

HAGER-RICHTER GEOSCIENCE, INC.

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THERE ARE VERY GOOD REASONS WHY H-R IS THE PREMIERE GEOPHYSICAL SERVICE FIRM IN THE NORTHEAST!

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This has been a hard year for a lot of firms in the environmental and engineering communities. It hasn't exactly been an easy year for us either. But, after a relatively quiet winter and spring, H-R is as busy as ever. In speaking with our clients, we keep hearing the same comments — namely, that there are several very good reasons why they keep coming back to H-R, even after some have tried using other geophysical firms:

- # **Quality** - Without question, consistent attention to quality is H-R's hallmark.
 - # **Technology** - Clients are confident that H-R will provide state-of-the-art equipment and data processing techniques for their projects.
 - # **Innovation** - H-R recognizes that every project is different and needs to be thought out independently.
 - # **Experience** - Some clients have discovered the hard way that the ability to apply lessons learned from past experience is not present at all consulting firms.
- H-R puts its experience to work for you.

The best compliment we hear is that H-R helps our clients look good to

their clients, something they and we appreciate in these competitive times.

H-R Helps Search for Missing Person

When a student at a New Hampshire college disappeared late last year, police and volunteers conducted intense searches in the wooded rural region where he was last seen. After months of searching without finding significant evidence, the family of the young man contacted H-R to find out how much it would cost to add geophysical methods to their efforts in a particular area where they feared his remains might be located under several feet of snow.

H-R donated two days of GPR survey time to the search effort, working in areas indicated by the police and an investigator hired by the family as likely spots where evidence of the young man might be found. Jeff Reid and Jonathon Puliafico found themselves up to their hips in snow, but the GPR survey did not result in new evidence for the family. Sadly, this story does not have a happy ending. In the spring, a helicopter pilot spotted a body in a swamp a few miles away, and the family finally learned the fate of their lost son.

H-R Acquires New Borehole Geophysical Logging System

As part of our continuing commitment to provide the best in leading edge technology to our clients, H-R has purchased a new portable compact geophysical logging system. The new system is a state-of-the-art Mount Sopris MGX2, a fully digital system based on Mount Sopris' powerful new polyprobe family of downhole tools designed to log wells as small as 2" in diameter. We've included a

sophisticated **heat-pulse flowmeter**, a recently developed probe for measuring low flows of water in fractured bedrock systems. Couple our MGX2 with H-R's new color video borehole logging system to give your client a complete characterization of subsurface conditions. *Call us for more info!*

Types of Logs Available

- # 3-arm caliper
- # Temperature
- # Natural Gamma Ray
- # Electromagnetic Induction
- # Fluid Resistivity
- # 16", 32", 64" Normal Resistivity
- # Single Point Resistance
- # Spontaneous Potential
- # Heat-Pulse Flowmeter
- # Color Video

Advantages

- # Fully digital
 - # Lightweight and portable. Can be shipped anywhere. Powered by small generator.
 - # Designed for logging slim holes, as small as 2" diameter
 - # Depth capability 1000 feet
 - # Multiple logs recorded on one run
- Why Use H-R for Logging?**

- # Many logging companies will log a well, hand you printouts of the logs, and drive off the site. H-R, on the other hand, will provide you with guidance on which logs will provide data to help you meet your objectives, and will interpret the results for you. Our staff has decades of experience in interpretation of borehole logging data.
- # Many logging companies provide a technician to log a well. H-R, on the other hand, provides a geophys-

icist with years of experience as the field personnel for logging projects.

- # Like most of our equipment for surface geophysics, our borehole geophysical logging equipment is owned, not rented, and available for you on short notice.

H-R Staff Lead NEIGC Field Trip

Jonathon Puliafico and Roger Yang of H-R are leaders for a field trip at the Fall 1996 NEIGC (New England Intercollegiate Geological Conference) hosted this year by Harvard University, New Hampshire Geological Society, and The Mount Washington Observatory. The NEIGC is the equivalent of homecoming weekend for New England geologists and has been a tradition since 1901. Jonathon's and Roger's field trip is based on several different geophysical surveys they performed at a NH-DOT maintenance area located in Franconia, NH. Their one-day field trip is designed for students and interested professionals who are unfamiliar with the application of surface geophysical methods to environmental and engineering studies.

