January, 1983

BULLETIN

HOUSTON GEOLOGICAL SOCIETY

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HGS JANUARY CALENDAR

January 10, 1983 (Dinner Meeting)
The Westin Oaks Hotel
Joint Meeting with Society of Petroleum Engineers of A.I.M.E.
Robert B. Truman
"Integrated Results - Interpretation of Logs with Thin Section Data"
Social Hour: 5:30 PM, Dinner and Meeting: 6:30 PM
Advanced Ticket Sales Only - See notice inside
(No tickets sold after **noon Friday, January 7.** Telephone **771-8315.**)

January 26, 1983 (Luncheon Meeting)
Sheraton Houston Hotel, 777 Polk Avenue
Anita Harris, U.S.G.S. Washington, D.C.
"Conodonts for Hydrocarbon Exploration Strategies"
Social Hour: 11:30 AM, Luncheon and Meeting 12:00 noon
Reservations by name (telephone only, **771-8315**) must be made or cancelled by **noon Monday, January 24, 1983.**

January 19, 1983 (Geo-Wives Luncheon)
La Hacienda De Los Morales
Audrey Fahlberg
"Travels To Mexico"
Call Mrs. Jack Stevenson (392-6252)

HOUSTON GEOLOGICAL SOCIETY
6916 Ashcroft
Houston, Texas 77081
771-8315
(Alternate phone: 771-5421)

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PRESIDENT'S COMMENTS

When the Houston Geological Society was formed in 1923, there were 73 charter members. At the November 1982 meeting of the Executive Board, 80 *new* members were approved for the month! After our annual purging of the rolls because of nonpayment of dues, our membership is now back to 4400-plus.

Attendance at our technical meetings ranges roughly from 200 to 650. That means only 4.5 to 15% of the membership is attending the meetings. In other member societies of the GCAGS represented at the October GCAGS Board meeting, membership ranges from 160 to 1400 and attendance at meetings ranges approximately from 20 to 40%.

I recognize that we in Houston have special problems because of the widely dispersed membership and the time and traffic involved in traveling to a central location. We are making an effort to serve various geographical sectors, and perhaps having periodic meetings in different areas of the city is the best approach. If you have other suggestions, please pass them on to me or some other member of the Board.

On the positive side, we in Houston have access to some of the best talent available in the geologic profession. There are experts here in most every geologic specialty. With all this talent available, we should be involved in more projects than we currently are — publications, environmental projects, educational projects, etc. Any suggestions (plus offers to work!) will be seriously considered.

Congratulations to Jim Lewis, General Chairman of the 1982 GCAGS convention, for such a successful meeting. We thank Jim and the many committee chairmen and members who worked for so many months to make the meeting a success.

Happy New Year!

PEGGY RICE
President

PRICE SCHEDULES — JANUARY MEETINGS

Westin Oaks Hotel, January 10, 1983 Dinner $18.00

Sheraton Houston, January 26, 1983 Luncheon $13.00

RESERVATIONS **(771-8315)**

This is a joint meeting with the Society of Petroleum Engineers of A.I.M.E. Deadline for making reservations is noon Friday, January 7, 1983.

Please make reservations for the Wednesday luncheon meeting by noon Monday, January 24, 1983.

SOCIETY CALENDAR FOR FEBRUARY

February 16 Noon Meeting
Meridien Hotel — L. I. Billingsley, Speaker
"Geometry Mechanisms of Folding Related to Growth Faulting in Nordheim Field Area (Wilcox), Dewitt County, Texas"

February 28 Evening Meeting
John Rankin, Speaker
Place and topic to be announced.

GULF COAST CLASTIC DEPOSITIONAL SYSTEMS FIELD COURSE — MARCH 7-12, 1983

A modern clastics field and lecture course on the Gulf Coast will be conducted for members of the HGS on March 7-12, 1983. The itinerary will cover the following sites: Padre Island, Corpus Christi Bay, Matagorda Bay and Cavallo Pass, Guadaloupe Delta, and Colorado-Brazos Rivers and Deltas. Daily orientation lectures, an overflight, on-site coring, and various visual aids will be integrated into the itinerary. Five full days will be spent in the field preceded by a general session the evening of March 6. Special emphasis will be placed on comparisons of these modern settings with equivalent hydrocarbon-producing units in the Gulf Coast and other basins.

Price: $1200.00 per person, includes breakfasts, lunches, one banquet, transportation while on course (including overflight) and all course materials.

Limit: 50 people. (Will separate into two groups.)

To Register: Send a deposit check of $200.00 no later than Feb. 1, 1983 to:
Gulf Coast Field Trip
Houston Geological Society
6916 Ashcroft
Houston, TX 77081
Phone: (713) 771-8315
The balance is due Feb. 14, 1983, with no cancellations (substitutions okay) after this date.

For Additional Information: Roxana Herrera
Dow Chemical, Oil & Gas
(713) 978-3814

COVER PHOTOGRAPHS NEEDED

The HGS *Bulletin* is in need of photographs for use on covers of future issues. Photos should relate to Texas geology or geological industries and should be clearly captioned. Color or black-and-white prints are acceptable, however, they should measure approximately 8" x 10" and *must* be oriented horizontally. If you would like to submit a photograph for consideration, please query Susan Conger-Morris, 754-7695.

TRADER'S COLUMN

The "Traders Column" makes free advertising space available to HGS members who have items available for *one time tranactions.* Items must be submitted six weeks in advance of publication.

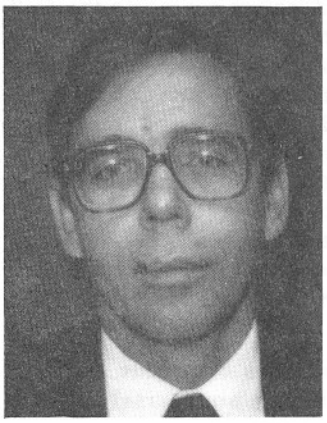
"Marc B. Edwards, consulting geologist, would like to purchase both a used binocular microscope and a used petrographic microscope in good condition. Please call **1-292-3937**."

