P & D ENVIRONMENTAL

A Division of Paul H. King, Inc.
4020 Panama Court
Oakland, CA 94611
(510) 658-6916

September 30, 1997
Report 0014.R25

Mr. Ted Simas
Mr. Keith Simas
XTRA OIL Company
2307 Pacific Ave.
Alameda, CA 94501

SUBJECT: MONITORING WELL INSTALLATION REPORT
XTRA OIL Company
3495 Castro Valley Blvd.
Castro Valley, CA

Gentlemen:

P&D Environmental, a division of Paul H. King, Inc. (P&D), is pleased to present this report documenting the permitting, installation, development, and sampling of one groundwater monitoring well at the subject site. This work was performed in accordance with P&D's proposal 073097.P1 dated July 30, 1997, and P&D's work plan 0014.W4 dated June 27, 1997. The work plan was approved by the Alameda County Department of Environmental Health (ACDEH) in a telephone conversation with Mr. Scott Seery on August 14, 1997. During the conversation Mr. Seery indicated that he would record his approval of the work plan in the county file for the site. A Site Location Map is attached with this report as Figure 1, and a Site Plan is attached as Figure 2.

All work was performed under the direct supervision of an appropriately registered professional. This report is prepared in accordance with guidelines set forth in the document "Tri-Regional Board Staff Recommendations for Preliminary Evaluation and Investigation of Underground Tank Sites" dated August 10, 1990 and "Appendix A - Workplan for Initial Subsurface Investigation" dated August 20, 1991.

BACKGROUND

The site is currently used as a gasoline station. Four 12,000 gallon underground fuel storage tanks are present at the site. Three of the tanks contain gasoline and the fourth tank contains diesel fuel. A 550 gallon waste oil tank was removed from the site in November, 1988. The fuel tanks were replaced during August, 1992.

Three monitoring wells, designated as MW1, MW2 and MW3 were installed at the site on February 14 and 15, 1990 by Western Geo-Engineers. The subsurface materials encountered in the boreholes consisted primarily of silt and clay. The locations of the monitoring wells are shown in Figure 2. Soil samples collected during drilling of the boreholes for the monitoring wells revealed the presence of total petroleum hydrocarbons as gasoline (TPH-G) and total petroleum hydrocarbons as diesel (TPH-D). TPH-G was encountered in borehole MW1 at depths of 5 and 10 feet below grade at concentrations of 40 and 1,400 ppm, respectively; in borehole MW2 at depths of 10 and 15 feet below grade at concentrations of 230 and 95 ppm, respectively; and in borehole MW3 at depths of 5, 10 and 15 feet at concentrations of 140, 250 and 25 ppm, respectively. In addition, 120 ppm TPH-D was detected in borehole MW3 at a depth of 5 feet. Soil samples collected at a depth of 20 feet in borehole MW1 and at a depth of 18 feet in boreholes in MW2 and MW3 did not show any detectable concentrations of TPH-G or TPH-D. Groundwater was encountered in the boreholes at depths of approximately 15 to 16 feet below grade.

On February 15, 1990 Western Geo-Engineers drilled three exploratory boreholes at the site designated as SB1, SB2 and SB3. The subsurface materials encountered in the boreholes consisted primarily of silt and clay. The

approximate locations of the boreholes are shown on Figure 2. It is P&D's understanding that soil samples were collected from the exploratory boreholes at depths of 10 and 12 feet and evaluated in the field using a photo ionization detector. In borehole SB1, TPH-G was detected at the depths of 10 and 12 feet at concentrations of 1,700 and 450 ppm, respectively. In boreholes SB2 and SB3, TPH-G was detected at the depths of 10 and 12 feet in both boreholes at concentrations of 800 ppm and greater than 2,000 ppm, respectively. A groundwater monitoring and sampling program was initiated at the site on February 20, 1990.

It is P&D's understanding that during fuel tank replacement activities in August, 1992 soil surrounding the tank pit was removed and disposed of offsite. An extraction well, designated as EW1, was designed and constructed in one corner of the new tank pit by K&B Environmental at the time of installation of the new tanks. The location of EW1 is shown on Figure 2.

On February 7, 1996 well MW2 was destroyed for the purpose of widening Redwood Road. The destruction was overseen by ACC Environmental Consultants of Oakland, California.

FIELD ACTIVITIES

On August 15, 1997 P&D personnel oversaw the installation of one groundwater monitoring well, designated as MW4 at the subject site. The location of the monitoring well is shown on the attached Site Plan, Figure 2. Prior to performing field work, a permit was obtained from the Alameda County Public Works Agency, notification was provided to the ACDEH of the scheduled drilling date, Underground Service Alert was notified for buried utility location, and a health and safety plan was prepared.

Monitoring Well Installation and Soil Sample Collection

The boring for monitoring well MW4 was drilled using truck-mounted 8-inch outside diameter hollow stem auger drilling equipment. The boring for monitoring well MW4 was drilled to a total depth of 20.0 feet. Groundwater was encountered during drilling in the borehole for the monitoring well at a depth of 15.5 feet.

