

September 1980

# BULLETIN

## HOUSTON GEOLOGICAL SOCIETY

Volume 23

Number 1



### HGS SEPTEMBER CALENDAR

**September 8, 1980 (Dinner Meeting)**

**Galleria Plaza Hotel**

Hunter Yarborough

Hunter Yarborough & Associates, Inc., Houston

"Orogenic Belts, Collision Tectonics, and Major Hydrocarbon Accumulations"

*Social Period - 5:30 PM, Dinner and Meeting - 6:30 PM*

Reservations (telephone only, **771-8315**) must be made or cancelled by Friday, September 5, 1980.

**September 24, 1980 (Luncheon Meeting)**

**Marriott West Loop (1750 West Loop South)**

Harry J. King

Conoco Inc., Midland, Texas

"North Tisdale Oil Mine, Johnson Co., Wyoming"

*Social Period - 11:30 AM, Luncheon and Meeting - 12:00 Noon*

Reservations (telephone only, **771-8315**) must be made or cancelled by noon Monday, September 22, 1980.

**September 27, 1980**

**HGS Field Trip**

"Tertiary of the Brazos River Valley"

See inside for details.



## HOUSTON GEOLOGICAL SOCIETY

6916 ASHCROFT  
HOUSTON, TEXAS 77077  
771-8315

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Historian	<b>Mrs. Russell (Mary Lou) Seward</b>	789-7596

## PRESIDENT'S COMMENTS

The Executive Board and the Chairmen, and members of the twenty-three committees of The Houston Geological Society welcome you to the beginning (for you) of the 57th year of the Society. As will be evident to you, as you read the various announcements of activities for September and October and realize this issue of the *Bulletin* was put together in July, the administrative year of your society began much earlier for a number of your professional peers. John Hefner and Milt Johnson of Exxon Company USA, and Clyde Beckwith of Conoco Inc., have seen to the transfer of all operations of the Society to our new location. The voice you generally hear when calling the Society's office belongs to Terry Mendoza. All that now remains is your acceptance and participation in these events. In a metropolitan area such as we live and work in, it is easy to get out of the habit of attending professional functions, technical or social. We will make every effort to get you back in the habit of attending your society's events. In the vernacular of the day - Enjoy!

One of the few, but most important, individual requests we will make of each of you happens early on. . .the timely renewal of your membership and indication of which committees you might have an interest in working with. Committee chairmen are always interested to know someone might help - that they aren't alone in the world. I say "might help" because we are aware of the demands on your time. There isn't a committee listed on the inside of the front cover that couldn't use your ideas, your enthusiasm, and your help. At least give us a chance to ask. "No experience," you say. Not many of us had experience in whatever it was we were first asked to do for the Society, but there was a lot of help and somehow we have survived. I am fortunate in that many of the committee chairmen agreed to serve another year - most wanting to carry through on ideas they had come up with, and the new committee chairmen have landed running. To paraphrase an old show biz axiom.. "Call us if we don't call you."

The 1980 Photo Directory, through the combined efforts of Bruce Archinal (Photo Directory Committee Chairman) and his committee, Fred Baker (Advertising Committee Chairman), and John Hefner (Membership Committee Chairman), has been printed and is available at the Society's office. A truly Herculean effort which, from inception to product, was done in a year's time. True, they may never be the same again!

It is not too early to remind each of you that this is an election year. In Texas you must be registered at least thirty days before November 4 to be eligible to vote in the national election. If you are a resident of Harris County, you may request Voter Registration Application by calling 224-1919, extension 310. It will be mailed to you. Or if you prefer, you may pick up your Voter Registration Certificate in person by going to 1001 Preston (2nd floor) or to one of the ten county clerk substations.

Redistricting of Congressional and State Senate and Legislative Districts and precinct boundaries, on the basis of the 1980 census, will be undertaken by the newly elected members of the next Texas Legislature during the 67th Session beginning in January 1981. Texas will gain two and possibly three Congressional Districts as a result of the 1980 census, which will count illegal aliens in the redistricting process.

Chet Baird  
President

## SOCIETY CALENDAR FOR OCTOBER

October 3, 1980	HGS Annual Shrimp Peel Knights of Columbus Hall 607 E. Whitney
October 6, 1980 Location to be announced	HGS Evening Meeting Stephen E. Collins Dallas Exploration, Inc. "Jurassic Cotton Valley and Smackover Reservoir Trends in East Texas, North Louisiana, and South Arkansas"
October 25-26, 1980	HGS Field Trip South Texas Meteor Impact Site and Exhumed Asphalt Carbonate Reservoir
October 29, 1980 Location to be announced	HGS Luncheon Meeting Tim Schowalter Mosbacher and Pruet "Hydrocarbon Shows—Proximity Indicators for Stratigraphic Traps"

## ANNUAL DUES NOTICE

Dues notices were mailed to members in August. Please take care of this obligation promptly so that we will not have to send out second notices in October. If you did not receive a dues notice, please notify the HGS office. As stated in the Bylaws, members not paid by November 15, will be dropped from the membership roll.

Gerald A. Cooley  
Treasurer

## PHOTO DIRECTORY

After several delays, the H.G.S. Photo Directory has been finished and was mailed during the first part of August. If, for some reason, you have not received your Directory please send a copy of your check or receipt to the new H.G.S. business office and we'll get a copy in the mail to you. Those members who did not pay for mailing may pick up their copies at Four Star Printing, 6916 Ashcroft. There are still a few copies of the Photo Directory left if any members still wish to order one. An order blank can be found elsewhere in the Bulletin.

## CALVERT-HGS SCHOLARSHIP FUND

On June 30, 1980 the Calvert-HGS Scholarship Fund received two contributions totaling \$215. One contributor was the Houston Geological Society Remembrance Committee in the memory of Donald M. Davis, a former president of our society. The other contribution represented bond interest.

## PRICE SCHEDULE—HGS MEETINGS

Galleria Plaza Hotel	
Dinner .....	\$16.00
Marriott West Loop	
Luncheon .....	\$10.00

RESERVATIONS (771-8315)

Please make reservations for the Monday evening meeting by the preceding Friday, and for the Wednesday noon meeting by the preceding Monday noon.



## EVENING MEETING—SEPTEMBER 8, 1980

### HUNTER YARBOROUGH—Biographical Sketch



Hunter Yarborough, a geologist and geophysicist of Hunter Yarborough & Associates, Inc., attended the University of Texas, receiving a degree in geology with highest honors and minors in physics and petroleum engineering. Two years were spent in graduate studies. During World War II, he served as an officer and aviator of the U.S. Navy, in both the Atlantic and Pacific theaters. Following

the war, Mr. Yarborough worked for Exxon conducting geological, geophysical, and geochemical programs in the exploration for oil and gas. He has been active in all phases of geological, geophysical, and geochemical research, and has traveled over much of the earth working and consulting with active exploration groups.

Mr. Yarborough is a Certified Petroleum Geologist, a member of The American Association of Petroleum Geologists, a Fellow of The Geological Society of America, a member of The American Geophysical Union, a Registered Professional Engineer, and a member of Sigma Gamma Epsilon and Rho Kappa. He has served as Distinguished Lecturer for AAPG and has given technical addresses on oil finding and energy and mineral problems to many universities and geological and geophysical societies in the United States. In addition to many professional awards and recognitions, he is a two-time recipient of AAPG's A. I. Levorsen Memorial Award. Mr. Yarborough is a member of the Governor's Energy Advisory Council for the State of Texas and Executive Vice-President of Global Exploration, Inc.

### OROGENIC BELTS, COLLISION TECTONICS, AND MAJOR HYDROCARBON ACCUMULATIONS (Abstract)

Classic concepts of the origin of orogenic belts are being challenged, primarily as a result of the recent development of new geophysical and geological data.

The geosynclinal concept, in which a thick prism of sediments is predicated to have been uplifted vertically without crustal shortening and the sedimentary mass to have been deformed in patterns of symmetrical and asymmetrical gravity-sliding away from the uplifted welt, appears invalid except in very unusual circumstances.

