



## INSIDE

### GSH Meetings

GSH Technical Luncheon	
April 18 .....	1
GSH Technical Breakfast	
April 12 .....	4
Reality Center SIG .....	4
DataProcessing .....	4

### Articles and Comments

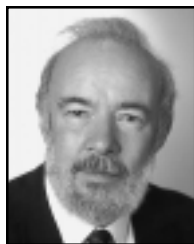
Editors Note .....	3
Membership Report .....	3
Symposium on Applied Multi-Component Reflection Seismic .....	5
Officer Candidate Bio's for 2000/2001 .....	6
Bet Fest .....	9
SEG Offshore Technology Conference .....	10
SEG International Expo. and 70th Annual Meeting .....	11
Annual Honors and Awards Banquet .....	12

### Social Events

GSH Bass Tournament .....	14
GSH Golf Tournament .....	15

## Spring 2000 Distinguished Lecture of the Society of Exploration Geophysicists

Date: April 18, 2000  
 Time: 11:30 am  
 Location: HESS Building; 5430 Westheimer near the Galleria



**Presented by Mike Cox**

**“Static Corrections for the 21st Century”**

Static corrections are routinely applied to almost all surveys. In the past, the main emphasis has been for the computation and application of datum and residual static corrections on land and transition zone surveys. For marine surveys, static corrections are used to adjust the data to a sea-level datum with the application of source and streamer corrections. In some surveys, static correction adjustments are made for calendar time-variant changes in seawater elevations (tides), salinities, and temperatures, and subwater-bottom features such as those in the Mississippi Delta. More recently, the introduction of ocean-bottom recording requires that potentially large near-surface time shifts be applied in marine processing to convert data to a sea-level datum.

A simple raypath analysis demonstrates that the vertical raypaths assumed by the application of static corrections are incorrect. Raypaths

through the near-surface layers are rarely vertical, although there are many areas where vertical travel is a good approximation. The relationship of static corrections to other data processing techniques also needs to be considered; for example, a large vertical shift (static correction) followed by migration, which assumes that raypaths (wavefronts) are followed from source to receiver elevations, is obviously not an optimum approach.

To put these approximations into perspective, the potential errors in the vertical raypath assumption of static corrections will be discussed for various land and marine scenarios; this analysis will show types of near-surface problems where static corrections represent a good approximation and those where an upgraded approach should be considered.

We should compensate for near-surface features and elevation differences with corrections which take the nonvertical raypaths in the near surface into account; that is, they need to be applied as dynamic corrections so that the time shifts are functions of reflector depth and source-to-receiver offset. Various techniques have been proposed to correct for near-surface irregularities in addition to static corrections, and these will be reviewed. These techniques include wave-equation datuming, layer replacement, model-based ray-traced time shifts (dynamic static corrections), offset-

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# EDITOR'S NOTE

## NEW DEADLINES!

To insure your information reaches the GSH society members in a timely manner, it must appear in the correct newsletter. All materials and information will be due on the second Thursday of the month prior to the issue's release. Please see exact dates below and plan your function's publicity strategy accordingly. Materials should be sent to Patty Cardwell via email to [patty@diamondg.com](mailto:patty@diamondg.com) or by fax to 713/783/9780. If you have any questions, please call Patty at 713/783-7837.

## 2000 GSH NEWSLETTER DEADLINES

Issue ..... May 2000

**Deadline ..... April 13**

Issue ..... August 2000

**Deadline ..... September 14**

## GeoEvents Calendar

Make reservations by e-mail at [reservations@hgs.org](mailto:reservations@hgs.org) and include your member number (found on Bulletin mailing label), or use the phone reservation system at 713/917-0218.

### Reservation Codes

Use these codes to make voice mail meeting reservations:

Technical Luncheon .....	<b>601</b>
Data Processing SIG .....	<b>602</b>
Interpretation SIG .....	<b>603</b>
Reservoir SIG .....	<b>604</b>
Potential Fields SIG .....	<b>605</b>
Environmental Applications SIG .....	<b>606</b>
Breakfast .....	<b>607</b>

*Spring 2000 Lecture continued from page 1*

dependent static corrections, and depth migration.

Velocity-depth models are required for procedures such as NMO corrections, static corrections and depth migration. In the case of static corrections, such a model is limited to the near surface which varies from a simple one for source and streamer depths of a marine survey, to potentially very complex models for some land surveys. A detailed near-surface model is required for wave-equation datuming and layer replacement, and in the marine case, this requires water velocity and water depth profiles. Techniques such as model-based ray-traced time shifts require both near-surface and deeper velocity-depth models, although some implementations have used simple models at depth. This model requirement often places limitations on approaches that can be applied to a data set, and is dependent on the sensitivity of the technique to errors in the velocity-depth models. Aspects of this error sensitivity will be discussed.

Many of the techniques used in geophysical data analysis are based on approximations, but generally constitute a practical or pragmatic approach to solve a specific problem; this is certainly the case for static corrections which, in spite of their shortcomings, have served the industry extremely well. Is it now time to phase out their usage for certain types of near-surface conditions so that their application is consistent with the wave equation?

### Mike Cox

Mike Cox graduated with a B.Sc. in physics (1960) and a M.Sc. in geophysics (1961) from Birmingham University. After service with the British Antarctic Survey, he joined Geophysical Service International (GSI) in 1964 and worked in Libya, Iran, and the U.S. before returning to the UK in 1976. Most of this time was spent as a senior technical specialist. He joined BP in 1981 and held various positions including Manager of Exploration Training and Head of Geophysical Operations for the Frontiers and International Division of BP

Exploration. In 1992 he became an independent geophysical consultant. He has been a visiting lecturer at several British Universities.

