



# NEAR-SURFACE VIEWS

Newsletter of the NEAR-SURFACE GEOPHYSICS Section of The Society of Exploration Geophysics  
Apr/May 2002 , Vol. 9, No. 1

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## LETTER FROM THE PRESIDENT - by Roger Young



Planning for the October 2002 annual SEG meeting in Salt Lake City continues to gain momentum, and NSG members are some of those working hardest. Pieter Hoekstra, General Chairman, is arranging what promises to be an exciting participation at the meeting by Dr. Robert Ballard of Titanic fame and Black Sea archeological adventures. Dr. Ballard will deliver the Keynote Speech Monday morning at the opening session. He then will lead an Applied Science Education Program in the afternoon for some 1200 secondary school children from Utah. Speaker's fees and transportation and lunch for the kids comes at a substantial tab, so support from the near-surface community would be greatly appreciated. Sponsorship—and all the good publicity it brings-- can be earmarked specifically for this program, so please contact Pieter directly (Pieterhoek@aol.com) with a pledge or pledge on-line (<http://www.seg.org>, go to SLC Meeting, then to the Sponsorship page).

The Technical Program Committee, of which Mike Powers is Chairman, has met once and is now distributing expanded abstracts for review. I am pleased to report that at the first meeting of the Committee, the five potential near-surface sessions being spearheaded by NSG members (see the report of Technical Program Committee in this newsletter) showed more early organization than all the other geophysical subject areas combined!

This year I have met several times with the immediate Past-president of EEGS, John Nicholl, and once with Jeff Wynn, now President. They have suggested ideas for projects that EEGS and NSG could jointly undertake and have offered to help however they can with the SLC meeting. I am very enthusiastic about pursuing these common areas of interest as they can benefit all members of both societies. We have talked about sharing articles in newsletters and the possibility of co-sponsoring a near-surface session at an AGU meeting. I'd like to hear ideas from you...please respond.

Elections for NSG Exec. Com. are only a few months down the road. Consider stepping up, and let someone know your intention so that you can be nominated.

## CALL FOR ACTION PHOTOGRAPHS

Lawrence Gochioco of *The Leading Edge* Editorial Board requests photographs of near-surface geophysical survey activities, especially ones showing recent-generation geophysical equipment involved in challenging situations. He is the editor for the May 2002 issue of TLE featuring near-surface articles. (Don't miss it!). Lawrence would like to establish a file of photographs from which he could draw for future TLE issues.

Please send him suitable digital files (prints or negatives, accepted, too):

Lawrence M. Gochioco  
GX Technology  
5847 San Felipe, Suite 3500  
Houston, TX 77057  
713 789 7260 (phone)  
[lgochioco@gxt.com](mailto:lgochioco@gxt.com)

## **NSGS EXECUTIVE COMMITTEE**

**Roger Young, President**  
University of Oklahoma  
School of Geology & Geophysics  
100 East Boyd St.  
Norman, OK 73019  
Phone: 405-325-5753  
FAX: 405-325-3140  
Email: ryoung@ou.edu

**Steve Danbom, President Elect**  
Danbom Geophysics  
55222 West Ridge Place  
Houston, TX 77041  
Phone: 713.937.7530  
Email: steve.danbom@worldnet.att.net

**Gregory S. Baker, Vice President**  
Department of Geology  
University at Buffalo  
Buffalo, NY 14260-3050  
Phone: 716-645-6800 ext 2252  
Email: gbaker@geology.buffalo.edu

**Tony Endres, Treasurer**  
Department of Earth Sciences  
University of Waterloo  
Waterloo, Ont., Canada N2L 3G1  
Phone: 519-888-4567 ext 3552  
FAX: 519-746-7484  
Email: tendres@cgrnserc.uwaterloo.ca

**Jonathan Nyquist, Secretary**  
Department of Geology  
Temple University  
1901 N 13th Street  
Philadelphia PA 19122  
Phone: 215-204-7484  
FAX: 215-204-3496  
Email: nyq@nimbus.temple.edu

**Pieter Hoekstra, Past President**  
Colorado School of Mines  
Blackhawk Geometrics, Inc.  
631 Range View Trail  
Golden, CO 80401  
Phone: 303-526-7525  
FAX: 303-278-0789  
Email: pieterhoek@aol.com