1982-83 GSH MEMBERSHIP DIRECTORY

The Geophysical Society of Houston is preparing its *1982-83 Membership Directory.* The cost for a business card ad will be $50; other rates are $200 for a full page ad, $125 for a half page ad, and $75 for a quarter page ad. Please contact **Katherine Daues at 668-8400** or **Jack Weyand at 529-8789** for further details. The **closing date** for ad requests and copy delivery is **February 1, 1983.**

EVENING MEETING — JANUARY 10, 1983

ROBERT B. TRUMAN — Biographical Sketch



Robert B. Truman is Vice President and Operations Manager for Res-Tech, Inc., Houston, Texas. Bob received his B.S. degree in mechanical engineering from California State University at Long Beach in 1966. Following graduation, Bob joined Schlumberger where he served in various positions in operations management and research and development. His sixteen years of formation evaluation experience includes the areas of Texas, Louisiana, California, Canada and overseas. Bob is a member of the AAPG, SPE, SEG and SPWLA.

INTEGRATED RESULTS — INTERPRETATION OF LOGS WITH THIN SECTION DATA

The data available from wireline logs and detailed core evaluation, such as thin section analysis, is often evaluated separately.

Integrated analysis and interpretation of this data yields accurate predictions of the type of expected production (oil, gas, water) and potential reservoir problems such as swelling clays. In addition, the evaluation of reservoir properties and the stimulation and treatment of pay intervals are enhanced.

Several examples of the enhanced results and interpretations will be presented and discussed.

UPCOMING FIELD TRIPS

Damon Mound: This trip was oversubscribed in November. Call Nancy Weintraub, 626-5700, if you are interested in a second chance.

River-Dominated Barrier Systems: Scheduled for Spring, 1983, this field trip is still in the planning stage. Coordinator is Roxana Herrera, 978-3814.

Field Trip for Non-Geologists: The trip is scheduled for Spring, 1983, and is still in the planning stage.

Mexico or Maverick Basin: This field trip is still in the discussion stage.

GEM AND MINERAL SHOW, February 5-6, 1983

The Clear Lake Gem and Mineral Society will hold its 8th Annual "Best Little Gem and Mineral Show in Texas", February 5-6 at the League City Civic Center, 400 W. Walker, League City, Texas. The show will be open from 9:00 A.M. to 9:00 P.M. on Saturday and from 10:00 A.M. to 6:00 P.M. on Sunday. And just like the big shows, Clear Lake will have dealers, speakers, door prizes, exhibits of gems, minerals and artifacts, swap areas, a gem mine, as well as well as films and lectures. Contact Mac Robinson, (1) 534-4696, with any questions.

HGS PIPELINE

The following timely letter from David Fontaine marks the initiation of the **HGS Pipeline.** The HGS *Bulletin* welcomes brief letters and responses which address topics of **technical or professional interest.**

New Ways to Profit in Bad Times

HGS Pipeline:

Is there any good news left? So much verbal crape has draped the conversations of HGS members recently. Endless talk of slipping rig counts, layoffs, and slashed budgets. All this against the backdrop of a confusing national economy characterized by record unemployment, a prime rate decline of 9 points in recent months, business failures and bankruptcies setting records, an anticipated budget deficit of $130-200 billion, flat corporate earnings while at the same time the Dow Jones has gone well above the so-called "Magic 1000" mark, and a myriad of changes in the Federal Income Tax laws for 1981 and 1982. Admittedly, a positive attitude is tough to maintain in view of the above.

Converting bad news to good news is something geologists do regularly. For example, someone else's dry holes are often the basic building blocks for new prospects from which others benefit. We all know of cases where seeming "wet" zones on old logs have turned into prolific producers years later - after a proper reevaluation. What about all those places where there wasn't supposed to be any oil (e.g., East Texas)?

I recently decided to try to find some good news in the current economic climate surrounding our business. I found several items actually beneficial to oil and gas exploration, development and acquisition. For example, did you know that:

1. The maximum long-term capital gain rate for individuals has been reduced to 20 percent, thus making the eventual resale of oil and gas properties more profitable;
2. Investment tax credit rules have been liberalized;
3. Depreciation of oil field equipment may be accelerated more rapidly (usually over 5 years);
4. Used oil field equipment is treated the same as new equipment for tax purposes;
5. There are more exemptions available from the Windfall Profits tax rates;
6. Drilling costs are down at least 30 percent;
7. Quality prospects are on the market at attractive prices;
8. Drilling capital is available if you're willing to dig hard to find it, and are willing to negotiate rather than dictate terms in order to get it.

I'm certainly going to exploit these opportunities for the benefit of my clients. I suspect this list could be expanded and utilized by others in our profession.

For some unknown reason it usually takes two or three times as much good news to outweigh a given amount of bad news. Given the current state of affairs then, why not start incorporating all the good news we can muster into our business activities. What's needed now is not an approach of "wait and see", but rather a determined effort to "seek and find".

How do people find new ways to profit in seemingly bad times? It's simple. They start looking for them.

David A. Fontaine
Consulting Geologist, Houston

LUNCHEON MEETING—JANUARY 26, 1983

ANITA G. HARRIS—Biographical Sketch

Anita has the additional distinction of being the first person to have her picture lost at press time by the editor.

Anita Harris is a geologist with the Paleontology & Stratigraphy Branch of the U.S. Geological Survey at the Smithsonian in Washington, D.C. She received her BS from Brooklyn College and PhD from Ohio State University. She worked for the USGS intermittently from 1957 to 1967 as a field assistant, geophysicist, and geologist. From 1967 to 1974 she was geologic map editor for the Survey after which she obtained her present position as a conodont specialist. In the course of her career she has authored and co-authored over 50 papers and maps on stratigraphy, structural geology, hydrocarbon evaluation, and conodont biostratigraphy of Paleozoic and Triassic rocks covering many areas of the United States. She has been chief of several biostratigraphic projects spanning the country, but most of her individual work has focused on establishing and refining the conodont biostratigraphic framework and paleoecologic models for Ordovician through Devonian rocks in the Appalachian and Great Basins. In addition, she has established conodonts as reliable indices of thermal metamorphism and applied this technique to the analysis and interpretation of several large regions in order to assess hydrocarbon and mineralization potential and to interpret tectonic evolution. Her work has received recognition from industry, academia, and foreign and domestic governments; last year she received the Department of Interior's Meritorious Service Award for her achievements. She has recently received some notoriety from her consulting work with John McPhee involving several articles in the "New Yorker" magazine. These pieces concern various aspects and controversies of geology and the geology of the Appalachians.