Much of Mike's career has been spent working on near-surface problems and the analysis of static corrections. This started in 1964 when he computed datum static corrections using refraction arrivals on a field crew in Libya. In 1970, he developed technical specifications for a successful crosscorrelation-based automatic residual static program, and in the late 1970s for a field computer-based refraction static technique. Mike was later persuaded to put pen to paper and his book, *Static Corrections for Seismic Reflection Surveys*, was published by SEG in October 1999.

Mike has been an SEG member since 1965 and served as a District Representative on the Council in 1995-98; he was awarded Life Membership in 1997. He is a Past President of EAGE and was made an Honorary Member in 1994. In 1993 Mike initiated, with Ken Larner, the first joint workshop of the SEG and EAGE executive committees aimed at fostering cooperation between the two societies. He is also a member of the Petroleum Exploration Society of Great Britain, and has served on several UK-based advisory and grants committees.

## MEMBERSHIP REPORT MARCH 6, 2000

### ACTIVE

Mark Bloom  
Adam Fox  
John Girgis  
Larry Luton  
Rocky Roden  
Ronald Salley  
Melanie Westergaard

### ASSOCIATE

Ricky Carroll  
Vexiang Mo

## GSH Westside Technical Breakfast

Date: Wednesday,  
April 12 2000  
Time: 7:00 AM

H. Roice Nelson, Jr., Peter Duncan, and Mike Yates at Continuum Resources' (CoRe) Houston will team up with Rod Laver and Sam Hill at the CoRe London office to demonstrate the power of real-time transatlantic immersive collaboration. A spatially and temporally integrated geotechnical model, including a gravity map, sea level, bathymetry, 2-D regional seismic lines, 2-D seismic horizons, 3-D seismic, 3-D seismic horizons, faults, well tracks, well logs, production histories, facilities, and an FPS (Floating Production System), will provide the data for collaboration.

We will also take a sneak peak at a large-scale multi-attribute seismic volume analysis tool running on a low cost Windows NT workstation.

At 9:00, following the breakfast talk, the regularly scheduled Wednesday morning public demo session will be available for anyone wishing to explore these immersive technologies in more detail. Attendance in the Houston CoRe Theater is limited to the first 91 people to sign up.

## GSH Directory 2000

Deadline to change your information in the 2000 Membership Directory will be May 1st, 2000. Send changes to the following numbers:

Phone: 713-785-6402  
Fax: 713-785-0553  
E-Mail: joan@hgs.org

## GSH SIG Meetings

### RC-SIG

#### Sets Plans for the Next Year

The Management Council for the RC-SIG met on March 2nd. It was agreed the location for the fall meeting, in the middle of September 2000 will be at VETC: Virtual Environment Technology Center of the National Research Council of Canada in London, Ontario, Canada. The Council will be holding monthly teleconferences to plan for this meeting and other RC-SIG supported activities. Notes from these Other upcoming RC-SIG activities members can volunteer to help with include:

- World Future Society Seminar, Saturday 22 July 2000
- GCAGS (Gulf Coast Association of Geological Societies) 50th Convention and Virtual Reality Symposium
- Tuesday, 24 October 2000, Lectures on Virtual Reality
- Wednesday, 25 October 2000, Bus tour to Virtual Reality Centers in Houston Area
- RCSIG III, January-February 2001
- OTC 2001, First Weekend in May, a full day of papers on Immersive Environment Technology

Roice Nelson is the GSH contact for RC-SIG: 713.860.5007 or rnelson@continuum-corp.com.

### DATA PROCESSING SIG

#### Topic:

Using seismic data to predict pore pressure

#### Speakers:

Nader Dutta, Baker Hughes, Inc  
A second speaker to be identified

Date: Wednesday,  
April 19, 2000  
Time: Social 4:30  
Presentations  
5:00 to 6:30  
Location: Western Geophysical  
10001 Richmond  
Ave.  
Organizer: Jerry Kapoor, Western  
Geophysical  
Directions: Southwest corner of  
Briarpart and  
Richmond 1.5 miles  
east of Beltway 8 on  
the West side of  
Houston.

For additional information contact Karl Schleicher by email or phone (karl@geodev.com; 713 782 1234)

#### Paper:

Unconventional Use of Conventional Seismic: Extraction of Subsurface Pressure Information from Seismic Data

#### Speaker:

Nader C. Dutta, Baker Hughes, Inc.

According to the Minerals Management Services, Department of the Interior, United States, about \$100 billion would be spent worldwide to explore for and produce hydrocarbons from deepwater basins (water depth greater than 3000 ft) within the next five years. About 47% of this amount will be targeted toward the Gulf of Mexico. Deepwater drilling is expensive- about \$25 million dollars per well is average. As the exploration and production companies continue to move toward deep and ultra deepwater, new hazards, and limitations begin to emerge. One of the most predominant hazards is associated with drilling in overpressured formations- a common geologic phenomenon in all deepwater basins. The industry has lost massive amount of resources in dealing with this problem- lost circulation, stuck pipes, and occasionally, blow-outs, in spite of a remarkable body of documentation,

*Data Processing continued on page 5*

# Symposium on Applied Multi-Component Reflection Seismic

**Date: April 25 & 26, 2000**

**Location:** Westchase Hilton, 9999 Westheimer Road, Houston, TX

**Call for Papers:** Cutoff Date April 1, 2000

**Registration:** Before April 15, 2000 - \$150, After April 15, 2000 - \$225

**Sponsors:** SEG hosted by Geophysical Society of Houston

**Program:** Presenting a two-day symposium on Multi-Component Reflection Seismic, a technology currently ramping-up in application to today's exploration and reservoir exploitation problems. Highlighting geophysical concepts and strategies to implement the rapidly-evolving research on Shear Waves and Multi-Component Reflection Seismic methodology. Emphasizing those techniques that have practical application today (or in the very near future) to subsurface issues such as:

**Complex Image Enhancement  
Lithology and Fluid Identification  
Poisson's ratio Applications  
Fracture Characterization**

Including oral presentations and expanded abstracts on acquisition, data processing, and interpretation case histories and conceptual models. Offering an opportunity to envision MCRS projects and assess pragmatic implementation plans with your peers.