**Daran Rehmeier, Newsletter Editor**  
GeoSpec, LLC  
11680 Rue de Tonti  
Baton Rouge, LA 70810  
Phone: 225-769-7379  
FAX: 225-769-7350  
Email: d.rehmeier@geospecllc.com

## **SUMMARY OF TECHNICAL PROGRAM COMMITTEE MEETING by Roger Young**

21 Feb 2002: 8:30-4:15 pm, Colorado School of Mines, Golden CO

The meeting was convened by Mike Powers, Technical Sessions Chairman

The two NSG representatives, Greg Baker and Roger Young, were in attendance. Committee members were introduced to the EASE system by staff from the SEG. Mike Powers explained the new category of presentation ("either"), which gives the NSG representatives added flexibility in grouping papers into appropriate oral and poster sessions. Key Contacts were determined for each category of papers: they will assign reviewers as abstracts are received for their particular categories. Special sessions (papers exempt from review) were explained by Mike. These consist of Recent Advances and the Road Ahead; the TLE Forum, and a collection of papers from affiliated societies (including 2 from EEGS). Eight focused sessions (abstracts to be reviewed) were being organized at the time, of which 6 were NSG-led efforts. The latter given by subject and (organizer) are: Seismic innovations (Greg Baker); Borehole geophysics (Klaus Holliger); GPR in sediments (Harry Jol and Roger Young); Infrastructure applications (Paul Wolfe); Rock physics (Patricia Berge), and Geotechnical and engineering applications in Japan (Pieter Hoekstra). If a sufficient number of papers is received in any of these subject areas, then a named session will be established to group the papers.

There will be a special area in the Foyer of the Convention Hall for prominent display of poster papers. All posters will have some display time in this area. This is also the area where coffee breaks will be held between oral sessions.

The Committee was reminded that in the Speaker Room (also through EASE) there will be an opportunity for checkoff should an author wish his presentation to be archived by the SEG for on-line retrieval by others.

There was considerable interest by a few in the possibility of on-line, live video presentation from the convention. The SEG is considering the potential for future meetings, but whether this year presentations will be viewable remotely during or after the meeting itself was unclear.

The second meeting of the Technical Program Committee will be in the same place on 23 May 2002. Accepted papers will then be assigned to particular named session.

### **NSG STUDENT TRAVEL AWARDS**

This year the NSG is granting up to two travel awards to students presenting papers related to near-surface at the Salt Lake City meeting. Students enrolled outside the USA are eligible and will be judged on the same basis of excellence in abstract and potential for achievement in geophysics. Maximum award is \$500 and the deadline for application is 1 June 2002. Application is simple and brief and can be done from the NSG Website. Alternatively, forms are available from Jon Nyquist. Please spread the word...and if you have students or know of students who have submitted papers, encourage them to apply..

## NEAR-SURFACE VIEWS

Near-Surface Views is created by the Near-Surface Geophysics Section of the Society of Exploration Geophysicists to convey information of common interest to people working in near-surface geophysics.

Past issues of the newsletter (in color) are available at <http://nsgs.seg.org/>.

To be effective, Near-Surface Views requires the contribution of information from a variety of sources. If you have an item to communicate to other members of the near-surface geophysics community, please send it to the Editor. All contributions are welcome. The Editor reserves the right to reject items that are felt to be too highly commercial or technically inappropriate.

ALL SUBMISSIONS SHOULD BE SENT DIRECTLY TO THE EDITOR.

*Submissions for the next newsletter should be sent by June 15<sup>th</sup>.*

### A NOTE OF THANKS...

... to all the companies that helped sponsor the NSG Section meeting in San Antonio last fall: Geonics, Zonge, Sensors & Software, Parallel, L-and-R, and AGI.

## GENERAL LIABILITY INSURANCE FOR ENVIRONMENTAL ASSESSMENT - CAN YOU GET IT, AND CAN YOU AFFORD IT?

Over the past few years, general liability insurance coverage for consultants working in the environmental assessment business has become increasingly difficult to obtain and expensive if you can get the required coverage. Changes in the insurance industry, largely a re-evaluation of risk tolerance, have presumably been brought about by recent claims for environmental-based litigation and pressure on the insurance industry in general due to excessive claims associated with September 11<sup>th</sup> and, more locally in Texas, tropical storm Allison.

