F-7333

PARSONS
ERA PROJECT

ENGINEERING CALCULATIONS TITLE AND SUMMARY SHEET

Date December 4, 1993
Sheet 1 of ~~29~~ 26 17

Proj. Order No. 37 Calculation No. 16-6

Project Title Technical and Project Management Support to CERCLA/RCRA Unit 5, Task 331

Calculation Subject Theis Recovery Analysis Date Verified/Checked

STATUS: PRELIMINARY ____ FINAL X SUPERSEDED ____ VOID ____

STATEMENT OF PROBLEM

1) Constant Rate Pumping Tests were performed at three separate locations on site as part of the Glacial Till/Vadose Zone Investigation. Using applicable methods of analysis, calculate aquifer parameter "Hydraulic Conductivity" for each pump test, using the recovery data obtained from these tests.

SUMMARY OF CONCLUSIONS	Originator's Signature and Date
1. Test data from the recovery period of three piezometers for each of three constant rate tests (11112, 11214, and 1785) was analyzed for using the methods of Theis (1954). Results for each of the pumping tests are listed on attached summary sheets.	Paul Frink 12/4/93
CHECKING METHOD	Checker's Signature and Date
1. Review X 2. Alternate Calculation ____	Don Vogel 1/11/94
	Lead Discipline Engineer's Signature and Date 1/26/94

Rev. No.	Sheet No.	Description	Reviser's Signature/Date	Checker's Signature/Date	Approved by Signature/Date

5/93 ENG080

000787

PARSONS
ERA PROJECT

ENGINEERING CALCULATIONS BASIS SHEET

Revision No. 0
Sheet 2 of ~~39~~ 26

Proj. Order No. 37 Calculation No. 16-6

Project Title Technical and Project management Support to CERCLA/RCRA Unit 5, Task 331

Calculation Subject Theis Recovery Analysis Date Verified/Checked 1-11-94

Prepared By: Paul Frink Checked/Verified By: Don Vogel

Date December 4, 1993

SUMMARY OF DATA SOURCES - CODES - ASSUMPTIONS

1) Drawdown measurements by data logger were used for the constant rate pumping test recovery period analysis without adjustment for background trend.

2) Several of the assumptions of Theis do not apply for all the wells of concern, however, this method provides a relative order of magnitude comparison to the analysis performed on the constant rate test data.

3) Values of u greater then 0.05 and 0.10 will introduce an error in the result which is less then 2% and 5% respectively. This level of error is acceptable for these calculations. The rapid recovery of well 1785, following the termination of pumping (due to well inefficiency) produced values of "u" in the range of 0.12-0.20 this is unusually high however the calculation is carried foeward for purposes of caomparison with the CRT calculations.

4) Reference list:

   (1) Analysis and Evaluation of Pumping Test Data. Kruseman and de Ridder, pg 194-196.

   (2) Groundwater and Wells, Driscoll, pgs 252-260.

5) Lotus Calculation/Graph Files are:

   Path = F:\USER\FRD144\GLACIAL\RECOVERY.WK3

PARSONS
ERA PROJECT

CALCULATION SHEET

REV	BY	DATE	CK	DATE	TITLE			
ϕ	FF	12/9/93	DAV	1/11/94	Theis Recovery Analysis			
					(description of basic approach)			CRU 5
					AUTHOR P. Frink	SHEET 3	OF ~~30~~ 26	PO 37

1. Corrected residual drawdown and t/t' values are obtained from data logger files for wells of interest.

2. Residual drawdown (s') vs. t/t' are plotted in accordance with Theis recovery method found in Driscoll (1986) for each of the wells described on the Engineering Calculation Basis Sheet.

3. Data regression is performed on late t' time data to get a straight line plot across one log cycle of the plotted s' vs. t/t'.

4. $\Delta s'$ is the slope in feet/log cycle and corresponds to the absolute value of the X-coefficient as seen on the data regression analysis portion of the spread sheet.

5. Transmissivity is calculated from the equation (Driscoll p. 256): $T = 264Q/\Delta s'$.

6. Horizontal Hydraulic conductivity is calculated from $K = T/b$, where b = thickness of the aquifer.

7. A value for $u = 1.87r^2s/Tt$ is calculated to determine the validity of the method for each piezometer. A value of $u < 0.01$ is desirable however a value of 0.1 is acceptable for this method to be considered valid and calulation based on higher values of U are carried forward for purposes of comparison.

8. The calculation file has 13 sheets as follows:
   A - Recovery Data from CRT 1785 file = 1785.RC2
   B - Recovery Data from CRT 11112 file = 1339.REC
   C - Recovery Data from CRT 11214 file = 11214.REC
   D - Calc Sheet Well 11120
   E - Calc Sheet Well 11121
   F - Calc Sheet Well 11211
   G - Calc Sheet Well 1339
   H - Calc Sheet Well 11114
   I - Calc Sheet Well 11116
   J - Calc Sheet Well 11213

K - Calc Sheet Well 11122
L - Calc Sheet Well 11125
M - Summary Sheet all wells

9. Each Calc sheet listed above runs 20 or more pages when printed out, therefor only the first printed page is included in this package.

Summary of Recovery Analysis

Test	Well Number	Aquifer Thickness (feet)	delta s (ft/decade)	u (method valid if u < 0.1)	Transmiss. T (gpd/ft)	Horizontal Conductivity (ft/day)	Horizontal Conductivity (cm/sec)
1785	11120	17	0.32	0.0159	1029.09	8.09	2.85E-03
	11121	15.5	0.30	0.1171	1097.84	9.47	3.34E-03
	11211	11.25	0.33	0.0186	999.70	11.88	4.19E-03
11112	1339	8	1.18	0.0017	390.82	6.53	2.30E-03
	11114	13.2	1.16	0.0228	399.82	4.05	1.43E-03
	11116	8.1	1.39	0.1100	331.71	5.47	1.93E-03
11214	11213	12.25	10.49	0.1541	50.35	0.55	1.94E-04
	11122	11.25	11.47	0.1275	46.04	0.55	1.93E-04
	11125	6.25	4.56	0.2079	115.90	2.48	8.75E-04

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Test 1785 Recovery Data file=1785.RC2
Measured as depth to water, zero reference at beginning of pump test

Time	1785	11120	11211	11121	11118	11119	1232
0	10.784	0.843	0.809	0.659	0.069	0.997	0.622
0.0083	10.784	0.843	0.809	0.659	0.069	1.003	0.622
0.0166	10.784	0.843	0.809	0.659	0.069	1.003	0.628
0.025	10.784	0.843	0.809	0.659	0.063	0.997	0.622
0.0333	10.784	0.837	0.815	0.659	0.069	1.003	0.622
0.0416	10.784	0.837	0.815	0.659	0.069	1.003	0.622
0.05	10.784	0.843	0.815	0.659	0.069	1.003	0.622
0.0583	10.784	0.837	0.815	0.659	0.069	1.003	0.622
0.0666	10.784	0.837	0.835	0.659	0.069	1.003	0.622
0.075	10.784	0.837	0.828	0.659	0.069	1.003	0.622
0.0833	10.784	0.837	0.822	0.659	0.069	1.003	0.622
0.0916	10.784	0.837	0.796	0.659	0.069	1.003	0.622
0.1	10.784	0.837	0.828	0.659	0.063	1.003	0.628
0.1083	10.784	0.837	0.822	0.659	0.069	1.003	0.622
0.1166	10.784	0.837	0.828	0.659	0.069	1.003	0.628
0.125	10.784	0.837	0.828	0.659	0.069	1.003	0.622
0.1333	10.784	0.837	0.847	0.659	0.069	1.003	0.628
0.1416	10.784	0.837	0.879	0.659	0.069	1.003	0.622
0.15	10.784	0.837	0.892	0.659	0.069	1.003	0.628
0.1583	10.784	0.837	0.886	0.659	0.063	1.003	0.622
0.1666	10.784	0.837	0.879	0.659	0.069	1.003	0.622
0.175	10.784	0.837	0.879	0.659	0.069	1.003	0.622
0.1833	10.784	0.837	0.873	0.659	0.069	0.997	0.622
0.1916	10.784	0.837	0.866	0.659	0.069	0.997	0.622
0.2	10.784	0.837	0.86	0.659	0.069	1.003	0.622
0.2083	10.784	0.837	0.854	0.659	0.069	1.003	0.622
0.2166	10.784	0.837	0.841	0.659	0.069	1.003	0.622
0.225	10.784	0.837	0.835	0.659	0.069	1.003	0.622
0.2333	10.784	0.837	0.835	0.659	0.069	1.003	0.622
0.2416	10.784	0.837	0.835	0.659	0.069	1.003	0.622
0.25	10.778	0.837	0.835	0.659	0.063	1.003	0.622
0.2583	10.765	0.837	0.828	0.659	0.069	1.003	0.622
0.2666	10.752	0.837	0.784	0.659	0.069	1.003	0.628
0.275	10.74	0.831	0.752	0.659	0.069	1.003	0.622
0.2833	10.721	0.831	0.841	0.659	0.069	1.003	0.622
0.2916	10.708	0.837	0.866	0.659	0.063	1.003	0.628
0.3	10.695	0.837	0.866	0.659	0.069	1.003	0.622
0.3083	10.683	0.831	0.86	0.659	0.069	1.003	0.622

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Test 11112 Recovery Data file=1339.REC
Measured as elevation, zero reference at beginning of pump test

Time	11112	1339	11114	11209	11115	11116	11208
0	-6.695	-2.589	-2.28	-2.364	2.993	-2.043	-0.959
0.0083	-6.695	-2.589	-2.28	-2.364	2.999	-2.043	-0.959
0.0166	-6.695	-2.585	-2.28	-2.361	2.999	-2.043	-0.959
0.025	-6.695	-2.589	-2.28	-2.364	3.002	-2.043	-0.962
0.0333	-6.695	-2.585	-2.28	-2.361	3.002	-2.046	-0.962
0.0416	-6.688	-2.589	-2.28	-2.368	3.005	-2.04	-0.962
0.05	-6.682	-2.582	-2.28	-2.355	3.002	-2.043	-0.962
0.0583	-6.663	-2.589	-2.28	-2.349	3.005	-2.043	-0.962
0.0666	-6.644	-2.585	-2.28	-2.342	3.005	-2.043	-0.962
0.075	-6.625	-2.589	-2.28	-2.342	3.005	-2.043	-0.956
0.0833	-6.606	-2.582	-2.28	-2.314	3.005	-2.043	-0.956
0.0916	-6.593	-2.582	-2.28	-2.339	3.005	-2.04	-0.959
0.1	-6.574	-2.582	-2.28	-2.349	3.005	-2.043	-0.959
0.1083	-6.555	-2.589	-2.28	-2.352	3.005	-2.04	-0.962
0.1166	-6.543	-2.582	-2.28	-2.371	3.005	-2.043	-0.959
0.125	-6.524	-2.585	-2.28	-2.387	3.005	-2.043	-0.959
0.1333	-6.505	-2.582	-2.28	-2.383	3.005	-2.043	-0.962
0.1416	-6.492	-2.585	-2.28	-2.383	3.008	-2.043	-0.959
0.15	-6.479	-2.579	-2.28	-2.374	3.005	-2.043	-0.959
0.1583	-6.46	-2.585	-2.28	-2.38	3.008	-2.043	-0.962
0.1666	-6.441	-2.582	-2.28	-2.371	3.008	-2.043	-0.962
0.175	-6.435	-2.582	-2.28	-2.364	3.008	-2.04	-0.959
0.1833	-6.416	-2.579	-2.28	-2.358	3.008	-2.043	-0.962
0.1916	-6.397	-2.585	-2.28	-2.352	3.008	-2.043	-0.962
0.2	-6.384	-2.579	-2.28	-2.349	3.008	-2.043	-0.962
0.2083	-6.372	-2.585	-2.28	-2.355	3.008	-2.043	-0.962
0.2166	-6.353	-2.579	-2.28	-2.349	3.008	-2.043	-0.962
0.225	-6.347	-2.582	-2.28	-2.358	3.008	-2.043	-0.959
0.2333	-6.334	-2.576	-2.28	-2.361	3.008	-2.043	-0.962
0.2416	-6.321	-2.582	-2.28	-2.377	3.008	-2.043	-0.959
0.25	-6.302	-2.576	-2.28	-2.361	3.008	-2.043	-0.959
0.2583	-6.29	-2.582	-2.28	-2.364	3.008	-2.043	-0.959
0.2666	-6.271	-2.576	-2.28	-2.371	3.008	-2.043	-0.959
0.275	-6.258	-2.579	-2.28	-2.377	3.008	-2.043	-0.962
0.2833	-6.239	-2.576	-2.28	-2.364	3.008	-2.043	-0.962
0.2916	-6.226	-2.579	-2.28	-2.371	3.008	-2.04	-0.959
0.3	-6.214	-2.576	-2.28	-2.364	3.008	-2.046	-0.959
0.3083	-6.195	-2.579	-2.28	-2.368	3.008	-2.043	-0.962

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-28 33

Test 11214 Recovery Data file=11214.REC
Measured as elevation, zero reference at beginning of pump test

Time	11214	11213	11122	11125	11124
0	-10.877	-8.108	-8.813	-4.765	-2.023
0.0083	-10.877	-8.108	-8.813	-4.772	-2.019
0.0166	-10.871	-8.108	-8.813	-4.772	-2.016
0.025	-10.877	-8.108	-8.813	-4.769	-2.016
0.0333	-10.871	-8.108	-8.813	-4.769	-2.016
0.0416	-10.877	-8.108	-8.813	-4.769	-2.013
0.05	-10.871	-8.108	-8.813	-4.769	-2.013
0.0583	-10.871	-8.108	-8.813	-4.772	-2.013
0.0666	-10.877	-8.108	-8.813	-4.769	-2.01
0.075	-10.871	-8.108	-8.813	-4.772	-2.01
0.0833	-10.877	-8.108	-8.813	-4.772	-2.01
0.0916	-10.877	-8.108	-8.813	-4.772	-2.01
0.1	-10.871	-8.108	-8.813	-4.772	-2.007
0.1083	-10.871	-8.108	-8.813	-4.772	-2.007
0.1166	-10.871	-8.108	-8.813	-4.769	-2.007
0.125	-10.858	-8.108	-8.81	-4.772	-2.01
0.1333	-10.846	-8.108	-8.81	-4.772	-2.01
0.1416	-10.827	-8.108	-8.813	-4.772	-2.007
0.15	-10.808	-8.108	-8.813	-4.769	-2.01
0.1583	-10.782	-8.108	-8.81	-4.769	-2.01
0.1666	-10.757	-8.108	-8.813	-4.769	-2.007
0.175	-10.738	-8.108	-8.81	-4.769	-2.007
0.1833	-10.713	-8.108	-8.81	-4.772	-2.01
0.1916	-10.694	-8.108	-8.81	-4.769	-2.01
0.2	-10.675	-8.108	-8.813	-4.772	-2.01
0.2083	-10.656	-8.108	-8.81	-4.772	-2.01
0.2166	-10.631	-8.108	-8.813	-4.772	-2.01
0.225	-10.618	-8.108	-8.81	-4.772	-2.01
0.2333	-10.612	-8.108	-8.81	-4.772	-2.01
0.2416	-10.593	-8.108	-8.81	-4.769	-2.01
0.25	-10.58	-8.108	-8.81	-4.772	-2.01
0.2583	-10.561	-8.108	-8.81	-4.772	-2.01
0.2666	-10.542	-8.108	-8.81	-4.772	-2.01
0.275	-10.529	-8.108	-8.81	-4.769	-2.01
0.2833	-10.51	-8.108	-8.81	-4.769	-2.007
0.2916	-10.491	-8.108	-8.81	-4.772	-2.007
0.3	-10.472	-8.108	-8.81	-4.769	-2.01
0.3083	-10.46	-8.108	-8.807	-4.769	-2.01

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Pump Test Number	1785
Well Number	11120

GT/VZ Investigation
Recovery Following Pump Test

Distance to Well	10.58 ft	
Time Pumping Began	11/04/93	21:58
Time Pumping Stopped	11/07/93	11:25
Level @ pump Start	0 reference	
Pumping Rate	1.25 gpm	
Aquifer Thickness	17 feet	
Transmissivity	1029.09 gpd/ft	
HorizontalConductivity	8.09 feet/day	
u = ((1.87*r*r*S)/(T*t)) =	0.0159	

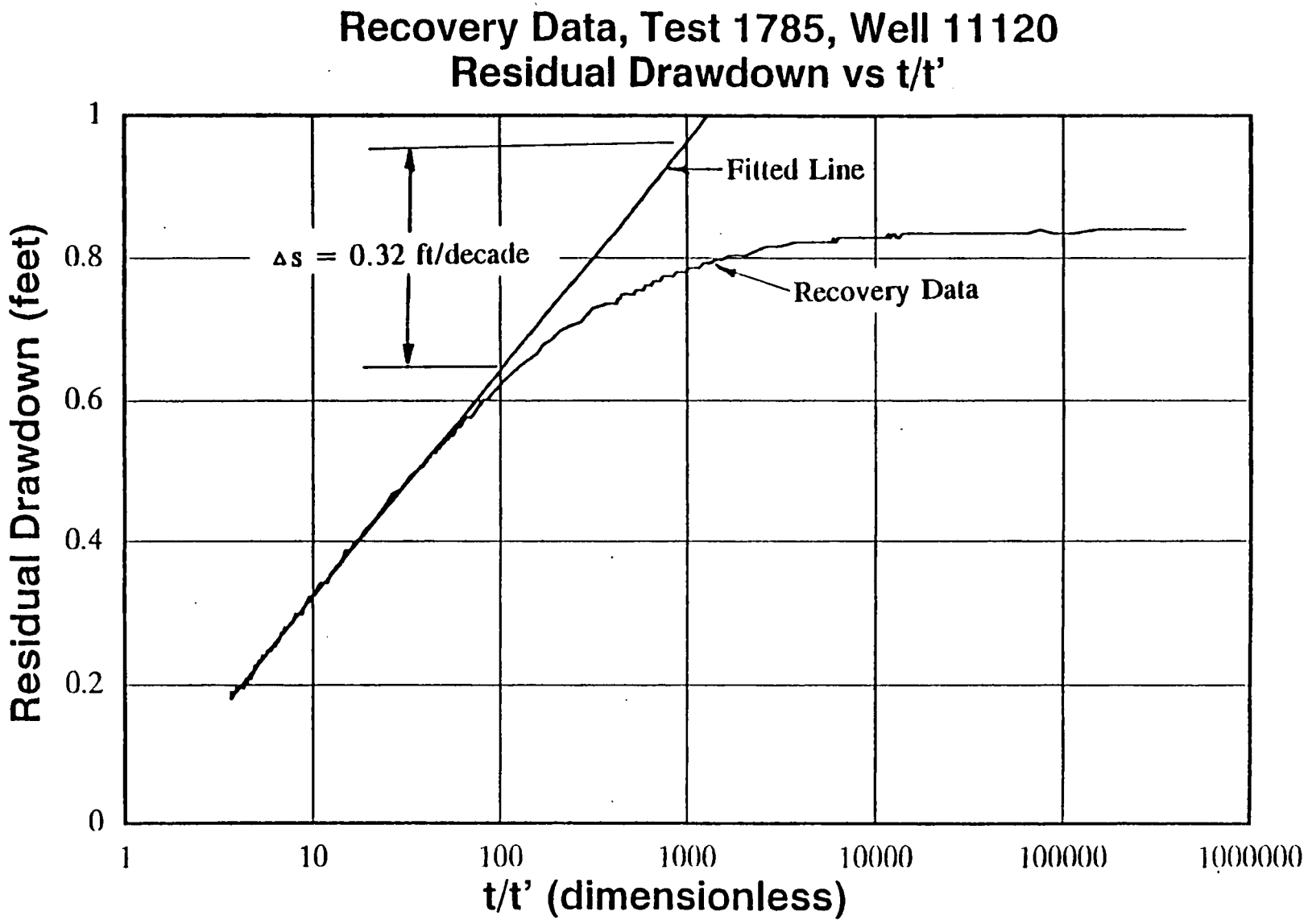
Regression Output:	
Constant	0.002446174
Std Err of Y Est	0.003665941
R Squared	0.988169496
No. of Observations	61
Degrees of Freedom	59
X Coefficient(s)	0.320671506
Std Err of Coef.	0.004567939