**Information:**

Eric von Lunen, Chairman • (512) 342-0674 • vond@swbell.net

Ingrid Swendig, Co-Chairman & Paper Contact • (713) 689-7865 • ingrid.swendig@westgeo.com

GSH Reservations • (713) 917-0218

*Data Processing continued from page 4*

investigation and research in this area.

Geopressuring is mainly caused by stress re-distribution within a sedimentary column - a greater proportion of the overlying weight of the sediments is borne by the fluids than in the case had the sediments compacted normally, due to rapid sedimentation - causing a decrease in the stress acting on the rock framework. This is known as undercompaction. Although there are other causes of Geopressure, this is considered to be the primary cause in sedimentary basins.

Geopressured formations pose significant threat to drilling safety - cost

of mitigation is high, especially, in deepwater settings - to the tune of \$1.08 billion per year worldwide. A proper planning before drilling is the key to lowering costs. In this regard, the role of seismic is of paramount importance. Seismic wave attributes (amplitude, velocity, coherency, etc.) are affected by the lowering of stresses acting on the sedimentary column (effective or differential stress).

These attributes can be analyzed to obtain signatures of fluid transport or lack thereof over geologic time - both qualitatively and quantitatively. Zones of "trapped" fluids and pressured compartments can also be mapped, prior to drilling, again, using seismic.

Further, given either an analogue or a reliable low frequency velocity model, it is also possible to map fluid transport effects in the reservoir scale using pre- and post-stack seismic inversion techniques.

In this presentation, we shall illustrate how this process works using seismic data at various scales - low-frequency reflection seismic at exploration frequency scales to those employed at well-logging scales. We shall also present a discussion of the road ahead.

# Officer Candidates for the GSH 2000/2001 Executive Committee

## President Elect



### DAVE AGARWAL

Dave became an Active Member of the GSH in 1980 and has been actively involved with various GSH activities ever since. Most recently, he was elected the First Vice President of GSH for the 1996-97 term and also served as the Chairman of the Speakers' Committee. Since then he has served as the Chairman of the Technical Committee and

SEG Section Representative or Alternate. Prior to this, he served as the very first chairman of the Technical Breakfast Meetings during 1995-96, when they were first started. These breakfasts are now a very important GSH service. He also served GSH as the chairman of the Interpretation/Workstations Special Interest Group (1993-95) and an active member of the Continuing Education & Interpretation Workstation Committees (1991 - 96) and the Reservoir Geophysics Committee (1995-96).

Dave has been a member of the AAPG Geophysical Integration Committee since 1994. He is also a vice president of a networking breakfast club.

Dave has a Bachelor's degree in geology and geophysics and a Master's degree in geophysics from the Imperial College, London, U.K. He joined Geophysical Service Inc. (International) in London in 1960 and spent majority of his 15 years overseas on field crews or area offices in Iran, Saudi Arabia and Lebanon, serving in various capacities from trainee "computer" to Supervisor for Exploration Services for Europe, Africa and Middle East. He joined the London office of Cities Service Company (International) in 1974 as Senior Geophysicist. He was transferred to Houston in 1978 and was promoted to Manager, Geophysical Technology. He joined Newmont Oil Co. in 1985 as Chief Geophysicist. After Newmont was sold in 1988, he co-founded Interactive Interpretation & Training, Inc. and is currently the president of I.I.&T.

Professional affiliations include SEG (1957), EAGE (1959), GSH (1980), HGS (1985) & AAPG (1985).



### DAN EBROM

Dan E Brom has worked as a geophysicist in Houston since 1979. Currently with Texaco's Upstream Technology group in Bellaire, he was previously the acting director of the Allied Geophysical Laboratories (AGL) at the University of Houston. Dan served the GSH in the capacity of 1st Vice President during 1998-1999. He has been active in the

GSH since 1994, when he took on the responsibilities of

chairing the Technology Transfer committee. As chair of the GSH Continuing Education Committee, he coordinated the GSH Spring Symposia for 1996-1998. For the SEG, Dan has also served as the chair of the SEG Continuing Education Committee (1996-1998), and helped coordinate the 1st and 2nd local presentations of the SEG Distinguished Instructor Short Course. He has chaired the Detection and Prediction teams of the DeepLook industrial research consortium (1997-1999), and he has been on the geophysical organizing subcommittee for the Offshore Technology Conference since 1996.

## First Vice President



### ROY E. CLARK, JR

After graduating from Texas A&M University in 1974, Roy joined Exxon Company, USA as a Geophysical Field QC Engineer. In 1976 he was assigned to Exxon Production Research Company. He QC'd land crews throughout the United States, including the North Slope. He had marine assignments off the East, West and Gulf coasts, as well

as Alaska. Other marine assignments included the Labrador Sea, North Sea, Caribbean and offshore Brazil. These included 2-D, 3-D and shallow hazard surveys. In 1979 Roy returned to Exxon Company, USA as Field Supervisor for the Alaska/Pacific Division.

