



Geophysical Society of Houston

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NEWSLETTER

NOVEMBER 1997

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Technical Luncheon

Chair - Phil Hosemann,
713-655-9838, 713-655-7301

Date: November 17, 1997
 Time: Register and cash bar, 11:30 AM ; Luncheon and Talk 12:00 Noon
 Location: NEW Hess Building, 5430 Westheimer Formerly the Carlyle Restaurant located on the north side of Westheimer between Chimney Rock and Yorktown.
 Cost: \$20 for pre-registered members; \$25 for walk-ins and guests
 Reservations: Call 713-917-0218 or email: reservations@hougeo.org no later than 12:00 Noon on Friday November 14, 1997
 Speaker: Dennis E. Willen, Exxon Production Research, Houston, Texas
 Topic: "Parallel Computing: What We Did Right" (Outstanding Paper award at the 1995 SEG meeting)

Abstract:

After a decade of research and evaluation, a number of contractors and major oil companies deployed massively parallel computers for production seismic processing. These investments in both hardware and in software development were made despite disagreement among vendors over the best parallel architecture, a sense within the computer science community that parallel programming remained too difficult for industrial development, a relative inattention to parallel I/O and

mass storage issues important to seismic processing, and close management scrutiny of the value added by high-end processing algorithms. Most of the issues raised by the supercomputing community proved to be irrelevant to seismic processing: processor topology, code portability, ease-of-use, and scalability do not significantly impact our use of high-performance computers. The turning point came when our industry realized that only a few relevant issues remained: applicability, stability, and the programming paradigm. These were addressed by business trends, product maturity, and hard work.

The idiosyncrasies of our business (the need to recognize and manage risk and the tremendous leveraging that occurs between research and successful exploration) placed us among the earliest adopters of parallel computing technology as we sought to seize the "attacker's advantage". These idiosyncrasies are unlikely to change and will therefore continue to distinguish our use of advanced technology from the way in which it is exploited by other industries. Seen in this light, our industry's adoption of massively parallel computing serves as a model for the careful, but aggressive exploitation of any new technology.

Speaker Bio:

After receiving a Ph. D. in high energy physics from the University of Illinois in 1980, Dennis Willen joined Exxon Production Research Company where he is presently involved in analyzing subsalt imaging problems. While at EPR, he has worked in various areas of geophysics including seismic modeling, reflection statics, electromagnetic exploration, full-waveform log analysis, tomography, prestack depth migration, and massively parallel computing.

GEOPHYSICAL SOCIETY OF HOUSTON

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Office Hours 7 a.m. - 4 p.m.

Event Reservations Number: (713) 917-0218

email: reservations@hougeo.org • website - http://www.seg.org/sections/gsh/gshhome.html

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Editor's Notes

To insure your information reaches all GSH society members in a timely fashion it must appear in the appropriate newsletter issue. Please check our deadlines and plan your function's publicity strategy accordingly. The newsletter editor must receive materials on or before the corresponding content deadline date.

1997-98 GSH Newsletter

Deadlines

Issue January, 1998

Deadline November 13, 1997

Issue February, 1998

Deadline December 18, 1997

Issue March, 1998

Deadline January 15, 1998

Issue April, 1998

Deadline February 19, 1998

Issue May, 1998

Deadline March 19, 1998

Issue June, 1998

Deadline April 16, 1998

Content deadlines occur approximately six weeks prior to publication, usually on the third Thursday of the month.

GSH Calendar

To insure that your planned function avoids scheduling and timing conflicts it must get onto the "Official GSH Calendar". This calendar is maintained by Joan Henshaw, our GSH office manager. The calendar contains not only important GSH activity dates, but dates for other local and national professional society events. Maintaining a centralized calendar avoids date and timing conflicts between society activities. Please communicate your GSH related activity dates to Joan. You can contact Joan Henshaw at GSH Office (713) 785-6403, fax (713) 785-0553, email: reservations@hougeo.org

Technical Breakfast

Chair - Scott Sechrist, 713-961-1804, fax 713-961-9773, email: acoustic@neosoft.com

Technical Breakfasts are scheduled monthly, on the Wednesday of the second full week of each month: Nov.13; Dec. 10; Jan. 14; Feb. 11; Mar. 11; Apr. 15; May 13; June 10 (possible).

