



# Converse Consultants

Geotechnical Engineering, Environmental & Groundwater Science, Inspection & Testing Services

DATE: April 22, 2020

TO: Sheryl Gonzales, Executive Director  
Western Nevada Development District

SUBJECT: **Phase I Environmental Site Assessment Addendum**  
Sierra Motel Property  
1380 Dartmouth Avenue  
Lovelock, Nevada

In March of 2020, Converse Consultants (Converse) performed a Phase I Environmental Site Assessment (ESA) at the above Property (Project Number 19-23217-01). During the course of the Phase I ESA, recognized environmental conditions (RECs) were identified. The RECs identified were related to undiscovered heating oil underground storage tanks (USTs) related to existing development possibly being located on the Property.

Prior to a Phase II ESA being conducted at the Property, a geophysical survey was performed to identify any possible undiscovered heating oil USTs. The geophysical survey was conducted on March 12, 2020 at the Property (attached to this addendum). The results of the geophysical survey did not reveal the presence of anomalies indicative of USTs or excavations associated with UST removal.

## CONCLUSIONS

Based on results of the geophysical study, we do not believe there are any undiscovered USTs at the Property. This conclusion reconciles the RECs that were found during the Phase I ESA.

## RECOMMENDATION

A Phase II ESA is no longer recommended for this Property.

Respectfully submitted,  
**CONVERSE CONSULTANTS**

Connor Welsh  
Environmental Project Manager

Philip Childers, CEM  
Senior Environmental Manager

Enclosures: Appendix A: GPRS Report



**SUBSURFACE  
SCANNING  
SOLUTIONS**

# Subsurface Investigation for Storage Tanks/Anomalies

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Prepared For: Converse Consultants

Prepared By:  
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Project Manager-Sacramento, CA  
3/15/2020



March 15th, 2020

**Converse Consultants**

**Attn: Connor Welsh**

**Site: 1380 Dartmouth AVE**

We appreciate the opportunity to provide this report for our work completed on 3/12/20 at the above address in Lovelock, NV.

**PURPOSE**

The purpose of this project was to search for any underground storage tanks (UST's) or UST-related piping remaining on the property.

**EQUIPMENT**

**400 MHz GPR Antenna.** The antenna is mounted in a stroller frame which rolls over the surface. The surface needs to be reasonably smooth and unobstructed in order to obtain readable scans. Obstructions such as curbs, landscaping, and vegetation will limit the feasibility of GPR. The data is displayed on a screen and marked in the field in real time. GPR works by sending pulses of energy into a material and recording the strength and the time required for the return of the reflected signal. Reflections are produced when the energy pulses enter into a material with different electrical properties from the material it left. The strength of the reflection is determined by the contrast in signal speed between the two materials. The total depth achieved can be as much as 8' or more with this antenna but can vary widely depending on the conductivity of the materials. Depths provided should always be treated as estimates as their accuracy can be affected by multiple factors. For more information, please visit: [Link](#)

**Electromagnetic Pipe Locator.** The EM locator can detect the electromagnetic fields from live power or radio frequency signals. It can also be used in conjunction with a transmitter to connect directly to accessible, metallic pipes, risers, or tracer wires. A current is sent through the pipe or tracer wire at a specific frequency and the resulting EM field can then be detected by the receiver. The receiver is moved over the surface without coming in contact with the ground so it is not affected by terrain. Depths provided should always be treated as estimates as their accuracy can be affected by multiple factors. Depths achieved can be as much as 20' depending on the type of signal being traced or methods used. For more information, please visit: [Link](#)

**Magnetic locator.** The Model GA-72Cd Magnetic Locator detects the magnetic field of ferromagnetic objects. It responds to the difference in the magnetic field between two sensors which are spaced about 14 inches apart. The GA-72Cd is unique because it provides an audio signal, and visual indications of both signal strength and polarity. Although most objects can be located using either of the indications, simultaneous use of both types will help you pinpoint a target and determine its orientation and identify magnetically detectable nonmetallic duct and cable.

## **PROCESS**

The EM pipe locator was used to connect to accessible, traceable pipes that may be tank-related such as vent pipes or product lines. A current is induced onto the pipe which creates an electromagnetic field that can be traced using the receiver. We can then attempt to trace these pipes to their origin or end point and paint or flag their locations.