Excluding Andean-type volcanic belts and volcanic island arcs, orogenic belts are formed by: (A) continent-continent collision, resulting from convergence of two or more lithospheric plates; (B) island arc-continent collision, resulting from the collision of offshore volcanic arcs and the sediments and crust of associated back-arc basins with the parent continent; (C) "flat plate" subduction, resulting in crustal shortening with faulting, folding, and shortening of continental crust and/or sediments commonly located hundreds of kilometers within the continent from the subduction zone; and (D) strike-slip (transform, shear, wrench) deformation.

Structural styles A and C usually exhibit crustal shortening and tectonically telescoped crust and sediments. Style B does not necessarily shorten continental crust; however, oceanic crust of the back-arc basin is usually shortened and commonly obducted on the adjoining continent.

Both style and intensity of deformation are in part controlled by the type of crust and sediment being deformed; the rigidity and ductility of the crust are primarily functions of competency, fabric, fluid (pore) pressures, and temperature of the crust.

Orogeny involving compression and crustal shortening is not a simple suturing process in which soft rocks are squeezed between rigid plates. Much ductile deformation is involved. Large sialic blocks in fold belts may occur as "orogenic float" rigid crustal blocks supported by masses of low-velocity material. Such "rootless," structurally detached masses remain "afloat" while the underlying lithosphere is being subducted. Compressional forces may dominate in the "float" while the underlying, downgoing lithosphere is bent, resulting in extensional deformation.

The thrust sheets of tectonically telescoped cores and margins of orogenic belts are usually the most visible and obvious scars of collision (and compression). However, the most significant hydrocarbon accumulations may be trapped by structures created by zones of strike-slip deformation formed by the compression and occurring contemporaneously with the main compressive orogeny. Pre-orogeny basins commonly are deformed complexly by large zones of synthetic and antithetic strike-slip faults. Not only are large en-echelon anticlines and synclines, "chopped" folds, half domes, and fault splays formed, but also, where major strike-slip faults and fault zones "lock" and "unlock," huge horst blocks and deep rift-valley basins develop.

The ancestral early and middle Paleozoic "Oklahoma" and "Texas" basins of pre-collision times were simple cratonic sags, probably "rooted" with Precambrian and/or early Cambrian rift basins (aulacogens?).

The Quachita-Marathon Carboniferous "collision" orogeny created the remarkable structural "overlays" that are responsible for trapping most of the oil and gas in these basins. The "Arbuckle-Ardmore" and the "Amarillo-Wichita-Anadarko" systems were superimposed over the Oklahoma basin, and the "Central Basin Platform Delaware" system was superimposed over the Texas basin. In a similar genesis, the "Moorman La Salle" system was superimposed over the ancestral Illinois basin.

Equally striking is the magnitude of the area and the volume of crust (and sediments) that may be deformed by collision orogenies. The "Pennsylvanian" (ancestral) Rocky Mountains are classic products of crustal compression and shearing resulting from collision. Deep rift-valley basins and large fault-block uplifts characterize the "Pennsylvanian" Rockies. Deformation extended northward from the Quachita-Marathon collision margin over 600 miles into the North American continent. The "Uncompahgre-Paradox" structural complex is typical of these "fault-block uplift/rift-valley basin systems."

The hydrocarbon potential of orogenic belts is controlled by the fundamental geological and geochemical factors that control all oil and gas accumulations: (1) structural and/or stratigraphic traps, (2) source rocks of adequate richness and maturation, (3) favorable reservoir rocks, (4) effective sealing rocks, and (5) time of migration of hydrocarbons.



## NOON MEETING—SEPTEMBER 24, 1980

### HARRY J. KING—Biographical Sketch



Harry J. King is Director of Exploratory Projects for Conoco Inc. in Midland, Texas. Prior to this assignment, he worked in Houston as Area Geologist and in Casper, Wyoming, as Geoscience Supervisor. He received his B.S. from the University of Missouri at Columbia and an M.S. from St. Louis University. After several years with the Standard Oil Co. of California organization, he left industry to pursue a Ph.D. at

the University of Missouri at Rolla. From 1968 to 1974, Dr. King was Assistant Professor of Geology at Southwest Missouri State University. In 1974, he joined Conoco in Casper.

During his academic career, Dr. King was awarded a NATO scholarship for continental-drift studies in Europe and an NSF grant for carbonate studies in the Caribbean.

### NORTH TISDALE OIL MINE, JOHNSON CO., WYOMING (Abstract)

The North Tisdale anticline was drilled by Conoco Inc. first in 1952. Unfortunately, the structure had been breached by erosion and the solution gas had escaped long before. Many million barrels of oil had been left behind without sufficient energy to enter a borehole. The increasing value of oil made the recovery of this oil viable, and a unique method of liquid oil recovery was begun.

An adit was driven into the reservoir and the liquids drained into a gallery for recovery. Color slides provide the opportunity to view the inside of this producing oil reservoir. Also, revealing information about perforating and cementing techniques can be gained by studying the results in this mine. The practicality of mining liquid oil, despite the problems associated with such an operation, adds another dimension to recovery of more of the oil left in the ground by conventional recovery methods.

## GEOWIVES MEETING

Geowives will have its first meeting Wednesday, September 17, 1980. It will be a coffee starting at 10:00 am at the home of Mrs. John C. Langford, 5830 Pine Arbor, Houston, Texas, 77066.

★ ★ ★ ★ ★

A \$188,000 for a coal resource of drilling and evaluation project has been awarded to the Colorado Geological Survey by USGS. The study will cover Adams, Arapahoe, Douglas and Elbert Counties and part of the city of Denver. The Colorado Survey will drill almost 10,000' of test holes over a two year period and take about 2,100' of cores. Maps and reports describing total coal thickness, individual coal seam thickness, overburden thickness, coal quality and other geologic and economic parameters will be prepared.

## HGS FIELD TRIP

The Houston Geological Society will host a one-day field trip to examine the Tertiary of the Brazos River Valley on September 27, 1980. Trip leaders will be Dr. Robert Stanton and Dr. Karl Koenig of Texas A & M. The cost of the trip will be \$40 per person which will include guidebooks, sack lunch, refreshments and transportation. Mail check for reservation by September 22, 1980 to:

Moin Hussain  
Dow Chemical U.S.A.  
P. O. Box 4322  
Houston, TX 77210  
Ph. (713) 978-3803

Field trip is being planned for 80 people. Buses will leave Houston Dow Center parking lot, 400 West Belt South at 6:00 a.m., and will return the same day around 9:15 p.m.

The field excursion will visit outcrops showing:

1. The Mesozoic-Cenozoic Contact (Midway-Navarro)
2. The Carrizo-Reklaw Contact
3. The Classical Stone City Exposures, Classic Eocene Locality
4. Deltaic Deposits of the Yegua
5. The Yegua-Jackson Contact

## HGS FIELD TRIP

October 25-26, 1980

### SOUTH TEXAS METEOR IMPACT SITE AND EXHUMED ASPHALT CARBONATE RESERVOIR

The Houston Geological Society will host an October weekend field trip to a newly discovered meteor impact site in South Texas. This 3 KM crater was discovered in 1979 by Feather Wilson and published in the March 1979 issue of *Geology*. Thrust faulting and complex folding are features of this highly deformed Wilcox area. This is the only "soft rock" example of an impact site in the world. The nearest analog is on the planet Mars. The rims and interior of the crater will be visited. The South Texas brush country offers a different but rugged view of the Gulf Coast.

The second portion of the field trip will involve an excursion to an exhumed oil field which is now an asphalt mine. Oil was originally trapped at an unconformable surface in an Upper Cretaceous carbonate beach deposit. The subtle differences in porosity and permeability may be viewed within the walls of the mine. It provides an unusual outcrop cross-section of a carbonate reservoir.

The trip leader is Feather Wilson (William Feathergail Wilson) from Placid Oil Company in San Antonio. It is scheduled for the weekend of October 25-26, 1980. Details and costs will be announced in the October *Bulletin*.

