

GROUND WATER PUMPING TESTS
AND A REVIEW OF GROUND WATER TREATMENT SYSTEM
7575 DUBLIN BOULEVARD
DUBLIN, CALIFORNIA

PROJECT NO. 1233

NOVEMBER 1ST, 1991



ENVIRONMENTAL AUDIT, INC.

Planning, Environmental Analysis and Hazardous
Substances Management and Remediation

1000-A ORTEGA WAY
PLACENTIA, CA 92670-7125

714 632-8527
FAX 714 632-6754

TABLE OF CONTENTS

	Page
1.0 INTRODUCTION	1
2.0 FIELD WORK	1
2.1 Ground Water Level Measurements	1
2.2 Ground Water Pumping Tests	2
2.3 Ground Water Sampling	2
2.4 Sampling Equipment Cleaning Protocol	2
3.0 ANALYTICAL TESTING	3
4.0 RESULTS	3
4.1 Ground Water Gradient and Direction of Flow	3
4.2 Ground Water Pumping Test	3
5.0 DISCUSSION	4
5.1 Ground Water Pumping Tests	4
5.2 Ground Water Quality	5
6.0 RECOMMENDED TREATMENT SYSTEM MODIFICATIONS.....	6
7.0 LIMITATION	6

TABLES:

TABLE 1: GROUND WATER ELEVATIONS	1
TABLE 2: GROUND WATER ANALYTICAL TESTING RESULTS	3
TABLE 3: SUMMARY OF PUMPING TEST RESULTS	4

FIGURES:

FIGURE 1: LOCATION MAP	
FIGURE 2: SITE PLAN	
FIGURE 3: GROUND WATER ELEVATION MAP (MARCH 29, 1991)	
FIGURE 4: GROUND WATER ELEVATION MAP (JUNE 4, 1991)	
FIGURE 5: WELL B-5, RESIDUAL DRAWDOWN vs. LOG (t/t')	
FIGURE 6: WELL B-10, DRAWDOWN vs. LOG t	
FIGURE 7: WELL B-10, RESIDUAL DRAWDOWN vs. LOG (t/t')	
FIGURE 8: WELL B-12, DRAWDOWN vs. LOG t	
FIGURE 9: WELL B-12, RESIDUAL DRAWDOWN vs LOG (t/t')	
FIGURE 10: WELL B-16, DRAWDOWN vs. LOG t	
FIGURE 11: WELL B-16, RESIDUAL DRAWDOWN vs. LOG (t/t')	
FIGURE 12: WELL B-5, DRAWDOWN vs. LOG t	
FIGURE 13: WELL B-5, RESIDUAL DRAWDOWN vs. LOG (t/t')	

FIGURE 14: WELL B-10, DRAWDOWN vs. LOG t
FIGURE 15: WELL B-15, DRAWDOWN vs. LOG t
FIGURE 16: WELL B-15, RESIDUAL DRAWDOWN vs. LOG (t/t')
FIGURE 17: WELL B-16, DRAWDOWN vs. LOG t
FIGURE 18: GROUND WATER TREATMENT SYSTEM

APPENDICES:

APPENDIX A: COPIES OF BORING LOGS
APPENDIX B: PUMPING TEST DATA
APPENDIX C: CHAIN OF CUSTODY RECORD
APPENDIX D: LABORATORY REPORT

UB:1233:MWD5.2TC

1.0 INTRODUCTION

Environmental Audit, Inc. (EAI) was retained by Montgomery Ward & Company, Inc. (Ward) to complete ground water pumping tests, and to evaluate the existing ground water treatment system located at a Ward Auto Service Center, 7575 Dublin Boulevard, Dublin, California (Site) (see Figure 1).

The Site formerly contained three 10,000-gallon underground gasoline storage tanks (USTs) (see Figure 2). The existing ground water treatment system consists of two 2,500-pound activated carbon canisters connected in parallel. When the system was in use, the ground water was extracted from well B-12 at a rate of 8 to 12 gallons per minute (gpm). The extracted ground water was filtered before adsorption in order to remove the suspended solids. The treated ground water was then discharged to the sanitary sewer.

This report presents the results of EAI pumping tests, and the minor modifications recommended to improve the ground water treatment system.

2.0 FIELD WORK

2.1 GROUND WATER LEVEL MEASUREMENTS

On March 29 and June 4, 1991, prior to commencement of the pumping tests, ground water level measurements were obtained from all on-site wells. The measurements were obtained using a Marine Moisture Control interface probe. No free-product was detected in any of the wells (see Table 1). EAI surveyed all wells using an arbitrary reference datum of 100 feet for the top of the casing of the well B-12.

TABLE 1

GROUND WATER ELEVATIONS

<u>WELL</u>	<u>CASING ELEVATIONS (ft)</u>	<u>DEPTH TO GROUND WATER (ft)</u>		<u>GROUND WATER ELEVATION (ft)</u>	
		<u>3/29</u>	<u>6/4</u>	<u>3/29</u>	<u>6/4</u>
B-5	100.95	10.41	11.02	90.54	89.93
B-10	100.60	10.13	10.72	90.47	89.88
B-12	100.00	9.36	9.96	90.64	90.04
B-15	101.50	10.86	11.47	90.64	90.03
B-16	100.70	10.41	10.98	90.29	89.72

2.2 GROUND WATER PUMPING TESTS

Ground water pumping tests were conducted on March 29 and June 4, 1991. For the March 29, 1991 testing, ground water was pumped from monitoring well B-5 at a constant rate of 3.5 gpm, and wells B-10, B-12 and B-16 were used as observation wells. For the June 4, 1991 testing, ground water was pumped from well B-12 at a constant rate of 7.5 gpm, and wells B-5, B-10, B-15 and B-16 were used as observation wells. The pumping test data are shown in Appendix A.

The recovered ground water was sealed in labeled 55-gallon drums. The drums remained on-site pending the results of the analytical testing of water samples, at which time the appropriate disposal method was determined.

2.3 GROUND WATER SAMPLING

On June 4, 1991, all wells were sampled after completion of the ground water pumping test. Prior to sampling, wells B-5, B-10, B-15 and B-16 were purged of four to five casing volumes of water using a submersible pump. No purging of well B-12 was necessary since this well was used to extract ground water during the pumping test. The water samples were obtained using Voss Technologies' disposable bottom bailers equipped with volatile organic compound samplers. Use of these bailers precludes the potential for cross contamination. The samples were sealed in two 40-milliliter (ml) VOA vials with Teflon septa lined lids. Each vial was completely filled so that no head space existed between the sample and the lid. The samples were labeled with the sample point identification and date, and immediately placed into an ice chest chilled using frozen blue ice and crushed ice. The samples remained chilled until they were delivered to the laboratory for analytical testing. All samples were logged on a chain of custody record form (see Appendix B).

2.4 SAMPLING EQUIPMENT CLEANING PROTOCOL

The submersible pump and hose system (equipment) used to purge the wells prior to sampling, was decontaminated prior to use at each well by the following procedure:

- The equipment was flushed with a solution of Alconox detergent and water; and
- The equipment was rinsed with purified water.

3.0 ANALYTICAL TESTING

All samples were delivered for analytical testing to Calscience Environmental Laboratories, Inc., a California Department of Health Services (DOHS) certified hazardous waste testing laboratory (Certificate #257) located in Stanton, California. Each sample was tested for total volatile petroleum hydrocarbons (TVPH) using modified EPA Method 8015, and benzene, toluene, xylenes and ethylbenzene (BTXE) using EPA Method 602. The testing results are shown in Table 2. The laboratory report is contained in Appendix C.

TABLE 2
GROUND WATER ANALYTICAL TESTING RESULTS

SAMPLE I.D. NO.	Parts per Billion (ppb)				
	TVPH	BENZENE	TOLUENE	XYLENES	ETHYL-BENZENE
B-5	7,800	2,140	1,030	764	439
B-10	16,000	3,820	1,770	1,210	933
B-12	20,000	2,240	2,960	4,280	1,030
B-15	1,200	43	21	28	34
B-16	2,300	346	50	407	155

4.0 RESULTS

4.1 GROUND WATER GRADIENT AND DIRECTION OF FLOW

Figures 3 and 4 present isopotentiometric contour maps for ground water constructed from data collected on March 29 and June 4, 1991, respectively. Interpretation of the data indicates that the direction of ground water flow, at the time of measurement, is to the south, and that the gradient is approximately 0.003 ft/ft.

4.2 GROUND WATER PUMPING TEST

The Neuman method of analysis was utilized to determine the unconfined aquifer parameters of transmissivity (T), hydraulic conductivity (K) and storativity (S). The aquifer thickness in the on-site wells is not well defined in the logs. Therefore, hydraulic conductivity values were determined assuming an aquifer thickness of 10 feet for the March 29, 1991 pumping test, and 15 feet for the June 4, 1991 pumping test (this represents the height of the water column in wells B-5 and B-12, respectively, which were used to conduct the pumping tests).

Figures 5 through 10 present the draw-down versus log time and residual drawdown versus log t/t' (t = time elapsed since the start of pumping, and t' = time elapsed since the pumping stopped) plots for the observation wells associated with the March 29, 1991 pumping test. Figures 11 through 17 present the same plots for the June 4, 1991 pumping test. Table 3 summarizes the results of the pumping tests, and includes the distances between the pumping and observation wells.

TABLE 3
SUMMARY OF PUMPING TEST RESULTS

<u>PUMPING WELL</u>	<u>OBSERVATION WELL</u>	<u>r (ft)</u>	<u>S</u>	<u>T (ft²/min)</u>	<u>K (ft/min)</u>
March 29, 1991					
B-5	B-10	23.0	0.00341	1.112	0.1112
	B-12	48.5	0.01319	1.682	0.1682
	B-16	82.0	0.01370	1.733	0.1733
June 4, 1991					
B-12	B-5	48.5	0.01739	1.791	0.1194
	B-10	68.5	0.00985	2.374	0.1583
	B-15	55.0	0.01025	1.377	0.0918
	B-16	95.0	0.01430	1.949	0.1299

5.0 DISCUSSION

5.1 GROUND WATER PUMPING TESTS

Calculations were made to evaluate shallow aquifer parameters such as transmissivity, storativity and permeability using an interactive computer software program developed by Geraghty & Miller, Inc. ("AQTESOLV"). The Neuman method for unsteady flow to a well in an unconfined aquifer was used to interpret pumping test data. Residual drawdown (recovery) plots provide reliable values of aquifer conditions near the individual observation wells because the recovery is not influenced by the variations in pumping rates that commonly occur during the drawdown period. However, as in this case, when boundary conditions are known or suspected, the interpretation of the recovery data must be done with caution because of the difficulty in separating the influence of boundaries. The transmissivity values calculated from the pumping test data indicate that the yield of water-bearing sediments is high (i.e., 1.112 to 2.374 ft²/min) (see Table 3).

The hydraulic conductivity values (i.e., 0.1112 to 0.1583 ft/min) were estimated from the transmissivity values, assuming that the aquifer thickness equals the height of water column in the pumping wells. These hydraulic conductivity values correspond to clean sand to silty sand. These findings are inconsistent with the soil boring logs which indicate that the soil consists of clay and sandy/silty clay (see Appendix D). The existing on-site wells are in the vicinity of a storm drain, and a definite change in slopes of the time draw-down graphs is expected to occur because of this boundary influence. When slopes steepen, this often reflects interception of a geohydrologic boundary by the cone of depression (e.g., limited aquifer conditions, impermeable bedrock, or fault barriers). When slopes flatten, the cone may have encountered a recharge boundary (e.g., stream), or have received recharge from leakage. Consequently, if the method used to interpret the test results cannot take into account the boundary condition influence, a shift in results will occur. Since the boring logs were prepared by two different consulting firms, and data regarding the depth and diameter of storm drain and sewer lines were not available to EAI, we decided to use the above-mentioned methods to interpret pumping test results. As a matter of fact, a shift of the results toward coarser grain sizes will not influence estimating the design parameters of the ground water extraction system, since the June 4, 1991 test was performed with a discharge rate close to the maximum yield of the existing extraction well. Based on these findings, it is presumable that this storm drain, as well as the former UST area filled with pea gravel, affect ground water extraction at the Site. The results also indicate that ground water extraction from well B-12 at a constant rate of 7.5 gpm has caused measurable drawdown in observation well B-16, located about 95 feet away from well B-12.

Based upon the pumping test results, it is EAI's opinion that pumping ground water at a rate of 8 gpm from existing extraction well B-12 should be sufficient to contain the ground water beneath the Site.

5.2 GROUND WATER QUALITY

The analytical testing results of the ground water samples show elevated TVPH and BTXE concentrations in all samples. The sample collected from extraction well B-12 contained the highest contaminant concentrations, i.e., a TVPH concentration of 20,000 parts per billion (ppb), and a total BTXE concentration of 10,510 ppb. Samples obtained from other wells contained the same parameters, but at lower concentrations. The backfill of the storm drain may act like a trench increasing the flow of the ground water at the Site. This may increase the volume of water to be pumped and treated since the influent is diluted because of the increasing ground water flow.

6.0 RECOMMENDED TREATMENT SYSTEM MODIFICATIONS

EAI has reviewed the existing treatment system at the Site, which consists of two 2,500-pound activated carbon canisters in parallel. This system, if properly maintained and managed, can effectively treat the extracted ground water to reduce the dissolved phase constituents to acceptable levels, prior to discharge to the sanitary sewer. However, based on our knowledge of past problems associated with the system, EAI recommends that an oil-water separator be installed at the front end of the treatment system and the carbon canisters be installed in series. Additionally, influent sampling ports should be installed before and after the separator, and between the two carbon canisters. The effluent sampling port will remain as currently located, i.e., after the second canister (see Figure 18). Free-product, if any, from the separator will be directed to a holding tank equipped with an automatic shut-off valve which will shut-down the treatment system if the product tank becomes full. Some aboveground piping is damaged and this also will be replaced. With these modifications and proper maintenance and monitoring, the system should be sufficient to contain and remediate the ground water below the Site.

Good

7.0 LIMITATION

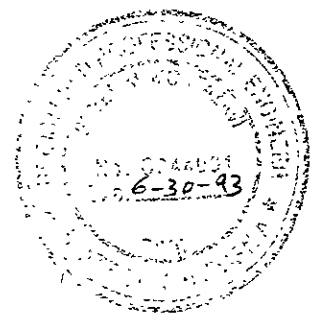
Our professional services have been performed using that degree of care and skill ordinarily exercised, under similar circumstances by reputable environmental consultants practicing in this or similar localities. This report has been prepared for Montgomery Ward & Company, Inc. No other warranty, expressed or implied, is made as to the professional advice contained in this report.

Respectfully submitted,

ENVIRONMENTAL AUDIT, INC.

