

HAGER-RICHTER GEOSCIENCE, INC.

Tel (603) 893-9944 / Fax (603) 893-8313

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

8 Industrial Way - D10

Salem, NH 03079

Fall, 2000

H-R STANDS THE TEST OF TIME! IT'S TIME FOR YOU TO FIND OUT WHY

Message from the President

I recently attended a meeting of 200+ executives of environmental and engineering firms in New York City. The firms represented span the range from giant firms with billion dollar revenues to minute specialty firms like H-R. It was the fourth time I attended the annual meeting, and what's fascinating to me is the similarities and differences of the giant and little firms.

Each year, different themes emerge. This year, both big and little firms reported record revenues and earnings in the current strong economy. Yes, there was some concern about what effect an economic downturn would have. And, by far, the biggest concern was staffing. The "big boys" are on a treadmill having to replace about 20% of their huge staffs each year!

Of the many charts and graphs, one of the most interesting was a comparison of the top 30 environmental firms of 1991. Only five of those firms are flourishing today! Sixteen either disappeared in mergers/acquisitions or demised altogether, and nine are 'surviving.'

Obviously, a geophysical specialty firm like H-R will never make the list with the giants, but the lesson for me was that, in our own special niche, H-R was a top

*geophysical firm in 1991 and is certainly flourishing in 2000. How many firms in our specialty can say that? Now in our seventeenth year, **H-R has stood the test of time.** I think that says a lot about our outstanding staff and their dedication to serving our clients. I think it also says a lot about our fine clients and their appreciation of quality geophysical services. H-R was there for you before, and you can trust that H-R will be there for you tomorrow. When you need geophysical services, **call us!***

Cordially,

*Dorothy Richter
President*

H-R Service Areas

One of the other lessons we hear at management conferences is to concentrate on your core service areas. Ours are:

- **Surface & Borehole Geophysics** — Ground Penetrating Radar (GPR), Seismic Refraction & Reflection, Crosshole Seismic, Electromagnetic Induction (EM), Resistivity, Magnetics, VLF, Geophysical Borehole Logging, Borehole Video Logging.
- **Geotechnical Support Services** — Subsurface Investigations, Blast/ Vi-

CONTENTS

Message from the President	1
H-R Service Areas	1
Tips for Preparing for a Geophysical Survey ..	2
H-R & the Pirate	2
H-R & the Battle of Bunker Hill	2
New Hampshire Passes PG Bill	2
Our Mission	2
Staff War Stories	3

- bration Monitoring, Rock Mechanics.
- **Subsurface Utility Engineering Services (SUE)** — Research, Designation, Mapping, Verification
- **Non-Destructive Testing Services (NDT)** — Piles and Foundations, Void Detection, Rebar Detection.
- **Dimension Stone Testing & Evaluation Services** — ASTM Testing, Failure Analysis, Quarry Evaluations.
- **Litigation Support Services** — Document Review, Consulting, Expert Testimony.

Tips for Preparing for a Geophysical Survey

We wish we had a dime for every time we have gone to a site to perform a geophysical survey and found that site conditions are completely different from what we had expected. In most cases, we have not seen a site before writing our proposals, and, therefore, must base our costs on site information provided by the client. Unfortunately, the client contact might not have seen the site either, or might have very little information. We cannot emphasize enough how important good site information is to a geophysical program.

There are several questions that should be answered before a geophysical survey can be properly scoped and executed. Try to find out as much as you can before you call for a geophysical survey. For example:

- What are your specific objectives?
- What is the size of the site?
- What are its current and former uses?
- What are the surface conditions? Are there structures, paved areas, vegetation? If vegetation needs to be cut, who will cut it?
- What is the surface topography?
- If traffic control is necessary, who will provide it?
- Are there access issues, such as locked gates, security, etc.

- Are good site plans available? If site survey control is needed, who will provide it?
- What are the subsurface conditions? What is the soil type? What are the depths of water table and bedrock? Are there logs for borings or test pits?

For the most part, our proposals and fees do not include the cost of preparing the site. If vegetation obstructs the geophysical work, then we recommend that you get it cut prior to our mobilization.

