Memorandum

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QM TRANSMITTAL
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UNOCAL 76

San Ramon, California
December 14, 1992

TO: J. L. Cierley

FROM: P.L. Silzer

OFF-SITE ACCESS REQUEST
Unocal Service Station #5760
376 Lewelling Blvd.
San Lorenzo, California

Attached please find the access information requested in your November 25, 1992 memo. This information was requested by Mr. David J. Reimer, owner of property in the vicinity of our site. Please proceed with the access agreement.

I have scheduled a meeting with Mr. Reimer for Tuesday December 15, 1992 at 2 pm at the Unocal service station.

If you have any questions, please call me, network, 355-2320.

Attachment

cc: R. E. Bock (w/o)
N. P. Mead

GeoStrategies Inc.
2140 WEST WINTON AVENUE
HAYWARD, CALIFORNIA 94545
(510) 352-4800

December 7, 1992

UNOCAL Corporation
Post Office Box 5155
San Ramon, California 94583

Attn: Ms. Penny Silzer

Re: Access Information Requested
UNOCAL Service Station No. 5760
376 Lewelling Boulevard
San Lorenzo, California

Ms. Silzer:

This letter was prepared in response to your fax dated December 3, 1992, requesting information required by J. L. Cierley of UNOCAL Real Estate Division. This fax is attached and the responses are numbered accordingly.

Responses are as follows:

1) Yes, the location of the proposed well is flexible, however, the closer we can get to the proposed location, the better.

2) Quarterly sampling of the proposed well is planned. Depending on the results, this frequency could be reduced.

Property Manager 3) One well was installed at the property owned by:

Don Del Company
21119 Redwood Road
Castro Valley, California 94546
Attention: Lloyd Donohue, General Partner

Mike Jaeger
15500 E. 14th St.
San Leandro, CA 94578
(510) 278-0800 ext. 113

:UNOCALMISC/NO5760.DJV/(rt)

Located at: 15636-15640 Usher Street
San Lorenzo, California

4) Three wells were installed along Usher Street and permitted through:

County of Alameda
Public Work Agency
399 Elmhurst Street
Hayward, California 94544-1395

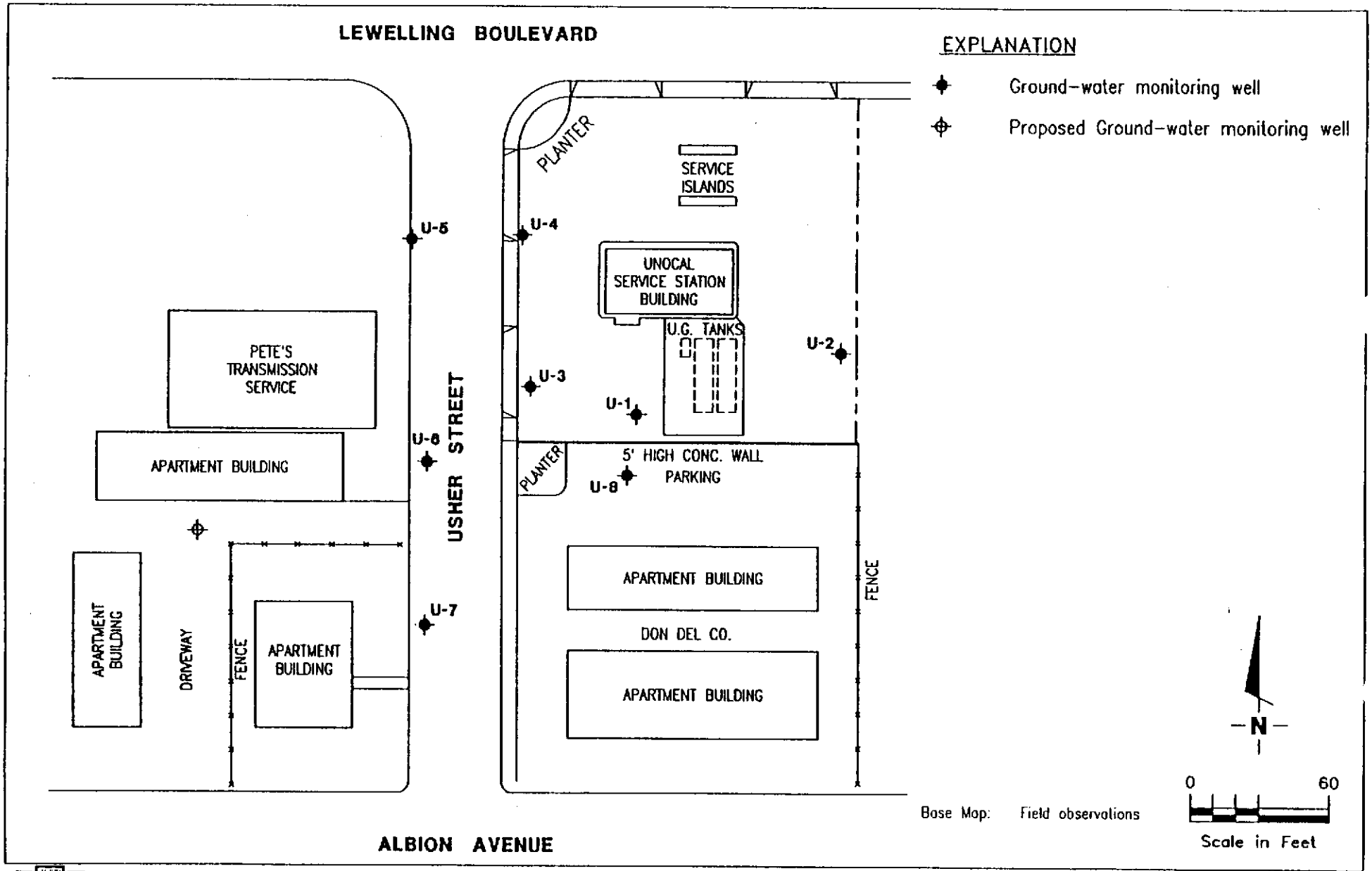
Attention: Mr. John Rodgers

I trust this is the information required at this time. Please call if you have any questions or comments.

