aqua science engineers inc.

R085

Alameda County

APR 14 2004

Environmental Health

April 9, 2004

Mr. Amir K. Gholami
Alameda County Health Care Services Agency
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577

SUBJECT: UST LOCATION, REPAIR OF CONCRETE SURFACE AT PUMP ISLAND AND UPDATE ON ASSESSMENT ACTIVITIES
Oakland Truck Stop
8255 San Leandro Street
Oakland, California

Dear Mr. Gholami:

This letter presents a report of the magnetometer survey and updates the status of other environmental activities at the site.

## LOCATE ANY UNKNOWN UNDERGROUND STORAGE TANKS

In February 2004, Subtronic Corporation of Concord, California conducted a Geophysical Subsurface Investigation at the site in an effort to locate any potential unknown underground storage tanks (USTs) at the site. The survey consisted of a visual inspection and use of a TW-6 M-Scope and a 858 Magnetometer. No USTs were located, although there were two areas where it appeared that there was buried reinforced concrete where buried metal objects such as an abandoned UST could not be ruled out. Please see the attached report.

## CONCRETE PAD REPLACMENT IN PUMP ISLAND AREA

The responsible party has replaced the cracked concrete pad at the pump island area as required.

## QUARTERLY GROUNDWATER MONITORING AND WEEKLY FREE-PRODUCT BAILING

Quarterly groundwater monitoring at the site has continued. The most recent sampling event took place on March 15, 2004. The report for this

sampling event will be submitted within one week of this letter. Free-product bailing in monitoring well MW-1 has continued at the site and is now being performed by truck stop employees every Friday.

## OZONE SPARING TEST AND SYSTEM DESIGN

ASE has recently completed a remedial action plan (RAP) for the site dated April 7, 2004 that explains the ozone-sparging test for the site and presents a design for the installation of an ozone-sparging system. ASE will install this system immediately upon approval of the RAP by the Alameda County Health Care Services Agency.

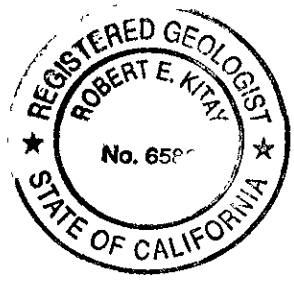
## COMPLETE THE DEFINITION OF THE HORIZONTAL AND VERTICAL EXTENT OF CONTAMINATION AT THE SITE

ASE is in the process of conducting an additional soil and groundwater assessment at the site to complete the definition of the horizontal and vertical extent of contamination. A complete conduit survey is also included as part of this assessment. ASE is still in the process of obtaining access agreements from BART to drill under their tracks east of the site. ASE will complete this assessment once the access agreement is in place. However, ASE has taken into account when designing the RAP that the full extent of contamination is not known in outlying areas of the site. However, ASE would not be able to remediate areas off-site to the east and south of the site, should it be necessary, with the same ozone sparging system to be built at the site. If off-site remediation should become necessary, a second system will be required anyway and the additional information obtained from the operation of the on-site system will assist in the design of any additional systems. In addition, ASE does not anticipate the need for remediation in areas to the north and west of the site, at least in the short term, based on hydrocarbon concentrations in the existing site wells. Based on this data, ASE does not recommend any delay in the implementation of the RAP prior to the completion of the additional assessment. Should remediation in deeper areas near the USTs become necessary, the existing ozone sparging system could be easily modified once contamination in the shallow water-bearing zones is complete.

Should you have any questions or comments, please feel free to call us at (925) 820-9391.

Respectfully submitted,

AQUA SCIENCE ENGINEERS, INC.




Robert E. Kitay, R.G., R.E.A.
Senior Geologist

cc: Mr. Nissan Saidian, 5733 Medallion Court, Castro Valley, CA 94522

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# GEOPHYSICAL SUBSURFACE INVESTIGATION

## 8255 San Leandro Street
## Oakland, CA
## For
## Aquasciences
## February 7th 2004

**Project Location:**
Oakland Truck Stop, 8255 San Leandro Street, Oakland, California

**Objective:**
The objective of the investigation is to determine the possible presence and location of external underground storage tanks.