Initial GPR scans were collected in order to evaluate the data and calibrate the equipment. Based on these findings, a scanning strategy is formed, typically consisting of scanning the entire area in a grid with 3'-5' scan spacing in order to locate any potential UST's that may remain at the site. The GPR data is interpreted in real time and anomalies in the data are located and marked on the surface along with their depths using spray paint, pin flags, etc. Depths are dependent on the dielectric of the materials being scanned so depth accuracy can vary throughout a site. Relevant scan examples were saved and will be provided in this report.

## **LIMITATIONS**

Please keep in mind that there are limitations to any subsurface investigation. The equipment may not achieve maximum effectiveness due to soil conditions, above ground obstructions, reinforced concrete, and a variety of other factors. No subsurface investigation or equipment can provide a complete image of what lies below. Our results should always be used in conjunction with as many methods as possible including consulting existing plans and drawings, exploratory excavation or potholing, visual inspection of above ground features, and utilization of services such as One Call/811.

## **FINDINGS**


We found that the soil allowed for maximum GPR depth penetration of 3 feet in most areas. Also, after completion of scans with GPR, there were no anomalies consistent with possible USTs detected in the scanning area.

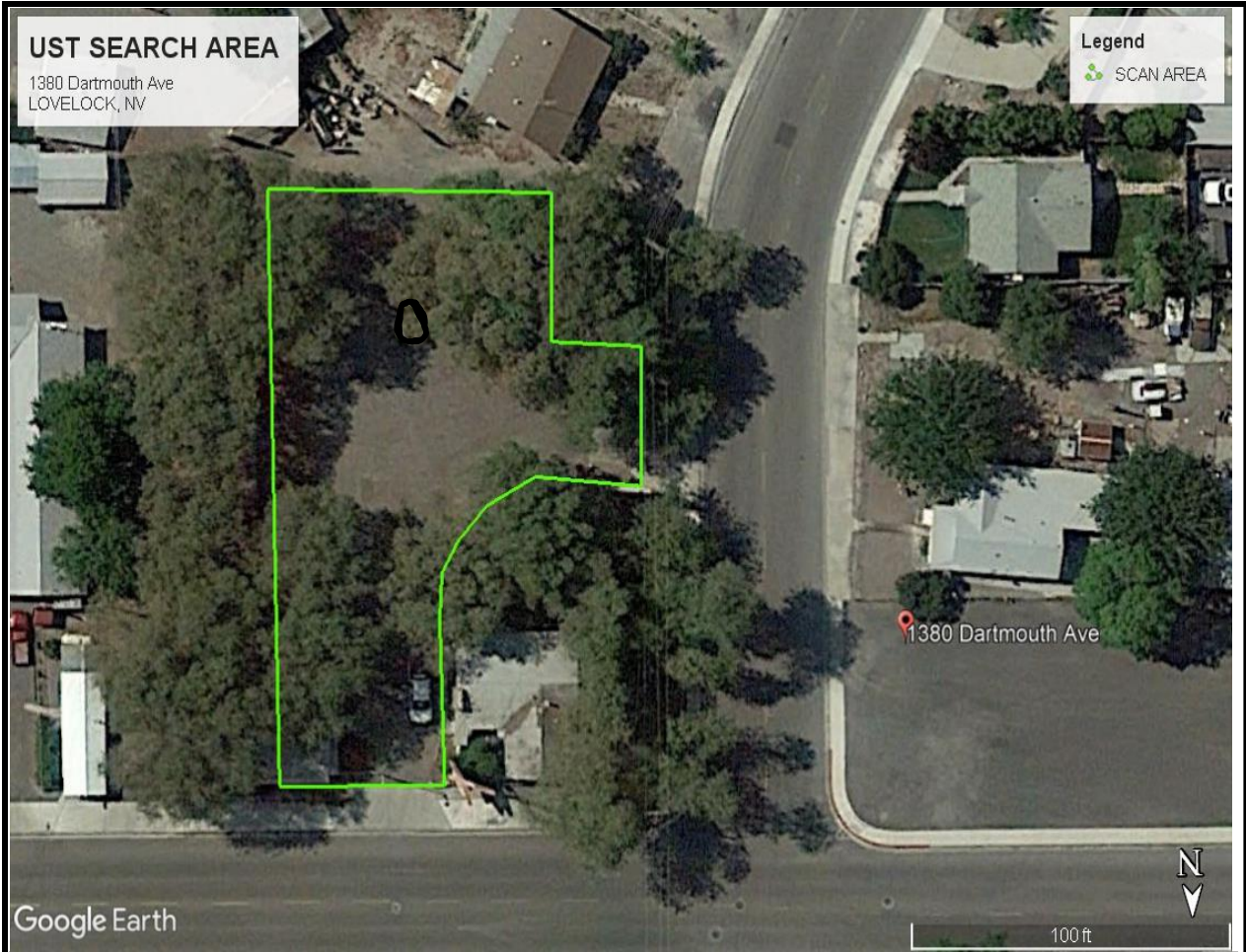
The following pages will provide photos and further explanation of our findings.