Call us if you'd like a reprint of Jonathon's and Roger's field guide. The full reference is:

Puliafico, Jonathon and Roger Cunhui Yang, 1996, Surface Geophysical Survey, NHDOT Patrol Shed #124, Franconia, New Hampshire, in Van Baalen, M.R., ed., Guidebook to Field Trips in Northern New England and Adjacent Regions of Maine and Vermont, New England Intercollegiate Geological Conference, p. 117-131.

Other Talks & Publications

At the Winter 1996 Meeting of the Vermont Geological Society, Dorothy Richter gave a talk about some of H-R's building stone projects and what we've learned from them. The abstract is published as:

Richter, Dorothy and Gene Simmons, 1996, Lessons Learned - Recent Geologic Experience with Building Stone, The Green Mountain Geologist, v 22, no. 1, p. 6.

At the Conn. Groundwater Assoc. DNAPL Conference on October 23, 1996, Dorothy Richter, Jeffrey Reid, and Gene Simmons are presenting a paper entitled "Geophysical Techniques for Use on DNAPL Sites." *Call us if you'd like a reprint* of the paper published in the CGA DNAPL Conference Proceedings.

H-R offers brown-bag type seminars on various topics to interested firms. Our most popular talk is "Surface and Borehole Geophysics for Environmental and Engineering Projects." Another popular talk is "Geology and Rock Mechanics of Building Stone." The seminars can run from ½-hour to an hour, depending on your preference. *Call us if you'd like to schedule a seminar at your firm.*

Take a Closer Look at H-R on the Web

You'll like what you see! Our homepage address is:

<http://www.hager-richter.com>

WBE Certified

H-R is certified as a WBE or DBE by *ten* agencies in all of the New England States and New York. Please keep that status in mind if you have projects with WBE or DBE participation goals.

Our Mission

To fulfill our clients needs in geoscience, using experienced professionals who enjoy their work and are totally committed to quality and professional development.

Message from the President

Some days we sit around the lunch table in our office lightheartedly speculating about what a catchy slogan for H-R might be. Some suggestions have been "Go Go Geophysics," "Can Do Geophysics," "Gypsy Geophysics," and my personal favorite, "Jolly Geophysics." As silly as these slogans may sound, they actually do convey a sense of the spirit of H-R and the extent to which our entire staff will go to meet your needs.

*That's why H-R is composed of dedicated people who are willing to work long days — sometimes under less than pleasant weather and/or site conditions, travel on short notice, and, more importantly, **think** constantly about the specific needs of each project.*

As much as we love the purely scientific aspects of our projects,

we never lose sight of the fact that the fundamental purpose of H-R's work is to provide practical information about subsurface conditions that will help you look good to your clients. Call us!

Cordially,

*Dorothy Richter
President*

'96 Staff Highlights

H-R's equivalent of "What I did on My Summer Vacation." Each year, our staff describes a few projects they found particularly interesting and/or satisfying for highlighting in this column. Once again, the list is far too long to use in its entirety. . .

Jeff Reid, our Operations Manager, has been unusually busy this year, ably coping with managing several geophysical and geotechnical projects while simultaneously filling in on all sorts of field work when we've been shorthanded. We deeply appreciate Jeff's extraordinary efforts this year, and we hope to see him back in the office someday. . .

Don Silvia, Mike Kolcak, and Gary Abdelnour (Gary joined H-R in July - welcome!) are providing technical support services and subsurface utility designating for Boston's Central Artery/Tunnel Project. **Chris Kujawa** joined them for several months and enjoyed that experience. This crew is a good example of what can happen when synergistic teaming occurs.

Jonathon Puliafico is our Party Chief for a major subsurface utility engineering survey in the I-90 Interchange construction area at Logan Airport. He's tracking utilities and supervising about 200 vacuum excavation test holes across about 70 acres. It is an *understatement* to say that Jonathon has been busy!

Roger Yang has been one of our gypsy geophysicists at times this year, traveling from site to site, often without getting a chance to catch his breath. He enjoyed several challenging GPR surveys in the midwest. In Wisconsin, Roger used GPR to track stratigraphic units across 40 acres. For another project, a client was skeptical that a seismic refraction survey would provide useful data. He requested a pilot test in an area where borings had been advanced to bedrock, but would not reveal the depths. Roger's pilot test results were "right on," and the client was delighted to approve a more extensive survey of the depth of bedrock.

Lyn Mercer, our Office Administrator, and **Bill Desmarais**, our CAD Operator/Draftsman, are relatively new to H-R. They have made immediate contributions to the firm. We're glad they have joined us, and we are confident that you will directly benefit from their efforts.