Soil samples were collected from the borehole at a maximum of five foot intervals using a California modified split spoon sampler lined with brass tubes driven by a 140 pound hammer falling 30 inches. Blow counts were recorded every six inches. The soil samples were classified lithologically in the field in accordance with standard geologic field techniques and the Unified Soil Classification System. In addition, the soil samples were evaluated in the field using a Model 580B OVM Photoionization Detector (PID) equipped with a 10.0 eV bulb and calibrated against a 100 ppm isobutylene standard. PID readings were recorded on the boring logs.

Mild to very strong petroleum hydrocarbon odors were detected in the soil from the borehole beginning at a depth of approximately three feet and extending to the total depth explored of 20 feet. Organic vapors were detected with the PID in the soil from the borehole for the monitoring well at depths of 5, 10, 15, and 18 feet at concentrations of 16.5, 58, 3.0, and 24 ppm, respectively.

Soil samples were collected at depths of 5.0, and 10.0 feet in borehole MW4 for laboratory analysis in the following manner. After collection of the sample into the brass tube in the California modified split spoon sampler, the ends of the brass tubes were wrapped in aluminum foil, covered with plastic endcaps, labeled, and placed in ziplock baggies. The capped brass tubes were then placed into a cooler with ice pending delivery to McCampbell Analytical Laboratory in Pacheco, California. McCampbell Analytical Laboratory is a State-certified hazardous waste testing laboratory. Chain of custody procedures were followed

for all sample handling. A copy of the boring log for borehole MW4 is attached with this report.

Groundwater monitoring well MW4 was constructed using two-inch diameter Schedule 40 PVC pipe with 15 feet of screened PVC (0.010-inch factory slot) which was placed in the bottom of the borehole between the depths of 5 and 20. A #2/16 Lonestar sack sand was placed into the annular space surrounding the PVC pipe to a height of two feet above the top of the slotted interval. A one-foot thick layer of bentonite pellets was placed above the sand and hydrated. The remaining annular space was filled with a neat cement grout to approximately one half foot below the ground surface.

The top of the PVC wellpipe for well MW4 was secured with a water-tight locking plug and enclosed in a water-tight, locking vault. The vault is traffic rated, and was set slightly above grade to diminish the accumulation of surface water inside the vault. A Well Construction Detail diagram for well MW4 is attached with this report. A Well Completion Report for well MW4 was completed and forwarded to the Alameda County Public Works Agency, in accordance with permit requirements.

Soil cuttings generated during drilling activities were stored onsite in a 55-gallon drum pending appropriate disposal.

Monitoring Well Surveyed Elevations

On August 20, 1997 the top of the PVC well pipe for each of wells MW1, MW3, and MW4 was surveyed vertically to the nearest 0.01 foot relative to a Mean Sea Level (MSL) datum by Elliott V. Ingram , Land Surveyor, of Concord, California. Elliott V. Ingram is a State-licensed surveyor. The surveyed top of the PVC well pipe elevations for MW1, MW3 and MW4 are 177.37, 176.60 and 1176.35 feet MSL, respectively. A copy of the letter transmitting the elevations from Elliott V. Ingram, including the surveyed elevations, a description of the benchmark, and the drawing showing the well locations is attached with this report.

Monitoring Well Development

Well MW4 was developed on August 20, 1997 by surging and over-pumping until the water discharged from the well was relatively clear. Prior to development, the well was monitored for depth to water using an electric water level indicator, and for the presence of free product or sheen using a transparent bailer. The measured depth to groundwater in well MW4 prior to development on August 20, 1997 was 7.66 feet. Depth to water was measured relative to the top of the PVC well casing. No free product, sheen or petroleum hydrocarbon odors were detected in water removed from the well during well development. The depth to water level measurement prior to well development is presented in Table 1.

A total of approximately 30 gallons was removed from the well during well development. Water removed from the well during development was placed into a DOT-approved 55-gallon drum and stored onsite pending appropriate disposal.

Monitoring Well Purging and Sample Collection

On August 26, 1997 well MW4 was monitored for depth to water and the presence of free product and sheen using methods described above. The measured depth to water in well MW4 was 8.92 feet. The depth to water level measurement is presented in Table 1.

After the well had been monitored, the well MW4 was purged of a minimum of three casing volumes of water. During purging operations, the field parameters of pH, electrical conductivity and temperature were monitored. Once the field parameters had been observed to stabilize and a minimum of three casing volumes

have been purged, a groundwater sample was collected from the well using a Teflon bailer. The bailer was cleaned using an Alconox solution and clean water rinse prior to use. A copy of the data sheet used to record the field parameters during well purging is attached with this report.

The groundwater sample was transferred from the bailer to 40 milliliter Volatile Organic Analysis (VOA) vials containing hydrochloric acid preservative and to one-liter amber glass bottles which were sealed with Teflon-lined screw caps. The VOA vials were overturned and tapped to assure that air bubbles were not present. The sample bottles were then labeled and placed into a cooler with ice pending delivery to McCampbell Analytical Laboratory. Chain of custody procedures were observed for all sample handling.

GEOLOGY AND HYDROGEOLOGY

Based on observations of the subsurface materials encountered in the borehole, the subsurface materials consist predominantly of a brown silty clay with minor medium fine sand to the total depth explored of approximately 20 feet.

Although groundwater was initially encountered during drilling at a depth of approximately 15.5 feet below grade, groundwater stabilized in the well at a depth of approximately 8.9 feet below grade.

