



Geophysical Society of Houston

VOL. 35, NO. 10

NEWSLETTER

MAY 2001

HGS Dinner Meeting

Date: Monday, May 7, 2001
Location: Westchase Hilton,
9999 Westheimer

Key Patterns of Corporate Organization and Culture Influencing Exploration Performance
Peter R. Rose and Gary P. Citron
Rose & Associates, LLP.
Austin, Texas

Recent independent studies document that companies managing petroleum exploration using (1) integrated geotechnical prospect and play assessment; (2) systematic probabilistic risk analysis; and (3) venture selection through centrally coordinated portfolio management clearly outperform companies that do not. This has naturally prompted great interest in sophisticated mathematical and software tools and systems that enable routine application of portfolio theory, real options theory, and decision analysis.

To be effective, however, such advanced management tools must rely on objective geotechnical input — that is,

the estimates of key geotechnical parameters must be free of bias. Outperforming companies reduce bias through disciplined linkage of integrated geotechnical work, probabilistic risk analysis, and applied learning from post-drill well reviews. Then they select those ventures which optimize portfolio performance, consistent with acceptable risk. But the primary problem remains the input — not the tools — and firm, consistent process implementation is essential, reinforced by positive incentives.

Analysis of many active E and P companies indicates that organizational and cultural patterns of underperforming firms encourage biased geotechnical input, and discourage centrally coordinated portfolio management. Subjectivity, intuition, salesmanship, and geopolitics flourish in the absence of consistent probabilistic procedures, thus promoting persistent motivational bias, mostly as prospect overestimation. Objective and consistent assessment of predictive performance is neither required nor evaluated. Decentralization of ex-

ploration decision-making into autonomous business units necessarily reduces the selective power of portfolios, and allows inferior projects from some business units to replace superior projects from others. Incentives often work at cross-purposes to efficient portfolio performance and correct corporate goals. The result is general underperformance relative to centrally coordinated E&P firms.

Companies who purposefully undertake to improve persistent exploration underperformance should anticipate (and encourage) substantial changes to both their organizational structure as well as their prevailing professional culture, if they are to succeed.

BIOGRAPHIES

PETER R. ROSE (BS, MA, PhD, Geology, University of Texas at Austin) is a certified petroleum geologist who was Staff Geologist with Shell Oil Company; Chief, Oil and Gas Branch of the U.S. Geological Survey; and Chief Ge-

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For more information about the Saltwater Tournament, visit our website at www.gsh.seg.org/ftrules.html Registration Form on page 13

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Editor's Note

To insure your information reaches the GSH society members in a timely manner it must appear in the in the appropriate newsletter issue. Please note the following deadlines and plan your function's publicity strategy accordingly. Items must be received on or before the corresponding deadline date. Materials may be sent to patty@diamondg.com or faxed to 713/783-9780. If you have any questions please call Patty Cardwell at 713/783-7837.

2001 GSH Newsletter Deadlines

Issue August 2001
Deadline .. July 13, 2001

The GSH would like to thank the following companies for their support as corporate members:

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Thank you for your supporting the GSH!

For information on how to become a corporate member or to endow a scholarship with an organization's name please contact Pat Starich (281) 423-5036 or the GSH office at (713) 785-6403.

GeoEvents Calendar

Make reservations by e-mail at 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	601
Data Processing SIG	602
Interpretation SIG	603
Reservoir SIG	604
Potential Fields SIG	605
Environmental Applications SIG	606
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Dinner Meeting continued from page 1

ologist and Director of Frontier Exploration for Energy Reserves Group, Inc. [now BHP Petroleum (Americas), Inc.]. In 1980, he established his own independent oil and gas consulting firm, Telegraph Exploration, Inc. His clients include most major U.S. companies and many prominent independents as well as many international firms and state oil companies. Dr. Rose has explored for oil and gas in most North American geological provinces and has published and lectured widely on U.S. resource assessment, basin analysis, play development, prospect evaluation, and risk and uncertainty in exploration. He has taught extensively at the professional level and was a 1985/1986 AAPG Distinguished Lecturer. Since 1989 he has been deeply involved in design and implementation of comprehensive exploration risk analysis systems for executive management of many major oil companies, operating in both the Domestic and International theaters. His courses emphasize the link between geoscience and making money in the business of petroleum exploration. Dr. Rose was 1996/97 President of AAPG's Division of Professional Affairs, and received the coveted Parker Memorial Medal from the American Institute of Professional Geologists in 1998. He is the Managing Partner in a newly established consulting firm, Rose & Associates, LLP (R&A).

GARY P. CITRON (BS, Geology, State University of New York at Buffalo; MS Geology, Cornell University; Ph.D., Geology and Geophysics, Cornell University) joined Telegraph in February 1999 after 19 years with Amoco. He is a certified Petroleum Geologist who worked at Amoco as a geophysicist, supervisor, manager, planner and consultant. In his last assignment, with Amoco's Prospect Quality Team, he worked with exploration teams worldwide for four years, helping them assess prospect component ranges and associated chance factors. Dr. Citron has developed expertise in consensus-building in risk assessments and performance tracking. He also coordinated the yearly post appraisal of the exploration drilling program, which helped develop, disseminate and institutionalize learning throughout the exploration department. Prior to that, he coached Amoco's managers on planning, exploration performance measurement and work process issues. He has worked most of the U.S. domestic trends as an explorer and manager, with special emphasis on the Gulf of Mexico. In 1999 he was selected by the AAPG to serve in their Visiting Geologist Program. While at Amoco Dr. Citron actively mentored younger geoscientists on prospect measurement and assessment. He is a Partner in Rose & Associates, LLP (R&A).