CONODONTS FOR HYDROCARBON EXPLORATION STRATEGIES—THE LITTLE CONODONT THAT COULD

Conodonts are bright, shiny, colorful, apatitic microfossils that are common to abundant in marine rocks of Cambrian through Triassic age throughout the world. In the last decade they have become one of the major biostratigraphic and organic maturation indices throughout most of their geologic range. As a consequence, conodonts now have great utility in the search for oil and gas and mineral deposits in Paleozoic and Triassic rocks. The use of conodonts as metamorphic, paleogeographic, and chronologic indices facilitates interpretation of pre-thrust depositional and burial metamorphic patterns, suggests relative sequence and correlation of thrust sheets, and indicates areas favorable for hydrocarbon exploration. Recent and ongoing published and unpublished studies in the Appalachian Basin, Michigan Basin, central Great Basin, and Arizona provide examples of all these applications in a wide range of geologic settings.

Conodont-based isograd maps for some or all Ordovician through Triassic Systems are now or will soon be available for the Appalachian Basin, Arizona, and the central Great Basin including Nevada, Utah, southeast Idaho, and eastern California. Each of these large terranes with its distinct depositional, thermal, and tectonic history as well as widely dissimilar geologic and conodont data base require different interpretation strategies to assess oil and gas as well as some types of mineralization potential. Conodont-based isograd maps provide a first-cut assessment and target large areas of resource potential in such frontiers as the buried segment of the Valley and Ridge Province beneath the crystalline terrane of the eastern Appalachians, the southern Western Overthrust Belt, and the central Great Basin.

Refinement of conodont zonations has enabled revision and reinterpretation of Ordovician stratigraphy and paleogeography in the Appalachian and Michigan basins. In part of the Appalachian Basin and adjacent craton, the well-documented disconformity between Lower Ordovician dolostones and Middle Ordovician limestones is usually associated with karstification features and porosity horizons. These porosity horizons are often the host or reservoir rocks for stratabound mineral deposits or large volumes of natural gas. Conodont studies now show that in the central Appalachian Basin, 1) a large part of the dolostone sequence is of Middle Ordovician age, 2) nearly continuous deposition occurred across the Lower/Middle Ordovician boundary in a large area centered at the Mason-Dixon Line, and 3) karstification and associated porosity horizons do occur at several levels in this carbonate sequence, but considerably below the dolostone-limestone contact previously taken as the basinwide marker for an unconformity of considerable magnitude. In the Michigan Basin, conodonts from a deep well near the Paleozoic depocenter of the basin prove that over 2300 feet of evaporite-bearing sandy carbonates are of Early through Middle Ordovician age and not Late Cambrian age as widely held. This revision considerably alters the interpretation of basin configuration, paleogeography, and tectonic development.

COMPUTERIZED INFORMATION EXCHANGE FOR EARTH SCIENTISTS

Dave Crane, a Dallas geologist/computer consultant, has begun a computerized information and software exchange for scientists and engineers, and especially earth scientists.

Your terminal can contact his microcomputer at:

(214) 931-8274
1800 - 0800 daily (Central time)
24 hours weekends and holidays

There are no fees, membership applications or passwords associated with the service. However, the quality of the system will depend on the quality of the questions, answers, comments, product reviews, public-domain software, etc., contributed by callers.

If you know the command language of CP/M, you may recognize the system as an RCP/M. The first time you sign-on, please execute the program 'CBBS' to access the bulletin board and prompting features. You will need a terminal or microcomputer capable of communicating at about 300 Baud (Bell 103A protocol). When the computer answers, type carriage returns until it responds. After that, it's self-prompting.

If you have questions contact:

Dr. David C. Crane
P.O. Box 402614
Dallas, Texas 75240
(214) 931-2669 or (214) 931-8272

TRANSPORTATION FOR 1983 AAPG DALLAS, TEXAS APRIL 17-20, 1983

Seats have been reserved for HGS members on Muse and Southwest Airlines to and from Dallas, Texas for the AAPG Convention. Seats are available leaving Houston at both Intercontinental and Hobby airports. All flights will arrive at and depart from Love Field in Dallas. Seats to Dallas are available on Saturday, April 16th, Sunday, April 17th and Monday April 18th. Seats on returning flights are available on Tuesday, April 19th, and Wednesday, April 20th. There is a large variety of departure times available. Ticket prices (at present time) are $25 each way on Saturday and Sunday, $40 each way weekdays, and $25 each way after 7:00 p.m.

For details regarding individual flights or reservations please contact:

Connie Burke
Frosch International Travel, Inc.
11 Greenway, Suite 111
Houston, Texas 77046
Phone: (713) 850-1566

NEWS OF GEOLOGICAL SOCIETIES IN THE REGION

During the recent GCAGS board meeting in Houston, HGS President Peggy Rice conferred with representatives from other geological societies in the region. The following information has been gleaned from her notes:

Houston Geological Society
Has 4400+ members (200-600+ at meetings).

New Orleans Geological Society
Has 1400+ members (250-400 at meetings).
The society is publishing a guide to building stones used in New Orleans buildings.

Lafayette Geological Society
Has 900+ members
In early 1983, the society will release a new publication on oil and gas fields in South Louisiana.

Corpus Christi Geological Society
Has 700 members.
The society is working on an Rw catalog for South Texas.

Shreveport Geological Society
Has 650 members (200 at last meeting).

Mississippi Geological Society
Has 600 members.

South Texas Geological Society
Has 500 members.
The society offers several $450 field camp scholarships to students.