Please contact Scott for further breakfast information or to suggest potential topics and speakers.

Breakfast Date: November 13, 1997
(note - date change due to scheduling conflict)

Location: British Petroleum (2nd floor conference room),
200 Westlake Park Boulevard

Time: Breakfast from 7:00 - 7:45 a.m.; Speaker from 7:45 to 8:15 a.m.;
Meeting ends by 8:30 a.m.

Cost: No charge
Continental breakfast provided by LCT

Host Companies: The GSH would like to thank LCT and British Petroleum for volunteering to host this month's technical breakfast.

Speaker: Brian S. Anderson of LCT (speaker) and John Bain of Galileo Geophysics (co-author)

Subject: "Integrated Interpretation of Seismic and Gravity Data in the Deep Water Gulf of Mexico for Improving Seismic Velocity Models"

Abstract:

As exploration in the Gulf of Mexico moves rapidly into deeper water, the lack of control for seismic velocities has become a difficult problem. Several companies have adopted an effective scheme for using new high-resolution gravity data for constraining and enhancing seismic

velocity models in the deep water. A brief overview of the typical project flow is followed by several case studies demonstrating the utility and effectiveness of this approach. This talk will be a slightly modified version of the paper "A New Dimension in 3D" on the same topic, to be presented in the "New Dimensions in Seismic Imaging" session at the 1997 SEG Conference and Exposition in Dallas.

Speaker Bios:

Brian Anderson is a Director and Vice President of Marketing of LCT, Inc. a Houston contractor supplying gravity and magnetic data acquisition, processing, and interpretation software world wide. Since graduating with a B.S. in Geological Oceanography from University of Washington in 1980, he has spent several years in seismic data acquisition, seismic vessel rigging, and gravity and magnetic consulting. He has been with LCT since shortly after its founding in 1987, is past Chairman of the GSH Potential Fields Group, and is presently the Secretary-Treasurer of the Board of Directors of the International Association of Geophysical Contractors (IAGC). He is also the proud father of two daughters, Erin 2, and Kelsey, 4.

John E. Bain is President of Galileo Geophysics, an LCT Technology Center located on the premises of LCT in Houston, providing gravity and magnetic consulting services to industry. He received his B.S. in Geophysics from the Colorado School of Mines in 1983. John began his career with EDCON in Denver, spending several years there prior to joining LCT in 1987. John is past Chairman of the SEG Gravity and Magnetics Committee, and is a past President and present Director of LCT.

SIG Announcements

Interpretation SIG

SIG Chair - Larry Godfrey, 281-499-6068, email lgodfrey@intertex.net

The Interpretation SIG will announce four meetings throughout the coming year on topics concerning Technology for Interpretation. Larry is actively seeking volunteers to serve on the Interpretation Committee. These volunteers could help to organize meetings, contact and schedule potential speakers, arrange venues, etc. If you are interested in helping out, please contact the SIG Chairman, Larry Godfrey.

November Meeting

DATE: Wednesday, Nov 12
TIME: 4:30 PM
PLACE: Mobil Oil Company Building, 12450 Greenspoint Drive; 2nd Floor Meeting Room; The building is located on the Northeast Corner of Greenspoint Drive and Greens Road North of the Wyndome Hotel. Parking is available in the Visitor portion of the parking garage located in the rear of the Building. Note: this is also the parking garage for Anadarko Petroleum.
COST: No charge; please reserve a place by calling the GSH Office at 713-917-0218 no later than noon Tuesday Nov 11.
SPEAKER: Rick Zoss, Consulting Geophysicist
TOPIC: Fault Scaffolding: An Interpretation Technique

ABSTRACT

Fault surfaces are a basic component of seismic data interpretation in the Gulf Coast Region. Typically, interpreters pick assigned fault segments on a series of inlines, crosslines, and arbitrary lines. The

interpretation

software then creates a fault surface using these assigned segments. This fault surface is too often unrealistic, especially at depth. This is caused by a number of factors, primarily the inaccuracy of the interpreters fault picks in poor quality data. Fault Scaffolding, as the name implies, builds a temporary platform from which the fault surfaces can be built.

