FINAL PHASE I
REMEDIAL INVESTIGATION

OLIN CHEMICALS
ROCHESTER PLANT SITE
ROCHESTER, NEW YORK

APPENDICES
VOLUME II

Submitted to:

Division of Hazardous Waste Remediation
New York State Department of Environmental Conservation
50 Wolf Road
Albany, New York 12233-4011

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AUGUST 1995

PHASE I REMEDIAL INVESTIGATION REPORT
OLIN ROCHESTER PLANT

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A-1 SURFACE GEOPHYSICAL SURVEY DATA AND INTERPRETATION

TECHNICAL MEMORANDUM NO. 1

PROJECT: Olin Rochester

SUBJECT: Geophysical Survey

PREPARED BY: R.P. Allen

DATE: November 12, 1993

1.0 INTRODUCTION

A Geophysical survey was conducted at the Olin Rochester Plant between October 18 and 21, 1993. The purpose for this work was (1) to profile the bedrock surface in the general vicinity of the Plant so that soil borings and piezometer/monitoring wells could be optimally placed to evaluate any soil and groundwater contamination; and (2) to evaluate two areas within the Olin property where sources of contamination may exist and to acquire data helpful in planning direct explorations in these areas.

2.0 PERSONNEL

Personnel from ABB-ES who conducted the geophysical surveys were R. Allen, Principal Geophysicist; R. Baer and R. Gervasio, Field Technicians; with occasional assistance from T. Eschner, Principal Hydrogeologist.

3.0 FIELD PROGRAM

The techniques used for this investigation were seismic refraction profiling and ground penetrating radar (GPR). The primary purpose for the seismic profiling was to profile the bedrock surface (a dolomite) and to determine if there are any surface features in the rock which might represent preferential pathways for contaminant migration (bedrock lows, fracture zones). The GPR profiling was conducted in the Sodamide area and Boneyard. The Boneyard contains stockpiled equipment from the plant which is either obsolete or beyond repair.

3.1 SEISMIC REFRACTION SURVEY. The seismic refraction survey was completed along the seismic traverses indicated on Figure 1. A total of 2765 feet of profiling was completed during the investigation. The spacing between individual geophones (nominal) was 20 feet, and energy generation points were located every 100 feet along individual 24-channel 400-foot long seismic spreads. The endpoint of one seismic spread coincides with the endpoint of the next spread along a seismic traverse longer than 400 feet (Lines 1 and 5, Figure 1). The energy source used was buried black powder industrial blanks which were detonated electrically. They consisted of either 500 grain or 800 grain loads and are supplied by Betsy Seisgun of Tulsa, Oklahoma. Due to the presence of numerous buried utilities, the energy source along Line 5 was a 10-pound sledgehammer impacting a 12-inch square aluminum plate. The seismograph used was a Geometrics ES2415F Signal Enhancement Seismograph. Appendix A contains additional information on the seismic refraction technique.

3.2 GROUND PENETRATING RADAR SURVEY. The ground penetrating radar survey

was completed in the Sodamide Area and the Boneyard (Figures 2 and 3). A total of approximately 1500 feet of profiling was completed in the Sodamide Area along with more than 6600 feet of profiling in the Boneyard. A GSSI SIR System III with 500 Megahertz antenna was used for this work. Appendix B contains additional information on the ground penetrating radar technique.

4.0 RESULTS

4.1 SEISMIC REFRACTION SURVEY. The results of the seismic refraction survey are presented as seismic profiles, Lines 1 through 4, Figures 4 through 7. Note that no results are presented for Seismic Line 5. Excessive seismic noise along McKee Road due to vehicular traffic and noise from both the Olin plant and Aid to Hospitals degraded the quality of the resulting seismograms to the extent that the data were not useable.

The seismic profiles indicate that the bedrock is from 8 to 17 feet deep and varies in seismic (P-wave) velocity from 8,000 to 14,000 fps (feet per second). Bedrock in the lower end of this velocity range is probably much more weathered and/or fractured than bedrock in the upper end of the range, although fresh, unweathered dolomite can have seismic velocity values of more than 20,000 feet per second.

The only seismic anomaly of any significance is an (interpreted) abrupt change in bedrock velocity at station 230 on Line 2. The reason for such a feature is unknown, but may be a candidate for further investigation via borings. A second subtle seismic anomaly occurs along Seismic Line 3 at Station 220, the location of an interpreted subtle bedrock swale. This may also be a candidate for a future boring location.

4.2 GROUND PENETRATING RADAR SURVEY. The results of the GPR survey are presented as GPR anomaly maps, Figures 8 and 9.

Figure 8 shows the Sodamide Area. Two buried pipes were mapped in the northern portion of the survey area. One is believed to be a sewer line and is from 2-1/2 to 4 feet deep. The other appears to be a pipe at a depth of approximately 4 feet. In addition, a number of point source anomalies have been mapped, the source of which is not known.

Figure 9 shows the Boneyard. Four anomalies were found that are believed to be buried pipes. In addition 4 single point anomalies were mapped in the western portion of the Boneyard. Other than these features, the GPR recordings revealed a largely chaotic pattern of reflected signals with no apparent stratification, typical for sites with heterogeneous and/or fill soils.

APPENDIX A
SEISMIC REFRACTION TECHNIQUE

GENERAL

The seismic refraction profiling method is an indirect means of determining the thickness and velocity values of the various seismic layers underlying a site. There is often a direct correlation between geologic strata and the layers defined during a seismic refraction investigation.

The basis for the interpretation of data is the amount of time required for elastic waves, generated at a point source, to travel to a series of sensitive listening devices called geophones, or seismometers. Geophones are placed at known intervals along a straight line on the ground surface and connected by special multi-conductor cables to the seismograph. The cables are known as seismic spread cables and the array of geophones and cables is called a seismic spread (Figure ?-1). The seismograph is the device that records the elastic wave arrivals from the energy source along the seismic spread, acquiring separate data for each geophone position.

The seismic waves detected in a seismic refraction survey and used for depth calculations and the identification of materials are "P" (compressional) waves. This wave travels through earth materials as a series of compressions and rarefactions. Just as sunlight bends when it passes through a glass prism (refraction), so sound waves bend as they travel deeper into the earth through the various layers of soil and rock. Because they are bent, they eventually return to the surface as refracted seismic waves. If one carefully measures the transit times between the energy source and each geophone, one can interpret subsurface structure. The thickness and velocity values of various soil and rock layers can be computed. In the same manner, seismologists have learned about the interior of the earth by carefully measuring the arrival of seismic waves generated by distant earthquakes.

FIELD PROCEDURE FOR DATA ACQUISITION

Seismic spread cables, which have pre-measured shotpoint and geophone locations, are positioned along the lines of investigation. Geophones, which have a spiked base to provide good ground contact, are positioned at their measured locations. We produce seismic energy with either a weight impact (sledge hammer) or small buried charges of explosives. If explosives are necessary, we prepare shotholes usually prepared with a driven rod (not excavated) to insure good ground coupling. The blaster tamps the explosives tightly and notes the depth and amount of explosives in each shothole.

Seismograms are obtained using a portable signal enhancement seismograph. This instrument records the wave arrivals from the energy source along the seismic spread, acquiring separate data for each geophone position. Timing lines across the entire recording allow direct reading of wave arrivals to an accuracy of one millisecond. The signal enhancement capability refers to the ability of the instrument to record the seismic waves from several impacts (or explosions), add them electronically, and retain this data in its internal digital memory for later processing and interpretation. The enhanced signal improves data quality and greatly simplifies interpretation.

Generally, the field party will obtain several recordings (seismograms) along each seismic spread seismograms are generated with the energy source at each end, and others may be obtained by energy generation in the middle, and at other positions along an individual seismic spread as necessary.

Continuous profiling is accomplished by having an end shotpoint of one seismic spread coincident with an end or intermediate position shot point of the succeeding spread. The length of each spread is determined by the required depth of penetration. Seismic spreads of varying lengths can be used in a study; the deeper the required penetration, the longer the spread must be.

INTERPRETATION

The data are interpreted by first accurately measuring the individual transit times at each geophone position, then constructing a graph of these times versus their distance from the energy source. The geophysicist then determines by inspection of the time-distance graphs the number of subsurface seismic layers present. Straight line segments of best fit are drawn onto the graphs with each layer represented by a line of different slope. The inverse of the slope of each line is the (apparent) velocity value for each layer. The distance, x, from the energy source to the "crossover point" between two layers is proportional to the thickness, D, of the overlying layer. A wavefront diagram and corresponding time-distance graph are shown on Figure A-1.

Depth calculations are made using standard critical distance formuli of the form

$$D_n = \frac{x_{n+1}}{2}\sqrt{\frac{V_{n+1}-V_n}{V_{n+1}+V_n}} + D_1\frac{V_{n+1}\sqrt{V_n^2-V_1^2} - V_n\sqrt{V_{n+1}^2-V_1^2}}{V_1\sqrt{V_{n+1}^2-V_n^2}} + \ldots$$

$$+ \ldots + D_{n-1}\frac{V_{n+1}\sqrt{V_n^2-V_{n-1}^2} - V_n\sqrt{V_{n+1}^2-V_{n-1}}}{V_{n-1}\sqrt{V_{n+1}^2-V_n^2}}$$

where D_n is the thickness of the nth layer, x_{n+1} is the critical distance for the deepest refractor, designated as the $n+1$ layer of seismic velocity value V_{n+1}).

There are several limitations of seismic refraction exploration which should be restated whenever such a study is planned so that expectations are reasonable:

Accuracy. The accuracy of any measurement or calculation (depth, velocity, critical distance) is generally limited to within plus or minus 10 to 15% of its "true" value. For example, if a depth to a refractor (bedrock) is calculated from refraction measurements to be 50 feet, then one might reasonably expect that if one were to confirm the depth to rock through drilling, that bedrock would be encountered at a depth of 50 plus or minus 5 to 7.5 feet, or 42.5 to 57.5 feet below ground surface.

Layer Thickness/Velocity Relationships. In order to be detected by seismic refraction, a target refractor must have sufficient thickness and velocity

contrast with overlying layers. A general guideline which can be used is that a target refractor should have a seismic velocity value of at least 1.2 to 1.5 times the velocity of the overlying layer and a thickness of from 0.5 to 1.0 times the combined thickness of the overlying layers. The greater the contrast in velocity between the target refractor and the overlying layer, and the greater its thickness, the more accurately it can be mapped. Conversely, the smaller the contrast in velocity and the thinner the target refractor, the less likely that it will be mapped accurately. In fact, as the velocity contrast or thickness approaches smaller and smaller values, there is a point at which the layer will no longer be detected by seismic refraction.

Seismic Velocity Increases with Depth. Interpretation and data processing of all seismic refraction data makes the assumption that the velocity value at which sound waves travel through subsurface materials will increase with depth. Generally, this assumption is both reasonable and valid, although there are notable exceptions. When seismic refraction measurements are made on asphalt or concrete surfaces, the asphalt/concrete "layer" is always of higher velocity than the underlying fill or soil materials. One must use these data with caution and recognize that sometimes such data will not be useable. Refraction surveys in karst terrain with limestone deposits underlain by shale or weathered bedrock would also fall into this category.

Uneven Terrain and Crooked Traverses. There are many pitfalls to the successful interpretation of seismic data which are not controllable, but two common pitfalls which are controllable are avoiding uneven terrain and avoiding unnecessary bends along seismic traverses. Uneven terrain along a traverse causes otherwise flat-lying layers to behave as if they were dipping alternately in one direction, then in the other, depending on which side of a slope the observer is. If traverses can be positioned generally parallel to topographic contours, interpretation will generally be more reliable.

For crooked seismic traverses, the measured distance between geophones and the energy source will be different (shorter) from that of a straight traverse. This will shorten the arrival times between the energy source and each geophones. Traverses with significant bends will need to be time-corrected in accordance with the geometric relationships between the energy source and each geophone.

Low Velocity Effects from Organic Surface Materials. Care must be taken to position individual geophones (generally fitted with a spiked base) such that root matter and peat zones are avoided. Each foot of low velocity surface material through which seismic waves travel is equivalent to perhaps 5 to 10 times an equivalent thickness of saturated overburden materials. Not accounting properly for these time delays can lead to erroneous interpretation.The identification of various materials can be made with a knowledge of seismic velocity values based on other engineering studies, and on correlations with various test borings taken near seismic lines.

FIGURE A
SEISMIC REFRACTION TECHNIQUE

APPENDIX B
GROUND PENETRATING RADAR PROFILING

INTRODUCTION

The GPR technique uses high frequency radio waves to determine the presence of subsurface objects and structures. Energy is radiated downward into the subsurface from an antenna that is pulled slowly across the ground at speeds varying from about 0.25 to 5 mph, depending on the amount of detail desired and the nature of the target. The radio wave energy is reflected from surfaces where there is a contrast in the electrical properties of subsurface materials. These surfaces may be naturally occurring geologic horizons (e.g., soil layers, changes in moisture content, voids and fractures in bedrock) or manmade (e.g., buried utilities, tanks, drums). The reflected energy is processed and displayed as a continuous strip chart recording of distance versus time (where time can be thought of as proportional to depth). The depth of penetration of a GPR system is highly site-specific, and depends (among other factors) on (1) the soil types at the site (clean sands are best), (2) moisture conditions (dry is best), and (3) the frequency of the antenna (the lower the frequency, the deeper the penetration, and the less the resolution capability).

It is theoretically possible to detect groundwater contamination from both ionic chemicals (acids, salts, and bases) and non-ionic chemicals (petroleum products, solvents, and pesticides). This is because the radar wave is generally quite sensitive to changes in the conductivity of the media through which it passes. However, in practice, it is very difficult to interpret lateral changes in conductivity from radar recordings with confidence and attribute those changes to the presence of such chemicals. Lateral changes in soil composition and moisture content can produce changes of similar appearance to those due to chemicals. If the shallow geology is very uniform, tracking an ionic plume sufficiently high conductivity would be feasible with GPR. It might also be possible to track a shallow non-ionic plume under uniform geologic conditions if there is a free product layer of sufficient thickness floating on the water table.

Typical applications for GPR include delineating the boundaries of buried hazardous waste materials and the perimeters of abandoned landfills; finding steel reinforcement bars and voids in concrete structures; recording the depth of geological interfaces, bedrock, and coal seams; locating and mapping buried utilities; bottom and shallow sub-bottom profiling on lakes; and determining glacial ice stratification and thickness.

PRINCIPLES

The radar system consists of a control unit, an antenna assembly (transmitter/receiver), and a recording device for analog field recordings. A tape-recording unit may also be present for further data processing after field activities are completed. The antenna transmits electromagnetic (EM) pulses of short duration into the ground. The pulses are reflected from geologic or manmade surfaces and are picked up by the receiver, which transmits the signals to the control unit for processing and analog display. Shallow objects appear near the top of the strip chart recording (less time elapsed between the outgoing pulse and the return of reflected energy), whereas deeper objects appear farther

down the recording (more time elapsed). The time required for the EM pulse to traverse the path down to and back from the reflecting medium is measured in nanoseconds (one nanosecond = ($1x10^{-9}$ seconds). The two-way travel time is proportional to the depth of burial of the reflecting medium and is dependent on the dielectric properties of the medium through which the EM pulse travels. The dielectric properties of a medium are related to the moisture content and composition of a material. Figure 1 depicts the relationship between a single EM pulse generated by the controller and the resulting strip chart recording that would result from many such EM pulses.

The propagation velocity of the EM pulse is determined by the relative dielectric permittivity of the material (e_r) through which the pulse travels. The relative dielectric permittivity is a measure of the degree to which a medium can resist the flow of the EM pulse: the higher the relative permittivity, the lower the resistance to flow, and vice versa. For most earth materials and rocks, the relative dielectric permittivity does not exceed 10 and is always greater than unity, the value for a vacuum. Table 1 gives typical permittivity values for commonly encountered materials. The dielectric permittivity is related to the propagation velocity by the formula

$$e_r = \left(\frac{C}{V_m}\right)^2$$

where "c" is the propagation velocity in free space ($3x10^8$ meters per second or approximately 1 foot per nanosecond), and V_m is the propagation velocity through a material. It follows that

$$\sqrt{e_r} = \frac{C}{V_m}$$

or

$$\frac{1}{V_m} = \frac{e_r^2}{C}$$

Since c is approximately equal to 1 ft/ns, then

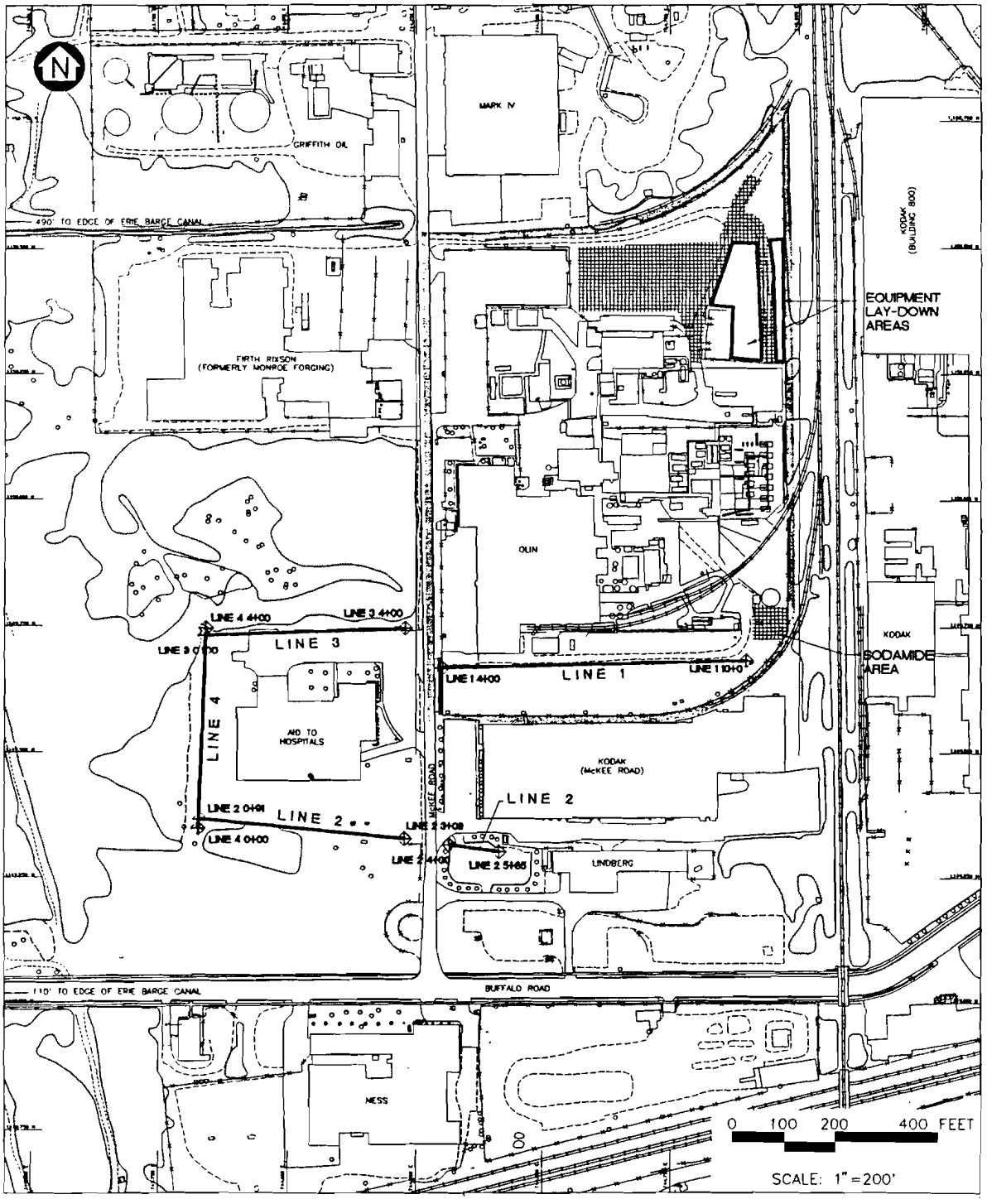
$$\frac{1}{V_m} \approx \sqrt{e_r}$$

where units are in ns/ft (one-way travel time). The last formula gives a method for estimating the propagation velocity for a medium (and therefore the depth to a reflecting horizon) if the soil conditions are known. If they are unknown or their properties cannot be estimated accurately enough, a reflector of known depth can often be used to calibrate the GPR recordings to site conditions.

TABLE 1
APPROXIMATE VHF ELECTROMAGNETIC PROPERTIES OF VARIOUS MATERIALS*

MATERIAL	RELATIVE DIELECTRIC PERMITTIVITY	PULSE VELOCITY (NS/FT)
AIR	1	1
FRESHWATER	81	9
SEAWATER	81	9
SAND (DRY)	4 to 6	2.0 to 2.4
SAND (SATURATED)	30	5.5
SILT (SATURATED)	10	3.1
CLAY (SATURATED)	8 to 12	2.8 to 3.3
AVERAGE "DIRT"	16	4.0
DRY SANDY COASTAL LAND	10	3.1
MARSHY FORESTED FLAT LAND	12	3.5
RICH AGRICULTURAL LAND	15	3.9
PASTORAL LAND, HILLY, FORESTED	13	3.6
FRESHWATER ICE	4	2.0
PERMAFROST	4 to 8	2.0 to 2.9
GRANITE (DRY)	5	2.2
LIMESTONE	7 to 9	2.6
CONCRETE	6.4	2.5
ASPHALT	3 to 5	1.7 to 2.5

*Modified from Geophysical Survey Systems, Inc.



LEGEND

- SEISMIC SURVEY TRAVERSE ENDPOINT EXPLORATION LOCATION
- GPR SURVEY AREA
- LINE 2 SEISMIC TRAVERSE LINE POSITION
- OUTLINE OF OLIN PROPERTY BOUNDARY

FIGURE 1

GEOPHYSICAL SURVEY LOCATIONS

OLIN CHEMICALS
PHASE I RI REPORT
ROCHESTER, N.Y.

J:\7311-04\FIG7 8-29-94 09:35

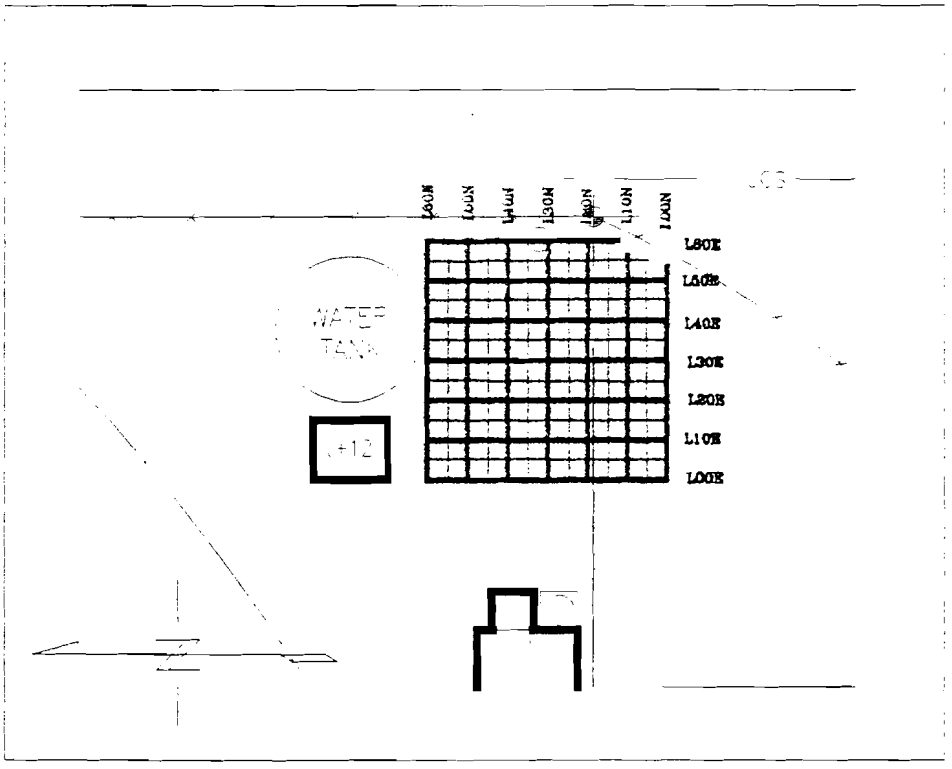
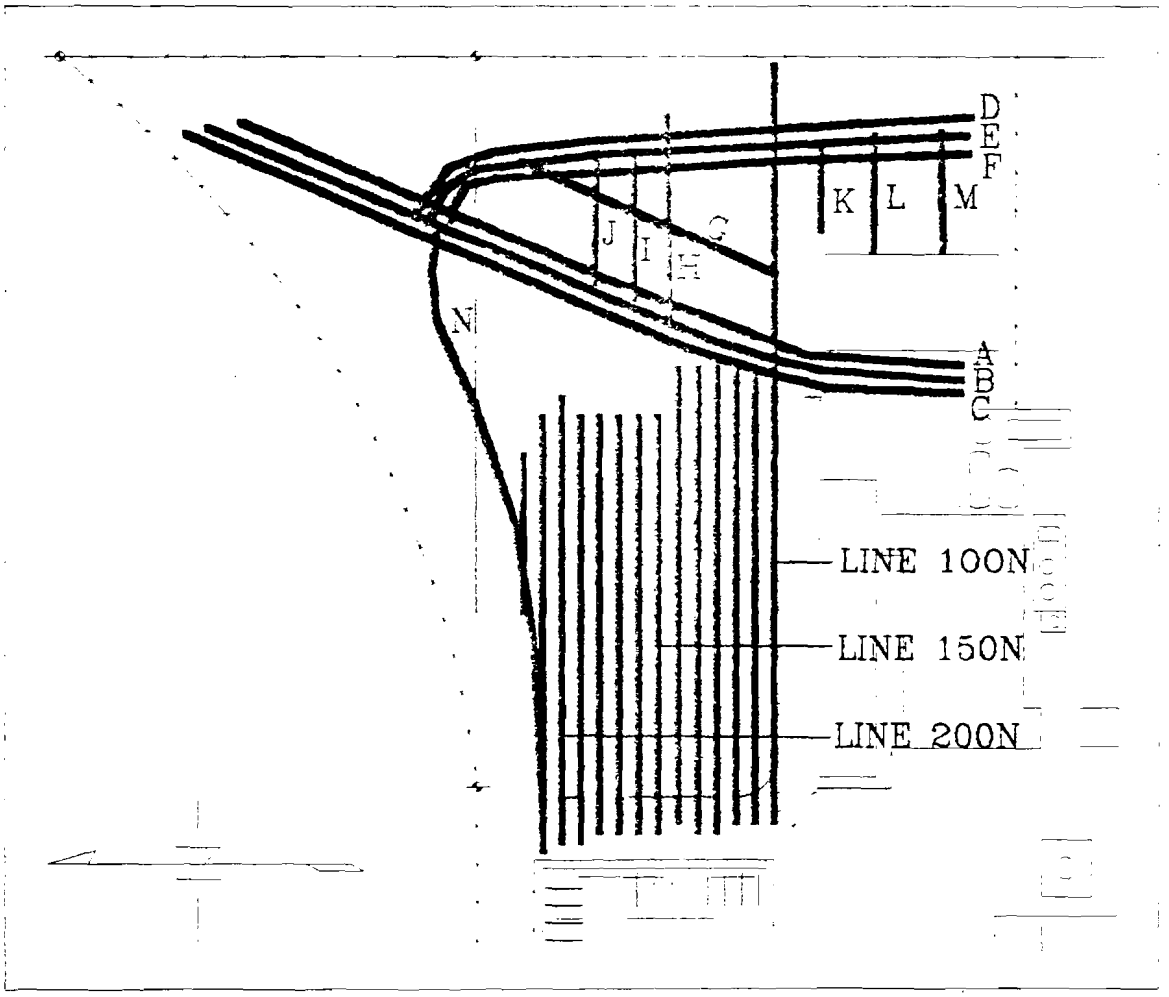


FIGURE 2

OLIN ROCHESTER
GROUND PENETRATING RADAR SURVEY SODAMIDE AREA
October 19, 1993
ABB Environmental Services, Inc.



Scale 1:1200

50 0 50 100

(feet)

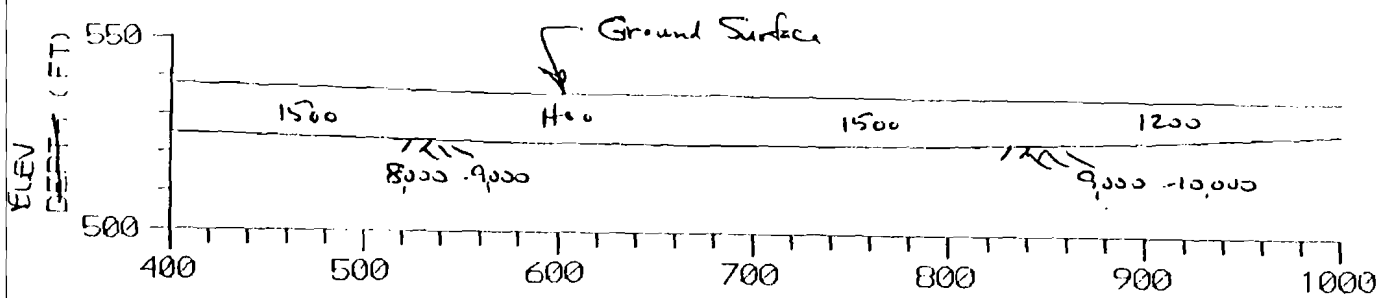
FIGURE 3

OLIN ROCHESTER

GROUND PENETRATING RADAR SURVEY
BONEYARD

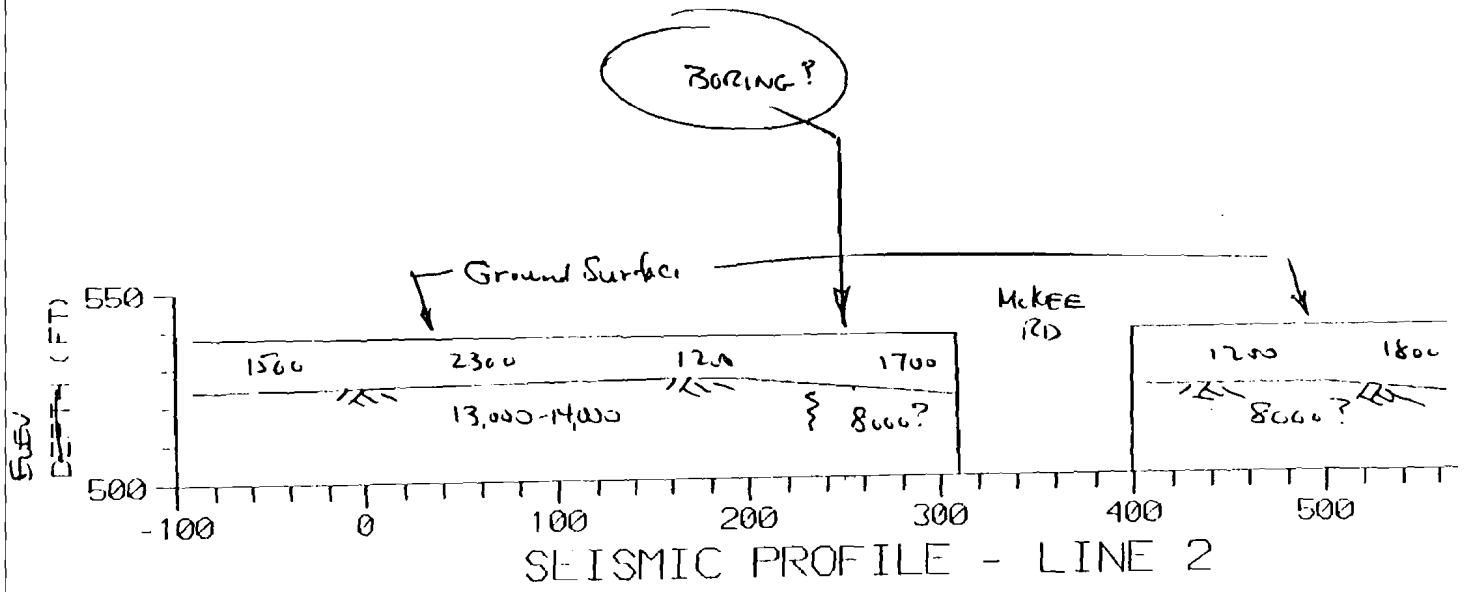
OCTOBER 20, 1993

ABB Environmental Services, Inc.



SEISMIC PROFILE - LINE 1

FIGURE 4



SEISMIC PROFILE - LINE 2

FIGUR

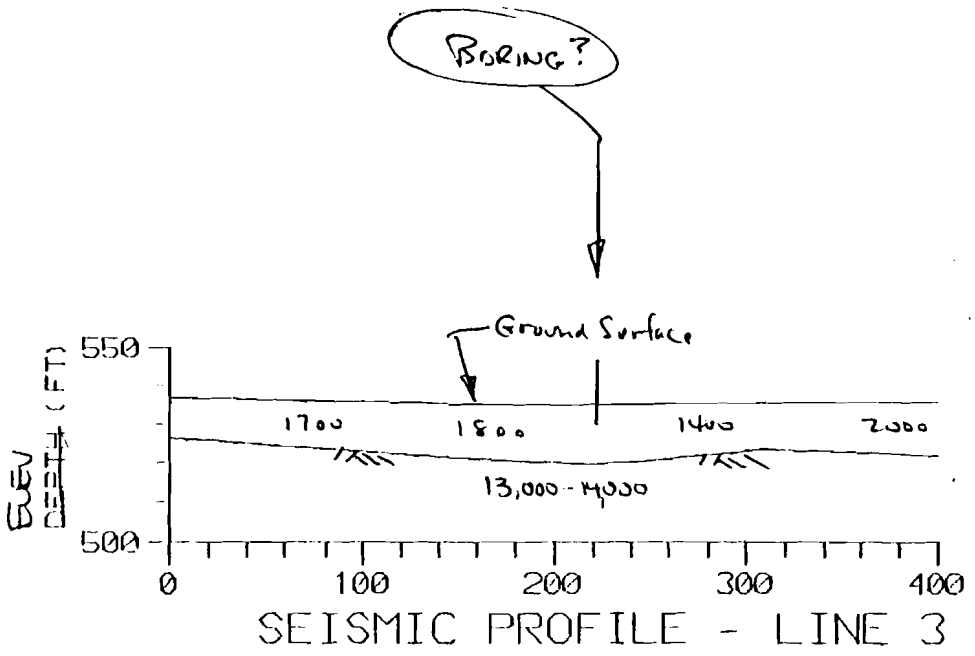
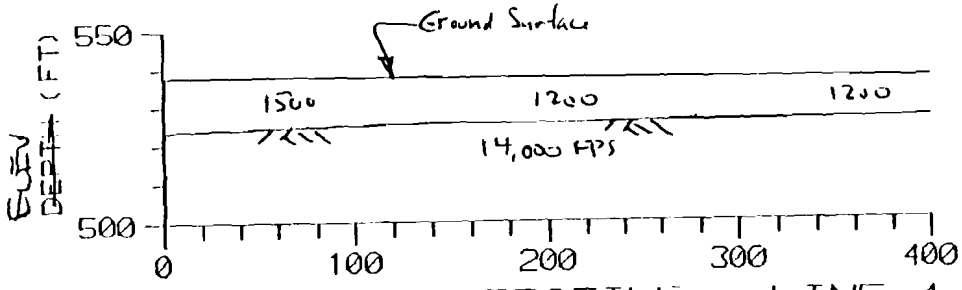

BORING?
Ground Surface
550
500
ELEV DEPTH (FT)
1700
1800
1400
2000
13,000 - 14,000
0
100
200
300
400
SEISMIC PROFILE - LINE 3

FIGURE 6



SEISMIC PROFILE - LINE 4

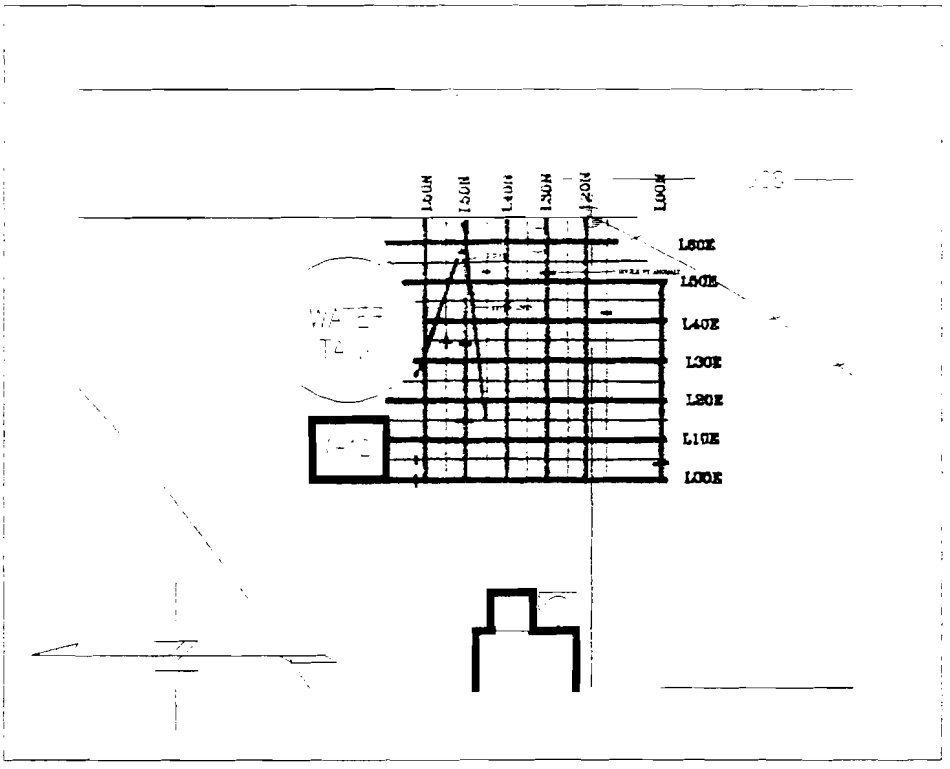


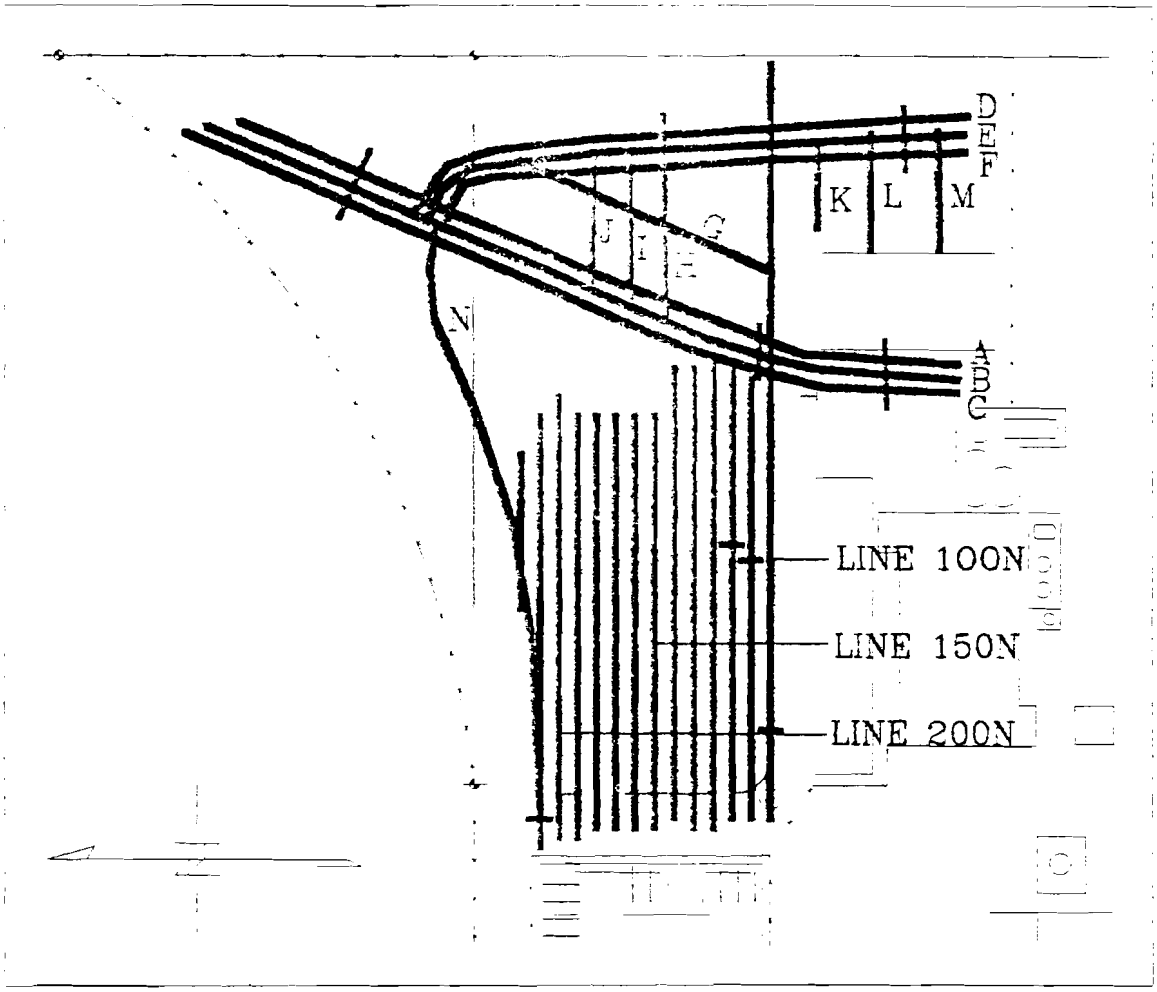
FIGURE 8

OLIN ROCHESTER

GROUND PENETRATING RADAR SURVEY
SODAMIDE AREA

October 19, 1993

ARB Environmental Services, Inc



Scale 1:1200

-50 0 50 100

(feet)

FIGURE 9

OLIN ROCHESTER

GROUND PENETRATING RADAR SURVEY
BONEYARD

OCTOBER 20, 1993

ABB Environmental Services, Inc.

A-2 SOIL BORING AND ROCK CORE LOGS

SOIL BORING LOG	BORING NO.: **BR-101**	PROJECT NO.: 7311-02	PAGE 1 OF 3
PROJECT NAME: OLIN ROCHESTER RI		DRILLING CONTRACTOR: MARCOR OF NEW YORK	
DRILL RIG TYPE: CANTERRA CT 350		DRILLER: R. SCHEFFER	DATE STARTED: 10/14/93 COMPLETED: 10/14/93
METHOD: HSA	AUGER SIZE: 4.25" I.D.	PID METER: 10.6 ev / FID METER: OVA-108	PROTECTION LEVEL: MOD D
GROUND ELEV.: 538.2	SOIL DRILLED: 15.5' FT.	ROCK DRILLED: CORE: 26.5' ROLLER BIT: 2.0'	TOTAL DEPTH: 44.0'
LOGGED BY: B. JOHNSON		CHECKED BY: NB	DATE: 9/6/94

DEPTH (FT.)	SAMPLE NUMBER	BLOWS PER 6-INCHES	PEN. / REC.	GRAPHIC LOG	SAMPLE DESCRIPTION	USCS CLASSIF.	MONITORING (PPM) PID	FID	OTHER
0									
1	S-1	18-14-5-6	2.0 / 0.5		0'-2.0' Brown and Gray Gravelly SAND, fine to medium, little Silt, trace coarse Sand, dry.	GP	0	1	
2									
3	S-2	3-2-3-3	2.0 / 2.0		2.0'-4.0' Dark Brown SILT, little fine Sand, trace Organics (rootlets and flakes), very soft, moist.	ML	0.6	300	
4									
5	S-3	1-4-5-7	2.0 / 2.0		4.0'-6.0' Dark Brown SILT, trace Organics, wet, some Gray spots and Red Silty fine Sand at 5.5'to 5.7'.	ML	1.0	300	
6									
7	S-4	2-4-7-7	2.0 / 1.2		6.0'-8.0' Brown Silty SAND, fine, little medium to coarse Sand, trace fine subrounded Gravel, saturated.	SM	1.0	50	
8									
9	S-5	3-6-9-10	2.0 / 1.3		8.0'-10.0' Similar to above, no Red horizon present.	SM	0	10	
10									
11	S-6	9-10-19-23	2.0 / 1.5		10.0-12.0'Similar to above, with little fine Gravel and coarse Sand.	SM	25	800	
12									
13	S-7	8-32-15-21	2.0 / 0.8		12.0'-14.0'Brown Silty SAND, fine, little coarse to medium Sand, fractured rock, saturated.	SM	5	250	
14									
15	S-8	5-8-50	2.0 / 0.5		14.0'-15.5'Brown SILT, little fine Sand, Some fractured Rock, saturated.	ML/GM	300	>10000	
					Refusal with augers at 15.5'				

ROCK CORE LOG	BORING NO.: **BR-101**	PROJECT NO.: 7311-03	PAGE 2 OF 3
PROJECT NAME: OLIN ROCHESTER RI		DRILLING CONTRACTOR: MARCOR OF NEW YORK	
DRILL RIG TYPE: CANTERRA CT-350		DRILLER: R. SCHEFFER	DATE STARTED: 11/01/93 COMPLETED: 11/02/93
METHOD: CORE	BIT SIZE: HQ (3.8" O.D.)	PID METER: 10.6 ev / FID METER: OVA-108	PROTECTION LEVEL: D
GROUND ELEV.: 538.2	SOIL DRILLED: 15.5 FT.	ROCK DRILLED: (CORED: 26.5' ROLLER BIT: 2.0')	TOTAL DEPTH: 44.0'
LOGGED BY: E. SHEPARD / N. BRETON		CHECKED BY: N B	DATE: 9/6/94

DEPTH (FT.)	RUN NO.	DRILLING RATE (FT/MIN)	PEN. REC.	RQD (%)	GRAPHIC LOG	CORE BREAKS TYPE	CORE BREAKS DIP	WEATHERED CONDITION	ROCK DESCRIPTION AND COMMENTS ON DRILLING	MONITORING PID	MONITORING FID
17									See soil boring log for BR-101 for soil descriptions from 0'-15.5'		
17.5									Roller cone drill from 15.5'to 17.5' Grout		
18	R-1	NA	1.5' / 1.5'	100		nat nat	0° 0°	slight slight	Light gray finely crystalline, medium bedded, DOLOMITE with interbedded shale. Lockport FM	652	200
19		3				nat nat	0° 0°	slight none		18	20
20		4				nat	0°	slight		1.4	20
21	R-2	4	5.0' / 4.5'	76		nat nat	30° 30°	moderate slight	Anastomosing shale stringers at 21.5' and 22.0'	21	50
22		4				nat	35°	moderate		52	20
23		6				nat	0°	slight		13	20
24		5							shale stringers and partings	0.7	15
25		5				nat	0°	slight		0.3	15
26	R-3	4	5.3' / 5.3'	94		nat nat	40° 0°	slight slight		0.7	20
27		4				nat	10°	slight	shale partings - 27.3'-27.9'	0	10
28		5				nat nat	0° 30°	moderate slight		0	10
29		5				nat	0°	slight		0	20
30	R-4	4	5.0' / 4.5'	69		nat mech	0°	slight		0	20
31		5				nat nat mech	0° 0°	slight slight	shale stringers and partings - 30.2' - 32.3' (occasionally anastamosing)	0.6	10

ROCK CORE LOG	BORING NO.: **BR-101**	PROJECT NO.: 7311-03	PAGE 3 OF 3
PROJECT NAME: OLIN ROCHESTER RI		DRILLING CONTRACTOR: MARCOR OF NEW YORK	
DRILL RIG TYPE: CANTERRA CT-350		DRILLER: R. SCHEFFER	DATE STARTED: 11/01/93 COMPLETED: 11/02/93
METHOD: CORE	BIT SIZE: HQ (3.8" O.D.)	PID METER: 10.6 ev	FID METER: OVA-108	PROTECTION LEVEL: D
GROUND ELEV.: 538.2	SOIL DRILLED: 15.5 FT.	ROCK DRILLED: (CORED: 26.5' ROLLER BIT: 2.0')	TOTAL DEPTH: 44.0'
LOGGED BY: E. SHEPARD / N. BRETON		CHECKED BY: NB	DATE: 9/6/94

DEPTH (FT.)	RUN NO.	DRILLING RATE (FT/MIN)	PEN. REC.	RQD (%)	GRAPHIC LOG	CORE BREAKS TYPE	CORE BREAKS DIP	WEATHERED CONDITION	ROCK DESCRIPTION AND COMMENTS ON DRILLING	MONITORING PID	MONITORING FID
32											
	R-4	5	5.0 / 4.5	69		nat	0°	slight	Light gray finely crystalline, medium bedded, DOLOMITE with interbedded shale.	1.7	20
33						nat	0°	slight			
		4				nat	0°	slight	Lockport FM Shale stringers at 33.5'- 34.0' (anastamosing)	0	20
34											
		5								10	20
35											
		4				nat mech	10°	slight		7.6	20
36											
	R-5	5	5.0 / 5.0	98						10	50
37											
		4								1.7	20
38											
		4				mech mech				0.6	20
39											
		4							Slightly porous w/ pits < 0.5 mm in size.	0.7	10
40											
		3				nat	0°	slight		1.7	10
41											
	R-6	3	5.0 / 3.2	64						0.7	10
42						nat nat	0° 0°	slight slight			
		4				nat	0°	slight		1.0	10
43											
		4								0.6	10
44											
45									End of boring at 44.0' below ground surface.		
									Note: Lost approximately 1700 gallons of drilling water to formation during coring.		
46									nat - Interpreted natural break or fracture		
47									mech - Interpreted mechanical break		
48											

SOIL BORING LOG	BORING NO.: **BR-102**	PROJECT NO.: 7311-02	PAGE 1 OF 5
PROJECT NAME: OLIN ROCHESTER RI		DRILLING CONTRACTOR: MARCOR OF NEW YORK	
DRILL RIG TYPE: CANTERRA CT 350		DRILLER: R. SCHEFFER	DATE STARTED: 10/13/93 COMPLETED: 10/13/93
METHOD: HSA	AUGER SIZE: 4.25" I.D.	PID METER: 10.6 ev FID METER: OVA-108	PROTECTION LEVEL: MOD D
GROUND ELEV.: 540.2	SOIL DRILLED: 20.2 FT.	ROCK DRILLED: CORE: 32.0' ROLLER BIT: 1.8'	TOTAL DEPTH: 54.0'
LOGGED BY: B. JOHNSON		CHECKED BY: NB	DATE: 9/6/94

DEPTH (FT.)	SAMPLE NUMBER	BLOWS PER 6-INCHES	PEN. / REC.	GRAPHIC LOG	SAMPLE DESCRIPTION	USCS CLASSIF.	MONITORING (PPM) PID	FID	OTHER
0					Auger without sampling to 1.0'; Asphalt from 0.0' to 0.3'.				
1					1.0'-2.0' Red/brown, sandy SILT; fine, trace coarse and medium Sand, moist, dense.	ML	0	3	
2	S-1	7-9-10-24	2.0 / 1.3						
3					3.0'-5.0' Red/brown, SILT, some fine Sand, little to trace fine Gravel (subrounded), trace medium Sand, trace clay, dry to moist	ML	0	2	
4	S-2	17-22-23-45	2.0 / 2.0						
5					5.0'-7.5' Similar to above with thin (< 0.1") silty fine Sand layers, moist	ML	0	0	
6	S-3	11-17-27-33	2.0 / 1.2						
7					7.5'-8.3' Red/brown, silty fine SAND, trace medium to coarse Sand, saturated at tip of spoon,	SM	0	0	
8	S-4	9-20-50┐ (for 0.3')	1.3 / 0.8		8.3'-9.0' No sampling; Auger through cobble size material to 9.0'	GM			
9					9.0'-11.0' Red/brown SAND, fine, some coarse to fine gravel, little to trace Silt, saturated voids in fine sandy material.	GP	0	0	
10	S-5	17-50-61-43	2.0 / 1.0						
11					11.0'-12.8' Light brown, fine SAND, little to trace Silt, trace coarse Gravel and medium to coarse Sand, Saturated	SP	0	0	
12	S-6	12-21-30-50┐ (for 0.3')	1.8 / 1.0		12.8'-13.0' No sampling; Auger through cobble size material	GP			
13					13.0'-15.0' Light brown SAND, fine, some fine to coarse Gravel, little silt, trace medium to coarse Sand, Saturated	SW	0	1.0	
14	S-7	8-21-28-28	2.0 / 1.0						
15									
	S-8								

SOIL BORING LOG	BORING NO.: **BR-102**	PROJECT NO.: 7311-02	PAGE 2 OF 5

PROJECT NAME: OLIN ROCHESTER RI		DRILLING CONTRACTOR: MARCOR OF NEW YORK	
DRILL RIG TYPE: CANTERRA CT 350		DRILLER: R. SCHEFFER	DATE STARTED: 10/13/93 COMPLETED: 10/13/93
METHOD: HSA	AUGER SIZE: 4.25" I.D.	PID METER: 10.6 ev / FID METER: OVA-108	PROTECTION LEVEL: MOD D
GROUND ELEV.: 540.2	SOIL DRILLED: 20.2 FT.	ROCK DRILLED: CORE: 32.0' ROLLER BIT: 1.8'	TOTAL DEPTH: 54.0'
LOGGED BY: B. JOHNSON		CHECKED BY: NB	DATE: 9/6/94

DEPTH (FT.)	SAMPLE NUMBER	BLOWS PER 6-INCHES	PEN. / REC.	GRAPHIC LOG	SAMPLE DESCRIPTION	USCS CLASSIF.	MONITORING (PPM) PID	FID	OTHER
16	S-8	8-18-21-27	2.0 / 1.2		15.0'-17.0' Light brown gravelly SAND, fine to medium, saturated	GP	0	0	
17					17.0'-19.0' Brown SAND, fine to coarse, little to some fine to coarse Gravel, trace Silt, saturated (Note: primary water bearing material appears to be fine to medium Sand at 18.5')	SW	0	0	
18	S-9	15-27-32-50	2.0 / 1.7						
19					19.0'-19.9' Brown gravelly SAND, fine to coarse, trace to little Silt, saturated	GW	0	0	
20	S-10	15-50/ (for 0.4')	0.9 / 0.7		19.9'-20.2' No sampling; Auger past spoon refusal depth into bedrock				
21					Refusal with augers at 20.2' below ground surface				

ROCK CORE LOG	BORING NO.: **BR-102**	PROJECT NO.: 7311-02	PAGE 3 OF 5
PROJECT NAME: OLIN ROCHESTER RI		DRILLING CONTRACTOR: MARCOR OF NEW YORK	
DRILL RIG TYPE: CANTERRA CT-350		DRILLER: R. SCHEFFER	DATE STARTED: 11/03/93 COMPLETED: 11/03/93
METHOD: CORE	BIT SIZE: HQ (3.8" O.D.)	PID METER: 10.6 ev	FID METER: OVA-108	PROTECTION LEVEL: D
GROUND ELEV.: 540.2	SOIL DRILLED: 20.0 FT.	ROCK DRILLED: (CORED: 32.0' ROLLER BIT: 2.0')	TOTAL DEPTH: 54.0'
LOGGED BY: E. SHEPARD / N. BRETON		CHECKED BY: NB	DATE: 9/6/94

DEPTH (FT.)	RUN NO.	DRILLING RATE (FT/MIN)	PEN. / REC.	RQD (%)	GRAPHIC LOG	CORE BREAKS TYPE	CORE BREAKS DIP	WEATHERED CONDITION	ROCK DESCRIPTION AND COMMENTS ON DRILLING	MONITORING PID	MONITORING FID
21									See soil boring log for BR-102 for soil descriptions from 0'-20'. Roller cone drill from 20.0'to 22.0' Grout		
22		5	2.0 / 1.9'	88		nat nat	0 5°	moderate moderate	Light gray finely crystalline, medium bedded, DOLOMITE with interbedded shale. Lockport FM	0	10
23	R-1	5				nat	0°	slight	22.5' - 23.0' - Shale stringers (anastamosing)	0	18
24		5				nat mech nat	0° 0°	slight moderate	Mostly uneven bedding throughout Run # R-2. Occasional partings	0	18
25		5								0	10
26						nat	0°	moderate			
27	R-2	4	5.0' / 4.3'	66		nat	0°	slight		0	20
		5				nat	0°	slight	27.7' - Shale parting	0	20
28						nat	0°	slight			
29		5								0	30
30		5				nat nat	10° 0°	none none	Subhorizontal; more evenly bedded (29.0' - 30.3')	0 0	15 20
31	R-3	5	5.0' / 4.8'	80		nat	0°	slight	Mostly uneven laminae until 36.2'. Anastamosing shale stringers common.	0	18
32						nat mech	0°	slight			
33		4				nat	0°	slight		0	15
34		4				nat mech	0°/ 90°	slight		0	8
35	R-4	4	5.0' / 4.5'	64		nat nat	0° 0°	slight slight		0	8
		4				nat	0°	slight		0	10

ROCK CORE LOG	BORING NO.: **BR-102**	PROJECT NO.: 7311-02	PAGE 4 OF 5

PROJECT NAME: OLIN ROCHESTER RI	DRILLING CONTRACTOR: MARCOR OF NEW YORK
DRILL RIG TYPE: CANTERRA CT-350	DRILLER: R. SCHEFFER — DATE STARTED: 11/03/93 COMPLETED: 11/03/93
METHOD: CORE — BIT SIZE: HQ (3.8" O.D.)	PID METER: 10.6 ev — FID METER: OVA-108 — PROTECTION LEVEL: D
GROUND ELEV.: 540.2 — SOIL DRILLED: 20.0 FT.	ROCK DRILLED: (CORED: 32.0' ROLLER BIT: 2.0') — TOTAL DEPTH: 54.0'
LOGGED BY: E. SHEPARD / N. BRETON	CHECKED BY: NB — DATE: 9/6/94

DEPTH (FT.)	RUN NO.	DRILLING RATE (FT/MIN)	PEN. REC.	RQD (%)	GRAPHIC LOG	CORE BREAKS TYPE	CORE BREAKS DIP	WEATHERED CONDITION	ROCK DESCRIPTION AND COMMENTS ON DRILLING	MONITORING PID	MONITORING FID
36		5				mech			Light gray finely crystalline, medium bedded, DOLOMITE with interbedded shale. Lockport FM.	0	15
37						nat	0°	none			
		4	5.0'			nat	0°	slight		0	10
	R-4		—	64							
38			4.5'			nat	0°	slight			
						nat	0°	moderate			
		4				nat	0°	slight	Mostly even bedded laminations (36.2' - 38.2')	0	5
39						nat	0°	slight			
		5							Subhorizontal fractures along shale partings.	0	0
40						nat	0°	slight			
						nat	0°	slight			
		5							Highly fractured (40.1' - 41.0')	0	0
41						nat	0°	slight			
			5.0'						Occasional shale stringers (41.1' - 42.5')		
	R-5	5	—	78						0	5
42			4.9'								
						nat	0°	slight			
		4								0	8
43						nat	5°	none			
						nat	5°	none			
		5								0	0
44						nat	0°	slight			
		3							Mostly even bedding (44.0' - 49.0') in Run # R-6. Fewer shale stringers	0	10
45						nat	0°	slight			
						nat	45°	none			
		4								0	8
46						nat	5°	slight			
			5.0'			nat	0°	none	Shale parting zone (46.2' - 46.3')		
	R-6	4	—	84						0	8
			4.9'			nat	0°	slight			
47											
		5								0	5
						nat	0°	slight			
48						nat	0°	slight			
						nat	0°	slight			
		3				nat	0°	slight		0	10
						nat	0°	slight			
49											
		3								0	8
50						nat	0°	none	Vugs (< 5 mm in size) with possible gypsum mineralization (50.7' - 50.8')		
		4				nat	0°	slight		0	10
			5.0'								
51	R-7		—	86					Fracture along 5 to 10 mm size vug (51.7')		
			4.8'			nat	0°	slight			
		4				nat	45°	slight		0	8

ROCK CORE LOG	BORING NO.: **BR-102**	PROJECT NO.: 7311-02	PAGE 5 OF 5

PROJECT NAME: OLIN ROCHESTER RI		DRILLING CONTRACTOR: MARCOR OF NEW YORK	
DRILL RIG TYPE: CANTERRA CT-350		DRILLER: R. SCHEFFER	DATE STARTED: 11/03/93 COMPLETED: 11/03/93
METHOD: CORE	BIT SIZE: HQ (3.8" O.D.)	PID METER: 10.6 ev / FID METER: OVA-108	PROTECTION LEVEL: D
GROUND ELEV.: 540.2	SOIL DRILLED: 20.0 FT.	ROCK DRILLED: (CORED: 32.0' ROLLER BIT: 2.0')	TOTAL DEPTH: 54.0'
LOGGED BY: E. SHEPARD / N. BRETON		CHECKED BY: NB	DATE: 9/6/94

DEPTH (FT.)	RUN NO.	DRILLING RATE (FT/MIN)	PEN. REC.	RQD (%)	GRAPHIC LOG	CORE BREAKS TYPE	CORE BREAKS DIP	WEATHERED CONDITION	ROCK DESCRIPTION AND COMMENTS ON DRILLING	MONITORING PID	MONITORING FID
52		4				nat	0°	slight	Light gray finely crystalline,		
			5.0'			nat	0°	slight	medium bedded, DOLOMITE with	0	8
53	R-7		—	86					interbedded shale.		
			4.8'			nat	0°	slight	Lockport FM.		
		3								0	8
						mech					
54									End of boring at 54.0' below ground surface.		

Note:
Approximately 1400 gallons of water used during coring.

nat - Interpreted natural fracture or break

mech - Interpreted mechanical break

ROCK CORE LOG	BORING NO.: **BR-103**	PROJECT NO.: 7311-03	PAGE 1 OF 3
PROJECT NAME: OLIN ROCHESTER RI		DRILLING CONTRACTOR: MARCOR OF NEW YORK	
DRILL RIG TYPE: CANTERRA CT-350		DRILLER: R. SCHEFFER	DATE STARTED: 11/15/93 COMPLETED: 11/16/93
METHOD: CORE	BIT SIZE: HQ (3.8" O.D.)	PID METER: 10.6 ev / FID METER: OVA-108	PROTECTION LEVEL: D
GROUND ELEV.: 533.19	SOIL DRILLED: 10.8 FT.	ROCK DRILLED: (CORED: 32.2' ROLLER BIT: 2.0')	TOTAL DEPTH: 45.0'
LOGGED BY: E. SHEPARD / N. BRETON		CHECKED BY: NB	DATE: 9/6/94

DEPTH (FT.)	RUN NO.	DRILLING RATE (FT/MIN)	PEN. REC.	RQD (%)	GRAPHIC LOG	CORE BREAKS TYPE	CORE BREAKS DIP	WEATHERED CONDITION	ROCK DESCRIPTION AND COMMENTS ON DRILLING	MONITORING PID	MONITORING FID
12									See boring log for MW-103 for soil descriptions from 0' - 10.8'. Roller cone drill from 10.8'to 12.8' Grout		
13		4				nat	30°	slight	Light gray finely crystalline, medium bedded, DOLOMITE with interbedded shale. Lockport FM	0	0
		4	2.2 / 2.2	69		nat	0°	slight		0	0
14	R-1					mech					
						nat	0°	slight			
		1				mech				0	0
15						mech			14.8' - 15.2' - Vugs up to 1 cm size.		
						nat	20°	slight			
		4				mech				0	0
16						nat	10°	slight			
						nat	0°	slight			
		5				nat	0°	slight		0	0
						nat	0°	slight			
17						nat	0°	slight	16.3' - 18.0' - Shale stringers and partings; uneven bedding		
			5.0			mech					
	R-2	5	/	60		nat	0°	slight		0	0
			4.9			mech					
18						nat	0°	slight	18.2' 18.6' - Shale stringers		
		4				nat	0°	slight		0	0
19						mech					
		4								0	0
20						nat	20°	slight			
		4								0	0
21						nat	40°	slight	19.5' - 22.5' - Numerous shale stringers; uneven bedding		
		5				nat	0°	slight		0	0
22						mech					
			5.1			nat	0°	slight			
	R-3	4	/	70						0	0
			5.0			nat	0°	slight			
23						mech					
		4				mech				0	0
24						nat	0°	slight	22.5' - 25.0' More even bedding; some shale stringers		
						nat	0°	slight			
		4				nat	60°	slight		0	0
25						nat	0°	slight			
						mech					
		4				nat	0°	slight		6.0	40
			5.0			nat	0°	slight			
26	R-4		/	62		mech					
			4.7			mech					
						nat	10°	moderate			
		4				nat	0°	slight		3.6	20

ROCK CORE LOG	BORING NO.: **BR-103**	PROJECT NO.: 7311-03	PAGE 2 OF 3

PROJECT NAME: OLIN ROCHESTER RI		DRILLING CONTRACTOR: MARCOR OF NEW YORK	
DRILL RIG TYPE: CANTERRA CT-350		DRILLER: R. SCHEFFER	DATE STARTED: 11/15/93 COMPLETED: 11/16/93
METHOD: CORE	BIT SIZE: HQ (3.8" O.D.)	PID METER: 10.6 ev	FID METER: OVA-108 / PROTECTION LEVEL: D
GROUND ELEV.: 533.19	SOIL DRILLED: 10.8 FT.	ROCK DRILLED: (CORED: 32.2' ROLLER BIT: 2.0')	TOTAL DEPTH: 45.0'
LOGGED BY: E. SHEPARD / N. BRETON		CHECKED BY: NB	DATE: 9/6/94

DEPTH (FT.)	RUN NO.	DRILLING RATE (FT/MIN)	PEN. / REC.	RQD (%)	GRAPHIC LOG	CORE BREAKS TYPE	CORE BREAKS DIP	WEATHERED CONDITION	ROCK DESCRIPTION AND COMMENTS ON DRILLING	MONITORING PID	MONITORING FID
28		4				nat	10°	slight	Light gray finely crystalline, medium bedded, DOLOMITE with interbedded shale.		
						mech					
						nat	0°	slight			
			5.0			nat	0°	slight	Lockport FM		
	R-4	5	—	62		nat	0°	moderate			
29			4.7						28.7' Weathered fracture along shale parting		
						mech					
		4									
30						mech					
		5									
31						nat	0°	slight			
						mech					
		4	4.0								
32	R-5		—	60		nat	0°	moderate			
		4	3.9								
33						mech					
						mech					
		4				mech					
34						mech					
		10							33.0' - 35.5' Mostly mechanical breaks		
35						mech					
						mech			Mostly even bedding to end of boring.		
		10							↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓		
36						mech					
		10									
			6.0								
37	R-6		—	80							
		15	5.6								
38						nat	0°	slight			
		10				mech					
						nat	0°	slight			
39											
		10									
40						mech					
		10									
41						mech					
			5.4								
	R-7	0	—	94		nat	0°	slight			
42			5.0								
						nat	0°	slight			
		10									

ROCK CORE LOG	BORING NO.: **BR-103**	PROJECT NO.: 7311-03	PAGE 3 OF 3

PROJECT NAME: OLIN ROCHESTER RI		DRILLING CONTRACTOR: MARCOR OF NEW YORK	
DRILL RIG TYPE: CANTERRA CT-350		DRILLER: R. SCHEFFER	DATE STARTED: 11/15/93 COMPLETED: 11/16/93
METHOD: CORE	BIT SIZE: HQ (3.8" O.D.)	PID METER: 10.6 ev / FID METER: OVA-108	PROTECTION LEVEL: D
GROUND ELEV.: 533.19	SOIL DRILLED: 10.8 FT.	ROCK DRILLED: (CORED: 32.2' ROLLER BIT: 2.0')	TOTAL DEPTH: 45.0'
LOGGED BY: E. SHEPARD / N. BRETON		CHECKED BY: NB	DATE: 9/6/94

DEPTH (FT.)	RUN NO.	DRILLING RATE (FT/MIN)	PEN. / REC.	RQD (%)	GRAPHIC LOG	CORE BREAKS TYPE	CORE BREAKS DIP	WEATHERED CONDITION	ROCK DESCRIPTION AND COMMENTS ON DRILLING	MONITORING PID	MONITORING FID
43											
		10	5.4			nat	0°	slight	Light gray finely crystalline,		
						nat	0°	slight	medium bedded, DOLOMITE with		
44	R-7		—	94		nat	40°	slight	interbedded shale.		
		0	5.0						Lockport FM		
						nat	0°	slight			
45									End of boring at 45.0' below ground surface		
									Note: Lost 450 gallons of water during rock coring.		
									nat - Interpreted natural core break		
									mech Interpreted mechanical core break		

SOIL BORING LOG	BORING NO.: **MW-104/BR-104**	PROJECT NO.: 7311-02	PAGE 1 OF 4
PROJECT NAME: OLIN ROCHESTER RI		DRILLING CONTRACTOR: MARCOR OF NEW YORK	
DRILL RIG TYPE: CANTERRA CT 350		DRILLER: R. SCHEFFER	DATE STARTED: 12/21/93 COMPLETED: 1/4/94
METHOD: HSA/DR.& WASH	AUGER SIZE: 4.25" I.D.	PID METER: 10.6 ev	FID METER: OVA-108 / PROTECTION LEVEL: MOD D
GROUND ELEV.: 537.5	SOIL DRILLED: 18.6' FT.	ROCK DRILLED: CORE: 19.2' ROLLER BIT: 2.0'	TOTAL DEPTH: 39.8'
LOGGED BY: E. SHEPHARD		CHECKED BY: NB.	DATE: 9/6/94

DEPTH (FT.)	SAMPLE NUMBER	BLOWS PER 6-INCHES	PEN. / REC.	GRAPHIC LOG	SAMPLE DESCRIPTION	USCS CLASSIF.	MONITORING (PPM) PID	FID	OTHER
0					NOTE: Soil data from 2'-8.5' from MW-104 Soil data from 8.5'-18.6' from BR-104.				
1					0.0'-2.0' Auger through gravel drive, no sample taken.				
2									
3	S-1	4-4-8-22	2.0 / 1.0		2.0'-2.3' Black to Dark Brown SAND, coarse, some Gravel, moist. 2.3'-3.0' Light Brown SAND, fine, some Silt, moist.	GW SM	0	0	
4									
5	S-2	4-4-29-32	2.0 / 1.5		4.0'-4.4' Similar to above 4.4'-5.5' Reddish Brown to orange brown SAND, medium to coarse, little to some Silt, trace Gravel.	SM SM	0	0	
6									
7	S-3	12-24-32-44	2.0 / 1.3		6.0'-6.7' Similar to above. 6.7'-7.3' Reddish Brown SAND, fine, little to some Silt.	SM SM	0	0	
8									
9	S-4	50/0.5'	0.5' / 0.5'		8.0'-8.5' Similar to above. Hit refusal at 8.5' on boulder; Continued soil sampling at BR-104 (see below)	SM	0	0	
10					- Augered w/o sampling from 0' to 10' in BR-104. Sampling continued from 10'.				
11	S-5	11-20-26-27	2.0 / 1.7		10.0'-12.0' Light Brown SAND, fine to medium, little to some Silt.	SM	0	0	
12									
13	S-6	6-7-15-26	2.0 / 1.7		12.0'-14.0' Light Brown SAND, fine, some Silt, wet.	SM	0	0	
14									
15	S-7	14-24-38-25	2.0 / 1.2		14.0'-14.4' Similar to above. 14.0'-14.9' Brown SAND, coarse, little Silt, trace Gravel. 14.9'-15.2' Brown SAND, medium to coarse.	SM SP SW	0	0	

SOIL BORING LOG	BORING NO.: **BR-104/MW-104**	PROJECT NO.: 7311-03	PAGE 2 OF 4

PROJECT NAME: OLIN ROCHESTER RI		DRILLING CONTRACTOR: MARCOR OF NEW YORK	
DRILL RIG TYPE: CANTERRA CT 350		DRILLER: R. SCHEFFER	DATE STARTED: 10/26/93 COMPLETED: 1/4/94
METHOD: HSA	AUGER SIZE: 4.25" I.D.	PID METER: 10.6 ev / FID METER: OVA-108	PROTECTION LEVEL: MOD D
GROUND ELEV.: 537.5	SOIL DRILLED: 18.6'	ROCK DRILLED:CORE: 19.2' ROLLER BIT: 2.0'	TOTAL DEPTH: 39.8'
LOGGED BY: E. SHEPHARD		CHECKED BY: N.B.	DATE: 9/6/94

DEPTH (FT.)	SAMPLE NUMBER	BLOWS PER 6-INCHES	PEN. / REC.	GRAPHIC LOG	SAMPLE DESCRIPTION	USCS CLASSIF.	MONITORING PID	MONITORING FID	MONITORING OTHER
16									
17	S-8	25-17-38-32	2.0 / 1.5		16.0'-18.0' Similar to above.	SW	NA	NA	
18									
18.8					Refusal with augers at 18.8' Water encountered at 9.4' Remainder of boring cored (see rock core log for BR-104)				

ROCK CORE LOG	BORING NO.: **BR-104**	PROJECT NO.: 7311-03	PAGE 3 OF 4

PROJECT NAME: OLIN ROCHESTER RI		DRILLING CONTRACTOR: MARCOR OF NEW YORK	
DRILL RIG TYPE: CANTERRA CT-350		DRILLER: R. SCHEFFER	DATE STARTED: 01/12/94 COMPLETED: 01/12/94
METHOD: CORE	BIT SIZE: HQ (3.8" O.D.)	PID METER: 10.6 ev / FID METER: OVA-108	PROTECTION LEVEL: D
GROUND ELEV.: 537.56	SOIL DRILLED: 18.6 FT.	ROCK DRILLED: (CORED: 19.2' ROLLER BIT: 2.0')	TOTAL DEPTH: 39.8'
LOGGED BY: E. SHEPARD / N. BRETON		CHECKED BY: NB	DATE: 9/6/94

DEPTH (FT.)	RUN NO.	DRILLING RATE (FT/MIN)	PEN. / REC.	RQD (%)	GRAPHIC LOG	CORE BREAKS TYPE	CORE BREAKS DIP	WEATHERED CONDITION	ROCK DESCRIPTION AND COMMENTS ON DRILLING	MONITORING PID	MONITORING FID
19									See soil boring log for MW/BR-104 for soil descriptions from 0'-18.6'		
									Roller cone drill from 18.6'- 20.6'		
20									Grout		
21						nat	90°	slight			
		4				nat	0°	slight	Light gray finely crystalline, medium bedded, DOLOMITE with interbedded shale.	0	20
22						nat	0°	slight	Lockport FM		
		3				nat	0°	slight	20.8' - 0.2' long fracture at rock surface	6.7	100
23						nat	15°	slight	- 22.8' - Fracture along shale parting		
		3				nat	0°	slight		5.0	60
24						nat	0°	slight			
		4							- 24.6' - 1" size vug showing possible gypsum mineralizaton	0	20
25	R-1		9.0 / 8.3	88		nat	0°	moderate	24.8' - 0.5" size vug		
		3								0	20
26						mech			Note: Little to no fractures from 25' to 28'; anastamosing shale stringers present		
		3								0	20
27											
		3							- 27.5' - 0.7" size vug	13	100
28						nat	0°	slight	- 28.2' - Fracture along shale parting		
		3								0	100
29						nat	0°	slight			
		3								0	50
30											
		3				nat	0°	moderate	- 30.5'-30.8' - Fractures along shale partings	0	50
31						nat	0°	moderate			
		3	10.1 / 10.0	90		nat	0°	slight		0	50
32	R-2					nat	0°	slight	Note: Mostly uneven bedding from 29.8' to 36.8'		
		3				nat	0°	slight		0	0
33											
		3				nat	0°	slight		0	0

ROCK CORE LOG	BORING NO.: **BR-104**	PROJECT NO.: 7311-03	PAGE 4 OF 4

PROJECT NAME: OLIN ROCHESTER RI		DRILLING CONTRACTOR: MARCOR OF NEW YORK	
DRILL RIG TYPE: CANTERRA CT-350		DRILLER: R. SCHEFFER	DATE STARTED: 01/12/93 COMPLETED: 01/12/93
METHOD: CORE	BIT SIZE: HQ (3.8" O.D.)	PID METER: 10.6 ev / FID METER: OVA-108	PROTECTION LEVEL: D
GROUND ELEV.: 537.56	SOIL DRILLED: 18.6 FT.	ROCK DRILLED: (CORED: 19.2' ROLLER BIT: 2.0')	TOTAL DEPTH: 39.8'
LOGGED BY: E. SHEPARD / N. BRETON		CHECKED BY: NB	DATE: 9/6/94

DEPTH (FT.)	RUN NO.	DRILLING RATE (FT/MIN)	PEN. REC.	RQD (%)	GRAPHIC LOG	CORE BREAKS TYPE	CORE BREAKS DIP	WEATHERED CONDITION	ROCK DESCRIPTION AND COMMENTS ON DRILLING	MONITORING PID	MONITORING FID
34		3				nat	0°	slight	Light gray finely crystalline, medium bedded, DOLOMITE with interbedded shale.	0	0
35									Lockport FM		
		3								0	0
36						nat	0°	slight			
		3								0	0
37	R-2		10.1 / 10.0	90					- 36.8' - 39.8' - More even bedding with fewer shale stringers than above.		
		3				nat	0°	slight		0	0
38									- 37.7' - Shale parting		
		3				mech			- 38.3' - Shale partings	0	0
39						mech nat nat	10° 10°	slight slight			
		3				mech				0	0
40									End of boring at 39.8' below ground surface Note: Lost 800 gallons of water during rock coring. nat - Interpreted natural core break mech Interpreted mechanical core break		

ROCK CORE LOG	BORING NO.: **BR-105**	PROJECT NO.: 7311-03	PAGE 1 OF 2
PROJECT NAME: OLIN ROCHESTER RI		DRILLING CONTRACTOR: MARCOR OF NEW YORK	
DRILL RIG TYPE: CANTERRA CT-350		DRILLER: R. SCHEFFER	DATE STARTED: 12/06/93 COMPLETED: 12/06/93
METHOD: CORE	BIT SIZE: HQ (3.8" O.D.)	PID METER: 10.6 ev	FID METER: OVA-108	PROTECTION LEVEL: D
GROUND ELEV.: 536.9	SOIL DRILLED: 15.0 FT.	ROCK DRILLED: (CORED: 25.5' ROLLER BIT: 5.0')	TOTAL DEPTH: 45.5'
LOGGED BY: E. SHEPARD / N. BRETON		CHECKED BY: N.B.	DATE: 9/6/94

DEPTH (FT.)	RUN NO.	DRILLING RATE (FT/MIN)	PEN. / REC.	RQD (%)	GRAPHIC LOG	CORE BREAKS TYPE	CORE BREAKS DIP	WEATHERED CONDITION	ROCK DESCRIPTION AND COMMENTS ON DRILLING	MONITORING PID	MONITORING FID
19									See boring log for MW-105 for soil descriptions from 0'-15'. Roller cone drill from 15.0'to 20.0' Grout		
20	R-1	3	1.0 / 0.6	50		nat nat	0° 0°	slight slight	Light gray finely crystalline, medium bedded, DOLOMITE with interbedded shale. Lockport FM	0	15
21		3				nat nat	10° 0°	slight slight		0	15
22		4				nat nat	20° 0°	slight slight		0	80
23	R-2	3	5.0 / 4.3	58		nat nat nat	0° 0° 5°	slight moderate moderate		0	80
24		4				nat	5°	moderate		0	115
25		4				nat nat nat	10° 0° 0°	slight moderate slight		0	115
26		4				nat	0°	slight	26.2' - Highly fractured along shale partings	0.8	20
27		4				nat nat	0° 0°	slight slight		0	20
28	R-3	4	5.0 / 4.1	64		nat	0°	slight	28.0' - Highly fractured along shale partings	0	20
29		4				nat	0°	slight	28.7' - 28.9' - Same as above (highly fractured) 29.6' - 30.0' - Highly fractured along shale parting	0.8	15
30		4				nat nat	0° 0°	slight slight		1.8	15
31		3				nat	0°	slight		0	15
32	R-4	3	5.0 / 4.8	80		nat nat nat	0° 0° 0°	slight slight slight	31.9' - 33.3'- Fractured along shale partings	0	10
33		4				nat	0°	slight		0.8	10

ROCK CORE LOG	BORING NO.: **BR-105**	PROJECT NO.: 7311-03	PAGE 2 OF 2
PROJECT NAME: OLIN ROCHESTER RI		DRILLING CONTRACTOR: MARCOR OF NEW YORK	
DRILL RIG TYPE: CANTERRA CT-350		DRILLER: R. SCHEFFER	DATE STARTED: 12/06/93 COMPLETED: 12/06/93
METHOD: CORE	BIT SIZE: HQ (3.8" O.D.)	PID METER: 10.6 ev / FID METER: OVA-108	PROTECTION LEVEL: D
GROUND ELEV.: 536.9	SOIL DRILLED: 15.0 FT.	ROCK DRILLED: (CORED: 25.5' ROLLER BIT: 5.0')	TOTAL DEPTH: 45.5'
LOGGED BY: E. SHEPARD / N. BRETON		CHECKED BY: NB	DATE: 9/6/94

DEPTH (FT.)	RUN NO.	DRILLING RATE (FT/MIN)	PEN. REC.	RQD (%)	GRAPHIC LOG	CORE BREAKS TYPE	CORE BREAKS DIP	WEATHERED CONDITION	ROCK DESCRIPTION AND COMMENTS ON DRILLING	MONITORING PID	MONITORING FID
34		3	5.0 / 4.8	80		nat	0°	slight	Light gray finely crystalline, medium bedded, DOLOMITE with interbedded shale. Lockport FM	0	10
35	R-4					nat	30°	slight			
						nat	30°	moderate			
		3				nat	0°	slight		0	10
36						nat	0°	slight	34.0'-34.05' - Wedge shaped vug cutting 1/3 way into core.		
		3							34.7'-34.9' - 30° fractures along shale rich zone.	0.8	10
37						nat	0°	slight			
						nat	0°	slight	37.1'-37.2' - 0.5" size vug with apparent gypsum mineralization.		
		3								0	10
38									37.5' 0.2" size vug		
	R-5		5.0 / 5.0	91		nat	0°	slight			
		3								0.8	10
39						nat	0°	slight			
		3								0	10
40						nat	0°	moderate			
		3								0.8	15
41									41.0'-45.5' - More even bedding with occasional shale stringers		
		3									
42						nat	0°	slight			
		3									
43						nat	0°	moderate	42.8'-43.0' - Weathered fracture along shale laminae.		
	R-6		4.5 / 4.5	93		nat	0°	slight			
		3				nat	0°	slight			
44											
		4							44.5'-45.5' - slightly porous with small 0.1" size vugs.		
45						nat	0°	slight			
		3				nat	0°	slight			
									End of boring at 45.5' below ground surface.		

