



Geophysical Society of Houston

VOL. 31, NO. 5

NEWSLETTER

JANUARY 1996

Second Vice-President's Letter

Serving in various offices since 1992 has allowed me to gain a much greater understanding of and appreciation for how the Society works. It is through the people who, without fanfare, give of themselves year after year in varying capacities that makes your GSH function and grow.



Joe Alcamo,
Pluspetrol Int'l.

Each year at the beginning of a new term and during the year the officers ask the same question. What programs, lectures, short courses, luncheon speakers or social events would appeal to the majority of the membership? Additionally, we ask how can we encourage the membership to attend the events? The question I have for you is what can the Society do to peak your interest to attend the remaining social functions? We have so far had exceptional attendance for the sporting clays and shrimp peel, due to the planning and dedication of the chairpersons, Robert Perez and Joe Stevens, their co-chairpeople, volunteers, sponsors and yes the wonderful attendees. What a great start!

By the time you read this article, we will have enjoyed a successful tennis tournament and Christmas party, thanks to the hard work of Joe Jones and his committee and Lorinda

Driskill and her volunteers.

But how do we really measure success? By the profits we make? By whether or not monies have to come out of the Dave P. Carlton Trust to make up for a lack of attendance? The Board of Directors has supported the goal that all Society functions should at least break even, so the Society can function and grow. With this in mind, what can we do to get you to attend the functions?

The purpose of the social events is to promote fellowship, have fun, meet new people and to network with other people. For some, the last one, networking, may be the most important. We all know about the global economy, downsizing, and the people who have lost jobs and/or are looking for one. Your society has an employee referral committee chaired by Sam Leroy under president-elect Wulf Massell. As you know, it is difficult to help someone looking for employment when they call, if we do not know anyone who is looking for someone to fill a position. This is where your participating in the social functions can come; into play. You may meet that someone.

So, the question remains, what function(s) would you support or like to see as GSH functions in the future? We could have tournaments such as bowling, horseshoes, lawn bowling (bocci ball), volleyball, casino night, just to name a few.

I sincerely want to hear from you. Please drop me a note at the GSH office or give me a call. May your 1996 be healthy, prosperous, and fun filled.

INSIDE

| | |
|--------------------------------|-------------|
| GSH Meetings | _____ |
| Technical Breakfasts | 3, 7 |
| Data Processing SIG | 4 |
| Environmental Applications SIG | 6 |
| Interactive Workstation SIG | 5 |
| Potential Fields | 5 |
| Reservoir Geophysics SIG | 4 |
| Technical Luncheon | 3 |
| Articles and Comments | _____ |
| 3-D Seismic Expo | 7 |
| Meetings and Events | 10-11 |
| Member News | 8 |
| November Technical Luncheon | 8 |
| Second Vice President's Letter | 1 |
| Social Events | _____ |
| Bass Tournament | 9 |
| Courses and Seminars | _____ |
| GSH Continuing Education | 8 |
| Training Notices | 7 |

GSH/HGS/HAPL Annual Bass Tournament

The 8th Annual GSH/HGS/HAPL Bass Tournament will be held on March 30 & 31 at the Pendleton Harbor Marina on Toledo Bend Reservoir. Prizes and trophies will be awarded. Register as soon as possible! Registration form can be found on page 9.

HAPPY
NEW YEAR



GEOPHYSICAL SOCIETY OF HOUSTON

Margaret Blake, Office Manager • 7171 Harwin Drive, Suite 314 • Houston, Texas 77036-2190

(713) 785-6403 • Fax (713) 785-0553 • Office Hours 7 a.m. - 4 p.m.

