

Summary

15 years Geophysical experience.

Education

B.S., Geological Engineering. University of Arizona. Tucson, Arizona.

Experience

2004 – Present. **Senior Geophysical Project Manager.** hydroGEOPHYSICS, Inc. Richland, Washington & Tucson, Arizona.

Responsible for marketing and development of geophysical projects that solve environmental and engineering problems for existing and potential clients. This includes participation in technical/marketing conferences, written proposals, technical survey design, budget estimation, and vendor management. Responsible for project management of several projects with yearly revenues averaging \$750K to \$1M. Other duties include contract negotiation, fostering career development of employees, and operations management for the four company offices. Major accomplishments include:

- Participated in the development of computer hardware and software for the processing of large domain electrical resistivity inversion.
- Developed the Subsurface Geophysical Exploration group within hydroGEOPHYSICS (HGI), to provide a multi-method, multi-year geophysical characterization of nuclear waste sites and tank farms.
- Assisted in the development of an information technology program that can reliably support the demands of geophysical applications and large data storage
- Generated quality assurance procedures and work plans for geophysical work practices that were approved by the Department of Energy for use on the Hanford Nuclear site.
- Helped obtain a patent for leak detection monitoring - U.S. Patent 7141982 - Estimation of leakage rates using voltage measurements.
- Participated in the re-design of company (logo, marketing materials, stationary, advertising, conference and tradeshow materials, etc.)

2002 – 2004. **Project Manager.** hydroGEOPHYSICS, Inc. Tucson, Arizona.

Responsible for project management of several projects with yearly revenues averaging between \$250K and \$600K. Daily management duties include client interaction, scheduling and training of employees, quality assurance management, financial management, report preparation, and timely completion of geophysical surveying projects. Support field data collection onsite and in the office and complete data processing and plotting. Major accomplishments include:

- Functioned as HGI's operations and procurement manager and participated in the financial management of company until hiring of CEO in 2004.
- Successfully negotiated of HGI's first long term government contract for the Leak Detection Monitoring (LDM) Program starting in October 2003 that still continues today.
- Developed first specialty group, LDM, within hydroGEOPHYSICS by recruiting and training personnel, setting up automated processing routines and databases, generating work instructions and procedures, and completing daily monitoring.
- Participated in development and fabrication of hardware and software systems for the first-generation Leak Detection and Monitoring data acquisition system which has operated continuously for over 5 years with a 99 percent reliability.

1998 – 2002. Staff Engineer. hydroGEOPHYSICS, Inc. Tucson, Arizona.

Responsible for data acquisition, reduction and presentation geophysical data. Diverse knowledge of geophysical methods that includes survey design, data acquisition and processing of electrical, magnetic, electro-magnetic, gravity and seismic data. Co-authored proposals and reports. Design and maintain company web-domain, web-site and e-mail. Conduct site characterization, including geologic, structural and hydrologic surface and subsurface mapping. Interact with clients to facilitate smooth and efficient work between contractors and subcontractors.

1996 – 1997. Research Assistant. University of Arizona. Tucson, Arizona.

Department of Mining and Geological Engineering. LASI Laboratory, under the direction of Dr. B.K. Sternberg, Department Head, and Dr. Mary Poulton, Associate Professor. Responsible for processing, organization and presentation of geophysical data for electro-magnetic ellipticity project. Senior design project sponsored by hydroGEOPHYSICS, Inc. on Very Low Frequency Electromagnetics as a tool for water well location. Research geophysical methods for the delineation and characterization of subsurface fractures and fracture-flow-aquifer systems.

Publications

Rucker, D.F., M.T. Levitt, and W.J. Greenwood, 2008. "Three Dimensional Electrical Resistivity Model of a Nuclear Waste Disposal Site." *Journal of Applied Geophysics* (in review).

Fink, J. B., and Levitt, M. T., 2007. "Temporal Monitoring of Focused Infiltration Using a Hybrid Electrical Method." P 392 - 393. In Stonestrom and others, eds. - *Ground-Water Recharge in the Arid and Semiarid Southwestern United States*. U.S. Geological Survey Professional Paper 1703.

Conference Proceedings

Rucker, D.F., M.T. Levitt, D.A. Myers, and C. Henderson, 2008. Development of an Electrical Resistivity Imaging Program for Subsurface Characterization at Hanford. *Waste Management 2008*, Phoenix, Arizona. February 24-28, 2008.