Seyed Mortaza Mortazavi

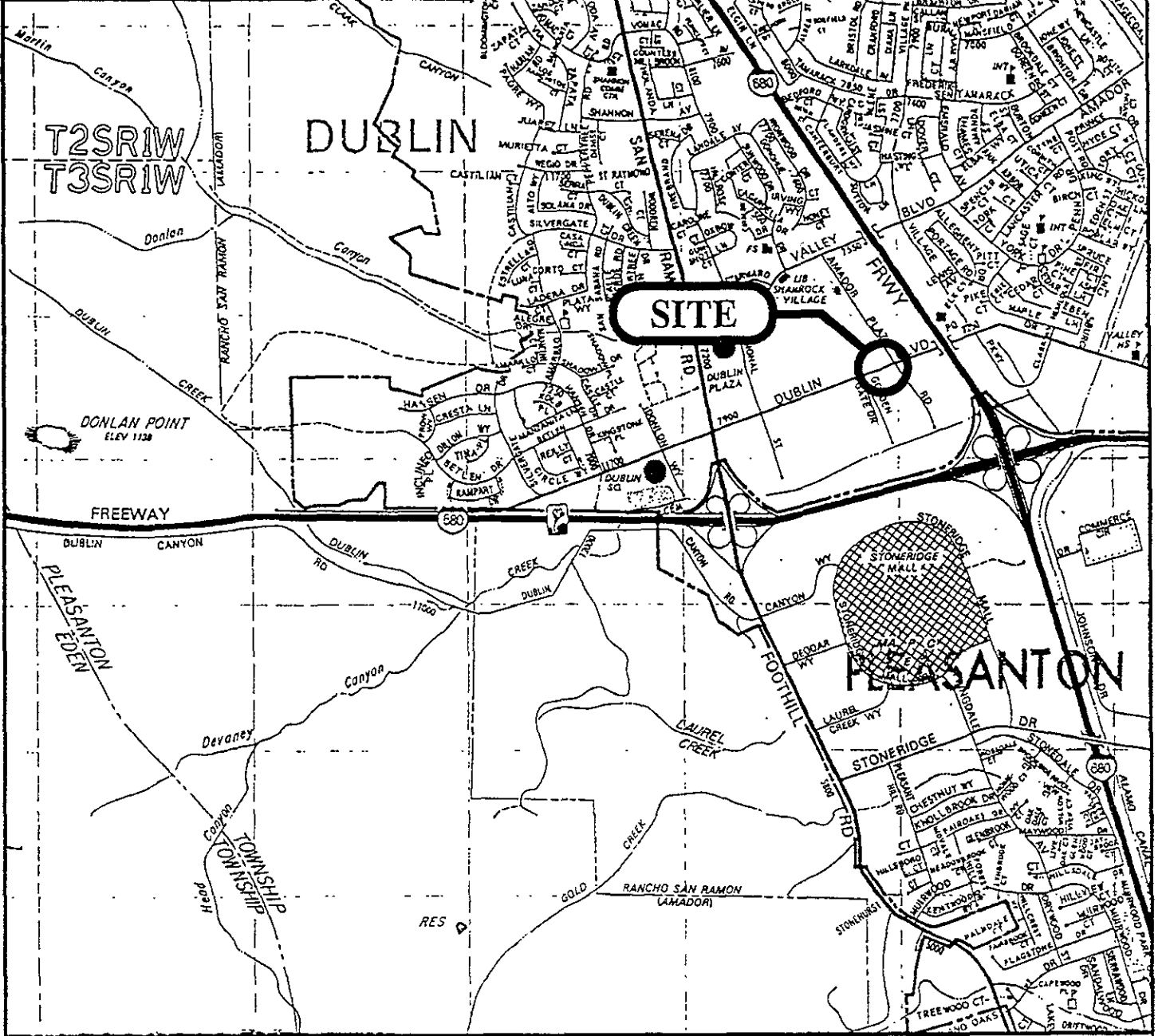
Seyed M. Mortazavi, Ph.D., R.C.E.
Senior Engineer/Hydrogeologist



SMM:SAB:pb

SM:WARD03.1

FIGURES



ENVIRONMENTAL AUDIT, INC.

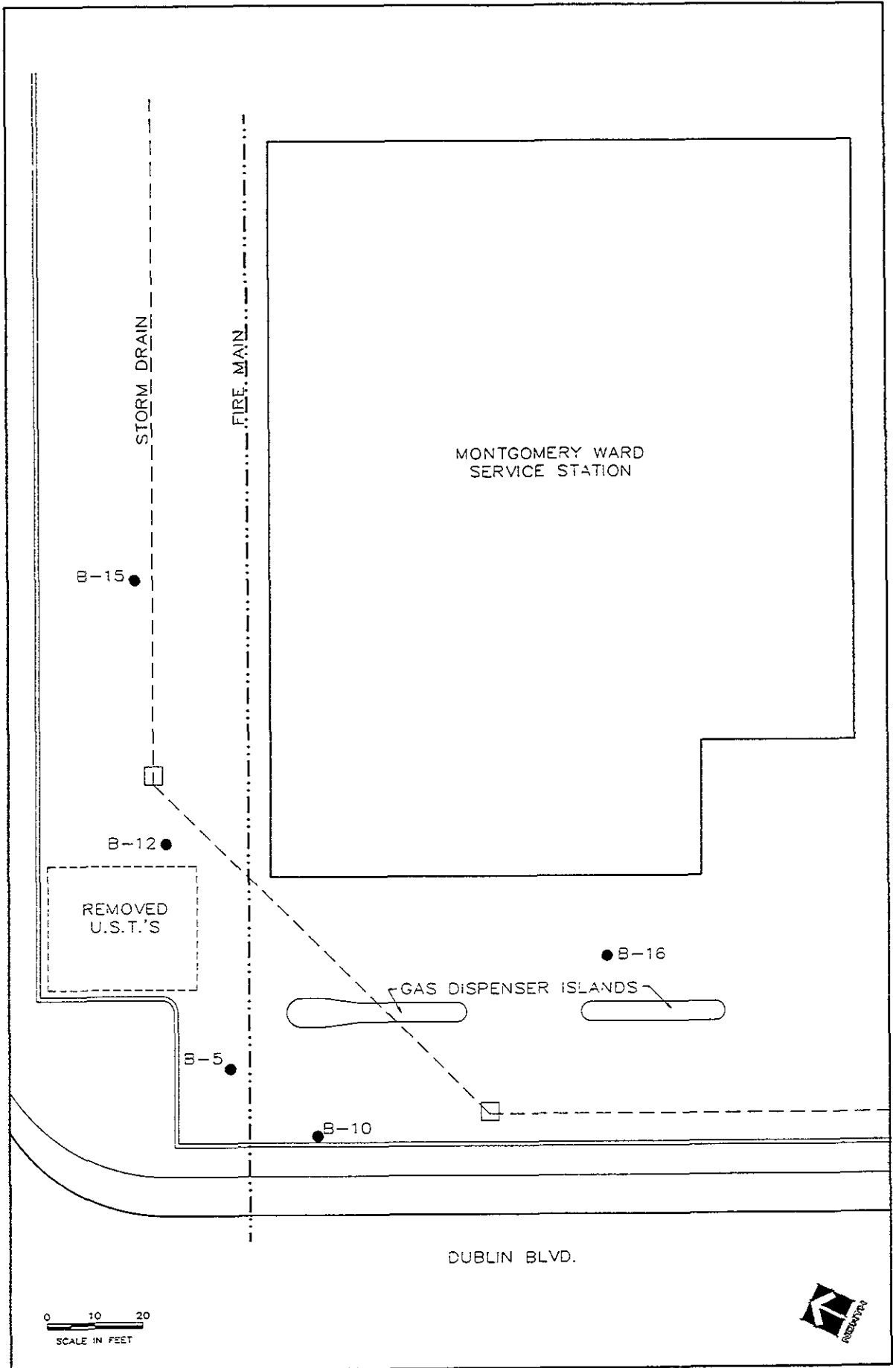
LOCATON MAP
 MONTGOMERY WARD AUTO SERVICE CENTER
 7575 DUBLIN BLVD.
 DUBLIN, CALIFORNIA



DATE: 7-91

FNM-1233LM01

FIGURE: 1

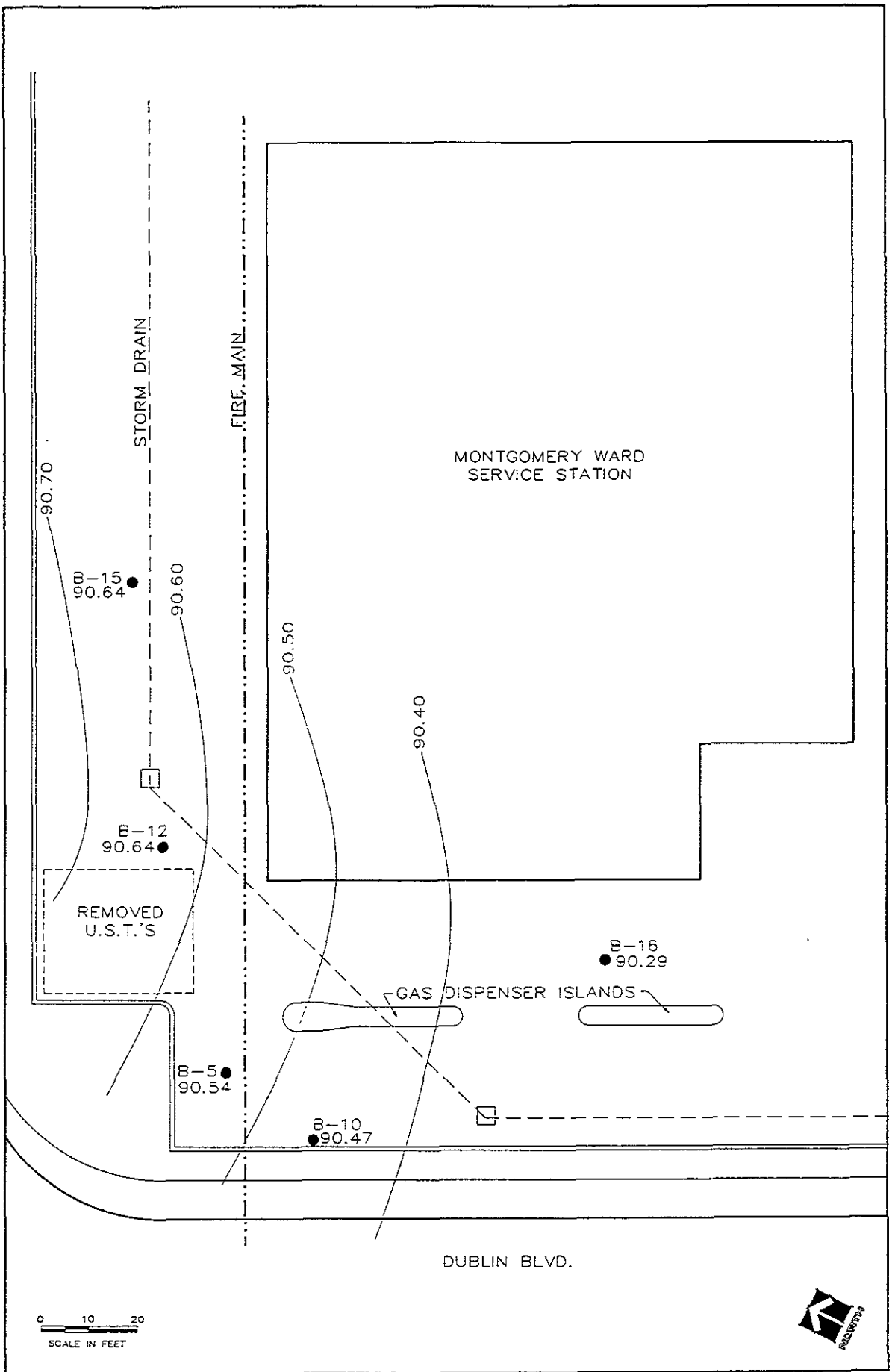


ENVIRONMENTAL ASSOCIATES, INC.

SITE PLAN
 MONTGOMERY WARD
 SERVICE STATION
 DUBLIN, CA

DATE: JULY, 1991
 FNM-1233SP02

FIGURE: 2

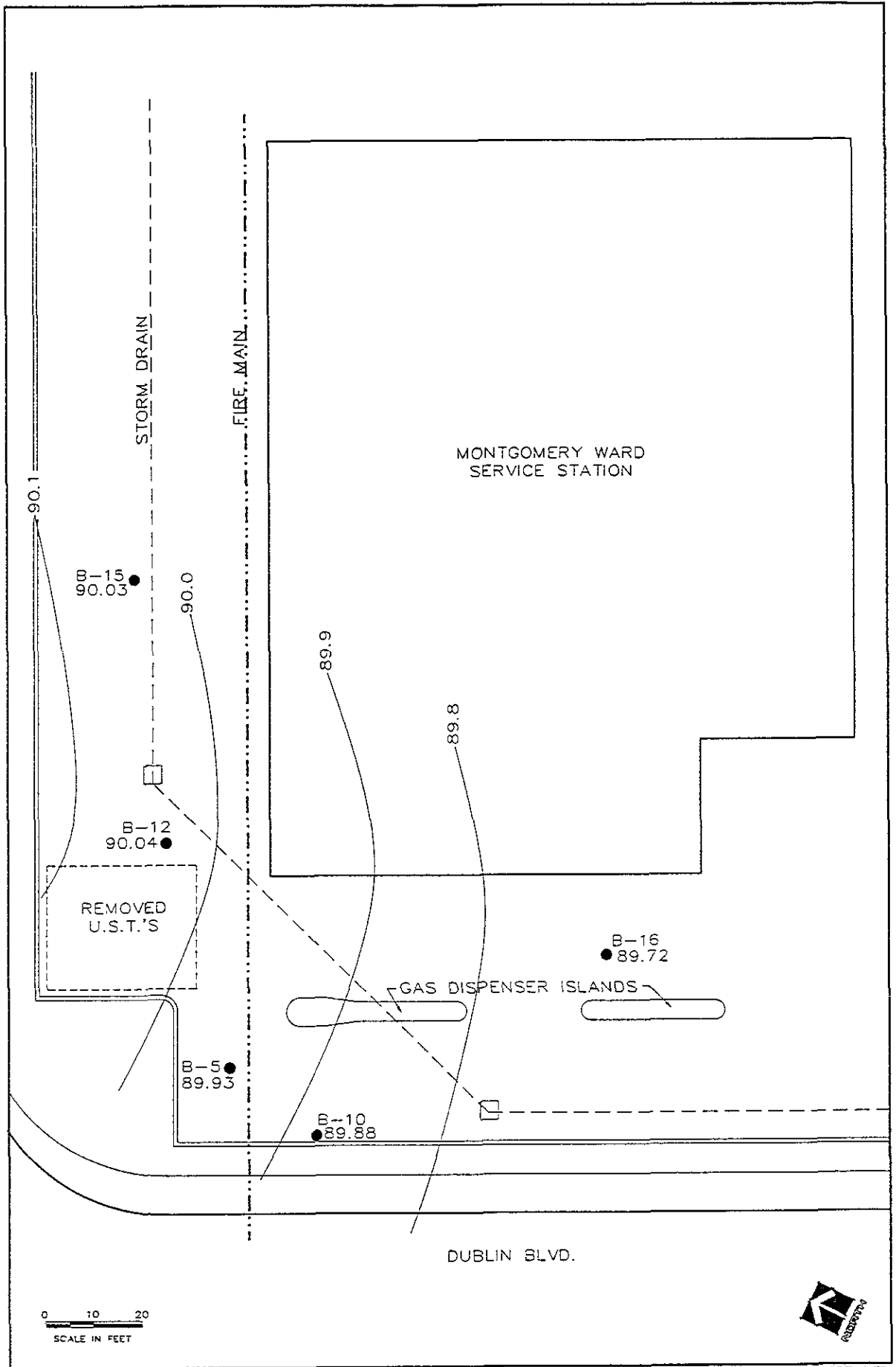


ENVIRONMENTAL AUDIT, INC. GROUND WATER ELEVATION MAP
 MONTGOMERY WARD
 SERVICE STATION
 DUBLIN, CA

(BASED ON DATA OBTAINED
 ON MARCH 29, 1991)