Time since pump stop	Water Level	Residual Drawdown	Time since pump start	Ratio t/t'	Log t/t'	Regressed Residual Drawdown
0	0.843	0.843	3687.0000			
0.0083	0.843	0.843	3687.0083	444217.8675	5.6476	1.8135
0.0166	0.843	0.843	3687.0166	222109.4337	5.3466	1.7169
0.025	0.843	0.843	3687.0250	147481.0000	5.1687	1.6599
0.0333	0.837	0.837	3687.0333	110721.7207	5.0442	1.6200
0.0416	0.837	0.837	3687.0416	88630.8077	4.9476	1.5890
0.05	0.843	0.843	3687.0500	73741.0000	4.8677	1.5634
0.0583	0.837	0.837	3687.0583	63242.8525	4.8010	1.5420
0.0666	0.837	0.837	3687.0666	55361.3604	4.7432	1.5235
0.075	0.837	0.837	3687.0750	49161.0000	4.6916	1.5069
0.0833	0.837	0.837	3687.0833	44262.7047	4.6460	1.4923
0.0916	0.837	0.837	3687.0916	40252.0917	4.6048	1.4791
0.1	0.837	0.837	3687.1000	36871.0000	4.5667	1.4669
0.1083	0.837	0.837	3687.1083	34045.3213	4.5321	1.4557
0.1166	0.837	0.837	3687.1166	31621.9262	4.5000	1.4455
0.125	0.837	0.837	3687.1250	29497.0000	4.4698	1.4358
0.1333	0.837	0.837	3687.1333	27660.4149	4.4419	1.4268
0.1416	0.837	0.837	3687.1416	26039.1356	4.4156	1.4184
0.15	0.837	0.837	3687.1500	24581.0000	4.3906	1.4104
0.1583	0.837	0.837	3687.1583	23292.2192	4.3672	1.4029
0.1666	0.837	0.837	3687.1666	22131.8523	4.3450	1.3958
0.175	0.837	0.837	3687.1750	21069.5714	4.3237	1.3889
0.1833	0.837	0.837	3687.1833	20115.5663	4.3035	1.3825
0.1916	0.837	0.837	3687.1916	19244.2150	4.2843	1.3763
0.2	0.837	0.837	3687.2000	18436.0000	4.2657	1.3703

000795

33

000796



10/26/92

Pump Test Number	1785
Well Number	11121

GT/VZ Investigation
Recovery Following Pump Test

Distance to Well	29.67 ft	
Time Pumping Began	11/04/93	21:58
Time Pumping Stopped	11/07/93	11:25
Level @ pump Start	0 reference	
Pumping Rate	1.25 gpm	
Aquifer Thickness	15.5 feet	
Transmissivity	1097.84 gpd/foot	
HorizontalConductivity	9.47 feet/day	
u = ((1.87*r*r*S)/(T*t)) =	0.1171	

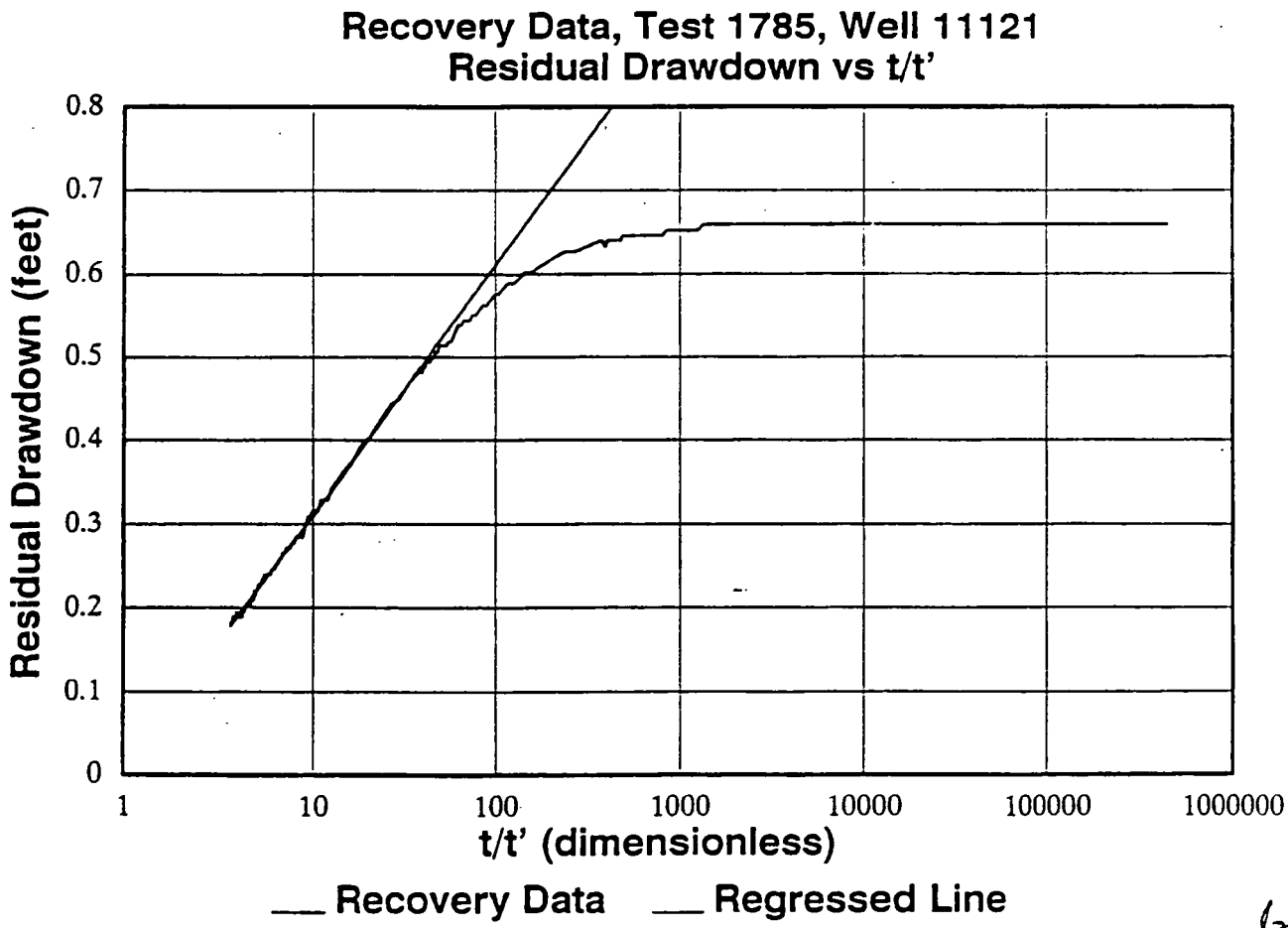
Regression Output:

Constant	0.010727474
Std Err of Y Est	0.00423201
R Squared	0.997576271
No. of Observations	91
Degrees of Freedom	89
X Coefficient(s)	0.300591041
Std Err of Coef.	0.001570544

Time since pump stop	Water Level	Residual Drawdown	Time since pump start	Ratio t/t'	Log t/t'	Regressed Residual Drawdown
0	0.659	0.659	3687.0000			
0.0083	0.659	0.659	3687.0083	444217.8675	5.6476	1.7083
0.0166	0.659	0.659	3687.0166	222109.4337	5.3466	1.6179
0.025	0.659	0.659	3687.0250	147481.0000	5.1687	1.5644
0.0333	0.659	0.659	3687.0333	110721.7207	5.0442	1.5270
0.0416	0.659	0.659	3687.0416	88630.8077	4.9476	1.4979
0.05	0.659	0.659	3687.0500	73741.0000	4.8677	1.4739
0.0583	0.659	0.659	3687.0583	63242.8525	4.8010	1.4539
0.0666	0.659	0.659	3687.0666	55361.3604	4.7432	1.4365
0.075	0.659	0.659	3687.0750	49161.0000	4.6916	1.4210
0.0833	0.659	0.659	3687.0833	44262.7047	4.6460	1.4073
0.0916	0.659	0.659	3687.0916	40252.0917	4.6048	1.3949
0.1	0.659	0.659	3687.1000	36871.0000	4.5667	1.3834
0.1083	0.659	0.659	3687.1083	34045.3213	4.5321	1.3730
0.1166	0.659	0.659	3687.1166	31621.9262	4.5000	1.3634
0.125	0.659	0.659	3687.1250	29497.0000	4.4698	1.3543
0.1333	0.659	0.659	3687.1333	27660.4149	4.4419	1.3459
0.1416	0.659	0.659	3687.1416	26039.1356	4.4156	1.3380
0.15	0.659	0.659	3687.1500	24581.0000	4.3906	1.3305
0.1583	0.659	0.659	3687.1583	23292.2192	4.3672	1.3235
0.1666	0.659	0.659	3687.1666	22131.8523	4.3450	1.3168
0.175	0.659	0.659	3687.1750	21069.5714	4.3237	1.3104
0.1833	0.659	0.659	3687.1833	20115.5663	4.3035	1.3043
0.1916	0.659	0.659	3687.1916	19244.2150	4.2843	1.2985
0.2	0.659	0.659	3687.2000	18436.0000	4.2657	1.2929

000797

-2833


Recovery Data, Test 1785, Well 11121
Residual Drawdown vs t/t'
Residual Drawdown (feet)
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
1
10
100
1000
10000
100000
1000000
t/t' (dimensionless)
Recovery Data
Regressed Line

12/

000798

Pump Test Number	1785
Well Number	11211

GT/VZ Investigation
Recovery Following Pump Test

Distance to Well	11.27 ft	
Time Pumping Began	11/04/93	21:58
Time Pumping Stopped	11/07/93	11:25
Level @ pump Start	0 reference	
Pumping Rate	1.25 gpm	
Aquifer Thickness	11.25 feet	
Transmissivity	999.70 gpd/foot	
HorizontalConductivity	11.88 feet/day	
u = ((1.87*r*r*S)/(T*t)) =	0.0186	

Regression Output:	
Constant	-0.00700029
Std Err of Y Est	0.003747581
R Squared	0.991781079
No. of Observations	67
Degrees of Freedom	65
X Coefficient(s)	0.330100551
Std Err of Coef.	0.003727255

Time since pump stop	Water Level	Residual Drawdown	Time since pump start	Ratio t/t'	Log t/t'	Regressed Residual Drawdown
0	0.809	0.809	3687.0000			
0.0083	0.809	0.809	3687.0083	444217.8675	5.6476	1.8667
0.0166	0.809	0.809	3687.0166	222109.4337	5.3466	1.7674
0.025	0.809	0.809	3687.0250	147481.0000	5.1687	1.7086
0.0333	0.815	0.815	3687.0333	110721.7207	5.0442	1.6676
0.0416	0.815	0.815	3687.0416	88630.8077	4.9476	1.6356
0.05	0.815	0.815	3687.0500	73741.0000	4.8677	1.6093
0.0583	0.815	0.815	3687.0583	63242.8525	4.8010	1.5873
0.0666	0.835	0.835	3687.0666	55361.3604	4.7432	1.5682
0.075	0.828	0.828	3687.0750	49161.0000	4.6916	1.5512
0.0833	0.822	0.822	3687.0833	44262.7047	4.6460	1.5361
0.0916	0.796	0.796	3687.0916	40252.0917	4.6048	1.5225
0.1	0.828	0.828	3687.1000	36871.0000	4.5667	1.5099
0.1083	0.822	0.822	3687.1083	34045.3213	4.5321	1.4985
0.1166	0.828	0.828	3687.1166	31621.9262	4.5000	1.4879
0.125	0.828	0.828	3687.1250	29497.0000	4.4698	1.4779
0.1333	0.847	0.847	3687.1333	27660.4149	4.4419	1.4687
0.1416	0.879	0.879	3687.1416	26039.1356	4.4156	1.4600
0.15	0.892	0.892	3687.1500	24581.0000	4.3906	1.4518
0.1583	0.886	0.886	3687.1583	23292.2192	4.3672	1.4441
0.1666	0.879	0.879	3687.1666	22131.8523	4.3450	1.4367
0.175	0.879	0.879	3687.1750	21069.5714	4.3237	1.4297
0.1833	0.873	0.873	3687.1833	20115.5663	4.3035	1.4230
0.1916	0.866	0.866	3687.1916	19244.2150	4.2843	1.4167
0.2	0.86	0.86	3687.2000	18436.0000	4.2657	1.4105

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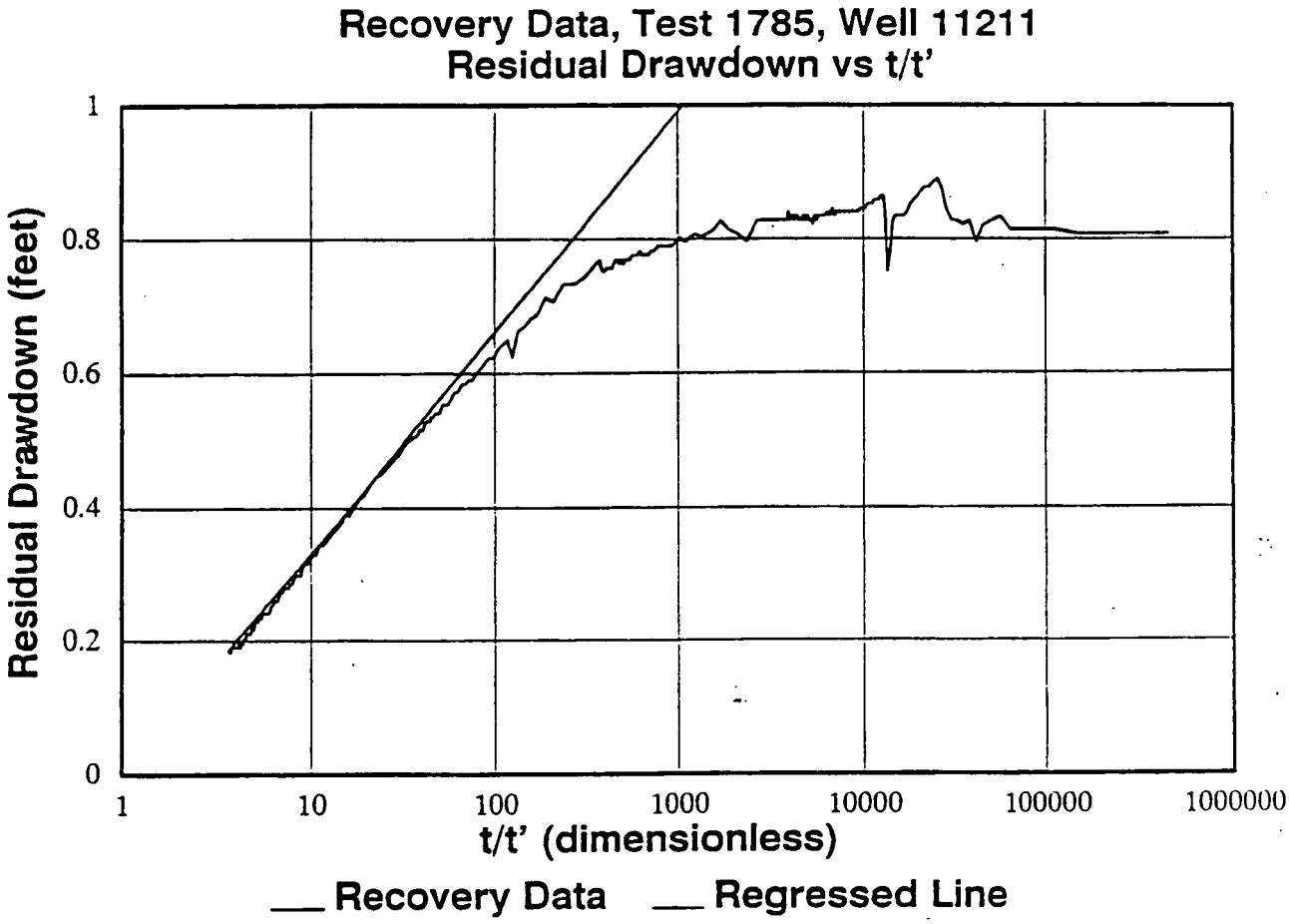
HP DAV 13/26


Recovery Data, Test 1785, Well 11211
Residual Drawdown vs t/t'
Residual Drawdown (feet)
1
0.8
0.6
0.4
0.2
0
1
10
100
1000
10000
100000
1000000
t/t' (dimensionless)
Recovery Data
Regressed Line

Pump Test Number	11112
Well Number	1339

GT/VZ Investigation
Recovery Following Pump Test

Distance to Well	2.67 ft	
Time Pumping Began	09/25/93	13:10
Time Pumping Stopped	09/29/93	15:15
Level @ pump Start	0 reference	
Pumping Rate	1.75 gpm	
Aquifer Thickness	8 feet	
Transmissivity	390.82 gpd/foot	
HorizontalConductivity	6.53 feet/day	
u = ((1.87*r*r*S)/(T*t)) =	0.0017	

Regression Output:	
Constant	1.006109645
Std Err of Y Est	0.009546323
R Squared	0.988221879
No. of Observations	390
Degrees of Freedom	388
X Coefficient(s)	1.182123719
Std Err of Coef.	0.006551758

Time since pump stop	Water Level	Residual Drawdown	Time since pump start	Ratio t/t'	Log t/t'	Regressed Residual Drawdown
0	-2.589	2.589	5885.0000			
0.0083	-2.589	2.589	5885.0083	709037.1446	5.8507	7.9223
0.0166	-2.585	2.585	5885.0166	354519.0723	5.5496	7.5665
0.025	-2.589	2.589	5885.0250	235401.0000	5.3718	7.3563
0.0333	-2.585	2.585	5885.0333	176727.7267	5.2473	7.2091
0.0416	-2.589	2.589	5885.0416	141467.3462	5.1507	7.0948
0.05	-2.582	2.582	5885.0500	117701.0000	5.0708	7.0004
0.0583	-2.589	2.589	5885.0583	100944.3962	5.0041	6.9216
0.0666	-2.585	2.585	5885.0666	88364.3634	4.9463	6.8532
0.075	-2.589	2.589	5885.0750	78467.6667	4.8947	6.7922
0.0833	-2.582	2.582	5885.0833	70649.2593	4.8491	6.7384
0.0916	-2.582	2.582	5885.0916	64247.7249	4.8079	6.6896
0.1	-2.582	2.582	5885.1000	58851.0000	4.7698	6.6445
0.1083	-2.589	2.589	5885.1083	54340.7969	4.7351	6.6036
0.1166	-2.582	2.582	5885.1166	50472.6981	4.7031	6.5657
0.125	-2.585	2.585	5885.1250	47081.0000	4.6728	6.5300
0.1333	-2.582	2.582	5885.1333	44149.5371	4.6449	6.4970
0.1416	-2.585	2.585	5885.1416	41561.7345	4.6187	6.4660
0.15	-2.579	2.579	5885.1500	39234.3333	4.5937	6.4364
0.1583	-2.585	2.585	5885.1583	37177.2476	4.5703	6.4087
0.1666	-2.582	2.582	5885.1666	35325.1297	4.5481	6.3825
0.175	-2.582	2.582	5885.1750	33629.5714	4.5267	6.3573
0.1833	-2.579	2.579	5885.1833	32106.8374	4.5066	6.3335
0.1916	-2.585	2.585	5885.1916	30716.0313	4.4874	6.3107
0.2	-2.579	2.579	5885.2000	29426.0000	4.4687	6.2887