SIG Announcements

DATA PROCESSING

Theme: Velocity Estimation

Speaker 1: Denes Vigh, Paradigm Geophysical

Title: Velocity analysis and model building in 3-d thrust belt case history

Speaker 2: Hua-wei Zhou, University of Houston

Title: Multi-scale tomography: An example of imaging subducted Indian lithospheric slab beneath the Tibetan Plateau.

Date: Wednesday, May 16, 2001

Time: Social 4:30
Presentations 5:00 to 6:30

Organizers: Walter Kessinger,
Paradigm Geophysical
Helen Delome, PGS

Location: To be determined.
Contact Karl Schleicher
via e-mail:
karl_schleicher@bigfoot.com

Cost: None

Abstract 1:

Velocity analysis and model building in 3-d thrust belt case history

Thrust belts remain of great interest to the petroleum industry as large reserves of oil and gas remain undiscovered due to structural complexity and the generally poor quality of the seismic data. Pre Stack Depth Migration plays a significant role in imaging many of these complex reservoirs. Depth imaging, in general, includes a systematic procedure for velocity estimation, model building, model refinement, imaging and model verification. There are two general classifications of these procedures; model based (structurally dependent) and grid based (structurally independent). In the case of thrust related geological settings, where seismic velocities are controlled by layer characteristics, the model based approach is generally used. The initial velocity model is built in time, converted to depth, and then is updated by tomographic procedures requiring several iterations of velocity picking. By

minimizing the moveout on the CRP gathers, the final velocity model is derived and used for imaging the entire volume in depth.

Biography:

Denes Vigh has an M.S in Geophysics from the Technical University of Miskolc (Hungary). He was group leader for Hungarian Exploration Co (1983-1987), project manager for CGG (1987-1991), and Supervisor and remote center DP manager for Schlumberger Geco-Prakla (1991-1997). He is currently V.P Geophysical Services at Paradigm Geophysical. He received the best paper award at the RMAG convention in Denver 2001 for "A 3D PSDM case history in a thrust belt; Quiriquire Block, Eastern Venezuela Basin".

Abstract 2:

Multi-scale tomography: An example of imaging subducted Indian lithospheric slab beneath the Tibetan Plateau.

Seismic traveltimes tomography is one of the leading methods of velocity estimation in the presence of lateral velocity variations and ray bending. This tutorial talk will focus on a multi-scale tomography (MST) that is devised to handle uneven ray coverage and mixed determinacy that occur in most tomographic applications. The main idea of MST is to parameterize the model volume using overlapping grids or cells of different sizes, and invert for the medium properties of different wavelengths simultaneously. This wavelet approach is similar to that of Fourier decomposition. The benefit is to have the proper cell size or grid spacing for given ray coverage at each model position.

An example of the MST is given for establishing the 3-D velocity model of the deep Earth structure using earthquake data. The value of the method is illustrated with images of the subducted Indian lithospheric slab beneath nearly the entire Tibetan plateau and the indication to the cause of the destructive earthquake in southwestern India on January 26, 2001.

At the end of this talk, a review will be given on challenges and potential

solutions to tomographic application in exploration problems, such as event picking and the use of refraction, reflection, and converted wave arrivals.

Biography:

Hua-wei Zhou started his science career at age 18 when he joined geologic survey of Jiangsu Province, China, in 1975. He received a BS in mathematics from China University of Geosciences in 1980, a MS in geology from California State University Long Beach in 1984, and a PhD in geophysics from Caltech in 1989. He joined the University of Houston in 1989, and now is an associate professor at Geosciences Department and associate director of the Allied Geophysical Lab. He worked at Exxon Production Research from 1997 to 1998. Hua-wei joined GSH in 1990 and served twice as the Academic Liaison. He is a member of SEG, GSH, and AGU, and authored over 30 journal papers and 70 abstracts in exploration geophysics and solid Earth geophysics. He is happily married with two teenage kids.

RC-SIG NEWS

The next RC-SIG meeting will be held May 9th and 10th at the Virtual Environment Application Center (VRAC) at Iowa State University (ISU) in Ames, Iowa. ISU has the only publicly known C-6 in North America (a six wall CAVE(TM) or Computer Aided Visualization Environment).

Those interested in following the organization committee meetings, seeing results from previous meetings, or becoming involved in the RC-SIG can do so at <http://www.walden3d.com/rcsig>. Those interested in presenting case histories or who have questions about the RC-SIG contact the GSH representative, Roice Nelson at rnelson@walden3d.com or call 281.579.0172.

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POTENTIAL FIELDS

The Integral Role of Potential Fields Data in Seismic Prestack Depth Migration and 3D modeling of basalts, Offshore Brazil

Brian Anderson and Marianne Parsons, Fugro-LCT, Inc.

