SUMMIT ENGINEERING

AL MASSO, P.E..
Civil and Geotechnical Engineer
Land Surveyor

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Oakland, CA 94611 (510) 531-6655

FACSIMILE COVER NOTE

FAX NO 569-4757 DATE 6/9/93

ATTENTION TOM PEACOCK OR SUSAN HUGO

COMPANY ALAMEDA CO. DEPT. OF ENV. HEALTH

FROM AL MASSO FAX NO 482-5848

NUMBER OF PAGES (including cover note) 8

MESSAGE WE WILL PROCEED AS SOON AS YOU APPROVE WORK PLAN.

SUMMIT ENGINEERING

- House Inspection
- Soils Report
- Surveying
- Design
- Hazardous Waste Studies

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Thomas F. Peacock
Hazardous Materials Division
Alameda County Dept. of Environmental Health
80 Swan Way, Room 200
Oakland CA 94621

June 9, 1993

Re : 5812 Hollis Street, Emeryville CA 94608

Dear Mr. Peacock :

In response to your December 29, 1992 (STID 49) letter, the following work plan is proposed for groundwater sampling and verification analysis at the subject site.

INTRODUCTION

The subject site consists of a paved storage yard for forklifts, and similar industrial equipment for the ongoing electro-hydraulic business located at 5812 Hollis Street between Powell and 59th Streets in Emeryville (Figure 1). A 10,000-gal gasoline tank and a 3000-gal diesel tank were removed from the subject site on December 5th, 1989. Several soil samples were analyzed showing minor amounts of TPH-d and non-detectable amounts of BTEX. A water sample from the tank pit had a surface sheen and showed 90 ppm TPH-d, and minor amounts of TPH-g and BTEX. In view of this results, the County of Alameda is now requiring a groundwater investigation. No information related to leaks or spills at the sie exist to our knowledge. The tanks were disposed and the excavation backfilled with clean soil and the pavement restored.

SCOPE OF WORK

A monitoring well will be installed west-southwest of the former excavation area in a downgradient location, and about 10 feet from the previously existing underground tanks (Figure 2).

The well will extend to a depth of 15 feet, and will consist of a 2-inch diameter PVC casing with the top 5 feet of blank pipe, and the remaining 10 feet of screen. Both well ends will be capped with the lower end converted to a silt catcher. The well will be completed with the customary sand backfill, bentonite seal, and Christy box as well cover (Figure 3). A point of reference on the top of the well casing will be marked, surveyed, and tied to a city benchmark for groundwater level control and to two off-site wells for gradient determination.

SOIL SAMPLING AND ANALYSIS

During drilling, soil samples will be collected and screened every five feet. Samples will be collected in 2-in x 6-in brass tubes; samples will be screened using a photo-ionization detector (PID) as an organic vapor analyzer for volatile hydrocarbons. PID readings will be recorded and the sample registering the highest reading will be submitted to Precision Analytical Laboratory of Richmond CA, a state-licensed facility, for analysis of TPH-g, TPH-d, and BTXE using EPA methods 5030, 8015m, and 8020 respectively. If no volatiles are detected, a soil sample in the vadose zone will be analyzed for TPH-d. Soil cuttings will be stored in drums on site pending analysis results for disposal.

WATER SAMPLING AND ANALYSIS

Following installation, the well will be developed, purged and a water sample collected according to Regional Water Quality Control Board (RWQCB) guidelines including a water sample protocol with pH, conductivity, and temperature measurements. The water sample will be submitted to Precision Lab for analysis of TPH-g, TPH-d, and BTXE using EPA methods 8015m, 8015m, and 602 respectively. Water used during development and sampling processes will be kept on site pending results of analysis for disposal.