Sincerely,

David J. Vossler
Project Manager

:UNOCALMISC/NO5760.DJV/(rt)



GeoStrategies Inc.

EXTENDED SITE PLAN
UNOCAL Service Station #5760
376 Lewelling Boulevard
San Lorenzo, California

PLATE **2**

JOB NUMBER	REVIEWED BY	DATE	REVISED DATE
780905-11	TPC	8/92	

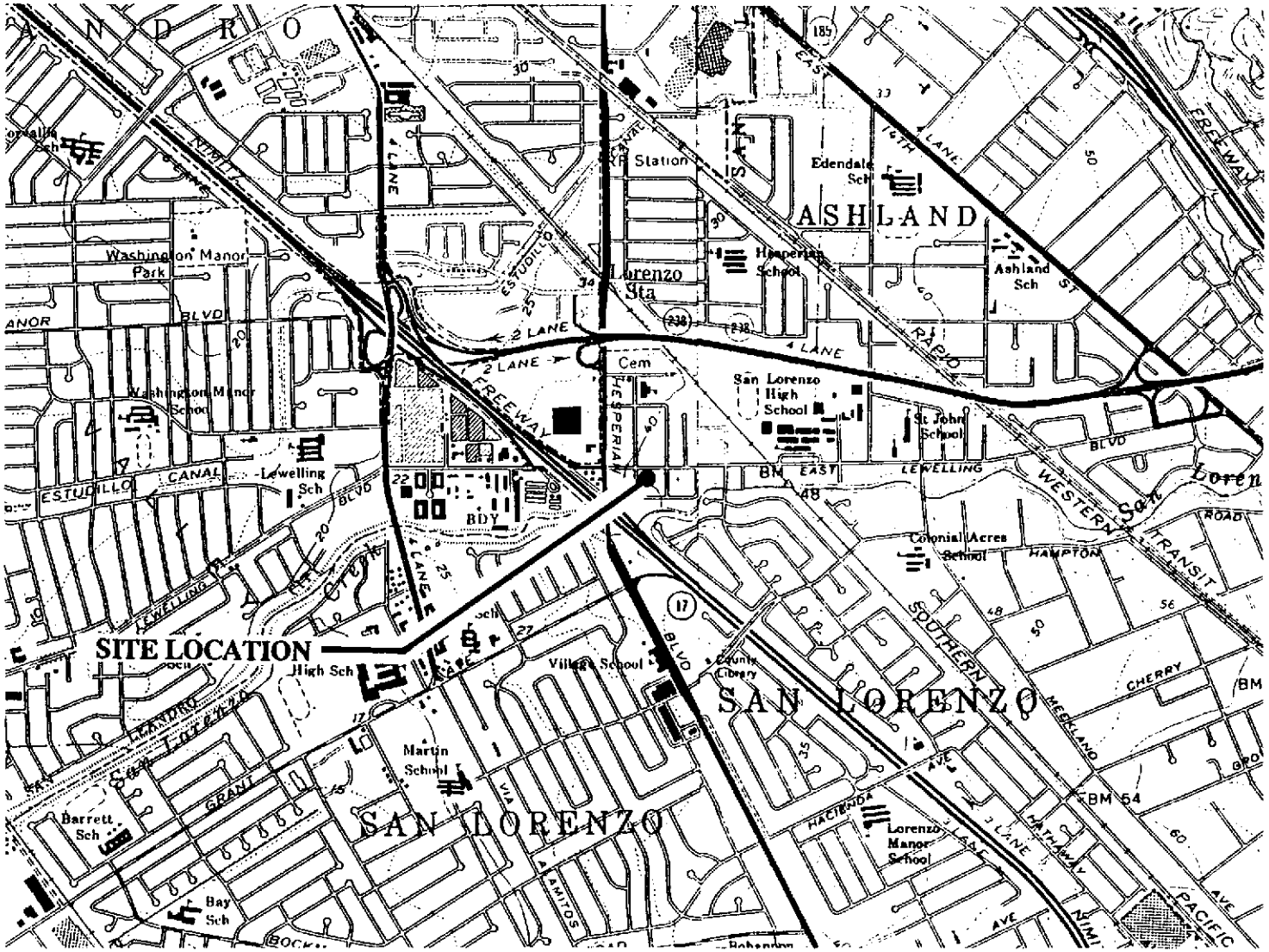
REFERENCES SITED

GeoStrategies Inc., 1990, Well Installation Report, Report No. 7809-3, dated November 16, 1990.

GeoStrategies Inc., 1992, Well Installation Report, Report No. 780902-10, dated June 15, 1992.

Helley, E.J. and others, 1979, Flatland deposits of the San Francisco Bay Region, California - Their geology and engineering properties, and their importance to comprehensive planning: U.S. Geological Survey Professional Paper 943.

Woodward-Clyde Consultants, 1988, Well Installation Report, Report No. 8820011A-0015, dated March 25, 1988.