In 1999, shortly before retiring from Conoco, my insurance agent with State Farm re-evaluated the insurance needs of my family. I told the agent that I would be opening a consulting business in geophysics and would need general liability insurance for the business, especially field-associated activities in near-surface geophysics. Since I was going to work out of the house, his suggestion was a policy especially designed for such home-based businesses.

Shortly after setting details of my Texas "C" Corporation and securing my first client for whom fieldwork would be required, I called my insurance agent and requested general liability coverage for the upcoming work. Shortly after finishing that first job, I received a letter from State Farm informing me that a new corporate policy no longer insured new businesses such as mine; they would only continue to serve those companies with policies already in force. The change in business policy concerned the perceived risk of insuring an independent consultant working in environmental activities. Assuming the policy change was only associated with State Farm, known to be among the more conservative insurers, I called an independent agent who found a firm to insure my business, albeit for a higher premium for the required coverage common to the business (\$1,000,000 per incident, \$2,000,000 aggregate).

In the summer of 2001, with nine months remaining on a contract for a petroleum client who did not require general liability insurance, I discontinued coverage on the annual anniversary date of the policy after being assured that I could renew coverage upon request. Within a week of canceling my policy, the Houston, Texas area was hit hard with insurance claims associated with tropical storm Allison, and, in the fall, the nation was hit by the tragedy of September 11<sup>th</sup>.

At the end of the petroleum contract, I called my independent insurance agent and asked for renewed coverage, anticipating a job in environmental geophysics about one month in the future. When he returned the call, he informed me that the company that had insured me in the past had been acquired by another firm that did not choose to continue to offer that type of insurance. Three weeks later, after he had not secured the coverage needed, I sought the assistance of another independent agent who gave me a preliminary quote that was roughly twice the previous premium for somewhat reduced coverage.

Since then, I have been re-evaluating the business sense of obtaining the necessary coverage, trying to determine if the insurance problem was temporary or long-term. Mentioning the problem to an insurance professional in another part of the business made me aware of the current insurance malaise due to excessive claims and their increased intolerance to higher-risk policies.

This problem does not seem to be affecting larger companies thus far. Perhaps larger engineering firms have seen a rise in premiums for similar coverage, but, to my knowledge, policies are still being written. If this problem continues for the foreseeable future, a solution must be found in order for consultants to be able to practice near-surface geophysics for site investigations associated with environmental remediation projects.

Steve H. Danbom, Ph.D.  
Danbom Geophysics, Inc. / Houston, TX

## HIGHLIGHTS

We have reserved this section of the newsletter for descriptions of current research, company histories, case studies, and new developments, i.e., anything that the members of the NSG might find of interest. If you want your company highlighted or have an idea about a topic of interest, please contact the newsletter editor.

### Editor's Note

As a private consultant providing near surface geophysical services, the potential impact of the proposed FCC UWB rules (article to right) would be to put me out of business. I am sure that other practitioners may face the same dilemma. Doria Kutrubes and Ken Maser, Ph.D. (Infrasense Inc./Arlington, MA) have spearheaded an effort to allow the continued use of GPR in the USA. If you are in any way involved in GPR research, development, manufacture, or use, you need to be aware of the FCC rules and how they may affect you. Please visit the web sites listed to the right and join in the effort.

Daran Rehmeyer  
www.geospec-llc.com

## NEW FCC UWB RULES & GPR

On February 14, 2002, the FCC published a Press Release and its First Report on the regulation of ultrawideband (UWB) devices. These devices include ground penetrating radar (GPR), as well as medical imaging systems, personal security systems, and many more devices. In a so-called "conservative" move, which was greatly influenced by the National Telecommunications and Information Administration (NTIA) and quite possibly influenced by the billions of dollars the wireless industry has paid the government to buy bandwidth, the FCC is calling for a COMPLETE BAN on the use of GPR at frequencies from 960 MHz to 3.1 GHz. Below 960 MHz, the FCC would severely restrict the use of GPR to licensed users. Also, Part 90 rulings call for GPR equipment manufacturers and service providers to be at least 80% owned by U.S. interests. Individuals must be U.S. Citizens in order to be licensed.

The proposed FCC regulations will impact GPR service providers on three fronts:

- 1) it will ban anyone from using any UWB device (radar antennas, etc.) above 960 MHz and below 3.1 GHz,
- 2) the language used by the FCC does **NOT** include geophysicists, geoscientists, engineers, or any other GPR service provider.