The more site information you can provide, and the better you can prepare a site prior to a geophysical survey, the greater the chances for success. Let H-R help you look good to your clients by helping you to plan and execute a sensible geophysical program based on as much insight into a site as possible. *Call us!*

H-R & The Pirate

It's not every day that we get a call from a TV producer in LA asking whether H-R would be willing to use our geophysical methods to search for the treasure of the infamous pirate Blackbeard for the History Channel. But the call did come, thanks to a referral from a friend in the academic world, and suddenly some of us were on a boat to Lunging Island, one of the nine privately owned Isles of Shoals located about six miles off the coast of New Hampshire and Maine.

What fun we had! **Jeff Reid, Jim Coffman, Garrick Marcoux, and Dorothy Richter** spent a beautiful September day with a professional camera crew, jovial actors in full pirate and ghost regalia, the elderly owner of the island who specified the spot where she believes Blackbeard hid the treasure in about 1715, two local historians, and a producer-director who actually shouted "Action!" and "Cut!" It's too bad the producer could not schedule his shoot based on the tide table, since the small "survey area" was under water for much of the day. He quipped

that the rapidly rising tide added an element of drama to our work, however.

What methods did we use? Magnetics (with our G-858G cesium vapor magnetometer), electromagnetic induction (with our EM61 and EM31), and ground penetrating radar (with our SIR2).

What did we find? You'll find out in an episode of "History's Mysteries" about lost treasures on the History Channel sometime in 2001. There's a funny photo story by one of the local historians about the whole adventure on the web at www.seacoastnh.com/dct/blackbeard1.html

Look for shots of our crew, the pirates, and the ghost. Also see www.seacoastnh.com/arts/please100700.html for some historical perspective, if you are interested..

'Need to find treasure? Be it pirate's loot or subsurface clues for environmental or engineering problems, *call us!*

H-R & The Battle of Bunker Hill

Two years ago, H-R investigated the April 19, 1775 Battle of Lexington and Concord ("The shot heard 'round the world") with a geophysical survey of the Lexington Battleground.¹ This year, we've advanced two months in the Revolutionary War to June 17, 1775 and a geophysical survey of the site of the Battle of Bunker Hill in Boston ("Don't fire until you see the whites of their eyes!") H-R is performing the survey for the Archeological Branch of the Northeast Cultural

¹ Read all about it at www.townonline.com/specials/patriotsday/battlegreenclues.html

Resource Center of the National Park Service, the same folks who hired us to perform a similar survey at the Statue of Liberty National Monument in 1999.

The Bunker Hill monument is a stunning granite obelisk built in 1825-1843, and is a landmark in the Charlestown section of Boston. The monument sits in the center of a four-acre park on Breed's Hill (let's not go into why). H-R is using geophysical methods to search for archeological artifacts, and in particular, evidence for the earthen redoubt constructed by the patriots to defend Boston from the British.

The methods? Ground penetrating radar and electromagnetic induction (EM61 and EM31). The results? It's too early to say. **Steve Grant** and **Garrick Marcoux** are still collecting and interpreting the data.

Everyone at H-R enjoys working on projects like Bunker Hill and Blackbeard's treasure because they are such a change from our normal projects of providing information about subsurface conditions for environmental and engineering projects. Most of the time, though, we are working at sites just like yours, so *call us!*

New Hampshire Passes PG Bill

New Hampshire passed a Professional Geologist licensing bill in 2000. H-R is one of over 30 Corporate Sponsors of the NH Council of Professional Geologists (www.nhcp.org), the primary organization that advocated the legislation, and **Gene Simmons** and **Dorothy Richter** were NHCPG officers. Dorothy spent a lot of time in the state capitol, Concord, last spring learning about the legislative process the hard way. Several bumps and bruises were acquired, but it was worth it. Dorothy resigned as president of NHCPG after being appointed to the new Board of Professional Geologists by Governor Jeanne Shaheen in the fall.