**UST SEARCH AREA**

1380 Dartmouth Ave  
LOVELOCK, NV

**Legend**

 SCAN AREA

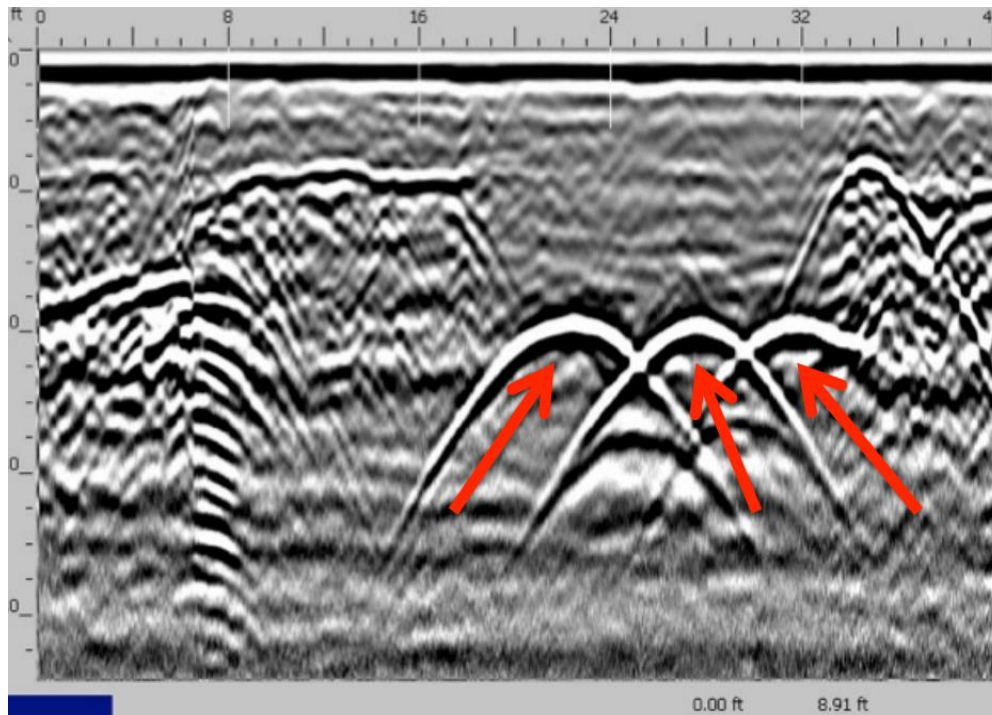


Google Earth

100 ft

Google earth overlay





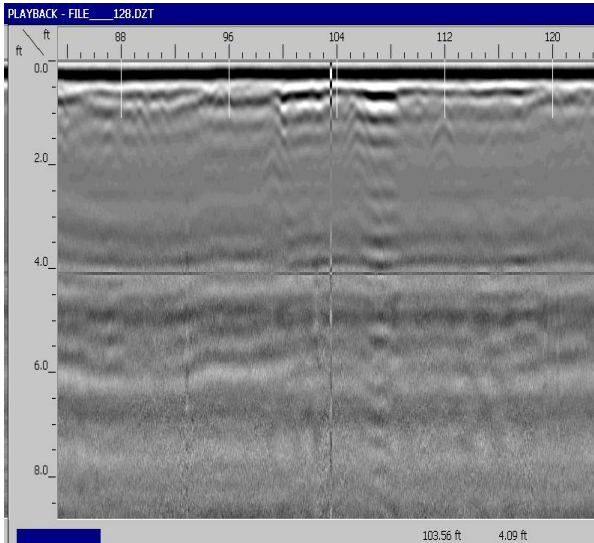
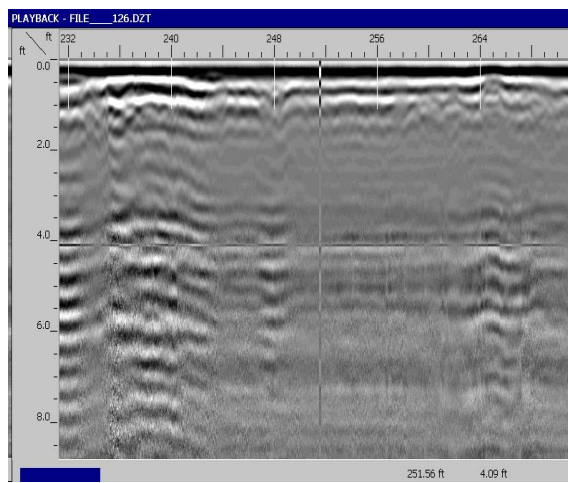
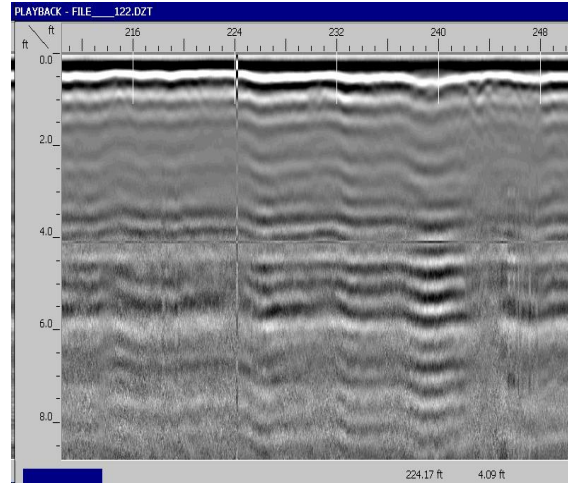
THE ABOVE PHOTO IS A **SAMPLE** OF WHAT A UST MIGHT LOOK LIKE WHEN CAPTURED ON GPR DATA. WHEN