Note: Approximately 1950 gallons lost during coring.

nat - interpreted natural fracture or core break

mech - interprteted mechnical core break

ROCK CORE LOG	BORING NO.: **BR-105D**	PROJECT NO.: 7311-03	PAGE 1 OF 6

PROJECT NAME: OLIN ROCHESTER RI	DRILLING CONTRACTOR: MARCOR OF NEW YORK	
DRILL RIG TYPE: CANTERRA CT-350	DRILLER: R. SCHEFFER	DATE STARTED: 12/09/93 COMPLETED: 12/21/93

METHOD: CORE	BIT SIZE: HQ (3.8" O.D.)	PID METER: 10.6 ev	FID METER: OVA-108	PROTECTION LEVEL: D

GROUND ELEV.: 536.7	SOIL DRILLED: 15.4 FT.	ROCK DRILLED: (CORED: 92.6'* ROLLER BIT: 2.0')	TOTAL DEPTH: 110.0'

LOGGED BY: E. SHEPARD / N. BRETON	CHECKED BY: NB	DATE: 9/6/94

DEPTH (FT.)	RUN NO.	DRILLING RATE (FT/MIN)	PEN. / REC.	RQD (%)	GRAPHIC LOG	CORE BREAKS TYPE	CORE BREAKS DIP	WEATHERED CONDITION	ROCK DESCRIPTION AND COMMENTS ON DRILLING	MONITORING PID	MONITORING FID
16									See Boring log for MW-105 for soil descriptions from 0' to 15'.		
									Roller cone drill from 15.4'to 17.4'		
17									Grout		
17.4'											
		2				nat	0°	slight	Light gray finely crystalline, medium bedded, DOLOMITE with interbedded shale.	0	50
18	R-1		2.0 / 1.7	0					Lockport FM		
		4				nat	10°	slight		0	50
19											
		5				nat	50°	slight	17.4'-19.1' - Vertical fracture	0	50
20											
		6				nat	0°	slight	20.1'-20.7' - Vertical fracture (slightly weathered)	0	50
21											
	R-2	5	5.0 / 5.0	64		nat mech	10°	moderate	Fractures are subhorizontal and along shale partings which dip from 0° to 30° in run R-2.	0	60
22											
		5				nat	15°	slight		0	20
23											
		6				nat	0°	moderate		0	50
24											
		5				nat mech	0°	slight	Uneven bedding and shale stringers is present in Run R-3.	0	50
25											
		3				mech			Fractures along shale stringers dip from 0° to 10° in Run R-3.	0	15
26						nat	0°	slight			
			5.0			mech					
		3	/	64		nat	30°	slight		0	10
27	R-3		4.7								
						nat	0°	slight			
		3				nat	0°	slight		0	10
28											
						nat	0°	slight			
		3								0	10
29						nat	0°	slight			
			1.0			nat	10°	slight	Drill bit hung up in Run R-4. Discontinued rock coring at 30.4'.	NA	NA
	R-4	NA	/	0							
30			0.4			nat	10°	slight			
									- - - - - - - - - - - - - - - - - - - -		
									Air hammer drilled from 30.4' to 45.8'		

ROCK CORE LOG	BORING NO.: **BR-105D**	PROJECT NO.: 7311-03	PAGE 2 OF 6
PROJECT NAME: OLIN ROCHESTER RI		DRILLING CONTRACTOR: MARCOR OF NEW YORK	
DRILL RIG TYPE: CANTERRA CT-350		DRILLER: R. SCHEFFER	DATE STARTED: 12/09/93 COMPLETED: 12/21/93
METHOD: AIR HAMMER	BIT SIZE: HQ (3.8" O.D.)	PID METER: 10.6 ev	FID METER: OVA-108	PROTECTION LEVEL: D
GROUND ELEV.: 536.7	SOIL DRILLED: 15.4 FT.	ROCK DRILLED: (CORED: 92.6'* ROLLER BIT: 2.0')	TOTAL DEPTH: 110.0'
LOGGED BY: E. SHEPARD / N. BRETON		CHECKED BY: N.B.	DATE: 9/6/94

DEPTH (FT.)	RUN NO.	DRILLING RATE (FT/MIN)	PEN. REC.	RQD (%)	GRAPHIC LOG	CORE BREAKS TYPE	CORE BREAKS DIP	WEATHERED CONDITION	ROCK DESCRIPTION AND COMMENTS ON DRILLING	MONITORING PID	MONITORING FID
31		15' per hour or 4 min. per foot without sampling. ↓							Light gray finely crystalline, medium bedded, DOLOMITE with interbedded shale. Lockport FM		
32											
33									Air hammer drilling performed from 30.4' to 45.8'.		
34											
35											
36											
37											
38											
39											
40											
41											
42											
43											
44											
45									Rock coring continued from 45.8'		
46	R-5	NA	0.7 / 0.7	100					- - Core bit hung up at 46.5'- - - -	0	0
47											

ROCK CORE LOG	BORING NO.: **BR-105D**	PROJECT NO.: 7311-03	PAGE 3 OF 6
PROJECT NAME: OLIN ROCHESTER RI		DRILLING CONTRACTOR: MARCOR OF NEW YORK	
DRILL RIG TYPE: CANTERRA CT-350		DRILLER: R. SCHEFFER	DATE STARTED: 12/09/93 COMPLETED: 12/21/93
METHOD: CORE	BIT SIZE: HQ (3.8" O.D.)	PID METER: 10.6 ev / FID METER: OVA-108	PROTECTION LEVEL: D
GROUND ELEV.: 536.7	SOIL DRILLED: 15.4 FT.	ROCK DRILLED: (CORED: 92.6'* ROLLER BIT: 2.0')	TOTAL DEPTH: 110.0'
LOGGED BY: E. SHEPARD / N. BRETON		CHECKED BY: N.B	DATE: 9/6/94

DEPTH (FT.)	RUN NO.	DRILLING RATE (FT/MIN)	PEN. / REC.	RQD (%)	GRAPHIC LOG	CORE BREAKS TYPE	CORE BREAKS DIP	WEATHERED CONDITION	ROCK DESCRIPTION AND COMMENTS ON DRILLING	MONITORING PID	MONITORING FID
47		15' per hour or 4 min. per foot without sampling.							Light gray finely crystalline, medium bedded, DOLOMITE with interbedded shale. Lockport FM		
48											
49									Continued air hammer drilling from 46.5' to 50.5'.		
50		↓									
51		4				mech			More evenly bedded; bedding dip ranges from 0° to 5°.	0	10
		4	2.5 / 2.5	74					No water lost in Run R-6.	0	10
52	R-6					nat	0°	slight			
		4				nat	30°	slight		0	10
53		4				nat	0°	slight	50 gallons of water lost in coring Run R-7.	0	10
54						nat	0°	slight			
		4								0	10
55						mech					
		4				nat	0°	slight		0	10
56			7.0 / 6.5								
	R-7	3		87		nat	0°	slight		0	15
57		4								0	15
						nat	0°	slight			
58						nat	0°	slight			
		3				nat	30°	slight		0	10
						nat	30°	slight			
59		4				nat	10°	slight		0	10
60		4				mech			Fractures in Run R-8 are along shale partings. Bedrock becoming more shale rich with depth.	0	15
61						nat	0°	slight			
		4	10.0 / 10.2	88		nat	0°	slight		0	15
62	R-8					nat	0°	slight			
		4				mech				0	15
63											

ROCK CORE LOG	BORING NO.: **BR-105D**	PROJECT NO.: 7311-03	PAGE 4 OF 6
PROJECT NAME: OLIN ROCHESTER RI		DRILLING CONTRACTOR: MARCOR OF NEW YORK	
DRILL RIG TYPE: CANTERRA CT-350		DRILLER: R. SCHEFFER	DATE STARTED: 12/09/93 COMPLETED: 12/21/93
METHOD: CORE	BIT SIZE: HQ (3.8" O.D.)	PID METER: 10.6 ev / FID METER: OVA-108	PROTECTION LEVEL: D
GROUND ELEV.: 536.7	SOIL DRILLED: 15.4 FT.	ROCK DRILLED: (CORED: 92.6'* ROLLER BIT: 2.0')	TOTAL DEPTH: 110.0'
LOGGED BY: E. SHEPARD / N. BRETON		CHECKED BY: N.B	DATE: 9/6/94

DEPTH (FT.)	RUN NO.	DRILLING RATE (FT/MIN)	PEN. REC.	RQD (%)	GRAPHIC LOG	CORE BREAKS TYPE	CORE BREAKS DIP	WEATHERED CONDITION	ROCK DESCRIPTION AND COMMENTS ON DRILLING	MONITORING PID	MONITORING FID
63		3				nat	0°	slight	Light gray finely crystalline, medium bedded, DOLOMITE with interbedded shale.	0	15
64						nat	0°	slight	Lockport Fm.		
		4								0	15
65						nat	0°	moderate	65.0'- 65.2'- Trace small (< 0.1") vugs.		
		3								0	10
66									Lost 50 gallons of water coring Run R-8		
	R-8	3	10.0 / 10.2	88		nat	0°	slight		0	15
67						nat	0°	slight			
		4				nat	0°	slight		0	15
68						nat	0°	slight			
		3								0	15
69						nat	0°	slight			
						nat	0°	slight			
70									- - - - - - - - - - - - - - - - - - - -		
		3				nat	0°	slight	Graditional contact - Gates member Lockport Fm. (increase in shale content and shale bedding thickness)	0	10
71											
		3				nat	0°	slight	Lost 50 gallons of water coring Run R-9	0	10
72											
		4				nat	0°	slight		0	10
73						nat	0°	slight			
		3								0	15
74						nat	0°	slight	74.2'- fracture along appararent calcite or gypsum lens. Lens is 0.02" thick.		
	R-9	3	10.0 / 9.8	90		nat	0°	slight		0	10
75						nat	0°	moderate	75.0'-75.3'- vugs (< 0.1") and weathered fractures.		
		3								0	10
76						nat	0°	slight	76.0'- fracture along 0.02" thick calcite or gypsum lens.		
		3				nat	0°	slight		0	10
77									76.9'- 0.2" size vug with apparent gypsum mineralization.		
		3				nat	0°	slight		0	15
78											
		4				nat	0°	slight		0	10
79											

ROCK CORE LOG	BORING NO.: **BR-105D**	PROJECT NO.: 7311-03	PAGE 5 OF 6
PROJECT NAME: OLIN ROCHESTER RI		DRILLING CONTRACTOR: MARCOR OF NEW YORK	
DRILL RIG TYPE: CANTERRA CT-350		DRILLER: R. SCHEFFER	DATE STARTED: 12/09/93 COMPLETED: 12/21/93
METHOD: CORE	BIT SIZE: HQ (3.8" O.D.)	PID METER: 10.6 ev / FID METER: OVA-108	PROTECTION LEVEL: D
GROUND ELEV.: 536.7	SOIL DRILLED: 15.4 FT.	ROCK DRILLED: (CORED: 92.6'* ROLLER BIT: 2.0')	TOTAL DEPTH: 110.0'
LOGGED BY: E. SHEPARD / N. BRETON		CHECKED BY: WB	DATE: 9/6/94

DEPTH (FT.)	RUN NO.	DRILLING RATE (FT/MIN)	PEN. / REC.	RQD (%)	GRAPHIC LOG	CORE BREAKS TYPE	CORE BREAKS DIP	WEATHERED CONDITION	ROCK DESCRIPTION AND COMMENTS ON DRILLING	MONITORING PID	MONITORING FID
79	R-9	3				nat	0°	moderate	Gray finely crystalline, medium bedded, DOLOMITE with interbedded shale.	0	20
						nat	0°	slight			
80		3							Lockport Fm. (Gates member)	0	15
81						nat	15°	slight	79.4'- Fracture along 0.02" thick calcite or gypsum lens.		
		3								0	20
82											
		3								0	10
83						nat	0°	slight			
		4								0	25
84											
						nat	0°	slight			
		3								0	10
85	R-10		10.0 / 10.2	93							
						nat	0°	slight			
		3								0	20
86											
		3							Even breaks; little to no weathering apparent.	0	10
87						nat	0°	slight			
						nat	0°	slight			
		3								0	15
88						nat	0°	slight			
		3								0	10
89											
		3				nat	0°	slight		0	10
90											
		3							Bedding dip angle between 0° and 5° in Run R-11.	0	25
91											
		3								0	40
92						nat	0°	slight			
	R-11	3	10.0 / 9.8	96						0	10
93						nat	0°	slight			
						nat	0°	slight	93.2'- Fracture along 0.02" thick calcite or gypsum lens.		
		3								0	20
94											
		3				nat	0°	slight		0	15
95											

ROCK CORE LOG	BORING NO.: **BR-105D**	PROJECT NO.: 7311-03	PAGE 6 OF 6
PROJECT NAME: OLIN ROCHESTER RI		DRILLING CONTRACTOR: MARCOR OF NEW YORK	
DRILL RIG TYPE: CANTERRA CT-350		DRILLER: R. SCHEFFER	DATE STARTED: 12/09/93 COMPLETED: 12/21/93
METHOD: CORE	BIT SIZE: HQ (3.8" O.D.)	PID METER: 10.6 ev	FID METER: OVA-108	PROTECTION LEVEL: D
GROUND ELEV.: 536.7	SOIL DRILLED: 15.4 FT.	ROCK DRILLED: (CORED: 92.6'* ROLLER BIT: 2.0')	TOTAL DEPTH: 110.0'
LOGGED BY: E. SHEPARD / N. BRETON		CHECKED BY: N.B	DATE: 9/6/94

DEPTH (FT.)	RUN NO.	DRILLING RATE (FT/MIN)	PEN. REC.	RQD (%)	GRAPHIC LOG	CORE BREAKS TYPE	CORE BREAKS DIP	WEATHERED CONDITION	ROCK DESCRIPTION AND COMMENTS ON DRILLING	MONITORING PID	MONITORING FID
95		3				nat	0°	slight	Dark gray finely crystalline, medium bedded, DOLOMITE with interbedded shale.	0	25
96						nat	0°	slight	Lockport Fm. (Gates member)		
		3				nat	0°	slight		0	40
97									Trace of small pits or vugs (less than 0.05" in size) throughout Run R-11 (90'-100')		
	R-11	3	10.0 / 9.8	96		nat	0°	slight		0	10
98						nat	0°	slight	50 gallons of water lost during coring for Run R-11.		
		3				nat	10°	slight		0	20
99						nat	0°	slight	99.0' - Fracture along calcite or gypsum lens.		
		3				nat	0°	slight		0	15
100						nat	0°	slight	Even bedding dominant in Run R-12; Bedding dips from 0° to 5°.		
		3				nat	0°	slight		0	50
101						nat	0°	slight			
		3								0	150
102						nat	0°	slight			
		3								0	50
						nat	0°	slight			
103						nat	10°	slight	103.0' - Fracture along calcite or gypsum lens.		
		3				nat	0°	slight		0	25
104						nat	0°	slight			
		3				nat	0°	slight		0	50
105	R-12		10.0 / 9.8	92							
		3								0	25
106						nat	0°	slight			
		3							Note: Approximately 220 gallons of water lost during coring BR-105D.	0	50
107											
		3				nat	0°	slight	nat - interpreted natural fracture or core break	0	100
108									mech - intrepreted mechanical core break		
		3				nat	0°	slight		0	150
109											
		3				nat	0°	slight		0	50
110									End of Boring at 110.0' below ground surface.		

ROCK CORE LOG	BORING NO.: **BR-106**	PROJECT NO.: 7311-03	PAGE 1 OF 2
PROJECT NAME: OLIN ROCHESTER RI		DRILLING CONTRACTOR: MARCOR OF NEW YORK	
DRILL RIG TYPE: CANTERRA CT-350		DRILLER: R. SCHEFFER	DATE STARTED: 01/11/94 COMPLETED: 01/11/94
METHOD: CORE	BIT SIZE: HQ (3.8" O.D.)	PID METER: 10.6 ev / FID METER: OVA-108	PROTECTION LEVEL: D
GROUND ELEV.: 535.7	SOIL DRILLED: 13.2 FT.	ROCK DRILLED: (CORED: 26.9' ROLLER BIT: 5.2')	TOTAL DEPTH: 45.3'
LOGGED BY: E. SHEPARD / N. BRETON		CHECKED BY: N.B	DATE: 9/6/94

DEPTH (FT.)	RUN NO.	DRILLING RATE (FT/MIN)	PEN. REC.	RQD (%)	GRAPHIC LOG	CORE BREAKS TYPE	CORE BREAKS DIP	WEATHERED CONDITION	ROCK DESCRIPTION AND COMMENTS ON DRILLING	MONITORING PID	MONITORING FID
17									See soil boring log for MW-106 for soil descriptions from 0'-13.2'		
									Roller cone drill from 13.2'to 18.4'		
18									Grout		
18.4											
		4				nat mech	0°	slight	Light gray, finely crystalline, medium bedded, DOLOMITE with interbedded shale.	0	0
19						nat	0°	slight	Lockport FM		
		4							19.4'-19.5'- Shale stringers	0	0
20						nat	0°	slight	dominant.		
						nat	0°	slight			
		3								0	0
21						mech					
	R-1	4	6.9 / 6.5	83						0	0
22											
		3								0	0
23						nat	0°	moderate	23.0'- Weathered fracture along shale laminae.		
						nat	0°	slight			
		3								0	0
24											
						nat	0°	slight			
		3				nat	0°	slight		0	0
25						nat	0°	slight			
		3								0	0
26											
						mech					
		3				nat	0°	slight		0	0
27											
						nat	0°	slight			
		3				nat	0°	slight		0	0
28						nat	0°	slight			
						nat	0°	slight			
	R-2	4	10.0 / 10.0	80						0	0
29						nat	0°	slight	28.7' and 28.9' - Two 0.2" size vugs		
						nat	0°	slight	with gypsum mineralization.		
		3								0	0
30						nat	0°	slight			
		3				nat	0°	slight		0	0
31						nat	0°	slight			
						nat	90°	slight			
		3				nat	20°	slight		0	0

ROCK CORE LOG	BORING NO.: **BR-106**	PROJECT NO.: 7311-03	PAGE 2 OF 2

PROJECT NAME: OLIN ROCHESTER RI	DRILLING CONTRACTOR: MARCOR OF NEW YORK
DRILL RIG TYPE: CANTERRA CT-350	DRILLER: R. SCHEFFER — DATE STARTED: 01/11/94 COMPLETED: 01/11/94
METHOD: CORE — BIT SIZE: HQ (3.8" O.D.)	PID METER: 10.6 ev — FID METER: OVA-108 — PROTECTION LEVEL: D
GROUND ELEV.: 535.7 — SOIL DRILLED: 13.2 FT.	ROCK DRILLED: (CORED: 26.9' ROLLER BIT: 5.2') — TOTAL DEPTH: 45.3'
LOGGED BY: E. SHEPARD / N. BRETON	CHECKED BY: N.B. — DATE: 9/6/94

DEPTH (FT.)	RUN NO.	DRILLING RATE (FT/MIN)	PEN. REC.	RQD (%)	GRAPHIC LOG	CORE BREAKS TYPE	CORE BREAKS DIP	WEATHERED CONDITION	ROCK DESCRIPTION AND COMMENTS ON DRILLING	MONITORING PID	MONITORING FID
32											
		3				nat	0°	slight	Light gray, finely crystalline, medium bedded, DOLOMITE with interbedded shale. Lockport FM	0	0
33											
			10.0								
	R-2	3	—	80		nat	0°	moderate		0	0
34			10.0								
						nat	0°	moderate	33.3'-35.5'- Irregularly shaped shale rich lenses (spotty appearance)		
		3				nat	0°	slight		0	0
35											
						nat	60°	slight	34.3'-34.8'- Highly fractured; Sub-vertical and subhorizontal orientation.		
		3								0	0
36											
						nat	0°	slight	35.3'-35.7'- Near vertical parting with calcite or gypsum mineralization.		
						nat	0°	slight			
		3				nat	0°	slight		0	0
37											
									35.7'-40.7' - Few fractures; Evenly bedded.		
		3								0	0
38											
		3				nat	0°	slight		0	0
39											
		3								0	0
40			10.0			nat	0°	slight			
	R-3		—	91					41.3'-41.5'- slightly porous with		
		3	9.4						0.1" size vugs.	0	0
41						nat	0°	slight			
						nat	0°	slight			
		3								0	0
42						nat	0°	slight			
		3				nat	0°	slight		0	0
43						nat	0°	slight	43.0'- Fracture along shale parting zone.		
		3								0	0
44						mech					
		3				mech			End of boring at 45.3' below ground surface.	0	0
45											
45.3											

Note: Approximately 700 gallons of water lost during coring.

nat - interpreted natural fracture or core break.

mech - interpreted mechanical core break.

ROCK CORE LOG	BORING NO.: **BR-107**	PROJECT NO.: 7311-03	PAGE 1 OF 2

PROJECT NAME: OLIN ROCHESTER RI		DRILLING CONTRACTOR: MARCOR OF NEW YORK	
DRILL RIG TYPE: CANTERRA CT-350		DRILLER: R. SCHEFFER	DATE STARTED: 01/15/94 COMPLETED: 01/15/94
METHOD: CORE	BIT SIZE: HQ (3.8" O.D.)	PID METER: 10.6 ev / FID METER: OVA-108	PROTECTION LEVEL: D
GROUND ELEV.: 536.3	SOIL DRILLED: 16.8 FT.	ROCK DRILLED: (CORED: 21.2' ROLLER BIT: 2.0')	TOTAL DEPTH: 40.0'
LOGGED BY: E. SHEPARD / N. BRETON		CHECKED BY: NB	DATE: 9/6/94

DEPTH (FT.)	RUN NO.	DRILLING RATE (FT/MIN)	PEN. / REC.	RQD (%)	GRAPHIC LOG	CORE BREAKS TYPE	CORE BREAKS DIP	WEATHERED CONDITION	ROCK DESCRIPTION AND COMMENTS ON DRILLING	MONITORING PID	MONITORING FID
17									See boring log for MW-107 for soil descriptions from 0'-16.8'		
18									Roller cone drill from 13.2'to 18.4'		
18.8									Grout		
19						nat	0°	slight			
	R-1	4	1.2 / 1.2	75		nat	0°	slight	Light gray, finely crystalline, medium bedded, DOLOMITE with interbedded shale.	0	0
20						nat	0°	slight	Lockport FM		
		4				nat	0°	slight	18.8'-25.0'- Mostly uneven bedding	0	0
21						nat	0°	slight			
		4				nat		moderate	21.2'-21.4'- Weathered fractured zone.	0	0
22						nat	0°	moderate			
	R-2	4	5.0 / 4.7	58		nat	0°	slight	22.0'- Weathered fracture along shale parting.	0	0
						nat	0°	slight			
23						nat	0°	slight	22.8'-23.0'- Vertical fracture		
						nat	20°	high			
		5				nat	0°	slight	23.1'-23.2'- Highly weathered zone; Fractured along shale stringers.	0	0
24						nat	20°	slight			
						nat	0°	slight	23.6'- 1" long / 0.5" wide vug with		
		4				nat	20°	slight	gypsum mineralization.	0	0
25						mech					
		4				mech			Run R-3 - Mostly even bedding; less fractured and weathered.	0	0
26						nat	0°	slight			
		5								0	0
27											
	R-3	4	5.0 / 4.6	80						0	0
28						nat	0°	moderate			
						mech					
		4								0	0
29						nat	0°	slight			
						nat	0°	slight			
		4								0	0
30						nat	0°	slight			
		4	5.0 / 5.2	100						0	0
	R-4										
31						nat	0°	slight			
		4								0	0

ROCK CORE LOG	BORING NO.: **BR-107**	PROJECT NO.: 7311-03	PAGE 2 OF 2
PROJECT NAME: OLIN ROCHESTER RI		DRILLING CONTRACTOR: MARCOR OF NEW YORK	
DRILL RIG TYPE: CANTERRA CT-350		DRILLER: R. SCHEFFER	DATE STARTED: 01/15/94 COMPLETED: 01/15/94
METHOD: CORE	BIT SIZE: HQ (3.8" O.D.)	PID METER: 10.6 ev / FID METER: OVA-108	PROTECTION LEVEL: D
GROUND ELEV.: 536.3	SOIL DRILLED: 16.8 FT.	ROCK DRILLED: (CORED: 21.2' ROLLER BIT: 2.0')	TOTAL DEPTH: 40.0'
LOGGED BY: E. SHEPARD / N. BRETON		CHECKED BY: N.B.	DATE: 9/6/94

DEPTH (FT.)	RUN NO.	DRILLING RATE (FT/MIN)	PEN. REC.	RQD (%)	GRAPHIC LOG	CORE BREAKS TYPE	CORE BREAKS DIP	WEATHERED CONDITION	ROCK DESCRIPTION AND COMMENTS ON DRILLING	MONITORING PID	MONITORING FID
32		4							Light gray, finely crystalline, medium bedded, DOLOMITE with interbedded shale. Lockport FM	0	0
33	R-4	4	5.0 / 5.2	100						0	0
34						nat	0°	slight			
		4				nat	0°	slight		0	0
35						nat	0°	slight	35.3' - Fracture along 0.1" thick shale stringer.		
		3								0	0
36											
		3							36.3'-36.9'- Slightly porous with vugs less than 0.1" in size.	0	0
37						mech					
	R-5	4	5.0 / 4.9	80		nat	0°	slight		0	0
38											
		3								0	0
39						nat	0°	slight			
		4				mech			39.7'-40.0'- Mostly shale in thicker beds	0	0
40									End of boring at 40.0' below ground surface		

Note: Approximately 575 gallons of water lost during coring

nat - interpreted natural fracture or core break

mech - interpreted mechanical core break

ROCK CORE LOG	BORING NO.: **BR-108**	PROJECT NO.: 7311-03	PAGE 1 OF 2
PROJECT NAME: OLIN ROCHESTER RI		DRILLING CONTRACTOR: MARCOR OF NEW YORK	
DRILL RIG TYPE: CANTERRA CT-350		DRILLER: R. SCHEFFER	DATE STARTED: 01/07/94 COMPLETED: 01/07/94
METHOD: CORE	BIT SIZE: HQ (3.8" O.D.)	PID METER: 10.6 ev / FID METER: OVA-108	PROTECTION LEVEL: D
GROUND ELEV.: 538.4	SOIL DRILLED: 12.5 FT.	ROCK DRILLED: (CORED: 23.5' ROLLER BIT: 5.0')	TOTAL DEPTH: 41.0'
LOGGED BY: E. SHEPARD / N. BRETON		CHECKED BY: N.B	DATE: 9/6/94

DEPTH (FT.)	RUN NO.	DRILLING RATE (FT/MIN)	PEN. REC.	RQD (%)	GRAPHIC LOG	CORE BREAKS TYPE	CORE BREAKS DIP	WEATHERED CONDITION	ROCK DESCRIPTION AND COMMENTS ON DRILLING	MONITORING PID	MONITORING FID
16									See boring log for MW-108 for soil descriptions from 0'-12.5'		
									Roller cone drill from 12.5'to 17.5'		
17									Grout		
17.5											
18		4	2.5 / 2.3	76		nat	0°	slight	Light gray, finely crystalline, medium bedded, DOLOMITE with interbedded shale. Lockport FM	0	0
	R-1					nat	0°	slight			
19		4				nat	0°	slight	17.9'-18.1'- Fractures along shale stringers.	0	0
20						nat	0°	slight			
		4								0	0
21						nat	0°	slight			
		3				nat	0°	slight		0	0
22						nat	0°	slight			
		3								0	0
						nat	0°	slight	22.8' - Fracture along shale parting		
23						nat	0°	slight	23.4' - 0.3" size vug with gypsum mineralization		
		3				nat	0°	slight		0	0
24						nat	0°	slight			
		3				nat	0°	moderate	24.5' - Fracture along shale parting (weathered)	0	0
			10.0 / 9.8	82		nat	0°	slight			
25	R-2										
		3				nat	0°	slight		0	0
26						nat	0°	slight			
		3				mech				0	0
						nat	0°	slight			
27									27.0'-27.2'- Highly fractured; Some mechanical breaks possible.		
		3				nat	0°	moderate		0	0
						nat	0°	moderate	27.8'-28.0'- Fractured irregular pattern of core breaks; Weathered		
28						nat	0°	slight			
		3				nat	0°	slight	28.5'- Fractured along shale stringers and/or partings.	0	0
29						nat	0°	slight			
		3								0	0
30						nat	0°	slight			
		3								0	0

ROCK CORE LOG	BORING NO.: **BR-108**	PROJECT NO.: 7311-03	PAGE 2 OF 2

PROJECT NAME: OLIN ROCHESTER RI		DRILLING CONTRACTOR: MARCOR OF NEW YORK	
DRILL RIG TYPE: CANTERRA CT-350		DRILLER: R. SCHEFFER	DATE STARTED: 01/07/94 COMPLETED: 01/07/94
METHOD: CORE	BIT SIZE: HQ (3.8" O.D.)	PID METER: 10.6 ev / FID METER: OVA-108	PROTECTION LEVEL: D
GROUND ELEV.: 538.4	SOIL DRILLED: 12.5 FT.	ROCK DRILLED: (CORED: 23.5' ROLLER BIT: 5.0')	TOTAL DEPTH: 41.0'
LOGGED BY: E. SHEPARD / N. BRETON		CHECKED BY: N B	DATE: 9/6/94

DEPTH (FT.)	RUN NO.	DRILLING RATE (FT/MIN)	PEN. REC.	RQD (%)	GRAPHIC LOG	CORE BREAKS TYPE	CORE BREAKS DIP	WEATHERED CONDITION	ROCK DESCRIPTION AND COMMENTS ON DRILLING	MONITORING PID	MONITORING FID
31		4				nat	0°	slight	Light gray, finely crystalline, medium bedded, DOLOMITE with interbedded shale.	0	0
32						nat	30°	slight	Lockport FM		
		3								0	0
33									Mostly even bedding throughout Run R-3 (30'-37')		
						nat	0°	slight			
		3				nat	0°	moderate	33.6'-33.9'- fractured along shale	0	0
			7.0			nat	0°	slight	partings; slightly to moderately		
34	R-3		6.3	74		nat	0°	slight	weathered.		
		3								0	0
35						nat	10°	slight	35.2'- Fracture along shale laminae		
		3				nat	0°	slight		0	0
36											
						nat	0°	slight			
		3								0	0
37											
		3							Mostly even bedding throughout Run R-4 (37'-41')	0	0
38						nat	0°	slight	37.9'- Fracture along shale parting		
		3								0	0
			4.0								
39	R-4		4.0	100		nat	0°	slight			
		3								0	0
40											
						nat	0°	slight	40.4'- Shale laminae stringers in		
		3							distinct 1" thick zone.	0	0
41											
									End of boring at 41.0' below ground surface.		
									Note: Approximately 600 gallons of water lost during coring.		
									nat - interpreted natural fracture or core break		
									mech - interpreted mechanical core break		

SOIL BORING LOG	BORING NO.: MW-103	PROJECT NO.: 7311-02	PAGE 1 OF 1
PROJECT NAME: OLIN ROCHESTER RI		DRILLING CONTRACTOR: MARCOR OF NEW YORK	
DRILL RIG TYPE: CANTERRA CT 350		DRILLER: R. SCHEFFER	DATE STARTED: 11/10/93 COMPLETED: 11/10/9
METHOD: HSA	AUGER SIZE: 4.25" I.D.	PID METER: 10.6 ev	FID METER: OVA-108 PROTECTION LEVEL: MOD D
GROUND ELEV.: 533.3	SOIL DRILLED: 10.8' FT.	ROCK DRILLED: (CORED \ ROLLER BIT) NONE FT.	TOTAL DEPTH: 10.8'
LOGGED BY: J. ROSENBLUM		CHECKED BY: NB,	DATE: 9/6/94

DEPTH (FT.)	SAMPLE NUMBER	BLOWS PER 6-INCHES	PEN. / REC.	GRAPHIC LOG	SAMPLE DESCRIPTION	USCS CLASSIF.	MONITORING (PPM) PID	FID	OTHER
0					Auger through 1.0' of concrete and pavement				
1	S-1	17-16	1.0 / 1.0		1.0'-2.0' Brown Silty SAND, fine, coarse Gravel, Dry.	SM	0	0	
2									
3	S-2	4-4-5-6	2.0 / 0.5		2.0'-4.0' Gray to Light Brown Silty SAND, fine, some Gravel, moist.	SM	0	0	
4									
5	S-3	4-12-16-17	2.0 / 1.6		4.0'-6.0' Light Brown Silty SAND, fine, medium dense, moist.	SM	0	0	
6									
7	S-4	21-50/0.5'	1.5 / 1.0		6.0'-8.0' Light Brown Silty SAND, fine, dense to very dense, some Rock fragments at 8.0'	SM	0	0	
8									
9	S-5	20-50/0.5'	1.5 / 1.5		8.0'-10.0' Similar to above, dense to very dense.	SM	0	0	
10									
11					NOTES: Rufusal with augers at 10.8'				
12					Groundwater measured at 7.3' During drilling.				
13					Initial auger refusal at 5.6' Exploration moved 6.0' north where final installation of MW-103 was achieved.				
14									
15									

SOIL BORING LOG	BORING NO.: **MW-105**	PROJECT NO.: 7311-02	PAGE 1 OF 1
PROJECT NAME: OLIN ROCHESTER RI		DRILLING CONTRACTOR: MARCOR OF NEW YORK	
DRILL RIG TYPE: CANTERRA CT 350		DRILLER: R. SCHEFFER	DATE STARTED: 11/16/93 COMPLETED: 11/17/93
METHOD: HSA	AUGER SIZE: 4.25" I.D.	PID METER: 10.6 ev / FID METER: OVA-108	PROTECTION LEVEL: MOD D
GROUND ELEV.: 536.9	SOIL DRILLED: 14.4 FT.	ROCK DRILLED: ROLLER BIT: 5.0'	TOTAL DEPTH: 19.4'
LOGGED BY: E. SHEPHARD		CHECKED BY: NB.	DATE: 9/6/94

DEPTH (FT.)	SAMPLE NUMBER	BLOWS PER 6-INCHES	PEN. / REC.	GRAPHIC LOG	SAMPLE DESCRIPTION	USCS CLASSIF.	MONITORING (PPM) PID	FID	OTHER
0									
1	S-1	3-4-20-24	2.0 / 1.5		0.0'-0.8' Dark Brown to Black SAND, fine, some Organics, Moist. 0.8'-2.0' Light Brown SAND, fine to coarse, some Gravel, dry.	SW	0	0	
2									
3	S-2	3-5-10-10	2.0 / 1.6		2.0'-2.2' Similar to above. 2.2'-3.6' Brown to Reddish Brown SAND, fine, some Silt, poorly graded, dry.	SW SM	0	0	
4									
5	S-3	4-10-20-15	2.0 / 1.8		4.0'-4.4' Similar to above. 4.4'-5.6' Tan to Light Brown SAND, fine dry. 5.6'-5.8' Gray SAND, fine, some Silt, dry.	SM SM SM	0	0	
6									
7	S-4	4-10-26-52	2.0 / 2.0		6.0'-6.6' Similar to above. 6.6'-7.9' Tan to Light Brown SAND, fine, some Silt, moist. 7.9'-8.0' Similar to above with trace Gravel.	SM SM SM	0	0	
8									
9	S-5	17-35-50/0.5'	1.5 / 1.5		8.0'-10.0' Similar to above.	SM	0	0	
10									
11	S-6	15-50/ 0.4'	0.9 / 0.9		10.0'-10.9' Brown SAND, fine, some silt, trace Gravel, poorly graded moist.	SM	0	0	
12									
13	S-7	4-9-13-30	2.0 / 1.6		12.0'-14.0' Gray SAND, fine, some Silt, poorly graded, wet.	SM	0	0	
14					14.0'-14.3' Gray SAND, fine to coarse, some silt, rock fragments, wet.	GM	0	0	
15	S-8	50/ 0.3'	2.0 / 0.3		Refusal with augers at 14.4' Roller cone drill to 19.4'				
19.4									

SOIL BORING LOG	BORING NO.: MW-106	PROJECT NO.: 7311-02	PAGE 1 OF 1
PROJECT NAME: OLIN ROCHESTER RI		DRILLING CONTRACTOR: MARCOR OF NEW YORK	
DRILL RIG TYPE: CANTERRA CT 350		DRILLER: D. BOOKER	DATE STARTED: 12/7/93 COMPLETED: 12/7/93
METHOD: HSA	AUGER SIZE: 4.25" I.D.	PID METER: 10.6 ev	FID METER: OVA-108 PROTECTION LEVEL: MOD D
GROUND ELEV.: 535.4	SOIL DRILLED: 14.4' FT.	ROCK DRILLED: ROLLER BIT: 5.4'	TOTAL DEPTH: 19.8'
LOGGED BY: E. Shepard		CHECKED BY: NB	DATE: 9/6/94

DEPTH (FT.)	SAMPLE NUMBER	BLOWS PER 6-INCHES	PEN. / REC.	GRAPHIC LOG	SAMPLE DESCRIPTION	USCS CLASSIF.	MONITORING (PPM) PID	FID	OTHER
0									
1	S-1	3-4-6-7	2.0 / 0.5		0.0'-2.0' Dark Brown SAND, fine, some Silt, trace Organics, moist.	SM	0	8	
2									
3	S-2	7-15-18-17	2.0 / 2.0		2.0'-4.0' Light Brown to Reddish Brown, SAND, fine, some Silt, trace Organics, trace Gravel, moist.	SM	0	3	
4									
5	S-3	11-39-50 / 5"	2.0 / 0.7		4.0'-6.0' Similar to above.	SM	0	2	
6									
7	S-4	11-33-50 | (for 0.4')	2.0 / 1.3		6.0'-8.0' Light Brown SAND, fine, little to some Silt, dry.	SM	0	2	
8									
9	S-5	12-31-45-50 | (for 0.4')	2.0 / 1.3		8.0'-10.0' Similar to above, moist.	SM	0	3	
10									
11	S-6	13-25-50 | (for 0.5')	1.5 / 1.2		10.0'-12.0' Brown to Grayish Brown SAND, fine to medium, some Silt, trace rock fragments, moist.	SM	0	5	
12									
13	S-7	15-20-25-50 | (for 0.4')	2.0 / 1.5		12.0'-14.0' Grayish Brown SAND, fine, some Silt, trace rock fragments, wet.	SM	0	100	
14	S-8	50 / 5"	0.4 / 0.4		14.0'-14.4' Similar to above.	GM	0	30	
15					Auger refusal at 14.4' Roller cone drill from 14.4'-19.8'				

SOIL BORING LOG	BORING NO.: MW-107	PROJECT NO.: 7311-02	PAGE 1 OF 2
PROJECT NAME: OLIN ROCHESTER RI		DRILLING CONTRACTOR: MARCOR OF NEW YORK	
DRILL RIG TYPE: CANTERRA CT 350		DRILLER: R. SCHEFFER	DATE STARTED: 11/8/93 COMPLETED: 11/8/93
METHOD: HSA	AUGER SIZE: 4.25" I.D.	PID METER: 10.6 ev	FID METER: OVA-108 PROTECTION LEVEL: MOD D
GROUND ELEV.: 536.3	SOIL DRILLED: 16.8' FT.	ROCK DRILLED: (CORE \ ROLLER BIT): NONE FT.	TOTAL DEPTH: 16.8'
LOGGED BY: E. SHEPHARD		CHECKED BY: NB	DATE: 9/6/94

DEPTH (FT.)	SAMPLE NUMBER	BLOWS PER 6-INCHES	PEN. / REC.	GRAPHIC LOG	SAMPLE DESCRIPTION	USCS CLASSIF.	MONITORING (PPM) PID	FID	OTHER
0									
1	S-1	24-14-11-12	2.0 / 1.5		0.0'-2.0' Brown Silty SAND, fine, trace Organics, dry.	SM	0	0	
2									
3	S-2	6-11-50 (for 0.4')	2.0 / 1.1		2.0'-4.0' Brown Sand, fine to coarse, some Silt, dry. (Concrete fragments in spoon)	SM	0	0	
4									
5	S-3	1-5-50 (for 0.4')	2.0 / 1.1		4.0'-4.6' Gray SILT, trace Sand. 4.6'-6.1' Light Brown SAND, fine, trace Organics, dry.	ML SM	0	0	
6									
7	S-4	5-13-17-10	2.0 / 1.5		6.0'-8.0' Light Brown SAND, fine, trace Silt, moist.	SP	0	0	
8									
9	S-5	8-20-35-50	2.0 / 1.5		8.0'-9.0' Similar to above. 9.0'-9.2' Rock fragments (shale) 9.2'-9.5' Light Brown SAND, fine to coarse, trace Silt, dry.	SP GW GW	0	0	
10									
11	S-6	35-50 (for 0.4')	2.0 / 1.0		10.0'-11.0' Red to Brown SAND, medium to coarse, trace rock fragments, dry.	GW	0	0	
12									
13	S-7	3-9-13-34	2.0 / 1.5		12.0'-12.8' Similar to above, wet. 12.8'-13.5' Gray Silty SAND, fine, trace medium to coarse Sand, wet.	GW SM	0	0	
14									
15	S-8	21-30-23-50	2.0 / 1.2		14.0'-16.0' Gray Silty SAND, fine, little medium to coarse Sand trace Rock fragments, saturated.	SM	0	0	

SOIL BORING LOG	BORING NO.: MW-107	PROJECT NO.: 7311-03	PAGE 2 OF 2

PROJECT NAME: OLIN ROCHESTER RI	DRILLING CONTRACTOR: MARCOR OF NEW YORK
DRILL RIG TYPE: CANTERRA CT 350	DRILLER: R. SCHEFFER / DATE STARTED: 11/8/93 COMPLETED: 11/8/93
METHOD: HSA / AUGER SIZE: 4.25" I.D.	PID METER: 10.6 ev / FID METER: OVA-108 / PROTECTION LEVEL: MOD D
GROUND ELEV.: 536.3 / SOIL DRILLED: 16.8' FT.	ROCK DRILLED: (CORE \ ROLLER BIT) NONE FT. / TOTAL DEPTH: 16.8'
LOGGED BY: E. SHEPHARD	CHECKED BY: N.B. / DATE: 9/6/94

DEPTH (FT.)	SAMPLE NUMBER	BLOWS PER 6-INCHES	PEN. / REC.	GRAPHIC LOG	SAMPLE DESCRIPTION	USCS CLASSIF.	MONITORING PID	MONITORING FID	MONITORING OTHER
16	S-9	50/ ⌐	0.5		16.0'-16.5' Similar to above, Rock fragments	SM	0	0	
17		| (for 0.4')	0.2		REFUSAL WITH SPOON AT 16.8'				
18									
19									
20									
21									
22									
22									
23									
24									
25									
26									
27									
28									
29									
30									

SOIL BORING LOG	BORING NO.: MW-108	PROJECT NO.: 7311-02	PAGE 1 OF 1

PROJECT NAME: OLIN ROCHESTER RI	DRILLING CONTRACTOR: MARCOR OF NEW YORK
DRILL RIG TYPE: CANTERRA CT 350	DRILLER: R. SCHEFFER — DATE STARTED: 12/15/93 COMPLETED: 12/15/93
METHOD: HSA — AUGER SIZE: 4.25" I.D.	PID METER: 10.6 ev — FID METER: OVA-108 — PROTECTION LEVEL: MOD D
GROUND ELEV.: 538.1 — SOIL DRILLED: 12.5' FT.	ROCK DRILLED: ROLLER BIT: 12.5'-17.5' — TOTAL DEPTH: 17.5'
LOGGED BY: E. SHEPHARD	CHECKED BY: NB — DATE: 9/6/94

DEPTH (FT.)	SAMPLE NUMBER	BLOWS PER 6-INCHES	PEN. / REC.	GRAPHIC LOG	SAMPLE DESCRIPTION	USCS CLASSIF.	MONITORING (PPM) PID	FID	OTHER
0									
1	S-1	13-25-9-7	2.0 / 1.4		0'-0.3' Dark Brown to Black SAND, fine, trace Organics (Topsoil). 0.3'-1.0' Black SAND, medium to coarse, some Silt, trace ash like material	SM	0	0	
2									
3	S-2	5-5-5-10	2.0 / 1.8		2.0'-2.6' Dark Brown SAND, fine to medium, dry. 2.6'-3.8' Light Brown SAND, fine, dry.	SP	0	0	
4									
5	S-3	5-10-40-22	2.0 / 1.7		4.0'-6.0' Brown SAND, fine, some Silt, trace medium Sand, dry.	SM	0	0	
6									
7	S-4	12-22-34-52	2.0 / 2.0		6.0'-8.0' Similar to above, trace Gravel, dry.	SM	0	0	
8									
9	S-5	15-50/0.3'	0.9 / 0.9		8.0'-8.9' Similar to above	SM	0	0	
10									
11	S-6	26-38-37-41	2.0 / 1.6		10.0'-11.6' Similar to above, trace rock fragments, moist.	SM	0	0	
12	S-7	50/0.4'	0.5 / 0.2		12.0'-12.2' Brown SAND, fine, some Silt, moist.	SM	0	0	
13					Split Spoon refusal at 12.5' Roller cone drilled in rock from 12.5' to 17.5'				
14									
15									

SOIL BORING LOG	BORING NO.: **PZ-101**	PROJECT NO.: 7311-02	PAGE 1 OF 2
PROJECT NAME: OLIN ROCHESTER RI		DRILLING CONTRACTOR: MARCOR OF NEW YORK	
DRILL RIG TYPE: CANTERRA CT 350		DRILLER: R. SCHEFFER	DATE STARTED: 10/26/93 COMPLETED: 10/26/93
METHOD: HSA	AUGER SIZE: 4.25" I.D.	PID METER: 10.6 ev	FID METER: OVA-108 PROTECTION LEVEL: D
GROUND ELEV.: 540.5	SOIL DRILLED: 20.4' FT.	ROCK DRILLED: (CORED \ ROLLER BIT) NONE FT.	TOTAL DEPTH: 20.4'
LOGGED BY: B. JOHNSON		CHECKED BY: NB	DATE: 9/6/94

DEPTH (FT.)	SAMPLE NUMBER	BLOWS PER 6-INCHES	PEN. / REC.	GRAPHIC LOG	SAMPLE DESCRIPTION	USCS CLASSIF.	MONITORING (PPM) PID	FID	OTHER
0									
1	S-1	5-10-10-21	2.0 / 1.3		0.0'-2.0' - Brown, Silty SAND, fine to coarse, trace to little fine Gravel, trace organics, (concrete in tip of spoon) moist.	SM	0	2	
2					2.0' - 3.0' - Similar to above, some concrete.	SM			
3	S-2	17-32-20-25	2.0 / 1.5		3.0' - 4.0' - Reddish-brown SAND, fine, little to some silt, trace to little medium and coarse Sand, dry.	SM	0	30	
4									
5	S-3	11-18-19-17	2.0 / 1.6		4.0' - 6.0' - Reddish brown Silty SAND, fine, trace to little medium Sand, trace coarse Sand and fine Gravel, dry to moist at 6.0'.	SM	0	4	
6					6.0' - 6.4' - Brown SAND, fine, some Silt, little medium to coarse Sand, trace Organics (roots).	SM			
7	S-4	6-12-23-24	2.0 / 1.8		6.4' - 8.0' - Brown to gray Silty Sand, fine, little coarse Sand, trace medium Sand and fine Gravel, moist.	SM	0	4	
8									
9	S-5	10-16-21-21	2.0 / 2.0		8.0' - 10.0'- Reddish-brown Silty SAND, fine, little coarse and medium Sand, trace fine Gravel, moist.	SM	0	2	
10									
11	S-6	10-50 (FOR 0.4')	0.9 / 0.9		10.0'-10.9' - Similar to above, wet and saturated at 10.5'.	SM	NA	NA	
12									
13	S-7	28-25-20-29	2.0 / 1.1		12.0'-14.0' - Brown SAND, fine some coarse Sand, little to some fine fine Gravel, trace to little Silt, trace medium Sand, poorly graded, saturated	SP	0	2	
14									
15	S-8	6-16-19-28	2.0 / 1.4		14.0'-16.0' - Brown SAND, fine to coarse, little Silt, grading to: fine SAND and little medium to coarse Sand, little Silt, trace fine Gravel, saturated.	SM	0	0	

SOIL BORING LOG	BORING NO.: PZ-101	PROJECT NO.: 7311-02	PAGE 2 OF 2

PROJECT NAME: OLIN ROCHESTER RI	DRILLING CONTRACTOR: MARCOR OF NEW YORK
DRILL RIG TYPE: CANTERRA CT 350	DRILLER: R. SCHEFFER; DATE STARTED: 10/26/93 COMPLETED: 10/26/93
METHOD: HSA; AUGER SIZE: 4.25" I.D.	PID METER: 10.6 ev; FID METER: OVA-108; PROTECTION LEVEL: D
GROUND ELEV.: 540.5; SOIL DRILLED: 20.4' FT.	ROCK DRILLED: (CORED \ ROLLER BIT) NONE FT.; TOTAL DEPTH: 20.4'
LOGGED BY: B. JOHNSON	CHECKED BY: NB; DATE: 1/6/94

DEPTH (FT.)	SAMPLE NUMBER	BLOWS PER 6-INCHES	PEN. / REC.	GRAPHIC LOG	SAMPLE DESCRIPTION	USCS CLASSIF.	MONITORING (PPM) PID	FID	OTHER
16									
17	S-9	43-40-40-43	2.0 / 1.6		16.0'-18.0'- Gray Silty SAND, fine, trace medium and coarse Sand, trace Gravel (fine), grading to more silt with depth, little fine Sand trace fine Gravel, saturated.	SM	1.2	300	
18									
19	S-10	25-43-50 (for 0.3')	1.3 / 1.0		18.0'-20.0'- Gray SILT, trace fine Gravel (subrounded) trace medium and coarse Sand, thin silty fine Sand lenses near bottom of sample.	ML	1.9	250	
20					Note: At tip of spoon FID readings jumped from 10 ppm to 150 ppm.				
20.4'									
21					Spoon refusal at 19.3'. Auger w/o sampling to refusal at 20.4'. Bedrock fragments observed.				
					Note: 1) Refusal with spoon first encountered at 10.9'. Boring moved 3' northwest and sampling continued from 12.0'.				

SOIL BORING LOG	BORING NO.: PZ-102	PROJECT NO.: 7311-02	PAGE 1 OF 4
PROJECT NAME: OLIN ROCHESTER RI		DRILLING CONTRACTOR: MARCOR OF NEW YORK	
DRILL RIG TYPE: CANTERRA CT 350		DRILLER: R. SCHEFFER	DATE STARTED: 10/25/93 COMPLETED: 10/25/93
METHOD: HSA	AUGER SIZE: 4.25" I.D.	PID METER: 10.0 ev	FID METER: OVA-108 PROTECTION LEVEL: MOD D
GROUND ELEV.: 539.1	SOIL DRILLED: 17.2' FT.	ROCK DRILLED:CORED: 15.1'	ROLLER BIT: 2.0' ' TOTAL DEPTH: 34.3'
LOGGED BY: B. JOHNSON		CHECKED BY: N.B	DATE: 9/6/94

DEPTH (FT.)	SAMPLE NUMBER	BLOWS PER 6-INCHES	PEN. / REC.	GRAPHIC LOG	SAMPLE DESCRIPTION	USCS CLASSIF.	MONITORING (PPM) PID	FID	OTHER
0									
1	S-1	4-8-6-8	2.0 / 1.2		0.0'-1.0' Dark Brown Silty SAND, fine trace organics, moist.	SM	0	0	
2					1.0'-2.0' Brown to Rust SAND, medium to coarse, some fine Sand, trace to little fine gravel, moist. (dry coal fragments present)	SW			
3	S-2	5-14-17-16	2.0 / 1.0		2.0'-4.0 Tan to rust SILT, little to some fine Sand, trace fine Gravel, dry.	ML	0	2	
4									
5	S-3	6-17-22-20	2.0 / 1.5		4.0'-6.0' Brown to rust Silty SAND, fine, trace to little fine to coarse Gravel, trace medium to coarse Sand, dry to moist (Organics in the form of roots are present)	SM	0	4	
6									
7	S-4	7-13-16-21	2.0 / 1.6		6.0'-6.2' Topsoil Silty SAND, fine, trace Organics, moist.	SM	0	15	
8					6.2'-8.0' Red to Brown Silty SAND, fine, little coarse Sand, fine Gravel, trace medium Sand, moist to wet. (Organics and mottles present)	SM			
9	S-5	8-20-19-17	2.0 / 1.8		8.0'-8.3' Similar to above.	SM			
10					8.3'-10.0' Light Brown Silty SAND, fine, little fine Sand, fine Gravel, trace medium Sand, wet to saturated.	SM	0	7	
11	S-6	10-18-20-27	2.0 / 1.4		10.0'-12.0' Light Brown SAND, fine, trace to little coarse Gravel, trace medium to coarse Sand, poorly graded, saturated.	SP	0	4	
12					12.0'-13.3' Similar to above.	SP			
13	S-7	17-23-31-31	2.0 / 1.7		13.3'-14.0' Gray SAND, fine, some Silt, fractured rock, trace medium to coarse Sand, saturated.	SM	0	125	
14									
15	S-8	14-12-17-21	2.0 / 1.2		14.0'-16.0' Similar to above, trace to little medium to coarse Sand.	SM	0	4	

SOIL BORING LOG	BORING NO.: PZ-102	PROJECT NO.: 7311-03	PAGE 2 OF 4
PROJECT NAME: OLIN ROCHESTER RI		DRILLING CONTRACTOR: MARCOR OF NEW YORK	
DRILL RIG TYPE: CANTERRA CT 350		DRILLER: R. SCHEFFER	DATE STARTED: 10/25/93 COMPLETED: 10/25/93
METHOD: HSA	AUGER SIZE: 4.25" I.D.	PID METER: 10.6 ev	FID METER: OVA-108 PROTECTION LEVEL: MOD D
GROUND ELEV.: 539.1	SOIL DRILLED: 17.2' FT.	ROCK DRILLED: CORE: 15.1' ROLLER BIT: 2.0'	TOTAL DEPTH:34.4''
LOGGED BY: B. JOHNSON		CHECKED BY: N.B.	DATE: 9/6/94

DEPTH (FT.)	SAMPLE NUMBER	BLOWS PER 6-INCHES	PEN. / REC.	GRAPHIC LOG	SAMPLE DESCRIPTION	USCS CLASSIF.	MONITORING PID	MONITORING FID	MONITORING OTHER
16					16.0'-16.2' Similar to above	SM	0	125	
17	S-9	1-13-50/0.2'	1.2 / 1.0		16.2'-16.5' Gray SAND, coarse to medium, some fine Sand and Silt, saturated.	SM			
18					16.5'-17.2' Gray Silty SAND, fine, trace medium to coarse Sand, saturated.	SM			
19					Notes:				
20					Refusal with augers at 17.2'				
21					Water level measured at 8.5' during drilling.				
22									
22									
23									
24									
25									
26									
27									
28									
29									
30									

ROCK CORE LOG	BORING NO.: PZ-102	PROJECT NO.: 7311-02	PAGE 3 OF 4
PROJECT NAME: OLIN ROCHESTER RI		DRILLING CONTRACTOR: MARCOR OF NEW YORK	
DRILL RIG TYPE: CANTERRA CT-350		DRILLER: R. SCHEFFER	DATE STARTED: 11/04/93 COMPLETED: 11/04/93
METHOD: CORE	BIT SIZE: HQ (3.8" O.D.)	PID METER: 10.6 ev	FID METER: OVA-108 PROTECTION LEVEL: D
GROUND ELEV.: 539.10	SOIL DRILLED: 17.2 FT.	ROCK DRILLED: (CORED: 15.1' ROLLER BIT: 2.0')	TOTAL DEPTH: 34.3'
LOGGED BY: E. SHEPARD / N. BRETON		CHECKED BY: NJB	DATE: 9/6/94

DEPTH (FT.)	RUN NO.	DRILLING RATE (FT/MIN)	PEN. / REC.	RQD (%)	GRAPHIC LOG	CORE BREAKS TYPE	CORE BREAKS DIP	WEATHERED CONDITION	ROCK DESCRIPTION AND COMMENTS ON DRILLING	MONITORING PID	MONITORING FID
18									See soil boring log for PZ-102 for soil descriptions from 0'-17.2'		
19									Roller cone drill from 17.2'to 19.2'		
19.2									Grout		
20	R-1	2	0.7 / 0.7						Light gray, finely crystalline, medium bedded, DOLOMITE with interbedded shale.	0	40
21	R-2	5	5.1 / 4.8	84		nat	20°	slight	Lockport FM Run R-2 - Shale stringers common throughout.	1.6	30
22		5				nat	0°	slight		0	50
23		5				nat	0°	slight		0	30
24		4				nat	10°	slight		0	20
25		5				nat mech nat mech	0°	none slight		6.2	70
26	R-3	5	5.0 / 4.8	88		nat	0°	slight	Run R-3 - Shale stringers common throughout.	0	10
27		3				nat	20°	slight		0	10
28		4				nat	20°	slight		0	15
29		3				nat mech mech	30° 0°	slight slight		0	10
30		4				nat mech	20°	slight		0	10
31	R-4	4	4.3 / 4.2	40		nat mech mech mech nat mech	0° 0°	moderate slight		0 0	10 18
32		4				nat nat nat	10° 0° 0°	slight slight slight		0	8

ROCK CORE LOG	BORING NO.: **PZ-102**	PROJECT NO.: 7311-02	PAGE 4 OF 4

PROJECT NAME: OLIN ROCHESTER RI		DRILLING CONTRACTOR: MARCOR OF NEW YORK	
DRILL RIG TYPE: CANTERRA CT-350		DRILLER: R. SCHEFFER	DATE STARTED: 11/04/93 COMPLETED: 11/04/93
METHOD: CORE	BIT SIZE: HQ (3.8" O.D.)	PID METER: 10.6 ev / FID METER: OVA-108	PROTECTION LEVEL: D
GROUND ELEV.: 539.10	SOIL DRILLED: 17.2 FT.	ROCK DRILLED: (CORED: 15.1' ROLLER BIT: 2.0')	TOTAL DEPTH: 34.3'
LOGGED BY: E. SHEPARD / N. BRETON		CHECKED BY: N.B.	DATE: 9/6/94

DEPTH (FT.)	RUN NO.	DRILLING RATE (FT/MIN)	PEN. REC.	RQD (%)	GRAPHIC LOG	CORE BREAKS TYPE	CORE BREAKS DIP	WEATHERED CONDITION	ROCK DESCRIPTION AND COMMENTS ON DRILLING	MONITORING PID	MONITORING FID
33											
	R-4	4	4.3	40		nat	0°	slight	Light gray, finely crystalline, medium bedded, DOLOMITE with interbedded shale.	0	8
34		3	4.2			nat	0°	slight		0	10
34.3									Lockport FM		
35									End of boring at 34.3' below ground surface.		

Note: Approximately 300 gallons of water lost during coring.

nat - interpreted natural fracture or core break

mech - interpreted mechanical core break

SOIL BORING LOG	BORING NO.: PZ-103	PROJECT NO.: 7311-02	PAGE 1 OF 3

PROJECT NAME: OLIN ROCHESTER RI		DRILLING CONTRACTOR: MARCOR OF NEW YORK	
DRILL RIG TYPE: CANTERRA CT 350		DRILLER: R. SCHEFFER	DATE STARTED: 10/18/93 COMPLETED: 10/19/93
METHOD: HSA	AUGER SIZE: 4.25" I.D.	PID METER: 10.6 ev / FID METER: OVA-108	PROTECTION LEVEL: MOD D
GROUND ELEV.: 537.8	SOIL DRILLED: 13.35 FT.	ROCK DRILLED: CORE: 15.0' ROLLER BIT: 2.0'	TOTAL DEPTH: 30.0'
LOGGED BY: B. JOHNSON		CHECKED BY: NB	DATE: 9/6/94

DEPTH (FT.)	SAMPLE NUMBER	BLOWS PER 6-INCHES	PEN. / REC.	GRAPHIC LOG	SAMPLE DESCRIPTION	USCS CLASSIF.	MONITORING (PPM) PID	FID	OTHER
0									
1	S-1	13-15-30-20	2.0 / 1.2		0.0'-2.0' Brown Silty SAND, fine to coarse, some fine gravel, dry.	GM	0	30	
2									
3	S-2	6-6-7-6	2.0 / 1.5		2.0'-4.0' Dark Brown to Black Silty SAND, trace Organics and ash, moist.	SM	0	30	
4									
5	S-3	5-10-10-14	2.0 / 2.0		4.0'-6.0' Brown SAND, fine, some silt, trace fine Gravel, medium and coarse Sand, moist. 5.3'-5.5' Light Brown SAND, fine, trace to little Silt.	SM	0	15	
6									
7	S-4	5-10-10-10	2.0 / 1.3		6.0'-8.0' Brown to Reddish Brown with light gray Silty SAND, fine, trace to little medium Sand, trace coarse Sand, fine Gravel and Clay, moist. to wet.	SM	NR	NR	
8					8.0'-9.0' Similar to above, (less coarse) wet to saturated.	SM			
9	S-5	2-2-12-17	2.0 / 1.3		9.0'-9.2' Light Gray cemmented SAND, fine, some to little Silt, dry. 9.2'-10.0' Light Gray SAND, fine, some to little Silt, trace medium to coarse Sand, moist to wet.		0	125	
10									
11	S-6	7-19-49-40	2.0 / 1.2		10.0'-12.0' Light Gray Silty SAND, fine, trace medium Sand, some Rock fragments, saturated.	GM	0	250	
12									
13	S-7	10-34-50/0.4'	1.4 / 1.0		12.0'-13.35' Gray fractured Rock and Silty Sand, fine.	GM	1.3	125	
14					Notes: Refusal with augers at 13.35' Water level observed at 8.0' during drilling				
15									

ROCK CORE LOG	BORING NO.: PZ-103	PROJECT NO.: 7311-02	PAGE 2 OF 3

PROJECT NAME: OLIN ROCHESTER RI	DRILLING CONTRACTOR: MARCOR OF NEW YORK
DRILL RIG TYPE: CANTERRA CT-350	DRILLER: R. SCHEFFER — DATE STARTED: 11/03/93 COMPLETED: 11/04/93
METHOD: CORE — BIT SIZE: HQ (3.8" O.D.)	PID METER: 10.6 ev — FID METER: OVA-108 — PROTECTION LEVEL: D
GROUND ELEV.: 537.8 — SOIL DRILLED: 13.4 FT.	ROCK DRILLED: (CORED: 15.0' ROLLER BIT: 2.0') — TOTAL DEPTH: 34.3'
LOGGED BY: E. SHEPARD / N. BRETON	CHECKED BY: NB — DATE: 9/6/94

DEPTH (FT.)	RUN NO.	DRILLING RATE (FT/MIN)	PEN. REC.	RQD (%)	GRAPHIC LOG	CORE BREAKS TYPE	CORE BREAKS DIP	WEATHERED CONDITION	ROCK DESCRIPTION AND COMMENTS ON DRILLING	MONITORING PID	MONITORING FID
14									See soil boring log for PZ-103 for soil descriptions from 0'-13.4'		
									Roller cone drill from 13.4'to 15.4'		
15									Grout		
15.4											
						gravel			Light gray, finely crystalline,	0	10
16		4	1.6			nat	20°	moderate	medium bedded, DOLOMITE with		
	R-1		—	81					interbedded shale.		
			1.6						Lockport FM	0	15
		3				nat	0°	moderate			
17											
		5							Run R-2 - Shale partings common	0	9
						nat	0°	moderate	throughout.		
18											
		4								0	20
19						nat	0°	moderate			
			5.0								
	R-2	5	—	84		nat	0°	moderate		0	6
			4.4			nat	50°	moderate			
20											
						nat	0°	slight			
		4								0	8
21											
		4				mech				0	5
22											
		4				nat	0°	slight		0	10
23											
		5				nat	0°	slight		0	5
24						nat	0°	slight			
			5.0								
	R-3	5	—	96						0	5
			5.1			nat	0°	slight			
25											
						mech			25.2'- Mechanical break along		
		5							shale parting.	0	8
26						nat	0°	slight			
		4								0	5
27											
		5				nat	30°	slight		0	10
	R-4		3.4			nat	0°	slight			
28			—	72		mech					
		5	3.3			nat	0°	moderate		0	10

ROCK CORE LOG	BORING NO.: PZ-103	PROJECT NO.: 7311-02	PAGE 3 OF 3

PROJECT NAME: OLIN ROCHESTER RI	DRILLING CONTRACTOR: MARCOR OF NEW YORK	
DRILL RIG TYPE: CANTERRA CT-350	DRILLER: R. SCHEFFER	DATE STARTED: 11/03/93 COMPLETED: 11/04/93

METHOD: CORE	BIT SIZE: HQ (3.8" O.D.)	PID METER: 10.6 ev	FID METER: OVA-108	PROTECTION LEVEL: D

GROUND ELEV.: 537.8	SOIL DRILLED: 13.4 FT.	ROCK DRILLED: (CORED: 15.0' ROLLER BIT: 2.0')	TOTAL DEPTH: 34.3'
LOGGED BY: E. SHEPARD / N. BRETON		CHECKED BY: NB	DATE: 9/6/94

DEPTH (FT.)	RUN NO.	DRILLING RATE (FT/MIN)	PEN. / REC.	RQD (%)	GRAPHIC LOG	CORE BREAKS TYPE	CORE BREAKS DIP	WEATHERED CONDITION	ROCK DESCRIPTION AND COMMENTS ON DRILLING	MONITORING PID	MONITORING FID
29											
	R-4	4	3.4 / —	72		nat	0°	none	Light gray, finely crystalline,	0	8
						nat	0°	slight	medium bedded, DOLOMITE with		
30			3.3			mech			interbedded shale.		
		1				nat	0°	slight	Lockport FM	0	8
31.4											
31									End of boring at 30.4' below ground surface		
									Note: Approximately 700 gallons of water lost during coring		
									nat - interpreted natural fracture or core break		
									mech - interpreted mechanical core break		

SOIL BORING LOG	BORING NO.: PZ-104	PROJECT NO.: 7311-02	PAGE 1 OF 3

PROJECT NAME: OLIN ROCHESTER RI	DRILLING CONTRACTOR: MARCOR OF NEW YORK
DRILL RIG TYPE: CANTERRA CT 350	DRILLER: R. SCHEFFER — DATE STARTED: 10/22/93 COMPLETED: 10/22/93
METHOD: HSA — AUGER SIZE: 4.25" I.D.	PID METER: 10.6 ev — FID METER: OVA-108 — PROTECTION LEVEL: MOD D
GROUND ELEV.: 537.2 — SOIL DRILLED: 13.4 FT.	ROCK DRILLED: CORE: 15.1' — ROLLER BIT: 1.9' — TOTAL DEPTH: 30.4'
LOGGED BY: B. JOHNSON	CHECKED BY: N.B. — DATE: 9/6/94

DEPTH (FT.)	SAMPLE NUMBER	BLOWS PER 6-INCHES	PEN. / REC.	GRAPHIC LOG	SAMPLE DESCRIPTION	USCS CLASSIF.	MONITORING (PPM) PID	FID	OTHER
0					AUGER THROUGH 0.5' OF GRAVEL AND ASPHALT				
1	S-1	13-10-14	1.5 / 1.0		0.5'-1.5' Light Gray to Brown Silty SAND, little fine to coarse Gravel, dry, poorly graded.	SM	0	50	
2					1.5'-2.0' Brown and Red SAND, fine to medium, little Silt.	SP			
3	S-2	7-7-5-5	2.0 / 1.5		2.0'-2.5' Similar to above.	SP			
					2.5'-4.3' Brown SILT, some fine Sand, little to some coarse Sand, trace medium Sand, fine Gravel, moist. (Ash or Slag observed)	ML	0	30	
4					4.3'-4.5' Topsoil, Silty SAND, fine, trace Organics.	SM			
5	S-3	1-4-4-8	2.0 / 1.6		4.5'-6.7' Reddish Brown with light tan SAND, fine, little to some Silt, trace medium to coarse Sand, moist.	SM	0	4	
6									
7	S-4	3-4-10-12	2.0 / 1.8		6.7'-8.0' Brown Gravelly SAND, fine to coarse, little Silt, dry.	GM	0	25	
8									
9	S-5	7-14-20-18	2.0 / 1.3		8.0'-10.0' Similar to above.	GM	0	125	
10					10.0'-10.5' Similar to above.	GM			
11	S-6	8-8-13-16	2.0 / 1.0		10.5'-11.5' Gray Silty SAND, fine, some fine to coarse Gravel, trace medium to coarse Sand, Moist.	GM	0	25	
					11.5'-12.0' Similar to above, saturated.	GM			
12									
13	S-7	2-11-50/0.4	1.4 / 1.0		12.0'-13.4' Similar to above with Rock fragments in tip of spoon.	GM	0	80	
14					Notes:				
					Refusal with augers at 13.4'				
15					Water level measured at 11.5' during drilling				

ROCK CORE LOG	BORING NO.: PZ-104	PROJECT NO.: 7311-02	PAGE 2 OF 3

PROJECT NAME: OLIN ROCHESTER RI		DRILLING CONTRACTOR: MARCOR OF NEW YORK	
DRILL RIG TYPE: CANTERRA CT-350		DRILLER: R. SCHEFFER	DATE STARTED: 11/05/93 COMPLETED: 11/05/93
METHOD: CORE	BIT SIZE: HQ (3.8" O.D.)	PID METER: 10.6 ev / FID METER: OVA-108	PROTECTION LEVEL: D
GROUND ELEV.: 537.2	SOIL DRILLED: 13.4 FT.	ROCK DRILLED: (CORED: 15.0' ROLLER BIT: 2.0')	TOTAL DEPTH: 30.4'
LOGGED BY: E. SHEPARD / N. BRETON		CHECKED BY: NB	DATE: 9/6/94

DEPTH (FT.)	RUN NO.	DRILLING RATE (FT/MIN)	PEN. / REC.	RQD (%)	GRAPHIC LOG	CORE BREAKS TYPE	CORE BREAKS DIP	WEATHERED CONDITION	ROCK DESCRIPTION AND COMMENTS ON DRILLING	MONITORING PID	MONITORING FID
14									See soil boring log for PZ-104 for soil descriptions from 0'-13.4'		
									Roller cone drill from 13.4'to 15.4'		
15									Grout		
15.4											
						nat	10°	moderate	Light gray, finely crystalline,		
16		5				nat	10°	moderate	medium bedded, DOLOMITE with interbedded shale.	0	30
									Lockport FM		
						nat	10°	moderate		0	20
17		4				nat	10°	moderate			
			4.0								
	R-1		—	55		nat	10°	slight	Run R-1 - Shale partings common		
			3.5						throughout. Moderately weathered	0	15
18		5				nat	10°	moderate			
						nat	30°	moderate			
						nat	0°	moderate		0	15
19		5				nat	0°	moderate high			
										0	0
20		4				mech			Run R-2 - Shale partings common throughout. Moderately weathered		
						mech				0	0
21		5									
						nat	10°	moderate		0	0
22		5				mech					
			5.0			nat	0°	slight			
	R-2		—	62		nat	10°	moderate		0	0
			4.7								
23		4				mech					
						nat	10°	moderate		0	0
24		4				nat	0°	moderate			
						nat	5°	slight			
25		6				nat	30°	slight	Run R-3 - Shale partings common throughout. Moderately weathered	0	10
						mech					
										0	8
26		6				nat	0°	moderate			
			6.0			nat	0°	moderate			
	R-3		—	85						0	10
			5.9								
27		5				nat	0°	moderate			
						nat	0°	moderate			
										0	10
28		4				nat	0°	moderate			
						nat	10°	slight			
										0	5

ROCK CORE LOG	BORING NO.: PZ-104	PROJECT NO.: 7311-02	PAGE 3 OF 3

PROJECT NAME: OLIN ROCHESTER RI	DRILLING CONTRACTOR: MARCOR OF NEW YORK
DRILL RIG TYPE: CANTERRA CT-350	DRILLER: R. SCHEFFER — DATE STARTED: 11/05/93 COMPLETED: 11/05/93
METHOD: CORE — BIT SIZE: HQ (3.8" O.D.)	PID METER: 10.6 ev — FID METER: OVA-108 — PROTECTION LEVEL: D
GROUND ELEV.: 537.2 — SOIL DRILLED: 13.4 FT.	ROCK DRILLED: (CORED: 15.0' ROLLER BIT: 2.0') — TOTAL DEPTH: 30.4'
LOGGED BY: E. SHEPARD / N. BRETON	CHECKED BY: N.B. — DATE: 9/6/94

DEPTH (FT.)	RUN NO.	DRILLING RATE (FT/MIN)	PEN. REC.	RQD (%)	GRAPHIC LOG	CORE BREAKS TYPE	CORE BREAKS DIP	WEATHERED CONDITION	ROCK DESCRIPTION AND COMMENTS ON DRILLING	MONITORING PID	MONITORING FID
29											
	R-3	4	6.0	85		nat	0°	slight	Light gray, finely crystalline, medium bedded, DOLOMITE with interbedded shale.	0	5
30		4	5.9			nat	0°	slight	Lockport FM	0	10
30.4											
31									End of boring at 30.4' below ground surface.		