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15/26

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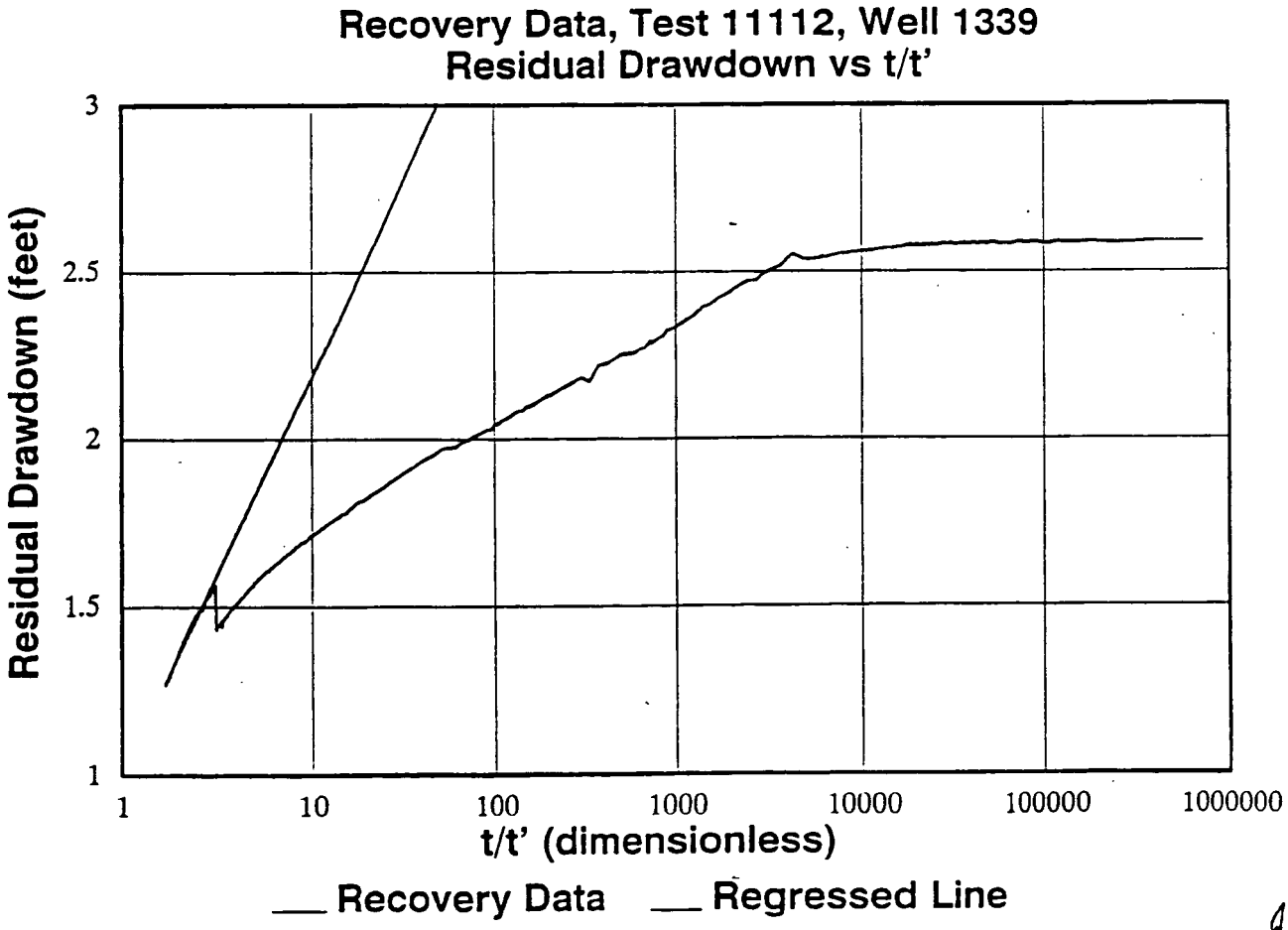
Recovery Data, Test 11112, Well 1339
Residual Drawdown vs t/t'
Residual Drawdown (feet)
3
2.5
2
1.5
1
1
10
100
1000
10000
100000
1000000
t/t' (dimensionless)
Recovery Data
Regressed Line

Pump Test Number	11112
Well Number	11114

GT/VZ Investigation
Recovery Following Pump Test

Distance to Well	9.99 ft	
Time Pumping Began	09/25/93	13:10
Time Pumping Stopped	09/29/93	15:15
Level @ pump Start	0 reference	
Pumping Rate	1.75 gpm	
Aquifer Thickness	13.2 feet	
Transmissivity	399.82 gpd/foot	
HorizontalConductivity	4.05 feet/day	
u = ((1.87*r*r*S)/(T*t)) =	0.0228	

Regression Output:	
Constant	0.843919715
Std Err of Y Est	0.010563842
R Squared	0.986060895
No. of Observations	397
Degrees of Freedom	395
X Coefficient(s)	1.155532476
Std Err of Coef.	0.006912724

Time since pump stop	Water Level	Residual Drawdown	Time since pump start	Ratio t/t'	Log t/t'	Regressed Residual Drawdown
0	-2.28	2.28	5885.0000			
0.0083	-2.28	2.28	5885.0083	709037.1446	5.8507	7.6046
0.0166	-2.28	2.28	5885.0166	354519.0723	5.5496	7.2567
0.025	-2.28	2.28	5885.0250	235401.0000	5.3718	7.0512
0.0333	-2.28	2.28	5885.0333	176727.7267	5.2473	6.9074
0.0416	-2.28	2.28	5885.0416	141467.3462	5.1507	6.7957
0.05	-2.28	2.28	5885.0500	117701.0000	5.0708	6.7034
0.0583	-2.28	2.28	5885.0583	100944.3962	5.0041	6.6263
0.0666	-2.28	2.28	5885.0666	88364.3634	4.9463	6.5595
0.075	-2.28	2.28	5885.0750	78467.6667	4.8947	6.4999
0.0833	-2.28	2.28	5885.0833	70649.2593	4.8491	6.4472
0.0916	-2.28	2.28	5885.0916	64247.7249	4.8079	6.3996
0.1	-2.28	2.28	5885.1000	58851.0000	4.7698	6.3555
0.1083	-2.28	2.28	5885.1083	54340.7969	4.7351	6.3155
0.1166	-2.28	2.28	5885.1166	50472.6981	4.7031	6.2785
0.125	-2.28	2.28	5885.1250	47081.0000	4.6728	6.2435
0.1333	-2.28	2.28	5885.1333	44149.5371	4.6449	6.2113
0.1416	-2.28	2.28	5885.1416	41561.7345	4.6187	6.1810
0.15	-2.28	2.28	5885.1500	39234.3333	4.5937	6.1521
0.1583	-2.28	2.28	5885.1583	37177.2476	4.5703	6.1250
0.1666	-2.28	2.28	5885.1666	35325.1297	4.5481	6.0994
0.175	-2.28	2.28	5885.1750	33629.5714	4.5267	6.0747
0.1833	-2.28	2.28	5885.1833	32106.8374	4.5066	6.0514
0.1916	-2.28	2.28	5885.1916	30716.0313	4.4874	6.0292
0.2	-2.28	2.28	5885.2000	29426.0000	4.4687	6.0077

000803

DAV 12/17/96

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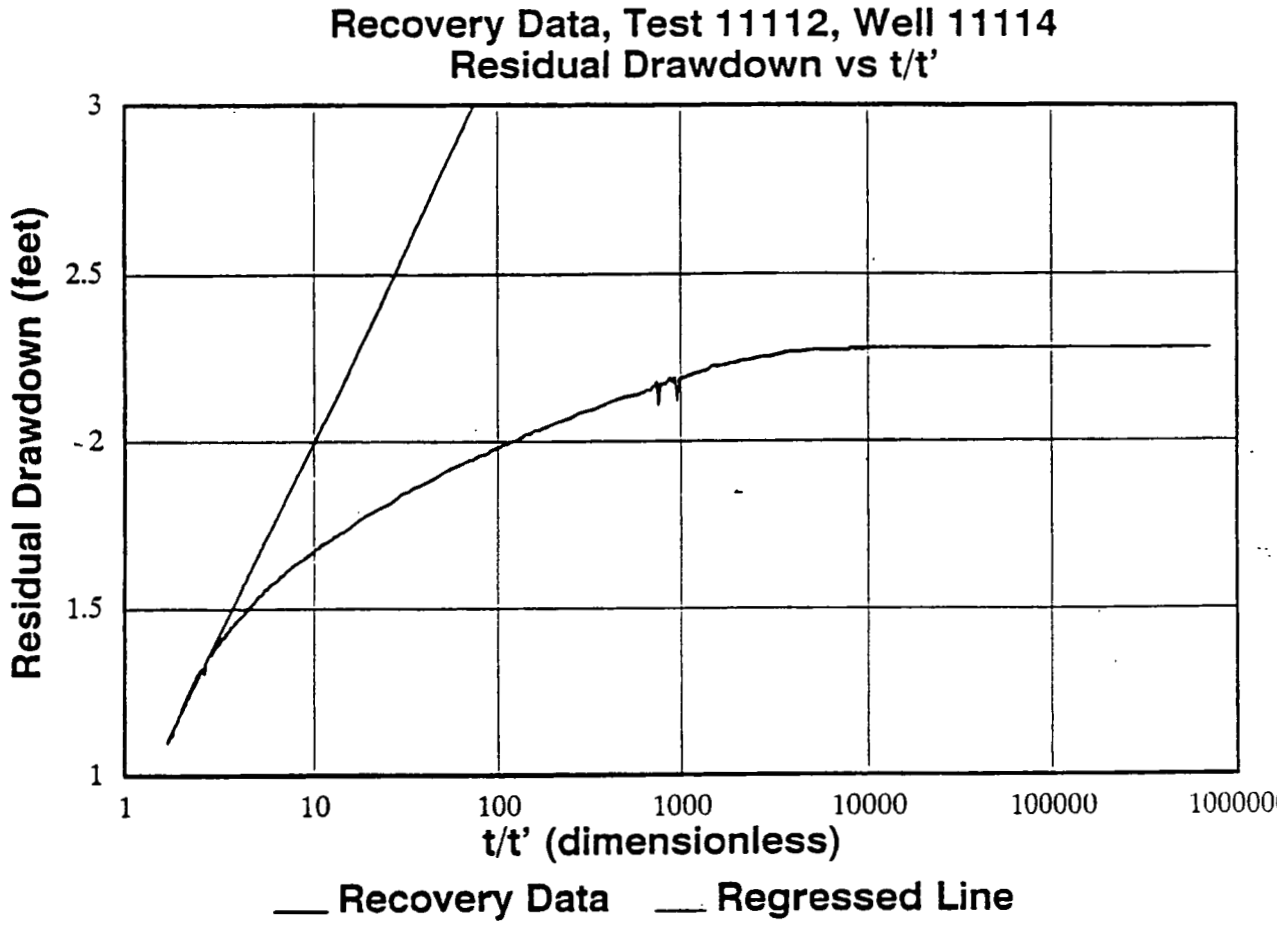

Recovery Data, Test 11112, Well 11114
Residual Drawdown vs t/t'
Residual Drawdown (feet)
3
2.5
2
1.5
1
1
10
100
1000
10000
100000
1000000
t/t' (dimensionless)
Recovery Data
Regressed Line

000804

Pump Test Number	11112
Well Number	11116

GT/VZ Investigation
Recovery Following Pump Test

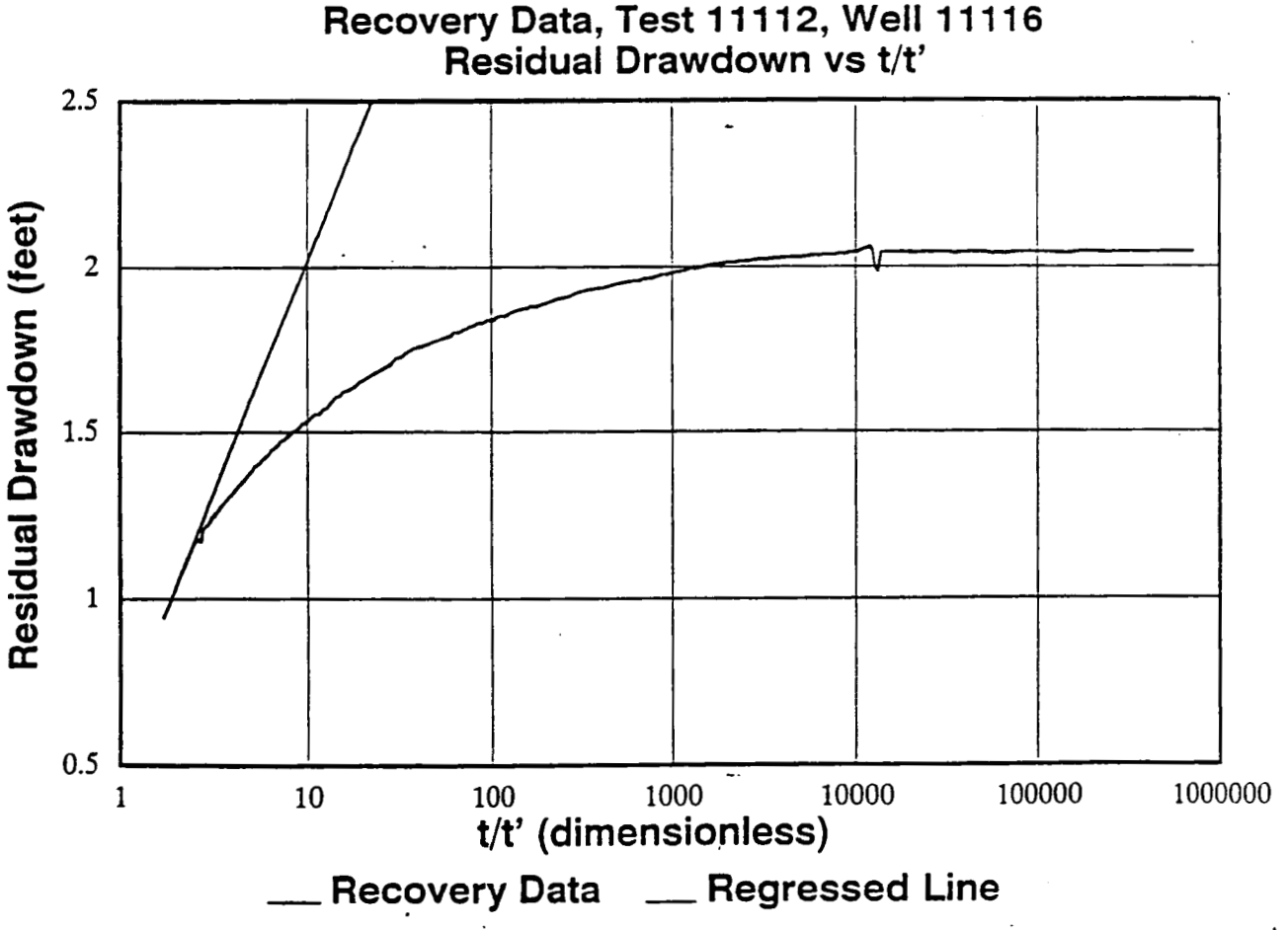
Distance to Well	19.97 ft	
Time Pumping Began	09/25/93	13:10
Time Pumping Stopped	09/29/93	15:15
Level @ pump Start	0 reference	
Pumping Rate	1.75 gpm	
Aquifer Thickness	8.1 feet	
Transmissivity	331.71 gpd/foot	
HorizontalConductivity	5.47 feet/day	
u = ((1.87*r*r*S)/(T*t)) =	0.1100	

Regression Output:	
Constant	0.627947015
Std Err of Y Est	0.002068279
R Squared	0.998591365
No. of Observations	277
Degrees of Freedom	275
X Coefficient(s)	1.392778972
Std Err of Coef.	0.003154432

Time since pump stop	Water Level	Residual Drawdown	Time since pump start	Ratio t/t'	Log t/t'	Regressed Residual Drawdown
0	-2.043	2.043	5885.0000			
0.0083	-2.043	2.043	5885.0083	709037.1446	5.8507	8.7766
0.0166	-2.043	2.043	5885.0166	354519.0723	5.5496	8.3574
0.025	-2.043	2.043	5885.0250	235401.0000	5.3718	8.1097
0.0333	-2.046	2.046	5885.0333	176727.7267	5.2473	7.9363
0.0416	-2.04	2.04	5885.0416	141467.3462	5.1507	7.8017
0.05	-2.043	2.043	5885.0500	117701.0000	5.0708	7.6904
0.0583	-2.043	2.043	5885.0583	100944.3962	5.0041	7.5975
0.0666	-2.043	2.043	5885.0666	88364.3634	4.9463	7.5170
0.075	-2.043	2.043	5885.0750	78467.6667	4.8947	7.4452
0.0833	-2.043	2.043	5885.0833	70649.2593	4.8491	7.3817
0.0916	-2.04	2.04	5885.0916	64247.7249	4.8079	7.3242
0.1	-2.043	2.043	5885.1000	58851.0000	4.7698	7.2712
0.1083	-2.04	2.04	5885.1083	54340.7969	4.7351	7.2229
0.1166	-2.043	2.043	5885.1166	50472.6981	4.7031	7.1783
0.125	-2.043	2.043	5885.1250	47081.0000	4.6728	7.1362
0.1333	-2.043	2.043	5885.1333	44149.5371	4.6449	7.0973
0.1416	-2.043	2.043	5885.1416	41561.7345	4.6187	7.0608
0.15	-2.043	2.043	5885.1500	39234.3333	4.5937	7.0259
0.1583	-2.043	2.043	5885.1583	37177.2476	4.5703	6.9933
0.1666	-2.043	2.043	5885.1666	35325.1297	4.5481	6.9624
0.175	-2.04	2.04	5885.1750	33629.5714	4.5267	6.9327
0.1833	-2.043	2.043	5885.1833	32106.8374	4.5066	6.9046
0.1916	-2.043	2.043	5885.1916	30716.0313	4.4874	6.8779
0.2	-2.043	2.043	5885.2000	29426.0000	4.4687	6.8519

000805

Dn 19/26


Recovery Data, Test 11112, Well 11116
Residual Drawdown vs t/t'
Residual Drawdown (feet)
2.5
2
1.5
1
0.5
1
10
100
1000
10000
100000
1000000
t/t' (dimensionless)
Recovery Data
Regressed Line

20/2

000806

Pump Test Number	11214
Well Number	11213

GT/VZ Investigation
Recovery Following Pump Test

Distance to Well	11.15 ft	
Time Pumping Began	09/21/93	13:44
Time Pumping Stopped	09/27/93	13:35
Level @ pump Start	0 reference	
Pumping Rate	2 gpm	
Aquifer Thickness	12.25 feet	
Transmissivity	50.35 gpd/ft	
HorizontalConductivity	0.55 feet/day	
u = ((1.87*r*r*S)/(T*t)) =	0.1541	

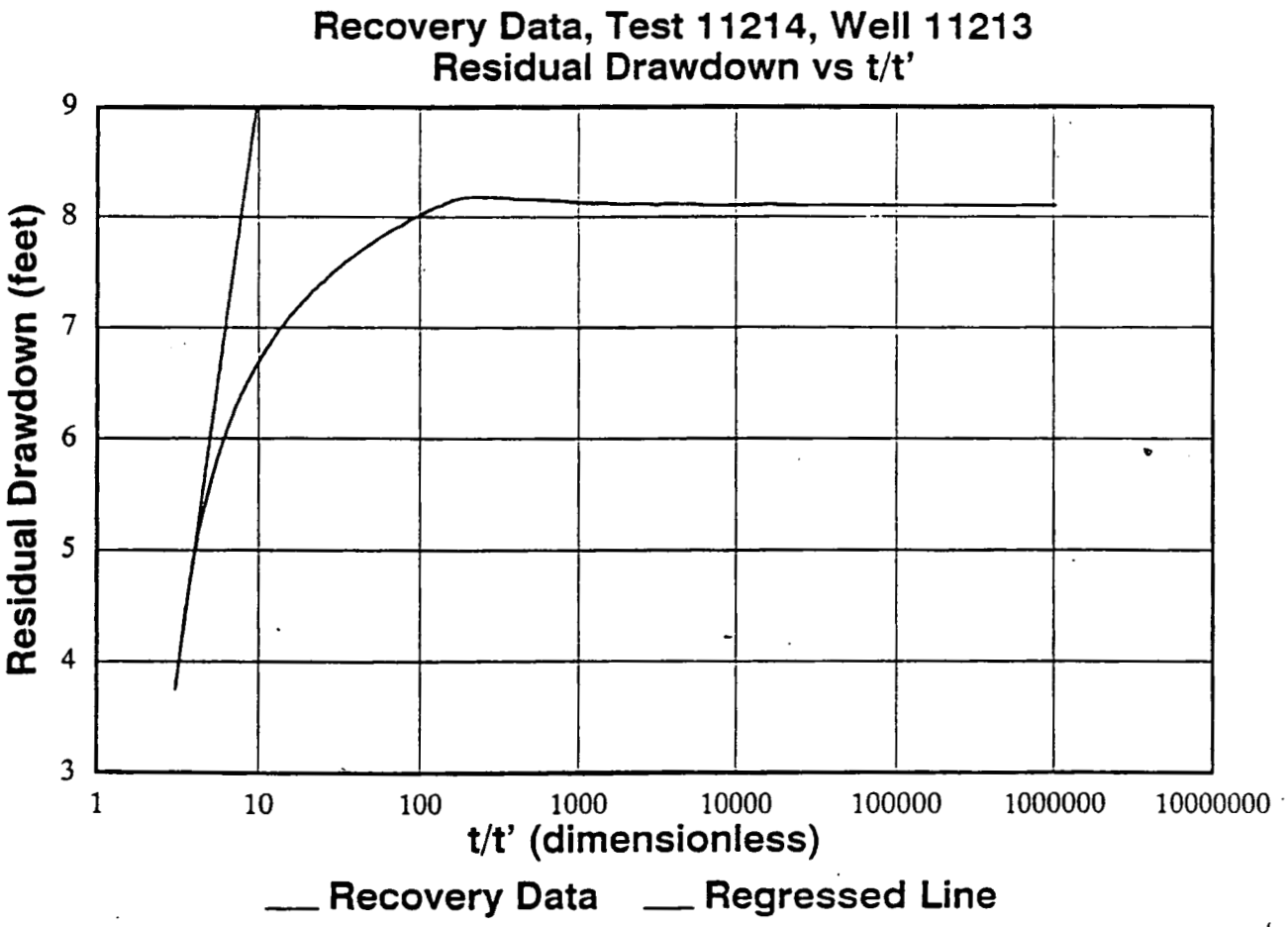
Regression Output:		
Constant		-1.30822727
Std Err of Y Est		0.024250294
R Squared		0.99601458
No. of Observations		93
Degrees of Freedom		91
X Coefficient(s)	10.48727191	
Std Err of Coef.	0.069541813	

