GEOPHYSICAL EVALUATION
901 SOUTH BRAND BOULEVARD
GLENDALE, CALIFORNIA

PREPARED FOR:
Golder Associates, Inc.
230 Commerce, Suite 200
Irvine, CA 92602

PREPARED BY:
Southwest Geophysics, Inc.
8057 Raytheon Road, Suite 9
San Diego, CA 92111

January 27, 2011
Project No. 111007

SOUTHWEST GEOPHYSICS, INC.

YOUR SUBSURFACE SOLUTION

January 27, 2011
Project No. 111007

Ms. Misty Vazquez
Golder Associates, Inc.
230 Commerce, Suite 200
Irvine, CA 92602

Subject: Geophysical Evaluation
901 South Brand Boulevard
Glendale, California

Dear Ms. Vazquez:

In accordance with your authorization, we are pleased to submit this data report pertaining to our geophysical evaluation for a portion of the property located at 901 South Brand Boulevard in Glendale, California. The purpose of our evaluation was to assess the presence of buried underground storage tanks (USTs) and/or backfilled excavations associated with UST removal in a portion of the site. Our services were conducted on January 5, 2011. This report presents the survey methodology, equipment used, analysis, and results from our study.

We appreciate the opportunity to be of service on this project. Should you have any questions please contact the undersigned at your convenience.

Sincerely,
SOUTHWEST GEOPHYSICS, INC.

Patrick F. Lehrmann, P.G., R.Gp.
Principal Geologist/Geophysicist

Hans van de Vrugt, C.E.G., R.Gp.
Principal Geologist/Geophysicist

PFL/HV/hv

Distribution: Addressee (Electronic)

REGISTERED GEOPHYSICIST
Hans van de Vrugt
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1. INTRODUCTION

In accordance with your authorization, we are pleased to submit this data report pertaining to our geophysical evaluation for a portion of the property located at 901 South Brand Boulevard in Glendale, California. The purpose of our evaluation was to assess the presence of buried underground storage tanks (USTs) and/or backfilled excavations associated with UST removal in a portion of the site. Our services were conducted on January 5, 2011. This report presents the survey methodology, equipment used, analysis, and results from our study.

2. SCOPE OF SERVICES

Our scope of services included:

- Performance of a geophysical survey at the subject site. Our survey included the use of a Schonstedt GA-52 magnetic gradiometer, Geonics model EM61 time domain instrument, Fisher M-Scope TW-6 pipe and cable locator, RD4000 line tracer, and GSSI SIR 3000 ground penetrating radar (GPR) unit using a 400 MHz transducer.
- Site reconnaissance including field mapping of surface structures at and near the survey area.
- Compilation and analysis of the data collected.
- Preparation of this report presenting our findings, conclusions and recommendations.

3. SITE AND PROJECT DESCRIPTION

The subject property is located on the west side of South Brand Boulevard just south of West Garfield Avenue in Glendale, California (Figure 1). The site is a former auto dealership with sales lots, a sales office, and a service building. The ground is paved predominantly with asphalt; however, a few concrete patches, an apron, a swale, and a ramp are present onsite. Figures 2 and 3 depict the general site conditions. The primary study area included the lot east of the service building. The specific limits of the survey area were delineated by a representative from your office.

Based on our discussions with you, it is our understanding that USTs may have once occupied the site. Details regarding the specific location of tanks reportedly are not available.

4. GEOPHYSICAL INSTRUMENTATION AND APPLICATIONS

Our evaluation included the use of a Geonics model EM61, GSSI SIR 3000 GPR, Schonstedt, model GA-52C magnetic gradiometer, Fisher M-Scope TW-6 pipe and cable locator, and RD4000 line tracer. These instruments provide real-time results and facilitate the delineation of subsurface features.

The EM61 instrument is a high resolution, time-domain device for detecting buried conductive objects. It consists of a powerful transmitter that generates a pulsed primary magnetic field when its coils are energized, which induces eddy currents in nearby conductive objects. The decay of the eddy currents, following the input pulse, is measured by the coils, which in turn serve as receiver coils. The decay rate is measured for two coils, mounted concentrically, one above the other. By making the measurements at a relatively long time interval (measured in milliseconds) after termination of the primary pulse, the response is nearly independent of the electrical conductivity of the ground. Thus, the instrument is a super-sensitive metal detector. Due to its unique coil arrangement, the response curve is a single well-defined positive peak directly over a buried conductive object. This facilitates quick and accurate location of targets. Conductive objects to a depth of approximately 11 feet generally can be detected.

The GPR instrument beams energy into the ground from its transducer/antenna, in the form of electromagnetic waves. A portion of this energy is reflected back to the antenna at boundaries in the subsurface across which there are an electrical contrast. The recorder continuously makes a record of the reflected energy as the antenna is moved across the ground surface. The greater the electrical contrast, the higher the amplitude of the returned energy. The EM wave travels at a velocity unique to the material properties of the ground being studied, and when these velocities are known, or closely estimated from ground conductivity values and other information, two-way travel times can be converted to depth. Penetration into the ground and resolution of the GPR images produced are a function of ground electrical conductivity and dielectric constant. Images tend to be graphic, even at considerable depth, in sandy soils, but penetration and resolution may be limited in more conductive clayey moist ground.