Note: Approximately 1100 gallons of water lost during coring.

nat - interpreted natural fracture or core break

mech - interpreted mechanical core break

SOIL BORING LOG	BORING NO.: PZ-105	PROJECT NO.: 7311-02	PAGE 1 OF 3

PROJECT NAME: OLIN ROCHESTER RI	DRILLING CONTRACTOR: MARCOR OF NEW YORK	
DRILL RIG TYPE: CANTERRA CT 350	DRILLER: R. SCHEFFER	DATE STARTED: 10/11/93 COMPLETED: 10/12/93

METHOD: HSA	AUGER SIZE: 4.25" I.D.	PID METER: 10.6 ev	FID METER: OVA-108	PROTECTION LEVEL: MOD D

GROUND ELEV.: 537.0	SOIL DRILLED: 15.9' FT.	ROCK DRILLED: CORE: 14.9' ROLLER BIT: 2.1'	TOTAL DEPTH: 32.9'

LOGGED BY: B. JOHNSON	CHECKED BY: N.B.	DATE: 9/6/94

DEPTH (FT.)	SAMPLE NUMBER	BLOWS PER 6-INCHES	PEN. / REC.	GRAPHIC LOG	SAMPLE DESCRIPTION	USCS CLASSIF.	MONITORING PID	MONITORING FID	(PPM) OTHER
0									
1	S-1	12-10-15-32	2.0 / 1.2		0'-0.3 Topsoil, Brown Silty SAND, fine, Organics, dry. 0.3'-1.5' Light Brown to Gray Gravelly SAND, coarse, angular, little to some fine to medium Sand, trace to little Silt, dry.	SM GW	0 0	0 3	
2					1.5'-2.0' Brown SAND, fine to medium, trace to little Silt, dry.	SW	0	0	
3	S-2	18-21-16-20	2.0 / 1.0		2.0'-3.9' Brown SAND, fine to medium, little fine Sand and Silt. 3.9'-4.0' Dark Brown Silty SAND, fine, moist.	GW SM	NA	NA	
4									
5	S-3	6-8-8-18	2.0 / 0.5		4.0'-6.0' Light Brown and Red Silty SAND, fine, moist.	SM	NA	NA	
6									
7	S-4	9-35-25-23	2.0 / 0.0		6.0'-8.0' No recovery after two attempts (cobble(s) at tip of spoon)				
8					8.0'-10.0' Brownish Red and Dark Brown Silty SAND, fine, little coarse Sand, fine Gravel, trace to little Silt and medium Sand, saturated, poorly graded.	SM			
9	S-5	20-44-21-16	2.0 / 1.2		(9.5'-9.7') Dark Brown SAND lens, medium to coarse, little fine Sand, trace, Silt. (water bearing soils)		1.0	0	
10									
11	S-6	6-9-14-19	2.0 / 1.5		10.0'-12.0' Brown Silty SAND, fine, trace to little medium to coarse Sand, little fine Sand, trace Silt, saturated	SM	2.5	110	
12									
13	S-7	12-6-9-14	2.0 / 1.2		12.0'-14.0' Dark Brown Silty SAND, fine, saturated, Dilatent.	SM	0	8	
14									
15	S-8	5-19-20-50/ (0.4')	1.6 / 1.9		14.0'-15.9' Brown Silty SAND, fine, trace fine angular Gravel, saturated, Dilatent. 15.9'-16.0' Auger to top of rock Refusal with augers at 15.9'	SM	0	110	

ROCK CORE LOG	BORING NO.: PZ-105	PROJECT NO.: 7311-02	PAGE 2 OF 3

PROJECT NAME: OLIN ROCHESTER RI	DRILLING CONTRACTOR: MARCOR OF NEW YORK
DRILL RIG TYPE: CANTERRA CT-350	DRILLER: R. SCHEFFER — DATE STARTED: 11/01/93 COMPLETED: 11/01/93
METHOD: CORE — BIT SIZE: HQ (3.8" O.D.)	PID METER: 10.6 ev — FID METER: OVA-108 — PROTECTION LEVEL: D
GROUND ELEV.: 537.0 — SOIL DRILLED: 15.9 FT.	ROCK DRILLED: (CORED: 15.1' ROLLER BIT: 2.0') — TOTAL DEPTH: 33.0'
LOGGED BY: E. SHEPARD / N. BRETON	CHECKED BY: NB — DATE: 9/6/94

DEPTH (FT.)	RUN NO.	DRILLING RATE (FT/MIN)	PEN. / REC.	RQD (%)	GRAPHIC LOG	CORE BREAKS TYPE	CORE BREAKS DIP	WEATHERED CONDITION	ROCK DESCRIPTION AND COMMENTS ON DRILLING	MONITORING PID	MONITORING FID
15									See soil boring log for PZ-105 for soil descriptions from 0'-15.9'		
									Roller cone drill from 15.9'to 17.9'		
16									Grout		
17.9											
	R-1		1.1 / 1.1	100		nat	0°	slight	Light gray, finely crystalline, medium bedded, DOLOMITE with interbedded shale. Lockport FM	0	10
19											
		3				nat	0°	slight	Run R-2 - Vugs common throughout measuring up to 0.4" in size.	0.6	180
20											
		4				nat	0°	slight		0	40
						nat	0°	slight			
21											
	R-2	5	5.0 / 4.9	80		nat	0°	slight		0	20
						nat	0°	slight			
22						nat	40°	moderate	21.9'-22.1' - Vertical fracture (2" long)		
		3								0	50
23						nat	0°	slight			
		5				nat	10°	slight	23.8'-24.0' - Shale partings present along stringers.	0.6	20
24											
		5				nat	0°	slight	Run R-3 - Shale stringers common; no vugs observed.	0	20
25											
		3				nat	0°	slight		0	50
26						nat	0°	moderate			
	R-3	4	5.0 / 5.1	80		nat	0°	slight		0.7	20
27						nat	0°	slight			
		5				nat	0°	slight		0	50
28											
		3				nat	20°	slight		0	50
29											
		4				nat	0°	slight		0	20
			4.0 / 4.0	73		nat	20°	slight			
30	R-4					nat	0°	slight			
		4								0	50

ROCK CORE LOG	BORING NO.: PZ-105	PROJECT NO.: 7311-02	PAGE 3 OF 3

PROJECT NAME: OLIN ROCHESTER RI		DRILLING CONTRACTOR: MARCOR OF NEW YORK	
DRILL RIG TYPE: CANTERRA CT-350		DRILLER: R. SCHEFFER	DATE STARTED: 11/01/93 COMPLETED: 11/01/93
METHOD: CORE	BIT SIZE: HQ (3.8" O.D.)	PID METER: 10.6 ev / FID METER: OVA-108	PROTECTION LEVEL: D
GROUND ELEV.: 537.0	SOIL DRILLED: 15.9 FT.	ROCK DRILLED: (CORED: 15.1' ROLLER BIT: 2.0')	TOTAL DEPTH: 33.0'
LOGGED BY: E. SHEPARD / N. BRETON		CHECKED BY: N.B.	DATE: 9/6/94

DEPTH (FT.)	RUN NO.	DRILLING RATE (FT/MIN)	PEN. / REC.	RQD (%)	GRAPHIC LOG	CORE BREAKS TYPE	CORE BREAKS DIP	WEATHERED CONDITION	ROCK DESCRIPTION AND COMMENTS ON DRILLING	MONITORING PID	MONITORING FID
31		3	4.0			nat	0°	slight	Light gray, finely crystalline, medium bedded, DOLOMITE with interbedded shale.	0	20
32	R-4		4.0	73		nat	0°	moderate	Lockport FM		
		4								0	20
33									End of boring at 33.0' below ground surface.		

Note: Approximately 400 gallons of water lost during coring

nat - interpreted natural fracture or core break

mech - interpreted mechanical core break

SOIL BORING LOG	BORING NO.: **PZ-106**	PROJECT NO.: 7311-02	PAGE 1 OF 3

PROJECT NAME: OLIN ROCHESTER RI	DRILLING CONTRACTOR: MARCOR OF NEW YORK
DRILL RIG TYPE: CANTERRA CT 350	DRILLER: R. SCHEFFER — DATE STARTED: 10/08/93 COMPLETED: 10/08/93
METHOD: HSA — AUGER SIZE: 4.25" I.D.	PID METER: 10.6 ev — FID METER: OVA-108 — PROTECTION LEVEL: MOD D
GROUND ELEV.: 535.0 — SOIL DRILLED: 13.2' FT.	ROCK DRILLED: CORE: 15.1' ROLLER BIT: 1.9' — TOTAL DEPTH: 30.2'
LOGGED BY: B. JOHNSON	CHECKED BY: N B — DATE: 9/6/94

DEPTH (FT.)	SAMPLE NUMBER	BLOWS PER 6-INCHES	PEN. / REC.	GRAPHIC LOG	SAMPLE DESCRIPTION	USCS CLASSIF.	MONITORING (PPM) PID	FID	OTHER
0									
1	S-1	9-9-7-6	2.0 / 1.5		0.0'-0.7' Brown to Black Silty SAND, fine, trace Organics.	SM	0	115	
2					0.7'-2.0' Dark Gray Silty SAND, fine to medium, little to some coarse Sand, trace fine Gravel, moist to wet.	SM			
3	S-2	3-5-4-4	2.0 / 0.8		2.0'-4.0' Similar to above.	SM	0	80	
4					4.0'-4.3' Similar to above	SM			
5	S-3	4-11-29-29	2.0 / 1.2		4.3'-4.8' Red to Brown Silty SAND, fine, trace to little medium to coarse SAND, trace fine Gravel. moist.	SM	0	85	
6					4.8'-6.0' Dark Gray and Red Brown SAND, fine to medium, some Silt, saturated.	SM			
7	S-4	10-19-13-14	2.0 / 1.4		6.0'-8.0' Red to Brown SAND, fine, little medium Sand and Silt, trace fine Gravel and coarse Sand, saturated poorly graded.	SP	0	35	
8					8.0'-8.3' Similar to above	SP			
9	S-5	14-11-24-18	2.0 / 1.6		8.3'-10.0' Dark Gray SAND, medium to coarse , little fine Sand, trace to little Silt, trace fine Gravel, saturated.	SW	0	15	
10									
11	S-6	14-18-18-23	2.0 / 1.5		10.0'-12.0' Dark Gray SAND, medium to coarse, little fine Sand and Silt, trace fine to coarse Gravel, saturated.	SW	0	10	
12									
13	S-7	40-27-50 (for 0.1')	1.1 / 1.0		12.0'-13.1' Dark Gray to light Brown SAND medium to coarse, little fine Sand and Silt, trace fine to coarse Gravel, saturated.	SW	15	30	
13.1									
14									

Notes:
Refusal with augers at 13.2'
Water measured at 4.8' during drilling

Cobbles noted at 6.0'
Water added to prevent heaving sand inside augers.

ROCK CORE LOG	BORING NO.: PZ-106	PROJECT NO.: 7311-02	PAGE 2 OF 3

PROJECT NAME: OLIN ROCHESTER RI		DRILLING CONTRACTOR: MARCOR OF NEW YORK	
DRILL RIG TYPE: CANTERRA CT-350		DRILLER: R. SCHEFFER	DATE STARTED: 10/28/93 COMPLETED: 10/28/93
METHOD: CORE	BIT SIZE: HQ (3.8" O.D.)	PID METER: 10.6 ev / FID METER: OVA-108	PROTECTION LEVEL: D
GROUND ELEV.: 535.0	SOIL DRILLED: 13.2 FT.	ROCK DRILLED: (CORED: 15.0' ROLLER BIT: 2.0')	TOTAL DEPTH: 30.2'
LOGGED BY: E. SHEPARD / N. BRETON		CHECKED BY: N.B	DATE: 9/6/94

DEPTH (FT.)	RUN NO.	DRILLING RATE (FT/MIN)	PEN. / REC.	RQD (%)	GRAPHIC LOG	CORE BREAKS TYPE	CORE BREAKS DIP	WEATHERED CONDITION	ROCK DESCRIPTION AND COMMENTS ON DRILLING	MONITORING PID	MONITORING FID
14									See soil boring log for PZ-106 for soil descriptions from 0'-13.2'		
									Roller cone drill from 13.2'to 15.2'		
15									Grout		
15.2											
16	R-1	5	1.0 / 1.0	79		nat	0°	slight	Light gray, finely crystalline, medium bedded, DOLOMITE with interbedded shale. Lockport FM	0	40
17	R-2	3	5.0 / 4.5	75		nat	0°	slight	Run R-2 - Occasional vugs	14	20
18		2				nat	0°	moderate	17.5'-17.7' - Noticeably weathered and fractured.	18	150
19		3				nat	0°	slight		8	70
						nat	0°	moderate	19.2'- Vug		
20		3				nat	0°	moderate		6	100
						nat	0°	moderate	20.5'- Highly fractured along shale partings		
21		4							20.6' - Vug	70	50
22	R-3	4	5.0 / 5.0	95		nat	0°	slight		10	50
23		3				nat	0°	moderate	23.1'-23.2'- Weathered and fractured along shale partings.	5	90
24		3				nat	0°	moderate	23.9'-24.0'- Weathered and fractured along shale partings.	0	15
						nat	0°	slight			
25		3				nat	0°	slight		5	20
26		2				nat	0°	slight		23	175
27	R-4	2	4.0 / 3.8	83		nat	0°	slight		30	70
28		2				nat	0°	slight		40	80
		2								10	30

ROCK CORE LOG	BORING NO.: PZ-106	PROJECT NO.: 7311-02	PAGE 3 OF 3
PROJECT NAME: OLIN ROCHESTER RI		DRILLING CONTRACTOR: MARCOR OF NEW YORK	
DRILL RIG TYPE: CANTERRA CT-350		DRILLER: R. SCHEFFER	DATE STARTED: 10/28/93 COMPLETED: 10/28/93
METHOD: CORE	BIT SIZE: HQ (3.8" O.D.)	PID METER: 10.6 ev	FID METER: OVA-108 / PROTECTION LEVEL: D
GROUND ELEV.: 535.0	SOIL DRILLED: 13.2 FT.	ROCK DRILLED: (CORED: 15.0' ROLLER BIT: 2.0')	TOTAL DEPTH: 30.2'
LOGGED BY: E. SHEPARD / N. BRETON		CHECKED BY: NB	DATE: 9/6/94

DEPTH (FT.)	RUN NO.	DRILLING RATE (FT/MIN)	PEN. REC.	RQD (%)	GRAPHIC LOG	CORE BREAKS TYPE	CORE BREAKS DIP	WEATHERED CONDITION	ROCK DESCRIPTION AND COMMENTS ON DRILLING	MONITORING PID	MONITORING FID
29											
	R-4	2	4.0	83		nat	0°	slight	Light gray, finely crystalline, medium bedded, DOLOMITE with interbedded shale.	7	30
30			3.8			nat	0°	slight	Lockport FM		
31									End of boring at 30.2' below ground surface		

Note: Approximately 80 gallons of water lost during coring.

nat - interpreted natural fracture or core break

mech - interpreted mechanical core break

SOIL BORING LOG	BORING NO.: PZ-107	PROJECT NO.: 7311-02	PAGE 1 OF 3

PROJECT NAME: OLIN ROCHESTER RI	DRILLING CONTRACTOR: MARCOR OF NEW YORK
DRILL RIG TYPE: CANTERRA CT 350	DRILLER: D. Bucher; DATE STARTED: 10/27/93 COMPLETED: 10/27/93
METHOD: HSA; AUGER SIZE: 4.25" I.D.	PID METER: 10.6 ev; FID METER: OVA-108; PROTECTION LEVEL: MOD D
GROUND ELEV.: 536.4; SOIL DRILLED: 10.2' FT.	ROCK DRILLED: CORE: 15.0' ROLLER BIT: 2.0'; TOTAL DEPTH: 27.2'
LOGGED BY: B. JOHNSON	CHECKED BY: N.B.; DATE: 9/6/94

DEPTH (FT.)	SAMPLE NUMBER	BLOWS PER 6-INCHES	PEN. / REC.	GRAPHIC LOG	SAMPLE DESCRIPTION	USCS CLASSIF.	MONITORING (PPM) PID	FID	OTHER
0									
1	S-1	5-7-9-10	2.0 / 1.7		0.0'-0.8' Brown Topsoil, Silty Sand, fine, medium Sand, moist, Rootlets and Peat present.	SM/PT	0	0	
2					0.8'-2.0' Red to Brown, Silty SAND, fine, trace to little angular coarse Gravel, trace medium to coarse Sand, moist.	SM			
3	S-2	3-4-4-5	2.0 / 1.5		2.0'-4.0' Light brown to red, Silty SAND, fine, trace Clay, trace fine Gravel, moist, slightly plastic.	SM	0	1.0	
4									
5	S-3	1-5-7-7	2.0 / 1.6		4.0'-5.3' Brown, Silty SAND, fine, trace to little medium to coarse Sand, fine to coarse angular Gravel, moist.	SM	1.5	100	
6					5.3'-6.0' Brown Silty SAND, fine, little medium Sand, trace coarse Sand and Gravel, saturated.	SP			
7	S-4	4-15-9-10	2.0 / 1.5		6.0'-6.5' Similar to above, Light Brown with yellow spots.	SP	NA	NA	
8					6.5'-7.0' Light Brown Gravelly SAND, fine to medium Sand, some Silt, saturated.	GM			
9	S-5	7-14-22-50	2.0 / 0.5		7.0'-8.0' Brown SAND, fine to medium, little Silt, saturated.		1.0	700	
10					8.0'-10.0' Silty SAND and Sand, fine to medium, in alternating thin layers, saturated.	SM			
10.2'					10.0'-10.2' Yellow Brown SAND, fine to medium, some Silt, trace to some coarse Sand, saturated.	SM	2.0	250	
11	S-6	50 for 0.2'	0.2 / 0.2		Spoon refusal at 10.2'				
12					Water level (initial) at 5.3'				
13					ADDITIONAL NOTES: FID hits at 4'to 6' in saturated soil only.				
14									
15									

ROCK CORE LOG	BORING NO.: PZ-107	PROJECT NO.: 7311-02	PAGE 2 OF 3
PROJECT NAME: OLIN ROCHESTER RI		DRILLING CONTRACTOR: MARCOR OF NEW YORK	
DRILL RIG TYPE: CANTERRA CT-350		DRILLER: R. SCHEFFER	DATE STARTED: 10/27/93 COMPLETED: 10/27/93
METHOD: CORE	BIT SIZE: HQ (3.8" O.D.)	PID METER: 10.6 ev	FID METER: OVA-108	PROTECTION LEVEL: D
GROUND ELEV.: 536.4	SOIL DRILLED: 10.2 FT.	ROCK DRILLED: (CORED: 15.2' ROLLER BIT: 1.8')	TOTAL DEPTH: 27.2'
LOGGED BY: E. SHEPARD / N. BRETON		CHECKED BY: N.B	DATE: 4/6/94

DEPTH (FT.)	RUN NO.	DRILLING RATE (FT/MIN)	PEN. / REC.	RQD (%)	GRAPHIC LOG	CORE BREAKS TYPE	CORE BREAKS DIP	WEATHERED CONDITION	ROCK DESCRIPTION AND COMMENTS ON DRILLING	MONITORING PID	MONITORING FID
11									See soil boring log for PZ-107 for soil descriptions from 0'-10.2'		
									Roller cone drill from 10.2'to 12.0'		
12									Grout		
		3.5							Light gray, finely crystalline, medium bedded, DOLOMITE with interbedded shale. Lockport FM		
13											
		9							12.0'- 13.7'- Core not recovered; interpret top of recovered core as 13.7' below ground surface.	0	80
14	R-1		4.4 / 2.7	35		mech					
		8				nat	30°	slight		0	5
						nat	0°	slight			
15						nat	0°	slight			
		4.3				nat	0°	slight		3.5	30
16						nat	45°	slight			
		2								5	40
16.4											
17		3				nat	0°	slight	Run R-2 - Slightly to moderately weathered fractures parallel to bedding and along shale partings	NA	10
						nat	0°	slight		NA	40
18		3				nat	0°	moderate			
						nat	0°	moderate		NA	NA
19		2				nat	0°	moderate			
	R-2		5.6 / 5.5	96						NA	NA
20		3				mech					
										0	40
21		2				nat	0°	slight			
										NA	NA
22											
	R-3	NA	0.7 / 0.7	NA		mech			Run R-3 - Mostly mechanical breaks; Difficulty with core jamming. Had abandon run at 22.7'	3.5	30
22.7											
23						nat	0°	slight			
		2				nat	0°	slight		20	150
24	R-4			4.5 / 4.4							
		2								9	100
						nat	0°	slight			
25											
		3				nat	0°	high	25.2'-25.4' - Soft weathered zone		
						nat	0°	slight		5	125

ROCK CORE LOG	BORING NO.: PZ-107	PROJECT NO.: 7311-02	PAGE 3 OF 3

PROJECT NAME: OLIN ROCHESTER RI	DRILLING CONTRACTOR: MARCOR OF NEW YORK

DRILL RIG TYPE: CANTERRA CT-350	DRILLER: R. SCHEFFER	DATE STARTED: 10/27/93 COMPLETED: 10/27/93

METHOD: CORE	BIT SIZE: HQ (3.8" O.D.)	PID METER: 10.6 ev	FID METER: OVA-108	PROTECTION LEVEL: D

GROUND ELEV.: 536.4	SOIL DRILLED: 10.2 FT.	ROCK DRILLED: (CORED: 15.2' ROLLER BIT: 1.8')	TOTAL DEPTH: 27.2'

LOGGED BY: E. SHEPARD / N. BRETON	CHECKED BY: NB	DATE: 9/6/94

DEPTH (FT.)	RUN NO.	DRILLING RATE (FT/MIN)	PEN. / REC.	RQD (%)	GRAPHIC LOG	CORE BREAKS TYPE	CORE BREAKS DIP	WEATHERED CONDITION	ROCK DESCRIPTION AND COMMENTS ON DRILLING	MONITORING PID	MONITORING FID
26											
	R-4	3	4.5 / 4.4	85		nat nat	0° 0°	slight slight	Light gray, finely crystalline, medium bedded, DOLOMITE with interbedded shale. Lockport FM	2	50
27											
27.2											
28									End of boring at 27.2' below ground surface Notes: Approximately 750 gallons of water lost during coring nat - interpreted natural fracture or core break mech - interpreted mechanical core break In Run R-4 a 1.5" size piece of core was discolored brown. FID and PID readings over this piece measured 400 and 27 ppm respectively.		

SOIL BORING LOG	BORING NO.: **PZ-108**	PROJECT NO.: 7311-02	PAGE 1 OF 1
PROJECT NAME: OLIN ROCHESTER RI		DRILLING CONTRACTOR: MARCOR OF NEW YORK	
DRILL RIG TYPE: CANTERRA CT 350		DRILLER: R. SCHEFFER	DATE STARTED: 10/22/93 COMPLETED: 10/22/93
METHOD: HSA	AUGER SIZE: 4.25" I.D.	PID METER: 10.6 ev	FID METER: OVA-108 PROTECTION LEVEL: MOD D
GROUND ELEV.: 536.6	SOIL DRILLED: 12.2' FT.	ROCK DRILLED: NONE	TOTAL DEPTH: 12.2'
LOGGED BY: B. JOHNSON		CHECKED BY: NB.	DATE: 9/6/94

DEPTH (FT.)	SAMPLE NUMBER	BLOWS PER 6-INCHES	PEN. / REC.	GRAPHIC LOG	SAMPLE DESCRIPTION	USCS CLASSIF.	MONITORING (PPM) PID	FID	OTHER
0									
1	S-1	3-6-11-11	2.0 / 2.0		0.0'-0.3' Topsoil, Brown Silty SAND, fine trace medium to coarse Sand, moist, Organics present. 0.3'-2.0' Brown to Red Silty SAND, fine, trace to little medium to coarse Sand, fine Gravel, dry to moist.	SM SM	0	0	
2									
3	S-2	5-5-6-8	2.0 / 1.8		2.0'-4.0' Brown to Red Silty SAND, trace medium Sand, moist. (piece of coal at 2.5')	SM	0	2	
4									
5	S-3	3-8-11-13	2.0 / 1.7		4.0'-4.4' Similar to above. 4.4'-4.7' Brown Silty SAND, fine, trace Clay, little fine Grave, moist to wet. 4.7'-6.0' Red to Brown SAND, fine, trace to little Silt, wet to saturated.	SP	NA	NA	
6									
7	S-4	5-7-10-14	2.0 / 1.0		6.0'-8.0' Reddish Brown SAND, fine, some Silt, saturated.	SM	NA	NA	
8									
9	S-5	4-8-6-13	2.0 / 1.0		8.0'-9.0' Similar to above. 9.0'-10.0' Dark Gray to Black SAND, fine, little to some Silt, trace fine to coarse Gravel, saturated.	SM SM	0	50	
10									
11	S-6	6-9-15-35	0.9 / 0.4		10.0'-12.0' Brown and Gray Silty SAND, fine, little medium to coarse SAND, trace fine Gravel, saturated, (Rock in tip of spoon)	SM	0	10,000	
12									
13					REFUSAL WITH AUGERS AT 12.2' WATER TABLE ENCOUNTERED AT 5.0'				
14									
15									

A-3 PIEZOMETER/WELL INSTALLATION LOGS

PIEZOMETER

APPENDIX A-3
WELL AND PIEZOMETER CONSTRUCTION DATA

WELL / PIEZOMETER	UNIT	TYPE	GROUND ELEV.(MSL)	REFERENCE ELEV.(MSL)	STICK-UP (FEET)	INSTALL. METHOD	CASING MAT.	CASING DIAMETER (IN.)	SCREEN MAT.	SCREEN DIAMETER (IN.)	WELL SCREEN DEPTH TOP (FT)	WELL SCREEN DEPTH BOTTOM	COMMENTS
PHASE I RI WELLS AND PIEZOMETERS													
BR-101	SBR	MW	538.2	540.65	2.4	Core	Steel	6.0	Open	3.8	18.0	44.5	
BR-102	SBR	MW	540.2	540.21	0.0	Core	Steel	6.0	Open	3.8	22.0	54.0	
BR-103	SBR	MW	533.2	533.19	0.0	Core	Steel	6.0	Open	3.8	13.0	45.2	
BR-104	SBR	MW	537.6	537.56	0.0	Core	Steel	6.0	Open	3.8	21.0	40.0	
BR-105	SBR	MW	536.9	536.90	0.0	Core	Steel	6.0	Open	3.8	19.0	45.5	
BR-105D	DBR	MW	536.7	536.69	0.0	Core	PVC	2.0	PVC	2.0	70.0	79.6	
BR-106	SBR	MW	535.7	535.74	0.0	Core	Steel	6.0	Open	3.8	18.0	44.9	
BR-107	SBR	MW	536.3	536.32	0.0	Core	Steel	6.0	Open	3.8	19.0	40.2	
BR-108	SBR	MW	538.4	540.58	2.2	Core	Steel	6.0	Open	3.8	18.0	41.5	
MW-103	OVB	MW	533.3	533.25	0.0	HSA	PVC	2.0	PVC	2.0	6.0	9.0	
MW-104	OVB	MW	537.5	537.54	0.0	HSA	PVC	2.0	PVC	2.0	9.0	18.6	
MW-105	OVB/SBR	MW	536.9	536.91	0.0	HSA/Roll	PVC	2.0	PVC	2.0	9.0	18.6	
MW-106	OVB/SBR	MW	535.4	535.44	0.0	HSA/Roll	PVC	2.0	PVC	2.0	10.0	19.6	
MW-107	OVB	MW	536.3	536.29	0.0	HSA	PVC	2.0	PVC	2.0	6.0	15.7	
MW-108	OVB/SBR	MW	538.1	540.80	2.7	HSA/Roll	PVC	2.0	PVC	2.0	8.0	17.6	
PZ-101	OVB	PZ	540.5	543.15	2.6	HSA	PVC	2.0	PVC	2.0	9.0	18.6	
PZ-102	SBR	PZ	539.1	541.11	2.0	Core	PVC	2.0	PVC	2.0	23.0	31.0	
PZ-103	SBR	PZ	537.8	540.34	2.5	Core	PVC	2.0	PVC	2.0	20.0	29.3	
PZ-104	SBR	PZ	537.2	537.21	0.0	Core	PVC	2.0	PVC	2.0	17.0	25.0	
PZ-105	SBR	PZ	537.0	539.58	2.6	Core	PVC	2.0	PVC	2.0	23.0	32.4	
PZ-106	SBR	PZ	535.0	537.45	2.5	Core	PVC	2.0	PVC	2.0	20.0	29.4	
PZ-107	SBR	PZ	536.4	538.64	2.2	Core	PVC	2.0	PVC	2.0	16.0	25.6	
PZ-108	OVB	PZ	536.4	536.56	0.2	HSA	PVC	2.0	PVC	2.0	6.0	11.6	
WELLS AND PIEZOMETERS INSTALLED PRIOR TO 1993													
BR-1	SBR	MW	535.1	537.11	2.0	Core	NA	4.0	Open	3.0	16.3	22.8	
BR-2	SBR	PW	536.7	538.97	2.3	Core	NA	4.0	Open	3.0	17.0	22.0	
BR-2D	DBR	MW	535.9	538.00	2.1	Core	Grout	6.0	Open	3.0	67.5	82.6	
BR-3	SBR	PW	536.0	538.04	2.0	Core	NA	4.0	Open	3.0	17.0	27.0	
BR-3D	DBR	MW	534.9	537.00	2.1	Core	PVC	4.0	Open	3.0	71.5	86.5	
BR-4	SBR	MW	537.2	538.93	1.8	Core	NA	NA	Open	0.0	12.0	50.0	
BR-5	SBR	MW	534.6	536.30	1.8	Core	NA	12.0	Open	3.8	13.0	43.0	
BR-5A	SBR	PW	534.9	536.35	1.5	Core	NA	NA	Open	NA	NA	NA	
BR-6	SBR	PW	535.5	538.00	2.5	Core	NA	12.0	Open	3.8	16.0	56.0	
BR-7	SBR	MW	537.5	539.70	2.2	Core	NA	12.0	Open	3.8	17.0	65.7	
BR-7A	SBR	PW	NA	NA	NA	Core	NA	NA	Open	NA	NA	NA	
BR-8	SBR	MW	537.5	540.00	2.5	Core	NA	12.0	Open	3.8	18.0	38.0	
B-1	OVB	PZ	535.5	537.48	2.0	HSA	PVC	1.5	PVC	1.5	5.5	15.5	

APPENDIX A-3
WELL AND PIEZOMETER CONSTRUCTION DATA

B-2	OVB	PZ	536.9	538.91	2.0	HSA	PVC	1.5 PVC	1.5	6.0	16.0	
B-3	OVB	PZ	539.6	541.62	2.0	HSA	PVC	1.5 PVC	1.5	5.0	15.0	
B-4	OVB	PZ	540.9	542.87	2.0	HSA	PVC	1.5 PVC	1.5	11.0	21.0	
B-5	OVB	PZ	538.1	540.10	2.0	HSA	PVC	1.5 PVC	1.5	7.0	17.0	
WELLS AND PIEZOMETERS INSTALLED PRIOR TO 1993 (CONTINUED)												
B-6	OVB	PZ	537.2	539.24	2.0	HSA	PVC	1.5 PVC	1.5	6.0	16.0	
B-7	OVB	PZ	538.7	540.68	2.0	HSA	PVC	1.5 PVC	1.5	9.0	19.0	
B-8	OVB	PZ	536.2	538.21	2.0	HSA	PVC	1.5 PVC	1.5	4.5	14.5	
B-9	OVB	PZ	535.7	537.67	2.0	HSA	PVC	1.5 PVC	1.5	2.0	12.0	
B-10	OVB	PZ	536.0	537.97	2.0	HSA	PVC	1.5 PVC	1.5	3.0	13.0	
B-11	OVB	PZ	NA	536.00	NA	NA	NA	NA NA	NA	NA	NA	
B-12	OVB	PZ	537.1	537.12	0.0	HSA	PVC	2.0 PVC	2.0	4.3	14.3	Destroyed during road repair.
B-13	OVB	PZ	537.1	537.07	0.0	HSA	PVC	2.0 PVC	2.0	4.7	14.7	
B-14	OVB	PZ	538.0	537.95	0.0	HSA	PVC	2.0 PVC	2.0	7.0	17.0	
B-15	OVB	PZ	535.3	535.29	0.0	HSA	PVC	2.0 PVC	2.0	4.0	14.0	
B-16	OVB	PZ	536.2	536.21	0.0	HSA	PVC	2.0 PVC	2.0	3.5	13.5	
B-17	OVB	MW	538.8	538.84	0.0	HSA	SS	2.0 SS	2.0	11.6	16.0	
C-1	OVB	MW	536.6	539.05	2.4	HSA	SS	2.0 SS	2.0	5.8	10.8	
C-2	OVB	MW	NA	539.00	NA	HSA	SS	2.0 SS	2.0	6.0	11.0	Abandoned; Replaced by C-2A.
C-2A	OVB	MW	537.4	539.12	1.8	HSA	SS	2.0 SS	2.0	4.7	14.7	
C-3	OVB	MW	538.9	541.63	2.8	HSA	SS	2.0 SS	2.0	6.5	11.5	
C-4	OVB	MW	538.8	540.82	2.0	HSA	SS	2.0 SS	2.0	7.0	12.0	
C-5	OVB	MW	534.1	536.35	2.3	HSA	SS	2.0 SS	2.0	6.3	11.3	
EC-1	OVB/SBR	MW	538.0	539.99	2.0	HSA	SS	2.0 SS	2.0	14.0	19.0	
EC-2	OVB/SBR	MW	540.0	542.00	2.0	HSA	SS	2.0 SS	2.0	6.2	11.2	
E-1	OVB	PW	532.3	534.32	2.0	HSA	SS	NA SS	NA	3.3	8.3	
E-2	OVB	MW	536.8	538.83	2.0	HSA	SS	2.0 SS	2.0	7.7	11.7	
E-3	OVB	MW	534.3	536.00	1.8	HSA	SS	2.0 SS	2.0	5.0	10.0	
E-4	OVB	MW	537.1	538.58	1.5	HSA	SS	2.0 SS	2.0	7.0	12.0	
E-5	OVB	MW	536.6	539.31	2.8	HSA	SS	2.0 SS	2.0	4.2	9.2	
N-1	OVB	MW	535.4	536.91	1.5	HSA	SS	2.0 SS	2.0	5.5	10.5	
N-2	OVB	MW	534.2	536.92	2.8	HSA	SS	2.0 SS	2.0	5.1	10.1	
N-3	OVB	MW	535.1	537.16	2.1	HSA	SS	2.0 SS	2.0	6.0	11.0	
S-1	OVB	PW	534.8	536.76	2.0	HSA	SS	NA SS	0.0	4.3	14.3	
S-2	OVB	PW	534.3	536.31	2.0	HSA	PVC	4.0 PVC	4.0	2.5	11.7	
S-3	OVB	PW	534.4	536.40	2.0	HSA	SS	NA SS	NA	2.3	12.3	
S-4	OVB	PW	NA	NA	NA	NA	NA	NA NA	NA	NA	NA	
W-1	OVB	PW	535.0	536.98	2.0	HSA	SS	NA SS	NA	6.1	16.1	
W-2	OVB	PW	537.5	539.53	2.0	HSA	SS	NA SS	NA	8.4	18.4	

APPENDIX A-3
WELL AND PIEZOMETER CONSTRUCTION DATA

W-3	OVB	PW	539.9	541.91	2.0	HSA	PVC	4.0 PVC	4.0	7.4	16.5	
W-4	OVB	PW	538.4	540.35	2.0	HSA	PVC	4.0 PVC	4.0	6.2	15.4	
W-5	OVB	PW	535.7	537.69	2.0	HSA	SS	NA SS	NA	5.0	15.0	
W-6	OVB	PW	536.3	538.25	2.0	HSA	SS	NA SS	NA	7.3	12.3	
MARK IV WELLS												
MW-1	OVB	MW	535.2	535.20	0.0	HSA	PVC	2.0 PVC	2.0	3.0	13.0	Abandoned in place with grout.
MW-2	OVB	MW	535.5	535.50	0.0	HSA	PVC	2.0 PVC	2.0	3.0	13.0	
MW-3	OVB	MW	535.9	535.89	0.0	HSA	PVC	2.0 PVC	2.0	3.0	13.0	
GRIFFITH OIL WELLS												
MW-G6	OVB	MW	534.7	534.65	0.0	NA	PVC	2.0 PVC	2.0	NA	NA	
MW-G8	OVB	MW	533.6	534.25	0.6	NA	PVC	2.0 PVC	2.0	NA	NA	
MW-G9	OVB	MW	536.2	536.60	0.4	NA	PVC	2.0 PVC	2.0	NA	NA	

NOTES:

OVB =	OVERBURDEN
SBR =	SHALLOW BEDROCK
DBR =	DEEP BEDROCK
OVB/SBR =	WELL SCREEN STRADDLES OVERBURDEN AND SHALLOW BEDROCK
MW =	MONITORING WELL
PW =	PUMPING WELL
PZ =	PIEZOMETER
HSA =	HOLLOW STEM AUGER DRILLING METHOD

WELL INSTALLATION LOGS

WELL INSTALLATION DIAGRAM

WELL NO.: **BR-101**

PROJECT NAME: OLIN ROCHESTER RI

PROJECT NO.: 7311-03

GROUND ELEVATION: 538.20

REFERENCE POINT ELEVATION: 540.65

DATE INSTALLED: 11 / 02 / 93

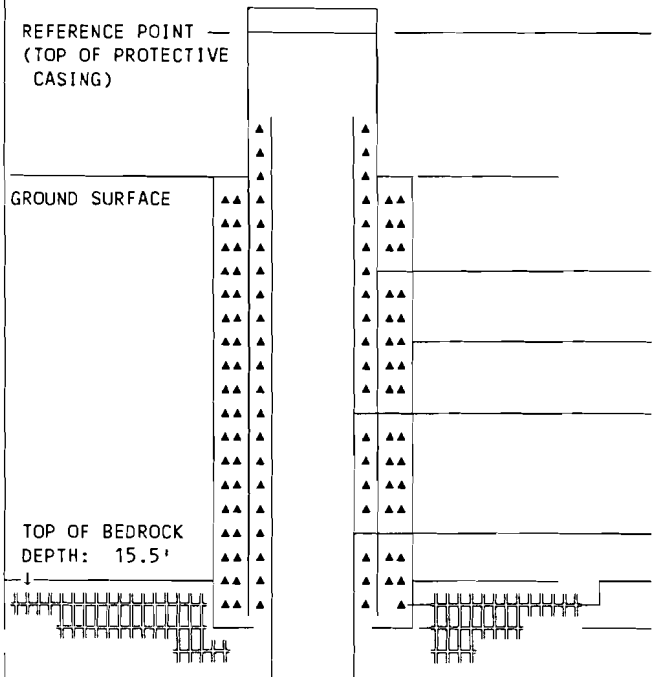
DRILLING METHOD: DRIVEN CASING \ CORE

CORE HOLE DIA.: 3.8 - INCH

RIG GEOLOGIST: B. JOHNSON / E. SHEPARD

INITIAL WATER LEVEL DEPTH: 11.80' (RF)

DATE: 01 / 17 / 94



PROTECTIVE CASING STICKUP: 2.5'

OUTSIDE DIAMETER OF STEEL CASING: 6-INCH

BOREHOLE DIAMETER: 10-INCH

CORE HOLE DIAMETER: 3.8-INCH

TYPE OF BACKFILL: CEMENT\BENTONITE GROUT

DEPTH TO BOTTOM OF 6" CASING: 17.5'

DEPTH TO BOTTOM OF ROCK SOCKET AND CEMENT\BENTONITE BACKFILL: 17.5'

ROCK CORE HOLE DIAMETER: 3.8-INCH

DEPTH TO BOTTOM OF OPEN CORE HOLE: 44.0'

ABB ENVIRONMENTAL SERVICES, INC.

WELL INSTALLATION DIAGRAM

WELL NO.: **BR-102**

PROJECT NAME: OLIN ROCHESTER RI

PROJECT NO.: 7311-03

GROUND ELEVATION: 540.21

REFERENCE POINT ELEVATION: 540.21

DATE INSTALLED: 11 / 03 / 93

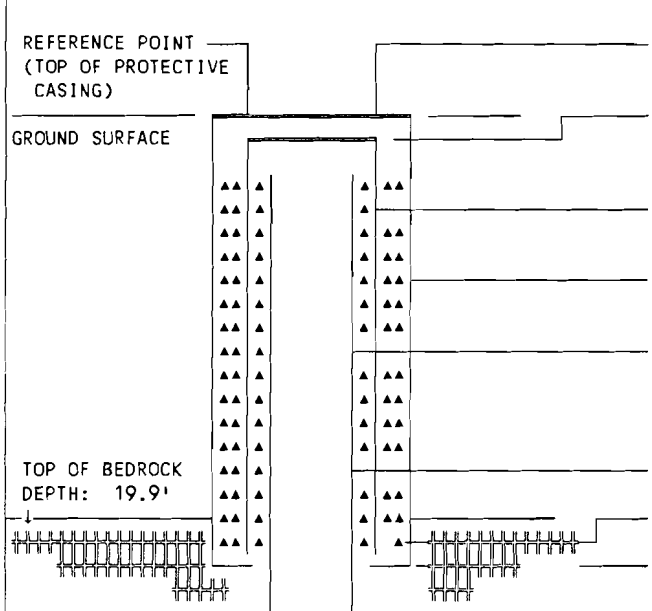
DRILLING METHOD: DRIVEN CASING \ CORE

CORE HOLE DIA.: 3.8 - INCH

RIG GEOLOGIST: E. SHEPARD

INITIAL WATER LEVEL DEPTH: 24.83'(RF)

DATE: 01 / 17 / 94



FLUSH MOUNTED PROTECTIVE CASING - STICKUP = 0.0'

TOP OF STEEL CASING DEPTH: 0.7'

OUTSIDE DIAMETER OF STEEL CASING: 6-INCH

BOREHOLE DIAMETER: 10-INCH

CORE HOLE DIAMETER: 3.8-INCH

TYPE OF BACKFILL: CEMENT\BENTONITE GROUT

DEPTH TO BOTTOM OF 6" CASING: 22.0'

DEPTH TO BOTTOM OF ROCK SOCKET AND CEMENT\BENTONITE BACKFILL: 22.0'

ROCK CORE HOLE DIAMETER: 3.8-INCH

DEPTH TO BOTTOM OF OPEN CORE HOLE: 54.0'

ABB ENVIRONMENTAL SERVICES, INC.

WELL INSTALLATION DIAGRAM

WELL NO.: **BR-103**

PROJECT NAME: OLIN ROCHESTER RI

PROJECT NO.: 7311-03

GROUND ELEVATION: 533.19

REFERENCE POINT ELEVATION: 533.19

DATE INSTALLED: 11 / 16 / 93

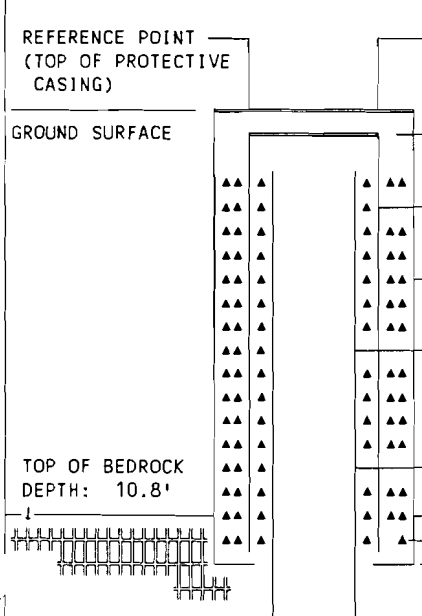
DRILLING METHOD: DRIVEN CASING \ CORE

CORE HOLE DIA.: 3.8 - INCH

RIG GEOLOGIST: E. SHEPARD

INITIAL WATER LEVEL DEPTH: 5.50'(RF)

DATE: 01 / 20 / 94



FLUSH MOUNTED PROTECTIVE CASING - STICKUP = 0.0'

TOP OF STEEL CASING DEPTH: 0.6'

OUTSIDE DIAMETER OF STEEL CASING: 6-INCH

BOREHOLE DIAMETER: 10-INCH

CORE HOLE DIAMETER: 3.8-INCH

TYPE OF BACKFILL: CEMENT\BENTONITE GROUT

DEPTH TO BOTTOM OF 6" CASING: 12.8'

DEPTH TO BOTTOM OF ROCK SOCKET AND CEMENT\BENTONITE BACKFILL: 12.8'

ROCK CORE HOLE DIAMETER: 3.8-INCH

DEPTH TO BOTTOM OF OPEN CORE HOLE: 45.0'

ABB ENVIRONMENTAL SERVICES, INC.

WELL INSTALLATION DIAGRAM

WELL NO.: **BR-104**

PROJECT NAME: OLIN ROCHESTER RI

PROJECT NO.: 7311-03

GROUND ELEVATION: 537.56

REFERENCE POINT ELEVATION: 537.56

DATE INSTALLED: 01 / 12 / 94

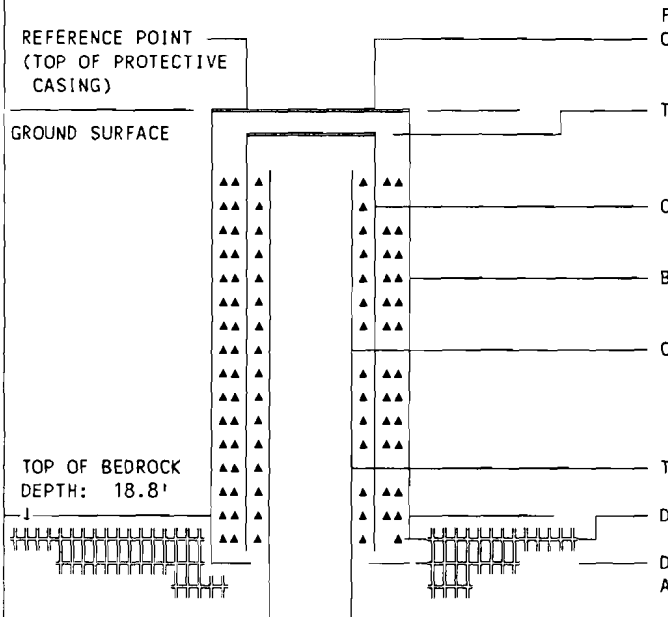
DRILLING METHOD: DRIVEN CASING \ CORE

CORE HOLE DIA.: 3.8 - INCH

RIG GEOLOGIST: E. SHEPARD

INITIAL WATER LEVEL DEPTH: 17.10'(RF)

DATE: 01 / 26 / 94



FLUSH MOUNTED PROTECTIVE CASING - STICKUP = 0.0'

TOP OF STEEL CASING DEPTH: 0.7'

OUTSIDE DIAMETER OF STEEL CASING: 6-INCH

BOREHOLE DIAMETER: 10-INCH

CORE HOLE DIAMETER: 3.8-INCH

TYPE OF BACKFILL: CEMENT\BENTONITE GROUT

DEPTH TO BOTTOM OF 6" CASING: 20.8'

DEPTH TO BOTTOM OF ROCK SOCKET AND CEMENT\BENTONITE BACKFILL: 20.8'

ROCK CORE HOLE DIAMETER: 3.8-INCH

DEPTH TO BOTTOM OF OPEN CORE HOLE: 39.8'

ABB ENVIRONMENTAL SERVICES, INC.

WELL INSTALLATION DIAGRAM

WELL NO.: **BR-105**

PROJECT NAME: OLIN ROCHESTER RI

PROJECT NO.: 7311-03

GROUND ELEVATION: 536.90

REFERENCE POINT ELEVATION: 536.90

DATE INSTALLED: 12 / 14 / 93

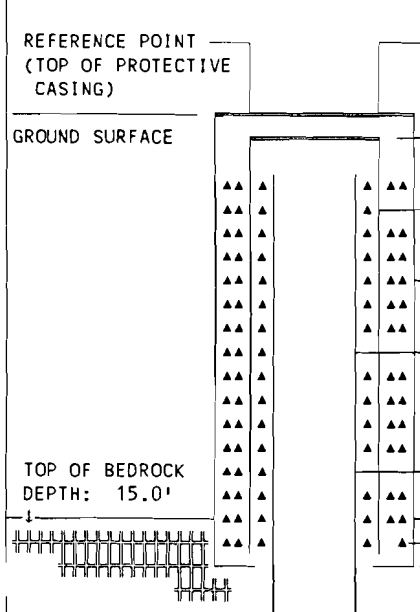
DRILLING METHOD: DRIVEN CASING \ CORE

CORE HOLE DIA.: 3.8 - INCH

RIG GEOLOGIST: E. SHEPARD

INITIAL WATER LEVEL DEPTH: 26.10'(RF)

DATE: 01 / 17 / 94



FLUSH MOUNTED PROTECTIVE CASING - STICKUP = 0.0'

TOP OF STEEL CASING DEPTH: 0.7'

OUTSIDE DIAMETER OF STEEL CASING: 6-INCH

BOREHOLE DIAMETER: 10-INCH

CORE HOLE DIAMETER: 3.8-INCH

TYPE OF BACKFILL: CEMENT\BENTONITE GROUT

DEPTH TO BOTTOM OF 6" CASING: 19.0'

DEPTH TO BOTTOM OF ROCK SOCKET AND CEMENT\BENTONITE BACKFILL: 19.0'

ROCK CORE HOLE DIAMETER: 3.8-INCH

DEPTH TO BOTTOM OF OPEN CORE HOLE: 45.5'

BACKFLLED FROM: 50.5' TO 45.5'

ABB ENVIRONMENTAL SERVICES, INC.

WELL INSTALLATION DIAGRAM

WELL NO.: **BR-105D**

PROJECT NAME: OLIN ROCHESTER RI

PROJECT NO.: 7311-03

GROUND ELEVATION: 536.69

REFERENCE POINT ELEVATION: 536.69

DATE INSTALLED: 01 / 19 / 94

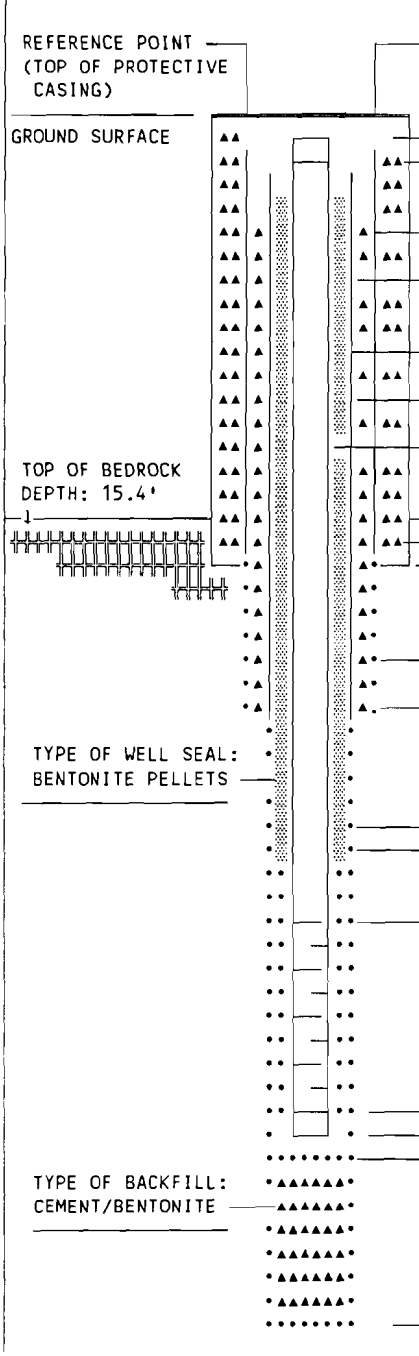
DRILLING METHOD: DRIVEN CASING / CORE

CORE HOLE DIA.: 3.8 - INCH

RIG GEOLOGIST: E. SHEPARD / N.BRETON

INITIAL WATER LEVEL DEPTH: 33.20'(RF)

DATE: 02 / 04 / 94



FLUSH MOUNTED PROTECTIVE CASING - STICKUP = 0.0'

TOP OF PVC RISER DEPTH: 0.2'

BOREHOLE DIAMETER: 10 - INCH

OUTSIDE DIAMETER OF STEEL CASING: 6 - INCH

OUTSIDE DIA. OF INNER STEEL CASING: 4 - INCH

CORE HOLE DIAMETER: 3.8-INCH

TYPE OF BACKFILL: CEMENT\BENTONITE GROUT

WELL RISER ID: 2.0 - INCH

TYPE OF WELL RISER: SCH 40 PVC

DEPTH TO BOTTOM OF 6" CASING: 17.4'

DEPTH TO BOTTOM OF ROCK SOCKET AND CEMENT\BENTONITE BACKFILL: 17.4'

BOREHOLE DIA. (REAMED): 5 7/8 - INCH (TO 50.5')

DEPTH TO BOTTOM OF 4 - INCH STEEL CASING: 50.5'

ROCK CORE HOLE DIAMETER: 3.8-INCH (TO 109.6')

DEPTH TO TOP OF SAND PACK: 68.0'

DEPTH TO TOP OF WELL SCREEN: 70.0'

TYPE OF WELL SCREEN: SCH 40 PVC

WELL SCREEN ID: 2.0 - INCH

LENGTH OF WELL SCREEN: 9.6'

TYPE OF SAND PACK: PENN SILICA # 1

DEPTH TO BOTTOM OF WELL SCREEN: 79.6'

DEPTH TO BOTTOM OF SEDIMENT TRAP: 80.0'

DEPTH TO TOP OF CEMENT/BENTONITE: 81.3'

DEPTH TO BOTTOM OF CORE HOLE: 109.6'

ABB ENVIRONMENTAL SERVICES, INC.

WELL INSTALLATION DIAGRAM

WELL NO.: **BR-106**

PROJECT NAME: OLIN ROCHESTER RI

PROJECT NO.: 7311-03

GROUND ELEVATION: 535.74

REFERENCE POINT ELEVATION: 535.74

DATE INSTALLED: 01 / 11 / 94

DRILLING METHOD: DRIVEN CASING \ CORE

CORE HOLE DIA.: 3.8 - INCH

RIG GEOLOGIST: E. SHEPARD

INITIAL WATER LEVEL DEPTH: 24.90'(RF)

DATE: 01 / 17 / 94

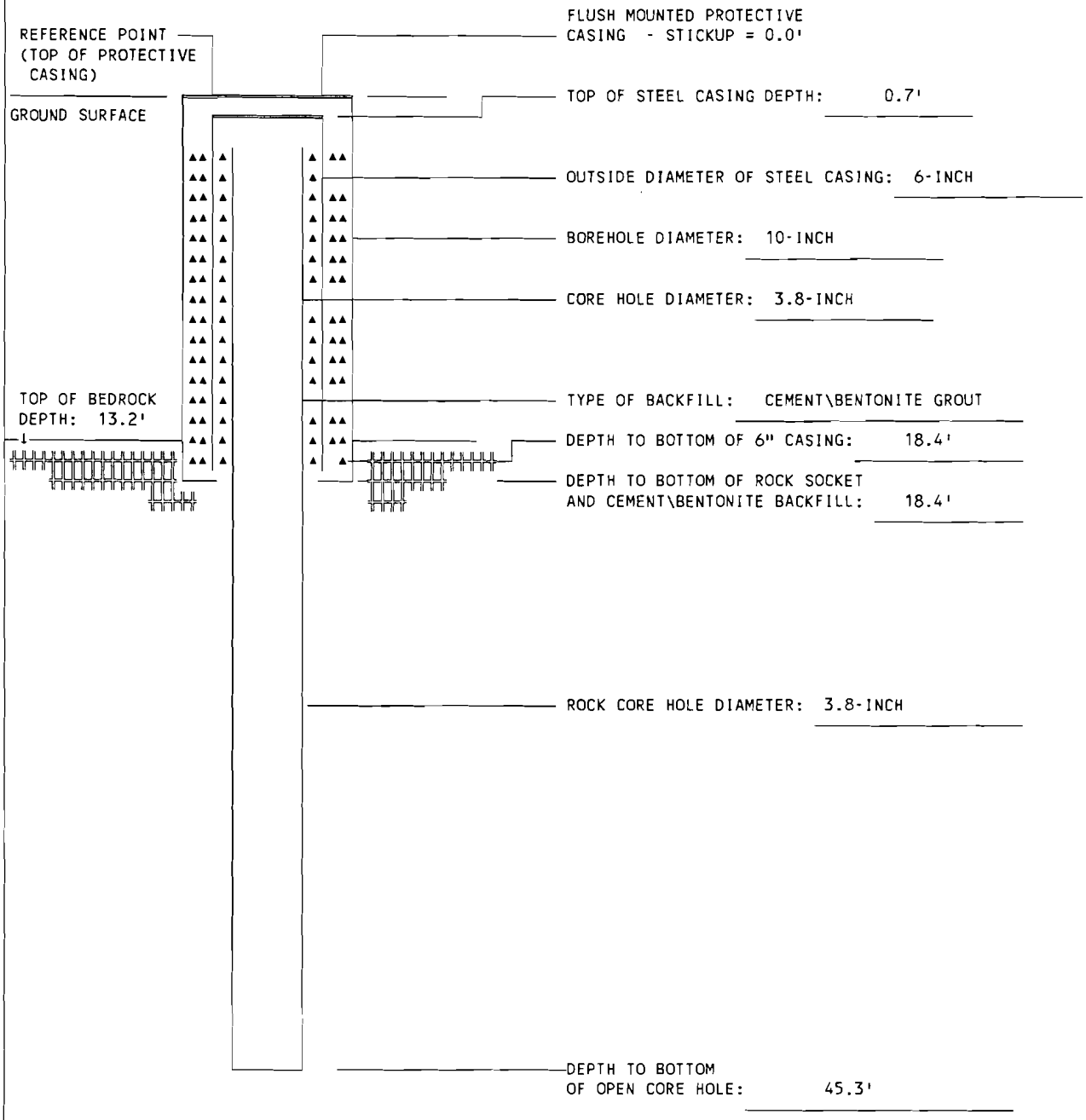


ABB ENVIRONMENTAL SERVICES, INC.

WELL INSTALLATION DIAGRAM

WELL NO.: **BR-107**

PROJECT NAME: OLIN ROCHESTER RI

PROJECT NO.: 7311-03

GROUND ELEVATION: 536.32

REFERENCE POINT ELEVATION: 536.32

DATE INSTALLED: 11 / 15 / 94

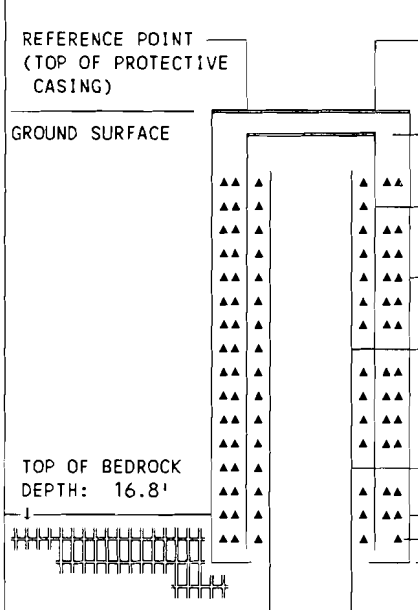
DRILLING METHOD: DRIVEN CASING \ CORE

CORE HOLE DIA.: 3.8 - INCH

RIG GEOLOGIST: E. SHEPARD

INITIAL WATER LEVEL DEPTH: 22.40'(RF)

DATE: 01 / 21 / 94



FLUSH MOUNTED PROTECTIVE CASING - STICKUP = 0.0'

TOP OF STEEL CASING DEPTH: 0.5'

OUTSIDE DIAMETER OF STEEL CASING: 6-INCH

BOREHOLE DIAMETER: 10-INCH

CORE HOLE DIAMETER: 3.8-INCH

TYPE OF BACKFILL: CEMENT\BENTONITE GROUT

DEPTH TO BOTTOM OF 6" CASING: 18.8'

DEPTH TO BOTTOM OF ROCK SOCKET AND CEMENT\BENTONITE BACKFILL: 18.8'

ROCK CORE HOLE DIAMETER: 3.8-INCH

DEPTH TO BOTTOM OF OPEN CORE HOLE: 40.0'

ABB ENVIRONMENTAL SERVICES, INC.

WELL INSTALLATION DIAGRAM

WELL NO.: **BR-108**

PROJECT NAME: OLIN ROCHESTER RI

PROJECT NO.: 7311-03

GROUND ELEVATION: 538.40

REFERENCE POINT ELEVATION: 540.58

DATE INSTALLED: 01 / 07 / 94

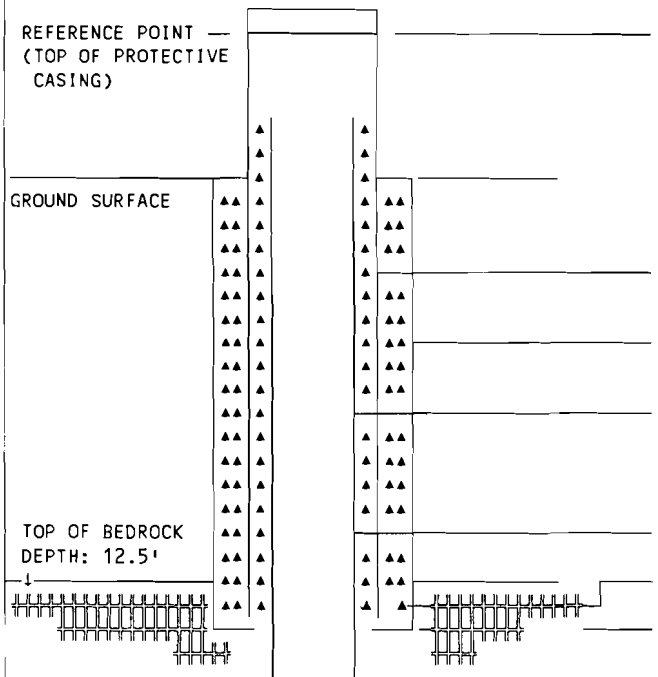
DRILLING METHOD: DRIVEN CASING \ CORE

CORE HOLE DIA.: 3.8 - INCH

RIG GEOLOGIST: E. SHEPARD

INITIAL WATER LEVEL DEPTH: 28.91'(RF)

DATE: 01 / 18 / 94



PROTECTIVE CASING STICKUP: 2.2'

OUTSIDE DIAMETER OF STEEL CASING: 6-INCH

BOREHOLE DIAMETER: 10-INCH

CORE HOLE DIAMETER: 3.8-INCH

TYPE OF BACKFILL: CEMENT\BENTONITE GROUT

DEPTH TO BOTTOM OF 6" CASING: 17.5'

DEPTH TO BOTTOM OF ROCK SOCKET AND CEMENT\BENTONITE BACKFILL: 17.5'

ROCK CORE HOLE DIAMETER: 3.8-INCH

DEPTH TO BOTTOM OF OPEN CORE HOLE: 41.0'

ABB ENVIRONMENTAL SERVICES, INC.

WELL INSTALLATION DIAGRAM

WELL NO.: **MW-103**

PROJECT NAME: OLIN ROCHESTER RI

PROJECT NO.: 7311-03

GROUND ELEVATION: 533.25

REFERENCE POINT ELEVATION: 533.25

DATE INSTALLED: 11 / 10 / 93

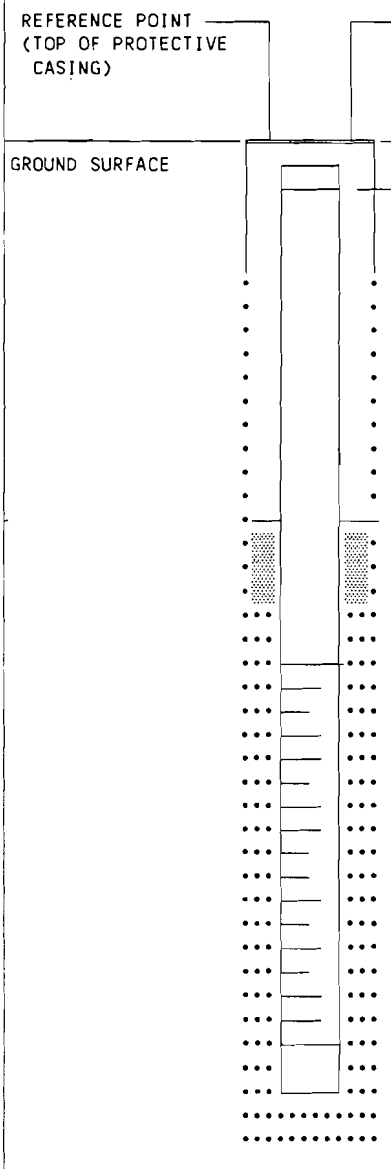
DRILLING METHOD: HSA

AUGER ID: 4.25 - INCH

RIG GEOLOGIST: J. ROSENBLUM

INITIAL WATER LEVEL DEPTH: 3.98'(RF)

DATE: 01 / 19 / 94



FLUSH MOUNTED PROTECTIVE CASING - STICKUP = 0.0'

TOP OF PVC RISER DEPTH: 0.3'

OUTSIDE DIAMETER OF STEEL PROTECTIVE CASING: 8 - INCH

BOREHOLE DIAMETER: 8.25 - INCH

WELL RISER ID: 2.0-INCH

TYPE OF WELL RISER: SCH 40 PVC

TYPE OF BACKFILL: PENN SILICA # 1 SAND (FOR DRAINAGE)

DEPTH TO TOP OF BENTONITE PELLET SEAL: 1.6'

DEPTH TO TOP OF SAND PACK: 3.6'

DEPTH TO TOP OF WELL SCREEN: 5.6'

BOREHOLE DIAMETER: 8.25 - INCH

TYPE OF WELL SCREEN: SCH 40 PVC

WELL SCREEN ID: 2.0-INCH

WELL SLOT SIZE: 0.010-INCH

LENGTH OF WELL SCREEN: 3.0'

TYPE OF SAND PACK: PENN SILICA # 1

DEPTH TO BOTTOM OF WELL SCREEN: 8.6'

DEPTH TO BOTTOM OF SEDIMENT TRAP: 8.6'

DEPTH OF BOREHOLE: 10.8'

ABB ENVIRONMENTAL SERVICES, INC.

WELL INSTALLATION DIAGRAM

WELL NO.: **MW-104**

PROJECT NAME: OLIN ROCHESTER RI

PROJECT NO.: 7311-03

GROUND ELEVATION: 537.54

REFERENCE POINT ELEVATION: 537.54

DATE INSTALLED: 01 / 04 / 94

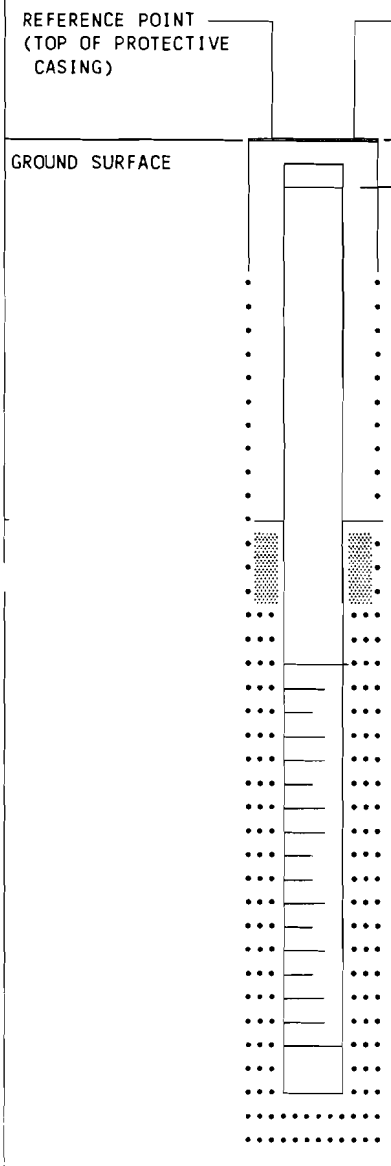
DRILLING METHOD: HSA

AUGER ID: 4.25 - INCH

RIG GEOLOGIST: E. SHEPARD

INITIAL WATER LEVEL DEPTH: 13.00'(RF)

DATE: 01 / 26 / 94



FLUSH MOUNTED PROTECTIVE CASING - STICKUP = 0.0'

TOP OF PVC RISER DEPTH: 0.6'

OUTSIDE DIAMETER OF STEEL PROTECTIVE CASING: 8 - INCH

BOREHOLE DIAMETER: 8.25 - INCH

WELL RISER ID: 2.0-INCH

TYPE OF WELL RISER: SCH 40 PVC

TYPE OF BACKFILL: PENN SILICA # 1 SAND (FOR DRAINAGE)

DEPTH TO TOP OF BENTONITE PELLET SEAL: 4.6'

DEPTH TO TOP OF SAND PACK: 6.6'

DEPTH TO TOP OF WELL SCREEN: 8.6'

BOREHOLE DIAMETER: 8.25 - INCH

TYPE OF WELL SCREEN: SCH 40 PVC

WELL SCREEN ID: 2.0-INCH

WELL SLOT SIZE: 0.010-INCH

LENGTH OF WELL SCREEN: 9.6'

TYPE OF SAND PACK: PENN SILICA # 1

DEPTH TO BOTTOM OF WELL SCREEN: 18.2'

DEPTH TO BOTTOM OF SEDIMENT TRAP: 18.6'

DEPTH OF BOREHOLE: 19.0'

ABB ENVIRONMENTAL SERVICES, INC.

WELL INSTALLATION DIAGRAM

WELL NO.: **MW-105**

PROJECT NAME: OLIN ROCHESTER RI

PROJECT NO.: 7311-03

GROUND ELEVATION: 536.91

REFERENCE POINT ELEVATION: 536.91

DATE INSTALLED: 11 / 17 / 93

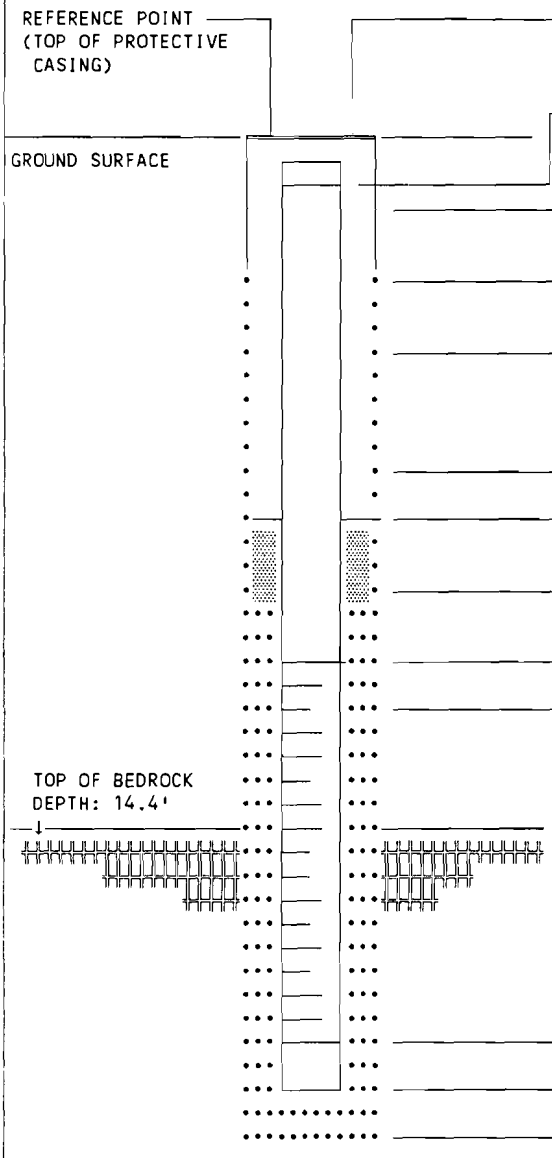
DRILLING METHOD: HSA

AUGER ID: 4.25 - INCH

RIG GEOLOGIST: E. SHEPARD

INITIAL WATER LEVEL DEPTH: DRY

DATE: 01 / 17 / 94



FLUSH MOUNTED PROTECTIVE CASING - STICKUP = 0.0'

TOP OF PVC RISER DEPTH: 0.4'

OUTSIDE DIAMETER OF STEEL PROTECTIVE CASING: 8 - INCH

BOREHOLE DIAMETER: 8.25 - INCH

WELL RISER ID: 2.0-INCH

TYPE OF WELL RISER: SCH 40 PVC

TYPE OF BACKFILL: PENN SILICA # 1 SAND (FOR DRAINAGE)

DEPTH TO TOP OF BENTONITE PELLET SEAL: 5.2'

DEPTH TO TOP OF SAND PACK: 7.4'

DEPTH TO TOP OF WELL SCREEN: 9.4'

BOREHOLE DIAMETER: 8.25 - INCH

TYPE OF WELL SCREEN: SCH 40 PVC

WELL SCREEN ID: 2.0-INCH

WELL SLOT SIZE: 0.010-INCH

LENGTH OF WELL SCREEN: 9.6'

TYPE OF SAND PACK: PENN SILICA # 1

DEPTH TO BOTTOM OF WELL SCREEN: 19.0'

DEPTH TO BOTTOM OF SEDIMENT TRAP: 19.4'

DEPTH OF BOREHOLE: 19.4'

ABB ENVIRONMENTAL SERVICES, INC.

WELL INSTALLATION DIAGRAM

WELL NO.: **MW-106**

PROJECT NAME: OLIN ROCHESTER RI

PROJECT NO.: 7311-03

GROUND ELEVATION: 535.44

REFERENCE POINT ELEVATION: 535.44

DATE INSTALLED: 12 / 07 / 93

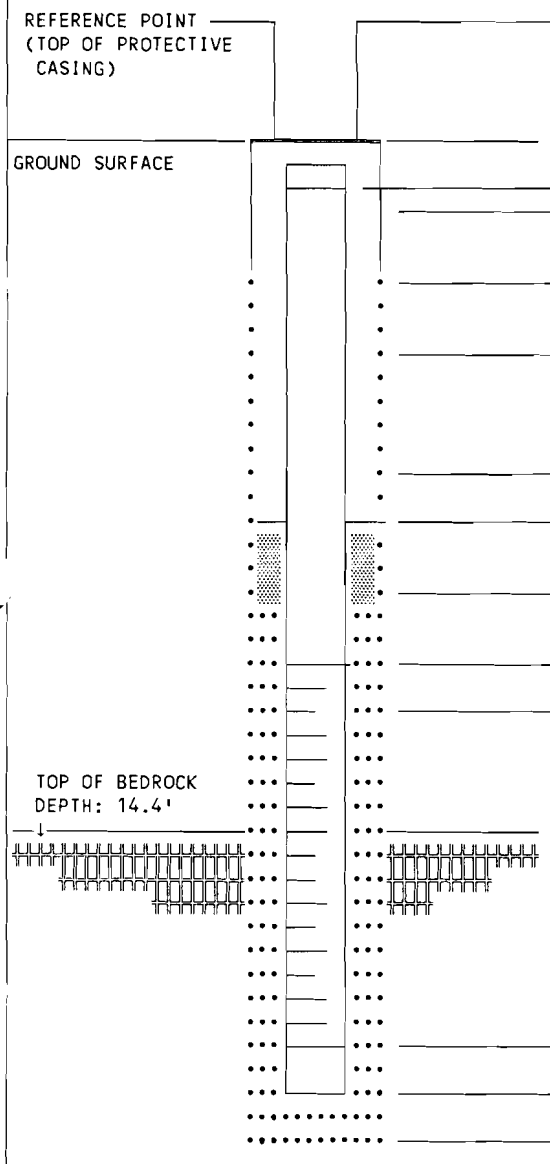
DRILLING METHOD: HSA

AUGER ID: 4.25 - INCH

RIG GEOLOGIST: E. SHEPARD

INITIAL WATER LEVEL DEPTH: 12.10'(RF)

DATE: 01 / 17 / 94



FLUSH MOUNTED PROTECTIVE CASING - STICKUP = 0.0'

TOP OF PVC RISER DEPTH: 0.5'

OUTSIDE DIAMETER OF STEEL PROTECTIVE CASING: 8 - INCH

BOREHOLE DIAMETER: 8.25 - INCH

WELL RISER ID: 2.0-INCH

TYPE OF WELL RISER: SCH 40 PVC

TYPE OF BACKFILL: PENN SILICA # 1 SAND (FOR DRAINAGE)

DEPTH TO TOP OF BENTONITE PELLET SEAL: 5.8'

DEPTH TO TOP OF SAND PACK: 7.8'

DEPTH TO TOP OF WELL SCREEN: 9.8'

BOREHOLE DIAMETER: 8.25 - INCH

TYPE OF WELL SCREEN: SCH 40 PVC

WELL SCREEN ID: 2.0-INCH

WELL SLOT SIZE: 0.010-INCH

LENGTH OF WELL SCREEN: 9.6'

TYPE OF SAND PACK: PENN SILICA # 1

DEPTH TO BOTTOM OF WELL SCREEN: 19.4'

DEPTH TO BOTTOM OF SEDIMENT TRAP: 19.8'

DEPTH OF BOREHOLE: 19.8'

ABB ENVIRONMENTAL SERVICES, INC.

WELL INSTALLATION DIAGRAM

WELL NO.: **MW-107**

PROJECT NAME: OLIN ROCHESTER RI

PROJECT NO.: 7311-03

GROUND ELEVATION: 536.29

REFERENCE POINT ELEVATION: 536.29

DATE INSTALLED: 11 / 08 / 93

DRILLING METHOD: HSA

AUGER ID: 4.25 - INCH

RIG GEOLOGIST: E. SHEPARD

INITIAL WATER LEVEL DEPTH: 11.18'(RF)

DATE: 01 / 18 / 94

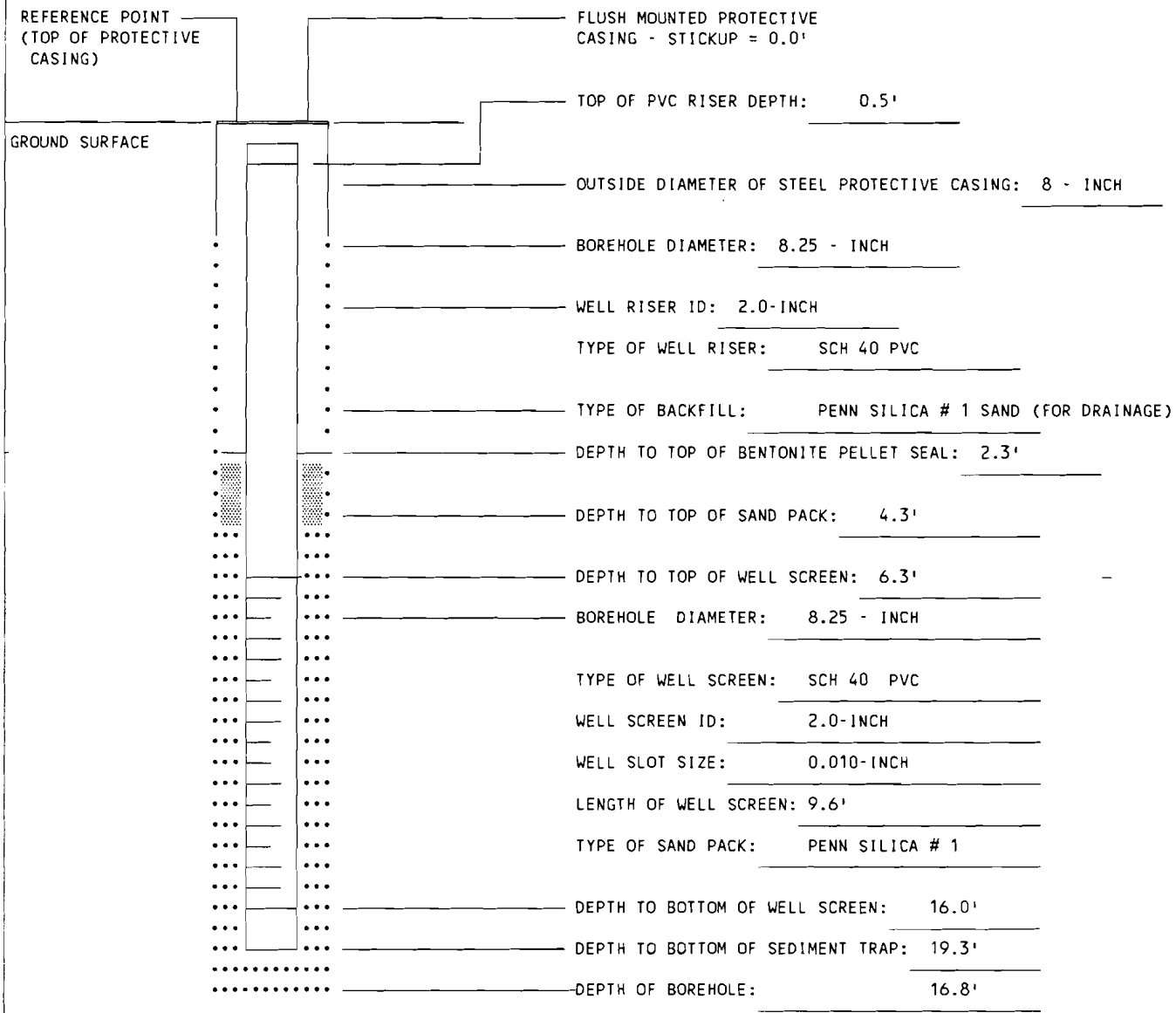


ABB ENVIRONMENTAL SERVICES, INC.