Water levels were measured in monitoring wells MW1, MW3, and MW4 at the site on August 26, 1997. The measured depth to water in wells MW1, MW3, and MW4 on August 26, 1997 was 8.51, 7.67 and 8.92 feet, respectively. Groundwater levels have increased in wells MW1 and MW3 by 0.20, and 0.23 feet, respectively, since the previous monitoring on July 24, 1997. Based on the measured depth to groundwater in groundwater monitoring wells MW1, MW3, and MW4, the apparent groundwater flow direction at the site on August 26, 1997 was calculated to be to the east-northeast with a gradient of 0.023.

Groundwater monitoring data collected on August 26, 1997 are presented in Table 1. The groundwater flow direction at the site on August 26, 1997 is shown on Figure 2.

LABORATORY ANALYTICAL RESULTS

The soil samples collected from borehole MW4 and the groundwater sample collected from monitoring well MW4 were analyzed for TPH-G using EPA Method 5030 and Modified EPA Method 8015; benzene, toluene, ethylbenzene, total xylenes (BTEX), and MTBE using EPA Method 8020; and for TPH-D using EPA Method 3550 (soil) or 3510 (water) in conjunction with Modified EPA Method 8015.

The laboratory analytical results of the soil samples collected from borehole MW4 show that at the 5 and 10 foot depths (samples MW4-5.0 and MW4-10.0, respectively) TPH-G was detected at concentrations of 350 and 1,600 ppm, respectively; benzene was detected at concentrations of 4.7 and 18 ppm, respectively; and TPH-D was detected at concentrations of 200 and 3,400 ppm, respectively. Review of the laboratory analytical reports indicates that the TPH-D results for the soil samples for groundwater monitoring well MW4 consist of both gasoline-range and diesel-range compounds. The laboratory analytical results of the soil samples are summarized in Table 2. Copies of the laboratory analytical report and chain of custody documentation are attached with this report.

The laboratory analytical results of the groundwater sample collected from MW4 show that TPH-G, MTBE, benzene, and TPH-D were detected at concentrations of 210, 1.7, 48, and 5.5 ppm, respectively. Review of the laboratory analytical reports indicates that the TPH-D results for the groundwater sample from well MW4 consist of both gasoline-range and diesel-range compounds. The laboratory

analytical results of the water samples are summarized in Table 3. Copies of the laboratory analytical report and chain of custody documentation are attached with this report.

DISCUSSION AND RECOMMENDATIONS

One groundwater monitoring well designated as MW4 was installed adjacent to Redwood Road at the subject site. Between February 7, 1996 and the installation of well MW4, only two monitoring wells were at the site. During this time it was not possible to calculate groundwater flow direction.

The subsurface materials encountered in the borehole were predominantly brown silty clay with minor to medium fine sand to the total depth explored of approximately 20 feet. Groundwater was initially encountered during drilling at a depth of approximately 15.5 feet, and later stabilized at a depth of 8.92 feet below grade.

The results of the soil samples collected from the borehole show that at the 5 and 10 foot depths TPH-G was detected at concentrations of 350 and 1,600 ppm, respectively; benzene at concentrations of 4.7 and 18 ppm, respectively; and TPH-D at concentrations of 200 and 3,400 ppm, respectively. The results of the groundwater sample collected from MW4 show that TPH-G, MTBE, benzene, and TPH-D were detected at concentrations of 210, 1.7, 48, and 5.5 ppm, respectively.

Based upon the sample results, P&D recommends that the quarterly groundwater monitoring and sampling program be continued.

DISTRIBUTION

Copies of this report should be sent to Mr. Scott Seery at the ACDEH and to Mr. Kevin Graves at the San Francisco Bay Regional Water Quality Control Board.

LIMITATIONS

This report was prepared solely for the use of XTRA OIL Company. The content and conclusions provided by P&D in this assessment are based on information collected during our investigation, which may include, but not be limited to, visual site inspections; interviews with the site owner, regulatory agencies and other pertinent individuals; review of available public documents; subsurface exploration and our professional judgement based on said information at the time of preparation of this document. Any subsurface sample results and observations presented herein are considered to be representative of the area of investigation; however, geological conditions may vary between borings and may not necessarily apply to the general site as a whole. If future subsurface or other conditions are revealed which vary from these findings, the newly-revealed conditions must be evaluated and may invalidate the findings of this report.

This report is issued with the understanding that it is the responsibility of the owner, or his representative, to ensure that the information contained herein is brought to the attention of the appropriate regulatory agencies, where required by law. Additionally, it is the sole responsibility of the owner to properly dispose of any hazardous materials or hazardous wastes left onsite, in accordance with existing laws and regulations.

This report has been prepared in accordance with generally accepted practices using standards of care and diligence normally practiced by recognized consulting firms performing services of a similar nature. P&D is not responsible for the accuracy or completeness of information provided by other individuals or entities which is used in this report. This report presents our professional judgement based upon data and findings identified in this report and

interpretation of such data based upon our experience and background, and no warranty, either express or implied, is made. The conclusions presented are based upon the current regulatory climate and may require revision if future regulatory changes occur.

Should you have any questions, please do not hesitate to contact us at (510) 658-6916.