DOCUMENTATION

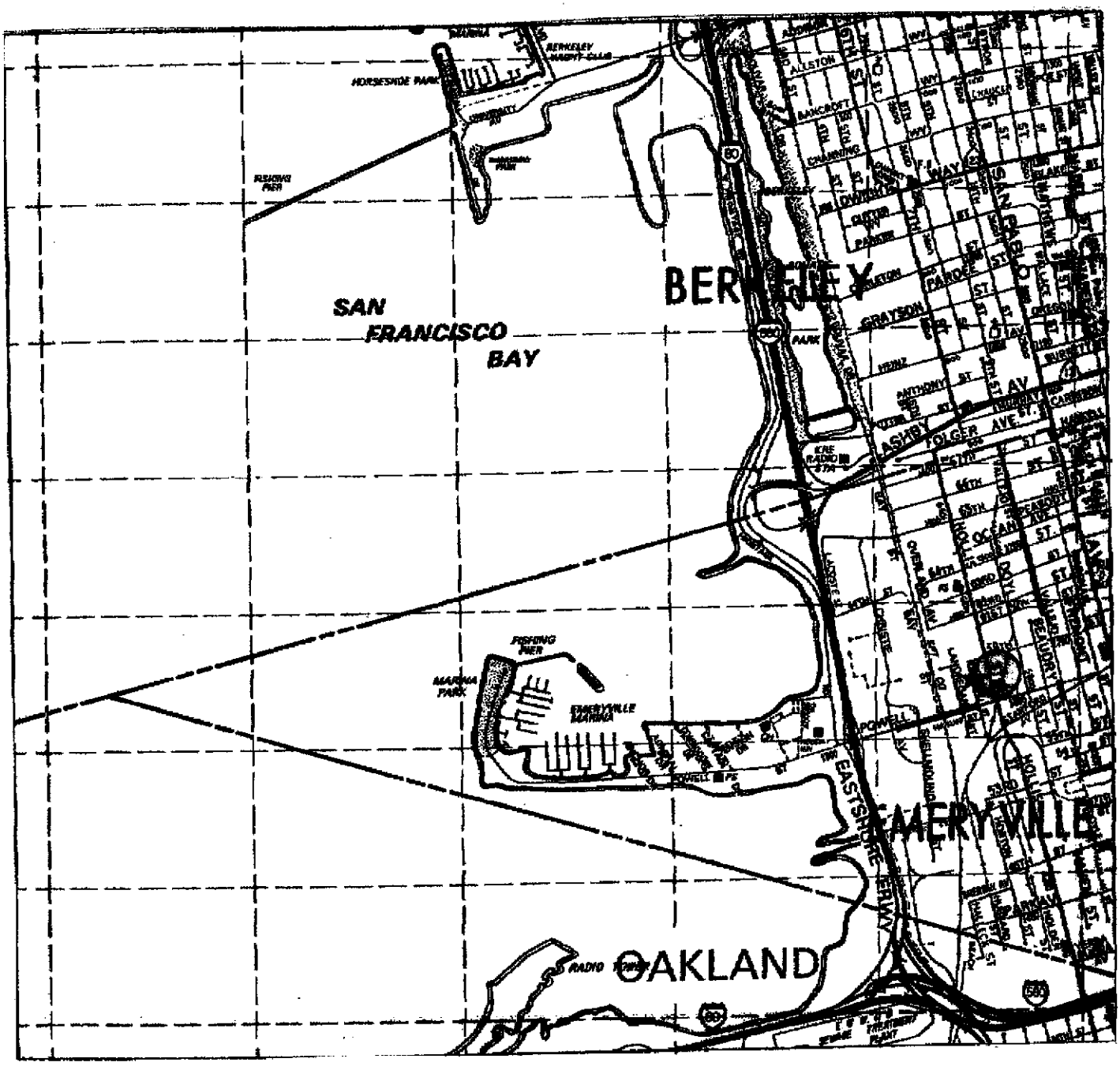
A report describing field activities as well as results of analysis will be prepared and copies submitted to Alameda County and to Rich Hiett of the RWQCB. If no contamination is found, a Site Closure Report will be prepared and submitted to County and to the RWQCB.