The magnetic gradiometer has two fluxgate magnetic fixed sensors that are passed closely to and over the ground. When not in close proximity to a magnetic object, that is, only in the earth's field, the instrument emits an audible signal at a low frequency. When the instrument passes over buried iron or steel objects, so that the field is significantly different at the two sensors, the frequency of the emitted sound increases. Frequency is a function of the gradient between the two sensors.

The M-Scope TW-6 device energizes the ground by producing an alternating primary magnetic field with alternating current (AC) in the transmitting coil. If conducting materials are within the area of influence of the primary field, AC eddy currents are induced to flow in the conductors. A receiving coil senses the secondary magnetic field produced by these eddy currents, and outputs an audio response. The strength of the secondary field is a function of the conductivity of the object, say a pipe, tank or cluster of drums, its size, and its depth and position relative to the instrument's two coils. Conductive objects to a depth of approximately 10 feet are sensed. Also the device is somewhat focused, that is, it is more sensitive to conductors below (and above) the instrument, than to conductors off to the side.

Where risers are present, the RD4000 utility locator transmitter can be connected to the object, and a current is impressed on the conductor pipe or cable. The receiver unit is tuned to this same frequency, and it is used to trace the pipe's surface projection away from the riser. In addition, the instrument may be used in the passive mode, whereby radio and 60 Hz electromagnetic signals produced by communication and live electric lines are detected.

5. SURVEY METHODOLOGY

To expedite data collection, EM61 data were collected in conjunction with a Trimble Pro XRS Global Positioning System (GPS) for spatial control. EM61 data points were collected at 1 second intervals along grid lines spaced roughly 5 feet apart in the paved parking areas. GPR traversing was also performed along north to south and east to west profiles spaced approximately 5 feet apart and along random profiles across and near potential EM anomalies. Traverses with the magnetic gradiometer and M-Scope were also conducted along traverses spaced approximately 5 to 10 feet apart in accessible areas on site.

Recorded EM61 data were downloaded to a portable computer in the field for preliminary analysis and then plotted on a site map (Figure 2). Detected anomalies were mapped with GPS and marked on the ground surface with paint.

6. RESULTS, CONCLUSIONS AND RECOMMENDATIONS

As previously discussed, the primary purpose of our evaluation was to assess the presence of buried underground storage tanks (USTs) and/or backfilled excavations associated with UST removal within the study area. Our survey utilized industry standard equipment (i.e., GPR, electromagnetic, and magnetic instruments) and was conducted in general accordance with current practice.

The results of our survey revealed the presence of one large and two small EM anomalies (Figures 2 and 3). These features were detected with both the magnetic gradiometer and the EM61. The two small EM anomalies are likely associated with buried metal debris. The larger EM anomaly has two unidentified lines extending toward it and is large enough in areal extent to represent a buried vault or UST; however, it is fairly small in instrument response. Based on the instrument response this feature could possibly represent a foundation remnant from a former street light. GPR across the two small EM anomalies appear to indicate small shallow features while the GPR traverses conducted across the larger EM anomaly were inconclusive.

Two possible excavations were detected with GPR in the area of the concrete patches (Figures 2 and 3). One of the possible excavations is located along the concrete apron near the south edge of the auto shop building, and the other is located in the center of the parking lot. The cause of these features is unknown.

Several additional high EM responses were noted during the EM61 survey; however, these responses appear to be related to surface objects such as fencing, sign posts, guard rails, building walls, etc. Figure 2 illustrates the location of mapped features.

In order to further assess the features described above, we recommend that more direct methods be used. Such methods may include the excavation of exploratory trenches/test pits and/or borings.

It should be noted that the presence of existing structures and surface objects (i.e., walls, signs, fencing, dirt piles, etc.) potentially limited the survey. Where obstructions were present subsurface data could not be collected. Moreover, EM/magnetic responses produced by metal surface objects can potentially obscure subsurface features. Figure 3 presents the general site conditions and some of the obstructions encountered. Additionally, radar penetration was on the order of 2 to 3 feet below the ground surface; therefore, objects below this depth would not have been detected.