**Site History:**
Two fuel tanks and one waste oil tank were removed approximately five years ago.

**Site Description:**
8255 San Leandro Street. is located on the east side of the street and covers approximately one acre. It is currently used as a truck maintenance and refueling facility.
There is a service station and market centrally located on the lot, with gas and diesel dispensers on the north-east side and five underground storage tanks on the south-east side.
In order to grid the survey sites the lot was divided into four rectangles, Area 1 being on the north-west side of the building, Area 2 is north-east, Area 3 is south-east and Area 4 is south-west.

**Survey Methodology:**
First, a visual inspection was conducted at each site. Underground utilities, vaults, boxes, exposed piping, topographic mounds and depressions were noted. Exposed piping or risers found on the site were energized, traced out and the surface location was spray painted on the ground.
The split box locator was used to scan the site in both directions, and utilities detected by the locator were marked on the ground.

Prior to collecting magnetometer data, grids were laid out on 5' centers. The data collected from the cesium vapor magnetometer was stored in the instrument and later downloaded for analysis.

**Geophysical Equipment**
The specialized equipment used at the site includes a TW-6 M-Scope and an 858 Magnetometer.

*TW-6 M-Scope*
The Fisher TW-6 M-Scope is a split box inductive locator and metal detector mounted on a four-foot rod. The split box locator can detect metal lines "inductively". The M-Scope is also used to detect buried metallic objects such as manhole covers, underground storage tanks, etc...

Data from the TW6 is not stored, however a visual and audio signal indicates the presence of metal objects when the instrument is passed over them.

*858 Magnetometer*
The 858 Magmapper by Geometrics is a magnetometer that detects the earth's magnetic field. This magnetometer uses new technology to get precise readings at rates up to 10 times per second. This enables Subtronic to collect high resolution data over large areas. The data is stored on the console connected to the magnetometer. Following the data collection, the data is then downloaded to a computer for processing by a software, contouring package. The results are analyzed and anomalies identified.

**Survey Results:**
Some areas were not surveyed, the facility operates 24/7 and some vehicles under repair were not movable. The area immediately to the south east of the building was not included because of this. Other vehicles, mostly large trucks, were moved to the perimeter of the property where the likelihood of U.S.T's is reduced. Metal drums, pipes and vehicle parts were removed from the search area.
Some structures such as truck ramps and a thirty foot length of pipe could not be removed from the survey area. These appear as significant magnetic fields on the contour maps and are labeled accordingly. Some utilities, including fuel pipes and electrical conduits are also identified and tend to follow the typical repeating bi-polar pattern of a linear form.
**Conclusion:**
The contour maps clearly illustrate the areas of high magnetism and areas where there are no ferrous metal objects.
Most of the magnetic anomalies are identified as utilities or above ground structures and are labeled accordingly.
One area, (shown on Area 1 contour map) to the north east of the station and market, contains anomalies that are not identified. These objects are under reinforced concrete and are therefore, not easy to identify. The possibility of them being U.S.T.'s cannot be

ruled out, they could also be foundations of previous steel structures on the site, or possibly the site of a previous service island.
A second area shown on Area 2 contour map shows several anomalies that are also under a reinforced concrete slab. The close proximity of the service islands and pumps in this area have made the distinguishing of buried objects virtually impossible in this area.

**Recommendations:**

We recommend further investigation of those areas under reinforced concrete that appear to harbor buried ferrous objects of some weight, unless further light can be shed from historical data or memory as to what these buried objects may be.
We would use ground penetrating radar as one possible method of further identification.