Co-authors: Qingbo Liao, Paradigm Geophysical, Greg Lyman & Mark Weber, Fugro-LCT, and Tore Undli, Fugro Geoteam

Place: HESS building, 5430 Westheimer, Houston
Date: Thursday, May 24, 2001
Time: 5:30 Social Hour;
6:30 Dinner;
7:30 Presentation
Cost: \$23.00

Contact: Afif Saad, Chair - GSH Potential Fields Group, at 281-342-8575 (AfifHSaad@netscape.net) or Bob Van Nieuwenhuise, Co-Chair at 281-679-2208 (Bob.VanNieuwenhuise@pgs.com) by Tuesday, May 15, 2001 for reservations. E-mail is best because we can confirm your reservation. Please HONOR your reservation! We must bill no-shows!

Abstract:

Part I: Enhanced Depth Imaging

As a rule of thumb well data, when available, is always used to constrain the velocity model as part of advanced seismic processing. However, another valuable source of constraint for the velocity model, potential fields data, all too often is not incorporated into advanced seismic processing techniques. Advanced seismic processing techniques, such as pre/post-stack depth migration and ray path modeling, are often used in a timely and cost effective manner to minimize exploration risk. Numerous publications have shown excellent examples of the significant improvement in geologic interpretations that can result from quality advanced seismic processing products. The velocity model is usually the most important variable in determining the soundness of products derived from advanced seismic processing techniques. Additional earth model

constraints or enhancements to the velocity model can provide significant value to advanced seismic processing products.

In many geologic settings high resolution potential fields data provide valuable information for the delineation of structures that seismic sometimes has difficulty imaging. Complex salt bodies, volcanics, and near vertical contacts such as diapirs and steep faults are all examples of geologic settings where potential fields are at their best. Significant lateral velocity, density and susceptibility contrasts typically result in highly diagnostic gravity and magnetics signatures for these types of geologic features. Unfortunately, these same geologic features have significant lateral velocity contrasts can cause degradation in seismic data quality.

By combining geophysical disciplines the velocity model can be constrained and enhanced. Integrating the velocity/density relationship derived from seismic/gravity data, with the additional information obtained from magnetic and well data, results in an earth model that honors multiple independent geophysical and geologic data sets. This type of multiple discipline integrated earth model typically produces a velocity model that is significantly better than a velocity model obtained from the isolated analysis of seismic data.

An integrated earth model was developed, using both seismic and potential fields data, to show the benefits derived from using a multiple discipline constrained velocity model for the advanced seismic processing technique of pre-stack depth migration (PSDM).

Part II: 3D Modeling of Volcanics

The physical nature of near surface flood basalts can make geophysical imaging and geological understanding of the sub-surface quite difficult. An integration of potential methods with 2D seismic was used in the 3 dimensional modeling of Abrolhos Bank, offshore Brazil, where no definitive mapping of the extents or thicknesses of the near surface basalts has been documented. Recent exploration interest in the area with the 3rd bidding round has spurred a number of geophysical surveys in the area and has provided ideal datasets for further examination of this geologically

complex area.

Seismic data alone did not provide conclusive evidence as to the extents and thickness of the flood basalts, due not only to the physical nature of the basalts, but also to the gas chimneys and difficult geology found in the study area. The re-iterative analysis of the interpreted seismic data, magnetic depth estimations and 3 dimensional gravity inversions helped create a more reliable geological model of the study area.

This case study underlines the importance of integrating multiple types of geophysical datasets for obtaining the most comprehensive subsurface models.

Biographies:

Brian Anderson is VP of Marketing of Fugro-LCT, Inc. and has been with the company since 1987. Mark Weber is a Senior Interpreter and President of Fugro-LCT.

Greg Lyman is Interpretation Geophysicist with Fugro-LCT, and manages software support.

Qingbo Liao is Sr. Geophysicist & Ph.D. for Paradigm Geophysical, and a specialist in seismic depth migration.

Marianne Parsons is Geophysicist with the airborne gravity group at Fugro-LCT, and in the past worked in 3D marine seismic processing, gravity, magnetics and radiometric processing.

Tore Undli has been involved in the interpretation of the Fugro-Geoteam AS offshore Brazil seismic datasets.

Authors can be reached for comments or questions at info@lct.com.

Geophysical Society of Houston

Officer Candidates for the

GSH 2001/2002 Executive Committee

President Elect



Joe Alcamo

Joe Alcamo received his B.S. degree in Geology from Southern Illinois University. He took graduate geophysics courses and earned his MBA in Finance from the

University of Houston.

His exploration career began in 1970 with Texaco working as a geophysicist, first in the Alaska division, then internationally in the Latin America group in Bogota, Colombia. Joe continued his international career with Pennzoil working China and the North Sea, with Tenneco working 3-D seismic projects and with Pluspetrol International working Africa and South America. Domestically, he has had several gas discoveries in offshore Gulf of Mexico while working for Snyder Oil and Coastal Oil & Gas Corporation and evaluated the exploration potential of 200 blocks in deepwater areas of the Mississippi Canyon.

During his career, Joe has been successful in finding commercial oil and gas fields, both onshore and offshore, worldwide, for major, mid-sized and independent oil and gas companies. Currently, Joe is working as a consulting geoscientist for an independent oil and gas company.

Joe has an extensive background generating successful prospects by integrating geology and geological concepts into all of his evaluations and prospects and has major discoveries and filed extensions in various geologic basins. He continues to learn and apply the latest technologies by using GeoFrame, Landmark, SMT workstations and PC computers to unravel the hydrocarbon potential of areas worked.