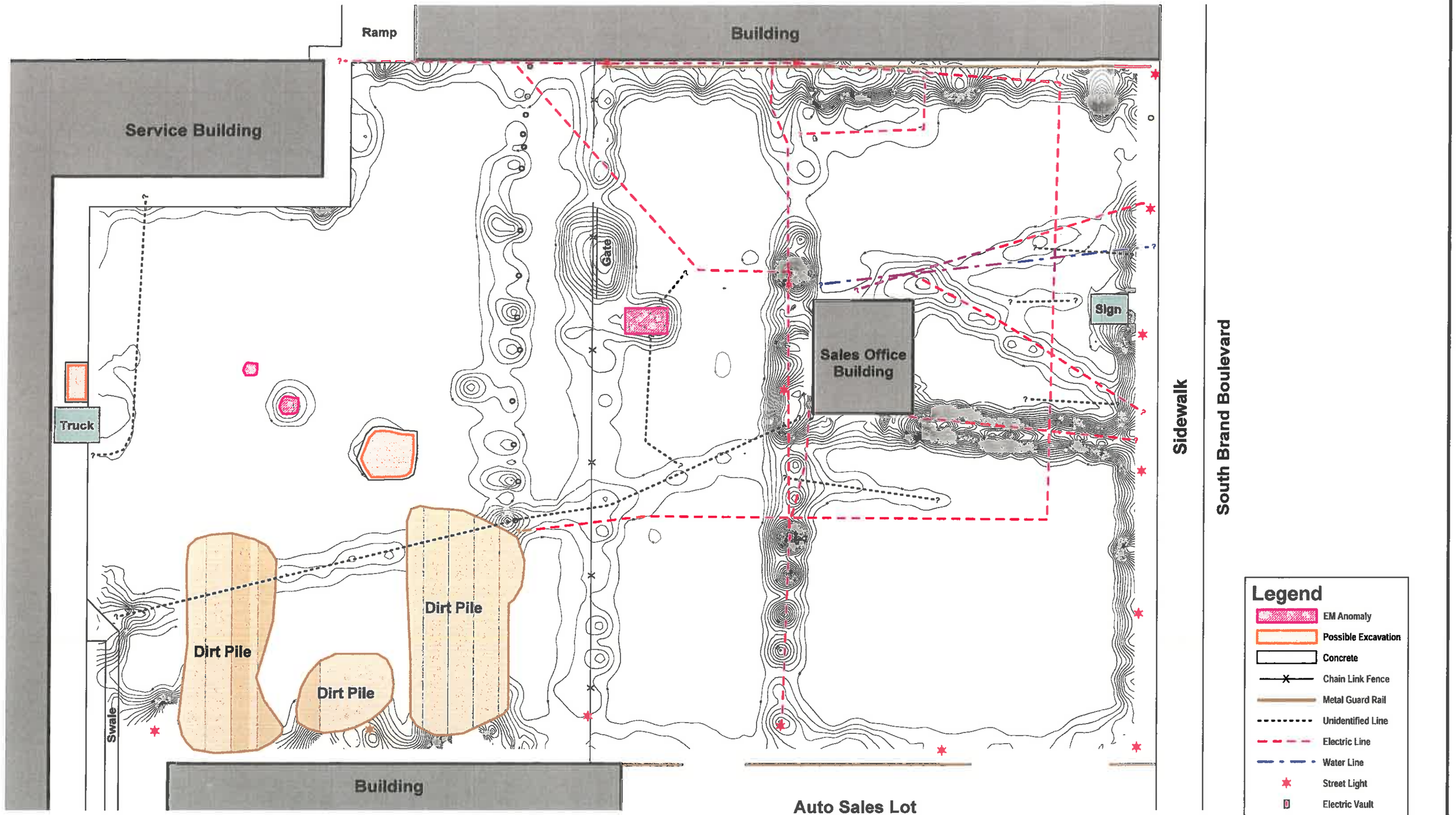
7. LIMITATIONS

The field evaluation and geophysical analyses presented in this report have been conducted in general accordance with current practice and the standard of care exercised by consultants performing similar tasks in the project area. No warranty, expressed or implied, is made regarding the conclusions and opinions presented in this report. There is no evaluation detailed enough to reveal every subsurface condition. Variations may exist and conditions not observed or described in this report may be present. Uncertainties relative to subsurface conditions can be reduced through additional subsurface surveying and/or exploration. Additional subsurface surveying can be performed upon request.

Please also note that our evaluation was limited to the detection of USTs and/or backfilled tank excavations. "USA" or "Dig Alert" should also be contacted prior to conducting subsurface exploration activities. In addition, we recommend that available utility plans/drawings of the project site be reviewed as appropriate.

This document is intended to be used only in its entirety. No portion of the document, by itself, is designed to completely represent any aspect of the project described herein. Southwest Geophysics, Inc. should be contacted if the reader requires additional information or has questions regarding the content, interpretations presented, or completeness of this document. This report is intended exclusively for use by the client. Any use or reuse of this report by parties other than the client is undertaken at said parties' sole risk.

SITE LOCATION MAP	N	901 South Brand Boulevard Glendale, California	SOUTHWEST GEOPHYSICS INC
		Project No.: 111007 / Date: 01/11	Figure 1



SITE DATA MAP

EM61 Data
CI = 100 mVolts

N

901 South Brand Boulevard
Glendale, California

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SOUTHWEST GEOPHYSICS INC.

Figure 2