To begin the process, pick all faults as unassigned segments instead of assigned segments. This is easily integrated with horizon picking. Pick unassigned faults on a grid of inlines and crosslines. After picking the faults, create time slices at a regular interval-100 msec for example. Each time slice will display the intersection of the unassigned fault segments. Pick the assigned fault segments on the time slices that are best fits to the unassigned fault intersections. Avoid the temptation of simply assigning the unassigned fault segments. Select several time slices and pick assigned fault segments that are best fits to the unassigned fault intersections. When displayed in a map view, the assigned fault segments are contours of the fault planes and the time slice increment is the contour interval.

As the deeper time slices are displayed, the scatter of the unassigned fault intersections increases. Continue picking assigned fault segments that best fit the unassigned fault intersections using the map view of the previously picked assigned fault segments as a guide. Each assigned fault segment must conform to the other segments as fault surface contours conform to one another. This approach ensures the resulting fault surfaces will be acceptable even in poor quality data areas. The final step is to display only the assigned fault segments thereby removing the fault scaffolding!

Data Processing SIG

SIG Chair - Young Kim, 713-966-6156, 713-966-6333, young.c.kim@exxon.sprint.com

The Data Processing SIG has scheduled nine monthly meetings for the coming year with themes for each of the meetings as listed below. The meetings are scheduled from September 1997 through May 1998, with two speakers at each meeting. The selected dates and topics are:

11/19/97
Wavefield reconstruction
Young Kim*, Karl Schleichler
12/10/97
AVO
Stan Truxillo*, Chengbin Peng
1/21/98
Velocity for depth migration
Alfonso Gonzalez*, Dave McMann
2/18/98
Time lapse (4-D) seismic
Jozica Gabizsch*, Chengbin Peng
3/18/98
Anisotropy
Chengbin Peng*, Richard Verm
4/15/98
Multiple attenuation
Jerry Kapoor*, Richard Verm
5/20/98
Traveltime calculation for depth migration
Ilkka Noponen*, Karl Schleichler, Jerry Kapoor
* denotes the primary organizer

November Meeting

Date: Wednesday, November 19
Time: Social 4:30 p.m.; presentations 5:00 to 6:00 p.m.
Location: Exxon Production Research Company, S-202, 3120 Buffalo Speedway
Cost: NO CHARGE
Topic: Wavefield Reconstruction

Speakers: Dr. Helmut Jakubowicz, Ensign Geophysics; Nicati Gulunay, Western; and Clark Trantham, Richard Duran, and Erik Eriksen, EPR.

Organizers: Young Kim*, Karl Schleichler

First Abstract & Bio:

Wavefield Reconstruction: A Technique For Maximizing the Quality of Low Fold 3D Data

Dr. Helmut Jakubowicz
Ensign Geophysics

Spatial sampling is a critical consideration for effective and economical acquisition of 3D seismic data. In particular, while the availability of high channel capacity recording systems has greatly improved the density at which recordings can be made from a single shot, shot sampling is constrained by the source cycle time and remains a major concern. Thus, while reciprocity requires that the shot interval should be the same as the group interval, this is rarely the case - especially when multisource techniques are used. Unfortunately, this problem is compounded by further, inadvertent, undersampling because of the nature of the common-midpoint and common-offset domains (the so-called sampling paradox). As a result, sparse shot sampling is often a major limitation on the effectiveness of prestack multichannel procedures such as F-K filtering, velocity analysis, multiple attenuation, dip moveout correction, and even stacking itself.

Wavefield Reconstruction is a patented processing technique that addresses the issue of sparse shot sampling for 3D (and 2D) surveys. Originally developed in 1993, the method is a prestack procedure that increases the shot sampling by interpolating additional shots using general wavefield considerations and explicit knowledge of the acquisition geometry. After Wavefield Reconstruction, not only do data conform to a higher fold of acquisition, thereby improving the quality of the

stack, but the increased spatial sampling can be used to advantage in improving the effectiveness of many prestack processing procedures.

Biography:

Dr. Helmut Jakubowicz joined Ensign Geophysics as Head of Research in 1992. He entered the geophysical industry in 1980 and, prior to his appointment at Ensign, was a Research Geophysicist with Western Geophysical, Head of Research with Geco UK and an Advanced Technical Specialist at Texaco Ltd.