Event Reservations Number: (713) 917-0218

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| | 5599 San Felipe #1000, Houston, TX 77056 | | |
| Annual Meeting | Jim Moulden, Energy Graphics | 659-2201 | Fax 659-2301 |
| Awards Banquet | Merry Lynn Southers, Business Archives | 840-8282 | Fax 599-9106 |
| Bass Tournament | Greg Doll, Weeks Exploration | 975-3700 | |
| Christmas Party | Lorinda Driskill, Western Atlas Software | 972-4693 | Fax 666-9439 |
| Golf Tournament | George Lauhoff, Digicon | 630-4011 | Fax 630-4311 |
| Shrimp Peel | Joe Stevens, Union Texas | 968-2416 | Fax 968-2417 |
| Sporting Clays | Robert Perez, Geotrace Technologies | 497-8440 | Fax 497-4619 |
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| | 2807 Valley Way, Kingwood, TX 77339 | | |
| Directory | Scott Sechrist, EnTec | 464-8200 | Fax 856-7445 |
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| Student Loans | Don Ashabranner, Phillips | 669-3782 | Fax 669-3725 |
| Editor | PAMELA M. MOORE, New World Horizon | 773-2627 | Fax 773-9620 |
| | P.O. Box 740099, Houston, TX 77274 | | |
| Assistant Editor | Cliff Kelley, Schlumberger Well Services | 368-8103 | Fax 368-8184 |
| Company Contacts | Scott Sechrist, EnTec | 464-8200 | Fax 856-7445 |
| Electronic Publishing | Victor H. Koosh, New World Horizon | 773-2627 | Fax 773-9620 |
| Houston Events Calendar | Jock Drummond, CogniSeis | 526-3273 | Fax 630-3968 |
| Photography | John Freeland, Exxon | 423-7223 | Fax 423-7801 |
| Publicity | Scott Sechrist, EnTec | 464-8200 | Fax 856-7445 |
| Technical Training Notices | Lloyd Weathers, Mobil | 775-2453 | Fax 775-4123 |
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| Alt. SEG Section Rep. | Merry Lynn Southers, Business Archives | 840-8282 | Fax 599-9130 |

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POSTMASTER: Send address changes to Geophysical Society of Houston Newsletter, 7171 Harwin, Suite 314, Houston, TX 77036-2190.

Technical Luncheon

Date: Monday, January 22, 1996
Place: HESS, 3121 Buffalo Speedway
Time: Social, 11:30 am; Meeting, 12:00 noon
Cost: \$17 Pre-registered GSH members
\$22 All Others
Topic: **Hybrid Migration: A Cost-Effective
3-D Depth Imaging Technology**
Speaker: Y. C. Kim,
Exxon Production Research Company

Please make reservations by calling the GSH reservation number 917-0218 prior to noon, Friday, January 19.

The transformation of surface seismic data into a subsurface image can be separated into two components - focusing and positioning. Focusing is associated with ensuring the data from different offsets are contributing constructively to the same event. Positioning involves the transformation of the focused events into a depth image consistent with a given velocity model. In prestack depth migration, both of these operations are achieved simultaneously; however, for 3-D data, the cost is significant. Prestack time migration is much more economical, focuses well even for moderate velocity variations, but suffers from mispositioning problems. Hybrid migration is a co-effective depth-imaging approach that uses prestack time migration for focusing; inverse migration for the removal of positioning errors; and poststack depth migration for proper positioning. Through this processing sequence, the hybrid migration provides:

- a) improved focusing of conflicting reflections through prestack time migration;
- b) accurate positioning of poststack depth migration with a laterally varying velocity model, at a considerably lower computing and operational cost than that of prestack depth migration;
- c) opportunity to evaluate the necessity for prestack depth migration.

When lateral velocity changes are moderate, the hybrid technique can generate accurate depth images. For very complex structures that require prestack depth migration, the results of the hybrid technique can be used as a starting velocity model, thereby reducing the number of iterations for velocity model building.



Young C. Kim received a B.S. in electronics engineering from Seoul National University, Korea and M.S. and Ph.D. degrees in electrical engineering from the University of Texas at Austin. He received an outstanding graduate student award in 1978 from the IEEE Nuclear and Plasma Science Society. In 1981, he joined Exxon Production Research Company and has

been conducting research on seismic imaging techniques, imaging of complex structures, and acquisition and enhancements of land data.

Northside Technical Breakfast – Best of GSH Series

Date: Tuesday, January 9, 1996
Time: 7:30 am, Technical Presentation will start at 8:00 am
Place: Mobil Conference Room
12450 Greenspoint Drive
(building with Mobil sign outside north of Wyndham Hotel and east of Greenspoint Mall—go directly to 2nd floor)
Cost: NO CHARGE (full breakfast provided by Mobil E & P U.S., Inc.)
Topic: **Seismic Reservoir Prediction**
Speaker: Lloyd Weathers, Mobil

Advance reservations urged — The host company needs an accurate headcount. Please call GSH Reservations at 917-0218 prior to Friday, **January 5**.

