

PROJECT BRIEF



HIGH-RESOLUTION GEOPHYSICAL SURVEY TO LOCATE BURIED UNEXPLODED ORDNANCE

Project Description

A high-resolution geophysical survey was conducted on a commercial property located at a confidential site in Japan. The 42-acre site was screened for unexploded WWII era bombs using magnetic and electromagnetic equipment.

Work Performed

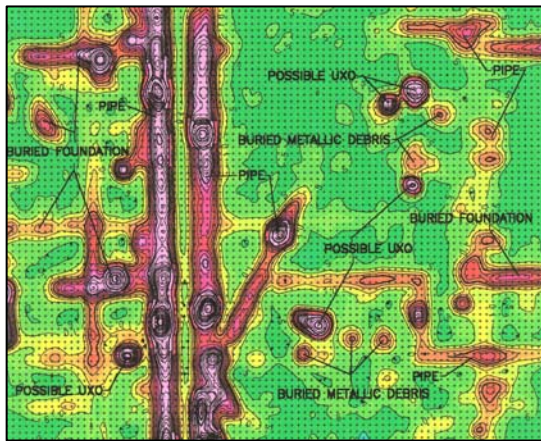
A Geometrics G-858 magnetic gradiometer was used to collect total magnetic field and vertical magnetic gradient data semicontinuously (10 readings/second) along profiles spaced 1 meter apart. A Geonics EM-31 was used to collect ground conductivity data and an EM-61 was used to detect the presence of buried metal objects, with readings taken every 1-meter. Detailed surveying was conducted and used to construct a scaled site map showing all surficial metal features that could interfere with the surveys.



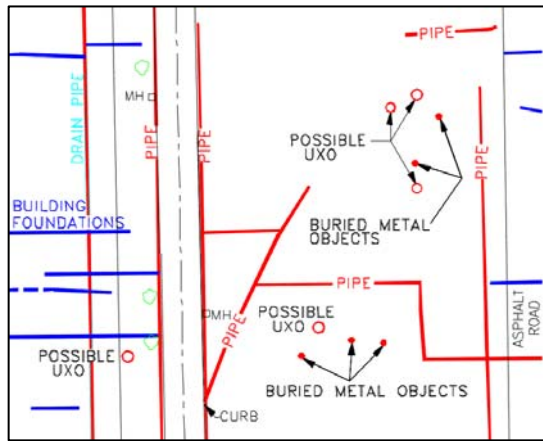
Geonics EM-61

Analysis and Results

Over 500,000 magnetic and electromagnetic data points were processed using the Geosoft mapping system. Geosoft UXO target analysis software was then used to select potential UXO objects based on target depth and estimated mass. Twenty potential UXO anomaly locations were identified, having calculated depths between 0.3m and 3.5m, and estimated masses between 250 and 350kg. The combined magnetic and EM survey allowed the identification of cultural features such as underground storage tanks, pipes, and reinforced concrete foundations, thereby eliminating them as possible UXO signatures.



Portion of EM-61 survey data



Corresponding interpretation

“a bold new vision in geophysical services”