Helmut has worked extensively in many areas of seismic exploration, but has a particular interest in migration techniques and 3D data acquisition and processing. He received the 1990 Hagedoon Award from the EAEG for his work on dip moveout and, together with Gary Hampson, co-authored the Best Paper at the 1990 SEG Meeting and 1995 Best Paper of the EAGE. He currently lectures on seismic acquisition at the University of Birmingham and is an Honorary Research Associate at Royal Holloway University of London.

Helmut holds degrees from the Universities of Cambridge and Stirling, and a Ph.D. in theoretical atomic physics from University College London. He is a member of the SEG and EAGE, a Chartered Physicist, a Member of the Institute of Physics, and an Associate of the London College of Music.

Second Abstract and Bio:

Wavefield interpolation: Aliasing suppression in the f-k domain

Nicati Gulunay
Western Geophysical

Aliasing caused by coarse recording is well known to create processing artifacts for multichannel processes such as stacking, F-K filtering, Radon transform filtering, DMO and migration especially when source and receiver arrays are not well tuned to suppress such energy in the field. Trace interpolation before such multichannel processes is a method that is used to lessen such artifacts. If properly done, trace interpolation unwraps the f-k spectrum and extends the wave number range of the data as many times as the interpolation order. Adding interpolated

traces to data creates an alias free f-k spectrum. In the past, trace interpolation that is capable of handling aliased energy was done either via Radon transform methods or via an f-x domain method.

In this talk a general f-k domain trace interpolation technique will be presented. F-k domain is chosen for efficiency reasons. The method is general in the sense that any interpolation order can be handled as well as more than one wave number axis (f-Kx-Ky as opposed to f-k) making it useful for 3-D. In practice, interpolation orders of 2, 3 or a combination of them (2:1 followed by 2:1 or 2:1 followed by 3:1) are used. This limitation is due to the fact that at a given temporal frequency, f , and for an interpolation order L , the required operator is derived from a temporal frequency which is L times lower than f . Another limitation of the method is that data is assumed to be made of a few (linear) events. The restriction imposed by this limitation is partially overcome by temporally and spatially windowing the data. Synthetic and field examples for 2-D and 3-D data will be given to illustrate that the process is robust enough to be useful for production data.

Biography:

Necati Gulunay is a senior geophysicist in the department of research and development, Western Geophysical since 1994. Between 1989 and 1994 he was a Senior Member of Technical Staff, department of research and development, Halliburton Geophysical Services. Prior to that he was a research scientist for Geosource (1984-1989). He has worked as seismic data processor in following capacities: Processing supervisor for Petty Ray Geophysical (1982-1984); project leader for CGG (1980-1982), seismic analyst and marine processing supervisor for TPAO(1977-1980). His geophysical research interests are in statics, signal-noise-ratio enhancement and signal processing in general. He holds a M.Sc. degree in physics (1970) from the University of Colorado in Boulder, and B.Sc. degree in Physics (1968) from University of Istanbul. He is an active

member of SEG, EAGE and associate member of IEEE.

Third Presentation:

“Wavefield Reconstruction”

Clark Trantham, Richard Duran, and Erik Eriksen EPR

Presentation abstract and speaker bios are unavailable.

Potential Fields SIG

SIG Chair - Chuck Campbell of Accel Services (713-993-0671 or email at campbell@neosoft.com)

The Potential Fields SIG plans to have 1997-98 meetings every other month, from September to May (September, November, a holiday party in December, January, March, and May). Meetings typically consist of a social hour, dinner, and technical presentation. Anyone interested is invited to attend.

For information about meeting times, locations and speakers, please contact the SIG chairman, Chuck Campbell.

November Meeting

Date: Thursday, November 20, 1997
Time: 5:30 - Social Hour,
6:30 - Dinner,
7:30 - Talk
Location: New HESS Building,
5430 Westheimer
Formerly the Carlyle
Restaurant Located on
the north side of
Westheimer between
Chimney Rock and
Yorktown.
Cost: \$20.00
Topic: Guidelines in Choosing
Between Ground and
Airborne Gravity Data
Acquisition.
Speaker: John Peacock,
Geoterrex-Digham Pty.
Limited
Reservations: Please respond by
Nov. 18 to Chuck
Campbell, ACCEL
Services, Inc.
campbell@neosoft.com,
or 713-993-0671

Near Surface Geophysics SIG

SIG Chair - Tom Dobecki, with FUGRO-McClelland (281/679-5558)

Contact Tom Dobecki for meeting information.