In 1980 Roy moved from field QC to the Exploration Data Processing Center. In 1992 he was assigned to the Exxon Exploration Company where, upon completion of a Gippsland Basin Project in 1994, was offered a three year assignment in Melbourne, with Esso Australia. While there, he was responsible for all seismic acquisition and processing projects for Australia and Papua New Guinea. Upon returning to Houston in 1998, he has been responsible for processing offshore Qatar, Nigeria and South Angola, where he continues in the new ExxonMobil Exploration Company as a Geophysical Associate.

Roy is a member of the SEG, ASEG, AAPG, PESA, GSH and HGS. He has served on the Arrangements Committees for the 1991 and 1999 SEG Annual International Meeting and Exposition, the 1993 Gulf Coast Exploration and Development Meeting and the 1993 and 1994 Offshore Technology Conferences. He served at the GSH/HGS Shrimp Boil from 1988-92. He chaired the GSH Membership Committee (1988-90), and the Publications & Directory Committee (1992-1994). He served as GSH Secretary (1993-94), Alternate Section Representative (1992-1993), Section Representative (1993-94) and 2nd Vice President (1994).

**RICHARD W. VERM**

Richard Verm is Vice-President of Technology 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 worked at the Allied Geophysical Laboratories at the University of Houston where he was a co-director of

the Image Processing Laboratory.

His career in geophysics started at Geosource where he worked in the Research Department of Petty-Ray Geophysical.

Richard is a member of the SEG, the Geophysical Society of Houston and the Association of Computing Machinery. In 1997 he was elected to the position of Treasurer for the Geophysical Society of Houston.

He was a member of the Technical Program Committee for the 1991 and 1997 SEG Annual Meetings. He served as the Vice-Chairman for the 1995 SEG Annual Meeting and as General Chairman for the 1999 SEG Annual Meeting. In addition, he was the Chairman of the Online Governing Board for the SEG from 1996 to 1998.

Richard Verm received a BA degree in mathematics from Rice University and Masters and Ph.D. degrees in geophysics from the University of Houston.

## Second Vice President

**CLAIRE BRESNAHAN**

Claire Bresnahan received her bachelor's degree in Geology from Boston College in 1981. After graduation, she worked for Robertson Research in Gulf Coast regional projects. She later worked for N.L.Erco in their Rocky Mountain regional projects group.

In 1984, Claire joined Allen Geophysical Consulting, generating prospects based on seismic mapping of areas in south Texas. In 1985, she became a partner with Gene Greene & Associates, specializing in geologic, seismic and gravity interpretation. From 1994 to 1996, Claire worked for Hampson-Russell Software Services Ltd. as general manager for US Operations.

Since 1996, Claire has been working as an independent consultant, specializing in the use of AVO analysis to generate prospects in the Gulf Coast. She also does international training for Hampson-Russell.

Claire is a member of the GSH, SEG, and AAPG. She served as editor of the GSH newsletter in 1991, secretary of the GSH in 1992, and has served on several SEG committees, including section representative and arrangements committee for the 1999 SEG Convention.

**DALE BIRD**

Prior to founding Bird Geophysical in 1997, Dale Bird established and managed an affiliate office in Houston for Aerodat Inc., an international airborne geophysical survey company. During his 19 year career he has also been the Chief Geophysicist for World Geoscience Inc. (Americas), another international airborne geophysical survey company, and

a Geophysicist with Marathon Oil Company, Digicon Inc., and Aero Service Division of Western Atlas International Inc.

Dale's worldwide experience involves most aspects of exploration including data acquisition, processing, interpretation and marketing. Before this, he served in the US Army, 1st Military Intelligence Battalion, as an Image Interpreter specializing in analyses of various imagery formats.

Dale has served the GSH in the past as Editor, and as Chair of the Potential Fields Group. Dale is also a member of the SEG (he currently Chairs the Gravity and Magnetics Committee), AAPG, EAGE, AGU, HGS, and National Eagle Scout Association.

Dale earned BS and MS geophysics degrees and is currently a Ph.D. candidate (geophysics) at the University of Houston.

## Secretary

**STEVE H. DANBOM**

Steve Danbom joined the SEG in 1969 and has been affiliated with Dallas, Oklahoma City, Tulsa, and Houston Sections. With Tulsa, he was Technical Chairman of the 39th Midwest SEG Convention (1986) and First Vice-President (1991-92). With Houston, he is currently chairman of the Near-Surface Special Interest Group. Continuing Education activities include "The Stationary Convolutional Model of Reflection Seismogram" (1978-80) and "Environmental Geophysics" (1995-98). Committee assignments include representative to PASSCAL (1988-89), Constitution and Bylaws (1995-99, Chairman 1995-96), and Chairman of the Ad Hoc Committee To Study The Feasibility of Certification of Geophysicists Through the SEG (1997). He is co-editor of the SEG book Shear-Wave Exploration (1986).

Steve received the B.S. in Mathematics (1966) and M.S. in Geophysics (1969) from Texas Tech University, and the Ph.D. in Geophysics (1975) from the University of Connecticut (Marine Sciences Institute).

Steve received the B.S. in Mathematics (1966) and M.S. in Geophysics (1969) from Texas Tech University, and the Ph.D. in Geophysics (1975) from the University of Connecticut (Marine Sciences Institute).