If you have any questions about this work plan, please call us. We look forward to working with you on this project.

Sincerely,

Al G. Masso
RCE-30442

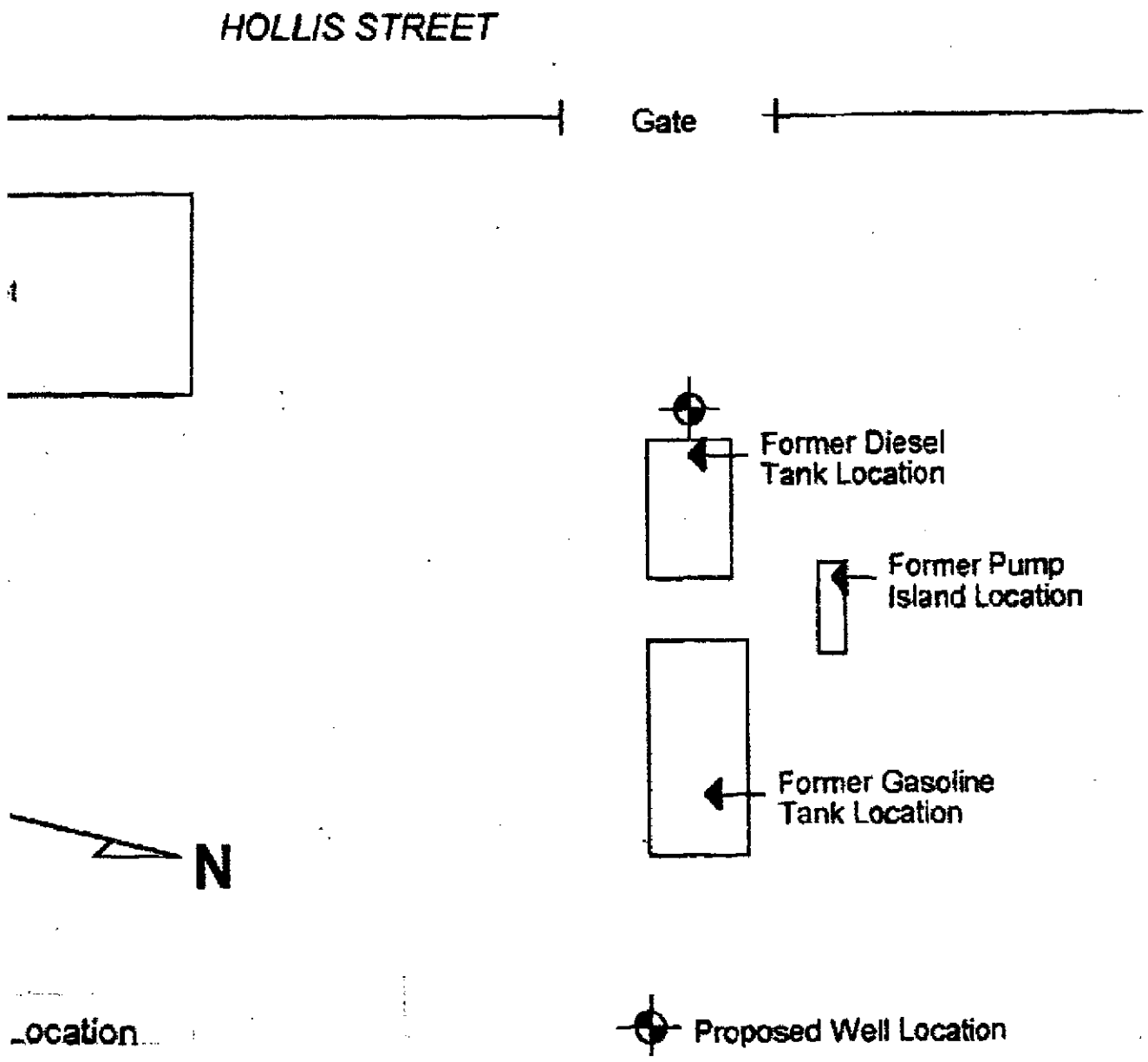
REGISTERED PROFESSIONAL ENGINEER
ALBERTO GOMEZ-MASSO
No. C 30442
Exp. 3-31-96
CIVIL
STATE OF CALIFORNIA



Ref: Thomas Brothers Map
Alameda County.