## CORRECTIONS FOR THE JUNE BULLETIN:

The following people were inadvertently omitted from the Spring Field Trip article and were members of the Field Trip Committee: Alan Stubenrauch, James D. Murphy, Douglas Harrington and Mary Ann Rafle.

In June's Professional and Organizational News, Dudley South was incorrectly identified as Doug Smith.

Also, Sabin W. Marshall was not Chairman of the HGS Abnormal Pressure Study Group in 1970 as was mistakenly reported in his biography.



## 1980-81 HGS PROGRAMS

This year's Program Committee is going to try to provide the membership with a series of stimulating talks on many facets of geology over a variety of geographic areas. Hunter Yarbrough—a name probably familiar to all of you—will start the year off on September 8 with a broad picture of orogenic belts and collision tectonics as related to major hydrocarbon accumulations around the world. The noon program in September will feature a talk by Harry J. King on an oil mine in Wyoming where one can "walk into" the reservoir. See details of these talks elsewhere in this Bulletin.

Other programs scheduled for this year are on Cotton Valley and Smackover reservoirs in the Ark-La-Tex area, by Stephen E. Collins of Dallas Exploration, Inc., an AAPG Distinguished Lecturer; hydrocarbon shows as proximity indicators for stratigraphic traps, by Tim Schowalter of Mosbacher and Pruet; deltaic and deep-sea Plio-Pleistocene, offshore Gulf Coast, by David K. Davies of Davies, Almon and Associates; and some aspect of Gulf Coast geology, by the current AAPG president, Robey H. Clark of Diamond Shamrock Corporation. Dr. H. W. Menard, Director of the U.S. Geological Survey, will speak to the Society in January. We also hope to schedule programs on the evaporitic environment as a source of petroleum, on clastic depositional models, and on the Ouachita fold belt. Also, two joint meetings are planned—one with the Houston Association of Petroleum Landmen and one with the Geophysical Society of Houston.

We are trying to arrange meeting facilities that will accommodate our larger turnouts and that will provide reasonably good food at a reasonable price (but don't expect cheap!). Location, parking, and audio-visual facilities also must be considered. We may not find the perfect place, but we'll keep trying.

Please show your support of your Society by attending as many of the meetings as possible. Also, please help us to conduct the programs as expeditiously and as economically as possible by making reservations by the date required and then honoring those reservations.

There is no reason we cannot have 1000 members present for the first meeting on September 8—and I hope we do (but not if only 500 make reservations!).

Peggy J. Rice  
2nd Vice President/Program Chairman

## LIBRARY HIGHLIGHTS THE GEOLOGICAL COLLECTION IS READY

The Library Committee of the Houston Geological Society is pleased to announce that the previously inaccessible books in the Geological Section collection at the Houston Public Library are now available to the public on the second floor in the Science section of the main library downtown. This group of geological and other related books has always been housed on the fifth floor of the main library with its contents relatively unknown. These books include the major portions of the Dumble, Barton and DeWolf Collections acquired by the Houston Geological Society and donated to the Houston Public Library as well as other useful and fascinating publications. They are now all catalogued on cards which are in drawers on the second floor in the Science section of the Library. These cards are being systematically integrated into the newer microfilm catalogue system of the library but it is still

necessary to look in both catalogue systems for particular publications.

Placing these books on the second floor in the open stacks by the library has eliminated the need for the Houston Geological Society Library Committee to inventory and publish the contents of the collection. For several years the HGS Library Committee has been trying to determine exactly what was contained in the GS collection on the fifth floor. Attempts at inventories by several different methods used by the HGS Library Committee were all found to be time consuming and unsuccessful. The HPL, tried to retrieve this information stored on cards but it was too difficult. It was not in their immediate program to move the books to the second floor but finally plans were changed and work was begun. Preparing and moving those books has entailed a great deal of extra effort by the dedicated HPL library personnel. We are deeply appreciative to them for this tremendous job that they have done for us. It was well worth the trouble, and now there are many treasures on the second floor ready for your discovery. Thank you, Houston Public Library! Some of you may be concerned about valuable old books being placed in the open stack reference shelves. The HPL has evaluated each book in the collection and removed the rare books for safekeeping. The ones on the shelves are working books. Come, see, enjoy!

Evelyn Wilie Moody  
Chairman

## THE PUBLICATION SALES COMMITTEE

The Houston Geological Society is a very diverse organization designed to cater to the various professional needs of its members. One area in which the HGS is particularly active is publications. The HGS publishes works which are intended to aid the geologist in his scientific pursuits.

The Publication Sales Committee serves the important function of providing HGS members easy access to these publications. This year the committee is broadening its scope. The HGS Executive Board has designated a Publication Sales Committee budget for this purpose.

A three fold program to educate the public about the services we offer is scheduled for this year. Reviews of our publications are to appear in the leading petroleum journals as well as the HGS Bulletin. Most of the budget is intended for advertisements in major journals of the industry and related professional societies. The publications table at HGS monthly meetings will be continued and expanded to include the meetings of other local petroleum industry professional societies. The Publication Sales Committee will also maintain exhibition booths at the upcoming GCAGS and AAPG conventions, as well as distribute the new photo directory.

The Publications Sales Committee is looking for new members. This committee offers a lot of fun and career expanding opportunity through publications in major periodicals, as well as the chance to meet and know many other industry professionals. The Publication Sales Committee will prove a rewarding experience for the ambitiously oriented geologist. HGS members interested in joining should contact committee chairman David Levin at 226-1392 or 226-1904.

David Levin  
Chairman



## HGS PUBLICATIONS

NAME	PRICE
ALTERNATE ENERGY RESOURCES	\$15.00
DELTA MODELS FOR EXPLORATION	\$12.00
ABNORMAL SUBSURFACE PRESSURE	\$1.00
STRATIGRAPHIC CROSS SECTIONS	\$25.00
HGS MEMBERSHIP PHOTO DIRECTORY	\$5.00
OIL FIELDS & SUBSIDENCE IN HOUSTON	\$5.50
TERTIARY BRAZOS RIVER	\$10.00
LIGNITE RESOURCES E.C. TEXAS	\$6.50
DAMON MOUND, TEXAS	\$7.50
LA. CHENIER PLAIN	\$6.00

## UTAH GEOLOGICAL ASSOCIATION GUIDEBOOK TO THE GEOLOGY OF EAST CENTRAL NEVADA, 1960

The guidebook was edited by Jerome W. Boettcher and William W. Sloan, Jr., and was published in 1960 by Intermountain Association of Petroleum Geologists and Eastern Nevada Geological Society. The book has 276 pages, 32 technical papers, road logs for 3 days of field trips, and two geologic maps (one in four parts) in a pocket at the back.

This reprint will have all the text and maps of the original, but will omit the advertising and will be soft cover instead of hard cover.

We must have 70 prepaid orders before we can reprint this volume and therefore we recommend a prompt response.

To: Utah Geological Association  
2275 South 2200 East  
Salt Lake City, Utah 84109

We shall go to press when we have received 70 prepaid orders. If we do not receive 70 orders by September 15, your money will be refunded. It is not likely that the ordered copies will be mailed out before November 15, 1980.

## AAPG SEALS FOR HYDROCARBONS RESEARCH CONFERENCE

SEPTEMBER 14-17, 1980  
KEYSTONE LODGE  
KEYSTONE, COLORADO

The Seals for Hydrocarbons Research Conference is being convened by T. T. Schowalter and M. W. Downey to focus attention on a fundamental, but relatively neglected area of petroleum geology. Recent advances in organic geochemistry and the study of migration have added to the understanding of the significance of hydrocarbon seals. The program is divided into discussions of the "micro" view (seal capacity, permeability, hydrodynamics and prediction from core data), and the "mega" view (world-wide review of types, controls in faulted structures, trap leakage detected by acoustical devices, evaporites as seals, etc.) and a general session on the direction of future research. Besides the two conveners, speakers will be R. R. Berg, Texas A&M; D. S. Stone, Independent; B. Roberts, Gulf R&D; H. Grunau, Petroconsultants; R. J. Murriss, Royal Dutch Shell; U. S. Allan, Shell Oil Company; W. E. Sweet, Jr., U.S.G.S.; Susan Landon, Amoco; J. A. Masters, Canadian Hunter; W. R. Bryant, Texas A&M; D. T. Secor, Jr., University of South Carolina; K. Magara, University of Texas and V. Schmidt, Petro-Canada. The conference schedule will be morning and evening talks with afternoons free for further discussions or recreation.