N

0 2000

Scale in Feet

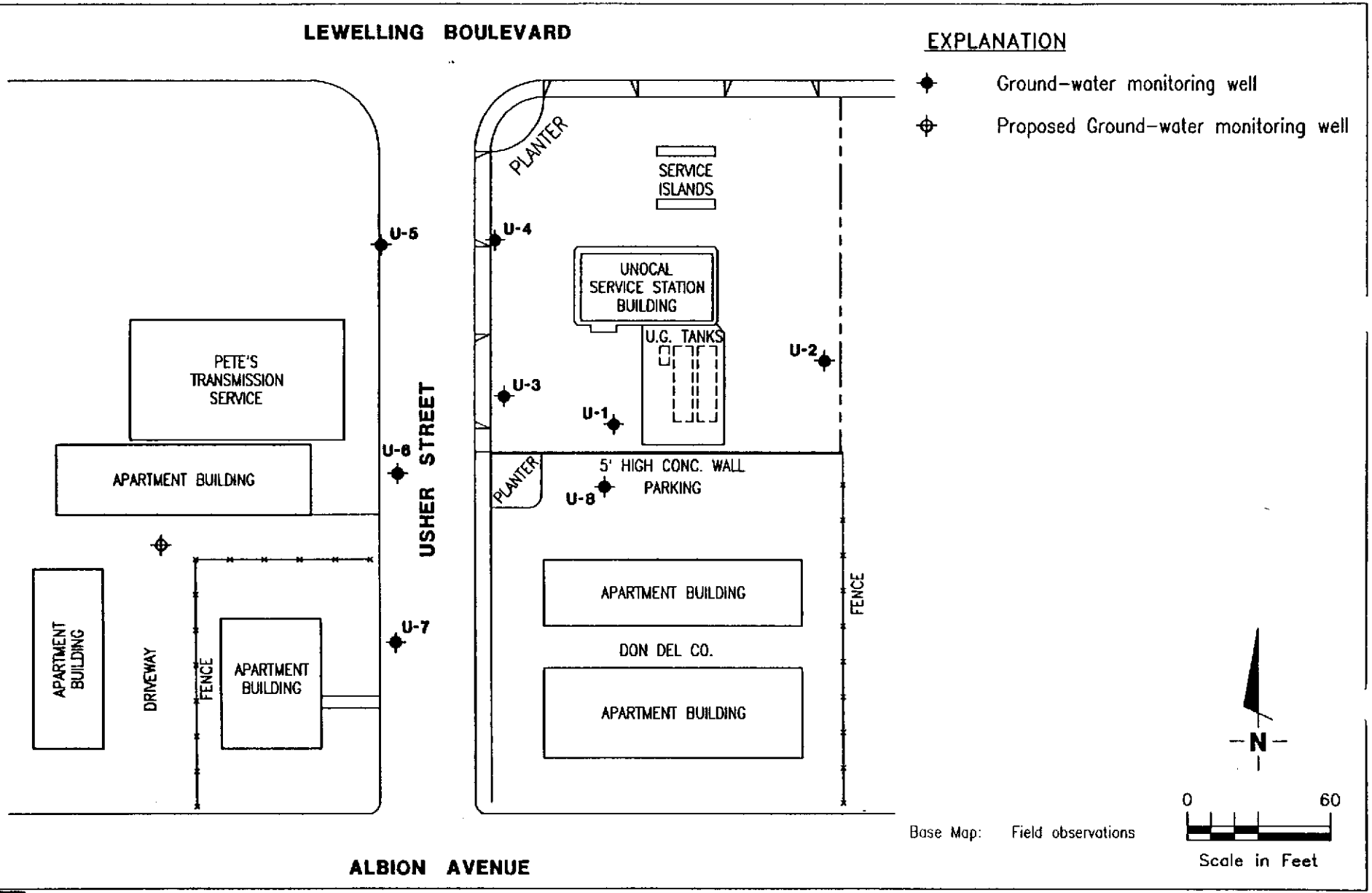
Base Map: USGS Topographic Map

GeoStrategies Inc.

VICINITY MAP
UNOCAL Service Station #5760
376 Lewelling Boulevard
San Lorenzo, California

PLATE
1

JOB NUMBER	REVIEWED BY	DATE	REVISED DATE
7809		2/91	



GeoStrategies Inc.

EXTENDED SITE PLAN
UNOCAL Service Station #5760
376 Lewelling Boulevard
San Lorenzo, California

PLATE **2**

JOB NUMBER	REVIEWED BY	DATE	REVISED DATE
780905-11	TPC	8/92	

APPENDIX A
FIELD METHODS AND PROCEDURES

FIELD METHODS AND PROCEDURES

EXPLORATION DRILLING

Mobilization

Prior to any drilling activities, GSI will verify that necessary drilling permits have been secured.

Utility locations will be located and drilling will be conducted so as not to disrupt activities at a project site. GSI will obtain and review available public data on subsurface geology and if warranted, the location of wells within a half-mile of the project site will be identified. Drillers will be notified in advance so that drilling equipment can be inspected prior to performing work.

Drilling

The subsurface investigations are typically performed to assess the lateral and vertical extent of petroleum hydrocarbons present in soils and ground water. Drilling methods will be selected to optimize field data requirements as well as be compatible with known or suspected subsurface geologic conditions.

Monitoring wells are installed using a truck-mounted hollow-stem auger drill rig or mud-rotary drill rig. Typically, the hollow-stem rig is used for wells up to 100 feet, if subsurface conditions are favorable. Wells greater than 100-feet deep are typically drilled using mud-rotary techniques. When mud rotary drilling is used, an electric log will be performed for additional lithological information. Also during mud rotary drilling, precautions will be taken to prevent mud from circulating contaminants by using a conductor casing to seal off contaminated zones. Samples will be collected for lithologic logging by continuous chip, and where needed by drive sample or core as specified by the supervising geologist.

Soil Sampling

Shallow soil borings will be drilled using a truck-mounted hollow-stem auger drilling rig, unless site conditions favor a different drilling method. Drilling and sampling methods will be consistent with ASTM Method D-1452-80. The auger size will be a minimum 6-inch nominal outside-diameter (O.D). No drilling fluids will be used during this drilling method. The augers and other tools used in the bore hole will be steam cleaned before use and between borings to minimize the possibilities of cross-contamination between borings.

Soil samples are typically collected at 5-foot intervals as a minimum from ground surface to total depth of boring. Additional soil samples will be collected based on significant lithologic changes and/or potential chemical content. Soil samples from each sampling interval will be lithologically described by a GSI geologist (Figure 1). Soil colors will be described using the Munsell Color Chart. Rock units will be logged using appropriate lithologic terms, and colors described by the G.S.A. Rock Color Chart.