Time since pump stop	Water Level	Residual Drawdown	Time since pump start	Ratio t/t'	Log t/t'	Regressed Residual Drawdown
0	-8.108	8.108	8631.0000			
0.0083	-8.108	8.108	8631.0083	1039880.5181	6.0170	61.7935
0.0166	-8.108	8.108	8631.0166	519940.7590	5.7160	58.6365
0.025	-8.108	8.108	8631.0250	345241.0000	5.5381	56.7716
0.0333	-8.108	8.108	8631.0333	259190.1892	5.4136	55.4659
0.0416	-8.108	8.108	8631.0416	207476.9615	5.3170	54.4523
0.05	-8.108	8.108	8631.0500	172621.0000	5.2371	53.6146
0.0583	-8.108	8.108	8631.0583	148045.5969	5.1704	52.9151
0.0666	-8.108	8.108	8631.0666	129595.5946	5.1126	52.3089
0.075	-8.108	8.108	8631.0750	115081.0000	5.0610	51.7679
0.0833	-8.108	8.108	8631.0833	103614.4454	5.0154	51.2898
0.0916	-8.108	8.108	8631.0916	94225.8908	4.9742	50.8572
0.1	-8.108	8.108	8631.1000	86311.0000	4.9361	50.4576
0.1083	-8.108	8.108	8631.1083	79696.2909	4.9014	50.0945
0.1166	-8.108	8.108	8631.1166	74023.2985	4.8694	49.7582
0.125	-8.108	8.108	8631.1250	69049.0000	4.8392	49.4413
0.1333	-8.108	8.108	8631.1333	64749.6872	4.8112	49.1485
0.1416	-8.108	8.108	8631.1416	60954.3898	4.7850	48.8734
0.15	-8.108	8.108	8631.1500	57541.0000	4.7600	48.6110
0.1583	-8.108	8.108	8631.1583	54524.0575	4.7366	48.3657
0.1666	-8.108	8.108	8631.1666	51807.7227	4.7144	48.1329
0.175	-8.108	8.108	8631.1750	49321.0000	4.6930	47.9089
0.1833	-8.108	8.108	8631.1833	47087.7430	4.6729	47.6978
0.1916	-8.108	8.108	8631.1916	45047.9729	4.6537	47.4961
0.2	-8.108	8.108	8631.2000	43156.0000	4.6350	47.3007

2333

000802

DN 2/26/94


Recovery Data, Test 11214, Well 11213
Residual Drawdown vs t/t'
Residual Drawdown (feet)
9
8
7
6
5
4
3
1
10
100
1000
10000
100000
1000000
10000000
t/t' (dimensionless)
Recovery Data
Regressed Line

22/26
17

Pump Test Number	11214
Well Number	11122

GT/VZ Investigation
Recovery Following Pump Test

Distance to Well	9.7 ft	
Time Pumping Began	09/21/93	13:44
Time Pumping Stopped	09/27/93	13:35
Level @ pump Start	0 reference	
Pumping Rate	2 gpm	
Aquifer Thickness	11.25 feet	
Transmissivity	46.04 gpd/ft	
HorizontalConductivity	0.55 feet/day	
u = ((1.87*r*r*S)/(T*t)) =	0.1275	

Regression Output:	
Constant	-1.86410793
Std Err of Y Est	0.012732505
R Squared	0.997873044
No. of Observations	66
Degrees of Freedom	64
X Coefficient(s)	11.46786786
Std Err of Coef.	0.066181146

Time since pump stop	Water Level	Residual Drawdown	Time since pump start	Ratio t/t'	Log t/t'	Regressed Residual Drawdown
0	-8.813	8.813	8631.0000			
0.0083	-8.813	8.813	8631.0083	1039880.5181	6.0170	67.1379
0.0166	-8.813	8.813	8631.0166	519940.7590	5.7160	63.6857
0.025	-8.813	8.813	8631.0250	345241.0000	5.5381	61.6463
0.0333	-8.813	8.813	8631.0333	259190.1892	5.4136	60.2186
0.0416	-8.813	8.813	8631.0416	207476.9615	5.3170	59.1102
0.05	-8.813	8.813	8631.0500	172621.0000	5.2371	58.1942
0.0583	-8.813	8.813	8631.0583	148045.5969	5.1704	57.4293
0.0666	-8.813	8.813	8631.0666	129595.5946	5.1126	56.7664
0.075	-8.813	8.813	8631.0750	115081.0000	5.0610	56.1748
0.0833	-8.813	8.813	8631.0833	103614.4454	5.0154	55.6521
0.0916	-8.813	8.813	8631.0916	94225.8908	4.9742	55.1790
0.1	-8.813	8.813	8631.1000	86311.0000	4.9361	54.7420
0.1083	-8.813	8.813	8631.1083	79696.2909	4.9014	54.3449
0.1166	-8.813	8.813	8631.1166	74023.2985	4.8694	53.9772
0.125	-8.81	8.81	8631.1250	69049.0000	4.8392	53.6307
0.1333	-8.81	8.81	8631.1333	64749.6872	4.8112	53.3105
0.1416	-8.813	8.813	8631.1416	60954.3898	4.7850	53.0097
0.15	-8.813	8.813	8631.1500	57541.0000	4.7600	52.7227
0.1583	-8.81	8.81	8631.1583	54524.0575	4.7366	52.4545
0.1666	-8.813	8.813	8631.1666	51807.7227	4.7144	52.1999
0.175	-8.81	8.81	8631.1750	49321.0000	4.6930	51.9550
0.1833	-8.81	8.81	8631.1833	47087.7430	4.6729	51.7242
0.1916	-8.81	8.81	8631.1916	45047.9729	4.6537	51.5036
0.2	-8.813	8.813	8631.2000	43156.0000	4.6350	51.2899

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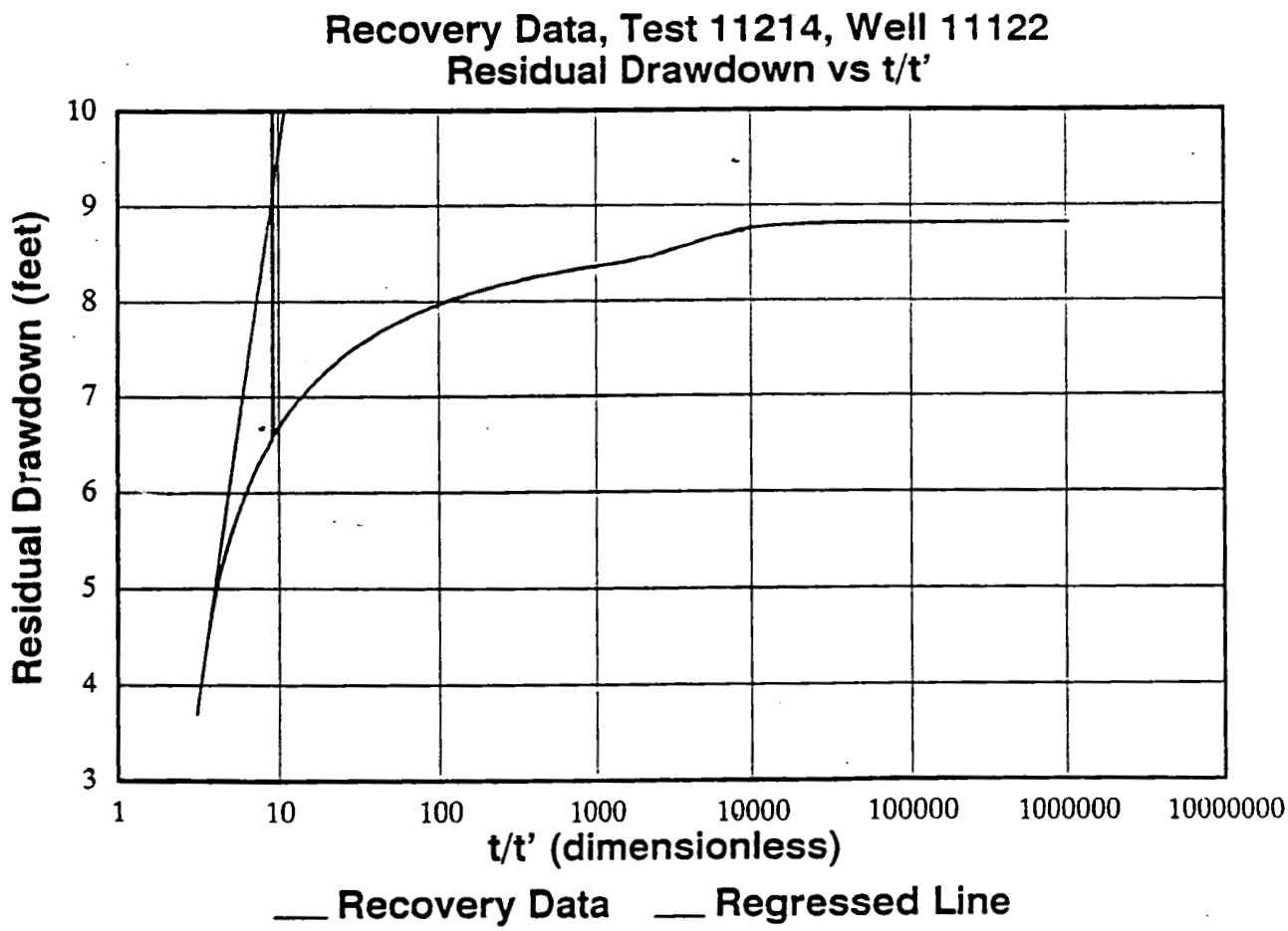
2333


Recovery Data, Test 11214, Well 11122
Residual Drawdown vs t/t'
Residual Drawdown (feet)
10
9
8
7
6
5
4
3
1
10
100
1000
10000
100000
1000000
10000000
t/t' (dimensionless)
Recovery Data
Regressed Line

24/26
K

PARSONS
ERA PROJECT

ENGINEERING CALCULATIONS TITLE AND SUMMARY SHEET

Date April 8, 1994
Sheet 1 of 7

Proj. Order No. 37 Calculation No. 16-10

Project Title Technical and Project Management Support to CERCLA/RCRA Unit 5, Task 331

Calculation Subject Barometric Efficiency Date Verified/Checked

STATUS: PRELIMINARY X FINAL ____ SUPERSEDED ____ VOID ____

STATEMENT OF PROBLEM

1) Determine the barometric efficiency for a representative well for each pump test conducted for the GT/VZ investigation.

SUMMARY OF CONCLUSIONS

1. Wells at two of the test locations exhibited very small barometric efficiencies of 5.2, 17.6 per cent. There was no relationship between barometric pressure and level at the third location. These low values lead to the conclusion that wells in the Glacial Till generally do not respond significantly to variations in barometric pressure.

Originator's Signature and Date: 4/8/94 Paul Frink

CHECKING METHOD

1. Review X
2. Alternate Calculation ____

Checker's Signature and Date: 5/19/94

Lead Discipline Engineer's Signature and Date: 5/20/94

Rev. No.	Sheet No.	Description	Reviser's Signature/Date	Checker's Signature/Date	Approved by Signature/Date

05/93 ENG080

PARSONS
ERA PROJECT

ENGINEERING CALCULATIONS BASIS SHEET

Revision No. 0
Sheet 2 of 7

Proj. Order No. 37 Calculation No. 16-10

Project Title Technical and Project Management Support to CERCLA/RCRA Unit 5, Task 331

Calculation Subject Barometric Efficiency Date Verified/Checked 5/19/94

Prepared By: Paul Frink Checked/Verified By:

Date April 8, 1994

SUMMARY OF DATA SOURCES - CODES - ASSUMPTIONS

1) FEMP Weather data, F:USER\FRD144\GLACIAL\GEN_CRT\WEATHER.WK3.

2) Well Level Data for BE calculation

Well 11209: Datalogger file = 1339.REC

Well 11122: Datalogger file = BACKGND.WL2

Well 11211: datalogger file = 1785BACK.WL2

3) Procedure: Brassington, R., Field Hydrology, Open University Press, pg 81-85

4) Lotus BE Calculational Files:

Well 11209: file = F:\USER\FRD144\GLACIAL\GEN_CRT\BE-11209B.WK3

Well 11122: file = F:\USER\FRD144\GLACIAL\GEN_CRT\BE-11122.WK3

Well 11211: file = F:\USER\FRD144\GLACIAL\GEN_CRT\BE-11211.WK3

5) For wells 11209 and 11122, water level effects from previous pumping, precipitation events, and background trend are negligible. For well 11211 a correction is required to remove the effects of recovery following the step test performed at this location.

6) Results: see attached sheets.

05/93
ENG098

Pump Test Number	11214
Well Number	11125

GT/VZ Investigation
Recovery Following Pump Test

Distance to Well	19.65 ft	
Time Pumping Began	09/21/93	13:44
Time Pumping Stopped	09/27/93	13:35
Level @ pump Start	0 reference	
Pumping Rate	2 gpm	
Aquifer Thickness	6.25 feet	
Transmissivity	115.90 gpd/ft	
HorizontalConductivity	2.48 feet/day	
u = ((1.87*r*r*S)/(T*t)) =	0.2079	

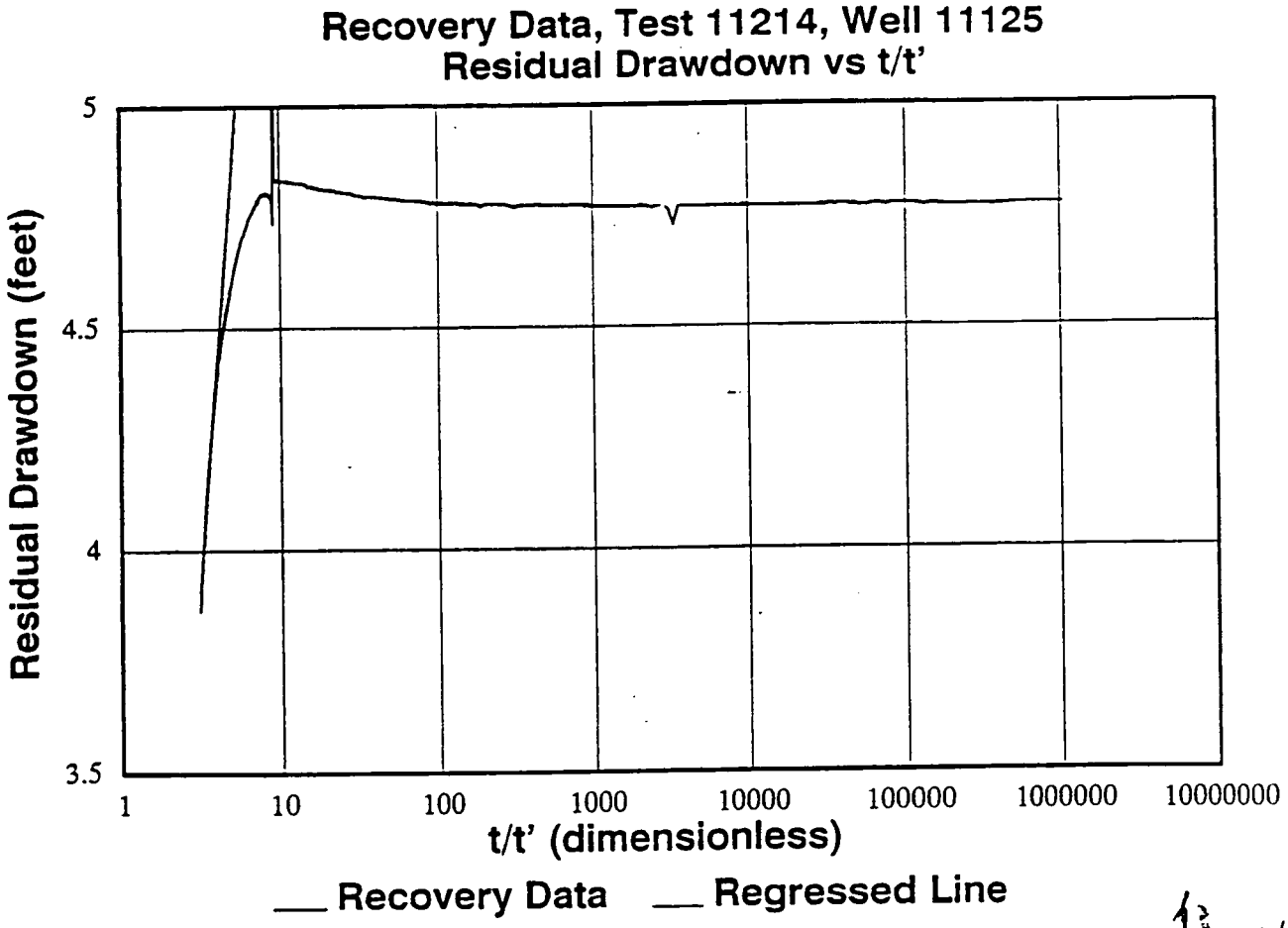
Regression Output:

Constant	1.689246128
Std Err of Y Est	0.016364941
R Squared	0.988696852
No. of Observations	87
Degrees of Freedom	85
X Coefficient(s)	4.555672702
Std Err of Coef.	0.05283372

Time since pump stop	Water Level	Residual Drawdown	Time since pump start	Ratio t/t'	Log t/t'	Regressed Residual Drawdown
0	-4.765	4.765	8631.0000			
0.0083	-4.772	4.772	8631.0083	1039880.5181	6.0170	29.1007
0.0166	-4.772	4.772	8631.0166	519940.7590	5.7160	27.7293
0.025	-4.769	4.769	8631.0250	345241.0000	5.5381	26.9191
0.0333	-4.769	4.769	8631.0333	259190.1892	5.4136	26.3519
0.0416	-4.769	4.769	8631.0416	207476.9615	5.3170	25.9116
0.05	-4.769	4.769	8631.0500	172621.0000	5.2371	25.5477
0.0583	-4.772	4.772	8631.0583	148045.5969	5.1704	25.2439
0.0666	-4.769	4.769	8631.0666	129595.5946	5.1126	24.9805
0.075	-4.772	4.772	8631.0750	115081.0000	5.0610	24.7455
0.0833	-4.772	4.772	8631.0833	103614.4454	5.0154	24.5379
0.0916	-4.772	4.772	8631.0916	94225.8908	4.9742	24.3499
0.1	-4.772	4.772	8631.1000	86311.0000	4.9361	24.1763
0.1083	-4.772	4.772	8631.1083	79696.2909	4.9014	24.0186
0.1166	-4.769	4.769	8631.1166	74023.2985	4.8694	23.8725
0.125	-4.772	4.772	8631.1250	69049.0000	4.8392	23.7349
0.1333	-4.772	4.772	8631.1333	64749.6872	4.8112	23.6077
0.1416	-4.772	4.772	8631.1416	60954.3898	4.7850	23.4882
0.15	-4.769	4.769	8631.1500	57541.0000	4.7600	23.3741
0.1583	-4.769	4.769	8631.1583	54524.0575	4.7366	23.2676
0.1666	-4.769	4.769	8631.1666	51807.7227	4.7144	23.1665
0.175	-4.769	4.769	8631.1750	49321.0000	4.6930	23.0692
0.1833	-4.772	4.772	8631.1833	47087.7430	4.6729	22.9775
0.1916	-4.769	4.769	8631.1916	45047.9729	4.6537	22.8899
0.2	-4.772	4.772	8631.2000	43156.0000	4.6350	22.8050

000813

RK 25/26 DAV


Recovery Data, Test 11214, Well 11125
Residual Drawdown vs t/t'
Residual Drawdown (feet)
5
4.5
4
3.5
1
10
100
1000
10000
100000
1000000
10000000
t/t' (dimensionless)
Recovery Data
Regressed Line

Approach:

1) A typical monitoring well is selected, based on available datalogger files, for a steady state period when pumping is not in progress for each constant rate pumping test performed for the Glacial Till/Vadose Zone Hydraulic Investigation. It is desired to select a monitoring well in communication with the test well which was monitored during the pumping test but which is one of the more remote monitored wells.