The conference will be limited to 80 participants on a first-come, first-served basis. If you are interested in participating, write Sondra Biggs, Convention Manager, AAPG, P. O. Box 979, Tulsa, Oklahoma, 74101 as soon as possible.

## ELEVENTH UNDERWATER MINING INSTITUTE

The Eleventh Underwater Mining Institute will be held on November 11-12-13, 1980, in Savannah, Georgia. The program will include papers on the following topics: deepsea metal-bearing muds, spreading centers and marine mineral deposits, geochemical and geophysical exploration techniques for locating marine minerals, new coring devices, nuclear exploration methods, long-range metal requirements and new marine metal sources, new sand and gravel exploitation projects, geophysical assessment of underwater sand deposits, a high-level review of the U. N. Law of the Sea and U. S. marine mining, and a report on new opportunities in emerging nations for developing marine mining in coastal waters.

To obtain information on registration, costs, hotel accommodations and a copy of the program of speakers and topics, please write:

Dr. Gregory Hedden  
Sea Grant Institute  
1815 University Avenue  
Madison, Wisconsin 53706

For information on the technical program, please write:

Dr. J. Robert Moore  
The Marine Science Institute  
P. O. Box 7999  
University Station  
Austin, Texas 78712

Please note that the program will commence in the early afternoon of November 11th, and will end at noon on November 13th, thus allowing for more convenient travel arrangements of attendees.

## HGS ENTERTAINMENT FUND

The contributions made by these companies to the 1980-81 Houston Geological Society Entertainment Fund enabled your Society to provide the membership an opportunity to participate in several social functions at a greatly reduced cost. The HGS would like to thank these companies for their continued support. Please express your thanks to these companies and individuals. We know we can count on their support in the 1981-82 HGS year.

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## SHREVEPORT GEOLOGICAL SOCIETY

The Shreveport Geological Society announces the publication of Reference Volume VI, Selected Oil and Gas Fields of North Louisiana and South Arkansas. This Volume includes reports on the following 30 fields:

Bayou D'Arbonne Lake	Mount Vernon
Bayou Middle Fork	North Big Island
Bethany-Longstreet (Rodessa)	Northwest Colquitt
Black Lake	Oakes
Calvin	Panther Creek
Chalybeat Springs	Parker Lake
Choudrant-Tremont	Rawson Creek
Clear Branch	Ruston
Cotton Valley (Gray Sand)	Sailes and West Bryceland
Cummings	South Drew
Days Creek	South Sarepta
Lake Curry	Sugar Creek
Leatherman Creek	Tubal
Lewisville	Walker Creek
Mount Olive	Welcome

The Reference Volume series is the single most important source of information on the petroleum geology of North Louisiana and South Arkansas. Volume VI continues this long tradition.

You may reserve your copy at the reduced, pre-publication price of \$30.00 by completing the attached form and returning it with your payment. This represents a \$5.00 savings over the regular price of \$35.00. Publication is expected by August 1, 1980.

SHREVEPORT GEOLOGICAL SOCIETY

P. O. Box 750

Shreveport, Louisiana 71162

## GULF COAST SECTION-SEPM FIRST ANNUAL RESEARCH CONFERENCE GEOLOGY OF THE WOODBINE-TUSCALOOSA TREND

The Gulf Coast Section - SEPM is planning a research conference on the Geology of the Woodbine - Tuscaloosa Trend to be held December 1, 2, 3, 1980 in Houston at the Marriott Hotel near the Galleria. Presentations by invited speakers and selected authors of submitted papers will cover the geology, stratigraphy, paleontology and economics of this trend. The deadline for abstracts is September 1, 1980. To submit an abstract or for more information please contact:

Gene B. Martin  
Arco Oil & Gas  
P. O. Box 1346  
Houston, TX 77001

Mary Ann Rafle  
Secretary, GCS - SEPM

## 1981 AAPG CONVENTION SAN FRANCISCO — MAY 31-JUNE 3 POST CONVENTION TRIP (HAWAII) JUNE 4-JUNE 11

Group space has been reserved for AAPG members planning to fly to San Francisco for the 1981 annual meeting. Additionally, group space is being arranged for a post convention trip to Hawaii. More specific details will be published in the *Bulletin* in January, 1981.

## GULF/ATLANTIC SYMPOSIUM 1980

What is the origin of the Gulf of Mexico? With plate tectonics as a common basis for discussion, approximately 150 geologists and geophysicists converged on Louisiana State University for a symposium of 22 oral presentations by 34 authors dealing with various aspects of the question. The symposium, held March 3 - 5, 1980, was sponsored by the Department of Geology, LSU, and the Louisiana Geological Survey. Topics of discussion provided a spectrum of constraints on plate tectonic models for the evolution of the circum-Gulf region. While a complete consensus on even the broadest model for late Paleozoic - early Mesozoic Gulf tectonics could not be reached, and would have been an unrealistic expectation in any case, a remarkable convergence evidenced by several speakers provided a grossly consistent hypothesis for the origin of the crust beneath the central Gulf of Mexico.

Marine seismic and refraction studies by the University of Texas Galveston Geophysics Laboratory, reported by Richard Buffler, A. K. Ibrahim, and Jeanne Shaub together with previously published data, distinguish an oceanic type crust, beneath the central Gulf from "transitional" crust which rims the Gulf. In addition to crustal thickness and velocity contrasts between the two crustal types, the Galveston group argued that the character of reflections from the apparent basement surface differs significantly between the two crustal types. They concluded that the area within the Gulf underlain by oceanic crust is significantly smaller than previously thought.

Both the Galveston Group and Amos Salvador of Exxon suggested that salt deposition in and around the Gulf ceased when the Gulf was rifted wide enough for seafloor spreading to begin. Crude correspondence between the boundary between oceanic and transitional crust and the apparent limits of salt was cited as major supporting evidence for this suggestion. As cessation of evaporite deposition in the circum - Gulf region is marked by the onset of marine sedimentation, Salvador further suggested that the beginning of seafloor spreading in the Gulf was accompanied by permanent linkage of the Gulf with the world ocean, in Callovian time, or about 150 my ago.

The direction of seafloor spreading in the Gulf inferred by Buffler and Salvador was shown by Kim Klitgord of the U.S. Geological Survey to be quite consistent with the direction of relative motion between North America and Africa between about 150 - 130 my B.P. From combination of Klitgord's study and geometrical constraints, a major transform structure, linking the central North Atlantic and the Gulf across Florida, was inferred to have been active while the Central Gulf was opening by seafloor spreading, as previously suggested by Pilger in 1978.

Indirect evidence for effects of continental rifting, in the form of sedimentation on cooling continental margins was discussed by Mike Steckler of Lamont-Doherty. Mike noted that application of his techniques to the margin of the Gulf could provide valuable information concerning its early evolution. Coincidentally E. G. Anderson of the Louisiana Geological Survey provided an introduction to his newly published study (by the LGS) of Mesozoic sedimentation of the northern Gulf Coast - a valuable basis for the kind of study envisaged by Steckler.

Considerable discussion centered on the fits of the three major continents, Africa and North and South America, and

the microcontinents of Middle America and the Caribbean prior to opening of the Gulf. Klitgord reported several lines of marine evidence in support of a slight modification of the pre-Atlantic Bullard, Everett and Smith fit. The two major problems with the fit, overlap of Middle and South America and a partially "open" Gulf were "solved" in several ways. A number of authors invoked the famed left-lateral megashear of Silver and Anderson as a means of eliminating the overlap of Middle and South America. Tom Anderson of Pittsburgh reviewed evidence for the megashear and presented his version of a pre-Gulf fit. Rob Van der Voo (Michigan), Bill Dickinson and Peter Coney (Arizona), and Rex Pilger (LSU) incorporated the megashear into their schemes and Wulf Gose (Texas - Galveston) provided paleomagnetic data from Mexico which seemed to be compatible with the megashear model.