Activity Report:

**Environmental/Near-Surface
Geophysics SIG**

Report submitted by
Stephanie Hrabar

On July 9, 1997 Bill Gafford, 1997 GSH President, and Stephanie Hrabar attended the Citizen's Environmental Coalition (CEC) Delegate luncheon meeting. Hrabar is serving as the 1997-98 Environmental/Near-Surface Geophysics SIG Liaison with CEC and was the SIG Leader for the past three years. CEC coordinates exchanges of environmental information its members and to communities within the 13-county area. The GSH has been a member of CEC since 1995.

About 25 of the more than 70 member organizations were present at the delegate meeting. Environmental interests ranged from professional societies to architecture-community development, conservation, nature, air quality, urban gardening, animal, plant, and endangered species groups. People introduced themselves and commented on the activities of their respective groups. Hrabar commented on the 1) SIGs major activities— and handed out a 1-page summary 2) current and historical roles of geology and geophysics in characterizing potential underground nuclear waste disposal sites, and 3) safety training (HAZWOPER) for industrial workers.

Saturday September 6 Stephanie Hrabar hosted the SIGs booth at the “Neighborhood Connections Conference” sponsored by the City of Houston Planning and development department. She distributed fact sheets about the GSH activities, local environmental issues, and tried to improve people’s awareness about the use of appropriate non-intrusive geophysical methods for some local environmental concerns. Booth space was provided by CEC to help distribute

environmental information to civic group leaders who are managing neighborhood revitalization issues. The event was held at the U of H Main campus University Center.

September 10 Stephanie Hrabar attended the CEC Delegate meeting and reported that the 1997-98 Leader for the SIG was Tom Dobecki. Notable changes from the last meeting are:

1. a couple groups received funding to support or expand their primary activities.

2. the CEC 1998 Resource Directory will be updated soon. Notice will be mailed out to all member groups in about 30 days.

Reservoir Geophysics SIG

SIG Chair - John Eastwood - Exxon Production & Research Co., P.O. Box 2189,
713/966-3196, 713/965-7309(fax),
john.eastwood@exxon.sprint.com.

Contact John Eastwood for meeting information.

Notices

Emerging Technologies Energy Conference

A new national technology transfer conference has been specifically designed for owners and CEOs of domestic oil and gas companies and will take place Nov. 17-19 at the Houston Hyatt Regency. The “Emerging Technologies Energy Conference” (ETEC) is a joint effort of IPAA (Independent Petroleum Association of America) and the regional network of the PTTC (Petroleum Technology Transfer Council).

For information about exhibiting or attending, contact IPAA at 1-800-433-2851 or visit their National Website at <http://www.pttc.org/hq/>

**SEG Distinguished Instructor Short Course
Registration Form
December 17, 1997
Exxon Brookhollow Auditorium
4500 Dacoma**

Name: _____

Company Name: _____

Street Address: _____

City: _____ State: _____ Zip: _____

Phone: _____ Fax: _____ Email: _____

Society Membership Status

SEG and GSH Member	NO SHORT COURSE COST
SEG Member (not a GSH Member)	\$20.00 (GSH membership cost)
GSH Membership only (not a SEG Member)	\$70.00 (SEG membership cost)
Non-Member (neither SEG or GSH)	\$90.00 (SEG + GSH membership cost)

Total Amount Submitted: \$ _____
(Make check payable to Geophysical Society of Houston)

Send to: GSH, 7457 Harwin Drive, Suite 301, Houston, Texas 77036-2160

Short Course Location: Exxon Brookhollow campus is located at 4500 Dacoma, Houston, one block to the east of Highway 290 just north of Loop 610. Drivers northbound on 290 should exit mangum, go left under the freeway, and then head south on the 290 access road to Dacoma, where they will take another left. the Exxon facility will be on the left (North) side of Dacoma.

**SEG Distinguished
Instructor Short Course**

**Time-Lapse Seismic in Reservoir
Management**
presented by Ian Jack

Offered by the Society of Exploration Geophysicists Continuing Education Committee and the Society of Exploration Geophysicists Foundation

Sponsored by the Geophysical Society of Houston

December 17, 1997

The Distinguished Instructor Short Course (DISC) will be held Wednesday Dec. 17. This is an exciting new initiative of the SEG to offer real value to the practicing geophysicist. Houston is the first venue for what will be a year-long, world-wide speaking tour. The course is free for those members of GSH who are also member of SEG. The inaugural speaker will be Ian Jack, BP's

expert on 4D seismics. The location will be Exxon's Brookhollow facility auditorium. The course will run from 9 a.m. to 4 p.m.