Alcamo has served as co-chair and chair of the HGS/GSH Bass Tournament. He was elected treasurer for the

GSH for the 1992-93 term and served as Finance Committee chair in 1993-94 and 1994-95. He also served as second vice president for 1994-95. Joe has been actively involved with the SEG, AAPG, GSH and HGS throughout his career and would be honored to serve the GSH as President Elect for the upcoming term.



Dan Ebrom

Dan Ebrom is a geophysicist with BP Amoco. Formerly with Texaco's Upstream Technology group, he has continued to work primarily on new exploration and

production seismic technologies, especially shear-wave seismic interpretation and time-lapse seismics. Earlier, Dan was the acting director of the Allied Geophysical Laboratories at the University of Houston, where he was also a Research Assistant Professor in the Department of Geosciences. He has previously worked for Cities Service Company, Digicon, and C.G.G.

Dan served the GSH in the capacity of 1st Vice President during 1998-1999. As chair of the GSH Continuing Education Committee, he coordinated the GSH Spring Symposia for 1996-1998. While chairing the Technology Transfer committee, he arranged for donated back issues of Geophysics and other geophysical journals to be sent to developing geophysical university programs. Currently, he serves the GSH as a Section Representative.

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 Houston presentations of the SEG Distinguished Instructor Short Course. He was the co-chair of the 1999 SEG Development and Production Forum on time-lapse geophysics, held in Kananaskis. He

is the editor of the SEG's reprint book series, and serves as a reviewer for Geophysics and Geophysical Prospecting.

For the last 5 years, Dan has served on the geophysical organizing committee for the Offshore Technology Conference, and this past year has served as the vice-chair of the committee. He will be co-chairing a session on seismic pore pressure prediction at the upcoming May meeting. He has also chaired the Detection and Prediction teams of the DeepLook industrial research consortium (1997-1999).

First Vice President



Hua-wei Zhou

Hua-wei Zhou started his science career at age 18 when he joined geologic survey of Jiangsu Province, China, in 1975. He received a BS in mathematics from

China University of Geosciences in 1980, a MS in geology from California State University Long Beach in 1984, and a PhD in geophysics from Caltech in 1989. He joined the University of Houston in 1989, and now is an associate professor at Geosciences Department and associate director of the Allied Geophysical Lab. He worked at Exxon Production Research from 1997 to 1998. Hua-wei joined GSH in 1990 and served twice as the Academic Liaison. He is a member of SEG, GSH, and AGU, and authored over 30 journal papers and 70 abstracts in exploration geophysics and solid Earth geophysics. He is happily married with two teenage kids.

Candidate Bios continued on page 7



James S. Schuelke

Jim received a BS (1972) in geology from the University of Wisconsin-Platteville and attended postgraduate studies in geophysics at Univer-

sity of Houston. He started his career with Geophysical Service, Inc., and has worked for Superior Oil, and Mobil Oil. He is presently a Senior Research Associate with ExxonMobil's Upstream Research Company in Houston, Texas, as a member of a research team that develops new geophysical analysis and interpretation technologies. Recent work has been in the development of techniques for the prediction of rock and fluid properties using seismic attribute data and neural networks. His research interests include seismic attributes, neural networks, production geophysics, and time-lapse geophysics.

Jim has been very active at both the national and local levels of the SEG organization. He has served as the Dallas Geophysical Society Second Vice President and President. Jim is currently a member of the SEG Development and Production Committee and the SEG Interpretation Committee. In addition, Jim has provided technical review of many publications for Geophysics and the SEG Annual Meetings. Jim is a member of the SEG, AAPG, DGS and GSH.

Second Vice President



Ronald W. Ward

Ron Ward is currently Director of Interpretation Studies for Geophysical Development Company, where he has worked since last year. Prior to that,

he worked for Burlington Resources (successor to LL&E) for 11 years as Corporate Geoscience Consultant. From 1982 to 1988, he worked at Sohio Petroleum (now BP) as Manger of Seismic Research. He spent eight years at the

University of Texas at Dallas as Associate Professor and Director of the Center for Lithospheric Studies. Fresh out of graduate school, he worked at Amoco Production Company Technology Center in Tulsa. He holds a Ph.D. in geophysics and B.S. in applied mathematics both from M.I.T. He has served the geophysical community as Technical Program Chairman and General Chairman of the SEG Annual Meeting in New Orleans during his days with LL&E.



Bob Parker

Bob Parker received his BS in Fundamental Science / Geology from Lehigh University in Bethlehem, PA, in 1975. After a short military obligation,

he attended the University of Arizona, receiving his MS in Geophysics in 1978. His on the job oil and gas exploration training was completed during his three-year stay at Conoco. From 1981 to 1990 he was employed as a geophysicist / manager of geophysics at Ladd Petroleum in Houston. During the mid 80's Bob co-wrote and presented several papers related to Ladd's successful Mid Gulf Coast Expanded Yegua exploration program. In 1990 he joined Yuma Petroleum as a geophysical consultant focusing on Texas RR Districts 2 and 3. From 1995 to 2000 he was a consultant on retainer with Austin based United Oil and Minerals, Inc. Since 1995, Bob has had his own company, Findmor Natural Gas, Inc., and currently he is consulting and generating prospects for several clients and partners.