In 1969, Steve began his career at Sun Oil Company's Research Lab where he did potential-field research and technical service. Transferring to Sun's Houston office, he analyzed marine seismic data for offshore lease sales. After an educational leave, Steve returned to Sun's Research Lab to do seismic research including commercialization of his shallow-water acoustics dissertation and heading Sun's shear-wave effort. He then joined the Department of Geology and Geo-

physics at the University of Oklahoma as Associated Professor of Geophysics (1978-80), where he taught graduate and undergraduate courses and served as faculty advisor for the SEG student section. In 1980, he joined Conoco's Exploration Research Division. During the next seven years, he did experimental seismic research. In 1987, he switched to environmental and engineering geophysical activities for Conoco's parent company DuPont. For the past 12 years, environmental geophysics has been Steve's primary focus through Conoco's Environmental Services Division in Ponca City and the Remediation Technology Group in Houston. In January 2000, Steve retired from Conoco to open his own consulting firm, Danbom Geophysics.



**H. ROICE NELSON, JR.**

H. Roice Nelson, Jr. likes to find things, particularly hydrocarbons. Past work has positively impacted hydrocarbon exploration and production. He is the author of more than 150 professional papers and a 1983 book, *New Technologies in Exploration Geophysics*. Professionally active in the AAPG, HGS, and SEG, he has instructed a variety of

schools and workshops. As a co-founder of Landmark Graphics Corporation and now Continuum Resources International Corporation (CoRe), he continues to develop new visualization tools. Mr. Nelson earned a BS in Geophysics from the University of Utah (1974) and an MBA from Southern Methodist University (1981).

**Treasurer**

**SHANE P. COPERUDE**



Shane received a B.A. degree in Physics from the University of Oregon in 1970. After spending four years in the Air Force as an Aircraft Maintenance Officer, Shane returned to the University of Oregon and received a second B.A. degree in Geology followed by a Masters Degree in Geophysics from Oregon State University in 1978. He also

attended the South Texas College of Law on a part-time basis from 1994 to 1998, received the Doctor of Jurisprudence degree, and passed the Texas State Bar exam to become a licensed attorney in 1999.

Shane began his geophysical career during his undergraduate studies by working summers for Lockheed/NASA in the field of microearthquake detection. After obtaining the Masters Degree, he began full-time employment in the oil and gas industry for Shell Oil Company in New Orleans working in data acquisition and processing. He then joined Santa Fe Energy in Amarillo, Texas, obtaining the position of District Geophysicist for their West Texas region. For the last several years Shane has worked on the contracting side of the geophysical industry and since 1995 has been the Area Geophysicist for the Houston office of Fairfield Indus-

tries working in such seismic fields as depth migration, AVO, inversion, and transition zone processing.

Shane has served the GSH for the past two years as the coordinator for the monthly technical luncheon. He also served as the Volunteers Chairman for the 1998 GSH Technical Symposium on Virtual Reality. Shane serves the SEG as the co-chairman of the Asian Pacific region of the International Affairs Committee.



**JOSEF PAFFENHOLZ**

After receiving my Ph.D. at the Technical University Berlin, I continued my work in rock physics at the University of Colorado. From 1990-1998 I have been employed by Halliburton Geophysical and Western Geophysical, where I worked on various research assignments in seismic data processing.

Since 1998 I am a member of the Geophysical Technology Group at BHP Petroleum. My main area of interest is the improvement of seismic images in areas with substantial surface multiple problems. I am also studying the use of seismic attributes for lithology prediction.

**Editor**

**PATTY CARDWELL**

Patty Cardwell graduated from Southwest Texas State University in 1994 with a Bachelor of Science degree. She has held several positions at Diamond Geophysical over the past three years of her employment. Currently, she is the Senior Marketing Assistant whose duties include coordinating licensure of seismic data in the Gulf of Mexico, processing data orders, and designing graphics for marketing displays. Patty has been on the GSH newsletter staff since August 1999 and has been actively involved in editing the newsletter since the February 2000 issue.





# **ALBERT W. BALLY**

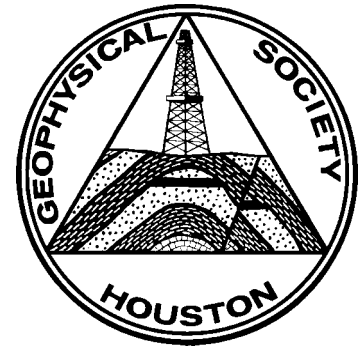
## **SPRING 2000**

### **SYMPOSIUM AND FEST**

A symposium in honor of Bert Bally, Professor Emeritus at Rice University and Past President of Geological Society of America, will be held in Houston on Thursday and Friday, April 13 and 14, 2000. The Albert W. Bally Symposium will bring together an international group of world-renowned geoscientists to honor Bert's great insight in combining geology and reflection seismology - a hallmark of all his research and teaching. Bruno d'Argenio (Italy), Daniel Bernoulli (Switzerland), Sierd Cloetingh (The Netherlands), Carlos Cramez (France), John Dewey (Great Britain), Carlo Doglioni (Italy), Robert Ginsburg (Miami, Florida), Chris Harrison (Alberta, Canada), Martin Jackson (Austin, Texas), Art Sylvester (Santa Barbara, California), Bruce Trodgill (Boulder, Colorado), Paul Weimer (Boulder, Colorado), and Martha Withjack (Dallas, Texas) will give technical presentations that focus on regions of the world such as the Apennines, the Canadian Cordilleras, and Gulf of Mexico, where Bert has conducted research for almost five decades. Jorge Carnevali (PDVSA), Marlan W. Downey (President Elect of AAPG), Jean Michel Fonck (TOTALFINA), and Alfredo Guzman (PEMEX) will offer unique insights on the future of oil and gas exploration at the beginning of the third millennium.