On a somewhat grander scale, Ted Irving (Canadian Earth Physics Branch) and Rob Van der Voo (Michigan) presented disparate models for the position of Atlantic continents in the Late Paleozoic, presumably before the Gulf formed. Irving's grand right-lateral megashear seemed to stun the audience, which might have been more comfortable with Van der Voo's more "conventional" plate evolutionary scheme. Nothing more typified the oft heard plea for more work and better data.

Jim Case and Walter Mooney both of the U.S. Geological Survey (Menlo Park) provided a southern perspective on Middle and Southern American constraints on the early evolution of the Gulf - Caribbean region. Jim's wide experience provided a valuable cutting edge for the disparate models spun by the various tectonicians present.

Jim Garrison (Texas - Austin) presented a strong case for late Paleozoic island arc activity in eastern Mexico, while Jack Walper (Texas Christian), Stan Cebull and S. E. Shubert (Texas Tech.), and George Viele (Missouri) provided their perspectives on the late Paleozoic evolution of the northern Gulf Coast and Ouachitas - critical areas for any model of the opening of the Gulf.

A proceedings volume, with nine articles and 11 abstracts provided additional documentation of the meeting and is available post paid for \$15 from the School of Geoscience, LSU, Baton Rouge, LA 70803.

For the first tectonics conference at LSU, the Gulf/Atlantic symposium was an excellent success, warranting a return engagement a few years down the road.

Rex H. Pilger, Jr.  
Covonor

## **PROCEDURES REVISED FOR UNITIZATION OF OCS OIL AND GAS OPERATIONS**

Final rules revising regulations governing the unitization of operations under Outer Continental Shelf (OCS) oil and gas leases have been announced by the Department of the Interior.

The revisions, being published in the Federal Register, establish June 30, 1980, as the effective date.

Unitization denotes the joint operation of separately owned leases. Under unitized operations, exploration and development may be conducted in the most economically feasible manner by one operator on behalf of several companies owning competing interests.

The new regulation establishes specific procedures for review of proposals to unitize operations and for issuance of orders requiring unitization. The regulation emphasizes that

unit operator's responsibility for the prompt and efficient conduct of exploration, development, and production activities.

The rulemaking spells out specific procedures for decision-making on the part of the Director of the U.S. Geological Survey in instances where he approves a request for unitization or orders the execution of an oil and gas unit agreement. The more formal approach established by the new regulation, as compared to previous procedures, is desirable because mandatory unitization often involves conflicting interests of many parties.

Opportunities for hearings and appeals concerning unit agreement decisions by the USGS director continue to be provided in the new rulemaking as assurances that the interest of each party is duly recognized.

The new rule recognizes three different situations under which unitization may occur:

Voluntary unitization (all lessees execute unit agreement).

Compulsory unitization initiated by less than all affected leases.

Compulsory unitization initiated by the USGS director.

The new rule changes were developed as the result of review of past and current criteria for the unitization of operations under OCS oil and gas leases.

Further information concerning the revised regulations may be obtained from Gerald D. Rhodes, U.S. Geological Survey, 640 National Center, Reston, Va. 22092, telephone (703) 860-7531.

## **PROFIT SHARE BID SYSTEM TO BE USED IN OCS SALE #A62**

Secretary of the Interior Cecil D. Andrus announced that a fixed net profit share bidding system will be used on 40 tracts in the proposed Outer Continental Shelf (OCS) Gulf of Mexico oil and gas lease sale #A62, tentatively scheduled for September 1980.

"This marks the first time that the Federal government has used this system in offering OCS tracts for lease," said Secretary Andrus. "This is a further implementation of the OCS Lands Act Amendments and satisfies a primary intent of Congress that there be experimentation with various alternative bidding systems."

Secretary Andrus has sent a proposed Notice of Sale concerning Sale #A62 to the Governors of Louisiana, Mississippi, and Alabama asking for their comments within 60 days. The Notice was published in the **Federal Register** on May 30, 1980.

The proposed lease sale consists of 192 tracts covering 915,000 acres offshore Louisiana. Forty tracts would be offered using a cash bonus bid with a fixed net profit share rate of 50 percent and a 1.25 capital recovery factor. This system is now allowed by the new Department of Energy regulations (10 CFR 390) issued on May 14, 1980. The regulations provide the basis for calculating the net profit share payment.

Fifty-nine tracts will be offered under a cash bonus with a sliding scale royalty formula which is a slight modification of the sliding scale system that has been used in previous sales. Twenty-two tracts will be offered on a cash bonus basis with a 33-1/3 percent fixed royalty. The remaining 71 tracts will be offered on a cash bonus bid basis with a fixed royalty of 16-2/3 percent, the conventional bidding system most often used in OCS oil and gas lease sales.



## PROFESSIONAL AND ORGANIZATIONAL NEWS

Because it is necessary to have approximately five weeks to prepare the Bulletin for the Houston Geological Society, it is not always possible to have the Professional and Organizational News in a specific issue as desired. Therefore, news for the November, 1980 issue should be sent by September 20th, to Mrs. Virginia Lee Bick, 2534 Yorktown, Suite 156, Houston, 77056 or telephoned to her at 840-9562 or 961-0406.

**Edward R. Killian** has been elected Vice President of onshore exploration for Transco Exploration Company, a subsidiary of Transco Companies, Inc. He will be responsible for the development and management of the onshore exploration program operated by Transco. (871-8000.)

Mr. Killian formerly had been Gulf Coast Exploration Manager for J. M. Huber Corp. for four years and prior to that a geologist supervisor for Texaco. He earned a B.A. in Geology from the University of Texas in 1967 and since that time has been involved in Gulf Coast and foreign exploration activities. He is a member of the HGS and AAPG.

**Rex E. Olsen** has been appointed Exploration Planning Director for Transco Exploration Company. In his newly created position, Olsen is studying exploration prospects outside of Transco Exploration's current drilling activities in the Gulf Coast and Atlantic Coast areas. During twenty years as a geologist with Exxon, his exploration efforts were concentrated in Alaska onshore, offshore California, the Overthrust Belt, and Gulf of Mexico. (871-8000)

For the past three years he was with Home Petroleum Corp. as the Northern Region Exploration supervisor. Mr. Olsen has his B.A. in Petroleum Geology from the University of California (Berkeley). He is a member of AAPG, AIPG, and GSA.

Omni Exploration, Inc. of Radnor, Penna. is pleased to announce the opening of its Gulf Coast Division Office and that **Bud McDaniel, Jr.**, an exploration geologist with more than thirty years experience has joined Omni as Division Exploration Manager, Houston, Texas. Prior to joining Omni, Bud was Onshore District Geologist with Michigan Wisconsin Pipeline, Houston. Before that he was employed by Phillips Petroleum Company for more than twenty four years.

Omni's new offices are at 1212 Main Bldg., Suite 950, Tel. No. 650-0016.

Mr. McDaniel is a member of the HGS and AAPG. His degree in Geology is from the University of Mississippi.

**Bruce Ellison**, formerly Exploration Manager for Trinity Resources, Inc. has been promoted to Vice President. Mr. Ellison previously was with Ladd Petroleum, and before that with Union of California. Mr. Ellison is a member of AAPG and HGS. Mr. Ellison received his B.S. in Geology from Portland State University and his M.S. from Oregon State University.

**Ron Free**, formerly with Home Petroleum, has accepted a position as Exploration Geophysicist with the newly formed Houston Exploration of Omni Exploration, Inc. Mr. Free has his B.S. from West Virginia University.

**Arthur J. Link** has accepted the position of Regional Exploration Manager for the Energy Division of W. R. Grace and Company. Mr. Link received his B.S. from City College of New York in Geology with his PHD from Northwestern University. Mr. Link was previously associated with Petrofina Company, Home Petroleum and Texaco.

