GRIFFIN CAPITAL

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Alameda County
Environmental Health

October 25, 2010

1211.001.01.004

Alameda County Environmental Health
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502

Attention: Mr. Mark Detterman

Transmittal
Results of Groundwater Monitoring
and Preferential Pathway Study,
and Request for Closure
1650 65th Street
Emeryville, California
Fuel Leak Case No. RO0000440
Geotracker Global ID T0600100511

Dear Mr. Detterman:

Submitted herewith for your review is the *Results of Groundwater Monitoring and Preferential Pathway Study, and Request for Case Closure, 1650 65th Street, Emeryville, California* prepared by PES Environmental, Inc.

I declare, under penalty of perjury, that the information and recommendations contained in the attached document are true and correct to the best of my knowledge.

Very truly yours,

GRIFFIN CAPITAL CORPORATION

Julie A. Treinen
Managing Director, Asset Management

cc: Chris Baldassari, PES Environmental, Inc.
121100101T002.doc

2121 ROSECRANS AVENUE, SUITE 3321 · EL SEGUNDO, CA 90245
tel: 310.606.5900 fax: 310.606.5910 web: GRIFFINCAPITAL.COM

CONFIDENTIAL

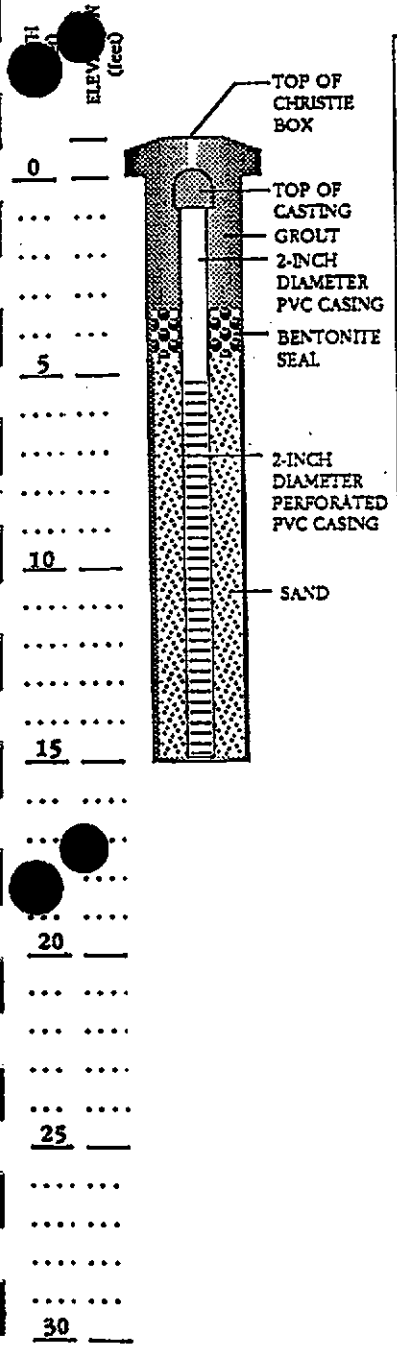
STATE OF CALIFORNIA DWR
WELL COMPLETION REPORT
(WELL LOGS)

REMOVED

372215 01S04W15P

DRIEL RIG: Mobile B-42 | SURFACE ELEVATION: 11.0 feet | LOGGED BY: TR

DEPTH TO GROUNDWATER: 7.5 feet (From Surface Elevation) | BORING DIAMETER: 8 inches | DATE DRILLED: 2/18/93



DESCRIPTION	SYMBOL	CONSISTENCY	SOIL TYPE	LEGEND	DEPTH (feet)	SAMPLER	WATER CONTENT (%)	PENETRATION RESISTANCE (BLOWS/FT.)	ORGANIC VAPORS (ppm)
1 inch asphaltic concrete over 3 inches rockbase									
Black silty sand, strong petroleum odor, moist ↑ FILL			SM						>1,000
Light brown silty clay, minor sand and gravel, wet		Hard	CL		5		▽	100	2.0
Silty sand with gravel, well-graded sand, fine grave, saturated		Very dense	SM		10			64	<1.0
Brown sandy silty, fine sand, trace medium coarse sand, wet		Very stiff	ML		15			27	<1.0
Bottom of Well = 15.0 feet					20				
					25				
					30				

NOTE: The stratification lines represent the approximate boundary between the soil types. The transition may be gradual.

517-21, 3/12 SF'EB

MONITORING WELL LOG - MW-1

5745 PELADEAU STREET
Emeryville, California

LOVNEY ASSOCIATES
Environmental/Geotechnical/Engineering Services

CONFIDENTIAL

STATE OF CALIFORNIA DWR
WELL COMPLETION REPORT
(WELL LOGS)

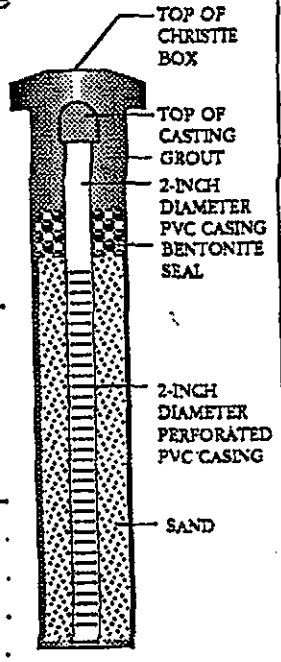
REMOVED

372217

01S04W15P

DRILL RIG: Mobile B-42 | SURFACE ELEVATION: 11.0 feet | LOGGED BY: TR

DEPTH TO GROUNDWATER: 5.0 feet (From Surface Elevation) | BORING DIAMETER: 8 inches | DATE DRILLED: 2/18/93



DEPTH (feet)	ELEVATION (feet)
0	11
5	6
10	1
15	-4
20	-9
25	-14
30	-19

DESCRIPTION	SYMBOL	CONSISTENCY	SOIL TYPE	LEGEND	DEPTH (feet)	SAMPLER	WATER CONTENT (%)	PENETRATION RESISTANCE (BLOWS/FT.)	ORGANIC VAPORS (ppm)
2 inch asphaltic concrete over 6 inches rockbase									
Black and green mottled silty clay, wet, strong petroleum odor		Stiff	CL						
Free product at 4.0 feet, saturated at 5.0 feet					5		▽	12	200
FILL									
Brown and gray mottled clayey silt, moist		Hard	ML		10			50	<1.0
Minor sand and gravel at 13.0 feet								54	3.0
Bottom of Well = 14.0 feet					15				
					20				
					25				
					30				

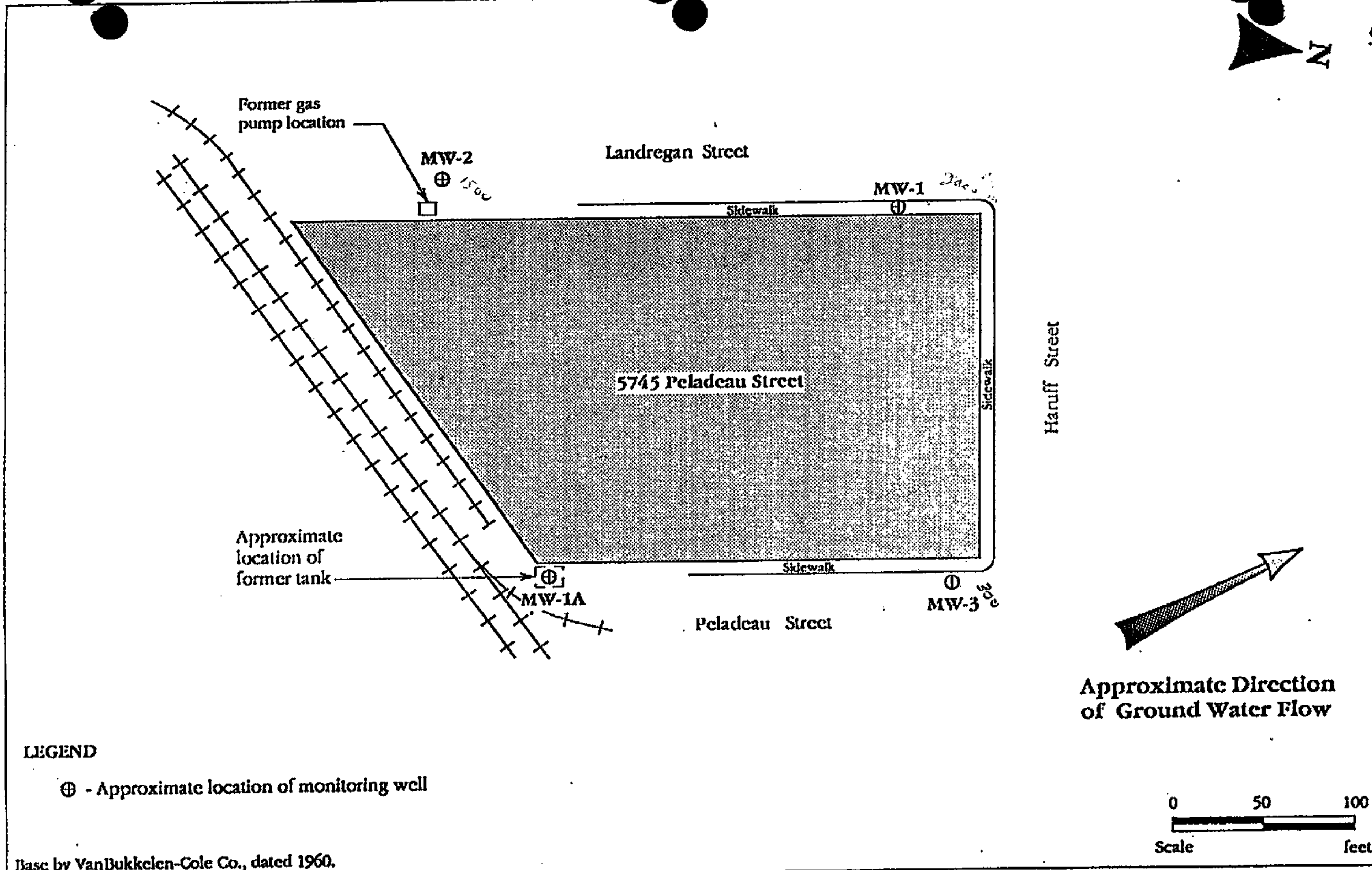
NOTE: The stratification lines represent the approximate boundary between the soil types. The transition may be gradual.

517-21.3/12 SF"EB

MONITORING WELL LOG - MW-2

5745 PELADEAU STREET
Emeryville, California

LOVNEY ASSOCIATES
Environmental/Geotechnical/Engineering Services



517-21, 3/12 SF*EB

SITE PLAN

5745 PELADEAU STREET
Emeryville, California

LOWNEYASSOCIATES
Environmental/Geotechnical/Engineering Services

FIGURE 2
517-21, March 1993

372215- 372217

0150W15P

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STATE OF CALIFORNIA DWR
WELL COMPLETION REPORT
(WELL LOGS)

REMOVED

372216

01S04W15P

DRILL RIG: Mobile B-42

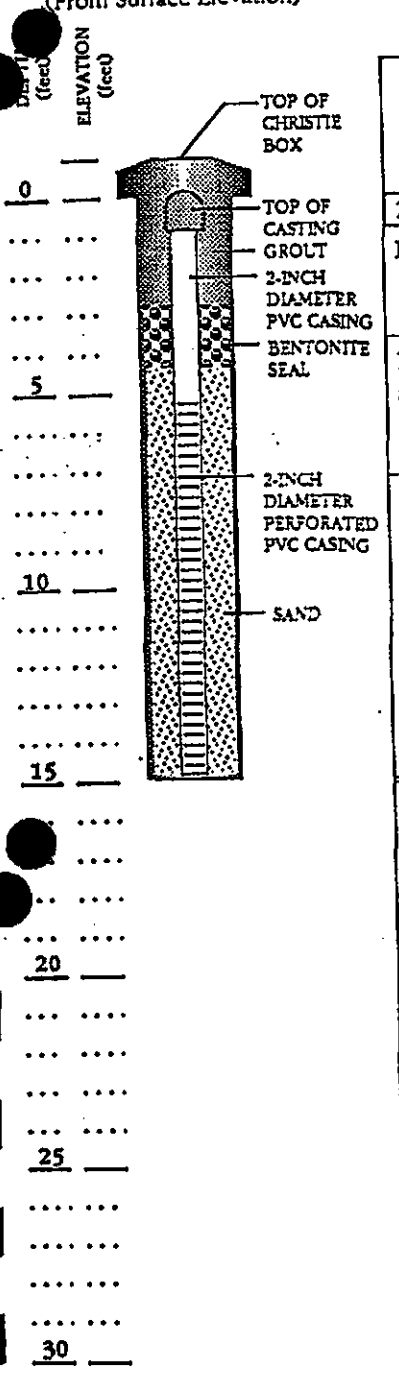
SURFACE ELEVATION: 11.0 feet

LOGGED BY: TR

DEPTH TO GROUNDWATER: 11.0 feet (From Surface Elevation)

BORING DIAMETER: 8 inches

DATE DRILLED: 2/18/93



DESCRIPTION	SYMBOL	CONSISTENCY	SOIL TYPE	LEGEND	DEPTH (feet)	SAMPLER	WATER CONTENT (%)	PENETRATION RESISTANCE (BLOWS/FT.)	ORGANIC VAPORS (ppm)
2 inch asphaltic concrete over 6 inches rockbase									
Black silty sand, trace fine gravel, moist ↑ FILL			SM						
Light brown silty clay, minor gravel and sand, medium plasticity, moist		Hard	CL		5			76	
Brown clayey silt, minor gravel and land, low plasticity, wet		Hard	ML		10		▽	53	
Saturated rootlet veins		Very stiff			15			29	
Bottom of Well = 15.0 feet					20				
					25				
					30				

NOTE: The stratification lines represent the approximate boundary between the soil types. The transition may be gradual.

517-21, 3/12 SF*EB

MONITORING WELL LOG - MW-3

5745 PELADEAU STREET

Emeryville, California

LOVNEY ASSOCIATES

Environmental/Geotechnical/Engineering Services

CONFIDENTIAL

STATE OF CALIFORNIA DWR
WELL COMPLETION REPORT
(WELL LOGS)

REMOVED

762156

PROJECT ▷ ANOTHER TREE	APPLIED GEOSCIENCES INC.	PROJECT NUMBER ▷ A901749A
LOGGED BY ▷ JOSEPH MELLO		START DATE ▷ 31 July 1991
CHECKED BY ▷ FRED R. CONWELL		COMPLETION DATE ▷ 31 July 1991
GROUND SURFACE ELEVATION DATUM (FT-MSL) ▷ 8.2		DRILLING COMPANY ▷ SPECTRUM EXPLORATION
DRILLING EQUIPMENT ▷ ACKER DRILLING CO. AD-2		
BORING DEPTH (FT) ▷ 11.5	WELL DEPTH (FT) ▷ 11.5	WATER DEPTH (FT)-Initial: 4.5 Completion: 5.2
WELL MATERIALS ▷ No. 3 MONTEREY SAND		WELL SCREEN INTERVAL (FT) ▷ 4.0 TO 9.0
WELL CASING ELEVATION (FT-MSL) ▷ 7.95		OVM/OVA ▷ Hnu with 10.2 eV PROBE
BACKFILL MATERIAL ▷ CEMENT-BENTONITE GROUT		

DEPTH (FT)	LITHOLOGY DESCRIPTION	GRAPHIC	WELL	BLOW COUNT	OVM/OVA (PPM)	SAMPLE RECOVERY %	SAMPLE TYPE	SAMPLE NUMBER	COMMENTS
0	Asphalt								
	Light brown (5 YR 5/6), slightly damp, stiff SILT (ML)			9	<1	65		ATD7-1	Some organic matter, some oxidation (fill material!)
5	Becomes mottled light brown (5 YR 5/6) and dusky yellow (5 Y 6/4), moist, Clayey SILT with some coarse sands at 2 feet			2	<1	75		ATD7-2	Water initially encountered at 4.5 feet
	Bluish black (5 B 3/1), saturated, very soft, Silty CLAY (CL)			4	<1	70		ATD7-3	Bay mud at 5 feet Hnu <1 part per million downhole at 5 feet
10	Mottled light brown (5 YR 5/6) and bluish black (5 B 3/1), saturated, stiff CLAY (CH)			12	<1	70		ATD7-4	Some debris observed in the bay mud. Bay mud used for fill?
	Boring terminated at 11.5 feet								Terminated boring approximately 7 feet below the initial encounter of water

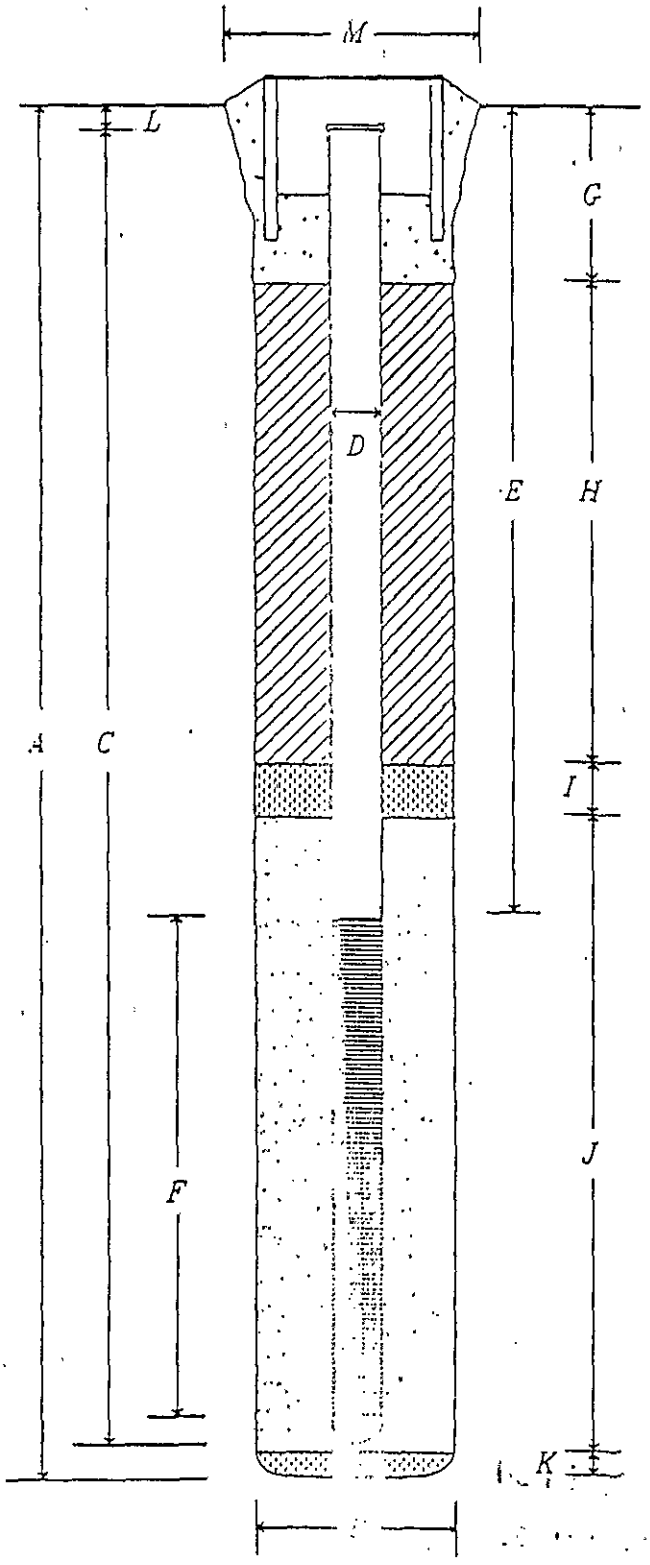
BORING DESIGNATION	BORING LOG	PAGE NUMBER	FIGURE NUMBER
ATD7		1 OF 1	

762156

SINGLE COMPLETION WELL DETAILS

PROJECT NUMBER: A901749A
PROJECT NAME: MARKETPLACE II
COUNTY: ALAMEDA
WELL PERMIT NO.: _____

BORING/WELL NO.: ATD7
TOP OF CASING ELEV.: 7.95
GROUND SURFACE ELEV.: 8.17
DATUM: MEAN SEA LEVEL



EXPLORATION BORING

A. Total Depth 11.5 ft.
B. Boring Diameter 10 in.
Drilling Method HOLLOW-STEM AUGER

WELL CONSTRUCTION

C. Casing Length 9.5 ft.
Material SCHEDULE 40 PVC
D. Diameter 4 in.
E. Depth to Top of Perforations 4.0 ft.
F. Perforated Length 5.0 ft.
Perforated Interval from 4.0 to 9.0 ft.
Perforation Type MACHINE SLOT
Perforation Size 0.020 INCH
G. Surface Seal 1.0 ft.
Seal Material CONCRETE
H. Backfill 2.0 ft.
Backfill Material CEMENT-BENTONITE
I. Seal 0.5 ft.
Seal Material BENTONITE PELLETS
J. Gravel Pack 8.0 ft.
Material NO 3 LONESTAR SAND
K. Bottom Seal 0 ft.
Material NONE
L. Top of Casing Depth 0 in.
M. Protective Cover Diameter 12.25 in.

APPLIED GEOSCIENCES INC.
Engineering Geology and Hazardous Materials Consultants

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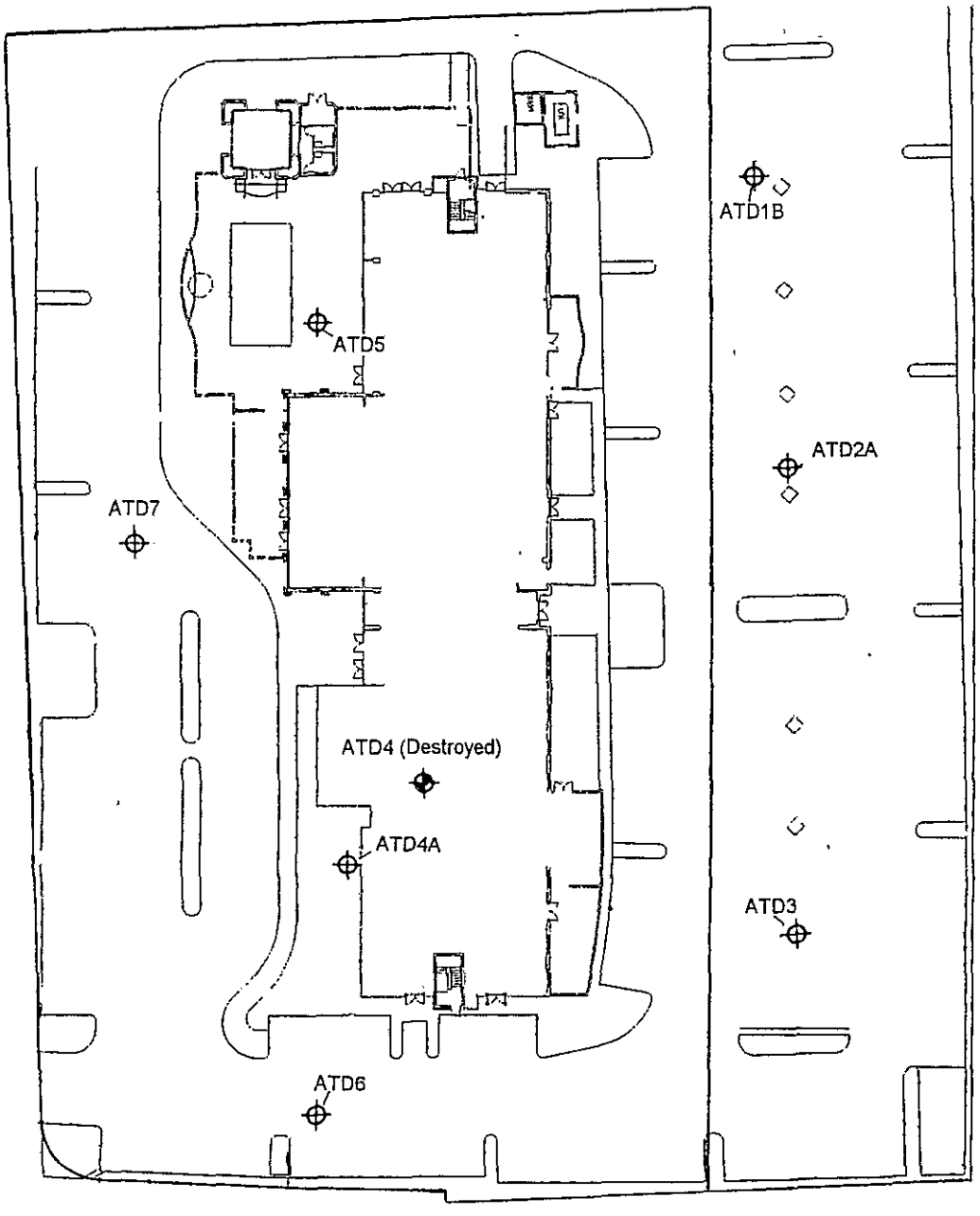


FIGURE 2
SITE PLAN
Hardage Construction Corporation Site
5800 Shellmound Street
Emeryville, California

N

Source:

Santina & Thompson, Inc.
Woodfin Suite Hotel
Monitoring Well Location and Elevation Map
March, 1999

RGA Environmental, Inc.
4701 Doyle Street, Suite 14
Emeryville, California 94608

0 30 60

SCALE IN FEET

CONFIDENTIAL

STATE OF CALIFORNIA DWR
WELL COMPLETION REPORT
(WELL LOGS)

REMOVED

762155

PROJECT ▷ ANOTHER TREE	APPLIED GEOSCIENCES INC.	PROJECT NUMBER ▷ A901749A
LOGGED BY ▷ JOSEPH MELLO		START DATE ▷ 31 July 1991
CHECKED BY ▷ FRED R. CONWELL		COMPLETION DATE ▷ 31 July 1991
GROUND SURFACE ELEVATION DATUM (FT-MSL) ▷ 8.3		DRILLING COMPANY ▷ SPECTRUM EXPLORATION
DRILLING EQUIPMENT ▷ ACKER DRILLING CO. AD-2		
BORING DEPTH (FT) ▷ 11.5	WELL DEPTH (FT) ▷ 11.5	WATER DEPTH (FT)-Initial: 5.0 Completion: 5.4
WELL MATERIALS ▷ No. 3 MONTEREY SAND		WELL SCREEN INTERVAL (FT) ▷ 4.0 TO 9.0
WELL CASING ELEVATION (FT-MSL) ▷ 7.87		OVM/OVA ▷ Hnu with 10.2 eV PROBE
BACKFILL MATERIAL ▷ CEMENT-BENTONITE GROUT		

DEPTH (FT)	LITHOLOGY DESCRIPTION	GRAPHIC	WELL	BLOW COUNT	OVM/OVA (PPM)	SAMPLE RECOVERY %	SAMPLE TYPE	SAMPLE NUMBER	COMMENTS
0	Asphalt								
	Grayish black (N2), damp, stiff, Clayey SILT (ML) with trace fine sand			11	78	75		ATD6-1	Diesel odor noted in the sample obtained at 2.5 feet
5	Mottled grayish blue (5 PB 5/2) and light brown (5 YR 5/6), saturated, firm, CLAY (CH)			7	94	70		ATD6-2	Analyze a sample from this boring for VOCs Hnu = 28 parts per million downhole at 5 feet
	Moderate yellowish brown (10 YR 5/4), saturated, medium dense, Silty fine Sandy GRAVEL (GM) with minor clay			25	9	70		ATD6-3	Gasloine odor noted in the sample obtained at 7.5 feet
10				27	1	85		ATD6-4	
	Boring terminated at 11.5 feet								Terminated boring approximately 6.5 below the initial encounter of water

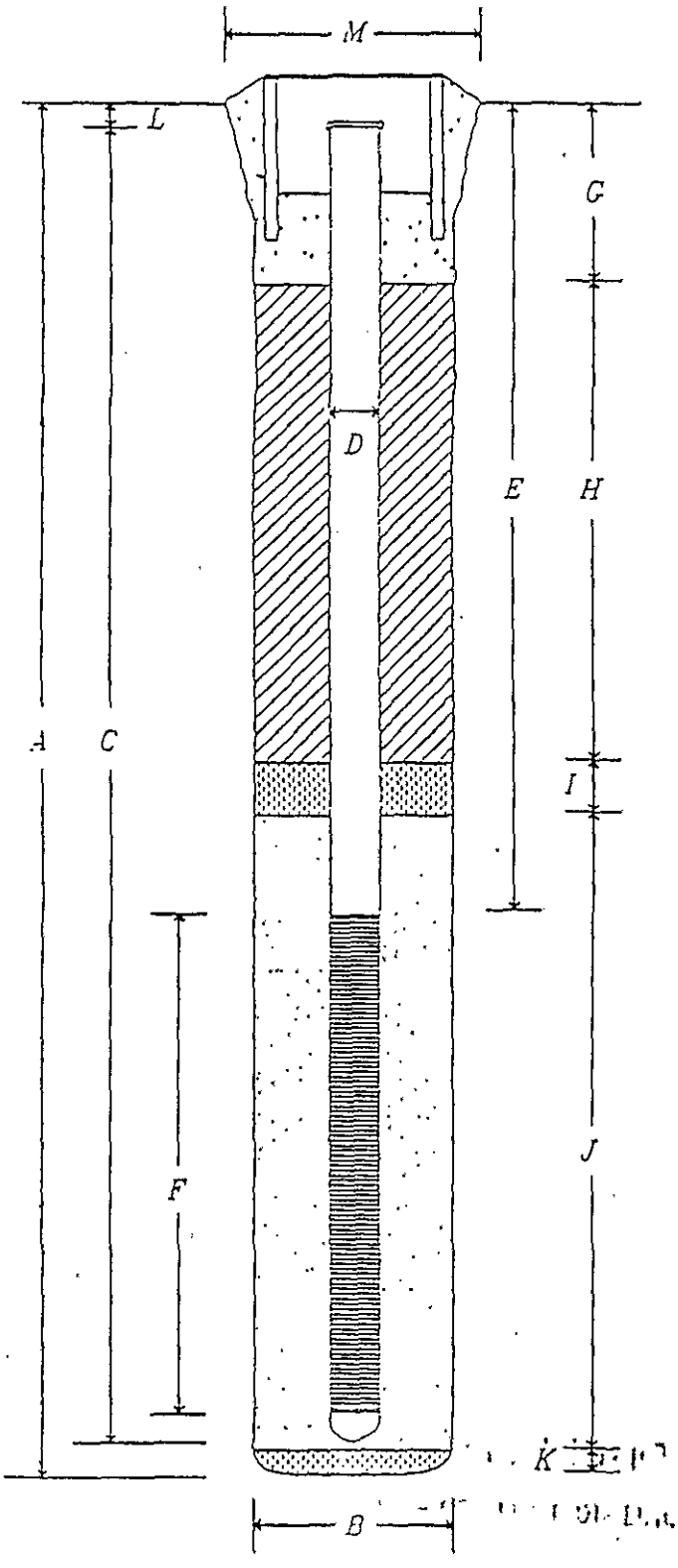
BORING DESIGNATION	BORING LOG	PAGE NUMBER	FIGURE NUMBER
ATD6		1 OF 1	

762155

SINGLE COMPLETION WELL DETAILS

PROJECT NUMBER: A901749A
PROJECT NAME: MARKETPLACE II
COUNTY: ALAMEDA
WELL PERMIT NO.: _____

BORING/WELL NO.: ATD6
TOP OF CASING ELEV.: 7.87
GROUND SURFACE ELEV.: 8.28
DATUM: MEAN SEA LEVEL



EXPLORATION BORING

A. Total Depth 11.5 ft.
B. Boring Diameter 10 in.
Drilling Method HOLLOW-STEM AUGER

WELL CONSTRUCTION

C. Casing Length 9.5 ft.
Material SCHEDULE 40 PVC
D. Diameter 4 in.
E. Depth to Top of Perforations 4.0 ft.
F. Perforated Length 5.0 ft.
Perforated Interval from 4.0 to 9.0 ft.
Perforation Type MACHINE SLOT
Perforation Size 0.020 INCH
G. Surface Seal 1.0 ft.
Seal Material CONCRETE
H. Backfill 2.0 ft.
Backfill Material CEMENT-BENTONITE
I. Seal 0.5 ft.
Seal Material BENTONITE PELLETS
J. Gravel Pack 8.0 ft.
Material NO.3 LONESTAR SAND
K. Bottom Seal 0 ft.
Material NONE
L. Top of Casing Depth 0 in.
M. Protective Cover Diameter 12.25 in.

762155

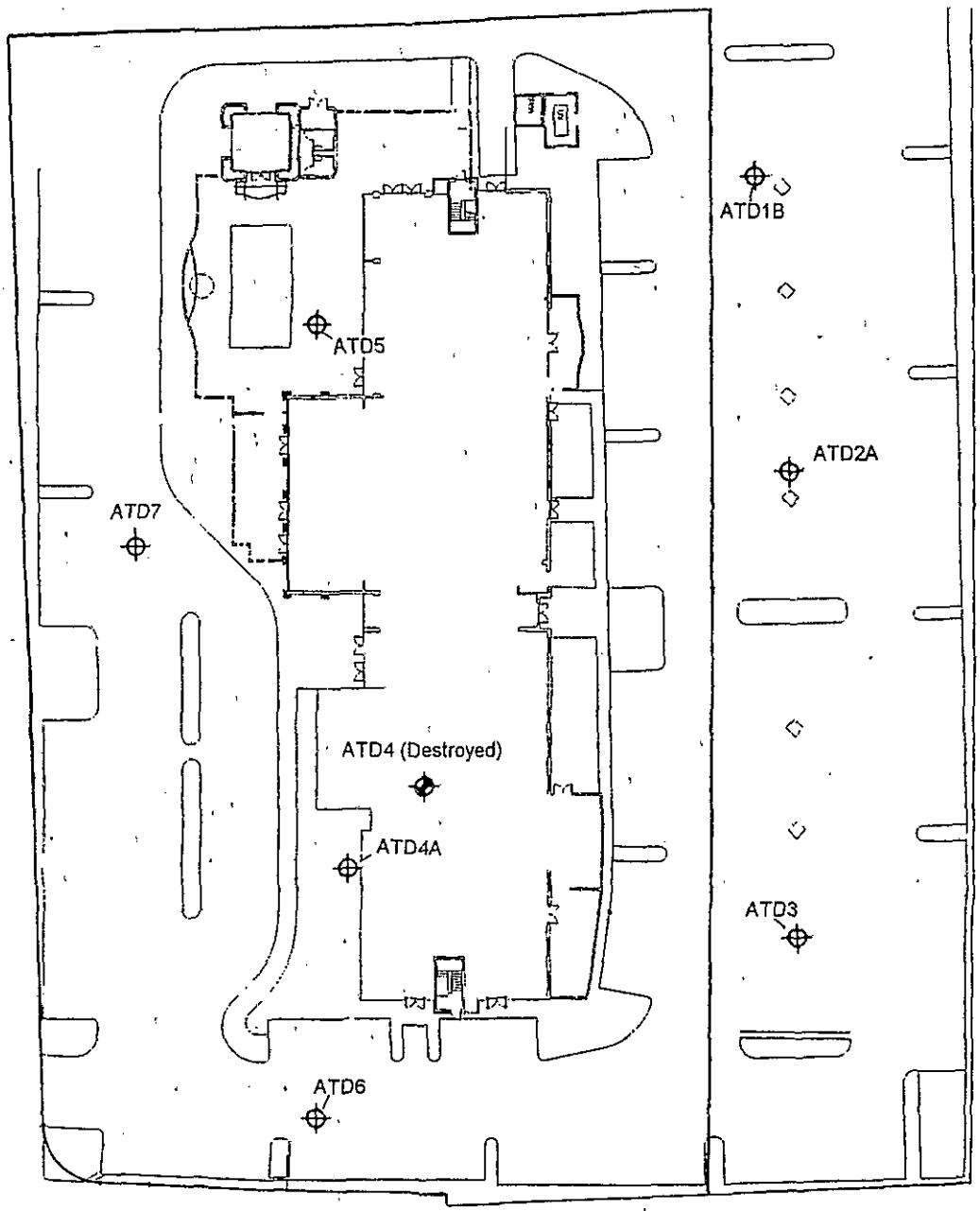


FIGURE 2
SITE PLAN
Hardage Construction Corporation Site
5800 Shellmound Street
Emeryville, California

Source:
Santana & Thompson, Inc.
Woodfin Suite Hotel
Monitoring Well Location and Elevation Map
March, 1999

RGA Environmental, Inc.
4701 Doyle Street, Suite 14
Emeryville, California 94608

0 30 60
SCALE IN FEET

CONFIDENTIAL

STATE OF CALIFORNIA DWR
WELL COMPLETION REPORT
(WELL LOGS)

REMOVED

762154

PROJECT ▷ ANOTHER TREE	APPLIED GEOSCIENCES INC.	PROJECT NUMBER ▷ A901749A
LOGGED BY ▷ JOSEPH MELLO		START DATE ▷ 31 July 1991
CHECKED BY ▷ FRED R. CONWELL		COMPLETION DATE ▷ 31 July 1991
GROUND SURFACE ELEVATION DATUM (FT-MSL) ▷ 7.9		DRILLING COMPANY ▷ SPECTRUM EXPLORATION
DRILLING EQUIPMENT ▷ ACKER DRILLING CO. AD-2		
BORING DEPTH (FT) ▷ 11.5	WELL DEPTH (FT) ▷ 11.5	WATER DEPTH (FT)-Initial: 5.0 Completion: 4.0
WELL MATERIALS ▷ No. 3 MONTEREY SAND		WELL SCREEN INTERVAL (FT) ▷ 4.0 TO 9.0
WELL CASING ELEVATION (FT-MSL) ▷ 7.56		OVM/OVA ▷ Hnu with 10.2 eV PROBE
BACKFILL MATERIAL ▷ CEMENT-BENTONITE GROUT		

DEPTH (FT)	LITHOLOGY DESCRIPTION	GRAPHIC	WELL	BLOW COUNT	OVM/OVA (PPM)	SAMPLE RECOVERY %	SAMPLE TYPE	SAMPLE NUMBER	COMMENTS
0	Asphalt								
	Light brown (5 Y 5/6), dry, very stiff, Sandy Clayey SILT (ML) with some fine gravels			17	-	40		ATD5-1	Hnu sample not obtained at 2.5 or 5 feet
5	Becomes black (N1) and saturated at 5 feet			100	-	15		ATD5-2	Hnu<1 part per million downhole at 5 feet
	Black (N1), saturated, stiff, very fine Sandy SILT (ML) with some shell fragments								Unable to obtain a sample at 5 feet
				12	<1	95		ATD5-3	Slight odor (petroleum hydrocarbons?)
	Mottled light olive brown (5 Y 5/6), light brown (5 YR 5/6), and light olive (10 Y 5/4), saturated, dense, Clayey Silty Sandy GRAVEL (GM)								Some shell fragments in the sample at 8.5 feet
10				30	<1	65		ATD5-4	
	Boring terminated at 11.5 feet .								Terminated boring approximately 6.5 feet below the initial encounter of water

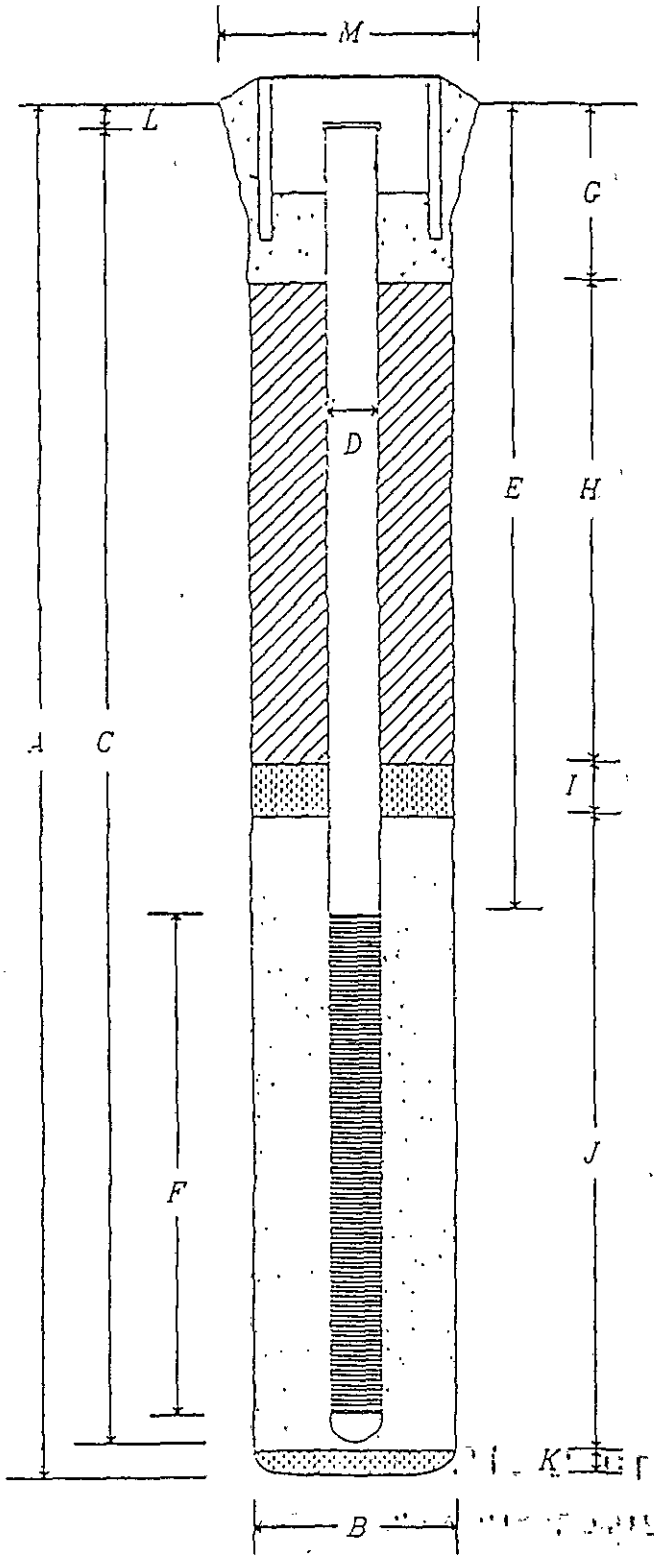
BORING DESIGNATION		PAGE NUMBER	FIGURE NUMBER
ATD5	BORING LOG	1 OF 1	

762154

SINGLE COMPLETION WELL DETAILS

PROJECT NUMBER: A901749A
PROJECT NAME: MARKETPLACE II
COUNTY: ALAMEDA
WELL PERMIT NO.: _____

BORING/WELL NO.: AT05
TOP OF CASING ELEV.: 7.56
GROUND SURFACE ELEV.: 7.89
DATUM: MEAN SEA LEVEL



EXPLORATION BORING

A. Total Depth 11.5 ft.
B. Boring Diameter 10 in.
Drilling Method HOLLOW-STEM AUGER

WELL CONSTRUCTION

C. Casing Length 9.5 ft.
Material SCHEDULE 40 PVC
D. Diameter 4 in.
E. Depth to Top of Perforations 4.0 ft.
F. Perforated Length 5 ft.
Perforated Interval from 4.0 to 9.0 ft.
Perforation Type MACHINE SLOT
Perforation Size 0.020 INCH
G. Surface Seal 1.0 ft.
Seal Material CONCRETE
H. Backfill 2.0 ft.
Backfill Material CEMENT-BENTONITE
I. Seal 0.5 ft.
Seal Material BENTONITE PELLLETS
J. Gravel Pack 8.0 ft.
Material NO.3 LONESTAR SAND
K. Bottom Seal 0 ft.
Material NONE
L. Top of Casing Depth 0 in.
M. Protective Cover Diameter 12.25 in.

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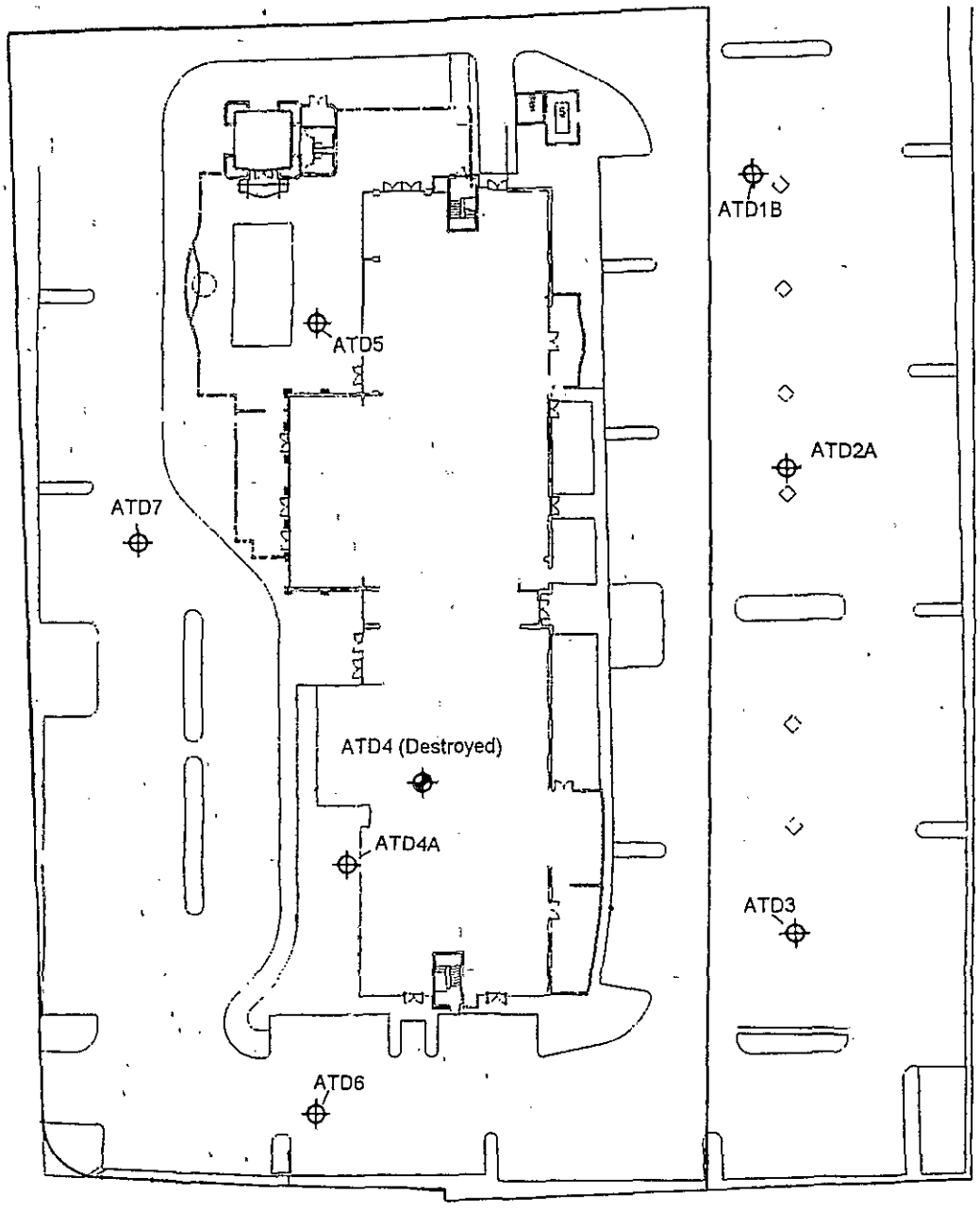

FIGURE 2
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Hardage Construction Corporation Site
5800 Shellmound Street
Emeryville, California

N

Source

Santana & Thompson, Inc.
Woodfin Suite Hotel
Monitoring Well Location and Elevation Map
March, 1999

RGA Environmental, Inc.
4701 Doyle Street, Suite 14
Emeryville, California 94608

0 30 60

SCALE IN FEET

CONFIDENTIAL

STATE OF CALIFORNIA DWR
WELL COMPLETION REPORT
(WELL LOGS)

REMOVED

RGA ENVIRONMENTAL, INC.

162153

PAGE 1 OF 1

BORING NO.: ATD4A PROJECT NO.: HSHI4089 PROJECT NAME: HARDAGE CONSTRUCTION CORP.

BORING LOCATION: CONSTRUCTION SITE ELEVATION AND DATUM: TOP OF CASING = 8.45 FEET MEAN SEA LEVEL

DRILLING AGENCY: Exploration Geoservices, Inc. DRILLER: DAN & DANNY

DATE & TIME STARTED: 3/4/99 DATE & TIME FINISHED: 3/4/99

DRILLING EQUIPMENT: MOBIL B56 10" OD HOLLOW STEM AUGER

COMPLETION DEPTH: 10.0 FEET BEDROCK DEPTH: NONE ENCOUNTERED

LOGGED BY: PHK CHECKED BY:

FIRST WATER DEPTH: 6 FEET NO. OF SAMPLES: 0

DEPTH (FT.)	DESCRIPTION	GRAPHIC COLUMN	WELL CONSTRUCTION LOG	BLOW COUNT PER 6"	PID/ppm	REMARKS
0	Gray Silty Sandy baserock, moist. No Petroleum Hydrocarbon (PHC) odor.	FILL	See Attached Diagram			
5	Gray black Silty Clay (CL); wood fragments, moist to saturated, stiff. No PHC odor.	CL	▽	10 6 6	0	Groundwater first encountered at 6 feet. Area immediately north of ATD4A was dewatered.
10				6 4 9	0	Borehole terminated at 10.0 feet. Borehole converted to groundwater monitoring well
15						
20						
25						
30						

4/25/99 1064BL01.DWG

762153

RGA ENVIRONMENTAL, INC.

4701 Doyle Street, Suite 14
Emeryville, CA 94608
Telephone (510) 547-7771

WELL CONSTRUCTION DETAILS

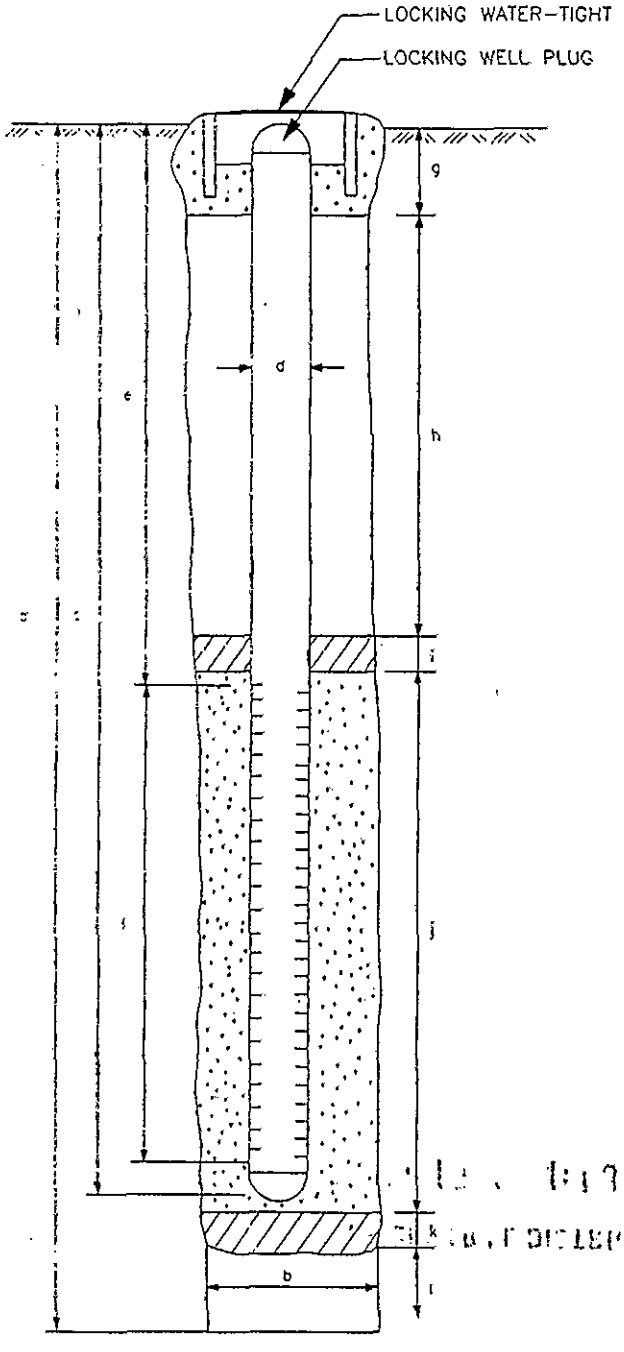
PROJECT NUMBER HSHI4089 BORING/WELL NO. ATD4A

PROJECT NAME Hardage Construction Corp. TOP OF CASING ELEV. 8.74 FEET

COUNTY Alameda GROUND SURFACE ELEV. UNKNOWN

WELL PERMIT NO. 98WR327 DATUM MEAN SEA LEVEL

DATE INSTALLED 3/4/99



EXPLORATORY BORING

a. Total depth 10.0 FT.

b. Diameter 10.0 IN.

Drilling method Hollow Stem Auger

WELL CONSTRUCTION

c. Casing length 10 FT.

Material Schedule 40 PVC

d. Diameter 2 IN.

e. Depth to top perforations 5.0 FT.

f. Perforated length 5 FT.

Perforated interval from 5 to 10 FT.

Perforation type Factory Slot

Perforation size 0.010 Inch

g. Surface sanitary seal 0.5 FT.

Seal material Concrete

h. Sanitary seal 3.0 FT

Seal material Neat Cement

i. Filter pack seal 1.0 FT.