Simultaneously, "Bert Fest" presents the opportunity for participants to celebrate Bert's life-long achievements and dedication to the advancement of Geology and Geophysics. "Bert Fest" will consist of three events: a late afternoon reception and an evening banquet on Thursday, April 13, and an evening festival to conclude the symposium on Friday, April 14.

Those interested in attending should contact the Department of Geology and Geophysics at Rice University (geol@rice.edu).



## **GEOPHYSICAL AUXILIARY OF HOUSTON**

April 11, 2000 will find us at Round Top Herb Gardens. We will tour the Herb gardens and enjoy lunch. Lunch will be followed by a talk on the lore, legend and use of herbs. There will be time for browsing in the antique stores also. Jane Hasenpflug can give you details on this trip at 281-265-1808.

To join our fun group and enjoy all our activities and make many new friends, call Georgeann Massell at 281-353-7894.

Dues for the rest of the year are only \$5.00.

Carol Gafford - GSH Liaison



## Highlights of the SEG-sponsored Sessions at the 2000 Offshore Technology Conference May 1 - 4, 2000 in Houston, Texas

### **Technical Luncheon (May 3, 12:00)**

#### **“The Importance of New Frontiers to Meet the Global Energy Demand in the 21st Century.”**

Steve Cassiani of ExxonMobil addresses the projected increase in oil and gas consumption as an increasing part of the world's total energy demand, and the ensuing potential demand/supply gap. Companies must not only focus on where, but also on how to explore for and produce hydrocarbons. A company's success will depend on how they obtain maximum value from technology and, most importantly, from their people, their knowledge, and ability to understand and apply fundamental scientific principles.

### **Reservoir Characterization (May 1, 9:30 - 4:00) co-sponsored by AAPG and SPE**

Neal Goins for ExxonMobil will emphasize integration of multi-disciplinary technologies as key to effective reservoir description. William Bashore of RC2 will then build on this integration theme and underscore emerging technologies. Papers include fluid and lithology using marine 4-C

seismic, over-pressure detection with  $V_p/V_s$  estimates, inversion of 4-D seismic and Production data, application of neural networks to 3-D seismic for fluid and lithology volumetrics, refining reservoir definition using depth modeling, angle dependent seismic inversion, and geostatistical seismic modeling.

### **Multiple Attenuation (May 2, 9:30 - 4:00)**

Dodd DeCamp of Arco will describe the challenge of discovery, delineation, and development of new, high quality resources while it is becoming increasingly difficult to achieve economic success in the face of complex, costly and challenging technology requirements. Removing multiples from seismic data to make the data suitable for wave theoretic imaging can improve imaging in complex settings and meet the challenge. Papers will cover specific technical responses and general strategic approaches to the challenges and authors will exemplify the issues with synthetic and field data examples.

### **Geophysical Technology (May 2, 9:30 - 12:00)**

From gathering premium quality seismic data and transmitting it back to the processing center as quickly and

inexpensively as possible to the sophisticated imaging techniques that are required to accurately delineate a reservoir, this session spotlights the application of diverse geophysical technologies to maximize exploration and production efficiency.

### **4D Seismic: Evaluating Reservoir Dynamics (May 3, 9:30 - 4:00) co-sponsored by AAPG and SPE**

Karl Berteussen of PGS will relate progress in 4-D acquisition technology and the impact on field development risks and economics. Roger Anderson of Columbia will illustrate the economics of 4-D reservoir management with case histories. Papers, which will emphasize business relevance, will cover acquisition, processing, determination of resolution by stochastic simulation, calibration of seismic, well, and field performance data, AVO effects linked to fluid movement and pressure changes, and using 4-D seismic to optimize field simulation and development.



# SEG 2000 International Exposition & 70th Annual Meeting

**For more info:**

tel +1.918.497.5500  
fax +1.918.497.5557



**SEG/Calgary 2000**  
*Focus on the Future*

## **EXHIBIT SPACE AVAILABLE**

**Society of Exploration Geophysicists**  
Calgary • August 6 - 11

**Explore the world's largest marketplace of geophysical technology and services.**

Join an estimated 10,000 geoscientists in Calgary to "Focus on the Future" of the latest acquisition, processing, and interpretation technologies and methods. Survey more than 500 technical presentations and approximately 300 exhibits displaying state-of-the-art products and services for the geophysical industry.

### **3 Ways to Register**

- Input online at <http://meeting.seg.org> (available after April 15)
- Use forms inserted in the "Annual Meeting Announcement" (available after May 1)
- Contact SEG Business Office and we will fax the forms to you after April 15

**Technical Papers Deadline FEB 15**  
**Advance Registration Begins APRIL 15**  
**Advance Registration Deadline JUNE 30** (for Reduced Fees)



# Annual Honors and Awards Banquet

## Thursday, April 27, 2000

### Lakeside Country Club

On **Thursday, April 27, 2000**, the GSH will host its Annual Honor and Awards Banquet in the Grand Ballroom of the Lakeside Country Club. Our special guests will be your friends who have 25 and 50 years of membership in the SEG along with this years GSH Honorary and Life Members. Bring your spouse and guest and enjoy cocktails (cash bar) from 6:30-7:15 p.m. in the Pine Lake Room. Then at 7:15 p.m., enjoy an elegant seated dinner and music. SEG President, William Barkhouse, will give the Presidential Address and assist GSH President, Pat Starich, in presenting the awards.

The cost for the dinner is \$30.00 per person, with pre-paid reservations necessary to accommodate the guarantee requirements of Lakeside Country Club. Make your check payable to the GSH and forward it by April 21st to Carmen M. Comis, c/o Paradigm Geophysical Corp., 1200 Smith Street, Suite 2100, Houston, TX 77002. Please reference "Awards Banquet" on your check.