A seismic reservoir prediction methodology generated seismic porosity measurements by conversion of each migrated seismic trace to acoustic impedance. Editing of sonic and density logs was iterative and was only performed where it was petrophysically justifiable. Editing was rigorously tested against other logs, other wells and surface seismic. Edited well logs from each field were used for wavelet extraction during space adaptive wavelet processing which maximized seismic resolution, corrected the wavelet to zero phase and stabilized residual phase variations spatially. Each wavelet-processed trace was converted to seismic acoustic impedance by a process that does not require any a priori information to constrain the acoustic solution. The output is unbiased since it is determined independently trace-by-trace and it is not model-driven. Seismic acoustic impedance was calculated independently of well control, but good correlations were still obtained at well ties. Low frequency compensation utilized well logs to map seismic acoustic impedance to absolute acoustic impedance then, by petrophysical analysis, to porosity. Reservoir volumetrics (ϕ -h) were then calculated from seismic traces and found to show good correlation with well-derived volumetrics. Additional results will be shown beyond those available at the September Reservoir Geophysics SIG meeting.

Lloyd Weathers started with Texaco in 1970 and has been with Mobil since 1974 with interpretation assignments in Houston, Dallas, and London and exploration supervisor assignments in Jakarta and Houston. A transfer to Midland in 1987 brought a switch to production geophysics at a time of rapid expansion of the application of seismic to production projects. He currently has oversight responsibility for seismic acquisition, processing and special projects for several Houston-based Mobil producing business units.

Reservoir Geophysics SIG

The Reservoir Geophysics Special Interest Group is an interdisciplinary forum for the discussion of reservoir geophysics topics of interest to geophysicists and geologists, and expanded interchange with the reservoir engineering community.

Date: Tuesday, January 16, 1996
Time: 4:00 p.m.
Place: Texaco EPTD
3901 Briarpark (Corner of Briarpark & Westpark. Parking in front and rear of six story building. Use front entrance of six story building (Conference Room A)
Cost: NO CHARGE
Topic: **AVO and Rock Properties**
Speaker: Richard Verm,
Geophysical Development Corporation
Organizer: Phil Inderwiesen, Texaco

For reservations call Kathy Gough at 954-6003 by January 12.

**Lithology Color-coded Seismic Section:
The Calibration of AVO Crossplotting to
Rock Properties With Extensions to 3D.**
Richard Verm and Fred Hilterman,
Geophysical Development Corporation

AVO processing and interpretation can yield a "lithologic section" through a two-step process. First, the well-log curves are analyzed to establish the normal-incidence reflectivity (NI) and the Poisson reflectivity (PR). These (NI,PR) pairs are then crossplotted for visual analysis of the grouping of the lithologic boundaries, such as shale over a water-saturated sand or a shale over a gas-saturated sand. The second step uses NI and PR reflectivity sections extracted from seismic data through AVO inversion. The two reflectivity sections are combined into a single color section by assigning each time sample, t , a color based on the spatial position that NI(t) and PR(t) occupy within the crossplot of NI vs. PR. The color assignment is based on the separation of the expected lithologic boundaries in the NI vs. PR crossplot conducted in the first step. The color on the resulting section then correlates to the lithologic boundaries established in the petrophysical calibration.

The extension to 3D data is straight forward and simply involves the viewing of two volumes of attributes. The advantage of 3D comes into play with the use of timeslice crossplotting. An alternative to crossplotting two volumes, involves the transformation via rotation of NI and PR and then generating a single product attribute. This rotation technique is most useful with "Class 2" AVO anomalies where the NI seismic response of hydrocarbons yields a low ampli-

Data Processing SIG

Date: Wednesday, January 17, 1996
Time: Social 4:30 PM; Presentations 5:00 PM
Place: Marathon Oil Company
5555 San Felipe Road (corner of Yorktown and San Felipe; Yorktown is several blocks west of 610 loop. Visitor's parking is in the lower levels of the parking garage and accessed from the breezeway drive. The meeting is in the P-10 auditorium on the 10th floor of the parking garage.)
Cost: NO CHARGE
Topic: **3D Numerical and Physical Modeling**
Organizers: Chuck Meeder, Doug McCowan
Speakers: Fred Aminzadeh, Bob Wiley

Please make reservations by calling the GSH reservation number 917-0218 no later than Monday, January 15.