**Robert S. Young** has accepted a position as Offshore Exploration Manager for Kerr McGee. His offices are at 3 North Point, and telephone number is 448-4800. Young was formerly offshore Exploration Manager for Getty Oil. His B.S. in Geology is from the University of California, LA. He is a member of the AAPG and HGS.

**Sam M. Penn**, Exploration Geophysicist, is now the Houston representative for Consolidated Oil and Gas, Inc. Their offices are at 1900 W. Loop, South, 3/D International Bldg. in the Galleria area. (622-5246)

**Martin Jones** has joined The Ballard and Cordell, Corp. as Manager of Exploration. His new address is Oil Center, P. O. Box 52151, Lafayette, 70505. (1/318-232-3181)

**Arthur John Blair** has joined Horizon Exploration Company as Exploration Geologist. He was formerly with Chevron and Reserve Oil. His B.S. in Geology is from the University of Alabama and M.S. from the University of Oklahoma.

**Paul Mayes** has joined Pioneer Production Company, One Allen Center (659-3406) as of July 1st. He has a B.S. in Geology from the University of Houston. He previously was with Williams Exploration Company in Tulsa.

Benchmark Oil and Gas Company of Houston has been completely reorganized. Geologist **Robert E. Pledger** is the company's new President and attorney **Cletus A. (Cowboy) Davis** is secretary and treasurer, a post he held prior to the reorganization. Pledger was formerly vice president of Benchmark in charge of exploration. He has a B.S. from Lamar University and a M.S. from the University of Dallas. The new corporate offices are located in Suite 455, North Bldg., 11177 Katy Freeway, Houston (496-4760). Mr. Pledger is a member of the HGS and AAPG.

**Joe B. McAdams**, President of Continental Laboratories, Inc. announces the promotion of **Dan Spencers**, a native of British Columbia. Spencers received his B.S. in Geology from the University of Br. Columbia. Prior to this promotion, he was Well Analyst and Field Supervisor for the company's Canadian and Mid-Continent operations. He was employed by Amoco in Canada and Australia before joining Continental Laboratories.

**SEPM SHORT COURSE.** The Society of Economic Paleontologists and Mineralogists will offer a one-day course on the principles and applications of coal petrology. The course will be conducted by **Russell R. Dutcher** and **John C. Crelling** of Southern Illinois University, Carbondale and will be held on Friday, November 21, in the Marriott Hotel, Atlanta, Georgia, following the annual meeting of the Geological Society of America.

Fees are \$50.00 for professionals and \$40.00 for students. Persons wishing further information should contact the SEPM office, P.O. Box 4756, Tulsa, Okla. 74104. (1-918-932-5720)

Participants will receive short course lecture notes on the meeting. These notes will also include a list of the major coal petrographic laboratories in North America as well as a fairly complete bibliography on applied coal petrology.

**Tom Joeckel** has accepted a position as Exploration Geologist with Texoil Company. Mr. Joeckel is a graduate of the University of Nevada, Las Vegas and will be participating in the generation of prospects in the Texas-Louisiana Gulf Coast area. Mr. Joeckel was formerly with Peltex Oil Company.

Trinity Resources, Inc. has announced appointment of

**Craig Earl Moore** as Chief Geophysicist. He will be working out of the Company's offices in Houston. Moore, a geophysical engineering graduate of Colorado School of Mines (Class of 1969), formerly was Chief Geophysicist for a large exploration and pipeline company, and has worked in a variety of exploration and advisory positions in the Gulf Coast Area, Rocky Mountain, West Texas-Oklahoma, and overseas in Japan, Taiwan, Indonesia, Thailand, Australia and Nigeria.

Coral Petroleum Development, Inc. is pleased to announce that **Mr. J. B. Cox** has joined its staff as Exploration Manager for oil and gas operations throughout the U.S.

Prior to joining Coral, Cox was Exploration Manager for First Energy Corp. of Mississippi in Houston. During his 31 years as a geologist, mainly in the Gulf Coast area, Mr. Cox has spent several years as a consultant and has served in various industry management positions. Mr. Cox is a graduate of Oklahoma University and Texas Tech.

**Vic Pernoud** has taken early retirement from Mobil and has organized Pernoud Exploration located in The Main Building, Suite 848, (650-1298). Mr. Pernoud spent 22 years with General Crude Oil in south Louisiana and offshore exploration manager and is an University of Houston graduate with a B.S. in geology. The major effort of the new company will be to generate investment opportunities in south Louisiana.

**Stewart L. Henry** has recently been promoted to Region Exploration Manager for Tenneco Gulf Coast Division. Mr. Henry has a B.S. in geology from L.S.U. and is a member of HGS, AAPG and NOGS.

## **THE SOCIETY OF INDEPENDENT PROFESSIONAL EARTH SCIENTISTS**

### **A UNIQUE ORGANIZATION FOR INDEPENDENTS ONLY**

In this world of plural professional societies there is only one organization that is designed especially for the independent or consulting earth scientist — **The Society of Independent Professional Earth Scientists**. The name says it all. They are geologists, geophysicists, engineers, geochemists, professors and other earth scientists who are professionally certified by the Society for their experience, expertise and ethics. They have been independents, consultants or professors for at least twelve years (some of this requirement may be fulfilled by B.S., M.S. or Ph.D. degrees). They must be self-employed. In fact, their letterhead reads "SIPES - the only world-wide organization of self-employed Geologists, Geophysicists and Engineers - Consultants to the Mineral Industries."

Their local Houston chapter has over one hundred members and the National organization is reaching toward one thousand. The new officers of the Houston chapter are:

Evelyn Willie Moody - Chairman

James L. Young - Vice Chairman

Robert L. Smith - Treasurer

Burton L. Young - Secretary

All are members of the Houston Geological Society. The new national president of the Society of Professional Earth Scientists is John J. Amarusio, a past president of the Houston Geological Society and W. L. Champion has been elected a national director.

SIPES was founded in 1963 in order to form an organization of independent earth scientists who could establish liaison and offer services to industry, government,

civic organizations and educational institutions; who could protect the public with a strict Code of Ethics and Certification of members; who could improve the status of the independent; who could provide professional advice to legislative bodies and who could tell the public and the government the facts about the independent.

On July 17, 1980, the Chairman of the Public Information Committee of the Houston chapter Lucius C. Geer, testified at the Windfall Profit Tax Hearing of the U.S. Senate Finance Committee held in Austin, Texas. He said: "Our members average over 30 years of experience in their lifelong chosen professions. . . . Each of these 1000 members average drilling or cause to be drilled some seven exploratory wells per year which is 57% of the national total and 67% of the total exploratory wells drilled by all independents. . . . We welcome the opportunity to address ourselves to certain aspects of a new excise tax styled Windfall Profits Tax, the largest single tax ever levied upon America . . . consider the professional who gets no salary for his efforts . . . who has just been given a payout of about 35% simply because he happens to be in the oil producing business . . . . We in SIPES feel that domestic oil exploration and production is vital to the Nation's severe balance of payments problem . . . . Accordingly, we heartily endorse legislation that would remove the Windfall Profits Tax from the first 1000 barrels of oil per day of production for Independent Operators, Landowners and Royalty Owners. . . .

If this is not done, Independents will be forced to drill fewer wells, find less oil . . . which will further our dependence on foreign crude."

SIPES meets the third Thursday of each month (even in the summer) at the Houston Petroleum Club for lunch and to hear a pertinent speaker (everything from geochemistry to taxes). It is an enthusiastic group who are good friends. It is a real plus for an independent.

## **ALASKA MINERS ASSOCIATION, INC.**

The 1980 Annual Alaska Miners Association Convention and Trade Show has been scheduled for Oct. 23-25 at the Hotel Captain Cook in Anchorage.

A growing exploration boom in the state, particularly for gold and other noble metals, is expected to make it the largest gathering in the association's history.

One reason for that expectation is the fact that nearly 500 persons attended a recent placer mining conference cosponsored by the AMA, nearly double the number that attended the 1979 AMA convention.

While the greatest interest is probably in the more valuable metallic minerals, exploration is being conducted for nearly every commercial mineral. Some of the world's largest deposits of copper, molybdenum, and nickel have been discovered here in recent years and are being assessed for their mining feasibility.