Seal material Bentonite Pellet

j. Filter pack length 5.5 FT.

Filter pack interval from 4.5 to 10 FT.

Pack material #2/16 Lonestar Sack Sand

k. Bottom seal 0 FT.

Seal material

l. Stuff in bottom of borehole 0 FT.

WCD1002

762153

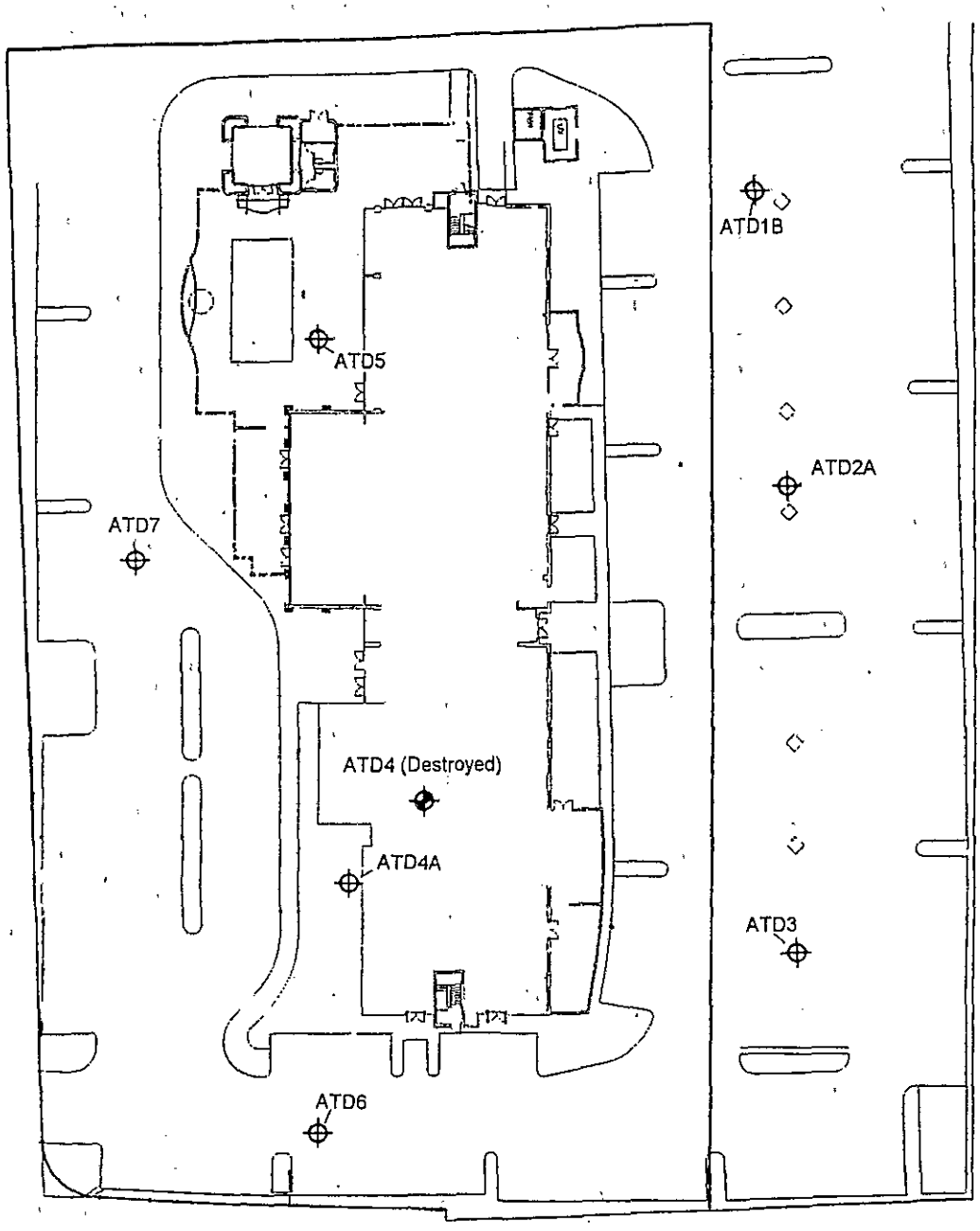


FIGURE 2
SITE PLAN
Hardage Construction Corporation Site
5800 Shellmound Street
Emeryville, California

Source

Santina & Thompson, Inc.
Woodfin Suite Hotel
Monitoring Well Location and Elevation Map
March, 1999

RGA Environmental, Inc.
4701 Doyle Street, Suite 14
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0 30 60

SCALE IN FEET

CONFIDENTIAL

STATE OF CALIFORNIA DWR
WELL COMPLETION REPORT
(WELL LOGS)

REMOVED

762152

PROJECT ▷ ANOTHER TREE	APPLIED GEOSCIENCES INC.	PROJECT NUMBER ▷ A901749A
LOGGED BY ▷ MICHAEL MILLER		START DATE ▷ 31 July 1991
CHECKED BY ▷ FRED R. CONWELL		COMPLETION DATE ▷ 31 July 1991
GROUND SURFACE ELEVATION DATUM (FT-MSL) ▷ 8.8		DRILLING COMPANY ▷ SPECTRUM EXPLORATION
DRILLING EQUIPMENT ▷ CME-55		
BORING DEPTH (FT) ▷ 22.0 / WELL DEPTH (FT) ▷ 22		WATER DEPTH (FT)-Initial: 18.5 Completion: 3.5
WELL MATERIALS ▷ No. 3 MONTEREY SAND		WELL SCREEN INTERVAL (FT) ▷ 16.5 TO 21.5
WELL CASING ELEVATION (FT-MSL) ▷ 8.21		OVM/OVA ▷ Hnu with 10.2 eV PROBE
BACKFILL MATERIAL ▷ CEMENT-BENTONITE GROUT		

DEPTH (FT)	LITHOLOGY DESCRIPTION	GRAPHIC	WELL	BLOW COUNT	OVM/OVA (PPM)	SAMPLE RECOVERY %	SAMPLE TYPE	SAMPLE NUMBER	COMMENTS
0	Asphalt								
	Dark yellow brown (10 YR 4/2), moist, medium dense, Silty GRAVEL (GM)			12	<1			ATD-3-1	
5	Dark yellow brown (10 YR 4/2), moist, stiff, Silty CLAY (CL)			11	<1			ATD-3-2	
	Becomes moderate yellow brown (10 YR 5/4) at 7 feet			22	<1			ATD-3-3	
10				38	<1			ATD-3-4	
15									
	Increase in gravel at 18.5 feet			29	<1			ATD-3-5	Water encountered at 18.5 feet
20	Boring terminated at 22 feet								Terminated boring approximately 3 feet below the initial encounter of water

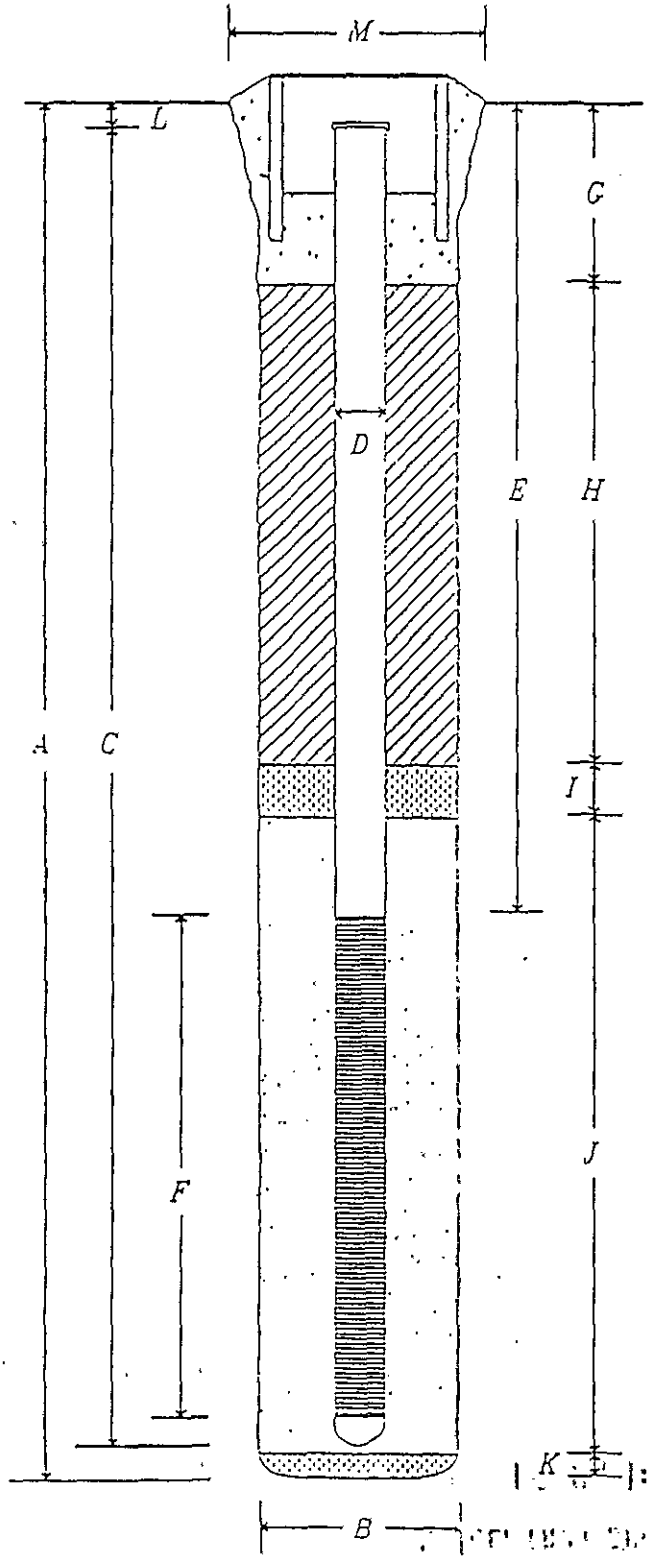
BORING DESIGNATION	BORING LOG	PAGE NUMBER	FIGURE NUMBER
ATD3		1 OF 1	

762152

SINGLE COMPLETION WELL DETAILS

PROJECT NUMBER: A901749A
PROJECT NAME: MARKETPLACE II
COUNTY: ALAMEDA
WELL PERMIT NO.: _____

BORING/WELL NO.: ATD3
TOP OF CASING ELEV.: 8.21
GROUND SURFACE ELEV.: 8.80
DATUM: MEAN SEA LEVEL



EXPLORATION BORING

A. Total Depth 22.0 ft
B. Boring Diameter 10 in
Drilling Method HOLLOW-STEM AUGER

WELL CONSTRUCTION

C. Casing Length 21.5 ft
Material SCHEDULE 40 PVC
D. Diameter 4 in
E. Depth to Top of Perforations 16.5 ft.
F. Perforated Length 5.0 ft
Perforated Interval from 16.5 to 21.5 ft
Perforation Type MACHINE SLOT
Perforation Size 0.020 INCH
G. Surface Seal 2.0 ft
Seal Material CEMENT GROUT
H. Backfill 12.5 ft
Backfill Material CEMENT GROUT
I. Seal 1.0 ft.
Seal Material BENTONITE PELLETS
J. Gravel Pack 6.0 ft
Material NO.3 LONESTAR SAND
K. Bottom Seal 0 ft
Material NONE
L. Top of Casing Depth 6 in
M. Protective Cover Diameter 12.25 in

APPLIED GEOSCIENCES INC.
Engineering Geology and Hazardous Materials Consultants

762152

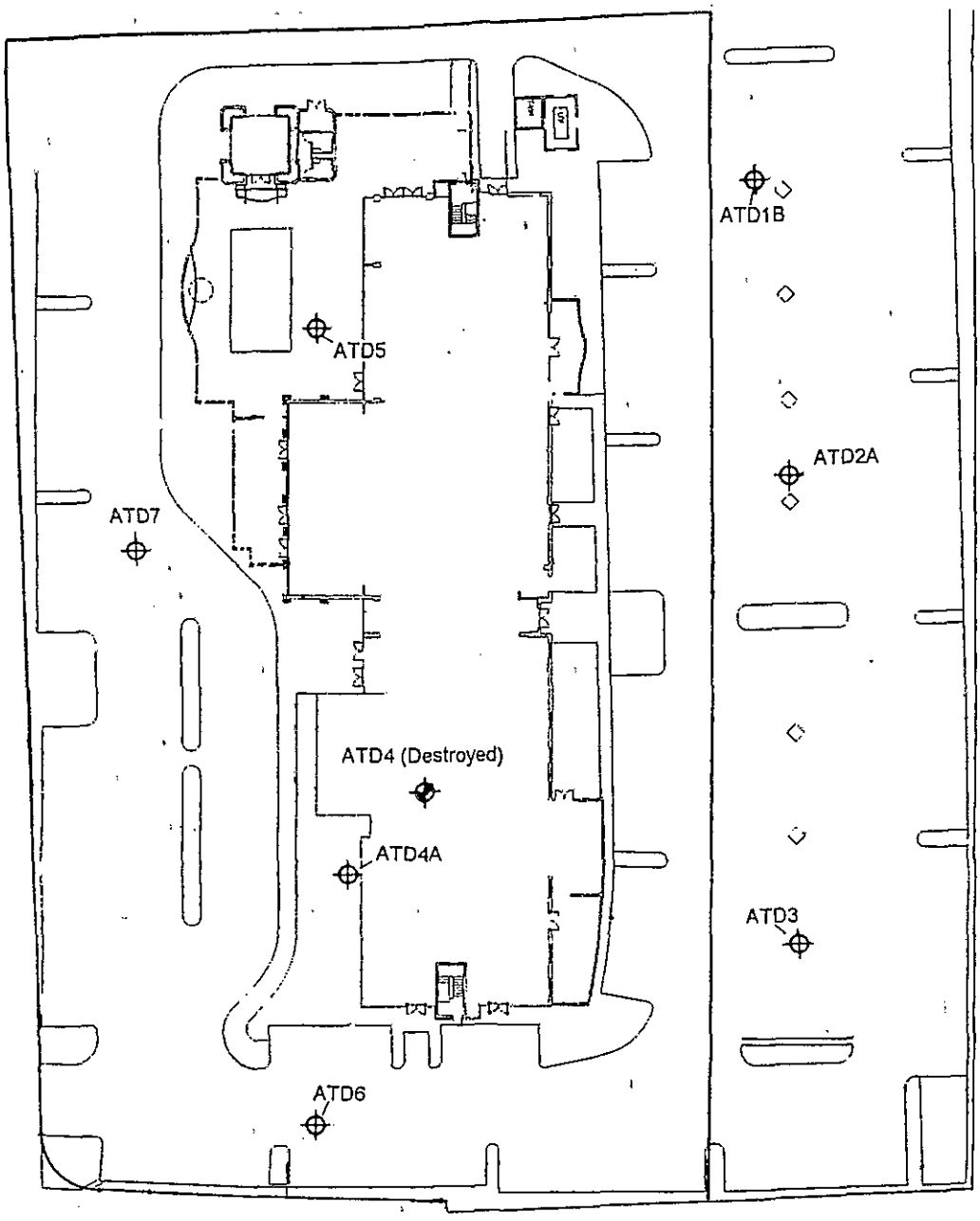


FIGURE 2
SITE PLAN
Hardage Construction Corporation Site
5800 Shellmound Street
Emeryville, California

Source:
Santina & Thompson, Inc.,
Woodfin Suite Hotel
Monitoring Well Location and Elevation Map
March, 1999

RGA Environmental, Inc.
4701 Doyle Street, Suite 14
Emeryville, California 94608

0 30 60
SCALE IN FEET

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STATE OF CALIFORNIA DWR
WELL COMPLETION REPORT
(WELL LOGS)

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762151

RGA Environmental, Inc.

BORING NO.: ATD2A	PROJECT NO.: HSHI4089	PROJECT NAME: HARDAGE CONSTRUCTION CORP.	
BORING LOCATION: SEE MAP		ELEVATION AND DATUM:	
DRILLING AGENCY: GREGG DRILLING AND TESTING, INC.	DRILLER: TREVOR & GERMAN	DATE & TIME STARTED: 1/14/00 8:30 AM	DATE & TIME FINISHED: 1/14/00
DRILLING EQUIPMENT: 10 INCH OUTSIDE DIAMETER HOLLOW STEM AUGER			
COMPLETION DEPTH: 10 FEET	BEDROCK DEPTH: NONE ENCOUNTERED	LOGGED BY: GMB	CHECKED BY:
FIRST WATER DEPTH: UNKNOWN	NO. OF SAMPLES: NONE		

DEPTH (FT.)	DESCRIPTION	GRAPHIC COLUMN	WELL CONSTRUCTION LOG	BLOW COUNT PER 6"	PID	REMARKS
5	Porland cement, monitoring well and construction debris (FILL), some brown sand, dense, wet.	FILL	See Attached Well Construction Detail Diagram			
10	Brown silt (ML), dense, wet.	ML				Borehole terminated at 10 0 feet. Borehole converted to groundwater monitoring well
15						
20						
25						
30						

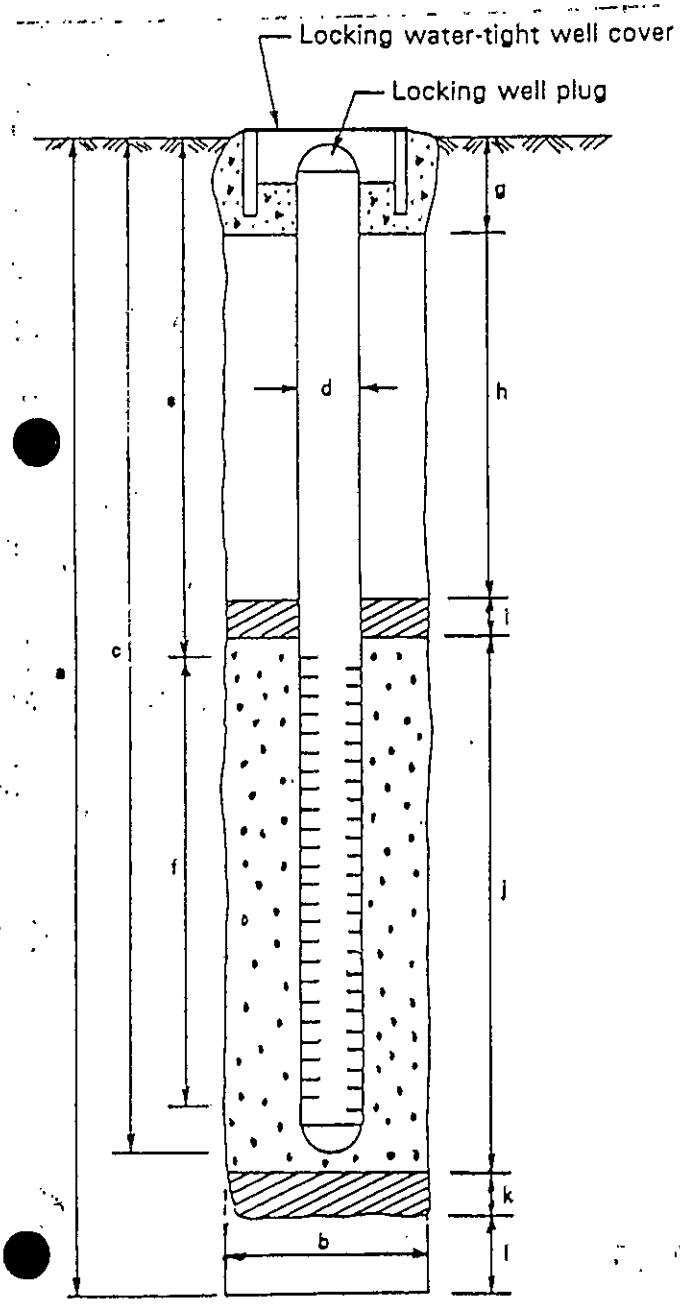
762151

RGA Environmental, Inc.
4701 Doyle Street, Suite 14
Emeryville, California 94608
Telephone: (510) 547-7771

WELL CONSTRUCTION DETAILS

PROJECT NUMBER HSHI4089
PROJECT NAME HARDAGE CONSTRUCTION CORP.
COUNTY ALAMEDA
WELL PERMIT NO. 99WR626

BORING/WELL NO. ATD2A
TOP OF CASING ELEVATION TBA
GROUND SURFACE ELEVATION TBA
DATUM TBA



EXPLORATORY BORING

a. Total Depth 10 ft.
b. Diameter 10 in.
Drilling Method Hollow Stem Auger

WELL CONSTRUCTION

c. Casing Length 9.5 ft.
Material Schedule 40 PVC
d. Diameter 4 in.
e. Depth to top perforations 4.5 ft.
f. Perforated length 5 ft.
Perforated interval from 4.5 to 9.5 ft.
Perforation type Factory Slot
Perforation size 0.010 inch
g. Surface sanitary seal 2.5 ft.
Seal material Neat cement grout
h. Sanitary seal 0 ft.
Seal material
i. Filter pack seal 1 ft.
Seal material Bentonite pellets
j. Filter pack length 6.5 ft.
Filter pack interval from 3.5 to 10 ft.
Pack material #2/16 Lonestar sand
k. Bottom seal 0 ft.
Seal material
l. Slough in bottom of borehole 0 ft.

762151

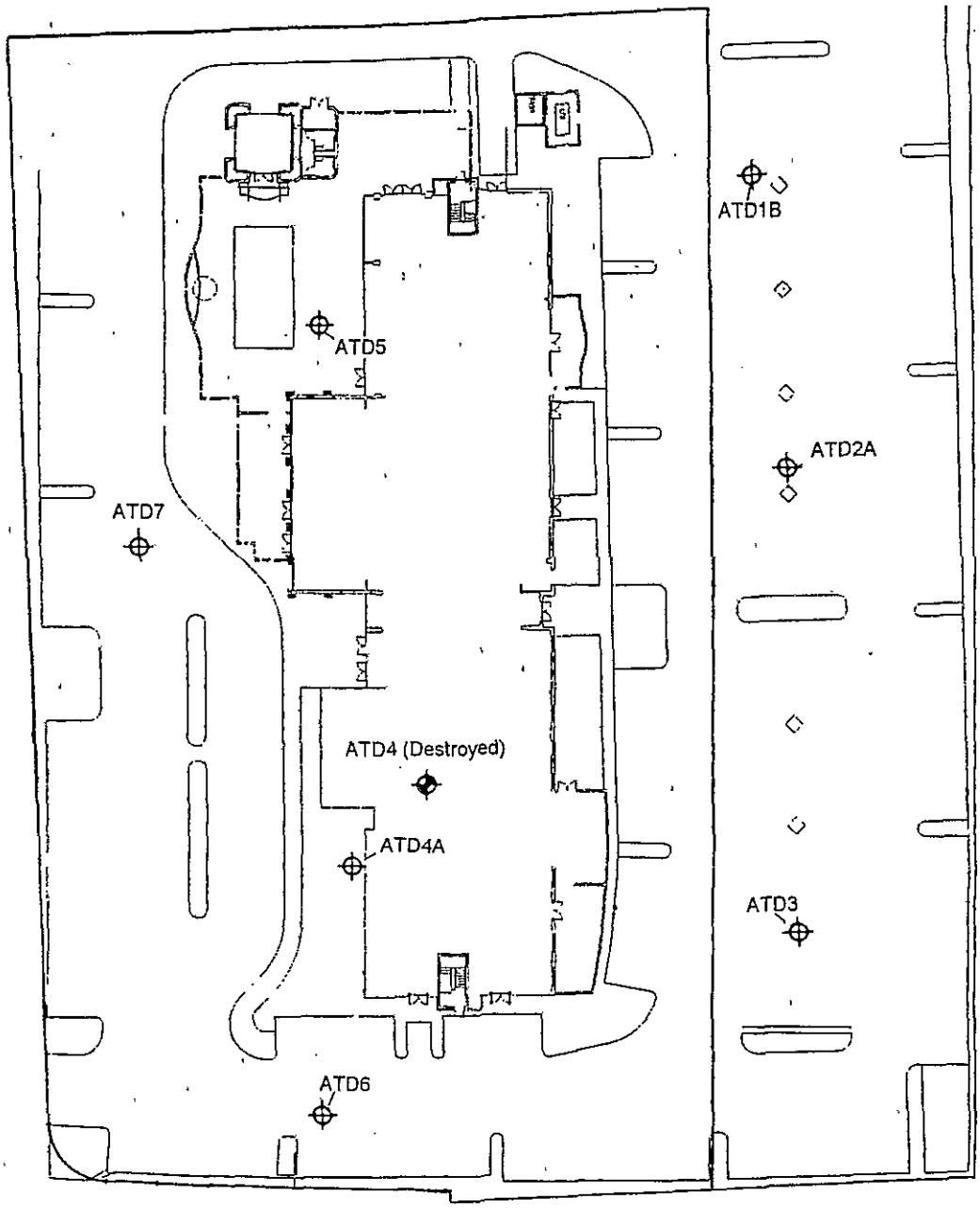


FIGURE 2
SITE PLAN
Hardage Construction Corporation Site
5800 Shellmound Street
Emeryville, California

N

Source:
Sanbria & Thompson, Inc.
Woodfin Suite Hotel
Monitoring Well Location and Elevation Map
March, 1999

RGA Environmental, Inc.
4701 Doyle Street, Suite 14
Emeryville, California 94608

0 30 60
SCALE IN FEET

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(WELL LOGS)

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762150

RGA ENVIRONMENTAL, INC.

BORING NO.: ATD1B	PROJECT NO.: HSHI5835	PROJECT NAME: HARDAGE CONSTRUCTION CORP.	
BORING LOCATION: SEE MAP		ELEVATION AND DATUM:	
DRILLING AGENCY: GREGG DRILLING AND TESTING, INC.	DRILLER: PAUL & FAUSTO	DATE & TIME STARTED: 10/2/00	DATE & TIME FINISHED: 10/2/00
DRILLING EQUIPMENT: 8 INCH OUTSIDE DIAMETER HOLLOW STEM AUGER			
COMPLETION DEPTH: 10 FEET	BEDROCK DEPTH: NONE ENCOUNTERED	LOGGED BY: GMB	CHECKED BY:
FIRST WATER DEPTH: UNKNOWN	NO. OF SAMPLES: NONE		

DEPTH (FT)	DESCRIPTION	GRAPHIC COLUMN	WELL CONSTRUCTION LOG	BLOW COUNT PER 6"	PID	REMARKS
0	Porland cement, monitoring well and construction debris (FILL), dense, moist.	FILL	See Attached Well Construction Detail Diagram			
5						
		▽				Saturated soil at approximately 8 feet.
	Gray clayey silt (ML), dense, saturated.	ML				
10						Borehole terminated at 10.0 feet.
						Borehole converted to groundwater monitoring well, designated ATD1B.
15						
20						
25						
30						

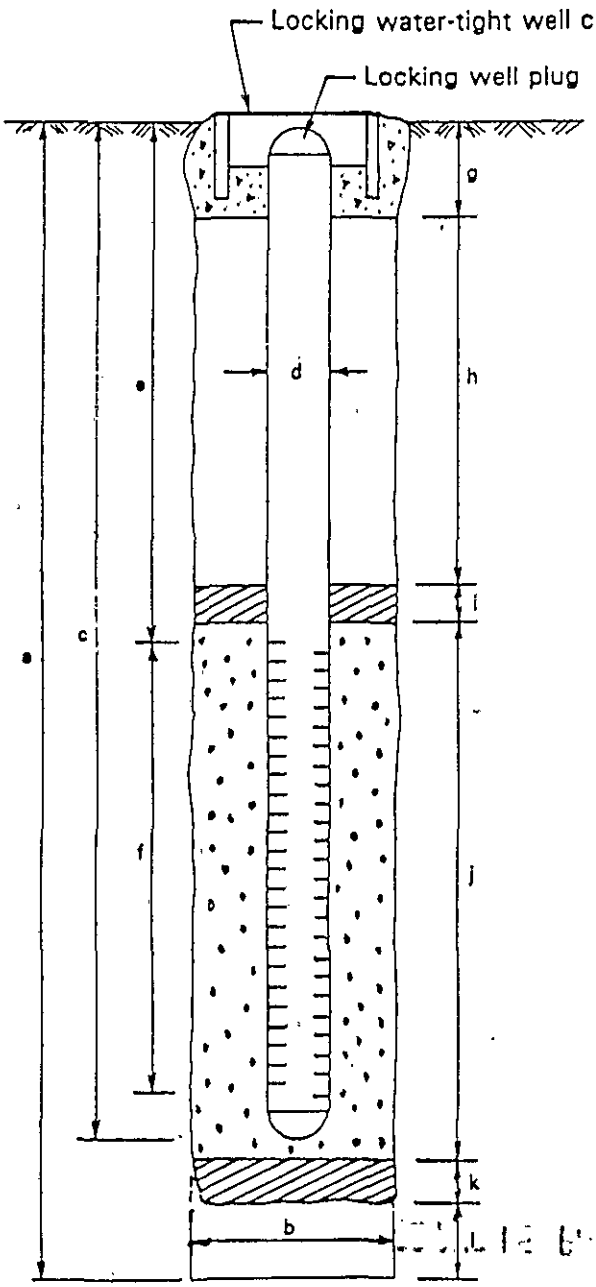
762150

RGA Environmental, Inc.
4701 Doyle Street, Suite 14
Emeryville, California 94608
Telephone: (510) 547-7771

WELL CONSTRUCTION DETAILS

PROJECT NUMBER HSHI5835
PROJECT NAME HARDAGE CONSTRUCTION CORP.
COUNTY ALAMEDA
WELL PERMIT NO. W00-544

BORING/WELL NO. ATD1B
TOP OF CASING ELEVATION TBD
GROUND SURFACE ELEVATION TBD
DATUM TBD



EXPLORATORY BORING

a. Total Depth 10 ft.
b. Diameter 8 in.
Drilling Method Hollow Stem Auger

WELL CONSTRUCTION

c. Casing Length 10 ft.
Material Schedule 40 PVC
d. Diameter 2 in.
e. Depth to top perforations 5 ft.
f. Perforated length 5 ft.
Perforated interval from 5 to 10 ft.
Perforation type Factory Slot
Perforation size 0.010 inch
g. Surface sanitary seal 2.5 ft.
Seal material Neat cement grout
h. Sanitary seal 0 ft.
Seal material
i. Filter pack seal 1 ft.
Seal material Bentonite chips
j. Filter pack length 6.5 ft.
Filter pack interval from 3.5 to 10 ft.
Pack material #2/16 Lonestar sand
k. Bottom seal 0 ft.
Seal material
l. Slough in bottom of borehole 0 ft.

762150

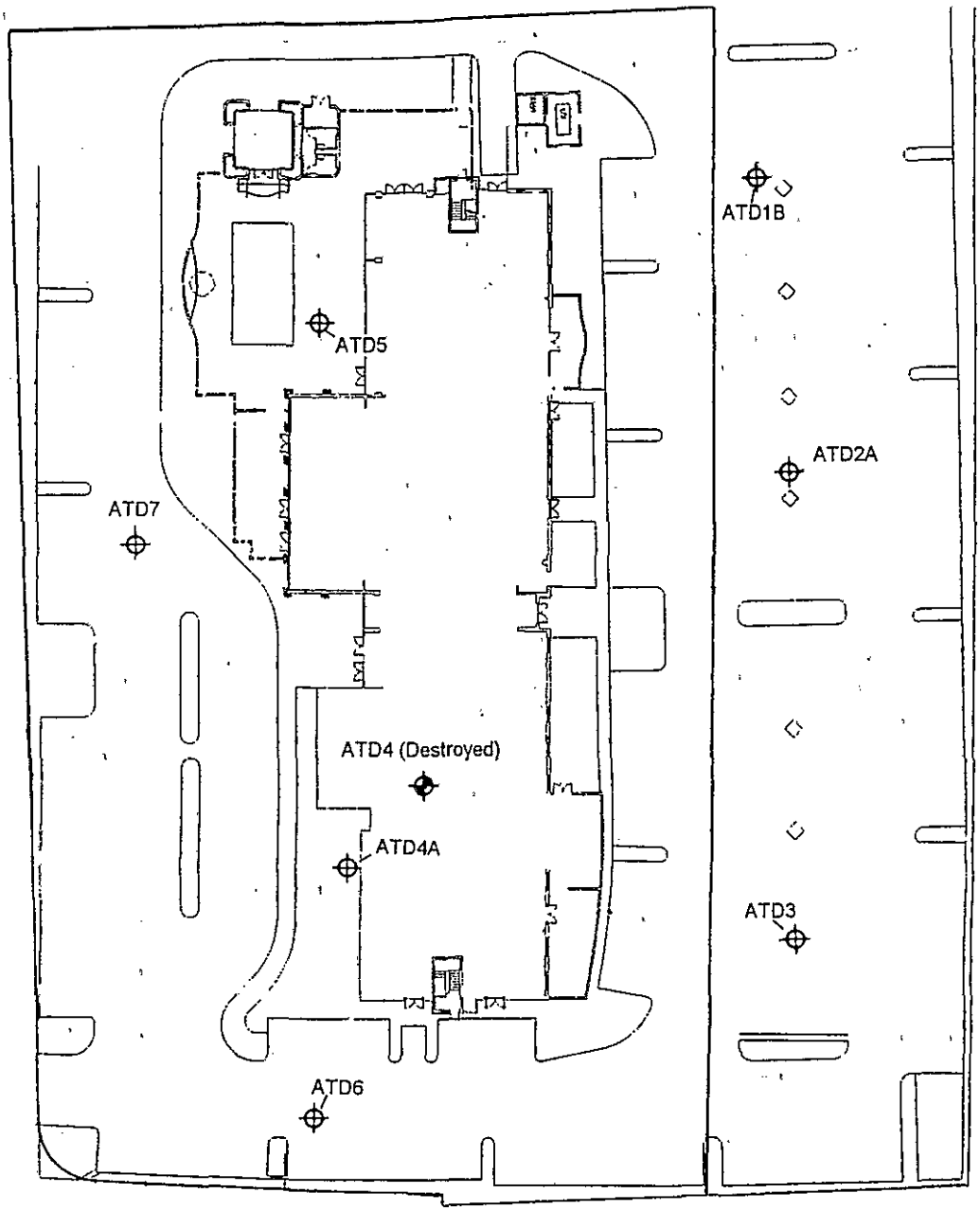


FIGURE 2
SITE PLAN
Hardage Construction Corporation Site
5800 Shellmound Street
Emeryville, California

Source

Santana & Thompson, Inc.
Woodfin Suite Hotel
Monitoring Well Location and Elevation Map
March, 1999

RGA Environmental, Inc.
4701 Doyle Street, Suite 14
Emeryville, California 94608

0 30 60

SCALE IN FEET

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STATE OF CALIFORNIA DWR
WELL COMPLETION REPORT
(WELL LOGS)

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WELL COMPLETION REPORT
(WELL LOGS)

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STATE OF CALIFORNIA DWR
WELL COMPLETION REPORT
(WELL LOGS)

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STATE OF CALIFORNIA DWR
WELL COMPLETION REPORT
(WELL LOGS)

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STATE OF CALIFORNIA DWR
WELL COMPLETION REPORT
(WELL LOGS)

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STATE OF CALIFORNIA DWR
WELL COMPLETION REPORT
(WELL LOGS)

REMOVED

433468 1S/4W 15A 6

Project Name: Myers Container Corp., Oakland	Date: 1/16/92	Boring Number: W-10
Project No: 11121-Q210	Borehole Depth: 15.5'	Surface Completion: Christie Box
Drilling Co: Clear Heart, Guerneville CA	Well Depth: 15.0'	Surface Elevation: 36.12'
Drilling Equip: COMBINATION, 6.75" HSA	Water Elev.: 26.48' on 1/20/92	Logged By: DRD
Sampler Type: 2.5" CSS & CC	Casing Elevation: 35.68'	Checked By: CAH

Description	Depth (feet)	Sample Number	Blows/Foot	OVM (ppm)	Remarks
Black (N1) asphalt paving.					
Dark gray (N3) silty GRAVEL with sand (GM); ~60% gravel, 20% sand, 20% silt; loose, damp; (fill).	1		8	0/0	
Dusky yellowish brown (10YR 2/2) sandy lean CLAY (CL); ~40% clay, 20% silt, 30% medium sand, 10% fine gravel; damp; (fill).	2				
Light olive gray (5Y 5/2) lean CLAY (CL); ~50% clay, 40% silt, 10% medium sand; damp. Color grades to greenish gray (5GY 6/1).	3				
Dusky yellow green (5GY 5/1) lean CLAY (CL); ~60% clay, 30% silt, 10% fine sand; damp to moist.	4				
	5		18	0/0	
Dusky yellow green (5GY 5/1) sandy SILT (ML); ~40% silt, 40% clay, 20% sand; medium dense, moist.	6				
	7				
Greenish gray (5GY 6/1) sandy SILT (ML); ~60% silt, 40% sand; damp.	8				
			36	0/0	
Dark gray (N3) well graded gravel with sand (GW); ~50% gravel, 40% coarse sand, 10% silt; medium dense, moist to wet.	9				▼ 1/20/92
Saturated at 10 feet.	10		12		▽
Brownish black (5YR 2/1) clayey GRAVEL with sand (GC); ~50% gravel, 30% coarse sand, 10% clay, 10% silt; loose, saturated.	11	W10-10			Soil becomes softer with depth.
Moderate brown (5YR 4/4) clayey GRAVEL with sand (GC); ~50% gravel, 30% coarse sand, 10% clay, 10% silt; saturated.	12			0/0	
Light brown (5YR 5/4) SILT (ML); ~60% silt, 30% clay, 10% fine sand; damp.	13				
Light olive gray (5Y 6/1) and dark yellowish orange (10YR 6/6) SILT with sand (ML); ~50% silt, 30% clay, 20% very fine sand; damp.	14				
END BORING 15 FEET	15			0/0	

Lithology / Casing / Annular Seal: 2" PVC Blank Casing; Neat Cement with 5% Bentonite; Bentonite Pellets; 0.010" Slotted PVC Screen; #2/12 Monterey Sand

TRC Environmental Consultants, Inc.

Figure No. C-16

TRC

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STATE OF CALIFORNIA DWR
WELL COMPLETION REPORT
(WELL LOGS)

REMOVED

433468 1S/4W-15A10

Project Name: Myers Container Corp., Oakland	Date: 1/16/92	Boring Number: W-10
Project No: 11121-Q210	Borehole Depth: 15.5'	Surface Completion: Christie Box
Drilling Co: Clear Heart, Guerneville CA	Well Depth: 15.0'	Surface Elevation: 36.12'
Drilling Equip: COMBINATION, 6.75" HSA	Water Elev.: 26.48' on 1/20/92	Logged By: DRD
Sampler Type: 2.5" CSS & CC	Casing Elevation: 35.68'	Checked By: CAH

Description	Depth (feet)	Sample Number	Blows/Foot	OVM (ppm)	Remarks
Black (N1) asphalt paving.					01S 04W 15A 10
Dark gray (N3) silty GRAVEL with sand (GM); ~60% gravel, 20% sand, 20% silt; loose, damp; (fill).	1		8	0/0	
Dusky yellowish brown (10YR 2/2) sandy lean CLAY (CL); ~40% clay, 20% silt, 30% medium sand, 10% fine gravel; damp; (fill).	2				
Light olive gray (5Y 5/2) lean CLAY (CL); ~50% clay, 40% silt, 10% medium sand; damp. Color grades to greenish gray (5GY 6/1).	3				
Dusky yellow green (5GY 5/1) lean CLAY (CL); ~ 60% clay, 30% silt, 10% fine sand; damp to moist.	4				
	5		18	0/0	
Dusky yellow green (5GY 5/1) sandy SILT (ML); ~ 40% silt, 40% clay, 20% sand; medium dense, moist.	6				
	7				
Greenish gray (5GY 6/1) sandy SILT (ML); ~60% silt, 40% sand; damp.	8				
			36	0/0	
Dark gray (N3) well graded gravel with sand (GW); ~50% gravel, 40% coarse sand, 10% silt; medium dense, moist to wet.	9				▼ 1/20/92
Saturated at 10 feet.	10		12		▽
Brownish black (5YR 2/1) clayey GRAVEL with sand (GC); ~50% gravel, 30% coarse sand, 10% clay, 10% silt; loose, saturated.	11	W10-10			Soil becomes softer with depth.
Moderate brown (5YR 4/4) clayey GRAVEL with sand (GC); ~50% gravel, 30% coarse sand, 10% clay, 10% silt; saturated.	12			0/0	
Light brown (5YR 5/4) SILT (ML); ~60% silt, 30% clay, 10% fine sand; damp.	13				
Light olive gray (5Y 6/1) and dark yellowish orange (10YR 6/6) SILT with sand (ML); ~50% silt, 30% clay, 20% very fine sand; damp.	14				
END BORING 15 FEET	15			0/0	

Casing: 2" PVC Blank Casing; 0.010" Slotted PVC Screen
Annular Seal: Neat Cement with 5% Bentonite; Bentonite Pellets; #2/12 Monterey Sand

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STATE OF CALIFORNIA DWR
WELL COMPLETION REPORT
(WELL LOGS)

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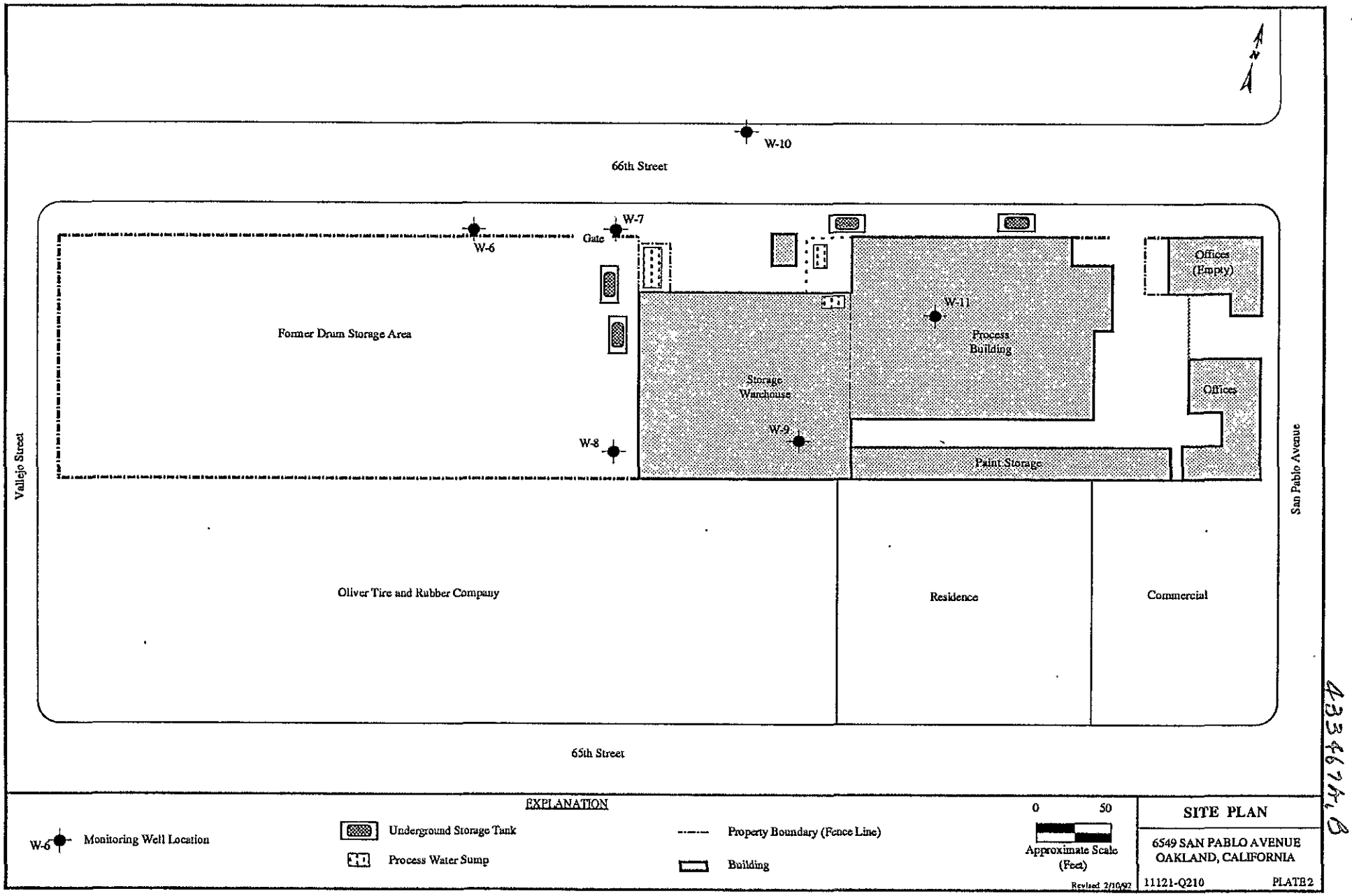
N
W-10
66th Street
W-7
Gate
W-6
Former Drum Storage Area
Storage Warehouse
W-11
Process Building
Offices (Empty)
Offices
W-9
W-8
Paint Storage
Vallejo Street
San Pablo Avenue
Oliver Tire and Rubber Company
Residence
Commercial
65th Street
EXPLANATION
W-6 Monitoring Well Location
Underground Storage Tank
Process Water Sump
Property Boundary (Fence Line)
Building
0 50
Approximate Scale (Feet)
Revised 2/10/92
SITE PLAN
6549 SAN PABLO AVENUE
OAKLAND, CALIFORNIA
11121-Q210
PLATE 2

TRC

4334674

Project Name: Myers Container Corp., Oakland		Date: 10/15/91	Boring Number: W-9
Project No: 11121-Q210	Borehole Depth: 16.5'		Surface Completion: Stovepipe monumen
Drilling Co: Precision Sampling, Mtn. View	Well Depth: 16'		Surface Elevation: 39.53' (floor)
Drilling Equip: 2.37" Hydraulic Percussion	Water Elev.: 23.03' on 11/12/91		Logged By: DRD
Sampler Type: 1" Continuous Core	Casing Elevation: 41.19'		Checked By: CAH

Description	Depth (feet)	Sample Number	Remarks
Concrete.			
Olive black (5Y 2/1) clayey BRICK FILL~ 50% brick, 30% clay, 10% sand, 10% silt; dry to damp.	1		
Olive black (5Y 2/1) lean CLAY (CL); ~ 60% clay, 30% silt, 10% sand; damp to saturated.	2		
	3	W9-3	Mild sewage odor.
Olive gray (5Y 4/1) & dusky yellow (5Y 6/4) sandy lean CLAY (CL) ~ 40% clay, 30% sand, 30% silt; moist.	4		
	5		
Light olive gray (5Y 5/2) lean CLAY with sand (CL); ~ 50% clay, 15% very fine sand, 15% gravel (sandstone & chert), 20% silt; damp.	6		
Gradual color change to light olive gray (5Y 6/1).	7		
Olive gray (5Y 4/1) & dark yellowish orange (10YR 6/6) lean CLAY with sand (CL); ~ 30% clay, 20% medium sand, 20% gravel (sandstone & chert), 30% silt;blocky fracture, damp.	8		
Light olive gray (5Y 6/1) lean CLAY with sand (CL); ~ 50% clay, 20% fine sand, 30% silt, charcoal flecks, iron oxide stains; moist.	9		
	10	W9-10	
	11		No sample recovery 10.5' to 11.5'.
Light olive gray (5Y 6/1) sandy lean CLAY (CL); ~ 40% clay, 30% fine sand, 30% silt; moist.	12		
Light olive gray (5Y 6/1) & dark yellowish orange (10YR 6/6) clayey GRAVEL with sand (GC);~ 40% gravel, 20% sand, 20% clay, 20% silt.	13		Poor sample recovery 12.5' to 16'.
	14		
Light olive gray (5Y 6/1) clayey SAND (SC); ~ 50% very fine sand, 30% clay, 20% silt; saturated.	15		

Casing: 1" PVC Casing; 0.010" Slotted PVC Screen

Annular Seal: Neat Cement with 5% Bentonite; Bentonite Pellets; #2/16 Monterey Sand

Blows/Foot

OVM (ppm)

015 04/2 15A08

TRC

433467A 15/4W-15A8

Project Name: Myers Container Corp., Oakland	**Date:** 10/15/91	**Boring Number:** W-9
Project No: 11121-Q210	Borehole Depth: 16.5'	Surface Completion: Stovepipe monumer
Drilling Co: Precision Sampling, Mtn. View	Well Depth: 16'	Surface Elevation: 39.53' (floor)
Drilling Equip: 2.37" Hydraulic Percussion	Water Elev.: 23.03' on 11/12/9	Logged By: DRD
Sampler Type: 1" Continuous Core	Casing Elevation: 41.19'	Checked By: CAH

Description	Lithology	Depth (feet)	Sample Number	Casing	Annular Seal	Blows/Foot	OVM (ppm)	Remarks
Same lithology.		16		Slotted Screen	#2/16 Sand			
END BORING 16.5 FEET.		17						
		18						
		19						
		20						
		21						
		22						
		23						
		24						
		25						
		26						
		27						
		28						
		29						
		30						

TRC Environmental Consultants, Inc. | Figure No. C-14b

TRC

4334678

Project Name: Myers Container Corp., Oakland		Date: 10/15/91	Boring Number: W-11
Project No: 11121-Q210	Borehole Depth: 15.5'		Surface Completion: Stovepipe monu
Drilling Co: Precision Sampling, Mtn. View	Well Depth: 15.0'		Surface Elevation: 39.57'
Drilling Equip: 2.37" Hydraulic Percussion	Water Elev.: 25.95' on 11/12/91		Logged By: DRD
Sampler Type: 1" Continuous Core	Casing Elevation: 41.30'		Checked By: CAH

015 04/W 15A09

Description	Depth (feet)	Sample Number	OVM (ppm)	Remarks
Concrete.				
Dusky yellow green (5GY 5/2) gravelly SILT with sand (ML); ~ 30% silt, 30% gravel, 20% sand, 20% clay; damp to moist.	1		21/ 0.4	Strong sweet odor.
	2	W11-2		
	3			No sample recovery 3' to 4.5'.
	4			
Olive black (5Y 2/1) lean CLAY (CL); ~ 50% clay, 40% silt, 10% sand, trace chert fragments; damp.	5			
Gradual color change to medium dark gray (N4).	6	W11-5	0/ 22	Strong odor.
	7			
Dark greenish gray (5G 4/1) silty GRAVEL with sand (GM); ~ 40% gravel, 25% medium sand, 20% clay, 15% silt; damp.	8			Mild odor.
Greenish gray (5G 6/1) lean CLAY with sand (CL); ~ 45% clay, 25% very fine sand, 30% silt; blocky to hackly fracture.	9		0/ 1.3	
Greenish gray (5G 6/1), dark greenish gray (5G 4/1), & greenish gray (5GY 6/1) well graded GRAVEL with sand (GW); ~ 50% gravel, 30% medium sand, 10% clay, 10% silt; damp.	10			
	11			
	12			
Brownish gray (5YR 4/1) & dark yellowish orange (10YR 6/6) well graded SAND with clay (SW-SC); ~ 40% coarse sand, 30% medium to fine sand, 10% fine gravel, 10% clay, 10% silt; wet.	13			
	14			
Light brownish gray (5YR 6/1) sandy lean CLAY (CL); ~ 40% clay, 30% very fine & medium sand, 30% silt; plastic, moist. END BORING 15.5 FEET	15			

Casing: 1" PVC Casing; 0.010" Slotted PVC Screen
Annular Seal: Neat Cement with 5% Bentonite; Bentonite Pellets; #2/16 Monterey Sand
Blows/Foot

TRC Environmental Consultants, Inc.