Three Dimensional SEG/EAEG Models – An Update

Fred Aminzadeh, Unocal

This overview talk gives an update on the results and status of the 3-D SEG/EAEG Modeling (SEM) Project. The project goal has been to design two 3-D models, salt and overthrust, and simulate realistic 3-D surveys through numerical calculations. The data sets generated through this project in four national DOE laboratories will be made available to the industry and academia.

So far, about 800 gigabytes of data have been generated, completing Phase A and Phase B of the project. "Classic data sets" containing subsets of calculations conducted for Phase A and B have been defined. These data sets will be provided to industry and academia upon request. Any other subsets of data could be extracted from the whole data set using a procedure devised by LLNL. Plans for additional calculations of about 3 terabytes are underway.

Many groups have already begun using and testing the data sets for various applications. Some of the preliminary work will be highlighted later. In addition, a new umbrella Advanced Computational Technical Initiative (ACTI) project has been initiated to enhance the value of SEM by developing and testing new modeling, processing, and analysis tools using results of SEM as its basis.

Three Dimensional Modeling – A Comparison of Finite Difference Modeling and Physical Modeling

Bob Wiley, Marathon

Drawing on experience from the numerical SEG/EAEG subsalt model and the salt canopy physical model, the merits of numerical and physical modeling are compared. These

continued on page 6

continued on page 6

Interactive Workstation SIG

Date: Thursday, January 18, 1996
Time: 4:00 pm
Place: British Petroleum, 3rd Floor
Room C306 A & B; British Petroleum is located at 200 Westlake Park Blvd; this is between the Katy Freeway and Memorial Drive just east of Highway 6. Please park in the BP parking garage which is located to the west of the BP building. The Visitor Parking Entrance is on the west side of the garage.

Cost: NO CHARGE

Topic: **Managing a Subsurface Client/Server Environment**

Speaker: Jim Whitfield, BP Exploration, Houston

Please make reservations by calling the GSH reservation number (917-0218) no later than noon Wednesday, January 17. Seating is limited.

A meeting of the SIG Committee will be held at 3:00 PM prior to the presentation in room C308. All committee members are urged to attend.

The strategic objectives of the BP Exploration Information Management (IM) team are to improve and maintain service levels, which compliment business objectives, and manage costs. A key business objective is reducing the time from lease acquisition, to prospect definition, to production of economic discoveries. By improving communication with users, relationships with service providers, data management practices, access to data and applications, and data integration IM can contribute significantly to this key business objective. It is the intention of this presentation to communicate some of the key practices that BPX have implemented in these areas.

Jim Whitfield is currently a Geophysicist with BP Exploration. He has worked in the oil and gas industry for ten years. Three of these years were with Tenneco and the last seven with BP. During this time with BP Jim served on the Information Management Team. Currently, Jim works in the New Developments team in Houston, Texas. He earned an undergraduate degree in Mathematical Engineering from the Colorado School of Mines. He then obtained a graduate degree in Geophysics from the University of Houston.

Potential Fields SIG

Date: Thursday, January 18, 1996
Time: Social Hour, Dinner, and Program at 5:30, 6:30 and 7:30 p.m. respectively

Place: HESS Building, 3121 Buffalo Speedway

Cost: \$20 (payable to GSH)

Topic: **The Development of Dynamic Gravimetry**

Speaker: Dr. Chris Harrison, LCT

Please make reservations by calling Brian Anderson or Sandy Fitch at 558-8383 no later than noon Wednesday, January 18. No shows will be billed.

This talk traces the evolution of techniques for measuring gravity on moving platforms — submarines, ships and aircraft - from Vening Meinesz's pendulum apparatus to recent developments in airborne surveying. The difficulties imposed by the motion of each platform are outlined and the methods used to overcome them are related to the physical principles involved and to the state of contemporary technology. It is a tribute to the genius of two great figures, F.A. Vening Meinesz and Lucien J.B. LaCoste.