Baton Rouge Geological Society
Has 200 members (60 at meetings).

Austin Geological Society
Has 160 members (75 at meetings).

U OF H ALUMNI MEETINGS

The University of Houston Geology Department Alumni extends an invitation to all graduates to attend our monthly luncheons. The group meets on the **second Wednesday of every month** at 11:45 am at the **Petroleum Club.** Yearly membership dues are $6.00 and your first lunch is on us. Call 658-8262 for reservations.

DIVISION OF PROFESSIONAL AFFAIRS OF AAPG

The basic goals of the Division of Professional Affairs (DPA) of AAPG are to promote the highest professional standards for petroleum geologists and to affirm these standards before industry, government, academic, and the general public. At regional and national conventions, the division presents programs which often focus on professional, ethical, political, or business matters confronting petroleum geologists. Other activities conducted by the DPA include certification of Petroleum Geologists, publication of a directory of Certified Petroleum Geologists, publication of a DPA newsletter, and sponsorship of a variety of other professional and educational programs.

Anyone desiring information about the DPA or certification may contact AAPG headquarters in Tulsa, or, in Houston, call Scott Lysinger at 658-8330.

LAWYER ADDRESSES DPA LUNCHEON

Approximately 250 geologists attended the Division of Professional Affairs of AAPG luncheon on Thursday, October 28, which was held in connection with the 1982 G.C.A.G.S. Convention in Houston. Featured speaker for the occasion was attorney J. Clark Martin, a partner in the legal firm of Vinson and Elkins, who addressed the group on the subject of how the law views the geologist and his relationship with employers and clients. A practicing trial lawyer in the field of intellectual property and unfair competition, Mr. Martin outlined in his speech the duties which the law imposes upon a geologist 1) as an employee, 2) as an independent contractor, and 3) as a fiduciary (an agent or joint venturer). He explained the legal obligations which exist during an employment or consulting relationship, and outlined those obligations which continue even after the professional relationship has terminated.

Some of the salient points covered in this portion of the talk included ownership of ideas, conflicts of interest, a geologist's obligation not to disclose confidential information and post-employment restrictions. Mr. Martin briefly discussed the AAPG Code of Ethics, stating that in certain instances, the Code could be used by courts to determine the customs in industry when legal issues involved geologists. Another area to which the courts often look is patent law, which, significantly, puts no time limits on the pursuit of confidential trade secrets and ideas. Four different lawsuits involving geologists were reviewed: *Omohundro v Matthews, Hunter v Shell Oil Co., Tlapek v Chevron Oil Company,* and *Superior Oil Co. v Mobil Oil Corp.* Each of these cases illustrated the application of some of the basic legal concepts listed above.

In conclusion, Mr. Martin emphasized that in the absence of a formal contract, our legal system gives most of the protection to the employer or company. Therefore, the best protection a geologist can have is a written contract with his employer or client which specifically addresses his rights and obligations, ownership of ideas, post-employment restraints and time limits, and the benefits of his professional efforts.

Mr. Martin followed his prepared remarks with a lively question and answer session during which he responded to queries concerning the Deceptive Trade Practices Act, copyright laws, proprietary seismic programs, the ownership of prospect ideas by bankrupt companies and a variety of other related topics. The abundance of questions from the floor illustrated a high degree of concern and interest in the legal aspects of petroleum geology.

Howard Kiatta
DPA Advisory Board

1982 GCAGS CONVENTION

The Gulf Coast Association of Geological Societies Convention held October 27-29 at the Shamrock Hilton Hotel in Houston was a resounding success and the Houston Geological Society can be justly proud of its accomplishments in organizing and conducting such a fine meeting. GCAGS has been sponsoring excellent conventions for the last 32 years through its system of affiliated societies, each of which enthusiastically takes turns in hosting the annual event. Houston has upheld the GCAGS tradition of excellence by hosting a convention which was second to none.

GCAGS conventions are particularly noteworthy because they provide a forum of geological thinking for the entire Gulf Coast Province. The technical programs are comprehensive and the papers presented at the convention are published in the *Transactions.* The registration fee of a GCAGS convention is a bargain which cannot be matched anywhere.

GCAGS officers for the past year were: John J. Amoruso, President; Sarah C. Childress, Vice President; Clyde G. Beckwith, Secretary; and Chester A. Baird, Treasurer. James O. Lewis was Chairman of the convention and through his efforts an excellent group of committee chairmen and women, and committee workers, was organized. Although space prohibits the listing of everyone who worked so hard to insure the success of the convention the committee heads should be specially recognized. They were:

Vice Chairman - Roy Worrell
Arrangements - Mac Newby
Advertising - Kay Stafford
Athletic Events - Stewart Chuber
Awards - Earl Ritchie
Transactions Editor - Mo Malek-Aslani
Entertainment - Howard Kiatta
Exhibits - John Langford
Field Trips - Steve Thornhill
Housing - Fred Schall
Ladies Activities - Glenna Floyd and Norma Jean Bacho
Printing - Robert Pace
Program - Paul Harris
Publicity - William Cobb and Bryan Richards
Registration - Richard Guerrero
SEPM Program - Jack Colle
Audio Visual - Jerry Watson
Transportation - Dave Eggleston

The 1982 GCAGS *Transactions* were dedicated to Rufus J. Le Blanc, Sr. Rufus has been an outstanding contributor to the geological profession throughout his career and this is an honor which he richly deserves. With this convention, GCAGS, also instituted Honorary Membership and Distinguished Service Awards to recognize specific individuals who particularly have helped GCAGS through the years. Honorary Membership Awards were presented to: Don R. Boyd, Jules Braunstein, Michel T. Halbouty, Frank W. Harrison, Lee H. Meltzer and Harold N. Hickey. Distinguished Service Awards were presented to Robert E. Boyer, P. Barkley Souders and Bill C. Tucker. Well deserved congratulations are due to each of them.

The next GCAGS convention will be held in Jackson, Mississippi on October 26-28, 1983. Although the GCAGS convention schedule is already set through 1989, we can all look forward to another one in Houston about 1991. See you there.

