

B. THE UTEM III SURVEY SYSTEM

The Utem III Survey System and interpretation methods were developed at the University of Toronto during the past fifteen years and most of the relevant information on the system's function and the interpretation of results is found in University of Toronto theses and project reports.

A summary of Utem III instrumentation and computer specifications can be seen in appendix 1 and a brief description of the system is as follows:-

The measuring system is a time-domain E.M. system using a large fixed transmitter loop and a portable receiver-coil pair capable of measuring both electric and magnetic field components. The actual source is a large square or rectangular loop (Turam-style) energised by a triangular current waveform. This waveform is not of a precise triangular nature but is modified by pre-whitening circuitry which optimises the frequency content of the output power spectrum so as to improve signal/spheric-noise ratios by factors of up to 4 or 5.

Resulting total fields - note that the