The Vening Meinesz pendulum apparatus was supported in gimbals and the theory of the corrections needed for the imperfect depth keeping the attenuated wave motions of the submarine, together with techniques for determining them, were developed by B.C. Browne and Vening Meinesz in 1937. Their general approach, but with major hardware improvements was followed by LaCoste in his submarine gravity meter (1956) which he later improved to the point where it could be used on surface ships (1958). A different approach was taken by Anton Graf (1957) who used a gyro-stabilized platform to hold the gravity meter vertical, and approach which is more demanding on the gravity sensor. The analysis of this mode of operation was developed during the early 1960's and with the development of initial technology it became the preferred approach. LaCoste first marketed his gyro-stabilized meter in 1965.

Aircraft gravimetry raises new problems because the disturbing accelerations extend to much longer periods than is the case on ships and the high speed places a premium on short averaging times. Thus instead of simply low-pass filtering, the vertical airplane accelerations are determined and subtracted from the gravity record. The accuracy required is very demanding and during the (1970's and 1980's) efforts were focused on using precise barometric, radar and laser altimeters to provide the necessary vertical control. Since 1992, however, the Global Positioning System has provided very accurate motional information, greatly simplifying the measuring system and allowing major improvements in the processing.

continued on page 6

Reservoir Geophysics SIG

continued from page 4

tude reflection. By applying this rotation, the low amplitude Class 2 product section response turns into a bright spot.

Richard Verm is Manager of Exploration Projects at Geophysical Development Corporation. He has been involved in the development of AVO and VSP technology for the past 10 years. Prior to joining Geophysical Development Corporation, he has worked at the Allied Geophysical Laboratories at the University of Houston and before that at Geosource. Verm holds a BA degree in mathematics from Rice University and Masters and Ph.D. degrees in geophysics from the University of Houston.

Data Processing SIG

continued from page 4

two models contain some similar features including nearly identical salt bodies and subsalt structures. These features along with the same general velocity trend provide a platform for comparing the two modeling schemes. While only some of the data have been compared at this time, many of the experiences gained from setting up the two programs have provided valuable insights into each approach.

Once the numerical subsalt model had been designed, the physical model was designed from those data. The physical model was to be very similar to the numerical model. However, subsequent decisions in both modeling groups resulted in some variations in the two models. These decisions were based upon restrictions in the computer hardware, physical modeling materials, data storage and algorithm limitations.

The talk will discuss the construction of the physical model in comparison with the design of the numerical model, the differences in data acquisition parameters, and the differences in the sources. Some of the model modifications will be addressed and the reasons for making these changes will be discussed.

Bob Wiley received his PhD at Colorado School of Mines in 1980. He worked at Marathon Oil Research Center in Littleton, Colorado from 1973 - 1994 and now works for Marathon in the Worldwide Exploration Services group in Houston.

Environmental Applications SIG

Date: Thursday, January 25, 1996

Time: 4:00-6:00 pm

Place: Shell Development,
Westhollow Technology Center,
3333 Hwy 6 & Richmond,
R-Bldg. Rm. 1412. Stop at main gate.
Security officer will provide visitors badge.
Park in visitors parking at Bldg.-R.

Cost: NO CHARGE

Program: **Can Non-invasive Geophysical Methods Decrease Remediation Time and Cost?**
(Richard Lewis, Shell Development Co.)
Locating Buried Tanks and Landfills Using Reciprocal Seismic Refraction
(Alf Klaveness, Klaveness Research Co.)
Impacts of 3-D Seismic Reflection Surveys in Coastal Wetlands and Bays of Texas
(David Buzan, Texas Parks & Wildlife)

Each speaker has a 20-35 minute presentation. Presentations are followed by a dialogue with the audience. Session ends promptly at 6:00 pm.