**Limitations:**

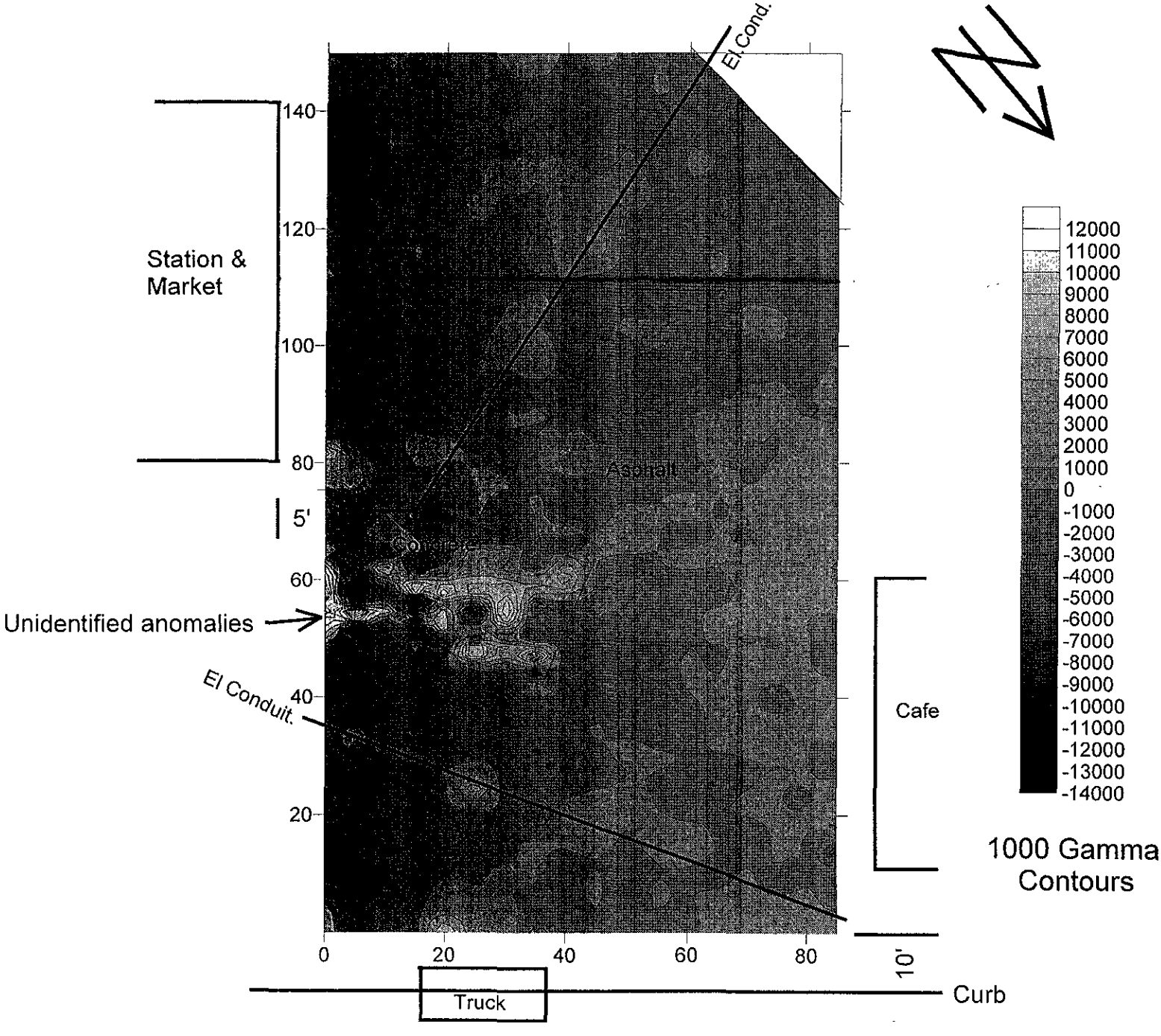
The subsurface geology, object size and composition, burial depth, affect the size and shape of geophysical anomalies, which may impede their detection. Geophysical anomalies may not represent unique solutions. Apparently similar anomalies may be created by different subsurface phenomena.

The limits of discernment of this magnetic survey are the detection of objects within five feet of metal fences, buildings, vehicles and other identified metal objects.