Scale : 1" = 2,200'

FIGURE 1 - SITE LOCATION


HOLLIS STREET
Gate
Former Diesel
Tank Location
Former Pump
Island Location
Former Gasoline
Tank Location
N
ocation
Proposed Well Location

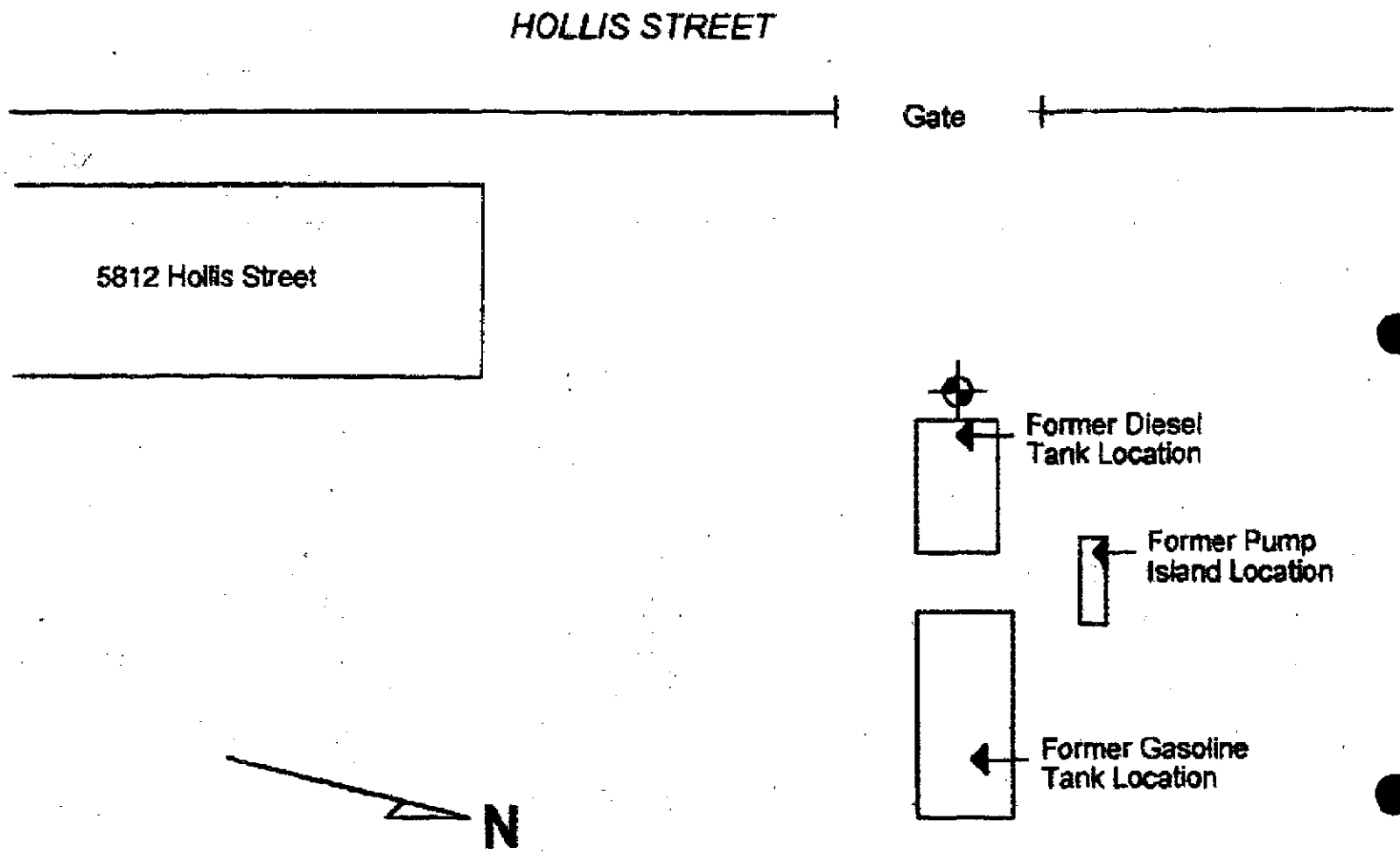


Figure 2
Proposed Well Location
Not to Scale

SUMMIT ENGINEERING

ALBERTO G. MASSO

EDUCATION: Ph.D., Geotechnical Engineering, University of Texas, Austin, 1978

M.S., Geotechnical Engineering, University of Texas, Austin; 1972 (Fulbright Scholar)

B.S., Civil Engineering, University of Madrid, Spain, 1970

SUMMARY: 20 YEARS: Experience in Civil and Geotechnical Engineering. Dr. Masso is a registered Civil Engineer in the State of California specializing in geotechnical engineering. He has managed, directed or participated in a wide range of civil, geotechnical and waste management engineering studies. His experience includes investigation, laboratory and field testing, software developments for numerical modeling, and analysis of earth structures and soil-structure systems. Dr. Masso is responsible for managing the geotechnical aspects of hazardous waste assessment and remediation projects. This includes determination of the nature and extent of hazardous waste contamination, design and implementation of containment and cleanup procedures.

EXPERIENCE:

1988 - Present : Principal, SUMMIT ENGINEERING, Oakland, California. Private practice in general Civil Engineering including Land Surveying, Soil Reports, Drainage Plans, Environmental Studies, etc. Survey work in the Oakland area includes Parcel Maps and Subdivisions. Geotechnical work includes field studies, construction and post-construction monitoring. Environmental work included remedial investigation, remediation, etc.