Potential Fields SIG

continued from page 5

Dr. Chris Harrison entered the Department of Geodesy and Geophysics of Cambridge University in the UK as a graduate student in 1950 and was immediately handed a large pile of Vening Meinesz pendulum records from which to compute gravity anomalies with the aid of a hand cranked mechanical computer. Three years later he moved on to the Institute of Geophysics and Planetary Physics at UCLA, where he initiated a program of submarine gravity measurements off the west coast of North America. From 1957 to 1965, at UCLA and later at the Hughes Research Laboratories, he worked very closely with Lucien LaCoste on the development of surface ships gravimetry and participated in some early attempts at airborne measurements. At the University of Colorado (1965-1983) his main work was on the development of tiltmeters for the precise measurement of ground tilt but in 1983 he joined the Geodynamics Corporation and returned to working on gravity problems - this time developing modeling techniques and gravity models for the Air Force Ballistic Missile programs. In 1992 he started working with LCT in a cooperative program aimed at developing an airborne gravity measuring system which relies solely on the Global Positioning System for determining aircraft positions and motions. He is currently technical manager of this program for LCT.

Technical Breakfast — February

Date: Wednesday, February 7, 1996
Time: 7:30-9.00 a.m., Technical Presentation will start at 8:00 a.m.
Place: Western Geophysical, 10001 Richmond, Second Floor Cafeteria
Cost: NO CHARGE, underwritten by Western Geophysical Company
Topic: **Geophysical Imaging of Subsalt Geology**
Speaker: Davis Ratcliff and David Weber, Diamond Geophysical Service Corporation

Advance reservation urged — The host company needs an accurate head count. Please call GSH (917-0218) prior to Monday, **February 5**.

Exploration and production of huge subsalt hydrocarbon accumulations in the Gulf of Mexico has been an ambitious challenge for many explorationists throughout the industry. The complexities associated with the three dimensional nature of salt structures, as well as the highly deformed tops and bottoms of salt, demand 3-D Prestack Depth Migration (3-D PreSDM) technology in order to correctly stack and position reflectivity below salt. Application of "large-volume" 3-D PreSDM techniques has been, and will continue to be, instrumental in unraveling the structural and stratigraphic complexities of the subsalt environment. "Large-volume" 3-D PreSDM technology allows the explorationist to better assess subsalt exploration and development risk, as well as improve subsalt exploration success.

In this paper, we discuss a full-volume 3-D PreSDM case study that, to our knowledge, is the largest prestack depth imaging project ever attempted, to date. The 3-D PreSDM case study is centered over the **Mahogany** Discovery in the Gulf of Mexico's Ship Shoal South Addition Block 349 area. Information about input and output data coverage, computer run times and 3-D depth imaging strategies will be discussed. Numerous examples of closely spaced 3-D prestack depth migrated seismic data will also be shown in order to demonstrate how "large-volume" 3-D PreSDM technology improves subsalt imaging, both structural and stratigraphic, as well as subsalt prospecting. Additionally, geophysical technologies used to assist in the understanding of subsalt stratigraphy and subsalt lithology (e.g. 3-D subsalt AVO) will be included in the presentation.

Davis Ratcliff is Executive Vice President of Diamond Geophysical Service Corporation and President of the recently formed Diamond Geoscience Research Corporation. He has been involved in the geophysical imaging of complex salt geologies worldwide for the past 13 years and has applied 3-D imaging technology to more than 100 salt structures. Before joining Diamond, he was supervisor of geophysical technology for Amoco Production

Co.U.S.A. and European exploration business units. In 1992, Davis received the Best Paper Award at the CSEG Convention in Calgary for his presentation on Steep Dip Imaging, and in 1993 received the Best Poster Paper Award at the SEG Convention in Washington DC. Davis is the 1994 recipient of the Society of Exploration Geophysicists Virgil Kauffman Gold Medal award for his work in 3-D structural imaging. Ratcliff holds a BS in mathematics from the University of New Orleans.

Please fax your suggestions to Dave Agarwal at 650-3822 for the "Best of GSH" series Breakfast Meetings regarding Topics, Speaker, Place and Potential Sponsors.

3-D Seismic Expo

January 16, 1996
10 am - 6 pm
Lafayette Hilton Ballroom

Southwest Louisiana Geophysical Society (SWLGS)

This Expo is open to the public at no charge. Our goal is to offer individuals the opportunity to learn about 3-D seismic workstations, 3-D software, seismic acquisition, processing, modeling and consulting services without the expense of traveling to a major convention. Last year's Expo was outstanding with approximately 500 attendees and 24 companies participating. This year we will have 32 companies exhibiting. For more information call James Crane at (318)-989-7144.