WELL INSTALLATION DIAGRAM

WELL NO.: **MW-108**

PROJECT NAME: OLIN ROCHESTER RI

PROJECT NO.: 7311-03

GROUND ELEVATION: 538.10

REFERENCE POINT ELEVATION: 540.80

DATE INSTALLED: 12 / 15 / 93

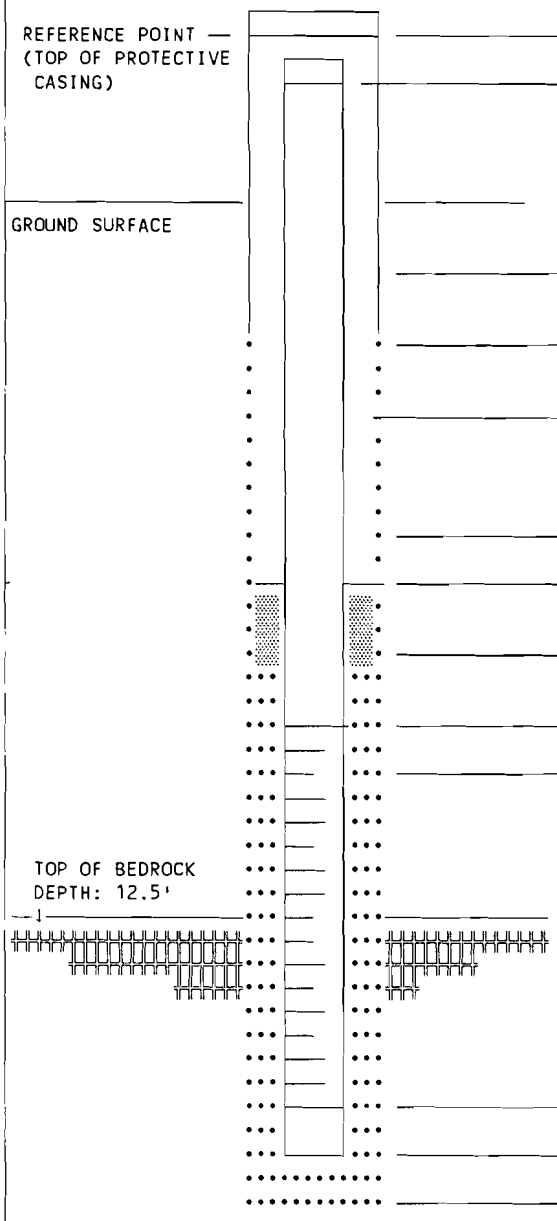
DRILLING METHOD: HSA

AUGER ID: 4.25 - INCH

RIG GEOLOGIST: E. SHEPARD

INITIAL WATER LEVEL DEPTH: 19.99'(RF)

DATE: 01 / 18 / 94



PROTECTIVE CASING STICKUP: 2.7'

PVC STICKUP: 2.6'

OUTSIDE DIAMETER OF STEEL PROTECTIVE CASING: 4 - INCH

BOREHOLE DIAMETER: 8.25 - INCH

WELL RISER ID: 2.0-INCH

TYPE OF WELL RISER: SCH 40 PVC

TYPE OF BACKFILL: VOLCLAY GROUT

DEPTH TO TOP OF BENTONITE PELLET SEAL: 3.3'

DEPTH TO TOP OF SAND PACK: 5.5'

DEPTH TO TOP OF WELL SCREEN: 7.5'

BOREHOLE DIAMETER: 8.25 - INCH

TYPE OF WELL SCREEN: SCH 40 PVC

WELL SCREEN ID: 2.0-INCH

WELL SLOT SIZE: 0.010-INCH

LENGTH OF WELL SCREEN: 9.6'

TYPE OF SAND PACK: PENN SILICA # 1

DEPTH TO BOTTOM OF WELL SCREEN: 17.1'

DEPTH TO BOTTOM OF SEDIMENT TRAP: 17.5'

DEPTH OF BOREHOLE: 17.5'

ABB ENVIRONMENTAL SERVICES, INC.

WELL INSTALLATION DIAGRAM

WELL NO.: **PZ-101**

PROJECT NAME: OLIN ROCHESTER RI

PROJECT NO.: 7311-03

GROUND ELEVATION: 540.50

REFERENCE POINT ELEVATION: 543.15

DATE INSTALLED: 10 / 26 / 93

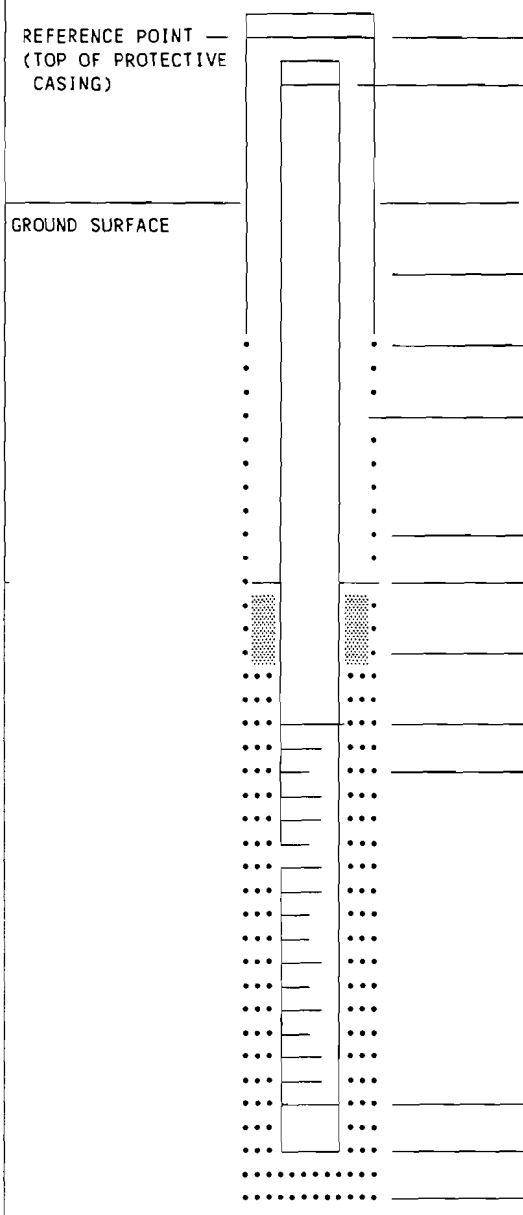
DRILLING METHOD: HSA

AUGER ID: 4.25 - INCH

RIG GEOLOGIST: B. JOHNSON

INITIAL WATER LEVEL DEPTH: 15.36'(RF)

DATE: 01 / 17 / 94



PROTECTIVE CASING STICKUP: 2.7'

PVC STICKUP: 2.5'

OUTSIDE DIAMETER OF STEEL PROTECTIVE CASING: 4 - INCH

BOREHOLE DIAMETER: 8.25 - INCH

WELL RISER ID: 2.0-INCH

TYPE OF WELL RISER: SCH 40 PVC

TYPE OF BACKFILL: PENN SILICA # 1 SAND (FOR DRAINAGE)

DEPTH TO TOP OF BENTONITE PELLET SEAL: 5.0'

DEPTH TO TOP OF SAND PACK: 7.3'

DEPTH TO TOP OF WELL SCREEN: 9.4'

BOREHOLE DIAMETER: 8.25 - INCH

TYPE OF WELL SCREEN: SCH 40 PVC

WELL SCREEN ID: 2.0-INCH

WELL SLOT SIZE: 0.010-INCH

LENGTH OF WELL SCREEN: 9.6'

TYPE OF SAND PACK: PENN SILICA # 1

DEPTH TO BOTTOM OF WELL SCREEN: 19.0'

DEPTH TO BOTTOM OF SEDIMENT TRAP: 19.4'

DEPTH OF BOREHOLE: 20.4'

ABB ENVIRONMENTAL SERVICES, INC.

WELL INSTALLATION DIAGRAM

WELL NO.: **PZ-102**

PROJECT NAME: OLIN ROCHESTER RI

PROJECT NO.: 7311-03

GROUND ELEVATION: 539.10

REFERENCE POINT ELEVATION: 541.11

DATE INSTALLED: 01 / 14 / 94

DRILLING METHOD: HSA \ ROCK CORE

CORE HOLE DIA.: 3.8 - INCH

RIG GEOLOGIST: E. SHEPARD

INITIAL WATER LEVEL DEPTH: 26.00'(RF)

DATE: 01 / 17 / 94

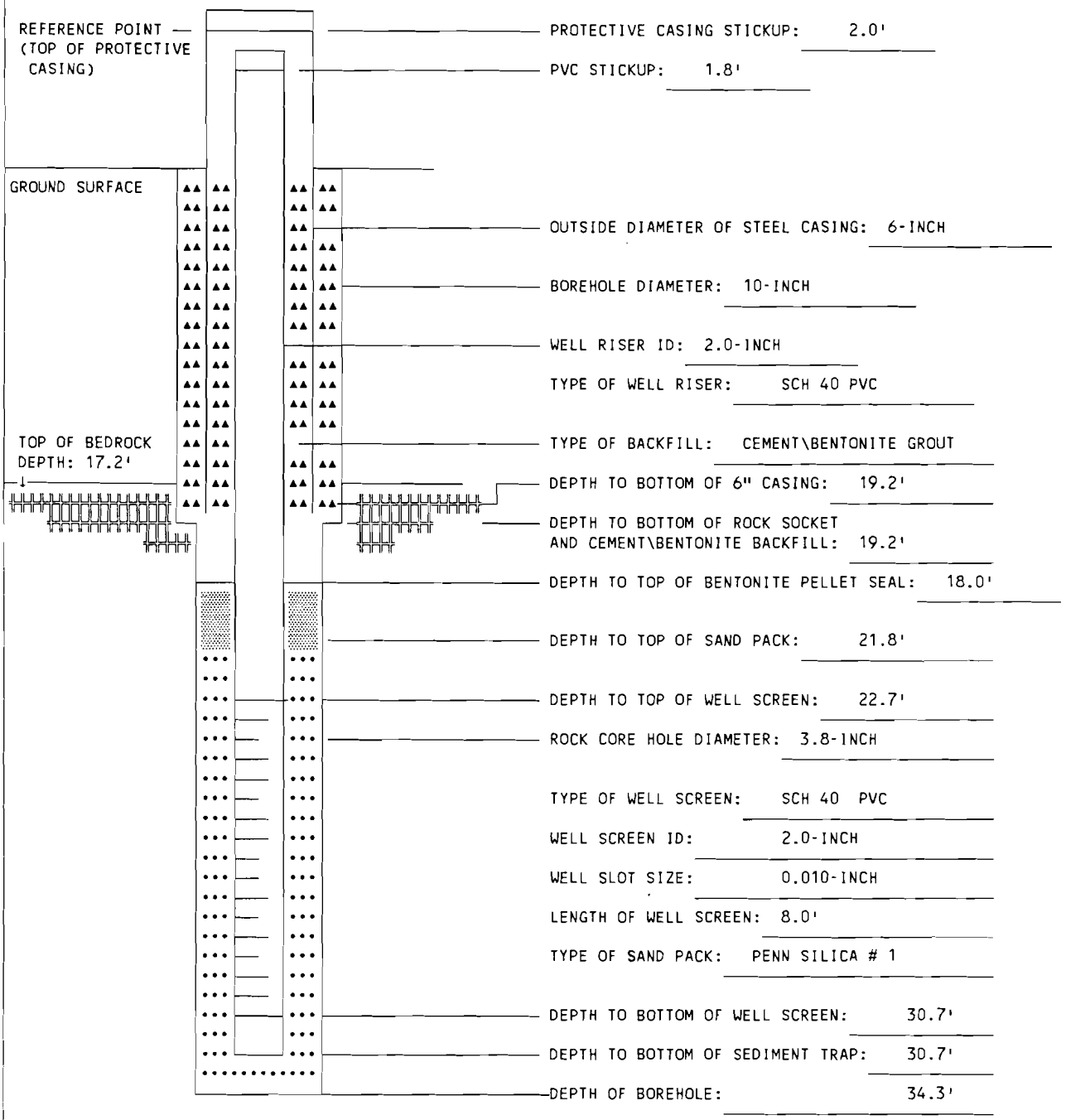


ABB ENVIRONMENTAL SERVICES, INC.

WELL INSTALLATION DIAGRAM

WELL NO.: **PZ-103**

PROJECT NAME: OLIN ROCHESTER RI

PROJECT NO.: 7311-03

GROUND ELEVATION: 537.80

REFERENCE POINT ELEVATION: 540.34

DATE INSTALLED: 12 / 21 / 93

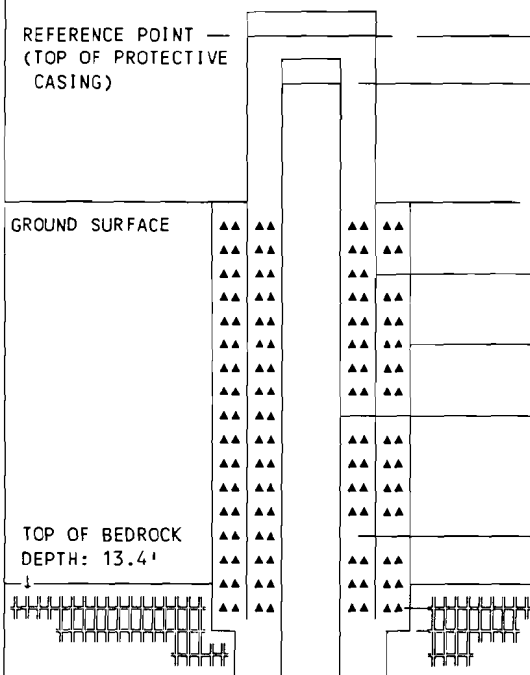
DRILLING METHOD: HSA \ ROCK CORE

CORE HOLE DIA.: 3.8 - INCH

RIG GEOLOGIST: E. SHEPARD

INITIAL WATER LEVEL DEPTH: 12.65'(RF)

DATE: 01 / 17 / 94



PROTECTIVE CASING STICKUP: 2.5'

PVC STICKUP: 2.4'

OUTSIDE DIAMETER OF STEEL CASING: 6-INCH

BOREHOLE DIAMETER: 10-INCH

WELL RISER ID: 2.0-INCH

TYPE OF WELL RISER: SCH 40 PVC

TYPE OF BACKFILL: CEMENT\BENTONITE GROUT

DEPTH TO BOTTOM OF 6" CASING: 15.4'

DEPTH TO BOTTOM OF ROCK SOCKET AND CEMENT\BENTONITE BACKFILL: 15.4'

DEPTH TO TOP OF BENTONITE PELLET SEAL: 14.5'

DEPTH TO TOP OF SAND PACK: 16.8'

DEPTH TO TOP OF WELL SCREEN: 19.8'

ROCK CORE HOLE DIAMETER: 3.8-INCH

TYPE OF WELL SCREEN: SCH 40 PVC

WELL SCREEN ID: 2.0-INCH

WELL SLOT SIZE: 0.010-INCH

LENGTH OF WELL SCREEN: 9.3'

TYPE OF SAND PACK: PENN SILICA # 1

DEPTH TO BOTTOM OF WELL SCREEN: 29.1'

DEPTH TO BOTTOM OF SEDIMENT TRAP: 29.8'

DEPTH OF BOREHOLE: 30.0'

ABB ENVIRONMENTAL SERVICES, INC.

WELL INSTALLATION DIAGRAM

WELL NO.: **PZ-104**

PROJECT NAME: OLIN ROCHESTER RI

PROJECT NO.: 7311-03

GROUND ELEVATION: 537.21

REFERENCE POINT ELEVATION: 537.21

DATE INSTALLED: 01 / 14 / 94

DRILLING METHOD: HSA \ ROCK CORE

CORE HOLE DIA.: 3.8 - INCH

RIG GEOLOGIST: E. SHEPARD

INITIAL WATER LEVEL DEPTH: 15.70'(RF)

DATE: 01 / 17 / 94

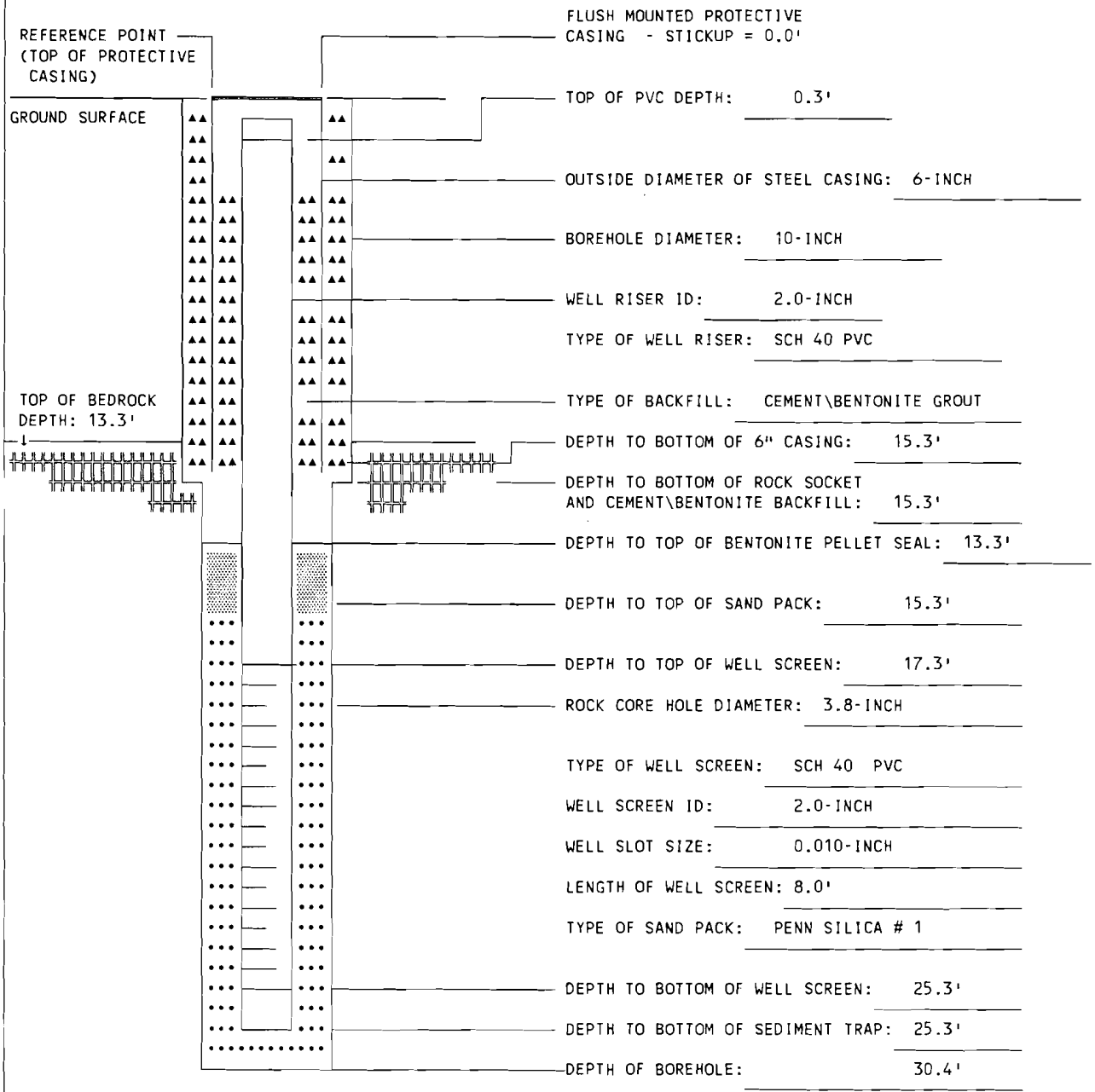


ABB ENVIRONMENTAL SERVICES, INC.

WELL INSTALLATION DIAGRAM

WELL NO.: **PZ-105**

PROJECT NAME: OLIN ROCHESTER RI

PROJECT NO.: 7311-03

GROUND ELEVATION: 537.00

REFERENCE POINT ELEVATION: 539.58

DATE INSTALLED: 12 / 21 / 93

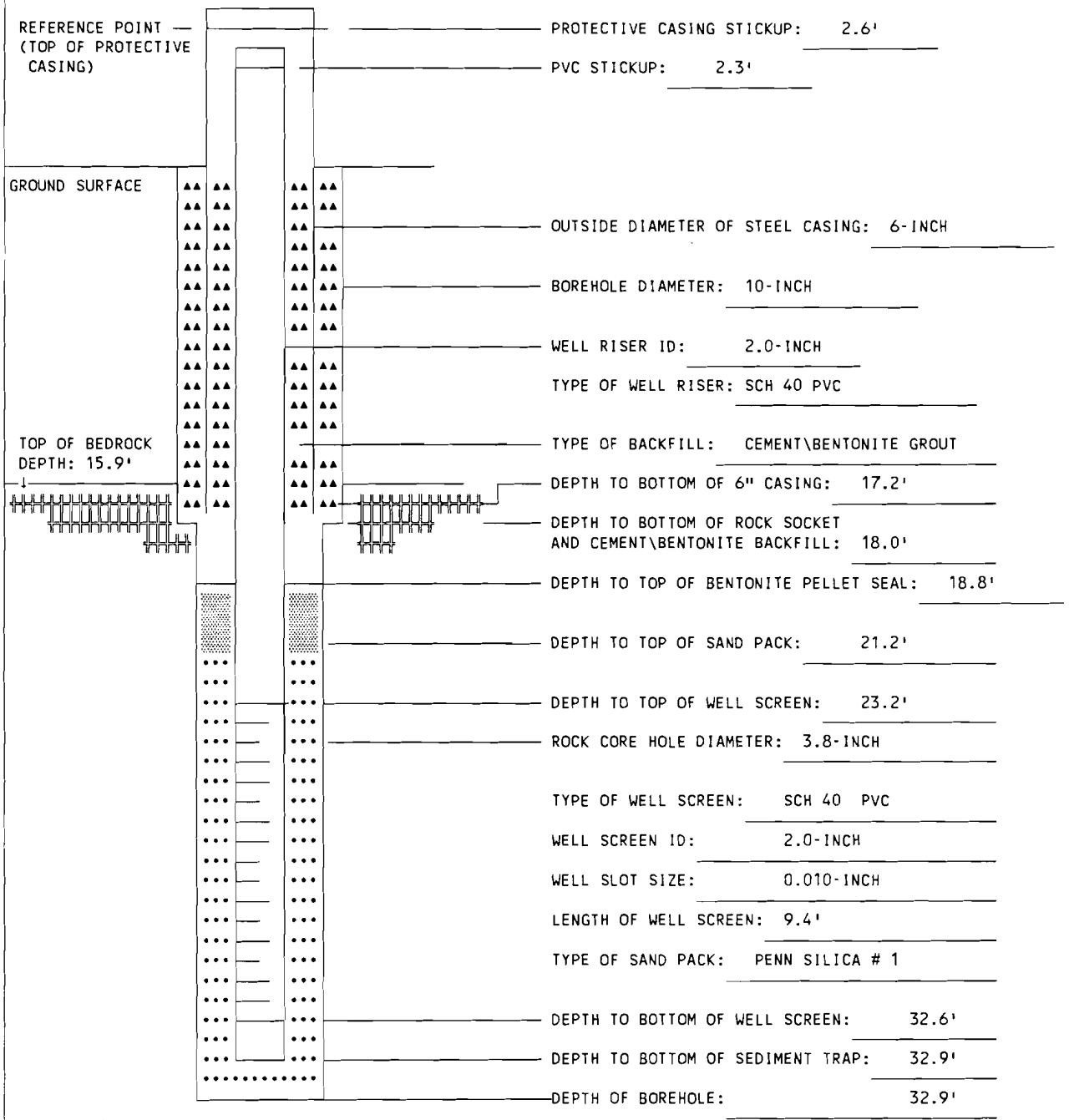
DRILLING METHOD: HSA \ ROCK CORE

CORE HOLE DIA.: 3.8 - INCH

RIG GEOLOGIST: N. BRETON

INITIAL WATER LEVEL DEPTH: 13.00'(RF)

DATE: 01 / 17 / 94



PROTECTIVE CASING STICKUP: 2.6'

PVC STICKUP: 2.3'

OUTSIDE DIAMETER OF STEEL CASING: 6-INCH

BOREHOLE DIAMETER: 10-INCH

WELL RISER ID: 2.0-INCH

TYPE OF WELL RISER: SCH 40 PVC

TYPE OF BACKFILL: CEMENT\BENTONITE GROUT

DEPTH TO BOTTOM OF 6" CASING: 17.2'

DEPTH TO BOTTOM OF ROCK SOCKET AND CEMENT\BENTONITE BACKFILL: 18.0'

DEPTH TO TOP OF BENTONITE PELLET SEAL: 18.8'

DEPTH TO TOP OF SAND PACK: 21.2'

DEPTH TO TOP OF WELL SCREEN: 23.2'

ROCK CORE HOLE DIAMETER: 3.8-INCH

TYPE OF WELL SCREEN: SCH 40 PVC

WELL SCREEN ID: 2.0-INCH

WELL SLOT SIZE: 0.010-INCH

LENGTH OF WELL SCREEN: 9.4'

TYPE OF SAND PACK: PENN SILICA # 1

DEPTH TO BOTTOM OF WELL SCREEN: 32.6'

DEPTH TO BOTTOM OF SEDIMENT TRAP: 32.9'

DEPTH OF BOREHOLE: 32.9'

ABB ENVIRONMENTAL SERVICES, INC.

WELL INSTALLATION DIAGRAM

WELL NO.: **PZ-106**

PROJECT NAME: OLIN ROCHESTER RI

PROJECT NO.: 7311-03

GROUND ELEVATION: 535.00

REFERENCE POINT ELEVATION: 537.45

DATE INSTALLED: 12 / 21 / 93

DRILLING METHOD: HSA \ ROCK CORE

CORE HOLE DIA.: 3.8 - INCH

RIG GEOLOGIST: N. BRETON

INITIAL WATER LEVEL DEPTH: 12.50'(RF)

DATE: 01 / 17 / 94

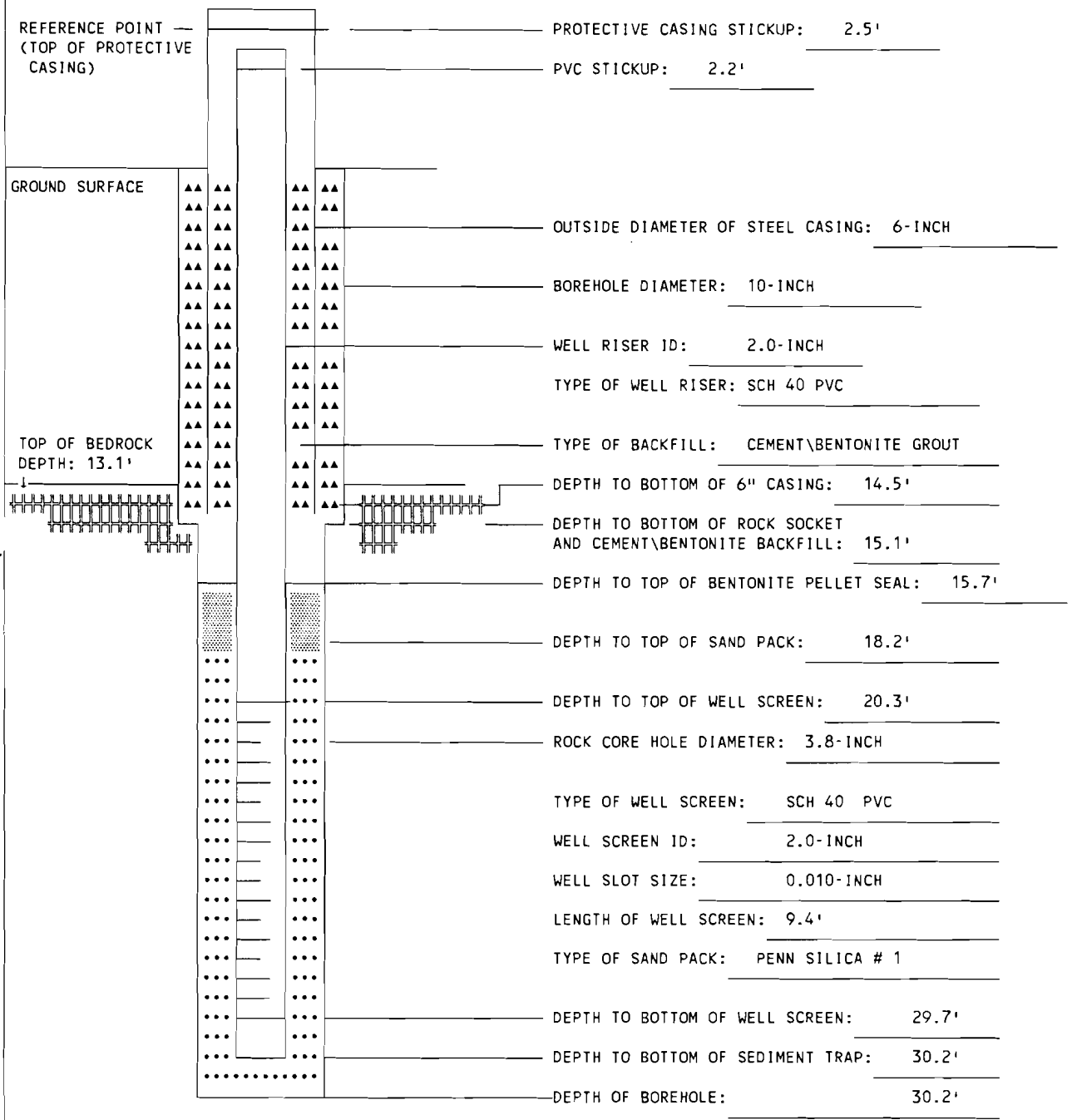


ABB ENVIRONMENTAL SERVICES, INC.

WELL INSTALLATION DIAGRAM

WELL NO.: **PZ-107**

PROJECT NAME: OLIN ROCHESTER RI

PROJECT NO.: 7311-03

GROUND ELEVATION: 536.40

REFERENCE POINT ELEVATION: 538.64

DATE INSTALLED: 10 / 28 / 93

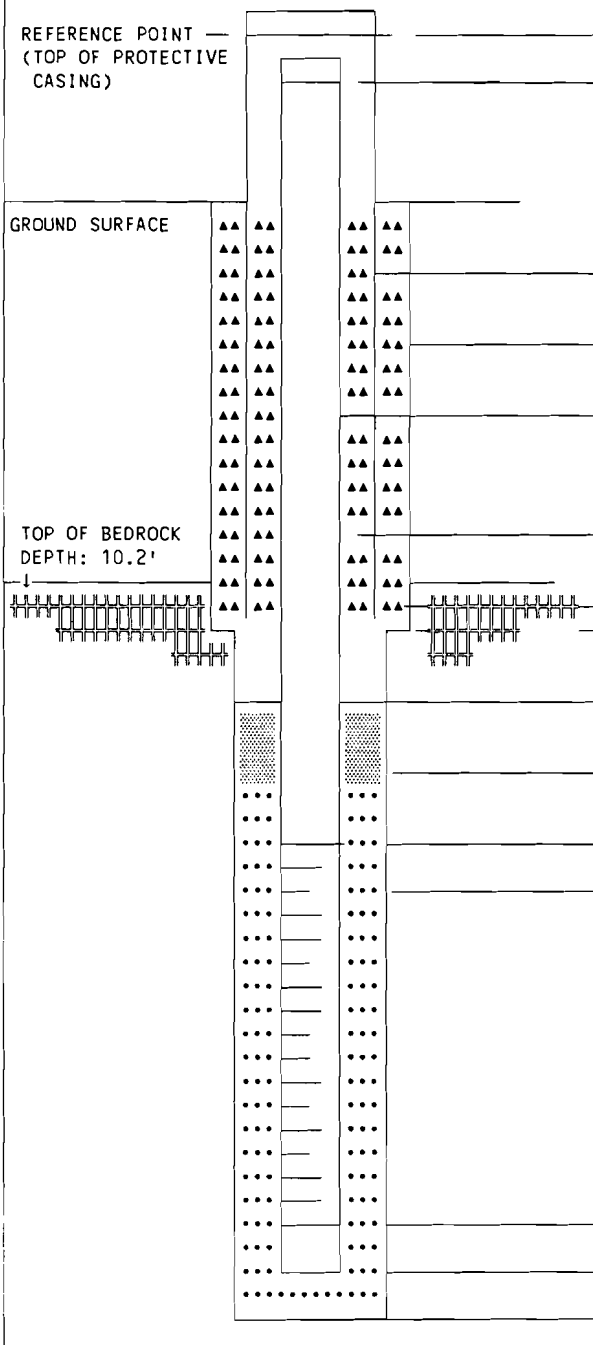
DRILLING METHOD: HSA \ ROCK CORE

CORE HOLE DIA.: 3.8 - INCH

RIG GEOLOGIST: E. SHEPARD

INITIAL WATER LEVEL DEPTH: 7.10'(RF)

DATE: 01 / 17 / 94



PROTECTIVE CASING STICKUP: 2.2'

PVC STICKUP: 2.0'

OUTSIDE DIAMETER OF STEEL CASING: 6-INCH

BOREHOLE DIAMETER: 10-INCH

WELL RISER ID: 2.0-INCH

TYPE OF WELL RISER: SCH 40 PVC

TYPE OF BACKFILL: CEMENT\BENTONITE GROUT

DEPTH TO BOTTOM OF 6" CASING: 11.7'

DEPTH TO BOTTOM OF ROCK SOCKET AND CEMENT\BENTONITE BACKFILL: 12.2'

DEPTH TO TOP OF BENTONITE PELLET SEAL: 12.5'

DEPTH TO TOP OF SAND PACK: 14.5'

DEPTH TO TOP OF WELL SCREEN: 15.5'

ROCK CORE HOLE DIAMETER: 3.8-INCH

TYPE OF WELL SCREEN: SCH 40 PVC

WELL SCREEN ID: 2.0-INCH

WELL SLOT SIZE: 0.010-INCH

LENGTH OF WELL SCREEN: 9.6'

TYPE OF SAND PACK: PENN SILICA # 1

DEPTH TO BOTTOM OF WELL SCREEN: 25.1'

DEPTH TO BOTTOM OF SEDIMENT TRAP: 25.5'

DEPTH OF BOREHOLE: 30.2'

ABB ENVIRONMENTAL SERVICES, INC.

WELL INSTALLATION DIAGRAM

WELL NO.: **PZ-108**

PROJECT NAME: OLIN ROCHESTER RI

PROJECT NO.: 7311-03

GROUND ELEVATION: 536.56

REFERENCE POINT ELEVATION: 536.56

DATE INSTALLED: 10 / 21 / 93

DRILLING METHOD: HSA

AUGER ID: 4.25 - INCH

RIG GEOLOGIST: B. JOHNSON

INITIAL WATER LEVEL DEPTH: 4.30'(RF)

DATE: 01 / 17 / 94

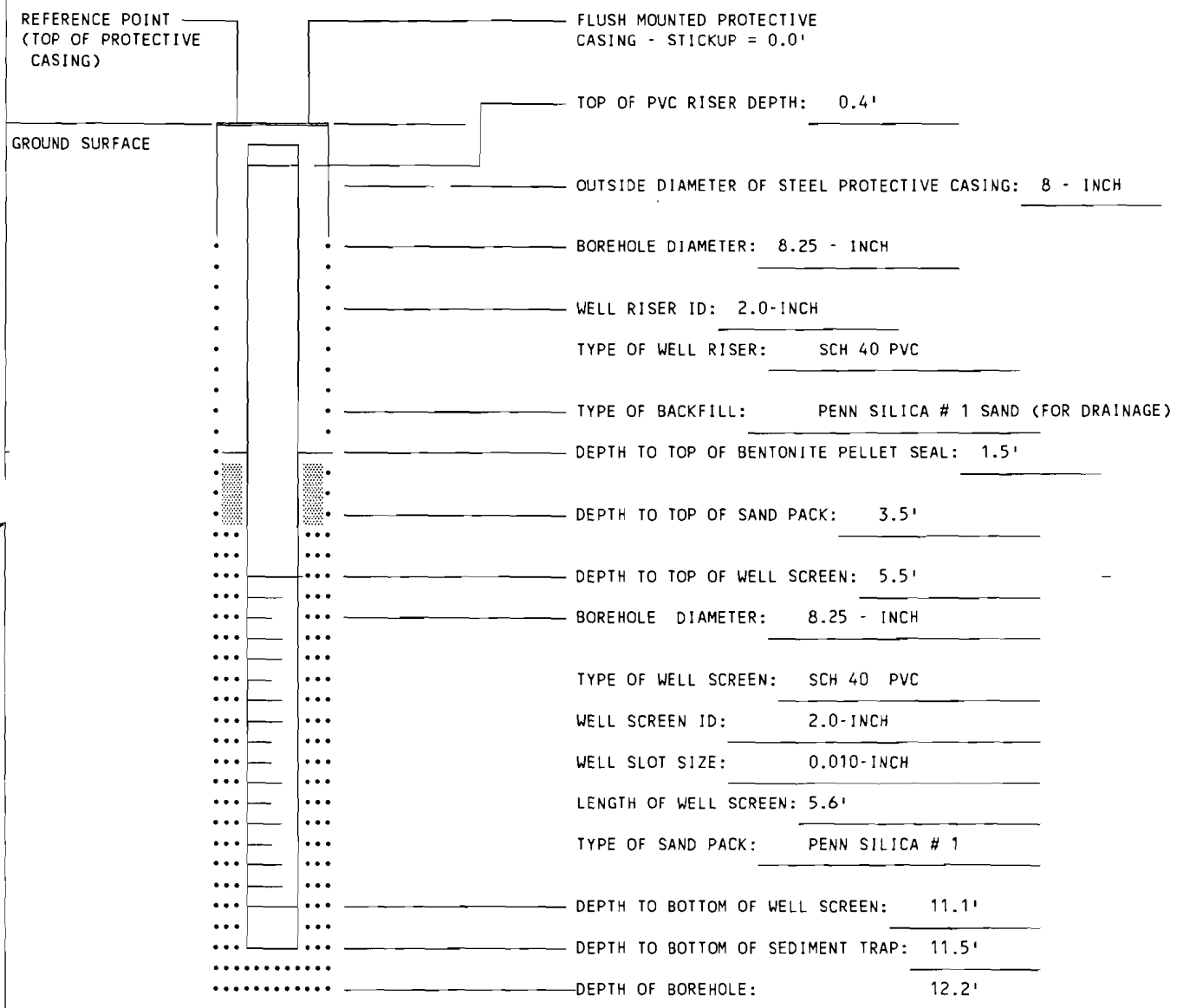


ABB ENVIRONMENTAL SERVICES, INC.

A-4 WELL DEVELOPMENT DATA

APPENDIX A-4
WELL DEVELOPMENT SUMMARY
OLIN CHEMICALS PHASE I RI REPORT
ROCHESTER, NY

WELL / PIEZOMETER	TYPE	WATER LOST (gallons) (1)	TOTAL AMOUNT PURGED (gal)	DURATION (hours)	AVERAGE PURGE RATE (gpm)	DATE COMPLETED
BR-101	BEDROCK	1700	2490	6.25	10	17-Jan-94
BR-102	BEDROCK	1400	2100	4	9	12-Jan-94
BR-103	BEDROCK	450	480	4	2	02-Dec-93
BR-104	BEDROCK	800	1200	2.2	9	12-Jan-94
BR-105	BEDROCK	1950	3250	7.5	10	04-Jan-94
BR-106	BEDROCK	700	1080	2	9	17-Jan-94
BR-107	BEDROCK	575	1000	3.5	4	03-Dec-93
BR-108	BEDROCK	600	900	1.6	9	11-Jan-94
BR-105D	DEEP BEDROCK	220	412	5.25	< 0.5	21-Jan-94
PZ-102	BEDROCK	300	450	4	2.0	20-Jan-94
PZ-103	BEDROCK	700	480	4	2.0	14-Jan-94
PZ-104	BEDROCK	1100	480	4	2.0	18-Jan-94
PZ-105	BEDROCK	400	164	4.5	0.5	07-Jan-94
PZ-106	BEDROCK	80	116	4	0.5	06-Jan-94
PZ-107	BEDROCK	750	720	4	3.0	13-Jan-94
MW-103	OVERBURDEN	NA	80	3.5	0.2	02-Dec-93
MW-104	OVERBURDEN	NA	27	0.75	0.6	12-Jan-94
MW-105	OVERBURDEN	NA	DRY	DRY	DRY	DRY
MW-106	OVERBURDEN	300	50	3	< 0.1	17-Jan-94
MW-107	OVERBURDEN	NA	5	4.5		01-Dec-93
MW-108	OVERBURDEN	NA	2.5	1	< 0.1	11-Jan-94
PZ-101	OVERBURDEN	NA	5	2.5	0.2	02-Dec-93
PZ-108	OVERBURDEN	NA	7	3	0.8	01-Dec-93

Notes:

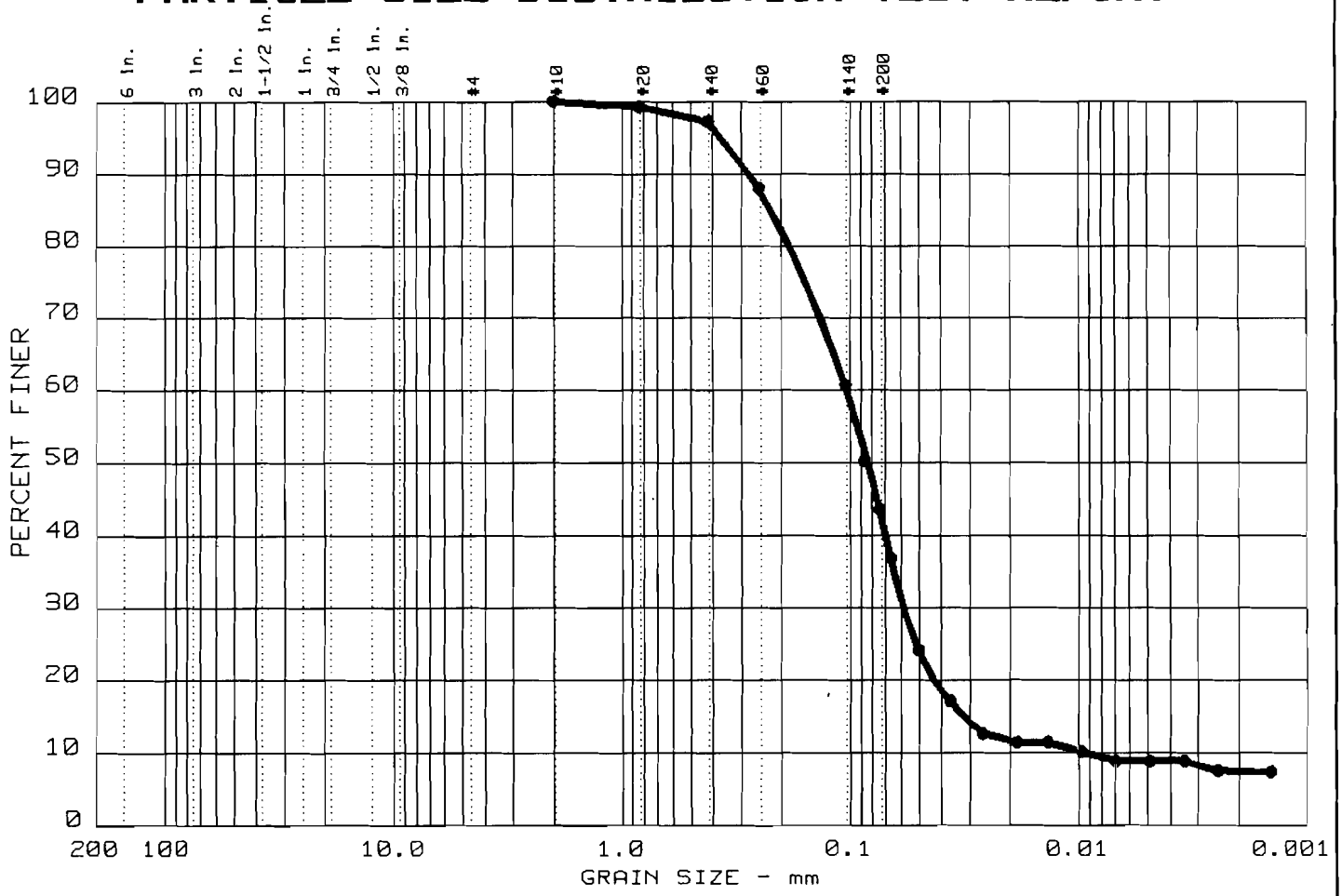
(1) Amount of potable water lost to formation during drilling

APPENDIX A-4
WELL DEVELOPMENT SUMMARY
OLIN CHEMICALS PHASE I RI REPORT
ROCHESTER, NY

WELL /	PH		CONDUCTANCE			TEMPERATURE (C°)		TURBIDITY (NTUs)	
PIEZOMETER	START	END	START	(umhos/cm)	END	START	END	START	END
BR-101	7.00	6.91	1647		3200	14.5	12.1	> 200	> 200
BR-102	7.18	7.25	1792		1920	11.6	12.8	85	1.0
BR-103	7.52	7.12	1507		1504	13.3	13.7	> 200	12
BR-104	9.43	7.40	1508		1402	11.7	11.1	> 200	> 200
BR-105	7.26	7.27	1278		1492	12.6	11.0	57	10.0
BR-106	7.17	7.48	2214		2080	11.7	10.7	> 200	1.0
BR-107	7.10	7.22	780		560	11.5	11.5	15.6	0.9
BR-108	6.83	7.06	750		717	11.2	10.8	122	52
BR-105D	7.18	8.27	17180		19900	12.0	9.8	> 200	> 200
PZ-102	7.81	7.57	3280		3300	11.4	10.2	> 200	15
PZ-103	7.44	7.78	8920		8880	11.4	10.2	4.8	0.2
PZ-104	7.38	7.51	1538		1605	11.6	10.0	14.5	1.0
PZ-105	9.04	8.83	2520		2790	8.9	9.0	103	5.0
PZ-106	7.11	7.53	2930		2180	2.6	6.9	160	16
PZ-107	10.90	10.22	2500		3200	8.8	10.1	> 200	> 200
MW-103	6.94	7.08	968		976	10.0	10.6	> 200	> 200
MW-104	6.68	7.11	830		1052	10.2	10.9	> 200	> 200
MW-105	DRY	DRY	DRY		DRY	DRY	DRY	DRY	DRY
MW-106	7.28	7.35	4300		5320	6.4	6.8	> 200	> 200
MW-107	7.84	6.35	626		679	11.3	12.3	> 200	> 200
MW-108	6.36	6.88	834		768	10.9	10.5	> 200	> 200
PZ-101	7.23	6.89	3060		3050	11.6	10.0	> 200	> 200
PZ-108	6.19	6.95	827		752	9.6	10.1	> 200	> 200

A-5 GRAIN SIZE ANALYSIS PLOTS

PARTICLE SIZE DISTRIBUTION TEST REPORT



	% +3"	% GRAVEL	% SAND	% SILT	% CLAY	USCS	LL	PI
●	0.0	0.0	56.5	34.7	8.8	SM		

SIEVE inches size	PERCENT FINER ●		
	GRAIN SIZE		
D_{60}	0.10		
D_{30}	0.06		
D_{10}	0.00		
	COEFFICIENTS		
C_c	3.52		
C_u	11.1		

SIEVE number size	PERCENT FINER ●		
10	100.0		
20	99.2		
40	97.2		
60	88.0		
140	60.6		
200	43.5		

Sample information:

● PZ-108
8' - 10'

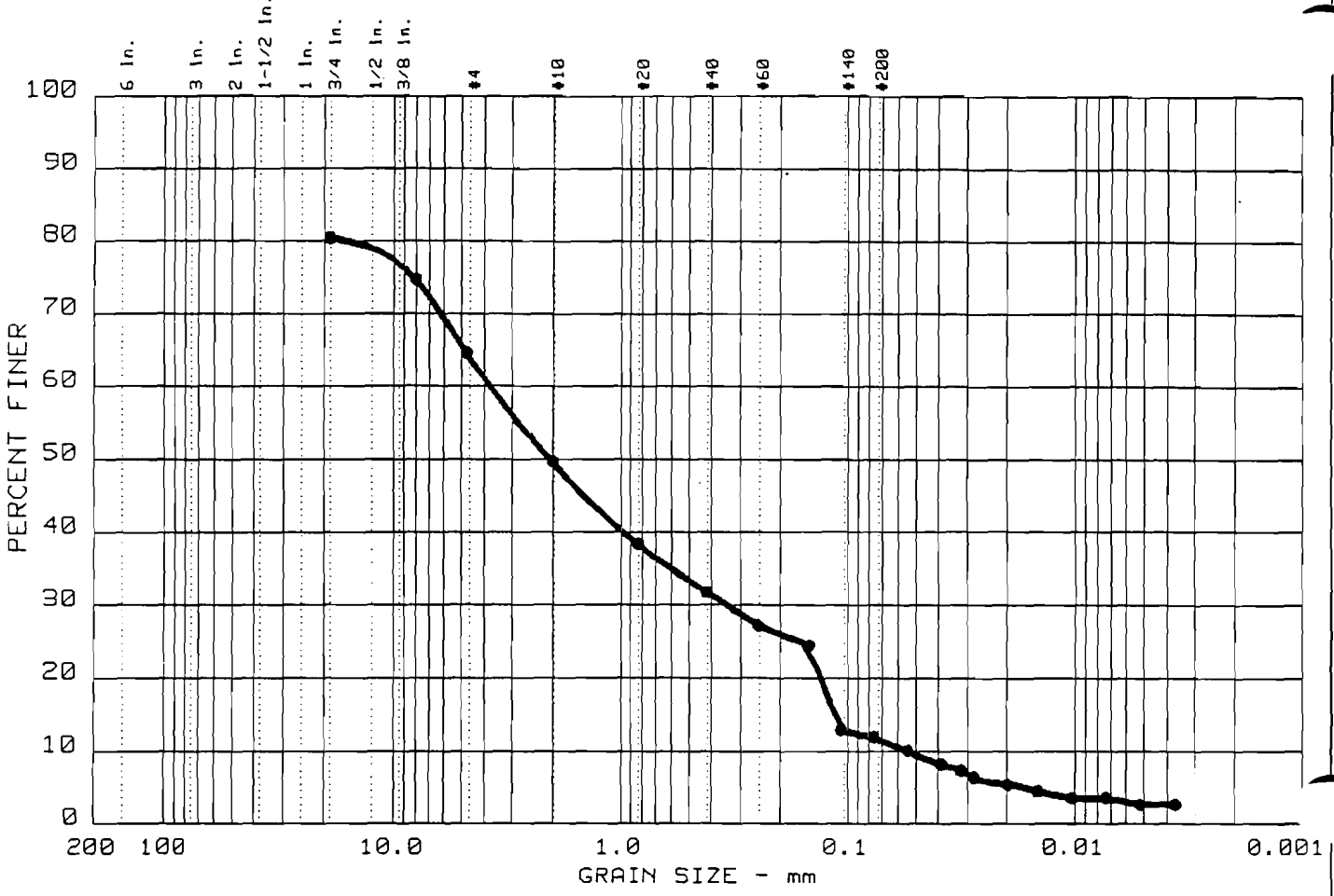
Remarks:
hydrometer followed by sieve analysis
assume specific gravity= 2.65

ABB Environmental Services, Inc.

Project No.: 7658.01
Project: Olin

Date: 8/1/94 Data Sheet No. ____

PARTICLE SIZE DISTRIBUTION TEST REPORT



	Test	% +3"	% GRAVEL	% SAND	% SILT	% CLAY	USCS	LL	PI
●	S	0.0	35.5	52.8	9.1	2.6	SP-SM		

SIEVE inches size	PERCENT FINER ●	-		
0.75	80.3			
0.315	74.6			
	GRAIN SIZE			
D_{60}	3.76			
D_{30}	0.34			
D_{10}	0.05			
	COEFFICIENTS			
C_c	0.58			
C_u	69.6			

SIEVE number size	PERCENT FINER ●		
4	64.5		
10	49.7		
20	38.3		
40	31.7		
60	27.2		
100	24.5		

Sample information:

● MW-107
8' - 10'

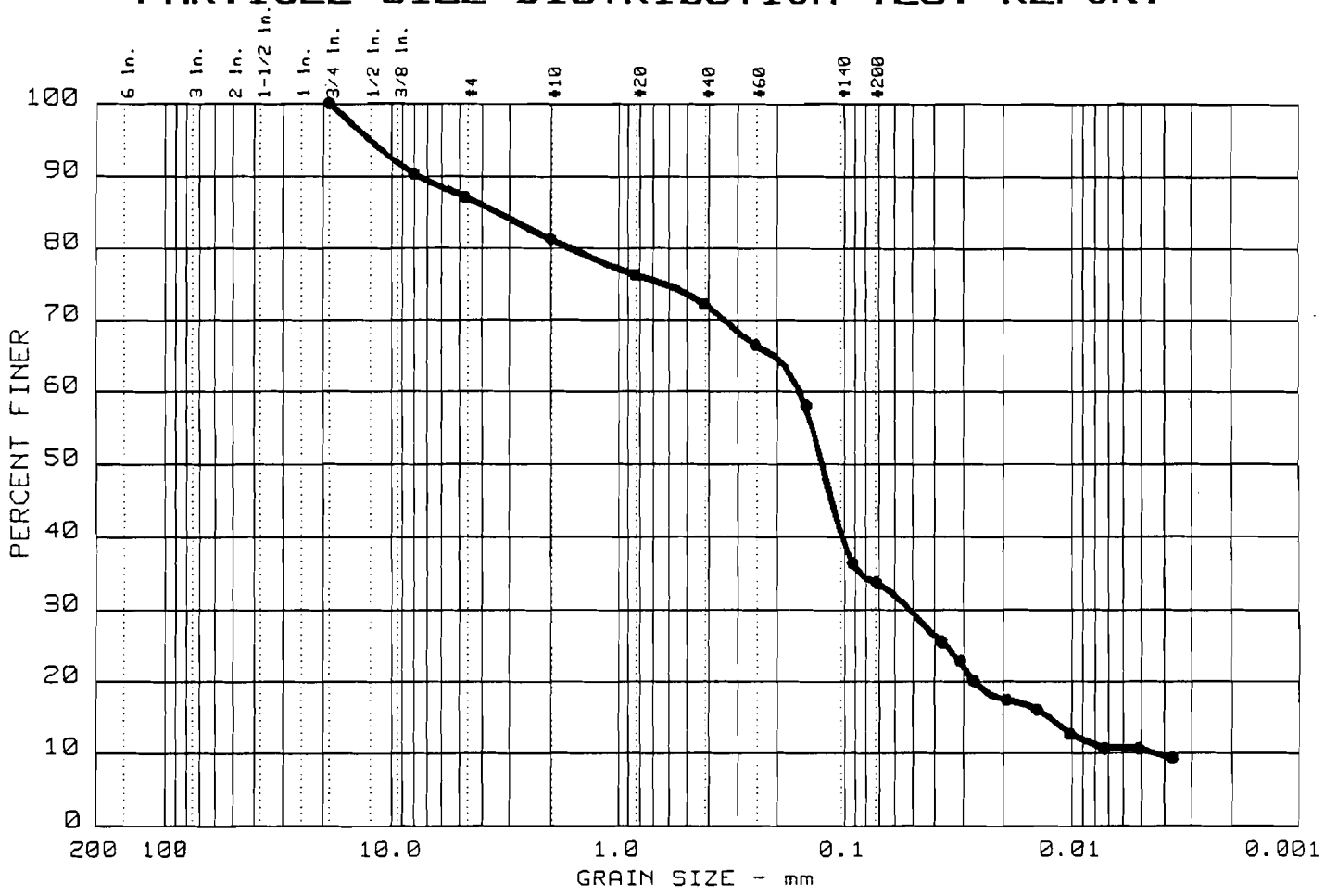
Remarks:
hydrometer & sieve analysis
assume specific gravity= 2.65

ABB Environmental Services, Inc.

Project No.:
Project:

Date: 4/1/94 Data Sheet No. ____

PARTICLE SIZE DISTRIBUTION TEST REPORT



	Test	% +3"	% GRAVEL	% SAND	% SILT	% CLAY	USCS	LL	PI
●	5	0.0	13.0	53.2	23.3	10.5	SM		

SIEVE inches size	PERCENT FINER ●		
0.75	100.0		
0.315	90.3		

	GRAIN SIZE		
D_{60}	0.16		
D_{30}	0.05		
D_{10}	0.00		

	COEFFICIENTS		
C_c	3.80		
C_u	36.3		

SIEVE number size	PERCENT FINER ●		
4	87.0		
10	81.2		
20	76.2		
40	72.1		
60	66.4		
100	57.9		

Sample information:

● PZ-101
14' - 16'

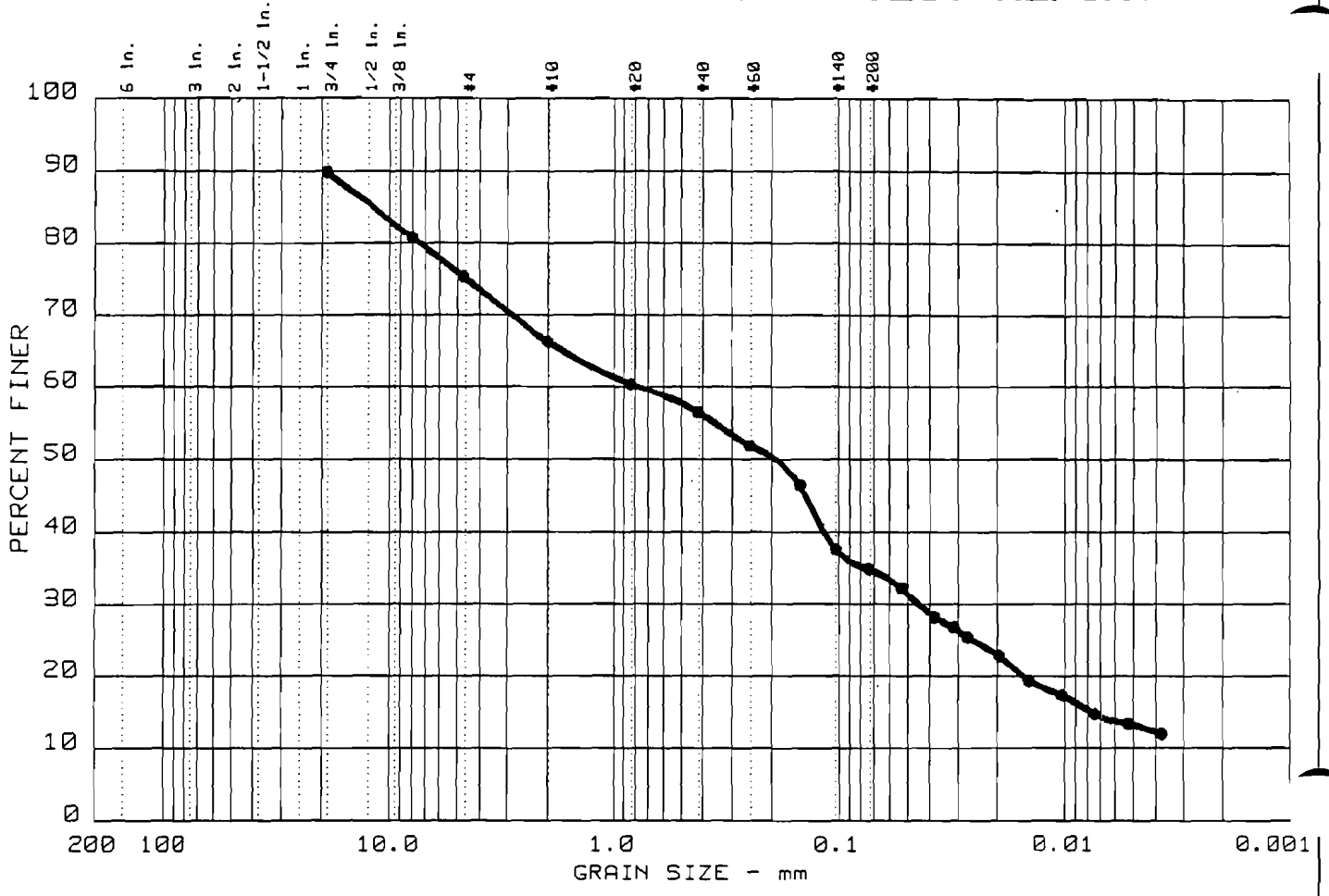
Remarks:
hydrometer & sieve analysis
assume specific gravity= 2.65

ABB Environmental Services, Inc.

Project No.:
Project:

Date: 4/1/94 Data Sheet No. ——

PARTICLE SIZE DISTRIBUTION TEST REPORT



	Test	% +3"	% GRAVEL	% SAND	% SILT	% CLAY	USCS	LL	PI
●	5	0.0	24.6	40.5	21.7	13.2	SM		

SIEVE inches size	PERCENT FINER ●		
0.75	89.8		
0.315	80.7		
	GRAIN SIZE		
D_{60}	0.79		
D_{30}	0.04		
D_{10}			
	COEFFICIENTS		
C_c			
C_u			

SIEVE number size	PERCENT FINER ●		
4	75.4		
10	66.2		
20	60.3		
40	56.4		
60	51.8		
100	46.4		

Sample information:

● MW-103
6' - 8'

Remarks:
hydrometer & sieve analysis
assume specific gravity= 2.65

ABB Environmental Services, Inc.

Project No.:
Project:

Date: 4/1/94 Data Sheet No. ——

A-6 BOREHOLE GEOPHYSICAL LOGS

TECHNICAL MEMORANDUM

PROJECT: Olin Rochester

SUBJECT: Borehole Geophysical Logging

PREPARED BY: Larry L. Dearborn

DATE: January 31, 1994 (Revised - June 1995)

1.0 INTRODUCTION

Borehole geophysical logging was performed in two monitoring wells downgradient of the Olin Plant, MW-105 and MW-105D, on January 6 and 7, 1994. This memorandum documents the discussion of January 10, 1994 between the author and Tom Eschner of ABB-ES concerning interpretation of geophysical log data for the purpose of completing work at MW-105D. The purpose of geophysical logging was to provide characterization of the deep bedrock zone for selecting an interval to screen, and to provide hydrogeologic information that could be used to correlate with data from future boreholes. Together, the logs of MW-105 and MW-105D represent all but a 5-foot depth interval (between 45 to 50 feet below ground surface).

Furthermore, it was hoped that the geophysical logs would help identify significant fractures or fractured zones to aid placement of packers for subsequent in situ permeability testing, assist description of the bedrock properties, and possibly locate depth zones where groundwater was entering or leaving the borehole.

2.0 PERSONNEL

The logging was performed by the following ABB-ES personnel: Larry Dearborn, Principal Scientist (Hydrogeology), Scott Calkin, Geophysists, with general oversight by Nelson Breton, Field Operations Leader.

3.0 FIELD PROGRAM

Downhole geophysical data were collected in MW-105 and MW-105D using a Mount Sopris Instrument Company MGX digital logger with field computer storage of data and real-time printout of the logs. All log data were collected (measured) and recorded at 0.1 foot intervals. The surface console instruments were housed in the back of a small van to keep the sub-freezing temperature and falling snow from altering the electronic signals.

In accordance with the Work Plan, the following geophysical log types were run in both wells:

fluid temperature
fluid resistivity
caliper (hole diameter)
single point resistance

In the process of obtaining the single point resistivity log two other logs, natural gamma and spontaneous potential (SP), were obtained during the logging.

Also as specified, an 8 mm color video camera made by GeoVision was run in MW-105D in an attempt to document borehole wall conditions, including prominent fractures.

Usually at least two, and as many as four, logging passes were made with each probe to verify response and examine differences between downhole versus uphole runs. Constant probe speeds in the borehole ranged from approximately 5 feet per minute for the temperature, caliper, and video camera logs to approximately 10 feet per minute for the other log types. Each probe run received a distinctive file name. Real-time log printouts were made for at least one run of each log type per well. The other logs were viewed on the computer screen as data were being recorded.

4.0 RESULTS

Composite log suites for each well logged are attached to this memorandum. The following paragraphs summarize the findings as interpreted from each log suite.

MW-105: Log types of most diagnostic importance were the fluid temperature, caliper, and single point resistance.

The single point resistance log and the large increase in borehole diameter registered by the caliper log indicate a washout of rock just below the water level at 26 feet bgs. In addition, similar but more subdued single point resistance responses are apparent at 34.5 and 40 feet below ground surface, suggesting the presence of fractures. Relatively large excursions to the right (increasing natural radioactivity) on the natural gamma log at the above three depths further indicate fractures, either through responding to clay deposited within fractures or to groundwater mineralization within fractures that contains natural radioactive isotopes.

Collectively, the most prominent borehole feature is indicated at a depth of 34.5 feet bgs. It appears that warmer groundwater above this depth is moving out of the borehole through a fracture(s) at this depth.

A single point resistance low excursion suggests another fracture intersects, or possibly nearly intersects, the borehole at 40 feet

bgs.

MW-105D: The video log is of poor interpretive quality beneath the water due to the abundance of gas moving uphole, although it did provide proof of silt in the bottom of the borehole. The video log is so dominated by bubble interference that fractures could not be observed on the borehole wall.

The video log suggests that degassing was occurring throughout the entire depth of the borehole. This phenomenon caused the fluid temperature to lack character between 56 and 107 feet bgs, and the fluid resistivity probe not to respond, providing no data to analyze. The abrupt temperature deflection at the bottom of the hole (below 107 feet) is attributed to the insulating effect of silt or rock flour residual from drilling within the borehole. A slight warming trend (less than 0.1 degree C) in the upper part of the hole (above 56 feet) may relate to the presence of a less competent zone.

In the 56 to 60 feet bgs zone, the caliper and natural gamma logs suggest a change in rock character that possibly could represent fracturing. This is also where the borehole fluid temperature becomes stable with increasing depth.

Interpretation of the log suite revealed only one other zone of interest at 71 and 86 feet bgs. Both single point resistance and SP logs show anomalously large excursions in this zone in comparison to the rest of the depths. A repeat logging run gave the same results, implying that the probe was consistent and sensing a physical change in the bedrock. Other logs did not show excursions from their trends above or below this zone. It appears that the single point resistance log reached a peak resolution reading of 2850 ohms from 75 to 82 feet bgs, and that the excursion to lower resistance between 73 and 75 feet bgs may be significant. Less competent rock will nearly always give lower resistance readings, implying that this interval is either shalely or fractured. However, the natural gamma log did not react as if this zone were shalely (shift to the right).

5.0 SUMMARY AND CONCLUSIONS

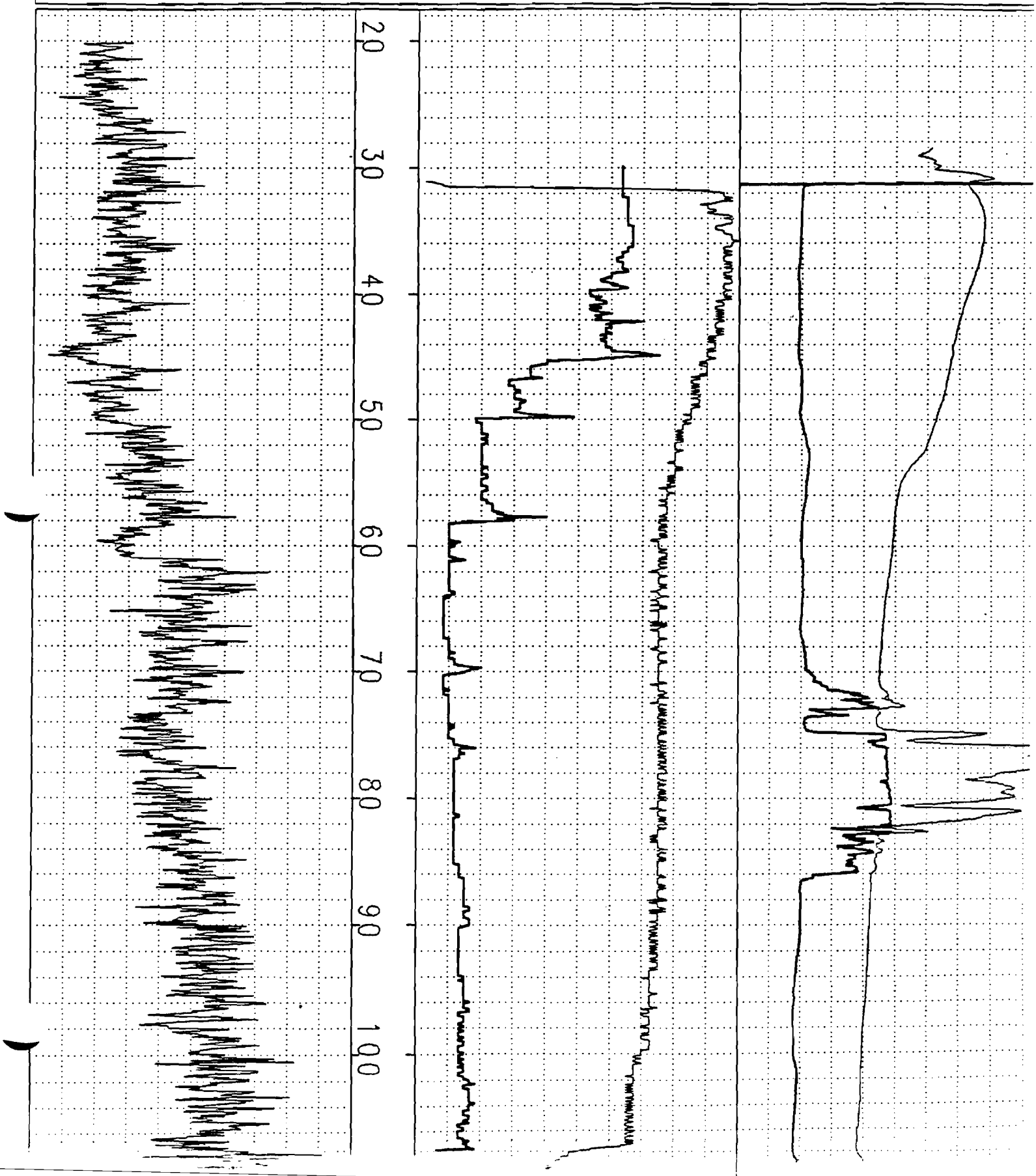
Overall, the geophysical logs, when examined as a log suite for each well, provided important information. However, several of the geophysical log types were of distinctly lesser quality in MW-105D as compared to MW-105, hindering interpretation of hydrogeologic conditions. The reason for this was a constant stream of gas bubbles rising rapidly through the borehole in MW-105D. The video camera filming vividly documents the degassing, but little else of consequence.

Log interpretation indicates that a fracture or fractures are probably present at the following depths:

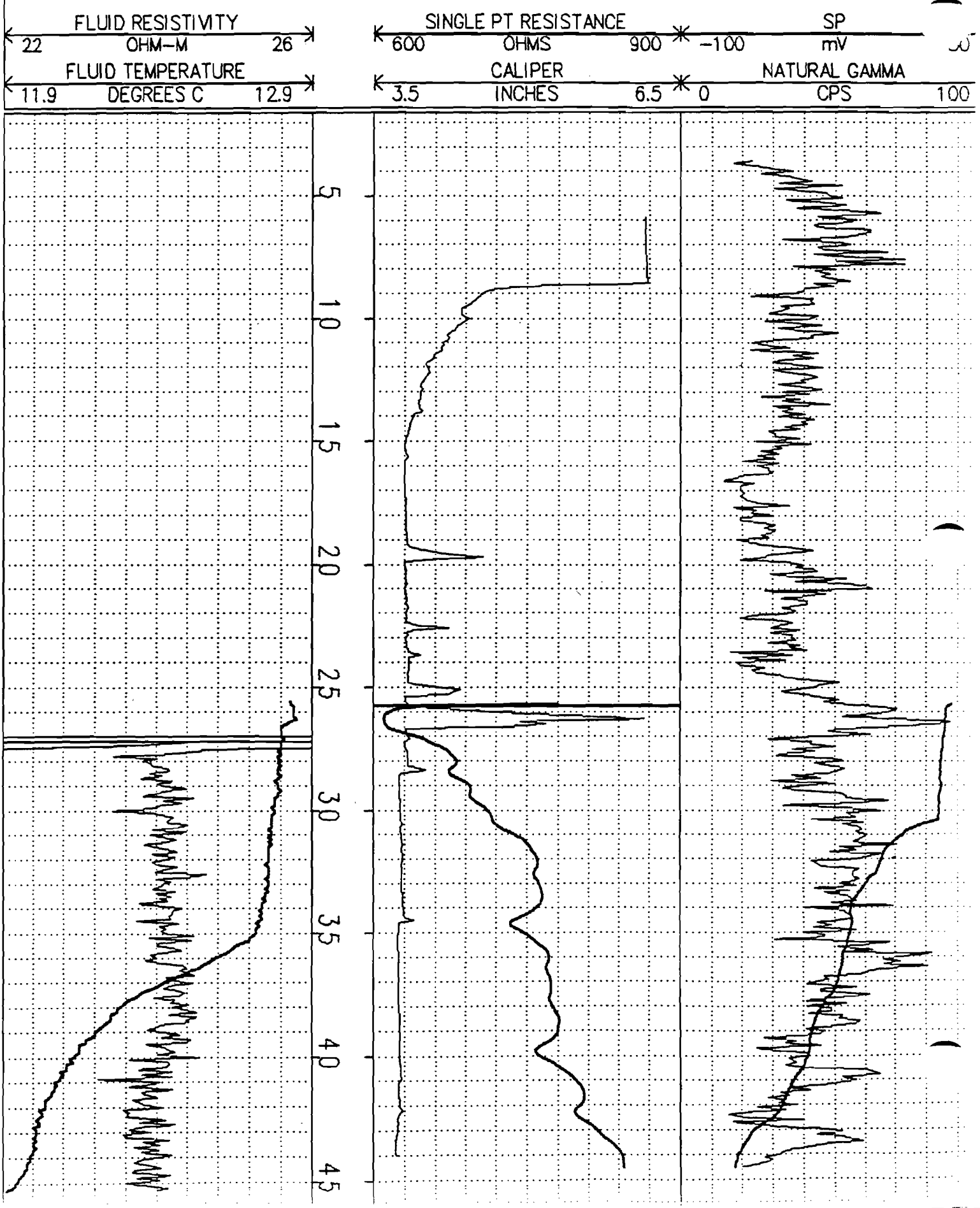
26 to 27	feet bgs	in MW-105
34.5	feet bgs	in MW-105
40	feet bgs	in MW-105
56 to 60	feet bgs	in MW-105D
73 to 75	feet bgs	in MW-105D

The lower zone appears to be the most prominent feature, and therefore, my recommendation on January 10 was that the screen in MW-105D be set to straddle the 73 to 75 foot zone.

OLIN-ROCHESTER MW-105D GEOPHYSICAL LOGS



OLIN–ROCHESTER MW–105 GEOPHYSICAL LOGS



A-7 PACKER TEST LOGS

APPENDIX A-7
BR-105D PACKER TEST RESULTS

OLIN CHEMICALS PHASE I RI REPORT
ROCHESTER, N.Y.

DEPTH (ft bgs)	TEST #	Packer Pressure (psi)	Hg (ft)	Hp (psi)	Hp (ft)	Htot(ft)	Q (gpm)	K (ft/day)	K (cm/sec)	Kave(cm/sec)
50.5 – 56	1	150	37.1	12	28	65	0.47	1.44E-01	5.07E-05	
50.5 – 56	2	150	37.1	25	58	95	0.75	1.57E-01	5.53E-05	
50.5 – 56	3	170	37.1	25	58	95	0.74	1.55E-01	5.46E-05	5.36E-05
56 – 61.5	1	150	37.1	13	30	67	0.18	5.32E-02	1.88E-05	
56 – 61.5	2	150	37.1	26	60	97	0.18	3.68E-02	1.30E-05	
56 – 61.5	3	170	37.1	26	60	97	0.16	3.27E-02	1.15E-05	1.44E-05
61.5 – 67	1	150	37.1	15	35	72	0.12	3.32E-02	1.17E-05	
61.5 – 67	2	150	37.1	30	69	106	0.28	5.22E-02	1.84E-05	
61.5 – 67	3	170	37.1	30	69	106	0	0.00E+00	0.00E+00	1.00E-05
67 – 72.5	1	150	37.1	16	37	74	0.14	3.83E-02	1.35E-05	
67 – 72.5	2	150	37.1	32	74	111	0	0.00E+00	0.00E+00	
67 – 72.5	3	170	37.1	32	74	111	0	0.00E+00	0.00E+00	4.50E-06
72 – 77.5	1	150	37.1	17	39	76	2.74	7.12E-01	2.51E-04	
72 – 77.5	2	150	37.1	35	81	118	3.9	6.56E-01	2.31E-04	
72 – 77.5	3	170	37.1	35	81	118	4.08	6.86E-01	2.42E-04	2.42E-04
80 – 85.5	1	150	37.1	19	44	81	0.2	4.90E-02	1.73E-05	
80 – 85.5	2	150	37.1	39	90	127	0.4	6.24E-02	2.20E-05	
80 – 85.5	3	170	37.1	39	90	127	0	0.00E+00	0.00E+00	1.31E-05
85-91.5	1	150	37.1	20	46	83	0.06	1.43E-02	5.04E-06	
85-91.5	2	150	37.1	41	95	132	0.12	1.81E-02	6.37E-06	
85-91.5	3	170	37.1	41	95	132	0.02	3.01E-03	1.06E-06	4.16E-06
91.5 – 97	1	150	37.1	22	51	88	0.04	9.03E-03	3.18E-06	
91.5 – 97	2	150	37.1	45	104	141	0.02	2.81E-03	9.93E-07	
91.5 – 97	3	170	37.1	45	104	141	0.04	5.63E-03	1.99E-06	2.05E-06
97 – 102.5	1	150	37.1	23	53	90	0.04	8.80E-03	3.10E-06	
97 – 102.5	2	150	37.1	46	106	143	0.04	5.54E-03	1.95E-06	
97 – 102.5	3	170	37.1	46	106	143	0.02	2.77E-03	9.77E-07	2.01E-06
101 – 106.5	1	150	37.1	25	58	95	0.08	1.67E-02	5.90E-06	
101 – 106.5	2	150	37.1	50	115	152	0.12	1.56E-02	5.51E-06	
101 – 106.5	3	170	37.1	50	115	152	0.02	2.60E-03	9.18E-07	4.11E-06

NOTES:

Hg	Gravity head or height in feet from static water level to pressure guage.
Hp(psi)	Amount of guage pressure measured during test in pounds per square inch.
Hp(ft)	Converted value of pressure head in feet (2.307 x Hp(psi)).
Htot	Total head = Hg + Hp
Q (gpm)	Flow measured in gallons per minute.
K (ft/day)	Hydraulic conductivity calculated in feet per day
K (cm/sec)	Hydraulic conductivity calculated in centimeters per second
Kave (cm/sec)	Average hydraulic conductivity from three tests.

