



Special Seminar

Tuesday, February 5, 2008

Holmes 389

10:30 a.m. – 11:30 a.m.

Recent Experience with Full-Tensor Squid Magnetic Gradiometers for Unexploded Ordnance Detection

Jeffrey Gamey

Research Scientist, Battelle

Abstract:

This seminar will encompass the experiences of a four year SERDP project involving the development of an airborne full-tensor SQUID magnetic gradiometer for UXO detection. Although successful in the laboratory, the project was ultimately unsuccessful in developing a field capable system. The fundamental limitations of the hardware, the engineering approaches designed to overcome them and the lessons learned will be presented, along with background insights into the technical requirements for small target detection.

Speaker Bio:

Jeffrey Gamey is a Research Scientist at Battelle in Oak Ridge, Tennessee. He graduated from the University of Western Ontario with a BSc in geophysics in 1985, and later completed his MBA at York University in 1992. He worked his way through the university conducting mining surveys in northern Canada. On graduation, he worked for the mineral exploration company, Aerodat Inc., in Toronto from 1985-1997, processing and analyzing airborne magnetic, electromagnetic, and radiometric data. He later co-founded Vanguard Geophysics Inc. to focus on airborne environmental applications before moving to the Department of Energy's Oak Ridge National Laboratory in 1999. He transferred to Battelle along with the rest of the geophysics group in 2005. Since 1994, he has been developing a series of low-altitude helicopter magnetic and electromagnetic systems for ordnance detection, including airborne superconducting magnetometers. He is a member of SEG and EEGS and is a licensed Professional Geophysicist in California and Ontario Canada.