1986 - 1988: Senior Project Engineer, IT Corporation, Martinez, California. Dr. Masso was responsible for geotechnical investigations of hazardous waste sites. He has directed or managed projects requiring the integration of soil mechanics, hydrology, and related earth sciences to determine levels of ground water and soil contamination and appropriate remediation actions. All of these projects were executed within budgetary and schedule constraints.

- Remedial investigation and remediation projects on industrial sites involving extensive soil and ground water contamination by gasoline, fuel oils, solvents, etc. Projects made use of soil gas surveys to assist in the mapping of contaminant plumes. Projects include Peterbilt Motors Company (Newark, CA), Calpine Containers (Firebaugh, CA), Continental White Cap (Hayward, CA), Armstrong Rubber Company (Hanford, CA).

ALBERTO G. NASSO

EXPERIENCE: (continued)

- Remedial investigation of military installations involving underground fuel supply systems, underground storage tanks, etc. Preparation of cost estimates for procurement purposes. Projects include Castle AFB (Atwater, CA), Moffett NAS (Mountain View, CA), Hunters Point Naval Shipyard (San Francisco, CA).

- Geotechnical investigations for the design of expansion or closure of existing waste disposal sites including soil and ground water contamination, seismic stability, earthwork, etc. Projects include the IT-owned sites of Panoche, Montezuma and Benson Ridge.

1985 - 1986: Project Engineer, Woodward-Clyde, Walnut Creek, California. Geotechnical and waste management studies included the following:

Installation of a slurry wall as part of remedial measures for the Westinghouse plant in Emeryville, California.

Preparation of cost estimates and specifications for the Bunker Hill, Idaho. Superfund project and for the Clorox plant project in Oakland, California.

Geotechnical engineering study of the C&H Sugar Company cogeneration plant in Crockett, California.

Field exploration and ground water monitoring at the MMI plant in Sunnyvale, California.

Seismic evaluation of Antioch dam in California.