Head-space analyses will be performed to check for the evidence of volatile organic compounds. Head-space analyses will be performed using an organic vapor analyzer; either an OVA, HNU, or OVM. Organic vapor concentrations will be recorded on the GSI field log of boring (Figure 1). The selection of soil samples for chemical analysis are typically based on the following criteria:

1) Soil discoloration
2) Soil odors
3) Visual confirmation of chemical in soil
4) Depth with respect to underground tanks (or existing grade)
5) Depth with respect to ground water
6) OVA reading

Soil samples (full brass liners) selected for chemical analysis are immediately covered with aluminum foil and the liner ends are capped to prevent volatilization. The samples are labeled and entered onto a Chain-of-Custody form, and placed in a cooler on blue ice for transport to a State-certified analytical laboratory.

Soil cuttings are stockpiled on-site. Soils are sampled and analyzed for site-specific chemical parameters. Disposition of soils is dependent of chemical analytical results of the samples.

Soil Sampling - cont.

Soil borings not converted to monitoring wells will be backfilled (sealed) to ground surface using either a neat cement or cement-bentonite grout mixture. Backfilling will be tremied by continuously pumping grout from the bottom to the top of the boring where depth exceeds 20' or as required by local permit requirements.

All field and office work, including exploratory boring logs, are prepared under the direction of a registered geologist.

Monitoring Well Installation

Monitoring well casing and screen will be constructed of Schedule 40, flush-joint threaded polyvinylchloride (PVC). The well screen will be factory mill-slotted unless additional open area is required (eg. conversion to an extraction well in a low-yield aquifer). The screen length will be placed adjacent to the aquifer material to a minimum of 2-feet above encountered water. No screen shall be placed in a borehole that potentially creates hydraulic interconnection of two or more aquifer units. Screen slot size and well sand pack will be compatible with encountered aquifer materials, as confirmed by sieve analysis.

Monitoring wells will be completed below grade (Figure 2) unless special conditions exist that require above-grade completion design. In the event a monitoring well is required in an aquifer unit beneath an existing aquifer, the upper aquifer will be sealed off by installing a steel conductor casing with an annular neat cement or cement-bentonite grout seal. This seal will be continuously tremied pumped from the bottom of the annulus to ground surface.

The monitoring well sand pack will be placed adjacent to the entire screened interval and will extend a recommended minimum distance of 2-feet above the top of the screen. No sand pack will be placed that interconnects two or more aquifer units. A minimum 2-foot bentonite pellet or bentonite slurry seal will be placed above the sand pack. Sand pack, bentonite, and cement seal levels will be confirmed by sounding the annulus with a calibrated weighted tape. The remaining annular space above the bentonite seal will be grouted with a bentonite-cement mixture and will be tremie-pumped from the bottom of the annular space to the ground surface. The bentonite content of the grout will not exceed 5 percent by weight. A field log of boring and a field well completion form will be prepared by GSI for each well installed.

Decontamination of drilling equipment before drilling and between wells will consist of steam cleaning, and/or Alconox wash.

Well Development

All newly installed wells will be properly developed within 48 hours of completion. No well will be developed until the well seal has set a minimum of 12 hours. Development procedures will included one or more of the methods described below:

Bailing

Bailing will be used to remove suspended sediments and drilling fluids from the well, where applicable. The bailer will be raised and lowered through the column of water in the well so as to create a gentle surging action in the screened interval. This technique may be used in conjunction with other techniques, such as pumping, and may be used alone if the well is of low yield.

Pumping

Pumping will be used in conjunction with bailing or surging. The pump will be operated in such a manner as to gently surge the entire screened interval of the well. This may involve operating the pump with a packer type mechanism attached and slowly raising and lowering the pump, or by cycling the pump off and on to allow water to move in and out of the screened interval. Care will be used not to overpump a well.

Surging

Surging will be performed on wells that are screened in known or suspected high yield formations and/or on larger diameter (recovery) wells. A surge block will be raised and lowered through the entire screened interval, forcing water in and out of the well screen and sand pack. Pumping or air lifting will be used in conjunction with this method of development to remove any sediment brought into the well during surging.

Air Lifting

Air lifting will be used to remove sediment from wells as an alternative to pumping under certain conditions. When appropriate, a surge block designed for use with air lifting will be used to agitate the entire screened interval and water will be lifted out of the well using forced air. When air lifting is performed, the air source will be either nitrogen or filtered air and the procedure will be performed gently to prevent any damage to the well screen or casing and to insure that discharged water is contained.

Well Development - cont.

All well developing equipment will be thoroughly decontaminated prior to development using a steam cleaner and/or Alconox detergent wash and clean water rinse. During development procedures, field parameters (temperature, specific conductance and pH) will be monitored and recorded on well development forms (Figure 3). Equilibration requirements consist of a minimum of three readings with the following accuracy standards:

pH	± 0.1 pH units
Specific Conductance	± 10% of full scale reading
Temperature	± 0.5 degrees Celsius

The wells will be developed until water is visibly clear and free of sediment, and well purging parameters stabilized. A minimum of 8 to 10 well volumes will be purged from each well, if feasible. If well purging parameters have not stabilized before 10 casing volumes have been removed, well development will continue until purging parameters have stabilized and formation water is being drawn into the well. The adequacy of well development will be judged by the field technician performing the well development and based on known formation conditions.

Well Surveying

Monitoring wells will be surveyed to obtain top of box elevations to the nearest ±0.01 foot. Water level measurements will be recorded to the nearest ±0.01 foot and referenced to mean sea level (MSL). If additional wells are required, then existing and newly installed wells are surveyed relative to MSL.

GeoStrategies Inc.