For GSH members who are not members of SEG, the cost for the course is \$70. For SEG members who are not members of GSH, the cost for the course is \$20. For individuals who are not members of either society, the cost for the course is \$90.

The course is limited to room capacity (about 150). There is a possibility of a second course being offered on Dec. 18 if the first course is over-subscribed.

GSH members who are also members of SEG may register by email at reservation@hougeo.org or by FAX at (713) 785-0553.

Others may send their check (made out to the Geophysical Society of Houston) to Geophysical Society of Houston 7457 Harwin Drive, Suite 301 Houston, TX 77036-2160

**GSH Ladies Auxiliary
Calendar of Events**

November 19, 1997
Special Event:: Bunko Tournament; Luncheon at the PALM: A mix and mingle occasion.

January 23, 1998
Junior League; Luncheon with "The BUZZ Lady" Roseann Rogers.

March....., 1998
"The view from within" Tour+Lunch; Inside access to downtown Houston.

April 19, 1998
Museum of health evening with the director, includes Dinner, Video, and Guided Tour.

ALL SEG MEMBERS, SPOUSES AND GUESTS are invited at an auxiliary price to attend any function - contact Donna Parrish at 281-785-7115 Annual Auxiliary Membership Dues \$10

PLEASE note on your check that the payment is for the Dec. 17 DISC.

ABSTRACT:

This course, intended to appeal to a wide audience, will bring participants up-to-date with the current state of the art and will enable them to make decisions involving the use of the method.

It will cover the rationale and driving forces behind "time-lapse seismic" by examining the limitations of existing methods of tracking fluid flow between wells and will examine those reservoir properties which change with time and what might be observed on seismic data as a function of elapsed time, together with those things which may also change, which we would prefer to remain constant.

Rock physics is the link between reservoir depletion and seismic observations. In this area key success factors, key calibration requirements, and key uncertainties will be addressed.

The repeatability of seismic data and the use of "legacy" data sets will be discussed, together with a review of the seismic data acquisition schemes and data processing requirements for time-lapse analysis. Analysis and interpretation options will be investigated, as will the risks and value of this new technology.

A representative selection of industry case histories will illustrate many of the above points and some of these will be worked through in detail. The course finishes by noting some remaining challenges.

Biography:



Ian Jack holds a degree in physics from the University of St. Andrews. His career includes 10 years with Geophysical Service Inc., working as observer and seismic data processing before moving to seismic software and systems development in Dallas, Texas. He joined the Technical Service Division of BP Exploration in 1978, and became manager of their acquisition services branch in 1982. His current assignment is geophysical advisor and R&D project manager, based in BP's London office. He has been a guest lecturer on postgraduate geophysics courses at several universities in the United Kingdom. His interests are in most aspects of geophysics and he has contributed papers to SEG and EAGE on topics such as 4D seismic, the downgoing vibroseis wavelet, and marine seismic interference as well as several workshop and review papers. Mr. Jack has served SEG as Second Vice-President, and as a member of the SEG Technical Standards Committee since 1981. He is a member of SEG, EAGE, EAPG, and PESGB.

Geophysics on the Internet : A Seminar

Sponsored by the Geophysical Society of Houston

Friday, January 16 , 1998
2:30PM till 4:30PM

Texaco [(3901 Briarpark, at the corner of Briarpark and Westpark)]

Conducted By:

John C. Butler, Professor of Geosciences
Associate Dean, Natural Sciences
University of Houston

What is the Internet? Why should I at least be aware of its potential?... What's in it for me for my company ... for my professional organization(s)? ... How do I begin to prepare information for distribution via the Internet?

This seminar — Geophysics on the Internet — will attempt to provide at least partial answers to these and related questions. This will not be a hands-on-experience; the costs associated with providing all participants with Internet access are prohibitive and it is too easy for the participants to "get lost surfing" — herding cats would be easier than a hand-on approach.

A show and tell approach will be used and each participant will be given an Internet address where the contents presented during the seminar will be available for independent work.