John J. Amoruso
1981-82 GCAGS President

GCAGS BEST PAPER AWARDS

The following papers have been selected as winners of the 1982 Best Paper Awards at the 1982 GCAGS/GCS-SEPM Convention, October 26-31, 1982 in Houston, Texas.

GCAGS BEST PAPERS

First Best Paper Award and A. I. Levorsen Award
T. E. Ewing and S. C. Caran, Bureau of Economic Geology, the University of Texas at Austin, Austin, Texas 78712
"Late Cretaceous Volcanism in South and Central Texas - Stratigraphic, Structural, and Seismic Models."

Second Best Paper Award:
D. J. Benson, Department of Geology, the University of Alabama and E. A. Mancini, Geological Survey of Alabama;, and Department of Geology, the University of Alabama
"Petrology and Reservoir Characteristics of the Smackover Formation, Hatter's Pond Field: Implications for Smackover Exploration in Southwestern Alabama."

Third Best Paper Award:
R. R. Berg, Department of Geology, Texas A&M University, College Station, Texas 77843 and M. F. Habeck, Bass Enterprises Production Company, Fort Worth, Texas 76102
"Abnormal Pressures in the Lower Vicksburg, McAllen Ranch Field, South Texas."

GCS/SEPM BEST PAPERS

Best Presentation Award:
Charles D. Winker, Institute for Geophysics, University of Texas, Current Address: Department of Geosciences, University of Arizona, Tucson, Arizona 85721
"Cenozoic Shelf Margins, Northwestern Gulf of Mexico."

Best Published Paper Award: to be announced at a later date.

No poster sessions were held at the 1982 convention.

1982-83 GCAGS OFFICERS

President	Sarah Childress, Jackson, MS
Vice President	John T. Palmer, Shreveport, LA
Secretary	Simeon Ann King, Jackson, MS
Treasurer	P. David Cate, Jackson, MS
Past President	John J. Amoruso, Houston, TX

1983 GCAGS-GCS/SEPM CONVENTION:

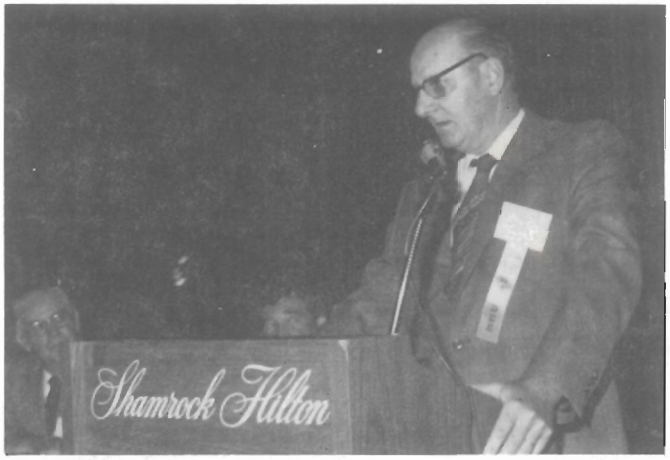
The 33rd annual convention will be held in Jackson, Mississippi, on October 25-29, 1983. The convention headquarters will be the Holiday Inn downtown and papers will be presented in the City Auditorium.

GCAGS CONVENTION SCHEDULE

1983	Oct. 26-28	Jackson, MS
1984	Oct. 24-26	Shreveport, LA
1985	Oct.	Austin, TX

THE GULF COAST ASSOCIATION OF GEOLOGICAL SOCIETIES 1982 CONVENTION, HOUSTON, TEXAS

The Ice breaker cocktail party was a great success.



The 1982 GCAGS *Transactions* were dedicated to Rufus Le Blanc, Sr. (above) in recognition of his many outstanding contributions to the geological profession.

Left to right: Convention Vice Chairman Roy Worrell, Convention Chairman James Lewis, GCAGS President John Amoruso

Ladies Hospitality Room. Left to right: Betty Hastings, Lois Vind, Bonnie Slanis.

GCAGS Program Chairman, Paul Harris

SEPM Program Chairman, Jack Colle

Some of the special awardees of the convention. Left to right: Harold Hickey, Robert Boyer, Jules Braunstein, Don Boyd, Michel Halbouty.

GCAGS President John Amoruso

SEPM Awards Chairman James Bain

Earl Ritchie Awards Chairman, presents the GCAGS Best Paper and the A. I. Levorsen Awards to Edward C. Roy, senior author of the last year's top paper.

The Registration Committee at work. Left to right: Richard Guerrero (chairman), Claudia Ludwig, Roy Worrell (Convention Vice Chairman).

Registration went smoothly and quickly.

Publicity Committee members review their work. Left to right: Bryan Richards, Bill Cobb (chairman), Ken Nemeth.

NEW DEVELOPMENTS IN ENERGY TECHNOLOGY:
Review of the 57th Annual SPE Conference

Kenneth Ruzyla
Exxon Production Research Co.

The 57th Annual Technical Conference and Exhibition of the Society of Petroleum Engineers was held in New Orleans, Louisiana, September 26-29, 1982. The theme of the conference was "resource management in a changing environment". A total of 250 papers were grouped into 47 technical sessions. Some sessions of particular importance to exploration or production geology were:

- Geological characterization for reservoir modeling
- Geological characteristics of reservoir pore systems
- Theory of one and two phase flow in porous media
- Theory of two phase flow in porous media
- Electrical measurements
- Acoustic measurements and fracture detection
- Radioactivity measurements

In addition to the technical sessions, a geological field trip to the Mississippi River deltaic depositional system was led by James M. Coleman and Harry H. Roberts of the Coastal Studies Institute, Louisiana State University. The field trip enabled participants to view modern analogs of subsurface clastic reservoirs, and also included discussion of modern sedimentary deformation processes that have an influence on man-made structures such as offshore drilling platforms.