Figure No. C-15

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STATE OF CALIFORNIA DWR
WELL COMPLETION REPORT
(WELL LOGS)

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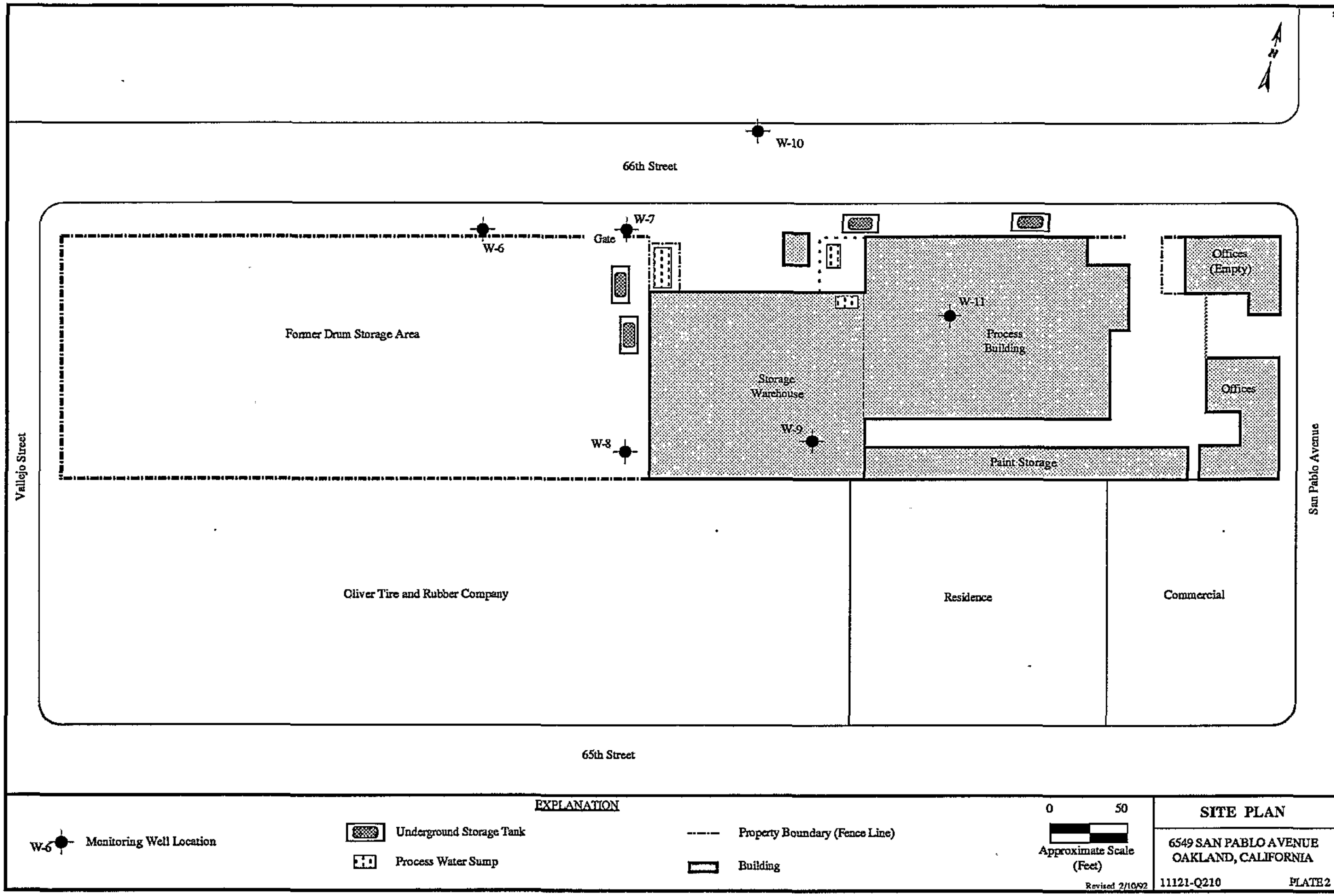


SITE PLAN

6549 SAN PABLO AVENUE
OAKLAND, CALIFORNIA

11121-Q210 PLATE 2

TRC

433469A 1S/4W 15A 7

Project Name: Myers Container Corp., Oakland		Date: 10/15/91		Boring Number: W-6	
Project No:	11121-Q210	Borehole Depth:	17'	Surface Completion:	Christy box
Drilling Co:	Wayne Drilling, Lincoln CA	Well Depth:	15'	Surface Elevation:	34.07'
Drilling Equip:	CME 55, 7.75" HSA	Water Elev.:	24.11' on 10/22/91	Logged By:	LKD
Sampler Type:	2.5" CSS & CC	Casing Elevation:	33.91'	Checked By:	CAH

Description	Depth (feet)	Sample Number	Blows/Foot	OVM (ppm)	Remarks
Silty GRAVEL with sand (GM) loose, dry; (ASB fill).	1				
Brownish black (5YR 2/1) SILT with sand (ML); ~ 50% silt, 35% clay, 10% fine & medium sand, 5% fine gravel; loose, damp. Gradual color change to brownish gray (5YR 4/1).	2	W6-1	8	0/0	Hydrocarbon odor.
Gradual color change to brownish gray (5YR 5/1). Thin (2") gravel & coarse sand lense.	3, 4				
Mottled light olive gray (5Y 6/2) & moderate yellowish orange (10YR 5/6) lean CLAY with sand (CL); 45% clay, 35% silt, 20% sand, wood fragments; stiff, damp.	5, 6	W6-5	18		
Light olive gray (5Y 6/1) silty SAND (SM), loose, damp. Color mottled with moderate yellowish brown (10YR 5/6). Thin (2") gravel and coarse sand lenses 7.5' to 8.5'.	7, 8, 9				
Color change to light olive gray (5Y 5/2).	10, 11				
Moderate yellowish brown (10YR 5/2) clayey SAND (SC); ~ 25% fine sand, 30% medium sand, 25% coarse sand, 10% clay, 10% silt, trace coarse gravel; medium dense, wet.	12, 13, 14, 15	W6-G4	38		

Casing: 2" PVC Casing; 0.010" Slotted PVC Screen
Annular Seal: Neat Cement with 5% Bentonite; Bentonite Pellets; #2/16 Monterey Sand

TRC

433469A 1S/4W 15A 7

Project Name: Myers Container Corp., Oakland		Date: 10/15/91	Boring Number: W-6
Project No: 11121-Q210	Borehole Depth: 17'		Surface Completion: Christy box
Drilling Co: Wayne Drilling, Lincoln CA	Well Depth: 15'		Surface Elevation: 34.07'
Drilling Equip: CME 55, 7.75" HSA	Water Elev.: 24.11' on 10/22/91		Logged By: LKD
Sampler Type: 2.5" CSS & CC	Casing Elevation: 33.91'		Checked By: CAH

Description	Lithology	Depth (feet)	Sample Number	Casing	Annular Seal	Blows/Foot	OVM (ppm)	Remarks
Same lithology.					#2/16 Monterey Sand			
Mottled light olive gray (5Y 6/2) & moderate yellowish brown (10YR 5/6) sandy lean CLAY (CL); about 40% clay, 25% fine sand, 15% coarse & medium sand, 10% fine gravel, 10% silt; medium stiff, damp.		16						
		17						
END BORING 17 FEET.								
		18						
		19						
		20						
		21						
		22						
		23						
		24						
		25						
		26						
		27						
		28						
		29						
		30						

TRC Environmental Consultants, Inc. Figure No. C-11b

TRC

433469 B 1S/4W 15B 4

Project Name: Myers Container Corp., Oakland		Date: 10/15/91		Boring Number: W-7	
Project No:	11121-Q210	Borehole Depth:	15'	Surface Completion:	Christy box
Drilling Co:	Wayne Drilling, Lincoln CA	Well Depth:	14'	Surface Elevation:	35.13'
Drilling Equip:	CME 55, 7.75" HSA	Water Elev.:	24.43' on 10/24/91	Logged By:	LKD
Sampler Type:	2.5" CSS & CC	Casing Elevation:	34.97'	Checked By:	CAH

Description	Depth (feet)	Sample Number	Blows/Foot	OVM (ppm)	Remarks
Silty GRAVEL with sand (GM), loose, dry; (ASB fill).	1				
Olive black (5Y 2/1) to greenish black (5GY 2/1) lean CLAY with gravel (CL); ~ 45% clay, 20% gravel, 5% coarse sand, 30% silt; medium stiff, damp.	2	W7-1	12		
Dark olive gray (5Y 3/1) lean CLAY (CL); ~ 60% clay, 10% coarse sand, 30% silt; damp.	3				
	4				
	5				
Color change to greenish gray (5GY 5/1).	6				
	7				
Greenish gray (5GY 5/1) lean CLAY with sand (CL); ~ 45% clay, 15% medium & coarse sand, 10% fine gravel, 30% silt; moist.	8				
Greenish gray (5GY 5/1) lean CLAY (CL); ~ 60% clay, 10% coarse sand, 30% silt; damp.					
Greenish gray (5GY 5/1) sandy lean CLAY (CL); ~ 40% clay, 30% sand, trace fine gravel, 30% silt; damp.	9			0/ 1.3	
Greenish gray (5GY 5/1) lean CLAY (CL); ~ 60% clay, 10% coarse sand, 30% silt; damp.	10				
Dark greenish gray (5GY 4/1) clayey SAND (SC); ~ 65% medium sand, 15% fine & coarse sand, 5% fine gravel, 10% clay, 5% silt; medium dense, moist.	11	W7-11	34		▼
	12				
	13				
Moderate brown (5YR 4/5) lean CLAY (CL); ~60% clay, 40% silt; medium stiff, moist.					
Wet.	14				▽
Sandy CLAY (CL) lenses.					
END BORING 15 FEET.	15				

Casing: 2" PVC Casing; 0.010" Slotted PVC Screen
Annular Seal: Neat Cement with 5% Bentonite; Bentonite Pellets; #2/16 Monterey Sand

TRC Environmental Consultants, Inc.

Figure No. C-12

TRC

433469 B 1S/4W 15B 5

Project Name: Myers Container Corp., Oakland		Date: 10/14/91		Boring Number: W-8	
Project No:	11121-Q210	Borehole Depth:	15'	Surface Completion:	Christy box
Drilling Co:	Wayne Drilling, Lincoln CA	Well Depth:	13.5'	Surface Elevation:	35.34'
Drilling Equip:	CME 55, 7.75" HSA	Water Elev.:	24.82' on 10/21/91	Logged By:	LKD
Sampler Type:	2.5" CSS & CC	Casing Elevation:	35.24'	Checked By:	CAH

Description	Depth (feet)	Sample Number	Blows/Foot	Remarks
Silty GRAVEL with sand (GM), loose, dry; (ASB fill).	1			
Brownish black (5YR 2/1) lean CLAY (CL); ~ 55% clay, 40% silt, 5% fine sand; soft, damp.	2	W8-1	6	Hydrocarbon odor in blackish zone.
Olive gray (5Y 4/1) lean CLAY (CL) thinly interbedded (6") with lean CLAY with gravel (CL); ~ 55% clay, 20-40% silt, 0-20% gravel, 5% fine sand; soft, damp.	3			
	4			
Mottled olive gray (5Y 4/1) & yellowish brown (10YR 6/4) lean CLAY with sand (CL); ~ 45% clay, 15% fine sand, 40% silt; soft, damp.	5			
Mottled olive gray (5Y 4/1) & yellowish brown (10YR 6/4) clayey SAND (SC); ~ 40% fine sand, 15% medium & coarse sand, 10% fine gravel, 20% clay, 15% silt; medium dense, damp.		W8-5	35	
	6			
	7			
	8			
Mottled olive gray (5Y4/1) & yellowish brown (10YR 6/4) silty SAND with gravel (SM); ~ 45% coarse to fine sand, 15% gravel, 25% silt, 15% clay; medium dense, moist. Wet at 10 feet.	9			
	10	W8-10		
	11			
	12			
	13			
Olive gray (5Y 5/1) SILT with sand (ML); ~ 45% silt, 20% fine sand, 35% clay; medium dense, damp.	14			
END BORING 15 FEET.	15	W8-G5	21	

Casing: 2" PVC Casing; 0.010" Slotted PVC Screen

Annular Seal: Neat Cement with 5% Bentonite; Bentonite Pellets; #2/16 Monterey Sand

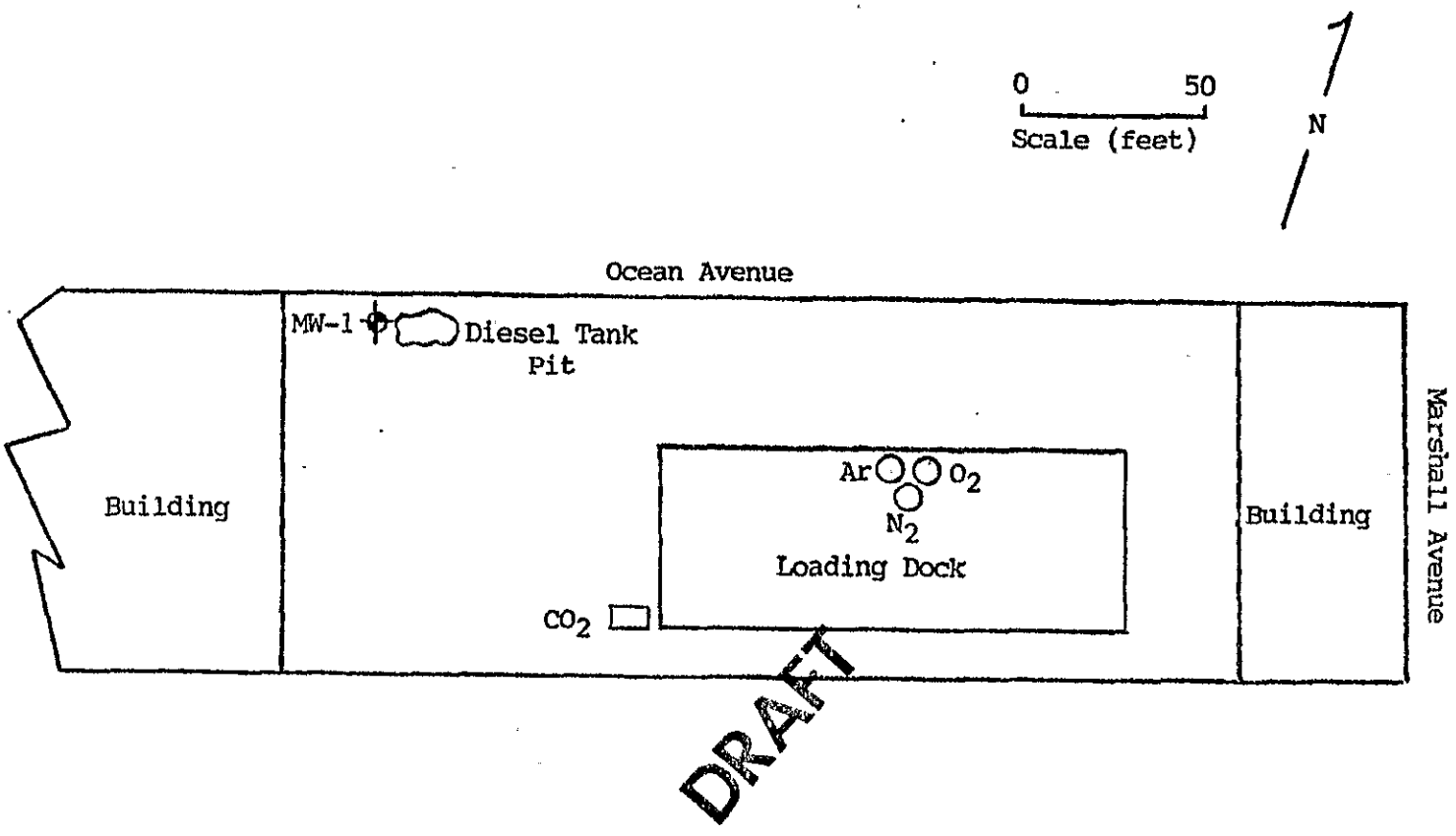
OVM (ppm):

TRC

1S/4W 15B1
01-4420

URIAH ENVIRONMENTAL SERVICES, INC.
AT:
1171 OCEAN AVENUE, OAKLAND, CA

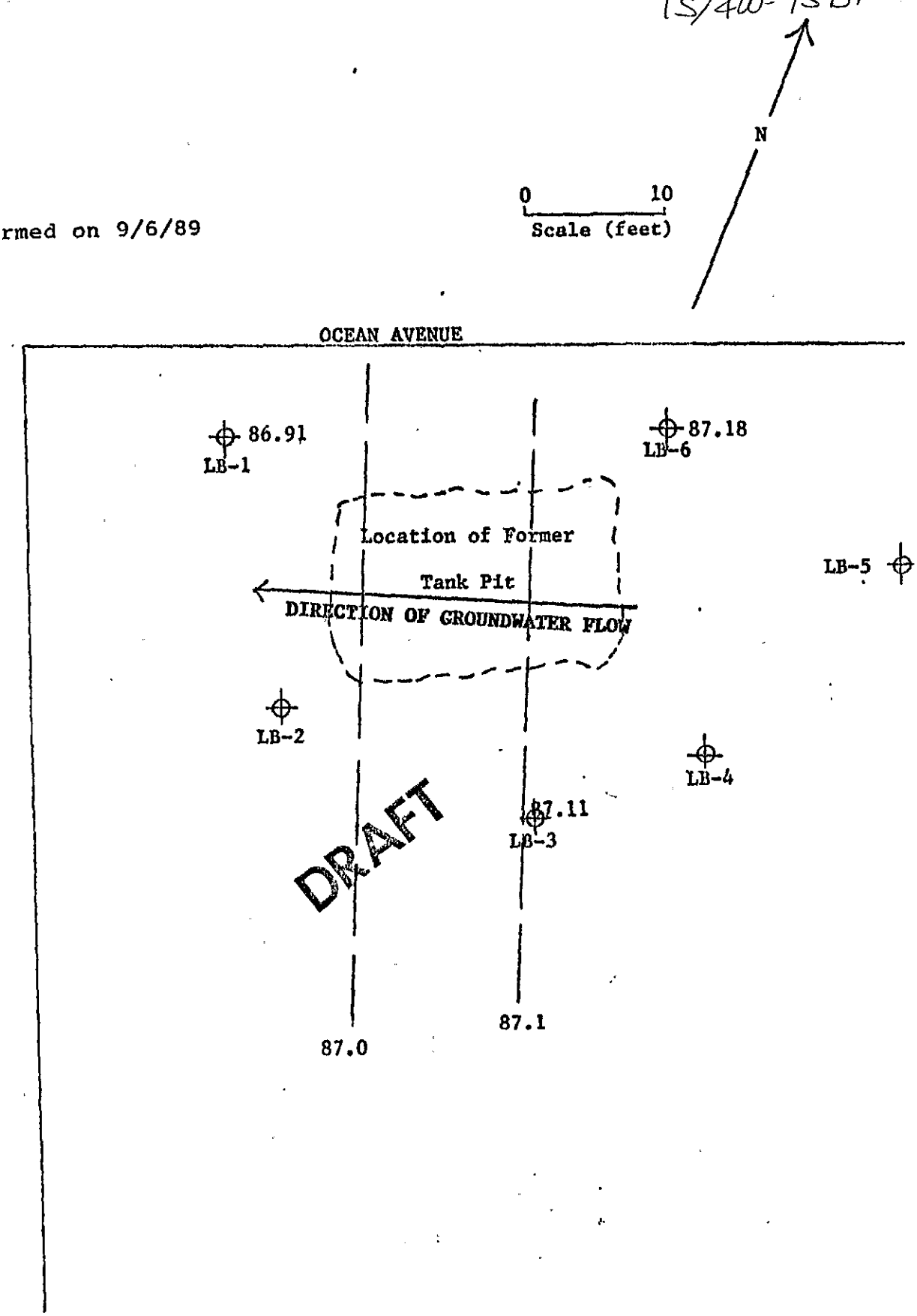
Site Map



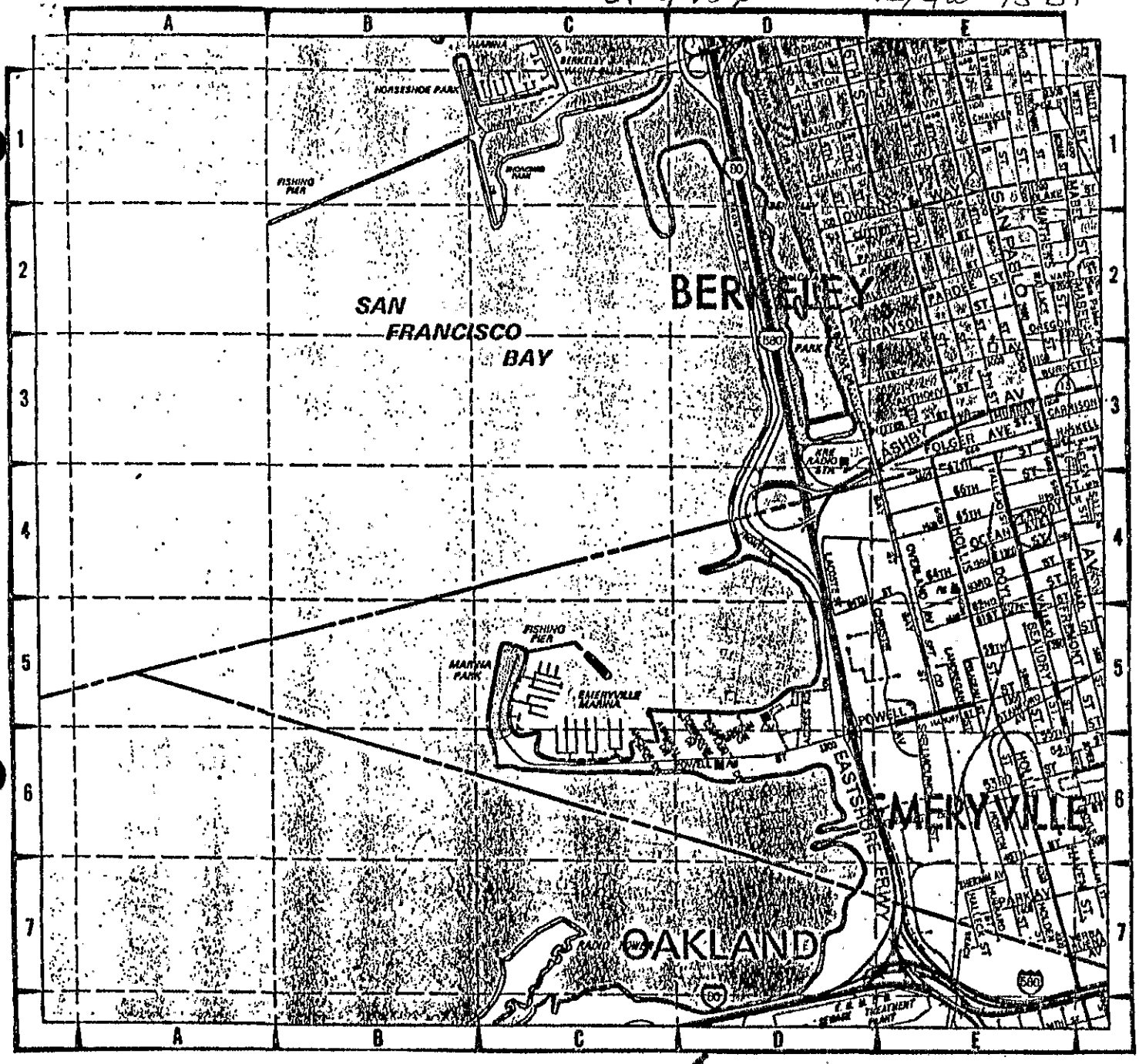
OAKLAND ENVIRONMENTAL SERVICES, INC.
1171 OCEAN AVENUE, OAKLAND, CA

01-4429
1S/4W-15B1

Work performed on 9/6/89



01-4426 1S/4W-15B1



DRAFT

URIAH ENVIRONMENTAL SERVICES, INC.

SITE LOCATION:

1171 OCEAN AVENUE, OAKLAND, CA

0 1/2
Scale (miles)

N

01-4420 Page 1 of 1 15/4W-15B1

PROJECT NO. _____ LOCATION 1171 Ocean Avenue, Oakland, CA

CLIENT Linde Gases LOGGED BY Walter Floyd, Geologist

BORE HOLE NO. _____ MONITOR HOLE NO. MW-1 ELEVATION _____

DATE DRILLED 12/26/89 START 1030 FINISH 130

DRILLING METHOD H/S Auger SAMPLING METHOD CA MOD SS DRILLED BY H.E.W. Drilling

DEPTH BELOW SURFACE	SAMPLES COLLECTED: INT	OVA ppm	SAMPLE NO	SOIL DESCRIPTION: TEXTURE, COLOR, MOISTURE, *CONSISTENCY, GRAIN SIZE, ETC.	UNIFIED SOIL CLASSIF.	GRAPHIC LOG	PENETRATION COLLECTED: Blows 6"-6"-6"	BPF	WELL CONSTRUCTION DETAILS: Christy Box
0				CLAY- yellowish-brown, stiff, no odors, pebbles present (less than 5 pct).	CL				2" Blank PVC; Grout
5			OW-5				4,7,10	11	Bentonite
		▽	OW-9'	Change to CLAYEY-GRAVEL @ 7', orange-brown, angular clasts to 2", no odors.	GC		7,9,16	16	
10							5,10,11	15	
			OW-11.5'	Clay matrix is saturated.			7,10,11	17	2" Slotted PVC
		▼	OW-13.5'	Groundwater encountered at 14'.					
15			OW-15				4,6,9	10	
				Change at 16' to SANDY-GRAVEL. Contains approx. 12 pct clay. Dark orange-brown, medium dense.	GW				#3 Monterey Sand
20			OW-20'				3,8	11	
25			OW-25'				7,7	14	
			OW-30'				11,35	46	Screw Cap
30				Boring terminated at 30' (29').					

DRAFT

WELL DETAILS

01-4426 15/4W-15B1

PROJECT NAME: Linde Gases

BORING/WELL NO. MW-1

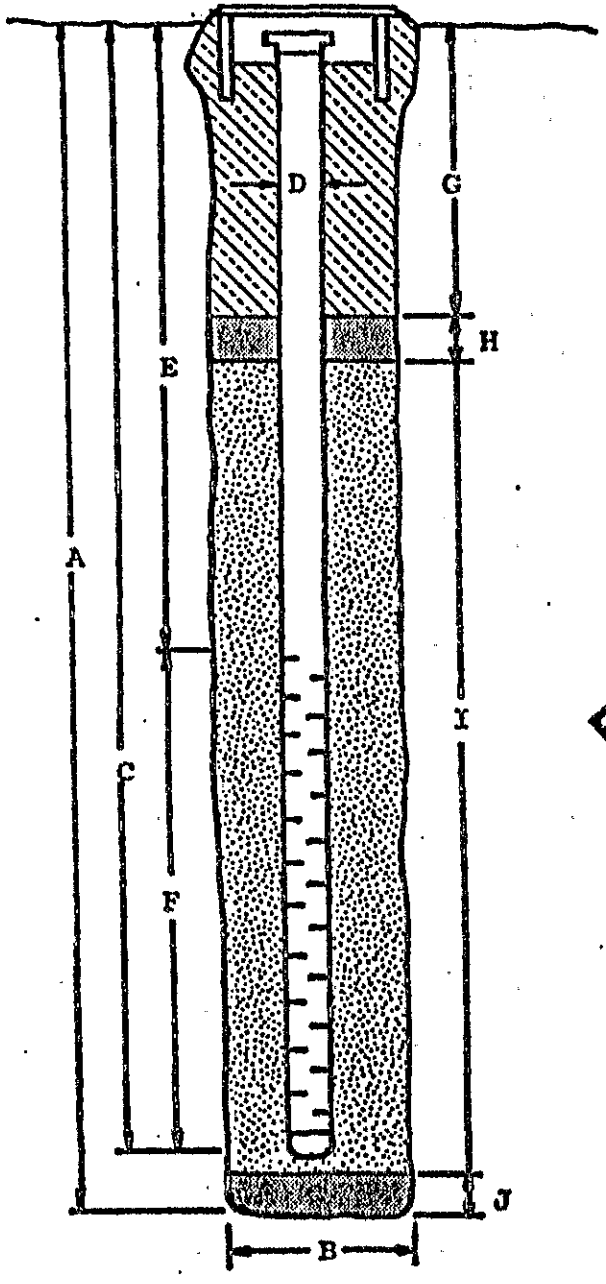
PROJECT NUMBER: _____

CASING ELEVATION: _____

WELL PERMIT NO.: _____

SURFACE ELEVATION: _____

G-5 Vault Box



DRAFT

A. Total Depth: 29'

B. Boring Diameter: 8"

Drilling method: H/S Auger

C. Casing Length: 29'

Material: PVC

D. Casing Diameter: 2"

E. Depth to Perforations: 9'

F. Perforated Length: 20'

Perforated Interval: 29'-9'

Perforation Type: Factory Slot

Perforation Size: 0.020"

G. Surface Seal: 5'-0'

Seal Material: Grout

H. Seal: 7.5'-5'

Seal Material: Bentonite

I. Gravel Pack: 29'-7.5'

Pack Material: Monterey Sand

Size: #3

J. Bottom Seal: _____

Seal Material: _____

01-442Ø 15/4W-15B1

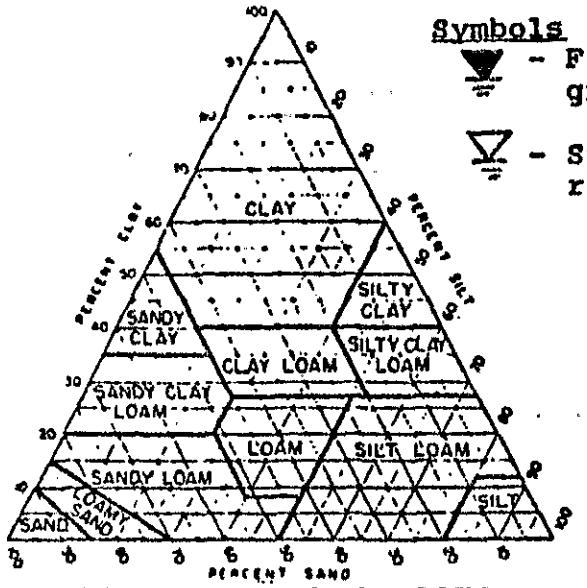
WELL LOG
KEY TO ABBREVIATIONS

Sampling Method

Cal. Mod. - California modified split-spoon sampler (2" inner diameter) driven 18" by a 140-pound hammer having a 30" drop. Where penetration resistance is designated "P", sampler was instead pushed by drill rig.

Disturbed - Sample taken from drill-return materials as they surfaced.

n/a - Not applicable



SOIL TEXTURAL CLASSES

Symbols

- First encountered ground water

- Static ground recovery

Drilling Method

HSA - Hollow stem auger
CFA - Continuous flight auger
Air - Reverse air circulation
HND - Hand Auger

OVR (ppm)

ND - No Detection

GRAIN-SIZE SCALE

GRADE LIMITS inches	GRADE LIMITS U.S. Standard sieve size	GRADE NAME
		Boulders
12.0		
		Cobbles
3.0	3.0 in.	
		Gravel
0.19	No. 4	
		Coarse
0.08	No. 10	
		Medium Sand
	No. 40	
		Fine
	No. 200	
		Silt
		Clay

01-4420 IS/SW-1581

Key To Boring Logs

PRIMARY DIVISIONS			GROUP SYMBOL	SECONDARY DIVISIONS
COARSE GRAINED SOILS — MORE THAN HALF OF MATERIAL IS LARGER THAN NO. 200 SIEVE SIZE	GRAVELS — MORE THAN HALF OF COARSE FRACTION IS LARGER THAN NO. 4 SIEVE	CLEAN GRAVELS (LESS THAN 5% FINES)	GW	Well graded gravels, gravel-sand mixtures, little or no fines
			GP	Poorly graded gravels or gravel-sand mixtures, little or no fines.
		GRAVEL WITH FINES	GM	Silty gravels, gravel-sand-silt mixtures, non-plastic fines.
			GC	Clayey gravels, gravel-sand-clay mixtures, plastic fines.
	SANDS — MORE THAN HALF OF COARSE FRACTION IS SMALLER THAN NO. 4 SIEVE	CLEAN SANDS (LESS THAN 5% FINES)	SW	Well graded sands, gravelly sands, little or no fines.
			SP	Poorly graded sands or gravelly sands, little or no fines.
		SANDS WITH FINES	SM	Silty sands, sand-silt mixtures, non-plastic fines.
			SC	Clayey sands, sand-clay mixtures, plastic fines.
FINE GRAINED SOILS — MORE THAN HALF OF MATERIAL IS SMALLER THAN NO. 200 SIEVE SIZE	SILTS AND CLAYS — LIQUID LIMIT IS LESS THAN 50%		ML	Inorganic silts and very fine sands, rock flour, silty or clayey fine sands or clayey silts with slight plasticity.
			CL	Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays.
			OL	Organic silts and organic silty clays of low plasticity.
	SILTS AND CLAYS — LIQUID LIMIT IS GREATER THAN 50%		MH	Inorganic silts, micaceous or diatomaceous fine sandy or silty soils, elastic silts.
			CH	Inorganic clays of high plasticity, fat clays.
			OH	Organic clays of medium to high plasticity, organic silts.
HIGHLY ORGANIC SOILS			Pt	Peat and other highly organic soils.

DEFINITION OF TERMS

U.S. STANDARD SERIES SIEVE				CLEAR SQUARE SIEVE OPENINGS			
200	40	10	4	3/4"	3"	12"	
SILTS AND CLAYS	SAND			GRAVEL		COBBLES	BOULDERS
	FINE	MEDIUM	COARSE	FINE	COARSE		

GRAIN SIZES

SANDS AND GRAVELS	BLOWS/FOOT*
VERY LOOSE	0 - 4
LOOSE	4 - 10
MEDIUM DENSE	10 - 30
DENSE	30 - 50
VERY DENSE	OVER 50

RELATIVE DENSITY

SILTS AND CLAYS	STRENGTH†	BLOWS/FOOT*
VERY SOFT	0 - 1/4	0 - 2
SOFT	1/4 - 1/2	2 - 4
FIRM	1/2 - 1	4 - 8
STIFF	1 - 2	8 - 16
VERY STIFF	2 - 4	16 - 32
HARD	OVER 4	OVER 32

CONSISTENCY

*Number of blows of 140 pound hammer falling 30 inches to drive a 2 inch O.D. (1-3/8 inch I.D.) split spoon (ASTM D-1586).

†Unconfined compressive strength in tons/sq. ft. as determined by laboratory testing or approximated by the standard penetration test (ASTM D-1586), pocket penetrometer, torvane, or visual observation.

UNIFIED SOIL CLASSIFICATION SYSTEM
(ASTM D-2487)

Soil Color derived from the MUNSELL Soil Color Charts

01-4426 1S/4W-15B1

ALAMEDA COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

5997 PARKSIDE DRIVE ♦ PLEASANTON, CALIFORNIA 94566 ♦ (415) 484-2600

GROUNDWATER PROTECTION ORDINANCE PERMIT APPLICATION

FOR APPLICANT TO COMPLETE

ATION OF PROJECT 1171 Ocean Avenue
Oakland, CA

ENT
e Union Carbide - Linde Division
ress 2420 Camino Ramon Phone (415) 866-6800
/ San Ramon Zip 94583

LICANT
e Uriah Environmental Services Inc.
ress 464 Lindbergh Ave. Phone (415)455-4991
/ Livermore Zip 94550

E OF PROJECT

Construction		Geotechnical Investigation	
thodic Protection	___	General	___
ter Supply	___	Contamination	___
nitoring	X	Well Destruction	___

OSED WATER SUPPLY WELL USE
estic ___ Industrial ___ Other ___
icipal ___ Irrigation ___

LING METHOD:
Rotary ___ Air Rotary ___ Auger X
le ___ Other ___

LER'S LICENSE NO. HEW 384167

. PROJECTS
Drill Hole Diameter 8" in. Maximum
Casing Diameter 2" in. Depth 30 ft.
Surface Seal Depth 4 ft.* Number 1

ECHNICAL PROJECTS
Number of Borings ___ Maximum
Hole Diameter ___ in. Depth ___ ft.

IMATED STARTING DATE 12/26/89
IMATED COMPLETION DATE 12/26/89

reby agree to comply with all requirements of this t and Alameda County Ordinance No. 73-68.

LICANT'S NATURE [signature] Date 12-20-89

FOR OFFICE USE

PERMIT NUMBER 89733
LOCATION NUMBER

PERMIT CONDITIONS

Circled Permit Requirements Apply

(A.) GENERAL
1. A permit application should be submitted so as to arrive at the Zone 7 office five days prior to proposed starting date.
2. Submit to Zone 7 within 60 days after completion of permitted work the original Department of Water Resources Water Well Drillers Report or equivalent for well projects, or drilling logs and location sketch for geotechnical projects.
3. Permit is void if project not begun within 90 days of approval date.

(B.) WATER WELLS, INCLUDING PIEZOMETERS
1. Minimum surface seal thickness is two inches of cement grout placed by tremie.
2. Minimum seal depth is 50 feet for municipal and industrial wells or 20 feet for domestic and irrigation wells unless a lesser depth is specially approved. Minimum seal depth for monitoring wells is the maximum depth practicable or 20 feet.

C. GEOTECHNICAL. Backfill bore hole with compacted cuttings or heavy bentonite and upper two feet with compacted material. In areas of known or suspected contamination, tremied cement grout shall be used in place of compacted cuttings.

D. CATHODIC. Fill hole above anode zone with concrete placed by tremie.

E. WELL DESTRUCTION. See attached.

* 10 feet, depending on depth to water.

Approved Wyman Hong Date 19 Dec 89
Wyman Hong

12/1989

1 9 2 01-543T 01S04W15B06

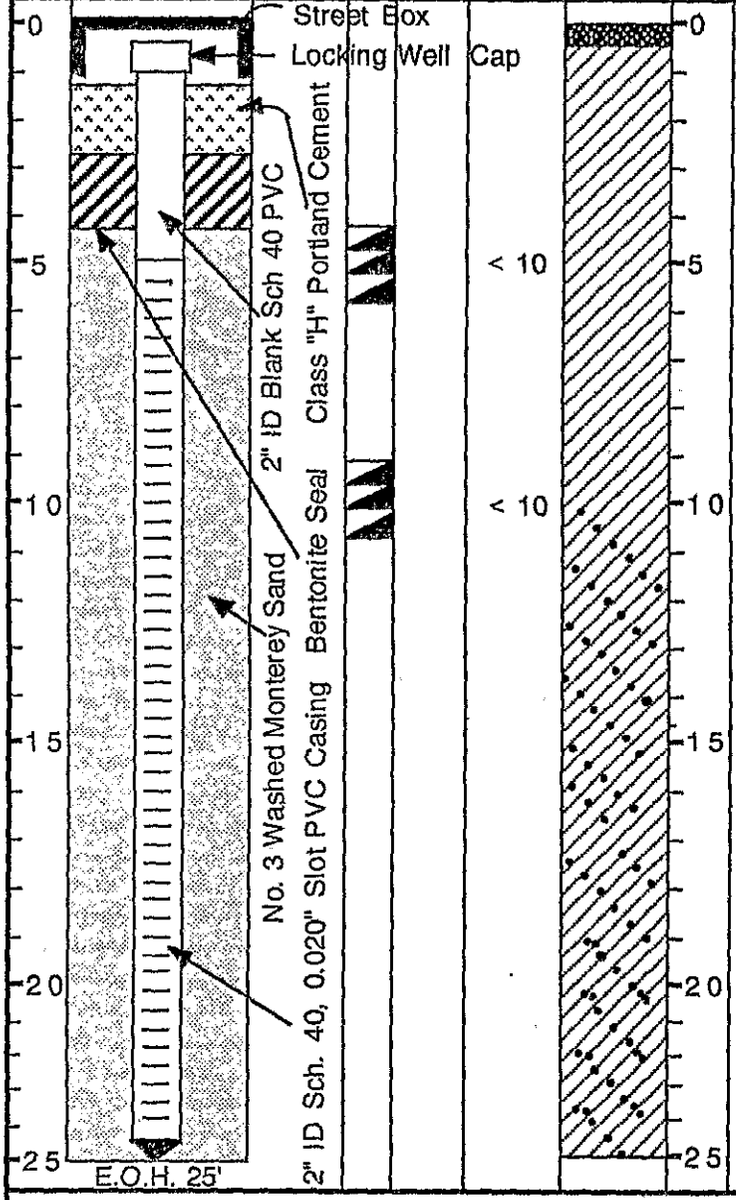
SOIL BORING LOG AND MONITORING WELL CONSTRUCTION DETAILS

WELL NO. MW1

Project Name: Oliver Rubber	Project Location: 1200 65th Street, Oakland	Page 1 of 1
Driller: WEST HAZMAT	Type of Rig: Simco 2400 SK-1	Type and Size of Auger: 6.00" O.D., H.S.
Logged By: WCL	Date Drilled: 10/01/92	Checked By: David M. Schultz, P.E.

WATER AND WELL DATA

- Depth of Water First Encountered: ≈ 15'
- Static Depth of Water in Well: 8.08' Below T.O.C.
- Total Depth of Boring: 25'
- Total Depth of Well Completed: 25.0'
- Well Screen Type and Diameter: 2" Diameter Schedule 40 PVC
- Well Screen Slot Size: 0.020"
- Type and Size of Soil Sampler: 2" I.D., Calif. Split-Spoon



DESCRIPTION OF LITHOLOGY

standard classification, texture, relative moisture, density, stiffness, odor-staining, USCS designation.

And (40-50%) With (40-25%) Some (25-10%) Trace (10-0%)

- Approximately 4" of asphalt
- Dark Gray Clay (CL) from 2 to 5 feet
- Blue-Green Clay (CL), trace silt (≈ 10%), slight moisture, no odor
- Static Water Level = 8.08'
- Brown clay (CL), with silt (≈ 40%), some blue-green mottling, slight moisture, no odor
- Brown clay (CL), with silt (≈ 40%), some pebbles, very moist, no odor

ASE Form 20A — AQUA SCIENCE ENGINEERS, INC.

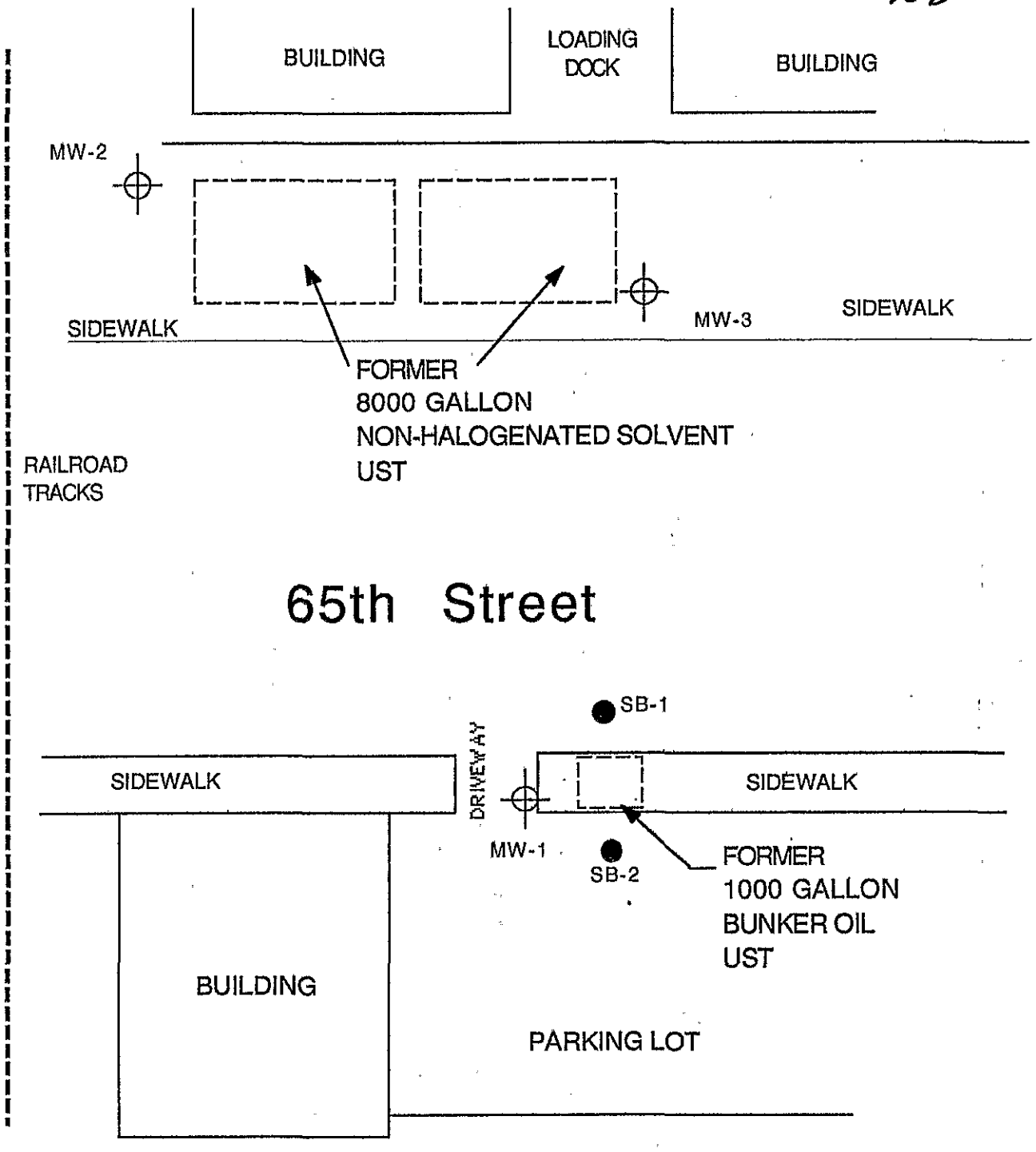
1621

2 of 2

01-543T-

01S04W15B06-08

15B



LEGEND

SB-1 Soil Boring

MW-1 Monitoring Well

N

0 ft. 20 ft.

SCALE

SITE PLAN

Oliver Rubber
1200 65th Street
Emeryville, California

Aqua Science Engineers | Figure 2

1B2 01-5430 01S04W15B07

SOIL BORING LOG AND MONITORING WELL CONSTRUCTION DETAILS

WELL NO. MW2

Project Name: Oliver Rubber	Project Location: 1200 65th Street, Oakland	Page 1 of 1
Driller: WEST HAZMAT	Type of Rig: CME 75	Type and Size of Auger: 8.0" O.D., H.S.
Logged By: WCL	Date Drilled: 10/01/92	Checked By: David M. Schultz, P.E.

WATER AND WELL DATA

Depth of Water First Encountered: ≈ 15'

Static Depth of Water in Well: 7.45' Below T.O.C.

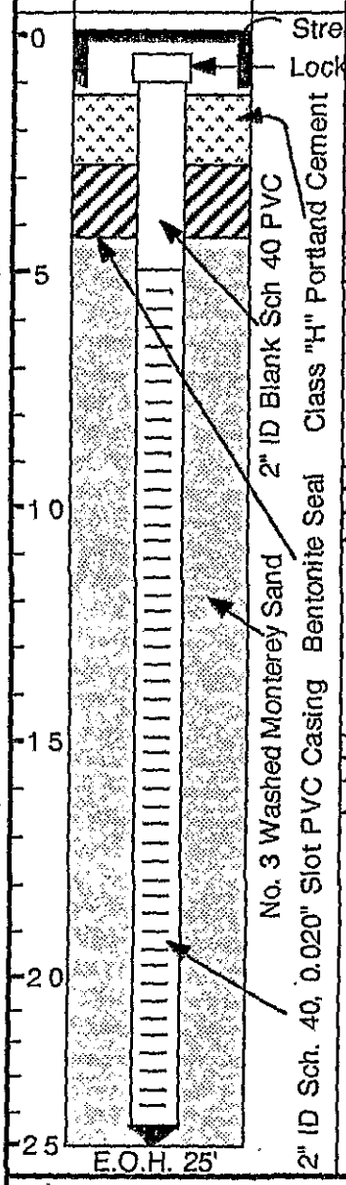
Total Depth of Boring: 25'

Total Depth of Well Completed: 25.0'

Well Screen Type and Diameter: 2" Diameter Schedule 40 PVC

Well Screen Slot Size: 0.020"

Type and Size of Soil Sampler: 2" I.D., Calif. Split-Spoon



SOIL/ROCK SAMPLE DATA

Interval	Blow Ct.	Field VOC (ppmv)	Graphic Log
	7 8 15	< 10	
	18 12 18	< 10	
	4 5 5		

DESCRIPTION OF LITHOLOGY

standard classification, texture, relative moisture, density, stiffness, odor-staining, USCS designation.

And (40-50%) With (40-25%) Some (25-10%) Trace (10-0%)

Depth in Feet	
0	Approximately 4" of asphalt
5	Fine, Sandy, Silty Clay (SP-ML-CL) blue-green color, unrecognizable odor slight moisture
	Static Water Level = 7.45'
10	Fine, Sandy, Silty, Clay (SP-ML-CL) brown with blue-green mottling, some pebbles no noticeable odor
15	Brown Silty Clay (CL), with some plant fragments and pebbles, very moist, no odor
20	As Above.
25	As Above.

ASE Form 20A — AQUA SCIENCE ENGINEERS, INC.

1621

172 01-543V 01504W15B08

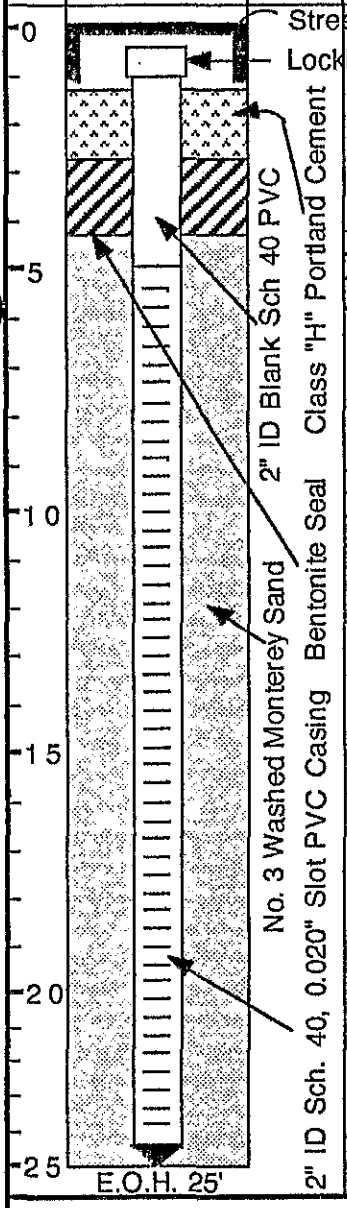
SOIL BORING LOG AND MONITORING WELL CONSTRUCTION DETAILS

WELL NO. MW3

Project Name: Oliver Rubber	Project Location: 1200 65th Street, Oakland	Page 1 of 1
Driller: WEST HAZMAT	Type of Rig: CME 75	Type and Size of Auger: 8.0" O.D., H.S.
Logged By: WCL	Date Drilled: 10/01/92	Checked By: David M. Schultz, P.E.

WATER AND WELL DATA

- Depth of Water First Encountered: ~ 17'
- Static Depth of Water in Well: 7.44' Below T.O.C.
- Total Depth of Boring: 25'
- Total Depth of Well Completed: 25.0'
- Well Screen Type and Diameter: 2" Diameter Schedule 40 PVC
- Well Screen Slot Size: 0.020"
- Type and Size of Soil Sampler: 2" I.D., Calif. Split-Spoon



Interval	Blow Ct.	Field VOC (ppmv)	Graphic Log	Depth in Feet	DESCRIPTION OF LITHOLOGY
				0	Approximately 4" of asphalt
	6 12 14	< 10		5	Blue-green Clay (CL) moderate, unrecognizable odor slight moisture
					▼ Static Water Level = 7.45'
	6 8 10	< 10		10	Bown with blue-green Clay (CL) brown with blue-green mottling, some plant fragments, moderately moist, no noticeable odor
	4 6 6			15	Brown with slight blue-green mottling Clay (CL), with silt,with abundant pebbles, very moist, no odor
					As Above.
				20	Brown Clay with silt (CL), mottled with plant fragments, moderately moist, no odor
				25	As Above.

SOIL/ROCK SAMPLE DATA

DESCRIPTION OF LITHOLOGY: standard classification, texture, relative moisture, density, stiffness, odor-staining, USCS designation.

And (40-50%) With (40-25%) Some (25-10%) Trace (10-0%)

ASE Form 20A — AQUA SCIENCE ENGINEERS, INC.

1621

1 of 2 01-548W 01504W15B

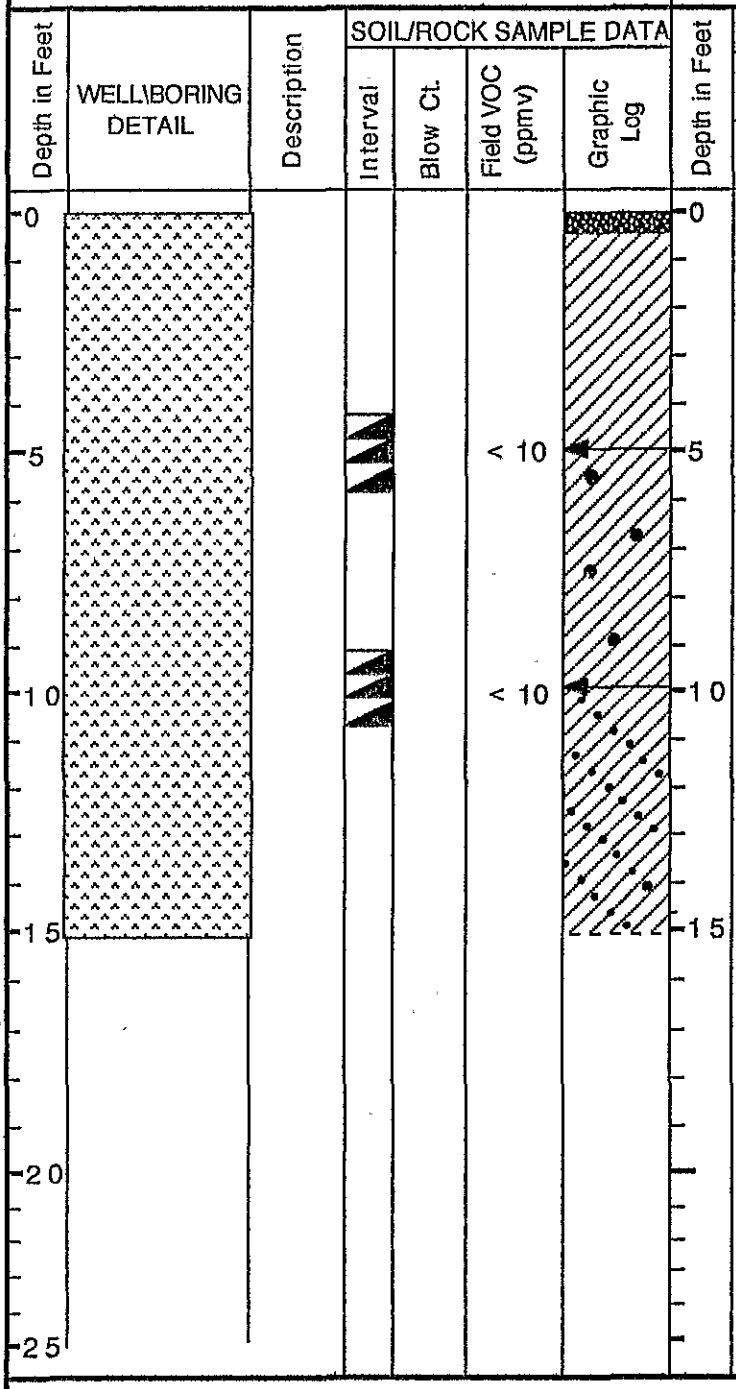
SOIL BORING LOG AND MONITORING WELL CONSTRUCTION DETAILS

BORING NO. SB1

Project Name: Oliver Rubber	Project Location: 1200 65th Street, Oakland	Page 1 of 1
Driller: WEST HAZMAT	Type of Rig: Simco 2400 SK-1	Type and Size of Auger: 6.00" O.D., H.S.
Logged By: WCL	Date Drilled: 10/01/92	Checked By: David M. Schultz, P.E.