1982 - 1984: Independent Consultant to Kraftwek Union A. G., Offenbach/Main, West Germany. As a private consultant, Dr. Nasso directed and managed several projects for the German nuclear power plant industry. The work was performed with computer programs using finite elements and other numerical techniques. These computer programs were developed by Dr. Nasso or under his direction. Projects included:

Seismic soil-structure interaction analyses of buried tunnels for the nuclear power plants at Isar, Emsland, Borken, and Neckar in West Germany.

Seismic soil-structure interaction analyses of pile groups for the Angra nuclear power plant in Brazil.

PROFESSIONAL REGISTRATION/CERTIFICATIONS:

1970 Civil Enginer, Spain, No. 5509
1979 Civil Engineer, California, No. CE-30415
1988 Geotechnical Engineer, California, No. GE-[illegible]

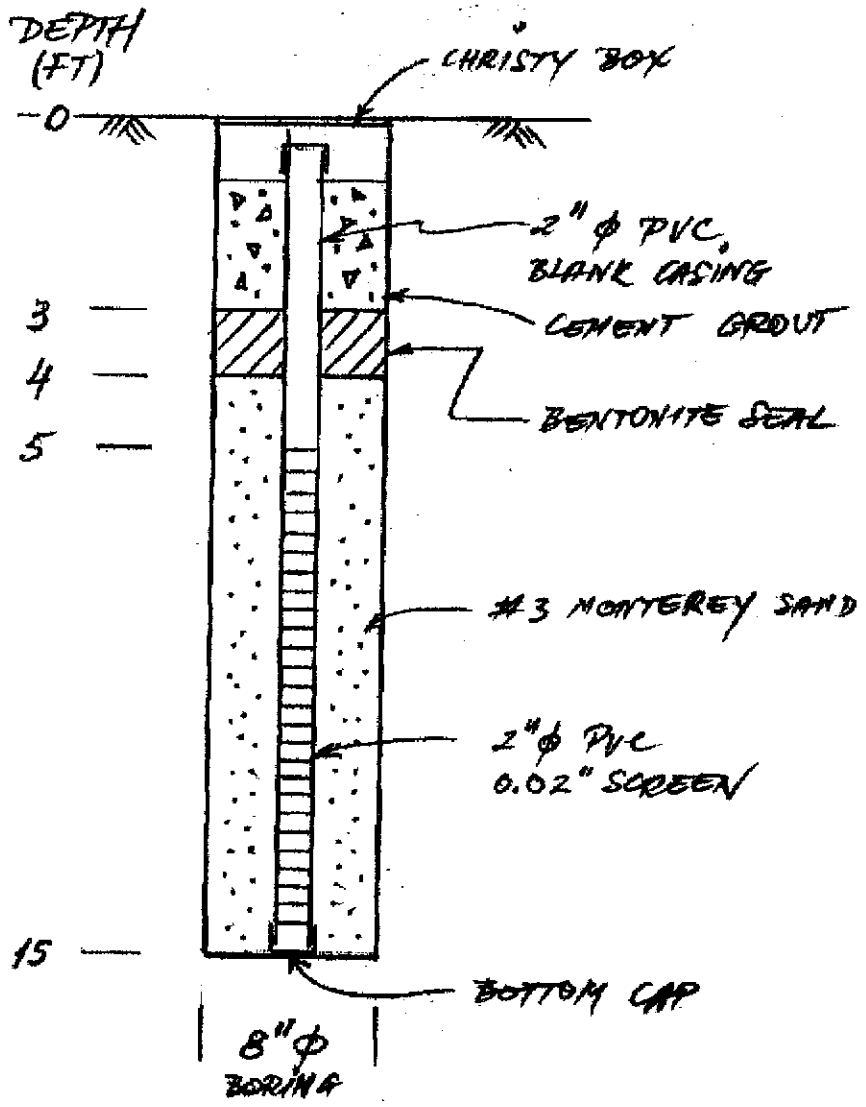


FIGURE 3 - WELL DIAGRAM