Short courses offered participants a broader discussion of such topics as reservoir geology of sandstones, enhanced oil recovery, properties of petroleum fluids, economic evaluations, geophysics, and hydraulic fracturing. The short course on reservoir geology of sandstones was conducted by Robert M. Sneider (Robert M. Sneider Exploration), C. N. Tinker (Shell Oil Company), and J. G. Richardson (Exxon Production Research Co.), and explained the use of modern analog models for defining the external geometry and internal spatial distribution of various sandstone reservoir systems. Discussion included depositional environments, key sedimentary environments, and reservoir models.

The following brief account, limited to those sessions listed above, is an attempt to summarize some important concepts, trends, and new technology presented at the conference. Many SPE papers eventually are published in either the Journal of Petroleum Technology, or the Society of Petroleum Engineers Journal. Preprints of all SPE papers are also available.

RESERVOIR MODELING

The session on geological characterization for reservoir modeling included three case histories of geological studies done in association with performance and production evaluation. The first paper discussed the Post West (Strawn) Field of Garza County, Texas, and was authored by S. R. Myers (Amoco Production Co.) The field produces from a structurally and stratigraphically controlled trap within the Pennsylvanian Strawn Limestone and a lower Mississippian limestone. Porosity types were identified, zoned, and mapped in order to better determine hydrocarbon reserves. Diagenetic processes, such as cavity filling by saddle dolomite (see Radke and Mathis: "On the formation and occurrence of saddle dolomite", Jour. Sed. Petrol., v.50, (1980) p. 1149-1168) were found to be important to predicting production trends.

Gregory P. Long (Amoco Production Company) next presented "The Geology of the Yellowhouse Unit, Hockley County, Texas", which described porosity and permeability trends in the Permian San Andres Formation. Core data and log response were merged to determine pay quality, zonation, lateral and vertical continuity. Anhydrite infilling of pores was found to be an important porosity occluding mechanism in certain depositional zones, while intercrystalline pores developed during dolomitization were found to be the more effective porosity type.

The third case history was titled "Synergistic evaluation of a complex conglomerate reservoir for enhanced oil recovery, Barrancas Formation, Argentina", by Vishnu N. Simlote, W. J. Ebanks, Jr., and Eric V. Eslinger (Cities Service Co.). Their paper described an engineering-geological study to evaluate waterflood performance and to develop a predictive model for use in evaluating reservoir response to caustic flooding. Analysis of pore geometry and its effects on fluid flow was included in the geologic study. The authors found that S. P. logs could be used to define zones of generally "high" and "low" permeability, and that reservoir permeability decreases with increasing abundance of total clay.

In addition to the above case studies, a session paper was presented by John A. McDonald and Gerald H. F. Gardner (University of Houston) and Robert I. Morris (Gulf Research and Development Co.) titled "Reservoir characterization by areal seismic methods". This paper described improvements in areal seismic techniques for better definition of hydrocarbon reservoirs through the use of common-depth-point methods. Advantages of areal seismic methods were discussed. The authors point out that conventional CDP methods provide a plane of subsurface information whereas the areal method provides a "cube" of information useful for subsurface mapping. The final paper of the session was a synergistic review of the Silurian-Niagaran Reef Belt around the Michigan Basin, by K. Aminian (Michigan Consolidated Gas Co.), M. R. Tek and J. L. Wilson (University of Michigan).

RESERVOIR PORE SYSTEMS

Relationships among the physical and chemical properties of reservoir rocks were addressed in the six papers presented in the session "Geological characteristics of reservoir pore systems". Michael T. Holland (Terra Tek Research) presented a study of pore modification during secondary porosity development in deep overpressured sands titled "Reservoir property implications of pore geometry modification accompanying sand diagenesis: Anahuac Formation, Louisiana". The importance of such secondary porosity in sandstone reservoirs has received considerable attention in recent years. Holland concluded that Anahuac porosity was significantly increased by selective dissolution of soluble material by acidic fluids generated during hydrocarbon maturation and shale dewatering. It was also found that dissolution was capable of influencing permeability by enlargement of pore throats.

The next two papers of this session, by Jeffrey J. Lelek and by Sandra J. Lindquist (Amoco Production Co.), discussed geological characteristics that affect production in the Overthrust Belt. Lelek's paper titled "Geologic factors affecting reservoir analysis, Anschutz Ranch East Field, Utah-Wyoming", pointed out reservoir heterogeneities in the Jurassic Nugget sandstone caused by depositional, diagenetic, and structural factors. In her paper titled "Nugget Formation reservoir characteristics affecting production in the Overthrust Belt of Southwestern Wyoming", Lindquist drove home the importance of understanding pore structure and its influence on production, because many sandstone reservoirs, like the Nugget, are lithologically consistent yet very heterogeneous with respect to permeability. Highly variable pore and pore throat sizes, resulting in this example from grain size variations, were found to be responsible for permeabilities which range over several orders of magnitude. It is also noteworth that in the better Nugget reservoir rock, fracturing was found to *reduce* permeability by nearly an order of magnitude as a result of gouge-filling and mineralization of the fractures.

The remaining three papers of the session illustrated some important research approaches designed to investigate geochemical and acoustical properties of reservoirs. Walter E. Dibble, Jr. and J. M. Potter (Petrophysical Services, Inc.) discussed "Effect of fluid flow rates on geochemical processes"; a means of better understanding the influence of fluid flow rate on mineral growth and dissolution. Donald G. Harris, J. F. Sarg, F. Branisa, and P. R. Vail (Exxon Production Research Co.) illustrated how seismic trace inversion sections show variations in acoustic impedance that may represent lithologic changes in their paper "Trace inversion for interpreting reservoir continuity and lithology". The final session paper, "Acoustical anisotropy of Cotton Valley shale", by Carol A. Tosaya (Petrophysical Services Inc.), focused on experimental results of acoustical measurements to demonstrate physical anisotrophy in Cotton Valley shaly siltstone.