DATE: JULY, 1991
 FNM-1233SP03

FIGURE: 3

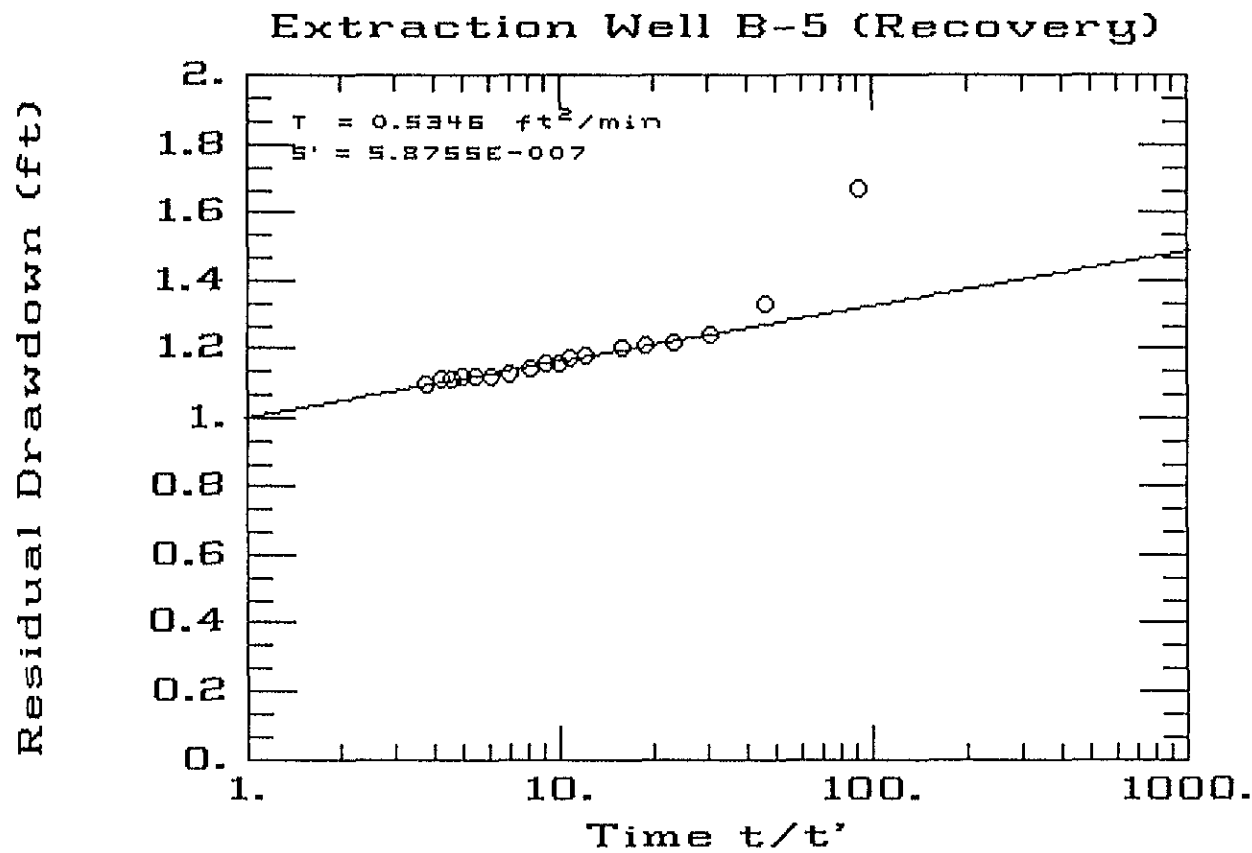


ENVIRONMENTAL AUDIT, INC. GROUND WATER ELEVATION MAP
 MONTGOMERY WARD
 SERVICE STATION
 DUBLIN, CA

(BASED ON DATA OBTAINED
 ON JUNE 4, 1991)