FIELD EXPLORATORY BORING LOG

FIGURE 1

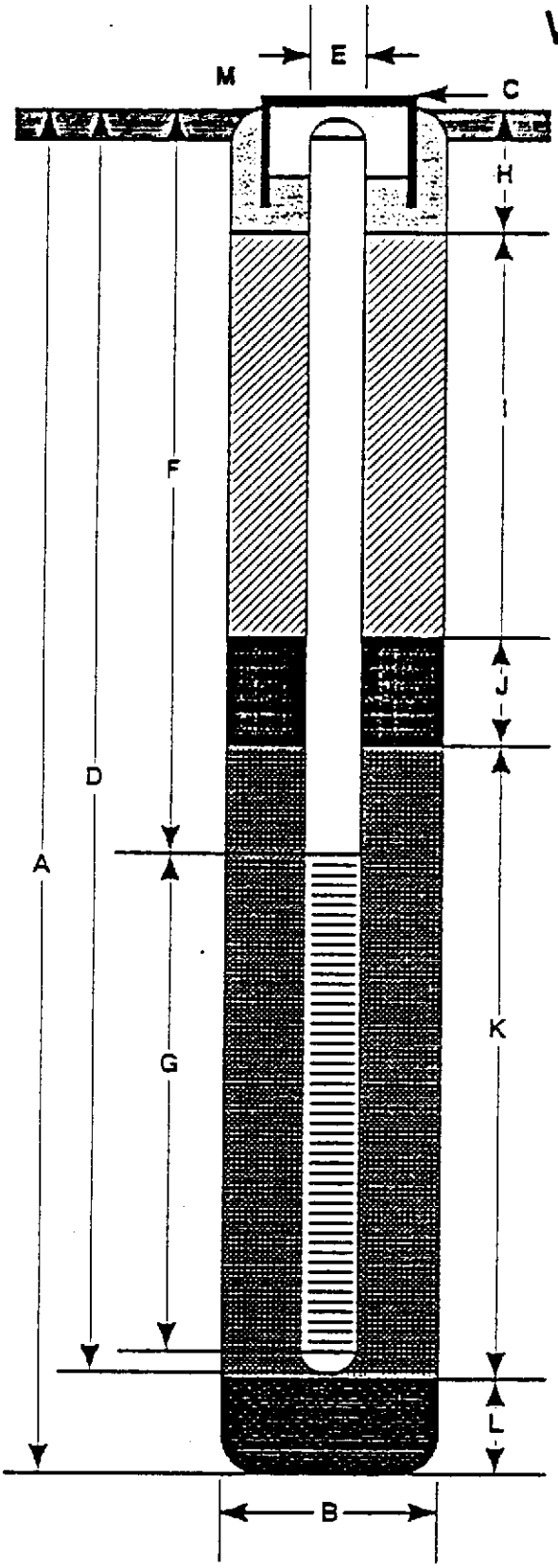
Field location of boring:	Project No.:	Date:	Boring No:
	Client:		
	Location:		
	City:		Sheet
	Logged by:	Driller:	of
	Casing installation data:		
Drilling method:			
Hole diameter:	Top of Box Elevation:		Datum:

PID (ppm)	Blows/ft. or Pressure (psi)	Type of Sample	Sample Number	Depth (ft.)	Sample	Well Detail	Soil Group Symbol (USCS)	Water Level / Time / Date
								Description

Remarks:

WELL CONSTRUCTION DETAIL

FIGURE 2



A Total Depth of Boring _____ ft.

B Diameter of Boring _____ in.
Drilling Method _____

C Top of Box Elevation _____ ft.
☐ Referenced to Mean Sea Level
☐ Referenced to Project Datum

D Casing Length _____ ft.
Material _____

E Casing Diameter _____ in.

F Depth to Top Perforations _____ ft.

G Perforated Length _____ ft.
Perforated Interval from _____ to _____ ft.
Perforation Type _____
Perforation Size _____ in.

H Surface Seal from _____ to _____ ft.
Seal Material _____

I Backfill from _____ to _____ ft.
Backfill Material _____

J Seal from _____ to _____ ft.
Seal Material _____

K Gravel Pack from _____ to _____ ft.
Pack Material _____

L Bottom Seal _____ ft.
Seal Material _____

M _____
_____

Note: Depths measured from initial ground surface

GeoStrategies Inc.

Well Construction Detail

WELL NO.

JOB NUMBER | REVIEWED BY RG/CEG | DATE | REVISED DATE | REVISED DATE

WELL DEVELOPMENT FORM FIGURE 3

Page_____ of_____

(to be filled out in office)

Client_____ SS#_____ Job#_____

Name_____ Location_____

Well#_____ Screened Interval_____ Depth_____

Aquifer Material_____ Installation Date _____

Drilling Method_____ Borehole Diameter_____

Comments regarding well installation:_____

(to be filled out in the field) Name_____

Date_____ Development Method_____

Total Depth_____ - Depth to liquid_____ = WaterColumn_____

Product thickness_____

_____ x _____ x _____ x 0.0408 = _____gals
Water Column Diameter (in.) #Vol

Purge Start_____ Stop_____ Rate_____ gpm

Gallons	Time	Clarity	Temp.	pH	Conductivity
0					

Total gallons removed_____ Development stop time_____

Depth to liquid _____at_____(time)

Odor of water_____ Water discharged to_____

Comments_____

Unocal Real Estate Division
Unocal Corporation
1201 West 5th Street, P .ox 7600
Los Angeles, California 9[illegible]1
Telephone (213) 977-6596

FILE # 5760 SS X BP
RPT QM TRANSMITTAL
1 2 3 4 5 X

UNOCAL 76

October 29, 1992

Mr. David J. Reimer
41 Kensington Ct.
Kensington, Ca. 94707

RE: Access Permission
Lot southwest of
Unocal Service Station #5760
376 Lewelling Blvd.
San Lorenzo, Ca.