COMPUTATION:

$$K(FT/DAY) = C \frac{Q}{2*PI*L*Htot} * \ln \frac{L}{r}$$

Where:

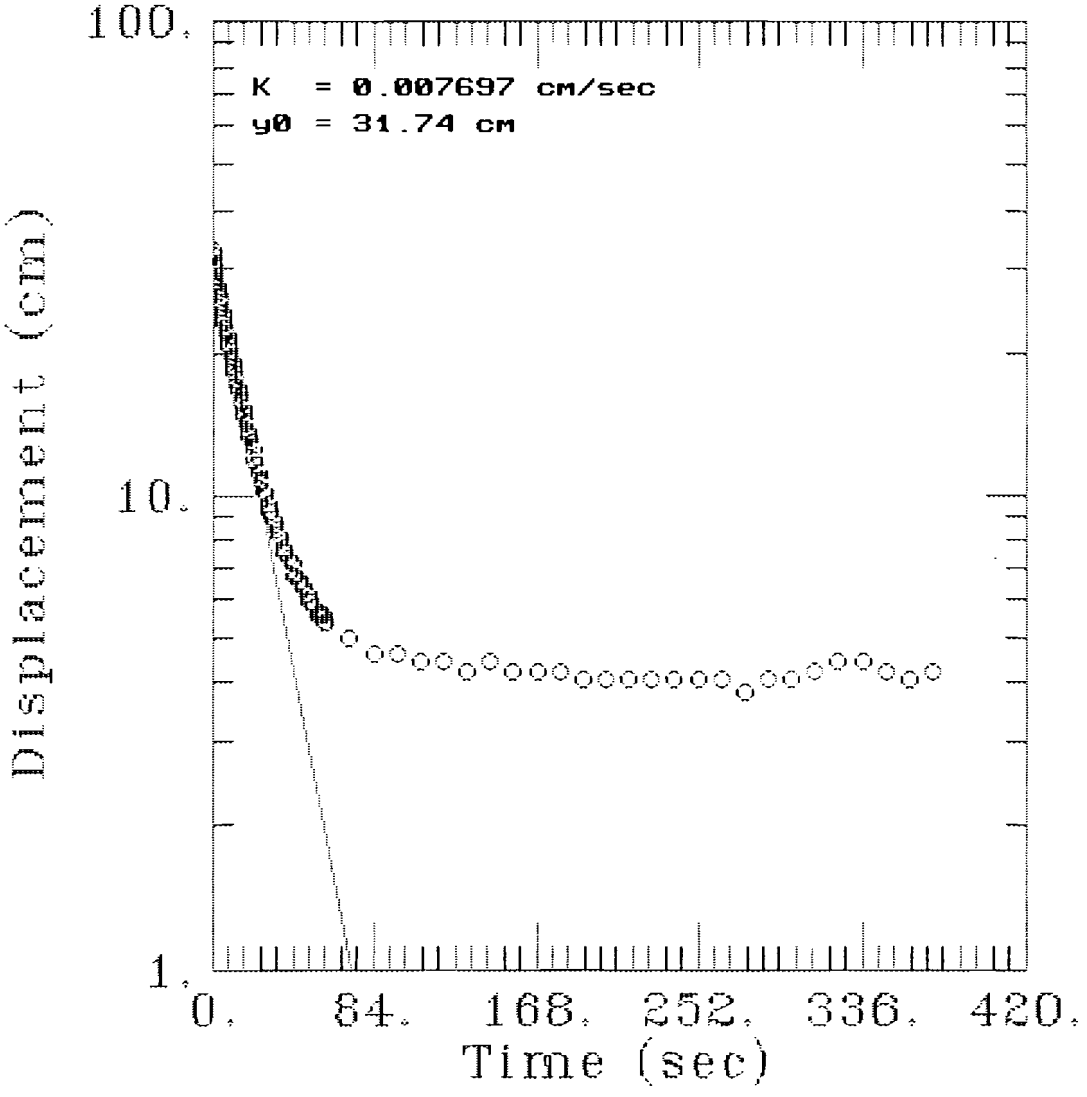
C = Conversion factor to obtain K in ft/day from gpm/ft3 (192.8)

r = Radius of borehole in feet

L = Length of test section in feet

A-8 HYDRAULIC CONDUCTIVITY TEST DATA

MW-104 RISING HEAD - TEST 1



MIN	AS MEAS. FEET	PLOTTED FEET
0	1.076	1.076
0.0083	1.051	1.051
0.0166	1.019	1.019
0.025	0.988	0.988
0.0333	0.956	0.956
0.0416	0.931	0.931
0.05	0.905	0.905
0.0583	0.886	0.886
0.0666	0.861	0.861
0.075	0.842	0.842
0.0833	0.817	0.817
0.0916	0.798	0.798
0.1	0.779	0.779
0.1083	0.76	0.76
0.1166	0.741	0.741
0.125	0.722	0.722
0.1333	0.709	0.709
0.1416	0.69	0.69
0.15	0.677	0.677
0.1583	0.658	0.658
0.1666	0.646	0.646
0.175	0.627	0.627
0.1833	0.614	0.614
0.1916	0.601	0.601
0.2	0.589	0.589
0.2083	0.576	0.576
0.2166	0.563	0.563
0.225	0.551	0.551
0.2333	0.544	0.544
0.2416	0.532	0.532
0.25	0.519	0.519
0.2583	0.513	0.513
0.2666	0.5	0.5
0.275	0.487	0.487
0.2833	0.481	0.481
0.2916	0.468	0.468
0.3	0.462	0.462
0.3083	0.449	0.449
0.3166	0.443	0.443
0.325	0.437	0.437
0.3333	0.424	0.424
0.35	0.411	0.411
0.3666	0.392	0.392
0.3833	0.38	0.38
0.4	0.367	0.367
0.4166	0.354	0.354
0.4333	0.348	0.348
0.45	0.335	0.335

MW–104 RISING HEAD – TEST 1

SLUG DISPLACEMENT	1.25 FT	38.10 CM
TRANSDUCER STATIC	0.00 FT	0.00 CM
WELL RADIUS(re)	0.20 FT	6.12 CM
SCREEN RADIUS (re)	0.20 FT	6.12 CM
AQUIF. THICKNESS	6.00 FT	182.88 CM
SCREEN LENGTH	9.60 FT	292.61 CM
WATER COL. HEIGHT	5.60 FT	170.69 CM

WELL/SCREEN RADIUS CORRECTION FOR WATER TABLE WELLS:

re = SQRT[r**2(1–n) + nR**2]

Where:

re = effective radius

r = well or screen radius = 0.083' for a 2" ID well

n = porosity – assumed to be 0.3

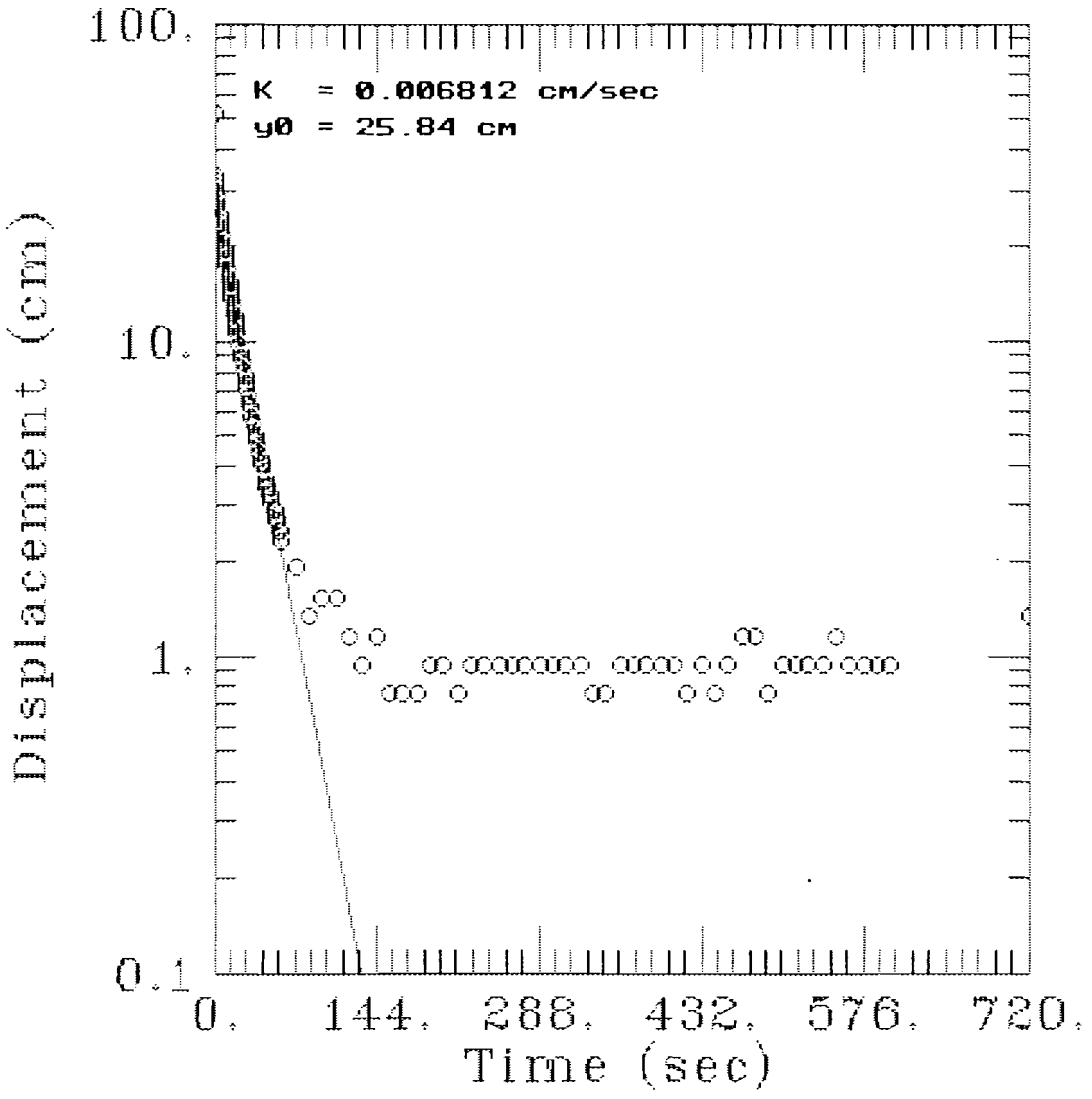
R = borehole radius = 0.344' for a 8.25 inch DIA. borehole

re = 0.20 FT

MIN	AS MEAS. FEET	PLOTTED FEET
0.4666	0.329	0.329
0.4833	0.316	0.316
0.5	0.304	0.304
0.5166	0.304	0.304
0.5333	0.291	0.291
0.55	0.285	0.285
0.5666	0.278	0.278
0.5833	0.272	0.272
0.6	0.266	0.266
0.6166	0.253	0.253
0.6333	0.247	0.247
0.65	0.247	0.247
0.6666	0.24	0.24
0.6833	0.234	0.234
0.7	0.234	0.234
0.7166	0.221	0.221
0.7333	0.221	0.221
0.75	0.215	0.215
0.7666	0.215	0.215
0.7833	0.209	0.209
0.8	0.209	0.209
0.8166	0.202	0.202
0.8333	0.202	0.202
0.85	0.196	0.196
0.8666	0.196	0.196
0.8833	0.19	0.19
0.9	0.183	0.183
0.9166	0.183	0.183
0.9333	0.183	0.183
0.95	0.183	0.183
0.9666	0.183	0.183
0.9833	0.177	0.177
1	0.177	0.177
1.2	0.164	0.164
1.4	0.152	0.152
1.6	0.152	0.152
1.8	0.145	0.145
2	0.145	0.145
2.2	0.139	0.139
2.4	0.145	0.145
2.6	0.139	0.139
2.8	0.139	0.139
3	0.139	0.139
3.2	0.133	0.133
3.4	0.133	0.133
3.6	0.133	0.133
3.8	0.133	0.133
4	0.133	0.133
4.2	0.133	0.133

MIN	AS MEAS. FEET	PLOTTED FEET
4.4	0.133	0.133
4.6	0.126	0.126
4.8	0.133	0.133
5	0.133	0.133
5.2	0.139	0.139
5.4	0.145	0.145
5.6	0.145	0.145
5.8	0.139	0.139
6	0.133	0.133
6.2	0.139	0.139

MW-104 RISING HEAD - TEST 2



MIN	AS MEAS. FEET	PLOTTED FEET
0	1.71	1.71
0.0083	1.089	1.089
0.0166	1.045	1.045
0.025	1.013	1.013
0.0333	0.969	0.969
0.0416	0.931	0.931
0.05	0.956	0.956
0.0583	0.88	0.88
0.0666	0.855	0.855
0.075	0.829	0.829
0.0833	0.804	0.804
0.0916	0.772	0.772
0.1	0.753	0.753
0.1083	0.734	0.734
0.1166	0.709	0.709
0.125	0.69	0.69
0.1333	0.671	0.671
0.1416	0.646	0.646
0.15	0.639	0.639
0.1583	0.62	0.62
0.1666	0.601	0.601
0.175	0.589	0.589
0.1833	0.57	0.57
0.1916	0.557	0.557
0.2	0.544	0.544
0.2083	0.525	0.525
0.2166	0.513	0.513
0.225	0.5	0.5
0.2333	0.487	0.487
0.2416	0.475	0.475
0.25	0.462	0.462
0.2583	0.449	0.449
0.2666	0.437	0.437
0.275	0.424	0.424
0.2833	0.418	0.418
0.2916	0.405	0.405
0.3	0.392	0.392
0.3083	0.38	0.38
0.3166	0.373	0.373
0.325	0.367	0.367
0.3333	0.354	0.354
0.35	0.342	0.342
0.3666	0.323	0.323
0.3833	0.304	0.304
0.4	0.291	0.291
0.4166	0.278	0.278
0.4333	0.266	0.266
0.45	0.253	0.253

MW-104 RISING HEAD - TEST 2

SLUG DISPLACEMENT	1.25 FT	38.10 CM
TRANSDUCER STATIC	0.00 FT	0.00 CM
WELL RADIUS(re)	0.20 FT	6.12 CM
SCREEN RADIUS (re)	0.20 FT	6.12 CM
AQUIF. THICKNESS	6.00 FT	182.88 CM
SCREEN LENGTH	9.60 FT	292.61 CM
WATER COL. HEIGHT	5.60 FT	170.69 CM

WELL/SCREEN RADIUS CORRECTION FOR WATER TABLE WELLS:

re = SQRT[r**2(1-n) + nR**2]

Where:

re = effective radius

r = well or screen radius = 0.083' for a 2" ID well

n = porosity - assumed to be 0.3

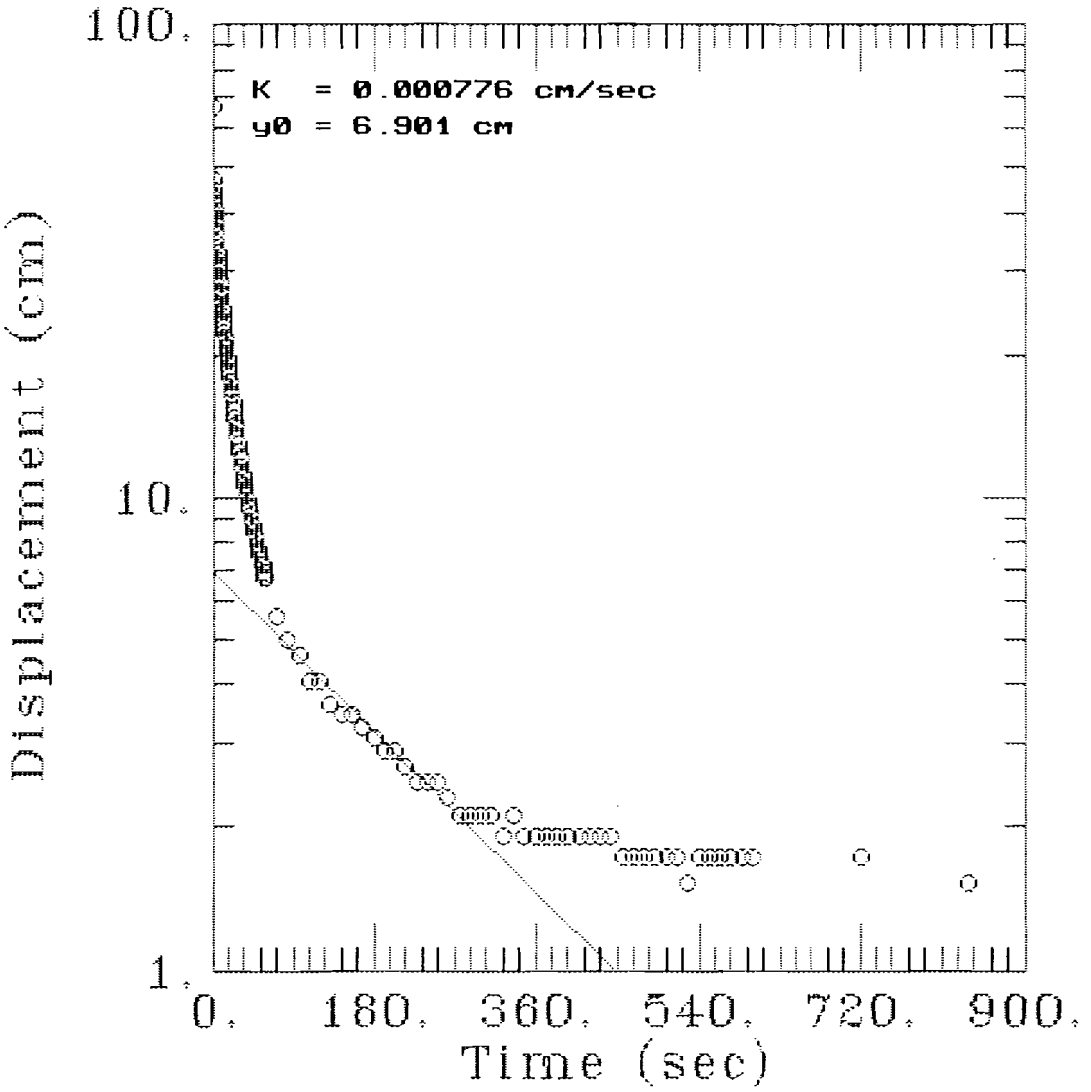
R = borehole radius = 0.344' for a 8.25 inch DIA. borehole

re = 0.20 FT

MIN	AS MEAS. FEET	PLOTTED FEET
0.4666	0.24	0.24
0.4833	0.234	0.234
0.5	0.221	0.221
0.5166	0.209	0.209
0.5333	0.202	0.202
0.55	0.19	0.19
0.5666	0.183	0.183
0.5833	0.177	0.177
0.6	0.164	0.164
0.6166	0.164	0.164
0.6333	0.158	0.158
0.65	0.152	0.152
0.6666	0.145	0.145
0.6833	0.139	0.139
0.7	0.133	0.133
0.7166	0.133	0.133
0.7333	0.126	0.126
0.75	0.12	0.12
0.7666	0.114	0.114
0.7833	0.114	0.114
0.8	0.114	0.114
0.8166	0.107	0.107
0.8333	0.107	0.107
0.85	0.101	0.101
0.8666	0.095	0.095
0.8833	0.095	0.095
0.9	0.095	0.095
0.9166	0.088	0.088
0.9333	0.088	0.088
0.95	0.088	0.088
0.9666	0.082	0.082
0.9833	0.082	0.082
1	0.076	0.076
1.2	0.063	0.063
1.4	0.044	0.044
1.6	0.05	0.05
1.8	0.05	0.05
2	0.038	0.038
2.2	0.031	0.031
2.4	0.038	0.038
2.6	0.025	0.025
2.8	0.025	0.025
3	0.025	0.025
3.2	0.031	0.031
3.4	0.031	0.031
3.6	0.025	0.025
3.8	0.031	0.031
4	0.031	0.031
4.2	0.031	0.031

MIN	AS MEAS. FEET	PLOTTED FEET
4.4	0.031	0.031
4.6	0.031	0.031
4.8	0.031	0.031
5	0.031	0.031
5.2	0.031	0.031
5.4	0.031	0.031
5.6	0.025	0.025
5.8	0.025	0.025
6	0.031	0.031
6.2	0.031	0.031
6.4	0.031	0.031
6.6	0.031	0.031
6.8	0.031	0.031
7	0.025	0.025
7.2	0.031	0.031
7.4	0.025	0.025
7.6	0.031	0.031
7.8	0.038	0.038
8	0.038	0.038
8.2	0.025	0.025
8.4	0.031	0.031
8.6	0.031	0.031
8.8	0.031	0.031
9	0.031	0.031
9.2	0.038	0.038
9.4	0.031	0.031
9.6	0.031	0.031
9.8	0.031	0.031
10	0.031	0.031
12	0.044	0.044
14	7.665	

MW-106 RISING HEAD - TEST 1



MIN	AS MEAS. FEET	PLOTTED FEET
0	2.199	2.199
0.0083	1.54	1.54
0.0166	1.47	1.47
0.025	1.413	1.413
0.0333	1.375	1.375
0.0416	1.299	1.299
0.05	1.28	1.28
0.0583	1.318	1.318
0.0666	1.198	1.198
0.075	1.242	1.242
0.0833	1.134	1.134
0.0916	1.103	1.103
0.1	1.077	1.077
0.1083	1.046	1.046
0.1166	1.014	1.014
0.125	0.995	0.995
0.1333	0.969	0.969
0.1416	0.944	0.944
0.15	0.925	0.925
0.1583	0.9	0.9
0.1666	0.881	0.881
0.175	0.862	0.862
0.1833	0.836	0.836
0.1916	0.824	0.824
0.2	0.805	0.805
0.2083	0.786	0.786
0.2166	0.767	0.767
0.225	0.748	0.748
0.2333	0.735	0.735
0.2416	0.716	0.716
0.25	0.703	0.703
0.2583	0.69	0.69
0.2666	0.678	0.678
0.275	0.659	0.659
0.2833	0.646	0.646
0.2916	0.633	0.633
0.3	0.621	0.621
0.3083	0.608	0.608
0.3166	0.602	0.602
0.325	0.589	0.589
0.3333	0.576	0.576
0.35	0.557	0.557
0.3666	0.538	0.538
0.3833	0.519	0.519
0.4	0.5	0.5
0.4166	0.481	0.481
0.4333	0.469	0.469
0.45	0.456	0.456

MW-106 RISING HEAD - TEST 1

SLUG DISPLACEMENT	1.25 FT	38.10 CM
TRANSDUCER STATIC	0.00 FT	0.00 CM
WELL RADIUS(re)	0.20 FT	6.12 CM
SCREEN RADIUS (re)	0.20 FT	6.12 CM
AQUIF. THICKNESS	7.50 FT*	228.60 CM
SCREEN LENGTH	9.60 FT	292.61 CM
WATER COL. HEIGHT	7.50 FT	228.60 CM

WELL/SCREEN RADIUS CORRECTION FOR WATER TABLE WELLS:

re = SQRT[r**2(1-n) + nR**2]

Where:

re = effective radius

r = well or screen radius = 0.083' for a 2" ID well

n = porosity - assumed to be 0.3

R = borehole radius = 0.344' for a 8.25 inch DIA. borehole in the overburden.

re = 0.20 FT (Overburden)

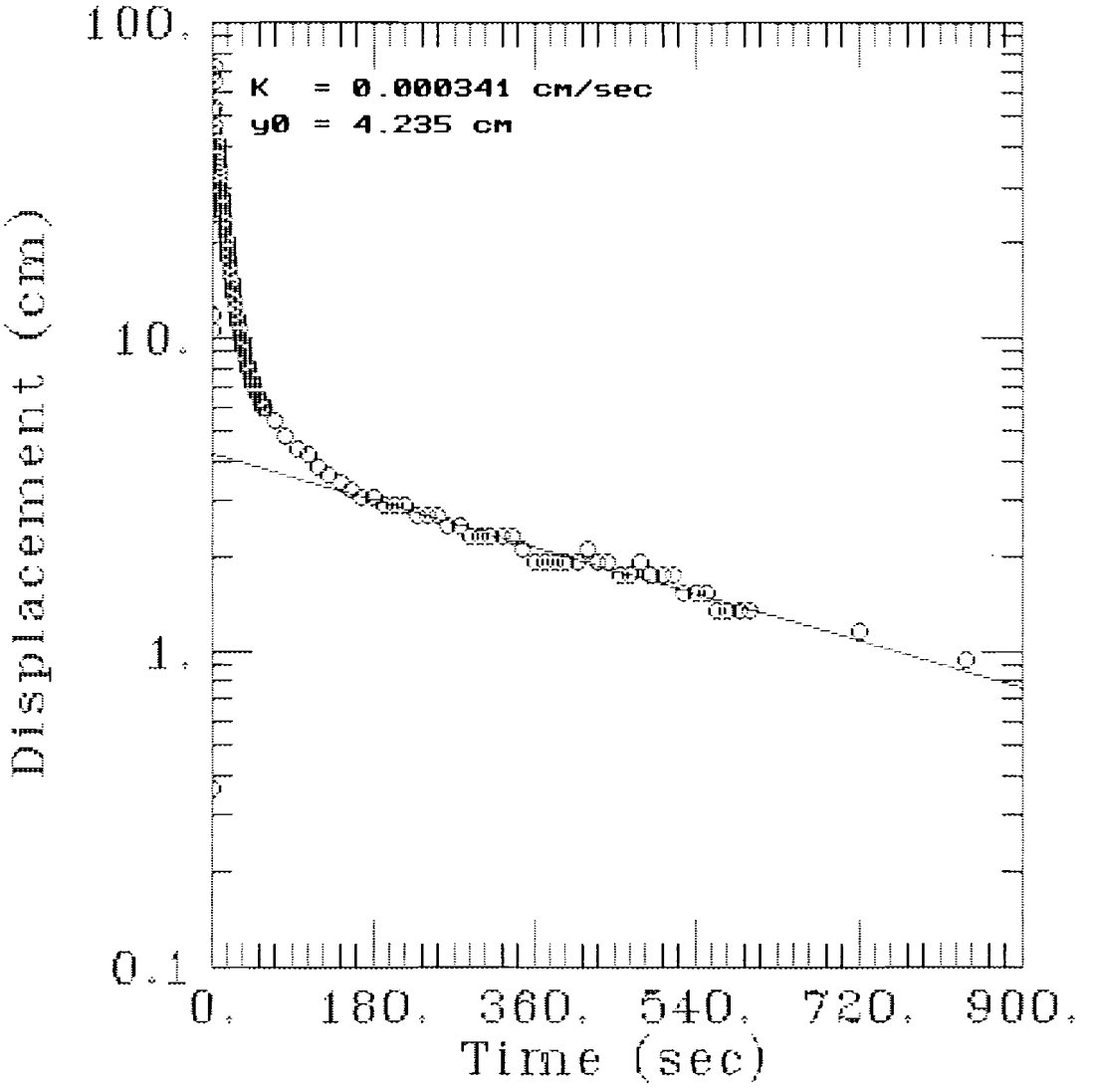
NOTE 1: MW-106 is screened across the bedrock/overburden interface. However, since the water level is appox. 1' above bedrock surface, effective radius is calculated by using the overburden borehole radius.

* Aquifer or saturated thickness assumes an impermeable barrier ~~beneath~~ at the bottom of the well screen.

MIN	AS MEAS. FEET	PLOTTED FEET
0.4666	0.443	0.443
0.4833	0.424	0.424
0.5	0.412	0.412
0.5166	0.399	0.399
0.5333	0.393	0.393
0.55	0.38	0.38
0.5666	0.367	0.367
0.5833	0.361	0.361
0.6	0.348	0.348
0.6166	0.342	0.342
0.6333	0.335	0.335
0.65	0.329	0.329
0.6666	0.323	0.323
0.6833	0.316	0.316
0.7	0.31	0.31
0.7166	0.304	0.304
0.7333	0.291	0.291
0.75	0.285	0.285
0.7666	0.278	0.278
0.7833	0.278	0.278
0.8	0.272	0.272
0.8166	0.266	0.266
0.8333	0.259	0.259
0.85	0.253	0.253
0.8666	0.247	0.247
0.8833	0.247	0.247
0.9	0.24	0.24
0.9166	0.24	0.24
0.9333	0.234	0.234
0.95	0.234	0.234
0.9666	0.228	0.228
0.9833	0.221	0.221
1	0.221	0.221
1.2	0.183	0.183
1.4	0.164	0.164
1.6	0.152	0.152
1.8	0.133	0.133
2	0.133	0.133
2.2	0.12	0.12
2.4	0.114	0.114
2.6	0.114	0.114
2.8	0.107	0.107
3	0.101	0.101
3.2	0.095	0.095
3.4	0.095	0.095
3.6	0.088	0.088
3.8	0.082	0.082
4	0.082	0.082
4.2	0.082	0.082

MIN	AS MEAS. FEET	PLOTTED FEET
4.4	0.076	0.076
4.6	0.069	0.069
4.8	0.069	0.069
5	0.069	0.069
5.2	0.069	0.069
5.4	0.063	0.063
5.6	0.069	0.069
5.8	0.063	0.063
6	0.063	0.063
6.2	0.063	0.063
6.4	0.063	0.063
6.6	0.063	0.063
6.8	0.063	0.063
7	0.063	0.063
7.2	0.063	0.063
7.4	0.063	0.063
7.6	0.057	0.057
7.8	0.057	0.057
8	0.057	0.057
8.2	0.057	0.057
8.4	0.057	0.057
8.6	0.057	0.057
8.8	0.05	0.05
9	0.057	0.057
9.2	0.057	0.057
9.4	0.057	0.057
9.6	0.057	0.057
9.8	0.057	0.057
10	0.057	0.057
12	0.057	0.057
14	0.05	0.05
16	0.044	0.044
18	0.044	0.044
20	0.038	0.038
22	0.044	0.044
24	0.044	0.044
26	0.038	0.038
28	0.038	0.038
30	0.038	0.038

MW-106 FALLING HEAD - TEST 1



MIN	AS MEAS. FEET	PLOTTED FEET
0	−0.012	0.012
0.0083	−0.386	0.386
0.0166	−0.342	0.342
0.025	−0.811	0.811
0.0333	−1.711	1.711
0.0416	−2.237	2.237
0.05	−2.13	2.13
0.0583	−1.293	1.293
0.0666	−2.351	2.351
0.075	−1.743	1.743
0.0833	−1.546	1.546
0.0916	−1.451	1.451
0.1	−1.381	1.381
0.1083	−1.324	1.324
0.1166	−1.267	1.267
0.125	−1.217	1.217
0.1333	−1.172	1.172
0.1416	−1.128	1.128
0.15	−1.09	1.09
0.1583	−1.052	1.052
0.1666	−1.02	1.02
0.175	−0.982	0.982
0.1833	−0.957	0.957
0.1916	−0.925	0.925
0.2	−0.906	0.906
0.2083	−0.881	0.881
0.2166	−0.855	0.855
0.225	−0.83	0.83
0.2333	−0.805	0.805
0.2416	−0.779	0.779
0.25	−0.76	0.76
0.2583	−0.735	0.735
0.2666	−0.716	0.716
0.275	−0.69	0.69
0.2833	−0.671	0.671
0.2916	−0.652	0.652
0.3	−0.633	0.633
0.3083	−0.621	0.621
0.3166	−0.602	0.602
0.325	−0.589	0.589
0.3333	−0.57	0.57
0.35	−0.545	0.545
0.3666	−0.513	0.513
0.3833	−0.494	0.494
0.4	−0.469	0.469
0.4166	−0.45	0.45
0.4333	−0.431	0.431
0.45	−0.412	0.412

MW−106 FALLING HEAD − TEST 1

SLUG DISPLACEMENT	1.25 FT	38.10 CM
TRANSDUCER STATIC	0.00 FT	0.00 CM
WELL RADIUS(re)	0.20 FT	6.12 CM
SCREEN RADIUS (re)	0.20 FT	6.12 CM
AQUIF. THICKNESS	7.50 FT*	228.60 CM
SCREEN LENGTH	9.60 FT	292.61 CM
WATER COL. HEIGHT	7.50 FT	228.60 CM

WELL/SCREEN RADIUS CORRECTION FOR WATER TABLE WELLS:

re = SQRT[r**2(1−n) + nR**2]

Where:

re = effective radius

r = well or screen radius = 0.083' for a 2" ID well

n = porosity − assumed to be 0.3

R = borehole radius = 0.344' for a 8.25 inch DIA. borehole in the overburden.

re = 0.20 FT (Overburden)

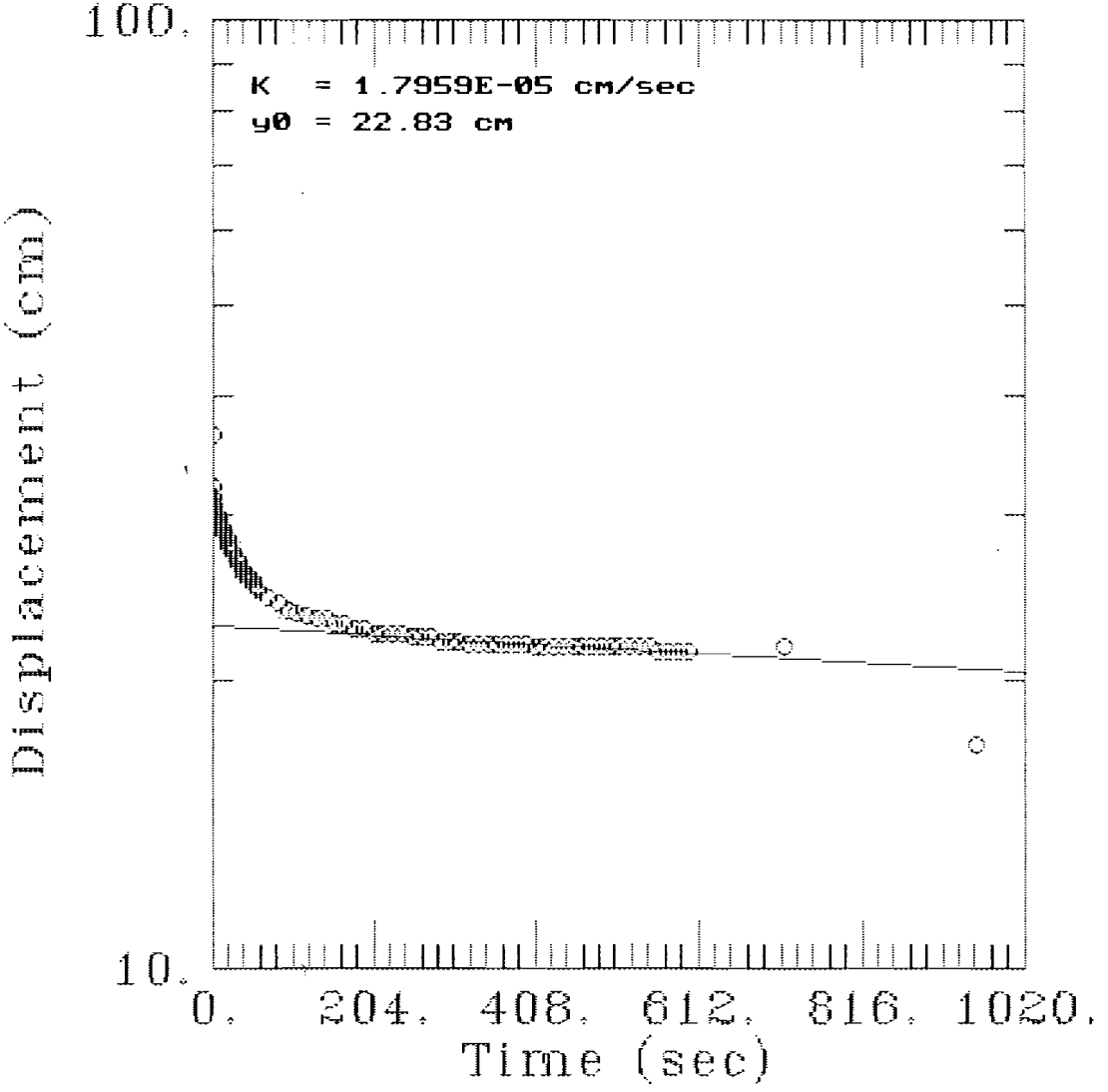
NOTE 1: MW−106 is screened across the bedrock/overburden interface. However, since the water level is appox. 1' above bedrock surface, effective radius is calculated by using the overburden borehole radius.

* Aquifer or saturated thickness assumes an impermeable barrier beneath at the bottom of the well screen.

MIN	AS MEAS. FEET	PLOTTED FEET
0.4666	−0.399	0.399
0.4833	−0.38	0.38
0.5	−0.367	0.367
0.5166	−0.355	0.355
0.5333	−0.342	0.342
0.55	−0.329	0.329
0.5666	−0.323	0.323
0.5833	−0.31	0.31
0.6	−0.304	0.304
0.6166	−0.297	0.297
0.6333	−0.285	0.285
0.65	−0.278	0.278
0.6666	−0.272	0.272
0.6833	−0.266	0.266
0.7	−0.259	0.259
0.7166	−0.253	0.253
0.7333	−0.247	0.247
0.75	−0.24	0.24
0.7666	−0.24	0.24
0.7833	−0.234	0.234
0.8	−0.228	0.228
0.8166	−0.221	0.221
0.8333	−0.221	0.221
0.85	−0.215	0.215
0.8666	−0.215	0.215
0.8833	−0.215	0.215
0.9	−0.209	0.209
0.9166	−0.209	0.209
0.9333	−0.202	0.202
0.95	−0.202	0.202
0.9666	−0.202	0.202
0.9833	−0.196	0.196
1	−0.196	0.196
1.2	−0.177	0.177
1.4	−0.158	0.158
1.6	−0.145	0.145
1.8	−0.139	0.139
2	−0.126	0.126
2.2	−0.12	0.12
2.4	−0.114	0.114
2.6	−0.107	0.107
2.8	−0.101	0.101
3	−0.101	0.101
3.2	−0.095	0.095
3.4	−0.095	0.095
3.6	−0.095	0.095
3.8	−0.088	0.088
4	−0.088	0.088
4.2	−0.088	0.088

MIN	AS MEAS. FEET	PLOTTED FEET
4.4	−0.082	0.082
4.6	−0.082	0.082
4.8	−0.076	0.076
5	−0.076	0.076
5.2	−0.076	0.076
5.4	−0.076	0.076
5.6	−0.076	0.076
5.8	−0.069	0.069
6	−0.063	0.063
6.2	−0.063	0.063
6.4	−0.063	0.063
6.6	−0.063	0.063
6.8	−0.063	0.063
7	−0.069	0.069
7.2	−0.063	0.063
7.4	−0.063	0.063
7.6	−0.057	0.057
7.8	−0.057	0.057
8	−0.063	0.063
8.2	−0.057	0.057
8.4	−0.057	0.057
8.6	−0.057	0.057
8.8	−0.05	0.05
9	−0.05	0.05
9.2	−0.05	0.05
9.4	−0.044	0.044
9.6	−0.044	0.044
9.8	−0.044	0.044
10	−0.044	0.044
12	−0.038	0.038
14	−0.031	0.031

MW-107 FALLING HEAD - TEST 1



MIN	AS MEAS. FEET	PLOTTED FEET
0	−0.69	0.01
0.0083	0.354	1.054
0.0166	0.329	1.029
0.025	0.494	1.194
0.0333	0.323	1.023
0.0416	0.31	1.01
0.05	0.297	0.997
0.0583	0.304	1.004
0.0666	0.297	0.997
0.075	0.297	0.997
0.0833	0.291	0.991
0.0916	0.291	0.991
0.1	0.291	0.991
0.1083	0.285	0.985
0.1166	0.278	0.978
0.125	0.278	0.978
0.1333	0.272	0.972
0.1416	0.278	0.978
0.15	0.278	0.978
0.1583	0.266	0.966
0.1666	0.272	0.972
0.175	0.266	0.966
0.1833	0.259	0.959
0.1916	0.259	0.959
0.2	0.259	0.959
0.2083	0.253	0.953
0.2166	0.253	0.953
0.225	0.253	0.953
0.2333	0.247	0.947
0.2416	0.24	0.94
0.25	0.247	0.947
0.2583	0.24	0.94
0.2666	0.24	0.94
0.275	0.234	0.934
0.2833	0.234	0.934
0.2916	0.228	0.928
0.3	0.228	0.928
0.3083	0.228	0.928
0.3166	0.228	0.928
0.325	0.228	0.928
0.3333	0.221	0.921
0.35	0.215	0.915
0.3666	0.215	0.915
0.3833	0.209	0.909
0.4	0.209	0.909
0.4166	0.202	0.902
0.4333	0.202	0.902
0.45	0.196	0.896
0.4666	0.196	0.896

MW−107 FALLING HEAD − TEST 1

SLUG DISPLACEMENT	1.25 FT	38.10 CM
TRANSDUCER STATIC	0.00 FT	0.00 CM
WELL RADIUS(re)	0.20 FT	6.12 CM
SCREEN RADIUS (re)	0.20 FT	6.12 CM
AQUIF. THICKNESS	5.50 FT*	167.64 CM
SCREEN LENGTH	9.60 FT	292.61 CM
WATER COL. HEIGHT	5.50 FT	167.64 CM

WELL/SCREEN RADIUS CORRECTION FOR WATER TABLE WELLS:

re = SQRT[r**2(1−n) + nR**2]

Where:

re = effective radius

r = well or screen radius = 0.083' for a 2" ID well

n = porosity − assumed to be 0.3

R = borehole radius = 0.344' for a 8.25 inch DIA. borehole

re = 0.20 FT

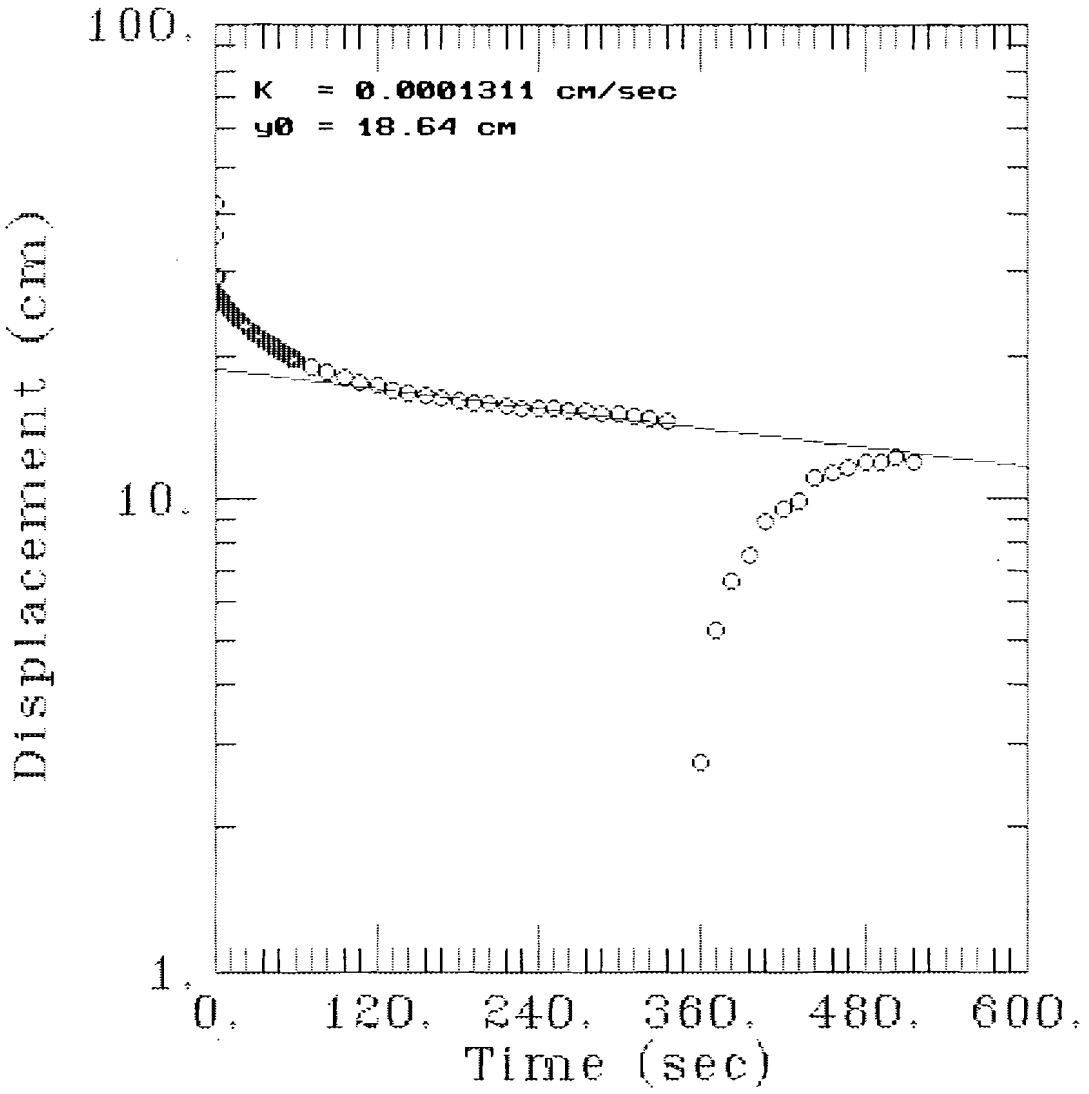
NOTE:

* Aquifer or saturated thickness assumes an impermeable barrier at the bottom of the well.

MIN	AS MEAS. FEET	PLOTTED FEET
0.4833	0.19	0.89
0.5	0.183	0.883
0.5166	0.183	0.883
0.5333	0.183	0.883
0.55	0.183	0.883
0.5666	0.171	0.871
0.5833	0.177	0.877
0.6	0.171	0.871
0.6166	0.171	0.871
0.6333	0.164	0.864
0.65	0.164	0.864
0.6666	0.152	0.852
0.6833	0.152	0.852
0.7	0.152	0.852
0.7166	0.152	0.852
0.7333	0.152	0.852
0.75	0.152	0.852
0.7666	0.145	0.845
0.7833	0.145	0.845
0.8	0.145	0.845
0.8166	0.139	0.839
0.8333	0.139	0.839
0.85	0.139	0.839
0.8666	0.139	0.839
0.8833	0.133	0.833
0.9	0.133	0.833
0.9166	0.126	0.826
0.9333	0.126	0.826
0.95	0.126	0.826
0.9666	0.12	0.82
0.9833	0.12	0.82
1	0.12	0.82
1.2	0.107	0.807
1.4	0.095	0.795
1.6	0.082	0.782
1.8	0.076	0.776
2	0.069	0.769
2.2	0.063	0.763
2.4	0.063	0.763
2.6	0.057	0.757
2.8	0.057	0.757
3	0.044	0.744
3.2	0.044	0.744
3.4	0.038	0.738
3.6	0.038	0.738
3.8	0.038	0.738
4	0.038	0.738
4.2	0.031	0.731
4.4	0.031	0.731

MIN	AS MEAS. FEET	PLOTTED FEET
4.6	0.031	0.731
4.8	0.025	0.725
5	0.025	0.725
5.2	0.025	0.725
5.4	0.019	0.719
5.6	0.019	0.719
5.8	0.019	0.719
6	0.019	0.719
6.2	0.019	0.719
6.4	0.019	0.719
6.6	0.019	0.719
6.8	0.012	0.712
7	0.012	0.712
7.2	0.012	0.712
7.4	0.012	0.712
7.6	0.012	0.712
7.8	0.012	0.712
8	0.012	0.712
8.2	0.012	0.712
8.4	0.012	0.712
8.6	0.012	0.712
8.8	0.012	0.712
9	0.012	0.712
9.2	0.012	0.712
9.4	0.006	0.706
9.6	0.006	0.706
9.8	0.006	0.706
10	0.006	0.706
12	0.012	0.712
14	−0.684	0.016
16	−0.139	0.561

MW-107 RISING HEAD - TEST 1



MIN	AS MEAS. FEET	PLOTTED FEET
0	0.728	1.185
0.0083	0.513	0.97
0.0166	0.418	0.875
0.025	0.924	1.381
0.0333	0.513	0.97
0.0416	0.43	0.887
0.05	0.418	0.875
0.0583	0.411	0.868
0.0666	0.405	0.862
0.075	0.405	0.862
0.0833	0.405	0.862
0.0916	0.399	0.856
0.1	0.399	0.856
0.1083	0.392	0.849
0.1166	0.386	0.843
0.125	0.386	0.843
0.1333	0.386	0.843
0.1416	0.38	0.837
0.15	0.38	0.837
0.1583	0.373	0.83
0.1666	0.373	0.83
0.175	0.367	0.824
0.1833	0.361	0.818
0.1916	0.361	0.818
0.2	0.361	0.818
0.2083	0.361	0.818
0.2166	0.354	0.811
0.225	0.348	0.805
0.2333	0.342	0.799
0.2416	0.348	0.805
0.25	0.342	0.799
0.2583	0.342	0.799
0.2666	0.342	0.799
0.275	0.335	0.792
0.2833	0.335	0.792
0.2916	0.329	0.786
0.3	0.329	0.786
0.3083	0.329	0.786
0.3166	0.323	0.78
0.325	0.323	0.78
0.3333	0.323	0.78
0.35	0.316	0.773
0.3666	0.31	0.767
0.3833	0.304	0.761
0.4	0.304	0.761
0.4166	0.297	0.754
0.4333	0.291	0.748
0.45	0.285	0.742
0.4666	0.285	0.742

MW-107 RISING HEAD - TEST 1

SLUG DISPLACEMENT	1.25 FT	38.10 CM
TRANSDUCER STATIC	0.00 FT	0.00 CM
WELL RADIUS(re)	0.20 FT	6.12 CM
SCREEN RADIUS (re)	0.20 FT	6.12 CM
AQUIF. THICKNESS	5.50 FT*	167.64 CM
SCREEN LENGTH	9.60 FT	292.61 CM
WATER COL. HEIGHT	5.50 FT	167.64 CM

WELL/SCREEN RADIUS CORRECTION FOR WATER TABLE WELLS:

re = SQRT[r**2(1-n) + nR**2]

Where:

re = effective radius

r = well or screen radius = 0.083' for a 2" ID well

n = porosity - assumed to be 0.3

R = borehole radius = 0.344' for a 8.25 inch DIA. borehole

re = 0.20 FT

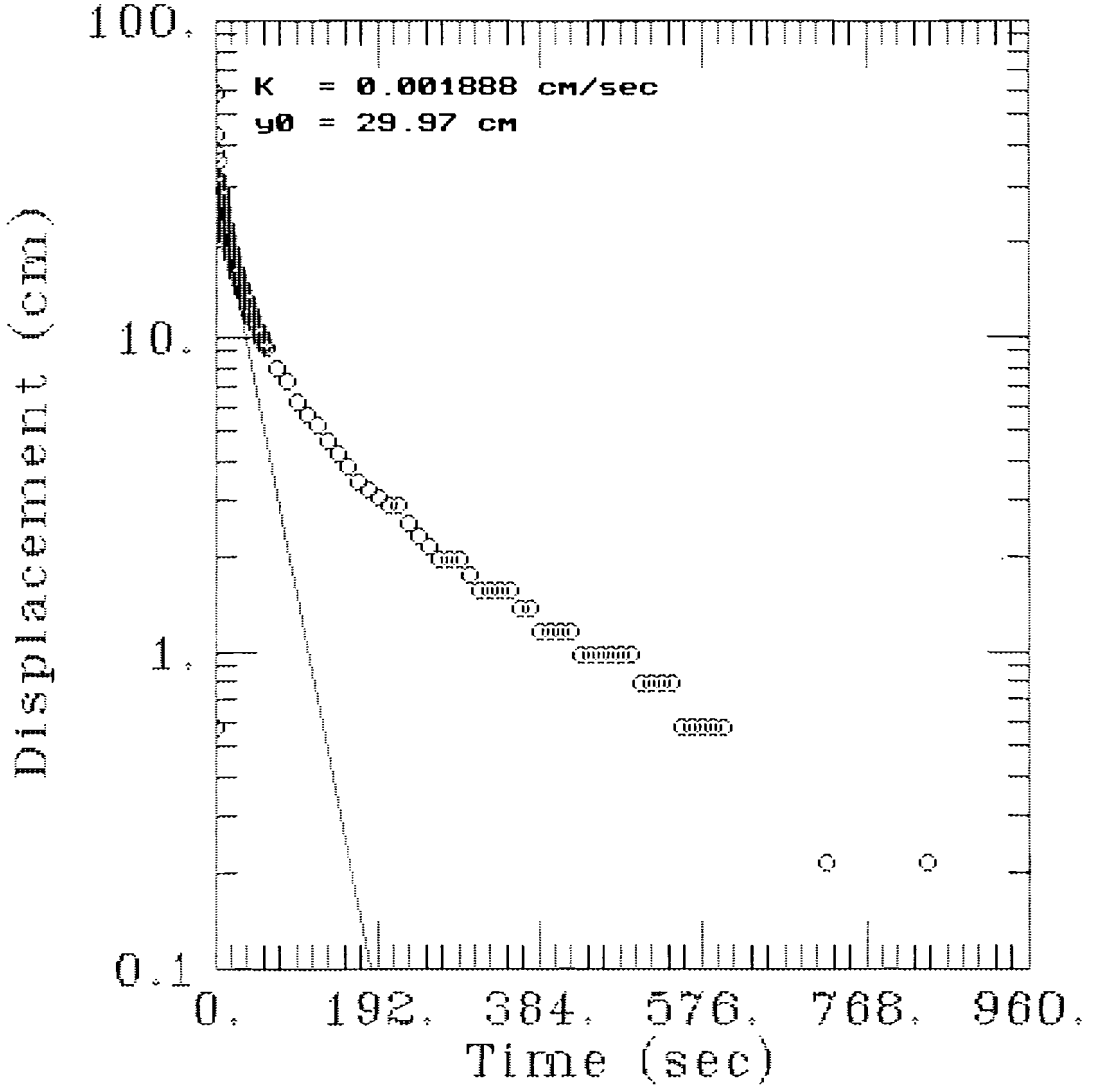
NOTE:

* Aquifer or saturated thickness assumes an impermeable barrier at the bottom of the well.

MIN	AS MEAS. FEET	PLOTTED FEET
0.4833	0.278	0.735
0.5	0.278	0.735
0.5166	0.272	0.729
0.5333	0.266	0.723
0.55	0.266	0.723
0.5666	0.259	0.716
0.5833	0.259	0.716
0.6	0.253	0.71
0.6166	0.253	0.71
0.6333	0.247	0.704
0.65	0.247	0.704
0.6666	0.24	0.697
0.6833	0.24	0.697
0.7	0.234	0.691
0.7166	0.228	0.685
0.7333	0.228	0.685
0.75	0.228	0.685
0.7666	0.221	0.678
0.7833	0.215	0.672
0.8	0.215	0.672
0.8166	0.215	0.672
0.8333	0.209	0.666
0.85	0.209	0.666
0.8666	0.202	0.659
0.8833	0.202	0.659
0.9	0.202	0.659
0.9166	0.196	0.653
0.9333	0.196	0.653
0.95	0.196	0.653
0.9666	0.19	0.647
0.9833	0.19	0.647
1	0.19	0.647
1.2	0.164	0.621
1.4	0.145	0.602
1.6	0.133	0.59
1.8	0.12	0.577
2	0.114	0.571
2.2	0.095	0.552
2.4	0.088	0.545
2.6	0.082	0.539
2.8	0.076	0.533
3	0.069	0.526
3.2	0.063	0.52
3.4	0.063	0.52
3.6	0.057	0.514
3.8	0.05	0.507
4	0.05	0.507
4.2	0.05	0.507
4.4	0.044	0.501

MIN	AS MEAS. FEET	PLOTTED FEET
4.6	0.044	0.501
4.8	0.038	0.495
5	0.038	0.495
5.2	0.031	0.488
5.4	0.025	0.482
5.6	0.019	0.476
5.8	−0.456	
6	−0.367	0.09
6.2	−0.285	0.172
6.4	−0.24	0.217
6.6	−0.209	0.248
6.8	−0.164	0.293
7	−0.145	0.312
7.2	−0.133	0.324
7.4	−0.095	0.362
7.6	−0.088	0.369
7.8	−0.076	0.381
8	−0.069	0.388
8.2	−0.069	0.388
8.4	−0.057	0.4
8.6	−0.069	0.388

BR-101 FALLING HEAD – TEST 1



MIN	FEET
0	0.019
0.0083	0.666
0.0166	0.894
0.025	1.249
0.0333	1.915
0.0416	1.414
0.05	1.186
0.0583	1.04
0.0666	0.938
0.075	1.027
0.0833	1.021
0.0916	0.989
0.1	0.957
0.1083	0.926
0.1166	0.9
0.125	0.875
0.1333	0.856
0.1416	0.843
0.15	0.824
0.1583	0.812
0.1666	0.793
0.175	0.78
0.1833	0.761
0.1916	0.748
0.2	0.736
0.2083	0.723
0.2166	0.71
0.225	0.697
0.2333	0.691
0.2416	0.678
0.25	0.666
0.2583	0.659
0.2666	0.647
0.275	0.64
0.2833	0.634
0.2916	0.621
0.3	0.615
0.3083	0.609
0.3166	0.602
0.325	0.596
0.3333	0.59
0.35	0.571
0.3666	0.558
0.3833	0.545
0.4	0.533
0.4166	0.526
0.4333	0.514
0.45	0.501
0.4666	0.495
0.4833	0.488

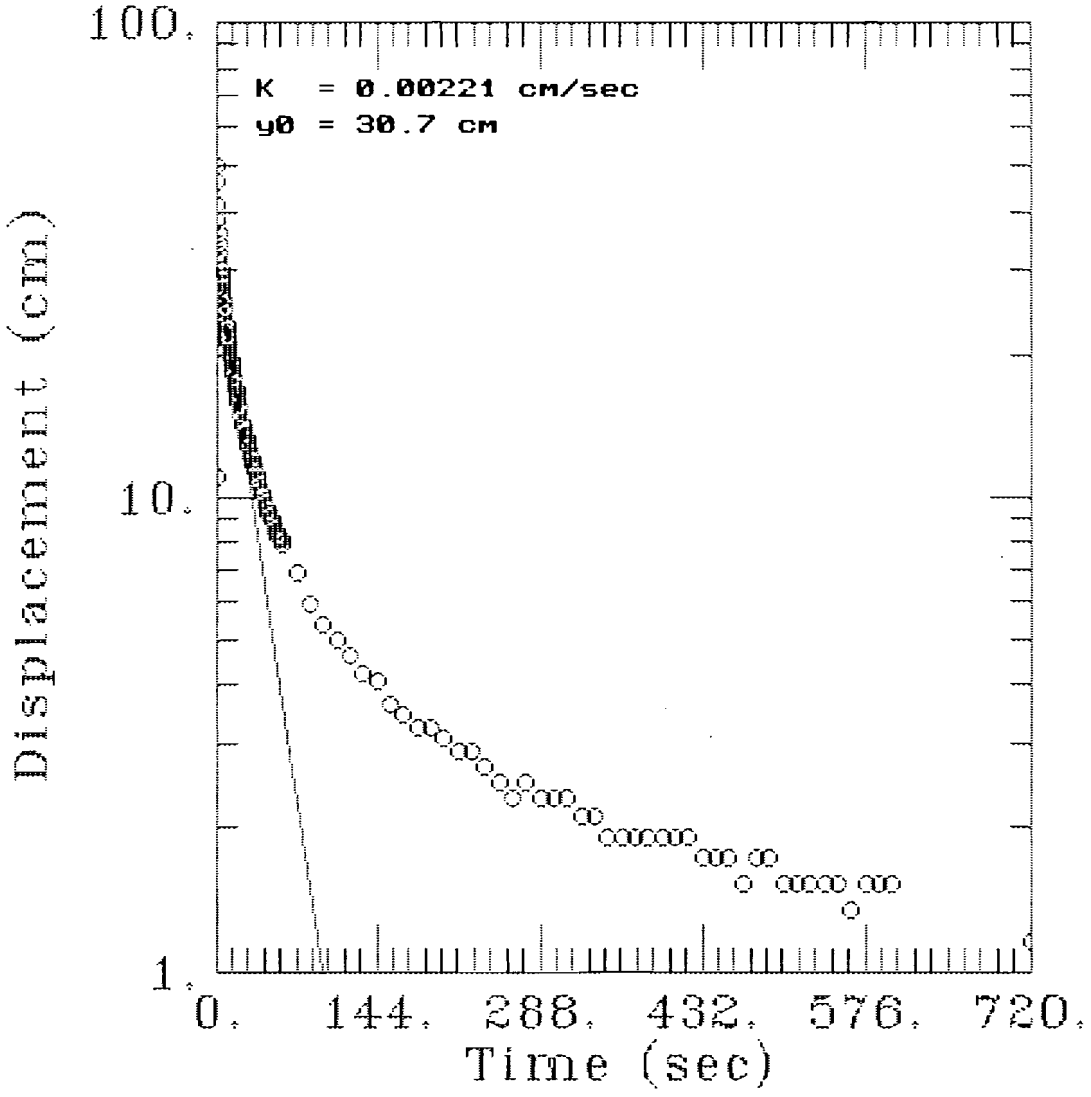
BR–101 FALLING HEAD
TEST 1

SLUG DISPLACEMENT	1.36 FEET
TRANSDUCER STATIC	0.000 FEET
WELL DIA. (2")	0.16 FEET
SCREEN DIA.	0.16 FEET
AQUIF. THICKNESS	28.5 FEET
SCREEN LENGTH	26.5 FEET
WATER COL. HEIGHT	33.6 FEET

MIN	FEET
0.5	0.476
0.5166	0.469
0.5333	0.457
0.55	0.45
0.5666	0.444
0.5833	0.438
0.6	0.431
0.6166	0.425
0.6333	0.412
0.65	0.406
0.6666	0.4
0.6833	0.393
0.7	0.393
0.7166	0.387
0.7333	0.374
0.75	0.374
0.7666	0.368
0.7833	0.362
0.8	0.355
0.8166	0.349
0.8333	0.349
0.85	0.342
0.8666	0.342
0.8833	0.336
0.9	0.33
0.9166	0.323
0.9333	0.323
0.95	0.317
0.9666	0.311
0.9833	0.311
1	0.304
1.2	0.26
1.4	0.235
1.6	0.203
1.8	0.184
2	0.171
2.2	0.152
2.4	0.14
2.6	0.127
2.8	0.114
3	0.108
3.2	0.102
3.4	0.095
3.6	0.095
3.8	0.083
4	0.076
4.2	0.07
4.4	0.064
4.6	0.064
4.8	0.064

MIN	FEET
5	0.057
5.2	0.051
5.4	0.051
5.6	0.051
5.8	0.051
6	0.045
6.2	0.045
6.4	0.038
6.6	0.038
6.8	0.038
7	0.038
7.2	0.032
7.4	0.032
7.6	0.032
7.8	0.032
8	0.032
8.2	0.032
8.4	0.026
8.6	0.026
8.8	0.026
9	0.026
9.2	0.019
9.4	0.019
9.6	0.019
9.8	0.019
10	0.019
12	0.007
14	0.007
16	0.001

BR-101 RISING HEAD - TEST 1



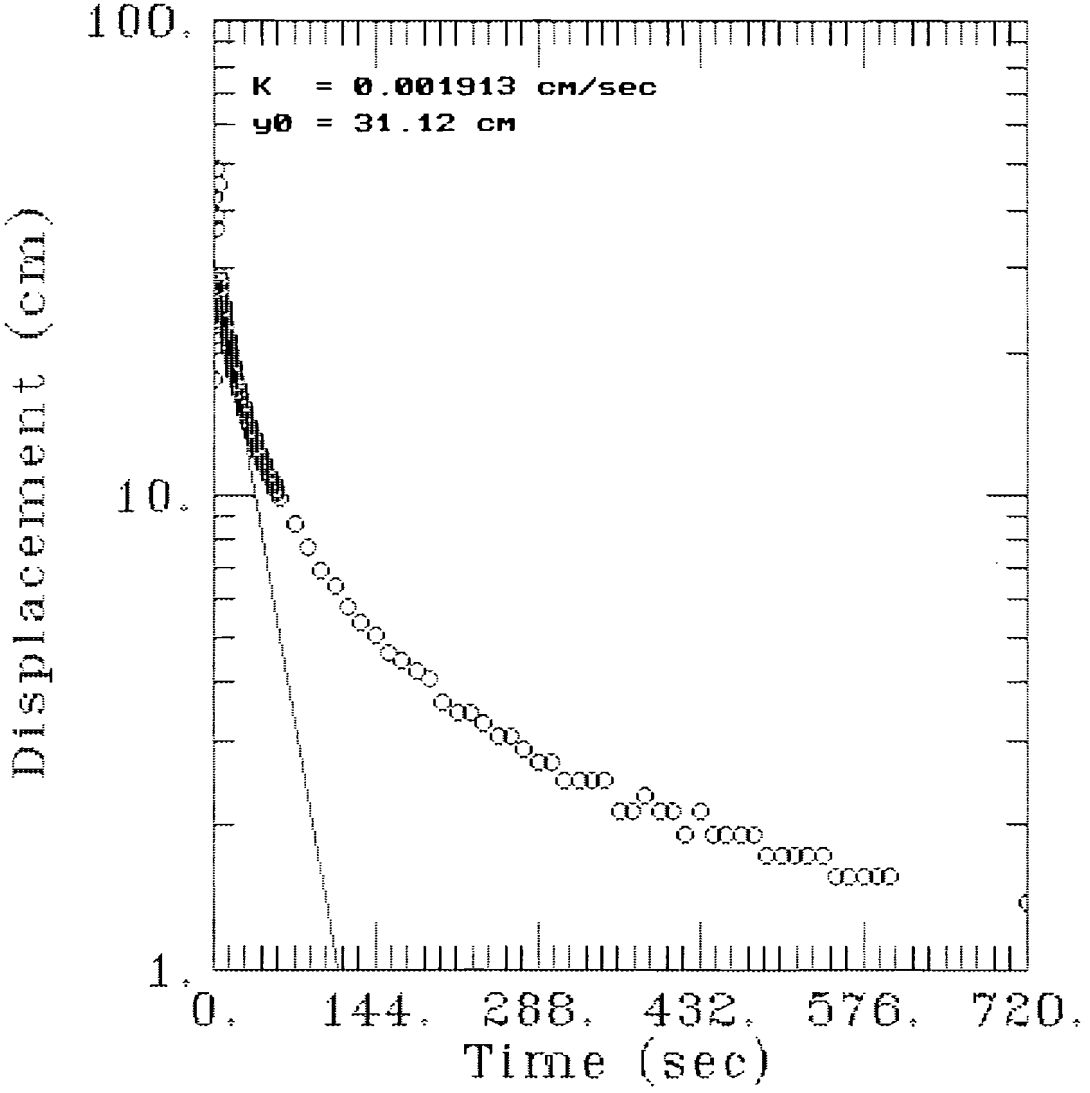
MIN	FEET
0	0.361
0.0083	1.641
0.0166	1.527
0.025	1.362
0.0333	1.255
0.0416	1.179
0.05	1.122
0.0583	1.071
0.0666	1.026
0.075	0.988
0.0833	0.957
0.0916	0.931
0.1	0.9
0.1083	0.874
0.1166	0.849
0.125	0.824
0.1333	0.805
0.1416	0.779
0.15	0.76
0.1583	0.748
0.1666	0.729
0.175	0.71
0.1833	0.697
0.1916	0.684
0.2	0.665
0.2083	0.652
0.2166	0.646
0.225	0.633
0.2333	0.621
0.2416	0.608
0.25	0.602
0.2583	0.595
0.2666	0.583
0.275	0.576
0.2833	0.564
0.2916	0.557
0.3	0.551
0.3083	0.538
0.3166	0.532
0.325	0.526
0.3333	0.519
0.35	0.507
0.3666	0.488
0.3833	0.462
0.4	0.469
0.4166	0.456
0.4333	0.443
0.45	0.437
0.4666	0.424
0.4833	0.418

BR–101	RISING HEAD TEST 1
SLUG DISPLACEMENT	1.36 FEET
TRANSDUCER STATIC	0.000 FEET
WELL DIA.	0.16 FEET
SCREEN DIA.	0.16 FEET
AQUIF. THICKNESS	28.5 FEET
SCREEN LENGTH	26.5 FEET
WATER COL. HEIGHT	33.6 FEET

MIN	FEET
0.5	0.412
0.5166	0.399
0.5333	0.393
0.55	0.386
0.5666	0.38
0.5833	0.374
0.6	0.367
0.6166	0.355
0.6333	0.355
0.65	0.342
0.6666	0.342
0.6833	0.335
0.7	0.329
0.7166	0.323
0.7333	0.316
0.75	0.31
0.7666	0.31
0.7833	0.304
0.8	0.304
0.8166	0.297
0.8333	0.297
0.85	0.291
0.8666	0.285
0.8833	0.278
0.9	0.278
0.9166	0.272
0.9333	0.272
0.95	0.272
0.9666	0.266
0.9833	0.266
1	0.259
1.2	0.228
1.4	0.196
1.6	0.177
1.8	0.164
2	0.152
2.2	0.139
2.4	0.133
2.6	0.12
2.8	0.114
3	0.107
3.2	0.107
3.4	0.101
3.6	0.095
3.8	0.095
4	0.088
4.2	0.082
4.4	0.076
4.6	0.082
4.8	0.076

MIN	FEET
5	0.076
5.2	0.076
5.4	0.069
5.6	0.069
5.8	0.063
6	0.063
6.2	0.063
6.4	0.063
6.6	0.063
6.8	0.063
7	0.063
7.2	0.057
7.4	0.057
7.6	0.057
7.8	0.05
8	0.057
8.2	0.057
8.4	0.05
8.6	0.05
8.8	0.05
9	0.05
9.2	0.05
9.4	0.044
9.6	0.05
9.8	0.05
10	0.05
12	0.038

BR-101 FALLING HEAD - TEST 2



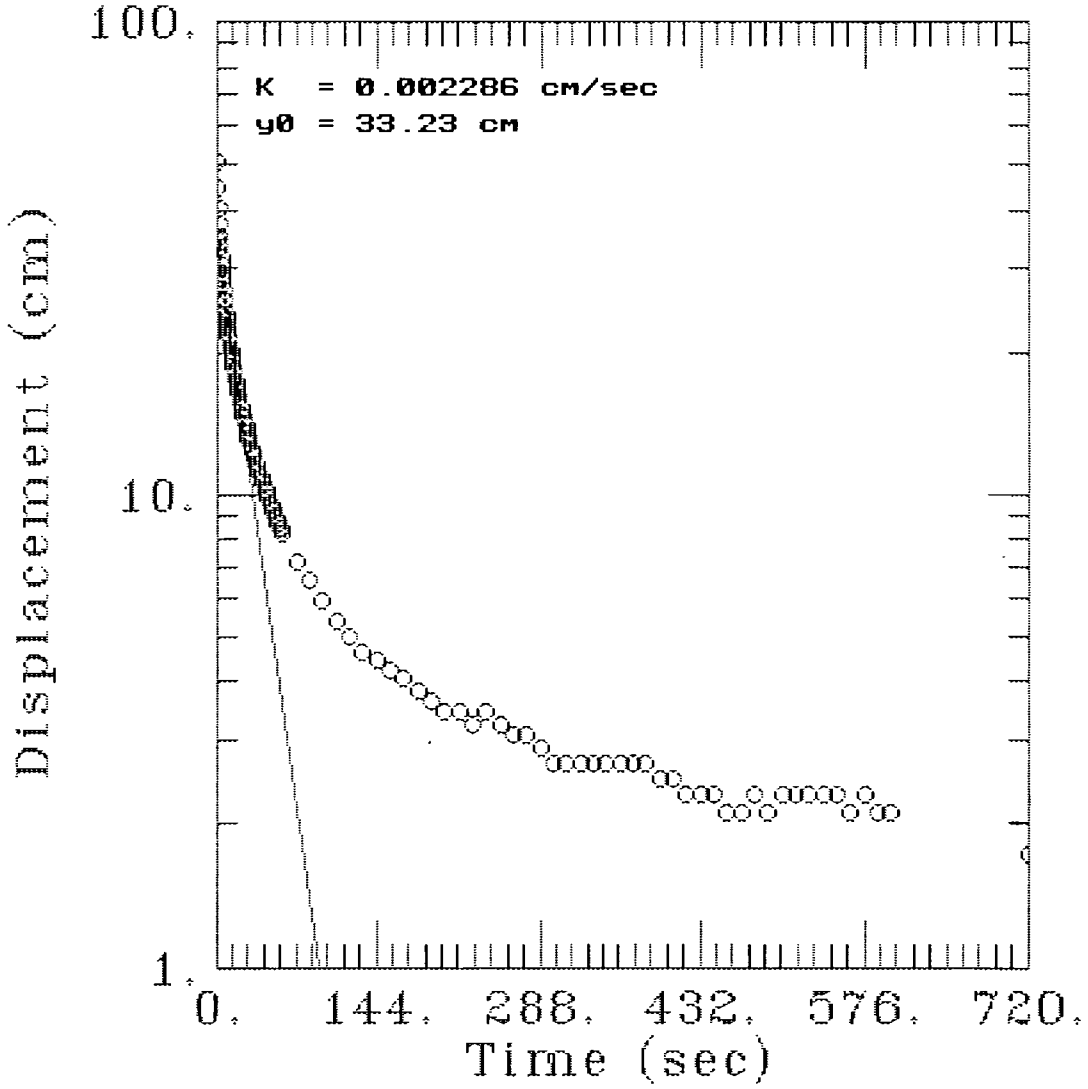
MIN	AS MEAS. FEET	INVERT FEET	PLOTTED (ADD .051) FEET
0	0.05	−0.05	0.001
0.0083	0.025	−0.025	0.026
0.0166	−0.526	0.526	0.577
0.025	−0.703	0.703	0.754
0.0333	−1.337	1.337	1.388
0.0416	−1.217	1.217	1.268
0.05	−1.546	1.546	1.597
0.0583	−1.546	1.546	1.597
0.0666	−1.147	1.147	1.198
0.075	−1.42	1.42	1.471
0.0833	−0.665	0.665	0.716
0.0916	−0.773	0.773	0.824
0.1	−0.9	0.9	0.951
0.1083	−0.906	0.906	0.957
0.1166	−0.874	0.874	0.925
0.125	−0.849	0.849	0.9
0.1333	−0.824	0.824	0.875
0.1416	−0.798	0.798	0.849
0.15	−0.779	0.779	0.83
0.1583	−0.76	0.76	0.811
0.1666	−0.748	0.748	0.799
0.175	−0.729	0.729	0.78
0.1833	−0.716	0.716	0.767
0.1916	−0.703	0.703	0.754
0.2	−0.69	0.69	0.741
0.2083	−0.678	0.678	0.729
0.2166	−0.665	0.665	0.716
0.225	−0.652	0.652	0.703
0.2333	−0.64	0.64	0.691
0.2416	−0.627	0.627	0.678
0.25	−0.621	0.621	0.672
0.2583	−0.614	0.614	0.665
0.2666	−0.602	0.602	0.653
0.275	−0.595	0.595	0.646
0.2833	−0.583	0.583	0.634
0.2916	−0.576	0.576	0.627
0.3	−0.57	0.57	0.621
0.3083	−0.564	0.564	0.615
0.3166	−0.551	0.551	0.602
0.325	−0.545	0.545	0.596
0.3333	−0.538	0.538	0.589
0.35	−0.526	0.526	0.577
0.3666	−0.513	0.513	0.564
0.3833	−0.5	0.5	0.551
0.4	−0.488	0.488	0.539
0.4166	−0.475	0.475	0.526
0.4333	−0.469	0.469	0.52
0.45	−0.456	0.456	0.507
0.4666	−0.45	0.45	0.501
0.4833	−0.437	0.437	0.488

BR−101	FALLING HEAD TEST 2
SLUG DISPLACEMENT	1.36 FEET
TRANSDUCER STATIC	0.000 FEET
WELL ~~DIA.~~	0.16 FEET
SCREEN ~~DIA.~~	0.16 FEET
AQUIF. THICKNESS	28.5 FEET
SCREEN LENGTH	26.5 FEET
WATER COL. HEIGHT	33.6 FEET

MIN	AS MEAS. FEET	INVERT FEET	PLOTTED (ADD .051) FEET
0.5	−0.431	0.431	0.482
0.5166	−0.418	0.418	0.469
0.5333	−0.412	0.412	0.463
0.55	−0.405	0.405	0.456
0.5666	−0.399	0.399	0.45
0.5833	−0.393	0.393	0.444
0.6	−0.386	0.386	0.437
0.6166	−0.38	0.38	0.431
0.6333	−0.374	0.374	0.425
0.65	−0.367	0.367	0.418
0.6666	−0.361	0.361	0.412
0.6833	−0.355	0.355	0.406
0.7	−0.348	0.348	0.399
0.7166	−0.342	0.342	0.393
0.7333	−0.335	0.335	0.386
0.75	−0.335	0.335	0.386
0.7666	−0.329	0.329	0.38
0.7833	−0.323	0.323	0.374
0.8	−0.316	0.316	0.367
0.8166	−0.316	0.316	0.367
0.8333	−0.31	0.31	0.361
0.85	−0.304	0.304	0.355
0.8666	−0.297	0.297	0.348
0.8833	−0.297	0.297	0.348
0.9	−0.297	0.297	0.348
0.9166	−0.291	0.291	0.342
0.9333	−0.285	0.285	0.336
0.95	−0.285	0.285	0.336
0.9666	−0.278	0.278	0.329
0.9833	−0.272	0.272	0.323
1	−0.272	0.272	0.323
1.2	−0.234	0.234	0.285
1.4	−0.202	0.202	0.253
1.6	−0.177	0.177	0.228
1.8	−0.158	0.158	0.209
2	−0.139	0.139	0.19
2.2	−0.126	0.126	0.177
2.4	−0.114	0.114	0.165
2.6	−0.101	0.101	0.152
2.8	−0.095	0.095	0.146
3	−0.088	0.088	0.139
3.2	−0.082	0.082	0.133
3.4	−0.069	0.069	0.12
3.6	−0.063	0.063	0.114
3.8	−0.063	0.063	0.114
4	−0.057	0.057	0.108
4.2	−0.05	0.05	0.101
4.4	−0.05	0.05	0.101
4.6	−0.044	0.044	0.095
4.8	−0.038	0.038	0.089