COMPARED TO TODAY'S SCAN FROM YOUR SITE, WE CAN SEE THAT THE DATA DOES NOT RESEMBLE THE SAMPLE.

IN THE FOLLOWING PAGES YOU WILL SEE SITE PHOTOS WITH CORRESPONDING DATA TAKEN USING GPR. WE CAN SEE THAT THERE IS NO DATA COLLECTED THAT SUGGESTS THE PRESENCE OF A UST(S).

GPR DATA **SAMPLE ONLY**



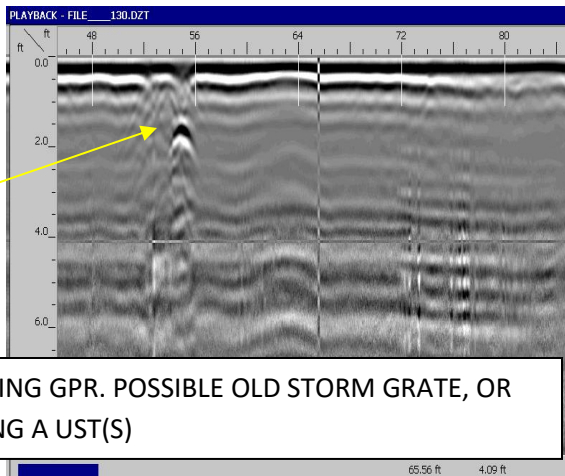
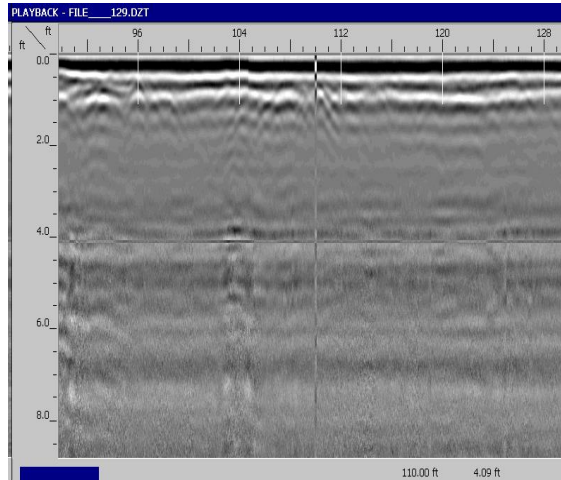