Dear Mr. Reimer:

As part of Unocal's continuing environmental commitment and to comply with existing laws and regulations, we will be assessing the soil and ground water beneath our property referenced above. We plan to assess the soil and ground water on adjoining property as well.

As you are an adjacent property owner, we are requesting your permission to come on your property which is southwest of the subject service station, to install a ground water monitoring well and periodically collect water samples from the well.

I have enclosed:

1. A Site Vicinity Map that shows the location on your property where the proposed well would be installed.

2. Two original License Agreements executed by Unocal that would allow Unocal employees, representatives and contractors to enter on your property to install the well. This Agreement also indemnifies the property owner.

Please sign and date one of the Agreements and return it to me in the enclosed envelope by November 19, 1992. The remaining Agreement is for your file.

Be assured that once testing is completed, we will return your property to its original condition. If you have any questions about the work we plan or the Agreement, please call me at 213/977-5930.

Thank you in advance for your prompt attention to this matter.

Sincerely,

J. E. Mason
Manager Sales and Administration

JEM/JLC

Enclosures

Memorandum

UNOCAL 76

San Ramon, California
October 14, 1992

TO: J. L. CIERLEY

FROM: JANE LARIS

OFF-SITE ACCESS REQUEST
UNOCAL SERVICE STATION #5760
376 LEWELLING BLVD.
SAN LORENZO, CALIFORNIA

Your assistance is requested in obtaining off-site access to property in the vicinity of service station #5760 in San Lorenzo, California to install one monitoring well. The access agreement should be for a minimum of one year and should be structured so that extensions to the agreement can be easily obtained.

All pertinent information required for the access agreement is attached, including the name and address of the property owner, site vicinity map, and Assessor's parcel map.

Please forward the signed access agreement to the consultant upon receipt. Also, please send a copy to me for my file.

Consultant: GeoStrategies Inc.
2140 West Winton Avenue
Hayward, California 94545
Attn: Dave J. Vossler

Thank you for your prompt handing.

Attachments

JAL/access

cc: Penny Silzer
Dave J. Vossler - GeoStrategies, Inc.
Project File #5760

GeoStrategies Inc.
2140 WEST WINTON AVENUE
HAYWARD, CALIFORNIA 94545
(510) 352-4800

October 7, 1992

UNOCAL Corporation
P.O. Box 5155
San Ramon, California 94583

Attn: Ms. Penny Silzer

Re: Access Agreement Request
Albion Apartments
439-467 Albion Avenue
San Lorenzo, California

Ms. Silzer:

GSI requests assistance in obtaining access to the above property. Access is requested for the installation of one additional monitoring well downgradient of the UNOCAL service station No. 5760 located at 376 Lewelling Blvd., San Lorenzo, California. Please find below the required information.

Property Owner: Mr. David J. Reimer
41 Kensington Ct.
Kensington, CA. 94707

Phone number: (510) 528-7812

Property location: Albion Apartments
439-467 Albion Avenue
San Lorenzo, California