The language used states:

"... Operation is restricted to law enforcement, fire and rescue organizations, to scientific research institutions, to commercial mining companies, and to construction companies."

- 3) anyone else not mentioned in the proposed regulations would not be licensable under these regulations. It is ironic that the very organizations listed by the FCC rely on GPR specialists to provide these services because they generally are overwhelmed by the technology and lack experience using it, and they don't want to invest in the equipment. All these agencies, and many more institutions and companies, rely on GPR service providers to do the job right.

If these regulations go into effect, they will close down almost every GPR manufacturer. Even if GPR service providers were allowed to continue with business as usual, without manufacturers to build new equipment and repair old systems, over time they would not be able to provide reliable services.

From Doria Kutrubes, Radar Solutions International, Waltham, MA

- GPR service providers can go to [www.radar-solutions.com/Stop\\_FCC.html](http://www.radar-solutions.com/Stop_FCC.html) for further information.
- GPR manufactures can go to [www.g-p-r.com/gpric.htm](http://www.g-p-r.com/gpric.htm) for more information.

An excellent paper by Gary Olhoeft, Ph.D., Colorado School of Mines, is available online at <http://www.g-p-r.com/SB02r157.pdf>

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### News Flash

The FCC has officially released its First Order concerning the UWB device controls (April 22, 2002). You may find the text at [www.fcc.gov](http://www.fcc.gov). It becomes effective 60 days after it appears in the Federal Register, but there are only 30 days after it appears in the Federal Register to file a Petition for Reconsideration. Unofficially, it can take up to 2 weeks to publish something in the Federal Register.

## NSG & EEGS

The NSG and EEGS are actively pursuing common areas of interest and cooperation. If any one has comments or ideas on areas of cooperation, please contact Roger Young at 405-325-5753 or ryoung@ou.edu.

## Letter from the EEGS President, April 2002 - by Jeff Wynn

I am grateful for the opportunity that Roger Young has offered me to contribute a letter to the NSG Newsletter. Sharing letters in our respective newsletters is just one aspect of increasing cooperation that you will be seeing between the Environmental & Engineering Geophysical Society and SEG-NSG. Other cooperative activities that we are actively pursuing include but are not limited to joint publishing efforts and jointly-hosted symposia on near-surface geophysics at other society meetings, such as the AGU. It's no coincidence that more than half of EEGS members are also members of SEG-NSG - so we felt this was just one aspect of adding value to what our members gain by joining either society.

I've published before in the NSG Newsletter, but this time I'd like to address a less technical, more philosophical subject. When Ernest Shackleton began planning for his now-historic "Endurance" Antarctic trip in 1914, he began with a newspaper ad that said "**[W]Men wanted for harsh journey, small wages, bitter cold...Safe return doubtful...**" (*My addition in italics*). Shackleton received an astounding 3,000 volunteer responses. It is worth considering for a moment why.

All of us pass through this life seeking some measure of personal happiness. Most everyone reading this letter can probably identify at least one individual who seems irrepressibly happy - and a lot who seem depressed. While some depression is certainly linked to chemical imbalances in the brain, most is not. The scientist in me, which is sometimes hard to suppress, has applied a somewhat non-rigorous analysis to understand why.

I've found there is almost no correlation between happiness and wealth.

With some notable and hopefully temporary exceptions (check your daily headlines), there also seems to be rather little correlation between personal happiness and where we happen to live.

What I *have* noted is that personal happiness seems to follow those who give of themselves and their time freely. I'm reminded of a geophysicist who once worked for the USGS who abruptly retired... and became a full-time volunteer leader working with youth-at-risk in Washington, DC. His obituary when he died a few years ago barely mentioned a stellar career as a geophysicist. It did note a huge attendance at the memorial service held for him... of kids, now adults, with whom he had worked over the years.

I suspect that most of us would love to quit our jobs and buy that blue-water sailboat, and be PAID to do what we want. Reality for most of us, however, includes the house mortgage, the groceries, the utility bills, the college tuition and loans, and so on.

For those of us in this latter category, there IS an alternative. We can volunteer our time in our local communities - and our local communities includes the scientific societies we belong to. One doesn't have to be the president of a society to reap satisfaction (in fact, there seems to be a mild inverse relation between rank and satisfaction...).

