



EDUCATION

BACHELOR OF SCIENCE IN GEOLOGICAL ENGINEERING

University of Arizona. Tucson, Arizona

EXPERIENCE

Senior Engineer

2012 – 2014, 2017 – Present

hydroGEOPHYSICS, Inc., Richland, WA

Greater role in commercial and government projects, including an increased involvement with clients and a significantly decreased need for managerial supervision. Major accomplishments include:

- Completed geophysical projects successfully in both national and international markets, solving a variety of problems ranging from environmental characterization to mineral exploration.
- Continued development in report writing and graphical visualization.
- Developed positive relationships with equipment vendors and client representatives.
- Provided training and supervision for HGI's field technician positions.
- Field testing and implementation of a 180-channel electrical resistivity data acquisition system, Geotecton™ Resistivity Monitoring System.

Staff Engineer II

2009 – 2012

hydroGEOPHYSICS, Inc., Richland, WA

Primary workload was conducted as a member of the Surface Geophysical Exploration (SGE) team, responsible for data acquisition, processing, and report writing for of multi-method, multi-year geophysical characterization projects at the Hanford nuclear facility in eastern Washington. The SGE program is designed to provide characterization of the extent of subsurface contamination for use in active remediation of waste disposal and waste storage sites. Diverse knowledge of field practices associated primarily with electrical resistivity, in addition to electromagnetic, magnetic, IP resistivity, and high precision GPS surveying.

Staff Engineer I

2004 – 2009

hydroGEOPHYSICS, Inc., Tucson, AZ

Data processing and reporting for the HRR-LDM (High Resolution Resistivity - Leak Detection and Monitoring) program in Hanford, Washington. HRR-LDM is used by the Hanford Site personal as part of remediation for historically leaking single shell waste storage tanks. The LDM program was designed to provide a monitoring system that could ensure that remediation activities would not create new or re-activate old leaks. Duties included operation and maintenance of data collection software and hardware systems, data processing and filtering of real-time data, creation and management of database storage systems, interpretation of geophysical data and preparation of daily status reports that were assessed to ensure safety of Hanford Site personnel. Major accomplishments include:

- Developed data processing and filtering software to automate and streamline daily LDM processing.
- Assisted with development of quality assurance procedures and work instructions for geophysical work practices that were approved by the Department of Energy for use on the Hanford Nuclear site.



- Assisted with the successful 2006 LDM proof of concept leak injection test at single shell tank S-102 at the Hanford Nuclear Waste Reservation.
- Developed automated data visualization routines to more efficiently display multiple resistivity data sets.

Hydrologic Technician

2002 – 2004

United States Geological Survey, Tucson, AZ

Involved with surface and ground water projects spanning southeastern Arizona, with data collected through stream gaging stations and well monitoring stations. Responsibilities ranged from conducting stream discharge measurements, gaging station construction and equipment maintenance, and data input and processing.

Undergraduate Research Assistant

2000 – 2002

University of Arizona, Tucson, Arizona

Assisted with two National Science Foundation funded graduate research projects, directed by Dr. Pinnaduwa Kulatilake of the Department of Geological Engineering at the University of Arizona. Managed sample preparation and assisted in sample testing for projects entitled “Effect of finite size joints on strength and deformability of rock masses,” and “Establishing functional relations between fluid flow parameters for single rock joints.”



SOFTWARE

Experienced with most geophysical data processing and visualization software packages.
Background in engineering and computer aided design software.
Knowledge of programming and scripting.

PROFESSIONAL CERTIFICATIONS

Engineer-in-Training (EIT) certified
MSHA certified
OSHA certified (29 CFR 1910.120) Hazardous Materials Awareness (Department of Labor)
OSHA certified (29 CFR 1910.1200) Hazard Communications (Department of Labor)
First Aid certified

PUBLICATIONS

– Conference Proceedings –

M.J. McNeill, D.F. Rucker, J.B. Fink, C.A. Baldyga, T. Seal, J. Winterton. Electrical Monitoring of Pressurized Injections into a Heap. SAGEEP 2011, Annual meeting of the Environmental and Engineering Geophysical Society, Charleston, South Carolina, April 10-14, 2011.