There will be a 12-month grandfathering period that will begin after the PG Board's administrative rules are written, approved by a legislative committee, and adopted. To be placed on a list to receive an application package when one becomes available, contact the NH Joint Board of Licensure and Certification, 57 Regional Drive, Concord, NH 03301, or visit its website at www.state.nh.us/jtboard/home.htm.

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.

Staff Stories

Jeff Reid, P.G., Operations Manager, gets deeply involved in just about every H-R project in one way or another, including performing the basic field work when we have too much work to handle with our regular staff, as happened so many times this year. When he's not golfing in local tournaments, Jeff keeps busy as chairman of the board for Applewood Learning Center, an award-winning kindergarten/ preschool facility.

Lyn Mercer, Office Administrator, smoothly takes on ever increasing responsibilities while patiently dealing with the antics of our mischievous staff and occasionally mischievous clients. Lyn is not the glue, she's the epoxy that holds the office together when explosions of paper suddenly fly around the office. She thoughtfully remembers everyone's birthday, and is the one with the spirit to dress for Halloween.

Bill Desmarais, CAD Operator/Draftsman and our star in a local bowling league, *keeps the ball rolling* in H-R's

report process with his concise drawings and plots. He *saves* no effort in getting the job done right. It's tough to *pin* him down on which projects are his favorites. Bill *strikes* the right chord by keeping everyone in the office upbeat and smiling.

Carl Gruszczak, Geophysicist/Survey Specialist, and **Jeff Crossman**, Survey Specialist, are dedicated to the massive Central Artery/Third Harbor Tunnel Project in Boston. Carl is based in Boston and works with the survey management team. Jeff, who joined H-R in January, is currently based in Maine at a concrete casting plant. Both guys are working very long hours and are coolly staying on top of it all despite the pressure.

Jim Coffman, Geophysicist, is getting to know the New York metro area very well, since it seems like we send him there for project work nearly every week. Jim has been our lead person on a contract to detect subsurface utilities and USTS at over 50 NYC-owned properties across the five boroughs, a geophysical survey at a large industrial site on Staten Island, and countless other projects in New York, New Jersey and elsewhere.

Steve Grant, Geologist/Geophysicist, lives close to Boston, so he likes to be assigned to our abundant Boston-area projects. Steve led the geophysical charge at Bunker Hill and since he is from Nova Scotia, where many of Boston's loyalists fled during the Revolution, we playfully designated him as a redcoat. Steve has also been busy this year with several sizable seismic projects (refraction, crosshole, and downhole).

Garrick Marcoux, Geologist/Geophysicist, lives in the country over 50 miles north of the office, so he generally prefers our more northerly projects. Garrick spent several weeks in the Maine woods last summer, unfortunately at the peak of tick season, on a large

geophysical project where we acquired and field-interpreted GPR data along several miles of a utility right-of-way. Like everyone else, he travels far and wide on our other projects.

Jeff Sullivan, Geophysicist, who some-

times moonlights as a professional video editor for the Brown University football team, has used his visual talents to update some of our marketing presentations and become our GIS expert. Jeff was in Maine for much of a large GPR project,

has led several seismic refraction and crosshole seismic projects across the northeast, and has been an integral part of our other projects scattered across the country.

H-R STAFF

PRESIDENT	Dorothy Richter, P.G.	dorothy@hager-richter.com
VICE PRESIDENT	Gene Simmons, Ph.D., P.G.	gene@hager-richter.com
OPERATIONS MANAGER	Jeffrey Reid, P.G.	jeff@hager-richter.com
ADMINISTRATION	Lyn Mercer	lyn@hager-richter.com
TECHNICAL STAFF	James Coffman	jim@hager-richter.com
	Carl Gruszczak, Jr.	
	Steven Grant	steve@hager-richter.com
	Garrick Marcoux	garrick@hager-richter.com
	Jeffrey Sullivan	jeffs@hager-richter.com
	Jeff D. Crossman	
DRAFTING/CAD	William Desmarais	bill@hager-richter.com

Visit our Web Site — <http://www.hager-richter.com>

HAGER-RICHTER GEOSCIENCE, INC.
8 Industrial Way - D10
Salem, New Hampshire 03079