Report Prepared By: J. C. Taylor

# Gradient Survey by Subtronic Corp.
# Oakland Truck Stop
# 8255 San Leandro Street,Oakland

Area 1 02-07-2004




San Leandro Street

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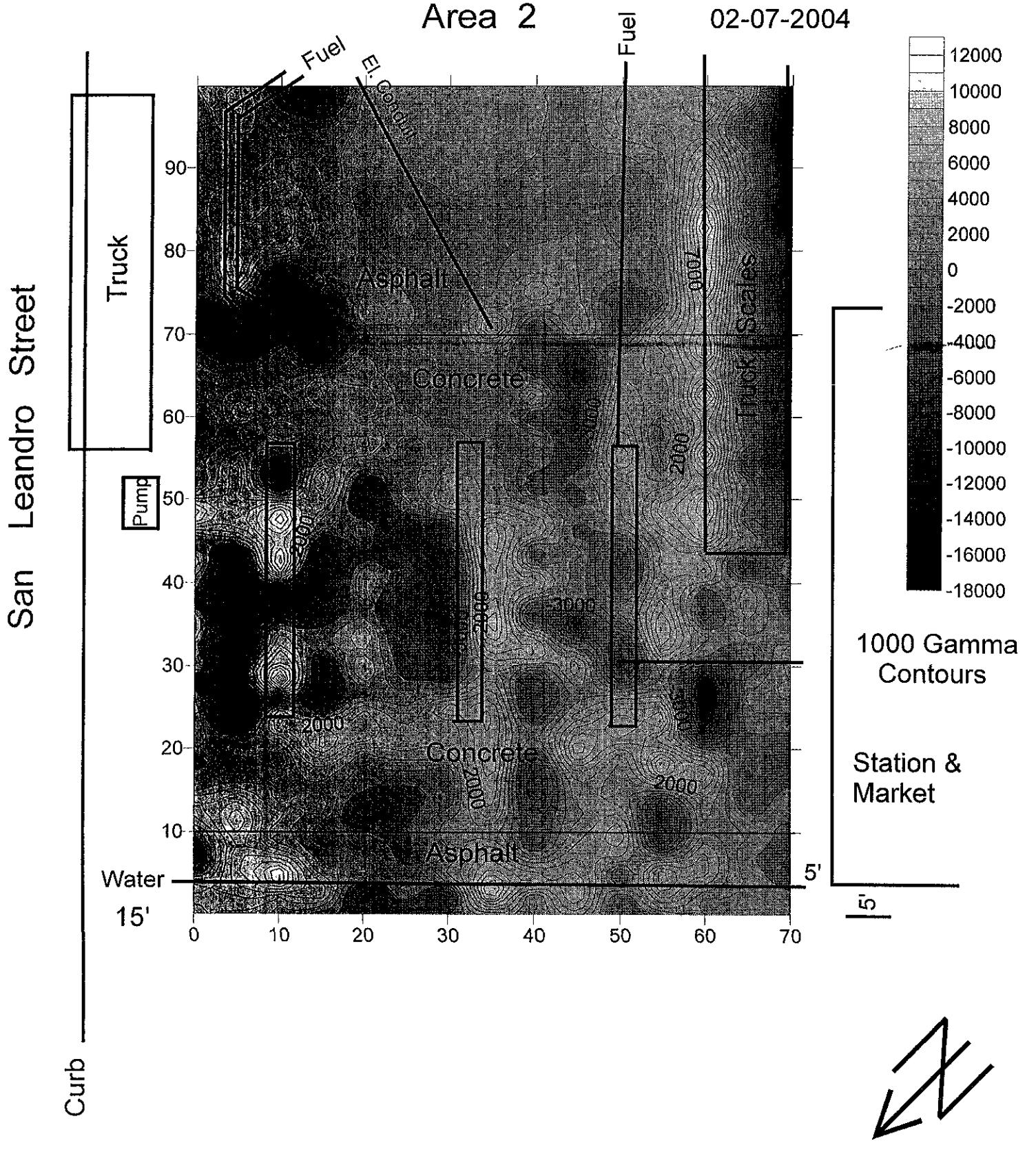

