

receiver measures in the presence of the primary field - can be detected by a portable three-component coil (for magnetic field measurements) and grounded electrodes (for electric field measurements). The received waveform is sampled by 10 channels whose windows have widths and delay times logarithmically spaced by factors of two.

An important feature of Utem resulting from the transmission of a triangular waveform is that the system response is a step rather than an impulse. This results in a direct relationship between amplitude of response and inductance and better resolution of time constants. In addition, the power spectrum of the transmitted triangular waveform shows relatively higher levels at low frequencies as compared to that of an impulse excitation.

Because of the step response, the inductive limit of the response is of immediate diagnostic value, as in the case of frequency domain excitation, and is dependent upon conductor dimensions and depth only. This often enables the interpretation of conductor geometry from secondary field amplitude, thus complementing normal geometric interpretation based on spatial anomaly character.