Recent AEM case study examples using a Full Waveform time- domain system for near-surface applications

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Abstract

Early time or high frequency airborne electromagnetic data (AEM) are desirable for shallow sounding or mapping of resistive areas but this poses difficulties due to a variety of issues, such as system bandwidth, system calibration and parasitic loop capacitance. In an effort to address this issue, a continued system design strategy, aimed at improving its early-channel VTEM data, has achieved fully calibrated, quantitative measurements closer to the transmitter current turn-off, while maintaining reasonably optimal deep penetration characteristics. The new design implementation, known as "Full Waveform" VTEM was previously described by Legault et al. (2012). This paper presents some case-study examples of the Full Waveform VTEM helicopter time-domain EM system for near-surface applications.