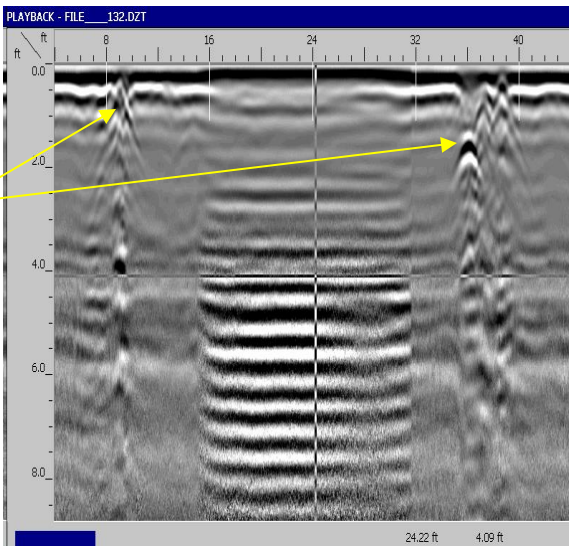
GPR Data Screenshots



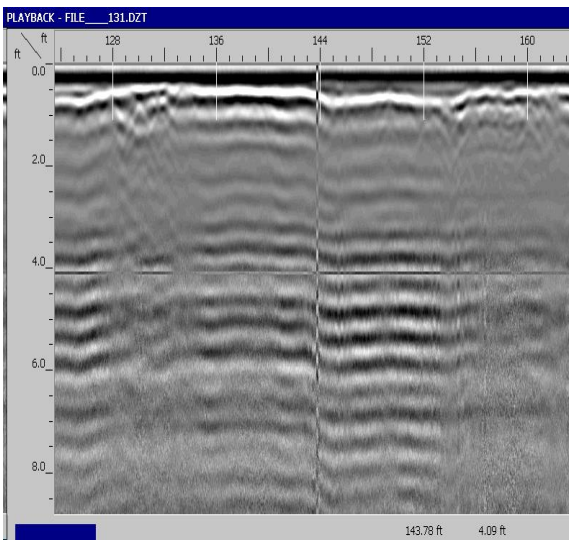
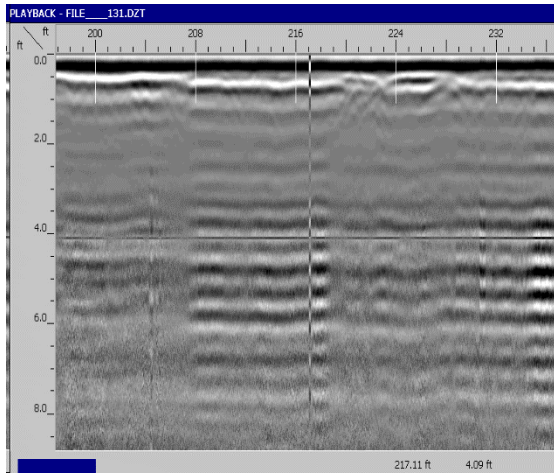
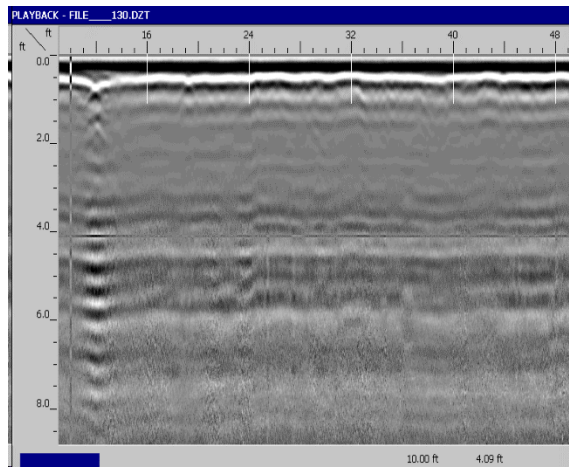