# Gradient Survey by Subtronic Corp.
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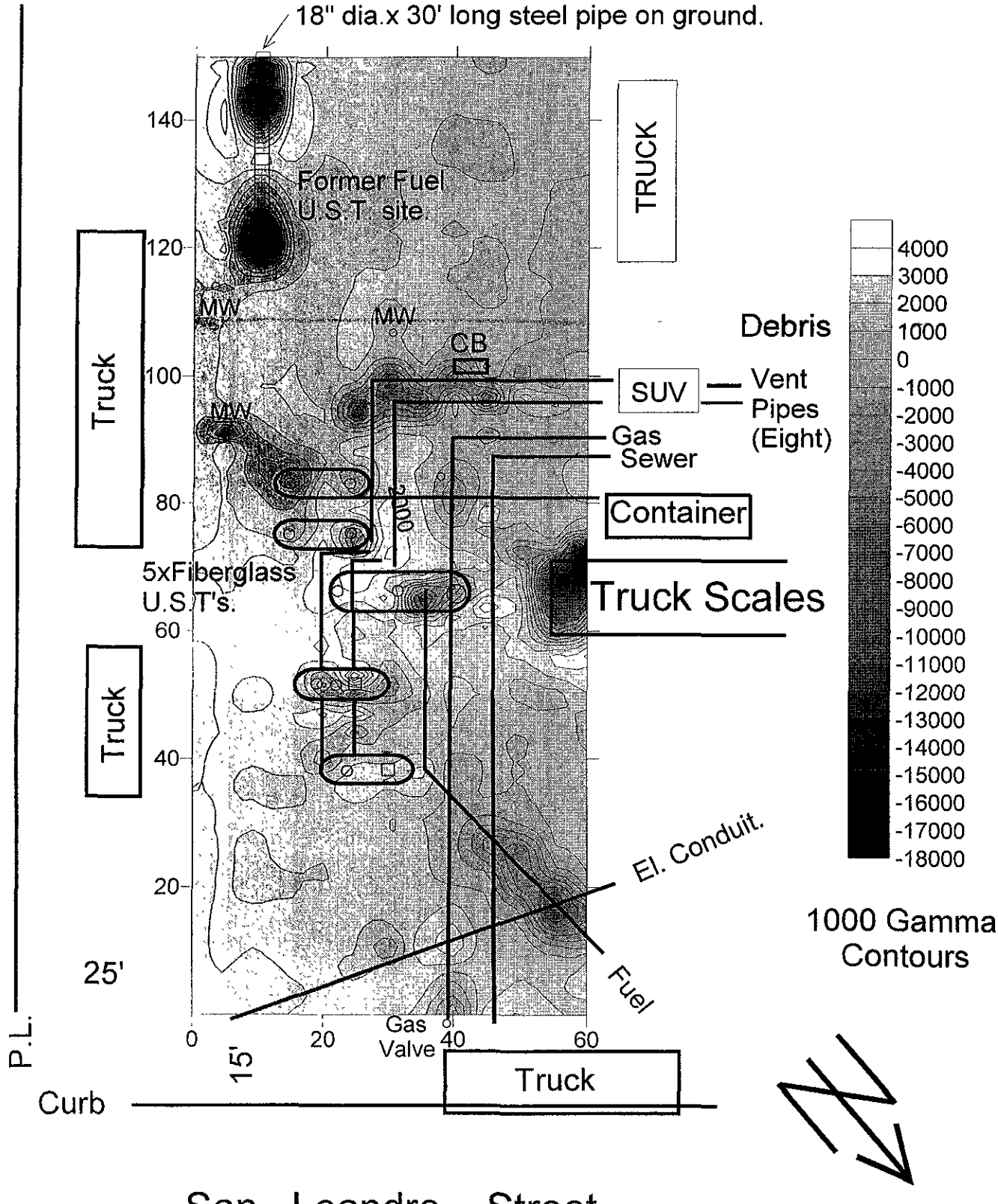
## Area 3 02-07-2004



