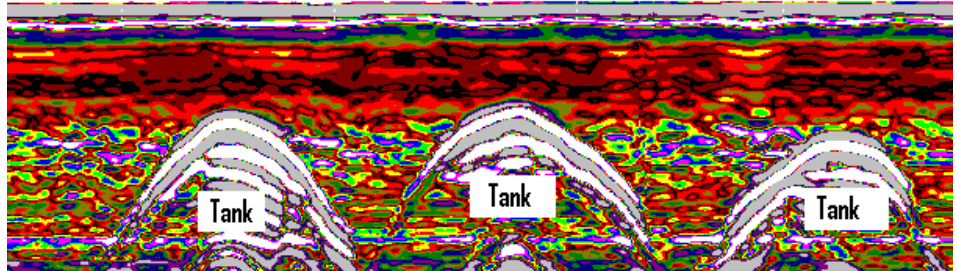


Geophysical Application

Locating Underground Storage Tanks

Underground Storage Tanks (USTs) can be of environmental importance. With poorly maintained records and changing regulations, the presence or location of a UST is frequently unclear.

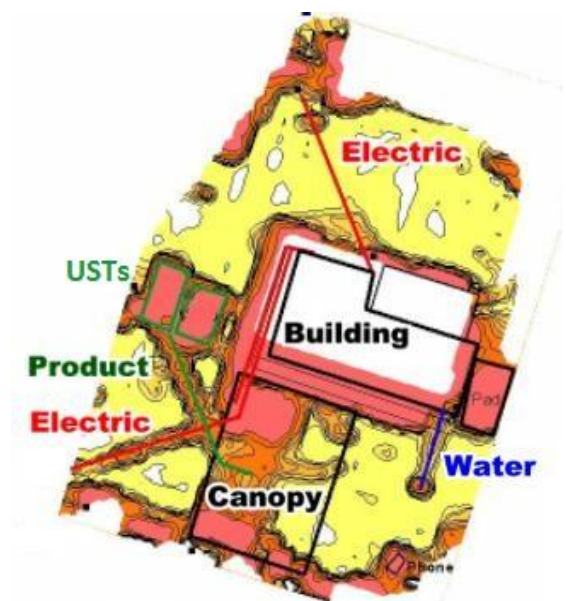


Geophysical methods can provide a cost effective means to screen a site and identify the location of USTs.

Geophysical methods can be keyed to the composition of a UST. The majority of USTs are metal, which provides a great contrast that can be relatively simple to identify with a single geophysical method. However, with the growing use of fiberglass reinforced plastic (FRP) tanks, or old deteriorating USTs a more complex approach may be necessary.

ASTM 6429, Guide to Selecting Surface Geophysical Methods recognizes five consensus methods to detect drums and USTs. Quality Geophysics is capable of performing all five surface geophysical methods, and the experience to select the appropriate method for site conditions. Surface geophysical methods used to detect USTs and drums include:

- Frequency Domain Electromagnetic,
- Time Domain Electromagnetic (high sensitivity metal detectors),
- Ground Penetrating Radar,
- Magnetic methods, and
- Pipe & Cable Locators.



Some methods are qualitative and depend on the experience of the operator to “hear” tone differences indicating USTs, or “see” a UST feature on a display screen. These methods often result in a spray-paint marking on the ground surface to indicate the UST. However in areas with multiple utilities, discriminating a small UST from other subsurface features can be difficult if not impossible.

Some geophysical methods are quantitative, with recorded data that enable independent assessment and interpretation of features. These methods permit site mapping, and a comprehensive evaluation of both USTs and underground utilities.