DATE: JULY, 1991
 FNM-123SSP3A

FIGURE: 4




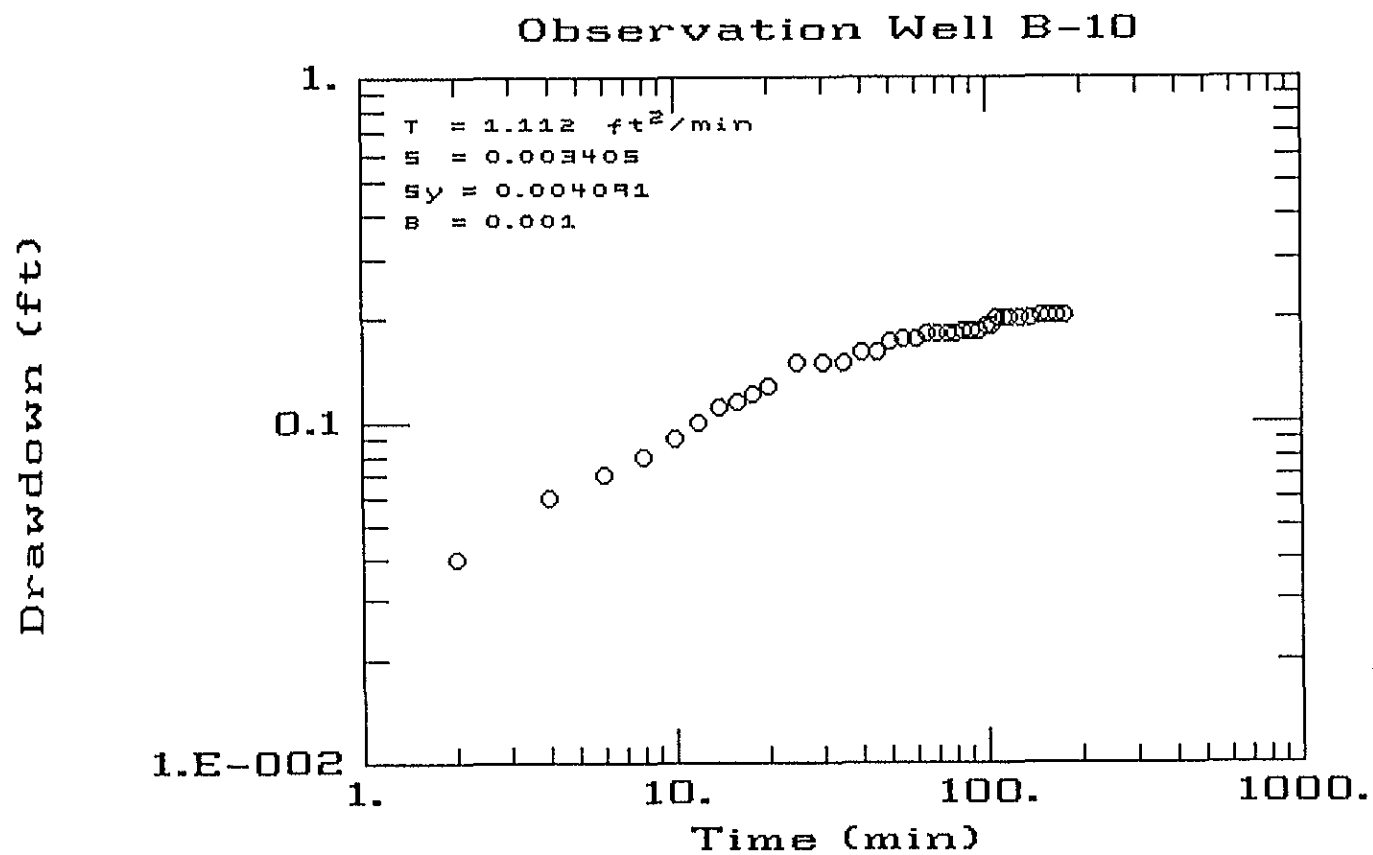
AQTESOLV

**GERRAGHTY
& MILLER, INC.**
 Modeling Group

FIGURE: 5




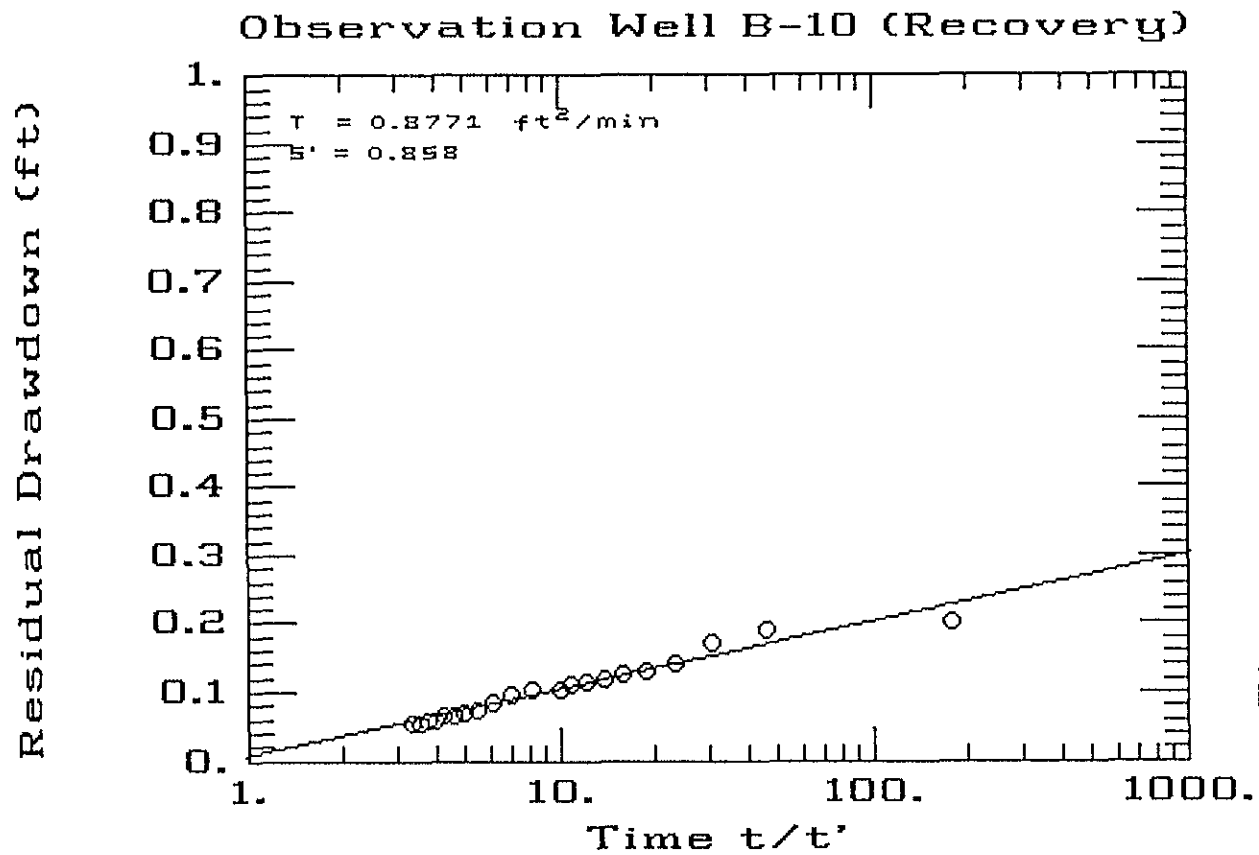

AQTESOLV

GERRITY & MILLER, INC.
 Modeling Group

FIGURE: 6



AQTESOLV

 **GERAGHTY & MILLER, INC.**


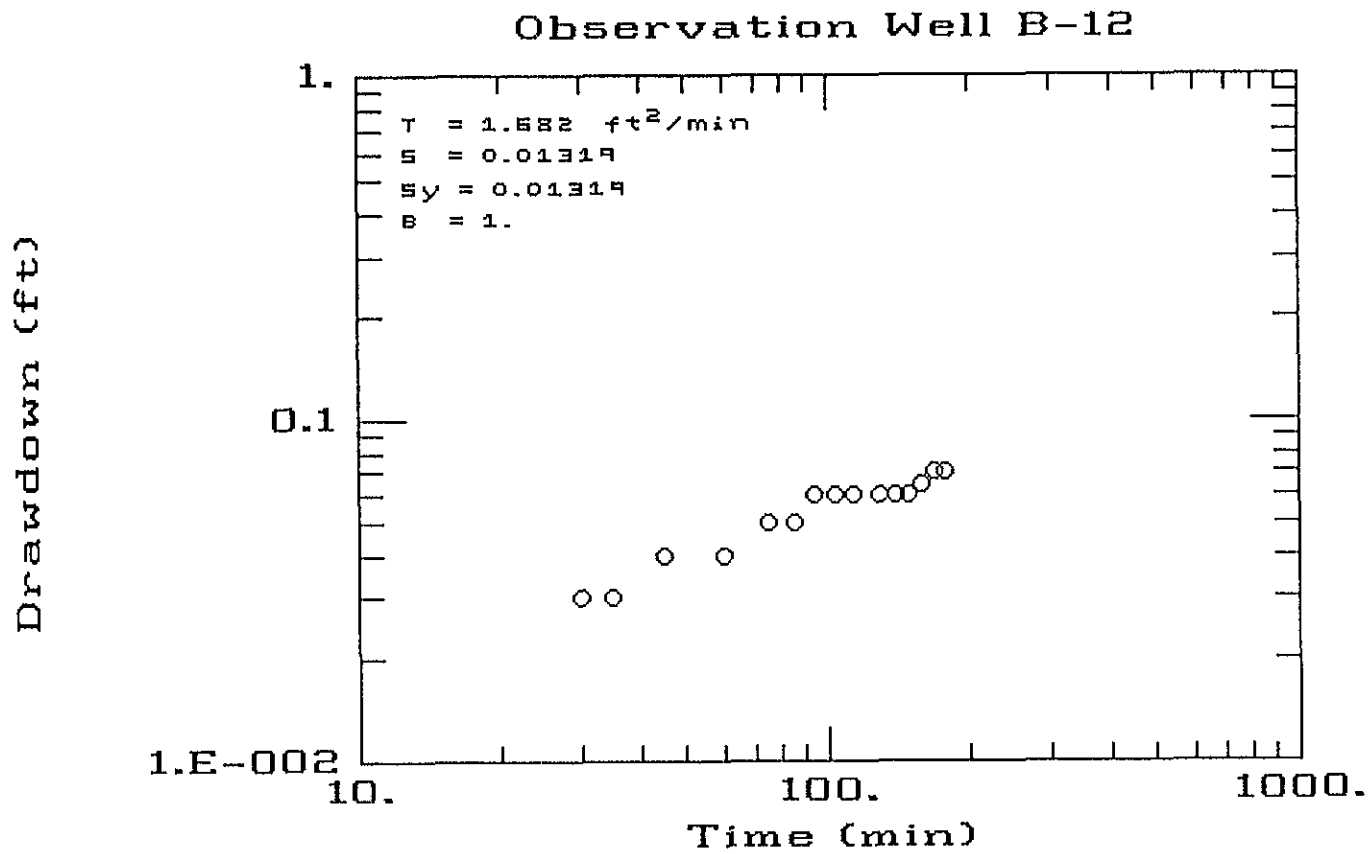
 **Modeling Group**

FIGURE: 7




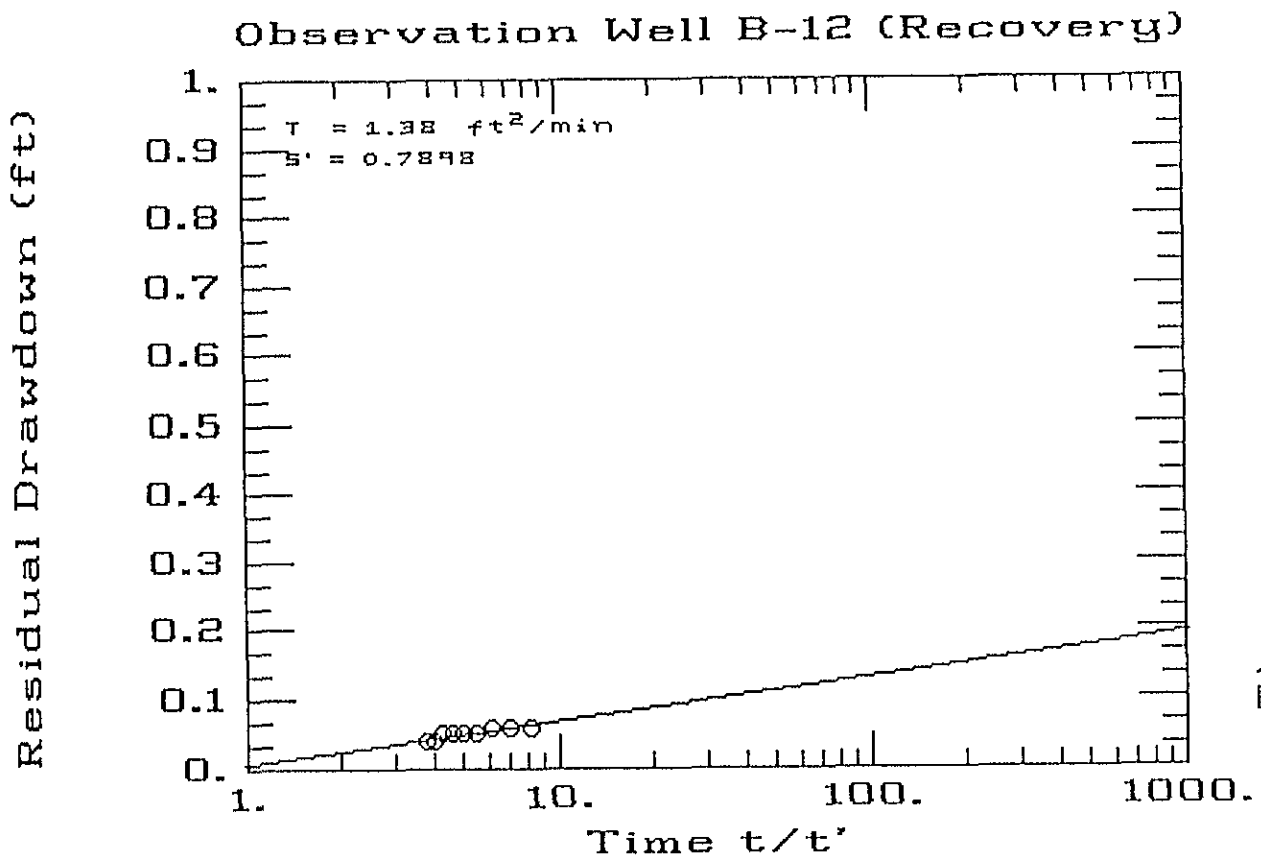

AQTESOLV

**GERRIGHTY
& MILLER, INC.**
 Modeling Group

FIGURE: 8



AQTESOLV


**GERRAGHTY
& MILLER, INC.**



 Modeling Group

FIGURE: 9

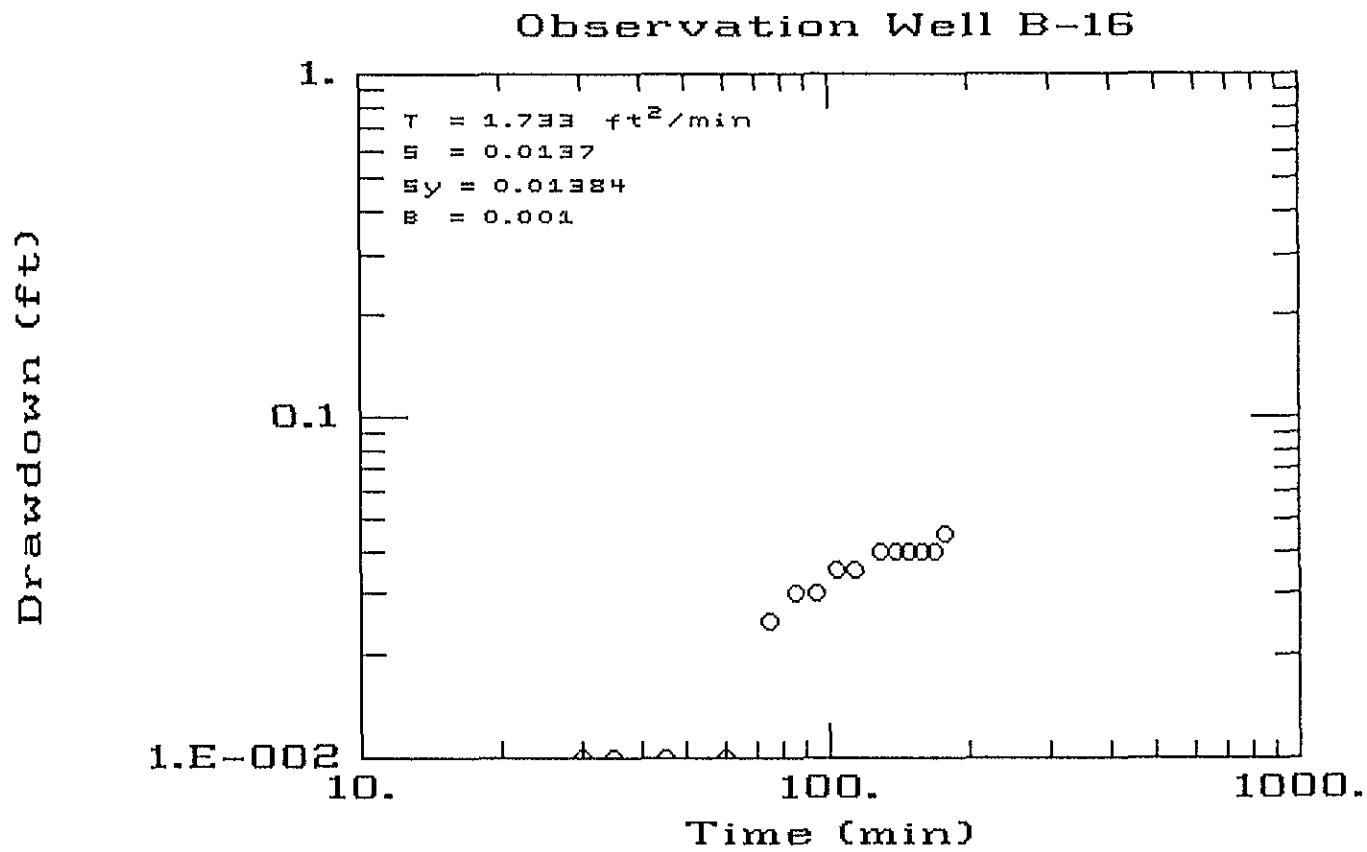
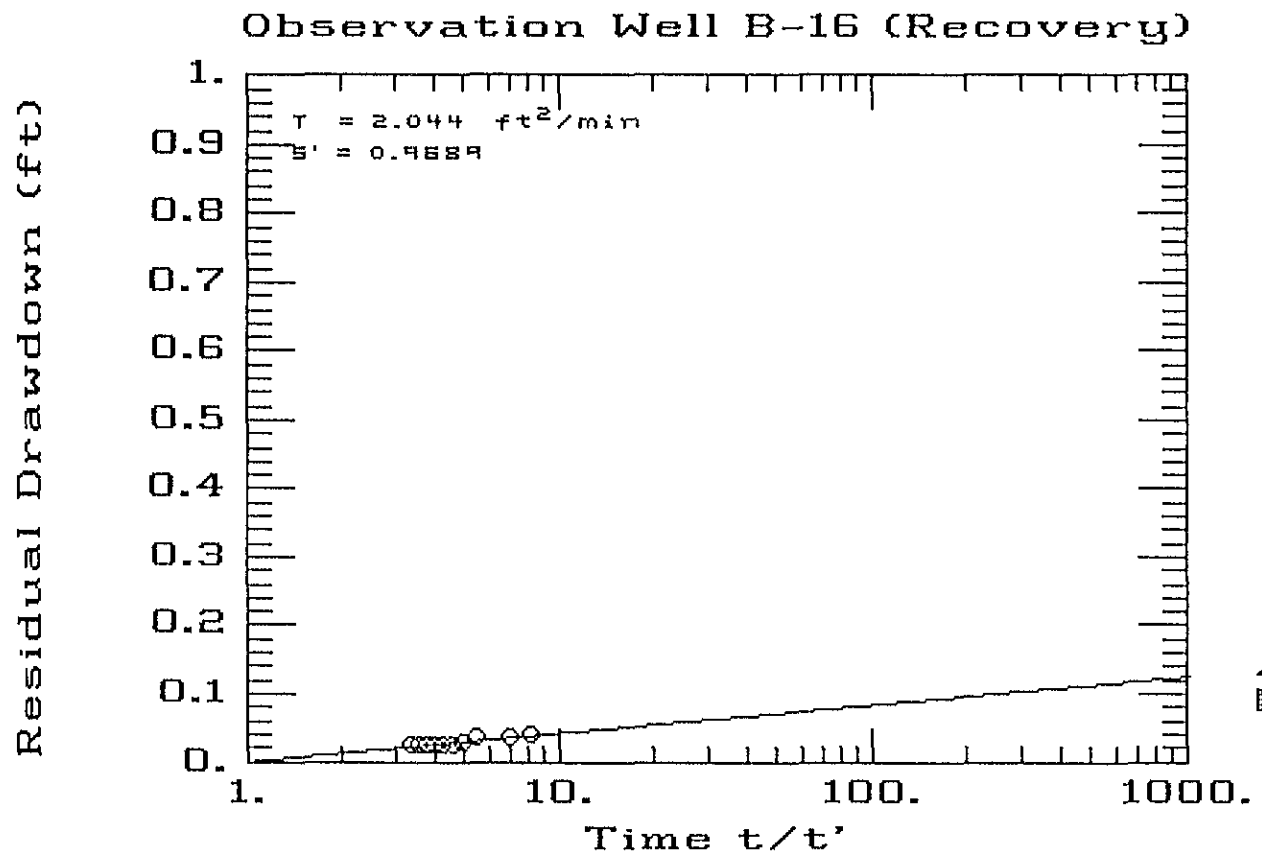