2) Barometric Efficiency is calculated for each typical well based on a time period when there is a change in barometric pressure.

3) For well 11211 the effects of recovery from a previous step test are still evident in the collected data. Water level is corrected for this effect by subtracting the recovery trend based on two times when barometric pressure was equal.

Results:

See attached sheets

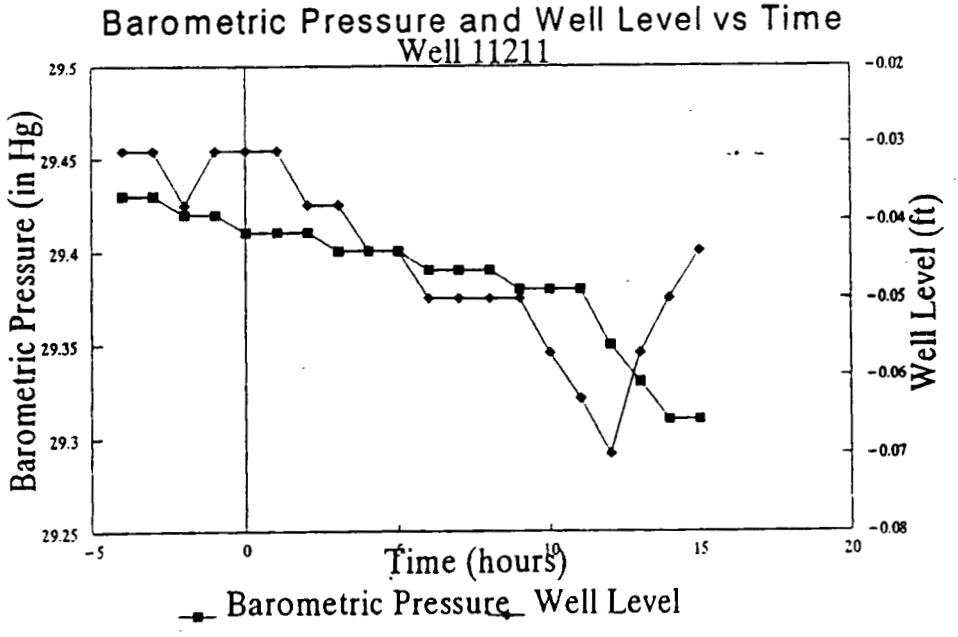
Conclusion:

In all cases the effect of varying barometric pressure on the observed change in water level (drawdown) is less then 20 percent. Typically an aquifer which responds to changes in barometric pressure will exhibit an efficiency between 20 and 75 percent (Todd 1959). These results support the conclusion of calculation package 16-5 which stated that a correction for the effect of varying barometric pressure was not required based on observed response at the test wells.

FEMP Weather Data
25–26 October, 1993

Month of September				HAND INSTR PRESS	Well 11211 Level
MO–YR	Date	Hour	PRECIP		
10–93	26	–4	0	29.43	–0.031
10–93	26	–3	0	29.43	–0.031
10–93	26	–2	0	29.42	–0.038
10–93	26	–1	0	29.42	–0.031
10–93	26	0	0	29.41	–0.031
10–93	26	1	0	29.41	–0.031
10–93	26	2	0	29.41	–0.038
10–93	26	3	0	29.40	–0.038
10–93	26	4	0	29.40	–0.044
10–93	26	5	0	29.40	–0.044
10–93	26	6	0	29.39	–0.05
10–93	26	7	0	29.39	–0.05
10–93	26	8	0	29.39	–0.05
10–93	26	9	0	29.38	–0.05
10–93	26	10	0	29.38	–0.057
10–93	26	11	0	29.38	–0.063
10–93	26	12	0	29.35	–0.07
10–93	26	13	0	29.33	–0.057
10–93	26	14	0	29.31	–0.05
10–93	26	15	0	29.31	–0.044

BE = –((–0.031+0.044)*12)/((29.43–29.31)*13.62)*100
BE = –9.54479



000816

000817

FEMP Weather Data
3 October, 1993

MO-YR	Date	Hour		PRECIP	HAND INSTR PRESS	Water Level 11209 (feet)	WL 11209 Corrected for recovery(feet)
10-93	3	0	34245	0	29.57	-1.367	-1.367
10-93	3	1	34245.0416667	0	29.58	-1.364	-1.3696772247
10-93	3	2	34245.0833333	0	29.58	-1.361	-1.3693544495
10-93	3	3	34245.125	0	29.60	-1.358	-1.3690316742
10-93	3	4	34245.1666667	0	29.61	-1.355	-1.3687088989
10-93	3	5	34245.2083333	0	29.62	-1.351	-1.3683861237
10-93	3	6	34245.25	0	29.63	-1.345	-1.3670633484
10-93	3	7	34245.2916667	0	29.64	-1.342	-1.3637405732
10-93	3	8	34245.3333333	0	29.64	-1.339	-1.3634177979
10-93	3	9	34245.375	0	29.64	-1.336	-1.3630950226
10-93	3	10	34245.4166667	0	29.64	-1.332	-1.3627722474
10-93	3	11	34245.4583333	0	29.63	-1.332	-1.3614494721
10-93	3	12	34245.5	0	29.63	-1.329	-1.3641266968
10-93	3	13	34245.5416667	0	29.58	-1.323	-1.3638039216
10-93	3	14	34245.5833333	0	29.54	-1.317	-1.3604811463
10-93	3	15	34245.625	0	29.52	-1.313	-1.357158371
10-93	3	16	34245.6666667	0	29.49	-1.313	-1.3558355958
10-93	3	17	34245.7083333	0	29.48	-1.307	-1.3585128205
10-93	3	18	34245.75	0	29.46	-1.304	-1.3551900452
10-93	3	19	34245.7916667	0	29.46	-1.301	-1.35486727
10-93	3	20	34245.8333333	0	29.46	-1.301	-1.3545444947
10-93	3	21	34245.875	0	29.46	-1.298	-1.3572217195
10-93	3	22	34245.9166667	0	29.45	-1.298	-1.3568989442
10-93	3	23	34245.9583333	0	29.45	-1.291	-1.3595761689
10-93	4	0	34246	0	29.45	-1.291	-1.3552533937
10-93	4	1	34246.0416667	0	29.43	-1.288	-1.3579306184
10-93	4	2	34246.0833333	0	29.41	-1.285	-1.3576078431
10-93	4	3	34246.125	0	29.40	-1.282	-1.3572850679
10-93	4	4	34246.1666667	0	29.38	-1.279	-1.3569622926
10-93	4	5	34246.2083333	0	29.36	-1.279	-1.3566395173
10-93	4	6	34246.25	0		-1.272	-1.3593167421
10-93	4	7	34246.2916667	0	29.37	-1.272	-1.3549939668
10-93	4	8	34246.3333333	0	29.37	-1.269	-1.3576711916
10-93	4	9	34246.375	0	29.37	-1.266	-1.3573484163
10-93	4	10	34246.4166667	0	29.36	-1.266	-1.357025641
10-93	4	11	34246.4583333	0	29.35	-1.26	-1.3597028658
10-93	4	12	34246.5	0	29.33	-1.26	-1.3563800905
10-93	4	13	34246.5416667	0	29.31	-1.258	-1.3590573152
10-93	4	14	34246.5833333	0	29.29	-1.25	-1.35773454
10-93	4	15	34246.625	0	29.27	-1.247	-1.3544117547
10-93	4	16	34246.6666667	0	29.27	-1.244	-1.3540889894
10-93	4	17	34246.7083333	0	29.28	-1.244	-1.3537662142
10-93	4	18	34246.75	0	29.29	-1.241	-1.3564434389
10-93	4	19	34246.7916667	0	29.33	-1.241	-1.3561206637
10-93	4	20	34246.8333333	0	29.34	-1.241	-1.3587978884
10-93	4	21	34246.875	0	29.35	-1.241	-1.3614751131
10-93	4	22	34246.9166667	0	29.39	-1.237	-1.3641523379
10-93	4	23	34246.9583333	0	29.44	-1.237	-1.3628295626
10-93	5	0	34247	0	29.46	-1.237	-1.3655067873
10-93	5	1	34247.0416667	0	29.46	-1.234	-1.3681840121
10-93	5	2	34247.0833333	0	29.52	-1.234	-1.3678612368
10-93	5	3	34247.125	0	29.53	-1.231	-1.3705384615
10-93	5	4	34247.1666667	0	29.55	-1.231	-1.3702156863
10-93	5	5	34247.2083333	0	29.58	-1.225	-1.372892911
10-93	5	6	34247.25	0	29.59	-1.225	-1.3695701357
10-93	5	7	34247.2916667	0	29.61	-1.225	-1.3722473605
10-93	5	8	34247.3333333	0	29.65	-1.225	-1.3749245852
10-93	5	9	34247.375	0	29.67	-1.222	-1.37760181
10-93	5	10	34247.4166667	0	29.69	-1.222	-1.3772790347
10-93	5	11	34247.4583333	0	29.70	-1.218	-1.3799562594
10-93	5	12	34247.5	0	29.69	-1.218	-1.3786334842
10-93	5	13	34247.5416667	0	29.68	-1.215	-1.3813107089
10-93	5	14	34247.5833333	0	29.67	-1.209	-1.3809879336

$\Delta P = 0$
$\Delta L = .142$
$\Delta t = 2.21$

$\Delta P = .43$
$\Delta L = .0255$

BE = -((-1.35441+1.37996)*12)/((29.27-29.70)*13.62)*100
BE = 5.23511935253 %

correction for recovery

$$\frac{\Delta L}{\Delta t} = \frac{.142}{2.21} = 0.0643 \text{ ft/day}$$

AB

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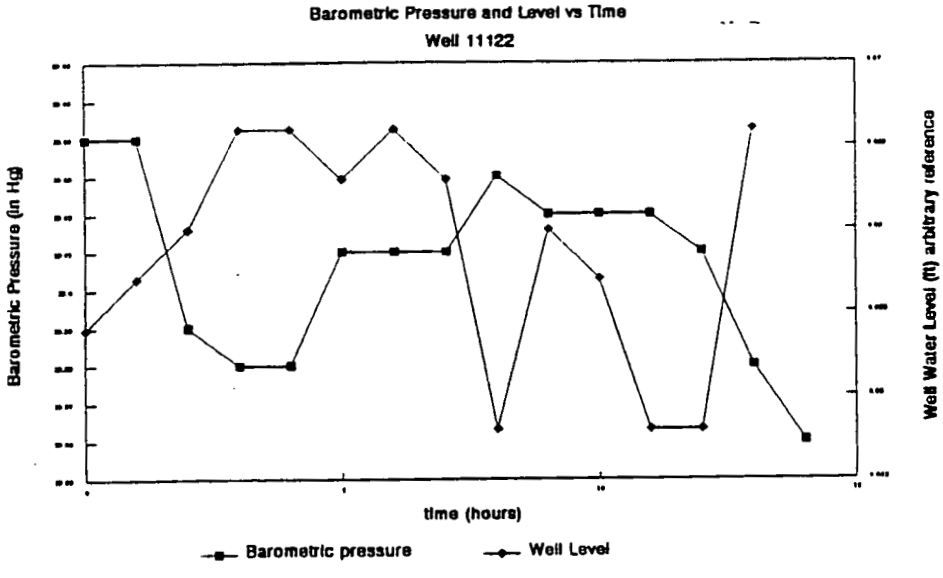
2338

FEMP Weather Data
20 September, 1993

MO-YR	Date	Hour	PRECIP (in)	HAND INSTR PRESS (in Hg)	Well 11122 level (ft)
	Month of September				
9-93	20	0	0	29.44	0.054
9-93	20	1	0	29.44	0.057
9-93	20	2	0	29.39	0.06
9-93	20	3	0	29.38	0.066
9-93	20	4	0	29.38	0.066
9-93	20	5	0	29.41	0.063
9-93	20	6	0	29.41	0.066
9-93	20	7	0	29.41	0.063
9-93	20	8	0.01	29.43	0.048
9-93	20	9	0	29.42	0.06
9-93	20	10	0	29.42	0.057
9-93	20	11	0	29.42	0.048
9-93	20	12	0	29.41	0.048
9-93	20	13	0	29.38	0.066
9-93	20	14	0	29.36	

BE = -(DELTA H)/(DELTA P/GAMMA)*100
BE = -(((0.054-0.066)*12)/((29.44-29.38)*13.62)*100)
BE = 17.62115 %



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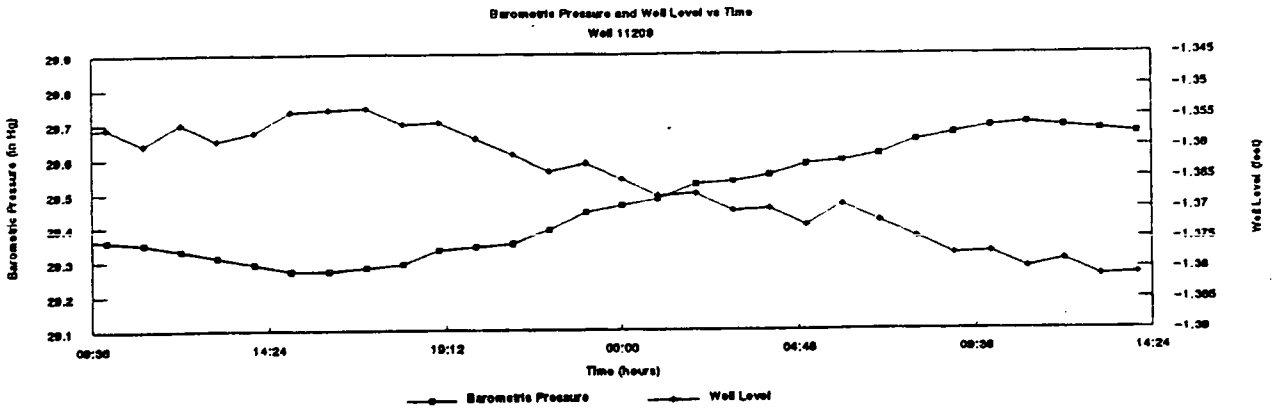
Barometric Pressure and Well Level vs Time
Well 11209
Barometric Pressure (in Hg)
29.9
29.8
29.7
29.6
29.5
29.4
29.3
29.2
29.1
Well Level (feet)
-1.345
-1.35
-1.355
-1.36
-1.365
-1.37
-1.375
-1.38
-1.385
-1.39
09:36
14:24
19:12
00:00
04:48
09:36
14:24
Time (hours)
Barometric Pressure
Well Level

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SECTION D7

METHODS OF ANALYSIS

D7.1 Theis Analysis (Confined)

Using an analogy to heat-flow theory, Theis (1935) developed an analytical solution to calculate drawdown, s, for any time and radial distance from a pumped well in unsteady flow in a confined aquifer.

$$s = \frac{Q}{4\pi T} W(u)$$

W(u) is called the Theis well function and represents the following integral:

$$W(u) = \int_u^\infty \left(\frac{e^{-u}}{u}\right) du$$

where

$$u = \frac{r^2 S}{4 T \tau}$$

Q = discharge rate (ft^3/min)
T = Transmissivity (ft^2/min)
S = Storativity (dimensionless)
τ = time since pumping began (min)
r = radial distance from pumped well (feet)
s = drawdown (feet)

By plotting the function W(u) versus 1/u on log-log paper, it is possible to produce a plot of dimensionless theoretical response known as a type curve. With a type curve, it is then possible to match the time-drawdown response in an observation well and perform parameter estimation for the values of horizontal hydraulic conductivity and storativity.

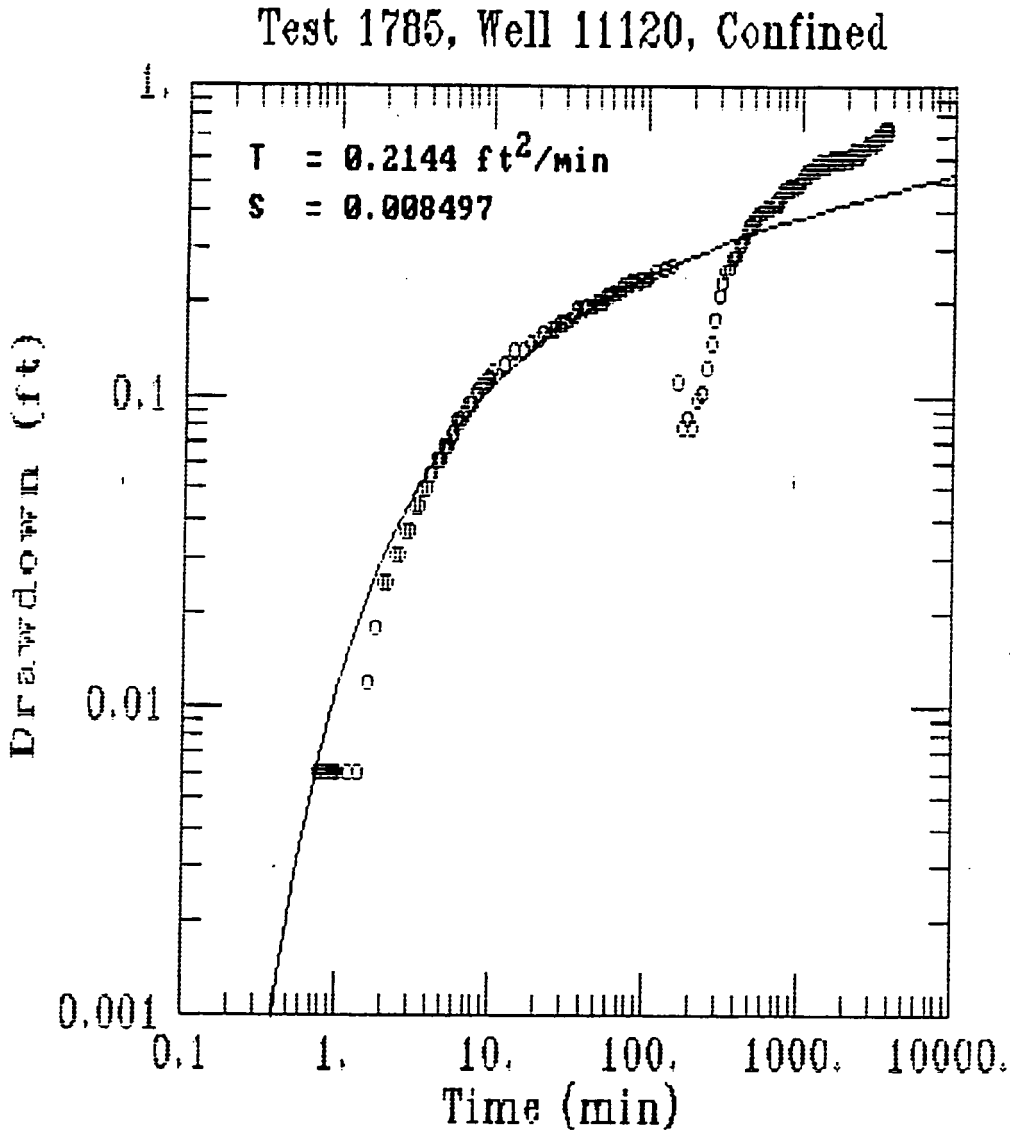


Figure D7-1 - Theis Type Curve

$$r/B = r\sqrt{\frac{K'}{K_1 b_1 b'}}$$

where:

r = distance to pumped well (ft)
K' = Aquitard conductivity (ft/day)
K_1 = Conductivity (ft/day)
b_1 = Saturated thickness (ft)
b' = Aquitard thickness (ft)

The solution can be written in an analogous manner to the Theis equation:

$$s = \frac{Q}{4\pi T} W(\mu, \frac{r}{B})$$

Where:

$$\mu = \frac{r^2 S}{4Tt} \text{ (dimensionless)}$$

$W(\mu, r/B)$ = The leaky well function
S = Storage coefficient
T = Transmissivity (ft^2/min)
Q = Pumping rate (ft^3/min)
t = Time since pumping began (min)

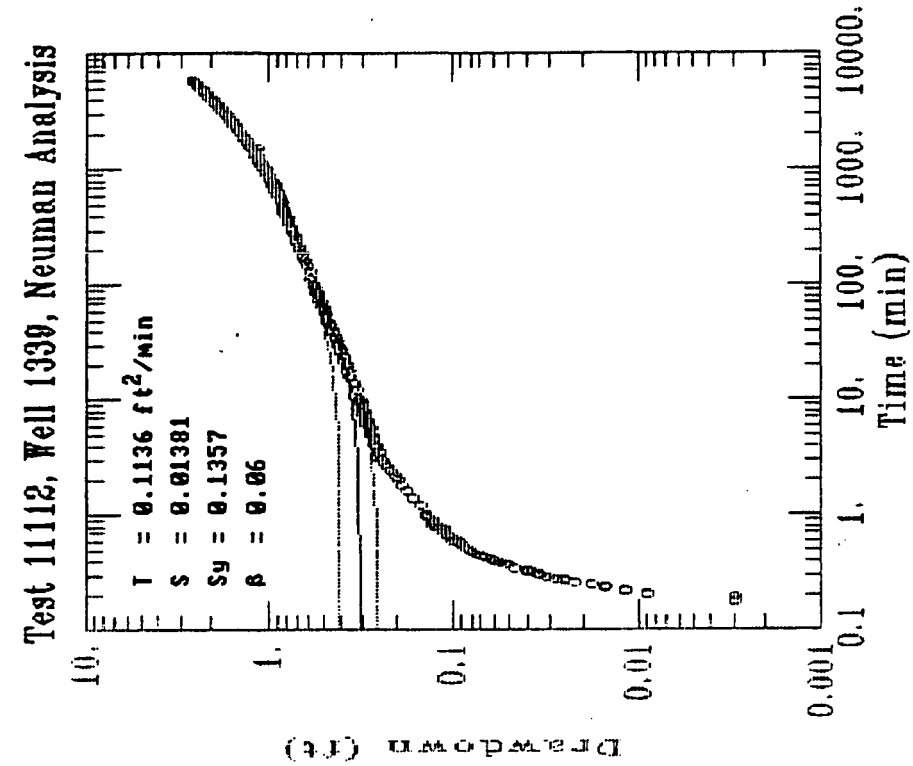
This solution was developed on the basis of three fairly restrictive assumptions:

1) The hydraulic head in the unpumped aquifer remains constant during the removal of water from the pumped aquifer.