MIN	AS MEAS. FEET	INVERT FEET	PLOTTED (ADD .051) FEET
5	−0.038	0.038	0.089
5.2	−0.031	0.031	0.082
5.4	−0.031	0.031	0.082
5.6	−0.031	0.031	0.082
5.8	−0.031	0.031	0.082
6	−0.019	0.019	0.07
6.2	−0.019	0.019	0.07
6.4	−0.025	0.025	0.076
6.6	−0.019	0.019	0.07
6.8	−0.019	0.019	0.07
7	−0.012	0.012	0.063
7.2	−0.019	0.019	0.07
7.4	−0.012	0.012	0.063
7.6	−0.012	0.012	0.063
7.8	−0.012	0.012	0.063
8	−0.012	0.012	0.063
8.2	−0.006	0.006	0.057
8.4	−0.006	0.006	0.057
8.6	−0.006	0.006	0.057
8.8	−0.006	0.006	0.057
9	−0.006	0.006	0.057
9.2	0	0	0.051
9.4	0	0	0.051
9.6	0	0	0.051
9.8	0	0	0.051
10	0	0	0.051
12	0.006	−0.006	0.045

BR-101 RISING HEAD - TEST 2



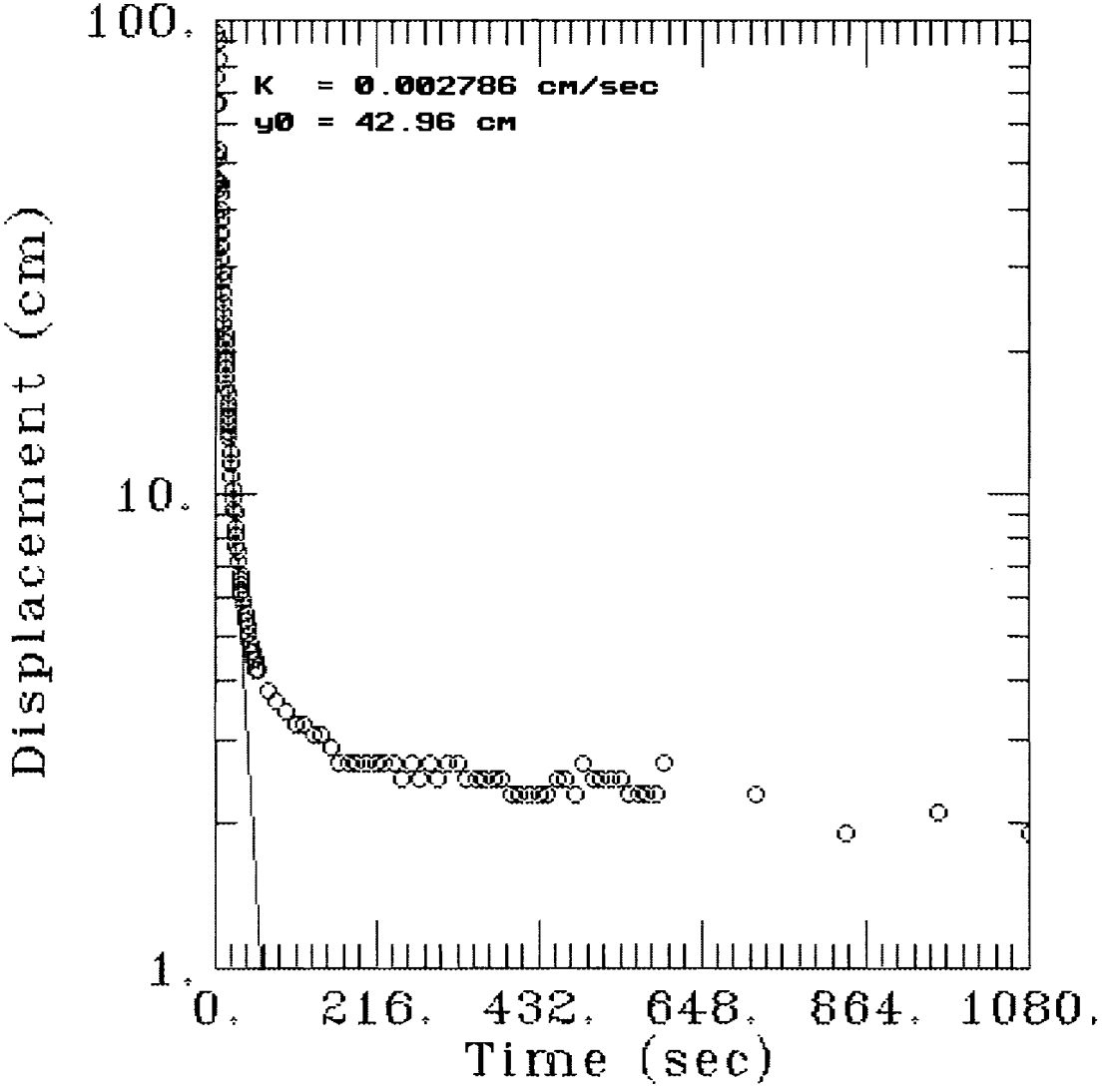
MIN	AS MEAS. FEET	PLOTTED FEET
0	1.141	1.141
0.0083	1.084	1.084
0.0166	0.735	0.735
0.025	1.654	1.654
0.0333	1.458	1.458
0.0416	1.324	1.324
0.05	1.229	1.229
0.0583	1.147	1.147
0.0666	1.09	1.09
0.075	1.046	1.046
0.0833	1.001	1.001
0.0916	0.969	0.969
0.1	0.938	0.938
0.1083	0.912	0.912
0.1166	0.881	0.881
0.125	0.855	0.855
0.1333	0.836	0.836
0.1416	0.811	0.811
0.15	0.792	0.792
0.1583	0.773	0.773
0.1666	0.754	0.754
0.175	0.741	0.741
0.1833	0.722	0.722
0.1916	0.703	0.703
0.2	0.697	0.697
0.2083	0.678	0.678
0.2166	0.665	0.665
0.225	0.659	0.659
0.2333	0.646	0.646
0.2416	0.633	0.633
0.25	0.627	0.627
0.2583	0.614	0.614
0.2666	0.602	0.602
0.275	0.595	0.595
0.2833	0.589	0.589
0.2916	0.576	0.576
0.3	0.57	0.57
0.3083	0.564	0.564
0.3166	0.551	0.551
0.325	0.545	0.545
0.3333	0.538	0.538
0.35	0.526	0.526
0.3666	0.513	0.513
0.3833	0.5	0.5
0.4	0.481	0.481
0.4166	0.475	0.475
0.4333	0.462	0.462
0.45	0.456	0.456
0.4666	0.443	0.443

BR–101	RISING HEAD TEST 2
SLUG DISPLACEMENT	1.36 FEET
TRANSDUCER STATIC	0.000 FEET
WELL ~~DIA~~.	0.16 FEET
SCREEN ~~DIA~~.	0.16 FEET
AQUIF. THICKNESS	28.5 FEET
SCREEN LENGTH	26.5 FEET
WATER COL. HEIGHT	33.6 FEET

MIN	AS MEAS. FEET	PLOTTED FEET
0.4833	0.431	0.431
0.5	0.431	0.431
0.5166	0.418	0.418
0.5333	0.412	0.412
0.55	0.405	0.405
0.5666	0.399	0.399
0.5833	0.393	0.393
0.6	0.38	0.38
0.6166	0.38	0.38
0.6333	0.367	0.367
0.65	0.361	0.361
0.6666	0.361	0.361
0.6833	0.355	0.355
0.7	0.348	0.348
0.7166	0.342	0.342
0.7333	0.335	0.335
0.75	0.335	0.335
0.7666	0.329	0.329
0.7833	0.323	0.323
0.8	0.316	0.316
0.8166	0.316	0.316
0.8333	0.31	0.31
0.85	0.304	0.304
0.8666	0.304	0.304
0.8833	0.297	0.297
0.9	0.291	0.291
0.9166	0.291	0.291
0.9333	0.285	0.285
0.95	0.285	0.285
0.9666	0.278	0.278
0.9833	0.278	0.278
1	0.272	0.272
1.2	0.234	0.234
1.4	0.215	0.215
1.6	0.196	0.196
1.8	0.177	0.177
2	0.164	0.164
2.2	0.152	0.152
2.4	0.145	0.145
2.6	0.139	0.139
2.8	0.133	0.133
3	0.126	0.126
3.2	0.12	0.12
3.4	0.114	0.114
3.6	0.114	0.114
3.8	0.107	0.107
4	0.114	0.114
4.2	0.107	0.107
4.4	0.101	0.101

MIN	AS MEAS. FEET	PLOTTED FEET
4.6	0.101	0.101
4.8	0.095	0.095
5	0.088	0.088
5.2	0.088	0.088
5.4	0.088	0.088
5.6	0.088	0.088
5.8	0.088	0.088
6	0.088	0.088
6.2	0.088	0.088
6.4	0.088	0.088
6.6	0.082	0.082
6.8	0.082	0.082
7	0.076	0.076
7.2	0.076	0.076
7.4	0.076	0.076
7.6	0.069	0.069
7.8	0.069	0.069
8	0.076	0.076
8.2	0.069	0.069
8.4	0.076	0.076
8.6	0.076	0.076
8.8	0.076	0.076
9	0.076	0.076
9.2	0.076	0.076
9.4	0.069	0.069
9.6	0.076	0.076
9.8	0.069	0.069
10	0.069	0.069
12	0.057	0.057

BR-102 FALLING HEAD - TEST 1



MIN	AS MEAS. FEET	INVERT FEET	PLOTTED (ADD 0.5') FEET
0	−0.456	0.456	0.956
0.0083	−0.786	0.786	1.286
0.0166	−0.57	0.57	1.07
0.025	−1.21	1.21	1.71
0.0333	−1.02	1.02	1.52
0.0416	−2.573	2.573	3.073
0.05	−1.984	1.984	2.484
0.0583	−2.44	2.44	2.94
0.0666	−2.206	2.206	2.706
0.075	−0.95	0.95	1.45
0.0833	−1.679	1.679	2.179
0.0916	−1.248	1.248	1.748
0.1	−1.179	1.179	1.679
0.1083	−1.007	1.007	1.507
0.1166	−0.982	0.982	1.482
0.125	−0.906	0.906	1.406
0.1333	−0.811	0.811	1.311
0.1416	−0.735	0.735	1.235
0.15	−0.665	0.665	1.165
0.1583	−0.595	0.595	1.095
0.1666	−0.532	0.532	1.032
0.175	−0.469	0.469	0.969
0.1833	−0.424	0.424	0.924
0.1916	−0.374	0.374	0.874
0.2	−0.329	0.329	0.829
0.2083	−0.291	0.291	0.791
0.2166	−0.247	0.247	0.747
0.225	−0.209	0.209	0.709
0.2333	−0.183	0.183	0.683
0.2416	−0.152	0.152	0.652
0.25	−0.126	0.126	0.626
0.2583	−0.107	0.107	0.607
0.2666	−0.076	0.076	0.576
0.275	−0.05	0.05	0.55
0.2833	−0.031	0.031	0.531
0.2916	−0.006	0.006	0.506
0.3	0.006	−0.006	0.494
0.3083	0.025	−0.025	0.475
0.3166	0.044	−0.044	0.456
0.325	0.057	−0.057	0.443
0.3333	0.069	−0.069	0.431
0.35	0.101	−0.101	0.399
0.3666	0.12	−0.12	0.38
0.3833	0.145	−0.145	0.355
0.4	0.164	−0.164	0.336
0.4166	0.183	−0.183	0.317
0.4333	0.196	−0.196	0.304
0.45	0.202	−0.202	0.298
0.4666	0.221	−0.221	0.279
0.4833	0.234	−0.234	0.266
0.5	0.247	−0.247	0.253
0.5166	0.253	−0.253	0.247
0.5333	0.266	−0.266	0.234
0.55	0.266	−0.266	0.234
0.5666	0.278	−0.278	0.222
0.5833	0.285	−0.285	0.215
0.6	0.291	−0.291	0.209
0.6166	0.297	−0.297	0.203
0.6333	0.304	−0.304	0.196
0.65	0.31	−0.31	0.19

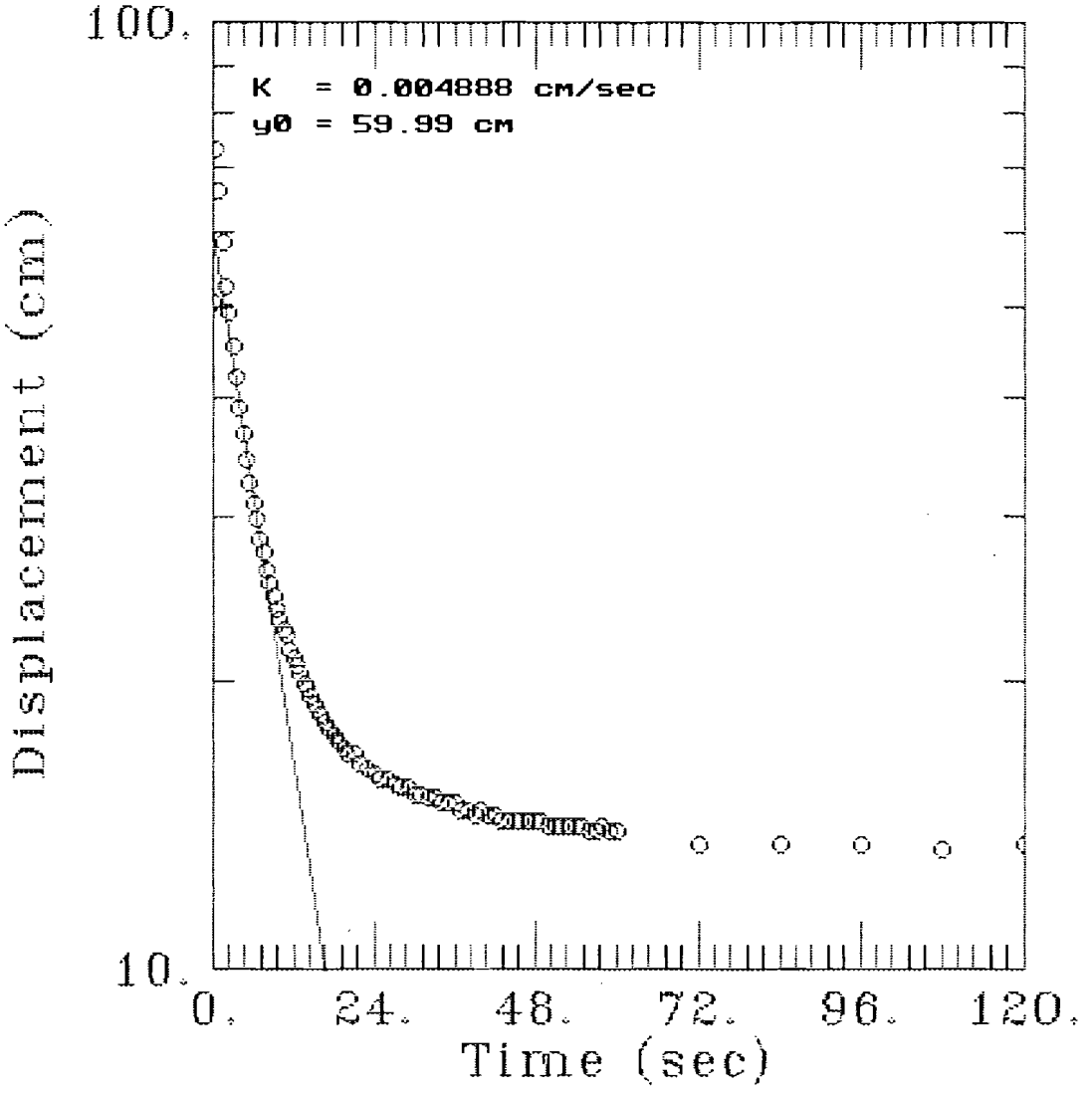
BR−102 FALLING HEAD TEST 1

SLUG DISPLACEMENT	1.36 FT /	41.3 CM
TRANSDUCER STATIC	0.000 FT /	0.0 CM
WELL ~~DIA.~~ Radius	0.16 FT /	4.9 CM
SCREEN ~~DIA.~~	0.16 FT /	4.9 CM
AQUIF. THICKNESS	34.1 FT /	1039.4 CM
SCREEN LENGTH	32 FT /	975.4 CM
WATER COL. HEIGHT	26 FT /	792.5 CM

MIN	AS MEAS. FEET	INVERT FEET	PLOTTED (ADD 0.5') FEET
0.6666	0.31	−0.31	0.19
0.6833	0.316	−0.316	0.184
0.7	0.316	−0.316	0.184
0.7166	0.323	−0.323	0.177
0.7333	0.329	−0.329	0.171
0.75	0.329	−0.329	0.171
0.7666	0.335	−0.335	0.165
0.7833	0.335	−0.335	0.165
0.8	0.342	−0.342	0.158
0.8166	0.342	−0.342	0.158
0.8333	0.348	−0.348	0.152
0.85	0.348	−0.348	0.152
0.8666	0.348	−0.348	0.152
0.8833	0.355	−0.355	0.145
0.9	0.355	−0.355	0.145
0.9166	0.361	−0.361	0.139
0.9333	0.355	−0.355	0.145
0.95	0.361	−0.361	0.139
0.9666	0.361	−0.361	0.139
0.9833	0.361	−0.361	0.139
1	0.361	−0.361	0.139
1.2	0.374	−0.374	0.126
1.4	0.38	−0.38	0.12
1.6	0.386	−0.386	0.114
1.8	0.393	−0.393	0.107
2	0.393	−0.393	0.107
2.2	0.399	−0.399	0.101
2.4	0.399	−0.399	0.101
2.6	0.405	−0.405	0.095
2.8	0.412	−0.412	0.088
3	0.412	−0.412	0.088
3.2	0.412	−0.412	0.088
3.4	0.412	−0.412	0.088
3.6	0.412	−0.412	0.088
3.8	0.412	−0.412	0.088
4	0.412	−0.412	0.088
4.2	0.418	−0.418	0.082
4.4	0.412	−0.412	0.088
4.6	0.418	−0.418	0.082
4.8	0.412	−0.412	0.088
5	0.418	−0.418	0.082
5.2	0.412	−0.412	0.088
5.4	0.412	−0.412	0.088
5.6	0.418	−0.418	0.082
5.8	0.418	−0.418	0.082
6	0.418	−0.418	0.082
6.2	0.418	−0.418	0.082
6.4	0.418	−0.418	0.082
6.6	0.424	−0.424	0.076
6.8	0.424	−0.424	0.076
7	0.424	−0.424	0.076
7.2	0.424	−0.424	0.076
7.4	0.424	−0.424	0.076
7.6	0.418	−0.418	0.082
7.8	0.418	−0.418	0.082
8	0.424	−0.424	0.076
8.2	0.412	−0.412	0.088
8.4	0.418	−0.418	0.082
8.6	0.418	−0.418	0.082
8.8	0.418	−0.418	0.082

MIN	AS MEAS. FEET	INVERT FEET	PLOTTED (ADD 0.5') FEET
9	0.418	−0.418	0.082
9.2	0.424	−0.424	0.076
9.4	0.424	−0.424	0.076
9.6	0.424	−0.424	0.076
9.8	0.424	−0.424	0.076
10	0.412	−0.412	0.088
12	0.424	−0.424	0.076
14	0.437	−0.437	0.063
16	0.431	−0.431	0.069
18	0.437	−0.437	0.063

BR-102 RISING HEAD - TEST 1



0	1.66	1.66
0.0083	2.408	2.408
0.0166	2.18	2.18
0.025	1.92	1.92
0.0333	1.724	1.724
0.0416	1.622	1.622
0.05	1.489	1.489
0.0583	1.381	1.381
0.0666	1.28	1.28
0.075	1.204	1.204
0.0833	1.134	1.134
0.0916	1.065	1.065
0.1	1.014	1.014
0.1083	0.976	0.976
0.1166	0.931	0.931
0.125	0.9	0.9
0.1333	0.862	0.862
0.1416	0.836	0.836
0.15	0.811	0.811
0.1583	0.786	0.786
0.1666	0.767	0.767
0.175	0.748	0.748
0.1833	0.735	0.735
0.1916	0.71	0.71
0.2	0.697	0.697
0.2083	0.684	0.684
0.2166	0.671	0.671
0.225	0.652	0.652
0.2333	0.646	0.646
0.2416	0.633	0.633
0.25	0.621	0.621
0.2583	0.614	0.614
0.2666	0.608	0.608
0.275	0.595	0.595
0.2833	0.589	0.589
0.2916	0.583	0.583
0.3	0.576	0.576
0.3083	0.57	0.57
0.3166	0.564	0.564
0.325	0.557	0.557
0.3333	0.551	0.551
0.35	0.551	0.551
0.3666	0.538	0.538
0.3833	0.532	0.532
0.4	0.526	0.526
0.4166	0.519	0.519
0.4333	0.519	0.519
0.45	0.513	0.513
0.4666	0.507	0.507
0.4833	0.507	0.507
0.5	0.5	0.5
0.5166	0.5	0.5
0.5333	0.494	0.494
0.55	0.494	0.494
0.5666	0.488	0.488
0.5833	0.488	0.488

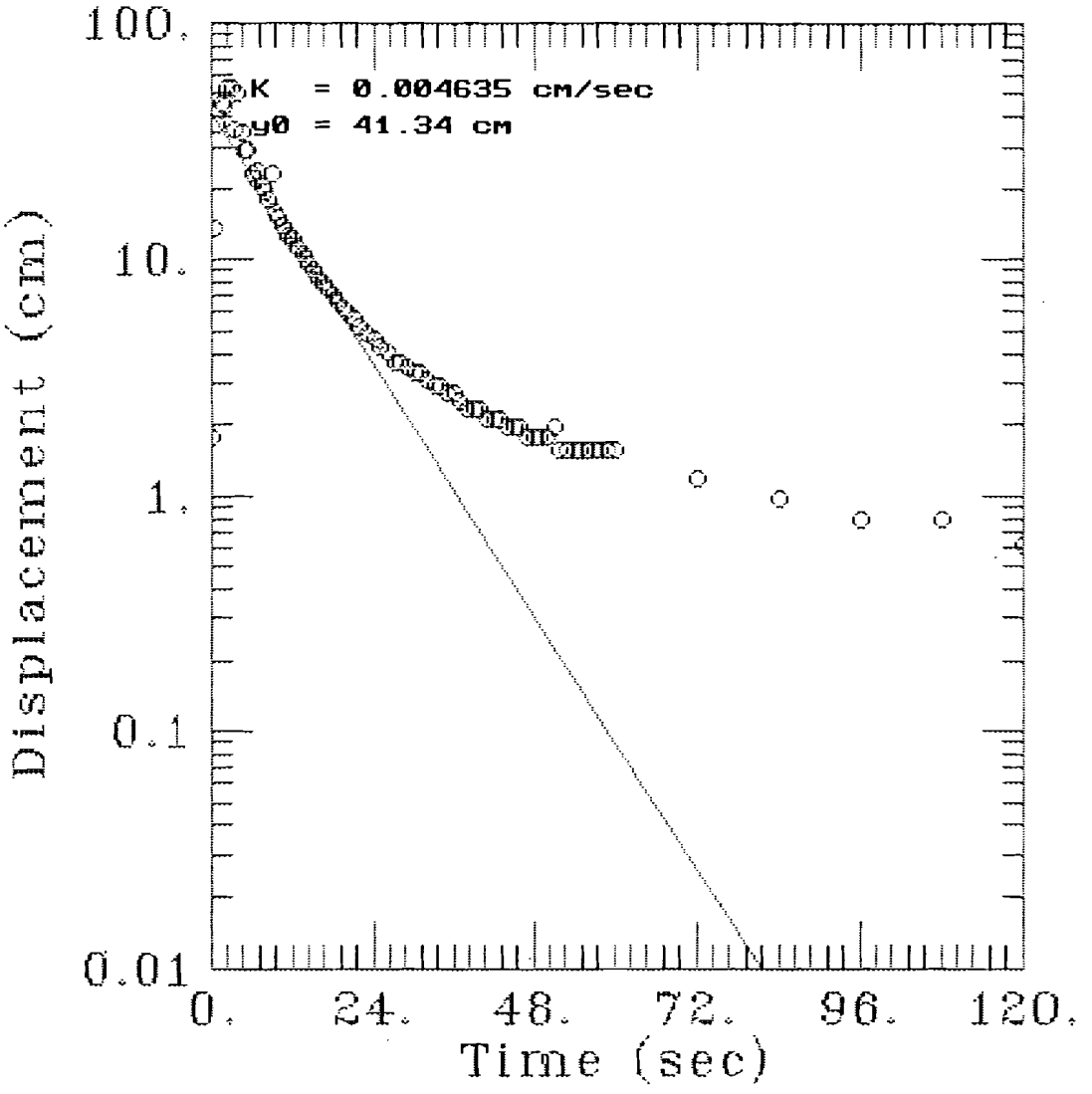
BR–102 RISING HEAD TEST 1

SLUG DISPLACEMENT	1.36 FT /	41.3 CM
TRANSDUCER STATIC	0.000 FT /	0.0 C
WELL DIA.	0.16 FT /	4.9 CM
SCREEN DIA.	0.16 FT /	4.9 CM
AQUIF. THICKNESS	34.1 FT /	1039.4 CM
SCREEN LENGTH	32 FT /	975.4 CM
WATER COL. HEIGHT	26 FT /	792.5 CM

0.6	0.488	0.488
0.6166	0.481	0.481
0.6333	0.481	0.481
0.65	0.475	0.475
0.6666	0.481	0.481
0.6833	0.475	0.475
0.7	0.475	0.475
0.7166	0.469	0.469
0.7333	0.469	0.469
0.75	0.469	0.469
0.7666	0.469	0.469
0.7833	0.469	0.469
0.8	0.469	0.469
0.8166	0.469	0.469
0.8333	0.462	0.462
0.85	0.462	0.462
0.8666	0.462	0.462
0.8833	0.462	0.462
0.9	0.462	0.462
0.9166	0.462	0.462
0.9333	0.456	0.456
0.95	0.456	0.456
0.9666	0.462	0.462
0.9833	0.456	0.456
1	0.456	0.456
1.2	0.443	0.443
1.4	0.443	0.443
1.6	0.443	0.443
1.8	0.437	0.437
2	0.443	0.443
2.2	0.443	0.443
2.4	0.45	0.45
2.6	0.437	0.437
2.8	0.431	0.431
3	0.437	0.437
3.2	0.437	0.437
3.4	0.437	0.437
3.6	0.443	0.443
3.8	0.45	0.45
4	0.443	0.443
4.2	0.443	0.443
4.4	0.443	0.443
4.6	0.443	0.443
4.8	0.443	0.443
5	0.443	0.443
5.2	0.443	0.443
5.4	0.443	0.443
5.6	0.443	0.443
5.8	0.437	0.437
6	0.443	0.443
6.2	0.443	0.443
6.4	0.443	0.443
6.6	0.443	0.443
6.8	0.437	0.437
7	0.443	0.443
7.2	0.443	0.443

7.4	0.443	0.443
7.6	0.456	0.456
7.8	0.443	0.443
8	0.443	0.443
8.2	0.443	0.443
8.4	0.443	0.443
8.6	0.443	0.443
8.8	0.443	0.443
9	0.45	0.45
9.2	0.443	0.443
9.4	0.443	0.443
9.6	0.443	0.443
9.8	0.437	0.437
10	0.437	0.437
12	0.443	0.443
14	0.443	0.443

BR-102 FALLING HEAD - TEST 2



MIN	AS MEAS. FEET	INVERT FEET	PLOTTED (ADD 0.501')
0	0.443	−0.443	0.058
0.0083	0.05	−0.05	0.451
0.0166	−0.716	0.716	1.217
0.025	−0.988	0.988	1.489
0.0333	−0.963	0.963	1.464
0.0416	−1.255	1.255	1.756
0.05	−1.248	1.248	1.749
0.0583	−0.659	0.659	1.16
0.0666	−1.141	1.141	1.642
0.075	−0.64	0.64	1.141
0.0833	−0.45	0.45	0.951
0.0916	−0.456	0.456	0.957
0.1	−0.259	0.259	0.76
0.1083	−0.221	0.221	0.722
0.1166	−0.278	0.278	0.779
0.125	−0.171	0.171	0.672
0.1333	−0.139	0.139	0.64
0.1416	−0.095	0.095	0.596
0.15	−0.247	0.247	0.748
0.1583	−0.019	0.019	0.52
0.1666	0.006	−0.006	0.495
0.175	0.038	−0.038	0.463
0.1833	0.063	−0.063	0.438
0.1916	0.082	−0.082	0.419
0.2	0.101	−0.101	0.4
0.2083	0.126	−0.126	0.375
0.2166	0.139	−0.139	0.362
0.225	0.158	−0.158	0.343
0.2333	0.171	−0.171	0.33
0.2416	0.19	−0.19	0.311
0.25	0.202	−0.202	0.299
0.2583	0.215	−0.215	0.286
0.2666	0.228	−0.228	0.273
0.275	0.24	−0.24	0.261
0.2833	0.253	−0.253	0.248
0.2916	0.259	−0.259	0.242
0.3	0.272	−0.272	0.229
0.3083	0.278	−0.278	0.223
0.3166	0.285	−0.285	0.216
0.325	0.297	−0.297	0.204
0.3333	0.304	−0.304	0.197
0.35	0.316	−0.316	0.185
0.3666	0.329	−0.329	0.172
0.3833	0.342	−0.342	0.159
0.4	0.348	−0.348	0.153
0.4166	0.361	−0.361	0.14
0.4333	0.367	−0.367	0.134
0.45	0.38	−0.38	0.121
0.4666	0.38	−0.38	0.121
0.4833	0.386	−0.386	0.115
0.5	0.393	−0.393	0.108
0.5166	0.393	−0.393	0.108
0.5333	0.399	−0.399	0.102
0.55	0.405	−0.405	0.096

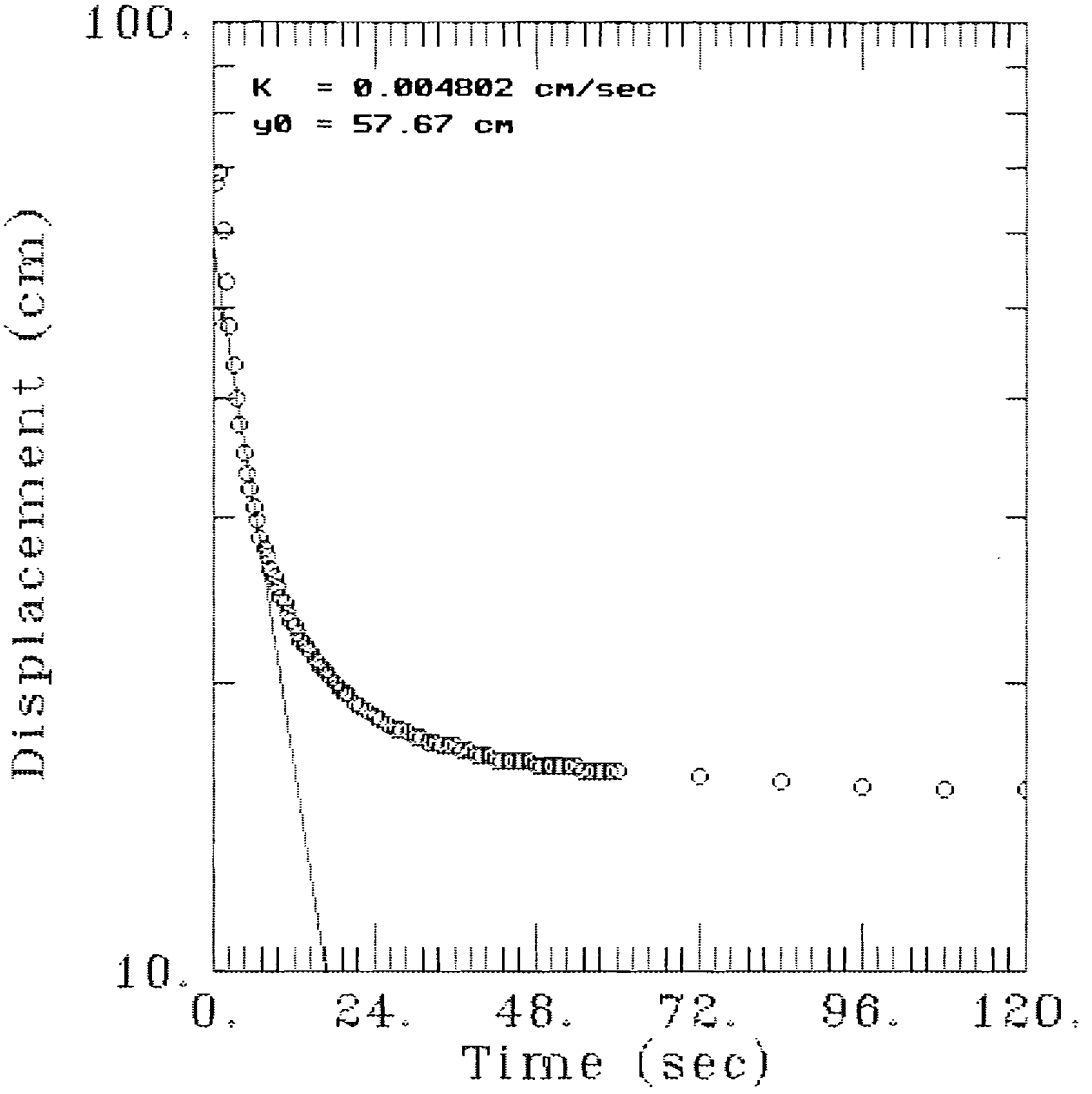
BR−102 FALLING HEAD TEST 2

SLUG DISPLACEMENT	1.36 FT /	41.3 CM
TRANSDUCER STATIC	0.000 FT /	0.0 CM
WELL DIA.	0.16 FT /	4.9 CM
SCREEN DIA.	0.16 FT /	4.9 CM
AQUIF. THICKNESS	34.1 FT /	1039.4 CM
SCREEN LENGTH	32 FT /	975.4 CM
WATER COL. HEIGHT	26 FT /	792.5 CM

MIN	AS MEAS. FEET	INVERT FEET	PLOTTED (ADD 0.501')
0.5666	0.405	−0.405	0.096
0.5833	0.412	−0.412	0.089
0.6	0.412	−0.412	0.089
0.6166	0.418	−0.418	0.083
0.6333	0.424	−0.424	0.077
0.65	0.424	−0.424	0.077
0.6666	0.424	−0.424	0.077
0.6833	0.431	−0.431	0.07
0.7	0.431	−0.431	0.07
0.7166	0.431	−0.431	0.07
0.7333	0.437	−0.437	0.064
0.75	0.437	−0.437	0.064
0.7666	0.437	−0.437	0.064
0.7833	0.443	−0.443	0.058
0.8	0.443	−0.443	0.058
0.8166	0.443	−0.443	0.058
0.8333	0.443	−0.443	0.058
0.85	0.437	−0.437	0.064
0.8666	0.45	−0.45	0.051
0.8833	0.45	−0.45	0.051
0.9	0.45	−0.45	0.051
0.9166	0.45	−0.45	0.051
0.9333	0.45	−0.45	0.051
0.95	0.45	−0.45	0.051
0.9666	0.45	−0.45	0.051
0.9833	0.45	−0.45	0.051
1	0.45	−0.45	0.051
1.2	0.462	−0.462	0.039
1.4	0.469	−0.469	0.032
1.6	0.475	−0.475	0.026
1.8	0.475	−0.475	0.026
2	0.481	−0.481	0.02
2.2	0.481	−0.481	0.02
2.4	0.481	−0.481	0.02
2.6	0.475	−0.475	0.026
2.8	0.481	−0.481	0.02
3	0.481	−0.481	0.02
3.2	0.481	−0.481	0.02
3.4	0.481	−0.481	0.02
3.6	0.488	−0.488	0.013
3.8	0.481	−0.481	0.02
4	0.481	−0.481	0.02
4.2	0.481	−0.481	0.02
4.4	0.488	−0.488	0.013
4.6	0.488	−0.488	0.013
4.8	0.488	−0.488	0.013
5	0.494	−0.494	0.007
5.2	0.494	−0.494	0.007
5.4	0.488	−0.488	0.013
5.6	0.494	−0.494	0.007
5.8	0.494	−0.494	0.007
6	0.494	−0.494	0.007
6.2	0.494	−0.494	0.007
6.4	0.488	−0.488	0.013

MIN	AS MEAS. FEET	INVERT FEET	PLOTTED (ADD 0.501')
6.6	0.488	−0.488	0.013
6.8	0.488	−0.488	0.013
7	0.488	−0.488	0.013
7.2	0.494	−0.494	0.007
7.4	0.494	−0.494	0.007
7.6	0.494	−0.494	0.007
7.8	0.494	−0.494	0.007
8	0.494	−0.494	0.007
8.2	0.494	−0.494	0.007
8.4	0.494	−0.494	0.007
8.6	0.494	−0.494	0.007
8.8	0.5	−0.5	0.001
9	0.5	−0.5	0.001
9.2	0.494	−0.494	0.007
9.4	0.494	−0.494	0.007
9.6	0.494	−0.494	0.007
9.8	0.494	−0.494	0.007
10	0.494	−0.494	0.007
12	0.5	−0.5	0.001

BR-102 RISING HEAD - TEST 2



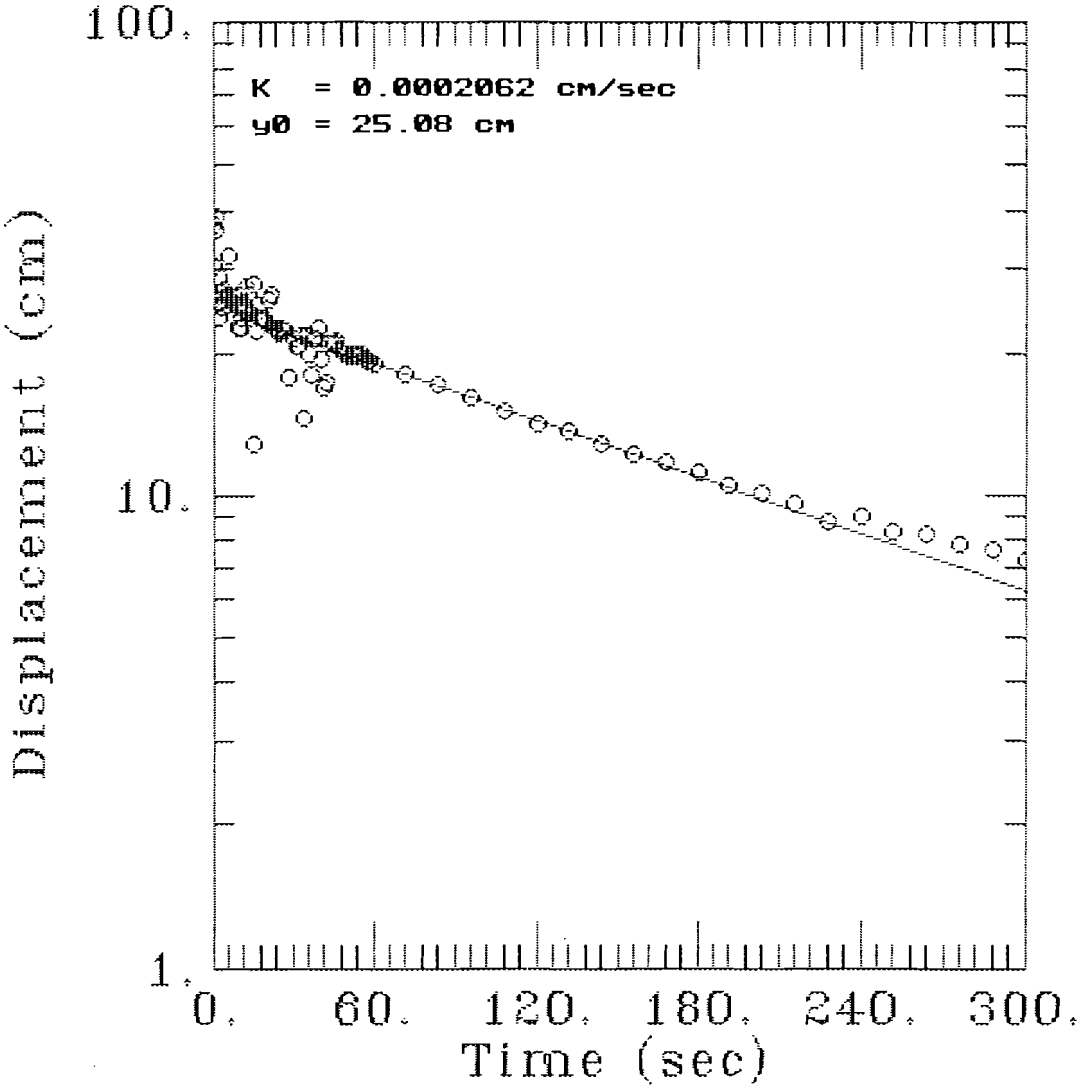
MIN	AS MEAS. FEET	PLOTTED FEET
0	1.61	1.61
0.0083	2.218	2.218
0.0166	2.275	2.275
0.025	1.977	1.977
0.0333	1.743	1.743
0.0416	1.565	1.565
0.05	1.426	1.426
0.0583	1.318	1.318
0.0666	1.236	1.236
0.075	1.153	1.153
0.0833	1.096	1.096
0.0916	1.052	1.052
0.1	1.007	1.007
0.1083	0.976	0.976
0.1166	0.938	0.938
0.125	0.912	0.912
0.1333	0.893	0.893
0.1416	0.868	0.868
0.15	0.849	0.849
0.1583	0.83	0.83
0.1666	0.811	0.811
0.175	0.798	0.798
0.1833	0.779	0.779
0.1916	0.767	0.767
0.2	0.754	0.754
0.2083	0.741	0.741
0.2166	0.729	0.729
0.225	0.722	0.722
0.2333	0.716	0.716
0.2416	0.71	0.71
0.25	0.697	0.697
0.2583	0.69	0.69
0.2666	0.684	0.684
0.275	0.678	0.678
0.2833	0.671	0.671
0.2916	0.665	0.665
0.3	0.659	0.659
0.3083	0.652	0.652
0.3166	0.646	0.646
0.325	0.64	0.64
0.3333	0.64	0.64
0.35	0.627	0.627
0.3666	0.621	0.621
0.3833	0.614	0.614
0.4	0.608	0.608
0.4166	0.602	0.602
0.4333	0.595	0.595
0.45	0.589	0.589
0.4666	0.589	0.589
0.4833	0.583	0.583
0.5	0.576	0.576
0.5166	0.576	0.576
0.5333	0.57	0.57
0.55	0.57	0.57

BR–102 RISING HEAD – TEST 2

SLUG DISPLACEMENT	1.4 FT /	41.3 CM
TRANSDUCER STATIC	0.000 FT /	0.0 CM
WELL RADIUS	0.16 FT /	4.8 CM
SCREEN RADIUS	0.16 FT /	4.8 CM
SATURATED THICKNESS	34.1 FT /	1039.4 CM
SCREEN LENGTH	32 FT /	975.4 CM
WATER COL. HEIGHT	26 FT /	792.5 CM

MIN	AS MEAS. FEET	PLOTTED FEET
0.5666	0.564	0.564
0.5833	0.564	0.564
0.6	0.564	0.564
0.6166	0.557	0.557
0.6333	0.557	0.557
0.65	0.551	0.551
0.6666	0.551	0.551
0.6833	0.551	0.551
0.7	0.545	0.545
0.7166	0.545	0.545
0.7333	0.545	0.545
0.75	0.545	0.545
0.7666	0.545	0.545
0.7833	0.545	0.545
0.8	0.538	0.538
0.8166	0.538	0.538
0.8333	0.538	0.538
0.85	0.538	0.538
0.8666	0.538	0.538
0.8833	0.538	0.538
0.9	0.538	0.538
0.9166	0.532	0.532
0.9333	0.532	0.532
0.95	0.532	0.532
0.9666	0.532	0.532
0.9833	0.532	0.532
1	0.532	0.532
1.2	0.526	0.526
1.4	0.519	0.519
1.6	0.513	0.513
1.8	0.507	0.507
2	0.507	0.507
2.2	0.513	0.513
2.4	0.513	0.513
2.6	0.513	0.513
2.8	0.513	0.513
3	0.513	0.513
3.2	0.507	0.507
3.4	0.507	0.507
3.6	0.507	0.507
3.8	0.513	0.513
4	0.513	0.513
4.2	0.513	0.513
4.4	0.513	0.513
4.6	0.513	0.513

BR-103 FALLING HEAD - TEST 1



MIN	AS MEAS. FEET	INVERT FEET	PLOTTED (−1.29') FEET
0	−2.294	2.294	1.004
0.0083	−2.523	2.523	1.233
0.0166	−2.491	2.491	1.201
0.025	−2.561	2.561	1.271
0.0333	−2.066	2.066	0.776
0.0416	−2.237	2.237	0.947
0.05	−2.104	2.104	0.814
0.0583	−2.174	2.174	0.884
0.0666	−2.136	2.136	0.846
0.075	−2.18	2.18	0.89
0.0833	−2.149	2.149	0.859
0.0916	−2.161	2.161	0.871
0.1	−2.339	2.339	1.049
0.1083	−2.149	2.149	0.859
0.1166	−2.142	2.142	0.852
0.125	−2.13	2.13	0.84
0.1333	−2.079	2.079	0.789
0.1416	−2.149	2.149	0.859
0.15	−2.123	2.123	0.833
0.1583	−2.028	2.028	0.738
0.1666	−2.161	2.161	0.871
0.175	−2.072	2.072	0.782
0.1833	−2.028	2.028	0.738
0.1916	−2.13	2.13	0.84
0.2	−2.104	2.104	0.814
0.2083	−2.104	2.104	0.814
0.2166	−2.193	2.193	0.903
0.225	−2.085	2.085	0.795
0.2333	−2.161	2.161	0.871
0.2416	−2.085	2.085	0.795
0.25	−2.212	2.212	0.922
0.2583	−1.711	1.711	0.421
0.2666	−2.117	2.117	0.827
0.275	−2.022	2.022	0.732
0.2833	−2.072	2.072	0.782
0.2916	−2.072	2.072	0.782
0.3	−2.066	2.066	0.776
0.3083	−2.066	2.066	0.776
0.3166	−2.066	2.066	0.776
0.325	−2.06	2.06	0.77
0.3333	−2.053	2.053	0.763
0.35	−2.136	2.136	0.846
0.3666	−2.161	2.161	0.871
0.3833	−2.034	2.034	0.744
0.4	−2.022	2.022	0.732
0.4166	−2.009	2.009	0.719
0.4333	−2.028	2.028	0.738
0.45	−2.022	2.022	0.732
0.4666	−2.022	2.022	0.732
0.4833	−1.876	1.876	0.586
0.5	−1.996	1.996	0.706
0.5166	−1.965	1.965	0.675
0.5333	−1.971	1.971	0.681

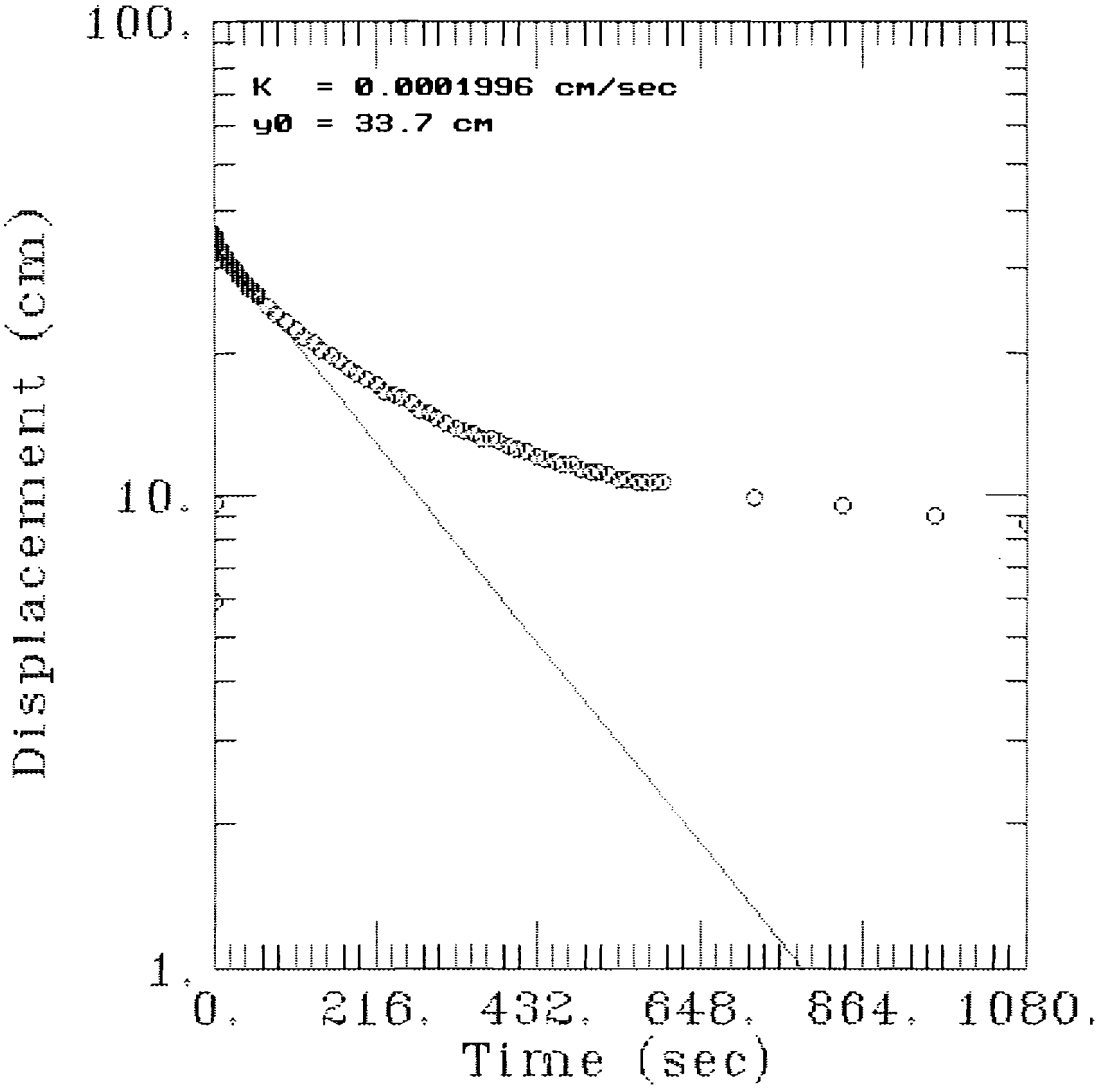
BR−103 FALLING HEAD TEST 1

SLUG DISPLACEMENT	1.4 FT /	41.3 CM
TRANSDUCER STATIC	0.000 FT /	0.0 CM
WELL DIA. R/D	0.16 FT /	4.8 CM
SCREEN DIA. R/D	0.16 FT /	4.8 CM
AQUIF. THICKNESS	34.2 FT /	1042.4 CM
SCREEN LENGTH	32.2 FT /	981.5 CM
WATER COL. HEIGHT	24.25 FT /	739.1 CM

MIN	AS MEAS. FEET	INVERT FEET	PLOTTED (−1.29') FEET
0.55	−2.003	2.003	0.713
0.5666	−1.768	1.768	0.478
0.5833	−2.003	2.003	0.713
0.6	−1.939	1.939	0.649
0.6166	−1.882	1.882	0.592
0.6333	−1.99	1.99	0.7
0.65	−1.99	1.99	0.7
0.6666	−2.034	2.034	0.744
0.6833	−1.927	1.927	0.637
0.7	−1.844	1.844	0.554
0.7166	−1.857	1.857	0.567
0.7333	−1.977	1.977	0.687
0.75	−1.977	1.977	0.687
0.7666	−1.984	1.984	0.694
0.7833	−1.958	1.958	0.668
0.8	−1.952	1.952	0.662
0.8166	−1.946	1.946	0.656
0.8333	−1.939	1.939	0.649
0.85	−1.933	1.933	0.643
0.8666	−1.939	1.939	0.649
0.8833	−1.939	1.939	0.649
0.9	−1.933	1.933	0.643
0.9166	−1.933	1.933	0.643
0.9333	−1.939	1.939	0.649
0.95	−1.927	1.927	0.637
0.9666	−1.92	1.92	0.63
0.9833	−1.92	1.92	0.63
1	−1.914	1.914	0.624
1.2	−1.882	1.882	0.592
1.4	−1.851	1.851	0.561
1.6	−1.819	1.819	0.529
1.8	−1.787	1.787	0.497
2	−1.756	1.756	0.466
2.2	−1.736	1.736	0.446
2.4	−1.711	1.711	0.421
2.6	−1.692	1.692	0.402
2.8	−1.673	1.673	0.383
3	−1.654	1.654	0.364
3.2	−1.635	1.635	0.345
3.4	−1.622	1.622	0.332
3.6	−1.603	1.603	0.313
3.8	−1.578	1.578	0.288
4	−1.584	1.584	0.294
4.2	−1.565	1.565	0.275
4.4	−1.559	1.559	0.269
4.6	−1.546	1.546	0.256
4.8	−1.54	1.54	0.25
5	−1.527	1.527	0.237
5.2	−1.515	1.515	0.225
5.4	−1.508	1.508	0.218
5.6	−1.502	1.502	0.212
5.8	−1.489	1.489	0.199
6	−1.483	1.483	0.193

MIN	AS MEAS. FEET	INVERT FEET	PLOTTED (−1.29') FEET
6.2	−1.477	1.477	0.187
6.4	−1.47	1.47	0.18
6.6	−1.458	1.458	0.168
6.8	−1.451	1.451	0.161
7	−1.445	1.445	0.155
7.2	−1.439	1.439	0.149
7.4	−1.432	1.432	0.142
7.6	−1.426	1.426	0.136
7.8	−1.426	1.426	0.136
8	−1.42	1.42	0.13
8.2	−1.42	1.42	0.13
8.4	−1.413	1.413	0.123
8.6	−1.407	1.407	0.117
8.8	−1.401	1.401	0.111
9	−1.401	1.401	0.111
9.2	−1.394	1.394	0.104
9.4	−1.394	1.394	0.104
9.6	−1.388	1.388	0.098
9.8	−1.381	1.381	0.091
10	−1.381	1.381	0.091
12	−1.356	1.356	0.066
14	−1.337	1.337	0.047
16	−1.324	1.324	0.034
18	−1.318	1.318	0.028
20	−1.305	1.305	0.015
22	−1.299	1.299	0.009
24	−1.299	1.299	0.009
26	−1.293	1.293	0.003
28	−1.293	1.293	0.003
30	−1.293	1.293	0.003

BR-103 RISING HEAD - TEST 1



MIN	AS MEAS. FEET	INVERT FEET	PLOTTED (1.5−(ABS))
0	−1.305	1.305	0.195
0.0083	−1.185	1.185	0.315
0.0166	−0.329	0.329	1.171
0.025	−0.329	0.329	1.171
0.0333	−0.355	0.355	1.145
0.0416	−0.361	0.361	1.139
0.05	−0.367	0.367	1.133
0.0583	−0.374	0.374	1.126
0.0666	−0.38	0.38	1.12
0.075	−0.38	0.38	1.12
0.0833	−0.386	0.386	1.114
0.0916	−0.386	0.386	1.114
0.1	−0.399	0.399	1.101
0.1083	−0.399	0.399	1.101
0.1166	−0.405	0.405	1.095
0.125	−0.405	0.405	1.095
0.1333	−0.412	0.412	1.088
0.1416	−0.418	0.418	1.082
0.15	−0.418	0.418	1.082
0.1583	−0.424	0.424	1.076
0.1666	−0.424	0.424	1.076
0.175	−0.424	0.424	1.076
0.1833	−0.431	0.431	1.069
0.1916	−0.431	0.431	1.069
0.2	−0.437	0.437	1.063
0.2083	−0.437	0.437	1.063
0.2166	−0.443	0.443	1.057
0.225	−0.443	0.443	1.057
0.2333	−0.45	0.45	1.05
0.2416	−0.45	0.45	1.05
0.25	−0.456	0.456	1.044
0.2583	−0.456	0.456	1.044
0.2666	−0.462	0.462	1.038
0.275	−0.462	0.462	1.038
0.2833	−0.469	0.469	1.031
0.2916	−0.469	0.469	1.031
0.3	−0.469	0.469	1.031
0.3083	−0.475	0.475	1.025
0.3166	−0.475	0.475	1.025
0.325	−0.481	0.481	1.019
0.3333	−0.481	0.481	1.019
0.35	−0.488	0.488	1.012
0.3666	−0.494	0.494	1.006
0.3833	−0.5	0.5	1
0.4	−0.507	0.507	0.993
0.4166	−0.507	0.507	0.993
0.4333	−0.507	0.507	0.993
0.45	−0.513	0.513	0.987
0.4666	−0.519	0.519	0.981
0.4833	−0.526	0.526	0.974
0.5	−0.526	0.526	0.974
0.5166	−0.532	0.532	0.968
0.5333	−0.538	0.538	0.962

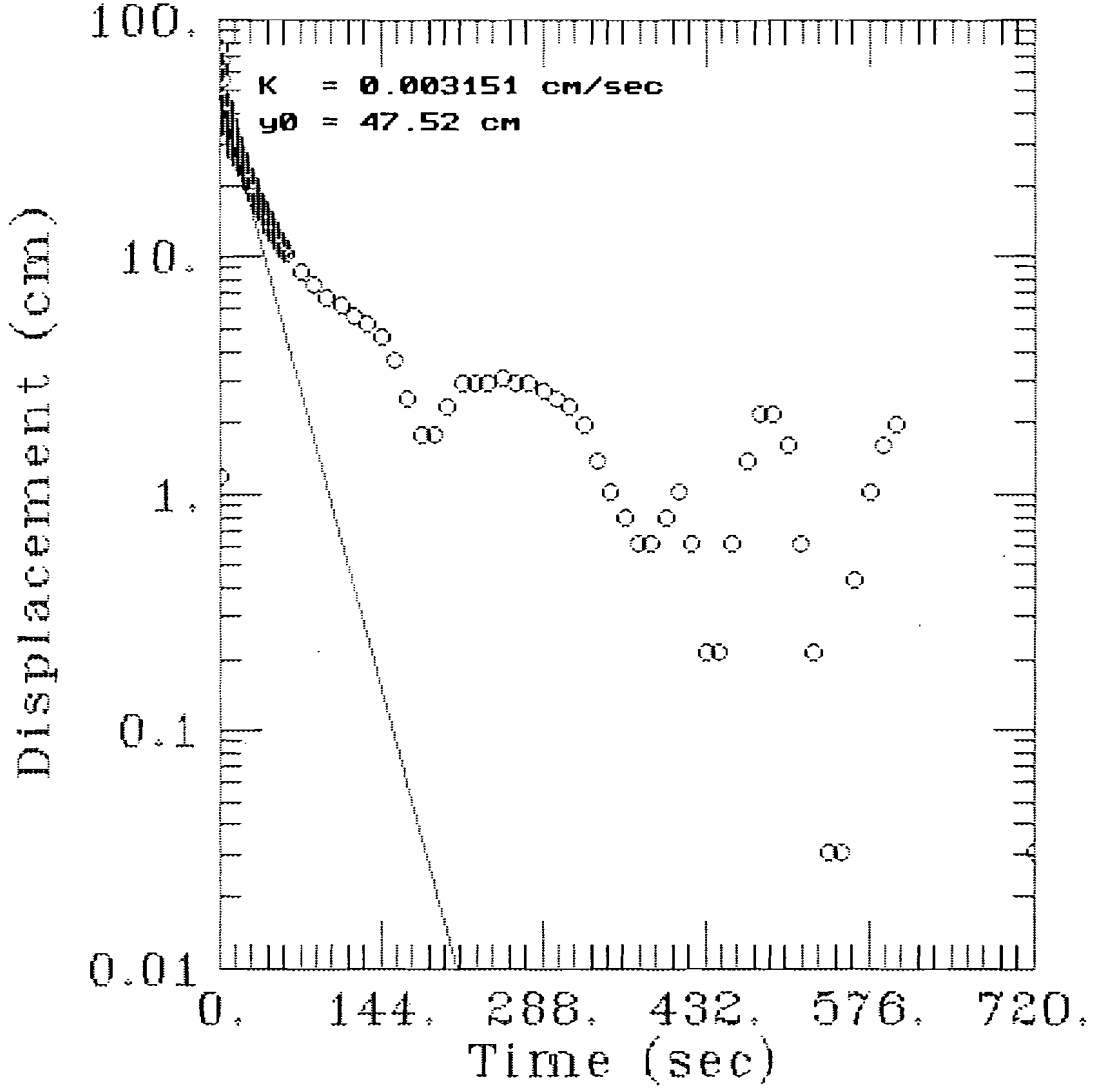
BR−103 RISING HEAD TEST 1

SLUG DISPLACEMENT	1.4 FT /	41.3 CM
TRANSDUCER STATIC	0.000 FT /	0.0 CM
WELL RADIUS	0.16 FT /	4.8 CM
SCREEN RADIUS	0.16 FT /	4.8 CM
AQUIF. THICKNESS	34.2 FT /	1042.4 CM
SCREEN LENGTH	32.2 FT /	981.5 CM
WATER COL. HEIGHT	24.25 FT /	739.1 CM

MIN	AS MEAS. FEET	INVERT FEET	PLOTTED (1.5−(ABS))
0.55	−0.538	0.538	0.962
0.5666	−0.545	0.545	0.955
0.5833	−0.551	0.551	0.949
0.6	−0.551	0.551	0.949
0.6166	−0.557	0.557	0.943
0.6333	−0.564	0.564	0.936
0.65	−0.57	0.57	0.93
0.6666	−0.57	0.57	0.93
0.6833	−0.576	0.576	0.924
0.7	−0.576	0.576	0.924
0.7166	−0.583	0.583	0.917
0.7333	−0.589	0.589	0.911
0.75	−0.589	0.589	0.911
0.7666	−0.595	0.595	0.905
0.7833	−0.602	0.602	0.898
0.8	−0.602	0.602	0.898
0.8166	−0.602	0.602	0.898
0.8333	−0.608	0.608	0.892
0.85	−0.614	0.614	0.886
0.8666	−0.614	0.614	0.886
0.8833	−0.621	0.621	0.879
0.9	−0.621	0.621	0.879
0.9166	−0.627	0.627	0.873
0.9333	−0.627	0.627	0.873
0.95	−0.633	0.633	0.867
0.9666	−0.633	0.633	0.867
0.9833	−0.64	0.64	0.86
1	−0.64	0.64	0.86
1.2	−0.678	0.678	0.822
1.4	−0.71	0.71	0.79
1.6	−0.741	0.741	0.759
1.8	−0.767	0.767	0.733
2	−0.792	0.792	0.708
2.2	−0.817	0.817	0.683
2.4	−0.836	0.836	0.664
2.6	−0.855	0.855	0.645
2.8	−0.874	0.874	0.626
3	−0.893	0.893	0.607
3.2	−0.906	0.906	0.594
3.4	−0.925	0.925	0.575
3.6	−0.938	0.938	0.562
3.8	−0.957	0.957	0.543
4	−0.969	0.969	0.531
4.2	−0.976	0.976	0.524
4.4	−0.988	0.988	0.512
4.6	−1.007	1.007	0.493
4.8	−1.014	1.014	0.486
5	−1.026	1.026	0.474
5.2	−1.033	1.033	0.467
5.4	−1.046	1.046	0.454
5.6	−1.052	1.052	0.448
5.8	−1.058	1.058	0.442
6	−1.071	1.071	0.429

MIN	AS MEAS. FEET	INVERT FEET	PLOTTED (1.5−(ABS))
6.2	−1.071	1.071	0.429
6.4	−1.077	1.077	0.423
6.6	−1.084	1.084	0.416
6.8	−1.09	1.09	0.41
7	−1.096	1.096	0.404
7.2	−1.103	1.103	0.397
7.4	−1.109	1.109	0.391
7.6	−1.115	1.115	0.385
7.8	−1.122	1.122	0.378
8	−1.122	1.122	0.378
8.2	−1.128	1.128	0.372
8.4	−1.134	1.134	0.366
8.6	−1.134	1.134	0.366
8.8	−1.141	1.141	0.359
9	−1.147	1.147	0.353
9.2	−1.147	1.147	0.353
9.4	−1.153	1.153	0.347
9.6	−1.153	1.153	0.347
9.8	−1.153	1.153	0.347
10	−1.153	1.153	0.347
12	−1.179	1.179	0.321
14	−1.191	1.191	0.309
16	−1.204	1.204	0.296
18	−1.217	1.217	0.283

BR-104 FALLING HEAD - TEST 1



MIN	AS MEAS. FEET	INVERT FEET	PLOTTED (ADD 0.102)
0	0.063	−0.063	0.039
0.0083	−2.351	2.351	2.453
0.0166	−1.889	1.889	1.991
0.025	−1.933	1.933	2.035
0.0333	−1.996	1.996	2.098
0.0416	−1.445	1.445	1.547
0.05	−2.085	2.085	2.187
0.0583	−1.73	1.73	1.832
0.0666	−1.274	1.274	1.376
0.075	−1.356	1.356	1.458
0.0833	−1.369	1.369	1.471
0.0916	−1.331	1.331	1.433
0.1	−1.293	1.293	1.395
0.1083	−1.255	1.255	1.357
0.1166	−1.229	1.229	1.331
0.125	−1.312	1.312	1.414
0.1333	−1.305	1.305	1.407
0.1416	−1.141	1.141	1.243
0.15	−1.115	1.115	1.217
0.1583	−1.09	1.09	1.192
0.1666	−1.065	1.065	1.167
0.175	−1.039	1.039	1.141
0.1833	−1.014	1.014	1.116
0.1916	−0.995	0.995	1.097
0.2	−0.976	0.976	1.078
0.2083	−0.95	0.95	1.052
0.2166	−0.931	0.931	1.033
0.225	−0.912	0.912	1.014
0.2333	−0.906	0.906	1.008
0.2416	−0.881	0.881	0.983
0.25	−0.773	0.773	0.875
0.2583	−0.836	0.836	0.938
0.2666	−0.83	0.83	0.932
0.275	−0.817	0.817	0.919
0.2833	−0.805	0.805	0.907
0.2916	−0.786	0.786	0.888
0.3	−0.779	0.779	0.881
0.3083	−0.76	0.76	0.862
0.3166	−0.748	0.748	0.85
0.325	−0.735	0.735	0.837
0.3333	−0.722	0.722	0.824
0.35	−0.697	0.697	0.799
0.3666	−0.678	0.678	0.78
0.3833	−0.652	0.652	0.754
0.4	−0.633	0.633	0.735
0.4166	−0.614	0.614	0.716
0.4333	−0.595	0.595	0.697
0.45	−0.583	0.583	0.685
0.4666	−0.557	0.557	0.659
0.4833	−0.545	0.545	0.647
0.5	−0.526	0.526	0.628
0.5166	−0.513	0.513	0.615
0.5333	−0.494	0.494	0.596

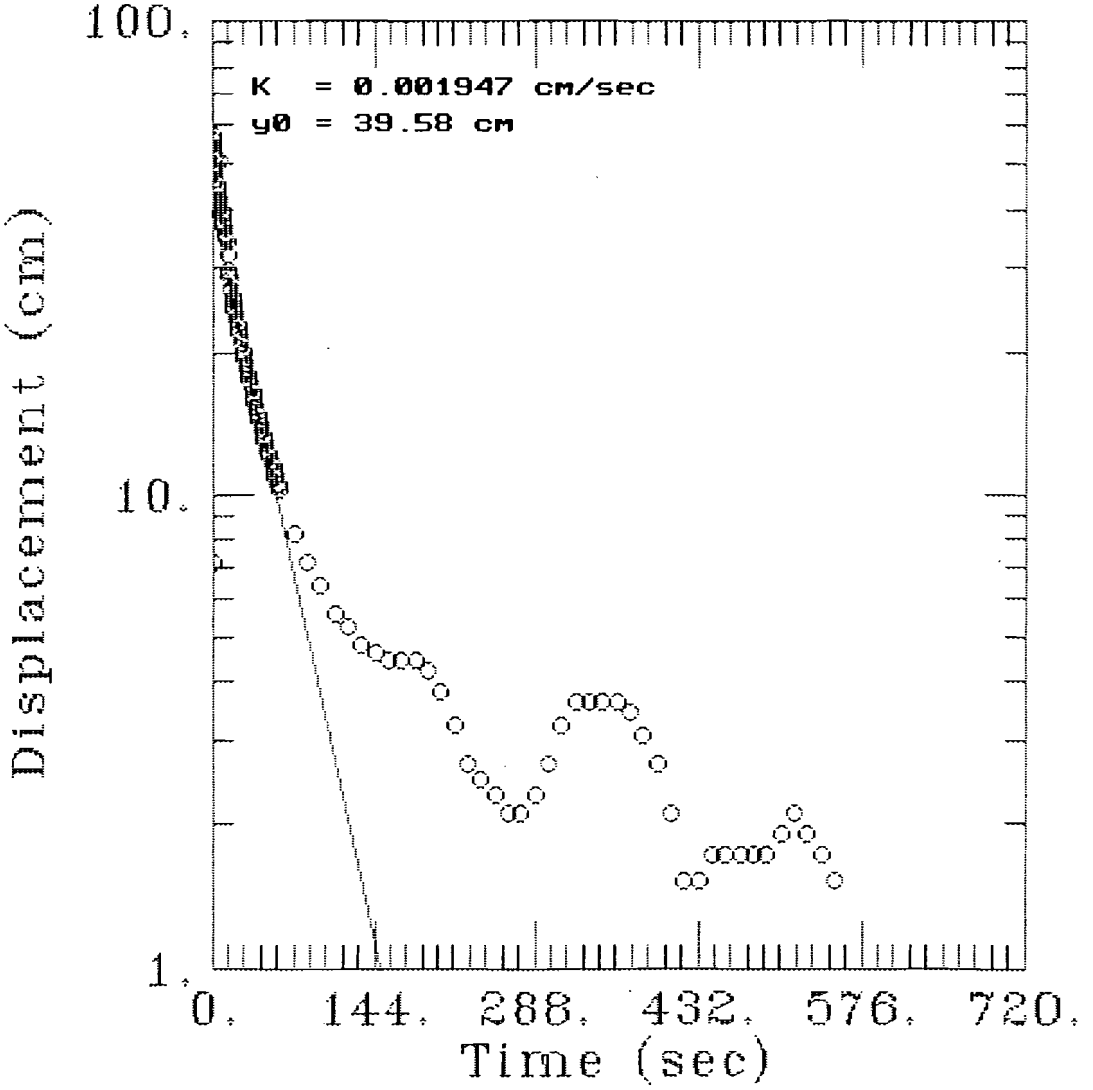
BR−104 FALLING HEAD TEST 1

SLUG DISPLACEMENT	1.4 FT /	41.3 CM
TRANSDUCER STATIC	0.000 FT /	0.0 CM
WELL RADIUS	0.16 FT /	4.8 CM
SCREEN RADIUS	0.16 FT /	4.8 CM
AQUIF. THICKNESS	21 FT /	640.1 CM
SCREEN LENGTH	19 FT /	579.1 CM
WATER COL. HEIGHT	24.28 FT /	740.1 CM

MIN	AS MEAS. FEET	INVERT FEET	PLOTTED (ADD 0.102)
0.55	−0.481	0.481	0.583
0.5666	−0.469	0.469	0.571
0.5833	−0.456	0.456	0.558
0.6	−0.443	0.443	0.545
0.6166	−0.431	0.431	0.533
0.6333	−0.418	0.418	0.52
0.65	−0.405	0.405	0.507
0.6666	−0.393	0.393	0.495
0.6833	−0.386	0.386	0.488
0.7	−0.374	0.374	0.476
0.7166	−0.361	0.361	0.463
0.7333	−0.355	0.355	0.457
0.75	−0.342	0.342	0.444
0.7666	−0.335	0.335	0.437
0.7833	−0.323	0.323	0.425
0.8	−0.316	0.316	0.418
0.8166	−0.31	0.31	0.412
0.8333	−0.297	0.297	0.399
0.85	−0.291	0.291	0.393
0.8666	−0.285	0.285	0.387
0.8833	−0.278	0.278	0.38
0.9	−0.272	0.272	0.374
0.9166	−0.266	0.266	0.368
0.9333	−0.259	0.259	0.361
0.95	−0.253	0.253	0.355
0.9666	−0.247	0.247	0.349
0.9833	−0.24	0.24	0.342
1	−0.234	0.234	0.336
1.2	−0.183	0.183	0.285
1.4	−0.145	0.145	0.247
1.6	−0.12	0.12	0.222
1.8	−0.101	0.101	0.203
2	−0.082	0.082	0.184
2.2	−0.069	0.069	0.171
2.4	−0.05	0.05	0.152
2.6	−0.019	0.019	0.121
2.8	0.019	−0.019	0.083
3	0.044	−0.044	0.058
3.2	0.044	−0.044	0.058
3.4	0.025	−0.025	0.077
3.6	0.006	−0.006	0.096
3.8	0.006	−0.006	0.096
4	0.006	−0.006	0.096
4.2	0	0	0.102
4.4	0.006	−0.006	0.096
4.6	0.006	−0.006	0.096
4.8	0.012	−0.012	0.09
5	0.019	−0.019	0.083
5.2	0.025	−0.025	0.077
5.4	0.038	−0.038	0.064
5.6	0.057	−0.057	0.045
5.8	0.069	−0.069	0.033
6	0.076	−0.076	0.026

MIN	AS MEAS. FEET	INVERT FEET	PLOTTED (ADD 0.102)
6.2	0.082	−0.082	0.02
6.4	0.082	−0.082	0.02
6.6	0.076	−0.076	0.026
6.8	0.069	−0.069	0.033
7	0.082	−0.082	0.02
7.2	0.095	−0.095	0.007
7.4	0.095	−0.095	0.007
7.6	0.082	−0.082	0.02
7.8	0.057	−0.057	0.045
8	0.031	−0.031	0.071
8.2	0.031	−0.031	0.071
8.4	0.05	−0.05	0.052
8.6	0.082	−0.082	0.02
8.8	0.095	−0.095	0.007
9	0.101	−0.101	0.001
9.2	0.101	−0.101	0.001
9.4	0.088	−0.088	0.014
9.6	0.069	−0.069	0.033
9.8	0.05	−0.05	0.052
10	0.038	−0.038	0.064
12	0.101	−0.101	0.001

BR-104 RISING HEAD - TEST 1

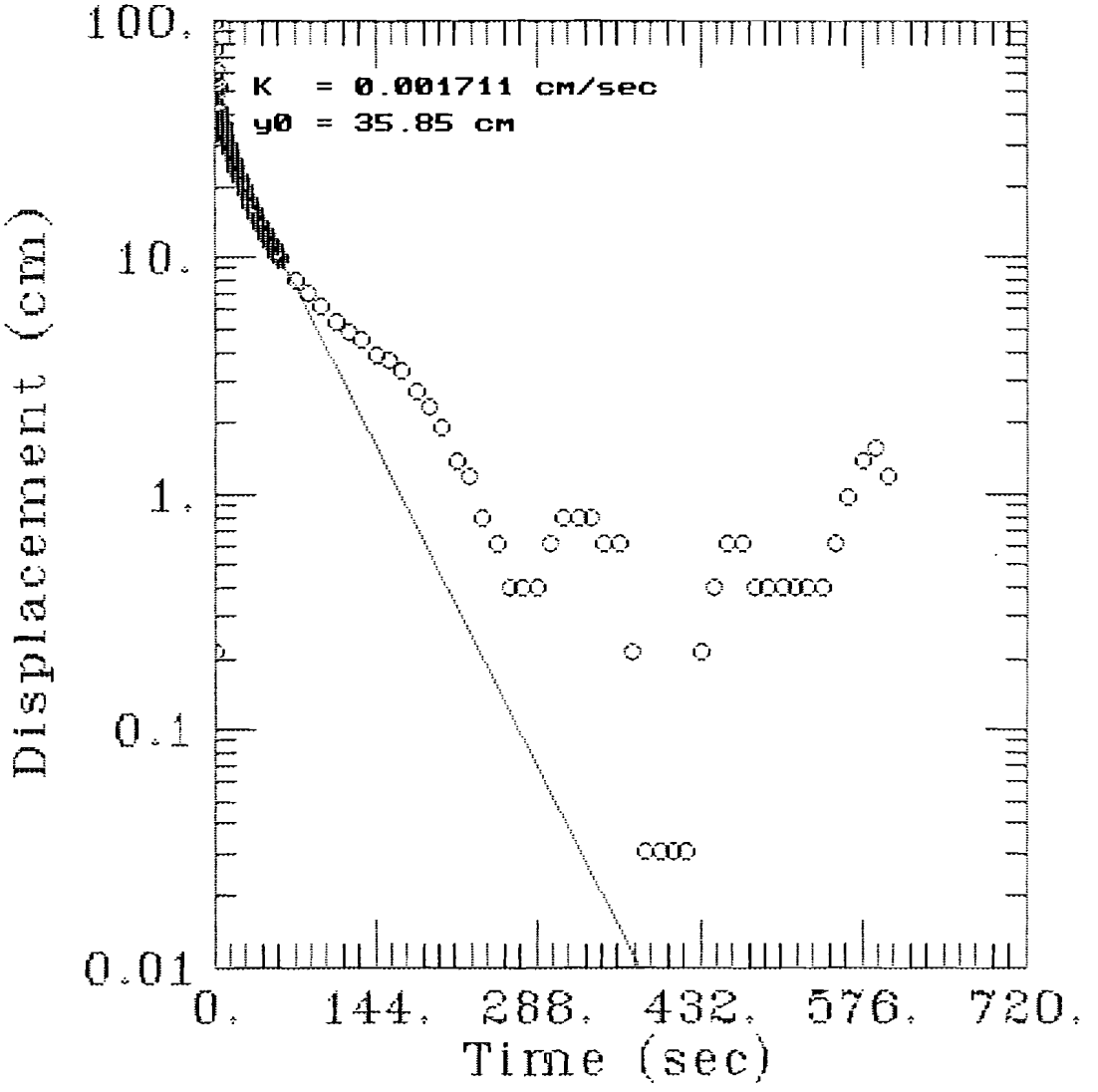


MIN	AS MEAS./PLOTTED FEET			
0	0.234	BR-104	RISING HEAD TEST 1	
0.0083	1.717			
0.0166	1.87	SLUG DISPLACEMENT	1.4 FT /	41.3 CM
0.025	1.832	TRANSDUCER STATIC	0.000 FT /	0.0 CM
0.0333	1.756			
0.0416	1.686	WELL RADIUS	0.16 FT /	4.8 CM
0.05	1.622	SCREEN RADIUS	0.16 FT /	4.8 CM
0.0583	1.572	AQUIF. THICKNESS	21 FT /	640.1 CM
0.0666	1.527	SCREEN LENGTH	19 FT /	579.1 CM
0.075	1.483	WATER COL. HEIGHT	24.28 FT /	740.1 CM
0.0833	1.439			
0.0916	1.401			
0.1	1.362			
0.1083	1.337			
0.1166	1.324			
0.125	1.667			
0.1333	1.369			
0.1416	1.337			
0.15	1.312			
0.1583	1.286			
0.1666	1.267			
0.175	1.242			
0.1833	1.217			
0.1916	1.191			
0.2	1.166			
0.2083	1.153			
0.2166	1.134			
0.225	1.115			
0.2333	1.052			
0.2416	0.976			
0.25	0.976			
0.2583	0.95			
0.2666	0.938			
0.275	0.9			
0.2833	0.887			
0.2916	0.881			
0.3	0.862			
0.3083	0.849			
0.3166	0.836			
0.325	0.824			
0.3333	0.811			
0.35	0.792			
0.3666	0.767			
0.3833	0.748			
0.4	0.722			
0.4166	0.703			
0.4333	0.684			
0.45	0.665			
0.4666	0.652			