THIS PINK OUTLINED AREA WAS FOUND USING GPR. POSSIBLE OLD STORM GRATE, OR LID. WE DON'T SEE ANY SIGNS OF THIS BEING A UST(S)



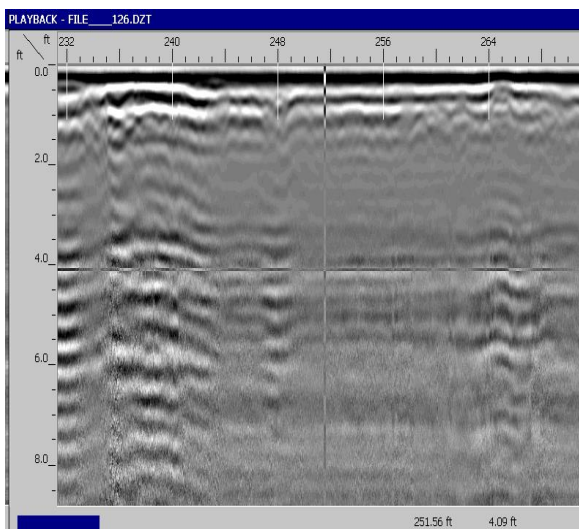
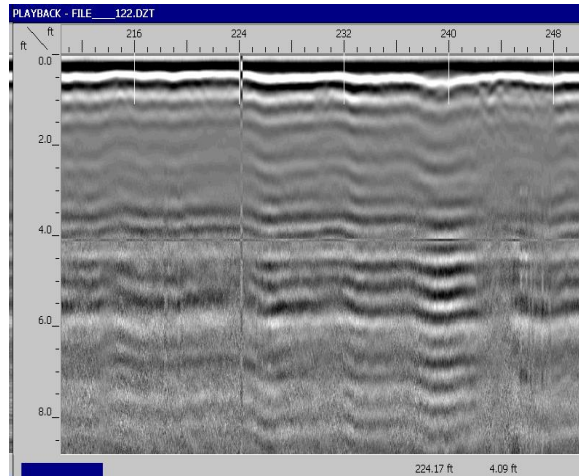
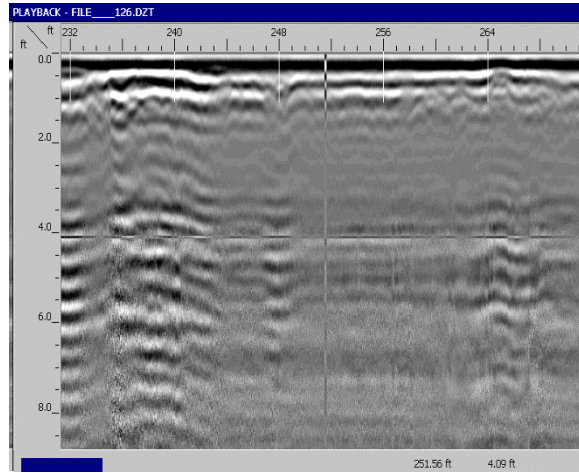




GPR Data Screenshots







GPR Data Screenshots



**CLOSING**

GPRS, Inc. has been in business since 2001, specializing in underground storage tank location, concrete scanning, utility locating, and shallow void detection for projects throughout the United States. I encourage you to visit our website ([www.gprsinc.com](http://www.gprsinc.com)) and contact any of the numerous references listed.

GPRS appreciates the opportunity to offer our services, and we look forward to continuing to work with you on future projects. Please feel free to contact us for additional information or with any questions you may have regarding this report.

Signed,

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Project Manager—Sacramento, CA



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