Sincerely,

P&D Environmental

Paul H. King

Paul H. King
Hydrogeologist

REGISTERED GEOLOGIST
DON R. BRAUN
No. 1310
CERTIFIED
ENGINEERING
GEOLOGIST
STATE OF CALIFORNIA

Don R. Braun
Certified Engineering Geologist
Registration No.: 1310
Expiration Date: 6/30/98

Attachments: Tables 1, 2, & 3
Site Location Map - Figure 1
Site Plan - Figure 2
MW4 Boring Log
MW4 Well Construction Details
Wellhead Survey Data
Well Sampling Purge Data Sheet
Laboratory Analytical Reports
Chain of Custody Documentation

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TABLE 1
WELL MONITORING DATA

Well No.	Date Monitored	Top of Casing Elev. (ft.)	Depth to Water (ft.)	Water Table Elev. (ft.)
MW1	8/26/97	177.37*	8.51	168.86
	7/24/97	177.43**	8.71	168.72
	4/25/97		7.98	169.45
	1/20/97		7.12	170.31
	7/26/96		8.39	169.04
	7/09/96		8.16	169.27
	4/23/96		7.47	169.96
	2/07/96		6.09	171.34
	1/29/96		6.17	171.26
	10/26/95		8.45	168.98
	7/28/95		8.27	169.16
	5/02/95		6.96	170.47
	2/23/95		7.72	169.71
	11/18/94		7.14	170.29
	8/22/94		8.67	168.76
	5/19/94		8.05	169.38
	2/28/94		7.44	169.99
	11/24/93		8.74	168.69
	8/30/93		8.78	168.65
	5/18/93		8.12	169.31
	2/23/93		7.34	170.09
	11/13/92	200.00***	9.13	190.87
	5/29/92	175.73	8.59	167.14
	1/14/92		8.57	167.16
	12/23/91		9.65	166.08
	11/25/91		9.41	166.32
	10/10/91		9.70	166.03
	9/17/91		9.50	166.23
	8/19/91		9.31	166.42
MW2	NOT MEASURED (DESTROYED ON FEBRUARY 7, 1996)			
	2/07/96	176.04**	5.70	170.34
	1/29/96		5.16	170.88
	10/26/95		8.21	167.83
	7/28/95		7.99	168.05
	5/02/95		6.79	169.25
	2/23/95		7.51	168.53
	11/18/94		6.92	169.12
	8/22/94		8.59	167.45
	5/19/94		7.70	168.34
	2/28/94		6.99	169.05
	11/24/93		8.47	167.57
	8/30/93		8.64	167.40
	5/18/93		7.73	168.31
	2/23/93		6.39	169.65

NOTES:
* = Surveyed on August 20, 1997
** = Surveyed on March 24, 1993
*** = Surveyed on December 5, 1992

TABLE 1
WELL MONITORING DATA
(Continued)

Well No.	Date Monitored	Top of Casing Elev. (ft.)	Depth to Water (ft.)	Water Table Elev. (ft.)
MW2	11/13/92	198.61***	8.70	189.91
	5/29/92	175.45	9.31	166.14
	1/14/92		8.97	166.48
	12/23/91		10.39	165.06
	11/25/91		9.81	165.64
	10/10/91		10.39	165.06
	9/17/91		10.23	165.22
	8/19/91		9.60	165.85
MW3	8/26/97	176.60*	7.67	168.93
	7/24/97	176.41**	7.90	168.51
	4/25/97		7.12	169.29
	1/20/97		6.35	170.06
	7/26/96		7.84	169.57
	7/09/96		7.61	168.80
	4/23/96		6.81	169.60
	2/07/96		5.05	170.36
	1/29/96		5.77	170.64
	10/26/95		7.72	168.69
	7/28/95		7.80	168.61
	5/02/95		6.50	169.91
	2/23/95		7.24	169.17
	11/18/94		6.05	170.36
	8/22/94		7.65	168.76
	5/19/94		7.15	169.26
	2/24/94		6.68	169.73
	11/24/93		7.55	168.86
	8/30/93		7.64	168.77
	5/18/93		7.12	169.29
	2/23/93		8.01	168.40
	11/13/92	190.97***	7.86	191.12
	5/29/92	175.00	8.45	166.55
	1/14/92		8.24	166.55
	12/23/91		9.37	165.63
	11/25/91		9.19	165.81
	10/10/91		9.43	165.57
	9/17/91		9.20	165.80
	8/19/91		8.95	166.05
MW4	8/26/97	176.35*	8.92	167.43
	8/20/97		7.66 (prior to development)	

NOTES:
* = Surveyed on August 20, 1997
** = Surveyed on March 24, 1993
*** = Surveyed on December 5, 1992

TABLE 2
SOIL BORING
LABORATORY ANALYTICAL RESULTS
(Samples Collected on August 15, 1997)

Sample Location	TPH-D	TPH-G	MTBE	Benzene	Toluene	Ethyl-benzene	Total Xylenes
MW4-5.0#	200	350	ND	4.7	1.1	6.9	6.2
MW4-10.0#	3,400	1,600	ND	18	3.6	25	120

NOTES:

TPH-D = Total Petroleum Hydrocarbons as Diesel.
TPH-G = Total Petroleum Hydrocarbons as Gasoline.
MTBE = Methyl tert-Butyl Ether.
ND = Not Detected.
# = Review of the laboratory analytical report indicates that the TPH-D results consist of both gasoline-range and diesel-range compounds.
Results are in parts per million (ppm), unless otherwise specified.