WATER AND WELL DATA

Depth of Water First Encountered:N/A	Total Depth of Well Completed: N/A
Static Depth of Water in Well: N/A.	Well Screen Type and Diameter: N/A
Total Depth of Boring: 15'	Well Screen Slot Size:N/A
	Type and Size of Soil Sampler: 2" I.D., Calif. Split-Spoon



Depth in Feet	DESCRIPTION OF LITHOLOGY standard classification, texture, relative moisture, density, stiffness, odor-staining, USCS designation. And (40-50%) With (40-25%) Some (25-10%) Trace (10-0%)
0	Approximately 4" of asphalt
	Dark Gray Clay (CL) from 2 to 5 feet
5	Blue-Green Clay (CL), some plant mattter, cobbles, slight moisture, no odor
10	Brown clay (CL), some plant matter slight moisture, no odor
15	Brown clay (CL), some plant matter, very moist some pebbles, no odor
	EOH = 15'

ASE Form 20A — AQUA SCIENCE ENGINEERS, INC.

1621

1 & 2 01-543X 01S04W15B

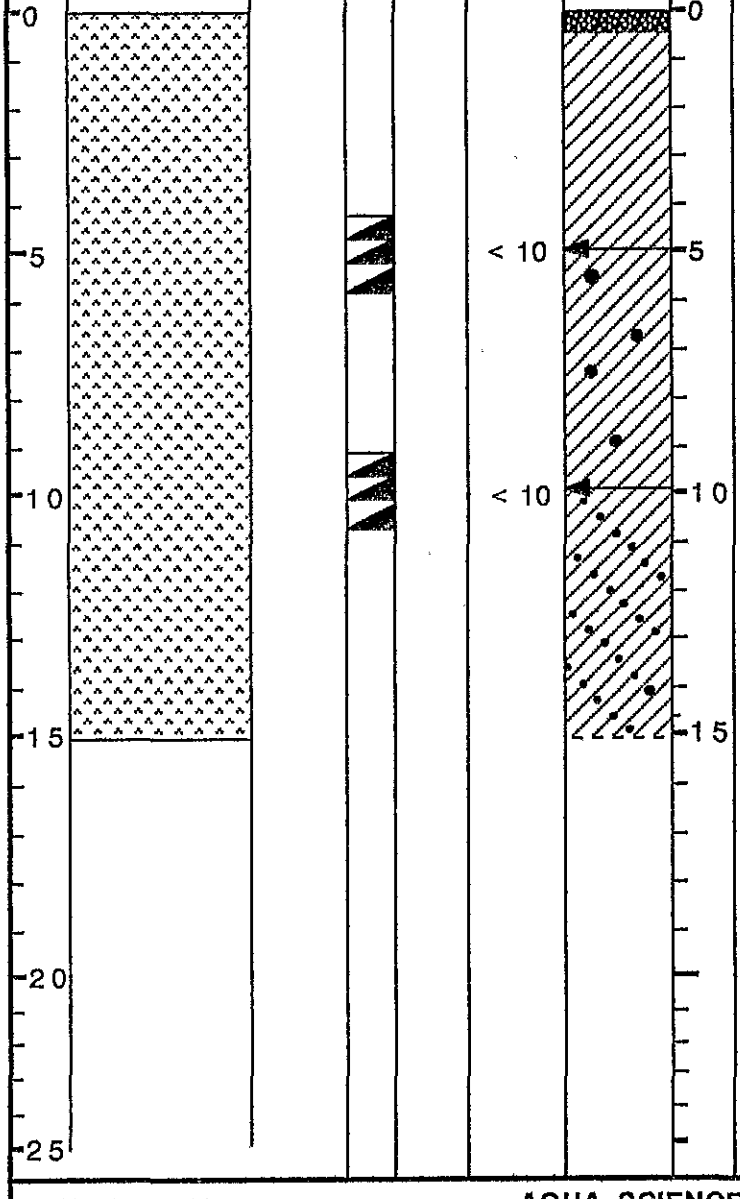
SOIL BORING LOG AND MONITORING WELL CONSTRUCTION DETAILS

BORING NO. SB2

Project Name: Oliver Rubber	Project Location: 1200 65th Street, Oakland	Page 1 of 1
Driller: WEST HAZMAT	Type of Rig: Simco 2400 SK-1	Type and Size of Auger: 6.00" O.D., H.S.
Logged By: WCL	Date Drilled: 10/01/92	Checked By: David M. Schultz, P.E.

WATER AND WELL DATA

Depth of Water First Encountered:N/A	Total Depth of Well Completed: N/A
Static Depth of Water in Well: N/A.	Well Screen Type and Diameter: N/A
Total Depth of Boring: 15'	Well Screen Slot Size:N/A
	Type and Size of Soil Sampler: 2" I.D., Calif. Split-Spoon



DESCRIPTION OF LITHOLOGY

standard classification, texture, relative moisture, density, stiffness, odor-staining, USCS designation.

And (40-50%) With (40-25%) Some (25-10%) Trace (10-0%)

0 Approximately 4" of asphalt

Dark Gray Clay (CL), no odor

5 Blue-Green Clay (CL), some plant mattter, slight moisture, no odor

10 Brown, silty clay (CL), some plant matter slight moisture, abundant pebbles, no odor

15 Brown, silty clay (CL), some plant matter very moist, abundant pebbles, no odor

EOH = 15'

ASE Form 20A

AQUA SCIENCE ENGINEERS, INC.

1621

CONFIDENTIAL

STATE OF CALIFORNIA DWR
WELL COMPLETION REPORT
(WELL LOGS)

REMOVED

CONFIDENTIAL

STATE OF CALIFORNIA DWR
WELL COMPLETION REPORT
(WELL LOGS)

REMOVED

422209A

15/4W 15C 2.

Woodward-Clyde Consultants

PROJECT NAME GROVE VALVE NO. 91C0091A/2000

MONITORING WELL LOCATION	Grove Valve and Regulator, 6529 Hollis Street, Emeryville, CA — South east parking lot	ELEVATION AND DATUM	20.72' MSL
DRILLING AGENCY	Kvilhaug Well Drilling	DRILLER Rodney Furlow	DATE STARTED / DATE FINISHED 2/27/92
DRILLING EQUIPMENT	Mobile Drill B-61	COMPLETION DEPTH 25	SAMPLER 2" split spoon
DRILLING METHOD	Hollow stem auger	DRILL BIT	NO. OF SAMPLES DIST. / UNDIST. 6
SIZE AND TYPE OF CASING	4" Schedule 40 PVC	FROM 0.0 TO 10.0 FT.	WATER LEVEL FIRST / COMPL. / 24 HRS.
TYPE OF PERFORATION	0.020" Slot	FROM 10.0 TO 25.0 FT.	LOGGED BY: K. O. Guyer / CHECKED BY: R. Ely
SIZE AND TYPE OF PACK	#2/12 Monterey sand	FROM 8.0 TO 25.0 FT.	
TYPE OF SEAL NO. 1	1/4" Bentonite pellets	FROM 7.0 TO 8.0 FT.	
TYPE OF SEAL NO. 2	Neat cement grout	FROM surface TO 7.0 FT.	

Depth (feet)	Samples	Blows	MATERIAL DESCRIPTION	USCS	Well Construction
		4 2 2	Cement Pavement FILL - Silty Sand tan, coarse sand with silt, loose, moist	ML	
			SILTY CLAY dark brown, some fine sand, soft, medium plastic, damp	CL	
5		10 15 22	HNu= 0 ppm SILTY SAND light brown, medium grained with silt, some clay, medium dence, dry	SM	
10		4 5 12	HNu= 0 ppm Increase in Clay		
			Increase in moisture		
15		5 7 10	HNu= 0 ppm SILTY CLAY tan, some 1/8" pebbles, stiff, slightly moist	CL	
20		3 5 8	HNu= 0 ppm NOTE: Lenses of medium to coarse sand, about 2" thick, saturated	(SP)	
25		2 3 7	HNu= 0 ppm		
			Total Depth = 25 feet		
30					
35					

LOG OF MONITORING WELL NO. MW-1 SHEET 1 OF 1

422209B 1S/4W 15C 3

Woodward-Clyde Consultants PROJECT NAME GROVE VALVE NO. 91C0091A/2000

MONITORING WELL LOCATION	Grove Valve and Regulator, 6529 Hollis Street, Emeryville, CA — Southwest corner of main Plant building	ELEVATION AND DATUM	15.95' MSL
DRILLING AGENCY	Kvilhaug Well Drilling	DRILLER	Rodney Furlow
DATE STARTED / DATE FINISHED	2/26/92		
DRILLING EQUIPMENT	Mobile Drill B-61	COMPLETION DEPTH	25
SAMPLER	2" split spoon		
DRILLING METHOD	Hollow stem auger	DRILL BIT	
NO. OF SAMPLES	DIST.	UNDIST.	6
SIZE AND TYPE OF CASING	4" Schedule 40 PVC	FROM 0.0 TO 10.0 FT.	WATER LEVEL: FIRST — COMPL. — 24 HRS.
TYPE OF PERFORATION	0.020" Slot	FROM 10.0 TO 25.0 FT.	LOGGED BY: K. O. Guyer
CHECKED BY:	R. Ely		
SIZE AND TYPE OF PACK	#2/12 Monterey sand	FROM 8.0 TO 25.0 FT.	
TYPE OF SEAL	NO. 1: 1/4" Bentonite pellets	FROM 7.0 TO 8.0 FT.	
	NO. 2: Neat cement grout	FROM surface TO 7.0 FT.	

Depth (feet)	Samples	Blows	MATERIAL DESCRIPTION	USCS	Well Construction
		15 22 28	Cement Pavement, 7" thick FILL - Silty Sandy Gravel greenish tan, gravel to 1", angular, coarse sand with silt, loose, moist	GM	
			Cobles to 3"		
5		3 6 8	Increase in moisture to wet HNu= 0 ppm		
			SANDY SILT tan, medium stiff, dry, lenses of sand, black, medium grained loose and damp to wet HNu= 0 ppm	MH	
10		18 22 25			
			CLAYEY SILT light brown,low plasticity, damp to dry HNu= 0 ppm	OL	
15		6 10 15			
			SANDY SILT light brown, fine sand, trace clay,medium stiff, damp HNu= 0 ppm	MH	
20		8 15 25			
			SILTY CLAY mottled gray and tan, medium stiff to stiff, damp to wet HNu= 0 ppm	OL	
25		6 8 13			
			Total Depth = 25 feet		
30					
35					

LOG OF MONITORING WELL MW-2 SHEET 1 OF 1

422209C 1S/4W 15C 4

Woodward-Clyde Consultants

PROJECT NAME GROVE VALVE NO. 91C0091A/2000

MONITORING WELL LOCATION	Grove Valve and Regulator 6529 Hollis Street, Emeryville, CA — Northwest corner outside of main Plant building	ELEVATION AND DATUM	16.98' MSL
DRILLING AGENCY	Kvilhaug Well Drilling	DRILLER Rodney Furlow	DATE STARTED / DATE FINISHED 2/26/92
DRILLING EQUIPMENT	Mobile Drill B-61	COMPLETION DEPTH 25	SAMPLER 2" split spoon
DRILLING METHOD	Hollow stem auger	DRILL BIT	NO. OF SAMPLES / DIST. / UNDIST. 6
SIZE AND TYPE OF CASING	4" Schedule 40 PVC	FROM 0.0 TO 10.0 FT.	WATER LEVEL / FIRST / COMPL. / 24 HRS.
TYPE OF PERFORATION	0.020" Slot	FROM 10.0 TO 25.0 FT.	LOGGED BY: K. O. Guyer — CHECKED BY: R. Ely
SIZE AND TYPE OF PACK	#2/12 Monterey sand	FROM 8.0 TO 25.0 FT.	
TYPE OF SEAL NO. 1	1/4" Bentonite pellets	FROM 7.0 TO 8.0 FT.	
TYPE OF SEAL NO. 2	Neat cement grout	FROM surface TO 7.0 FT.	

Depth (feet)	Samples	Blows	MATERIAL DESCRIPTION	USCS	Well Construction
		8 7 16	Asphalt Pavement FILL/ROAD BASE - Sandy Gravel gray to tan, gravel to 1", some fines, poorly sorted, angular, gravel to 1 1/2", well compacted, damp	GM	
			Cobles to 3"		
			SILTY CLAY	CL	
5		4 8 12	HNu= 0 ppm CLAY gray , soft, plastic, some pebbles to 1/4", dry	OL	
10		4 8 10	Same as above but with sand lenses, black, 2-3" thick, medium to coarse sand, wet	(SP)	
			HNu= 0 ppm SILTY CLAY mottled gray and tan, some to few 1/4" pebbles, medium stiff, dry	CL	
15		8 7 10	HNu= 0 ppm		
20		7 10 12	HNu= 0 ppm		
			SILTY SAND light brown,medium sand with silt, moderate sorting, lose, wet HNu= 0 ppm	SM	
25		10 18 45	Total Depth = 25 feet		
30					
35					

LOG OF MONITORING WELL MW-3 SHEET 1 OF 1

DIVISION OF WATER RESOURCES

DEPARTMENT OF PUBLIC WORKS

STATE OF CALIFORNIA

WELL LOG

REGION ____________ BASIN ____________

COUNTY ____________ DWR NO. 15/4-15D ; ______ B & M

NEAR ____________ OTHER NOS. 15/4W-15D

01-754

LOCATION ____________

OWNER T. V. Carter & Co. ADDRESS 67 [illegible] & Bay Sts. [illegible]

DRILLED BY Barnett ADDRESS ____________

DRILLING METHOD ____________ GRAVEL PACKED ____________ DATE COMPLETED 7/13/48

SIZE OF CASING DEPTH 12" STRUCK WATER AT ____________

PERFORATIONS 12-30, 53-60, 66-88, 174-183, 186-202, 202-260 SIZE ____________ No. ____________

WATER LEVEL BEFORE PERFORATING ____________ AFTER ____________

TEST DATA: DISCHARGE G. P. M. ____________ DRAWDOWN FT. ____________ HOURS RUN ____________

OTHER DATA AVAILABLE: WATER LEVEL RECORD ____________ ANALYSIS ____________

SURFACE ELEV. ____________ DATUM ____________ SOURCE OF INFORMATION ____________

DEPTH	ELEV. OF BOTTOM OF STRATUM	MATERIAL	THICK-NESS	SP. YIELD %
0 - 2		top soil		
13		gray c.		
28		[illegible]		
32		[illegible]		
42		stiff sdy. br. c.		
53		[illegible] c. & b. c.		
60		[illegible] (broken cemented)		
68		[illegible] at 65		
74		[illegible]		
88		sdy. [illegible] c.		
105		[illegible] c.		
183		changed to c. with little pebbles		
186		[illegible]		
202		[illegible]		
238		tight g. c. with gr.		
250		[illegible] c. with [illegible]		
277		[illegible]		
301		[illegible]		
325		[illegible]		

FOR FIELD COPIES USE ALTERNATE LINES

LOG OBTAINED BY ____________ DATE ____________ SHEET 1 OF ____________

FORM 263. 6642 12-54 5M SPO

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STATE OF CALIFORNIA DWR
WELL COMPLETION REPORT
(WELL LOGS)

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STATE OF CALIFORNIA DWR
WELL COMPLETION REPORT
(WELL LOGS)

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(WELL LOGS)

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(WELL LOGS)

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(WELL LOGS)

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(WELL LOGS)

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(WELL LOGS)

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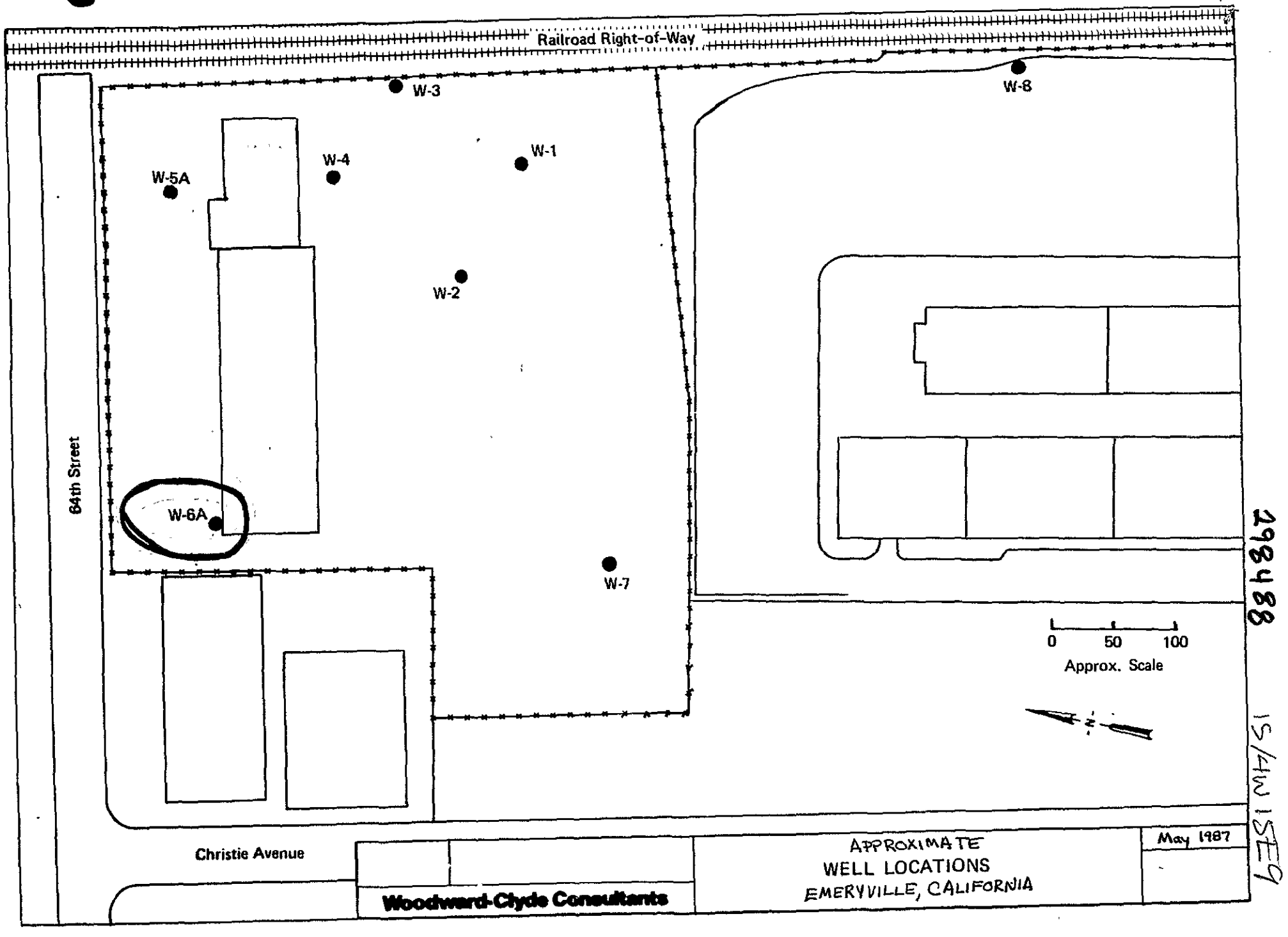

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15/4W 15E9

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WELL COMPLETION REPORT
(WELL LOGS)

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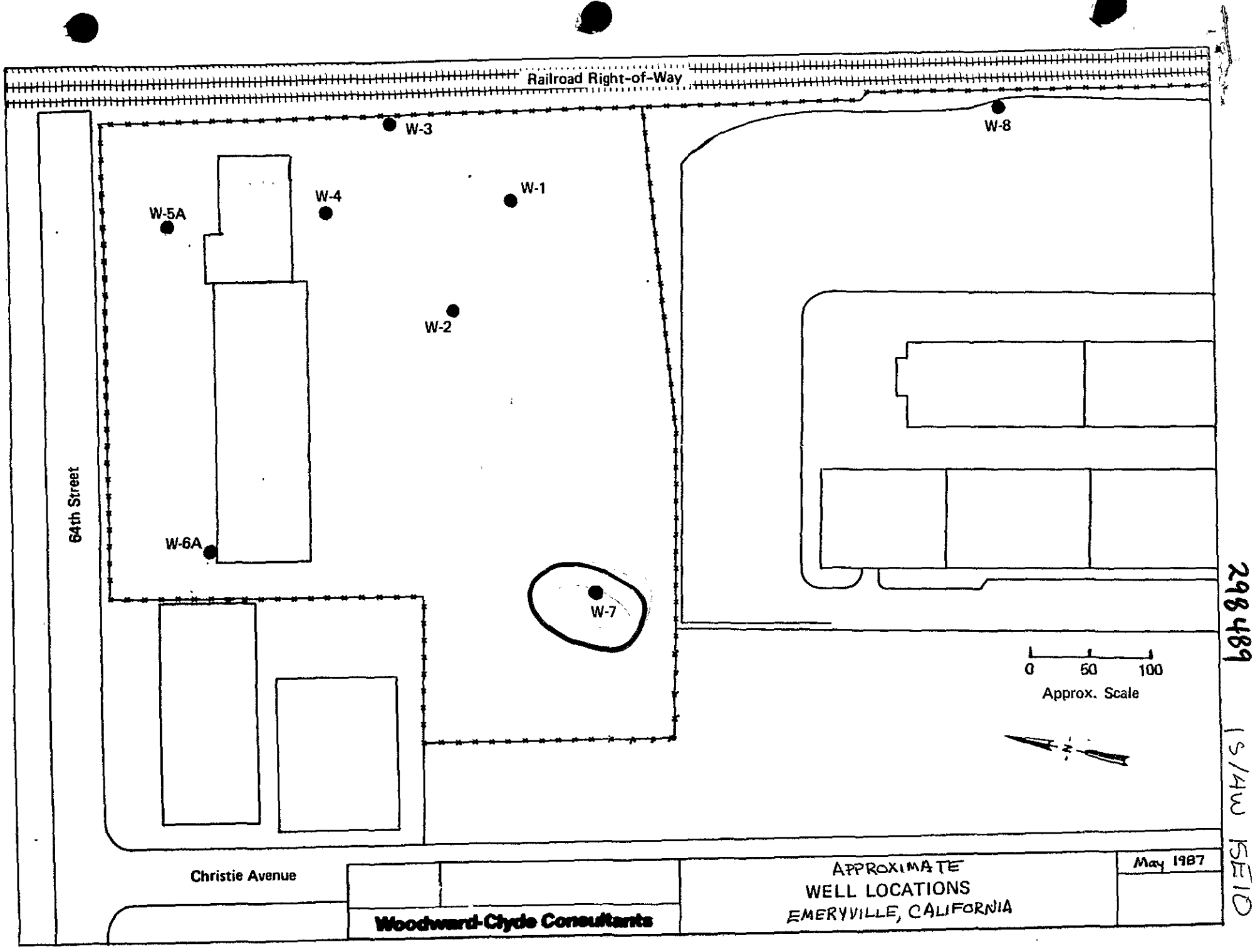

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1S/4W 15E10

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WELL COMPLETION REPORT
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WELL COMPLETION REPORT
(WELL LOGS)

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STATE OF CALIFORNIA DWR
WELL COMPLETION REPORT
(WELL LOGS)

REMOVED

CONFIDENTIAL

STATE OF CALIFORNIA DWR
WELL COMPLETION REPORT
(WELL LOGS)

REMOVED

SOIL DRILLING LOG

McLaren

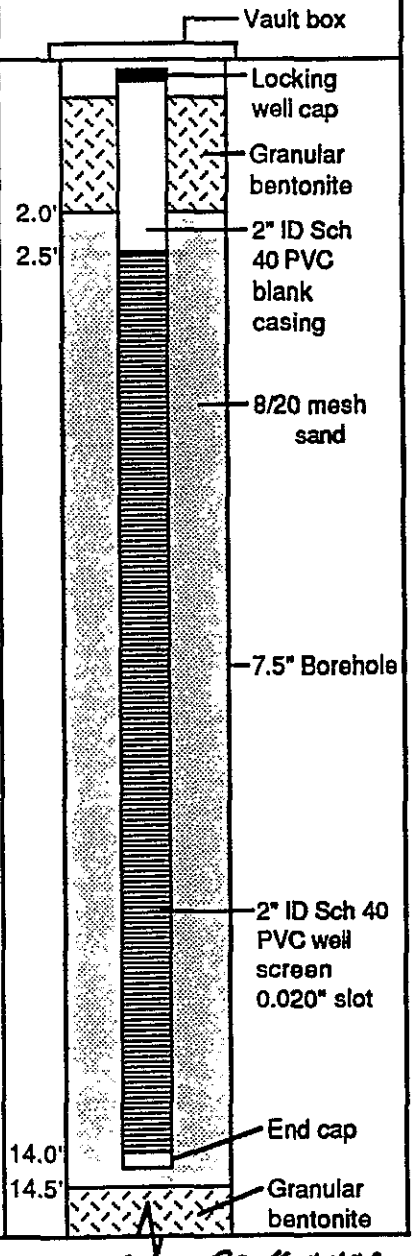
340014

SB/MW # W-19
D- 5757, 5758
Page 1 of 2
Sampler: M CHRISTENSEN

PROJECT MARKETPLACE 59801-008 LOCATION 305'SE FROM CENTER OF 64 ST. & 340'NE FROM CENTER OF CHRISTIE AVE
ELEVATION 10.265' (MSL) MONITORING DEVICE Hnu, BENZENE DREAGER
SAMPLING DATE(S) 4-6-90 START 7:30 FINISH 11:00
SAMPLING METHOD 5' CONTINUOUS SAMPLER SUBCONTRACTOR & EQUIPMENT GREGG DRILLING MOBILE B-53
MEMO HAND AUGER TO 5'. 0 ppm BENZENE DETECTED AT 20'.
MODIFIED CALIFORNIA SPLIT SPOON SAMPLER USED FROM 5' TO 10'.
PERCENTAGE ORDER: (GRAVEL-SAND-SILT-CLAY).

Depth Below Surface(ft.)	Penetration Results: Blows 6"-6"-6"	Penetration Results: BPF	Sampler Depth Interval (ft.)	Sample ID #	Hnu reading (ppm)	Soil Description Color, Texture, Moisture,Etc.	Unified Classification	Graphic Log	Sampled Depth
	NA	NA		NA		(0.0-0.5'); Asphalt	AC		NA
					1.7	(0.5'-2.0'); clayey sand; (20-50-15-15); yellowish brown, (10YR5/6); slight plasticity; fine to coarse grained sand; sub-angular gravel (to 3.0 cm); soft; dense; moist. Contains minor brick fragments.	SC (RB)		
2.5'						(2.0'-6.0'); sandy clay; (5-45-20-30); very dark gray, (10YR3/1); low plasticity; fine to medium grained sand; sub-angular gravel (to 1.0 cm); slightly stiff; moist, grading to slightly moist with depth. Contains wood and brick fragments; concrete occurs between 5.5'-6.0'.	CL		
5'			5.0-6.5		2.2	(6.0'-9.0'); clayey sand; (15-50-15-20); dark grayish brown, (2.5Y4/2); slight plasticity; fine to coarse grained sand; sub-angular gravel(to2.0cm); soft; medium density; saturated. Contains wood and brick fragments; dark brown viscous oil droplets observed in cuttings.	SM/SC		
7.5'			6.5-8.0		3.0	(9.0'-10.5'); sandy clay; (5-30-25-40); black, (10YR2/1); medium plasticity; fine to medium grained sand; sub-rounded gravel (to 3.0cm); stiff; moist. Strong petroleum odor.	CL		
10'			8.0-9.5		7.0	(10.5'-13.0'); silty sand; (20-50-20-10); olive brown, (2.5Y4/4); non-plastic; fine to medium grained sand; sub-angular gravel (to2.5cm); loose; moist.	SM		
12.5'			10.0-15.0		3.2	(13.0'-14.0'); silty sand; (0-70-20-10); black, (10YR2/1); non-plastic; dense; very fine to fine grained sand; very moist.	SM		
15'					6.4 3.8	(14.0'-14.5'); sandy clay; (10-40-20-30); dark greenish gray (5GY4/1); medium plasticity; fine to coarse grained sand; sub-angular gravel (to1.0cm); slightly stiff; moist.	CL		

Well Construction Details



Julie S. Menack RG#4440

SIGNATURE OF FIELD SUPERVISOR
ASSISTANT GEOLOGIST
TITLE

SIGNATURE OF REVIEWER
SENIOR HYDROGEOLOGIST
TITLE

SOIL DRILLING LOG

McLaren

340014

SB/MW # W-19
D- 5757, 5758
Page 2 of 2
Sampler: M CHRISTENSEN

PROJECT MARKETPLACE 59801-008 LOCATION 305'SE FROM CENTER OF 64 ST. & 340'NE FROM
ELEVATION 10.265' (MSL) MONITORING DEVICE Hnu, BENZENE DREAGER CENTER OF CHRISTIE AVE
SAMPLING DATE(S) 4-6-90 START 7:30 FINISH 11:00
SAMPLING METHOD 5' CONTINUOUS SAMPLER SUBCONTRACTOR & EQUIPMENT GREGG DRILLING
MEMO HAND AUGER TO 5'. 0 ppm BENZENE DETECTED AT 20'. MOBILE B-53
MODIFIED CALIFORNIA SPLIT SPOON SAMPLER USED FROM 5' TO 10'.
PERCENTAGE ORDER: (GRAVEL-SAND-SILT-CLAY).

Depth Below Surface (ft.)	Penetration Results: Blows 6"-6"-6"	Penetration Results: BPF	Sampler Depth Interval (ft.)	Sample ID #	Hnu reading (ppm)	Soil Description Color, Texture, Moisture, Etc.	Unified Classification	Graphic Log	Sampled Depth	Well Construction Details
	NA	NA	15.0-20.0	NA	2.1	(14.5-16.0'); sandy clay; (0-35-30-35); yellowish brown, (10YR5/4) streaked with gray, (10YR6/1); medium plasticity; fine to medium grained sand; minor sub-angular gravel (to 0.5cm); stiff; moist.	CL		NA	Granular bentonite
17.5					1.9	(16.0'-20.0'); sandy clay; (0-35-35-30); gray, (5Y5/1); medium plasticity; fine grained sand; stiff; moist.	CL			7.5" borehole
20.0'										20' TD
22.5'										
25.0'										
27.5										
30.0'										

SIGNATURE OF FIELD SUPERVISOR
ASSISTANT GEOLOGIST
TITLE

Julie S. Menard RG 4448
SIGNATURE OF REVIEWER
SENIOR HYDROGEOLOGIST
TITLE

CONFIDENTIAL

STATE OF CALIFORNIA DWR
WELL COMPLETION REPORT
(WELL LOGS)

REMOVED

SOIL DRILLING LOG

McLaren

340015

SB/MW # W-20
D- 5753, 5754
Page 1 of 2
Sampler: M CHRISTENSEN

PROJECT MARKETPLACE 59801-008 LOCATION 670'SE FROM CENTER OF 64 ST. & 15'SW FROM
ELEVATION 6.815' (MSL) MONITORING DEVICE Hnu, BENZENE DREAGER CENTER OF CHRISTIE AVE
SAMPLING DATE(S) 4-5-90 START 7:30 FINISH 11:30
SAMPLING METHOD 5' CONTINUOUS SAMPLER SUBCONTRACTOR & EQUIPMENT GREGG DRILLING
MEMO HAND AUGER TO 5'. 0 ppm BENZENE DETECTED AT 18'. MOBILE B-53
PERCENTAGE ORDER; (GRAVEL-SAND-SILT-CLAY).

Depth Below Surface(ft.)	Penetration Results: Blows 6"-6"-6"	Penetration Results: BPF	Sampler Depth Interval (ft.)	Sample ID #	Hnu reading (ppm)	Soil Description Color, Texture, Moisture, Etc.	Unified Classification	Graphic Log	Sampled Depth
	NA	NA		NA		(0.0'-0.25'); Asphalt.	AC		NA
						(0.25'-2.0');clayey sand;(15-50-15-20); light olive brown, (2.5Y5/6); slight plasticity;fine to coarse grained sand; *sub-angular gravel* (to 4.0 cm); soft; slightly moist to moist.	SC (RB)		
2.5'					7.1	(2.0'-4.0'); sandy clay; (5-35-25-35); dark grayish brown, (2.5Y4/2); medium plasticity; fine to medium grained sand; *stiff; moist.* Contains wood and brick fragments; petroleum odor.	CL		
5'			5.0-10.0		16.4	(4.0'-6.0'); sandy clay; (5-40-20-35); very dark gray, (5Y3/1); medium plasticity; fine to coarse grained sand; stiff; moist. Contains brick and shell fragments.	CL		
7.5					10.9	(6.0'-9.75'); silty sand; (10-65-20-10); dark gray, (5Y4/1); non-plastic; very fine to medium grained sand; sub-angular gravel (to 4.0 cm); medium dense; saturated. Contains wood, glass, brick and shell fragments. Black asphaltic material occurs between 9.0'-9.75', hard, dense. Petroleum odor.	SM		
10'			10.0-15.0		33	(9.75'-10.5'); silty sand; (5-70-20-5); black, (2.5Y2/0); non-plastic; fine to medium grained sand; medium density; saturated. Contains wood and brick fragments.	SM		
					10.2	(10.5'-12.0'); sandy clay; (5-30-25-40); dark greenish gray, (5G4/1); high plasticity; fine to medium grained sand; sub-angular gravel (to 1.0 cm); moist.	CL		
12.5'					3.4	(12.0'-13.5'); clayey gravel; (45-30-10-15); dark yellowish brown, (10YR 4/6); very slightly plastic; fine to coarse grained sand, well graded, sub-angular gravel (to 1.0cm); soft; dense; saturated.	GC		
15'					3.3	See following page	SC		

4-9-90

Well Construction Details

Vault box
Locking well cap
Granular bentonite
2.0'
2" ID Sch 40 PVC blank casing
2.5'
8/20 mesh sand
7.5" Borehole
2" ID Sch 40 PVC well screen 0.020" slot

SIGNATURE OF FIELD SUPERVISOR
ASSISTANT GEOLOGIST
TITLE

Julie S Menacke RG # 4440
SIGNATURE OF REVIEWER
SENIOR HYDROGEOLOGIST
TITLE

SOIL DRILLING LOG

McLaren

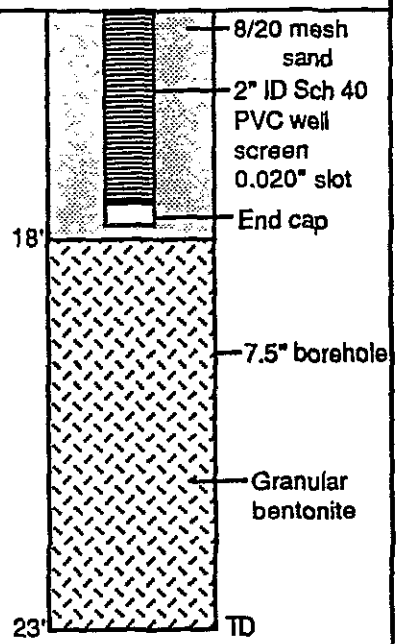
340015

SB/MW # W-20
D- 5753, 5754
Page 2 of 2
Sampler: M CHRISTENSEN

PROJECT MARKETPLACE 59801-008 LOCATION 670'SE FROM CENTER OF 64 ST. & 15'SW FROM CENTER OF CHRISTIE AVE
ELEVATION 6.815' (MSL) MONITORING DEVICE Hnu, BENZENE DREAGER
SAMPLING DATE(S) 4-5-90 START 7:30 FINISH 11:30
SAMPLING METHOD 5' CONTINUOUS SAMPLER SUBCONTRACTOR & EQUIPMENT GREGG DRILLING MOBILE B-53
MEMO HAND AUGER TO 5'. 0 ppm BENZENE DETECTED AT 18'.
PERCENTAGE ORDER; (GRAVEL-SAND-SILT-CLAY).

Depth Below Surface(ft.)	Penetration Results: Blows 6"-6"-6"	Penetration Results: BPF	Sampler Depth Interval (ft.)	Sample ID #	Hnu reading (ppm)	Soil Description Color, Texture, Moisture,Etc.	Unified Classification	Graphic Log	Sampled Depth
	NA	NA	15.0-20.0	NA	2.5	(13.5'-16.0'); clayey sand; (15-50-15-20); dark yellowish brown, (10YR4/6); slightly plastic; fine to coarse grained sand, well graded, sub-angular gravel (to 1.0 cm); soft; dense; moist.	SC		NA
							SC		
17.5					2.9	(16.0'-17.5'); clayey sand; (15-55-15-15); yellowish brown (10YR5/6); very slightly plastic; fine to coarse grained sand, well graded, sub-angular gravel (to 1.5 cm); soft; dense; saturated.			
20.0			20.0-21.5		2.5	(17.5'-23.0'); sandy clay; (0-40-25-35); yellowish brown, (10YR5/4); medium plasticity; fine to medium grained sand, poorly graded; stiff; moist. Minor burrows, filled with greenish gray, (5GY5/1), silt.	CL		
			21.5-23.0			(20.0'-23.0'); samples obtained with Modified California Split Spoon Sampler.			
22.5									
25.0									
27.5									
30.0									

Well Construction Details



Julie S. Menacle RG #4446

SIGNATURE OF FIELD SUPERVISOR
ASSISTANT GEOLOGIST
TITLE

SIGNATURE OF REVIEWER
SENIOR HYDROGEOLOGIST
TITLE

CONFIDENTIAL

STATE OF CALIFORNIA DWR
WELL COMPLETION REPORT
(WELL LOGS)

REMOVED

SOIL DRILLING LOG

McLaren

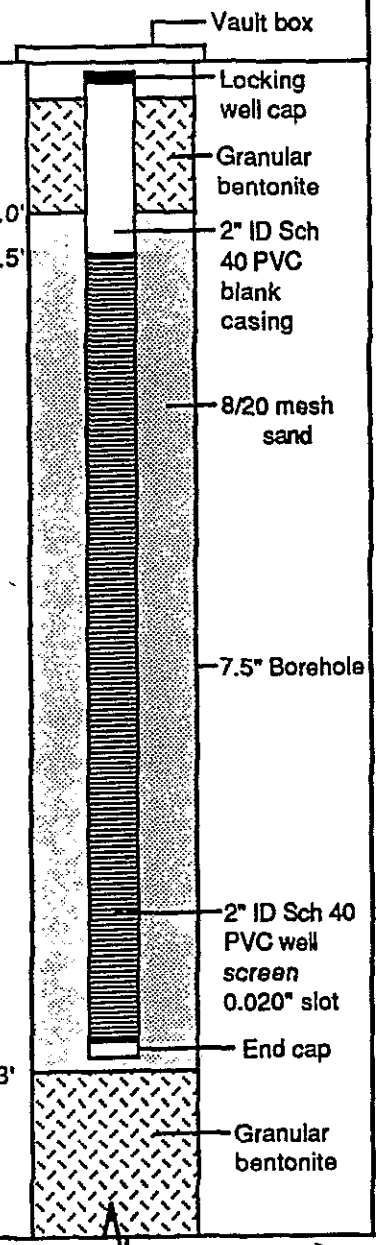
SB/MW # W-21
D- 5755, 5756
Page 1 of 2
Sampler: M CHRISTENSEN

340016

PROJECT MARKETPLACE 59801-008 LOCATION 440'SE FROM CENTER OF 64 ST. & 360'NE FROM CENTER OF CHRISTIE AVE
ELEVATION 9.475' (MSL) MONITORING DEVICE Hnu, BENZENE DREAGER
SAMPLING DATE(S) 4-5-90 START 12:20 FINISH 16:00
SAMPLING METHOD 5' CONTINUOUS SAMPLER SUBCONTRACTOR & EQUIPMENT GREGG DRILLING MOBILE B-53
MEMO HAND AUGER TO 5'. 0 ppm BENZENE DETECTED AT 20'.
PERCENTAGE ORDER; (GRAVEL-SAND-SILT-CLAY).
MODIFIED CALIFORNIA SPLIT SPOON SAMPLER USED 10.0'-15.0'.

Depth Below Surface(ft.)	Penetration Results: Blows 6"-6"-6"	Penetration Results: BPF	Sampler Depth Interval (ft.)	Sample ID #	Hnu reading (ppm)	Soil Description Color, Texture, Moisture, Etc.	Unified Classification	Graphic Log	Sampled Depth
	NA	NA		NA		Asphalt	AC		NA
						(0.5'-2.0'); clayey sand; (20-45-15-20); olive, (5Y5/4); slight plasticity; fine to coarse grained sand; sub-angular gravel (to 4.0 cm); well graded; soft; dense; moist. Road base.	SC (RB)		
2.5'					18.0	(2.0'-10.0'); clayey sand; (10-60-10-20); very dark gray, (10YR3/1); slight plasticity; coarse grained sand; sub-angular gravel (to 2.5 cm); soft; moist. Contains wood and brick fragments, brass gromets and patent plate from 1901.			
4-9-90 5'			5.0-10.0		54	5'-10' No recovery			
						(10.0'-10.5'); Tar; black, 10YR2/1); solid.	SC		
7.5'					5.2	(10.5'-11.0'); silty sand; (20-60-15-5); black, (10YR2/1); non-plastic; fine to coarse grained sand; sub-angular gravel (to 2.0 cm); well graded; saturated.			
					3.9	(11.0'-11.5'); sandy clay; (5-35-25-35); dark greenish gray, (5GY4/1); medium plasticity; fine to coarse grained sand; minor sub-angular gravel (to 0.5 cm); well graded; moist. Petroleum odor; contains brick fragments.	TAR		
10'			10.0-11.5				SM		
			11.5-13.0		3.1	(11.5'-12.0'); clayey sand; (15-50-15-20); dark gray, (5Y4/1); slight to low plasticity; fine to coarse grained sand; sub-angular gravel (to 1.5 cm); saturated.	CL SC		
12.5'			13.0-14.5		8.4	(12.0'-15.0'); sandy clay; (5-35-25-35); very pale brown, (10YR7/4) with very dark grayish brown, (10YR3/2) streaking; medium plasticity; fine to medium grained sand; stiff; moist. Contains burrows.	CL		
15'					3.5				

Well Construction Details



Julie S. Menard RG#4440

SIGNATURE OF FIELD SUPERVISOR
ASSISTANT GEOLOGIST
TITLE

SIGNATURE OF REVIEWER
SENIOR HYDROGEOLOGIST
TITLE

SOIL DRILLING LOG

McLaren

340016

SB/MW # W-21
D- 5755, 5756
Page 2 of 2
Sampler: M CHRISTENSEN

PROJECT MARKETPLACE 59801-008 LOCATION 440'SE FROM CENTER OF 64 ST. & 360'NE FROM CENTER OF CHRISTIE AVE
ELEVATION 9.475' (MSL) MONITORING DEVICE Hnu, BENZENE DREAGER
SAMPLING DATE(S) 4-5-90 START 12:20 FINISH 16:00
SAMPLING METHOD 5' CONTINUOUS SAMPLER SUBCONTRACTOR & EQUIPMENT GREGG DRILLING MOBILE B-53
MEMO HAND AUGER TO 5'. 0 ppm BENZENE DETECTED AT 20'.
PERCENTAGE ORDER; (GRAVEL-SAND-SILT-CLAY).

Depth Below Surface (ft.)	Penetration Results: Blows 6"-6"-6"	Penetration Results: BPF	Sampler Depth Interval (ft.)	Sample ID #	Hnu reading (ppm)	Soil Description Color, Texture, Moisture, Etc.	Unified Classification	Graphic Log	Sampled Depth	Well Construction Details
17.5	NA	NA	15.0-20.0	NA		(15.0'-20.0'); sandy clay; (0-35-25-40); yellowish brown, (10YR5/6) with gray, (10YR6/1) streaking; medium plasticity; fine to medium grained sand; trace sub-rounded gravel (to 0.5 cm); stiff; moist. Contains burrows.	CL		NA	Granular bentonite; 7.5" borehole; 20' TD
20.0										
22.5										
25.0										
27.5										
30.0										

SIGNATURE OF FIELD SUPERVISOR
ASSISTANT GEOLOGIST
TITLE

Julie S. Menack RG-#4440
SIGNATURE OF REVIEWER
SENIOR HYDROGEOLOGIST
TITLE

CONFIDENTIAL

STATE OF CALIFORNIA DWR
WELL COMPLETION REPORT
(WELL LOGS)

REMOVED

SOIL DRILLING LOG

McLaren

340017

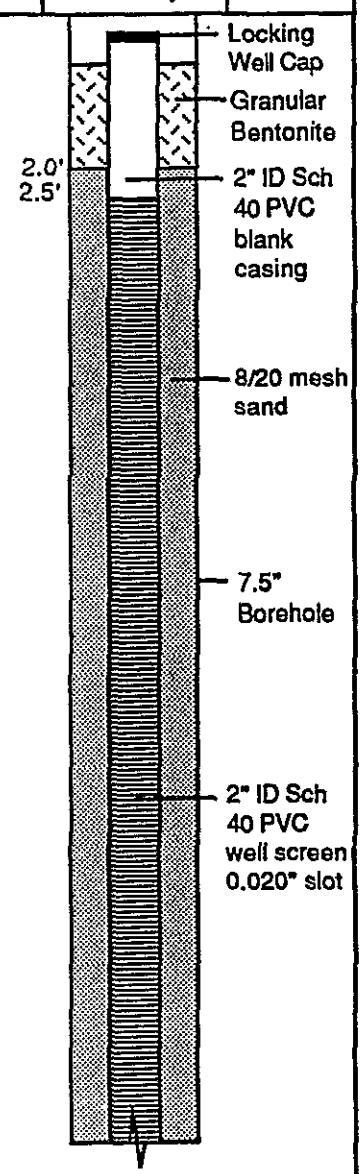
SB/MW # W-22
D- 5759
Page 1 of 2
Sampler: M CHRISTENSEN

PROJECT MARKETPLACE 59801-008 LOCATION 105'SE FROM CENTER OF 63 ST. & 15' SW FROM CENTER OF OVERLAND
ELEVATION 11.67' (MSL) MONITORING DEVICE Hnu, BENZENE DREAGER
SAMPLING DATE(S) 4-6-90 START 11:30 FINISH 15:00
SAMPLING METHOD 5' CONTINUOUS SAMPLER SUBCONTRACTOR & EQUIPMENT GREGG DRILLING
MEMO HAND AUGER TO 5'. 0 ppm BENZENE DETECTED AT 20'. MOBILE B-53
PERCENTAGE ORDER; (GRAVEL-SAND-SILT-CLAY).

Depth Below Surface(ft.)	Penetration Results: Blows 6"-6"-6"	Penetration Results: BPF	Sampler Depth Interval (ft.)	Sample ID #	Hnu reading (ppm)	Soil Description Color, Texture, Moisture,Etc.	Unified Classification	Graphic Log	Sampled Depth
0	NA	NA		NA		Asphalt	AC		NA
2.5'						(0.33'-2.0') clayey sand; (20-50-15-15); gray, (10YR5/1); slight plasticity; fine to coarse grained sand; sub-angular gravel (to 4.0 cm); dense; slightly moist.	SC/ (RB)		
					1.0	(2.0'-7.5') sandy clay; (0-35-35-30); very dark gray, (10YR3/1); medium plasticity; fine to medium grained sand; stiff; moist.	CL		
5'			5.0-10.0						
					0.8	(7.5'-10.0') sandy clay; (5-30-25-30); grayish brown, (2.5Y 5/2); high plasticity; fine to medium grained sand; sub-rounded gravel (to 2.0 cm); very stiff; moist.			
7.5'									
					1.5	(10.0'-13.0') clayey sand; (20-50-15-15); yellowish brown, (10 YR5/4); slight plasticity; fine to coarse grained sand; sub-angular gravel (to 2.5 cm); slightly dense; saturated.	CL		
10'			10.0-15.0						
					2.6	(13.0'-14.5') sandy clay; (5-35-35-25); yellowish brown, (10YR 5/4);slight to medium plasticity; fine grained sand; sub-angular gravel (to 0.5cm); slightly stiff; moist.	SC		
12.5'									
					2.8	(14.5'-15.5') clayey sand; (15-55-15-15); yellowish brown, (10 YR5/4);slight plasticity; fine to coarse grained sand; sub-angular gravel (to 2.0 cm); slightly dense; very moist to saturated.	CL		
15'							SC		

4-9-90

Well Construction Details



SIGNATURE OF FIELD SUPERVISOR
ASSISTANT GEOLOGIST
TITLE

Julie S. Menack RG#4440
SIGNATURE OF REVIEWER
SENIOR HYDROGEOLOGIST
TITLE

SOIL DRILLING LOG

McLaren

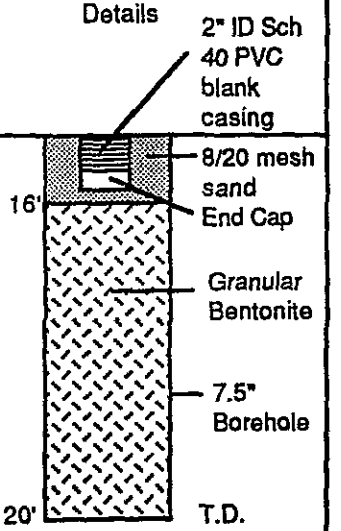
340017

SB/MW # W-22
D- 5759
Page 2 of 2
Sampler: M CHRISTENSEN

PROJECT MARKETPLACE 59801-008 LOCATION 105'SE FROM CENTER OF 63 ST. & 15' SW FROM
ELEVATION 11.67' (MSL) MONITORING DEVICE Hnu, BENZENE DREAGER CENTER OF OVERLAND
SAMPLING DATE(S) 4-6-90 START 11:30 FINISH 15:00
SAMPLING METHOD 5' CONTINUOUS SAMPLER SUBCONTRACTOR & EQUIPMENT GREGG DRILLING
MEMO HAND AUGER TO 5'. 0 ppm BENZENE DETECTED AT 20'. MOBILE B-53
PERCENTAGE ORDER; (GRAVEL-SAND-SILT-CLAY).

Depth Below Surface (ft.)	Penetration Results: Blows 6"-6"-6"	Penetration Results: BPF	Sampler Depth Interval (ft.)	Sample ID #	Hnu reading (ppm)	Soil Description Color, Texture, Moisture, Etc.	Unified Classification	Graphic Log	Sampled Depth
	NA	NA	15.0-20.0	NA		See Previous Page			NA
17.5'					1.6	(15.5'-18.0') sandy clay; (0-25-40-35); dark yellowish brown, (10YR4/4); medium plasticity; fine to medium grained sand; trace sub-angular gravel (to 0.5 cm); stiff; moist.	CL		
20'					1.7	(18.0'-20.0') sandy clay; (0-30-25-45); light olive brown, (2.5Y5/4); high plasticity; fine grained sand, poorly graded; very stiff; moist.	CL		
22.5'									
25'									
27.5'									
30'									

Well Construction Details



SIGNATURE OF FIELD SUPERVISOR
ASSISTANT GEOLOGIST
TITLE

Julie S. Menedde RG # 4440
SIGNATURE OF REVIEWER
SENIOR HYDROGEOLOGIST
TITLE

CONFIDENTIAL

STATE OF CALIFORNIA DWR
WELL COMPLETION REPORT
(WELL LOGS)

REMOVED

SOIL DRILLING LOG

McLaren

340018

SB/MW # W-23
D- 5751-5752
Page 1 of 2
Sampler: M CHRISTENSEN

PROJECT MARKETPLACE 59801-008 LOCATION 800'SE FROM CENTER OF 64TH ST. & 465' NE FROM
ELEVATION 9.155' (MSL) MONITORING DEVICE Hnu, BENZENE DREAGER CENTER OF CHRISTIE AVE.
SAMPLING DATE(S) 4-4-90 START 9:45 FINISH 13:30
SAMPLING METHOD MOD. CALIF. SPLIT SPOON SMPLR SUBCONTRACTOR & EQUIPMENT GREGG DRILLING
MEMO HAND AUGER TO 5'. 0 ppm BENZENE DETECTED AT 19'. MOBILE B-53
MODIFIED CALIFORNIA SPLIT SPOON SAMPLER USED FROM 5' TO 10'.
PERCENTAGE ORDER: (GRAVEL-SAND-SILT-CLAY).