Rucker, D.F., M.T. Levitt, W.J. Greenwood, and X. Yang, 2008. Inversion of Large Electrical Resistivity Surveys on Multi-Processor Platforms. *SAGEEP 2008*, Annual meeting of the

Environmental and Engineering Geophysical Society, Philadelphia, Pennsylvania. April 6-10, 2008.

Rucker, D.F., M.T. Levitt, and D.A. Myers, 2007. Imaging Beneath Hanford's Tank Farms with Electrical Resistivity Geophysics - An Innovative Approach. Waste Management 2007, Tucson, Arizona. February 25-March 1, 2007.

Rucker, D.F., B.D. Cabbage, M.T. Levitt, and D.R. Glaser II, 2007. Electrical Resistivity Imaging to Monitor a Simulated Leak From an Underground Storage Tank at a Radiological Waste Facility. SAGEEP 2007, Annual meeting of the Environmental and Engineering Geophysical Society, Denver, Colorado. April 4-8, 2007.

Levitt, M. T., C. Henderson, C. Baldyga, B. Cabbage, S. Calendine, and D. Rucker, 2007. Subsurface Geophysical Exploration within and around Hanford's Tank Farms: Examples from T and S Farm. 6th Annual Washington Hydrogeology Symposium. Tacoma, Washington. May 1-3, 2007.

Rucker, D.F., J.B. Fink, M.T. Levitt, D.R. Glaser II, C.A. Baldyga, 2006. Characterization of a Nitrate and Technetium Plume with Environmental Geophysics. Soils, Sediments, and Water, 22nd Annual Meeting, Amherst, Maine. October 16-19, 2006.

Rucker, D.F., J.B. Fink, M.T. Levitt, D.R. Glaser II, C.A. Baldyga, 2005. Estimating dipping angle with cross-borehole radar: No tomography required. SAGEEP 2005, Annual meeting of the Environmental and Engineering Geophysical Society, Atlanta, Georgia. April 14-17, 2005.

D.R. Glaser II, Rucker, D.F., J.B. Fink, M.T. Levitt, C.A. Baldyga, 2005. A Comprehensive Geophysical Case Study At A Former Radioactive Waste Disposal Site in the Columbia River Valley, Southeastern Washington. SAGEEP 2005, Annual meeting of the Environmental and Engineering Geophysical Society, Atlanta, Georgia. April 14-17, 2005.

Rucker, D.F., J.B. Fink, M.T. Levitt, D.R. Glaser II, C.A. Baldyga, 2005. High Resolution Resistivity (HRR) Delineation Of A Liquid Waste Plume At A Former Radioactive Waste Disposal Site, Hanford, Washington. Waste Management 2005, Tucson, Arizona. Paper Number 5324. February.

Levitt, M. T., Thomure, T., Henley, M., 2003. Hydrologic Characterization of Favorable Groundwater Recharge Locations: Water Resource Planning for the City of Tucson. Arizona Hydrological Society - 2003 Annual Symposium, Phoenix, Arizona.

Levitt, M. T., Fink, J. B., McGill, R. L., 2002. Vadose Zone Transport Field Study: 3D Casing Tomography and High Resolution. SAGEEP 2002, Annual meeting of the Environmental and Engineering Geophysical Society, Las Vegas, Nevada.

Levitt, M. T., Fink, J. B., Gee G. W., 2002. Steel Casing Resistivity Technology (SCRT): Innovative Applications of Electrical Methods for Buried Tank Leak Detection. American Geophysical Union - Hydrology Fall 2002, San Francisco, California.

Levitt, M. T., Fink, J. B., Gee G. W., 2002. Steel Casing Resistivity Technology (SCRT): Innovative Applications of Electrical Methods for Buried Tank Leak Detection. Arizona Hydrological Society - 2002 Annual Symposium, Phoenix, Arizona.

Affiliations

Arizona Hydrological Society

Environmental and Engineering Geophysical Society

Certifications

MSHA certified

OSHA certified (29CFR 1910.120) Hazardous Materials Awareness

OSHA certified (29CFR 1910.1200) Hazard Communications (Department of Labor)

Professional Geologist (Washington State)