TABLE 3
GROUNDWATER
LABORATORY ANALYTICAL RESULTS
(Sample Collected on August 26, 1997)

Sample Location	TPH-D	TPH-G	MTBE	Benzene	Toluene	Ethyl-benzene	Total Xylenes
MW4#	5.5	210	1.7	48	42	3.4	19

NOTES:

TPH-D = Total Petroleum Hydrocarbons as Diesel.
TPH-G = Total Petroleum Hydrocarbons as Gasoline.
MTBE = Methyl tert-Butyl Ether.
ND = Not Detected.
# = Review of the laboratory analytical reports indicates that the TPH-D results consist of both gasoline-range and diesel-range compounds.
Results are in parts per million (ppm), unless otherwise specified.

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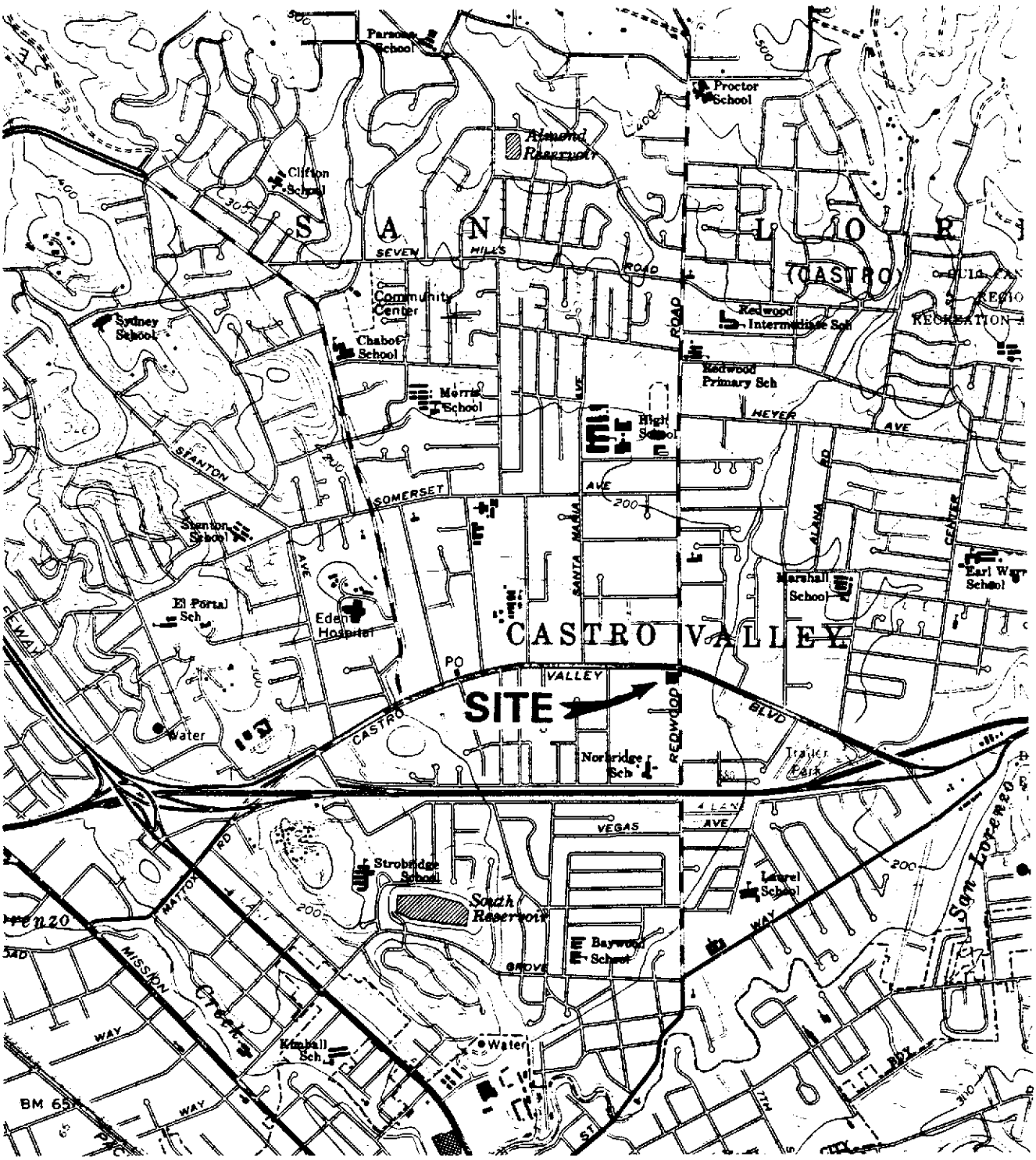
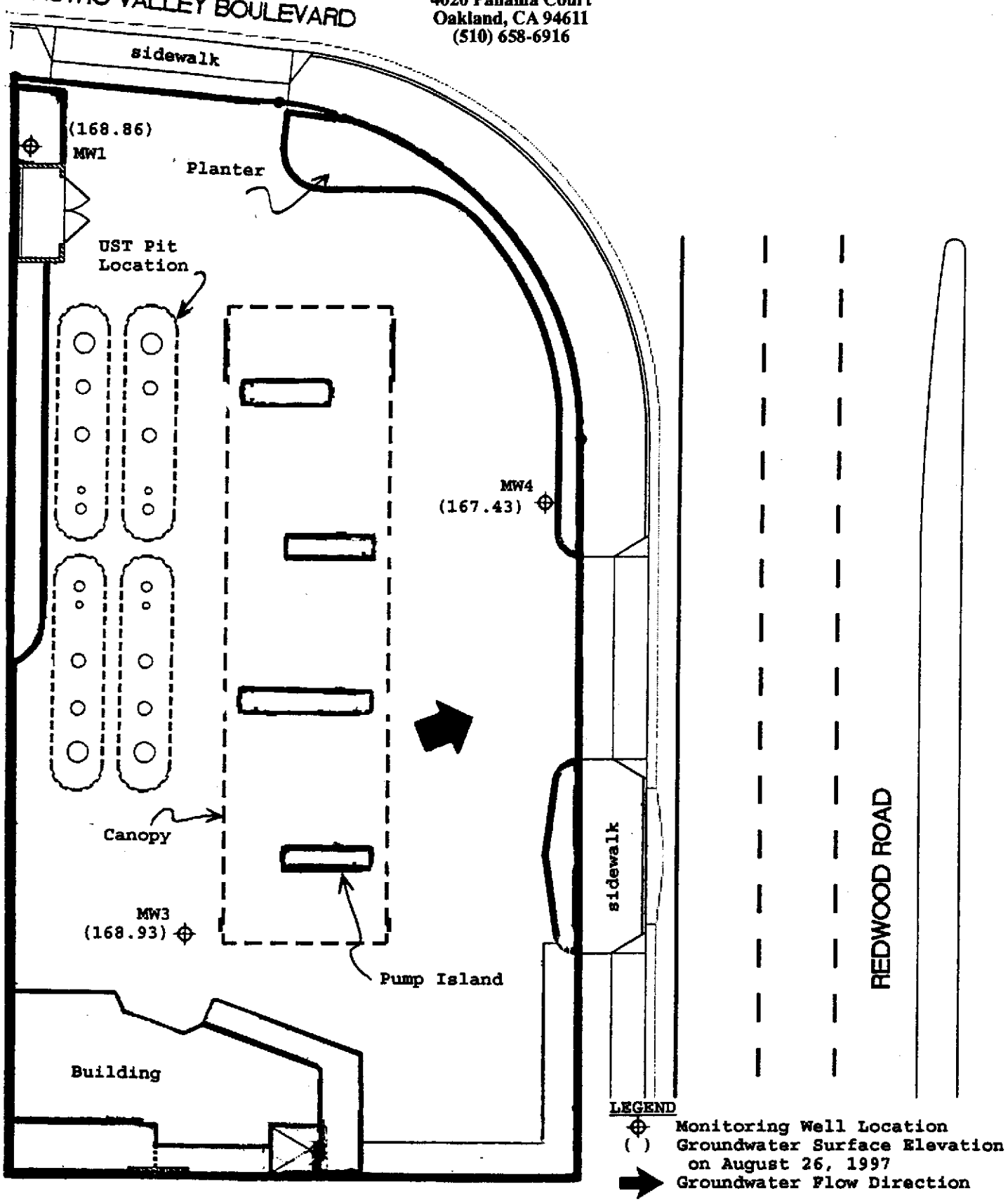