PORE MODELING AND FLUID FLOW

Two sessions were dedicated to porosity modeling and prediction of one and two phase fluid flow. Included were a total of eleven papers which discussed new and evolving concepts in areas such as microscopic pore geometry, percolation theory, pore topology, dispersion, wettability, and capillary effects, all of which are of fundamental importance in the reservoir modeling of producible hydrocarbons. In their paper "two-phase flow in random network models of porous media", J. Koplik and T. J. Lasseter (Schlumberger-Doll Research) emphasized the need for connecting reservoir properties at the microscopic scale to the macroscopic properties observed in the laboratory and in the borehole. Inability to make this connection results in a significant limitation to understanding the dynamics of multiphase fluids in reservoir pores. Koplik and Lassiter have produced a sophisticated pore space model which uses approximate solutions of the Navier-Stokes equations to calculate the flow of two fluids in random networks. The result is a mathematical approximation of oil displacement by water flood, dependent on the particular pore geometry network of similarly-shaped, but randomly-sized elements chosen. The model is thus an important step toward predicting the behavior of oil reservoirs in advance of production. However, because of the complexity of the numerical calculations, the authors have been restricted to working with small two-dimensional networks of hundreds of pores. Application of the model to three-dimensional networks of thousands of pores awaits further programming developments.

Prabodh Pathak (Cities Service Co.), H. Ted Davis and L. E. Scriven (University of Minnesota) used percolation theory to examine how residual oil saturations depend on rock pore structure. Their paper titled "Dependence of residual nonwetting liquid on pore topology" concluded that pore topology, or connectivity, is as crucial as pore geometry in determining residual nonwetting saturations. Percolation theory is an approach being developed at the University of Minnesota which seeks by statistical means to describe the morphology of, and transport through, randomly disordered media. In practice, the percolation theory applies to network models of pore structure which in turn have been used to estimate relative permeabilities, capillary pressures, and formation factors. The understanding of fluid distributions and flow in reservoir rocks thus requires detailed study of pore-space morphology, that is to say, the size, shape, and number of pores, as well as how they are interconnected. The importance of pore interconnections was also stressed by Kishore K. Mohanty and Stephen J. Salter (ARCO Oil and Gas Co.) in their paper "Multiphase flow in porous media: II. pore level modeling". They presented a three-dimensional pore network model which calculates pore-level distribution of fluids and steady-state transport properties of such distributions.

LOGGING DEVELOPMENTS

Papers relating to new developments in logging were mostly grouped into three sessions, (1) electrical measurements, (2) acoustic measurements and fracture detection, and (3) radioactivity measurements. Papers in the electrical measurements session discussed induction log response deconvolutions; the Deep Propagation Tool (DPT) and how its response can be used to interpret formation resistivity and dielectric constants; response of the DPT in invaded boreholes; and the use of geotomography to reconstruct the geometry of a reservoir between two boreholes. The latter technique was described by J. L. Kretzschmar, K. L. Kibbe, and E. J. Witterholt (Cities Service Co.) in their paper "Tomographic reconstruction techniques for reservoir monitoring". Geotomography uses electromagnetic or elastic wave energy to construct a vertical slice or "tomograph" bounded by two boreholes, analogous to medical reconstruction technology which uses x-rays or ultrasound to create "pictures" of the interior of the human body. Geotomography promises to make reservoir modeling and enhanced recovery increasingly more accurate and effective by reconstructing complex reservoir fluid patterns.

The acoustic measurements and fracture detection session papers included discussion on use of computer modeling to improve acoustic porosity estimates; a new analytical model for determining shear wave travel time; study of acoustic wave forms generated by a point transmitter source; detection and analysis of natural limestone fracture systems; and the effects of unfavorable formation, borehole, and tool conditions on acoustic fracture detection. Techniques for evaluation of fractures were compared by Preston J. Julian, Jr. (Amoco Production Co.) in his paper "Fracture detection techniques in the Georgetown and Austin Chalk Formations". Julian concluded that a good porosity and induction log is usually a sufficient logging program to identify fractures and to determine if sufficient hydrocarbon production is attainable. Cores were considered as too expensive to use as a fracture

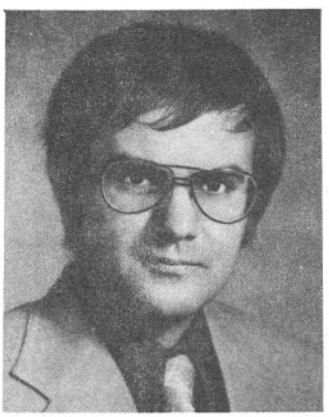
identification tool and the Borehole Televiewer was not capable of determining the hydrocarbon content of the fractures. Included in the radioactivity measurements session were six papers which discussed models used to predict the lithology of complex formations; techniques developed to correct inelastic and capture-gamma-ray spectra induced by neutron irradiation; natural gamma ray spectral logging devices; a new neutron porosity tool; surfactant flood monitoring; and the accuracy of pulsed neutron capture logs for residual oil saturation determinations.

OTHER SESSIONS

In addition to the sessions mentioned above, many papers pertinent to exploration or production geology problems were included in the program. Covered were such topics as drilling practices, reservoir simulation, tight gas production, oil shale technology, uranium, resource management, well testing, fracture theory, unconventional resources, economics, geothermal reservoirs, and enhanced recovery. In summary, the 1982 meeting of SPE provided ample opportunity for the exploration or production geologist to sharpen his or her skills and to become informed about important new and evolving reservoir concepts. A preprint of any presentation made at this or any other SPE meeting is obtainable from SPE Headquarters: 6200 N. Central Expwy., Drawer 64706, Dallas, TX 75206. Phone 214/361-6601.

The next (58th) Annual Technical Conference and Exhibition of SPE will take place October 5-8, 1983, in San Francisco, California.

KENNETH RUZYLA — Biographical Sketch



Kenneth Ruzyla is a Senior research petrophysicist at Exxon Production Research Company. His research interests include quantitative determination of pore geometry and its effects on fluid flow. He received his BS degree in geology from the University of Oklahoma in 1969, and his MA degree in geology from the State University of New York at Binghamton in 1972. He worked as an exploration geologist with Marathon Oil Company from 1971 to 1976, before receiving his Ph.D. in geology from Rensselaer Polytechnic Institute in 1980. For the past two years he has served on the Program Committee of SPE. His professional society memberships include the Society of Petroleum Engineers (SPE), the Society of Economic Paleontologists and Mineralogists (SEPM), the American Association of Petroleum Geologists (AAPG), and the International Society for Stereology (ISS).