MIN	AS MEAS./PLOTTED FEET
0.4833	0.633
0.5	0.621
0.5166	0.602
0.5333	0.589
0.55	0.576
0.5666	0.564
0.5833	0.551
0.6	0.538
0.6166	0.526
0.6333	0.513
0.65	0.5
0.6666	0.488
0.6833	0.481
0.7	0.469
0.7166	0.456
0.7333	0.45
0.75	0.437
0.7666	0.431
0.7833	0.424
0.8	0.418
0.8166	0.405
0.8333	0.399
0.85	0.393
0.8666	0.386
0.8833	0.38
0.9	0.374
0.9166	0.367
0.9333	0.355
0.95	0.355
0.9666	0.342
0.9833	0.342
1	0.335
1.2	0.272
1.4	0.234
1.6	0.209
1.8	0.183
2	0.171
2.2	0.158
2.4	0.152
2.6	0.145
2.8	0.145
3	0.145
3.2	0.139
3.4	0.126
3.6	0.107
3.8	0.088
4	0.082
4.2	0.076
4.4	0.069

MIN	AS MEAS./PLOTTED FEET
4.6	0.069
4.8	0.076
5	0.088
5.2	0.107
5.4	0.12
5.6	0.12
5.8	0.12
6	0.12
6.2	0.114
6.4	0.101
6.6	0.088
6.8	0.069
7	0.05
7.2	0.05
7.4	0.057
7.6	0.057
7.8	0.057
8	0.057
8.2	0.057
8.4	0.063
8.6	0.069
8.8	0.063
9	0.057
9.2	0.05

BR-104 FALLING HEAD - TEST 2



MIN	AS MEAS. FEET	INVERT FEET	PLOTTED (ADD 0.051') FEET
0	0.044	−0.044	0.007
0.0083	0.044	−0.044	0.007
0.0166	−3.131	3.131	3.182
0.025	−1.046	1.046	1.097
0.0333	−2.453	2.453	2.504
0.0416	−1.952	1.952	2.003
0.05	−1.356	1.356	1.407
0.0583	−1.641	1.641	1.692
0.0666	−1.546	1.546	1.597
0.075	−1.673	1.673	1.724
0.0833	−1.191	1.191	1.242
0.0916	−1.318	1.318	1.369
0.1	−1.324	1.324	1.375
0.1083	−1.286	1.286	1.337
0.1166	−1.248	1.248	1.299
0.125	−1.217	1.217	1.268
0.1333	−1.185	1.185	1.236
0.1416	−1.153	1.153	1.204
0.15	−1.128	1.128	1.179
0.1583	−1.103	1.103	1.154
0.1666	−1.077	1.077	1.128
0.175	−1.052	1.052	1.103
0.1833	−1.033	1.033	1.084
0.1916	−1.007	1.007	1.058
0.2	−0.988	0.988	1.039
0.2083	−0.969	0.969	1.02
0.2166	−0.969	0.969	1.02
0.225	−0.931	0.931	0.982
0.2333	−0.912	0.912	0.963
0.2416	−0.893	0.893	0.944
0.25	−0.881	0.881	0.932
0.2583	−0.868	0.868	0.919
0.2666	−0.849	0.849	0.9
0.275	−0.83	0.83	0.881
0.2833	−0.817	0.817	0.868
0.2916	−0.805	0.805	0.856
0.3	−0.792	0.792	0.843
0.3083	−0.779	0.779	0.83
0.3166	−0.76	0.76	0.811
0.325	−0.748	0.748	0.799
0.3333	−0.735	0.735	0.786
0.35	−0.716	0.716	0.767
0.3666	−0.69	0.69	0.741
0.3833	−0.671	0.671	0.722
0.4	−0.652	0.652	0.703
0.4166	−0.633	0.633	0.684
0.4333	−0.614	0.614	0.665
0.45	−0.595	0.595	0.646
0.4666	−0.576	0.576	0.627
0.4833	−0.564	0.564	0.615
0.5	−0.545	0.545	0.596
0.5166	−0.532	0.532	0.583
0.5333	−0.519	0.519	0.57

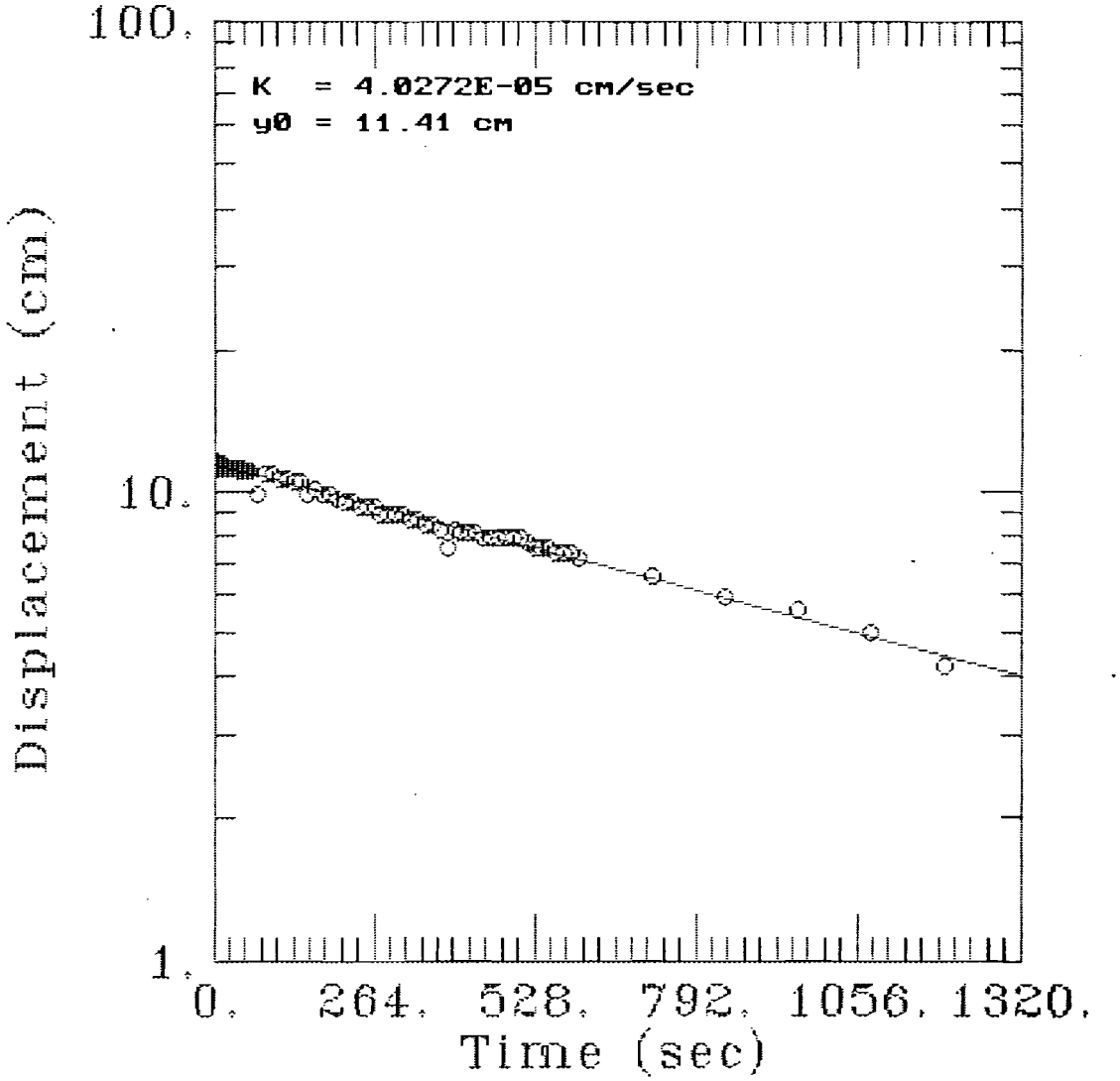
BR−104 FALLING HEAD TEST 2

SLUG DISPLACEMENT	1.4 FT /	41.3 CM
TRANSDUCER STATIC	0.000 FT /	0.0 CM
WELL RADIUS	0.16 FT /	4.8 CM
SCREEN RADIUS	0.16 FT /	4.8 CM
AQUIF. THICKNESS	21 FT /	640.1 CM
SCREEN LENGTH	19 FT /	579.1 CM
WATER COL. HEIGHT	24.28 FT /	740.1 CM

MIN	AS MEAS. FEET	INVERT FEET	PLOTTED (ADD 0.051') FEET
0.55	−0.5	0.5	0.551
0.5666	−0.488	0.488	0.539
0.5833	−0.475	0.475	0.526
0.6	−0.462	0.462	0.513
0.6166	−0.45	0.45	0.501
0.6333	−0.443	0.443	0.494
0.65	−0.431	0.431	0.482
0.6666	−0.418	0.418	0.469
0.6833	−0.405	0.405	0.456
0.7	−0.399	0.399	0.45
0.7166	−0.393	0.393	0.444
0.7333	−0.38	0.38	0.431
0.75	−0.374	0.374	0.425
0.7666	−0.361	0.361	0.412
0.7833	−0.355	0.355	0.406
0.8	−0.348	0.348	0.399
0.8166	−0.342	0.342	0.393
0.8333	−0.335	0.335	0.386
0.85	−0.323	0.323	0.374
0.8666	−0.316	0.316	0.367
0.8833	−0.31	0.31	0.361
0.9	−0.316	0.316	0.367
0.9166	−0.297	0.297	0.348
0.9333	−0.291	0.291	0.342
0.95	−0.285	0.285	0.336
0.9666	−0.278	0.278	0.329
0.9833	−0.278	0.278	0.329
1	−0.272	0.272	0.323
1.2	−0.215	0.215	0.266
1.4	−0.183	0.183	0.234
1.6	−0.152	0.152	0.203
1.8	−0.126	0.126	0.177
2	−0.107	0.107	0.158
2.2	−0.095	0.095	0.146
2.4	−0.076	0.076	0.127
2.6	−0.069	0.069	0.12
2.8	−0.057	0.057	0.108
3	−0.038	0.038	0.089
3.2	−0.025	0.025	0.076
3.4	−0.012	0.012	0.063
3.6	0.006	−0.006	0.045
3.8	0.012	−0.012	0.039
4	0.025	−0.025	0.026
4.2	0.031	−0.031	0.02
4.4	0.038	−0.038	0.013
4.6	0.038	−0.038	0.013
4.8	0.038	−0.038	0.013
5	0.031	−0.031	0.02
5.2	0.025	−0.025	0.026
5.4	0.025	−0.025	0.026
5.6	0.025	−0.025	0.026
5.8	0.031	−0.031	0.02
6	0.031	−0.031	0.02

MIN	AS MEAS. FEET	INVERT FEET	PLOTTED (ADD 0.051') FEET
6.2	0.044	−0.044	0.007
6.4	0.05	−0.05	0.001
6.6	0.05	−0.05	0.001
6.8	0.05	−0.05	0.001
7	0.05	−0.05	0.001
7.2	0.044	−0.044	0.007
7.4	0.038	−0.038	0.013
7.6	0.031	−0.031	0.02
7.8	0.031	−0.031	0.02
8	0.038	−0.038	0.013
8.2	0.038	−0.038	0.013
8.4	0.038	−0.038	0.013
8.6	0.038	−0.038	0.013
8.8	0.038	−0.038	0.013
9	0.038	−0.038	0.013
9.2	0.031	−0.031	0.02
9.4	0.019	−0.019	0.032
9.6	0.006	−0.006	0.045
9.8	0	0	0.051
10	0.012	−0.012	0.039

BR-105 FALLING HEAD - TEST 1



MIN	AS MEAS. FEET	INVERT/PLOTTED FEET
0	−0.374	0.374
0.0083	−0.374	0.374
0.0166	−0.38	0.38
0.025	−0.374	0.374
0.0333	−0.374	0.374
0.0416	−0.374	0.374
0.05	−0.374	0.374
0.0583	−0.374	0.374
0.0666	−0.374	0.374
0.075	−0.374	0.374
0.0833	−0.374	0.374
0.0916	−0.374	0.374
0.1	−0.367	0.367
0.1083	−0.374	0.374
0.1166	−0.374	0.374
0.125	−0.374	0.374
0.1333	−0.374	0.374
0.1416	−0.374	0.374
0.15	−0.367	0.367
0.1583	−0.374	0.374
0.1666	−0.374	0.374
0.175	−0.374	0.374
0.1833	−0.367	0.367
0.1916	−0.374	0.374
0.2	−0.367	0.367
0.2083	−0.367	0.367
0.2166	−0.367	0.367
0.225	−0.367	0.367
0.2333	−0.367	0.367
0.2416	−0.374	0.374
0.25	−0.367	0.367
0.2583	−0.367	0.367
0.2666	−0.367	0.367
0.275	−0.367	0.367
0.2833	−0.367	0.367
0.2916	−0.367	0.367
0.3	−0.367	0.367
0.3083	−0.367	0.367
0.3166	−0.367	0.367
0.325	−0.367	0.367
0.3333	−0.367	0.367
0.35	−0.367	0.367
0.3666	−0.367	0.367
0.3833	−0.367	0.367
0.4	−0.367	0.367
0.4166	−0.367	0.367
0.4333	−0.367	0.367
0.45	−0.367	0.367
0.4666	−0.367	0.367

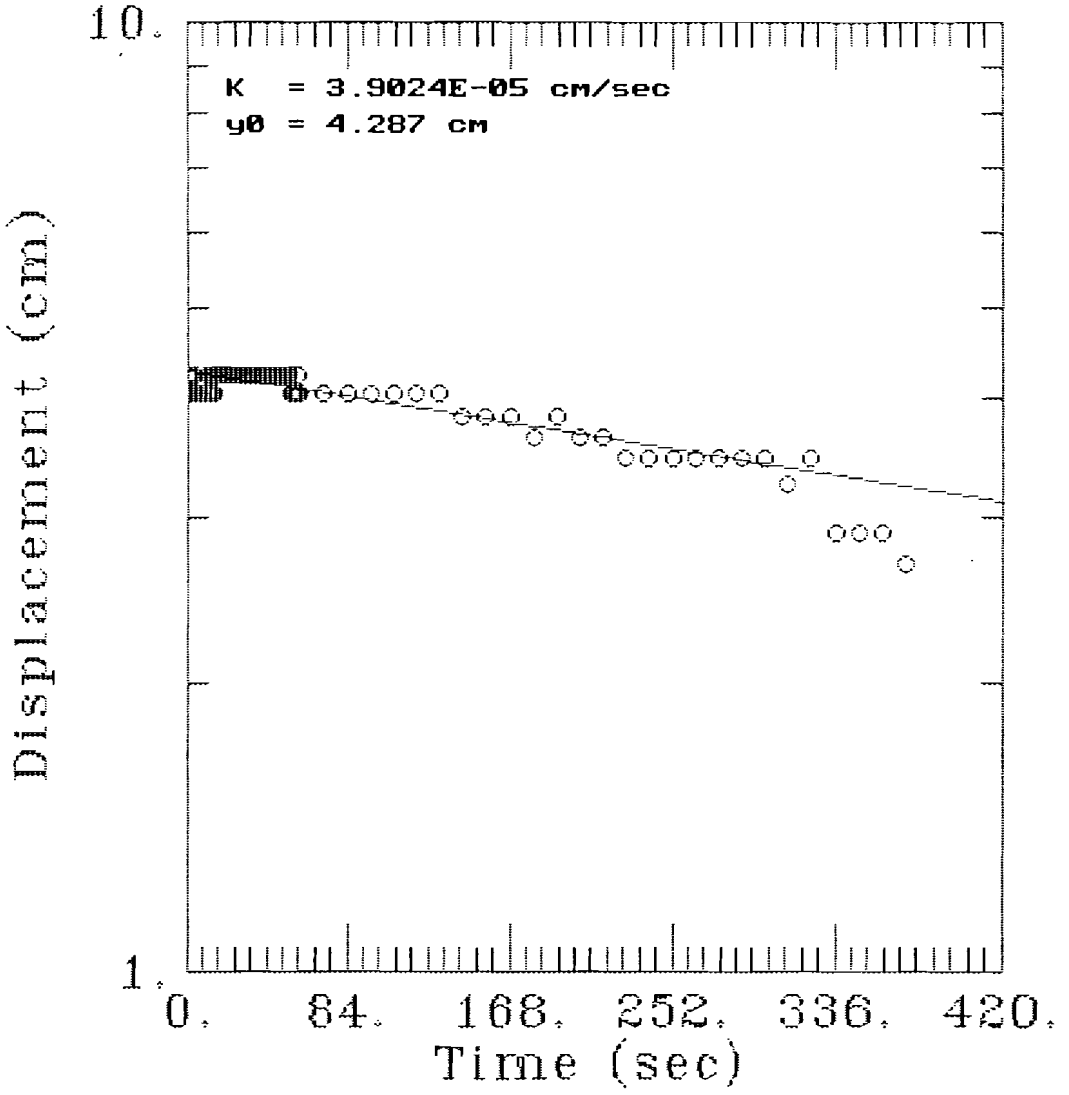
BR−105 FALLING HEAD TEST 1

SLUG DISPLACEMENT	1.4 FT /	41.3 CM
TRANSDUCER STATIC	0.000 FT /	0.0 CM
WELL RADIUS	0.16 FT /	4.8 CM
SCREEN RADIUS	0.16 FT /	4.8 CM
AQUIF. THICKNESS	30.5 FT /	929.6 CM
SCREEN LENGTH	26.5 FT /	807.7 CM
WATER COL. HEIGHT	19.5 FT /	594.4 CM

MIN	AS MEAS. FEET	INVERT/PLOTTED FEET
0.4833	−0.367	0.367
0.5	−0.367	0.367
0.5166	−0.367	0.367
0.5333	−0.367	0.367
0.55	−0.367	0.367
0.5666	−0.367	0.367
0.5833	−0.367	0.367
0.6	−0.367	0.367
0.6166	−0.367	0.367
0.6333	−0.367	0.367
0.65	−0.367	0.367
0.6666	−0.367	0.367
0.6833	−0.367	0.367
0.7	−0.367	0.367
0.7166	−0.367	0.367
0.7333	−0.361	0.361
0.75	−0.361	0.361
0.7666	−0.361	0.361
0.7833	−0.367	0.367
0.8	−0.367	0.367
0.8166	−0.367	0.367
0.8333	−0.361	0.361
0.85	−0.361	0.361
0.8666	−0.361	0.361
0.8833	−0.361	0.361
0.9	−0.361	0.361
0.9166	−0.361	0.361
0.9333	−0.361	0.361
0.95	−0.361	0.361
0.9666	−0.361	0.361
0.9833	−0.361	0.361
1	−0.361	0.361
1.2	−0.323	0.323
1.4	−0.355	0.355
1.6	−0.355	0.355
1.8	−0.348	0.348
2	−0.348	0.348
2.2	−0.342	0.342
2.4	−0.342	0.342
2.6	−0.323	0.323
2.8	−0.329	0.329
3	−0.323	0.323
3.2	−0.323	0.323
3.4	−0.316	0.316
3.6	−0.31	0.31
3.8	−0.31	0.31
4	−0.304	0.304
4.2	−0.304	0.304
4.4	−0.304	0.304

MIN	AS MEAS. FEET	INVERT/PLOTTED FEET
4.6	−0.291	0.291
4.8	−0.291	0.291
5	−0.291	0.291
5.2	−0.291	0.291
5.4	−0.285	0.285
5.6	−0.285	0.285
5.8	−0.278	0.278
6	−0.278	0.278
6.2	−0.272	0.272
6.4	−0.247	0.247
6.6	−0.272	0.272
6.8	−0.266	0.266
7	−0.266	0.266
7.2	−0.266	0.266
7.4	−0.259	0.259
7.6	−0.259	0.259
7.8	−0.259	0.259
8	−0.259	0.259
8.2	−0.259	0.259
8.4	−0.259	0.259
8.6	−0.253	0.253
8.8	−0.247	0.247
9	−0.247	0.247
9.2	−0.247	0.247
9.4	−0.24	0.24
9.6	−0.24	0.24
9.8	−0.24	0.24
10	−0.234	0.234
12	−0.215	0.215
14	−0.196	0.196
16	−0.183	0.183
18	−0.164	0.164
20	−0.139	0.139

BR-105 RISING HEAD - TEST 1



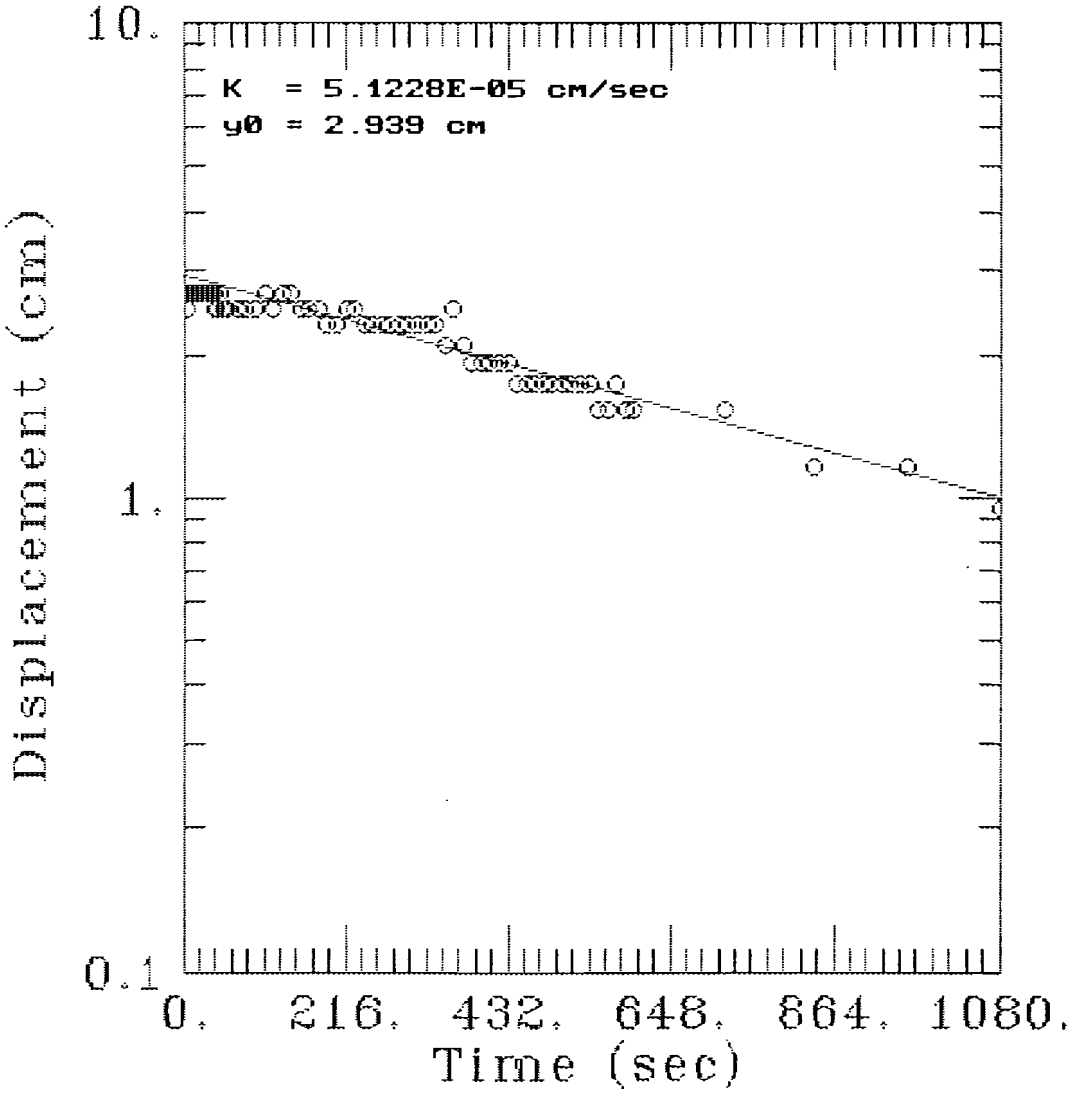
MIN	AS MEAS. FEET	INVERT/ PLOTTED FEET
0	−0.139	0.139
0.0083	−0.139	0.139
0.0166	−0.139	0.139
0.025	−0.139	0.139
0.0333	−0.133	0.133
0.0416	−0.133	0.133
0.05	−0.133	0.133
0.0583	−0.139	0.139
0.0666	−0.133	0.133
0.075	−0.139	0.139
0.0833	−0.133	0.133
0.0916	−0.133	0.133
0.1	−0.133	0.133
0.1083	−0.133	0.133
0.1166	−0.133	0.133
0.125	−0.133	0.133
0.1333	−0.133	0.133
0.1416	−0.133	0.133
0.15	−0.133	0.133
0.1583	−0.139	0.139
0.1666	−0.139	0.139
0.175	−0.139	0.139
0.1833	−0.133	0.133
0.1916	−0.133	0.133
0.2	−0.139	0.139
0.2083	−0.139	0.139
0.2166	−0.133	0.133
0.225	−0.139	0.139
0.2333	−0.133	0.133
0.2416	−0.139	0.139
0.25	−0.133	0.133
0.2583	−0.139	0.139
0.2666	−0.139	0.139
0.275	−0.139	0.139
0.2833	−0.139	0.139
0.2916	−0.139	0.139
0.3	−0.139	0.139
0.3083	−0.139	0.139
0.3166	−0.139	0.139
0.325	−0.139	0.139
0.3333	−0.139	0.139
0.35	−0.139	0.139
0.3666	−0.139	0.139
0.3833	−0.139	0.139
0.4	−0.139	0.139
0.4166	−0.139	0.139
0.4333	−0.139	0.139
0.45	−0.139	0.139
0.4666	−0.139	0.139

BR−105	RISING HEAD TEST 1	
SLUG DISPLACEMENT	1.4 FT /	41.3 CM
TRANSDUCER STATIC	0.000 FT /	0.0 CM
WELL RADIUS	0.16 FT /	4.8 CM
SCREEN RADIUS	0.16 FT /	4.8 CM
AQUIF. THICKNESS	30.5 FT /	929.6 CM
SCREEN LENGTH	26.5 FT /	807.7 CM
WATER COL. HEIGHT	19.5 FT /	594.4 CM

MIN	AS MEAS. FEET	INVERT/ PLOTTED FEET
0.4833	−0.139	0.139
0.5	−0.139	0.139
0.5166	−0.139	0.139
0.5333	−0.139	0.139
0.55	−0.139	0.139
0.5666	−0.139	0.139
0.5833	−0.139	0.139
0.6	−0.139	0.139
0.6166	−0.139	0.139
0.6333	−0.139	0.139
0.65	−0.139	0.139
0.6666	−0.139	0.139
0.6833	−0.139	0.139
0.7	−0.139	0.139
0.7166	−0.139	0.139
0.7333	−0.139	0.139
0.75	−0.139	0.139
0.7666	−0.139	0.139
0.7833	−0.139	0.139
0.8	−0.139	0.139
0.8166	−0.139	0.139
0.8333	−0.139	0.139
0.85	−0.139	0.139
0.8666	−0.139	0.139
0.8833	−0.139	0.139
0.9	−0.139	0.139
0.9166	−0.133	0.133
0.9333	−0.133	0.133
0.95	−0.133	0.133
0.9666	−0.133	0.133
0.9833	−0.139	0.139
1	−0.133	0.133
1.2	−0.133	0.133
1.4	−0.133	0.133
1.6	−0.133	0.133
1.8	−0.133	0.133
2	−0.133	0.133
2.2	−0.133	0.133
2.4	−0.126	0.126
2.6	−0.126	0.126
2.8	−0.126	0.126
3	−0.12	0.12
3.2	−0.126	0.126
3.4	−0.12	0.12
3.6	−0.12	0.12
3.8	−0.114	0.114
4	−0.114	0.114
4.2	−0.114	0.114
4.4	−0.114	0.114

MIN	AS MEAS. FEET	INVERT/ PLOTTED FEET
4.6	−0.114	0.114
4.8	−0.114	0.114
5	−0.114	0.114
5.2	−0.107	0.107
5.4	−0.114	0.114
5.6	−0.095	0.095
5.8	−0.095	0.095
6	−0.095	0.095
6.2	−0.088	0.088

BR-105 FALLING HEAD - TEST 2



MIN	AS MEAS. FEET	INVERT/PLOTTED FEET
0	−0.088	0.088
0.0083	−0.088	0.088
0.0166	−0.088	0.088
0.025	−0.088	0.088
0.0333	−0.088	0.088
0.0416	−0.088	0.088
0.05	−0.088	0.088
0.0583	−0.088	0.088
0.0666	−0.088	0.088
0.075	−0.088	0.088
0.0833	−0.088	0.088
0.0916	−0.088	0.088
0.1	−0.088	0.088
0.1083	−0.082	0.082
0.1166	−0.088	0.088
0.125	−0.088	0.088
0.1333	−0.088	0.088
0.1416	−0.088	0.088
0.15	−0.088	0.088
0.1583	−0.088	0.088
0.1666	−0.088	0.088
0.175	−0.088	0.088
0.1833	−0.088	0.088
0.1916	−0.088	0.088
0.2	−0.088	0.088
0.2083	−0.088	0.088
0.2166	−0.088	0.088
0.225	−0.088	0.088
0.2333	−0.088	0.088
0.2416	−0.088	0.088
0.25	−0.088	0.088
0.2583	−0.088	0.088
0.2666	−0.088	0.088
0.275	−0.088	0.088
0.2833	−0.088	0.088
0.2916	−0.088	0.088
0.3	−0.088	0.088
0.3083	−0.088	0.088
0.3166	−0.088	0.088
0.325	−0.088	0.088
0.3333	−0.088	0.088
0.35	−0.088	0.088
0.3666	−0.088	0.088
0.3833	−0.088	0.088
0.4	−0.088	0.088
0.4166	−0.088	0.088
0.4333	−0.088	0.088
0.45	−0.088	0.088
0.4666	−0.088	0.088

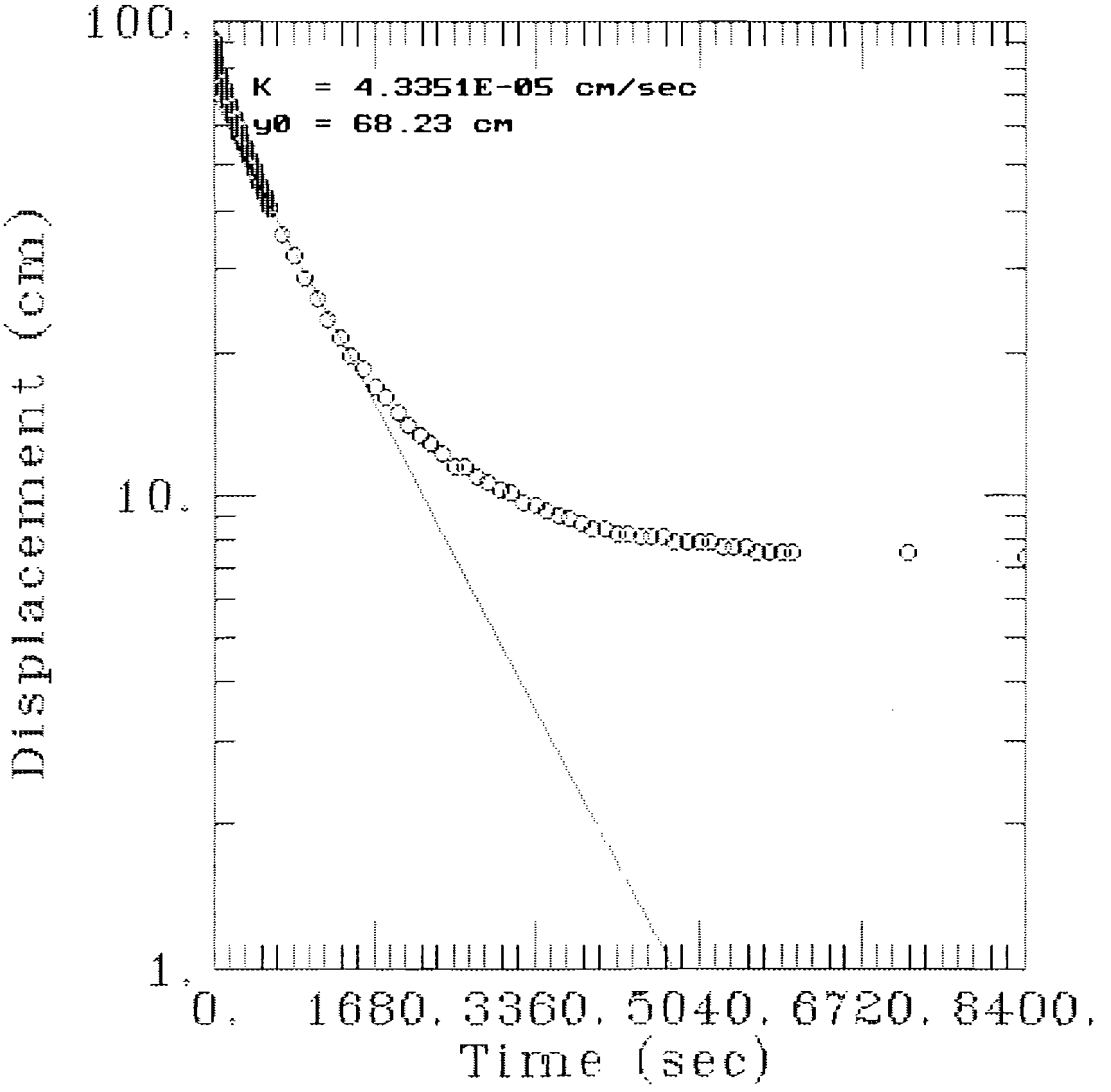
BR−105 FALLING HEAD TEST 2

SLUG DISPLACEMENT	1.4 FT /	41.3 CM
TRANSDUCER STATIC	0.000 FT /	0.0 CM
WELL RADIUS	0.16 FT /	4.8 CM
SCREEN RADIUS	0.16 FT /	4.8 CM
AQUIF. THICKNESS	30.5 FT /	929.6 CM
SCREEN LENGTH	26.5 FT /	807.7 CM
WATER COL. HEIGHT	19.5 FT /	594.4 CM

MIN	AS MEAS. FEET	INVERT/PLOTTED FEET
0.4833	−0.088	0.088
0.5	−0.088	0.088
0.5166	−0.088	0.088
0.5333	−0.088	0.088
0.55	−0.088	0.088
0.5666	−0.088	0.088
0.5833	−0.088	0.088
0.6	−0.088	0.088
0.6166	−0.088	0.088
0.6333	−0.088	0.088
0.65	−0.088	0.088
0.6666	−0.088	0.088
0.6833	−0.088	0.088
0.7	−0.088	0.088
0.7166	−0.082	0.082
0.7333	−0.082	0.082
0.75	−0.082	0.082
0.7666	−0.082	0.082
0.7833	−0.082	0.082
0.8	−0.088	0.088
0.8166	−0.088	0.088
0.8333	−0.088	0.088
0.85	−0.082	0.082
0.8666	−0.082	0.082
0.8833	−0.082	0.082
0.9	−0.082	0.082
0.9166	−0.082	0.082
0.9333	−0.082	0.082
0.95	−0.082	0.082
0.9666	−0.082	0.082
0.9833	−0.082	0.082
1	−0.082	0.082
1.2	−0.082	0.082
1.4	−0.082	0.082
1.6	−0.082	0.082
1.8	−0.088	0.088
2	−0.082	0.082
2.2	−0.088	0.088
2.4	−0.088	0.088
2.6	−0.082	0.082
2.8	−0.082	0.082
3	−0.082	0.082
3.2	−0.076	0.076
3.4	−0.076	0.076
3.6	−0.082	0.082
3.8	−0.082	0.082
4	−0.076	0.076
4.2	−0.076	0.076
4.4	−0.076	0.076

MIN	AS MEAS. FEET	INVERT/PLOTTED FEET
4.6	−0.076	0.076
4.8	−0.076	0.076
5	−0.076	0.076
5.2	−0.076	0.076
5.4	−0.076	0.076
5.6	−0.076	0.076
5.8	−0.069	0.069
6	−0.082	0.082
6.2	−0.069	0.069
6.4	−0.063	0.063
6.6	−0.063	0.063
6.8	−0.063	0.063
7	−0.063	0.063
7.2	−0.063	0.063
7.4	−0.057	0.057
7.6	−0.057	0.057
7.8	−0.057	0.057
8	−0.057	0.057
8.2	−0.057	0.057
8.4	−0.057	0.057
8.6	−0.057	0.057
8.8	−0.057	0.057
9	−0.057	0.057
9.2	−0.05	0.05
9.4	−0.05	0.05
9.6	−0.057	0.057
9.8	−0.05	0.05
10	−0.05	0.05
12	−0.05	0.05
14	−0.038	0.038
16	−0.038	0.038
18	−0.031	0.031

BR-105D RISING HEAD - TEST 1



MIN	AS MEAS. FEET	PLOTTED FEET
0	2.599	2.599
0.0083	2.979	2.979
0.0166	2.985	2.985
0.025	2.878	2.878
0.0333	2.947	2.947
0.0416	2.846	2.846
0.05	2.865	2.865
0.0583	2.871	2.871
0.0666	2.827	2.827
0.075	2.852	2.852
0.0833	2.865	2.865
0.0916	2.821	2.821
0.1	2.84	2.84
0.1083	2.865	2.865
0.1166	2.84	2.84
0.125	2.821	2.821
0.1333	2.808	2.808
0.1416	2.802	2.802
0.15	2.795	2.795
0.1583	2.802	2.802
0.1666	2.802	2.802
0.175	2.795	2.795
0.1833	2.795	2.795
0.1916	2.789	2.789
0.2	2.789	2.789
0.2083	2.782	2.782
0.2166	2.776	2.776
0.225	2.776	2.776
0.2333	2.77	2.77
0.2416	2.77	2.77
0.25	2.77	2.77
0.2583	2.763	2.763
0.2666	2.763	2.763
0.275	2.757	2.757
0.2833	2.757	2.757
0.2916	2.751	2.751
0.3	2.751	2.751
0.3083	2.744	2.744
0.3166	2.744	2.744
0.325	2.744	2.744
0.3333	2.738	2.738
0.35	2.738	2.738
0.3666	2.732	2.732
0.3833	2.725	2.725
0.4	2.719	2.719
0.4166	2.713	2.713
0.4333	2.706	2.706
0.45	2.706	2.706

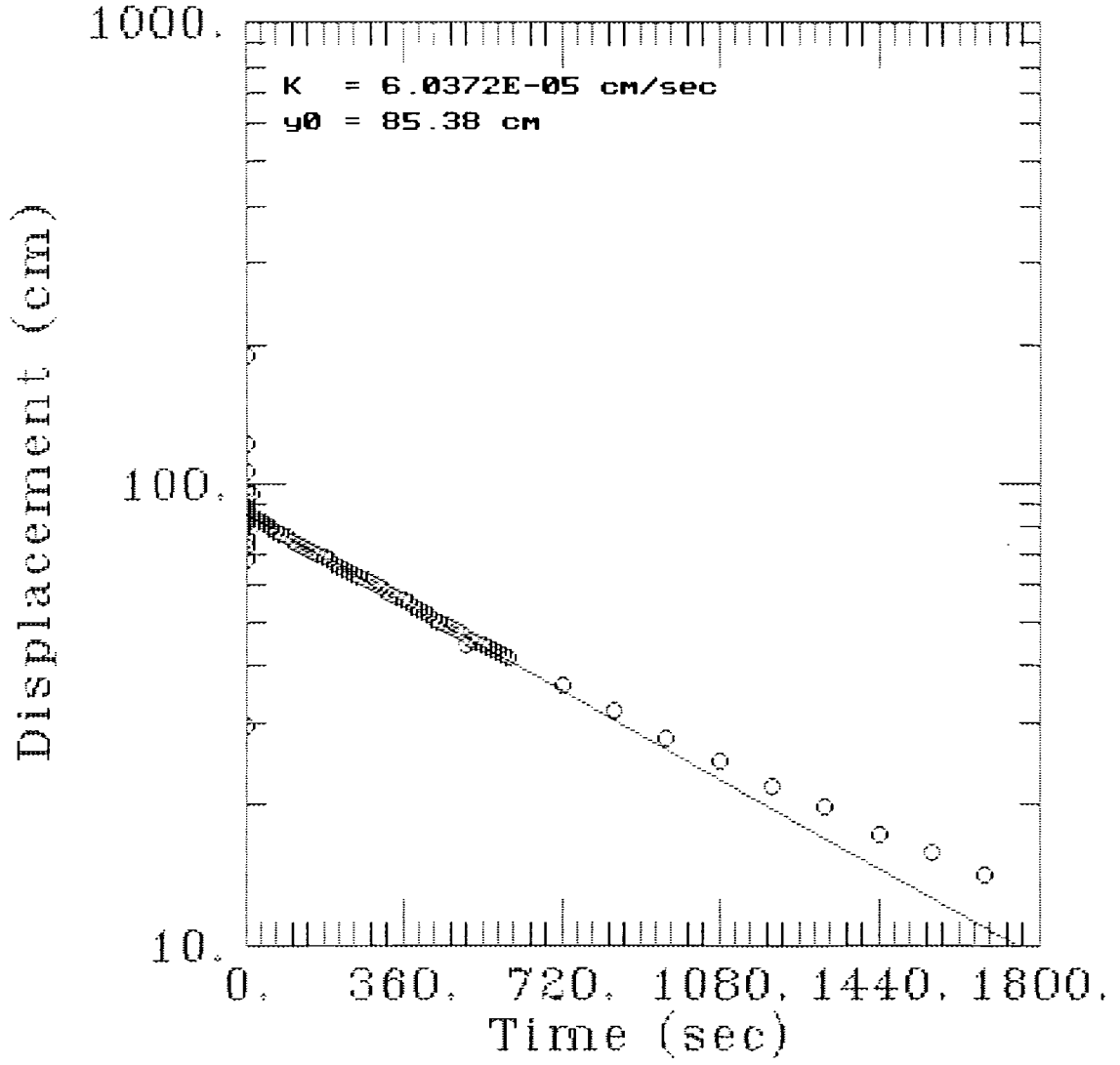
BR-105D RISING HEAD TEST 1

SLUG DISPLACEMENT	1.250 FT /	38.1 CM
TRANSDUCER STATIC	0.000 FT /	0.0 CM
WELL RADIUS	0.083 FT /	2.5 CM
SCREEN RADIUS	0.083 FT /	2.5 CM
AQUIF. THICKNESS	30.000 FT /	914.4 CM
SCREEN LENGTH	10.000 FT /	304.8 CM
WATER COL. HEIGHT	47.400 FT /	1444.8 CM

MIN	AS MEAS. FEET	PLOTTED FEET
0.4666	2.7	2.7
0.4833	2.694	2.694
0.5	2.687	2.687
0.5166	2.681	2.681
0.5333	2.681	2.681
0.55	2.675	2.675
0.5666	2.668	2.668
0.5833	2.662	2.662
0.6	2.662	2.662
0.6166	2.656	2.656
0.6333	2.649	2.649
0.65	2.643	2.643
0.6666	2.643	2.643
0.6833	2.637	2.637
0.7	2.637	2.637
0.7166	2.63	2.63
0.7333	2.624	2.624
0.75	2.624	2.624
0.7666	2.618	2.618
0.7833	2.618	2.618
0.8	2.611	2.611
0.8166	2.611	2.611
0.8333	2.605	2.605
0.85	2.599	2.599
0.8666	2.599	2.599
0.8833	2.592	2.592
0.9	2.586	2.586
0.9166	2.586	2.586
0.9333	2.58	2.58
0.95	2.573	2.573
0.9666	2.573	2.573
0.9833	2.567	2.567
1	2.561	2.561
1.2	2.516	2.516
1.4	2.478	2.478
1.6	2.44	2.44
1.8	2.396	2.396
2	2.358	2.358
2.2	2.32	2.32
2.4	2.282	2.282
2.6	2.244	2.244
2.8	2.206	2.206
3	2.174	2.174
3.2	2.142	2.142
3.4	2.111	2.111
3.6	2.072	2.072
3.8	2.041	2.041
4	2.009	2.009

MIN	AS MEAS. FEET	PLOTTED FEET
4.2	1.977	1.977
4.4	1.946	1.946
4.6	1.914	1.914
4.8	1.889	1.889
5	1.863	1.863
5.2	1.832	1.832
5.4	1.806	1.806
5.6	1.781	1.781
5.8	1.756	1.756
6	1.73	1.73
6.2	1.705	1.705
6.4	1.679	1.679
6.6	1.654	1.654
6.8	1.629	1.629
7	1.61	1.61
7.2	1.584	1.584
7.4	1.572	1.572
7.6	1.546	1.546
7.8	1.527	1.527
8	1.508	1.508
8.2	1.483	1.483
8.4	1.464	1.464
8.6	1.445	1.445
8.8	1.426	1.426
9	1.407	1.407
9.2	1.394	1.394
9.4	1.375	1.375
9.6	1.356	1.356
9.8	1.343	1.343
10	1.324	1.324
12	1.172	1.172
14	1.052	1.052
16	0.944	0.944
18	0.855	0.855
20	0.773	0.773
22	0.703	0.703
24	0.646	0.646
26	0.602	0.602
28	0.557	0.557

BR-105D FALLING HEAD - TEST 1



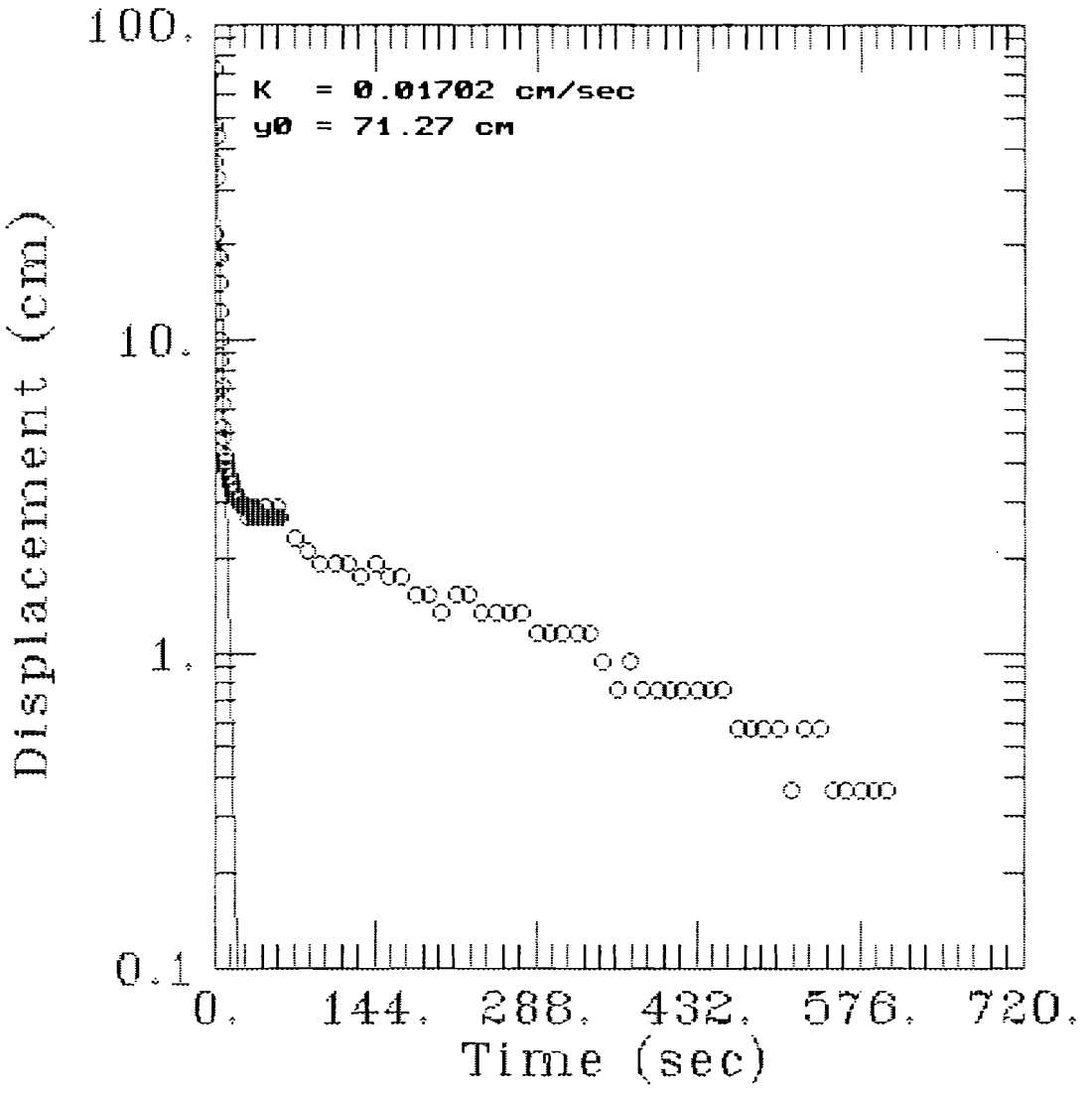
MIN	AS MEAS. FEET	INVERT/PLOTTED FEET
0	−0.082	0.082
0.0083	−0.088	0.088
0.0166	−0.976	0.976
0.025	−6.237	6.237
0.0333	−3.473	3.473
0.0416	−3.974	3.974
0.05	−2.237	2.237
0.0583	−2.478	2.478
0.0666	−3.157	3.157
0.075	−2.821	2.821
0.0833	−2.396	2.396
0.0916	−2.973	2.973
0.1	−2.719	2.719
0.1083	−2.751	2.751
0.1166	−2.802	2.802
0.125	−2.763	2.763
0.1333	−2.808	2.808
0.1416	−2.795	2.795
0.15	−2.795	2.795
0.1583	−2.795	2.795
0.1666	−2.795	2.795
0.175	−2.795	2.795
0.1833	−2.789	2.789
0.1916	−2.789	2.789
0.2	−2.789	2.789
0.2083	−2.782	2.782
0.2166	−2.782	2.782
0.225	−2.782	2.782
0.2333	−2.751	2.751
0.2416	−3.118	3.118
0.25	−2.624	2.624
0.2583	−2.795	2.795
0.2666	−2.763	2.763
0.275	−2.77	2.77
0.2833	−2.77	2.77
0.2916	−2.763	2.763
0.3	−2.763	2.763
0.3083	−2.763	2.763
0.3166	−2.763	2.763
0.325	−2.763	2.763
0.3333	−2.757	2.757
0.35	−2.751	2.751
0.3666	−2.751	2.751
0.3833	−2.744	2.744
0.4	−2.744	2.744
0.4166	−2.744	2.744
0.4333	−2.738	2.738
0.45	−2.732	2.732

BR−105D	FALLING HEAD TEST 1	
SLUG DISPLACEMENT	1.250 FT /	38.1 CM
TRANSDUCER STATIC	0.000 FT /	0.0 CM
WELL RADIUS	0.083 FT /	2.5 CM
SCREEN RADIUS	0.083 FT /	2.5 CM
AQUIF. THICKNESS	30.000 FT /	914.4 CM
SCREEN LENGTH	10.000 FT /	304.8 CM
WATER COL. HEIGHT	47.400 FT /	1444.8 CM

MIN	AS MEAS. FEET	INVERT/PLOTTED FEET
0.4666	−2.732	2.732
0.4833	−2.725	2.725
0.5	−2.719	2.719
0.5166	−2.719	2.719
0.5333	−2.713	2.713
0.55	−2.713	2.713
0.5666	−2.706	2.706
0.5833	−2.706	2.706
0.6	−2.7	2.7
0.6166	−2.7	2.7
0.6333	−2.694	2.694
0.65	−2.694	2.694
0.6666	−2.687	2.687
0.6833	−2.681	2.681
0.7	−2.681	2.681
0.7166	−2.675	2.675
0.7333	−2.675	2.675
0.75	−2.668	2.668
0.7666	−2.668	2.668
0.7833	−2.662	2.662
0.8	−2.662	2.662
0.8166	−2.656	2.656
0.8333	−2.656	2.656
0.85	−2.649	2.649
0.8666	−2.649	2.649
0.8833	−2.643	2.643
0.9	−2.643	2.643
0.9166	−2.637	2.637
0.9333	−2.637	2.637
0.95	−2.63	2.63
0.9666	−2.624	2.624
0.9833	−2.624	2.624
1	−2.618	2.618
1.2	−2.58	2.58
1.4	−2.535	2.535
1.6	−2.497	2.497
1.8	−2.459	2.459
2	−2.427	2.427
2.2	−2.389	2.389
2.4	−2.351	2.351
2.6	−2.32	2.32
2.8	−2.288	2.288
3	−2.256	2.256
3.2	−2.225	2.225
3.4	−2.193	2.193
3.6	−2.161	2.161
3.8	−2.13	2.13
4	−2.104	2.104

MIN	AS MEAS. FEET	INVERT/PLOTTED FEET
4.2	−2.072	2.072
4.4	−2.047	2.047
4.6	−2.015	2.015
4.8	−1.99	1.99
5	−1.965	1.965
5.2	−1.939	1.939
5.4	−1.908	1.908
5.6	−1.882	1.882
5.8	−1.851	1.851
6	−1.825	1.825
6.2	−1.8	1.8
6.4	−1.768	1.768
6.6	−1.749	1.749
6.8	−1.717	1.717
7	−1.692	1.692
7.2	−1.654	1.654
7.4	−1.641	1.641
7.6	−1.616	1.616
7.8	−1.591	1.591
8	−1.565	1.565
8.2	−1.546	1.546
8.4	−1.451	1.451
8.6	−1.502	1.502
8.8	−1.483	1.483
9	−1.464	1.464
9.2	−1.445	1.445
9.4	−1.42	1.42
9.6	−1.407	1.407
9.8	−1.388	1.388
10	−1.362	1.362
12	−1.191	1.191
14	−1.046	1.046
16	−0.919	0.919
18	−0.817	0.817
20	−0.722	0.722
22	−0.652	0.652
24	−0.57	0.57
26	−0.519	0.519
28	−0.462	0.462

BR-106 FALLING HEAD - TEST 1



MIN	AS MEAS. FEET	INVERT FEET	PLOTTED FEET
0	−0.228	0.228	0.228
0.0083	−0.709	0.709	0.709
0.0166	−1.552	1.552	1.552
0.025	−1.19	1.19	1.19
0.0333	−2.356	2.356	2.356
0.0416	−1.45	1.45	1.45
0.05	−1.064	1.064	1.064
0.0583	−1.076	1.076	1.076
0.0666	−0.608	0.608	0.608
0.075	−0.595	0.595	0.595
0.0833	−0.494	0.494	0.494
0.0916	−0.399	0.399	0.399
0.1	−0.329	0.329	0.329
0.1083	−0.278	0.278	0.278
0.1166	−0.234	0.234	0.234
0.125	−0.202	0.202	0.202
0.1333	−0.171	0.171	0.171
0.1416	−0.158	0.158	0.158
0.15	−0.139	0.139	0.139
0.1583	−0.133	0.133	0.133
0.1666	−0.133	0.133	0.133
0.175	−0.126	0.126	0.126
0.1833	−0.133	0.133	0.133
0.1916	−0.12	0.12	0.12
0.2	−0.126	0.126	0.126
0.2083	−0.126	0.126	0.126
0.2166	−0.12	0.12	0.12
0.225	−0.12	0.12	0.12
0.2333	−0.12	0.12	0.12
0.2416	−0.114	0.114	0.114
0.25	−0.12	0.12	0.12
0.2583	−0.114	0.114	0.114
0.2666	−0.114	0.114	0.114
0.275	−0.114	0.114	0.114
0.2833	−0.114	0.114	0.114
0.2916	−0.107	0.107	0.107
0.3	−0.107	0.107	0.107
0.3083	−0.107	0.107	0.107
0.3166	−0.107	0.107	0.107
0.325	−0.101	0.101	0.101
0.3333	−0.107	0.107	0.107
0.35	−0.101	0.101	0.101
0.3666	−0.101	0.101	0.101
0.3833	−0.101	0.101	0.101
0.4	−0.101	0.101	0.101
0.4166	−0.095	0.095	0.095
0.4333	−0.095	0.095	0.095
0.45	−0.095	0.095	0.095
0.4666	−0.095	0.095	0.095
0.4833	−0.095	0.095	0.095
0.5	−0.088	0.088	0.088
0.5166	−0.095	0.095	0.095
0.5333	−0.095	0.095	0.095

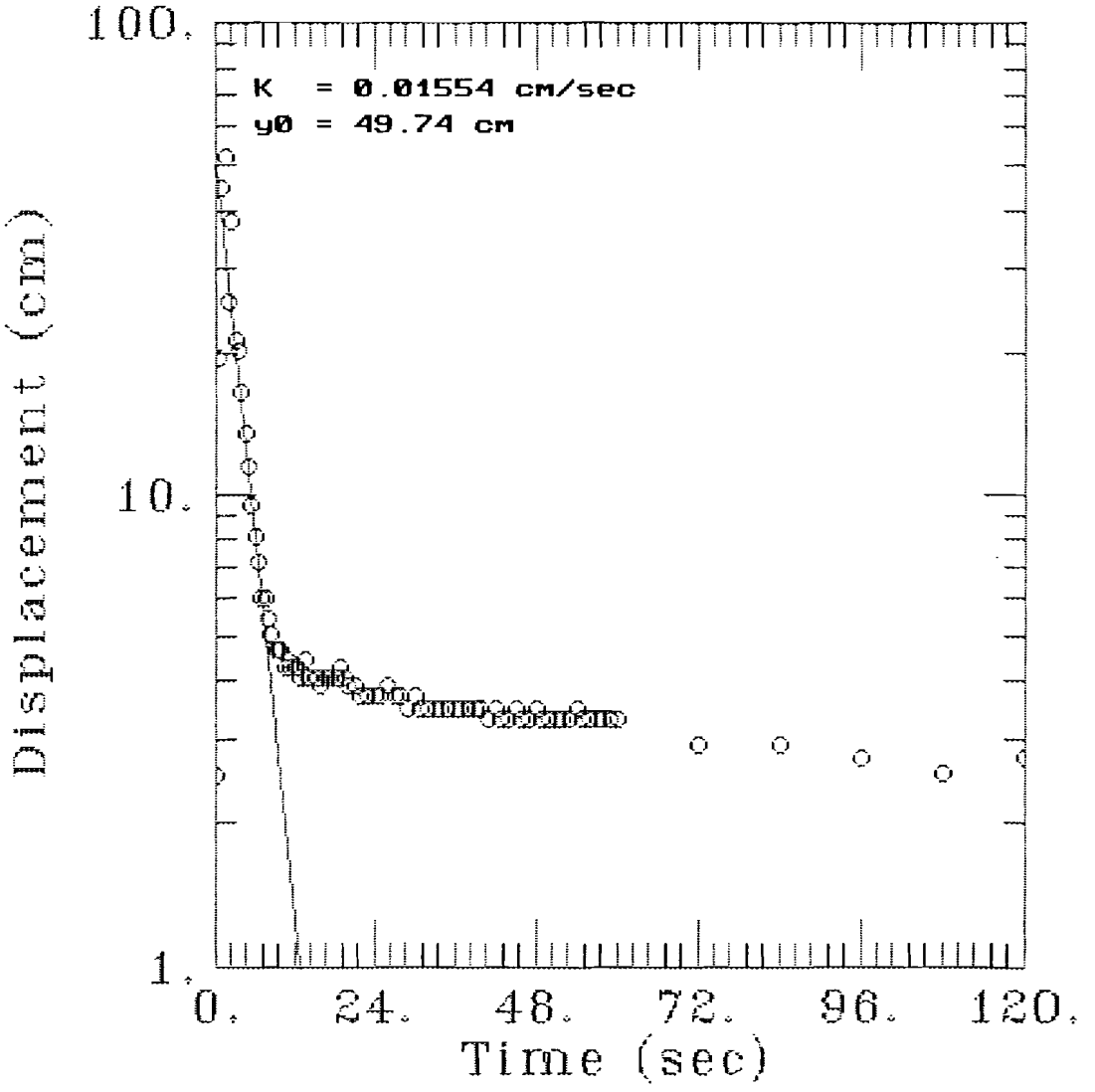
BR−106 FALLING HEAD TEST 1

SLUG DISPLACEMENT	1.4 FT /	41.3 CM
TRANSDUCER STATIC	0.000 FT /	0.0 CM
WELL RADIUS	0.16 FT /	4.8 CM
SCREEN RADIUS	0.16 FT /	4.8 CM
AQUIF. THICKNESS	32.1 FT /	978.4 CM
SCREEN LENGTH	26.9 FT /	819.9 CM
WATER COL. HEIGHT	19.2 FT /	585.2 CM

MIN	AS MEAS. FEET	INVERT FEET	PLOTTED FEET
0.55	−0.095	0.095	0.095
0.5666	−0.095	0.095	0.095
0.5833	−0.088	0.088	0.088
0.6	−0.088	0.088	0.088
0.6166	−0.095	0.095	0.095
0.6333	−0.088	0.088	0.088
0.65	−0.088	0.088	0.088
0.6666	−0.088	0.088	0.088
0.6833	−0.088	0.088	0.088
0.7	−0.088	0.088	0.088
0.7166	−0.088	0.088	0.088
0.7333	−0.088	0.088	0.088
0.75	−0.088	0.088	0.088
0.7666	−0.095	0.095	0.095
0.7833	−0.088	0.088	0.088
0.8	−0.088	0.088	0.088
0.8166	−0.088	0.088	0.088
0.8333	−0.088	0.088	0.088
0.85	−0.088	0.088	0.088
0.8666	−0.088	0.088	0.088
0.8833	−0.088	0.088	0.088
0.9	−0.088	0.088	0.088
0.9166	−0.088	0.088	0.088
0.9333	−0.088	0.088	0.088
0.95	−0.095	0.095	0.095
0.9666	−0.088	0.088	0.088
0.9833	−0.088	0.088	0.088
1	−0.088	0.088	0.088
1.2	−0.076	0.076	0.076
1.4	−0.069	0.069	0.069
1.6	−0.063	0.063	0.063
1.8	−0.063	0.063	0.063
2	−0.063	0.063	0.063
2.2	−0.057	0.057	0.057
2.4	−0.063	0.063	0.063
2.6	−0.057	0.057	0.057
2.8	−0.057	0.057	0.057
3	−0.05	0.05	0.05
3.2	−0.05	0.05	0.05
3.4	−0.044	0.044	0.044
3.6	−0.05	0.05	0.05
3.8	−0.05	0.05	0.05
4	−0.044	0.044	0.044
4.2	−0.044	0.044	0.044
4.4	−0.044	0.044	0.044
4.6	−0.044	0.044	0.044
4.8	−0.038	0.038	0.038
5	−0.038	0.038	0.038
5.2	−0.038	0.038	0.038
5.4	−0.038	0.038	0.038
5.6	−0.038	0.038	0.038
5.8	−0.031	0.031	0.031
6	−0.025	0.025	0.025

MIN	AS MEAS. FEET	INVERT FEET	PLOTTED FEET
6.2	−0.031	0.031	0.031
6.4	−0.025	0.025	0.025
6.6	−0.025	0.025	0.025
6.8	−0.025	0.025	0.025
7	−0.025	0.025	0.025
7.2	−0.025	0.025	0.025
7.4	−0.025	0.025	0.025
7.6	−0.025	0.025	0.025
7.8	−0.019	0.019	0.019
8	−0.019	0.019	0.019
8.2	−0.019	0.019	0.019
8.4	−0.019	0.019	0.019
8.6	−0.012	0.012	0.012
8.8	−0.019	0.019	0.019
9	−0.019	0.019	0.019
9.2	−0.012	0.012	0.012
9.4	−0.012	0.012	0.012
9.6	−0.012	0.012	0.012
9.8	−0.012	0.012	0.012
10	−0.012	0.012	0.012
12	0.019	−0.019	0.001

BR-106 FALLING HEAD - TEST 2



MIN	AS MEAS. FEET	INVERT FEET	PLOTTED (ADD 0.134')
0	−0.696	0.696	0.83
0.0083	−0.506	0.506	0.64
0.0166	−1.33	1.33	1.464
0.025	−1.564	1.564	1.698
0.0333	−0.703	0.703	0.837
0.0416	−1.114	1.114	1.248
0.05	−0.557	0.557	0.691
0.0583	−0.525	0.525	0.659
0.0666	−0.405	0.405	0.539
0.075	−0.31	0.31	0.444
0.0833	−0.24	0.24	0.374
0.0916	−0.177	0.177	0.311
0.1	−0.133	0.133	0.267
0.1083	−0.101	0.101	0.235
0.1166	−0.063	0.063	0.197
0.125	−0.063	0.063	0.197
0.1333	−0.044	0.044	0.178
0.1416	−0.031	0.031	0.165
0.15	−0.019	0.019	0.153
0.1583	−0.019	0.019	0.153
0.1666	−0.019	0.019	0.153
0.175	−0.006	0.006	0.14
0.1833	−0.012	0.012	0.146
0.1916	−0.006	0.006	0.14
0.2	−0.006	0.006	0.14
0.2083	−0.006	0.006	0.14
0.2166	0	0	0.134
0.225	−0.012	0.012	0.146
0.2333	0	0	0.134
0.2416	0	0	0.134
0.25	0	0	0.134
0.2583	0	0	0.134
0.2666	0.006	−0.006	0.128
0.275	0	0	0.134
0.2833	0	0	0.134
0.2916	0	0	0.134
0.3	0	0	0.134
0.3083	0	0	0.134
0.3166	−0.006	0.006	0.14
0.325	0	0	0.134
0.3333	0.006	−0.006	0.128
0.35	0.006	−0.006	0.128
0.3666	0.012	−0.012	0.122
0.3833	0.012	−0.012	0.122
0.4	0.012	−0.012	0.122
0.4166	0.012	−0.012	0.122
0.4333	0.006	−0.006	0.128
0.45	0.012	−0.012	0.122
0.4666	0.012	−0.012	0.122
0.4833	0.019	−0.019	0.115
0.5	0.012	−0.012	0.122
0.5166	0.019	−0.019	0.115
0.5333	0.019	−0.019	0.115

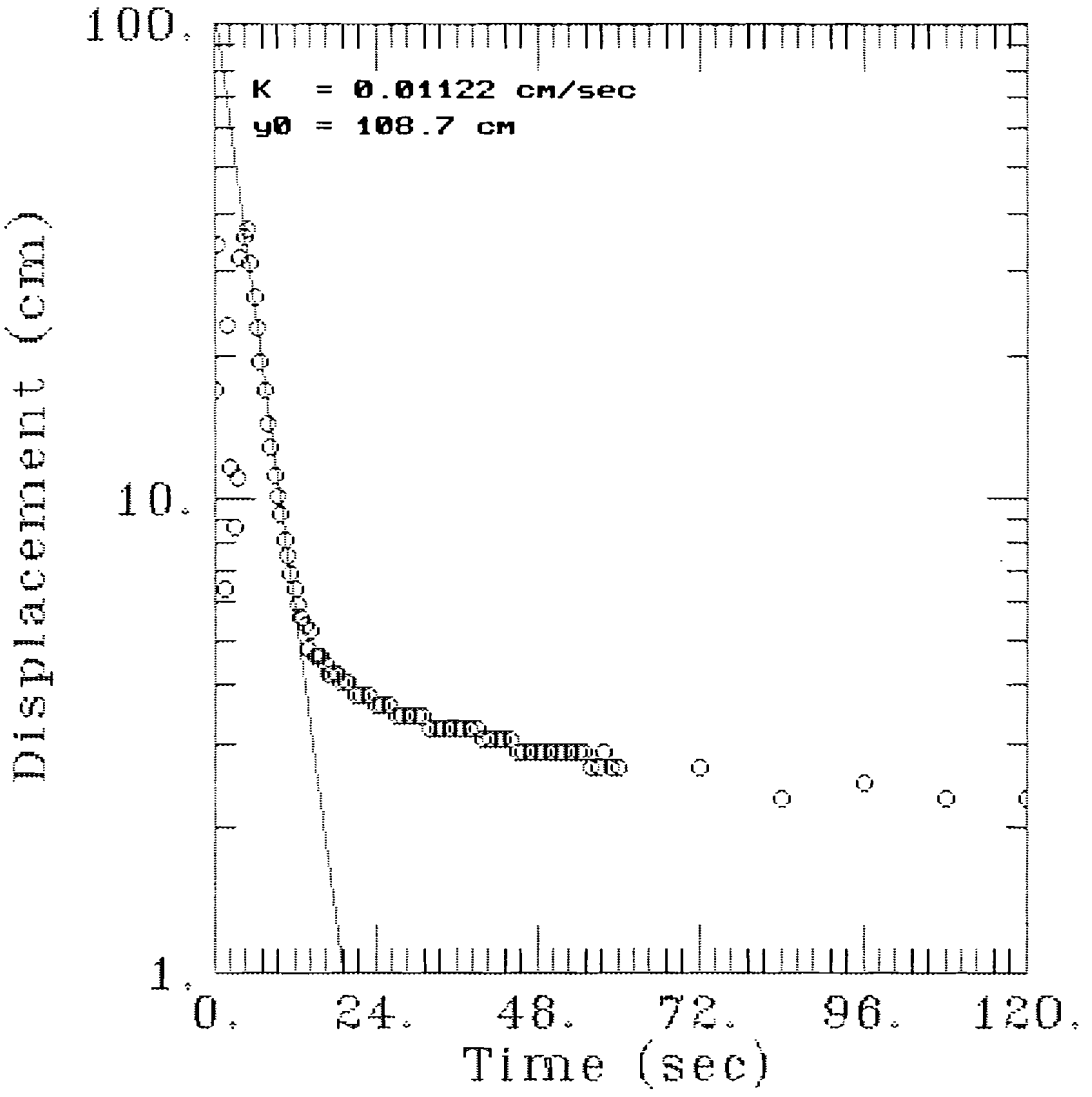
BR−106 FALLING HEAD TEST 2

SLUG DISPLACEMENT	1.4 FT /	41.3 CM
TRANSDUCER STATIC	0.000 FT /	0.0 CM
WELL RADIUS	0.16 FT /	4.8 CM
SCREEN RADIUS	0.16 FT /	4.8 CM
AQUIF. THICKNESS	32.1 FT /	978.4 CM
SCREEN LENGTH	26.9 FT /	819.9 CM
WATER COL. HEIGHT	19.2 FT /	585.2 CM

MIN	AS MEAS. FEET	INVERT FEET	PLOTTED (ADD 0.134')
0.55	0.019	−0.019	0.115
0.5666	0.019	−0.019	0.115
0.5833	0.019	−0.019	0.115
0.6	0.019	−0.019	0.115
0.6166	0.019	−0.019	0.115
0.6333	0.019	−0.019	0.115
0.65	0.019	−0.019	0.115
0.6666	0.019	−0.019	0.115
0.6833	0.025	−0.025	0.109
0.7	0.019	−0.019	0.115
0.7166	0.025	−0.025	0.109
0.7333	0.025	−0.025	0.109
0.75	0.019	−0.019	0.115
0.7666	0.025	−0.025	0.109
0.7833	0.025	−0.025	0.109
0.8	0.019	−0.019	0.115
0.8166	0.025	−0.025	0.109
0.8333	0.025	−0.025	0.109
0.85	0.025	−0.025	0.109
0.8666	0.025	−0.025	0.109
0.8833	0.025	−0.025	0.109
0.9	0.019	−0.019	0.115
0.9166	0.025	−0.025	0.109
0.9333	0.025	−0.025	0.109
0.95	0.025	−0.025	0.109
0.9666	0.025	−0.025	0.109
0.9833	0.025	−0.025	0.109
1	0.025	−0.025	0.109
1.2	0.038	−0.038	0.096
1.4	0.038	−0.038	0.096
1.6	0.044	−0.044	0.09
1.8	0.05	−0.05	0.084
2	0.044	−0.044	0.09
2.2	0.05	−0.05	0.084
2.4	0.05	−0.05	0.084
2.6	0.05	−0.05	0.084
2.8	0.05	−0.05	0.084
3	0.057	−0.057	0.077
3.2	0.057	−0.057	0.077
3.4	0.057	−0.057	0.077
3.6	0.057	−0.057	0.077
3.8	0.063	−0.063	0.071
4	0.063	−0.063	0.071
4.2	0.063	−0.063	0.071
4.4	0.063	−0.063	0.071
4.6	0.069	−0.069	0.065
4.8	0.069	−0.069	0.065
5	0.069	−0.069	0.065
5.2	0.069	−0.069	0.065
5.4	0.069	−0.069	0.065
5.6	0.069	−0.069	0.065
5.8	0.069	−0.069	0.065
6	0.076	−0.076	0.058

MIN	AS MEAS. FEET	INVERT FEET	PLOTTED (ADD 0.134')
6.2	0.076	−0.076	0.058
6.4	0.076	−0.076	0.058
6.6	0.076	−0.076	0.058
6.8	0.082	−0.082	0.052
7	0.082	−0.082	0.052
7.2	0.082	−0.082	0.052
7.4	0.082	−0.082	0.052
7.6	0.076	−0.076	0.058
7.8	0.076	−0.076	0.058
8	0.082	−0.082	0.052
8.2	0.082	−0.082	0.052
8.4	0.076	−0.076	0.058
8.6	0.082	−0.082	0.052
8.8	0.082	−0.082	0.052
9	0.076	−0.076	0.058
9.2	0.082	−0.082	0.052
9.4	0.076	−0.076	0.058
9.6	0.082	−0.082	0.052
9.8	0.082	−0.082	0.052
10	0.082	−0.082	0.052
12	0.114	−0.114	0.02
14	0.133	−0.133	0.001

BR-106 RISING HEAD - TEST 2



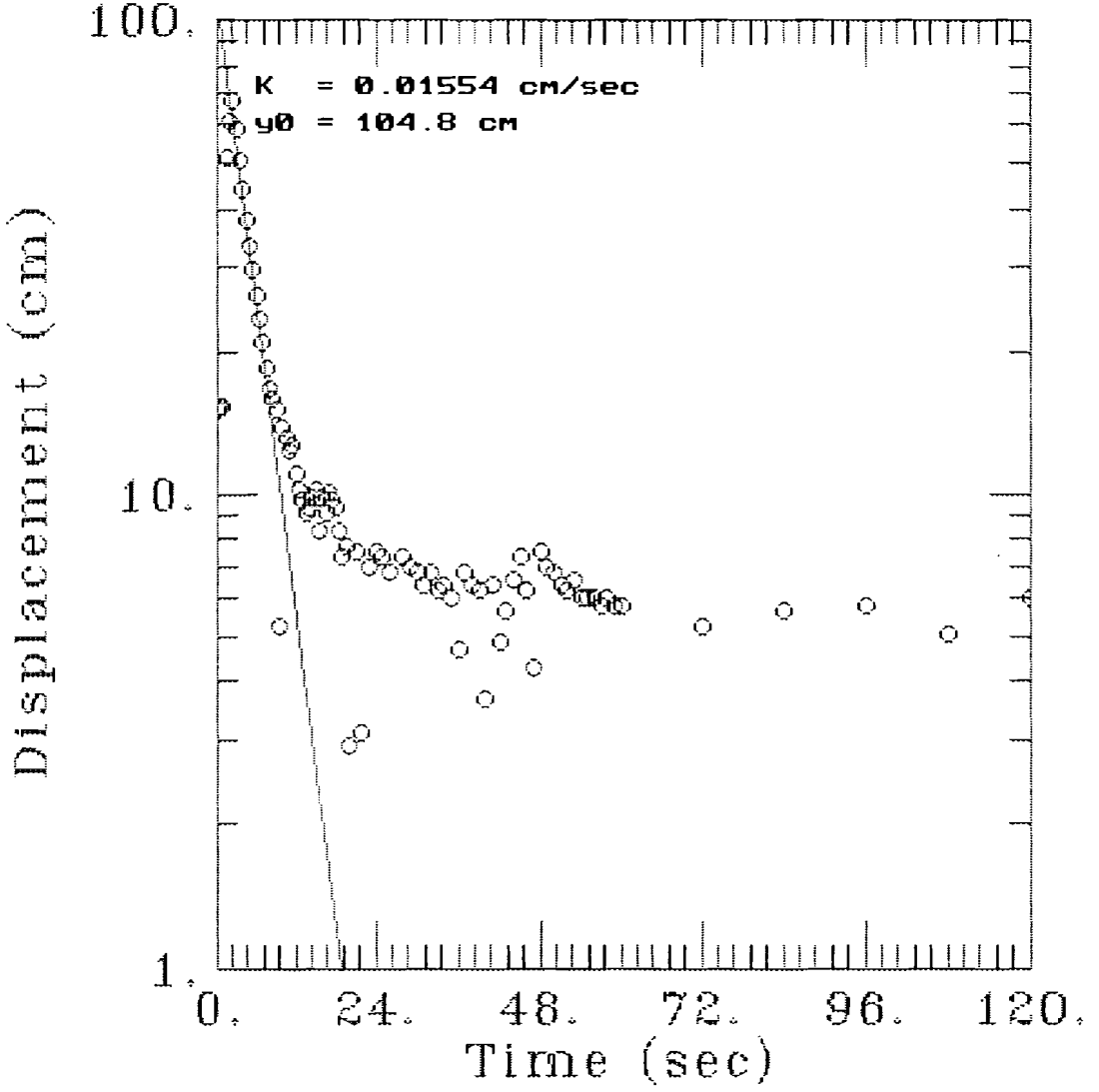
MIN	AS MEAS. FEET	PLOTTED FEET
0	0.551	0.551
0.0083	1.121	1.121
0.0166	0.031	0.031
0.025	0.209	0.209
0.0333	0.76	0.76
0.0416	0.38	0.38
0.05	0.285	0.285
0.0583	0.361	0.361
0.0666	1.051	1.051
0.075	1.171	1.171
0.0833	1.203	1.203
0.0916	1.032	1.032
0.1	0.874	0.874
0.1083	0.747	0.747
0.1166	0.639	0.639
0.125	0.551	0.551
0.1333	0.468	0.468
0.1416	0.418	0.418
0.15	0.367	0.367
0.1583	0.329	0.329
0.1666	0.304	0.304
0.175	0.266	0.266
0.1833	0.247	0.247
0.1916	0.228	0.228
0.2	0.209	0.209
0.2083	0.196	0.196
0.2166	0.183	0.183
0.225	0.177	0.177
0.2333	0.158	0.158
0.2416	0.171	0.171
0.25	0.152	0.152
0.2583	0.152	0.152
0.2666	0.152	0.152
0.275	0.145	0.145
0.2833	0.139	0.139
0.2916	0.139	0.139
0.3	0.139	0.139
0.3083	0.139	0.139
0.3166	0.133	0.133
0.325	0.133	0.133
0.3333	0.133	0.133
0.35	0.126	0.126
0.3666	0.126	0.126
0.3833	0.126	0.126
0.4	0.12	0.12
0.4166	0.12	0.12
0.4333	0.12	0.12
0.45	0.114	0.114
0.4666	0.114	0.114
0.4833	0.114	0.114
0.5	0.114	0.114
0.5166	0.114	0.114
0.5333	0.107	0.107
0.55	0.107	0.107
0.5666	0.107	0.107