Base Map from:
U.S. Geological Survey
Hayward, Calif.
7.5 Minute Quadrangle
Photorevised 1980

Figure 1
SITE LOCATION MAP
XTRA OIL Company
3195 Castro Valley Blvd.
Alameda, California

P & D ENVIRONMENTAL
A Division of Paul H. King, Inc.
4020 Panama Court
Oakland, CA 94611
(510) 658-6916



Base Map From
RHL Design Group, Inc.
June, 1997

Figure 2
SITE PLAN
XTRA OIL Company
3459 Castro Valley Blvd.
Castro Valley, CA

P & D ENVIRONMENTAL

BORING NO.: MW4 PROJECT NO.: 0014 PROJECT NAME: XIRA OIL COMPANY - CASTRO VALLEY

BORING LOCATION: NEXT TO PLANTER ON REDWOOD ROAD ELEVATION AND DATUM: N/A

DRILLING AGENCY: EXPLORATION GASERVICES, INC. DRILLER: DAVE Y. & DAVE N.

DRILLING EQUIPMENT: 8" OD HOLLOW STEM AUGER

COMPLETION DEPTH: 20 FEET BEDROCK DEPTH: NONE ENCOUNTERED

FIRST WATER DEPTH: 15.5 FEET NO. OF SAMPLES: 3 SOIL

DATE & TIME STARTED:	DATE & TIME FINISHED:
8/15/97	8/15/97
LOGGED BY: AOG	CHECKED BY: PHK

DEPTH (FT.)	DESCRIPTION	GRAPHIC COLUMN	WELL CONSTRUCTION LOG	BLOW COUNT PER 6"	PID/ppm	REMARKS
0	Concrete		See attached Well Construction Detail Diagram			Samples collected using 3 1/2" OD California Modified Split Spoon sampler driven by a 140# hammer falling 30".
1	Dark brown SILTY CLAY (CL); with minor fine to medium sand, stiff, moist. Moderate Petroleum Hydrocarbon (PHC) odor.	CL				
2						
3						
4						
5				4		
6				5 9	16.5	
7	Light green SILTY CLAY (CL); with abundant fine to medium sand, very stiff, moist. Strong PHC odor.	CL				
8						
9						
10				7		
11				10 9	58	
12	Red-brown SILTY CLAY (CL); with some gray mottling, minor fine to medium sand, very moist, stiff to hard. Mild PHC odor.	CL				
13						
14						
15			▽	13		Groundwater first encountered at 15.5 feet at 8:17 AM on 8/15/97.
16				19 18	3.0	
17	Brown SILTY CLAY (CL) with minor gray mottling, saturated, hard. Moderate PHC odor.	CL				
18						
19					24	
20						Borehole terminated at 20 feet below grade. Groundwater monitoring well constructed on 8/15/97.
21						
22						
23						
24						
25						
26						
27						
28						
29						
30						

9/10/97 1001MW4.DWG

P & D ENVIRONMENTAL

4020 Panama Court
Oakland, CA 94611
Telephone (510) 658-6916

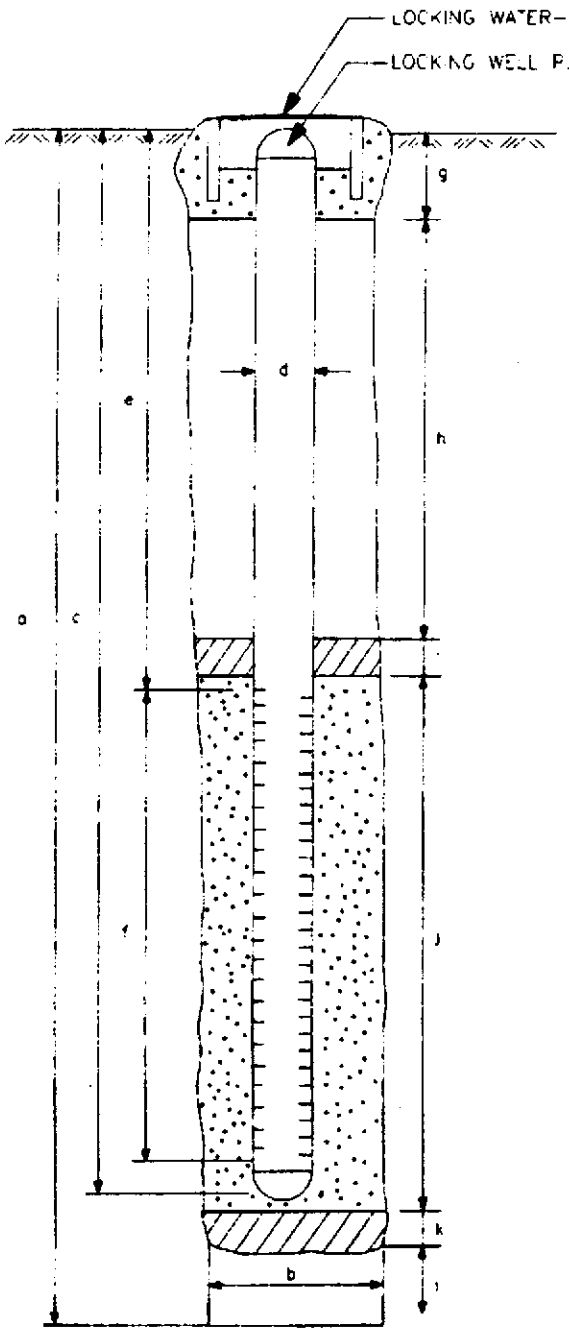
WELL CONSTRUCTION DETAILS

PROJECT NUMBER 0014 BORING/WELL NO. MW4

PROJECT NAME Xira Oil Company, Castro Valley TOP OF CASING ELEV. 176.35

COUNTY Alameda GROUND SURFACE ELEV. UNKNOWN

WELL PERMIT NO. 97WR049 DATUM BOLT ON TRAFFIC SIGNAL POLE



EXPLORATORY BORING

a. Total depth 20.0 FT.

b. Diameter 8.0 IN.

Drilling method Hollow Stem Auger

WELL CONSTRUCTION

c. Casing length 20.0 FT.

Material Schedule 40 PVC

d. Diameter 2 IN.

e. Depth to top perforations 5.0 FT.

f. Perforated length 15 FT.

Perforated interval from 5 to 20 FT.

Perforation type Factory Slot

Perforation size 0.010 inch

g. Surface sanitary seal 0.5 FT.

Seal material Concrete

h. Sanitary seal 1.5 FT.

Seal material Neat Cement

i. Filter pack seal 1.0 FT.

Seal material Bentonite Pellet

j. Filter pack length 17.0 FT.

Filter pack interval from 3.0 to 20.0 FT.