2) The rate of leakage into the pumped aquifer is proportional to the hydraulic gradient across the leaky aquitard.

3) Storage in the confining layer is assumed to be negligible.

Due to its simplicity and despite the inherent dangers of using a simple model for a complex system, this model is widely used for the prediction of drawdowns in leaky-aquifer systems (Freeze and Cherry 1979).



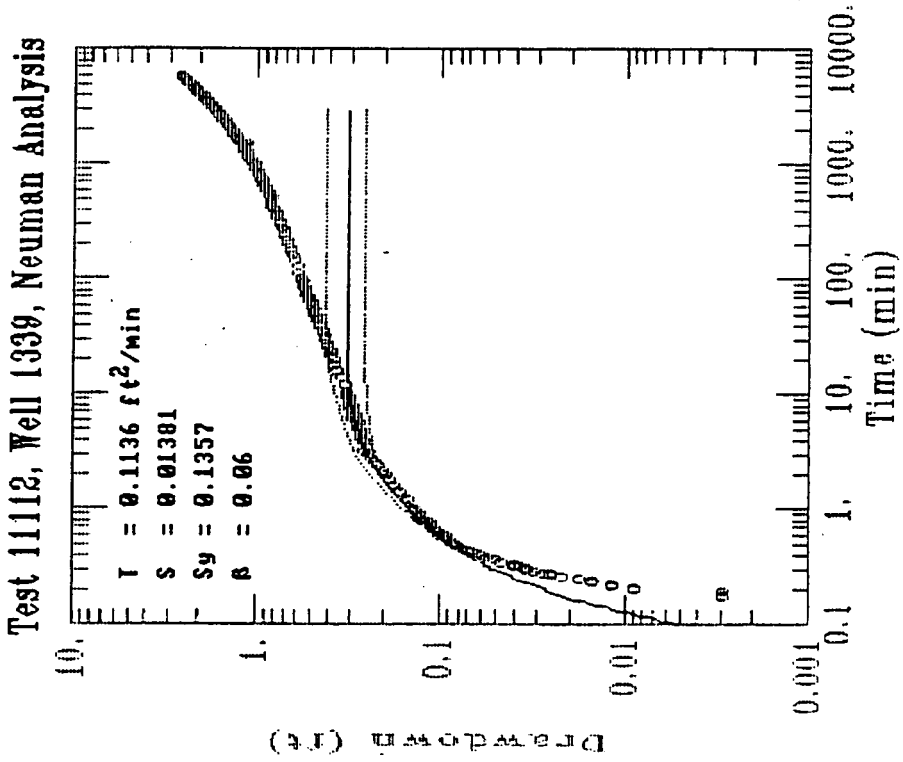


Figure D7-2 - Type A and B Curve Matching: Neuman

D7.4 Recovery Period (Theis)

At the conclusion of the constant rate pumping test, the final drawdown was recorded at the test well and observation wells. The pump was then shut down, and the recovery began.

During the recovery period, potentiometric head data (referred to as residual drawdown) was collected with transducer/data loggers and manual soundings. The residual drawdown data was used to calculate a value for hydraulic conductivity using the following equation derived by Theis in 1935 (Kruseman and de Ridder 1990; and Driscoll 1986).

When the pump is shut down following a pumping test, the water levels in the test and observation wells will start to rise. Residual drawdown is expressed as the difference between the original water before the start of pumping, and the water level measured at a time (t') after pumping stopped.

Recovery-test measurements allow the transmissivity (and therefore, hydraulic conductivity) to be calculated, thereby providing an independent check on the results of the pumping test. When pumping an infinite saturated unit of constant thickness, residual drawdown data is usually more reliable than pumping test data because recovery occurs at a constant rate, whereas constant discharge during pumping is often difficult to achieve in the field (Kruseman and de Ridder 1990). The recovery analysis is less accurate for these pumping tests, however, due to the variability of sand and clay units in the glacial till.

$$s' = \frac{(264)Q}{T}\,[W_{(u)} - W_{(u')}]$$

s' = residual drawdown (feet)
$\Delta s'$ = change in residual drawdown (feet per log cycle of t/t')
Q = rate of recharge = rate of discharge (gpm)
T = transmissivity (gpd/ft)
$W(u)$ = Theis well function of drawdown (dimensionless)
$W(u')$ = Theis well function of residual drawdown (dimensionless)

Using the Theis recovery method, a graphical relationship exists such that:

$$\Delta s' = \frac{264 * Q}{T} \quad or \quad T = \frac{264 * Q}{\Delta s'}$$

$$T = \frac{264 * 0.167}{0.32} = 150.45\ ft^2/day\ (for\ Well\ 11120)$$

D7.3 Neuman Curve Fitting Method (Unconfined)

For drawdown in an unconfined anisotropic aquifer pumped by a partially penetrating well, Neuman (1974) developed a curve-fitting method based on the following equation:

$$s = \frac{Q}{4\pi K_h D} W\left(u_a, u_b, B, S_A/S_y, \frac{b}{D}, \frac{d}{D}, \frac{z}{D}\right)$$

$$u_a = \frac{r^2 S_A}{4K_h Dt}, \quad u_b = \frac{r^2 S_y}{4K_h Dt}$$

where:

- s = drawdown (ft)
- Q = discharge (ft^3/day)
- t = time (day)
- K_h = horizontal hydraulic conductivity (ft/day)
- $W(u_a \ldots)$ = Well function based on six independent dimensionless parameters
- S_y = specific yield (dimensionless)
- S_A = storativity (dimensionless)
- b = distance, water table to bottom pumping well screen (ft)
- d = distance, water table to top of pumping well screen (ft)
- D = original saturated thickness (ft)
- Z = distance from bottom of monitor well to bottom of aquifer (ft)
- T = transmissivity (ft^2/min)
- K_v = vertical hydraulic conductivity (ft/day)
- r = distance to the test well (ft)
- B = curve parameter (dimensionless)

The well function (W) shown above is a function of six dimensionless parameters. Drawdown data is analyzed in two parts: early data and late data. Type A curves are used to analyze the early data where the effects of elastic storage are dominant and Type B curves are used to analyze the late data when storage from gravity drainage becomes important (Dawson and Istok 1991).

Neuman analysis allows the generation of individual type curves for each observation well based on well depth, penetration, and distance from the pumped well. Neuman curve fitting was performed using the AQTESOLV (Aquifer Test Solver) software package, Version 1.11 by Geraghty & Miller, Inc. AQTESOLV allows interactive visual curve matching as well as automatic hydraulic parameter estimation. AQTESOLV computes specific type curves for each particular data set and thus increases

the accuracy of the graphical hydraulic parameter estimation by eliminating the need for interpolation between widely spaced type curves.

Parameter estimation was performed using data logger drawdown information. Parameters were estimated by selecting and positioning type curves interactively during the analysis to achieve the best visual fit. All data was weighted equally when fitting type curves to the observed data except for two time periods: early time data within the first minute of each pump test was discounted due to the effects of well storage and late data after the emergence of boundary effects was also given less importance.

An assumption of the Neuman method (and most other methods of analysis) is that the water-bearing unit is of constant (uniform) thickness. This assumption is not rigorously met as the thickness of the sand unit varies from one observation well location to the next. Additionally, in the case of pumping test 11214, the pumped well only partially penetrates the water-bearing unit and it is desirable to correct for this partial penetration in the Neuman analysis. This correction is performed by assuming a constant thickness equal to the original saturated thickness at the observation well being analyzed. An effective screen length for the pumping well is then calculated based on the assumed saturated thickness and the actual percent penetration of the pumped well.

Parameter estimates are calculated by AQTESOLV and printed on the final matched curves for each parameter. The only manual calculations are conversion of transmissivity to horizontal conductivity and the ratio of vertical to horizontal conductivity (K_v/K_h), which are shown in Figure D7-2 for Well 11213 below:

$$K_h = \frac{T * 1440}{D}$$

$$K_h = \frac{(0.03143)(1440)}{12.25} = 3.69 \; feet/day$$

$$\frac{K_v}{K_h} = B\left[\frac{D}{r}\right]^2$$

$$\frac{K_v}{K_h} = 0.03\left[\frac{12.25}{11.15}\right]^2 = .0362$$

Figure D6-2 shows the Type A and Type B curve matching screens used for the visual estimation. The fitted curves for all the observation wells are located in Appendix J along with the AQTESOLV input files.

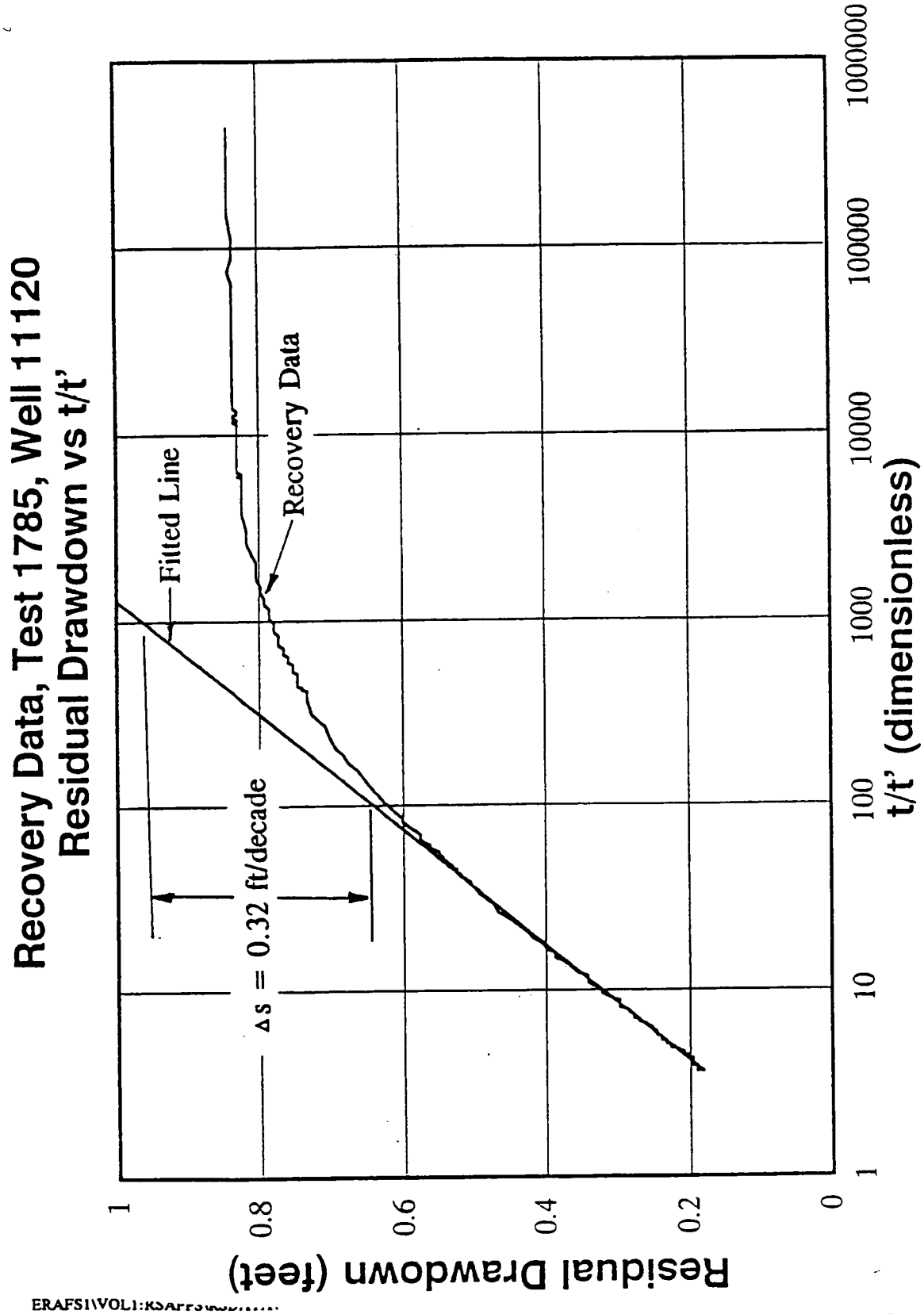
Figure D7-3 is a semi-logarithmic plot of residual drawdown versus the ratio of t/t' for Well 11120 and is presented as an example for determining T from recovery data. The plot yields a straight line through the late-time recovery data. The slope of the straight line is $\Delta s'$ which is the change in drawdown over one log cycle.

Once T is determined, K can be calculated from the equation:

$$K_h = T/D$$

$$K_h = \frac{150.45}{17} = 8.85 \ ft/day \ (for \ Well \ 11120)$$

The calculations for T and K from the recovery data using the Theis recovery method are shown and discussed in Subsection 3.4.


Recovery Data, Test 1785, Well 11120
Residual Drawdown vs t/t'
Filted Line
Recovery Data
Δs = 0.32 ft/decade
Residual Drawdown (feet)
t/t' (dimensionless)
1
0.8
0.6
0.4
0.2
0
1
10
100
1000
10000
100000
1000000

000828

FEMP Weather Data
20 September through 9 November, 1993

Month of September					HAND INSTR	TOWER
MO-YR	Date	Hour	TEMP(10M)	PRECIP	PRESS	PRESS
9-93	20	0	15.43	0		29.02
9-93	20	1	14.14	0		29.02
9-93	20	2	14.48	0		28.97
9-93	20	3	14.27	0		28.96
9-93	20	4	13.83	0		28.96
9-93	20	5	14.07	0		28.99
9-93	20	6	14.13	0	29.41	
9-93	20	7	14.3	0	29.41	
9-93	20	8	13.97	0.01	29.43	
9-93	20	9	14.07	0	29.42	
9-93	20	10	15.74	0	29.42	
9-93	20	11	18.02	0	29.42	
9-93	20	12	20.62	0	29.41	
9-93	20	13	22.6	0	29.38	
9-93	20	14	22.67	0	29.36	
9-93	20	15	21.86	0	29.34	
9-93	20	16	18.59	0.01	29.35	
9-93	20	17	19.08	0	29.34	
9-93	20	18	18.59	0	29.35	
9-93	20	19	18.05	0.01	29.35	
9-93	20	20	17.66	0	29.36	
9-93	20	21	17.04	0	29.36	
9-93	20	22	16.28	0	29.37	
9-93	20	23	15.89	0	29.38	
9-93	21	0	15.48	0	29.38	
9-93	21	1	16.35	0	29.38	
9-93	21	2	16.26	0	29.38	
9-93	21	3	16.42	0	29.38	
9-93	21	4	16.51	0	29.38	
9-93	21	5	16.15	0	29.39	
9-93	21	6	15.81	0	29.40	
9-93	21	7	15.7	0	29.42	
9-93	21	8	18.5	0	29.43	
9-93	21	9	20	0	29.45	
9-93	21	10	20.5	0	29.46	
9-93	21	11	21	0	29.46	
9-93	21	12	21	0	29.47	
9-93	21	13	20.5	0	29.47	
9-93	21	14	20.43	0	29.47	29.52
9-93	21	15	20.28	0	29.47	29.52
9-93	21	16	19.73	0	29.47	29.51
9-93	21	17	18.99	0	29.48	29.53
9-93	21	18	18.25	0	29.50	29.53
9-93	21	19	17.55	0	29.51	29.54
9-93	21	20	15.59	0	29.52	29.54
9-93	21	21	14.86	0	29.53	29.56
9-93	21	22	14.03	0	29.54	29.56
9-93	21	23	12.71	0	29.53	29.55
9-93	22	0	12.62	0	29.55	29.56
9-93	22	1	11.77	0	29.55	29.56
9-93	22	2	10.24	0	29.55	29.57
9-93	22	3	10.54	0	29.57	29.58
9-93	22	4	10.5	0	29.57	29.59
9-93	22	5	10.09	0	29.57	29.59
9-93	22	6	9.87	0	29.57	29.59
9-93	22	7	10.35	0	29.57	29.6
9-93	22	8	11.84	0	29.56	29.59
9-93	22	9	14.47	0	29.55	29.61
9-93	22	10	17.9	0	29.59	29.64
9-93	22	11	21.01	0	29.58	29.63
9-93	22	12	21.87	0	29.57	29.61
9-93	22	13	21.8	0	29.55	29.58
9-93	22	14	21.92	0	29.51	29.57

9-93	22	15	21.41	0	29.50	29.54
9-93	22	16	20.66	0	29.52	29.54
9-93	22	17	20.61	0	29.48	29.5
9-93	22	18	19.96	0	29.45	29.48
9-93	22	19	18.94	0		29.47
9-93	22	20	18.8	0	29.44	29.48
9-93	22	21	18.68	0	29.46	29.49
9-93	22	22	18.79	0	29.45	29.48
9-93	22	23	18.94	0	29.45	29.48
9-93	23	0	18.15	0	29.45	29.46
9-93	23	1	17.83	0	29.42	29.46
9-93	23	2	17.69	0	29.44	29.45
9-93	23	3	17.97	0	29.39	29.43
9-93	23	4	17.75	0	29.40	29.43
9-93	23	5	17.31	0	29.39	29.43
9-93	23	6	17.18	0	29.38	29.43
9-93	23	7	17.63	0	29.39	29.44
9-93	23	8	18.63	0	29.41	29.45
9-93	23	9	19.14	0	29.41	29.45
9-93	23	10	19.02	0.06	29.41	29.47
9-93	23	11	19.1	0	29.44	29.48
9-93	23	12	19.54	0	29.45	29.49
9-93	23	13	19.89	0	29.44	29.48
9-93	23	14	20.02	0.01	29.42	29.46
9-93	23	15	20.47	0	29.41	29.45
9-93	23	16	20.62	0	29.40	29.45
9-93	23	17	20.36	0	29.41	29.48
9-93	23	18	19.86	0	29.45	29.5
9-93	23	19	18.75	0	29.47	29.51
9-93	23	20	17.84	0	29.50	29.53
9-93	23	21	16.71	0	29.51	29.54
9-93	23	22	15.3	0	29.52	29.54
9-93	23	23	14.43	0	29.53	29.55
9-93	24	0	13.57	0	29.54	29.56
9-93	24	1	12.4	0	29.54	29.55
9-93	24	2	11.46	0	29.54	29.55
9-93	24	3	10.35	0	29.54	29.55
9-93	24	4	9.18	0	29.55	29.56
9-93	24	5	8.68	0	29.56	29.57
9-93	24	6	8.42	0	29.57	29.59
9-93	24	7	9.38	0	29.58	24.71
9-93	24	8	10.52	0.55	29.58	29.52
9-93	24	9	14.18	0	29.58	29.63
9-93	24	10	16.62	0	29.57	29.62
9-93	24	11	17.75	0	29.56	29.61
9-93	24	12	18.21	0	29.55	29.61
9-93	24	13	18.59	0	29.54	29.59
9-93	24	14	19.14	0	29.52	29.56
9-93	24	15	19.13	0	29.51	29.54
9-93	24	16	18.93	0	29.49	29.53
9-93	24	17	18.51	0	29.47	29.51
9-93	24	18	17.24	0	29.46	29.48
9-93	24	19	16.17	0	29.44	29.47
9-93	24	20	15.95	0	29.45	29.48
9-93	24	21	15.77	0	29.45	29.47
9-93	24	22	15.44	0.01	29.46	29.47
9-93	24	23	14.88	0	29.45	29.47
9-93	25	0	14.7	0.01	29.43	29.44
9-93	25	1	14.52	0	29.41	29.43
9-93	25	2	14.82	0	29.39	29.41
9-93	25	3	15.03	0	29.38	29.39
9-93	25	4	15.17	0	29.35	29.37
9-93	25	5	15.22	0	29.34	29.37
9-93	25	6	14.88	0	29.32	29.35
9-93	25	7	14.94	0	29.32	29.35
9-93	25	8	15.38	0	29.32	29.35
9-93	25	9	15.82	0	29.30	29.33
9-93	25	10	15.52	0.04	29.29	29.31