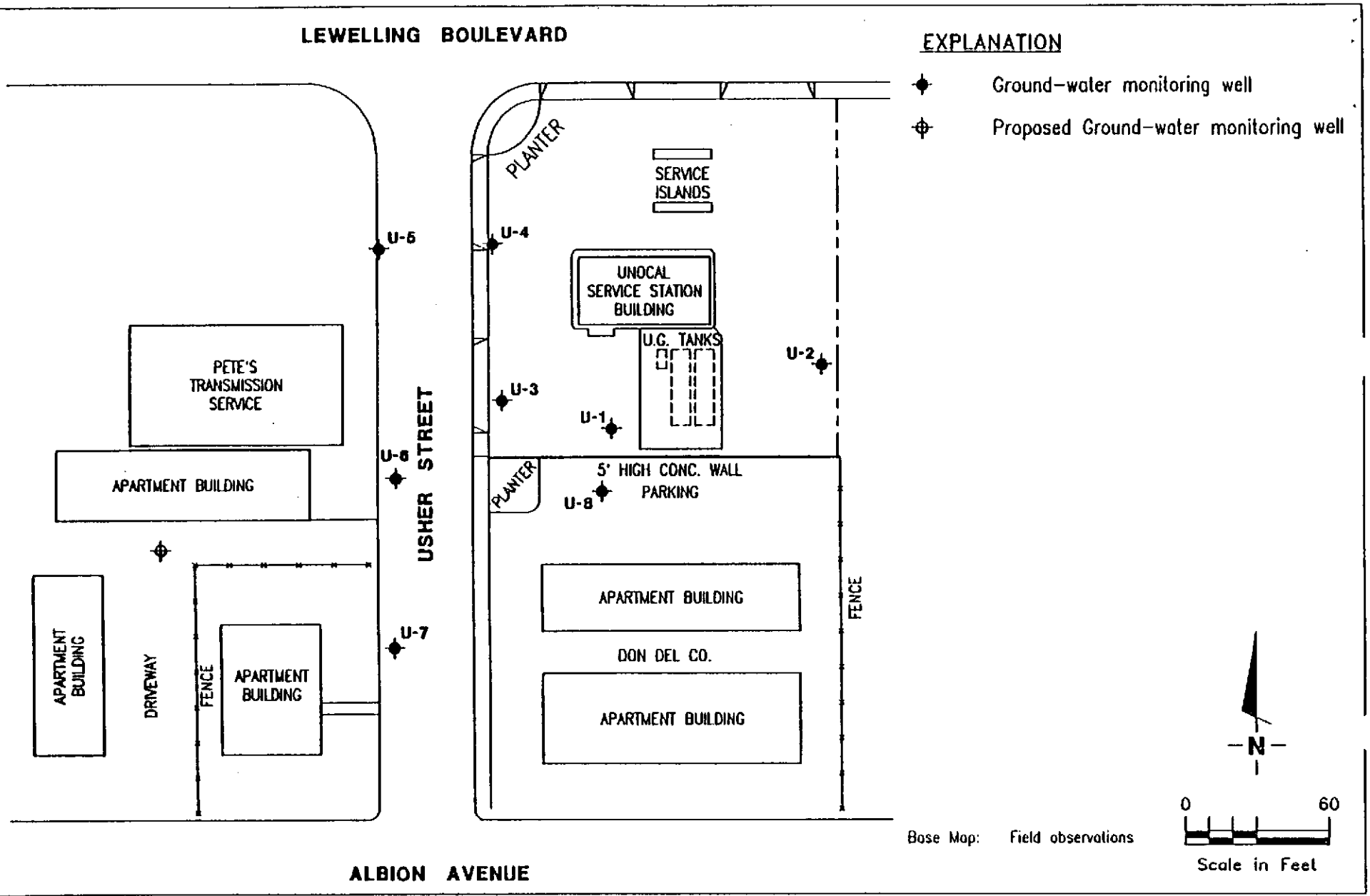
Parcel # 413-97-12

If you should have any questions of comments, please call.

Very truly yours,

David J. Vossler
Senior Geologist

Enclosures: Site Map
Parcel Map



GeoStrategies Inc.

EXTENDED SITE PLAN
UNOCAL Service Station #5760
376 Lewelling Boulevard
San Lorenzo, California

PLATE 2

JOB NUMBER	REVIEWED BY	DATE	REVISED DATE
780905-11	TPC	8/92	

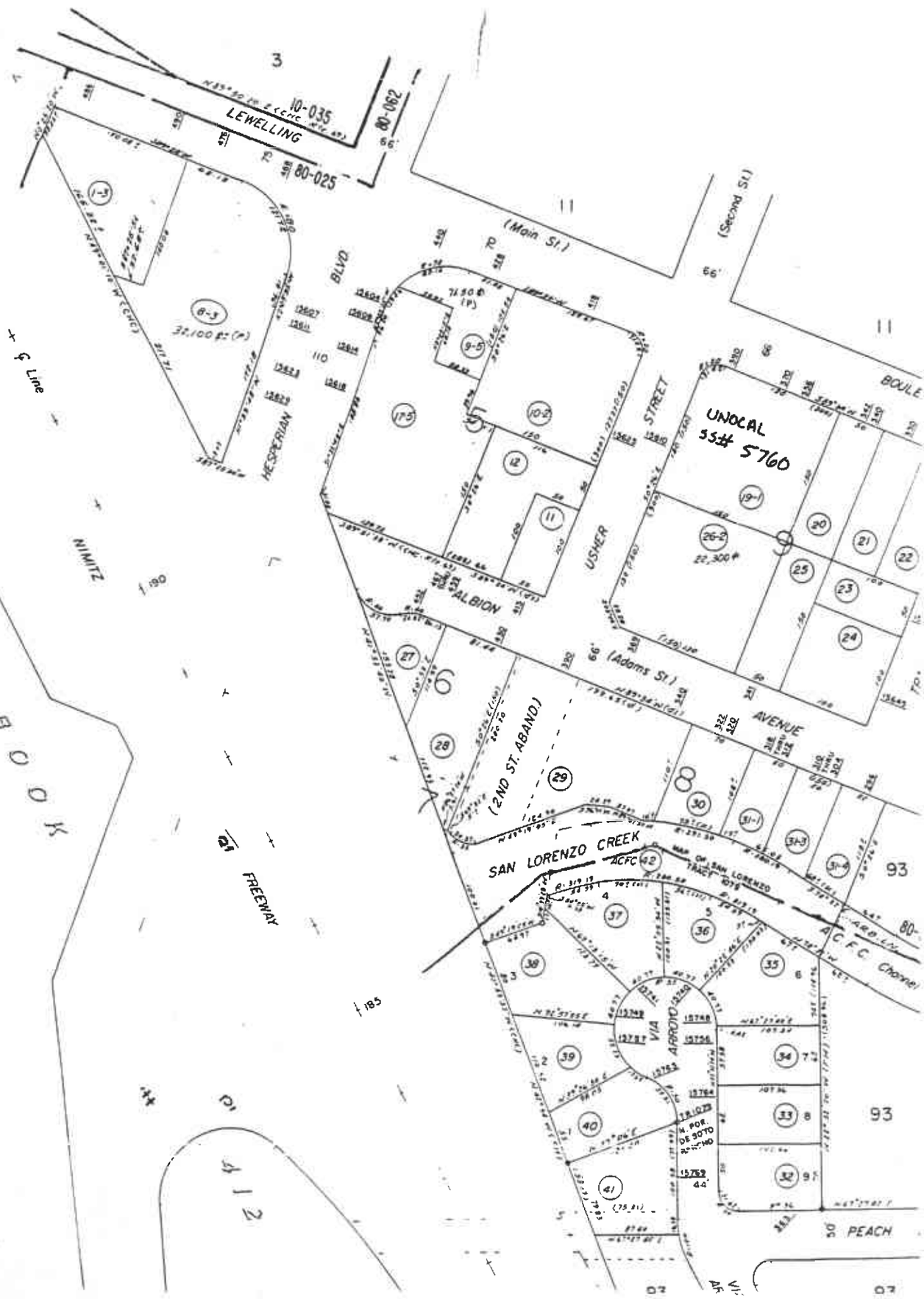
97

Scale: 1" = 100'

ASSESSOR'S MAP 413

Rancho San Leandro (J. J. Estudillo) (Bk "A" Pats Pg. 116)
Northern Portion De Soto Rancho (Bk."W" Ds. Pg. 768)
Map of San Lorenzo (Bk 6 Pg. 3)
Tract 1079 (Bk 31 Pg. 35)

5-62 E.L.
Corrected: 6-2-75 W.M.
3-15-83 KB



Bk. 600 - Bks. 553, 591, 592, Por. 593 & Bk. 80E - Por. Blk. 603, 5-62

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director

RAFAT A. SHAHID, ASST. AGENCY DIRECTOR
DEPARTMENT OF ENVIRONMENTAL HEALTH
State Water Resources Control Board
Division of Clean Water Programs
UST Local Oversight Program
80 Swan Way, Rm 200
Oakland, CA 94621
(510) 271-4320

September 11, 1992

Ms. Penny Silzer
UNOCAL Corporation
P.O. Box 5155
San Ramon, CA 94583

STID 1746

RE: UNOCAL Station #5760, 376 Lewelling Blvd., San Lorenzo, California

Dear Ms. Silzer,

This office received the work plan, dated September 1, 1992, and the additional information that we requested of you in a letter dated July 1, 1992.