**Menu**  
**Roasted Garlic Soup**  
**House Salad**  
**Breast of Chicken New Orleans**  
**Wild Rice**  
**Baby Belgium Carrots**  
**Ices and Fresh Berries**

I-10 Katy Freeway		
	Memorial	
Lakeside Country Club	Briar Forest	Beltway 8
Wilcrest	Westheimer	

---

### RESERVATION FORM

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

Guest: \_\_\_\_\_

No of Guests: \_\_\_\_\_

Check No: \_\_\_\_\_

Make your check **payable to the GSH** and forward it by April 30th to:  
 Carmen M. Comis  
 c/o Paradigm Geophysical Corp.  
 1200 Smith Street, Ste. 2100  
 Houston, TX 77002

Please reference "**Awards Banquet**" on your check.

# Annual Honors and Awards Banquet

Thursday, April 27, 2000 • Lakeside Country Club

## SEG 50 YEAR HONOREES

Elwin M. Peacock  
Lee H. Price  
Vernon E. Whitney  
Cecil Hagen

Richard A. Baile  
John M. Donna  
John W. Green

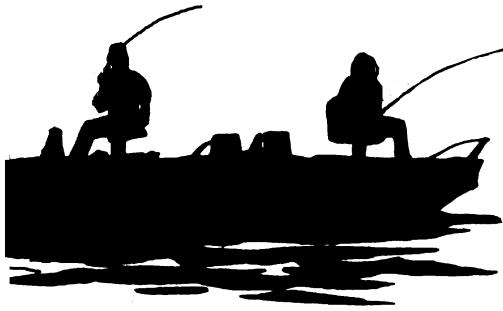
E. E. Cook  
Wm. E. N. Doty  
John J. Wallace

## SEG 25 YEAR HONOREES

A. T. McCarroll  
Albert Timothy Cejka  
Allan Trevor Long  
Aloke K. Mathur  
Amalendu Gupta  
Andrew Edward Hannan  
Andrew G. Bittson  
Benjamin Cyrus Lockman  
Bradley Raoul Pitney  
Bruce Hastings  
Carl Oscar Berglund  
Carl W. Kuhnen, Jr.  
Charles Randall Schott  
Chiung-Chuan Cheng  
D. Charles Menut  
Daniel Robert Negri  
Daryll W. Williams  
David B. Dobrzykowski  
David C. Crane  
David D. Ryan  
David H. Johnston  
David Wayne Reinkemeyer  
Denis Joseph Haydel, III  
Donald Martin Clement  
Donn McGuire  
Edward R. Shaw  
Francis Ariganello  
Frederick Spiegelberg  
Gerard Joseph Beaudoin  
Gregory L. Warren  
Gregory Paul Smith  
Ian M. Threadgold  
Jack Dee Downing  
Jack Douglas Stonebraker  
Jack L. Krasin  
James B. Coffman

James C. Eckert  
James C. Laughry  
James C. Waugaman  
James Douglas Huggard  
James Edward Wolfe  
James Scott Schuelke  
Jay Richard Byerly  
Jerome Thornburg  
Jesus Antonio Bilbao  
John A. Walker  
John Edward Krueger  
John Frank Joity  
John G. Elliott, Jr.  
John H. McKee  
John P. Dorrier, Jr.  
John William Bissell  
John William Stevens  
Joseph L. Wimmer  
Joseph M. Mills, Jr.  
Katherine R. Daus  
Keith H. Wrolstad  
Kenneth A. Ortmann  
Larry Wayne Altman  
Lawrence C. Morley  
Michael A. Graham  
Michael Anthony Kowalski  
Michael J. Keyes  
Michael L. Ammerman  
Michael Sidney Lansford  
Nancy C. Talley  
Neil Lewis Smith  
Nicolae Moldoveanu  
Peter John Nordstrom  
Radford P. Laney  
Randolph E.F. Pepper

Randy L. Carlson  
Richard D. Chimblo  
Richard Jay Castle  
Richard S. Suggs  
Richard Scott Dow  
Rick Robert Schmid  
Ricky L. Workman  
Robert E. Klenz  
Robert Edward Bierley  
Robert F. Talley  
Robert Parker Brown  
Robert Steven Dammer  
Ronald Alan Bain  
Ronald Clyde Fiske  
Ronny J. McWhorter  
Ruben Dario Martinez  
S. H. Hentschel  
Stephen David Burgess  
Stephen Eric Foster  
Stephen Hull Wood  
Stephen P. Mitchell  
Steven Allen Markley  
Steven M. Tobias  
T. Edward Clee  
Terry R. MacShane  
Thai Binh Nguyen  
Thomas Sherald Sherman  
Tommie D. Rape  
Tse-chuang Hu  
Veronica Virginia Cottingham  
Wayne R. Greaves  
William A. Silk, Jr.  
William E. Phillips  
William Nolan Barkhouse  
William Thomas Louder  
Wilson Glen Groen



# 7th ANNUAL GSH/HGS/HAPL BASS TOURNAMENT

April 1 & 2, 2000

This year the 7th Annual GSH/HGS/HAPL Bass Tournament will once again be held at Harbor Marina on Toledo Bend Reservoir. We are looking forward to an even bigger and better weekend of fishing fun and friendly competition along with the traditional Saturday Night Fish Fry with door prize drawing that evening.