FIGURE: 10



AQTESOLV


**GERRAGHTY
& MILLER, INC.**


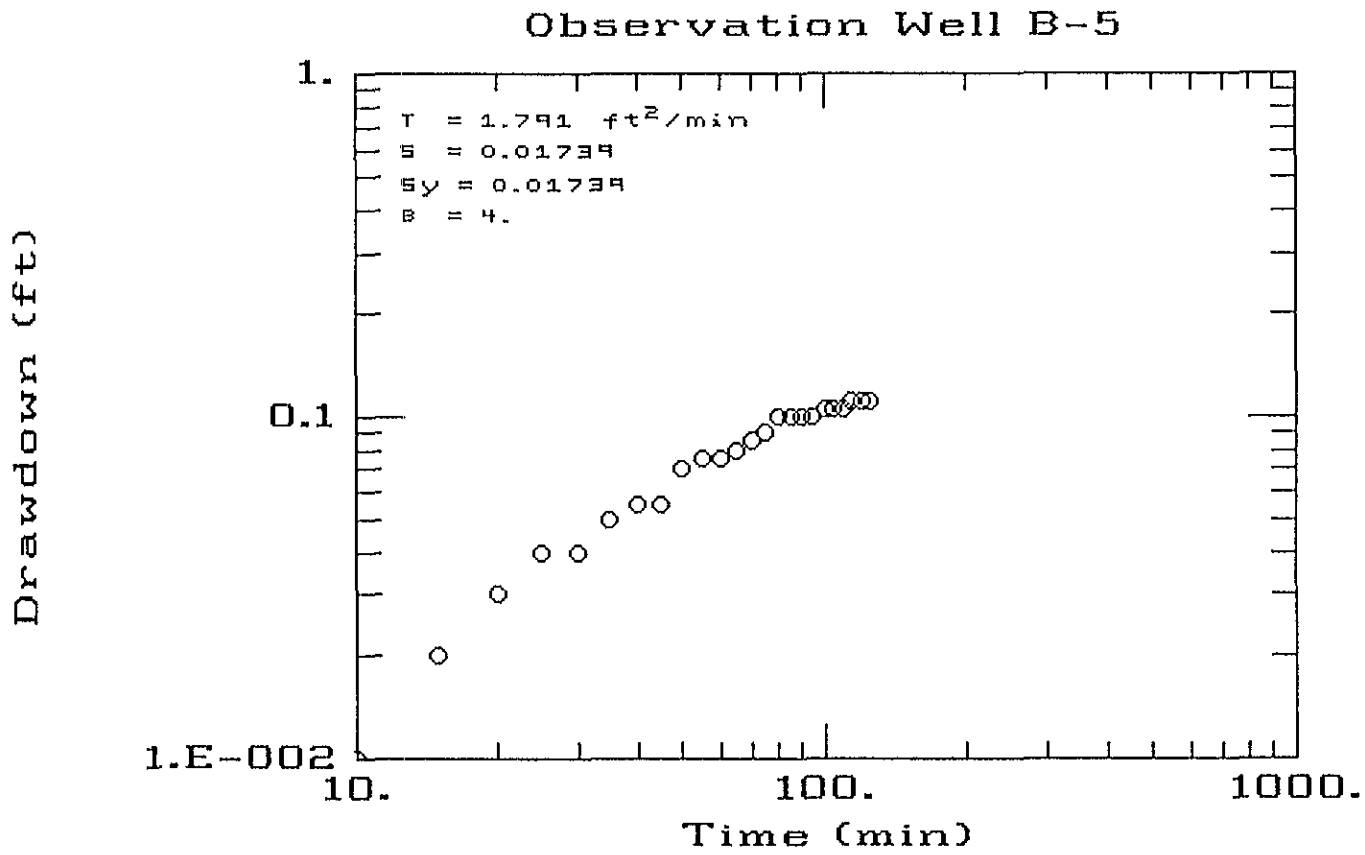

Modeling Group

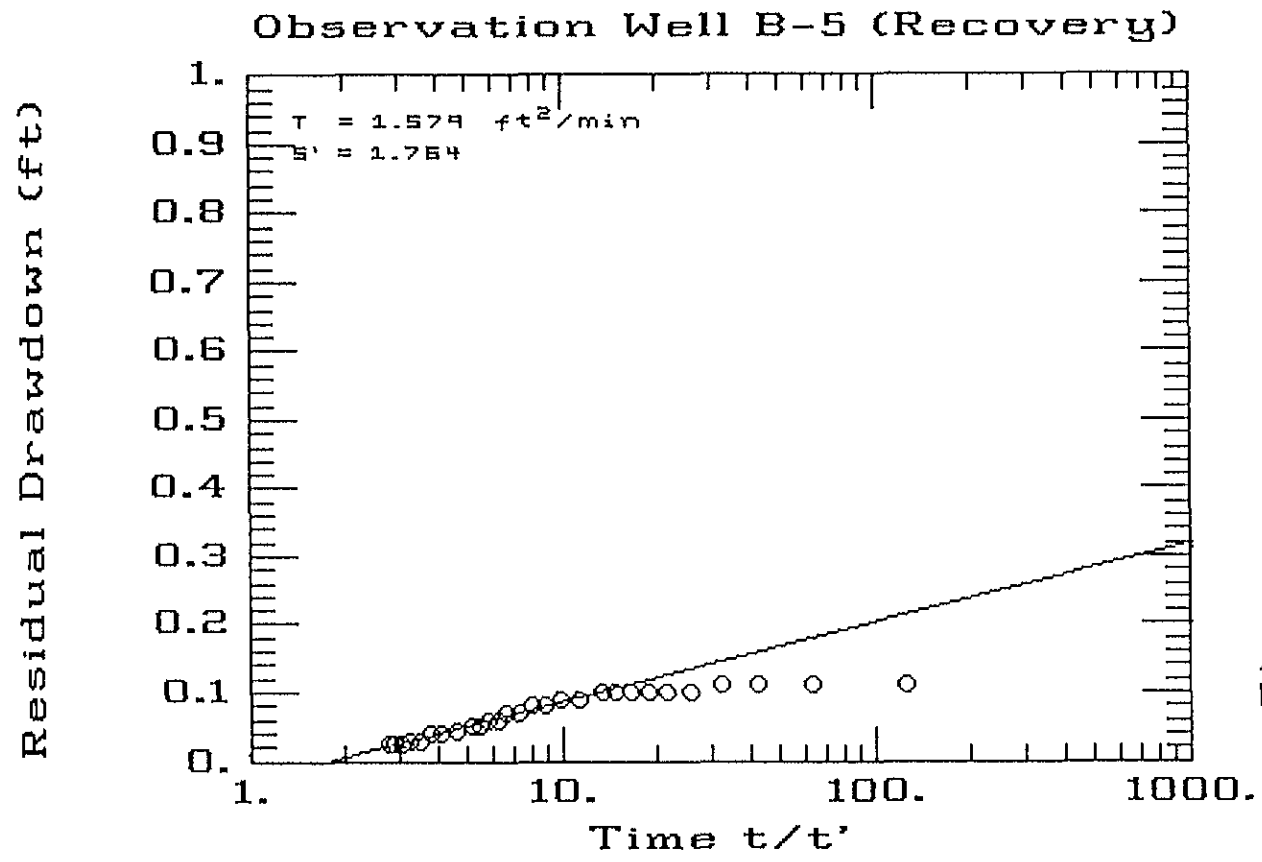
FIGURE: 11



AQTESOL

GERAGHTY & MILLER,
 Modeling I

FIGURE: 12




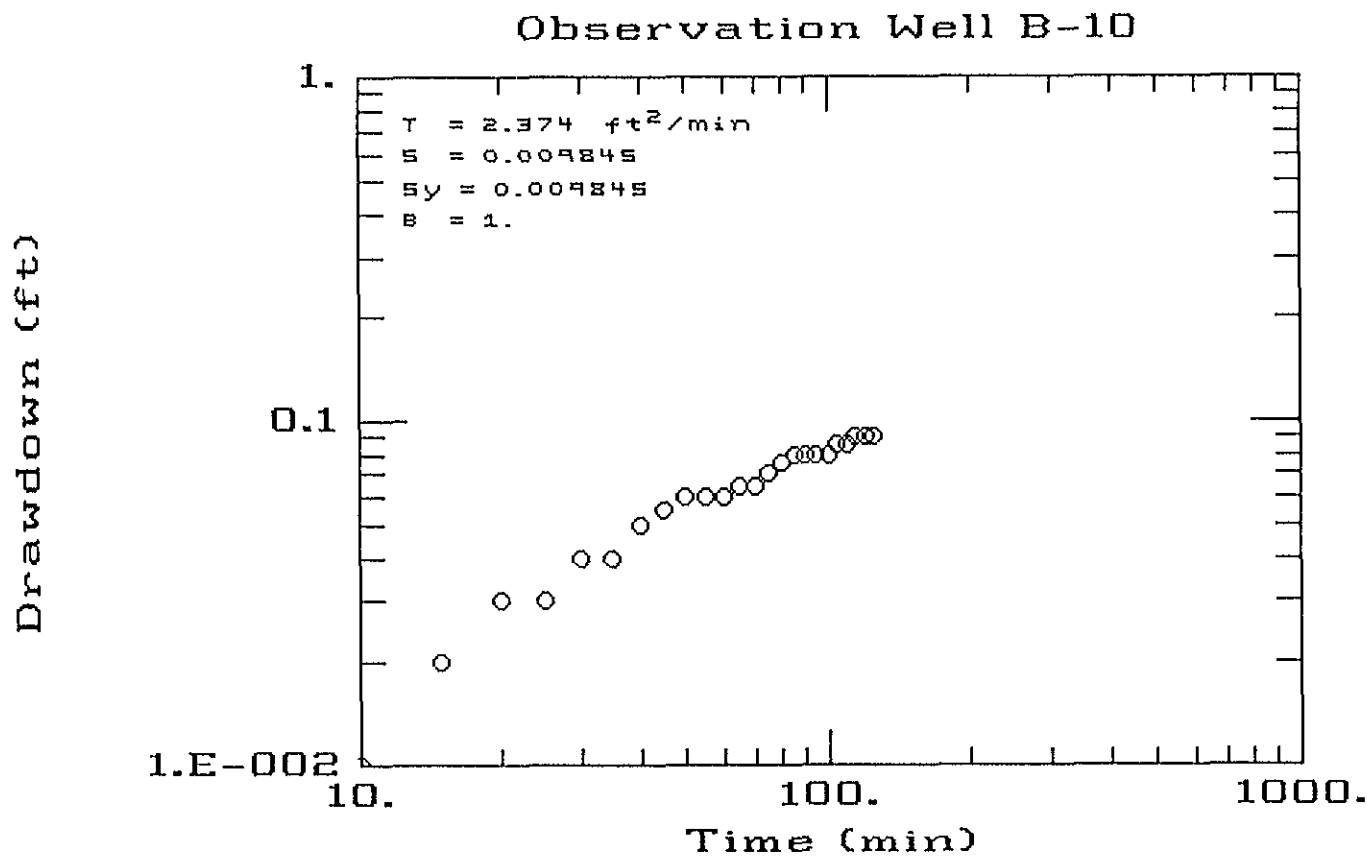
AQTESOLV

GERRIGHTY & MILLER, INC.
 Modeling Group

FIGURE: 13




AQTESOLV

GERRITY & MILLER, INC.
 Modeling Group

FIGURE: 14

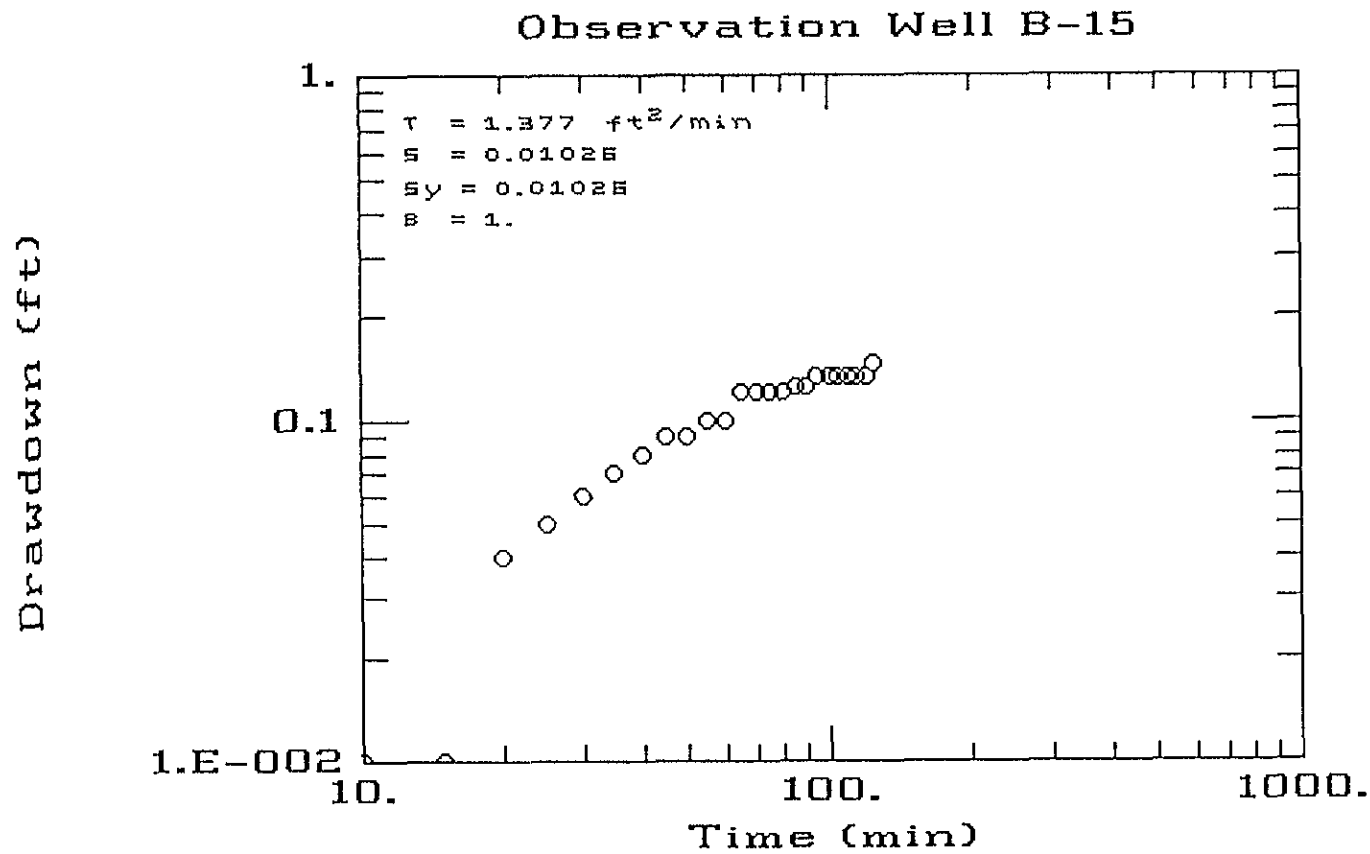
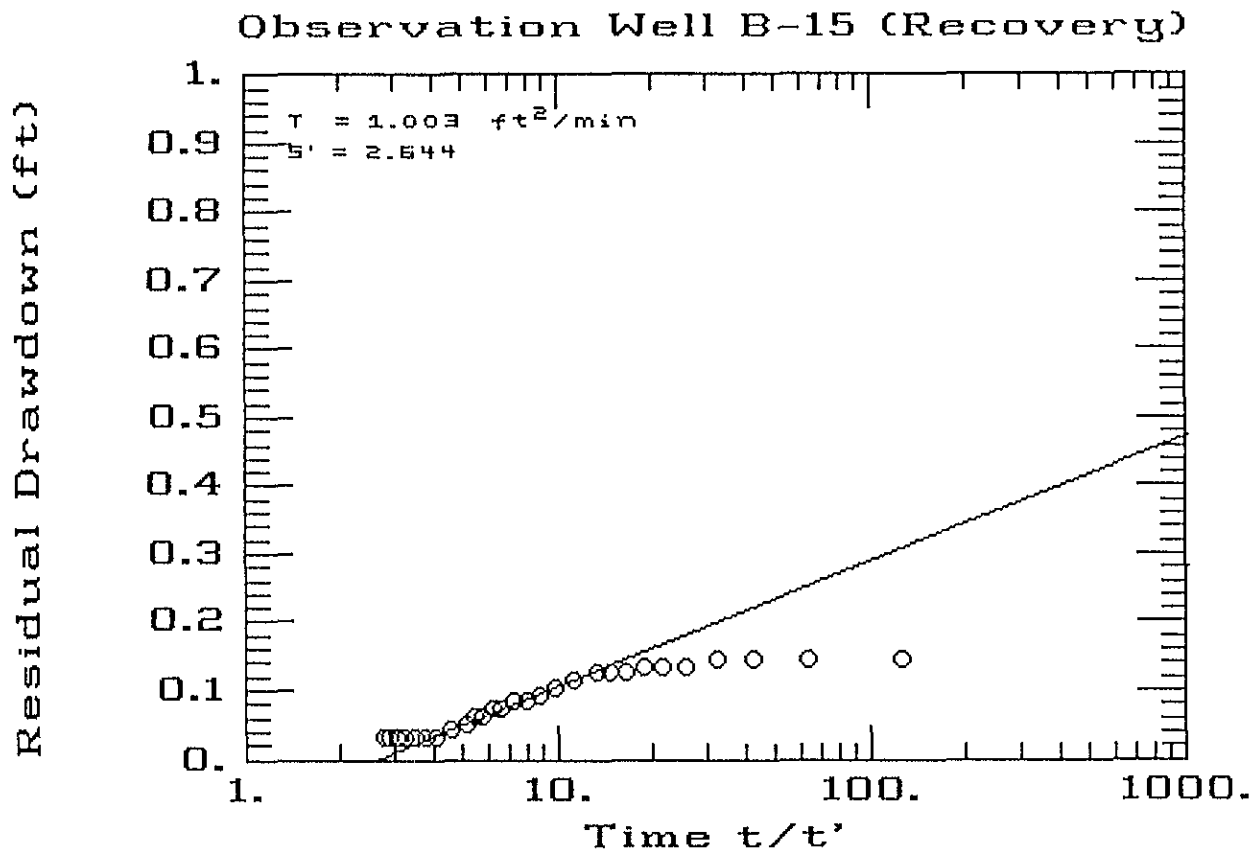