Depth Below Surface(ft.)	Penetration Results: Blows 6"-6"-6"	Penetration Results: BPF	Sampler Depth Interval (ft.)	Sample ID #	Hnu reading (ppm)	Soil Description Color, Texture, Moisture,Etc.	Unified Classification	Graphic Log	Sampled Depth
4-9-90	NA	NA		NA		Asphalt.	AC		NA
					7.7	(0.67'-1.5') silty sand; (30-50-10-10); variegated; non to slight plasticity; fine to coarse grained sand; sub-angular gravel (to 4.0 cm); slightly dense; moist.	SM/ (RB)		
2.5'					17.2	(1.5'-3.0') silty sand; (10-65-15-10); olive brown, (2.5Y4/4); slight plasticity fine to medium grained sand; soft; moist. Contains brick & wood fragments.	SM-SC		
					4.2	(3.0'-5.5') sandy clay; (5-40-25-30); very dark gray, (10YR3/1) with minor greenish gray, (5G5/1) streaking; med. plasticity; fine to medium grained sand; slightly stiff; moist. Contains brick fragments; concrete occurs between 5.0'-5.5'.	CL		
5'			5.5-7.0						
					17	(5.5'-7.0') sandy clay; (5-40-20-35); very dark gray, (10YR3/1); medium plasticity; fine to medium grained sand; stiff; very moist. Contains brick fragments.	CL		
7.5			7.0-8.5						
					26	(7.0'-9.0') silty sand; (5-65-20-10); very dark gray, (10YR3/1); very slight plasticity; fine grained sand; soft; dense; saturated. Contains brick fragments; strong petroleum odor.	SM-SC		
			8.5-10.0						
10'							CL		
			10.0-11.5		9.2	(9.0'-10.0'); sandy clay; (5-30-25-40); gray, (5Y6/1) with olive gray, (5Y5/2) streaking; medium plasticity; very fine to fine grained sand; stiff; moist. Contains shell fragments. Color change to light olive brown, (2.5Y5/6) occurs at 9.5'.	CL		
			11.5-13.0		5.4				
12.5'					5.7	(10.0'-11.5') sandy clay; (0-35-25-40); light yellowish brown, (2.5Y6/4); high plasticity; very fine grained sand; very stiff; moist.	CL		
			13.0-14.5		2.9	(11.5'-14.5') sandy clay; (10-20-30-40); brownish yellow, (10YR6/6); high plasticity; very fine to coarse grained sand; sub-angular gravel (to 1.0 cm); very stiff; moist.	CL		
15'			14.5-16.0						

Well Construction Details

Vault Box
Locking Well Cap
Granular Bentonite
2.0'
2.5'
2" ID Sch 40 PVC blank casing
8/20 mesh sand
2" ID Sch 40 PVC well screen 0.020" slot
9.5'
10.0'
End Cap
7.5" Borehole
Granular Bentonite

Julie S. Menatte RG 4440

SIGNATURE OF FIELD SUPERVISOR
ASSISTANT GEOLOGIST
TITLE

SIGNATURE OF REVIEWER
SENIOR HYDROGEOLOGIST
TITLE

SOIL DRILLING LOG

McLaren

340018

SB/MW # W-23
D- 5751-5752
Page 2 of 2
Sampler: M CHRISTENSEN

PROJECT MARKETPLACE 59801-008 LOCATION 800'SE FROM CENTER OF 64th ST. & 465 NE FROM CENTER OF CHRISTY AVE.
ELEVATION 9.155' (MSL) MONITORING DEVICE Hnu, BENZENE DREAGER
SAMPLING DATE(S) 4-4-90 START 9:45 FINISH 13:30
SAMPLING METHOD MOD. CA. SPLIT SPOON SUBCONTRACTOR & EQUIPMENT GREGG DRILLING
MEMO HAND AUGER TO 5'. 0 ppm BENZENE DETECTED AT 19'. MOBILE B-53
MODIFIED CALIFORNIA SPLIT SPOON SAMPLER USED FROM 5' TO 10'.
PERCENTAGE ORDER: (GRAVEL-SAND-SILT-CLAY).

Depth Below Surface (ft.)	Penetration Results: Blows 6"-6"-6"	Penetration Results: BPF	Sampler Depth Interval (ft.)	Sample ID #	Hnu reading (ppm)	Soil Description Color, Texture, Moisture, Etc.	Unified Classification	Graphic Log	Sampled Depth	Well Construction Details
	NA	NA		NA	2.7	(14.5'-19.0') sandy clay; (0-20-45-35); brownish yellow, (10YR6/6); medium plasticity; very fine grained sand; trace gravels, sub-rounded (to 0.5 cm); moist.	CL		NA	Granular Bentonite
			16.0-17.5							
17.5'					2.4					7.5" Borehole
			17.5-19.0							19' T.D.
20'										
22.5'										
25'										
27.5'										
30'										

SIGNATURE OF FIELD SUPERVISOR
ASSISTANT GEOLOGIST
TITLE

Julie S. Menecke RG #4480
SIGNATURE OF REVIEWER
SENIOR HYDROGEOLOGIST
TITLE

CONFIDENTIAL

STATE OF CALIFORNIA DWR
WELL COMPLETION REPORT
(WELL LOGS)

REMOVED

SOIL DRILLING LOG

McLaren

340019

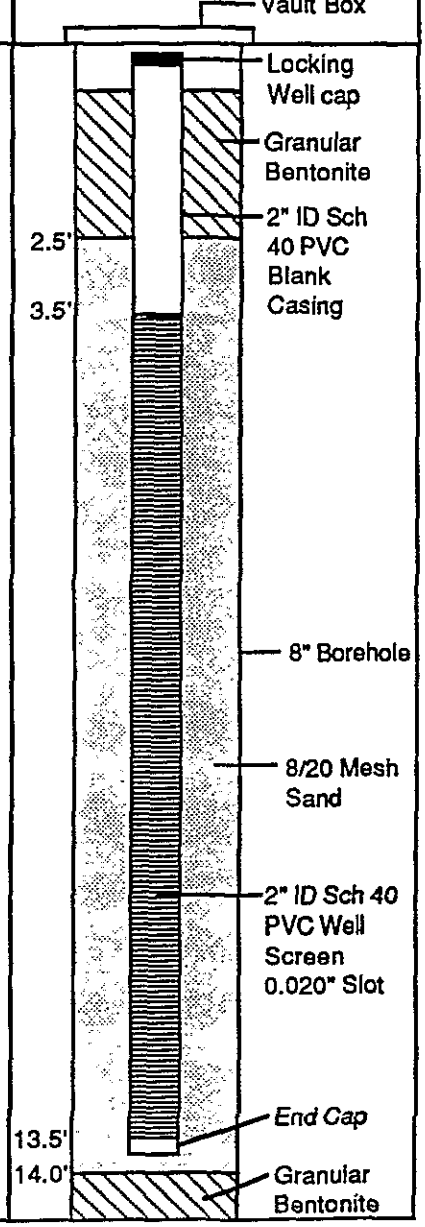
SB/MW # W-24
D- 5768,5769,5770
Page 1 of 2
Sampler: M CHRISTENSEN

PROJECT MARKETPLACE LOCATION 420' S from 64th ST. & 35' E from CHRISTIE Ave.
ELEVATION _____ MONITORING DEVICE Hnu, BENZENE DREAGER
SAMPLING DATE(S) 6-6-90 START 8:20 FINISH 11:00
SAMPLING METHOD 5' CONTINUOUS SAMPLER SUBCONTRACTOR & EQUIPMENT ENVIRONMENTAL EXPLORATION CME 75
MEMO HAND AUGER TO 4'. .
PERCENTAGE ORDER: (GRAVEL-SAND-SILT-CLAY) I.E. (15-40-15-30).

Depth Below Surface (ft.)	Penetration Results: Blows 6"-6"-6"	Penetration Results: BPF	Sampler Depth Interval (ft.)	Sample ID #	Hnu reading (ppm)	Soil Description Color, Texture, Moisture, Etc.	Unified Classification	Graphic Log	Sampled Depth
0	NA	NA			0	(0-2") Asphalt	AC		
						(2"-8") Road Base	RB		
					0	(8"-1.5') clayey sand; (25-40-15-20); dark grayish brown ,(2.5Y4/2); low plastic fines; fine to coarse grained sand; sub-angular gravel, (to5.0 cm); slightly stiff; slightly moist to moist.	SC		
2.5					0	(1.5'-3.5') silty sand; (25-45-20-10); light grayish brown, (2.5Y6/2); non-plastic fines; fine to medium grained sand; sub-rounded gravel (to 3.0 cm); dense; slightly moist.	SM		
					0	(3.5'-5.0') silty sand; (0-80-15-5) ; olive gray, (5Y4/2); non-plastic fines; fine to medium grained sand; poorly graded; moist to very moist.	SM		
5'			4.0-9.0		0	(5.0'-7.0') clayey sand; (15-50-15-20); olive gray, (5Y4/2); low plastic fines; fine to coarse grained sand; sub-angular gravel (to 2.0 cm); well graded; slightly stiff; moist to very moist.	SC		
7.5					0	(7.0'-8.5') sandy clay; (5-40-20-35); dark grayish brown, (2.5Y4/2); medium plastic fines; fine to medium grained sand; rounded gravel (to 1.0 cm); stiff; moist.	CL		
			9.0-14.0		0	(8.5'-11.0') silty sand; (15-50-20-15); grayish brown, (2.5Y5/2); slight plastic fines; fine to coarse grained sand; sub-rounded gravel, (to 1.5 cm); well graded; medium dense; moist to saturated at 9'.	SM-SC		
10'					0	(11.0'-12.0') silty sand; (0-70-20-10); grayish brown, (2.5Y5/2) streaked with very dark gray, (2.5Y3/0); non-plastic fines; fine grained sand; dense; very moist.	SM		
12.5'					0	(12.0'-13.0') silty sand; (0-75-20-5); very dark gray, (2.5Y3/0); non-plastic fines; fine to medium grained sand; sub-rounded gravel, (to 4.0 cm); moist to very moist. Contains shell fragments.	SM		
15'					0	(13'-15) See following page	CL		

6-7-90

Well Construction Details



SIGNATURE OF FIELD SUPERVISOR
ASSISTANT GEOLOGIST
TITLE

Julie S. Menack RG 4440
SIGNATURE OF REVIEWER
SENIOR HYDROGEOLOGIST
TITLE

SOIL DRILLING LOG

McLaren

340019

SB/MW # W-24
D- 5768,5769,5770
Page 2 of 2
Sampler: M CHRISTENSEN

PROJECT MARKETPLACE LOCATION 420' S from 64th ST. & 35' E from CHRISTIE Ave.
ELEVATION _____ MONITORING DEVICE Hnu, BENZENE DREAGER
SAMPLING DATE(S) 6-6-90 START 8:20 FINISH 11:00
SAMPLING METHOD 5' CONTINUOUS SAMPLER SUBCONTRACTOR & EQUIPMENT ENVIRONMENTAL
MEMO HAND AUGER TO 4'. . EXPLORATION CME 75
PERCENTAGE ORDER; (GRAVEL-SAND-SILT-CLAY) I.E. (15-40-15-30).

Depth Below Surface(ft.)	Penetration Results: Blows 6"-6"-6"	Penetration Results: BPF	Sampler Depth Interval (ft.)	Sample ID #	Hnu reading (ppm)	Soil Description Color, Texture, Moisture, Etc.	Unified Classification	Graphic Log	Sampled Depth	Well Construction Details
	NA	NA	15.0-20.0		0	(13.0'-15.0') sandy clay; (15-35-15-35); yellowish brown, (10YR5/4); medium plastic fines; fine to coarse grained sand; sub-rounded gravel, (to 4.0 cm) *well graded; stiff; moist.*	SC			8" Borehole
17.5'					0	(15.0'-15.5') clayey sand; (0-55-15-20); yellowish brown, (10YR5/4); fine to coarse grained sand; sub-rounded gravel, (to 4.0 cm); well graded; slightly stiff; very moist to saturated.	CL			Granular Bentonite
20'					0	(15.5'-20.0') sandy clay; (10-35-20-35); yellowish brown, (10YR5/4); medium plastic fines; fine to medium grained sand; sub-rounded gravel, (to 1.0 cm); stiff; moist. Grading to clayey sand from 18.5' to 20.0'.	(SC)			20.0' TD
22.5'										
25'										
27.5'										
30'										

SIGNATURE OF FIELD SUPERVISOR
ASSISTANT GEOLOGIST
TITLE

Julie S. Menacle RG 4440.
SIGNATURE OF REVIEWER
SENIOR HYDROGEOLOGIST
TITLE

01-532K

ZONE 7 WATER AGENCY

01S04W15Q03

5997 PARKSIDE DRIVE PLEASANTON, CALIFORNIA 94588 VOICE (510) 484-2600
FAX (510) 462-3914

RECEIVED
MAY 18 1993
ZONE 7, ACFC&WCD

DRILLING PERMIT APPLICATION

FOR APPLICANT TO COMPLETE

LOCATION OF PROJECT 5521 Doyle Street
Emeryville, CA

CLIENT
Name Clementina Ltd.
Address 2177 Jerrold Ave Phone (415) 282-7725
City San Francisco, CA Zip 94124

APPLICANT
Name Geo Plexus, Inc.
Fax (408) 988-0815
Address 1900 Wyatt Drive #1 Phone (408) 987-0210
City Santa Clara, CA Zip 95054

TYPE OF PROJECT

Well Construction		Geotechnical Investigation	
Cathodic Protection	___	General	___
Water Supply	___	Contamination	___
Monitoring	XX	Well Destruction	___

PROPOSED WATER SUPPLY WELL USE
Domestic ___ Industrial ___ Other ___
Municipal ___ Irrigation ___

DRILLING METHOD:
Mud Rotary ___ Air Rotary ___ Auger XX
Cable ___ Other ___

DRILLER'S LICENSE NO. C57 554979

WELL PROJECTS

Drill Hole Diameter	8	in.	Maximum		
Casing Diameter	2	in.	Depth	20	ft.
Surface Seal Depth	5	ft.	Number	1	

GEOTECHNICAL PROJECTS

Number of Borings	___		Maximum		
Hole Diameter	___	in.	Depth	___	ft.

ESTIMATED STARTING DATE 4/8/93
ESTIMATED COMPLETION DATE 4/8/93

I hereby agree to comply with all requirements of this permit and Alameda County Ordinance No. 73-68.

APPLICANT'S SIGNATURE T. David Glick Date 3/14/93
David C. Glick CEG 1338

FOR OFFICE USE

PERMIT NUMBER 93139
LOCATION NUMBER ___

PERMIT CONDITIONS

Circled Permit Requirements Apply

(A.) GENERAL
1. A permit application should be submitted so as to arrive at the Zone 7 office five days prior to proposed starting date.
2. Submit to Zone 7 within 60 days after completion of permitted work the original Department of Water Resources Water Well Drillers Report or equivalent for well Projects, or drilling logs and location sketch for geotechnical projects.
3. Permit is void if project not begun within 90 days of approval date.

(B.) WATER WELLS, INCLUDING PIEZOMETERS
1. Minimum surface seal thickness is two inches of cement grout placed by tremie.
2. Minimum seal depth is 50 feet for municipal and industrial wells or 20 feet for domestic and irrigation wells unless a lesser depth is specially approved. Minimum seal depth for monitoring wells is the maximum depth practicable or 20 feet.

C. GEOTECHNICAL. Backfill bore hole with compacted cuttings or heavy bentonite and upper two feet with compacted material. In areas of known or suspected contamination, tremied cement grout shall be used in place of compacted cuttings.

D. CATHODIC. Fill hole above anode zone with concrete placed by tremie.

E. WELL DESTRUCTION. See attached.

Approved Wyman Hong Date 18 Mar 93
Wyman Hong

31992
1621

01-532K 01S04W15Q03

SUBSURFACE DATA LOG

LOG No. MW-1 DATE: 4/29/93
LOCATION: Clementina Equipment 5521 Doyle Street, Emeryville
EQUIPMENT: Mobile B61
PROJECT No.

DRY DENSITY (lbs cu. ft.)	MOISTURE (% of dry wt.)	"N" VALUE (blows/ft.)	OVM READING (ppm)	SAMPLE TYPE	DEPTH (ft)	LOG	U.S.C.	
								4" AC/6" Aggregate Base
								SILTY SAND, dark gray, moist, medium dense
		21	n/a	S1	5			
								SILTY SAND WITH GRAVEL, orange-brown, moist, dense
		19	n/a	S2	10			GRAVELLY SAND, orange-brown, saturated, dense
								Sample S2 not retained due to high gravel/void content.
		14	n/a	S3	15			SILTY SAND, mottled orange-brown, moist, dense
					20			Boring terminated at 17 feet.
								Ground water encountered at 14 feet and stabilized at 11.5 feet.
								2-inch diameter monitoring well constructed.

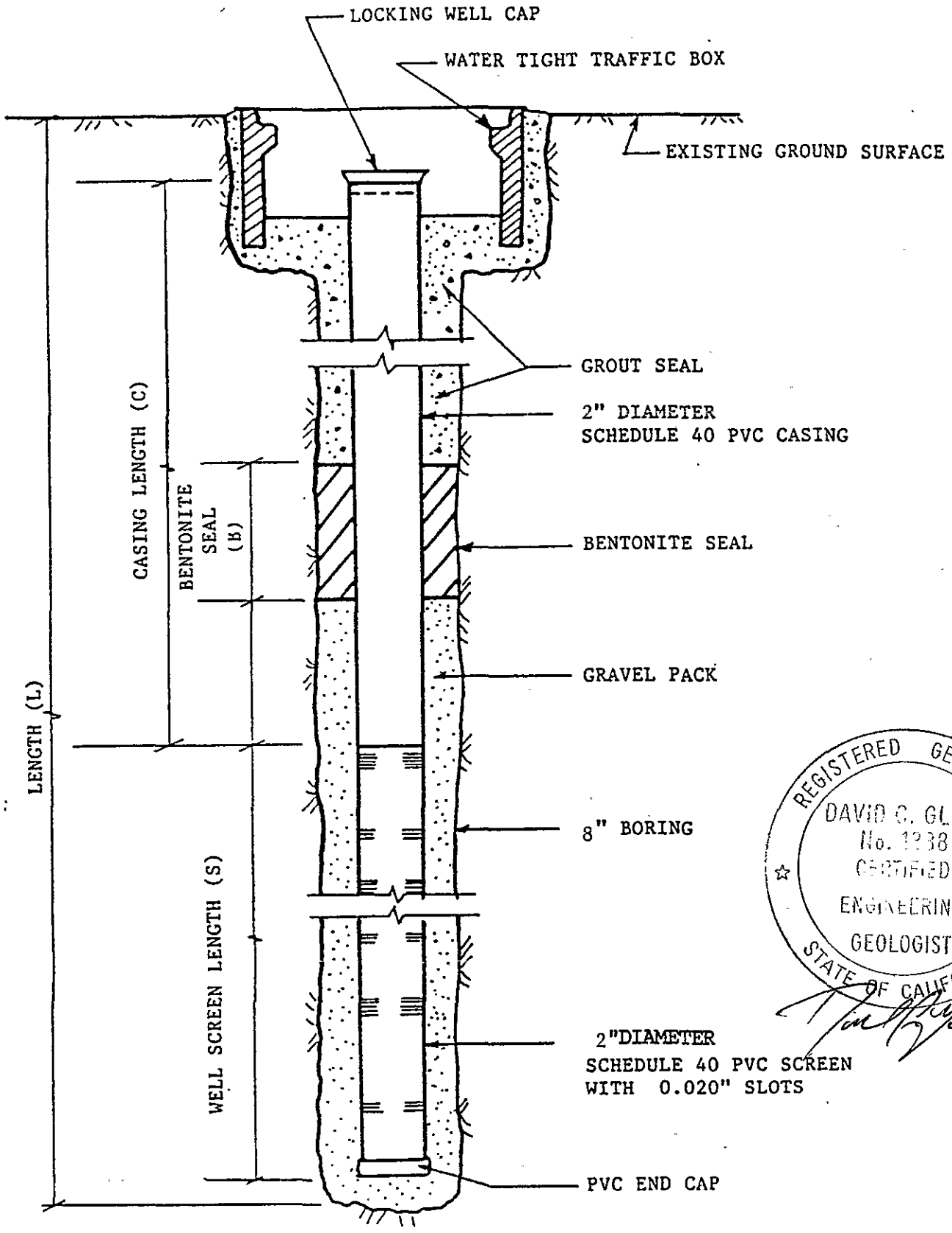
REGISTERED GEOLOGIST
DAVID C. GLICK
No. 1328
CERTIFIED
ENGINEERING
GEOLOGIST
STATE OF CALIFORNIA

GeoPlexus, Inc.

FIGURE

01-532K

01S040W15Q03



REGISTERED GEOLOGIST
DAVID C. GLICK
No. 1238
CERTIFIED
ENGINEERING
GEOLOGIST
STATE OF CALIFORNIA

L= 17 feet
S= 10 feet
C= 7 feet
B= 1 foot

MONITORING WELL MW-1		
DATE 4/29/93	SCALE n/a	DRAWN BY dcg
CLEMENTINA PROPERTY		
		Figure

GeoPlexus, Inc.

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(WELL LOGS)

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WELL COMPLETION REPORT
(WELL LOGS)

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WELL COMPLETION REPORT
(WELL LOGS)

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(WELL LOGS)

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WELL COMPLETION REPORT
(WELL LOGS)

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185593 15/4W 15F3

PROJECT: GETZ/1351 Ocean Avenue
Emeryville, California

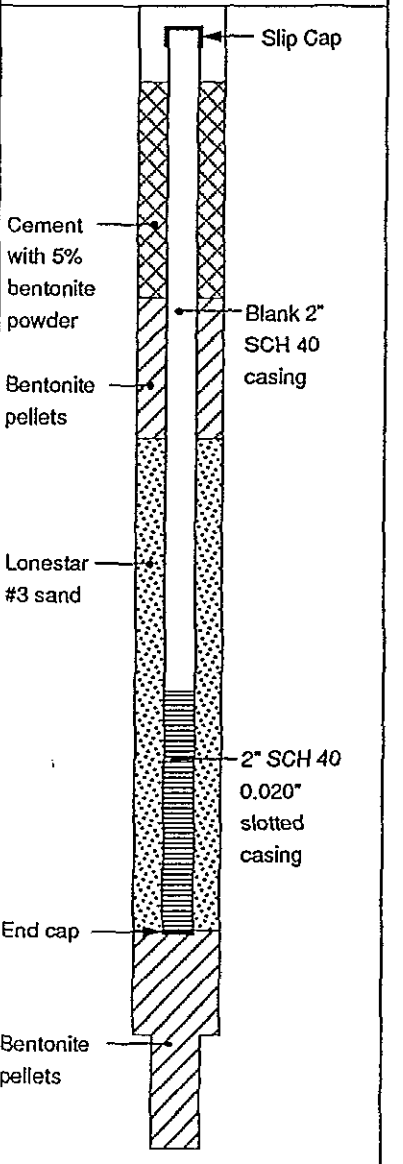
Log of Well No. W-1A

BORING LOCATION: 1351/1354 Ocean Avenue

DATE STARTED: 11/3/88	DATE FINISHED: 11/3/88	CASING: NA	
DRILLING METHOD: 8"" hollow stem auger		DEPTH TO WATER ATD: 10.0'	
HAMMER WEIGHT: 140 lb.	DROP: 30"	LOGGED BY: DWN	CHECKED BY: NTB
SAMPLER: 2" California modified sampler			

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/Foot	MATERIAL DESCRIPTION (Surface Elevation:)	TEST RESULTS
0				SILTY CLAY (CL) Dark brown, damp, moderate plasticity	
2					
4	1-1		22	SILTY CLAY (CL) Dark brown mottled orangish red, damp, very stiff, moderate plasticity	
6				Some fine to medium grained sand Color change to light brown	
8					
10	1-2		41	GRAVELLY SAND (SW) Medium brown, saturated, very dense, sand fine to medium grained, gravel subrounded to rounded	
12				SILTY SAND (SM) Orangish brown, saturated, dense, sand fine to medium grained	
14				SILTY CLAY (CL) Gray brown, slightly damp, stiff, medium plasticity, iron staining around trace coarse sand grains, trace micas	
	1-3		12	SANDY CLAY (CL) Gray brown, slightly damp, stiff, low plasticity	
				SILTY CLAY (CH) Light blue gray, slightly damp, firm, high plasticity	
16				Bottom of boring 15.5 feet	
18					

WELL CONSTRUCTION DETAILS



1S/4W 15F3

185593, Aban

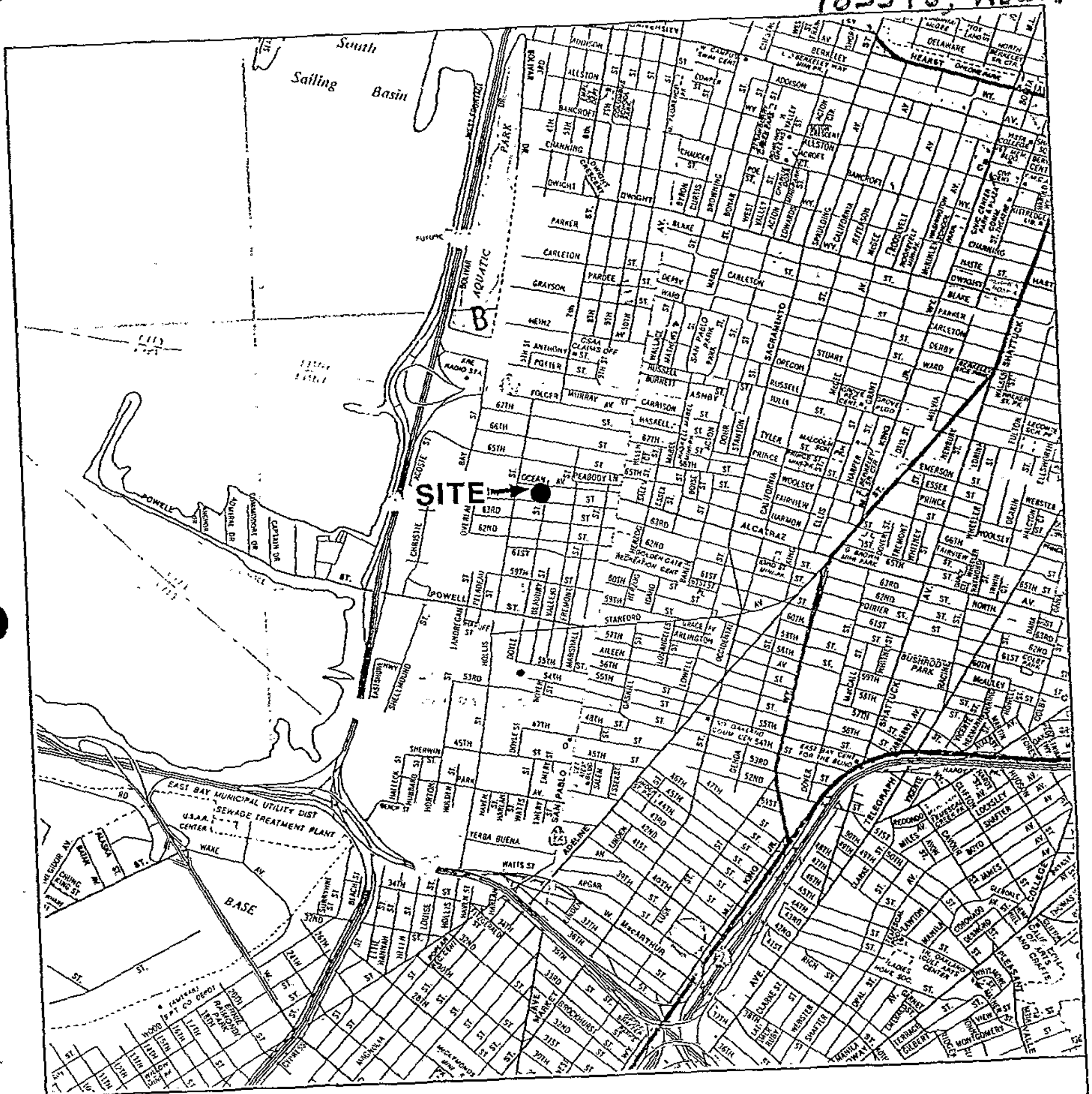
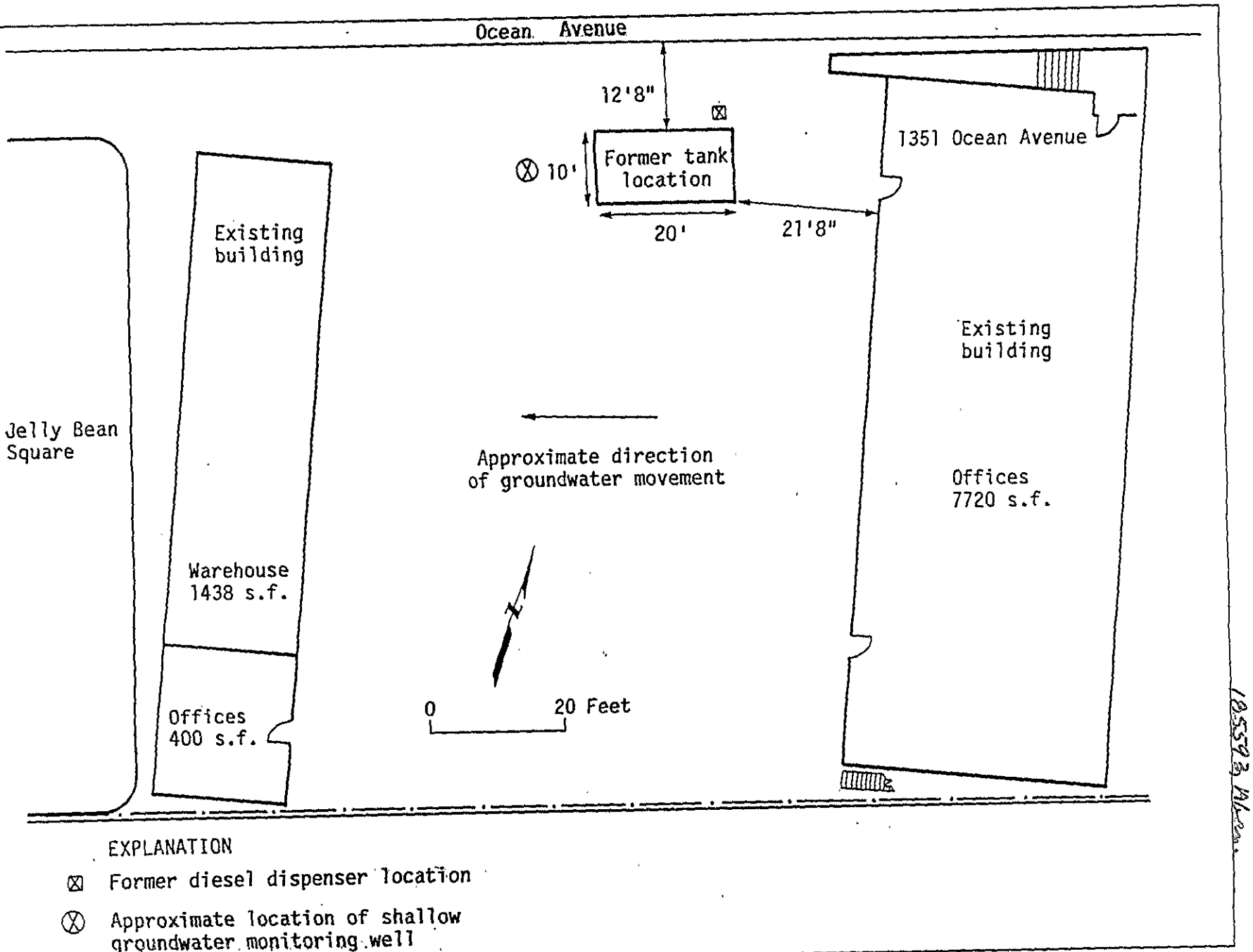


Figure 1

...TE LOCATION MAP



FORMER DIESEL TANK EXCAVATION AND MONITORING WELL

Figure 2

18559 3 Alameda

1S/4W 15 F3

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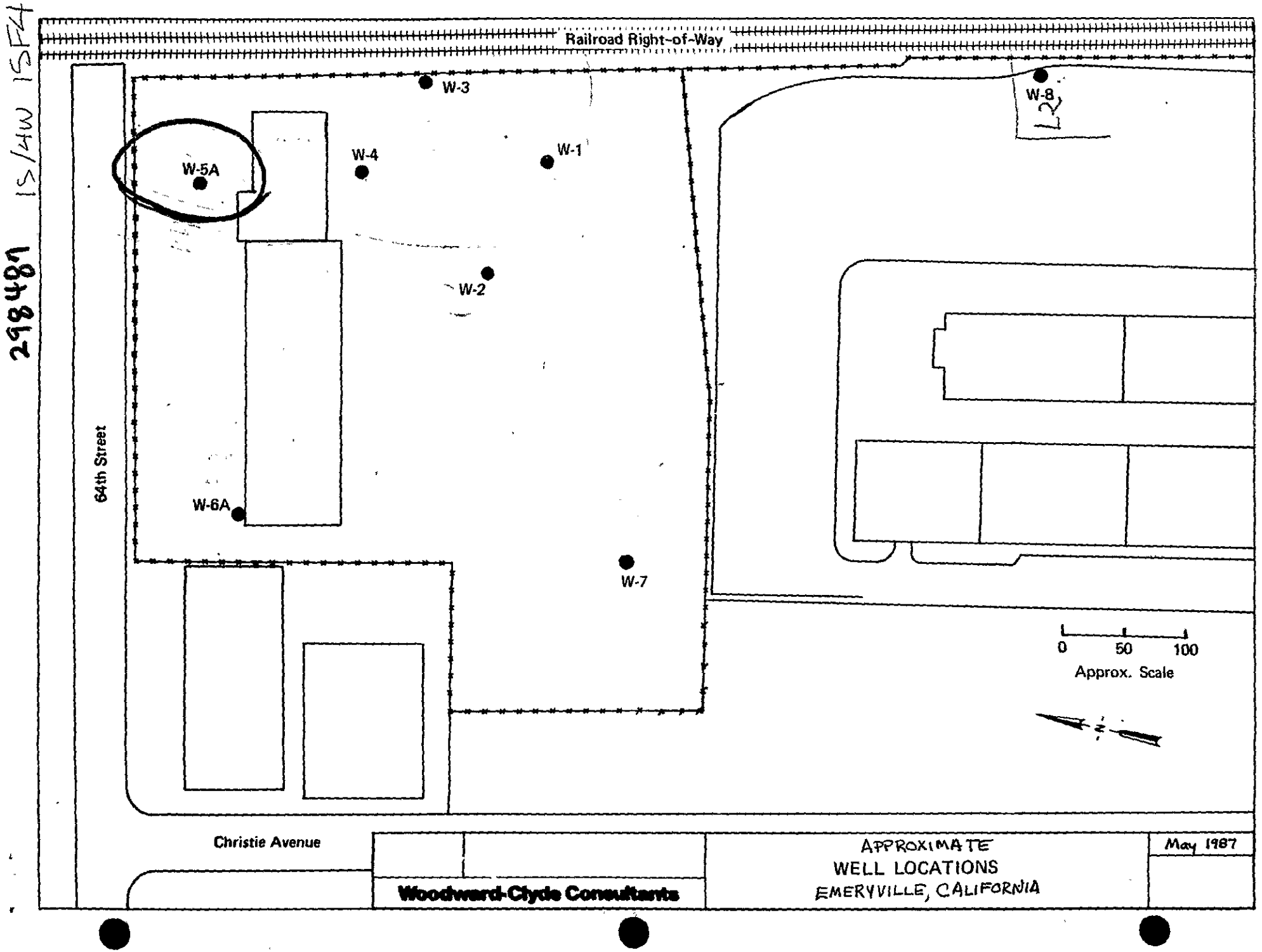
Railroad Right-of-Way
W-3
W-8
W-5A
W-4
W-1
W-2
64th Street
W-6A
W-7
0
50
100
Approx. Scale
Christie Avenue
Woodward-Clyde Consultants
APPROXIMATE
WELL LOCATIONS
EMERYVILLE, CALIFORNIA
May 1987

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WELL COMPLETION REPORT
(WELL LOGS)

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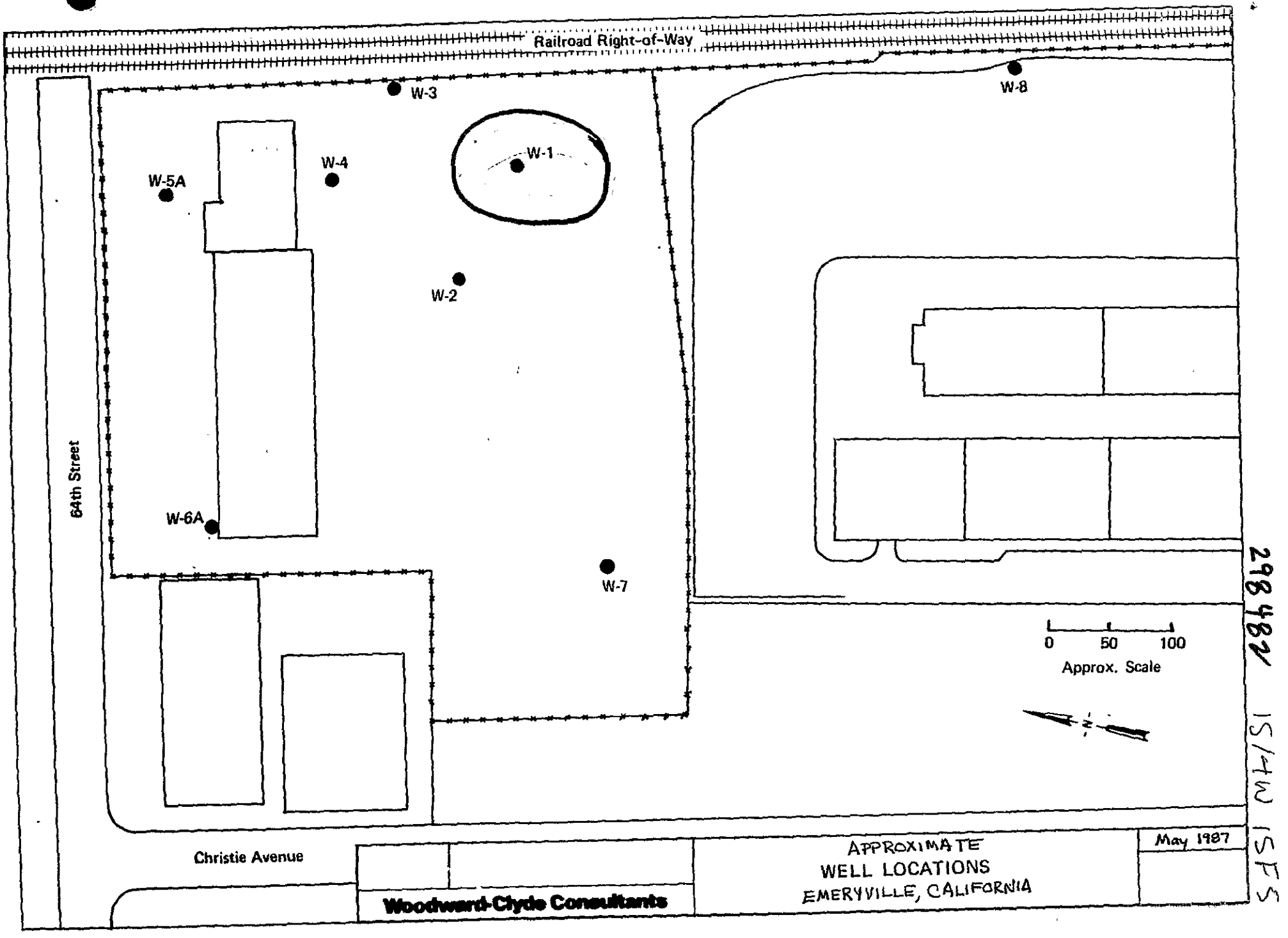

298482 IS/4W ISFS

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(WELL LOGS)

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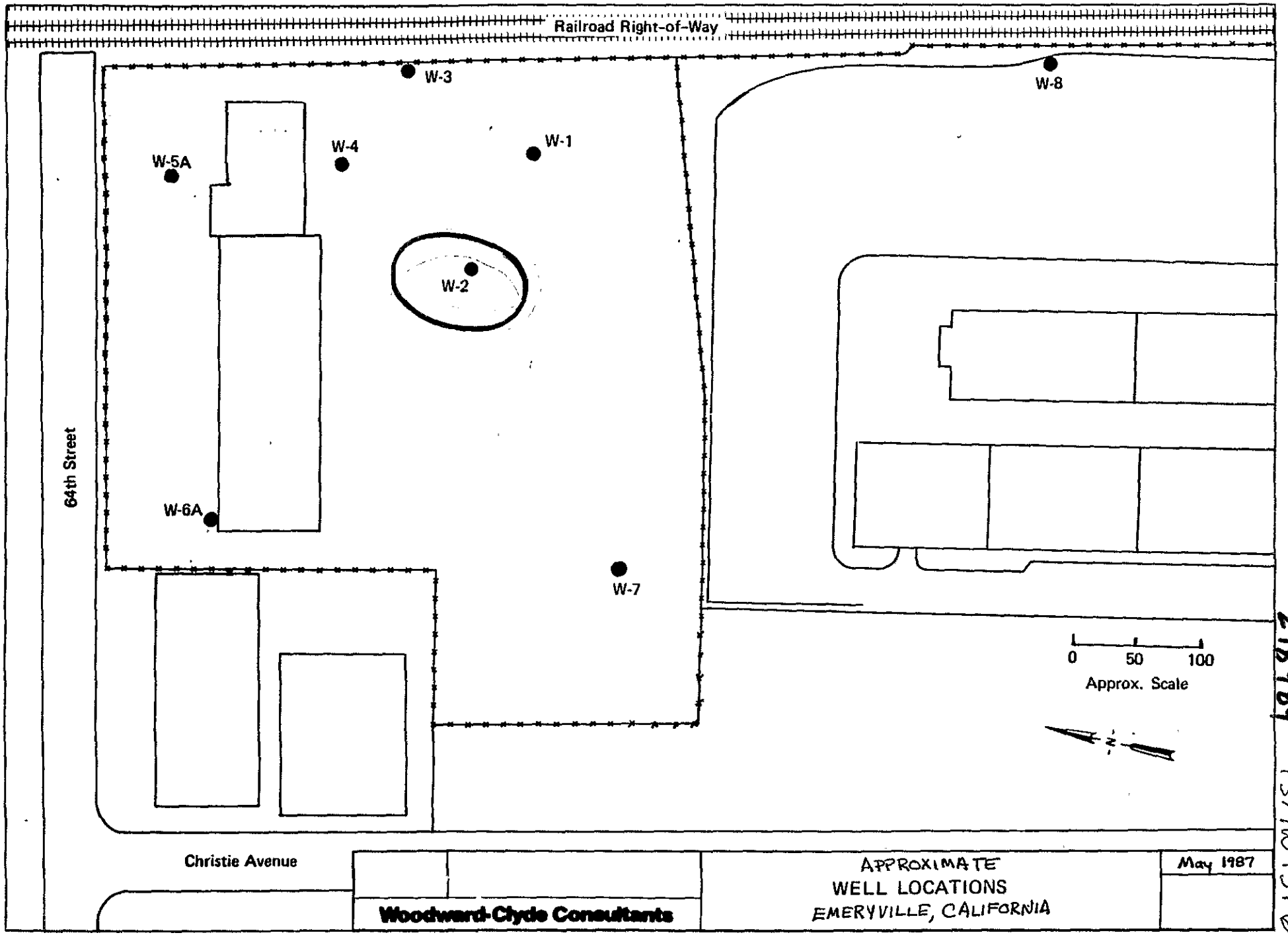
Railroad Right-of-Way
W-3
W-8
W-5A
W-4
W-1
W-2
64th Street
W-6A
W-7
0
50
100
Approx. Scale
Christie Avenue
Woodward-Clyde Consultants
APPROXIMATE
WELL LOCATIONS
EMERYVILLE, CALIFORNIA
May 1987

298484

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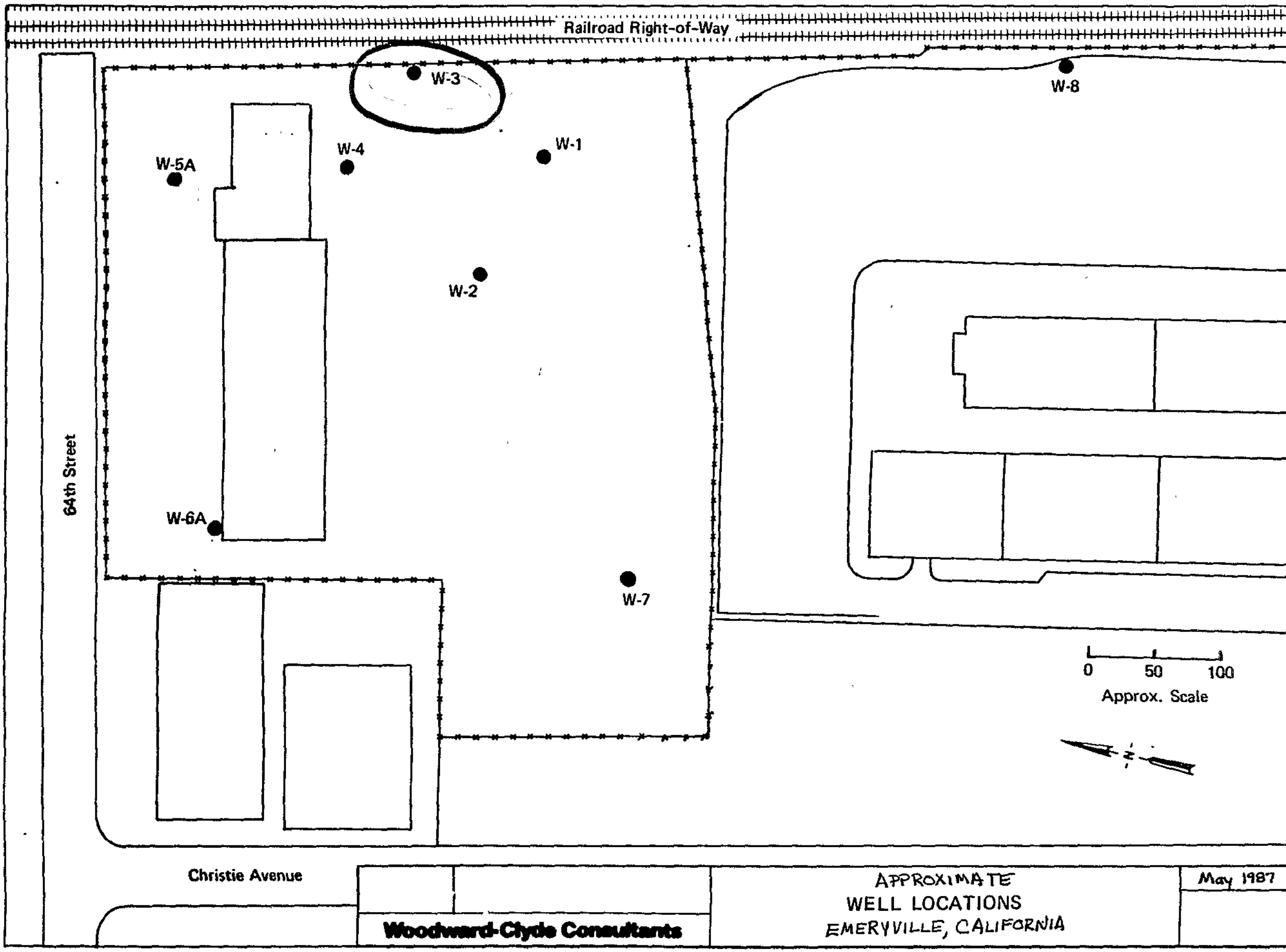

298485

15/4W 15E7

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WELL COMPLETION REPORT
(WELL LOGS)

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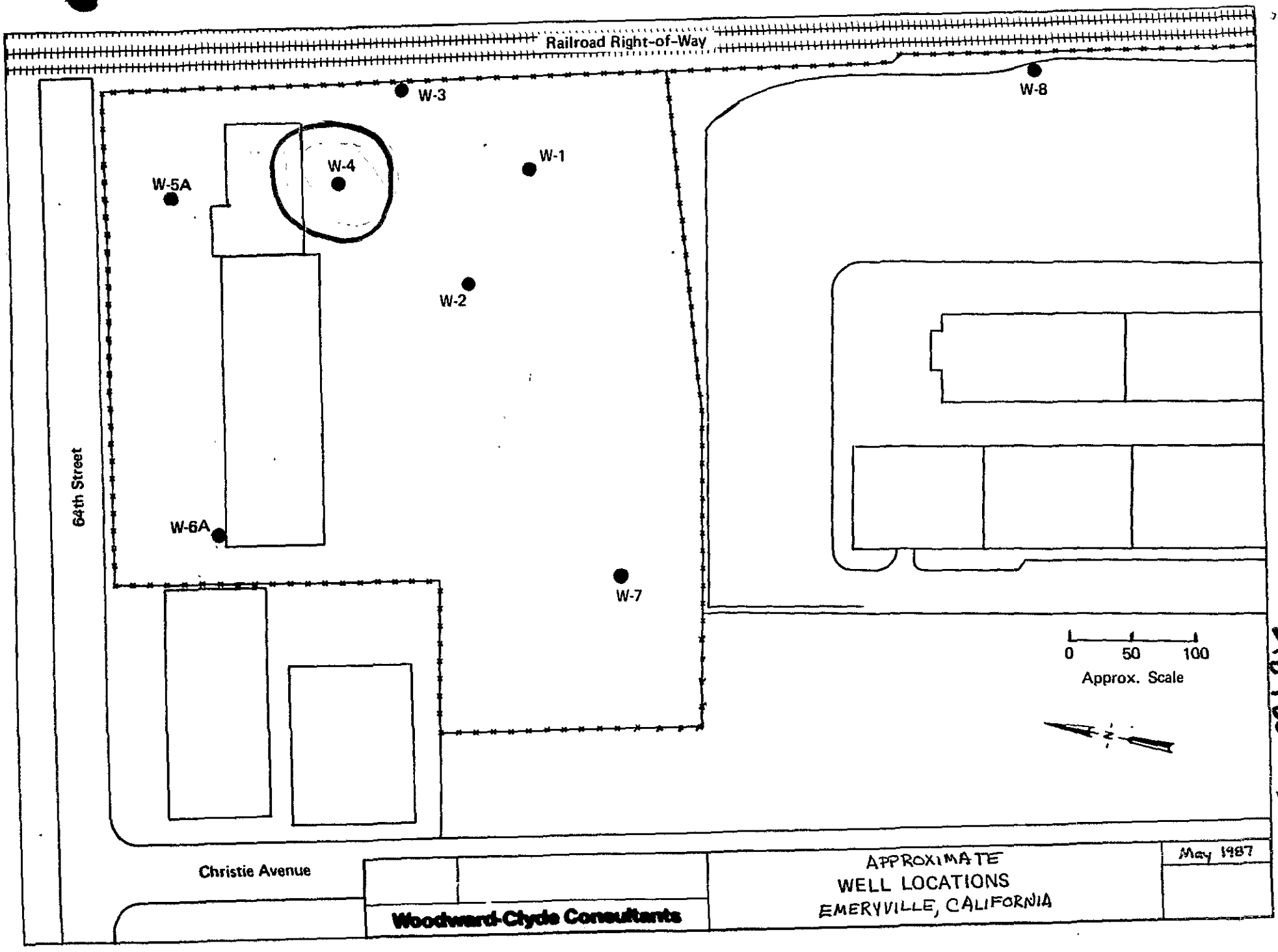
Railroad Right-of-Way
W-3
W-8
W-1
W-4
W-5A
W-2
64th Street
W-6A
W-7
0
50
100
Approx. Scale
Christie Avenue
Woodward-Clyde Consultants
APPROXIMATE
WELL LOCATIONS
EMERYVILLE, CALIFORNIA
May 1987

15/4W-15J
01-423 T-X

APPENDIX A

SUBSURFACE SOIL SAMPLING

The subsurface investigation was performed using a truck-mounted drilling rig equipped with 8-inch diameter, continuous flight hollow stem augers. Five exploratory borings were drilled on February 9, 1989, to depths of 15 to 20 feet below existing grade. The approximate locations of the borings are shown on the Site Plan, Figure 2. The augers and equipment were steam-cleaned prior to the drilling operations. The borings were grouted to the ground surface at the completion of the drilling program.

The soils encountered in the borings were continuously logged in the field by our geologist. The soils were described in accordance with the Unified Soil Classification System (ASTM D-2487). The logs of the borings as well as a key for the classification of the soil (Figure A-1) and the symbols utilized on the logs (Figure A-2), are included.

Representative soil samples were obtained from the exploratory borings at selected depths based on our field observations at the time of drilling. The soil samples were obtained with the 2-1/2 inch O.D. California split spoon sampler. The locations where each soil sample was obtained are indicated in the "Sample" column of the logs as designated below. In addition, the depth of the selected soil sample to be utilized for possible analytical testing is designated by the cross-hatched area within the "sampler" column.

Each sample was collected in 2-inch diameter, 6-inch long, brass liners. The samplers and brass liners were decontaminated with a trisodium phosphate (TSP) solution, rinsed with fresh water, and then a final rinse of deionized water prior to each sampling. The ends of the soils samples were covered with aluminum foil, rubber capped, and placed in zip-lock, plastic bags. Each sample was labeled in such a manner as to maintain client confidentiality and immediately placed in refrigerated storage. A chain-of-custody form was completed by the sampler and accompanied the samples to Sequoia Analytical Laboratory, in Redwood City, California for analytical testing.