Training Notices

Lloyd Weathers

Training Notices Committee Chairman

Training Notices will be published in January. It will be mailed separately from the GSH newsletter to all GSH members. As a service to the membership, information on training courses offered in Houston of interest to geophysicists will be collected in this one document for easy referral. Also included will be a questionnaire soliciting membership preferences about training courses in Houston.

November Technical Luncheon

November 13, HESS

Prospect Characterization Through Visualization

Dale Sperrazza and Chip Corbett, Schlumberger-GeoQuest



Nina Rach, Doris Ross, Peggy Trenholm, Landmark

Curtis Herbert, EEC; Alan Penberton, Petrosystems

Dale Bird, Aerodat; Pat Starich, EEC; Jim Sherar



Tip French, Columbia Gas; Steve Starr, Petroleum Technology; Wes Mosteller, Columbia Gas; Bruce Tadgwald

Lillian Roberts, Landmark; Don Singleton, Coastal; Americo Korompai, Coastal; John Anderson, TLC Data

John Tiffert, Dallas G.S.; Tom Fulton, Seismic Solutions

Continuing Education

Don Herron

BP

The Continuing Education and Interactive Interpretation Committees will be sponsoring a technical workshop entitled "Case Histories of Seismic Attribute Mapping" in late April - early May 1996 (exact date and location to be determined). If you are interested in contributing to this workshop, please contact Don Herron at 560-3778. Details including registration information will be included in subsequent newsletter announcements.

Member News

Patrick W. (Pat) Klem, formerly Marketing Director for The Woodlands Geophysical Group, Inc., has formed a new company specializing in seismic data management, namely reformatting, archiving and other services. Pat may be reached at POLARIS E&E SERVICES, INC., 24900 Pitkin, Suite 110, Spring, Texas, 77386, 713-367-6000, email pat@polarisdata.com.

Houston Meetings

January 8

HGS Dinner Meeting

*Regional Offshore Interaction of Sediment and Salt,
Gulf of Mexico*

James F. Fox

Post Oak Doubletree, 2001 Post Oak Blvd.
Social Period, Poster Session, and Emerging Technologies
5:30 p.m.
Dinner and Meeting 6:30 p.m.
Reservations by noon Friday, January 5, 917-0218

January 9

Best of GSH, Northside Breakfast Meeting

Seismic Reservoir Prediction

Lloyd Weathers, Mobil

12450 Greenspoint
Breakfast 7:30 a.m., Meeting 8:00 a.m.
Reservations by noon Friday, January 5, 917-0218

January 10

HGS Environment/Engineering Geologists

Building Environmental Consensus

John D. Wilson

Steak & Ale, 8150 Katy Freeway
Dinner 6:00 p.m. Meeting 7:00 p.m.
Reservations by noon Monday, January 8, 917-0218

January 16

GSH Reservoir Geophysics SIG

AVO and Rock Properties

Richard Verm, Geophysical Development Corporation

Texaco EPTD, 3901 Briarpark, Conference room A
Meeting 4:00 p.m.
Reservations by noon Friday, January 12, 954-6003

January 17

GSH Data Processing SIG

3D Numerical and Physical Modeling

Fred Aminzadeh, Unocal; Bob Wiley, Marathon Oil Co.
5555 San Felipe, Auditorium P-10, Garage level 10
Social 4:30 p.m. Presentations 5:00 p.m.
Reservations by noon Monday, January 15th, 917-0218

January 18

SIPES Luncheon

Petroleum Club, 11:30 a.m.

January 18

GSH Potential Fields SIG

The Development of Dynamic Gravimetry

Dr. Chris Harrison, LCT

HESS, 3121 Buffalo Speedway
Social Period 5:30 p.m., Dinner 6:30 p.m.
Reservations by noon Wednesday, January 17, 558-8383

January 18

GSH Interactive Workstation SIG

Managing a Subsurface Client/Server Environment

Jim Whitfield, BP Exploration

British Petroleum, 200 Westlake Park Blvd.
4:00 p.m.
Reservations by noon Wednesday, January 17, 917-0218