Bob has been a member of SEG, AAPG, GHS, and HGS for over 20 years. The Geophysical Society of Houston is a great organization and Bob will do his best to uphold the standards as well as look for ways to improve the Society if elected.

Secretary



Jim Wood

Jim Wood began his geophysical career with a summer job as a driller's helper for PGC in 1962. He graduated from the Colorado School of Mines with a degree

in Geophysical Engineering in 1963 and joined Texaco on a company field crew working on the Navajo Indian Reservation. He was then transferred to Texaco's Casper playback center where he computed 100% records and migrated data. After military service at the Army's Cold Regions Research and Engineering Lab in Hanover, NH, Jim moved to Houston in 1966 with Texaco in their new digital processing center, where he processed data from a variety of onshore and offshore projects. He was transferred to Denver in 1972 and was given a variety of assignments that ranged from seismic interpreter to a position on the General Manager's staff.

Jim also worked for Petro-Lewis Corporation and Trend Exploration Ltd. in Denver until he was transferred back to Houston in 1988 with Trend. After a company downsizing, he began work for Fina Oil and Chemical Company - primarily in the East Texas, North Louisiana, and Mississippi Salt Basins. He has been a geophysical consultant with offices at Earthfield Technology since the last downsizing in 1999.

Jim held several volunteer offices with the Denver Geophysical Society and was President in 1977. He was Treasurer of the 36th Annual Midwest SEG Meeting in Denver and is Membership Directory Editor for the GSH in 2000 and 2001.



Karl Schleicher

Karl Schleicher received a Mathematics degree from the University of Houston and an Operation Research degree from the University of Texas at Dallas. He

began his career processing some of the industries first marine 3-D seismic surveys at Geophysical Service Incorporated in 1975. He worked in seismic processing, software testing, navigation processing, and research at GSI, Halliburton Geophysical Services, and Western Geophysical. In 1996 he joined Geophysical Development Corporation where he is the Director of Research.

Karl is a long-standing member of SEG and the Geophysical Society of Houston. He has presented papers at various industry conventions including SEG, EAEG, and CSEG. He has served on the SEG technical committee organizing the convention technical sessions. He is the chairman of the data processing special interest group of the Geophysical Society of Houston, which organizes monthly technical presentations.

Treasurer



Donna Sperrazza Sisak

Donna Sisak graduated from the University of Texas in Austin in 1980, receiving a B. S. in Biology, with minor in Geology and from the University

of Houston in 1982 with a B. S. in Geophysics.

Following graduation, Donna joined Exxon U. S. A. in Houston. She started her career in the Seismic Data Processing Group at the Exploration Data Processing Center. Her processing experience included coordinating 2D and 3D seismic marine and land projects for the Western, Eastern and Offshore groups. She has also provided computer support for Corporate Recruiting and Planning and for Purchasing and Information Systems groups at Exxon U. S. A.

For the past 8 years, Donna has focussed her career in the Upstream Technology Group at ExxonMobil Exploration Company in Geophysical Applications. This led to an overseas assignment with Esso Exploration UK, handling the consolidation of their Seismic Interpretation packages. Following

the merger of ExxonMobil, she has been dedicated to the Standardization and Implementation team to plan and implement the migration of all heritage corporate seismic data to one common seismic interpretation system. Currently she supervises the Geophysical User Support Group providing application support to ExxonMobil offices worldwide.

Donna has been active in the SEG and GSH since 1982. She was Assistant Newsletter Editor from 1987-88, GSH Newsletter Editor from 1988-89, GSH Treasurer from 1989-90, Christmas Party Chairperson 1994-95, and elected Second Vice President for the 1995-96 term (she was transferred to the UK and could not complete this term). She has also been involved with the GSH/HGS Shrimp Boil for over 10 years.



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

Frank Levin

Frank Levin joined the Carter Oil Company's geophysical research group in 1949 after receiving a PhD degree in physics. Except for a year's leave of absence to become assistant director of Columbia University's Hudson Laboratories, he remained with Carter's successor, Exxon Production Research Company, until August, 1986, retiring as a Research Scientist. He became a consultant for Western Geophysical in 1988, following a strong hint from his

wife that to preserve her sanity, he get out of the house. He retired from Western the end of 1999.

Frank was SEG's Editor, 1968-1971, and served on SEG's Publication Committee for several years. In 1984 he shared the Reginald Fessenden Award and has received the Maurice Ewing Gold Medal. Twice he shared an award for the best paper in "Geophysics." Frank is an Honorary Member of both the SEG and the GSH. He worked on the Manhattan Project during World War II and has been a member of several U.S. government committees.

Auxiliary Wraps Year at River Oaks Country Club

Friday, May 11, 2001 is the final event of this year for the Geophysical Auxiliary. The luncheon will be followed by our guest, Lucia Bettler, owner of Lucia's Garden. She will introduce us to the art of Aromatherapy. Come learn how to choose which oils will cheer you, relax you and rejuvenate you.

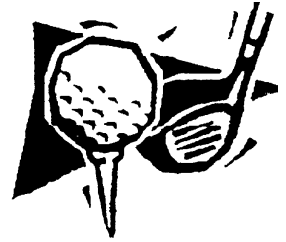
Join us on the balcony overlooking the fountain, adjourn inside for a sumptuous luncheon, and learn a little something too! Friends and fun are waiting for you at River Oaks Country Club on May 11th. The cost is \$20 for members.