Tentative plans for the trade show this year call for an exhibit of large equipment items in an outdoor exhibit adjacent to the convention site, according to Riz Bigelow, president of WGM Inc. and convention chairman.

More information on the trade show and convention may be obtained by writing the Alaska Miners Association, 509 W. 3rd., Suite 17, Anchorage, AK 99501 or calling (907) 276-0347.



**IN MEMORIAM**  
**JOHN W. INKSTER**  
**(1904-1980)**



John W. Inkster, a member of the Houston Geological Society for over 30 years, died in Houston on June 4, 1980. He was 75 years old. He is survived by his wife, Mrs. John W. Inkster, son and daughter-in-law, John F. and Bernice Inkster of Tulsa, Oklahoma, son and daughter-in-law, David and Judy Inkster of Houston and three grandchildren. John was a "dyed-in-the-wool" Nebraska cornhusker. He attended high school in

Omaha and received his degree in geology at the University of Nebraska in 1928. Also in 1928, two days after he graduated, another great thing happened to John Inkster. He married Pauline Bandholtz of Guthrie Center, Iowa. Just two years ago John and Pauline celebrated their 50th wedding anniversary at Lake Side Country Club in Houston. Dozens of Pauline and John's friends from all over the country were invited to this most delightful occasion. In 1929 John was employed as a geologist by I.T.I.O. - The Indian Territory Illuminating Oil Company. He worked in the Kansas-Oklahoma area for this organization for seven years.

In 1935 he joined the Shell organization in Tulsa. During his early career with Shell he worked mainly in Kansas and Oklahoma. In 1948 John was transferred to the Shell Regional staff in Houston and in 1953 he returned to Tulsa as Area Exploration Manager. He held this very important post until 1959 when he was transferred back to Houston as Exploration Manager of Shell's Houston Area Office. John accepted a special assignment with Royal Dutch Shell in The Hague in 1961. His main responsibility in The Hague was to coordinate Shell's operations in the USA. However, John's activities in The Hague extended well beyond his office duties. He and Pauline became unofficial "ambassadors of goodwill" to all the USA Shell families on temporary assignment in The Hague. They welcomed and assisted everyone. Upon his return to Houston in 1963 John accepted an assignment as Chief Recruiter for Shell's Exploration Department. He held this important post until he retired in 1969. John's very friendly personality, his genuine interest in people and his sound judgement provided him with all the essential ingredients of a great recruiter. There was no doubt that he was assigned to this important position because Shell fully recognized his outstanding capabilities. A very large number of Shell geologists and geophysicists, including the President, several Vice-Presidents and Exploration Managers were hired by John.

When it became mandatory for John to retire at age 65, I had the good fortune of being selected by Shell to make all arrangements for John's retirement party and also prepare his "retirement book". I was very busy preparing this book for a period of several months. The material provided by John's friends from all over the world, consisting of photographs and personal messages, were finally compiled in a very beautiful,

four inch thick, leather bound book which I had the pleasure of presenting to John at his retirement party. John's favorite desk, which he had used for many years with Shell, was also presented to him by his Shell friends. This desk and retirement book occupied an important place in John's den during his 11 years of retirement. John took great pleasure in showing his desk and book to all his friends that were invited to attend the famous Inkster Dinner Parties at 234 Chimney Rock in the Memorial Area. All of the members of this Society and everyone else who knew John will miss him very much. I personally hope that his lovely and most devoted wife, Pauline, who has been very active in the Houston Geological Auxiliary as President and member of various committees for many years, will continue her close association with our Society during the coming years.

Rufus J. Le Blanc  
 June 1980

**IN MEMORIAM**  
**DAVID A. HINERMAN**  
**(1926-1980)**

Dave Hinerman has died of cancer. Since the early fifties he was active in the Society and in our industry. He seldom missed a Society meeting, and seldom could his big laugh be missed during the social hour.

Much of his early training was with the American Republics Corporation, and even then he was achieving the professional standards which characterized his later work with Union Texas, Natomas and others. A mark of Dave the scientist was the skill with which he would attack each assignment he was given, whether it was examining a Cockfield core or interpreting seismic data from the Middle East. A mark of Dave the man was the doggedness with which he would pursue each problem to its conclusion.

He shared his experience and expertise with younger people entering the business and encouraged them to do the same in turn. Some of this newer group of scientists are now showing themselves to be of the same caliber and enthusiasm as Dave Hinerman of thirty years ago. Could there be a better legacy?

John N. Grissett

**PASSAGES**

**Dr. Milton B. Dobrin, 65, died May 22, 1980.** Dr. Dobrin was Professor of Geophysics at the University of Houston. A contribution has been made in his memory to the Milton B. Dobrin Scholarship Fund.

**Donald M. Davis** died January 1, 1980 in Houston. He was retired. Mr. Davis was a former president of the Houston Geological Society. A contribution has been made in his memory to the Memorial Scholarship Fund.

**John D. Marr, 75, died in November 1979.** Mr. Marr was a consultant and former vice-president of Seismic Explorations, Inc. A contribution has been made to the American Cancer Society.

**H. L. Thompson, Jr., 53, died June 23, 1980.** Mr. Thompson was retired and was formerly a Senior Geophysicist with Pennzoil Company.

★ ★ ★ ★ ★

Try to eliminate unnecessary trips in your car. If every automobile took one less ten mile trip per week, the Nation could save 3½ billion gallons of gasoline in one year.





**HOUSTON GEOLOGICAL SOCIETY  
EXECUTIVE BOARD  
1980-1981**

L-R: Gerald A. Cooley, Treasurer; Tommy M. Thompson, James A. Ragsdale, Wendell L. Lewis, Robert W. Bybee, Executive Committeemen; William A. Fowler, Jr., Past President; Peggy J. Rice, Second Vice President; William F. Bishop, First Vice President; Chester A. Baird, President; Matthew W. Daura, Secretary (not present).



# **LAISSER LE BON TEMPS ROULER\***

## **1980 GCAGS - SEPM CONVENTION LAFAYETTE, LOUISIANA OCTOBER 15 - 17**

The 1980 GCAGS-SEPM Convention will meet in the heart of Acadiana - Lafayette, Louisiana.

Make plans now to attend. Here are highlights of events scheduled:

- **DISTINGUISHED TECHNICAL PROGRAMS**  
Outstanding Technical Papers  
Annual GCAGS-SEPM Meetings  
Field trips through Bayou Country and Guatemala
- **FOR THE LADIES**  
Thursday: Luncheon and Style Show at Evangeline Downs  
Friday: Brunch and private shopping at Goudchaux and Acadiana Mall  
Friday: Field trip to historic Acadiana homes
- **SPORTS ACTIVITIES (Men & Women)**  
Golf Tournament  
Tennis Tournament  
Cross Country Run
- **LAGNAIPPE (Social Events)**  
Wednesday Night: Icebreaker Cocktail Party at Evangeline Downs  
Thursday Night: Dinner and Dance Acadiana Style

Come to the 1980 GCAGS-SEPM Convention in Bayou Country - Lafayette, Louisiana

For Information write:

1980 GCAGS-SEPM Convention  
P. O. Box 51388  
Lafayette, Louisiana 70505



**\*Let The Good Times Roll.**

## NATIONAL PARK MAPS AVAILABLE

Millions of Americans will be traveling to U.S. parks and many will be using U.S. Geological Survey, Department of the Interior, topographic maps as guides to getting around in the nation's scenic getaways.

The colorful USGS maps, which can also serve as souvenir reminders of a pleasant trip, not only show familiar cultural features such as roads, buildings, and highways, but they also portray the lay of the land — the topography — in highly accurate, scientific renditions.

According to Rupert B. Southard, chief of the Survey's National Mapping Division, "Our special-edition park maps emphasize features that are particularly helpful to vacationers such as campgrounds, campsites, trails, scenic viewpoints and other useful information. They also show land elevations, streams, forests, lakes, bridges, ranger stations, state and local boundaries and parking areas."