023000

9-93	25	11	15.56	0.04	29.26	29.27
9-93	25	12	15.99	0.14	29.23	29.25
9-93	25	13	16.62	0.09	29.20	29.21
9-93	25	14	17.52	0.03	29.16	29.16
9-93	25	15	18.98	0.03	29.11	29.12
9-93	25	16	19.94	0.03	29.08	29.09
9-93	25	17	20.54	0	29.05	29.06
9-93	25	18	21.16	0	29.02	29.03
9-93	25	19	21.09	0.04	29.01	29.02
9-93	25	20	20.49	0.37	29.04	29.06
9-93	25	21	20.39	0	29.06	29.07
9-93	25	22	20.39	0	29.07	29.07
9-93	25	23	20.52	0	29.05	29.07
9-93	26	0	20.46	0	29.05	29.07
9-93	26	1	19.85	0	29.05	29.07
9-93	26	2	18.93	0	29.07	29.07
9-93	26	3	18.59	0	29.07	29.08
9-93	26	4	17.83	0	29.08	29.1
9-93	26	5	17	0	29.12	29.13
9-93	26	6	16.67	0	29.15	29.16
9-93	26	7	16.24	0	29.17	29.2
9-93	26	8	15.74	0	29.20	29.22
9-93	26	9	15.28	0	29.23	29.25
9-93	26	10	15.39	0	29.25	29.27
9-93	26	11	15.3	0	29.27	29.28
9-93	26	12	15.93	0	29.28	29.3
9-93	26	13	16.66	0	29.28	29.31
9-93	26	14	16.7	0	29.28	29.31
9-93	26	15	16.49	0	29.28	29.3
9-93	26	16	16.25	0	29.29	29.32
9-93	26	17	16.06	0	29.30	29.31
9-93	26	18	15.35	0	29.30	29.32
9-93	26	19	14.58	0	29.31	29.32
9-93	26	20	13.97	0	29.31	29.33
9-93	26	21	13.22	0	29.33	29.33
9-93	26	22	12.41	0	29.31	29.31
9-93	26	23	11.97	0	29.29	29.29
9-93	27	0	11.64	0	29.25	29.27
9-93	27	1	11.48	0	29.23	29.26
9-93	27	2	11.89	0	29.23	29.23
9-93	27	3	12.12	0	29.21	29.22
9-93	27	4	12.69	0	29.20	29.2
9-93	27	5	12.89	0	29.19	29.19
9-93	27	6	12.39	0	29.18	29.19
9-93	27	7	12.44	0	29.19	29.21
9-93	27	8	11.78	0	29.21	29.24
9-93	27	9	11.96	0	29.24	29.27
9-93	27	10	12.35	0	29.25	29.28
9-93	27	11	12.45	0	29.26	29.29
9-93	27	12	12.03	0	29.28	29.31
9-93	27	13	13.03	0	29.29	29.32
9-93	27	14	12.03	0	29.29	29.32
9-93	27	15	11.4	0	29.33	29.35
9-93	27	16	11.92	0	29.34	29.36
9-93	27	17	11.86	0	29.34	29.37
9-93	27	18	11.31	0	29.37	29.39
9-93	27	19	10.97	0	29.38	29.4
9-93	27	20	10.7	0	29.41	29.43
9-93	27	21	10.13	0	29.42	29.44
9-93	27	22	8.65	0	29.42	29.43
9-93	27	23	7.77	0	29.42	29.43
9-93	28	0	7.26	0	29.41	29.42
9-93	28	1	8.11	0	29.40	29.41
9-93	28	2	8.13	0	29.39	29.41
9-93	28	3	7.29	0	29.38	29.39
9-93	28	4	7.15	0	29.37	29.37
9-93	28	5	7.36	0	29.36	29.36
9-93	28	6	7.58	0	29.36	29.37

9-93	28	7	9.15	0	29.33	29.35
9-93	28	8	10.53	0	29.33	29.35
9-93	28	9	11.6	0	29.34	29.37
9-93	28	10	14.34	0	29.35	29.39
9-93	28	11	16.35	0		29.41
9-93	28	12	17.58	0	29.36	29.42
9-93	28	13	18.22	0	29.37	29.43
9-93	28	14	18.66	0	29.38	29.44
9-93	28	15	18.79	0	29.39	29.46
9-93	28	16	18.28	0	29.41	29.46
9-93	28	17	17.95	0	29.41	29.44
9-93	28	18	15.44	0	29.42	29.44
9-93	28	19	14.22	0	29.43	29.46
9-93	28	20	13.31	0	29.46	29.5
9-93	28	21	12.24	0	29.52	29.53
9-93	28	22	9.34	0	29.53	29.53
9-93	28	23	7.4	0	29.53	29.54
9-93	29	0	6.2	0	29.55	29.54
9-93	29	1	5.64	0	29.55	29.55
9-93	29	2	4.82	0	29.56	29.56
9-93	29	3	4.78	0	29.57	29.57
9-93	29	4	4.46	0	29.57	29.57
9-93	29	5	4.22	0	29.58	29.58
9-93	29	6	3.16	0	29.59	26.51
9-93	29	7	3.59	0	29.60	17.28
9-93	29	8	6.31	0	29.62	29.63
9-93	29	9	9.81	0	29.62	29.67
9-93	29	10	12.3	0	29.62	29.66
9-93	29	11	13.05	0	29.62	29.66
9-93	29	12	13.15	0	29.61	29.65
9-93	29	13	13.41	0	29.61	29.64
9-93	29	14	12.72	0	29.60	29.63
9-93	29	15	13.33	0	29.58	29.63
9-93	29	16	12.97	0	29.59	29.62
9-93	29	17	12.15	0	29.59	29.62
9-93	29	18	11.06	0	29.60	29.55
9-93	29	19	9.94	0	29.62	29.63
9-93	29	20	8.74	0	29.63	29.64
9-93	29	21	7.05	0	29.64	29.65
9-93	29	22	6.27	0	29.66	29.67
9-93	29	23	5.03	0	29.68	29.67
9-93	30	0	3.35	0	29.69	29.67
9-93	30	1	2.61	0	29.69	29.67
9-93	30	2	2.06	0	29.70	29.68
9-93	30	3	1.07	0	29.70	29.68
9-93	30	4	0.37	0	29.70	29.69
9-93	30	5	-0.02	0	29.72	29.71
9-93	30	6	-0.52	0	29.73	29.72
9-93	30	7	0.23	0	29.74	29.73
9-93	30	8	2.75	0	29.75	29.75
9-93	30	9	5.71	0	29.75	29.78
9-93	30	10	8.67	0	29.76	29.8
9-93	30	11	10.34	0	29.76	29.79
9-93	30	12	11.52	0	29.74	29.78
9-93	30	13	12.3	0	29.72	29.75
9-93	30	14	13.24	0	29.68	29.72
9-93	30	15	13.69	0	29.67	29.69
9-93	30	16	13.9	0		22.82
9-93	30	17	13.21	0	29.60	20.3
9-93	30	18	11.2	0	29.57	29.58
9-93	30	19	8.14	0	29.56	29.56
9-93	30	20	8.29	0	29.54	29.55
9-93	30	21	8.51	0	29.52	29.53
9-93	30	22	8.65	0	29.52	29.53
9-93	30	23	8.61	0	29.51	29.52

Month of October	HAND INSTR	TOWER

MO-YR	Date	Hour	TEMP(10M)	PRECIP	PRESS	PRESS
10-93	1	0	8.36	0	29.51	29.5
10-93	1	1	8.35	0	29.50	29.5
10-93	1	2	8.02	0	29.50	29.49
10-93	1	3	7.97	0	29.48	29.48
10-93	1	4	8.13	0	29.46	29.46
10-93	1	5	8.14	0	29.44	29.44
10-93	1	6	8.72	0		29.43
10-93	1	7	9.95	0	29.41	29.42
10-93	1	8	12.37	0	29.40	29.42
10-93	1	9	14.25	0	29.38	29.41
10-93	1	10	17.19	0	29.37	29.39
10-93	1	11	20.32	0	29.35	29.37
10-93	1	12	22.17	0	29.31	29.34
10-93	1	13	22.66	0	29.28	29.3
10-93	1	14	23.71	0	29.25	29.29
10-93	1	15	24.22	0	29.25	29.3
10-93	1	16	24.17	0		29.29
10-93	1	17	23.02	0	29.25	29.28
10-93	1	18	21.89	0	29.25	29.28
10-93	1	19	21.05	0	29.27	29.3
10-93	1	20	20.8	0	29.27	29.3
10-93	1	21	20.93	0	29.28	29.31
10-93	1	22	19.24	0.02	29.31	29.36
10-93	1	23	15.23	0.09	29.34	29.37
10-93	2	0	14.6	0.08	29.34	29.37
10-93	2	1	14.24	0.07	29.36	29.38
10-93	2	2	14.13	0.01	29.36	29.39
10-93	2	3	13.5	0.01	29.37	29.4
10-93	2	4	12.1	0	29.40	29.42
10-93	2	5	11.87	0.01	29.42	29.44
10-93	2	6	11.78	0	29.44	29.46
10-93	2	7	11.71	0	29.45	29.48
10-93	2	8	11.93	0	29.46	29.48
10-93	2	9	12.46	0	29.47	29.49
10-93	2	10	13.07	0	29.47	29.5
10-93	2	11	13.5	0	29.49	29.51
10-93	2	12	13.47	0	29.49	29.52
10-93	2	13	13.83	0	29.49	29.51
10-93	2	14	14.88	0	29.47	29.52
10-93	2	15	15.07	0	29.47	29.51
10-93	2	16	15.11	0	29.47	29.51
10-93	2	17	14.28	0	29.47	29.5
10-93	2	18	13.19	0	29.50	29.51
10-93	2	19	11.81	0	29.50	29.5
10-93	2	20	10.55	0	29.52	29.51
10-93	2	21	9.71	0	29.53	29.53
10-93	2	22	8.94	0	29.54	29.54
10-93	2	23	7.93	0	29.55	29.56
10-93	3	0	7.35	0	29.57	29.57
10-93	3	1	6.27	0	29.58	29.58
10-93	3	2	4.99	0	29.58	29.58
10-93	3	3	3.99	0	29.60	28.66
10-93	3	4	2.08	0	29.61	1.9
10-93	3	5	1.16	0	29.62	11.85
10-93	3	6	0.53	0	29.63	29.62
10-93	3	7	1.18	0	29.64	29.62
10-93	3	8	5.01	0	29.64	29.64
10-93	3	9	9.34	0	29.64	29.67
10-93	3	10	11.3	0	29.64	29.67
10-93	3	11	13.47	0	29.63	29.66
10-93	3	12	15.1	0	29.63	29.64
10-93	3	13	16.41	0	29.58	29.61
10-93	3	14	16.97	0	29.54	29.59
10-93	3	15	17.24	0	29.52	29.56
10-93	3	16	16.93	0	29.49	29.53
10-93	3	17	16.07	0	29.48	29.5
10-93	3	18	13.81	0	29.46	29.49

10-93	3	19	12.18	0	29.46	29.48
10-93	3	20	10.83	0	29.46	29.47
10-93	3	21	10.28	0	29.46	29.46
10-93	3	22	9.48	0	29.45	29.46
10-93	3	23	8.7	0	29.45	29.45
10-93	4	0	8.43	0	29.45	29.44
10-93	4	1	8.36	0	29.43	29.43
10-93	4	2	8.39	0	29.41	29.41
10-93	4	3	8.54	0	29.40	29.41
10-93	4	4	8.51	0	29.38	29.39
10-93	4	5	8.57	0	29.38	29.39
10-93	4	6	8.85	0		29.39
10-93	4	7	9.98	0	29.37	29.39
10-93	4	8	11.89	0	29.37	29.4
10-93	4	9	14.47	0	29.37	29.42
10-93	4	10	17.31	0	29.36	29.41
10-93	4	11	19.42	0	29.35	29.39
10-93	4	12	21.06	0	29.33	29.38
10-93	4	13	22.85	0	29.31	29.35
10-93	4	14	23.73	0	29.29	29.33
10-93	4	15	23.98	0	29.27	29.32
10-93	4	16	23.73	0	29.27	29.31
10-93	4	17	22.66	0	29.28	29.31
10-93	4	18	20.73	0	29.29	29.33
10-93	4	19	18.72	0	29.33	29.36
10-93	4	20	17.46	0	29.34	29.36
10-93	4	21	15.88	0	29.35	29.38
10-93	4	22	16.23	0	29.39	29.44
10-93	4	23	14.7	0	29.44	29.47
10-93	5	0	12.92	0	29.46	29.49
10-93	5	1	11.73	0	29.48	29.51
10-93	5	2	10.31	0	29.52	29.53
10-93	5	3	8.9	0	29.53	29.54
10-93	5	4	7.8	0	29.55	29.56
10-93	5	5	6.88	0	29.58	29.59
10-93	5	6	5.78	0	29.59	26.69
10-93	5	7	6.32	0	29.61	29.64
10-93	5	8	8.52	0	29.65	29.68
10-93	5	9	10.94	0	29.67	29.72
10-93	5	10	13.16	0	29.69	29.74
10-93	5	11	14.98	0	29.70	29.74
10-93	5	12	16.44	0	29.69	29.74
10-93	5	13	17.6	0	29.68	29.74
10-93	5	14	18.39	0	29.67	29.74
10-93	5	15	18.78	0	29.67	29.74
10-93	5	16	18.69	0	29.68	29.72
10-93	5	17	18.1	0	29.68	29.7
10-93	5	18	14.61	0		29.69
10-93	5	19	11.07	0	29.68	29.69
10-93	5	20	8.64	0	29.70	29.69
10-93	5	21	7.52	0	29.70	29.69
10-93	5	22	6.58	0	29.71	29.7
10-93	5	23	5.9	0	29.71	29.71
10-93	6	0	5.33	0	29.72	29.7
10-93	6	1	4.64	0	29.71	29.7
10-93	6	2	4.2	0	29.72	29.71
10-93	6	3	3.87	0	29.71	29.7
10-93	6	4	3.32	0	29.71	29.71
10-93	6	5	3.17	0	29.72	29.72
10-93	6	6	2.95	0	29.74	29.72
10-93	6	7	4.85	0	29.76	29.74
10-93	6	8	8.28	0	29.74	29.75
10-93	6	9	12.06	0	29.74	29.79
10-93	6	10	16.11	0	29.73	29.8
10-93	6	11	18.76	0	29.73	29.79
10-93	6	12	21.29	0	29.70	29.76
10-93	6	13	22.81	0	29.68	29.72
10-93	6	14	24.01	0	29.64	29.69

10-93	6	15	24.56	0	29.62	29.68
10-93	6	16	24.57	0	29.61	29.66
10-93	6	17	23.36	0.01	29.61	20.95
10-93	6	18	19.73	0	29.60	12.71
10-93	6	19	15.94	0	29.60	29.62
10-93	6	20	13.98	0	29.61	29.62
10-93	6	21	12.5	0	29.62	29.63
10-93	6	22	11.12	0	29.62	29.63
10-93	6	23	10.53	0		29.63
10-93	7	0	10.21	0	29.62	17.07
10-93	7	1	9.49	0	29.61	0
10-93	7	2	8.66	0	29.61	0
10-93	7	3	8.49	0	29.61	0
10-93	7	4	8.35	0	29.61	4.48
10-93	7	5	8.41	0	29.62	29.63
10-93	7	6	8.09	0	29.62	29.63
10-93	7	7	8.51	0	29.63	29.64
10-93	7	8	12.02	0	29.62	29.66
10-93	7	9	17.6	0	29.64	29.69
10-93	7	10	20.78	0	29.63	29.69
10-93	7	11	22.91	0	29.61	28.72
10-93	7	12	24.61	0	29.59	29.65
10-93	7	13	25.78	0	29.56	29.62
10-93	7	14	26.48	0	29.53	29.61
10-93	7	15	26.71	0	29.51	29.59
10-93	7	16	26.21	0	29.51	29.57
10-93	7	17	24.91	0	29.50	29.55
10-93	7	18	21.59	0	29.50	29.54
10-93	7	19	18.03	0	29.50	29.52
10-93	7	20	15.97	0	29.49	29.51
10-93	7	21	14.31	0	29.50	29.52
10-93	7	22	13.51	0	29.49	29.51
10-93	7	23	12.33	0	29.49	29.5
10-93	8	0	11.45	0	29.48	29.5
10-93	8	1	10.86	0	29.47	29.49
10-93	8	2	10.27	0	29.47	29.48
10-93	8	3	9.57	0	29.46	29.47
10-93	8	4	9.08	0	29.45	29.46
10-93	8	5	8.9	0	29.45	29.46
10-93	8	6	8.49	0	29.44	29.45
10-93	8	7	8.51	0	29.43	29.45
10-93	8	8	10.45	0	29.44	29.47
10-93	8	9	12.7	0	29.44	29.47
10-93	8	10	16.51	0	29.43	29.48
10-93	8	11	22.36	0	29.41	29.48
10-93	8	12	24.79	0	29.39	29.44
10-93	8	13	25.12	0	29.35	29.4
10-93	8	14	25.29	0	29.32	29.37
10-93	8	15	25.65	0	29.30	29.35
10-93	8	16	25.07	0	29.29	29.34
10-93	8	17	23.77	0	29.28	29.32
10-93	8	18	20.48	0	29.27	29.3
10-93	8	19	17.65	0	29.27	29.29
10-93	8	20	15.78	0	29.26	29.28
10-93	8	21	14.64	0	29.25	29.28
10-93	8	22	14	0	29.25	29.26
10-93	8	23	13.44	0	29.23	29.24
10-93	9	0	14.11	0	29.21	29.23
10-93	9	1	16.24	0.04	29.20	29.21
10-93	9	2	16.13	0	29.18	29.19
10-93	9	3	16.36	0	29.14	29.18
10-93	9	4	16.51	0.07	29.16	29.18
10-93	9	5	15.95	0.34	29.17	29.19
10-93	9	6	16.1	0.08	29.17	29.19
10-93	9	7	16.04	0.04	29.17	29.19
10-93	9	8	16.17	0	29.17	29.19
10-93	9	9	16.38	0	29.16	29.19
10-93	9	10	17	0.01	29.15	29.19