Resistance blow counts were obtained with the samplers by dropping a 140-pound hammer through a 30-inch free fall. The sampler was driven 18 inches and the number of blows were recorded for each 6 inches of penetration. The blows per foot recorded on the boring logs represent the accumulated number of blows that were required to drive the last 12 inches. Due to the higher energy of this

15/4W-15J
01-423T-X

automatic hammer system, the blow counts obtained are not standard penetration resistance values. In order to convert, these blow counts should be multiplied by a factor of 1.56. Due to the larger diameter of California sampler, the blow counts calculated are not standard penetration resistance values, the indicated blow counts should be multiplied by an additional factor of 0.8.

01-423T

Inv✓ 1S/4W 15J.

DRILL RIG Mobile Rig B-53	SURFACE ELEVATION -	LOGGED BY ROB
DEPTH TO GROUNDWATER 13' (see note 2)	BORING DIAMETER 8 inches	DATE DRILLED 2/9/89

DESCRIPTION AND REMARKS	COLOR	CONSIST.	SOIL TYPE	DEPTH (FEET)	SAMPLER	PENETRATION RESISTANCE (BLOWS/FT)	WATER CONTENT (%)	P.I.D. (ppm)	UNCONFINED COMPRESSIVE STRENGTH (KSF)
4" Asphalt over 1" Baserock									
CLAY, sandy(fine grained) with gravels(fine grained), some silt, damp	orange-brown	very stiff	CL	1					
				2		21		2.8	
				3					
				4					
(grading with less gravels) (grading with less sand and more silt)				5		18		4.5	
				6					
				7					
				8					
		stiff		9					
				10		10		5.8	
				11					
CLAY, gravelly(fine to medium grained), some silt, wet	light orange-brown	stiff	CL	12					
(grading to saturated)				13			▽		
				14					
				15		28		4.3	
Bottom of Boring = 15 Feet				16					
				17					
				18					
				19					
				20					

Notes:
1. The stratification lines represent the approximate boundaries between soil types and the transition may be gradual.
2) Groundwater level was measured at 13 feet 10 minutes after drilling
3) These samplers were driven with a fully automatic hammer and the penetration resistance values should be converted as explained in Appendix A.

Kaldveer Associates
Geoscience Consultants
A California Corporation

EXPLORATORY BORING LOG

STANFORD-SAN PABLO
Oakland, California

PROJECT NO.	DATE	BORING NO.
KE1094-1	March 1989	B-1

Encs. 1486

01-4230

Inv 1S/4W 15J.

DRILL RIG Mobile Rig B-53	SURFACE ELEVATION -	LOGGED BY RDB
DEPTH TO GROUNDWATER 13½' (see note 2)	BORING DIAMETER 8 inches	DATE DRILLED 2/9/89

DESCRIPTION AND REMARKS	COLOR	CONSIST.	SOIL TYPE	DEPTH (FEET)	SAMPLER	PENETRATION RESISTANCE (BLOWS/FT)	WATER CONTENT (%)	P.I.D. (ppm)	UNCONFINED COMPRESSIVE STRENGTH (KSF)
3½" Asphalt over 5" Baserock									
CLAY, sandy (fine to medium grained), with gravels (fine grained), some silt, damp, sands grading from fine to coarse grained	orange-brown	stiff	CL	1 2 3 4 5 6 7		12 13		3.2 4.6	
CLAY, silty, some gravels (fine grained), moist	light orange-brown	very stiff	CL	8 9 10 11 12 13		25		24	
(grading to saturated)							▽		
		hard		14 15 16 17 18 19 20		29 30		7.8 6.4	
Bottom of Boring = 20 Feet									

Notes:
1. The stratification lines represent the approximate boundaries between soil types and the transition may be gradual.
2) Groundwater level was measured at 13½ feet 10 minutes after drilling
3) These samplers were driven with a fully automatic hammer and the penetration resistance values should be converted as explained in Appendix A.

Kaldveer Associates
Geoscience Consultants
A California Corporation

EXPLORATORY BORING LOG

STANFORD SAN PABLO
Oakland, California

PROJECT NO.	DATE	BORING NO
KE1094-1	March 1989	EB-2

Enseo 1486

01-423Y

Inv ✓ 15/1W 15J

DRILL RIG Mobile Rig B-53	SURFACE ELEVATION -	LOGGED BY RDB
DEPTH TO GROUNDWATER 13' (See Note 2)	BORING DIAMETER 8 inches	DATE DRILLED 2/9/89

DESCRIPTION AND REMARKS	COLOR	CONSIST	SOIL TYPE	DEPTH (FEET)	SAMPLER	PENETRATION RESISTANCE (BLOWS/FT)	WATER CONTENT (%)	P.I.D. (ppm)	UNCONFINED COMPRESSIVE STRENGTH (KSF)
3" Asphalt over 1½" Baserock									
CLAY, sandy (fine grained), some silt (slight petroleum odor, damp)	mottled light brown-olive-green	very stiff	CL	1					
				2		15		5.3	
				3					
				4					
(grading to no odor)				5		14		6.0	
				6					
CLAY, silty, trace of sand (fine grained), moist	light brown	very stiff	CL	7					
				8					
				9					
				10		13		4.9	
(grading to saturated) (grading with some gravels, fine grained)				11					
				12					
				13			▽		
				14					
				15		22		6.2	
Bottom of Boring = 15 Feet				16					
				17					
				18					
				19					
				20					

Notes:
1. The stratification lines represent the approximate boundaries between soil types and the transition may be gradual.
2) Groundwater level was measured at 13 feet 10 minutes after drilling
3) These samplers were driven with a fully automatic hammer and the penetration resistance values should be converted as explained in Appendix A.

Kaldveer Associates
Geoscience Consultants
A California Corporation

EXPLORATORY BORING LOG

STANFORD SAN PABLO
Oakland, California

PROJECT NO	DATE	BORING NO
KE1094-1	March 1989	EB-3

Enseco 1486

01-423W

Inw 1S/4W 15J

DRILL RIG Mobile Rig B-53	SURFACE ELEVATION -	LOGGED BY RDB
DEPTH TO GROUNDWATER Not Encountered	BORING DIAMETER 8 inches	DATE DRILLED 2/9/89

DESCRIPTION AND REMARKS	COLOR	CONSIST.	SOIL TYPE	DEPTH (FEET)	SAMPLER	PENETRATION RESISTANCE (BLOWS/FT)	WATER CONTENT (%)	P.I.D. (ppm)	UNCONFINED COMPRESSIVE STRENGTH (KSF)
3" Asphalt over 2" Baserock									
CLAY, silty, some sand (fine grained), damp	mottled brown-green-black	very stiff	CL	1					
				2		16		11.9	
(moderate petroleum odor)				3					
				4					
				5		16		268	
				6					
CLAY, silty, trace of sand (fine grained), moist	light brown	stiff	CL	7					
				8					
				9					
				10		12		7.1	
(grading to wet)				11					
				12					
				13					
				14					
				15		9		6.2	
				16					
				17					
				18					
				19					
				20		25		7.3	
Bottom of Boring = 20 Feet									

Notes:
1. The stratification lines represent the approximate boundaries between soil types and the transition may be gradual.
2) These samplers were driven with a fully automatic hammer and the penetration resistance values should be converted as explained in Appendix A.

Kaldveer Associates
Geoscience Consultants
A California Corporation

EXPLORATORY BORING LOG

STANFORD SAN PABLO
Oakland, California

PROJECT NO.	DATE	BORING NO.
KE1094-1	March 1989	EB-4

Ensco
1486

01-423X

Inw 15/4W 15J

DRILL RIG Mobile Rig B-53	SURFACE ELEVATION -	LOGGED BY RDB
DEPTH TO GROUNDWATER Not Encountered	BORING DIAMETER 8 inches	DATE DRILLED 2/9/89

DESCRIPTION AND REMARKS	COLOR	CONSIST.	SOIL TYPE	DEPTH (FEET)	SAMPLER	PENETRATION RESISTANCE (BLOWS/FT)	WATER CONTENT (%)	P.I.D. (ppm)	UNCONFINED COMPRESSIVE STRENGTH (KSF)
SAND (fine to medium grained), trace of silt, damp	mottled brown-olive-green	loose	SW	1					
(slight odor of petroleum)				2					
				3					
(grading to moist)				4		4		5.4	
				5					
				6					
				7					
(grading to moderate petroleum odor)		very loose		8					
				9					
				10		2		18	
(FILL)				11					
				12					
CLAY, silty, trace of sand (fine grained), trace of gravel (fine grained), moist to wet	orange-brown	stiff	CL	13					
				14		9		6.3	
				15					
Bottom of Boring = 15 Feet				16					
				17					
				18					
				19					
				20					

Notes:
1. The stratification lines represent the approximate boundaries between soil types and the transition may be gradual.
2) These samplers were driven with a fully automatic hammer and the penetration resistance values should be converted as explained in Appendix A.

Kaldveer Associates
Geoscience Consultants
A California Corporation

EXPLORATORY BORING LOG

STANFORD SAN PABLO
Oakland, California

PROJECT NO.	DATE	BORING NO
KE1094-1	March 1989	EB-5

Esco 1486

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STATE OF CALIFORNIA DWR
WELL COMPLETION REPORT
(WELL LOGS)

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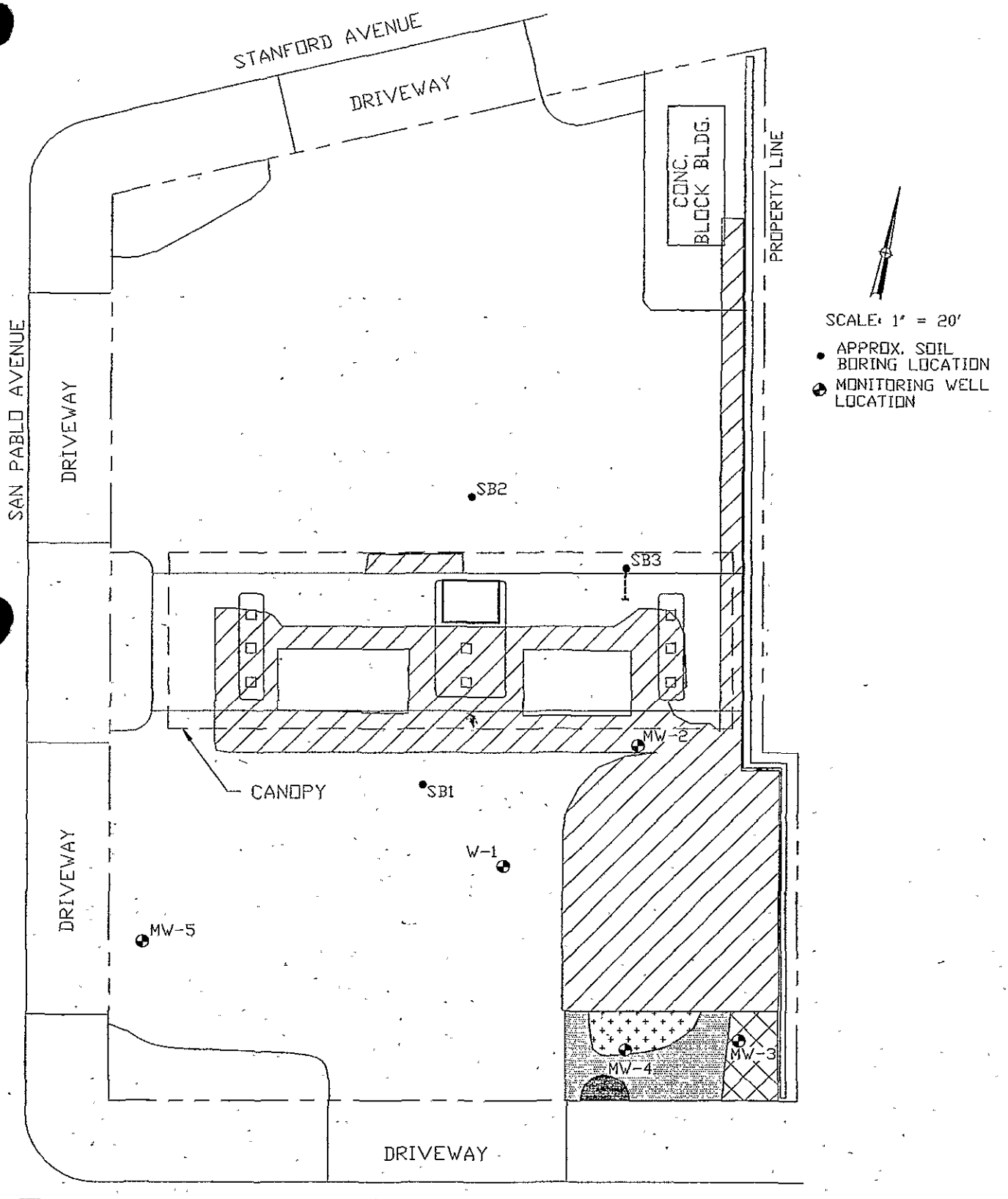
2 of 3

482477

15/4W 15J6



GHH ENGINEERING INC.

57TH STREET

RCE #27011 LIC. #537901

8084 Old Auburn Road, Suite E Citrus Heights, CA 95610 (916) 723-7645

383 482477 1S/4W 15J6

GAH ENGINEERING INC.
LIC.#537901
8084 OLD AUBURN ROAD CITRUS HEIGHTS, CA 95610

WELL LOG

PROJECT NAME SAN PABLO
PROJECT NO. 1129
MW# 2
PAGE 1 OF 1

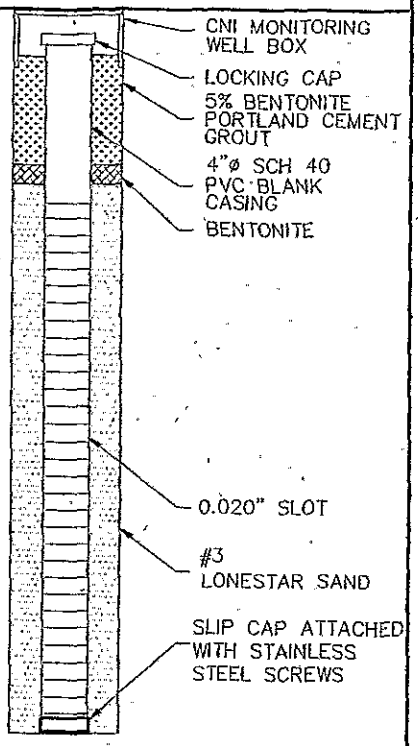
APPROVED:

BORING DIAMETER 10.5"
SCREEN LENGTH 14'
SLOT 0.020"
BLANK LENGTH 5'
DIAMETER 4"
DATE START 5/20/92
DATE FINISH 5/21/92

LOCATION APPROXIMATELY 18 FEET WEST OF CORNER IN CONCRETE WALL
DRILLING METHOD HOLLOW STEM AUGER
SAMPLING METHOD CA SPLIT SPOON
LOGGED BY: JOHN N. CHURCH
DRILLING CO B & F DRILLING
OPERATOR CHRIS FISCUS

DEPTH (FEET)	BLOWS/FT COUNT	HEAD SPACE	SAMPLE ID #	LITHOLOGY
				Class 2 AB backfill.
5	2/4/5		MW2-5	Sandy silty clay; 10YR 4/4 dark yellowish brown; moist; stiff. CL Material caved off wall of excavation.
10	4/5/7	0.3ppm	MW2-10	▼
15	3/6/10			Sandy silty clay; 10YR 4/4 dark yellowish brown; moist; stiff. CL In-place material.
20				TOTAL DEPTH = 19 FEET
25				
30				
35				

CONSTRUCTION



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WELL COMPLETION REPORT
(WELL LOGS)

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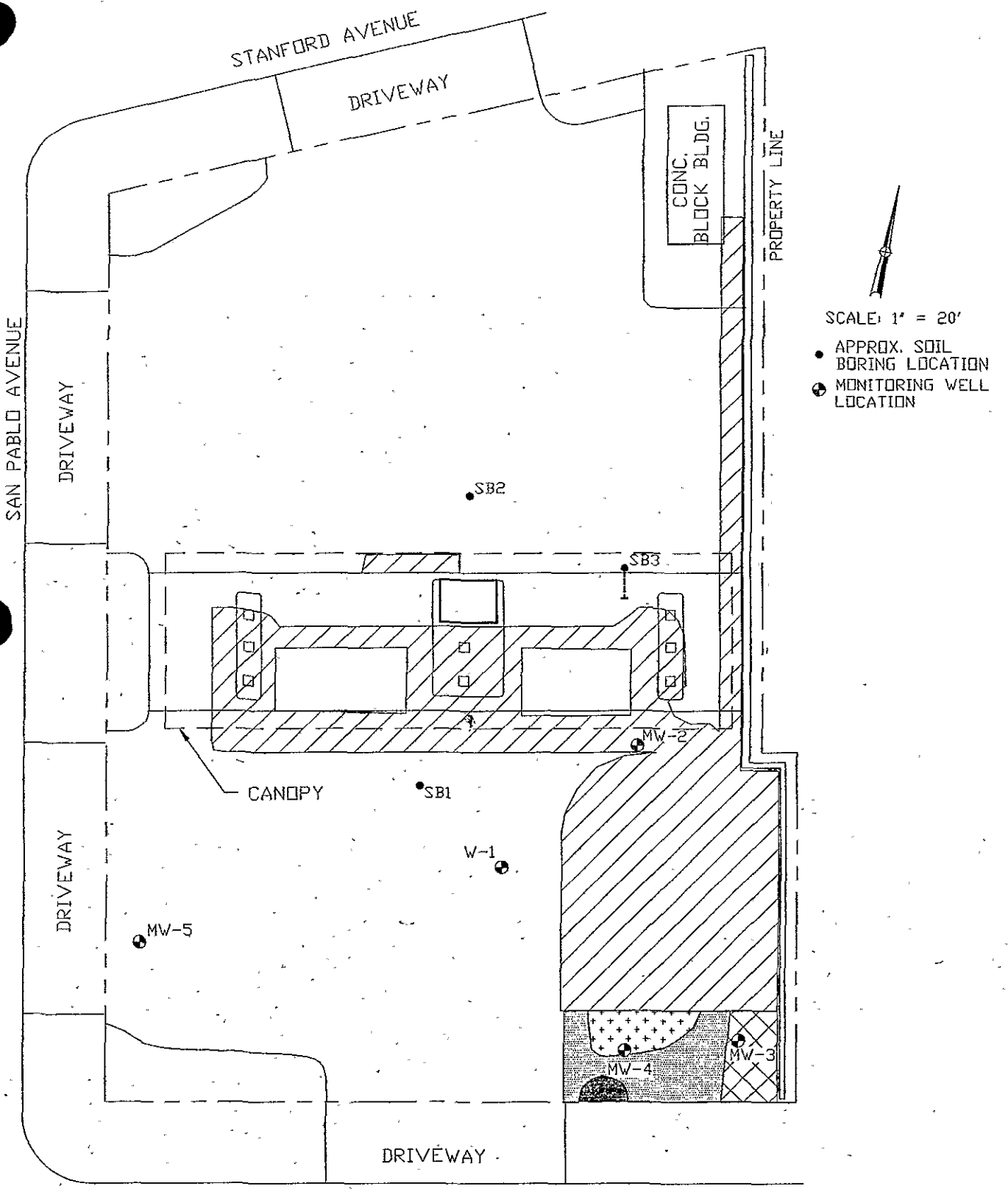
293 482878 15/4W 15J7



GHH ENGINEERING INC.
57TH STREET
RCE #27011 LIC. #537901
8084 Old Auburn Road, Suite E Citrus Heights, CA 95610 (916) 723-7645

3 of 3 482478 1S/4W 15J 7

GAH ENGINEERING INC.
LIC.#537901
8084 OLD AUBURN ROAD CITRUS HEIGHTS, CA 95610

WELL LOG

PROJECT NAME SAN PABLO
PROJECT NO. 1129
MW# 3
PAGE 1 OF 1

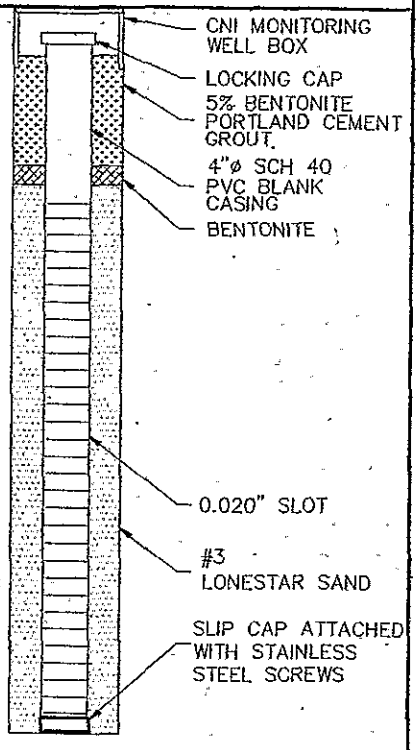
APPROVED:

BORING DIAMETER 10.5"
SCREEN LENGTH 14'
SLOT 0.020"
BLANK LENGTH 5'
DIAMETER 4"
DATE START 5/20/92
DATE FINISH 5/21/92

LOCATION APPROX. 8' FROM SE CORNER OF SITE BOUNDARY & SIDE WALK
DRILLING METHOD HOLLOW STEM AUGER
SAMPLING METHOD CA SPLIT SPOON
LOGGED BY: JOHN. N. CHURCH
DRILLING CO. B & F DRILLING
OPERATOR CHRIS FISCUS

DEPTH (FEET)	BLOWS/FT COUNT	HEAD SPACE	SAMPLE ID #	LITHOLOGY
				Class 2 AB backfill.
5	7/9/11	0.6ppm	MW3-5	Sandy silty clay; 2.5Y 5/4 light olive brown; damp; very stiff. CL
10	10/12/18	0.3ppm	MW3-10	▼ Zone containing coarse sand & sand sized metamorphic rock fragments.
15	4/11/17	0.6ppm	MW3-15	Clay, with <5% sand sized metamorphic rock fragments; 10YR 3/6 dark yellowish brown; moist; small fractures in clay with slight grayish color & containing ground water. CL
20				TOTAL DEPTH = 19 FEET
25				
30				
35				

CONSTRUCTION



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STATE OF CALIFORNIA DWR
WELL COMPLETION REPORT
(WELL LOGS)

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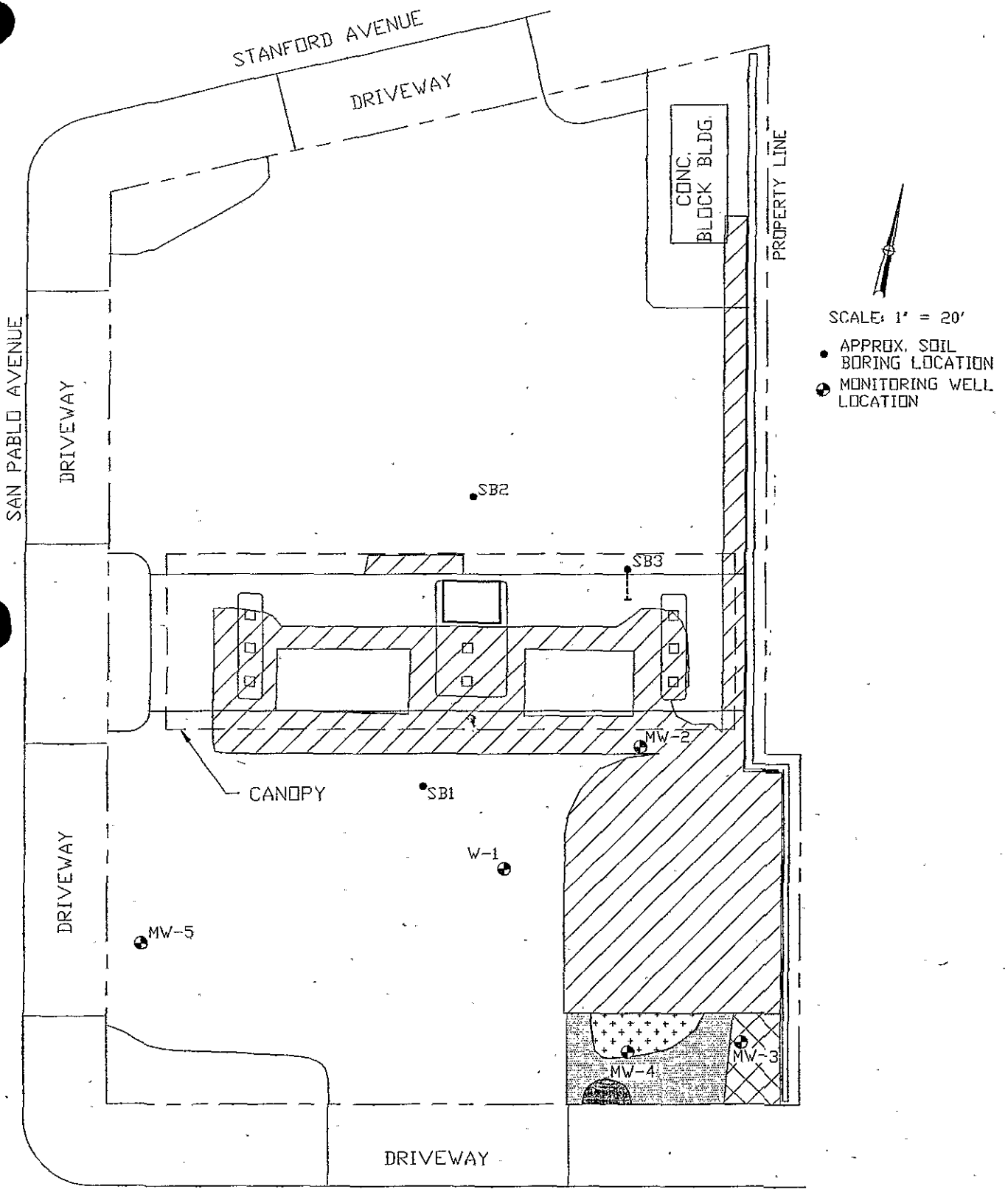
2 of 3 482479 15/4W 15J8



GHH
57TH STREET
ENGINEERING INC.

RCE #27011 LIC. #537901

8084 Old Auburn Road, Suite E Citrus Heights, CA 95610 (916) 723-7645

3 & 3 482479 1S/4W 15J8

GHH ENGINEERING INC.
LIC.#537901
8084 OLD AUBURN ROAD CITRUS HEIGHTS, CA 95610

WELL LOG

PROJECT NAME SAN PABLO
PROJECT NO. 1129
MW# 4
PAGE 1 OF 1

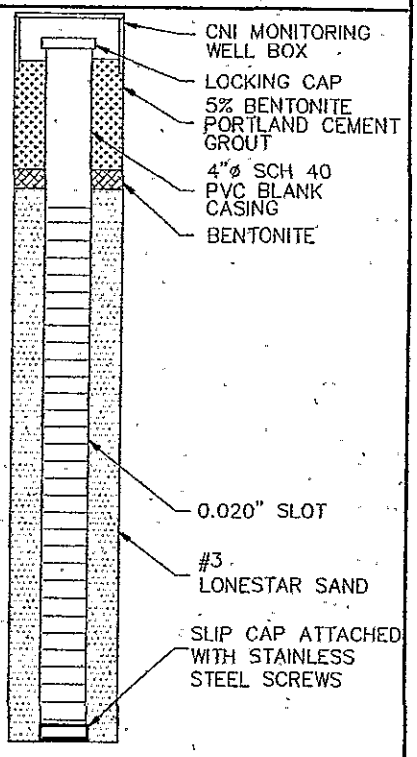
BORING DIAMETER 10.5"
SCREEN LENGTH 14'
SLOT 0.020"
BLANK LENGTH 5'
DIAMETER 4"
DATE START 5/21/92
DATE FINISH 5/21/92

LOCATION APPROX. 25' WEST OF EAST CONC. WALL, 5' N OF SIDEWALK, 5' S OF PROPERTY
DRILLING METHOD HOLLOW STEM AUGER
SAMPLING METHOD CA SPLIT SPOON
LOGGED BY: JOHN N. CHURCH
DRILLING CO. B & F DRILLING
OPERATOR CHRIS FISCUS

APPROVED:

DEPTH (FEET)	BLOWS/FT COUNT	HEAD SPACE	SAMPLE ID #	LITHOLOGY
5				Class 2 AB backfill.
10	5/8/11	31ppm	ES13	Sandy silty clay; 2.5Y 5/6 light olive brown; damp. CL ▼Hydrocarbon odor. Water on fractures. Coarse sand zone in clay.
15				Clay; 10YR 4/6 dark yellowish brown; damp. CL
20				TOTAL DEPTH = 19 FEET
25				
30				
35				

CONSTRUCTION



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(WELL LOGS)

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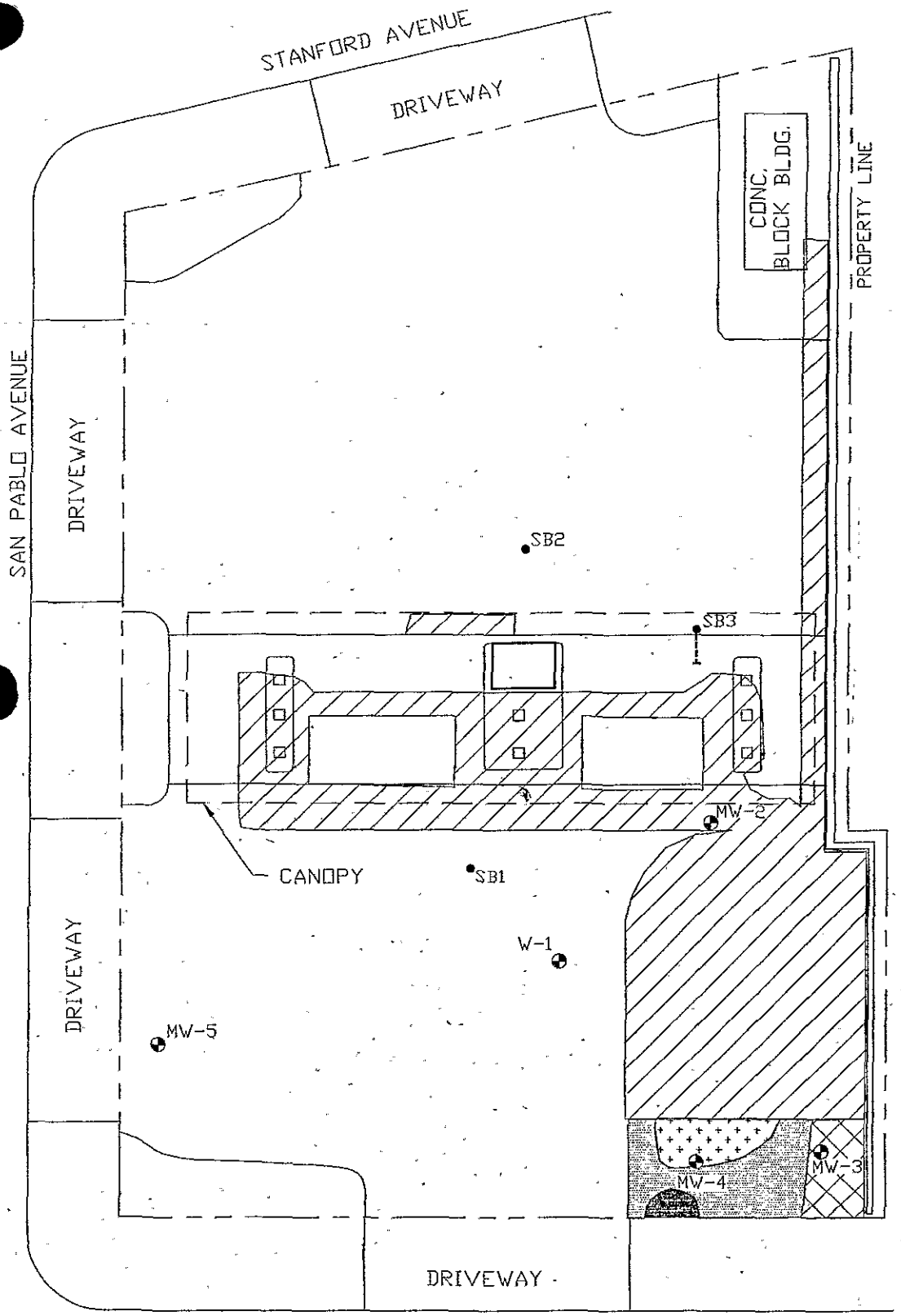
2g3 482480 1S/4W 15J 9



GHH ENGINEERING INC.

57TH STREET

RCE #27011 LIC. #537901

8084 Old Auburn Road, Suite E Citrus Heights, CA 95610 (916) 723-7645

3 73 482480 15/4W 15J9

GAH ENGINEERING INC.
LIC.#537901
8084 OLD AUBURN ROAD CITRUS HEIGHTS, CA 95610

WELL LOG

PROJECT NAME SAN PABLO
PROJECT NO. 1129
MW# 5
PAGE 1 OF 1

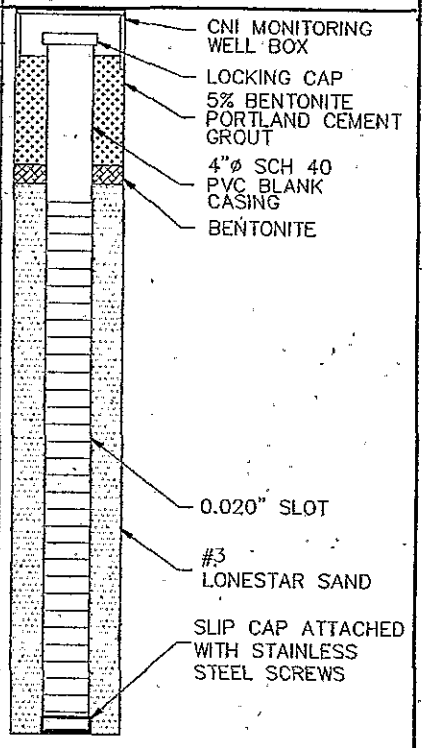
BORING DIAMETER 10.5"
SCREEN LENGTH 14'
SLOT 0.020"
BLANK LENGTH 5'
DIAMETER 4"
DATE START 5/20/92
DATE FINISH 5/21/92

LOCATION APPROX 25' NORTH OF SW CORNER OF SITE
DRILLING METHOD HOLLOW STEM AUGER
SAMPLING METHOD CA SPLIT SPOON
LOGGED BY: JOHN N. CHURCH
DRILLING CO. B & F DRILLING
OPERATOR CHRIS FISCUS

APPROVED:

DEPTH (FEET)	BLOWS/FT COUNT	HEAD SPACE	SAMPLE ID #	LITHOLOGY
				Asphalt & subgrade.
				Sandy silt; 2.5Y 3/2 very dark grayish brown; damp. ML
				Clay; 10YR 3/6 dark yellowish brown; stiff; damp. CL
5	6/5/7	0.3ppm	MW5-5	
10	5/6/12		MW5-10	▼ Groundwater in fractures.
				Zone containing coarse sand sized grains.
15				
20				TOTAL DEPTH = 19 FEET
25				
30				
35				

CONSTRUCTION



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STATE OF CALIFORNIA DWR
WELL COMPLETION REPORT
(WELL LOGS)

REMOVED

REGION

COUNTY

NEAR

STATE OF CALIFORNIA
DEPARTMENT OF WATER RESOURCES

WELL LOG

BASIN

SWR NO. B & M

OTHER NOS.

01-756

LOCATION

OWNER Griffin and Skelly ADDRESS Emeryville

DRILLED BY Rogers ADDRESS 110 Sutter, S. F. California, 1738 Larkin

DRILLING METHOD GRAVEL PACKED DATE COMPLETED

SIZE OF CASING 12" DEPTH STRUCK WATER AT

PERFORATIONS SIZE No.

WATER LEVEL BEFORE PERFORATING AFTER

TEST DATA: DISCHARGE G. P. M. DRAWDOWN FT. HOURS RUN

OTHER DATA AVAILABLE: WATER LEVEL RECORD ANALYSIS

SURFACE ELEV. DATUM SOURCE OF INFORMATION Drillers' Log

DEPTH	ELEV. OF BOTTOM OF STRATUM	MATERIAL	THICKNESS	SP. YIELD %	
0 - 4		Fill			
8		adobe			
12		yellow clay			
14		gray clay			
17		yellow clay			
25		stone clay			
36		sandy clay			
45		gray clay			
49		yellow clay			
53		cement coarse sand			
57		gray clay			
75		cement clay			
88		gray clay			
100		yellow clay			
108		cement			
123		had yellow clay			
127		dirty gravel			
139		gray clay			
149		coarse sand			
152		sandy clay			
156		cement gravel			
166		sandy clay			
180		yellow clay			
194		coarse sandy clay			
200		sandy yellow clay			
210		gravel			
213		yellow clay			

FOR FIELD COPIES USE ALTERNATE LINES

LOG OBTAINED BY DATE SHEET 1 OF

FORM 263.

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WELL COMPLETION REPORT
(WELL LOGS)

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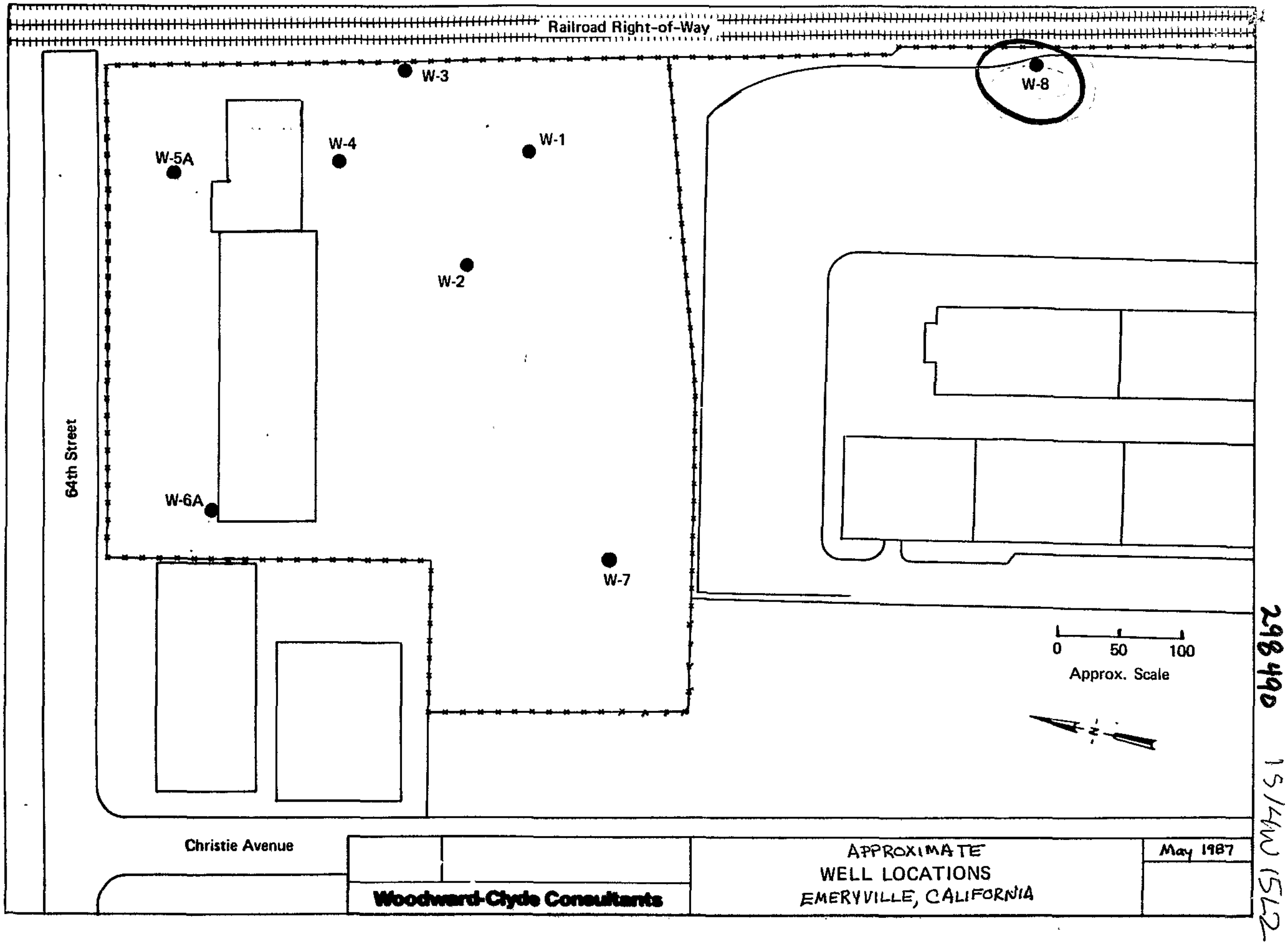

Railroad Right-of-Way
W-3
W-8
W-4
W-1
W-5A
W-2
64th Street
W-6A
W-7
0
50
100
Approx. Scale
N
Christie Avenue
Woodward-Clyde Consultants
APPROXIMATE
WELL LOCATIONS
EMERYVILLE, CALIFORNIA
May 1987
298490
15/4W 15L2

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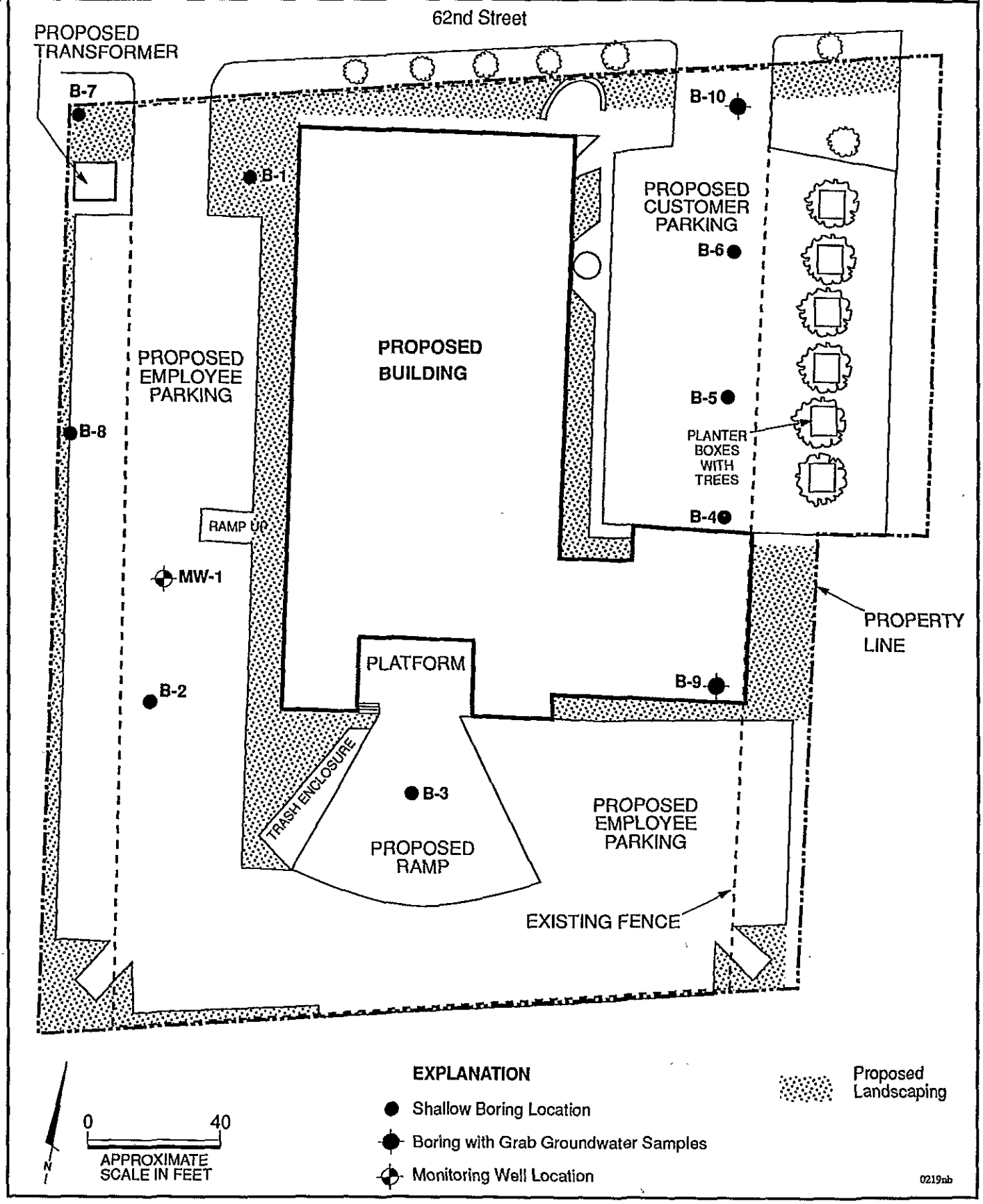


Harding Lawson Associates
Engineering and Environmental Services

Boring Location Map
Proposed USPS Facility
Emeryville, California

PLATE **2**

DRAWN	JOB NUMBER	APPROVED	DATE	REVISED DATE
NJBc	5525,134.02		1/92	

4/6 01-544A-0 01S04W15L

0 2000 4000

Scale in Feet

REFERENCE: U.S. Geological Survey map, Oakland West Quadrangle, Photorevised 1980

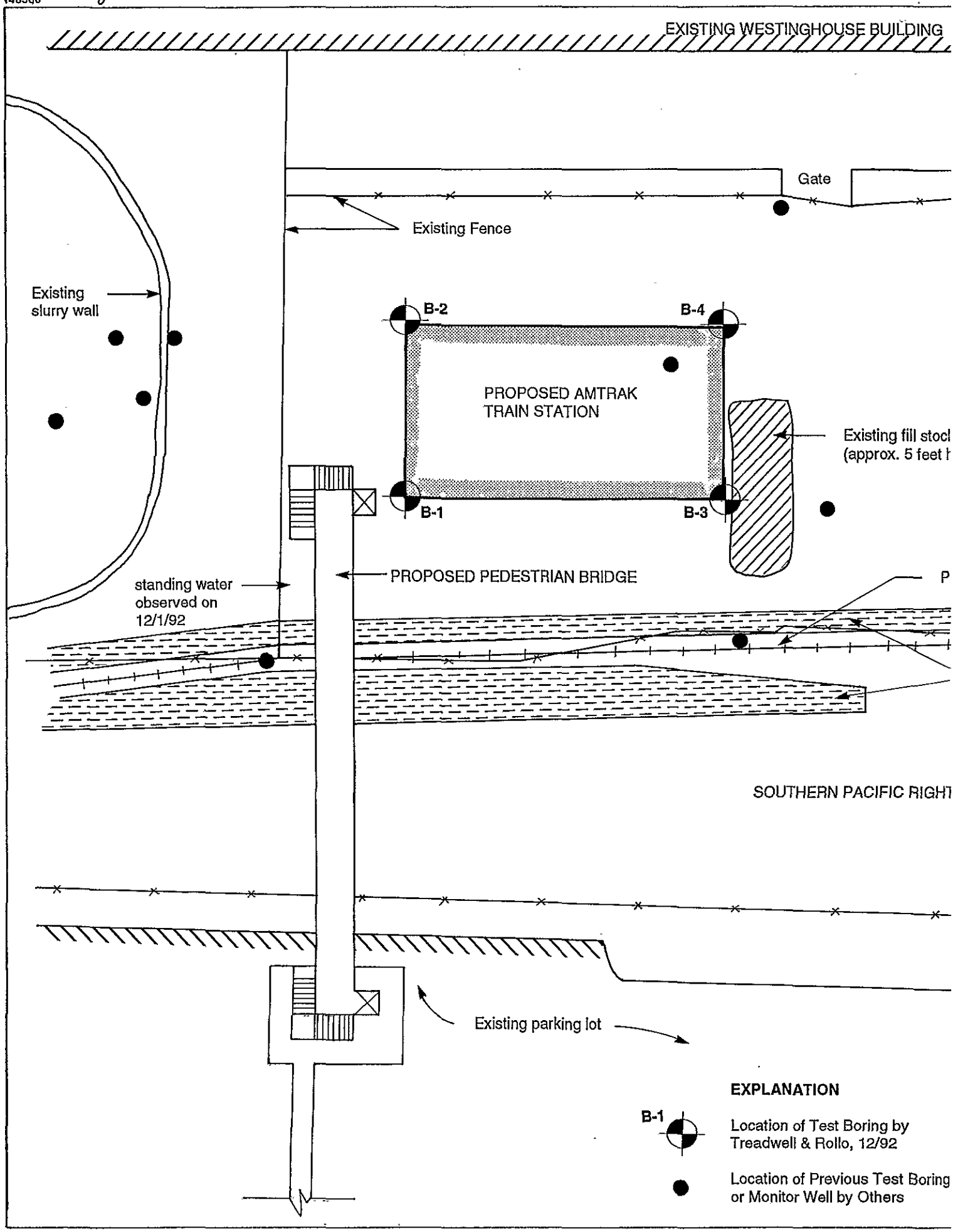
Landorgan St. & Powell St.

N

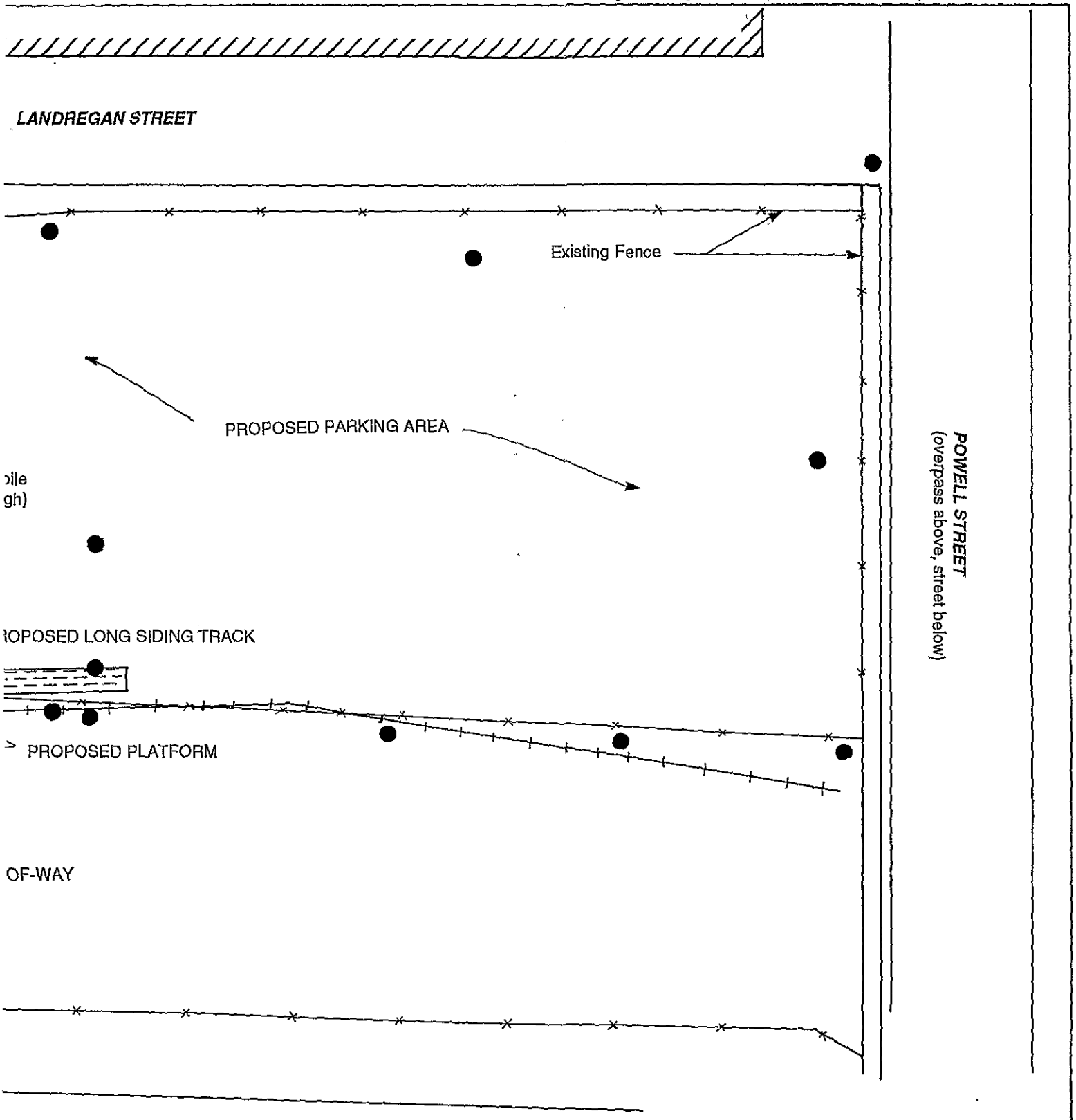
EMERYVILLE AMTRAK STATION Emeryville, California	SITE LOCATION MAP	
TREADWELL & ROLLO, INC. **Consulting Scientists and Engineers**	Project No. 1097.03	Figure 1

Permit # 92614

148506 27


EXISTING WESTINGHOUSE BUILDING
Gate
Existing Fence
Existing slurry wall
B-2
B-4
PROPOSED AMTRAK TRAIN STATION
Existing fill stock
(approx. 5 feet h
B-1
B-3
PROPOSED PEDESTRIAN BRIDGE
standing water observed on 12/1/92
SOUTHERN PACIFIC RIGHT
Existing parking lot
EXPLANATION
B-1
Location of Test Boring by Treadwell & Rollo, 12/92
Location of Previous Test Boring or Monitor Well by Others

01-544A-D 01S04W 15L



0 50
Scale in Feet

REFERENCE:
City of Emeryville,
Interim Amtrak Station,
by Korve Engineering, dated 11/20/92.