The work plan meets with the approval of this office. Please be aware that after the installation of the monitoring well, you are required to survey the well to an accuracy of 0.01 foot to an established benchmark.

Field work should commence within 60 days of the receipt of this letter. Please be reminded that a report documenting the results from work performed is due to this office within 45 days of completion of field activities. Quarterly monitoring and reporting is to be continued for all the monitoring wells.

In the most recently submitted work plan, you requested an extension on the due date for a portion of the required investigations in order to conduct file searches on adjacent properties. This office will grant you the extension on the following conditions: 1) Immediately following these file searches, you prepare and submit a work plan addressing the containment and remediation of the ground water contaminant plume and the delineation and remediation of the contaminated soil at the site; and 2) You submit a timetable of scheduled work events, such as file searches, to this office **within 30 days** of the receipt of this letter.

If you have any questions or comments, please contact me at (510) 271-4530.

Sincerely,

Juliet Shin
Hazardous Materials Specialist

cc: Richard Hiett, RWQCB

Jim Ferdinand, Eden Consolidated Fire Dept.

David J. Vossler
GeoStrategies Inc.
2140 West Winton Ave.
Hayward, CA 94545

Edgar Howell-File (JS)

JS

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director

State Water Resources Control Board
Division of Clean Water Program
UST Local Oversight Program

RAFAT A. SHAHID, Assistant Agency Director

DEPARTMENT OF ENVIRONMENTAL HEALTH
Hazardous Materials Division
80 Swan Way, Rm. 200
Oakland, CA 94621
(510) 271-4320

July 1, 1992

Penny Silzer
UNOCAL Corporation
P.O. Box 5155
San Ramon, CA 94583

STID 1746

RE: UNOCAL Station #5760, 376 Lewelling Blvd., San Lorenzo, California

Dear Ms. Silzer,

This office has received and reviewed the Quarterly Monitoring Report, dated May 19, 1992, and the Well Installation Report, dated June 15, 1992 for the above site. Floating product and elevated concentrations of TPHg and BTEX have consistently been identified in Wells U-1 and U-3, and most recently Well U-6, at the site. Although a product skimmer is currently being applied to Well U-1, additional measures need to be taken to contain the ground water contaminant plume from migrating further off site.

Additionally, this office has reason to believe that contaminated soil still exists at the site. During the installation of Well U-3, in August 1990, a soil sample collected from 20 feet below ground surface exhibited 640 ppm TPHg. Although this office does not currently have information regarding the soil sampling at the time of the underground storage tank (UST) replacements, it was mentioned in several reports submitted to this office that there was observed soil contamination in the tank pit. Please submit to this office any information on the UST replacements and sampling conducted in 1987. Also, please submit the results for soil samples collected during the installation of Well U-1.

You are required to submit a work plan to this office **within 45 days** of the receipt of this letter, addressing your proposals for further delineation, containment, and remediation of the ground water contaminant plume resulting from your site. These proposals must adhere to the Regional Water Quality Control Board's (RWQCB) Staff Recommendations for the Initial Evaluation and Investigation of Underground Tanks, the State Water Board's LUFT manual, and be consistent with requirements set forth in Article 11 of Title 23, California Code of Regulations. A report documenting the results from work performed is due to this office within 45 days of completion of

field activities. Copies of all plans and proposals should be sent to this office. Alameda County must approve these plans before they can be implemented.

Please be advised that this is a formal request for technical reports pursuant to **California Water Code Section 13267 (b)**. Any extensions of the stated deadlines, or modifications of the required tasks, must be confirmed in writing by either this agency or RWQCB.

This office has enclosed an Unauthorized Leak/Release form. Please complete this form and submit it to this office within 15 days of the receipt of this letter.

Please be aware that you must continue to prepare quarterly groundwater monitoring reports and submit them to this office.

If you have any questions or comments, please contact Juliet Shin at (510) 271-4320.

Sincerely,

Thomas Peacock, Supervising HMS
Hazardous Materials Division

cc: Richard Hiett, RWQCB

Jim Ferdinand, Eden Consolidated Fire Dept.

David J. Vossler
GeoStrategies Inc.
2140 West Winton Ave.
Hayward, CA 94545

Memorandum

UNOCAL 76

November 25, 1992

To: P. L. Silzer

From: J. L. Cierley

LICENSE AGREEMENT
David J. Reimer
Lot southwest of
Service Station #5760
San Lorenzo, Ca.

Mr. Reimer has requested the following information prior to agreeing to sign a License Agreement allowing access to his property to install one ground-water monitoring well:

1. Is the proposed location of the well flexible?

2. How often will samples be taken from the well?

3. He would like to talk to a property owner in the vicinity of his property or residence where a well has been installed.

4. He would like to talk to the appropriate government agency on whose right-of-way wells are installed in the vicinity of his property.

Please provide this information to N. P. Mead for her response to Mr. Reimer and copy me. Mr. Reimer's tel. no. is 510/528-7812.

Also please provide Natalie and me with a copy of the site plan.

cc: N. P. Mead w/previous corresp.
J. Laris
130-L
Offsite Access File