FROM : SUBTRONIC CORPORATION

FAX NO. : 9256865281

Jul. 22 1999 03:09PM P1



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To:

Michael Tanzillo

Company: MTC

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(510) 538-0469

Total pages: 5

Thursday, July 22, 1999

Message:

Following is the Geophysical Investigation for Paul Wilson at 22315 Redwood Road, Castro Valley that Paul asked me to fax to you. I mailed the original to him.

Please call me if you have any question.

how aubert

Yours sincerely,
Subtronic Corporation

Cheri Aubert

Office Administrator

Subtronic corp.

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2099-C Arnold Industrial Way Concord, California 94520 Telephone (925) 686-3747 (925) 686-5281 Fax No.

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## GEOPHYSICAL SUBSURFACE INVESTIGATION for **PAUL WILSON** 22315 Redwood Road Castro Valley, California

Subject

Geophysical subsurface investigation for underground storage tanks (USTs) and UST excavations.

Site Location and Description

On July 20 Subtronic conducted a subsurface geophysical survey at a 22315 Redwood Road, in Castro Valley, California. The area surveyed consists of the paved area and the planter west of the strip mall. The parking stalls in front of 7-11 store could not be surveyed because there was a constant flow of cars coming in and out of the parking stalls.

Geophysical Equipment

The specialized equipment used at the site includes a TW-6 M-Scope, a magnetic locator (the Schonstedt GA-72CV) and ground penetrating radar (GPR).

Magnetic Locator

The Schonstedt Instrument Company GA-72CV is a hand-held magnetic locator designed to detect magnetic objects made of iron and steel buried up to a depth of eight feet below the surface.

Primary applications of the magnetic locator are locating UST's, buried drums and underground pipes.

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...

Ground Penetrating Radar (GPR)

A ground penetrating radar system graphically records subsurface structures. Both geological and manmade structures are recorded by the introduction of a pulse of electromagnetic energy into the ground. Reflected pulses received by the antenna

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are then processed for measurable contrast in electrical properties. The result is a visual pseudo-cross-sectional profile.

Primary applications of the GPR are detecting USTs, buried drums, previously excavated areas, i.e., UST excavations, and detecting metallic and non-metallic utilities:

The GPR depth penetration is severely limited by clay-rich soil. Radar waves penetrate deeper in sandy and gravely soils. GPR penetration is limited at many sites in the "Bay Area" due to the clay type soil. However if the UST is backfilled P-gravel the GPR will provide a nice image of the UST.

Survey Methodology

First, a visual inspection was conducted at this site. Underground utilities, vaults, boxes, exposed piping and UST-related features such as vent pipes, product lines, fill ports, topographic mounds and depressions were noted. Any UST fill ports found were physically probed to determine size, orientation and depth.

Exposed plping or risers found on the site were energized, traced out and the surface location was spray painted on the ground. The site was then scanned with both the M-Scope and the magnetic locator for piping and possible buried UST's along traverses spaced approximately five feet apart. GPR scans were collected along profiles spaced ten feet apart to detect either USTs or UST excavations.

Results of the Subsurface Investigation

He UST related features were abserved. The magnetic locator detected two small anomalies in the parking lot (see site sketch). One of these anomalies is adjacent to an area of low conductivity detected by the M-SCOPE. The area of low conductivity may represent different backfill material (such as a UST excavation). The M-Scope anomaly is in the vicinity of USTs represented on the client's site sketch. Subtronic interprets these anomalies as the possible location of the UST excavation site.

GPR scans of the parking lot do not show obvious signs of a UST excavation.

Conclusions

Based on the detection of the low conductivity anomaly and that no large metallic anomalies were detected. The data suggests that the USTs have been removed.

The subsurface geology, object size and composition, burial depth, and surface interference are all major factors as to whether the object will be detected by surface geophysical methods. These are all factors beyond Subtronic's control. The results of geophysical surveys may not represent unique solutions. Apparently similar anomalies may be created by different subsurface phenomena.

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The limits of discernment of this survey are estimated to be objects less than two cubic feet, or fifteen gallons, objects buried greater than ten feet and areas within eight feet of metal fences, buildings and vehicles.

Report Prepared By:

Pierre S. Armand, MS License No. GP 1021

Report Checked By: Check Outlet

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## SUBTRONIC UTILITY SURVEY

Project: 1238/586666500 Rd Borehole/Site I.D. 22315 Radwood Rd	Date: 7/ Subtronic Job No: 5/2275 Client Job Ref:
planter answer is 17	M-scope ANomaly  Plantar  Plantar  Sourceged  Blog.  7-11  Sourceged  And going  and going
Utilities which were not located and why?	aly may be a possible 115T - small and probably represent allie objects left in the
Notes:Client's Signature	Print Name



## Michael Tanzillo & Co. Real Estate Brokerage

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NUMBER OF PAGES 5	INCLUDING THIS PAGE
7-22-9	15

DATE:

то: 5 с

Scott Seery

FROM: MIKE TANZILLO

Please Fino C	0 0	771.7	MAC
we spoke	P13000	1811	10101

## THANKS MIKE

IF THIS FAX DID NOT COME THROUGH CLEARLY, PLEASE CALL US AT (510) 889 9157 AND WE WILL FAX AGAIN.