BR-106 RISING HEAD TEST 2

SLUG DISPLACEMENT	1.4 FT /	41.3 CM
TRANSDUCER STATIC	0.000 FT /	0.0 CM
WELL RADIUS	0.16 FT /	4.8 CM
SCREEN RADIUS	0.16 FT /	4.8 CM
AQUIF. THICKNESS	32.1 FT /	978.4 CM
SCREEN LENGTH	26.9 FT /	819.9 CM
WATER COL. HEIGHT	19.2 FT /	585.2 CM

MIN	AS MEAS. FEET	PLOTTED FEET
0.5833	0.107	0.107
0.6	0.107	0.107
0.6166	0.107	0.107
0.6333	0.107	0.107
0.65	0.107	0.107
0.6666	0.101	0.101
0.6833	0.101	0.101
0.7	0.101	0.101
0.7166	0.101	0.101
0.7333	0.101	0.101
0.75	0.095	0.095
0.7666	0.095	0.095
0.7833	0.095	0.095
0.8	0.095	0.095
0.8166	0.095	0.095
0.8333	0.095	0.095
0.85	0.095	0.095
0.8666	0.095	0.095
0.8833	0.095	0.095
0.9	0.095	0.095
0.9166	0.095	0.095
0.9333	0.088	0.088
0.95	0.088	0.088
0.9666	0.095	0.095
0.9833	0.088	0.088
1	0.088	0.088
1.2	0.088	0.088
1.4	0.076	0.076
1.6	0.082	0.082
1.8	0.076	0.076
2	0.076	0.076
2.2	0.069	0.069
2.4	0.069	0.069
2.6	0.063	0.063
2.8	0.063	0.063
3	0.057	0.057
3.2	0.012	0.012
3.4	0.019	0.019
3.6	0.019	0.019
3.8	0.019	0.019
4	0.019	0.019
4.2	0.019	0.019
4.4	0.019	0.019
4.6	0.019	0.019
4.8	0.012	0.012
5	0.019	0.019
5.2	0.012	0.012
5.4	0.019	0.019
5.6	0.012	0.012
5.8	0.012	0.012
6	0.012	0.012
6.2	0.019	0.019
6.4	0.012	0.012
6.6	0.012	0.012

BR-107 FALLING HEAD - TEST 1



MIN	AS MEAS. FEET	IN. ERT FEET	PLOTTED (ADD 0.501')
0	0.006	−0.006	0.495
0.0083	0	0	0.501
0.0166	0	0	0.501
0.025	−1.185	1.185	1.686
0.0333	−1.502	1.502	2.003
0.0416	−1.705	1.705	2.206
0.05	−1.432	1.432	1.933
0.0583	−1.16	1.16	1.661
0.0666	−0.95	0.95	1.451
0.075	−0.735	0.735	1.236
0.0833	−0.595	0.595	1.096
0.0916	−0.481	0.481	0.982
0.1	−0.361	0.361	0.862
0.1083	−0.272	0.272	0.773
0.1166	−0.183	0.183	0.684
0.125	−0.107	0.107	0.608
0.1333	−0.044	0.044	0.545
0.1416	−0.019	0.019	0.52
0.15	0.006	−0.006	0.495
0.1583	0.329	−0.329	0.172
0.1666	0.05	−0.05	0.451
0.175	0.069	−0.069	0.432
0.1833	0.095	−0.095	0.406
0.1916	0.088	−0.088	0.413
0.2	0.139	−0.139	0.362
0.2083	0.164	−0.164	0.337
0.2166	0.183	−0.183	0.318
0.225	0.202	−0.202	0.299
0.2333	0.196	−0.196	0.305
0.2416	0.177	−0.177	0.324
0.25	0.164	−0.164	0.337
0.2583	0.228	−0.228	0.273
0.2666	0.177	−0.177	0.324
0.275	0.202	−0.202	0.299
0.2833	0.171	−0.171	0.33
0.2916	0.183	−0.183	0.318
0.3	0.196	−0.196	0.305
0.3083	0.228	−0.228	0.273
0.3166	0.259	−0.259	0.242
0.325	0.247	−0.247	0.254
0.3333	0.405	−0.405	0.096
0.35	0.253	−0.253	0.248
0.3666	0.399	−0.399	0.102
0.3833	0.272	−0.272	0.229
0.4	0.253	−0.253	0.248
0.4166	0.259	−0.259	0.242
0.4333	0.278	−0.278	0.223
0.45	0.5	−0.5	0.001
0.4666	0.259	−0.259	0.242
0.4833	0.272	−0.272	0.229
0.5	0.278	−0.278	0.223
0.5166	0.291	−0.291	0.21
0.5333	0.278	−0.278	0.223
0.55	0.297	−0.297	0.204
0.5666	0.291	−0.291	0.21

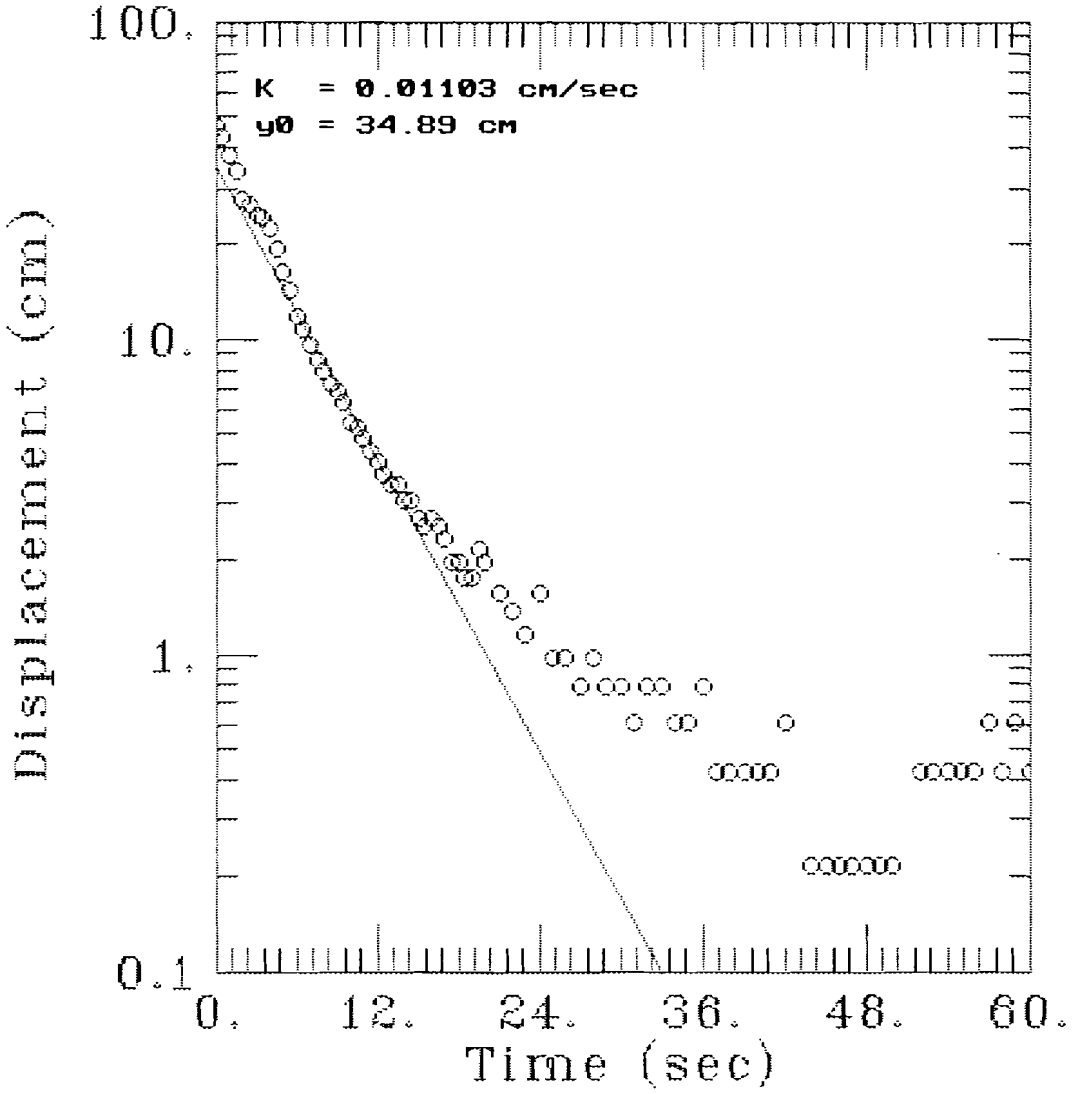
BR−107 FALLING HEAD TEST 1

SLUG DISPLACEMENT	1.4 FT /	41.3 CM
TRANSDUCER STATIC	0.000 FT /	0.0 CM
WELL RADIUS	0.16 FT /	4.8 CM
SCREEN RADIUS	0.16 FT /	4.8 CM
AQUIF. THICKNESS	23.2 FT /	707.1 CM
SCREEN LENGTH	21.2 FT /	646.2 CM
WATER COL. HEIGHT	17.6 FT /	536.4 CM

MIN	AS MEAS. FEET	INVERT FEET	PLOTTED (ADD 0.501')
0.5833	0.304	−0.304	0.197
0.6	0.348	−0.348	0.153
0.6166	0.278	−0.278	0.223
0.6333	0.291	−0.291	0.21
0.65	0.297	−0.297	0.204
0.6666	0.38	−0.38	0.121
0.6833	0.291	−0.291	0.21
0.7	0.342	−0.342	0.159
0.7166	0.316	−0.316	0.185
0.7333	0.285	−0.285	0.216
0.75	0.259	−0.259	0.242
0.7666	0.297	−0.297	0.204
0.7833	0.361	−0.361	0.14
0.8	0.253	−0.253	0.248
0.8166	0.272	−0.272	0.229
0.8333	0.278	−0.278	0.223
0.85	0.291	−0.291	0.21
0.8666	0.297	−0.297	0.204
0.8833	0.285	−0.285	0.216
0.9	0.304	−0.304	0.197
0.9166	0.304	−0.304	0.197
0.9333	0.304	−0.304	0.197
0.95	0.31	−0.31	0.191
0.9666	0.304	−0.304	0.197
0.9833	0.31	−0.31	0.191
1	0.31	−0.31	0.191
1.2	0.329	−0.329	0.172
1.4	0.316	−0.316	0.185
1.6	0.31	−0.31	0.191
1.8	0.335	−0.335	0.166
2	0.304	−0.304	0.197
2.2	0.304	−0.304	0.197
2.4	0.31	−0.31	0.191
2.6	0.316	−0.316	0.185
2.8	0.31	−0.31	0.191
3	0.323	−0.323	0.178
3.2	0.31	−0.31	0.191
3.4	0.323	−0.323	0.178
3.6	0.348	−0.348	0.153
3.8	0.316	−0.316	0.185
4	0.316	−0.316	0.185
4.2	0.31	−0.31	0.191
4.4	0.31	−0.31	0.191
4.6	0.316	−0.316	0.185
4.8	0.323	−0.323	0.178
5	0.323	−0.323	0.178
5.2	0.316	−0.316	0.185
5.4	0.31	−0.31	0.191
5.6	0.335	−0.335	0.166
5.8	0.329	−0.329	0.172
6	0.323	−0.323	0.178
6.2	0.323	−0.323	0.178
6.4	0.323	−0.323	0.178
6.6	0.323	−0.323	0.178
6.8	0.323	−0.323	0.178

MIN	AS MEAS. FEET	INVERT FEET	PLOTTED (ADD 0.501')
7	0.323	−0.323	0.178
7.2	0.329	−0.329	0.172
7.4	0.329	−0.329	0.172
7.6	0.323	−0.323	0.178
7.8	0.323	−0.323	0.178
8	0.329	−0.329	0.172
8.2	0.323	−0.323	0.178
8.4	0.335	−0.335	0.166
8.6	0.323	−0.323	0.178
8.8	0.316	−0.316	0.185
9	0.316	−0.316	0.185
9.2	0.31	−0.31	0.191
9.4	0.329	−0.329	0.172
9.6	0.329	−0.329	0.172
9.8	0.329	−0.329	0.172
10	0.316	−0.316	0.185
12	0.316	−0.316	0.185
14	0.323	−0.323	0.178
16	0.323	−0.323	0.178
18	0.335	−0.335	0.166
20	0.316	−0.316	0.185
22	0.323	−0.323	0.178
24	0.316	−0.316	0.185

BR-107 RISING HEAD - TEST 1



MIN	AS MEAS. FEET	PLOTTED (ADD 0.026')
0	1.502	1.528
0.0083	1.388	1.414
0.0166	1.229	1.255
0.025	1.096	1.122
0.0333	0.887	0.913
0.0416	0.843	0.869
0.05	0.786	0.812
0.0583	0.76	0.786
0.0666	0.71	0.736
0.075	0.602	0.628
0.0833	0.507	0.533
0.0916	0.437	0.463
0.1	0.361	0.387
0.1083	0.323	0.349
0.1166	0.291	0.317
0.125	0.253	0.279
0.1333	0.234	0.26
0.1416	0.209	0.235
0.15	0.196	0.222
0.1583	0.183	0.209
0.1666	0.152	0.178
0.175	0.145	0.171
0.1833	0.133	0.159
0.1916	0.12	0.146
0.2	0.107	0.133
0.2083	0.095	0.121
0.2166	0.088	0.114
0.225	0.088	0.114
0.2333	0.076	0.102
0.2416	0.076	0.102
0.25	0.063	0.089
0.2583	0.057	0.083
0.2666	0.063	0.089
0.275	0.057	0.083
0.2833	0.05	0.076
0.2916	0.038	0.064
0.3	0.038	0.064
0.3083	0.031	0.057
0.3166	0.031	0.057
0.325	0.044	0.07
0.3333	0.038	0.064
0.35	0.025	0.051
0.3666	0.019	0.045
0.3833	0.012	0.038
0.4	0.025	0.051
0.4166	0.006	0.032
0.4333	0.006	0.032
0.45	0	0.026
0.4666	0.006	0.032
0.4833	0	0.026
0.5	0	0.026
0.5166	−0.006	0.02
0.5333	0	0.026
0.55	0	0.026
0.5666	−0.006	0.02

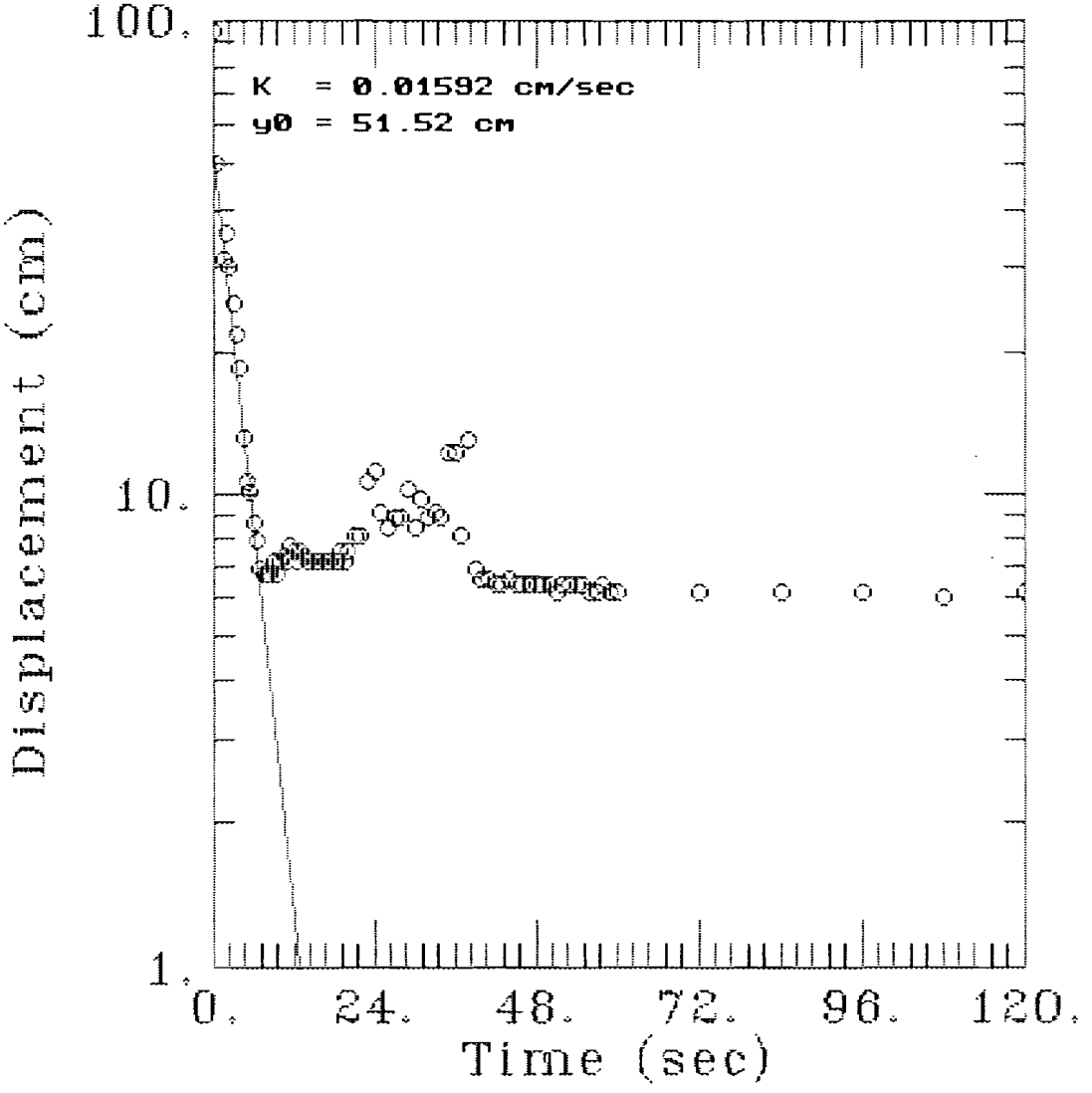
BR−107 RISING HEAD TEST 1

SLUG DISPLACEMENT	1.4 FT /	41.3 CM
TRANSDUCER STATIC	0.000 FT /	0.0 CM
WELL RADIUS	0.16 FT /	4.8 CM
SCREEN RADIUS	0.16 FT /	4.8 CM
AQUIF. THICKNESS	23.2 FT /	707.1 CM
SCREEN LENGTH	21.2 FT /	646.2 CM
WATER COL. HEIGHT	17.6 FT /	536.4 CM

MIN	AS MEAS. FEET	PLOTTED (ADD 0.026')
0.5833	−0.006	0.02
0.6	0	0.026
0.6166	−0.012	0.014
0.6333	−0.012	0.014
0.65	−0.012	0.014
0.6666	−0.012	0.014
0.6833	−0.012	0.014
0.7	−0.006	0.02
0.7166	−0.025	0.001
0.7333	−0.019	0.007
0.75	−0.019	0.007
0.7666	−0.019	0.007
0.7833	−0.019	0.007
0.8	−0.019	0.007
0.8166	−0.019	0.007
0.8333	−0.019	0.007
0.85	−0.025	0.001
0.8666	−0.012	0.014
0.8833	−0.012	0.014
0.9	−0.012	0.014
0.9166	−0.012	0.014
0.9333	−0.012	0.014
0.95	−0.006	0.02
0.9666	−0.012	0.014
0.9833	−0.006	0.02
1	−0.012	0.014
1.2	−0.019	0.007
1.4	−0.019	0.007
1.6	−0.006	0.02
1.8	0	0.026
2	0	0.026
2.2	0	0.026
2.4	0.006	0.032
2.6	0	0.026
2.8	0	0.026
3	0.006	0.032
3.2	0.012	0.038
3.4	0	0.026
3.6	0.012	0.038
3.8	0.006	0.032
4	−0.006	0.02
4.2	0.019	0.045
4.4	0.012	0.038
4.6	0.006	0.032
4.8	0.006	0.032
5	0	0.026
5.2	0.006	0.032
5.4	0.006	0.032
5.6	0.012	0.038
5.8	0.006	0.032
6	0.006	0.032
6.2	0.012	0.038
6.4	0.012	0.038
6.6	0.006	0.032
6.8	0.006	0.032

MIN	AS MEAS. FEET	PLOTTED (ADD 0.026')
7	−0.006	0.02
7.2	0.006	0.032
7.4	0.012	0.038
7.6	0	0.026
7.8	0.006	0.032
8	0.006	0.032
8.2	0	0.026
8.4	0.006	0.032
8.6	0.006	0.032
8.8	0.006	0.032

BR-108 RISING HEAD - TEST 1



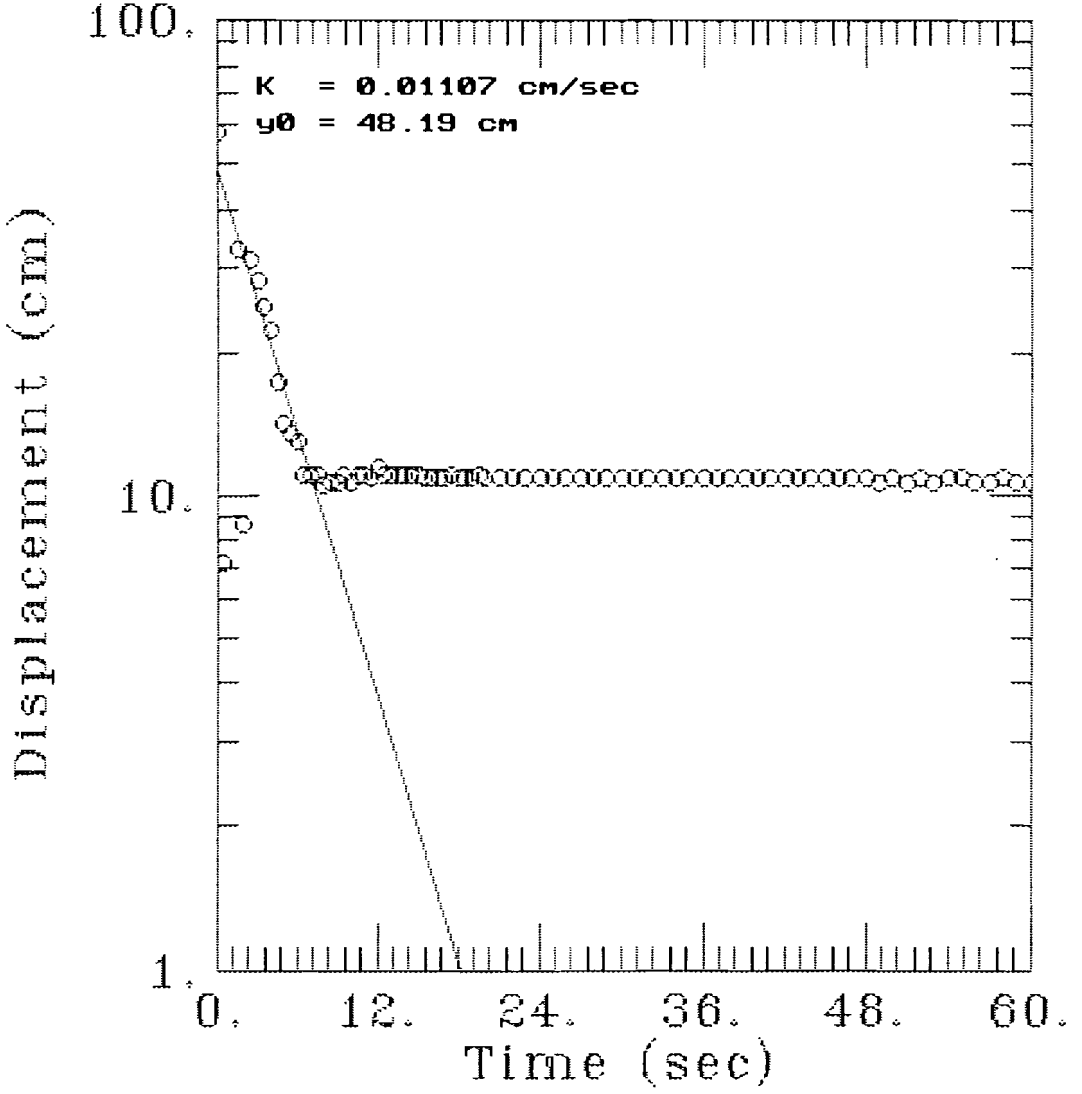
MIN	AS MEAS. FEET	PLOTTED (ADD 0.203')
0	2.901	3.104
0.0083	1.438	1.641
0.0166	−0.202	0.001
0.025	0.829	1.032
0.0333	0.969	1.172
0.0416	0.791	0.994
0.05	0.627	0.83
0.0583	0.513	0.716
0.0666	0.399	0.602
0.075	0.228	0.431
0.0833	0.145	0.348
0.0916	0.126	0.329
0.1	0.082	0.285
0.1083	0.057	0.26
0.1166	0.025	0.228
0.125	0.019	0.222
0.1333	0.019	0.222
0.1416	0.019	0.222
0.15	0.031	0.234
0.1583	0.019	0.222
0.1666	0.031	0.234
0.175	0.038	0.241
0.1833	0.031	0.234
0.1916	0.05	0.253
0.2	0.044	0.247
0.2083	0.031	0.234
0.2166	0.044	0.247
0.225	0.038	0.241
0.2333	0.031	0.234
0.2416	0.031	0.234
0.25	0.031	0.234
0.2583	0.031	0.234
0.2666	0.031	0.234
0.275	0.031	0.234
0.2833	0.031	0.234
0.2916	0.031	0.234
0.3	0.031	0.234
0.3083	0.031	0.234
0.3166	0.044	0.247
0.325	0.031	0.234
0.3333	0.044	0.247
0.35	0.063	0.266
0.3666	0.063	0.266
0.3833	0.145	0.348
0.4	0.164	0.367
0.4166	0.095	0.298
0.4333	0.076	0.279
0.45	0.088	0.291
0.4666	0.088	0.291
0.4833	0.133	0.336
0.5	0.076	0.279
0.5166	0.114	0.317
0.5333	0.088	0.291
0.55	0.095	0.298
0.5666	0.088	0.291

BR−108 RISING HEAD TEST 1

SLUG DISPLACEMENT	1.4 FT /	41.3 CM
TRANSDUCER STATIC	0.000 FT /	0.0 CM
WELL RADIUS	0.16 FT /	4.8 CM
SCREEN RADIUS	0.16 FT /	4.8 CM
AQUIF. THICKNESS	28.5 FT /	868.7 CM
SCREEN LENGTH	23.5 FT /	716.3 CM
WATER COL. HEIGHT	12.09 FT /	368.5 CM

MIN	AS MEAS. FEET	PLOTTED (ADD 0.203')
0.5833	0.196	0.399
0.6	0.196	0.399
0.6166	0.063	0.266
0.6333	0.221	0.424
0.65	0.025	0.228
0.6666	0.012	0.215
0.6833	0.012	0.215
0.7	0.006	0.209
0.7166	0.006	0.209
0.7333	0.012	0.215
0.75	0.006	0.209
0.7666	0.006	0.209
0.7833	0.006	0.209
0.8	0.006	0.209
0.8166	0.006	0.209
0.8333	0.006	0.209
0.85	0	0.203
0.8666	0.006	0.209
0.8833	0.006	0.209
0.9	0.006	0.209
0.9166	0.006	0.209
0.9333	0	0.203
0.95	0	0.203
0.9666	0.006	0.209
0.9833	0	0.203
1	0	0.203
1.2	0	0.203
1.4	0	0.203
1.6	0	0.203
1.8	−0.006	0.197
2	0	0.203
2.2	−0.006	0.197
2.4	−0.006	0.197
2.6	−0.006	0.197
2.8	−0.006	0.197
3	−0.012	0.191
3.2	−0.006	0.197
3.4	−0.019	0.184
3.6	−0.012	0.191
3.8	−0.006	0.197
4	−0.006	0.197
4.2	−0.012	0.191
4.4	−0.006	0.197
4.6	0	0.203
4.8	−0.006	0.197
5	−0.006	0.197
5.2	−0.006	0.197
5.4	−0.006	0.197
5.6	−0.019	0.184
5.8	−0.006	0.197

BR-108 RISING HEAD - TEST 2



MIN	AS MEAS. FEET	PLOTTED (ADD 0.362')
0	1.533	1.895
0.0083	−0.126	0.236
0.0166	−0.361	
0.025	0.715	1.077
0.0333	−0.076	0.286
0.0416	0.665	1.027
0.05	0.563	0.925
0.0583	0.462	0.824
0.0666	0.367	0.729
0.075	0.209	0.571
0.0833	0.101	0.463
0.0916	0.082	0.444
0.1	0.063	0.425
0.1083	0	0.362
0.1166	0	0.362
0.125	0	0.362
0.1333	−0.019	0.343
0.1416	−0.012	0.35
0.15	−0.012	0.35
0.1583	0	0.362
0.1666	−0.012	0.35
0.175	0	0.362
0.1833	0	0.362
0.1916	−0.006	0.356
0.2	0.012	0.374
0.2083	0	0.362
0.2166	0	0.362
0.225	0	0.362
0.2333	0	0.362
0.2416	0	0.362
0.25	0	0.362
0.2583	−0.006	0.356
0.2666	−0.006	0.356
0.275	−0.006	0.356
0.2833	−0.006	0.356
0.2916	0	0.362
0.3	−0.006	0.356
0.3083	−0.006	0.356
0.3166	−0.006	0.356
0.325	0	0.362
0.3333	−0.006	0.356
0.35	−0.006	0.356
0.3666	−0.006	0.356
0.3833	−0.006	0.356
0.4	−0.006	0.356
0.4166	−0.006	0.356
0.4333	−0.006	0.356
0.45	−0.006	0.356
0.4666	−0.006	0.356
0.4833	−0.006	0.356
0.5	−0.006	0.356
0.5166	−0.006	0.356
0.5333	−0.006	0.356
0.55	−0.006	0.356
0.5666	−0.006	0.356

BR−108 RISING HEAD TEST 2

SLUG DISPLACEMENT	1.4 FT /	41.3 CM
TRANSDUCER STATIC	0.000 FT /	0.0 CM
WELL RADIUS	0.16 FT /	4.8 CM
SCREEN RADIUS	0.16 FT /	4.8 CM
AQUIF. THICKNESS	28.5 FT /	868.7 CM
SCREEN LENGTH	23.5 FT /	716.3 CM
WATER COL. HEIGHT	12.09 FT /	368.5 CM

MIN	AS MEAS. FEET	PLOTTED (ADD 0.362')
0.5833	−0.006	0.356
0.6	−0.006	0.356
0.6166	−0.006	0.356
0.6333	−0.006	0.356
0.65	−0.006	0.356
0.6666	−0.006	0.356
0.6833	−0.006	0.356
0.7	−0.006	0.356
0.7166	−0.006	0.356
0.7333	−0.006	0.356
0.75	−0.006	0.356
0.7666	−0.006	0.356
0.7833	−0.006	0.356
0.8	−0.006	0.356
0.8166	−0.012	0.35
0.8333	−0.006	0.356
0.85	−0.012	0.35
0.8666	−0.006	0.356
0.8833	−0.012	0.35
0.9	−0.006	0.356
0.9166	−0.006	0.356
0.9333	−0.012	0.35
0.95	−0.012	0.35
0.9666	−0.006	0.356
0.9833	−0.012	0.35
1	−0.012	0.35
1.2	−0.012	0.35
1.4	−0.012	0.35
1.6	−0.012	0.35
1.8	−0.012	0.35
2	−0.012	0.35
2.2	−0.019	0.343
2.4	−0.012	0.35
2.6	−0.012	0.35
2.8	−0.012	0.35
3	−0.006	0.356
3.2	−0.006	0.356
3.4	−0.006	0.356
3.6	0	0.362
3.8	0	0.362
4	0.006	0.368
4.2	0	0.362
4.4	0	0.362
4.6	0.006	0.368
4.8	0.006	0.368
5	0.006	0.368
5.2	0.006	0.368
5.4	0.006	0.368

A-9 GROUNDWATER ELEVATION DATA

APPENDIX A-9
SUMMARY OF GROUDWATER ELEVATIONS - JANUARY - JUNE 1994

OLIN CHEMICALS PHASE I RI REPORT
ROCHESTER, N.Y.

WELL ID	REFERENCE ELEV. (MSL)	1994 MEASUREMENTS					
		JAN/FEB		MARCH		JUNE	
		DATE	ELEV. (MSL)	DATE	ELEV. (MSL)	DATE	ELEV. (MSL)
B-1	537.48	17-Jan-94	526.27	14-Mar-94	529.33	24-Jun-94	528.35
B-2	538.91	17-Jan-94	530.66	14-Mar-94	528.48	24-Jun-94	527.94
B-3	541.62	17-Jan-94	526.79	14-Mar-94	536.69	24-Jun-94	537.62
B-4	542.87	17-Jan-94	529.51	14-Mar-94	530.09	24-Jun-94	530.57
B-5	540.10	17-Jan-94	529.31	14-Mar-94	530.41	24-Jun-94	531.09
B-6	539.24	17-Jan-94	525.14	14-Mar-94	524.70	24-Jun-94	524.70
B-7	540.68	17-Jan-94	525.74	14-Mar-94	529.30	24-Jun-94	527.23
B-8	538.21	17-Jan-94	530.05	14-Mar-94	531.61	24-Jun-94	531.11
B-9	537.67	17-Jan-94	531.57	14-Mar-94	532.59	24-Jun-94	531.96
B-10	537.97	17-Jan-94	531.66	14-Mar-94	532.84	24-Jun-94	532.52
B-11	536.00	17-Jan-94	532.44	14-Mar-94	533.28	24-Jun-94	533.50
B-13	537.07	17-Jan-94	DRY	14-Mar-94	DRY	24-Jun-94	DRY
B-14	537.95	17-Jan-94	529.38	14-Mar-94	531.01	24-Jun-94	530.78
B-15	535.29	17-Jan-94	530.51	14-Mar-94	532.14	24-Jun-94	531.93
B-16	536.21	17-Jan-94	527.46	14-Mar-94	532.64	24-Jun-94	532.23
B-17	538.84	17-Jan-94	531.14	14-Mar-94	532.71	24-Jun-94	532.43
BR-1	537.11	17-Jan-94	528.31	14-Mar-94	530.28	24-Jun-94	529.49
BR-2	538.97	17-Jan-94	513.87	14-Mar-94	527.37	24-Jun-94	512.27
BR-2D	538.00	26-Jan-94	457.80	14-Mar-94	461.82	24-Jun-94	463.26
BR-3	538.04	17-Jan-94	515.94	14-Mar-94	521.06	24-Jun-94	514.76
BR-3D	537.00	17-Jan-94	455.50	14-Mar-94	451.75	24-Jun-94	454.37
BR-4	538.93	17-Jan-94	532.33	14-Mar-94	533.27	24-Jun-94	533.15
BR-5	536.30	17-Jan-94	524.95	14-Mar-94	528.70	24-Jun-94	522.72
BR-5A	536.35	17-Jan-94	524.55	14-Mar-94	510.34	24-Jun-94	522.77
BR-6	538.00	17-Jan-94	NA	14-Mar-94	526.83	24-Jun-94	490.40
BR-7	539.70	17-Jan-94	520.22	14-Mar-94	520.50	24-Jun-94	520.05
BR-7A		17-Jan-94	NA	14-Mar-94	NA	24-Jun-94	NA
BR-8	540.00	19-Jan-94	528.67	14-Mar-94	530.72	24-Jun-94	531.43
BR-101	540.65	17-Jan-94	528.85	14-Mar-94	531.48	24-Jun-94	531.69
BR-102	540.21	17-Jan-94	515.38	14-Mar-94	514.51	24-Jun-94	518.29
BR-103	533.19	20-Jan-94	527.69	14-Mar-94	528.81	24-Jun-94	528.24
BR-104	537.56	26-Jan-94	520.46	14-Mar-94	525.76	24-Jun-94	527.10
BR-105	536.90	17-Jan-94	510.80	14-Mar-94	511.40	24-Jun-94	512.75
BR-105D	536.69	04-Feb-94	503.49	14-Mar-94	504.39	24-Jun-94	511.90
BR-106	535.74	17-Jan-94	510.84	14-Mar-94	508.96	24-Jun-94	513.59
BR-107	536.32	21-Jan-94	513.92	14-Mar-94	508.61	24-Jun-94	512.22
BR-108	540.58	18-Jan-94	511.67	14-Mar-94	511.79	24-Jun-94	511.67
C-1	539.05	17-Jan-94	532.05	14-Mar-94	533.08	24-Jun-94	533.71
C-2A	539.12	17-Jan-94	532.32	14-Mar-94	533.92	24-Jun-94	533.22
C-3	541.63	17-Jan-94	531.93	14-Mar-94	532.58	24-Jun-94	532.88
C-4	540.82	17-Jan-94	531.92	14-Mar-94	532.92	24-Jun-94	532.82
C-5	536.35	17-Jan-94	528.65	14-Mar-94	529.34	24-Jun-94	529.36
E-1	534.32	17-Jan-94	527.07	14-Mar-94	523.30	24-Jun-94	527.31
E-2	538.83	24-Jan-94	532.23	14-Mar-94	533.75	24-Jun-94	534.69
E-3	536.00	17-Jan-94	525.10	14-Mar-94	525.59	24-Jun-94	526.44
E-4	538.58	17-Jan-94	531.28	14-Mar-94	533.96	24-Jun-94	531.03
E-5	539.31	17-Jan-94	DRY	14-Mar-94	533.98	24-Jun-94	DRY

APPENDIX A-9
SUMMARY OF GROUDWATER ELEVATIONS – JANUARY – JUNE 1994

OLIN CHEMICALS PHASE I RI REPORT
ROCHESTER, N.Y.

WELL ID	REFERENCE ELEV. (MSL)	1994 MEASUREMENTS					
		JAN/FEB		MARCH		JUNE	
		DATE	ELEV. (MSL)	DATE	ELEV. (MSL)	DATE	ELEV. (MSL)
EC-1	539.99	17-Jan-94	521.09	14-Mar-94	521.56	24-Jun-94	521.33
EC-2	542.00	17-Jan-94	DRY	14-Mar-94	DRY	24-Jun-94	NA
MW-2	535.50	19-Jan-94	528.79	14-Mar-94	530.75	24-Jun-94	530.59
MW-3	535.89	19-Jan-94	528.54	14-Mar-94	530.05	24-Jun-94	529.94
MW-103	533.25	19-Jan-94	529.27	14-Mar-94	NA	24-Jun-94	531.13
MW-104	537.54	26-Jan-94	524.54	14-Mar-94	527.28	24-Jun-94	528.11
MW-105	536.91	17-Jan-94	DRY	14-Mar-94	DRY	24-Jun-94	518.31
MW-106	535.44	17-Jan-94	523.34	14-Mar-94	525.34	24-Jun-94	525.16
MW-107	536.29	18-Jan-94	525.11	14-Mar-94	526.21	24-Jun-94	525.46
MW-108	540.80	18-Jan-94	520.81	14-Mar-94	522.10	24-Jun-94	521.05
MW-G6	534.65	18-Jan-94	528.15	14-Mar-94	531.51	24-Jun-94	530.75
MW-G8	534.25	18-Jan-94	525.95	14-Mar-94	528.54	24-Jun-94	527.56
MW-G9	536.60	18-Jan-94	526.20	14-Mar-94	530.84	24-Jun-94	527.44
N-1	536.91	17-Jan-94	531.81	14-Mar-94	534.05	24-Jun-94	531.74
N-2	536.92	17-Jan-94	530.52	14-Mar-94	533.52	24-Jun-94	530.83
N-3	537.16	17-Jan-94	528.26	14-Mar-94	531.10	24-Jun-94	530.87
PZ-101	543.15	17-Jan-94	527.79	14-Mar-94	529.47	24-Jun-94	529.80
PZ-102	541.11	17-Jan-94	515.11	14-Mar-94	519.46	24-Jun-94	525.08
PZ-103	540.34	17-Jan-94	527.69	14-Mar-94	528.79	24-Jun-94	529.50
PZ-104	537.21	17-Jan-94	521.51	14-Mar-94	522.88	24-Jun-94	522.73
PZ-105	539.58	17-Jan-94	526.58	14-Mar-94	528.16	24-Jun-94	527.45
PZ-106	537.45	17-Jan-94	524.95	14-Mar-94	529.30	24-Jun-94	528.01
PZ-107	538.64	17-Jan-94	531.54	14-Mar-94	533.15	24-Jun-94	532.56
PZ-108	536.56	17-Jan-94	532.26	14-Mar-94	533.92	24-Jun-94	532.67
S-1	536.76	17-Jan-94	528.76	14-Mar-94	529.81	24-Jun-94	521.92
S-2	536.31	17-Jan-94	521.01	14-Mar-94	531.71	24-Jun-94	520.97
S-3	536.40	17-Jan-94	525.08	14-Mar-94	531.85	24-Jun-94	526.65
S-4	NA	17-Jan-94	NA	14-Mar-94	NA	24-Jun-94	NA
W-1	536.98	17-Jan-94	NA	14-Mar-94	527.78	24-Jun-94	527.13
W-2	539.53	17-Jan-94	NA	14-Mar-94	524.43	24-Jun-94	522.63
W-3	541.91	17-Jan-94	522.11	14-Mar-94	528.86	24-Jun-94	522.23
W-4	540.35	20-Jan-94	522.35	14-Mar-94	529.85	24-Jun-94	522.30
W-5	537.69	20-Jan-94	526.79	14-Mar-94	529.49	24-Jun-94	524.54
W-6	538.25	17-Jan-94	NA	14-Mar-94	524.75	24-Jun-94	525.10

NOTES:
MSL – Mean sea level
NA – Not available

A-10 EXPLORATION LOCATION COORDINATES

APPENDIX A-10
Exploration Location Coordinates

Olin Chemicals Phase I RI Report
Rochester, NY

Location ID	Exploration Type	Coordinates (a)		Survey or Point Measurement Source
		Northing	Easting	
B-17	Monitoring Well	1,149,803	744,642	Measured from 1987 drawing
BR-1	Monitoring Well	1,150,533	744,790	Survey location data provided by Olin – Final Report, Groundwater Investigation, Rochester Plant Site, 9/90
BR-2D	Monitoring Well	1,149,850	744,803	Measured from 1987 drawing
BR-3D	Monitoring Well	1,149,728	744,595	Measured from 1987 drawing
BR-4	Monitoring Well	1,149,899	744,961	Measured from 1987 drawing
BR-5	Monitoring Well	1,150,215	744,962	Measured from 1987 drawing
BR-7	Monitoring Well	1,149,662	744,322	Measured from 1987 drawing
BR-8	Monitoring Well	1,149,928	744,325	Measured from 1987 drawing
BR-101	Monitoring Well	1,150,160	744,667	Om Popli Surveying Co. – Data tabulated 2/94
BR-102	Monitoring Well	1,150,209	744,318	Om Popli Surveying Co. – Data tabulated 2/94
BR-103	Monitoring Well	1,150,225	745,135	Om Popli Surveying Co. – Data tabulated 2/94
BR-104	Monitoring Well	1,149,096	744,594	Om Popli Surveying Co. – Data tabulated 2/94
BR-105	Monitoring Well	1,149,327	744,175	Om Popli Surveying Co. – Data tabulated 2/94
BR-105D	Monitoring Well	1,149,326	744,184	Om Popli Surveying Co. – Data tabulated 2/94
BR-106	Monitoring Well	1,149,764	744,046	Om Popli Surveying Co. – Data tabulated 2/94
BR-107	Monitoring Well	1,150,474	743,671	Om Popli Surveying Co. – Data tabulated 2/94
BR-108	Monitoring Well	1,150,058	743,661	Om Popli Surveying Co. – Data tabulated 2/94
C-1	Monitoring Well	1,150,148	744,828	Survey location data provided by Olin – Final Report, Groundwater Investigation, Rochester Plant Site, 9/90
C-2	Monitoring Well	1,149,854	744,820	Survey location data provided by Olin – Final Report, Groundwater Investigation, Rochester Plant Site, 9/90
C-2A	Monitoring Well	1,149,858	744,825	Survey location data provided by Olin – Final Report, Groundwater Investigation, Rochester Plant Site, 9/90
C-3	Monitoring Well	1,150,147	744,699	Survey location data provided by Olin – Final Report, Groundwater Investigation, Rochester Plant Site, 9/90
C-4	Monitoring Well	1,149,978	744,754	Survey location data provided by Olin – Final Report, Groundwater Investigation, Rochester Plant Site, 9/90
C-5	Monitoring Well	1,149,734	744,579	Survey location data provided by Olin – Final Report, Groundwater Investigation, Rochester Plant Site, 9/90
E-2	Monitoring Well	1,149,924	744,968	Survey location data provided by Olin – Final Report, Groundwater Investigation, Rochester Plant Site, 9/90
E-3	Monitoring Well	1,150,203	744,962	Survey location data provided by Olin – Final Report, Groundwater Investigation, Rochester Plant Site, 9/90
E-4	Monitoring Well	1,150,392	744,961	Survey location data provided by Olin – Final Report, Groundwater Investigation, Rochester Plant Site, 9/90
E-5	Monitoring Well	1,150,532	744,943	Survey location data provided by Olin – Final Report, Groundwater Investigation, Rochester Plant Site, 9/90
EC-1	Monitoring Well	1,149,215	743,581	Survey location data provided by Olin – Final Report, Groundwater Investigation, Rochester Plant Site, 9/90
EC-2	Monitoring Well	1,148,725	743,457	Survey location data provided by Olin – Final Report, Groundwater Investigation, Rochester Plant Site, 9/90
MW-1	Monitoring Well	1,150,747	744,562	Om Popli Surveying Co. – Data tabulated 2/94
MW-2	Monitoring Well	1,150,564	744,460	Om Popli Surveying Co. – Data tabulated 2/94
MW-3	Monitoring Well	1,150,636	744,309	Om Popli Surveying Co. – Data tabulated 2/94
MW-103	Monitoring Well	1,150,219	745,135	Om Popli Surveying Co. – Data tabulated 2/94
MW-104	Monitoring Well	1,149,096	744,588	Om Popli Surveying Co. – Data tabulated 2/94
MW-105	Monitoring Well	1,149,328	744,167	Om Popli Surveying Co. – Data tabulated 2/94
MW-106	Monitoring Well	1,149,766	744,058	Om Popli Surveying Co. – Data tabulated 2/94
MW-107	Monitoring Well	1,150,479	743,670	Om Popli Surveying Co. – Data tabulated 2/94
MW-108	Monitoring Well	1,150,066	743,664	Om Popli Surveying Co. – Data tabulated 2/94
MW-G6	Monitoring Well	1,150,807	744,201	Om Popli Surveying Co. – Data tabulated 2/94
MW-G8	Monitoring Well	1,150,589	744,005	Om Popli Surveying Co. – Data tabulated 2/94
MW-G9	Monitoring Well	1,150,701	743,626	Om Popli Surveying Co. – Data tabulated 2/94
N-1	Monitoring Well	1,150,534	744,797	Survey location data provided by Olin – Final Report, Groundwater Investigation, Rochester Plant Site, 9/90
N-2	Monitoring Well	1,150,532	744,663	Survey location data provided by Olin – Final Report, Groundwater Investigation, Rochester Plant Site, 9/90
N-3	Monitoring Well	1,150,522	744,537	Survey location data provided by Olin – Final Report, Groundwater Investigation, Rochester Plant Site, 9/90

APPENDIX A-10
Exploration Location Coordinates

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Location ID	Exploration Type	Coordinates (a) Northing	Coordinates (a) Easting	Survey or Point Measurement Source
B-1	Piezometer	1,150,506	744,301	Survey location data provided by Olin - Final Report, Groundwater Investigation, Rochester Plant Site, 9/90
B-2	Piezometer	1,150,347	744,303	Survey location data provided by Olin - Final Report, Groundwater Investigation, Rochester Plant Site, 9/90
B-3	Piezometer	1,150,205	744,304	Survey location data provided by Olin - Final Report, Groundwater Investigation, Rochester Plant Site, 9/90
B-4	Piezometer	1,150,056	744,302	Survey location data provided by Olin - Final Report, Groundwater Investigation, Rochester Plant Site, 9/90
B-5	Piezometer	1,149,926	744,302	Survey location data provided by Olin - Final Report, Groundwater Investigation, Rochester Plant Site, 9/90
B-6	Piezometer	1,149,647	744,306	Survey location data provided by Olin - Final Report, Groundwater Investigation, Rochester Plant Site, 9/90
B-7	Piezometer	1,149,579	744,381	Survey location data provided by Olin - Final Report, Groundwater Investigation, Rochester Plant Site, 9/90
B-8	Piezometer	1,149,578	744,512	Survey location data provided by Olin - Final Report, Groundwater Investigation, Rochester Plant Site, 9/90
B-9	Piezometer	1,149,582	744,692	Survey location data provided by Olin - Final Report, Groundwater Investigation, Rochester Plant Site, 9/90
B-10	Piezometer	1,149,653	744,886	Survey location data provided by Olin - Final Report, Groundwater Investigation, Rochester Plant Site, 9/90
B-11	Piezometer	1,149,723	744,958	Survey location data provided by Olin - Final Report, Groundwater Investigation, Rochester Plant Site, 9/90
B-12	Piezometer	1,149,729	744,265	Survey location data provided by Olin - Final Report, Groundwater Investigation, Rochester Plant Site, 9/90
B-13	Piezometer	1,149,548	744,317	Survey location data provided by Olin - Final Report, Groundwater Investigation, Rochester Plant Site, 9/90
B-14	Piezometer	1,149,561	744,465	Survey location data provided by Olin - Final Report, Groundwater Investigation, Rochester Plant Site, 9/90
B-15	Piezometer	1,149,562	744,578	Survey location data provided by Olin - Final Report, Groundwater Investigation, Rochester Plant Site, 9/90
B-16	Piezometer	1,149,566	744,751	Survey location data provided by Olin - Final Report, Groundwater Investigation, Rochester Plant Site, 9/90
PZ-101	Piezometer	1,150,063	744,226	Om Popli Surveying Co. - Data tabulated 2/94
PZ-102	Piezometer	1,149,951	744,226	Om Popli Surveying Co. - Data tabulated 2/94
PZ-103	Piezometer	1,149,791	744,238	Om Popli Surveying Co. - Data tabulated 2/94
PZ-104	Piezometer	1,149,460	744,318	Om Popli Surveying Co. - Data tabulated 2/94
PZ-105	Piezometer	1,149,588	744,448	Om Popli Surveying Co. - Data tabulated 2/94
PZ-106	Piezometer	1,149,711	744,801	Om Popli Surveying Co. - Data tabulated 2/94
PZ-107	Piezometer	1,149,633	744,851	Om Popli Surveying Co. - Data tabulated 2/94
PZ-108	Piezometer	1,149,660	744,967	Survey data suspect; Original coordinates put well approx. 100 ft. away.
BR-2	Pumping Well	1,149,860	744,818	Survey location data provided by Olin - Final Report, Groundwater Investigation, Rochester Plant Site, 9/90
BR-3	Pumping Well	1,149,728	744,582	Survey location data provided by Olin - Final Report, Groundwater Investigation, Rochester Plant Site, 9/90
BR-5A	Pumping Well	1,150,217	744,954	Survey location data provided by Olin - Surveyed by R. W. Schellinger - 7/29/94.
BR-6	Pumping Well	1,149,602	744,603	Measured from 1987 drawing
BR-7A	Pumping Well	1,149,662	744,322	Measured from 1987 drawing
E-1	Pumping Well	1,149,750	744,965	Survey location data provided by Olin - Final Report, Groundwater Investigation, Rochester Plant Site, 9/90
S-1	Pumping Well	1,149,578	744,465	Survey location data provided by Olin - Final Report, Groundwater Investigation, Rochester Plant Site, 9/90
S-2	Pumping Well	1,149,579	744,584	Survey location data provided by Olin - Final Report, Groundwater Investigation, Rochester Plant Site, 9/90
S-3	Pumping Well	1,149,597	744,759	Survey location data provided by Olin - Final Report, Groundwater Investigation, Rochester Plant Site, 9/90
S-4	Pumping Well	1,149,680	744,907	Measured from 1994 photogrammetric survey landmark
W-1	Pumping Well	1,150,498	744,301	Survey location data provided by Olin - Final Report, Groundwater Investigation, Rochester Plant Site, 9/90
W-2	Pumping Well	1,150,251	744,304	Survey location data provided by Olin - Final Report, Groundwater Investigation, Rochester Plant Site, 9/90
W-3	Pumping Well	1,150,142	744,307	Survey location data provided by Olin - Final Report, Groundwater Investigation, Rochester Plant Site, 9/90
W-4	Pumping Well	1,149,987	744,308	Survey location data provided by Olin - Final Report, Groundwater Investigation, Rochester Plant Site, 9/90
W-5	Pumping Well	1,149,730	744,304	Survey location data provided by Olin - Final Report, Groundwater Investigation, Rochester Plant Site, 9/90
W-6	Pumping Well	1,149,578	744,313	Survey location data provided by Olin - Final Report, Groundwater Investigation, Rochester Plant Site, 9/90

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Location ID	Exploration Type	Coordinates (a) Northing	Coordinates (a) Easting	Survey or Point Measurement Source
LINE 1 - 10+00	Seismic Survey	1,149,684	744,898	Om Popli Surveying Co. - Data tabulated 2/94
LINE 1 - 4+00	Seismic Survey	1,149,667	744,302	Om Popli Surveying Co. - Data tabulated 2/94
LINE 2 - 0-91	Seismic Survey	1,149,366	743,831	Om Popli Surveying Co. - Data tabulated 2/94
LINE 2 - 3+09	Seismic Survey	1,149,327	744,228	Om Popli Surveying Co. - Data tabulated 2/94 ; Note: Surveyed originally as Line 5-0+00
LINE 2 - 4+00	Seismic Survey	1,149,315	744,316	Om Popli Surveying Co. - Data tabulated 2/94
LINE 2 - 5+65	Seismic Survey	1,149,302	744,416	Om Popli Surveying Co. - Data tabulated 2/94
LINE 3 - 0+00	Seismic Survey	1,149,731	743,840	Om Popli Surveying Co. - Data tabulated 2/94
LINE 3 - 4+00	Seismic Survey	1,149,746	744,229	Om Popli Surveying Co. - Data tabulated 2/94
LINE 4 - 0+00	Seismic Survey	1,149,348	743,828	Om Popli Surveying Co. - Data tabulated 2/94
LINE 4 - 4+00	Seismic Survey	1,149,746	743,842	Om Popli Surveying Co. - Data tabulated 2/94
LINE 5 - 0+00	Seismic Survey	1,149,302	744,255	Om Popli Surveying Co. - Data tabulated 2/94; Note: Surveyed originally as Line 2-3+09
LINE 5 - 8+00	Seismic Survey	1,150,097	744,273	Om Popli Surveying Co. - Data tabulated 2/94
SG-101	Soil Gas	1,149,590	744,330	ABB-ES field measurement 12/93 - Located to nearest 5 feet using offset measurements to known coordinates.
SG-102	Soil Gas	1,149,590	744,430	ABB-ES field measurement 12/93 - Located to nearest 5 feet using offset measurements to known coordinates.
SG-103	Soil Gas	1,149,595	744,530	ABB-ES field measurement 12/93 - Located to nearest 5 feet using offset measurements to known coordinates.
SG-104	Soil Gas	1,149,600	744,630	ABB-ES field measurement 12/93 - Located to nearest 5 feet using offset measurements to known coordinates.
SG-105	Soil Gas	1,149,620	744,730	ABB-ES field measurement 12/93 - Located to nearest 5 feet using offset measurements to known coordinates.
SG-106	Soil Gas	1,149,650	744,830	ABB-ES field measurement 12/93 - Located to nearest 5 feet using offset measurements to known coordinates.
SG-107	Soil Gas	1,149,700	744,830	ABB-ES field measurement 12/93 - Located to nearest 5 feet using offset measurements to known coordinates.
SG-108	Soil Gas	1,149,700	744,735	ABB-ES field measurement 12/93 - Located to nearest 5 feet using offset measurements to known coordinates.
SG-109	Soil Gas	1,149,735	744,630	ABB-ES field measurement 12/93 - Located to nearest 5 feet using offset measurements to known coordinates.
SG-110	Soil Gas	1,149,735	744,575	ABB-ES field measurement 12/93 - Located to nearest 5 feet using offset measurements to known coordinates.
SG-111	Soil Gas	1,149,735	744,525	ABB-ES field measurement 12/93 - Located to nearest 5 feet using offset measurements to known coordinates.
SG-112	Soil Gas	1,149,735	744,470	ABB-ES field measurement 12/93 - Located to nearest 5 feet using offset measurements to known coordinates.
SG-113	Soil Gas	1,149,695	744,425	ABB-ES field measurement 12/93 - Located to nearest 5 feet using offset measurements to known coordinates.
SG-114	Soil Gas	1,149,785	744,955	ABB-ES field measurement 12/93 - Located to nearest 5 feet using offset measurements to known coordinates.
SG-115	Soil Gas	1,149,745	744,920	ABB-ES field measurement 12/93 - Located to nearest 5 feet using offset measurements to known coordinates.
SG-116	Soil Gas	1,149,745	744,955	ABB-ES field measurement 12/93 - Located to nearest 5 feet using offset measurements to known coordinates.
SG-117	Soil Gas	1,149,820	744,845	ABB-ES field measurement 12/93 - Located to nearest 5 feet using offset measurements to known coordinates.
SG-118	Soil Gas	1,149,755	744,710	ABB-ES field measurement 12/93 - Located to nearest 5 feet using offset measurements to known coordinates.
SG-119	Soil Gas	1,149,810	744,650	ABB-ES field measurement 12/93 - Located to nearest 5 feet using offset measurements to known coordinates.
SG-120	Soil Gas	1,149,860	744,755	ABB-ES field measurement 12/93 - Located to nearest 5 feet using offset measurements to known coordinates.
SG-121	Soil Gas	1,149,915	744,640	ABB-ES field measurement 12/93 - Located to nearest 5 feet using offset measurements to known coordinates.
SG-122	Soil Gas	1,150,035	744,640	ABB-ES field measurement 12/93 - Located to nearest 5 feet using offset measurements to known coordinates.
SG-123	Soil Gas	1,150,100	744,600	ABB-ES field measurement 12/93 - Located to nearest 5 feet using offset measurements to known coordinates.
SG-124	Soil Gas	1,150,100	744,560	ABB-ES field measurement 12/93 - Located to nearest 5 feet using offset measurements to known coordinates.
SG-125	Soil Gas	1,150,105	744,505	ABB-ES field measurement 12/93 - Located to nearest 5 feet using offset measurements to known coordinates.
SG-126	Soil Gas	1,150,130	744,530	ABB-ES field measurement 12/93 - Located to nearest 5 feet using offset measurements to known coordinates.
SG-127	Soil Gas	1,150,120	744,560	ABB-ES field measurement 12/93 - Located to nearest 5 feet using offset measurements to known coordinates.
SG-128	Soil Gas	1,150,120	744,600	ABB-ES field measurement 12/93 - Located to nearest 5 feet using offset measurements to known coordinates.
SG-129	Soil Gas	1,150,140	744,610	ABB-ES field measurement 12/93 - Located to nearest 5 feet using offset measurements to known coordinates.

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Location ID	Exploration Type	Coordinates (a)		Survey or Point Measurement Source
		Northing	Easting	
SG-130	Soil Gas	1,150,050	744,525	ABB-ES field measurement 12/93 - Located to nearest 5 feet using offset measurements to known coordinates.
SG-131	Soil Gas	1,150,075	744,415	ABB-ES field measurement 12/93 - Located to nearest 5 feet using offset measurements to known coordinates.
SG-132	Soil Gas	1,150,065	744,330	ABB-ES field measurement 12/93 - Located to nearest 5 feet using offset measurements to known coordinates.
SG-133	Soil Gas	1,149,930	744,325	ABB-ES field measurement 12/93 - Located to nearest 5 feet using offset measurements to known coordinates.
SG-134	Soil Gas	1,149,855	744,370	ABB-ES field measurement 12/93 - Located to nearest 5 feet using offset measurements to known coordinates.
SG-135	Soil Gas	1,149,755	744,370	ABB-ES field measurement 12/93 - Located to nearest 5 feet using offset measurements to known coordinates.
SG-136	Soil Gas	1,149,925	744,950	ABB-ES field measurement 12/93 - Located to nearest 5 feet using offset measurements to known coordinates.
SG-137	Soil Gas	1,149,915	744,905	ABB-ES field measurement 12/93 - Located to nearest 5 feet using offset measurements to known coordinates.
SG-138	Soil Gas	1,149,930	744,880	ABB-ES field measurement 12/93 - Located to nearest 5 feet using offset measurements to known coordinates.
SG-139	Soil Gas	1,149,995	744,865	ABB-ES field measurement 12/93 - Located to nearest 5 feet using offset measurements to known coordinates.
SG-140	Soil Gas	1,150,050	744,865	ABB-ES field measurement 12/93 - Located to nearest 5 feet using offset measurements to known coordinates.
SG-141	Soil Gas	1,150,055	744,815	ABB-ES field measurement 12/93 - Located to nearest 5 feet using offset measurements to known coordinates.
SG-142	Soil Gas	1,150,005	744,775	ABB-ES field measurement 12/93 - Located to nearest 5 feet using offset measurements to known coordinates.
SG-143	Soil Gas	1,150,135	744,955	ABB-ES field measurement 12/93 - Located to nearest 5 feet using offset measurements to known coordinates.
SG-144	Soil Gas	1,150,135	744,905	ABB-ES field measurement 12/93 - Located to nearest 5 feet using offset measurements to known coordinates.
SG-145	Soil Gas	1,150,135	744,855	ABB-ES field measurement 12/93 - Located to nearest 5 feet using offset measurements to known coordinates.
SG-146	Soil Gas	1,150,175	744,955	ABB-ES field measurement 12/93 - Located to nearest 5 feet using offset measurements to known coordinates.
SG-147	Soil Gas	1,150,190	744,910	ABB-ES field measurement 12/93 - Located to nearest 5 feet using offset measurements to known coordinates.
SG-148	Soil Gas	1,150,190	744,900	ABB-ES field measurement 12/93 - Located to nearest 5 feet using offset measurements to known coordinates.
SG-149	Soil Gas	1,150,225	744,955	ABB-ES field measurement 12/93 - Located to nearest 5 feet using offset measurements to known coordinates.
SG-150	Soil Gas	1,150,230	744,900	ABB-ES field measurement 12/93 - Located to nearest 5 feet using offset measurements to known coordinates.
SG-151	Soil Gas	1,150,225	744,855	ABB-ES field measurement 12/93 - Located to nearest 5 feet using offset measurements to known coordinates.
SG-152	Soil Gas	1,150,265	744,955	ABB-ES field measurement 12/93 - Located to nearest 5 feet using offset measurements to known coordinates.
SG-153	Soil Gas	1,150,265	744,900	ABB-ES field measurement 12/93 - Located to nearest 5 feet using offset measurements to known coordinates.
SG-154	Soil Gas	1,150,265	744,855	ABB-ES field measurement 12/93 - Located to nearest 5 feet using offset measurements to known coordinates.
SG-155	Soil Gas	1,150,155	744,790	ABB-ES field measurement 12/93 - Located to nearest 5 feet using offset measurements to known coordinates.
SG-156	Soil Gas	1,150,155	744,685	ABB-ES field measurement 12/93 - Located to nearest 5 feet using offset measurements to known coordinates.
SG-157	Soil Gas	1,150,240	744,790	ABB-ES field measurement 12/93 - Located to nearest 5 feet using offset measurements to known coordinates.
SG-158	Soil Gas	1,150,560	744,895	ABB-ES field measurement 12/93 - Located to nearest 5 feet using offset measurements to known coordinates.
SG-159	Soil Gas	1,150,475	744,890	ABB-ES field measurement 12/93 - Located to nearest 5 feet using offset measurements to known coordinates.
SG-160	Soil Gas	1,150,475	744,790	ABB-ES field measurement 12/93 - Located to nearest 5 feet using offset measurements to known coordinates.
SG-161	Soil Gas	1,150,475	744,690	ABB-ES field measurement 12/93 - Located to nearest 5 feet using offset measurements to known coordinates.
SG-162	Soil Gas	1,150,470	744,580	ABB-ES field measurement 12/93 - Located to nearest 5 feet using offset measurements to known coordinates.
SG-163	Soil Gas	1,150,470	744,480	ABB-ES field measurement 12/93 - Located to nearest 5 feet using offset measurements to known coordinates.
SG-164	Soil Gas	1,150,470	744,385	ABB-ES field measurement 12/93 - Located to nearest 5 feet using offset measurements to known coordinates.
SG-165	Soil Gas	1,150,375	744,920	ABB-ES field measurement 12/93 - Located to nearest 5 feet using offset measurements to known coordinates.
SG-166	Soil Gas	1,150,365	744,785	ABB-ES field measurement 12/93 - Located to nearest 5 feet using offset measurements to known coordinates.
SG-167	Soil Gas	1,150,400	744,690	ABB-ES field measurement 12/93 - Located to nearest 5 feet using offset measurements to known coordinates.
SG-168	Soil Gas	1,150,400	744,585	ABB-ES field measurement 12/93 - Located to nearest 5 feet using offset measurements to known coordinates.
SG-169	Soil Gas	1,150,395	744,390	ABB-ES field measurement 12/93 - Located to nearest 5 feet using offset measurements to known coordinates.
SG-170	Soil Gas	1,150,270	744,590	ABB-ES field measurement 12/93 - Located to nearest 5 feet using offset measurements to known coordinates.

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Location ID	Exploration Type	Coordinates (a)		Survey or Point Measurement Source
		Northing	Easting	
SG-171	Soil Gas	1,150,270	744,480	ABB-ES field measurement 12/93 - Located to nearest 5 feet using offset measurements to known coordinates.
SG-172	Soil Gas	1,150,270	744,395	ABB-ES field measurement 12/93 - Located to nearest 5 feet using offset measurements to known coordinates.
SG-173	Soil Gas	1,150,140	744,395	ABB-ES field measurement 12/93 - Located to nearest 5 feet using offset measurements to known coordinates.
SG-174	Soil Gas	1,150,230	744,180	ABB-ES field measurement 12/93 - Located to nearest 5 feet using offset measurements to known coordinates.
SG-175	Soil Gas	1,149,565	744,180	ABB-ES field measurement 12/93 - Located to nearest 5 feet using offset measurements to known coordinates.
SG-176	Soil Gas	1,149,460	744,380	ABB-ES field measurement 12/93 - Located to nearest 5 feet using offset measurements to known coordinates.
SG-177	Soil Gas	1,150,367	743,664	Om Popli Surveying Co. - Data tabulated 2/94
SG-178	Soil Gas	1,150,129	743,670	Om Popli Surveying Co. - Data tabulated 2/94
SG-179	Soil Gas	1,149,732	743,841	Om Popli Surveying Co. - Data tabulated 2/94
SG-180	Soil Gas	1,149,460	743,810	ABB-ES field measurement 12/93 - Located to nearest 5 feet using offset measurements to known coordinates.
SG-181	Soil Gas	1,149,190	743,895	ABB-ES field measurement 12/93 - Located to nearest 5 feet using offset measurements to known coordinates.
SG-182	Soil Gas	1,148,979	744,108	Om Popli Surveying Co. - Data tabulated 2/94
SG-183	Soil Gas	1,149,566	744,181	Om Popli Surveying Co. - Data tabulated 2/94
SG-184	Soil Gas	1,150,190	744,525	ABB-ES field measurement 12/93 - Located to nearest 5 feet using offset measurements to known coordinates.
SG-185	Soil Gas	1,150,190	744,550	ABB-ES field measurement 12/93 - Located to nearest 5 feet using offset measurements to known coordinates.
SG-186	Soil Gas	1,150,190	744,590	ABB-ES field measurement 12/93 - Located to nearest 5 feet using offset measurements to known coordinates.
SG-187	Soil Gas	1,150,225	744,590	ABB-ES field measurement 12/93 - Located to nearest 5 feet using offset measurements to known coordinates.
SS-101	Surface Soil	1,149,730	744,545	ABB-ES field measurement 12/93 - Located to nearest 5 feet using offset measurements to known coordinates.
SS-102	Surface Soil	1,149,740	744,955	ABB-ES field measurement 12/93 - Located to nearest 5 feet using offset measurements to known coordinates.
SS-103	Surface Soil	1,150,140	744,620	ABB-ES field measurement 12/93 - Located to nearest 5 feet using offset measurements to known coordinates.
SS-104	Surface Soil	1,150,065	744,845	ABB-ES field measurement 12/93 - Located to nearest 5 feet using offset measurements to known coordinates.
SS-105	Surface Soil	1,150,160	744,970	ABB-ES field measurement 12/93 - Located to nearest 5 feet using offset measurements to known coordinates.
SS-106	Surface Soil	1,150,520	744,770	ABB-ES field measurement 12/93 - Located to nearest 5 feet using offset measurements to known coordinates.
SS-107	Surface Soil	1,149,580	744,360	ABB-ES field measurement 12/93 - Located to nearest 5 feet using offset measurements to known coordinates.
SS-108	Surface Soil	1,149,930	744,780	ABB-ES field measurement 12/93 - Located to nearest 5 feet using offset measurements to known coordinates.
SS-109	Surface Soil	1,149,680	744,695	ABB-ES field measurement 12/93 - Located to nearest 5 feet using offset measurements to known coordinates.
SS-110	Surface Soil	1,149,800	744,745	ABB-ES field measurement 12/93 - Located to nearest 5 feet using offset measurements to known coordinates.
SS-111	Surface Soil	1,150,020	744,465	ABB-ES field measurement 12/93 - Located to nearest 5 feet using offset measurements to known coordinates.
SS-112	Surface Soil	1,149,875	744,975	ABB-ES field measurement 12/93 - Located to nearest 5 feet using offset measurements to known coordinates.
SS-113	Surface Soil	1,149,940	744,925	ABB-ES field measurement 12/93 - Located to nearest 5 feet using offset measurements to known coordinates.
SS-114	Surface Soil	1,150,230	744,745	ABB-ES field measurement 12/93 - Located to nearest 5 feet using offset measurements to known coordinates.
SS-115	Surface Soil	1,150,390	744,935	ABB-ES field measurement 12/93 - Located to nearest 5 feet using offset measurements to known coordinates.
T-101	Terraprobe Boring	1,149,600	744,880	Om Popli Surveying Co. - Data tabulated 2/94
T-102	Terraprobe Boring	1,149,663	744,967	Om Popli Surveying Co. - Data tabulated 2/94
T-103	Terraprobe Boring	1,149,328	744,696	Om Popli Surveying Co. - Data tabulated 2/94
T-104	Terraprobe Boring	1,149,328	744,355	Om Popli Surveying Co. - Data tabulated 2/94
T-105	Terraprobe Boring	1,149,247	744,845	Om Popli Surveying Co. - Data tabulated 2/94
T-106	Terraprobe Boring	1,150,228	744,903	Om Popli Surveying Co. - Data tabulated 2/94
T-107	Terraprobe Boring	1,149,830	744,236	Om Popli Surveying Co. - Data tabulated 2/94
T-108	Terraprobe Boring	1,150,108	744,231	Om Popli Surveying Co. - Data tabulated 2/94

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Location ID	Exploration Type	Coordinates (a) Northing	Coordinates (a) Easting	Survey or Point Measurement Source
T-109	Terraprobe Boring	1,150,228	744,181	Om Popli Surveying Co. - Data tabulated 2/94
T-110	Terraprobe Boring	1,150,451	744,173	Om Popli Surveying Co. - Data tabulated 2/94
T-111	Terraprobe Boring	1,150,171	745,113	ABB-ES field measurement 12/93 - Located to nearest 5 feet using offset measurements to known coordinates.
T-112	Terraprobe Boring	1,150,216	745,174	Om Popli Surveying Co. - Data tabulated 2/94
T-113	Terraprobe Boring	1,150,120	745,140	Om Popli Surveying Co. - Data tabulated 2/94
T-114	Terraprobe Boring	1,150,217	745,113	Om Popli Surveying Co. - Data tabulated 2/94
T-115	Terraprobe Boring	1,150,546	744,360	Om Popli Surveying Co. - Data tabulated 2/94
T-116	Terraprobe Boring	1,150,556	744,506	Om Popli Surveying Co. - Data tabulated 2/94
T-117	Terraprobe Boring	1,150,513	743,914	Om Popli Surveying Co. - Data tabulated 2/94
T-118	Terraprobe Boring	1,150,498	743,725	Om Popli Surveying Co. - Data tabulated 2/94
T-119	Terraprobe Boring	1,150,225	744,855	Om Popli Surveying Co. - Data tabulated 2/94
T-120	Terraprobe Boring	1,150,196	744,956	Om Popli Surveying Co. - Data tabulated 2/94
T-121	Terraprobe Boring	1,150,245	744,941	Om Popli Surveying Co. - Data tabulated 2/94
T-122	Terraprobe Boring	1,150,190	744,549	Om Popli Surveying Co. - Data tabulated 2/94
T-123	Terraprobe Boring	1,150,121	744,557	Om Popli Surveying Co. - Data tabulated 2/94
T-124	Terraprobe Boring	1,150,160	744,579	Om Popli Surveying Co. - Data tabulated 2/94
T-125	Terraprobe Boring	1,149,003	744,359	Om Popli Surveying Co. - Data tabulated 2/94
T-126	Terraprobe Boring	1,148,995	744,560	Om Popli Surveying Co. - Data tabulated 2/94
T-127	Terraprobe Boring	1,148,999	744,845	Om Popli Surveying Co. - Data tabulated 2/94
T-128	Terraprobe Boring	1,150,103	744,505	Om Popli Surveying Co. - Data tabulated 2/94
T-129	Terraprobe Boring	1,149,924	744,953	Om Popli Surveying Co. - Data tabulated 2/94
T-130	Terraprobe Boring	1,150,053	744,840	Om Popli Surveying Co. - Data tabulated 2/94
T-131	Terraprobe Boring	1,149,946	744,840	Om Popli Surveying Co. - Data tabulated 2/94
T-132	Terraprobe Boring	1,150,055	744,806	Om Popli Surveying Co. - Data tabulated 2/94
T-133	Terraprobe Boring	1,149,806	744,679	Om Popli Surveying Co. - Data tabulated 2/94
T-134	Terraprobe Boring	1,149,800	744,650	Om Popli Surveying Co. - Data tabulated 2/94
T-135	Terraprobe Boring	1,149,805	744,615	ABB-ES field measurement 12/93 - Located to nearest 5 feet using offset measurements to known coordinates.
T-136	Terraprobe Boring	1,149,733	744,571	Om Popli Surveying Co. - Data tabulated 2/94
T-137	Terraprobe Boring	1,149,764	744,935	Om Popli Surveying Co. - Data tabulated 2/94
T-138	Terraprobe Boring	1,149,743	744,955	Om Popli Surveying Co. - Data tabulated 2/94
T-139	Terraprobe Boring	1,149,785	744,957	Om Popli Surveying Co. - Data tabulated 2/94
T-140	Terraprobe Boring	1,149,722	744,834	Om Popli Surveying Co. - Data tabulated 2/94
T-141	Terraprobe Boring	1,150,448	744,302	Om Popli Surveying Co. - Data tabulated 2/94
T-142	Terraprobe Boring	1,149,449	744,976	Om Popli Surveying Co. - Data tabulated 2/94
T-143	Terraprobe Boring	1,149,579	745,135	Om Popli Surveying Co. - Data tabulated 2/94
T-144	Terraprobe Boring	1,149,847	745,134	Om Popli Surveying Co. - Data tabulated 2/94
T-145	Terraprobe Boring	1,148,708	744,345	Om Popli Surveying Co. - Data tabulated 2/94
T-147	Terraprobe Boring	1,148,682	743,874	Om Popli Surveying Co. - Data tabulated 2/94
T-148	Terraprobe Boring	1,150,386	744,494	Om Popli Surveying Co. - Data tabulated 2/94
T-149	Terraprobe Boring	1,150,254	744,369	Om Popli Surveying Co. - Data tabulated 2/94

APPENDIX A–10
Exploration Location Coordinates

Olin Chemicals Phase I RI Report
Rochester, NY

Location ID	Exploration Type	Coordinates (a) Northing	Coordinates (a) Easting	Survey or Point Measurement Source
T–150	Terraprobe Boring	1,150,358	744,169	Om Popli Surveying Co. – Data tabulated 2/94
T–151	Terraprobe Boring	1,149,735	744,614	Om Popli Surveying Co. – Data tabulated 2/94
T–152	Terraprobe Boring	1,149,814	744,727	Om Popli Surveying Co. – Data tabulated 2/94
T–153	Terraprobe Boring	1,149,913	744,636	Om Popli Surveying Co. – Data tabulated 2/94
T–154	Terraprobe Boring	1,149,204	744,965	Om Popli Surveying Co. – Data tabulated 2/94
T–155	Terraprobe Boring	1,149,305	745,148	Om Popli Surveying Co. – Data tabulated 2/94
T–156	Terraprobe Boring	1,148,997	745,005	ABB–ES field measurement 12/93 – Located to nearest 5 feet using offset measurements to known coordinates.
T–157	Terraprobe Boring	1,149,265	745,330	Om Popli Surveying Co. – Data tabulated 2/94
T–158	Terraprobe Boring	1,149,864	744,752	Om Popli Surveying Co. – Data tabulated 2/94
T–159	Terraprobe Boring	1,149,816	744,780	Om Popli Surveying Co. – Data tabulated 2/94
T–160	Terraprobe Boring	1,149,868	744,803	Om Popli Surveying Co. – Data tabulated 2/94
T–161	Terraprobe Boring	1,149,925	744,761	Om Popli Surveying Co. – Data tabulated 2/94

Notes:
a New York State Plane Coordinate System