For reservations or information contact Donna Parrish 281-859-8088 event chairperson.

For other Auxiliary information call Georgeann Massell 281-353-7894.



Golf Tournament and Dinner Geophysical Society of Houston



DATE:	Monday, May 21, 2001	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, 2001

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.

In Memory of Thomas A. Mazza

The professional community recently lost a gifted geophysicist, and we all lost a dear friend. Thomas A. Mazza, Senior Vice President of DDD Energy, Inc. (a subsidiary of Seitel, Inc.) died in a skiing accident on Saturday, March 10, 2001.

Tom graduated from Penn State University with a B.S. in Geology in 1979, and an M.S. in Geophysics in 1982. Tom began his career with Tenneco in the Rocky Mountain Region (Denver), and moved to International Exploration (Houston) in 1987. In January of 1989, Tom joined Marathon Oil at the Denver Research Center, where he pioneered the use of seismic attributes and visualization techniques for exploration, provided corporate training in seismic stratigraphy, and tremendously advanced the understanding of the Brae Field Complex, North Sea. Tom was one of the first to embrace and apply total data integration in a digital world.

Tom left Marathon in late 1993 for a brief stint with Enron Oil & Gas Company, then became Geophysical Manager with Presidio Oil, and later Exploration Manager. He joined DDD Energy as Manager of Geophysics in mid 1996. At DDD, Tom helped develop a very successful company by merging the science of 3-D seismic interpretation with the business of exploration geology, and advanced quickly to the position of Senior Vice President. Tom was a member of SEG, AAPG, and DGS.

Tom was a devoted husband and father, and is survived by his wife Peggy, and daughters Alyson, 14, and Danielle, 11. Tom brought vision, energy, integrity, and a larger-than-life smile to everything he did and everyone he touched. He will be greatly missed.

Donations may be sent to the Thomas A. Mazza Memorial Trust Fund to benefit the children, in care of Wells Fargo Bank, N.A., 2350 East Arapahoe Road, Littleton, CO 80122.

ANNUAL MEETING

and

Bar-B-Que

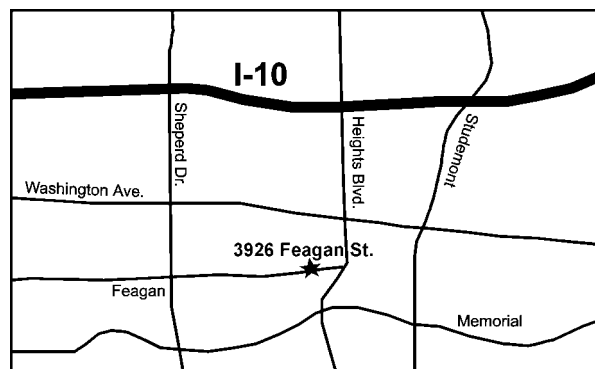
5:00 p.m. to 8:00 p.m. on Thursday, May 17, 2001

Come Enjoy A Great Evening - Welcome The New GSH Officers

NEW LOCATION: GARDEN IN THE HEIGHTS

formerly BAVARIAN GARDENS

3926 FEGAN
HOUSTON, TX 77007
713 - 880 -1065



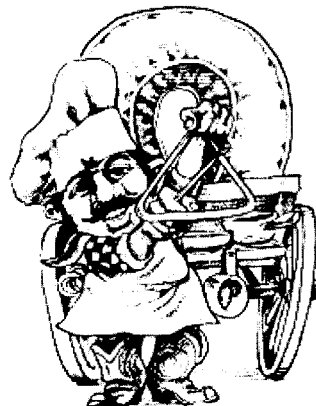
Tickets:

Only \$17.00 Each
If Purchased By May 15, 2001
\$20.00 Each At The Door

Note:

We Have To Guarantee The
Number Of Dinners, So You
Must Prepay To Be Guaranteed
Your Meal.

**RAIN
OR
SHINE**



WE WILL BE SERVING

- ☞ Bar-B-Que Brisket
- ☞ Sausage
- ☞ Chicken
- ☞ Beans
- ☞ Cole Slaw
- ☞ Bread
- ☞ Pickles
- ☞ Onions
- ☞ Draft Beer
- ☞ Soft Drinks
- ☞ Iced Tea

Annual Meeting and Bar-B-Que

Thursday, May 17, 2000

Name: _____ Phone: _____

Name: _____ Phone: _____

Number Tickets Desired: _____ X \$17.00 Each = \$ _____

Enclose Check Payable To: **Geophysical Society of Houston**

And Mail To: **7457 Harwin Drive, Suite 301 • Houston, Texas 77036 • (713) 785-6403**

Tickets Will Be Held At The Door. If Your Company Is Purchasing A Block Of Tickets -
Please Indicate Names On The Form To Eliminate Any Confusion At The Door.

Ticket Orders Must Be Received By May 15, 2001 to Obtain \$17.00 Price.