FIGURE: 15




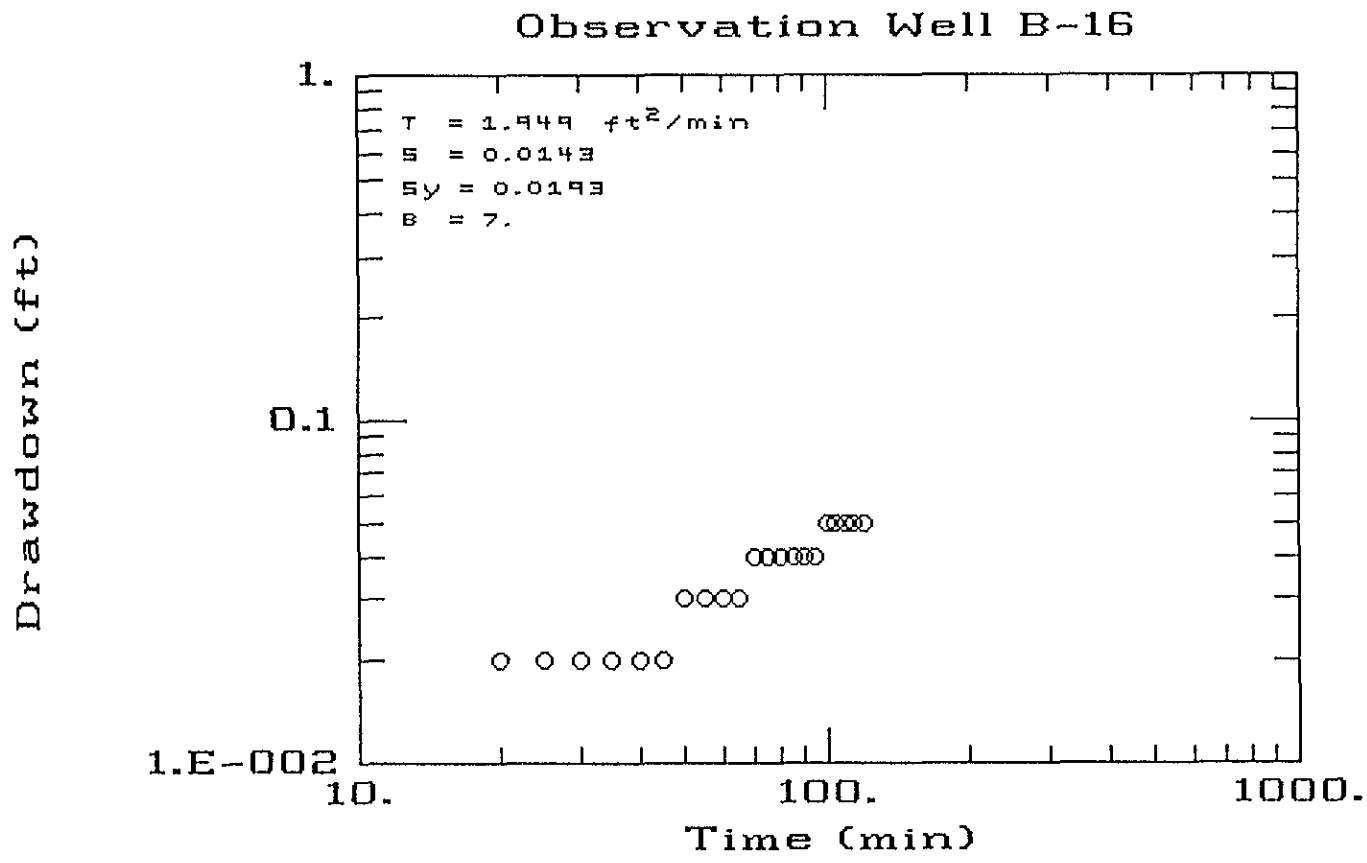
AQTESOLV

GERRAGHTY & MILLER, INC.
 Modeling Group

FIGURE: 16




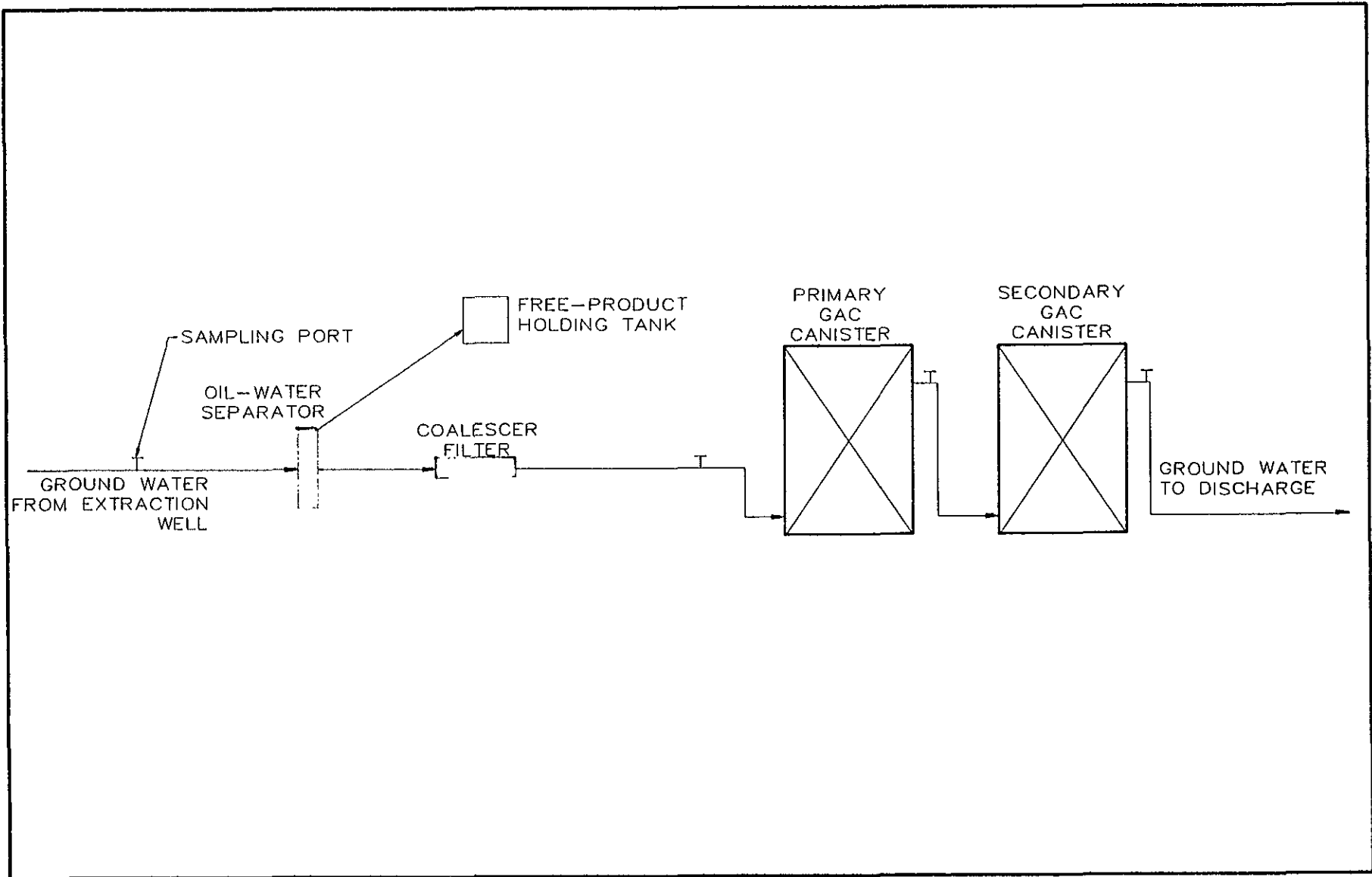
AQTESOLV

GERRIGHTY & MILLER, INC.
 Modeling Group

FIGURE: 17



ENVIRONMENTAL AUDIT, INC.

GROUND WATER TREATMENT SYSTEM
MONTGOMERY WARD SERVICE STATION
DUBLIN, CA

DATE: 10-91
1233TA20

FIGURE: 18

APPENDIX A

WELL LOG

118-2001-1750		A.D. Seibich and Assoc. Inc.		Project Name: MONTGOMERY WARD	
118-2001-1750		62071 - Spawm, Illinois - loc... Newark, Ct. 94500		DUBLIN	
Source/Well ID: 1188002R-5		Date Started: 1/11/89		Date Completed: 1/11/89	
Project and Task Number: 1188002R		Datum:		No. of Samples: 4	
Size and Type of Casing: 2" PVC		Completion Depth: 22'		Water Level Depth: 12" ATD	
Drilling Method/Equip: DIETRICH D-25		Perf: 0.02 Slotted		: From: 7' : To: 22'	
Drilling Agency: ENSCO		Pack: Sand		: From: 5' : To: 22'	
Driller: Cam		Drill Bit: 3' Hollow Core		Seal 1: Bentonite : From: 4' : To: 5"	
Elev TCC: MSL		Elev WL: MSL		Seal 2: Concrete : From: Grade : To: 4"	

Depth (feet)	Sample	Blws/ft	LITHOLOGIC DESCRIPTION	WELL	REMARKS
			AC Black top.		
			BC Gravel, medium brown, sandy, silty, slightly moist.		
			Clay, medium to dark brown, sandy, silty, moist, becoming more sandy.		
5	15		Clay, light brown, stiff, moist, slightly silty.		Sample No. 5-1-2 No Odor.
10	11		Clay, light gray, mottled brown, soft, moist to wet.		Sample No. 5-2-2 Slight odor at tip ▽ ATD
15	5		Clay, light gray, mottled brown, sandy, wet, soft.		Sample No 5-3-2 No Odor.
20	8		Clay, light brown mottled gray, soft moist.		Sample No. 5-4-2 No Odor.
			Bottom Of Boring;		
25					
30					

Logged by: IMH
Figure
Page 1 of

* INDICATE WELL COVER AND / OR LOCK

WELL LOG

115-700-1750 115-770-2000		<i>A.D. Seiduch and Assoc. Inc.</i> 6207 th - <i>Francis Horatio Ave., Newark, C.t. 94560</i>		Project Name:	
Boring/Well ID: 1188002R-10		Date Started: 2/8/89		Date Completed: 2/8/89	
Project and Task Number: 1188002R		Datum:		No. of Samples: 4	
Size and Type of Casing: 2" PVC		Completion Depth: 22' 6"		Water Level Depth: 12' 6" ATD	
Drilling Method/Equip: Mobile Drill B-34		Perf: 0.020 Slots		From: 6' 6"; To: 22'	
Drilling Agency: ENSCO		Pack: #3 Sand		From: 5'; To: 22'	
Driller: Frank		Drill Bit: 8" Hollow Core		Seal 1: Bentonite	
Elev TOC: MSL		Elev WL: MSL		Seal 2: Concrete	
				From: 0'; To: 4"	

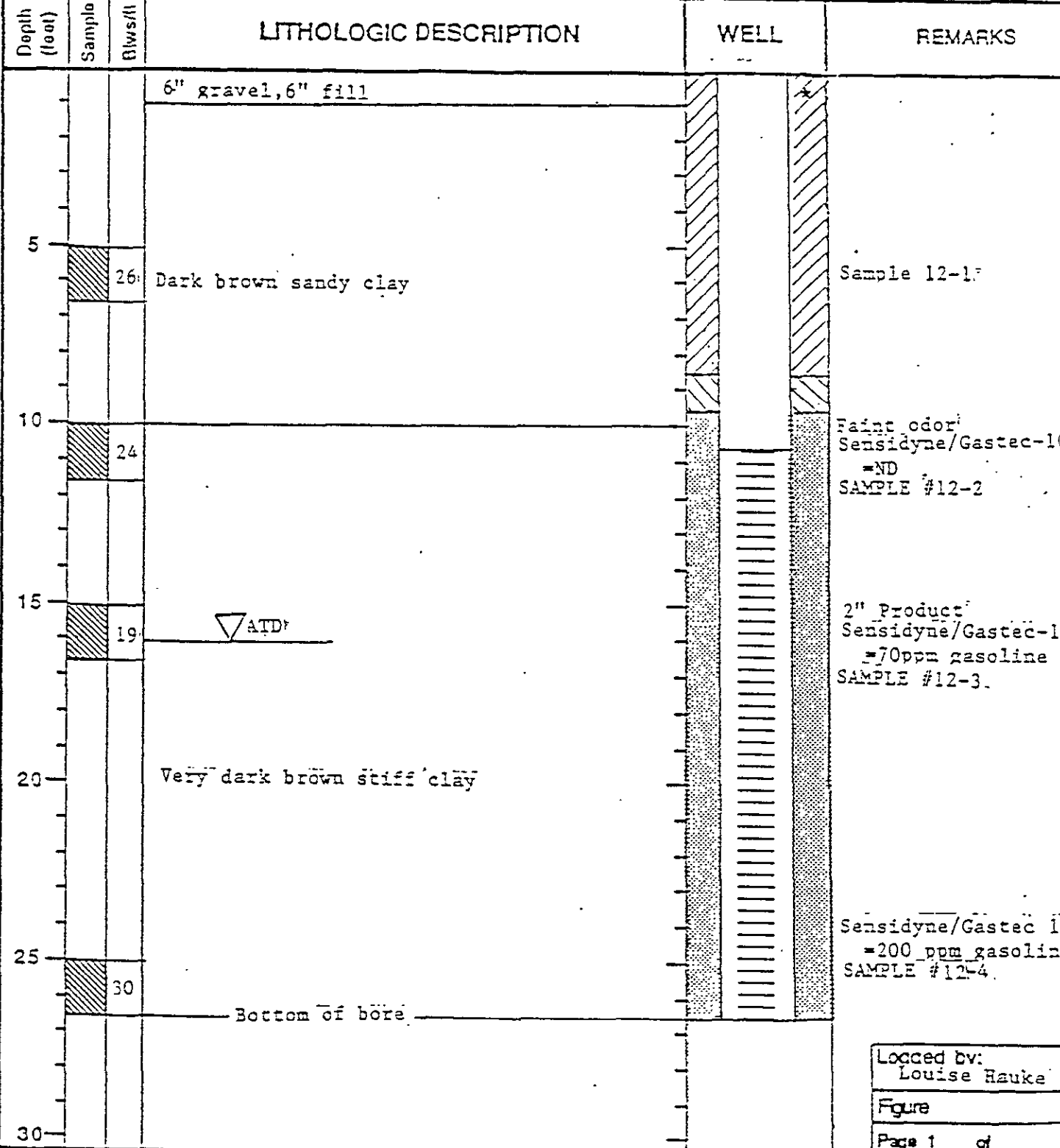
Depth (feet)	Sample	Blows/ft	LITHOLOGIC DESCRIPTION	WELL	REMARKS
			GC (Ground Cover)	*	
			Gravel, light to medium gray, clayey, sandy, silty, slightly moist, fine to coarse.	*	
			Clay (CL), medium to dark gray, trace gravel, sandy, silty, moist.	*	
5		40	Clay (CL), brown-gray, sandy, silty, slightly moist, stiff to very stiff.	*	5-1-2
10		21	Clay (CL), as above, less stiff.	*	10-2-2
				*	▽ ATD
15		10	Clay (CL), light to medium brown, sandy, silty, moist, firm. Trace rootlets.	*	15-3-2
20		8	Clay (CL), light to medium brown, sandy, silty, moist, soft.	*	20-4-2
			Bottom of Boring:		
25					
30					

Logged by: IMH
 Figure
 Page 1 of 1

* INDICATE WELL COVER AND / OR LOCK

WELL LOG

118-2R-12	<i>A.D. Seilich and Assoc. Inc.</i>	Project Name: Montgomery Ward, Dublin CA
118-2R-12	6257 - <i>Truman, Harris, Inc., Newark, Ct. 94300</i>	
Well ID: 118800 2R-12	Date Started: 12-2-88	Date Completed: 12-2-88
Project and Task Number: 1188002R	Datum:	No. of Samples: 4
Size and Type of Casing: 4" PVC	Completion Depth: 26' 0"	Water Level Depth: 16' ATD
Drilling Method/Equip: Mobile B-61	Perf: 0.02"	From: 10' 6" ; To: 26' 6"
Drilling Agency: Ensco	Pack: Monterey Sand #2	From: 9' 6" ; To: 26' 6"
Driller: Scott Davison	Drill Bit: 8" Hollow Core	Seal 1: Bentonite ; From: 8' 6" ; To: 9' 6"
Elev TCC: MSL	Elev WL: MSL	Seal 2: Concrete ; From: 0' ; To: 8' 6"



Logged by:
Louise Hauke

Figure

Page 1 of

* INDICATE WELL COVER AND / OR LOCK

WELL LOG

415-200-1759		<i>A.D. Schluch and Assoc. Inc.</i>		Project Name: Montgomery Ward	
Feb 21.5-770-9608		<i>62874 - Syracuse, N.Y. - Newark, C.T. 92560</i>		Dublin	
Boring/Well ID: 1188002R-15		Date Started: 8-15-89		Date Completed: 8-15-89	
Project and Task Number: 1188002R		Datum:		No. of Samples: 5	
Size and Type of Casing: 4" PVC		Completion Depth: 23'		Water Level Depth: 17.5' *1	
Drilling Method/Equip: Mobil Drill		Perf: .02		From: 8' To: 23'	
Drilling Agency: Ensco		Pack: #2 Sand		From: 6' To: 23'	
Driller: Scott		Drill Bit:		Seal 1: Bentonite	
Elev TOC: MSL		Elev WL: MSL		From: 5' To: 6'	
		Seal 2: Concrete		From: 0' To: 5'	