EMERYVILLE AMTRAK STATION
Emeryville, California

SITE PLAN

TREADWELL & ROLLO, INC.
Consulting Engineers and Scientists

Project No. 1097.03

Figure 2

3 7 OL544A-D

Unified Soil Classification System

Major Divisions		Symbols	Typical Names
Coarse-Grained Soils (more than half of soil > no. 200 sieve size)	Gravels (More than half of coarse fraction > no. 4 sieve size)	GW	Well-graded gravels or gravel-sand mixtures, little or no fines
		GP	Poorly-graded gravels or gravel-sand mixtures, little or no fines
		GM	Silty gravels, gravel-sand-silt mixtures
		GC	Clayey gravels, gravel-sand-clay mixtures
	Sands (More than half of coarse fraction < no. 4 sieve size)	SW	Well-graded sands or gravelly sands, little or no fines
		SP	Poorly-graded sands or gravelly sands, little or no fines
		SM	Silty sands, sand-silt mixtures
		SC	Clayey sands, sand-clay mixtures
Fine -Grained Soils (more than half of soil < no. 200 sieve size)	Silts and Clays LL = < 50	ML	Inorganic silts and very fine sands, rock flour, silty fine sands or clayey silts with slight plasticity
		CL	Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, lean clays
		OL	Organic silts and organic silty clays of low plasticity
	Silts and Clays LL = > 50	MH	Inorganic silts, micaceous or diatomaceous fine sandy or silty soils, elastic silts
		CH	Inorganic clays of high plasticity, fat clays
		OH	Organic clays of high plasticity, organic silty clays, organic silts
Highly Organic Soils		Pt	Peat and other highly organic soils

Grain Size Chart

Classification	Range of Grain Sizes	
	U.S. Standard Sieve Size	Grain Size in Millimeters
Boulders	Above 12"	Above 305
Cobbles	12" to 3"	305 to 76.2
Gravel	3" to No. 4	76.2 to 4.76
coarse	3" to 3/4"	76.2 to 19.1
fine	3/4" to No. 4	19.1 to 4.76
Sand	No. 4 to No. 200	4.76 to 0.074
coarse	No. 4 to No. 10	4.76 to 2.00
medium	No. 10 to No. 40	2.00 to 0.420
fine	No. 40 to No. 200	0.420 to 0.074
Silt and Clay	Below No. 200	Below 0.074

Sample Designation

- Undisturbed sample taken with Sprague & Henwood (3-inch outside diameter) sampler
- Classification sample taken with Standard Penetration Test (2-inch outside diameter) sampler
- Undisturbed sample taken with 3-inch outside diameter Shelby tube
- Attempted sample with no recovery

EMERYVILLE AMTRAK STATION
Emeryville, California

CLASSIFICATION CHART

TREADWELL & ROLLO, INC.
Consulting Engineers and Scientists

Project No. 1097.03 | Figure 7

476 01-544A 01S04W15L

PROJECT: **EMERYVILLE AMTRAK STATION**
Emeryville, California

Log of Boring B-1

Boring location: See Figure 2

Date started: 12/1/92 | Date finished: 12/1/92

Drilling method: Rotary Wash

Hammer weight: 140 lbs. | Drop: 30 inches

Sampler: 3.0-inch O.D. split barrel, SPT, Shelby tube

NOTES: Logged by Lou Gilpin

DEPTH (Feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/foot[2]	LITHOLOGY	MATERIAL DESCRIPTION	STRENGTH: Type of Strength Test	STRENGTH: Test Surcharge Pressure Lbs/Sq Ft	DATA: Fines %	DATA: Shear Strength Lbs/Sq Ft	MOISTURE-DENSITY DATA: Natural Moisture Content	MOISTURE-DENSITY DATA: Dry Density Lbs/Cu Ft
					Ground Surface Elevation: 9.2 feet[1] (approx.)						
1–2	1		16	CL	3/4-inch gravel at ground surface CLAY WITH GRAVEL (CL) dark brown, very stiff, moist FILL					15.0	108
2–3	2		10		LL=34, PI=12, See Figure 8					17.3	
3–6	3		50 psi	CH	becomes medium stiff to stiff and wet at 3 feet CLAY (CH) dark brown, soft, wet, with gravel						
6–9	4		12	CH	CLAY (CH) olive, stiff, wet, with gravel 3-inch O.D. sampler driven, bag recovery only increased gravel content at 8 feet						
9–14	5		27	GC	CLAYEY GRAVEL WITH SAND (GC) red-brown, medium-dense, wet						
14–18	6		16	CH	CLAY (CH) dark yellow-brown, very stiff, wet						
18–23	7		15	SC	CLAYEY SAND WITH GRAVEL (SC) mottled olive-brown and gray, medium dense, wet						
23–28	8		10	CH	SILT (ML) mottled olive-brown and gray, stiff, wet, with clay						
28–30											

Bg 6 01-544A

PROJECT: **EMERYVILLE AMTRAK STATION**
Emeryville, California

Log of Boring B-1

DEPTH (Feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/foot	SAMPLES: LITHOLOGY	MATERIAL DESCRIPTION	STRENGTH: Type of Strength Test	STRENGTH: Test Surcharge Pressure Lbs/Sq Ft	DATA: Fines %	DATA: Shear Strength Lbs/Sq Ft	MOISTURE-DENSITY DATA: Natural Moisture Content	MOISTURE-DENSITY DATA: Dry Density Lbs/Cu Ft
31–35				ML	SILT (ML) mottled olive-brown and gray, stiff, wet, with clay						
32–36	9	X	11	ML	SANDY SILT (ML) dark blue-gray, stiff, wet, with clay						
37–47	10	■	27	CH	CLAY (CH) dark blue-gray, very stiff, wet, with sand gravel lens at 42 to 43 feet mottled brown and olive from 42 to 45 feet						
48–49	11	■	29	SC	CLAYEY SAND (SC) light olive-brown, medium dense, wet, with gravel						
50–51				CH	CLAY (CH) olive-brown, stiff, wet						
52–60	12	X	36	SC	CLAYEY SAND (SC) light olive-brown, dense, wet, with gravel						

B-1b 01-544A

PROJECT: **EMERYVILLE AMTRAK STATION**
Emeryville, California

Log of Boring B-1

DEPTH (Feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/foot	SAMPLES: LITHOLOGY	MATERIAL DESCRIPTION	STRENGTH: Type of Strength Test	STRENGTH: Test Surcharge Pressure Lbs/Sq Ft	DATA: Fines %	DATA: Shear Strength Lbs/Sq Ft	MOISTURE-DENSITY DATA: Natural Moisture Content	MOISTURE-DENSITY DATA: Dry Density Lbs/Cu Ft
61–64				SC	CLAYEY SAND (SC) light olive-brown, dense, wet, with gravel						
65–77	13		50	CH	CLAY (CH) mottled light olive-brown and gray, very stiff to hard, wet gravel lens from 69 to 70 feet						
78	14		57/ 10"	GC	CLAYEY GRAVEL WITH SAND (GC) yellow-brown, very dense, wet						
79–90					Boring terminated at depth of 78.5 feet. Boring sealed with cement/bentonite grout. Groundwater level obscured by rotary-wash fluid. Notes: [1] Ground surface elevations estimated based on topographic information given plan entitled "City of Emeryville, Interim Amtrak Station," by Korve Engineering, dated 11/20/92. [2] Blow counts have been corrected to SPT N-values.						

4-7-4 01-544B

PROJECT: **EMERYVILLE AMTRAK STATION**
Emeryville, California

Log of Boring B-2

Boring location: See Figure 2

Date started: 12/1/92 | Date finished: 12/2/92

Drilling method: Rotary Wash (no fluid used)

Hammer weight: 140 lbs. | Drop: 30 inches

Sampler: SPT, 3.0-inch O.D. split barrel, Shelby tube

NOTES: Logged by Lou Gilpin

DEPTH (Feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/foot	LITHOLOGY	MATERIAL DESCRIPTION	STRENGTH: Type of Strength Test	STRENGTH: Test Surcharge Pressure Lbs/Sq Ft	DATA: Fines %	DATA: Shear Strength Lbs/Sq Ft	MOISTURE-DENSITY DATA: Natural Moisture Content	MOISTURE-DENSITY DATA: Dry Density Lbs/Cu Ft
					Ground Surface Elevation: 11.3 feet (approx.)						
1					3/4- inch gravel at ground surface						
2	1		8	CL	GRAVELLY CLAY (CL) dark gray, medium stiff, wet					15.4	109
3	2		5		groundwater level on 12/2/92 FILL					23.9	99
4											
5	3		200 psi		becomes stiff at 5-1/2 feet	TXUU	400		850	20.6	109
6											
7											
8	4		29	GC	CLAYEY GRAVEL WITH SAND (GC) yellow-brown, medium dense, wet						
9					3-inch O.D. sampler driven at 7 feet, bag sample only						
10											
11	5		11	CH	CLAY (CH) brown, medium stiff to stiff, wet						
12					Boring terminated at a depth of 11.5 feet. Boring sealed with cement/bentonite grout.						
13											
14											
15											
16											
17											
18											
19											
20											
21											
22											
23											
24											
25											
26											
27											
28											
29											
30											

4 of 4 01-544C

PROJECT: **EMERYVILLE AMTRAK STATION**
Emeryville, California

Log of Boring B-3

Boring location: See Figure 2

Date started: 12/2/92 | Date finished: 12/2/92

Drilling method: Rotary Wash (no fluid used)

Hammer weight: 140 lbs. | Drop: 30 inches

Sampler: 3.0-inch O.D. split barrel, Shelby tube

NOTES: Logged by Lou Gilpin

DEPTH (Feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/foot	LITHOLOGY	MATERIAL DESCRIPTION	STRENGTH: Type of Strength Test	STRENGTH: Test Surcharge Pressure Lbs/Sq Ft	DATA: Fines %	DATA: Shear Strength Lbs/Sq Ft	MOISTURE-DENSITY DATA: Natural Moisture Content	MOISTURE-DENSITY DATA: Dry Density Lbs/Cu Ft
					Ground Surface Elevation: 9.5 feet (approx.)						
1					GRAVELLY CLAY (CL)						
2	1		20		dark gray-brown, very stiff, moist, with sand						
3	2		200 psi	CL	LL=36, PI=17, see Figure 8					14.5	109
4					stiff at 3 feet	TXUU	300		1280	19.3	105
5					FILL						
6	3		200-300 psi	CH	CLAY (CH)						
7					olive-brown, stiff, wet						
8					very stiff to hard at 8 feet						
9	4		28							29.4	91
10					Boring terminated at a depth of 9.5 feet.						
11					Boring sealed with cement/bentonite grout.						
12					Groundwater did not enter boring prior to grouting.						
13											
14											
15											
16											
17											
18											
19											
20											
21											
22											
23											
24											
25											
26											
27											
28											
29											
30											

4-75 61-544D

PROJECT: **EMERYVILLE AMTRAK STATION**
Emeryville, California

Log of Boring B-4

Boring location: See Figure 2

Date started: 12/1/92 | Date finished: 12/2/92

Drilling method: Rotary Wash

Hammer weight: 140 lbs. | Drop: 30 inches

Sampler: 3.0-inch O.D. split barrel

NOTES: Logged by Lou Gilpin

DEPTH (Feet)	SAMPLES Sample No.	SAMPLES Sample	SAMPLES Blows/foot	LITHOLOGY	MATERIAL DESCRIPTION	STRENGTH Type of Strength Test	STRENGTH Test Surcharge Pressure Lbs/Sq Ft	DATA Fines %	DATA Shear Strength Lbs/Sq Ft	MOISTURE-DENSITY DATA Natural Moisture Content	MOISTURE-DENSITY DATA Dry Density Lbs/Cu Ft
					Ground Surface Elevation: 11.2 feet (approx)						
1				GC	CLAYEY GRAVEL (GC) dark gray, medium dense, wet — FILL						
2	1		22								
3	2		7	ML	CLAYEY SILT (ML) dark gray, medium stiff, wet						
4											
5											
6	3		10	CH	CLAY (CH) olive, stiff, wet					24.9	99
7											
8											
9											
10				CH	CLAY WITH SAND (CH) mottled olive-brown and gray, very stiff, wet						
11	4		18								
12											
13											
14											
15											
16	5		16		light olive-brown at 16 feet						
17											
18											
19											
20											
21	6		23								
22				ML	SILT (ML) dark yellow-brown, very stiff, wet, with clay						
23											
24				CH	CLAY (CH) mottled light olive-brown and gray, very stiff, wet						
25											
26	7		21								
27					gravel lens from 27 to 28 feet						
28											
29											
30											

5 of 5

01-5440

PROJECT: **GOLDEN GATE BRIDGE**
San Francisco, California

Log of Boring B-4

DEPTH (Feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/foot	LITHOLOGY	MATERIAL DESCRIPTION	STRENGTH: Type of Strength Test	STRENGTH: Test Surcharge Pressure Lbs/Sq Ft	DATA: Fines %	DATA: Shear Strength Lbs/Sq Ft	MOISTURE-DENSITY DATA: Natural Moisture Content	MOISTURE-DENSITY DATA: Dry Density Lbs/Cu Ft
31	8		24	CH	CLAY (CH) continued						
				SM	SILTY SAND (SM) mottled olive-brown and gray, medium dense, wet						
32–39				CH	CLAY (CH) green-gray, very stiff, wet, with some gravel						
40											
41	9		30								
42–46					gravel lenses between 42 and 46 feet						
47											
48					gravel lens at 48 feet						
49											
50					color change to light olive-brown at 51 feet						
51	10		23								
52–60					Boring terminated at depth of 51.5 feet. Boring sealed with cement/bentonite grout. Groundwater level obscured by rotary-wash fluid.						

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WELL COMPLETION REPORT
(WELL LOGS)

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WELL COMPLETION REPORT
(WELL LOGS)

REMOVED

1S/4W 15N4
316903

PROJECT: ASSESSOR'S PARCEL No. 1495-LOT 21
Frontage Road, Emeryville, California

WELL NO. MW-1

DRILLING SUPERVISOR: Dale R. Dell'Osso
DRILLING LOGGER: Dale R. Dell'Osso
DRILLER: Spectrum Exploration, Stockton, California
DRILL RIG: Acker AD-11 Truck-mount
DRILLING METHOD: 8" OD/5" ID Hollow Stem Auger
GROUNDWATER DEPTH: 6.6 ft. 06/29/90

CASING: 2 in. PVC
SLOT SIZE: 0.02 in.
PERF: 7.5 ft. - 22.5 ft.

DATE: 06/27/90
SEAL: 4 ft. - 6 ft.
WELL DEPTH: 23.5 ft.

DESCRIPTION OF MATERIALS	Depth (ft.)	GRAPHIC WELL DESIGN: Pedology	Annulus	Casing	Number/Diameter	Blows per foot	PID Field Screen (ppm)	Comments and Other Tests*
Top of casing elevation: ~15.1 ft.; (2.1 ft. above existing grade)			Locking cover in concrete	2" PVC BLANK CASING				
Surface Elevation: ~13.0 ft.	0							
Stiff dark yellow brown silty clay (fill)			Neat Cement		1) 2"	14	ND	
Stiff gray brown silty clay (fill)					2) 2"	14	ND	
Stiff dark gray black silty clay (fill)	5		Bentonite Pellets		3) 2"	52	ND	▼ 06/29/90
Medium dense gray gravelly medium grained sand (fill); sandstone and chert clasts <2"			No. 3 Monterey Sand	0.02" PERFORATED SCREEN	4) 2"	9	ND	
Medium stiff medium gray silty sandy clay with wood detritus (fill)	10				5) 2"	6	ND	1st free water @ 10 ft.
Medium stiff gray green silty clay (fill)								
Medium stiff olive black silty clay with minor subrounded gravel <2" (fill)					6) 2"	14	ND	
Red and black asphalt shingles/roofing felt (fill)	15				7) 2"	25	0.5	
Medium stiff saturated black silty clay Minor recovery - reeds (Old Marsh Deposit)					8) 2"	16	0.5	2nd free water @ 19.5 ft.
Medium stiff black silty clay	20							

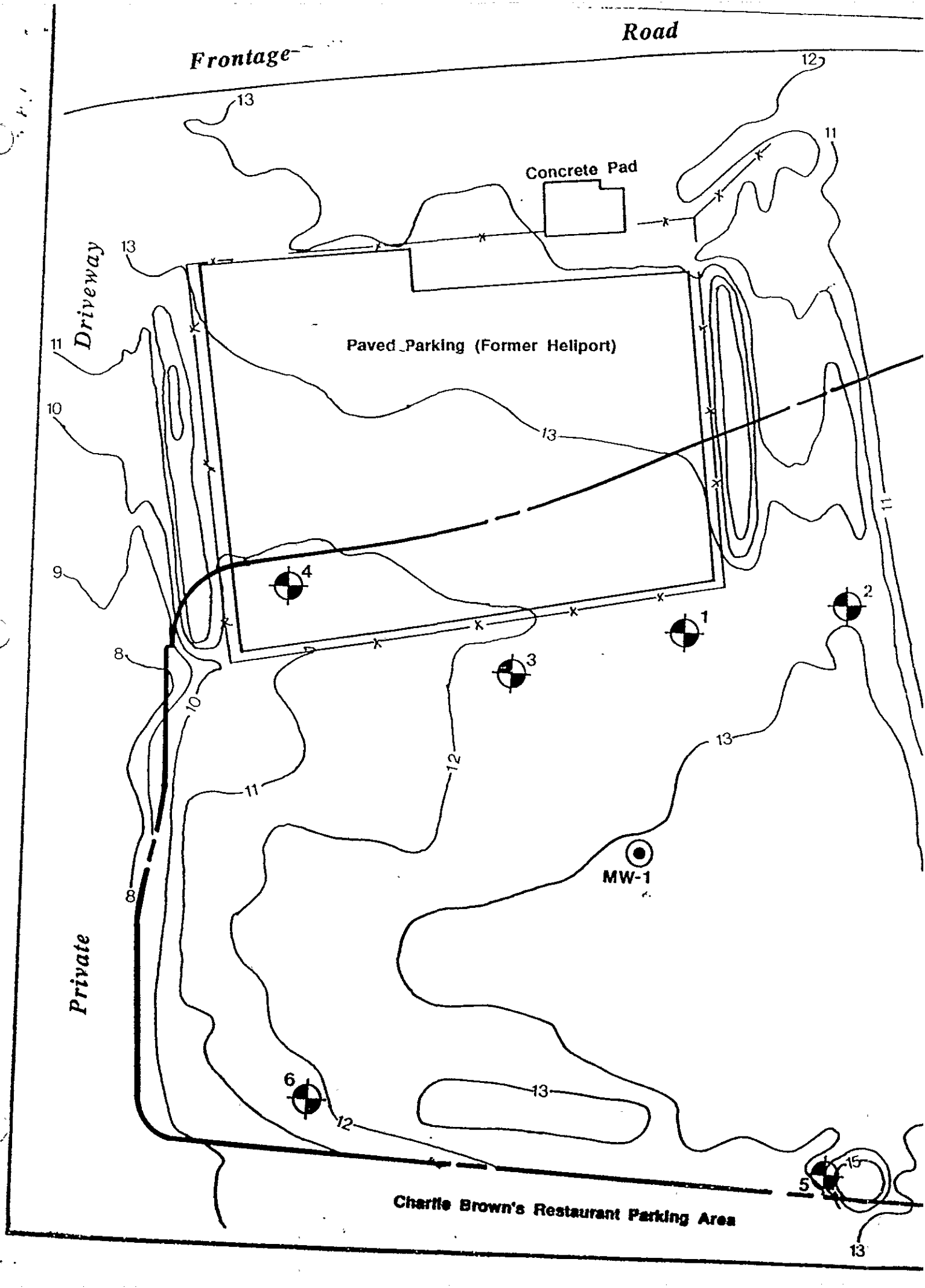
JOB NO. 6646.1-9005 | **HALLENBECK & ASSOCIATES** | FIGURE NO. 3

1S/4W 15N4

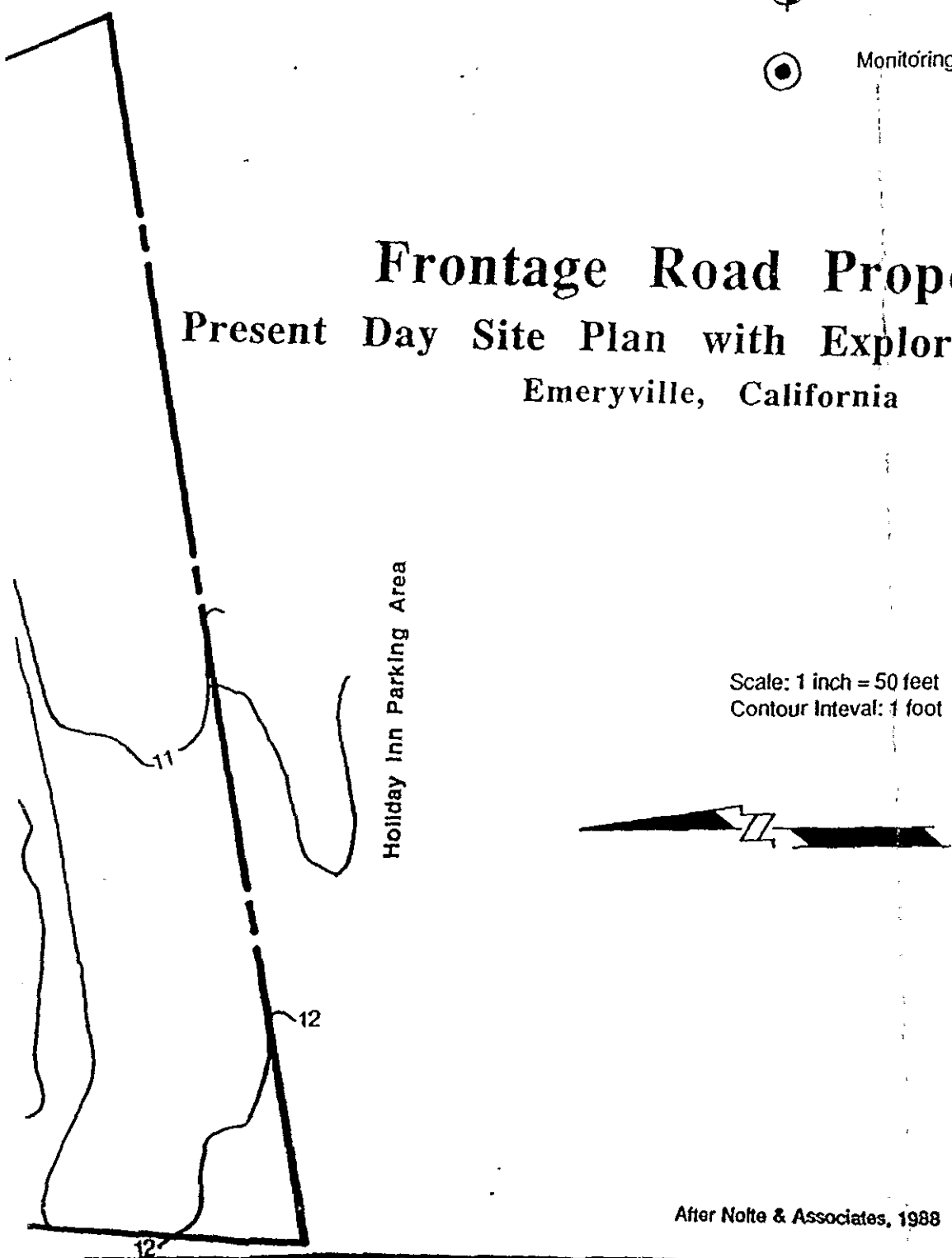
316903

PROJECT: ASSESSOR'S PARCEL No. 1495-LOT 21 Frontage Road, Emeryville, California									WELL NO. MW-1
DRILLING SUPERVISOR: Dale R. Dell'Osso	CASING: 2 in. PVC								DATE: 06/27/90
DRILLING LOGGER: Dale R. Dell'Osso	SLOT SIZE: 0.02 in.								SEAL: 4 ft. - 6.0 ft.
DRILLER: Spectrum Exploration, Stockton, California	PERF: 7.5 ft. - 22.5 ft.								WELL DEPTH: 23.5 ft.
DRILL RIG: Acker AD-11 Truck-mount									
DRILLING METHOD: 8" OD/5" ID Hollow Stem Auger									
GROUNDWATER DEPTH: 6.6 ft. 06/29/90									
DESCRIPTION OF MATERIALS	Depth (ft.)	GRAPHIC WELL DESIGN: Pedology	GRAPHIC WELL DESIGN: Annulus	GRAPHIC WELL DESIGN: Casing	Number/Diameter	Blows per foot	PID Field Screen (ppm)	Comments and Other Tests*
Top of casing elevation: ~15.1 ft.; (2.1 ft. above existing grade) Surface Elevation: ~13. ft. *Continued from Figure 3*	20		No. 3 Monterey Sand	0.02" PERFORATED SCREEN				
Medium stiff black silty clay					9) 2"	5	0.5	
Medium stiff black sandy silty clay					10) 2"	5	0.5	
TOTAL WELL DEPTH @ 23.5 FT.	25							
- Silty Clay - Silty Sandy Clay - Sandy Silty Clay - Sand - Gravel - Artificial Fill	30							
Notes: 1) Groundwater depth reported is stabilized. * See Appendix 1	35							
	40							

JOB NO. 6646.1-9005	HALLENBECK & ASSOCIATES	FIGURE NO. 3a


Road
Frontage
Concrete Pad
Driveway
Paved Parking (Former Heliport)
MW-1
Private
Charlie Brown's Restaurant Parking Area
1
2
3
4
5
6
8
9
10
11
12
13
15

1S/4W 15N4



Frontage Road Property

Present Day Site Plan with Exploratory Borings

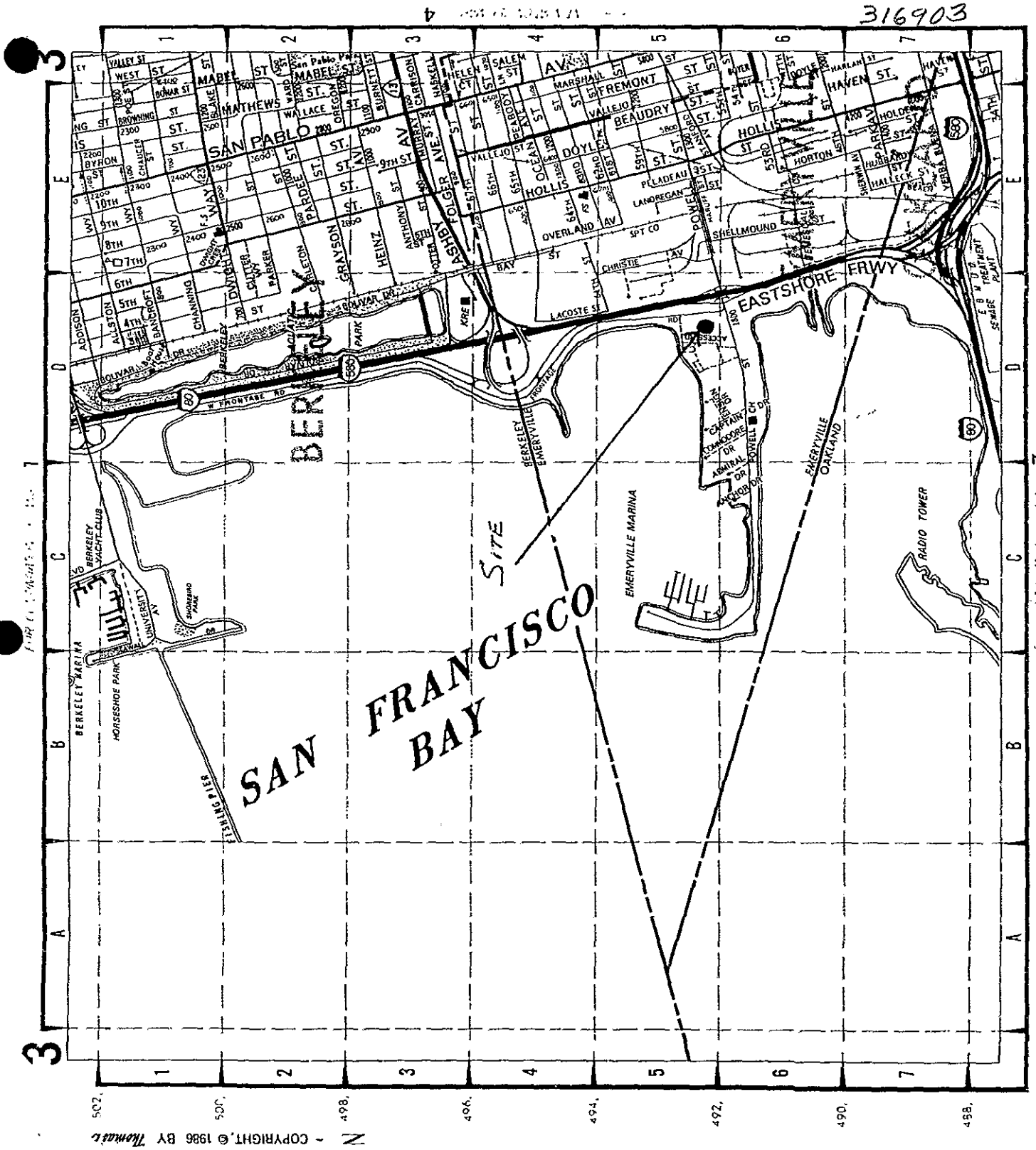
Emeryville, California

After Nolte & Associates, 1988

Job No.6646.1	HALLENBECK & ASSOCIATES	Figure No.: 1

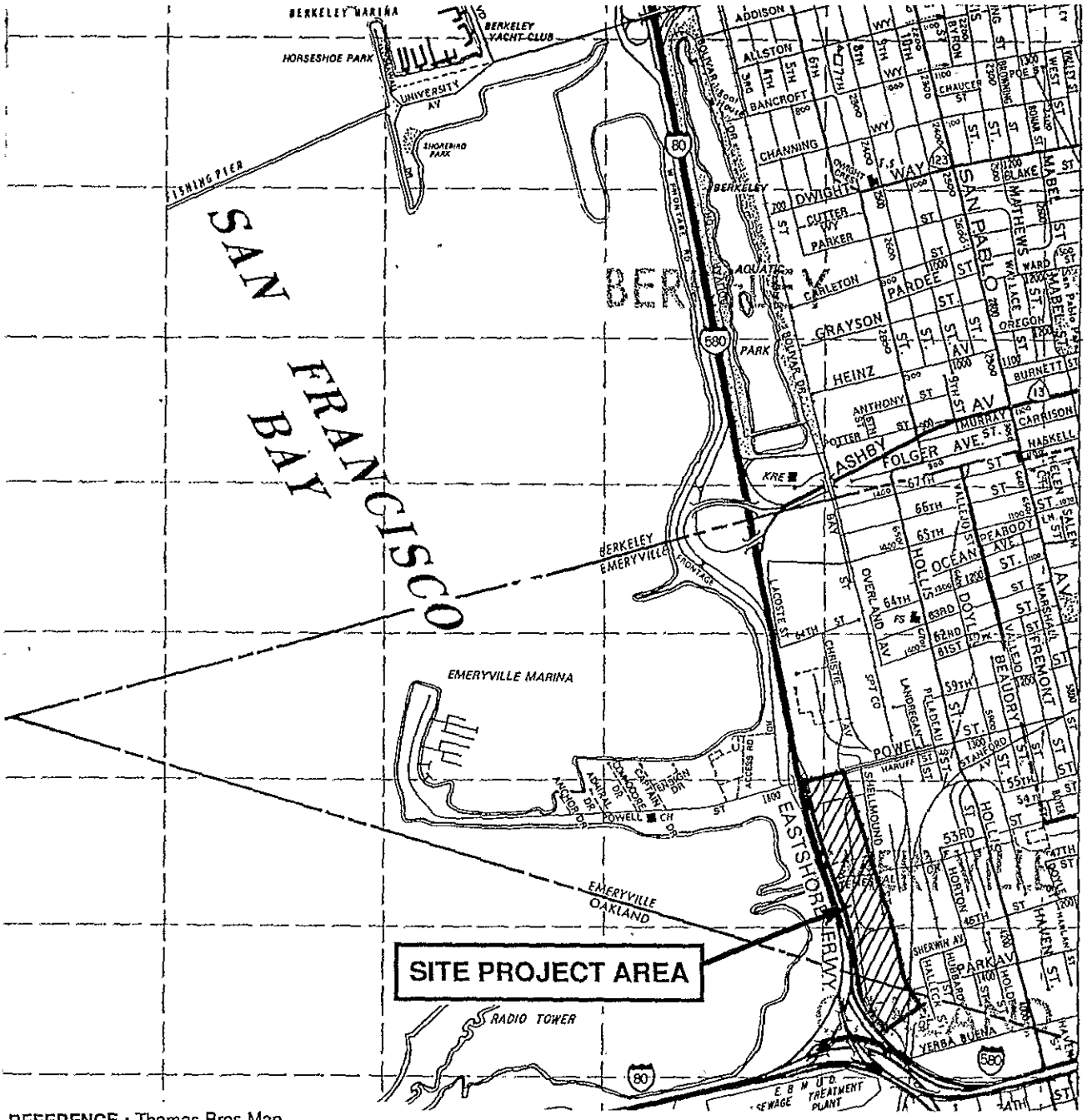
1S/4W 15-N4

316903



14 01-544F-I

013 04W 15N05-15N08



REFERENCE : Thomas Bros Map,
Alameda & Contra Costa Counties

N

0 2200

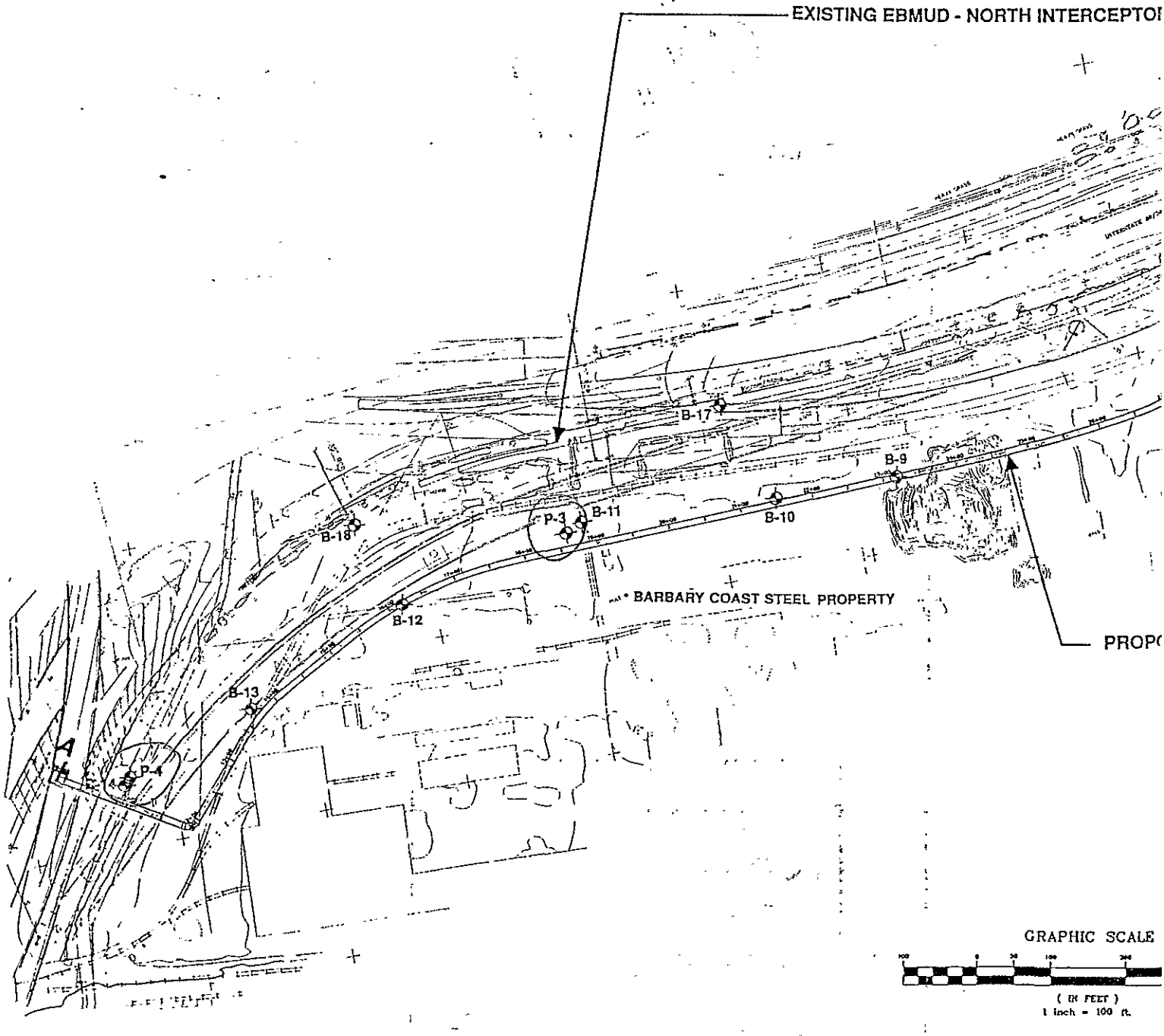
SCALE IN FEET

Geo/ Resource Consultants, Inc.
GEOLOGISTS / ENGINEERS / ENVIRONMENTAL SCIENTISTS
505 BEACH STREET, SAN FRANCISCO, CALIFORNIA 94133

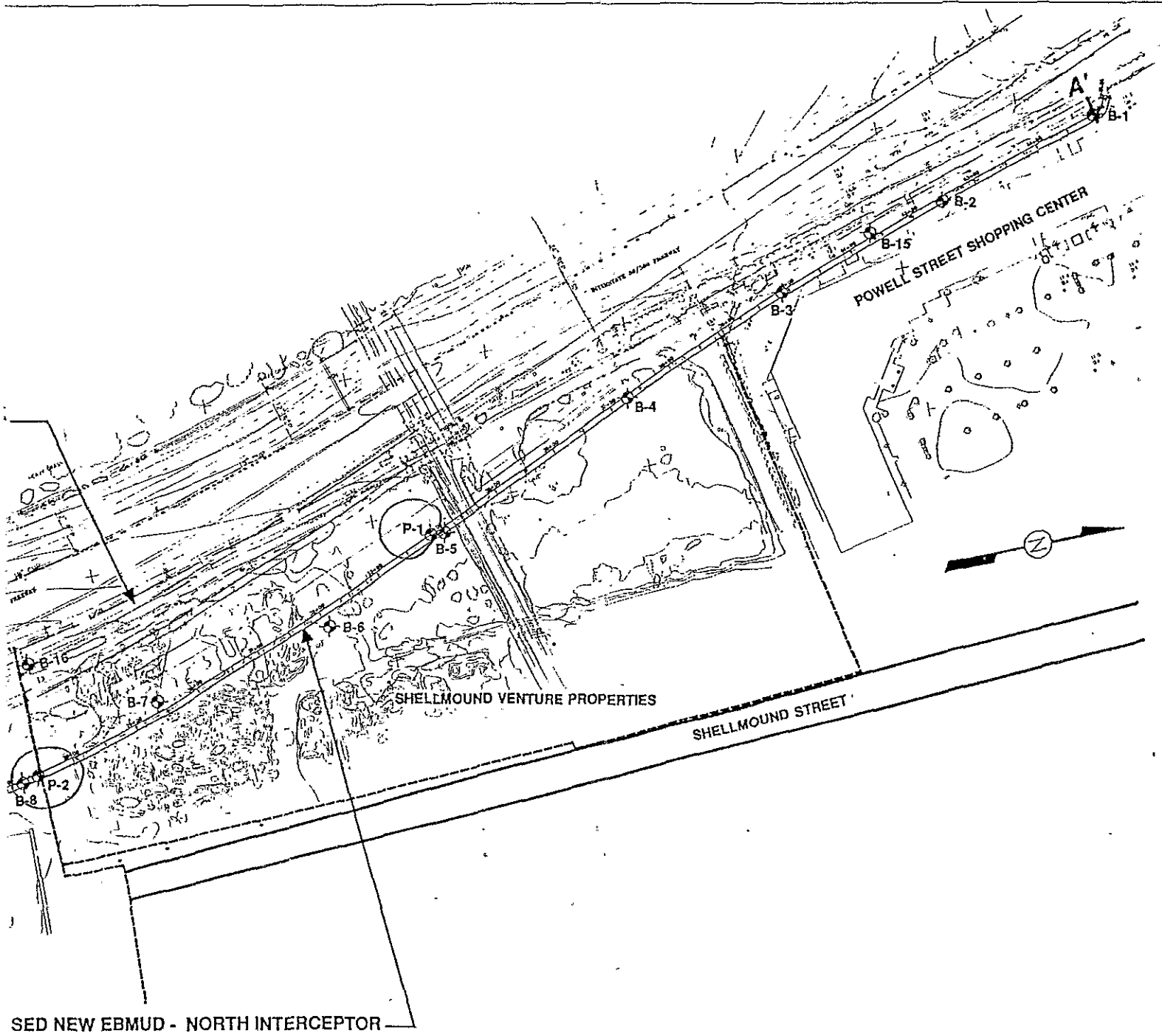
Job No. 1748-002-00 Appr. _____ Date 12/11/92

VICINITY MAP
EAST BAY MUNICIPAL UTILITY DISTRICT
INTERSTATE 80
NORTH INTERCEPTOR RELOCATION
EMERYVILLE/OAKLAND, CALIFORNIA

FIGURE
1


EXISTING EBMUD - NORTH INTERCEPTOR
B-17
B-9
B-10
B-11
P-3
B-18
B-12
BARBARY COAST STEEL PROPERTY
PROPO
B-13
P-4
GRAPHIC SCALE
(IN FEET)
1 inch = 100 ft.
REFERENCE : Base from JOHN CARO

01-544F-I 01S 04W 15N05-15N08



EXPLANATION	
B-1 THROUGH B-14 :	SOIL BORING LOCATIONS ALONG PROPOSED EBMUD - NORTH INTERCEPTOR
B-15 THROUGH B-18 :	SOIL BORING LOCATIONS ALONG EXISTING EBMUD - NORTH INTERCEPTOR
P-1 THROUGH P-4 :	PIEZOMETER LOCATIONS ALONG PROPOSED EBMUD - NORTH INTERCEPTOR

LLO ENGINEERS

SOIL BORING AND PIEZMETER LOCATION MAI
GEOTECHNICAL AND SITE CHARACTRIZATIOI
EBMUD - NORTH INTERCEPTOR RELOCATION PRO

Reference		
Scale	Approved by	Drawn by

Geo/Resource Consultants, Inc.
GEOLOGISTS / ENGINEERS / ENVIRONMENTAL SCIENTISTS
651 HARRISON STREET, SAN FRANCISCO, CALIFORNIA 94107

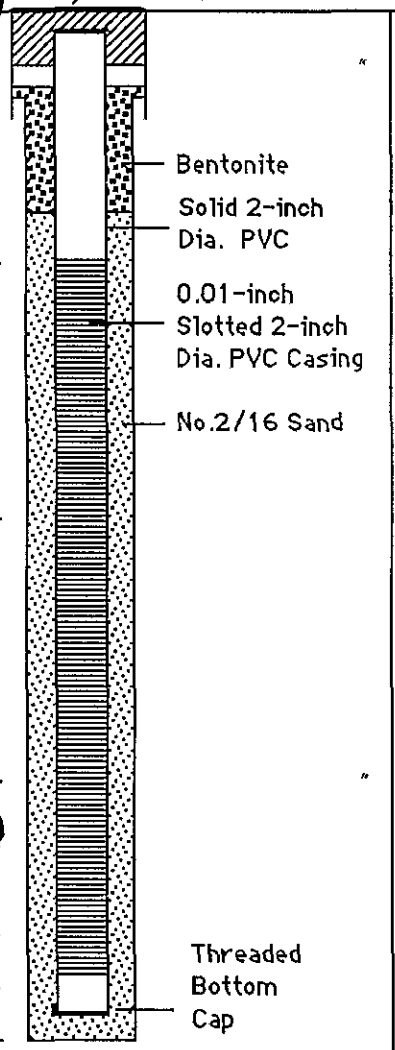
Job No. 1748-002	Date 12/10/92	FIGURE 2

393 01-544F 01S04W15N05

LOG OF BORING P-1

Equipment 6" Hollow Stem Auger, B-61 Mobile Drill Rig

Elevation ~110 ft. Date 10/7/92



Blows/ft.	Dry Density (pcf)	Depth (ft.)	Sample pnts.	
		0		4" ASPHALT
				MEDIUM GRAY GRAVEL (GP) with sand moist, loose
		5		MEDIUM/DARK BROWN/GRAY SILTY GRAVEL (GM) with sand moist, loose to medium dense
		10		groundwater noted @ approximately 9 ft. @ time of drilling
				DARK GRAY BROWN CLAYEY SAND (SC) with gravel saturated, loose to mediu dense
		15		DARK GRAY FINE SAND (SP) saturated, loose
		20		Boring terminated @ 20.0 feet.
		25		
		30		

Fill

Geo/Resource Consultants, Inc.
Geologists / Engineers / Environmental Scientists

Job No. 1748-002 Appr: Date 10/17/92

LOG OF BORING P-1
NORTH INTERCEPTOR RELOCATION
EBMUD
EMERYVILLE/OAKLAND
CALIFORNIA

FIGURE
A-15

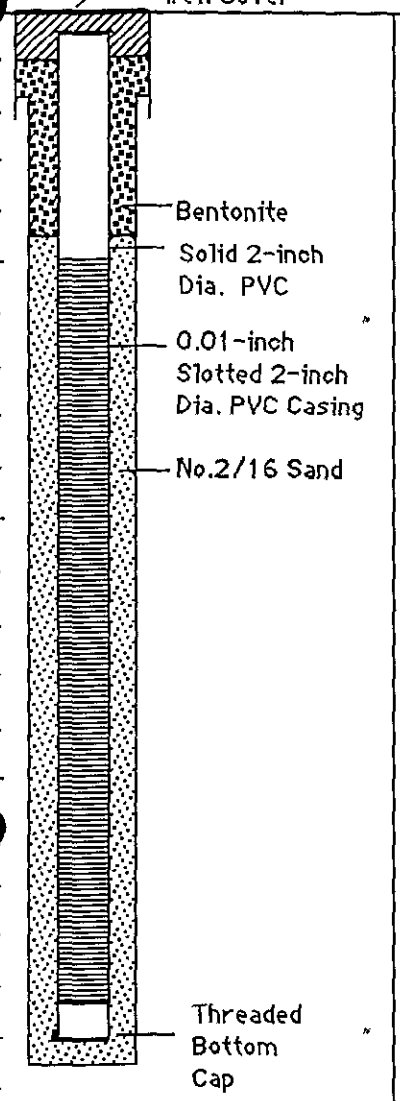
ph: 415 - 775 - 3177 PERMIT 92471 C57 554979 1621

3.73 01-5446 01504W15N06

LOG OF BORING P-2

Equipment 6" Hollow Stem Auger, B-61 Mobile Drill Rig

Elevation ~110 ft. Date 10/12/92



Depth (ft.)	Blows/ft.	Dry Density (pcf)	Sample pnts.	
0				RUBBLE/DEBRIS dry to moist, brick, glass, metal fragments
				DARK GRAY BROWN SILTY SANDY GRAVEL TO GRAVELLY SILTY SAND (GP-GM/SP-SM) moist, loose
5				DARK BROWN/GRAY RUBBLE/SLAG/SAND moist, loose, metal and brick fragments ▽ groundwater noted @ approximately 7 ft. @ time of drilling
10				Fill
15				DARK BLUISH GRAY CLAY (CH)(BAY MUD) saturated, soft
20				
25				Boring terminated @ 20.5 feet.
30				

Geo/Resource Consultants, Inc.
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Job No. 1748-002 Appr: Date 10/17/92

LOG OF BORING P-2
NORTH INTERCEPTOR RELOCATION
EBMUD
EMERYVILLE/OAKLAND
CALIFORNIA

FIGURE
A-16

1621

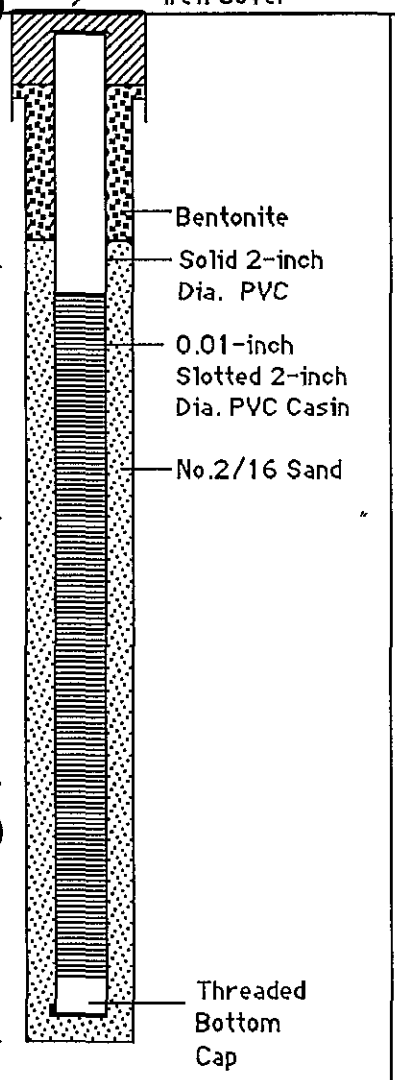
3 of 3 01-544H 01S04W15N07

LOG OF BORING P-3

Equipment 6" Hollow Stem Auger, B-61 Mobile Drill Rig

Elevation ~108 ft. Date 10/9/92

Well Installation Diagram



Blows/ft.	Dry Density (pcf)	Depth (ft.)	Sample pnts.	
		0		4" ASPHALT
				DARK BROWN GRAY TO BLACK SILTY GRAVEL (GM) with sand slightly moist, loose
		5		DARK GRAY BROWN SAND/SLAG very moist to wet, loose (Fill)
				▼ groundwater noted @ approximately 6 ft. @ time of drilling
		10		DARK GRAY/BLACK FINE SAND (SP) saturated, loose, scattered gravel
				DARK GRAY/BLACK CLAY (CH)(BAY MUD) saturated, soft
		15		
		20		LIGHT BROWN TAN SILTY CLAY (CL-ML)(TEMESCAL) saturated, soft to firm
				Boring terminated @ 20.5 feet.
		25		
		30		

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Job No. 1748-002 Appr: Date 10/17/92

LOG OF BORING P-3
NORTH INTERCEPTOR RELOCATION
EBMUD
EMERYVILLE/OAKLAND
CALIFORNIA

FIGURE A-17

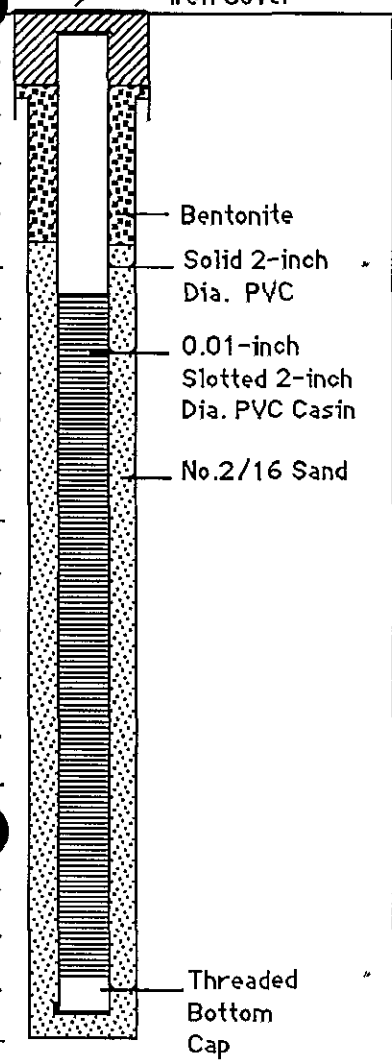
1621

.383 01-5441 01S04W15N08

LOG OF BORING P-4

Equipment 6" Hollow Stem Auger, B-61 Mobile Drill Rig

Elevation ~107 ft. Date 10/12/92



Depth (ft.)	Sample pnts.	Blows/ft.	Dry Density (pcf)	
0				LIGHT TAN-BROWN SILTY GRAVEL (GM) with sand moist, loose — Fill
				MEDIUM BROWN/GRAY SAND/SLAG (SP/GP) slightly damp, loose, angular rock fragments to 3 in. — Fill
5				MEDIUM DARK BROWN SILTY SAND (SM) with gravel damp to moist, loose — Fill
				MEDIUM BLACK-BLUISH GRAY CLAY (CH) (BAY MUD) saturated, soft
				▼ groundwater noted @ approximately 7 ft. @ time of drilling
10				MEDIUM TO LIGHT ORANGE TAN WITH OLIVE GREEN STREAKS SILTY CLAY (CL-ML) TO SILT (MH) saturated, firm
15				
20				Boring terminated @ 20.5 feet.
25				
30				

Geo/Resource Consultants, Inc.
Geologists / Engineers / Environmental Scientists

Job No. 1748-002 Appr: _____ Date 10/17/92

LOG OF BORING P-4
NORTH INTERCEPTOR RELOCATION
EBMUD
EMERYVILLE/OAKLAND
CALIFORNIA

FIGURE
A-18

1621

CONFIDENTIAL

STATE OF CALIFORNIA DWR
WELL COMPLETION REPORT
(WELL LOGS)

REMOVED

295 424779A-G

SOURCE:
USGS MAP, OAKLAND WEST QUADRANGLE, CALIFORNIA.
7.5 MINUTE SERIES, 1959, PHOTOREVISED 1980.