# Gradient Survey by Subtronic Corp.
# Oakland Truck Stop
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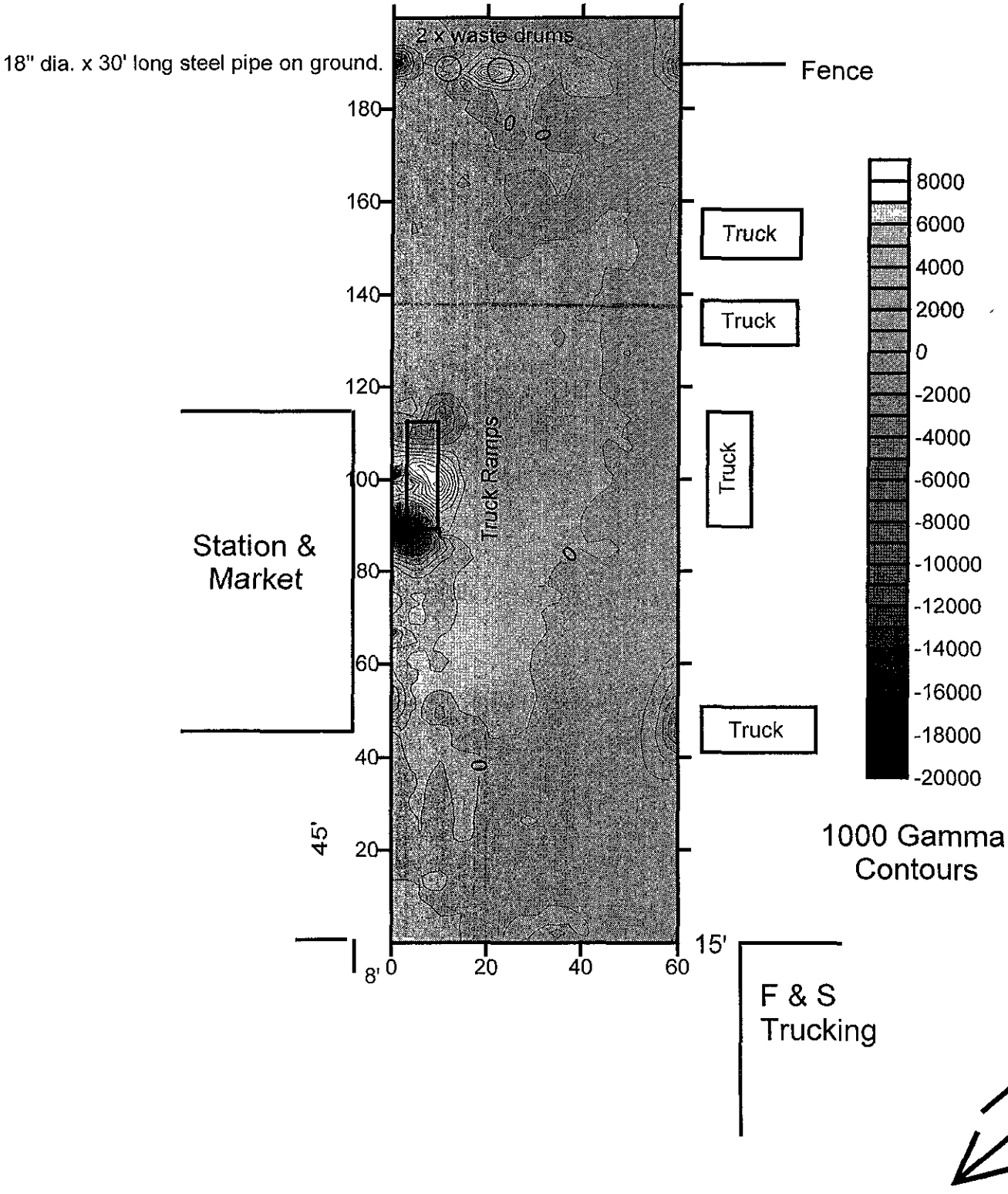
## Area 4

02-07-2004



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Area 4 02-07-2004