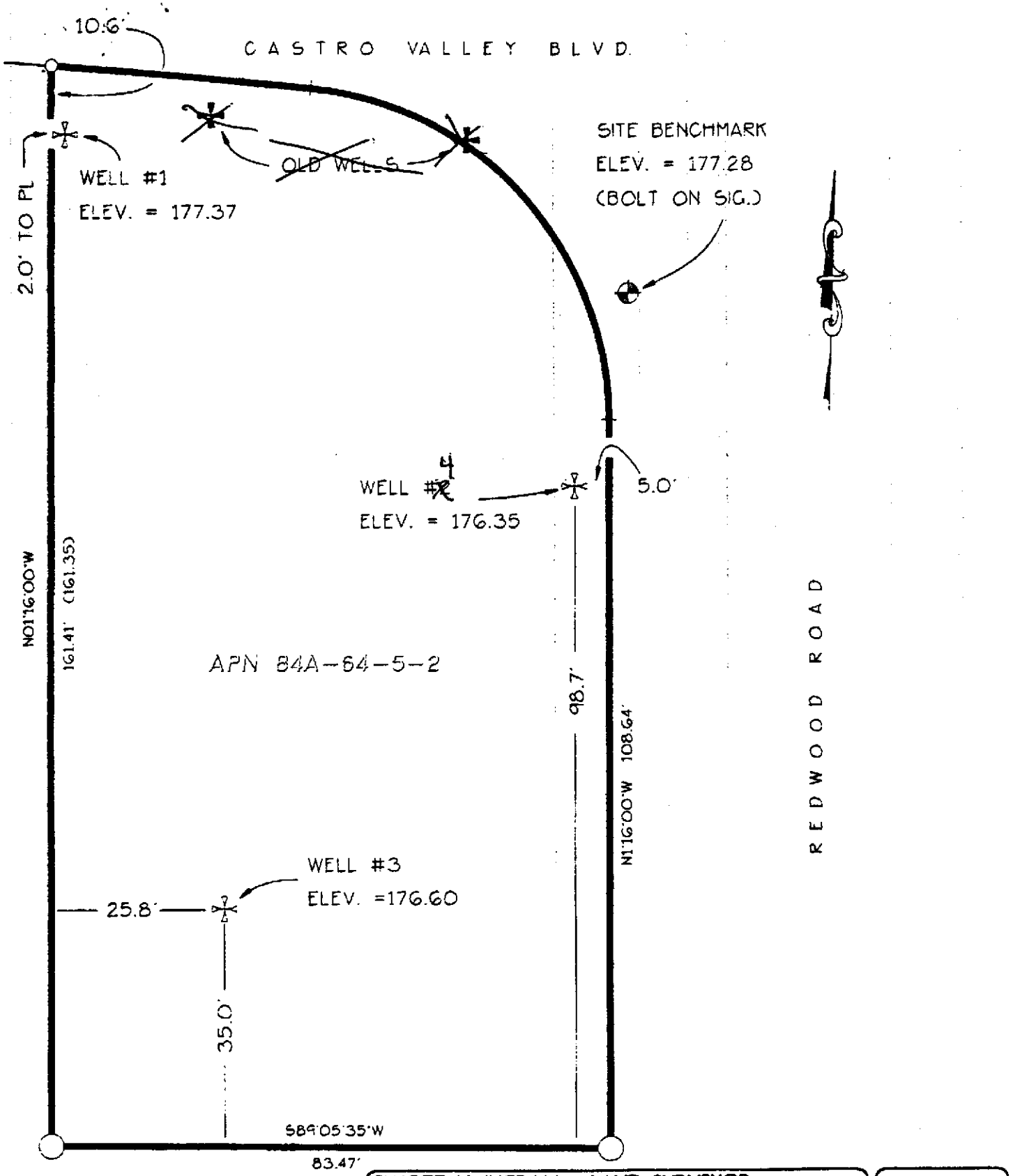
Pack material #2/16 Lonestar Sock Sand

k. Bottom seal 0 FT.

Seal material None

l. Stuff in bottom of borehole 0 FT.

WCD1001



ELLIOTT V. INGRAM LAND SURVEYOR
1310 LA VISTA CONCORD, CALIFORNIA 94521-2627
(510) 689 - 4578 FAX: (510) 676 - 9854

NEW MONITORING WELLS
3495 CASTRO VALLEY BLVD.
SCALE: 1" = 20' DATE: AUGUST 20, 1997

P&D ENVIRONMENTAL
GROUNDWATER MONITORING/WELL PURGING
DATA SHEET

Site Name XTRA Oil Company - Cuba Valley
Job No. 0014
TOC to Water (ft.) 8.92
Well Depth (ft.) 26.6
Well Diameter 2"
Gal./Casing Vol. 1.6

Well No. MW4
Date 4/26/97
Sheen None
Free Product Thickness 9
Sample Collection Method
Teflon Bailer

TIME	GAL. PURGED	pH	TEMPERATURE (°F)	ELECTRICAL CONDUCTIVITY (µS/cm)
7.00	0.9	7.45	72.1	4.95 x1000
7.03	1.8	7.38	72.5	5.20
7.06	2.7	7.25	72.7	4.35
7.09	3.6	7.20	72.3	4.20
7.12	4.5	7.18	71.9	4.25
7.15	5.4	7.15	71.8	4.15
7.40	Sampled			

NOTES:
AGG
Well was purged using Hand pump & bailer

PURGE 10.92

	TOC to H2O
MW1	8.51
MW3	7.69