A brief overview of some of the components of the Internet will be presented — client/server models, e-mail, file transfer protocol, gopher protocol and the World Wide Web protocol. Sources of applications and good starting points will be provided as part of an Internet-based interactive page. In addition, links will be provided to demonstrate the potential of Java Applets and QuickTime Virtual Reality.

The seminar will conclude with an introduction to preparing documents to distribute via the Internet; just enough to make you dangerous.

Will you become a proficient Java Applet provider or the producer of common gateway interfaces if you attend? No, but if you are wondering about and wandering about the Internet,

this should be a good investment of 90 minutes or so of your time.

Cost: \$10.00 to members of the Geophysical Society of Houston if you register before the course and \$15.00 on the day of the course. Non-members are encouraged to attend. The fee for non-members will be \$15.00.

So that we can complete our arrangements in a relatively short period of time, send your check payable to the GSH, to Joan Henshaw at the GSH office, 7457 Harwin, Suite 301, Houston, TX 77036.

GSH Web Site Updated!

If you haven't visited the GSH website lately, you'll want to check out the new format! You can check Events Calendars, make reservations online, download the GSH Newsletter (including full color renditions of figures from technical papers), access training and education resources, connect with the GSH Employment Referral Service, contact committee heads and GSH Officers, and link to related sites of interest.

The GSH pages are graciously hosted by the SEG in Tulsa, OK. Your suggestions and comments are welcomed and should be directed to Scott Sechrist (email: acoustic@neosoft.com). Visit the GSH site today at: <http://www.seg.org/sections/gsh/gshhome.html>.

Interdisciplinary Luncheon

The Houston Association of Professional Landmen (HAPL) is sponsoring a Joint Luncheon Meeting on November 12th beginning at 11:30a.m. at the Petroleum Club of Houston for members of HAPL, HGS, SIPES, SPE, GSH, and the SPWLA. The cost of the luncheon is \$22.50 for members and \$25.00 for guests (\$25.00 at the door).

The luncheon focus is to expand and improve interdisciplinary communication and networking. Jack Schank, President of Spirit of Energy

Dallas SEG notice

Interdisciplinary continued from page 8

76 (UNOCAL), will give the luncheon presentation.

Those having questions or wanting to attend should contact Diane R. Snyder at the HAPL office (713-622-6868).

Volunteers Always Needed

The GSH still needs a volunteer for the Assistant Newsletter Editor position. If you are interested in adding your expertise to the society's newsletter contact Dennis McMullin (281-560-1069) or Bill Gafford (281-366-7873).

All volunteers interested in helping with SIG meetings, speakers or organizational items are always appreciated. Please contact the specific GSH SIG Chairpersons to see how you can help.

GSH Year-End Holiday Gathering

Mark your holiday calendars and come join all your jolly fellow GSH members in our year-end holiday gathering!!

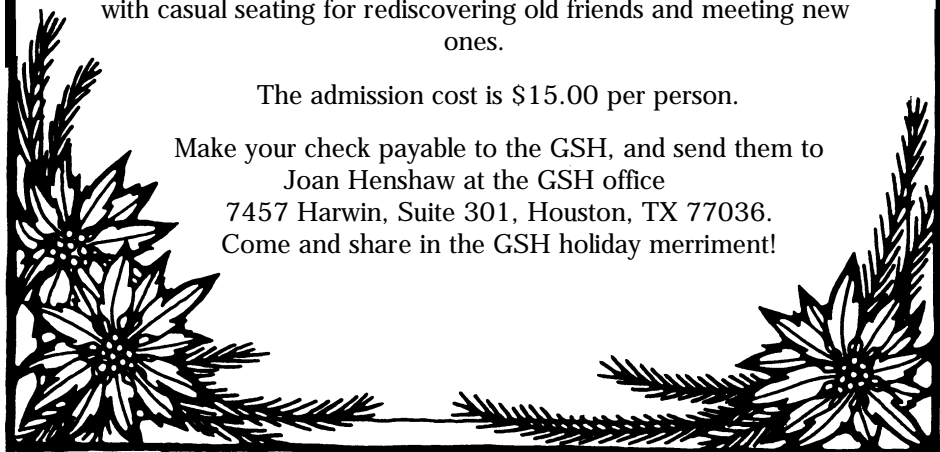
We'll be holding the shindig in the Texas(-sized) Ballroom (with seating for 200) at the new H.E.S.S. building (the former Carlyle Restaurant) at 5430 Westheimer just outside Loop 610 West.

