7.1 PHOENIX NEW GENERATION MT/CSAMT TECHNLOGIES WITH REAL TIME DATA TRANSFER CAPABILITIES

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ABSTRACT

Phoenix Geophysics is a pioneering geophysical instrument manufacturing company that has played a leading role in the electromagnetic (EM) community, meeting the needs of both academia and industry. Since the release of the first natural EM field data loggers (MT-16, 1980), with the data processor initially mounted on a minivan for a single Magnetotelluric (MT) station, Phoenix has maintained a focus on downsizing the equipment while simultaneously improving accuracy and reliability. Second generation MT receivers (V5, 1987) were more compact but still needed wired connection for remote reference synchronization. In 1997, Phoenix invented and developed the first Satellite Synchronized MT (SSMT) systems (US Patent 6,191,587, 1996). This was a significant milestone in the field of EM geophysics, allowing users remote reference processing with satellite synchronization. This generation of receivers was the first model of MT data loggers which had sensor processing and data processing in the same unit. Recently, Phoenix Geophysics introduced another groundbreaking feature that allows users to access their data on-site from anywhere in the world via a network connection. This feature has been employed for natural source EM field monitoring applications over the last couple of years and is expected to accelerate similar applications within the EM community.

KEYWORDS: magnetotellurics, natural EM signals, real time, monitoring