



PCPG

Pennsylvania Council of Professional Geologists
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Essentials of Borehole Geophysics with Field Demonstration

April 19, 2022
Middletown, PA

This seminar and field demonstration is designed for geologists, engineers, and environmental specialists who want to maximize information from exploratory wells for site characterization by using borehole geophysical logging and imaging tools. It will focus primarily on environmental, geotechnical, ground water, and oil & gas applications.

The class objective is to provide attendees with a working understanding of the available borehole geophysical methods for utilization on their projects. Each borehole method has advantages and disadvantages that must be understood in order to apply the most appropriate method(s) to the project objectives and site conditions. After a discussion on logging & imaging tools/methods, the seminar will focus on the interpretation of geophysical and imaging logs. Examples and case studies will be discussed to provide attendees with an understanding of how logs and images are used to determine lithology, correlate stratigraphy, characterize structure, and identify water producing and receiving zones. A field demonstration will be presented to provide attendees with a hands-on field data acquisition experience.

Level: Intermediate to Advanced

8:30 - 9:00	Arrivals, Registration & Morning Refreshments
9:00 - 9:15 AM	Introduction and Overview of Well Logging & Imaging
9:15 - 9:30 AM	Reading Logs, Borehole Environment, Effects of Tool Configuration
9:30 - 11:00 AM	Logging Methods & Tool Responses <ul style="list-style-type: none">• Caliper Logs• Gamma Ray & Spectral Gamma Logs• Resistivity and Conductivity Logs• Optical & Acoustic Televiewers• Fluid Temperature and Resistivity Logs• Flowmeter / Hydrophysical Logs• Sonic Logs• Density & Neutron Logs
11:00 – 11:15	Break

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11:15 - 12:30 PM	Applications of Well Logging and Imaging <ul style="list-style-type: none"> • Determining bed boundaries • Stratigraphic correlation • Ground water occurrence and migration • Estimating transmissivity • Engineering properties • Porosity • Structure & fracture characterization • Deviated wells • Contracting logging services
12:30 - 1:00 PM	Wrap-up and Lunch
1:00 – 1:30 PM	Travel to Field Site with Overview of Upcoming Field Demonstration
1:30 – 2:30 PM	Field Demonstration
2:30 – 3:00 PM	Return to Geological Survey Building / Summary / Q&A
3:00	Evaluations / Sign-Out (Attendance certificates will be emailed in 2-3 days)

About our Presenter

**Scott Wendling, P.G., Vice President, Chief Operating Officer
ARM Group/ARM Geophysics**

Scott Wendling, P.G. is a senior geologist and geophysicist for ARM Geophysics in Hershey, Pennsylvania. He currently serves as Vice President and is responsible for all geophysical services provided by ARM. He has more than 33 years of experience managing and performing surface and borehole geophysical surveys for environmental, engineering, and exploration projects.

Mr. Wendling received his Bachelor of Science and Master of Science Degrees in Geology from Southern Illinois University at Carbondale. Mr. Wendling's Master's Degree focused on geophysics and his Master's Thesis was part of a consortium jointly sponsored by the U.S. Geological Survey and the Geological Survey of Canada, and included several U.S. and Canadian Universities. Mr. Wendling has provided geophysical training presentations to a wide range of organizations, including PCPG, PA Geological Survey, PADEP, WVDEP, USGS, PAPUC, Marcellus Shale Coalition, AEG, PAEP, and several private companies/organizations. He has been a licensed Professional Geologist in Pennsylvania since 1994.