

Locating Pioneer Graves with GPR

Anton Kepic and Dominic Howman

Department of Exploration Geophysics
Curtin University
GPO Box U1987
Perth, 6845

Email: kepic@geophy.curtin.edu.au

There is a remarkable amount of interest in locating old graves. Either for archaeological/restoration purposes or in aiding property development. Usually there is minimal information available about the location of grave plots so geophysical methods by their non-destructive nature are an important tool in locating graves. Ground penetrating radar (GPR) is the method of choice as it is rapid and generally provides good information both in the vertical and lateral extent. GPR surveys in the East Perth (WA) area and at Greenough (near Geraldton, WA) conducted by ourselves were able to detect many “lost” grave sites.

Our experience is that it is the reflection from either the coffin or the materials used in the grave construction (such as brick lining) that provides the identifying signal. The pioneer graves we have encountered vary in construction from holes with coffins to family vaults. The latter would seem fairly easy to identify; however, many sites are cluttered with wrought iron fences and other artefacts that may have been moved from the original grave-site location. These surface obstacles interrupt the survey lines and produce interference from unshielded antenna. Thus, even normally easy targets can be tricky to identify amongst the clutter. Another complication is the practice of stacking coffins to reuse the grave plots. This may lead to the conclusion that there are more graves yet to be found when in fact some have been reused. We have some (unconfirmed) evidence that GPR can detect stacked coffins in the East Perth Cemetery.