Depth (foot)	Sample	Blws/ft	LITHOLOGIC DESCRIPTION	WELL	REMARKS
			AC & BC		
			Clay, dark gray, moist, gravelly, sandy, silty	*	
			Clay, as above, decrease in gravel.		
5		8	Clay, dark gray, moist, silty, firm,		15-2-1 Gas Tech 0 no odor.
10		3 4 6	Clay, medium to light brown, slightly moist, sandy, silty, rootlets, soft to firm. Becoming medium to dark brown.		15-2-2 Gas Tech 0 No odor.
15		7 12 14	Becoming very stiff. Free water in "root canals".		15-2-3 Gas Tech 0 No odor.
20		5 6 12	Clay, medium brown, moist, becoming more soft and mottled light gray Decrease in "rootlets".	▽ ATD	15-2-4 Gas Tech 0 No odor.
25		8 9 10	Clay, as above, soft to firm.		15-2-5 Gas Tech 0 No odor.
			Bottom of Boring		
30					

*1-Water at time of drilling, 17.5' up to 13' within 5 minutes

Logged by: IMH

Figure

Page 1 of

* INDICATE WELL COVER AND / OR LOCK

WELL LOG

115-290-1759 Feb 115-770-9608		<i>A.D. Sedlach and Assoc. Inc.</i> 62670 - Syracuse, New York, Inc. Newark, Ct. 94560		Project Name: Montgomery Ward Dublin	
Boring/Well ID: 1188002R-16		Date Started: 8-15-89		Date Completed: 8-15-89	
Project and Task Number: 1188002R		Datum:		No. of Samples: 5	
Size and Type of Casing: 4" PVC		Completion Depth: 26.5		Water Level Depth: 14	
Drilling Method/Equip: Mobil Drill		Perf: .02		From: 10	To: 25
Drilling Agency: Ensco		Pack: #2 Sand		From: 8	To: 25
Driller: Scott	Drill Bit: 10" Hollow	Seal 1: Bentonite		From: 7	To: 8
Elev TOC: MSL	Elev WL: MSL	Seal 2: Concrete		From: 0	To: 7

Depth (feet)	Sample	Blows/ft	LITHOLOGIC DESCRIPTION	WELL	REMARKS
			Concrete and Gravel	*	
			Gravel, gray, 3/4" ±, clean drain rock.	*	Abandoned power service
5	6 6 7		Clay, light to medium brown, slightly sandy, slightly moist, firm.	*	16-2-1 Gas Tech 0 No odor.
10	3 4 7		Clay as above, mottled light gray,	*	16-2-2 Gas Tech 0 No odor.
15	3 4 6		Clay, light to medium brown, mottled green-gray. Free moisture in "root canals".	*	16-2-3 Gas Tech 0 No odor.
20	6 8 9		Clay, as above, becoming mottled light gray.	*	16-2-4 Gas Tech 0 No odor
25	6 8 10		Clay, as above, becoming more firm.	*	16-2-5 Gas Tech 0 No odor.
			Bottom of Boring.		
			NOTE: Strong product odor on top of water at completion.		
30					

Logged by: IMH
Figure _____
Page 1 of _____

* INDICATE WELL COVER AND / OR LOCK

475-190-1759

A.D. Seidich and Assoc. Inc.

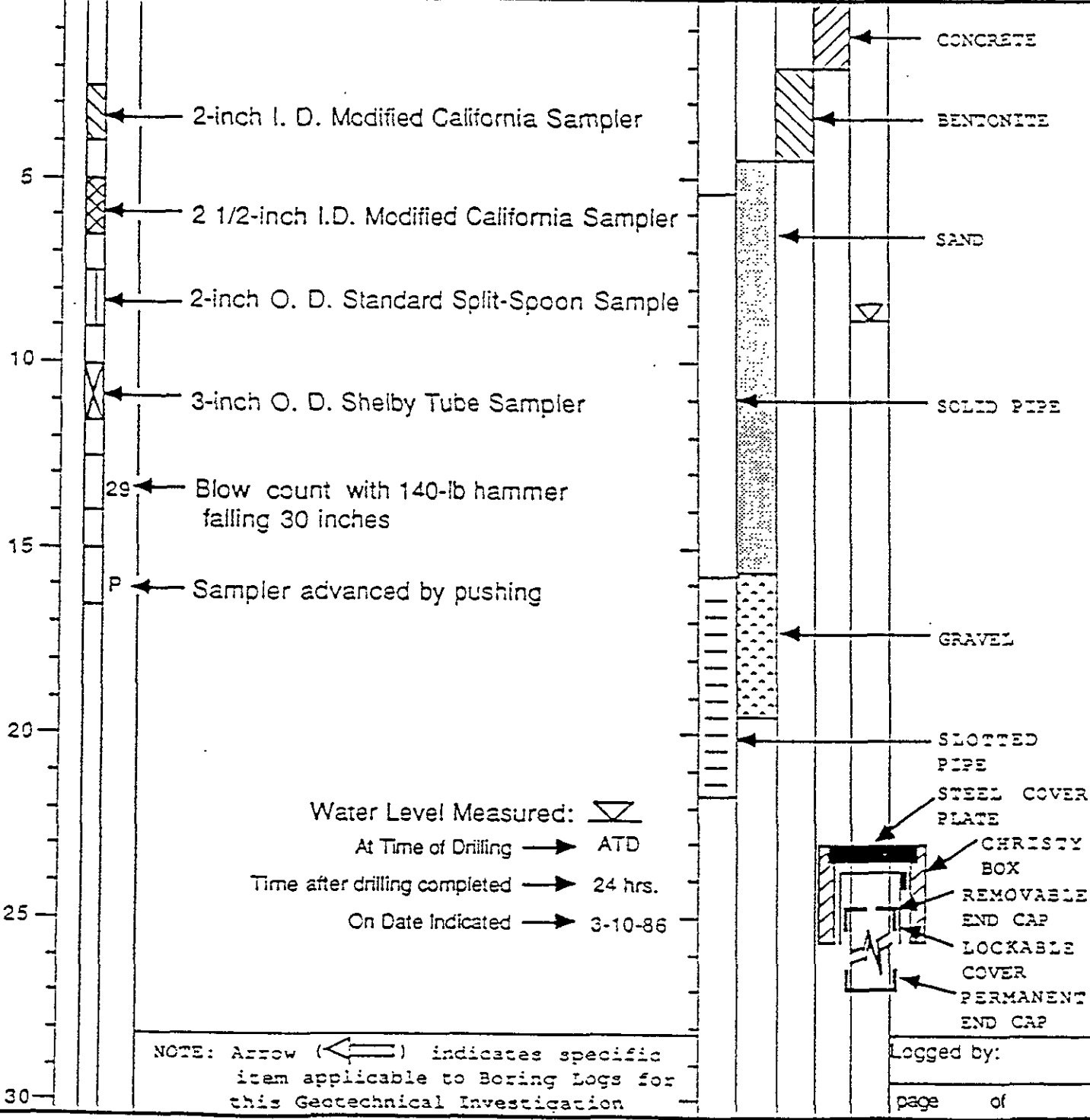
Project Name:

475-770-2608

62675- Soaman Island - Ave., Newark, C.I. 94560

Boring/Well ID:	Date Started:	Date Completed:
Project and Task Number:	Datum:	No. of Samples:
Size and Type of Casing:	Completion Depth:	Water Level Depth:
Drilling Method/Equip:	Perf:	From: To:
Drilling Agency:	Pack:	From: To:
Driller:	Drill Bit:	Seal 1: From: To:
Elev TOC: MSL	Elev WL: MSL	Seal 2: From: To:

Depth (feet)	Sample	Blws/ft	LITHOLOGIC DESCRIPTION	Perf	Pack	Seal 1	Seal 2	WL	REMARKS
--------------	--------	---------	------------------------	------	------	--------	--------	----	---------



Logged by: _____

page of _____

APPENDIX B

AQUIFER TEST DATA

Owner MONTGOMERY WARD Address PUBLIN County _____ State CA

Date 3/29/91 Company performing test ENVIRONMENTAL AUDIT Measured by SM/BHW

Well No. B-10 Distance from pumping well 23' Type of test CONSTANT FLOW Test No. 1

Measuring equipment _____

Time Data	Water Level Data	Discharge Data	Comments on factors affecting test data
Pump on: Date <u>3-29-91</u> Time <u>1:12 (h)</u> Pump off: Date <u>3-29-91</u> Time <u>4:12 (h)</u> Duration of aquifer test: Pumping <u>3 h</u> Recovery <u>1h 30m</u>	Static water level _____ Measuring point _____ Elevation of measuring point _____	How Q measured _____ Depth of pump/air line _____ Previous pumping? Yes _____ No _____ Duration: _____ End _____	

Date	Clock time	Time since pump		1/r	Water level measurement	Correction or Conversion	Water level	Water level change s or s'	Discharge measurement	Rate	
		t	t'								
3-29	1:12	0			10.13			0		3.5 gpm	
	1:14	2			10.17			0.04'			
	1:16	4			10.19			0.06'			
	1:18	6			10.20			0.07'			
	1:20	8			10.21			0.08'			
	1:22	10			10.22			0.09'			
	1:24	12			10.23			0.10'			
	1:26	14			10.24			0.11'			
	1:28	16			10.245			0.115'		3.5 gpm	
	1:30	18			10.25			0.12'			
	1:32	20			10.255			0.125'			
	1:37	25			10.25			0.15'			
	1:42	30			10.25			0.15'			
	1:47	35			10.25			0.15'		3.5 gpm	
	1:52	40			10.24			0.16			
	1:57	45			10.24			0.16			
	2:02	50			10.30			0.17			
	2:07	55			10.305			0.175			
	2:12	60			10.305			0.175			
	2:17	65			10.31			0.18			
	2:22	70			10.31			0.18			
	2:27	75			10.31			0.18			
	2:32	80			10.31			0.18			
	2:37	85			10.315			0.185			
	2:42	90			10.315			0.185			
	2:47	95			10.315			0.185			
	2:52	100			10.32			0.19'			

AQUIFER TEST DATA

Owner MONTGOMERY WARD Address DUBLIN County _____ State CA
 Date 3/29/91 Company performing test ENVIRONMENTAL AUDIT Measured by SM/BJW
 Well No. B-16 Distance from pumping well 82.0' Type of test CONSTANT FLOW Test No. 1

Measuring equipment _____

Time Data	Water Level Data	Discharge Data	Comments on factors affecting test data
Pump on: Date _____ Time _____ (h)	Static water level _____	How Q measured _____	
Pump off: Date _____ Time _____ (h)	Measuring point _____	Depth of pump/air line _____	
Duration of aquifer test: Pumping _____ Recovery _____	Elevation of measuring point _____	Previous pumping? Yes _____ No _____	
		Duration _____ End _____	

Date	Clock time	Time since pump started t	Time since pump stopped t'	t/t'	Water level measurement	Correction or Conversion	Water level	Water level change s or s'	Discharge measurement	Rate		
3-29	1:12	0			10.41			0				
	1:42	30			10.42			0.01				
	1:47	35			10.42			0.01				
	1:57	45			10.42			0.01				
	2:12	60			10.42			0.01				
	2:27	75			10.435			0.025				
	2:37	85			10.44			0.03				
	2:47	95			10.44			0.03				
	2:57	105			10.445			0.035				
	3:07	115			10.445			0.035				
	3:22	130			10.45			0.04				
	3:32	140			10.45			0.04				
	3:42	150			10.45			0.04				
	3:52	160			10.45			0.04				
	4:02	170			10.455			0.045				
	4:12	180			10.455			0.045				
	4:37	205	25		10.45			0.04				
	4:42	210	30		10.45			0.04				
	4:47	215	35		10.445			0.035				
	4:52	220	40		10.445			0.035				
	4:57	225	45		10.44			0.03				
	5:02	230	50		10.435			0.025				
	5:07	235	55		10.435			0.025				
	5:12	240	60		10.435			0.025				
	5:17	245	65		10.435			0.025				
	5:22	250	70		10.435			0.025				
	5:27	255	75		10.435			0.025				

AQUIFER TEST DATA

Owner MONTGOMERY WARD Address PUBLIN County _____ State CA

Date 3/29/91 Company performing test ENVIRONMENTAL AUDIT Measured by SIM/ISHM

Well No. B-10 Distance from pumping well 23' Type of test CONSTANT FLOW Test No. 1

Measuring equipment _____

Time Data	Water Level Data	Discharge Data	Comments on factors affecting test data
Pump on: Date _____ Time _____ (h) _____ (m) _____	Static water level _____	How Q measured _____	
Pump off: Date _____ Time _____ (h) _____ (m) _____	Measuring point _____	Depth of pump/air line _____	
Duration of aquifer test: Pumping _____ Recovery _____	Elevation of measuring point _____	Previous pumping? Yes _____ No _____ Duration _____ End _____	

Date	Clock time	Time since pump started/stopped		t/t'	Water level measurement	Correction or Conversion	Water level	Water level change s or s'	Discharge measurement	Rate
		t	t'							
3-29	2:57	105			10.32			0.19'		
	3:02	110			10.33			0.20		
	3:07	115			10.33			0.20		
	3:12	120			10.33			0.20		
	3:22	130			10.33			0.20		
	3:32	140			10.33			0.20		
	3:42	150			10.335			0.205		
	3:52	160			10.335			0.205		
	4:02	170			10.335			0.205		
	4:12	180			10.335			0.205		
	4:13	181	1		10.33			0.20		
	4:16	184	4		10.32			0.19		
	4:18	186	6		10.30			0.17		
	4:20	188	8		10.27			0.14		
	4:22	190	10		10.26			0.13		
	4:24	192	12		10.255			0.125		
	4:26	194	14		10.25			0.12		
	4:28	196	16		10.245			0.115		
	4:30	198	18		10.24			0.11		
	4:32	200	20		10.235			0.105		
	4:37	205	25		10.235			0.105		
	4:42	210	30		10.225			0.095		
	4:47	215	35		10.215			0.085		
	4:52	220	40		10.205			0.075		
	4:57	225	45		10.20			0.07		
	5:02	230	50		10.195			0.065		
	5:07	235	55		10.195			0.065		

AQUIFER TEST DATA

Owner MONTGOMERY WARD Address PUBLIN County _____ State CA

Date 6/4/91 Company performing test ENVIRONMENTAL AUDIT Measured by U. B.