I submit that personal satisfaction has little to do with where or how we serve. Ultimately, we are happy because we *like* ourselves - and we like ourselves only if deep down we feel we have earned our own self-respect. The key to that self-respect is not a large house, not prestige or recognition, but service. I urge each of you to look for new ways that you can volunteer to serve your profession and your community. EEGS and NSG both have committees begging for participants. Be warned, however: it can be open-ended and you may end up getting nominated for president someday in spite of your best efforts.

## NSG ADVERTISING

Advertisements can be placed in the Near-Surface Views. For advertising information contact the Editor.

### Advertising Rates/Issue

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\$100 (3.75" x 6.5")  
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## EDITOR'S NOTE

If you are an equipment, software, or system developer / manufacturer and want to see your ads in the newsletter, please contact the Editor at [d.rehmeyer@geospec-llc.com](mailto:d.rehmeyer@geospec-llc.com). With membership including researchers, academia, and consultants, you don't want to miss an opportunity to advertise your latest developments.

## NSG WEB SITE

Don't forget to add your input at the NSG Section site (<http://nsgs.seg.org/>).

You can send information about "Calls for Papers" or other announcements to be posted on the web or included in the newsletter.

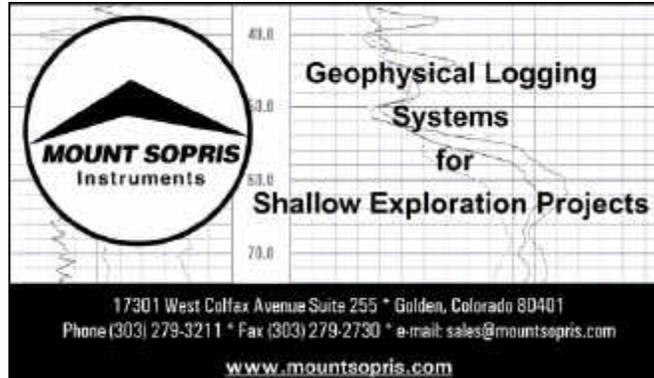
Stay involved!

## Calendar of Events

### 2002

- 29-2 Apr/May GPR 2002, 9<sup>th</sup> Annual Conference on Ground Penetrating Radar, Santa Barbara, California, U.S.
- 27-30 May EAGE 2002, Florence, Italy. Email: [AG@EAGE.NL](mailto:AG@EAGE.NL)
- 22-29 Sep AEG-AIPG Joint Meeting, Reno, Nevada, U.S.
- 6-11 Oct SEG International Exposition & 72nd Annual Meeting, Salt Lake City, Utah, U.S.

### ADVERTISEMENTS



## CALL FOR PAPERS

SAGEEP 2003 Call for Papers is now available!

The Symposium on the Application of Geophysics to Environmental and Engineering Problems (SAGEEP) will be held in beautiful San Antonio, Texas, April 6 - 10, 2003 at the Omni Hotel.

The SAGEEP 2003 General Chair, Dr. Kenneth Stokoe from the University of Texas - Austin, and the Technical Chair, Dr. Catherine Skokan from Colorado School of Mines, have been hard at work identifying top session topics to present at the next SAGEEP. Topics include Geophysics Applied to Security Issues, UXO and Land Mine Detection, Extreme Geophysics, and many more! For a full list of session topics and information on how to submit abstracts for review, access the EEGS website ([www.eegs.org](http://www.eegs.org)) and click on the SAGEEP 2003 logo or enter the following link: <http://www.eegs.org/PDFfiles/Call%20for%20papers.pdf>

## SEMINARS

### AGI

AGI will be offering a two-day workshop focusing on Electrical Resistivity Imaging with the Sting/Swift system and the SuperSting system. The workshop is directed towards individuals with some previous electrical resistivity knowledge.

The workshop is designed for those professionals currently involved in conducting resistivity imaging surveys, those wishing to acquire this expertise, and those involved in the management, oversight or review of imaging surveys. This hands-on training covers resistivity and IP imaging including: theory; data acquisition; field procedures; actual field measurements; data processing; data presentation; and interpretation.

Thursday and Friday, May 16-17, 2002 at Advanced Geosciences Inc., Austin, Texas.