N

0 1000 2000
SCALE IN FEET

FIGURE 1

SITE VICINITY MAP

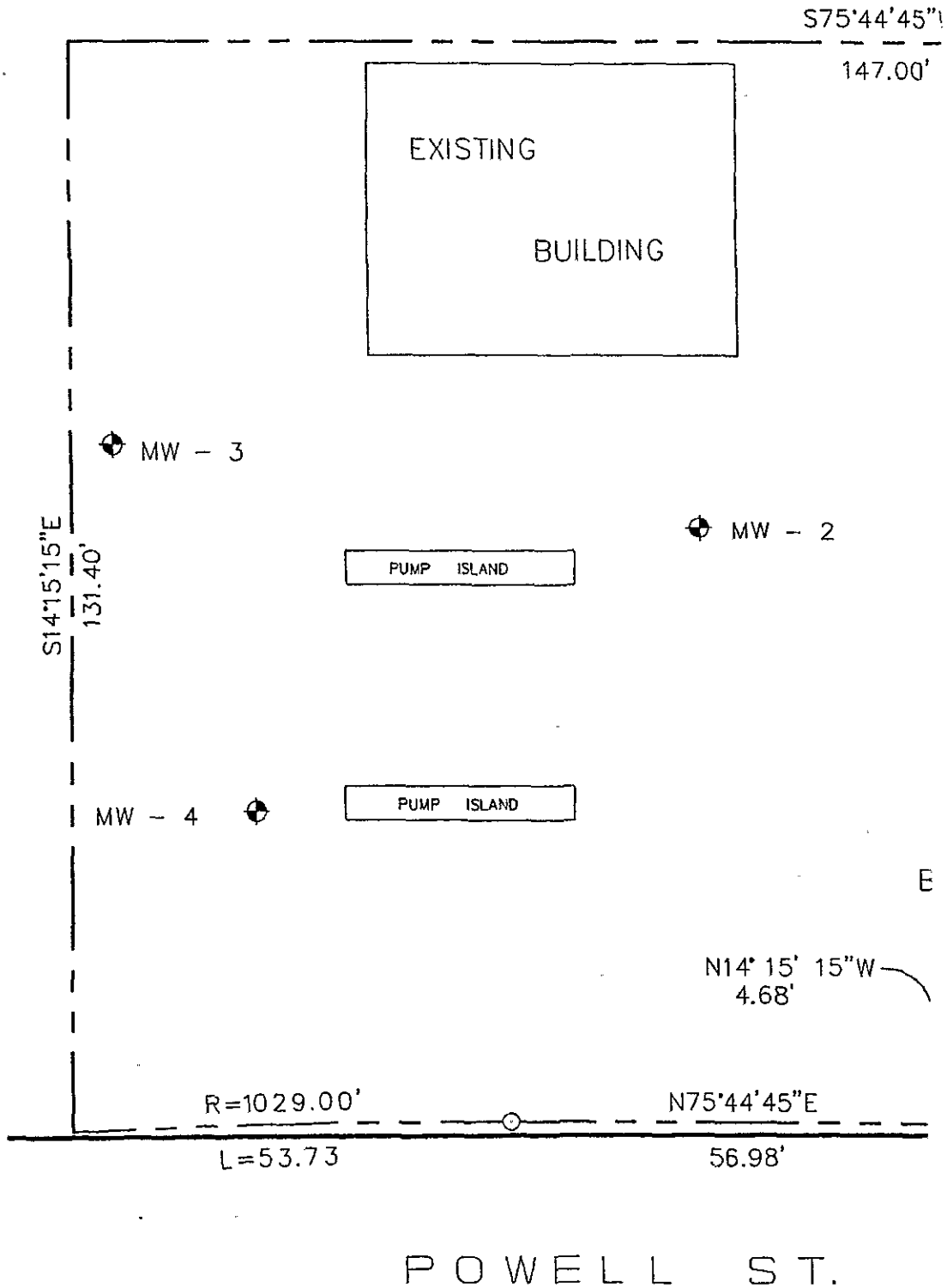
BP OIL SERVICE STATION NO. 11126
1700 POWELL STREET
EMERYVILLE, CALIFORNIA

ALISTO PROJECT NO. 10-061

ALISTO ENGINEERING GROUP
CONCORD, CALIFORNIA

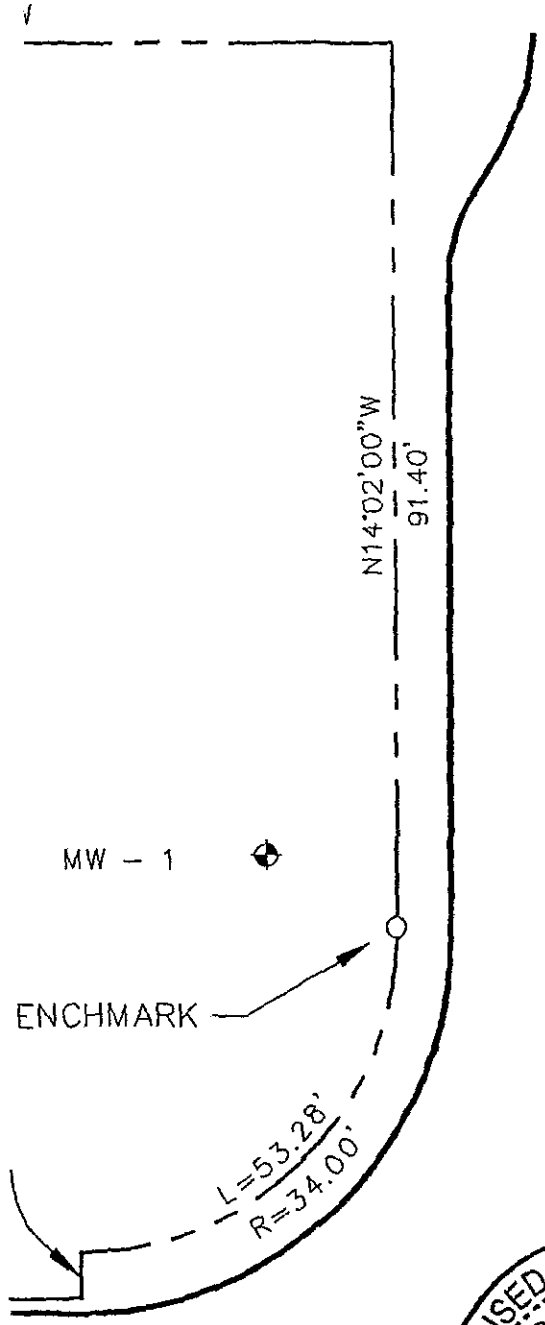
10061O1P.DWG 10-2-92 JWB 1=1

3 of 5



NOTE:
THIS IS NOT A SURVEY OF THE BOUNDARY.
ALL REPRESENTATIONS HEREIN ARE BASED
UPON RECORD INFORMATION.

424779A6



CHRISTIE AVE

SCALE: 1" = 20'

MONITORING WELL	ELEVATION
MW – 1	7.73
MW – 2	8.56
MW – 3	8.26
MW – 4	8.11

LEGEND

⊕ MONITORING WELL

BENCHMARK
5/8" REBAR & CAP AT PROP. LINE RETURN. EL= 8.11

BP STATION NO. 11126
EMERYVILLE CA.

MONITORING WELL LOCATIONS

NOVEMBER 13, 1992

LICENSED LAND SURVEYOR
ELLIOTT V. INGRAM
NO. 6357
EXPIRES 12/31/94
STATE OF CALIFORNIA

Elliott V. Ingram

ELLIOTT V. INGRAM
LAND SURVEYOR
1310 LA VISTA CONCORD, CA. 94521
(510) 689 - 4578

ALISTO ENGINEERING GROUP
CONCORD, CALIFORNIA

5775 424779A 01S04W15N09

ALISTO ENGINEERING GROUP
CONCORD, CALIFORNIA

LOG OF BORING B-2/MW-1

Page 1 of 1

SEE SITE PLAN

ALISTO PROJECT NO: 10-061 DATE DRILLED: 10/20/92
CLIENT: BP Oil Company
LOCATION: 1700 Powell Street, Emeryville, California
DRILLING METHOD: Hollow-stem Auger (8")
DRILLING COMPANY: Great Sierra Exploration CASING ELEVATION: 7.73 ' MSL
LOGGED BY: Ted Moise APPROVED BY: Al Sevilla

BLOWS/6 IN.	PID VALUES	WELL DIAGRAN	DEPTH feet	SAMPLES	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION
						SW	3" Asphalt. gravelly SAND: brown/green, damp, very loose, medium- to very coarse- grained sand, abundant rounded gravel to 1".
9	47	2" Sch.40 PVC; 0.010" slotted PVC screen; grout; #2/12 Lonestar Sand; Bentonite seal	5			ML	sandy SILT: gray/blue, damp, soft, abundant very fine-grained sand, minor clay.
1,1,1 1,1						CL	silty CLAY: dark gray, wet, very soft, abundant silt, very fine- to medium-grained sand, minor rounded gravel to 1".
			10			SM	silty SAND: blue/gray, wet, very loose, very fine- to fine-grained sand, minor clay.
2,3,3						CL	silty CLAY: blue/green, wet, medium firm, minor very fine-grained sand.
			15				Groundwater Monitoring Well MW-1 was installed in Soil Boring B-2. Soil Boring B-2 was drilled within three feet of Soil Boring B-1. Soil classification/contacts, PID readings, and blow counts presented on this boring log were copied from Soil Boring B-1.
			20				
			25				
			30				

5776 4247798 01S04W15N10

ALISTO ENGINEERING GROUP
CONCORD, CALIFORNIA

LOG OF BORING B-3/MW-2

Page 1 of 1

SEE SITE PLAN

ALISTO PROJECT NO: 10-061 DATE DRILLED: 10/20/92
CLIENT: BP Oil Company
LOCATION: 1700 Powell Street, Emeryville, California
DRILLING METHOD: Hollow-Stem Auger (8")
DRILLING COMPANY: Great Sierra Exploration CASING ELEVATION: 8.58 ' MSL
LOGGED BY: Ted Moise APPROVED BY: Al Sevilla

BLOWS/6 IN.	PID VALUES	WELL DIAGRAN	DEPTH feet	SAMPLES	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION
		0.010" slotted PVC screen; 2" Sch.40 PVC; #2/12 Lonestar Sand; Bentonite seal; grout	5			SW	3" Asphalt. gravelly SAND: brown, damp, loose, fine- to very coarse-grained sand, gravel to 1", minor fines.
1,3,3	288					ML	sandy SILT: black, moist/wet, medium firm, very fine- to medium- grained sand, minor clay.
1,3,3						CL	silty CLAY: gray, wet, medium firm, minor very fine- to fine-grained sand, minor angular to 1/2".
5,3,4			10			SM	silty SAND: gray, wet, loose, very fine- to medium-grained sand, minor clay.
4,3,4						CL	silty CLAY: blue/green, wet, medium firm, minor silt, rootlets.
			15				
			20				
			25				
			30				

1763

5 of 5 424729C 01S04W15N11

ALISTO ENGINEERING GROUP
CONCORD, CALIFORNIA

LOG OF BORING B-4/MW-3

Page 1 of 1

SEE SITE PLAN

ALISTO PROJECT NO: 10-061 DATE DRILLED: 10/20/92
CLIENT: BP Oil Company
LOCATION: 1700 Powell Street, Emeryville, California
DRILLING METHOD: Hollow-Stem Auger (8")
DRILLING COMPANY: Great Sierra Exploration CASING ELEVATION: 8.26 ' MSL
LOGGED BY: Ted Moise APPROVED BY: Al Seville

BLOWS/6 IN.	PID VALUES	WELL DIAGRAN	DEPTH feet	SAMPLES	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION
						SW	3" Asphalt. gravelly SAND: tan, damp, loose, medium- to very coarse-grained sand, gravel to 1".
50/5"			5				Concrete slab.
4,8,8	0.2					SM	silty SAND: black, wet, loose, very fine- to medium-grained sand, abundant silt, minor gravel to 1/2".
3,4,5			10				
4,3,4						CL	silty CLAY: blue/green, damp, medium firm, minor silt, rootlets.
			15				
			20				
			25				
			30				

WELL DIAGRAN: 0.010" slotted PVC screen; 2" Sch.40 PVC; #2/12 Lonestar Sand; Bentonite seal; grout

1763

5085 4247790 01S04W15N

ALISTO ENGINEERING GROUP
CONCORD, CALIFORNIA

LOG OF BORING B-1

SEE SITE PLAN

ALISTO PROJECT NO: 10-081 DATE DRILLED: 10/20/92
CLIENT: BP Oil Company
LOCATION: 1700 Powell Street, Emeryville, California
DRILLING METHOD: Hollow-stem Auger (8")
DRILLING COMPANY: Great Sierra Exploration CASING ELEVATION: N/A ft. MSL
LOGGED BY: Ted Moise APPROVED BY: Al Sevilla

BLOWS/6 IN.	PID VALUES	WELL DIAGRAM	DEPTH feet	SAMPLES	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION
		Grout					3" Asphalt.
						SW	gravelly SAND: brown/green, damp, very loose, medium- to very coarse- grained sand, abundant rounded gravel to 1".
9	47					ML	sandy SILT: gray/blue, damp, soft, abundant very fine-grained sand, minor clay.
1,1,1			5				
1,1						CL	silty CLAY: dark gray, wet, very soft, abundant silt, very fine- to medium-grained sand, minor rounded gravel to 1".
						SM	silty SAND: blue/gray, wet, very loose, very fine- to fine-grained sand, minor clay.
2,3,3			10			CL	silty CLAY: blue/green, wet, medium firm, minor very fine-grained sand.
7,7,8							Same: no sand, minor silt, plant rootlets.
7,11,12			15				Plant rootlets, very fine- to fine-grained sand.
9,14,14						ML	sandy SILT: blue/brown, wet, very stiff, very fine- to medium- grained sand, minor clay, minor angular gravel to 1/2".
10,11 12,12			20			SM	silty SAND: brown, wet, medium dense, fine- to very coarse-grained sand, minor angular gravel to 1/2".
			25				
			30				

1763

575 424779E 01S04W15N

ALISTO ENGINEERING GROUP
CONCORD, CALIFORNIA

LOG OF BORING B-4a

Page 1 of 1

SEE SITE PLAN

ALISTO PROJECT NO: 10-061 DATE DRILLED: 10/20/92

CLIENT: BP Oil Company

LOCATION: 1700 Powell Street, Emeryville, California

DRILLING METHOD: Hand Auger

DRILLING COMPANY: Great Sierra Exploration CASING ELEVATION: N/A ft. MSL

LOGGED BY: Ted Noise APPROVED BY: Al Sevilla

BLOWS/6 IN.	PID VALUES	WELL DIAGRAN	DEPTH feet	SAMPLES	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION
		Grout				SW	3" Asphalt.
							gravelly SAND: brown, damp, very loose, fine- to very coarse-grained sand, angular gravel to 1-1/2".
						ML	sandy SILT: black, damp, soft, fine- to medium-grained sand, minor clay, minor gravel to 1".
							Auger refusal at 2.5 Feet (Concrete slab).
			5				
			10				
			15				
			20				
			25				
			30				

1763

6795 424779P 01S04W15N

ALISTO ENGINEERING GROUP
CONCORD, CALIFORNIA

LOG OF BORING B-4b

SEE SITE PLAN

ALISTO PROJECT NO: 10-061 DATE DRILLED: 10/20/92

CLIENT: BP Oil Company

LOCATION: 1700 Powell Street, Emeryville, California

DRILLING METHOD: Hand Auger

DRILLING COMPANY: Great Sierra Exploration CASING ELEVATION: N/A ft. MSL

LOGGED BY: Ted Moise APPROVED BY: Al Sevilla

BLOWS/6 IN.	PID VALUES	WELL DIAGRAN	DEPTH feet	SAMPLES	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION
		Grout	5			SW	3" Asphalt.
			10			SW	gravelly SAND: brown, damp, very loose, fine- to very coarse-grained sand, angular gravel to 1-1/2".
			15			ML	sandy SILT: black, damp, soft, fine- to medium-grained sand, minor clay, minor gravel to 1".
			20				Auger refusal at 2.5 Feet (Concrete slab).
			25				
			30				

1763

5 of 5 424 7796 01S04W15N

ALISTO ENGINEERING GROUP
CONCORD, CALIFORNIA

LOG OF BORING B-5a

Page 1 of 1

SEE SITE PLAN

ALISTO PROJECT NO: 10-061 DATE DRILLED: 10/20/92
CLIENT: BP Oil Company
LOCATION: 1700 Powell Street, Emeryville, California
DRILLING METHOD: Hand Auger
DRILLING COMPANY: Great Sierra Exploration CASING ELEVATION: N/A ft. MSL
LOGGED BY: Ted Moise APPROVED BY: Al Sevilla

BLOWS/6 IN.	PID VALUES	WELL DIAGRAN	DEPTH feet	SAMPLES	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION
		grout	5			SW	3" Asphalt. gravelly SAND: tan, damp, loose, fine- to very coarse-grained sand, rounded gravel to 3/4".
							Boring terminated at 5', (8" clay pipe).
			10				
			15				
			20				
			25				
			30				

1763

CONFIDENTIAL

STATE OF CALIFORNIA DWR
WELL COMPLETION REPORT
(WELL LOGS)

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WELL COMPLETION REPORT
(WELL LOGS)

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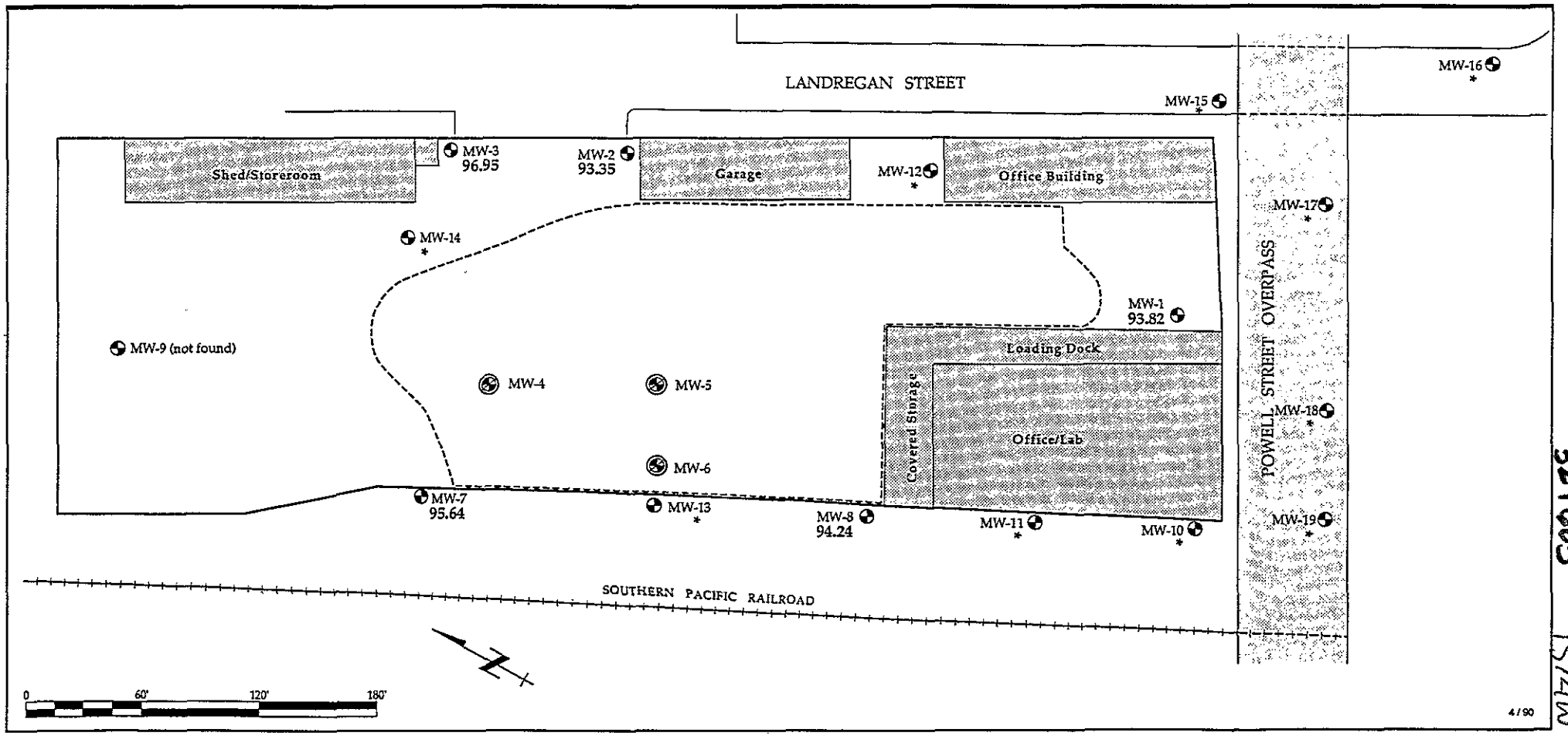

LEGEND

MW-1 93.82	Monitor Well Location and Groundwater Surface Elevation, feet above mean sea level
MW-5	Destroyed or Abandoned Monitor Well Location
*	Top of casing elevation unknown
----------	Boundary of Excavation

Site Map with Monitor Well Locations
and known Groundwater Surface Elevation
21 March 1990
Former Chevron Asphalt Plant and Terminal
Emeryville, California

FIGURE
2

WESTERN GEOLOGIC RESOURCES, INC.

1-045.07

321603 IS/4W IS P80

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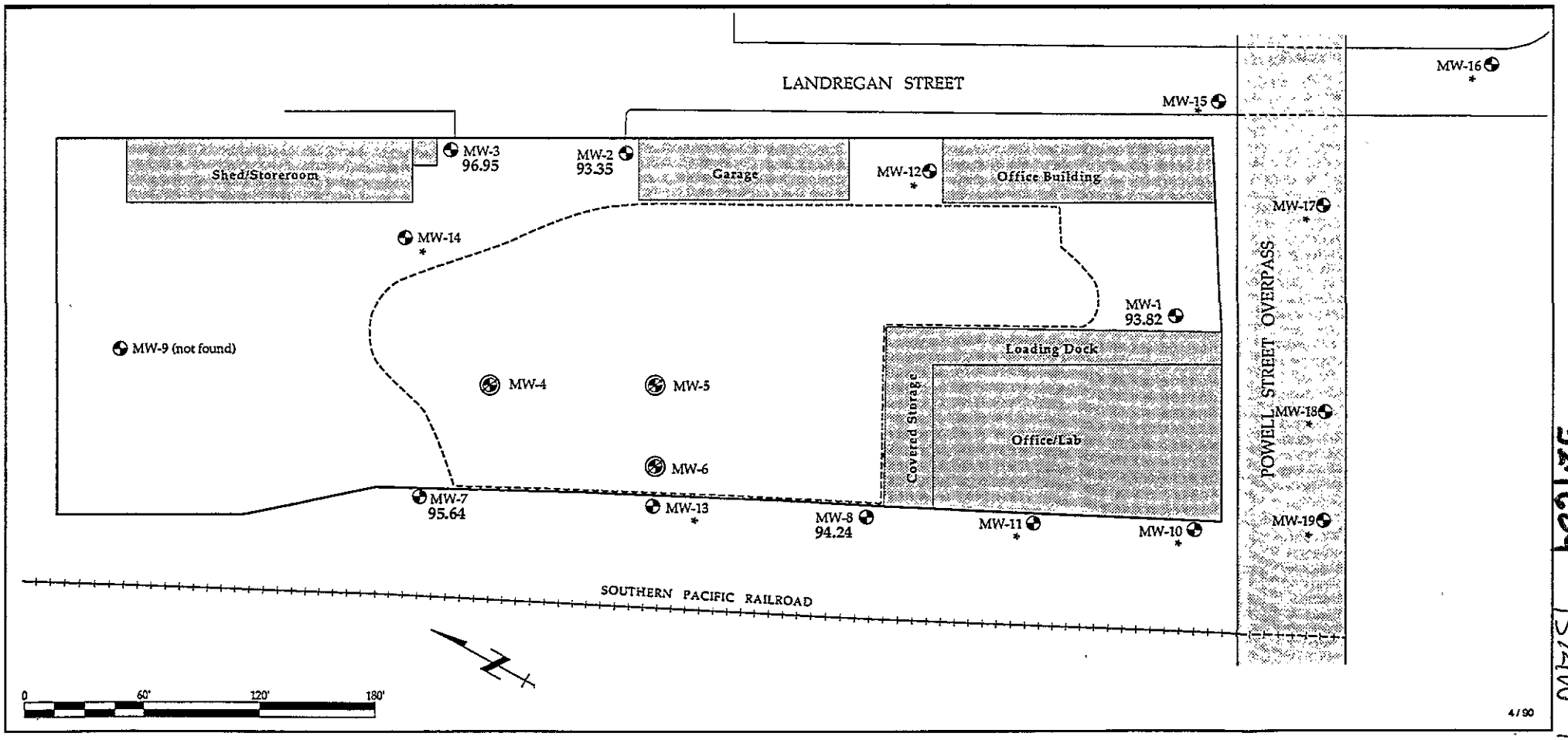

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Site Map with Monitor Well Locations
and known Groundwater Surface Elevation
21 March 1990
Former Chevron Asphalt Plant and Terminal
Emeryville, California

FIGURE
2

WESTERN GEOLOGIC RESOURCES, INC.

1-045.07

327604 15/4W 15P81

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(WELL LOGS)

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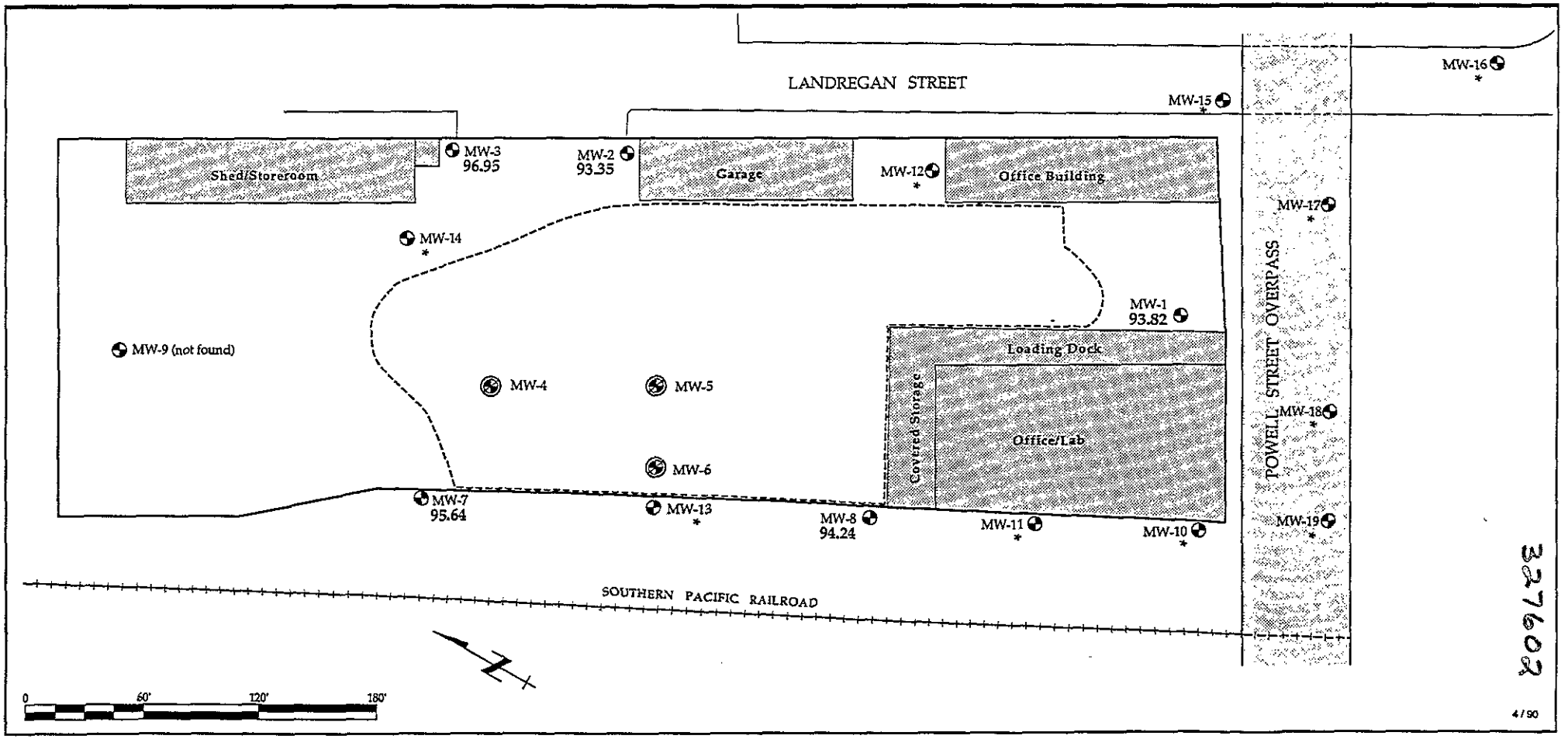


327602

LEGEND

MW-1 93.82	Monitor Well Location and Groundwater Surface Elevation, feet above mean sea level
MW-5	Destroyed or Abandoned Monitor Well Location
*	Top of casing elevation unknown
----------	Boundary of Excavation

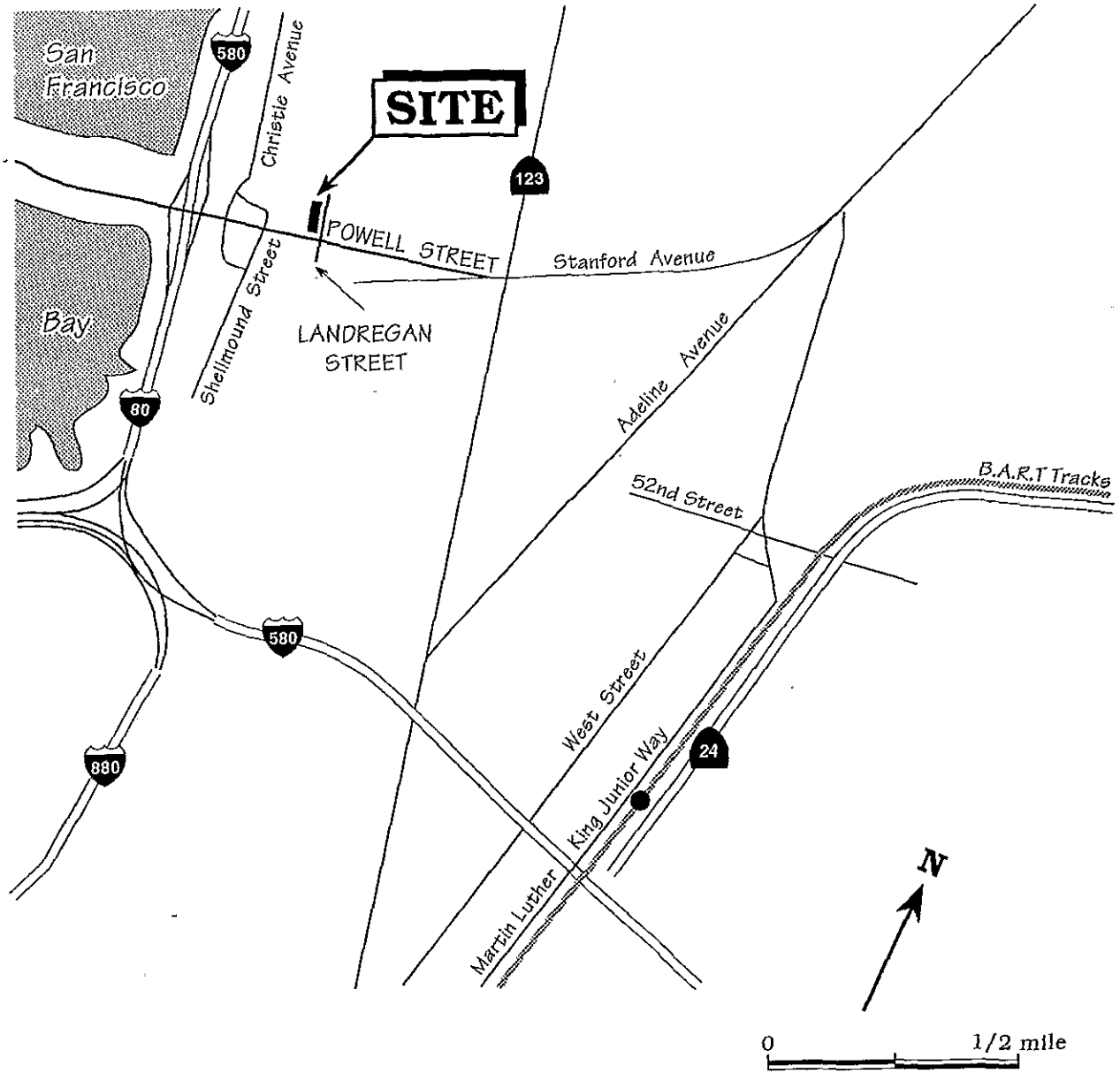
Site Map with Monitor Well Locations
and known Groundwater Surface Elevation
21 March 1990
Former Chevron Asphalt Plant and Terminal
Emeryville, California

FIGURE
2

WESTERN GEOLOGIC RESOURCES, INC.

1-045.07

SIERRA



Base map ref: California State Automobile Association (AAA)

Figure 1. Site Location Map – Former Chevron Asphalt Plant and Terminal #1001067, Emeryville, California

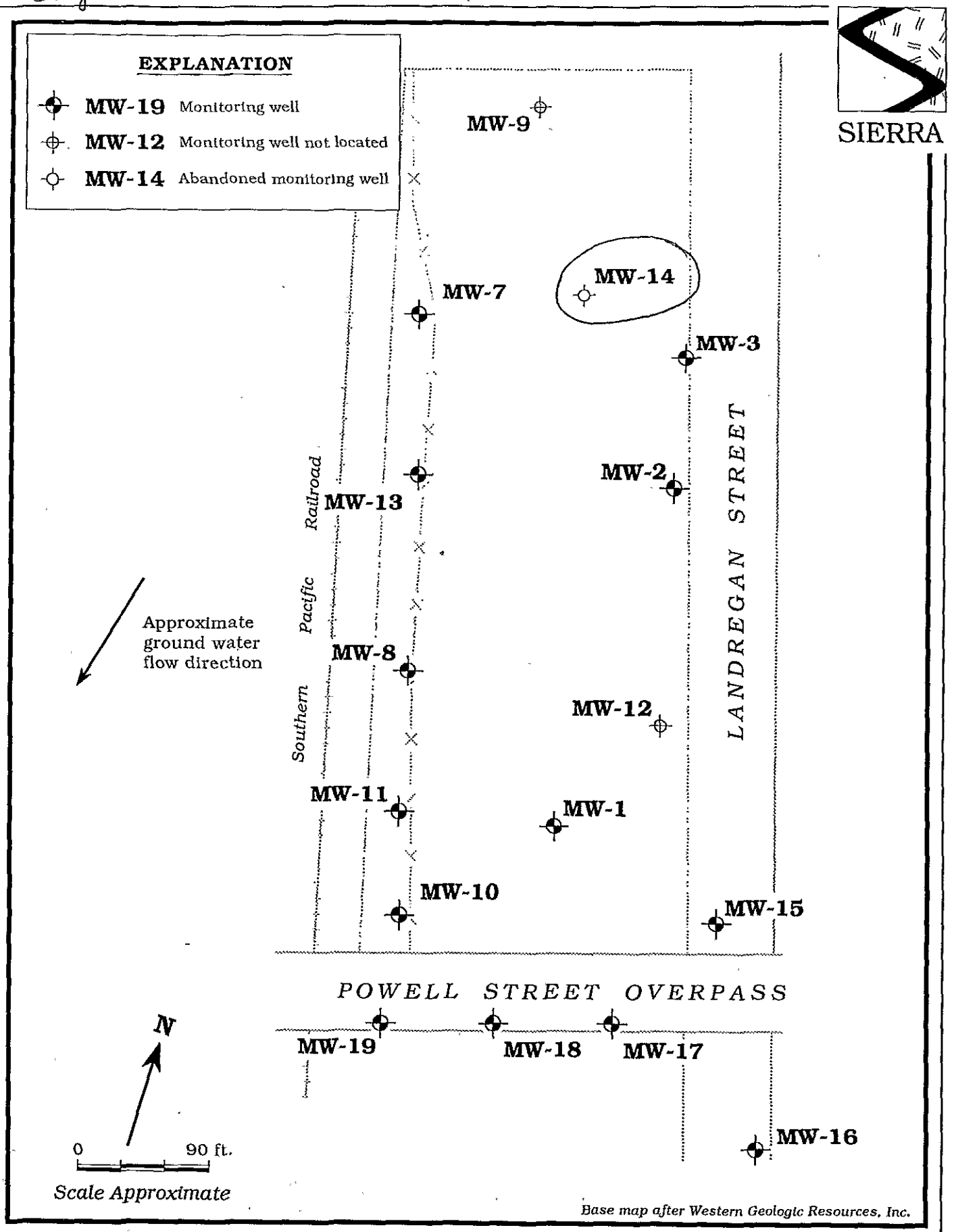


Figure 2. Monitoring Well Locations – Former Chevron Asphalt Plant and Terminal #1001067, Emeryville, California

3 of 8

01-5422 Already Entered

01S04W15P(64)

SIERRA
Environmental Services

March 15, 1993

Lucia Chou
Chevron USA
P.O. Box 5004
San Ramon, CA 94583

Re: Well Abandonment
Former Chevron Asphalt Plant
and Terminal #1001067
1520 Powell Street
Emeryville, California
SES Project # 1-191-06

Dear Ms. Chou:

As required, Sierra Environmental Services (SES) has prepared this letter report documenting well abandonment activities at the above-referenced location (Figure 1, Appendix A). One on-site monitoring well was abandoned, MW-14 (Figure 2, Appendix A).

On March 10, 1993 SES personnel supervised the abandonment of one on-site monitoring well. The monitoring well was abandoned by Soils Exploration Services of Vacaville, California (C57 #58296) using a CME-55 truck mounted drill rig. The well was drilled out to a depth of 13 feet below ground surface. Soil samples were collected at approximately 2.5 foot intervals for soil disposal purposes. The boring hole was filled with Portland cement grout with 5% bentonite powder, allowed to settle, then refilled with grout to match the existing grade.

Soil samples generated during well abandonment activities were collected according to SES Standard Operating Procedures - Soil Sampling (Appendix B). Soil samples were analyzed by Superior Precision Analytical, Inc. of San Francisco, California. SES is not responsible for laboratory omissions or errors.

Drill cuttings generated during the well abandonment were left on-site and covered with visqueen pending disposal. Approximately 1 cubic yard of cuttings were generated during the work.

1658

5 of 8

01-542Z

01S040015P

SIERRA

SES STANDARD OPERATING PROCEDURE

SOIL SAMPLING

The following describes sampling procedures used by SES field personnel to collect, handle, and transport soil samples. Before samples are collected, careful consideration is given to the type of analysis to be performed so that precautions are taken to prevent loss of volatile components or contamination of the sample, and to preserve the sample for subsequent analysis.

All drilling and sampling equipment is steam-cleaned between boreholes to prevent cross-contamination. The sampler is washed with an EPA approved detergent (such as liquinox or trisodium phosphate) between sample collection. Collection methods specific to soil sampling are presented below.

Soil samples are collected at pre-specified depth intervals or at a sediment/lithologic change for hydrogeologic description and possible chemical analysis. Samples are collected using a modified California split-spoon sampler lined with 2- or 2.5-inch I.D. x 4- or 6-inch long steam-cleaned or new stainless steel or brass tubes. The sampler is lowered into the borehole and driven 18 inches, using a 140-pound hammer. The drilling contractor provides the SES field personnel with the number of blows required to drive the sampler for each 6 inches of penetration.

The sampler is then extracted from the borehole and the middle or bottom brass tube is carefully removed for possible analysis. The soil material is immediately trimmed flush with the tube ends, and sealed with Teflon tape beneath polyethylene end caps. The caps are hermetically sealed to the brass tube with duct tape. The sample is then labeled to include the date, boring number, depth of sample, project number, SES, and the SES field personnel's initials. The samples are put into a plastic "zip-lock" type bag and placed into an ice chest maintained below 4°C with blue ice or dry ice, for transport under chain of custody to the laboratory. The chain-of-custody form includes the project number, analysis requested, sample ID, date analysis and the SES field personnel's name. The form is signed, dated and timed by each person who yields or receives the samples beginning with the field personnel and ending with the laboratory personnel.

628 01-542Z 01S04W15P

Superior Precision Analytical, Inc.

825 Arnold Drive, Suite 114 ▪ Martinez, California 94553 ▪ (510) 229-1512 / fax (510) 229-1526

Sierra Environmental
Attn: ARGY MENA

Project 1-191-06
Reported 03/12/93

TOTAL PETROLEUM HYDROCARBONS

Lab #	Sample Identification	Sampled	Analyzed	Matrix
88030- 1	MW14-SC1-SC2-SC3-SC4	03/10/93	03/11/93	Soil

RESULTS OF ANALYSIS

Laboratory Number: 88030- 1

Gasoline:	ND<1
Benzene:	ND<0.005
Toluene:	0.008
Ethyl Benzene:	ND<0.005
Xylenes:	0.027
Concentration:	mg/Kg

7 of 8 01-582Z 015 04W 15P

Superior Precision Analytical, Inc.
825 Arnold Drive, Suite 114 • Martinez, California 94553 • (510) 229-1512 / fax (510) 229-1526

C E R T I F I C A T E O F A N A L Y S I S

ANALYSIS FOR TOTAL PETROLEUM HYDROCARBONS

QA/QC INFORMATION
SET: 88030

NA = ANALYSIS NOT REQUESTED
ND = ANALYSIS NOT DETECTED ABOVE QUANTITATION LIMIT
mg/kg = parts per million (ppm)

OIL AND GREASE ANALYSIS By Standard Methods Method 5520F:
Minimum Detection Limit in Soil: 50mg/kg

Modified EPA SW-846 Method 8015 for Extractable Hydrocarbons:
Minimum Quantitation Limit for Diesel in Soil: 1mg/kg

EPA SW-846 Method 8015/5030 Total Purgable Petroleum Hydrocarbons:
Minimum Quantitation Limit for Gasoline in Soil: 1mg/kg

EPA SW-846 Method 8020/BTXE
Minimum Quantitation Limit in Soil: 0.003mg/kg

ANALYTE	MS/MSD RECOVERY	RPD	CONTROL LIMIT
Gasoline:	106/113	6	70-130
Benzene:	96/101	5	70-130
Toluene:	94/102	8	70-130
Ethyl Benzene:	91/101	11	70-130
Xylenes:	88/97	10	70-130

Richard Srna, Ph.D.
Afsaneh Salimpour pp
Laboratory Director

Fax copy of Lab Report and COC to Chevron Contact: ☐ Yes ☒ No

88050

Chain-of-Custody-Record

Chevron U.S.A. Inc.
P.O. BOX 5004
San Ramon, CA 94583
FAX (415)842-9591

Chevron Facility Number: 100106
Facility Address: 1520 Powell St., Emeryville
Consultant Project Number: 1-191-06
Consultant Name: Sierra Environmental Serv.
Address: P.O. Box 2546, Martinez CA
Project Contact (Name): Argy Mena
(Phone): 370-1280 (Fax Number): 370-7959

Chevron Contact (Name): Lucia Chou
(Phone): 842-9655
Laboratory Name: Superior Precision Analytical
Laboratory Release Number: 873432
Samples Collected by (Name): Carol Eaton
Collection Date: 3/10/93
Signature: Carol Eaton

Analyses To Be Performed

Sample Number	Lab Sample Number	Number of Containers	Matrix S = Soil A = Air W = Water C = Charcoal	Type G = Grab C = Composite D = Discrete	Time	Sample Preservation	Iced (Yes or No)	BTEX + TPH GAS (8020 + 8015)	TPH Diesel (8015)	Oil and Grease (5520)	Purgeable Halocarbons (8010)	Purgeable Aromatics (8020)	Purgeable Organics (8240)	Extractable Organics (8270)	Metals Cd,Cr,Pb,Zn,Ni (ICAP or AA)					Remarks
MW14-SC1		2"x6"	S	G		none	Y	✓												Composite And Analyze
-SC2		↓	↓	↓		↓	↓	✓												
-SC3		↓	↓	↓		↓	↓	✓												
-SC4		↓	↓	↓		↓	↓	✓												

Note: Do Not Bill TB-LB Samples

Please initial: FT
Samples Stored in ice. hand carried cold
Appropriate containers.
Samples preserved.
VOA's without headspace.
Comments:

Please initial:
Samples Stored in ice.
Appropriate containers.
Samples preserved.
VOA's without headspace.
Comments:

Relinquished By (Signature)	Organization	Date/Time	Received By (Signature)	Organization	Date/Time
Carol Eaton	SES	3/10/93			
Relinquished By (Signature)	Organization	Date/Time	Received By (Signature)	Organization	Date/Time
Relinquished By (Signature)	Organization	Date/Time	Recieved For Laboratory By (Signature)		Date/Time
			F Tanguilig		3-10-93 4:20 PM

Turn Around Time (Circle Choice)
24 Hrs.
48 Hrs. (circled)
5 Days
10 Days
As Contracted

01-760

Job #1621. Shell Development Company,
55rd. & Horton Streets,
Emeryville, California.

LOG OF T ST HOLE #1.

Fill		11 feet
Sandy yellow clay, hard	11 to	16 "
Sand	16 "	17 "
Sandy yellow clay	17 "	30 "
Gravel	30 "	31 "
Yellow clay	31 "	32 "
Blue clay	32 "	44 "
White Clay	44 "	45 "
Sandy yellow clay	45 "	54 "

36 feet of 8" No. 16 R. H. Collar Casing with Flush Collar on bottom and 12 feet perforated.

Water Table 13 feet.

Work done by J. H. Ough,
1201 - East Twelfth Street,
Oakland, California.

Job completed October 4 - 1934.

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01-761

Emeryville

Job #1637. F. A. B. Company, 69th. & Vallejo Sts.
Boring Test Holes.

Log of Test Hole #1.(12")

Fill, black soil	1½ ft.
Yellow sandy clay	1½ to 7 "
Soft yellow gravel	7 " 12 "
Hard yellow clay	12 " 13½ "

o

Log of Test Hole #2.(12")

Black soil, mixed yel.clay	5 ft.
Sticky yellow clay	5 to 9 "
Soft yellow sand & gravel	9 " 13 "
Hard gray sand clay	13 " 16 "
Hard yellow clay	16 " 17 "

o

Log of Test Hole #3.(8")

Fill,yel. clay, black adobe, small rock, broken glass	6 ft.
Yellow sand clay	6 to 8 "
Soft yellow sand clay	8 " 11 "
Soft yellow water gravel	11 " 14 "
Hard yellow cement clay	14 " 21 "
Hard yellow clay	21 " 22 "

o

Log of Test Hole #4. (8")

Black soil with yellow clay	3 ft.
Soft yellow sand clay	3 to 8 "
Soft yellow sand sediment	8 " 11 "
Hard cement gravel mixed with yellow clay	11 " 14 "
Hard yellow sticky clay	14 " 17 "

o

Log of Test Hole #5.

Black adobe & yellow clay	4 ft.
Soft yellow sand clay	4 to 9 "
Hard yellow cement gravel	9 " 12 "
Hard yellow cement clay	12 " 15 "

o

Log of Test Hole #6.

Fill, yel. clay broken rock with clay	5 ft.
Soft yel. sand clay	5to 8 "
Hard yel. cement gravel	8 "12 "
Hard yel. sand clay	12 "14 "

o

Log of Test Hole #7.

Fill, yel. clay, black dirt	3 ft.
Soft yel. sand clay	3 to 9 "
Hard yel. cement gravel	9 " 11½"

o

Log of Test Hole #8.

Black soil, some yel. clay in it	4 ft.
Hard yel. sandy clay	4 to 9 "
Hard yel, sticky clay	9 " 11½"

o

Log of Test Hole #9.

Fill, black dirt, some clay in it	5 ft.
Hard yellow sandy clay	5 to 8 "
Hard yel. cement grav.	8 " 10 "
Hard yel. sandy clay	10 " 12 "

Total footage ---- 135½ feet.

01-762

Job # 1748. F. A. B. Company,
67th. & Vallejo Streets,
Emeryville

TEST HOLE #1. (12")

Rock & dirt fill			2 feet
Hard black adobe	2 to	5	"
Hard yellow sand clay	5 "	8	"
Hard cement gravel	8 "	12	"
Hard sandy clay	12 "	15½	"

TEST HOLE #2. (12")

Black adobe			3 feet
Hard yellow sand clay	3 to	5	"
Dry water sand	5 "	8	"
Hard yellow clay	8 "	10⅛	"

TEST HOLE #3. (12")

Black adobe			5 feet
Yellow sand clay	3 to	7	"
Hard cement gravel	7 "	9	"
Hard yellow clay	9 "	10	"

TEST HOLE #4. (12")

Black adobe			5 feet
Soft blue sand clay	5 to	9	"
Soft brown sand clay	9 "	13	"
Hard yellow clay	13 "	15	"

01-763

LOG OF WELL. American Rubber Company,
1145 Park Avenue, Emeryville.

Top soil		10	feet
Gravel	10 to	12	"
Clay	12 "	42	"
Gravel	42 "	43	"
Clay	43 "	80	"
Red cement gravel	80 "	100	"
Clay	100 "	110	"
Cement gravel	110 "	132	"
Loose gravel	132 "	134	"
Clay	134 "	148	"
Sandy clay	148 "	150	"
Clay	150 "	158	"
Sandy clay	158 "	160	"

SAN FRANCISCO
FRENCH BANK BUILDING
110 SUTTER STREET
TELEPHONE KEARNY 2101

J. B. Rogers

Artesian and Oil Wells

Drilled and Bored

Test Holes and Foundation Work

Prospect Holes for Mines

RESIDENCE: 1738 LARKIN ST.
SAN FRANCISCO
PHONE ORDWAY 4828

15/40-15

01-764

San Francisco, _____ 19____

Well #2 for Griffin & Skelley Cannery, Emeryville, Calif.
12"/#14 D. D. with Steel ring and 10 Ft. perforated column. #14 Galv. on bottom.- 1 - 7". 14" Surface Casing Collar.

Filled ground		to 5 Ft.
Blue mud	7	" 12 "
Grey clay	8	" 20 "
Blue clay	5	" 25 "
Gravel & sand	4	" 29 "
Grey clay	4	" 33 "
Yellow clay	7	" 40 "
Blue clay	6	" 46 "
Grey clay	20	" 66 "
Light Grey clay	10	" 76 "
Cement	4	" 80 "
Yellow stoney clay	10	" 90 "
Light gray clay	5	" 95 "
Cement	10	" 105"
Yellow clay	20	" 125"
Brown stoney clay	10	" 135"
Yellow sandy clay	10	" 145"
Yellow cement	8	" 153"
Brown clay	9	" 162"
Sand & gravel light	8	" 170"
Brown clay	5	" 175"
Sand	5	" 180"
Sandy clay	8	" 188"
Yellow clay	9	" 197"
Gravel & sand	15	" 212"
Clay	8½	"212½"

10" D. D. #16 Outside casing. 12" D. D. 12½ Ft.

Filled ground		to 4 Ft.
Blue mud	3 Ft.	" 10 "
Yellow clay	4 "	" 14 "
Gray clay	3 "	" 17 "
Yellow sand clay	2 "	" 19 "
Yellow gravel	4 "	" 23 "
Blue clay	1 "	" 24 "
Yellow gravel	5 "	" 29 "
Gray clay	4 "	" 33 "
Yellow clay	3 "	" 36 "
Yellow sand	2 "	" 41 "
Gray clay	25 "	" 66 "
Yellow sand clay	6 "	" 72 "
Gray clay	4 "	" 76 "
Yellow cement	4 "	" 80 "
Yellow clay	4 "	" 34 "
Yellow cement	6 "	" 90 "
Yellow clay	2 "	" 92 "
Yellow cement	6 "	" 98 "
Yellow clay	5 "	" 103 "
Yellow cement	8 "	" 111"
Yellow clay	9 "	" 120 "
Yellow cement	4 "	" 124 "
Yellow clay	6 "	" 130 "
Yellow cement	3 "	" 133 "
Yellow clay	4 "	" 137 "
Sticky hard sand	4 "	" 141 "
Yellow cement	3 "	" 144 "
Yellow clay	5 "	" 149 "
Yellow cement	7 "	" 156 "
Yellow clay	12 "	" 168 "
Gravel (water)	8½ "	" 176½"
Yellow clay	2 "	" 178½"

Casing shoved 2 feet into clay below gravel.