10-93	9	11	16.87	0.29	29.16	29.19
10-93	9	12	16.35	0.02	29.15	29.18
10-93	9	13	11.45	0.02	29.18	29.21
10-93	9	14	10.3	0	29.20	29.23
10-93	9	15	8.96	0.01	29.25	29.27
10-93	9	16	8.64	0	29.27	29.29
10-93	9	17	7.9	0.01	29.31	29.32
10-93	9	18	6.95	0.01	29.33	29.36
10-93	9	19	6.39	0	29.38	29.39
10-93	9	20	5.87	0	29.39	29.42
10-93	9	21	5.36	0	29.42	29.44
10-93	9	22	5.23	0	29.45	29.47
10-93	9	23	5.02	0	29.46	29.49
10-93	10	0	4.63	0	29.49	29.5
10-93	10	1	4.16	0	29.51	29.53
10-93	10	2	3.66	0	29.52	29.52
10-93	10	3	2.96	0	29.54	29.54
10-93	10	4	2.22	0	29.56	29.55
10-93	10	5	1.3	0	29.58	29.57
10-93	10	6	0.17	0	29.60	10.22
10-93	10	7	0.92	0	29.61	26.69
10-93	10	8	3.26	0	29.64	29.64
10-93	10	9	4.75	0	29.64	29.67
10-93	10	10	5.77	0	29.64	29.68
10-93	10	11	6.81	0	29.64	29.67
10-93	10	12	7.75	0	29.63	29.66
10-93	10	13	8.63	0	29.61	18.97
10-93	10	14	9.64	0	29.59	26.41
10-93	10	15	9.95	0	29.58	29.64
10-93	10	16	10.13	0	29.58	29.61
10-93	10	17	9.72	0	29.57	29.59
10-93	10	18	7.51	0	29.58	29.58
10-93	10	19	5.18	0	29.59	29.59
10-93	10	20	3.66	0	29.59	29.59
10-93	10	21	2.46	0	29.60	29.53
10-93	10	22	1.85	0	29.61	29.59
10-93	10	23	1.44	0	29.60	19.04
10-93	11	0	1.03	0	29.59	14.4
10-93	11	1	0.66	0	29.58	29.57
10-93	11	2	0.75	0	29.57	29.55
10-93	11	3	0.58	0	29.55	29.54
10-93	11	4	-0.12	0	29.55	29.54
10-93	11	5	-0.15	0	29.54	29.53
10-93	11	6	-0.58	0	29.54	29.53
10-93	11	7	-0.08	0	29.53	29.53
10-93	11	8	2.74	0	29.52	29.52
10-93	11	9	5.4	0	29.51	29.54
10-93	11	10	8.09	0		29.54
10-93	11	11	10.01	0	29.48	29.52
10-93	11	12	11.44	0	29.45	29.49
10-93	11	13	12.25	0	29.42	29.46
10-93	11	14	12.69	0	29.40	29.43
10-93	11	15	12.26	0	29.37	29.4
10-93	11	16	11.86	0	29.36	29.39
10-93	11	17	11.33	0	29.36	29.38
10-93	11	18	10.73	0	29.35	29.38
10-93	11	19	10.08	0	29.35	29.37
10-93	11	20	9.52	0	29.36	29.37
10-93	11	21	9.13	0	29.36	29.37
10-93	11	22	9.01	0	29.36	29.37
10-93	11	23	8.69	0	29.36	29.37
10-93	12	0	8.06	0	29.35	29.37
10-93	12	1	6.55	0	29.35	29.37
10-93	12	2	5.51	0	29.36	29.36
10-93	12	3	4.65	0	29.34	29.35
10-93	12	4	4.17	0	29.35	29.35
10-93	12	5	3.54	0	29.35	29.35
10-93	12	6	3.14	0	29.36	29.35

10-93	12	7	3.85	0	29.36	29.37
10-93	12	8	5.74	0	29.37	29.39
10-93	12	9	8.05	0	29.38	29.4
10-93	12	10	10.11	0	29.36	29.4
10-93	12	11	11.71	0	29.35	29.39
10-93	12	12	12.42	0		29.37
10-93	12	13	13.81	0	29.32	29.35
10-93	12	14	14.9	0	29.30	29.33
10-93	12	15	15.48	0	29.29	29.32
10-93	12	16	15.54	0	29.29	29.32
10-93	12	17	15.12	0	29.29	29.32
10-93	12	18	13.87	0	29.29	29.31
10-93	12	19	13.31	0	29.31	29.31
10-93	12	20	13.17	0	29.32	29.33
10-93	12	21	12.53	0	29.34	29.35
10-93	12	22	11.71	0	29.36	29.37
10-93	12	23	10.11	0	29.35	29.37
10-93	13	0	8.95	0	29.36	29.37
10-93	13	1	8.52	0	29.37	29.38
10-93	13	2	7.78	0	29.38	29.39
10-93	13	3	6.62	0	29.38	29.39
10-93	13	4	5.69	0	29.39	29.4
10-93	13	5	5.05	0	29.40	29.42
10-93	13	6	4.6	0	29.43	29.45
10-93	13	7	4.34	0	29.46	29.48
10-93	13	8	6.33	0	29.51	29.52
10-93	13	9	8.71	0	29.51	29.55
10-93	13	10	10.68	0	29.52	29.56
10-93	13	11	12.28	0	29.51	29.56
10-93	13	12	13.71	0	29.51	29.55
10-93	13	13	14.76	0	29.48	29.54
10-93	13	14	14.78	0	29.47	29.52
10-93	13	15	15.08	0		29.51
10-93	13	16	14.72	0	29.46	29.5
10-93	13	17	13.98	0	29.47	29.49
10-93	13	18	12.49	0	29.48	29.49
10-93	13	19	11.08	0	29.48	29.49
10-93	13	20	10.2	0	29.49	29.5
10-93	13	21	9.58	0	29.50	29.51
10-93	13	22	8.55	0	29.51	29.5
10-93	13	23	7.12	0	29.50	29.5
10-93	14	0	6.32	0	29.50	29.5
10-93	14	1	5.67	0	29.50	29.5
10-93	14	2	5.68	0	29.50	29.5
10-93	14	3	5.9	0	29.50	29.5
10-93	14	4	6.01	0	29.50	29.51
10-93	14	5	5.97	0	29.52	29.53
10-93	14	6	5.56	0	29.52	29.53
10-93	14	7	5.2	0	29.53	29.53
10-93	14	8	6.68	0	29.54	29.57
10-93	14	9	9.25	0	29.56	29.61
10-93	14	10	12.13	0	29.57	29.63
10-93	14	11	14.73	0	29.57	29.63
10-93	14	12	16.36	0	29.57	29.62
10-93	14	13	17.22	0	29.55	29.6
10-93	14	14	17.92	0	29.52	29.58
10-93	14	15	18.27	0	29.52	29.59
10-93	14	16	18.4	0	29.52	29.58
10-93	14	17	17.6	0	29.53	29.56
10-93	14	18	14.16	0	29.54	29.55
10-93	14	19	11.24	0	29.55	29.57
10-93	14	20	9.47	0	29.56	29.57
10-93	14	21	7.98	0	29.56	29.57
10-93	14	22	7.09	0	29.57	29.58
10-93	14	23	6.38	0	29.57	29.57
10-93	15	0	5.99	0	29.57	29.57
10-93	15	1	5.64	0	29.57	29.58
10-93	15	2	5.22	0	29.58	29.59

10-93	15	3	4.67	0	29.58	29.58
10-93	15	4	4.07	0	29.58	29.59
10-93	15	5	3.66	0	29.60	19.14
10-93	15	6	3.59	0	29.60	0
10-93	15	7	3.98	0	29.60	20.24
10-93	15	8	7.23	0	29.62	29.63
10-93	15	9	11.43	0	29.61	29.66
10-93	15	10	16.34	0	29.61	29.67
10-93	15	11	19.26	0	29.59	20.99
10-93	15	12	21.33	0	29.58	29.62
10-93	15	13	22.71	0	29.54	29.59
10-93	15	14	22.99	0	29.51	29.55
10-93	15	15	22.86	0	29.49	29.53
10-93	15	16	22.09	0	29.47	29.52
10-93	15	17	20.91	0	29.46	29.5
10-93	15	18	19.19	0	29.46	29.49
10-93	15	19	17.8	0	29.46	29.48
10-93	15	20	16.52	0	29.45	29.48
10-93	15	21	14.14	0	29.45	29.47
10-93	15	22	14.72	0	29.45	29.47
10-93	15	23	15.7	0	29.44	29.46
10-93	16	0	17.14	0	29.43	29.46
10-93	16	1	16.78	0	29.42	29.46
10-93	16	2	16.74	0	29.43	29.45
10-93	16	3	16.61	0.03	29.41	29.43
10-93	16	4	15.67	0.2	29.39	29.43
10-93	16	5	15.44	0.06	29.39	29.43
10-93	16	6	15.31	0.1	29.39	29.42
10-93	16	7	15.37	0	29.39	29.42
10-93	16	8	15.61	0	29.38	29.42
10-93	16	9	15.97	0.04	29.38	29.42
10-93	16	10	16.02	0.02	29.38	29.41
10-93	16	11	16.38	0	29.34	29.39
10-93	16	12	16.98	0	29.33	29.37
10-93	16	13	17.1	0	29.32	29.36
10-93	16	14	17.33	0	29.30	29.33
10-93	16	15	17.56	0	29.29	29.31
10-93	16	16	17.7	0	29.27	29.3
10-93	16	17	17.27	0	29.27	29.29
10-93	16	18	16.92	0	29.25	29.29
10-93	16	19	17	0	29.24	29.28
10-93	16	20	17.07	0	29.22	29.25
10-93	16	21	17.15	0	29.22	29.25
10-93	16	22	16.9	0	29.20	29.23
10-93	16	23	16.82	0.02	29.18	29.21
10-93	17	0	16.82	0	29.17	29.19
10-93	17	1	17.04	0	29.15	29.18
10-93	17	2	17.36	0		29.17
10-93	17	3	17.5	0	29.11	29.13
10-93	17	4	17.36	0.03	29.10	29.12
10-93	17	5	16.95	0.03	29.09	29.11
10-93	17	6	16.96	0	29.07	29.1
10-93	17	7	17.07	0	29.07	29.1
10-93	17	8	17.41	0	29.08	29.1
10-93	17	9	18.2	0	29.09	29.1
10-93	17	10	18.9	0	29.08	29.1
10-93	17	11	18.56	0	29.10	29.12
10-93	17	12	18.91	0	29.11	29.14
10-93	17	13	19.09	0	29.12	29.14
10-93	17	14	19.42	0	29.12	29.15
10-93	17	15	17.41	0	29.14	29.19
10-93	17	16	15.47	0	29.18	29.21
10-93	17	17	14.87	0	29.21	29.23
10-93	17	18	14.06	0	29.24	29.25
10-93	17	19	13.64	0	29.27	29.29
10-93	17	20	13.35	0		29.32
10-93	17	21	12.89	0	29.31	29.32
10-93	17	22	12.32	0	29.33	29.34

10-93	17	23	12.05	0	29.33	29.35
10-93	18	0	12.07	0	29.34	29.36
10-93	18	1	11.82	0	29.36	29.38
10-93	18	2	11.56	0	29.37	29.38
10-93	18	3	11.52	0	29.38	29.4
10-93	18	4	11.46	0	29.39	29.4
10-93	18	5	11.02	0	29.40	29.43
10-93	18	6	10.76	0	29.41	29.44
10-93	18	7	10.83	0	29.41	29.45
10-93	18	8	11.56	0	29.44	29.48
10-93	18	9	12.74	0	29.45	29.48
10-93	18	10	13.83	0	29.45	29.5
10-93	18	11	14.38	0	29.47	29.51
10-93	18	12	15.03	0	29.47	29.51
10-93	18	13	15.9	0	29.46	29.49
10-93	18	14	16.14	0	29.44	29.48
10-93	18	15	16.22	0	29.44	29.48
10-93	18	16	16.02	0		29.48
10-93	18	17	15.74	0		29.47
10-93	18	18	15.16	0		29.47
10-93	18	19	14.8	0		29.47
10-93	18	20	14.6	0		29.48
10-93	18	21	14.54	0		29.48
10-93	18	22	14.18	0		29.49
10-93	18	23	13.48	0		29.48
10-93	19	0	13.02	0		29.47
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10-93	19	2	13.32	0		29.48
10-93	19	3	13.02	0		29.47
10-93	19	4	13.09	0		29.47
10-93	19	5	13.18	0		29.47
10-93	19	6	13.2	0	29.44	29.47
10-93	19	7	13.37	0.02	29.43	29.47
10-93	19	8	13.31	0.04	29.45	29.47
10-93	19	9	13.39	0.01	29.44	29.47
10-93	19	10	13.7	0.05	29.45	29.48
10-93	19	11	13.97	0.01	29.45	29.48
10-93	19	12	14.51	0	29.43	29.47
10-93	19	13	14.96	0	29.43	29.46
10-93	19	14	15.39	0.05	29.42	29.46
10-93	19	15	15.66	0.01	29.41	29.45
10-93	19	16	15.54	0.02	29.42	29.45
10-93	19	17	15.19	0	29.42	29.45
10-93	19	18	15.08	0.04	29.42	29.45
10-93	19	19	15.11	0.01	29.42	29.45
10-93	19	20	15.18	0.03	29.42	29.45
10-93	19	21	15.27	0.05	29.42	29.47
10-93	19	22	15.26	0.02	29.45	29.48
10-93	19	23	15.27	0.01	29.44	29.47
10-93	20	0	14.97	0.01	29.45	29.48
10-93	20	1	14.8	0	29.45	29.48
10-93	20	2	14.74	0	29.44	29.47
10-93	20	3	14.59	0.03	29.42	29.46
10-93	20	4	14.41	0.11	29.43	29.47
10-93	20	5	14.3	0.06	29.44	29.46
10-93	20	6	14.38	0.1	29.42	29.45
10-93	20	7	14.61	0.01	29.41	29.45
10-93	20	8	15	0	29.42	29.45
10-93	20	9	15.83	0	29.40	29.45
10-93	20	10	17.4	0	29.40	29.44
10-93	20	11	18.52	0	29.40	29.43
10-93	20	12	19.32	0	29.38	29.41
10-93	20	13	19.98	0	29.36	29.38
10-93	20	14	20.88	0	29.33	29.36
10-93	20	15	20.74	0.01	29.30	29.34
10-93	20	16	19.53	0.16	29.30	29.32
10-93	20	17	18.83	0	29.28	29.29
10-93	20	18	18.04	0.01	29.26	29.29

10-93	20	19	19.98	0	29.23	29.27
10-93	20	20	20.61	0	29.23	29.25
10-93	20	21	20.13	0	29.23	29.26
10-93	20	22	19.78	0	29.23	29.26
10-93	20	23	19.04	0.01	29.24	29.26
10-93	21	0	17.78	0.02	29.28	29.28
10-93	21	1	15.36	0	29.32	29.32
10-93	21	2	15.19	0	29.32	29.35
10-93	21	3	14.98	0	29.34	29.37
10-93	21	4	14.71	0	29.35	29.4
10-93	21	5	13.12	0	29.40	29.46
10-93	21	6	10.15	0	29.44	29.51
10-93	21	7	8.14	0	29.51	29.55
10-93	21	8	7.76	0	29.56	27.33
10-93	21	9	8.53	0	29.60	24.98
10-93	21	10	9.64	0	29.62	29.65
10-93	21	11	10.38	0	29.62	29.66
10-93	21	12	11.51	0	29.63	29.66
10-93	21	13	12.41	0	29.61	29.66
10-93	21	14	12.32	0	29.62	29.65
10-93	21	15	11.8	0	29.62	29.66
10-93	21	16	10.92	0	29.63	29.66
10-93	21	17	9.82	0	29.65	29.66
10-93	21	18	8.73	0	29.66	29.68
10-93	21	19	7.91	0	29.69	29.7
10-93	21	20	7	0	29.71	29.71
10-93	21	21	6	0	29.73	29.72
10-93	21	22	4.68	0	29.74	29.73
10-93	21	23	3.37	0	29.73	29.72
10-93	22	0	2.28	0	29.73	29.72
10-93	22	1	1.3	0	29.73	29.72
10-93	22	2	0.74	0	29.73	29.72
10-93	22	3	0.73	0	29.73	29.71
10-93	22	4	0.61	0	29.74	29.72
10-93	22	5	-0.22	0	29.75	29.73
10-93	22	6	-0.49	0	29.76	29.74
10-93	22	7	-0.88	0	29.77	29.76
10-93	22	8	1.6	0	29.79	29.79
10-93	22	9	5.41	0	29.81	29.84
10-93	22	0	2.28	0	29.73	29.72
10-93	22	1	1.3	0	29.73	29.72
10-93	22	2	0.74	0	29.73	29.72
10-93	22	3	0.73	0	29.73	29.71
10-93	22	4	0.61	0	29.74	29.72
10-93	22	5	-0.22	0	29.75	29.73
10-93	22	6	-0.49	0	29.76	29.74
10-93	22	7	-0.88	0	29.77	29.76
10-93	22	8	1.6	0	29.79	29.79
10-93	22	9	5.41	0	29.81	29.84
10-93	22	10	9.04	0	29.81	29.85
10-93	22	11	11.56	0	29.81	29.85
10-93	22	12	13.11	0	29.80	29.83
10-93	22	13	13.93	0	29.76	29.81
10-93	22	14	14.6	0	29.75	29.8
10-93	22	15	14.84	0	29.73	29.79
10-93	22	16	14.63	0	29.73	29.76
10-93	22	17	13.62	0	29.74	29.74
10-93	22	18	11.06	0	29.74	29.74
10-93	22	19	8.21	0	29.74	29.73
10-93	22	20	5.88	0	29.75	29.74
10-93	22	21	4.28	0	29.76	29.74
10-93	22	22	3.1	0	29.77	29.75
10-93	22	23	2.35	0	29.77	29.75
10-93	23	0	1.61	0	29.77	29.74
10-93	23	1	0.75	0	29.77	29.74
10-93	23	2	0.22	0	29.77	29.74
10-93	23	3	-0.33	0	29.77	29.74
10-93	23	4	-0.61	0	29.78	29.75

10-93	23	5	-1.18	0	29.79	29.76
10-93	23	6	-1.61	0	29.78	29.76
10-93	23	7	-1.73	0	29.79	29.77
10-93	23	8	0.62	0	29.81	29.8
10-93	23	9	4.38	0	29.81	29.84
10-93	23	10	9.78	0	29.81	29.84
10-93	23	11	13.35	0	29.80	29.84
10-93	23	12	14.93	0	29.77	29.81
10-93	23	13	16.49	0	29.73	29.78
10-93	23	14	17.35	0	29.71	29.75
10-93	23	15	17.73	0	29.69	29.75
10-93	23	16	17.55	0	29.68	29.71
10-93	23	17	16.24	0	29.67	29.69
10-93	23	18	12.18	0	29.66	29.67
10-93	23	19	8.93	0	29.67	29.66
10-93	23	20	6.69	0	29.67	29.66
10-93	23	21	5.5	0	29.67	29.66
10-93	23	22	4.36	0	29.67	29.65
10-93	23	23	3.11	0	29.65	29.65
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10-93	24	1	1.75	0	29.65	29.63
10-93	24	2	1.28	0	29.64	29.63
10-93	24	3	0.54	0	29.63	29.62
10-93	24	4	0.28	0	29.63	29.61
10-93	24	5	0.22	0	29.62	29.61
10-93	24	6	0.08	0	29.63	29.61
10-93	24	7	-0.02	0	29.63	29.62
10-93	24	8	1.91	0	29.63	29.63
10-93	24	9	5.8	0	29.62	29.65
10-93	24	10	10.09	0	29.62	29.65
10-93	24	11	14.23	0	29.61	
10-93	24	12	17.08	0	29.59	
10-93	24	13	18.89	0	29.55	29.61
10-93	24	14	19.95	0	29.53	29.59
10-93	24	15	20.49	0	29.51	29.57
10-93	24	16	20.33	0	29.50	29.55
10-93	24	17	18.77	0	29.50	29.54
10-93	24	18	14.38	0	29.51	29.53
10-93	24	19	11.64	0	29.51	29.52
10-93	24	20	9.76	0	29.52	29.52
10-93	24	21	7.48	0	29.52	29.52
10-93	24	22	6.09	0	29.52	29.52
10-93	24	23	5.04	0	29.53	29.52
10-93	25	0	4.21	0	29.52	29.52
10-93	25	1	3.51	0	29.52	29.52
10-93	25	2	2.76	0	29.51	29.51
10-93	25	3	2.31	0	29.52	29.51
10-93	25	4	2.06	0	29.52	29.51
10-93	25	5	1.55	0	29.54	29.54
10-93	25	6	1.14	0	29.55	29.54
10-93	25	7	1.15	0	29.54	29.54
10-93	25	8	3.53	0	29.56	29.57
10-93	25	9	7.78	0	29.56	29.6
10-93	25	10	12.87	0	29.55	29.6
10-93	25	11	17.17	0	29.53	29.59
10-93	25	12	19.26	0	29.51	29.56
10-93	25	13	19.97	0	29.48	29.53
10-93	25	14	20.72	0	29.45	29.52
10-93	25	15	20.85	0	29.44	29.5
10-93	25	16	19.87	0	29.44	29.48
10-93	25	17	18.09	0	29.42	29.45
10-93	25	18	15.37	0	29.43	29.45
10-93	25	19	13.43	0	29.43	29.45
10-93	25	20	12.34	0	29.43	29.45
10-93	25	21	11.54	0	29.43	29.45
10-93	25	22	10.95	0	29.42	29.44
10-93	25	23	10.09	0	29.42	29.44
10-93	26	0	9.37	0	29.41	29.43