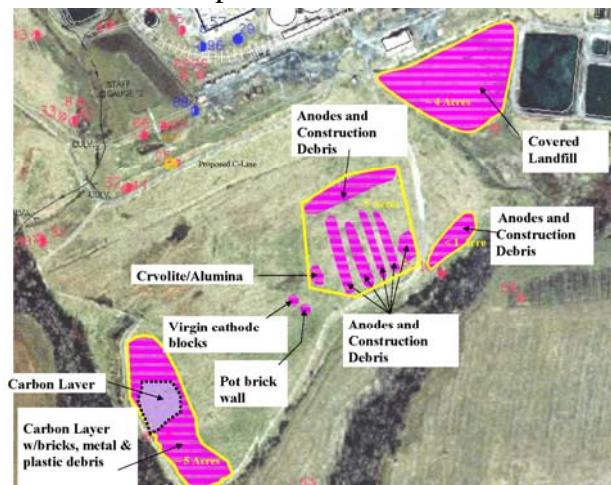
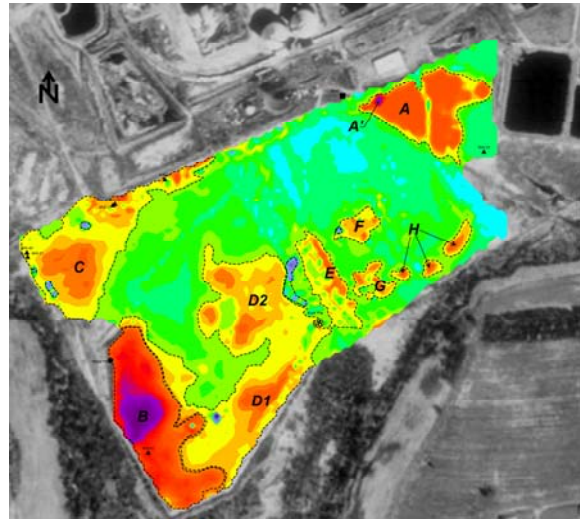


CASE HISTORY

Geophysical Survey Locates Buried Conductive Objects at Industrial Landfill Site

Challenge:

A records search and personal interviews at an aluminum industrial facility had reportedly indicated that landfill materials (in particular, carbon cathodes) had been buried in an approximately 53-acre area behind the facility. However, no precise indications were made as to the exact locations of these materials or to the extent of the actual area of buried materials. Prior to development of the property, the client was interested in locating and identifying these buried materials to aid in the direction of test pits over the 53-acre site. Given the size of the site, MUNDELL was asked to perform a large scale geophysical survey as a guide for the location of test pits.



Action:

To accomplish the study objectives, MUNDELL personnel completed a multi-faceted geophysical survey using advanced electromagnetic equipment integrated with GPS to locate and characterize concealed conductive and metallic objects, and to map variations in different fill materials.

Results:

The results indicated several large areas of highly conductive materials with substantially higher conductivities than the background soils (Areas A through H in the above figure). Using the geophysical results, MUNDELL recommended test pits for determining the expected character of the buried materials. The excavations uncovered significant accumulations of spent buried carbon material, including several virgin carbon cathodes and anodes, metallic objects, and general construction debris as shown in the figure to the left. A similar survey was performed at a later time in other areas at the facility which were also suspected of containing buried conductive objects. Comparable results were obtained during this survey.