CALIFORNIA GEOPHYSICAL GROUP, INC.
12709 Poway Road, Suite 202, Poway, CA 92064 Tel: (619) 486-1323

January 18, 1991

Incl. 10 Jun 91 addendum

Mr. Ted Simas
XTRA OIL CO.
2307 Pacific Ave.
Alameda, Ca 94501

WORK PLAN
SHELL STATION
3495 CASTRO VALLEY BLVD.
CASTRO VALLEY, CA

This work plan is presented to address the following problems:

1. Extent of up and down gradient groundwater contamination, including the possibility other offsite contaminates are contributing to the problem;

2. Extent of soil contamination at the site and around the boundaries;

3. Understand the extent of the vertical and lateral contamination so a remediation plan can be prepared.

We propose as a first step, an Electromagnetic Induction (EM) survey be performed in and around the site including the streets and adjacent property. This survey will measure the conductivity of the soil from the water table to about 1/2 a foot below the surface. Since hydrocarbons are non-conductive they will depress the natural conductivity of the soil, by contouring the readings from the survey high and low conductivity areas can be indentified. Knowing the location of low areas guides us to locating the soil and water borings necessary to confirm or deny the existence of soil contamination. Attached is a generalized plot of the vicinity which will be used for EM and Boring data presentation.

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After the EM survey we will drill various borings and test the soil and water. An ammendment to this plan will show the proposed bore sites and monitoring wells. As a screen we will use an OVA meter with the soil samples, this will reduce the amount of soil samples needed to be sent to the laboratory. Based upon the sampling we will determine the appropriate location for one or two monitoring wells that will allow us to monitor the contaminant downgradient.

Soil borings will be drilled with a hand auger to a depth of 5 feet BGS and then a core sleeve will be driven into the bottom of the hole to obtain sample. Borings going into the groundwater will be drilled with a hollow stem auger and or hydropunch. This

method will be spelled out in the ammendment showing the well locations. All borings will be backfilled with cement grout to the surface. All work will be supervised by myself or our geologist Mr. Richard Merriam. All drilling other than hand augering will be performed by a driller with a C-57 licence.

Finally with all of this data we will develop a model of the vertical and horizontal extent of both the contaminated soil and groundwater. We will be obtaining certain hydraulic parameters for the aquifer and the vadose zone which will be needed to analyze the reaction of each zone to various remediation methods. We will develop a remediation plan and a cost estimate which will be incorporated in a plan for closure.

We expect this phase of the work to take about 90 days once the work plan is approved and we receive authorization to proceed.

Yours truly,

John Cussen
President

Xtra OIL COMPANY
2307 PACIFIC AVE. ALAMEDA, CA 94501 TEL. (415) 865-9503 FAX (415) 865-1889

91 FEB -6 PM 3:44

February 5, 1991

Alameda County Health Dept.
Hazardous Waste Dept.
180 Swan Way
Oakland, CA 94604

Attention: Scott Seery

Regarding: 3495 Castro Valley Blvd.
Castro Valley

Dear Mr. Seery,

Please find enclosed, the Work Plan for our Castro Valley site. We await your comments.

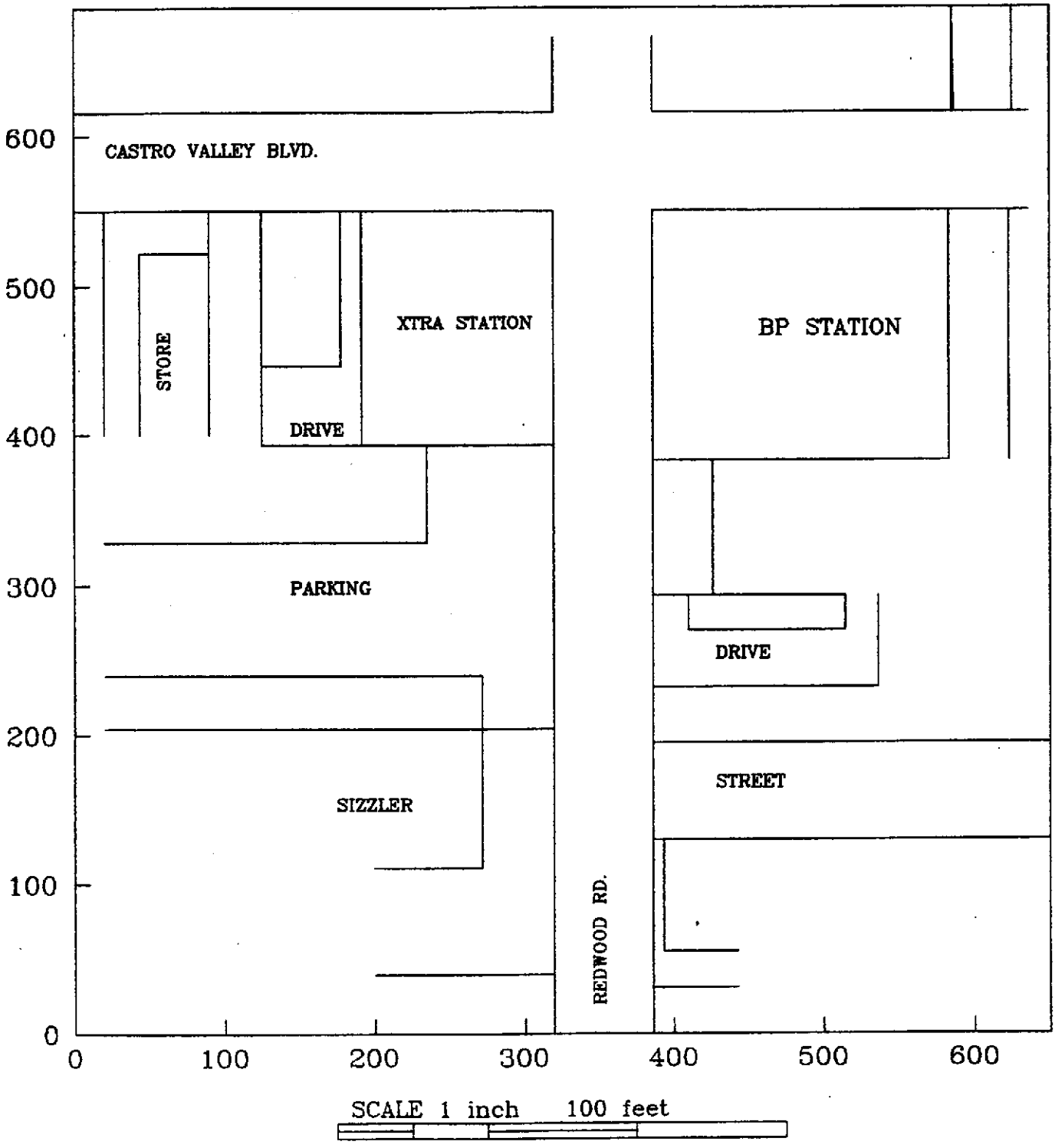
Very truly yours,

Ted Simas

Enclosure

Rec. 10 Jun 91

AREA MAP–XTRA OIL SITE



California Geophysical Group, Inc.
Engineering & Environmental Geophysics

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