January 22

GSH Technical Luncheon

Hybrid 3-D Depth Migration

Dr. Young C. Kim, Exxon Research

HESS, 3121 Buffalo Speedway
Social Period 11:30 a.m. Luncheon 12:00 noon
Reservations by noon Friday, January 19, 917-0218

January 22

HGS North American Dinner Meeting

*Barrett Resources Corporation:
Growth of an Independent Through Exploration*
William J. Barrett

HESS, 3121 Buffalo Speedway
Social Period and Poster Session 5:30 p.m., Dinner and
Meeting 6:30 p.m.
Reservations by noon Friday, January 19, 917-0218

January 24

HGS Luncheon Meeting

*DREAM-Drilling and Real Time Migration:
A New Method for the Geophysical Monitoring of Wells*
Luca Bertelli, Luca Savini, Luca Aleoti, Agip S.p.A.

Houston Club, 811 Rusk
Social Period 11:30 a.m. Lunch and Meeting 12:00 noon
Reservations by noon Friday, January 19th, 917-0218

January 25

GSH Environmental Applications SIG

*Can Non-invasive Geophysical Methods Decrease
Remediation Time and Costs?*
Richard Lewis, Shell Development Co.

*Locating Buried Tanks and Landfills Using
Reciprocal Seismic Refraction*
Alf Klaveness, Klaveness Research Co.

*Impacts of 3-D Seismic Reflection Surveys in
Coastal Wetlands and Bays of Texas*
David Buzan, Texas Parks and Wildlife

Westhollow Technology Center, 3333 Hwy. 6 & Richmond
4:00 p.m.

February 7

Best of GSH, Technical Breakfast Meeting

Geophysical Imaging of Subsalt Geology
Davis Ratcliff, Diamond Geophysical

Western Geophysical, 10001 Richmond Ave.
Breakfast 7:30 a.m., Meeting 8:00 a.m.
Reservations by noon Monday, February 5th, 917-0218

Events

March 30-31

GSH/HGS/HAPL Annual Bass Tournament
Pendleton Harbor Marina

April 10-11

Gulf Coast SEG Meeting

To Submit Articles and Announcements

Pamela Moore

Editor

All articles, announcements, inquiries or suggestions should be directed to the Editor, GSH Newsletter, c/o the GSH office on Harwin, or to my office (see address on inside front cover).

Deadline for copy is the first of each month preceding publication month (i.e. January 1 for the February issue).

All copy must be prepared and submitted on diskette along with an identical hard copy output of text. Most popular software programs will be compatible with our equipment. In addition, ads with logos or graphics should be submitted as camera-ready artwork in the final size intended for publication. Please call the Editor at 773-2627 about any particular problems, or fax at 773-9620. Alternatively, copy can be e-mailed to the Editor at: nwh@neosoft.com.

| SUNDAY | MONDAY | TUESDAY | WEDNESDAY | THURSDAY | FRIDAY | SATURDAY |
|-----------|---------------------------------------------------------------------------------------|--------------------------------------------------------------------|---------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------|-----------|-----------|
| | 1 HAPPY NEW YEAR | 2 | 3 | 4 | 5 | 6 |
| 7 | 8 HGS DINNER | 9 GSH TECHNICAL BREAKFAST 7:30 A.M. MOBIL | 10 HGS ENVIR./ ENG. DINNER | 11 | 12 | 13 |
| 14 | 15 | 16 RESERVOIR GEOPHYSICS SIG 4:00 P.M. TEXACO | 17 DATA PROCESSING SIG 4:30 P.M. MARATHON OIL | 18 SIPES LUNCH INTERACTIVE WORKSTATION SIG 4:00 P.M. BP POTENTIAL FIELDS SIG 5:30 P.M. - HESS | 19 | 20 |
| 21 | 22 HGS N. AMER. DINNER GSH TECHNICAL LUNCHEON 11:30 A.M. - HESS | 23 | 24 HGS LUNCH | 25 ENVIRONMENTAL APPLICATIONS SIG 4:00 P.M. SHELL | 26 | 27 |
| 28 | 29 | 30 | 31 | January 1996 | | |

GEOPHYSICAL SOCIETY OF HOUSTON

7171 HARWIN DRIVE, SUITE 314
HOUSTON, TEXAS 77036-2190
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