Agenda:

- ◆ Introduction ◆ Basic theory ◆ Electrical properties of different geological materials ◆ The use of different electrode arrays ◆ Electrical resistivity case histories including the Sting Cave and the Amistad dam ◆ The Sting/Swift and SuperSting resistivity imaging systems ◆ Planning field surveys: estimating depth penetration, estimating resolution, decide on electrode array type, estimating time for a field survey ◆ How will different weather conditions affect my survey ◆ How to perform roll-along surveys ◆ Field procedures with hands on training on the Sting/Swift and the SuperSting systems ◆ More case histories ◆ Why and when resistivity as opposed to other methods? ◆ Bore hole-to-bore hole measurements ◆ Marine measurements ◆ 3D surveys ◆ Conducting field surveys ◆ Resistivity imaging data processing including terrain correction and data presentation

For questions or to make a reservation, please contact Diana Arana at phone +1 512-335-3338 extension 0 or by e-mail to [diana@agiusa.com](mailto:diana@agiusa.com) or check the web site at <http://www.agiusa.com/seminar.shtml>

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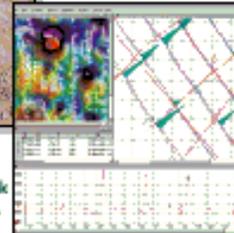
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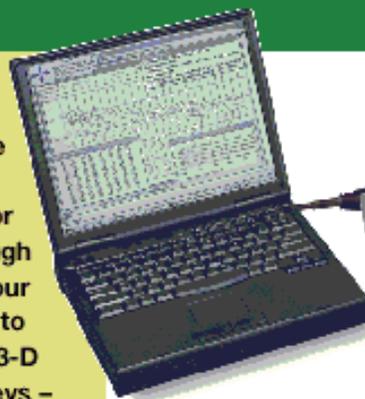
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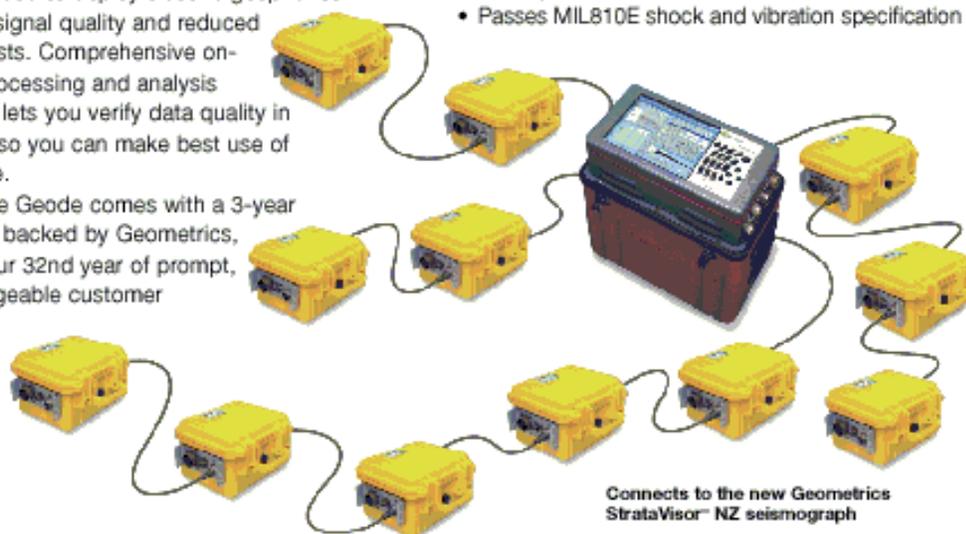


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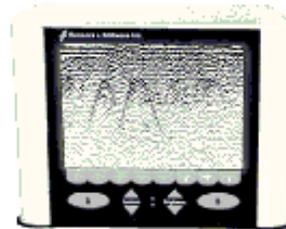
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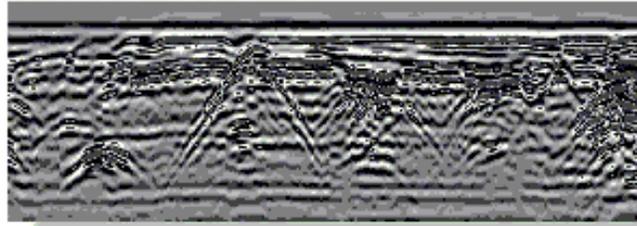