According to Southard, the USGS has produced approximately 45 maps of the most popular U.S. parks, monuments and seashores, including the Grand Canyon, Yosemite, Grand Teton, Yellowstone, Arches and Great Smoky Mountains national parks. Many of the maps are rendered in shaded relief, which gives a three-dimensional picture of the area, as if the viewer were looking down on the area from an airplane.

The USGS special-edition park maps vary in scale from 1:960 (1 inch on the map represents about 80 feet on the ground) for the Franklin D. Roosevelt National Historic Site in New York, to 1:250,000 (1 inch represents about 4 miles) for the map of Mount McKinley National Park in Alaska. Map sizes also vary from about 18x18 inches for the map of Arches National Park in Utah, to 46x61 inches for the map of Canyonlands National Park in Utah.

In addition to these special-edition park maps, coverage is

also available for most national parks, as well as most state parks, using the Survey's standard 1:24,000-scale (1 inch represents about 2,000 feet) topographic maps, the basic outdoor hiking map for the nation's backpackers. The American Hiking Society, for example, is using Survey topographic maps to guide its coast-to-coast Hike-A-Nation venture, a 3,000-mile trek from San Francisco to Washington, D.C.

The USGS is the nation's largest civilian mapmaking agency and has over 60,000 topographic and other maps available. In 1979, the Survey sold approximately 6½ million maps to scientists, engineers and land-use planners, as well as to campers, hikers, fishermen and other outdoor enthusiasts.

Both special-edition park maps and standard Survey topographic maps are available at national parks and monuments or from area retailers who are authorized USGS map dealers. Dealer prices may vary from those charged by government outlets.

According to the USGS, while the maps undergo periodic revisions, they may not always reflect the latest changes in parks status such as new boundaries and full park titles.

USGS national park, monument, seashore and recreational area maps can also be obtained for areas west of the Mississippi for \$2.00 each (standard topographic maps are \$1.25 each; however, several of these maps are normally required to cover the same area covered by one special-edition park map) from the USGS, Branch of Distribution, Box 25286, Federal Center, Denver, Colo. 80225, and for areas east of the Mississippi from the USGS, Branch of Distribution, 1200 South Eads St., Arlington, Va. 22202. Orders must include check or money order payable to the U.S. Geological Survey. In addition, an index showing what park maps are available can be obtained free upon request from either of the two USGS distribution centers.

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The *Bulletin* is published monthly except July and August. Subscription price for nonmembers is \$15 per year. Single copy price is \$1.50. Claims for nonreceipt in the contiguous U.S. should be made within 2 months of the date of issue; claims from elsewhere within 4 months.

Communication about manuscripts and editorial matters should be directed to the Editor. Inquiries concerning advertising rates should be directed to the Advertising Chairman. Applications for membership in the Houston Geological Society may be obtained from the Society office, 6916 Ashcroft, Houston, Texas 77081.

## COVER PHOTO

The hill in the foreground is made up of a remnant cap of Mitchell Mesa Rhyolite underlain by thin Pruett-Duff Tuff and Basal Tertiary Jeff Conglomerate. Underlying the above is the easily eroded upper Cretaceous Penn Formation. In the background, Tertiary basaltic sills have intruded into Tertiary ash flows. This area is southwest of Agua Fria Mountain, about 20 miles north of Lajitas, Brewster County, Texas. *Photo courtesy of Glenn Hatcher.*

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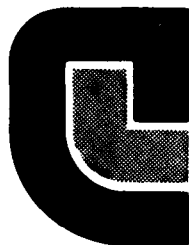
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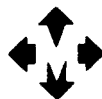
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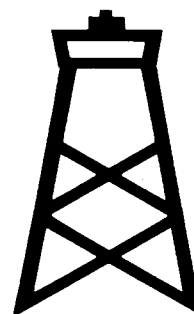
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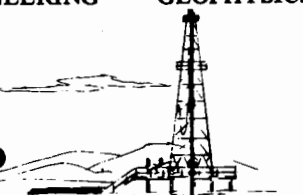


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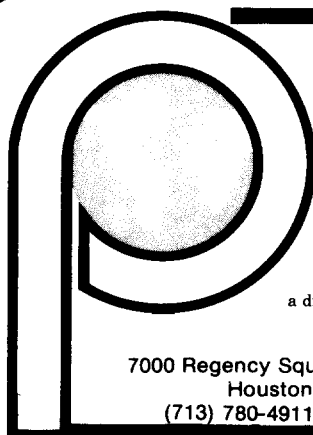
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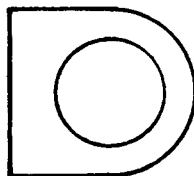
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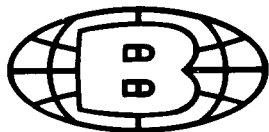
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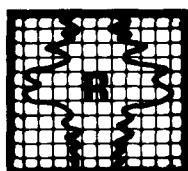
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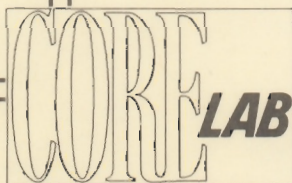
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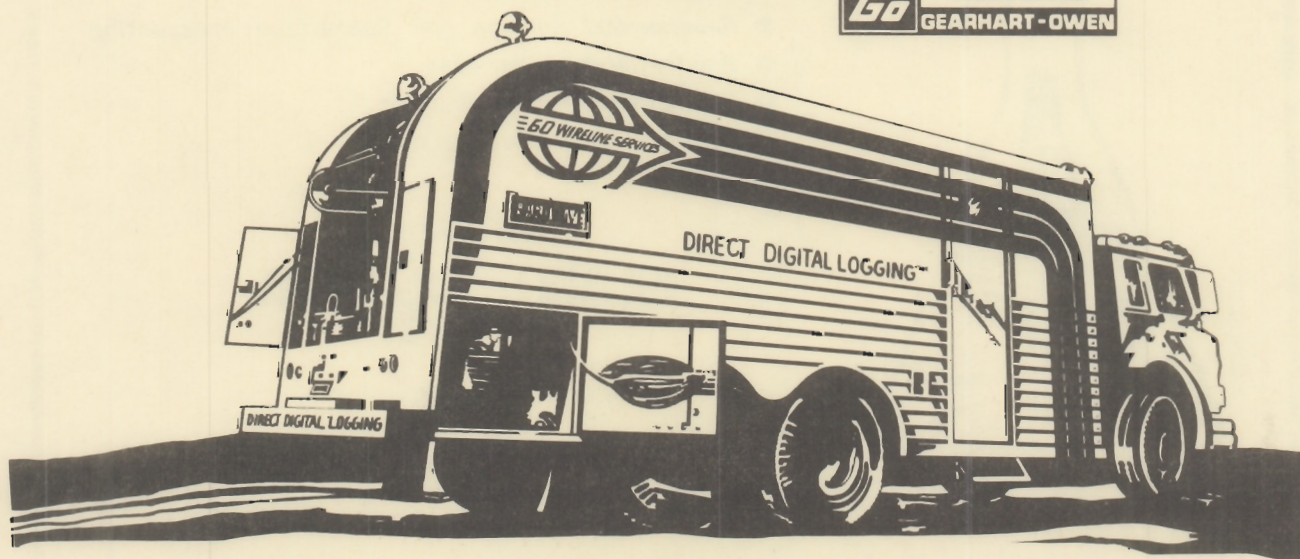
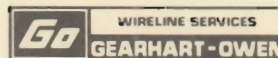
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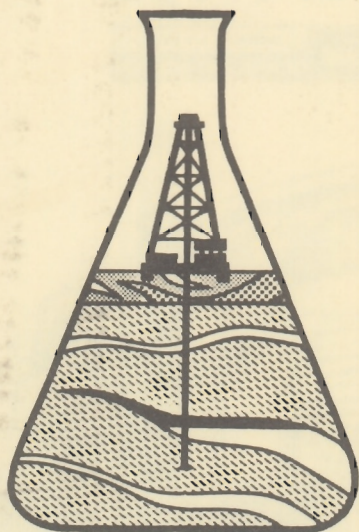
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