Prizes will be awarded for overall first, second, and third place team total weight of black bass as well as individual GSH, HGS, HAPL, and Guest prizes for biggest bass caught from each group. A Big Bass Pool for each day will be available as well. Each participant will be provided with a copy of the specific tournament itinerary, rules sheet, and prize breakdown with their tournament registration. For more information please contact:

<b>Greg Doll (HGS &amp; GSH)</b>	<b>(713) 658-8096ext11..Office</b>	<b>(713) 951-0343..Fax</b>
	<b>E-Mail to: <a href="mailto:gqdoll@msn.com">gqdoll@msn.com</a></b>	
<b>Bill Zwiener (HAPL)</b>	<b>(713) 650-0903..Office</b>	<b>(713) 650-3547..Fax</b>

Once again, Harbor Marina has reserved a block of rooms for our tournament and several mobile homes are available as well. To make reservations, call (409) 625-4912 and be sure to mention that you are participating in this tournament. The rates are reasonable and there is a limited number of rooms available so reserve your accommodations as soon as possible! There are also other accommodations available in the area as well.

Corporate and individual contributions are appreciated and will be acknowledged on a sponsor board at the weigh in station and in the respective organization newsletters following the tournament. This is a great way to entertain friends, business associates, and clients, so spread the word!

-----  
GSH/HGS/HAPL BASS TOURNAMENT REGISTRATION FORM

NAME: \_\_\_\_\_ AFFILIATION: \_\_\_\_\_

ADDRESS: \_\_\_\_\_ PHONE: \_\_\_\_\_

PARTNER: \_\_\_\_\_ AFFILIATION: \_\_\_\_\_

PHONE-OFFICE: \_\_\_\_\_ PHONE-HOME: \_\_\_\_\_

E-MAIL: \_\_\_\_\_

Please clip this form and return it with your payment, make your check for \$50.00 per contestant payable to:

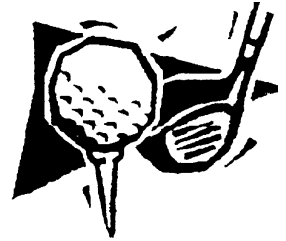
**GSH/HGS/HAPL BASS TOURNAMENT and Mail to:**  
**Mr. Bill Zwiener, Jones & Zwiener, Inc., 1010 Lamar, Suite 650, Houston, Texas 77002**

Registration Fee: \$ \_\_\_\_\_ + Sponsor Contribution: \$ \_\_\_\_\_ =

**TOTAL \$ \_\_\_\_\_**



# Golf Tournament and Dinner Geophysical Society of Houston



DATE: Monday, May 24, 2000	FORMAT: Four Man Florida Scramble
PLACE: Kingwood Country Club	COST: \$115.00 Members and Guests
TIME: 9:30 AM Registration 11:30 AM Tee off (Shotgun)	DEADLINE: April 15, 2000

### MAIL ENTRIES TO:

Fairfield Industries • 14100 Southwest Freeway, Suite 600 • Sugar Land, TX 77478 • Attn: George Lauhoff

### MAKE CHECKS PAYABLE TO:

Geophysical Society of Houston

### GOLFERS READ CAREFULLY

The three courses at Kingwood are available to the first 432 entrants. No entry will be accepted until the entry form and fees are received in full. NO EXCEPTIONS!!!

MULLIGANS \$5.00 EACH (MAX. 2/PERSON) AVAILABLE AT CHECK-IN

If you are not playing golf but want to join your friends attending the dinner following the tournament, please send in \$15.00 per person to cover the cost of the dinner. Make a note at the bottom of the check "Dinner Only". These checks should also be payable to the Geophysical Society of Houston.

## GOLF TOURNAMENT FORM

You may select your own foursome, if not you will be assigned to a group. The first name listed will be considered the TEAM SPOKESPERSON.

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

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

Circle: Member Guest

Circle: Member Guest

Company: \_\_\_\_\_

Company: \_\_\_\_\_

Phone: \_\_\_\_\_ HDCP: \_\_\_\_\_

Phone: \_\_\_\_\_ HDCP: \_\_\_\_\_

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

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

Circle: Member Guest

Circle: Member Guest

Company: \_\_\_\_\_

Company: \_\_\_\_\_

Phone: \_\_\_\_\_ HDCP: \_\_\_\_\_

Phone: \_\_\_\_\_ HDCP: \_\_\_\_\_

Course Preference: ISLAND LAKE MARSH DEERWOOD  
(Circle One)

# APRIL 2000

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
						<b>1</b> Bass Tournament  SPE Applied Technology Workshop
<b>2</b> Bass Tournament  SPE Applied Technology Workshop	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b> HGS GeoViz Workshop	<b>8</b>
<b>9</b>	<b>10</b>	<b>11</b> Auxiliary Spring Special Event (Round Top)	<b>12</b> GSH Technical Breakfast	<b>13</b> NEWSLETTER DEADLINE  Spring 2000 Symposium and Fest	<b>14</b>  Spring 2000 Symposium and Fest	<b>15</b>
<b>16</b>	<b>17</b>	<b>18</b> GSH Technical Luncheon	<b>19</b> Data Processing SIG	<b>20</b>	<b>21</b>	<b>22</b>
<b>23</b> <hr/> <b>30</b>	<b>24</b>	<b>25</b> Symposium on Applied Multi-Component Reflection Seismic	<b>26</b> Symposium on Applied Multi-Component Reflection Seismic	<b>27</b> Annual Awards Banquet	<b>28</b>	<b>29</b>

## GEOPHYSICAL SOCIETY OF HOUSTON

7457 HARWIN DRIVE, SUITE 301  
HOUSTON, TEXAS 77036  
(713) 785-6403



ADDRESS SERVICE REQUESTED

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