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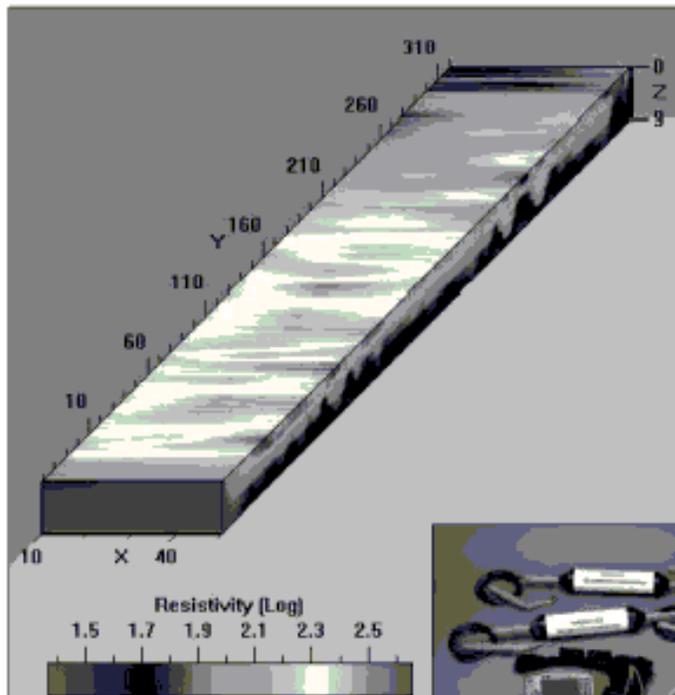
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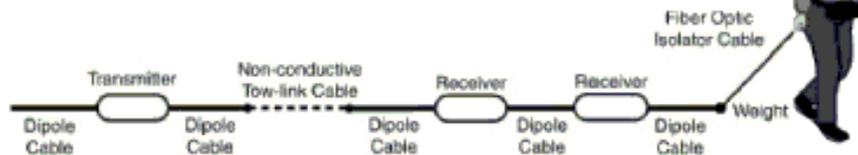


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# Near-Surface Geophysics Section of the SEG Membership Application

The Near-Surface Geophysics (NSG) Section of the Society of Exploration Geophysicists is a professional organization chartered by the SEG to promote the rigorous practice of the science of shallow-earth geophysics.

### Class of Membership (check one; SEG membership NOT required):

<input type="checkbox"/>	Active Membership <sup>1</sup>	\$10.00	Includes quarterly newsletter
<input type="checkbox"/>	Affiliate Membership <sup>2</sup>	\$10.00	Includes quarterly newsletter
<input type="checkbox"/>	Student Membership <sup>3</sup>	\$ 6.00	Includes quarterly newsletter

I am currently a member in good standing of the SEG:  YES  NO

[NOTE: If not a member of SEG, list the names of two NSG or SEG sponsors or attach a current resume.]

I have enclosed my check made payable to "Near-Surface Geophysics Section" **or** my cash payment for U.S. \$ \_\_\_\_\_ **or** have arranged for payment by credit card as outlined below\*.

Name: \_\_\_\_\_ Position: \_\_\_\_\_

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Preferred mailing address: \_\_\_\_\_

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(Please PRINT or TYPE all responses above)

Primary type of application:

- Engineering Geophysics
- Environmental Geophysics
- Groundwater Geophysics
- Mining Geophysics
- Petroleum
- Research
- Academic/Training
- Government Admin./Regulatory
- Other \_\_\_\_\_

Expertise (check all that apply):

- Borehole Geophysics
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- Magnetics
- Seismic
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\*Return this form with your payment to: NSGS, c/o the Society of Exploration Geophysicists (SEG) Business Office, P.O. Box 702740, Tulsa, OK, 14170-2740 USA  
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<sup>1</sup> Geophysicists & SEG member **or** sponsored by 2 NSG or SEG members. See NSG Bylaws III.1.a. for details.

<sup>2</sup> Interest in NSG & SEG member **or** sponsored by 2 NSG or SEG members. See Bylaws III.1.b. for details.

<sup>3</sup> A student member must attach a statement signed by a professor in his or her academic department indicating he/she is a registered student at the time of mailing of this application.

<sup>4</sup> Please include country and city telephone codes, if applicable.