HOUSTON GEOLOGICAL SOCIETY PRESENTS

Overview of Exploration Risk Analysis for Managers

May 15, 2001

Auditorium, Shell Plaza, 910 Louisiana (Downtown Houston)

Description:

The seminar reviews key geotechnical principles involved with estimation of prospect reserves and chance of success, identifies key management issues, common misconceptions and pitfalls (as well as their consequences), and the inherent power of systematic RA methodology to generate drilling portfolios which optimize corporate goals and deliver on promised performance. It highlights the critical management tasks necessary to cause progressive improvement in exploration performance of E&P firms; and it addresses concerns about the constraints on management decision-making imposed by systematic RA procedures.

Who should attend:

Because the course integrates fundamental topics such as Uncertainty, Reserves Estimates, Chance of Success Predictions, Economic Measures, Portfolio Management, Profitability Forecasts, and Performance Tracking, we strongly encourage the participation of decision-makers with diverse backgrounds, such as Geoscience, Engineering, Finance, and Business Management

Instructors:

PETER R. ROSE (BS, MA, PhD, Geology, University of Texas at Austin) is a certified petroleum geologist

who was Staff Geologist with Shell Oil Company; Chief, Oil and Gas Branch of the U.S. Geological Survey; and Chief Geologist and Director of Frontier Exploration for Energy Reserves Group, Inc. (now BHP Petroleum (Americas), Inc.). In 1980, he established his own independent oil and gas consulting firm, Telegraph Exploration, Inc. His clients include most major U.S. companies and many prominent independents as well as many international firms and state oil companies. His courses emphasize the link between geoscience and making money in the business of petroleum exploration.. He is the Managing Partner in a newly established consulting firm, Rose & Associates, LLP (R&A).

GARY P. CITRON (BS, Geology, State University of New York at Buffalo; MS Geology, Cornell University; Ph.D., Geology and Geophysics, Cornell University) joined Telegraph in February 1999 after 19 years with Amoco. He is a certified Petroleum Geologist who worked at Amoco as a geophysicist, supervisor, manager, planner and consultant. Dr. Citron has developed expertise in consensus-building in risk assessments and performance tracking . He has worked most of the U.S. domestic trends as an explorer and manager, with special emphasis on the Gulf of Mexico. He is a Partner in Rose & Associates, LLP (R&A).

OVERVIEW OF EXPLORATION RISK ANALYSIS FOR MANAGERS - - REGISTRATION FORM

Name: _____ Company: _____

Address: _____ City: _____ State: _____

Phones: Home _____ Office _____ E-mail: _____

Amount sent (US \$) _____

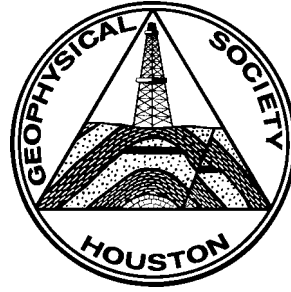
Note: Cost is \$75 members of organizations below and full-time students before May 8, \$95 for non-members before May 8, \$125 for registration after May 8 and at the door.

Membership (circle): HGS, GSH, SIPES, API Houston, SPE Gulf Coast, HAPL, SPEE Houston, SPWLA Gulf Coast

HGS/GSH Member No: _____

To reserve a seat, please return this form with your check payable to: HGS

Mail to: HGS Office —Attn: Overview of Exploration Risk Analysis for Managers Seminar
7457 Harwin, Suite 301 - Houston, Texas 77036-2190



SEG - GSH Spring Symposium 2001

Reservoir Resolution Through Comprehensive Use of Seismic Data Attributes

Dates: May 8, 2001

Location: Pavillion, 2500 N. Gessner, Houston, TX

Program: Seismic data attributes comprise not only the standard complex trace attributes, but AVO attributes, non-linear transformations, spatial attributes, velocity, and virtually any seismically-derived measurements that may shed light on the subsurface picture. Applying modern mathematical and computational techniques, such as neural networks and multi-variant analysis, coupled with the emerging visualization technology, the predicted characterization of reservoirs is becoming sharply resolved, and realistic. Topics to be addressed in the symposium include the following.

- * Lithologic and Pore Fluid Predictions
- * High Resolution Reservoir Imaging
- * Reservoir Modeling ... Fluid Substitution Techniques
- * Developments in Neural Network Classification
- * Case Histories with Technique Validation
- * AVO Attributes and their Applications
- * Well Log Prediction
- * Visualization Technology

Check out our website for more information and list of papers

For information:

Co-Chairman Mike Graul, phone: 713-465-3181; e-mail: symposium.info@texseis.com
Co-Chairman Tury Taner, phone: 713-783-5593; e-mail: mt.taner@rocksolidimages.com

1st ANNUAL GSH/HGS SALTWATER TOURNAMENT

Friday, June 22, 2001
Teakwood Marina, Village of Tiki Island
Galveston, Texas

This year's Fishing Tournament will be held on Friday, June 22 at the Teakwood Marina, Village of Tiki Island, Galveston, Texas. We are looking forward to a big event this summer and we encourage full family participation. We planned it on a Friday to make it a long weekend so the entire family can participate in the Tournament.

Trophies will be awarded for the heaviest individual Redfish (Non-Tagged), Speckled Trout, and Flounder for the Anglers, Junior Anglers, and Lady Anglers. Trophies will also be awarded for the heaviest individual Stringer - 1 Redfish, 3 Speckled Trout, and 1 Flounder.

