

GLOSSARY

Term	Definition
ADR	Atomic Dielectric Resonance.
Correlation Method	Stacks a large number of traces from a series of stare scans and applies mathematical filtering to give a baseline over which the signal can be described as being of high quality. The signal returns are analyzed to show distinct changes in lithology for the area under investigation.
Dielectric Constant (DC)	The index of the rate of transmission of our ADR wave packet through a medium relative to the transmission rate of the beam through vacuum. This is also sometimes called the transmissivity index, or relative permittivity. The vacuum has a dielectric constant of 1. For a medium such as limestone the dielectric constant (ϵ_r) is typically 9.
E-Log (Energy log)	During a stationary scan (“Stare” scan) the ADR transmitter and receiver antennas are positioned at known grid co-ordinates and aimed downward. The energy log (“E-log”) indicator is produced by dividing the Stare scan image data in time windows. Windowing is carried out in equal time intervals or the time axis is migrated to depth after our WARR tracking of dielectric and windowing is performed equal spatial intervals. The data windows are subsequently analyzed and/or enhanced utilizing a suite of signal and image processing techniques such as Fourier analysis, wavelet decomposition, and image enhancement algorithms using RADAMATIC, Adrok’s proprietary data analysis software. Amongst other indicators, this analysis produces the E-Logs which represent estimated energy values as a function of depth and were found to be excellent indicators. In this paper they are plotted on a logarithmic scale.
P-Scan	Profile Scan of the subsurface with fixed focus Antenna spacings at ground level. Both Transmitting and Receiving Antennas are moved simultaneously in parallel along the length of the scan line. This produces an image of the subsurface (from ground level) based on the two-way travel time of Adrok ADR Scanner’s beams from Transmitter (Tx) to Receiver (Rx) Antenna. The WARR data converts the P-Scan time-stamps into depths in metres.
Stare	A stationary scan where data collected with both antennae pointing the ground.
WARR	“Wide Angle Reflection and Refraction” scan to triangulate subsurface depths from the surface ground level. The transmitting antenna is moved at ground level along the scan line, away from the stationary receiving antenna which is positioned at the start of the scan line. Collected by ADR Scanner at ground level (produces depth calculations).
Weighted Mean Frequency	The frequency and energy values are combined to produce a Weighted Mean Frequency for each measured depth interval. WMF is the energy weighted mean of the frequencies. Therefore, frequency values with a high weight contribute more to the WMF than frequency values with a low weight.