

Chapter 10 Borehole Geophysics

10-1. Usage and Reporting

The use of geophysical techniques, if required, should be specified in the drilling plan. In the absence of this specification, the FDO should consider these techniques for site-specific applicability to enhance the technical acuity and cost-effectiveness of its efforts. Special applications may be useful in unexploded ordnance detection, disturbed area delineation, contaminant detection, depth to bedrock determination, buried drum detection, borehole and well logging, etc. When approved for use, geophysical techniques should

be discussed in the drilling plan to include the purpose; particular method(s) and equipment; selection rationale; physical and procedural assumptions; limitations (theoretical and site specific); resolution; accuracy; and quality control. Safety aspects of geophysical applications should be included in the safety plan, especially for those areas where induced electrical currents or seismic waves could detonate unexploded ordnance or other explosive materials.

10-2. Methods

General geophysical methodology is covered in EM 1110-1-1802. Geophysical techniques applied to HTRW studies are found in USEPA 625/R-92/007, 600/2-87/078, 600/7-84/064, and in Benson, Glaccum, and Noel (1982). Additional guidance on planning and conducting borehole geophysical logging can be found in ASTM Standard Guide D 5753.