Registration fee includes: launch fee, GSH/HGS Fishing Cap, BBQ meal at the marina after weigh-in, refreshments, Trophies, and DOOR PRIZES. For more information, please contact:

Bobby Perez (HGS & GSH)

281-240-1234 ext. 219 Office • 281-240-4997 Fax • 281-468-1809 Cell • 281-495-8695 Home
E-mail addresses: rdphxt@aol.com or r_perez@jdkseis.com

Greg Doll (HGS & GSH)

713-658-8096 ext. 28 Office • E-mail address: gqdoll@email.msn.com

The Geophysical Society of Houston and the Houston Geological Society are non-profit organizations serving the Geophysical Industry. Corporate and individual contributions are appreciated and will be acknowledged on several sponsor boards and banners at the weigh-in station and marina. All contributors will be recognized in their respective organization newsletters following the tournament. This is a great way to entertain friends, family, business associates, and clients. So spread the word!

GSH/HGS SALTWATER TOURNAMENT

NAME: _____ COMPANY: _____

ADDRESS: _____

PHONES: (H) _____ (B) _____ (C) _____

E-MAIL ADDRESS: _____

Upon receipt of the Registration form, each participant will be provided with a copy of the specific tournament itinerary and rules sheet by e-mail. Please register EARLY
Please return this form with your check for \$50.00 per contestant payable to:

**GSH/HGS SALTWATER TOURNAMENT and Mail to:
Ms. Joan Henshaw, 7457 Harwin Drive, Suite 301 (Houston, Texas 77036**

Registration Fee: \$ _____ + Sponsor Contribution: \$ _____ = TOTAL \$ _____

DISCLAIMER:

I acknowledge that neither the Geophysical Society of Houston nor the Houston Geological Society will be held responsible for injury or accidents during this event. PRACTICE SAFETY!!!!

Signature: _____

Annual Honors and Awards Banquet

Thursday, May 3, 2001

Lakeside Country Club

On **Thursday, May 3, 2001**, 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, Sally Zinke, will give the Presidential Address and assist GSH President, John Sumner, 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 26th to April Robertson, Diamond Geophysical, 2925 Briarpark, Suite 400, Houston, Texas 77042. Please reference "Awards Banquet" on your check.

Menu
 French Onion Soup
 House Salad
 Filet Mignon
 Roasted New Potatoes
 Fresh Asparagus
 Chocolate Covered Pecan Balls

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

RESERVATION FORM

Name: _____

Guest: _____

No of Guests: _____ Check No: _____

Make your check **payable to the GSH** and forward it by April 30th to:
 April Robertson
 c/o Diamond Geophysical
 2925 Briarpark, Suite 400
 Houston, Texas 77042

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

Annual Honors and Awards Banquet

Thursday, May 3, 2001 • Lakeside Country Club

SEG 50 YEAR HONOREES

John C. Baxter
Wesley E. Bird, Jr.
LeRoy Brow
T. Norman Crook

Ned E. Duval, Jr.
James H. Frasher
John T. Murphy, Jr.

Samuel O. Patterson
Robert E. Sheriff
Marvin L. Wagoner

SEG 25 YEAR HONOREES

Lawrence Ford Asher
William K. Aylor, Jr.
Michael Thomas Balombin
Max Baumeister
Harry George Beggs
Charles Howard Blumentritt
David L. Brewster
Robert J. Bruce
Scott D. Bugosh
Donald Lindy Buscarello
Chester J. Callahan
David Roy Carlson
Raymond O. Clifton, Jr.
Bruce Edward Cornish
Scott Daniel
Scott L. Davies
David L. Donalson
Donald Ray Dutcher

Alan Paul Frink
J. Michael Graul
Michael L. Harkness
Steven George Henry
H. Truman Holcombe
David Scott Holland
Carslile Gene Huxohl
Karl Christian Joern
Albin K. Kerekes
Harvey R. Klingensmith
Vic Lamanuzzi
Tony A. Lauhoff
George E. Marion
Allen Earl May
Jerome P. Mazzaferro
Robert David McCann
John A. Minor
Ronald K. Nickle

Malcolm Paterson
Gerald Linwood Penn
Arnold L. Porter
Mary J. Repar
Randall Scott Riepe
Michel Ivan Roberson
Gilbert Walter Snell
Fred Dean Spindle
J. David Stevens
Gordon Robert Wainscott
Robert Edward Warmbrodt
R. Daniel Wisecup
David Ray Wood
Michael W. Zebrowski
Richard K. Zoss

MAY 2001

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
		1	2	3 Honors and Awards Banquet Lakeside Country Club	4	5
		OTC	OTC	OTC		
6	7 HGS Dinner Meeting 9999 Westheimer	8 SEG-GSH Spring Symposium 2500 N. Gessner	9 RC SIG Iowa State University	10 RC SIG Iowa State University	11 GAH River Oaks Country Club	12
13	14	15 HGS Risk Analysis for Managers 910 Louisiana	16 DP SIG Rice University 4:30 p.m.	17 Annual Meeting Garden in the Heights 5:00 p.m.	18	19
20	21 GSH Golf Tournament Kingwood Country Club 11:30 a.m.	22	23	24 Potential Fields SIG HESS Bldg. 5:30 p.m.	25	26
27	28	29	30	31		

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GEOPHYSICAL SOCIETY OF HOUSTON

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