Our party date is Thursday December 4, 1997 from 5:00 till 9:00 p.m.

Our holiday gathering will be an open house arrangement with casual seating for rediscovering old friends and meeting new ones.

The admission cost is \$15.00 per person.

Make your check payable to the GSH, and send them to Joan Henshaw at the GSH office 7457 Harwin, Suite 301, Houston, TX 77036. Come and share in the GSH holiday merriment!



GSH Photo Album

Photos courtesy of John Freeland, Exxon

GSH Icebreaker



Bill Gafford, Bob Schneider & Peter Stickland



Fred Helfeman, GDC & Tom Smith



Alf Klaveness, Klaveness Res Co. & Richard Verm, GDC

GSH Photo Album

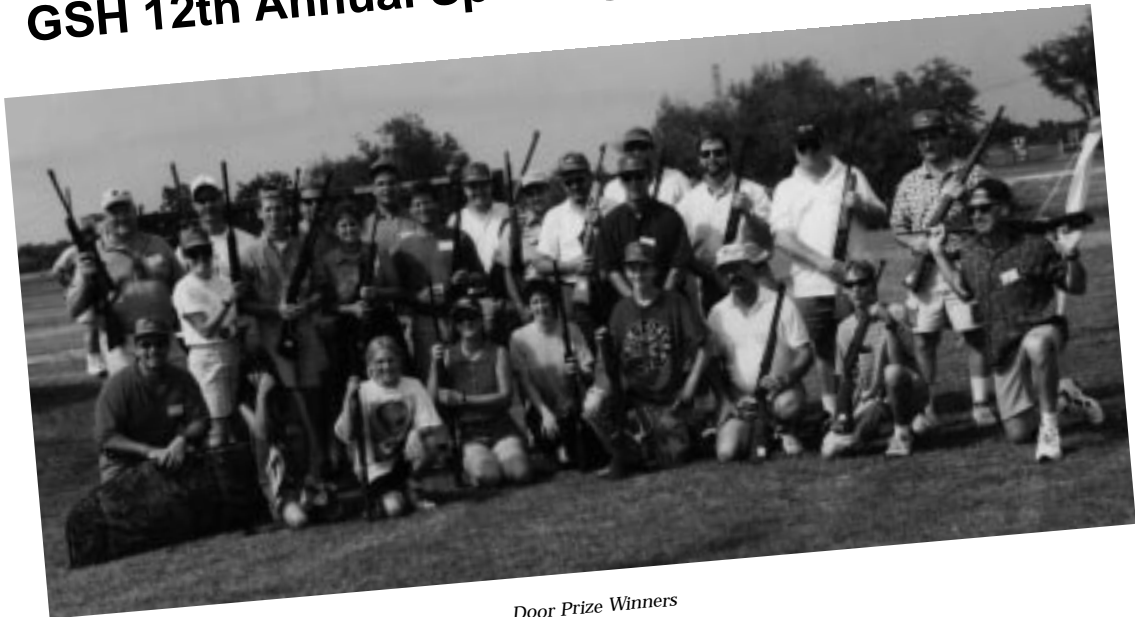
Photos courtesy of John Freeland, Exxon

GSH Technical Luncheon September 97



Don Paul, V.P. Chevron Corp., Speaker & John Sumner, Exxon, first V.P. GSH

GSH 12th Annual Sporting Clays Tournament



Door Prize Winners

NOVEMBER 1997

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
						1
2	3	4	5	6	7	8
9	10 HGS Dinner Meeting	11	12 HAPL Interdisciplinary Luncheon Interpretation SIG	13 GSH January Bulletin Deadline GSH Technical Breakfast GSH Board Meeting @ HESS	14	15
16	17 GSH Technical Luncheon @ HESS HGS International Meeting ETEC Conference	18 ETEC Conference	19 GSH Ladies Auxiliary Luncheon Data Processing SIG ETEC Conference	20 Potentail Fields SIG	21	22
23	24 HGS North America Dinner	25	26 HGS Lunch	27 Holiday HAPPY THANKSGIVING	28 Holiday	29
30						

GEOPHYSICAL SOCIETY OF HOUSTON

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