Well No. B-16 Distance from pumping well 95' Type of test CONSTANT FLOW Test No. 2

Measuring equipment _____

Time Data	Water Level Data	Discharge Data	Comments on factors affecting test data
Pump on: Date _____ Time _____ (t ₀)	Static water level _____	How Q measured _____	
Pump off: Date _____ Time _____ (t ₁)	Measuring point _____	Depth of pump/air line _____	
Duration of aquifer test: _____	Elevation of measuring point _____	Previous pumping? Yes _____ No _____	
Pumping _____ Recovery _____		Duration _____ End _____	

Date	Clock time	Time since pump started		t/t'	(ft)	Water level measurement	Correction or Conversion	Water level	Water level change s or s'	Discharge measurement	Rate	
		t	t'									
6/4/91	14:11	0			26			11.00	0			
		5			26			11.00	0			
		10			26			11.00	0			
		15			26			11.00	0			
		20			26.02			11.02	0.02			
		25			26.02			11.02	0.02			
		30			26.02			11.02	0.02			
		35			26.02			11.02	0.02			
		40			26.02			11.02	0.02			
		45			26.02			11.02	0.02			
		50			26.03			11.03	0.03			
		55			26.03			11.03	0.03			
		60			26.03			11.03	0.03			
		65			26.03			11.03	0.03			
		70			26.04			11.04	0.04			
		75			26.04			11.04	0.04			
		80			26.04			11.04	0.04			
		85			26.04			11.04	0.04			
		90			26.04			11.04	0.04			
		95			26.04			11.04	0.04			
		100			26.05			11.05	0.05			
		105			26.05			11.05	0.05			
		110			26.05			11.05	0.05			
		115			26.05			11.05	0.05			
		120			26.05			11.05	0.05			

AQUIFER TEST DATA

Owner MONTGOMERY WARD Address DUBLIN County _____ State CA

Date 6/4/91 Company performing test ENVIRONMENTAL AUDIT Measured by UB

Well No. B-15 Distance from pumping well 55' Type of test CONSTANT FLOW Test No. 2

Measuring equipment _____

<p>Time Data</p> <p>Pump on: Date _____ Time _____ (t_c)</p> <p>Pump off: Date _____ Time _____ (t_f)</p> <p>Duration of aquifer test: _____</p> <p>Pumping _____ Recovery _____</p>	<p>Water Level Data</p> <p>Static water level _____</p> <p>Measuring point _____</p> <p>Elevation of measuring point _____</p>	<p>Discharge Data</p> <p>How Q measured _____</p> <p>Depth of pump/air line _____</p> <p>Previous pumping? Yes _____ No _____</p> <p>Duration _____ End _____</p>	<p>Comments on factors affecting test data</p>
---	---	--	--

Date	Clock time	Time (MIN)		t/t'	Water level measurement	Correction or Conversion	Water level change		Discharge measurement	Rate	
		t	t'				s	or s'			
6/4/91	129	4			26.65	-15	11.65	0.15			
	130	5			26.635		11.635	0.135			
	131	6			26.635		11.635	0.135			
	132	7			26.635		11.635	0.135			
	133	8			26.625		11.625	0.125			
	134	9			26.625		11.625	0.125			
	135	10			26.625		11.625	0.125			
	137	12			26.615		11.615	0.115			
	139	14			26.60		11.60	0.10			
	141	16			26.59		11.59	0.09			
	143	18			26.58		11.58	0.08			
	145	20			26.58		11.58	0.08			
	147	22			26.57		11.57	0.07			
	149	24			26.57		11.57	0.07			
	151	26			26.56		11.56	0.06			
	153	28			26.56		11.56	0.06			
	155	30			26.55		11.55	0.05			
	160	35			26.54		11.54	0.04			
	165	40			26.53		11.53	0.03			
	170	45			26.53		11.53	0.03			
	175	50			26.53		11.53	0.03			
	180	55			26.53		11.53	0.03			
	185	60			26.53		11.53	0.03			
	190	65			26.53		11.53	0.03			
	195	70			26.53		11.53	0.03			

AQUIFER TEST DATA

Owner MONTGOMERY WARD Address DUBLIN County _____ State CA

Date 6/4/91 Company performing test ENVIRONMENTAL AUDIT Measured by CLB

Well No. B-15 Distance from pumping well 55' Type of test CONSTANT FLOW Test No. 2

Measuring equipment _____

Time Data	Water Level Data	Discharge Data	Comments on factors affecting test data
Pump on: Date _____ Time _____ (h)	Static water level: _____	How Q measured _____	
Pump off: Date _____ Time _____ (h)	Measuring point _____	Depth of pump/air line _____	
Duration of aquifer test _____	Elevation of measuring point _____	Previous pumping? Yes _____ No _____	
Pumping _____ Recovery _____		Duration _____ End _____	

Date	Clock time	Time since pump started/stopped		1/4"	(ft)	Water level measurement	Correction or Conversion	Water level	Water level change s or s'	Discharge measurement	Rate	
		t	t'									
6/4/91	14:11	0				26.5		11.5	0			
		5				26.5		11.5	0			
		10				26.51		11.51	0.01			
		15				26.51		11.51	0.01			
		20				26.54		11.54	0.04			
		25				26.55		11.55	0.05			
		30				26.56		11.56	0.06			
		35				26.57		11.57	0.07			
		40				26.58		11.58	0.08			
		45				26.59		11.59	0.09			
		50				26.59		11.59	0.09			
		55				26.60		11.60	0.10			
		60				26.60		11.60	0.10			
		65				26.62		11.62	0.12			
		70				26.62		11.62	0.12			
		75				26.62		11.62	0.12			
		80				26.62		11.62	0.12			
		85				26.625		11.625	0.125			
		90				26.625		11.625	0.125			
		95				26.635		11.635	0.135			
		100				26.635		11.635	0.135			
		105				26.635		11.635	0.135			
		110				26.635		11.635	0.135			
		115				26.635		11.635	0.135			
		120				26.635		11.635	0.135			
		125	0			26.65		11.65	0.15			
		126	1			26.65		11.65	0.15			
		127	2			26.65		11.65	0.15			
		128	3			26.65		11.65	0.15			

AQUIFER TEST DATA

Owner MONTGOMERY WARD Address DUBLIN County _____ State CA

Date 6/4/91 Company performing test ENVIRONMENTAL AUDIT Measured by JM

Well No. B-10 Distance from pumping well 69' Type of test CONSTANT FLOW Test No. 2

Measuring equipment _____

Time Data	Water Level Data	Discharge Data	Comments on factors affecting test data
Pump on: Date _____ Time _____ (t ₀)	Static water level _____	How Q measured _____	
Pump off: Date _____ Time _____ (t ₁)	Measuring point _____	Depth of pump/air line _____	
Duration of aquifer test: Pumping _____ Recovery _____	Elevation of measuring point _____	Previous pumping? Yes _____ No _____	
		Duration _____ End _____	

Date	Clock time	Time since pump started t	Time since pump stopped t'	t/t'	(ft) Water level measurement	Correction or Conversion	Water level	Water level change s or s'	Discharge measurement	Rate	
6/4/91	14:11	0			11.75		10.75	0			
		5			11.75		10.75	0			
		10			11.76		10.76	0.01			
		15			11.77		10.77	0.02			
		20			11.78		10.78	0.03			
		25			11.78		10.78	0.03			
		30			11.79		10.79	0.04			
		35			11.79		10.79	0.0			
		40			11.80		10.80	0.05			
		45			11.805		10.805	0.055			
		50			11.81		10.81	0.06			
		55			11.81		10.81	0.06			
		60			11.81		10.81	0.06			
		65			11.815		10.815	0.065			
		70			11.815		10.815	0.065			
		75			11.82		10.82	0.07			
		80			11.825		10.825	0.075			
		85			11.83		10.83	0.08			
		90			11.83		10.83	0.08			
		95			11.83		10.83	0.08			
		100			11.83		10.83	0.08			
		105			11.835		10.835	0.085			
		110			11.835		10.835	0.085			
		115			11.84		10.84	0.09			
		120			11.84		10.84	0.09			
		125			11.84		10.84	0.09			

AQUIFER TEST DATA

Owner MONTGOMERY WARD Address DUBLIN County _____ State CA

Date 6/4/91 Company performing test ENVIRONMENTAL AUDIT Measured by SM

Well No. B-5 Distance from pumping well 48.5' Type of test CONSTANT FLOW Test No. 2

Measuring equipment _____

Time Data	Water Level Data	Discharge Data	Comments on factors affecting test data
Pump on: Date _____ Time _____ (h)	Static water level _____	How Q measured _____	
Pump off: Date _____ Time _____ (h)	Measuring point _____	Depth of pump/air line _____	
Duration of aquifer test: _____	Elevation of measuring point _____	Previous pumping? Yes _____ No _____	
Pumping _____ Recovery _____		Duration _____ End _____	

Date	Clock time	Time since pump started t	Time since pump stopped t'	t/t'	(ft)	Water level measurement	Correction or Conversion	Water level	Water level change s or s'	Discharge measurement	Rate	
		130	5			12.15		11.15	0.10			
		131	6			12.15		11.15	0.10			
		132	7			12.15		11.15	0.10			
		133	8			12.15		11.15	0.10			
		134	9			12.15		11.15	0.10			
		135	10			12.15		11.15	0.10			
		137	12			12.14		11.14	0.09			
		139	14			12.14		11.14	0.09			
		141	16			12.13		11.13	0.08			
		143	18			12.13		11.13	0.08			
		145	20			12.12		11.12	0.07			
		147	22			12.12		11.12	0.07			
		149	24			12.11		11.11	0.06			
		151	26			12.11		11.11	0.06			
		153	28			12.10		11.10	0.05			
		155	30			12.10		11.10	0.05			
		160	35			12.095		11.095	0.045			
		165	40			12.09		11.09	0.04			
		170	45			12.09		11.09	0.04			
		175	50			12.08		11.08	0.03			
		180	55			12.08		11.08	0.03			
		185	60			12.075		11.075	0.025			
		190	65			12.075		11.075	0.025			
		195	70			12.07		11.07	0.02			

AQUIFER TEST DATA

Owner MONTGOMERY WARD Address DUBLIN County _____ State CA

Date 6/4/91 Company performing test ENVIRONMENTAL AUDIT Measured by JM

Well No. B-5 Distance from pumping well 48.5' Type of test CONSTANT FLOW Test No. 2

Measuring equipment _____

Time Data	Water Level Data	Discharge Data	Comments on factors affecting test data
Pump on: Date _____ Time _____ (h)	Static water level _____	How Q measured _____	
Pump off: Date _____ Time _____ (h)	Measuring point _____	Depth of pump/air line _____	
Duration of aquifer test: Pumping _____ Recovery _____	Elevation of measuring point _____	Previous pumping? Yes _____ No _____	
		Duration _____ End _____	

Date	Clock time	Time since pump started/stopped		t/t'	(ft)	Water level measurement	Correction or Conversion	Water level	Water level change s or s'	Discharge measurement	Rate
		t	t'								
6/4/91	14:11	0			12.05			11.05	0		
		5			12.05			11.05	0		
		10			12.06			11.06	0.01		
		15			12.07			11.07	0.02		
		20			12.08			11.08	0.03		
		25			12.09			11.09	0.04		
		30			12.09			11.09	0.04		
		35			12.10			11.10	0.05		
		40			12.105			11.105	0.055		
		45			12.105			11.105	0.055		
		50			12.120			11.120	0.07		
		55			12.125			11.125	0.075		
		60			12.125			11.125	0.075		
		65			12.13			11.13	0.08		
		70			12.135			11.135	0.085		
		75			12.14			11.14	0.09		
		80			12.15			11.15	0.10		
		85			12.15			11.15	0.10		
		90			12.15			11.15	0.10		
		95			12.15			11.15	0.10		
		100			12.155			11.155	0.105		
		105			12.155			11.155	0.105		
		110			12.155			11.155	0.105		
		115			12.16			11.16	0.11		
		120			12.16			11.16	0.11		
		125	0		12.16			11.16	0.11		
		126	1		12.16			11.16	0.11		
		127	2		12.16			11.16	0.11		
		129	4		12.16			11.16	0.11		

APPENDIX C



ENVIRONMENTAL AUDIT, INC.

Planning, Environmental Analyses and Hazardous
Substances Management and Remediation

1000-A ORTEGA WAY 714/632-0521
PLACENTIA, CA 92670-7125 FAX: 714/632-6754

CHAIN OF CUSTODY RECORD

PROJECT NO. 1233			PROJECT NAME MGWD/Dubli			TYPE CONTNR		ANALYSIS							OTHER		NUMBER OF CONTAINERS	REMARKS
SAMPLERS: (Signature) Seyed Mortza Mortzani			GLASS	PLASTIC	BRASS/SS TUBE	FUEL HC 662 6015	PETROLEUM HC 416.1	BII 8020	TOXIC ORGANICS 674 670	LEAD	EXTRACTABLE ORGANICS 675 670	OIL & GREASE	CAN DETAILS TOTAL VET					
SAMPLE NUMBER	DATE	TIME	SAMPLE DESCRIPTION															
atraction well	6-4	7:40 PM	water sample															
B-5	6-4	7:57 PM	water sample															
B-16	6-4	8:12 PM	water sample															
B-10	6-4	8:05 PM	water sample															
B-15	6-4	8:16 PM	water sample															
															TOTAL NUMBER OF CONTAINERS			
RELEQUISHED BY: (Signature) Seyed Mortza Mortzani			DATE/TIME 6/6/91	RECEIVED BY: (Signature)			RELEQUISHED BY: (Signature)			DATE/TIME	RECEIVED BY: (Signature)							
RELEQUISHED BY: (Signature)			DATE/TIME	RECEIVED BY: (Signature)			RELEQUISHED BY: (Signature)			DATE/TIME	RECEIVED BY: (Signature)							
METHOD OF SHIPMENT:				SHIPPED BY: (Signature)			CARRIER: (Signature)			RECEIVED FOR LAB BY: (Signature) Ew Hantley			DATE/TIME 6/6/91					
										LAB: CALSCIENCE								

APPENDIX D

JUN 13 1991

ENVIRONMENTAL AUDIT INC.

ANALYTICAL REPORT

=====
Environmental Audit, Inc.
1000-A Ortega Way
Placentia, CA 92670-7125

Date Sampled: 06/04/91
Date Received: 06/06/91
Date Extracted: N/A
Date Analyzed: 06/07/91
CEL Batch No.: 91-06-027

Attn: Seyed Mortazavi
RE: MGWD/Dublin/1233

Method: EPA 8015M

=====
All total petroleum hydrocarbon concentrations are reported in mg/L (ppm) using gasoline as a standard.

<u>Sample Number</u>	<u>Concentration</u>	<u>Det'n Limit</u>
Extraction Well	20	0.05
B-5	7.8	0.05
B-16	2.3	0.05
B-10	16	0.05
B-15	1.2	0.05

Reviewed and Approved

William H. Christensen
William H. Christensen
Laboratory Operations
Manager

on 06/12/1991.

EPA 8015M is conducted in accordance with the DHS Method for Total Petroleum Hydrocarbons.

ND denotes not detected at indicated detection limit.

Each sample was received by CEL in a chilled state, intact and with chain-of-custody attached.

Environmental Audit, Inc.
 1000-A Ortega Way
 Placentia, CA 92670-7125

Date Sampled: 06/04/91
 Date Received: 06/06/91
 Date Extracted: N/A
 Date Analyzed: 06/07/91
 CEL Batch No.: 91-06-027
 Page 1 of 2

Attn: Seyed Mortazavi
 RE: MGWD/Dublin/1233

Method: EPA 602

All concentrations are reported in ug/L (ppb).

	<u>Concentration</u>	<u>Det'n Limit</u>
Sample Number: Extraction Well		
Benzene	2240	1
Toluene	2960	1
Ethylbenzene	1030	1
Total Xylenes	4280	2
Sample Number: B-5		
Benzene	2140	1
Toluene	1030	1
Ethylbenzene	439	1
Total Xylenes	764	2
Sample Number: B-16		
Benzene	346	1
Toluene	50	1
Ethylbenzene	155	1
Total Xylenes	407	2
Sample Number: B-10		
Benzene	3820	1
Toluene	1770	1
Ethylbenzene	933	1
Total Xylenes	1210	2

JUN 1 1991

ENVIRONMENTAL AUDIT, INC.

=====
Environmental Audit, Inc.
1000-A Ortega Way
Placentia, CA 92670-7125

Date Sampled: 06/04/91
Date Received: 06/06/91
Date Extracted: N/A
Date Analyzed: 06/07/91
CEL Batch No.: 91-06-027
Page 2 of 2

Attn: Seyed Mortazavi
RE: MGWD/Dublin/1233

Method: EPA 602

=====
All concentrations are reported in ug/L (ppb).

	<u>Concentration</u>	<u>Det'n Limit</u>
Sample Number: B-15		
Benzene	43	1
Toluene	21	1
Ethylbenzene	34	1
Total Xylenes	28	2

Reviewed and Approved William H. Christensen on 06/12/1991.
William H. Christensen
Laboratory Operations
Manager

ND denotes not detected at indicated detection limit.

Each sample was received by CEL in a chilled state, intact and with chain-of-custody attached.