HGS MEMBERS ACTIVE IN AAPG

The HGS is well represented among leading members of the American Association of Petroleum Geologists. Twenty-four HGS members are prominent in the AAPG. They include:

John J. Amoruso (Houston): President-Elect; President, Gulf Coast Section.

Robert D. Berg (College Station): Chairman, Academic Liason Committee.

Richard S. Bishop (Houston): Chairman, Education Committee.

Robey H. Clark (Amarillo): Member, Advisory Council; Past President; Representative to International Union of Geological Sciences.

Fred A. Dix (Tulsa, OK): Executive Director.

Marlan W. Downey (Houston): Chairman, AAPG/OTC Technical Program Committee.

Norman H. Foster (Denver, CO): Treasurer; Chairman, Group Insurance Committee.

William E. Gipson (Houston): Chairman, Industry Liason Committee.

Peter G. Gray (Lafayette, LA): Vice Chairman, House of Delegates.

Merrill W. Haas (Houston): Trustee, AAPG Foundation; Past President.

Michel T. Halbouty (Houston): Member, Advisory Council; Past President; Circum-Pacific Section Councillor; President, Circum-Pacific Section.

Bernold M. Hanson (Midland): Chairman, Environmental Geology Committee.

Frank W. Harrison, Jr. (Lafayette, LA): Chairman, Advisory Council; Past President; Representative to AGI Governing Board.

Charles F. Iglehart (Houston): Chairman, Computer Applications to Geology Committee.

John T. Isberg (Santa Fe Springs, CA): Member, DPA Advisory Board.

Howard W. Kiatta (Houston): Member, DPA Advisory Board.

Susan A. Longacre (Houston): Chairman, Publication Committee.

Jack P. Martin (Lafayette, LA): Member, DPA Advisory Board.

Marcus E. Milling (Dallas): Representative to OTC Executive Committee.

Anthony Reso (Houston): Chairman, Committee on Conventions.

William H. Roberts, III (Houston): Chairman, House of Delegates.

Kenneth A. Schwarz (Baltimore, MD): Member, DPA Advisory Board.

Jack W. Shirley (Lafayette, LA): Chairman, Boy Scout Committee.

Joel S. Watkins (Houston): Chairman, Marine Geology Committee.

1983 Honoree from HGS:

Marc B. Edwards (Houston: 1983 Sproule Award for best paper by an author under the age of thirty-five.

REVIEW OF EXPLORATION ACTIVITY

OFFSHORE GULF COAST

A 13,000' **Miocene** test has been scheduled by Shell for **Galveston Block A-35.** The test is offshore from Brazoria County and will be drilled in 102' of water. Nearest production is Galveston Block 288-L Field, about 25 miles northeast.

MTS plans to drill a 15,000 **Miocene** test on High Island Block 63-L, offshore Galveston County. The test is 7 miles northeast of Block 98-L Field which produces from the Miocene.

Corpus Christi Oil & Gas has completed their #1-A State Tract 826-S as a **Miocene** gas discovery for North Clear Field on **Matagorda Island Block 826-S.** The discovery flowed 1.6 MMCFGPD plus 21 BCPD from perforations 6928-34' and 1.8 MMCFGPD plus 12 BCPD from perforations 7196-7208'.

An apparent new field discovery is being tested by Daniel Oil at **Main Pass Block 22** offshore Louisiana. A **Miocene** sand discovery is located 1-1/2 miles east of East Black Bay Field.

ONSHORE GULF COAST

Lower Texas Gulf Coast

Conoco has staked a 13,000' **lower Wilcox** test 2-1/2 miles south-southeast of Wilcox gas production at Mujeres Creek Field in **Webb County**. Scattered and tite lower Wilcox "Lobo" sands are productive at Mujeres Creek Field but the potential below 10,350' has not been tested. At the Carrizo-Wilcox horizon, the test will penetrate only regional southeast dip without any apparent structural anomaly.

A 9500' **lower Wilcox** test has been staked at the HNG #1 Garcia 1-2/3 miles north of Roleta Field in **Zapata County**. Scattered thin Wilcox sands from 7500' to 9500' are present at Roleta Field and a similar development is anticipated at the HNG test. Regional east dip is indicated at the proposed location on the Carrizo-Wilcox horizon.

Pyro Energy has announced an 11,000' **Queen City** or possibly **Carrizo-Wilcox** test in **Jim Hogg County**. The test is on strike with and 1-1/2 miles north of the Jones North Field which produces oil from the Jackson. Deep sands below 8200' are thin and "tite" in a downdip test; however, the sands may improve updip.

Tenroc has staked an 8500' **Frio** test at their #1 Marshall in **Cameron County.** Nearest production is at Willamar Southwest Field 9 miles northeast. This is a very sparsely drilled area, but the Miocene and *Marg* sands are fairly well developed in nearby tests. The test is interpreted to be downthrown at the *Het-Marg* horizon and in a structural low.

A **Queen City discovery** has been reported by Pyro Energy at their #1 Mestena 5-J-2 in **Jim Hogg County**. The discovery is on a northeast-southwest trending structural anomaly between Hot Wells Field to the northeast and Jaron Field to the southwest. Completion was from Queen City sand perfs 9667-82' with an IPF of 441 MCFGPD plus 22 BCPD.

Middle Texas Gulf Coast

Clover Energy has scheduled an 11,500' **Wilcox** test in **Karnes County,** 1-1/4 miles southwest of Wilcox production at McCaskill Southwest Field. Both the Carrizo-Wilcox and lower Wilcox sands are potential targets at this test, which is on regional northeast dip but fault separated from McCaskill Field.

A 10,600' **Frio** test has been permitted by Huffco Petroleum in **Calhoun County**. The test is approximately 2-3/4 miles northeast of Frio gas production at John Welder Field. The proposed test should encounter stringer-type Frio sands from 9400' to TD and it is interpreted to be on the north flank of a faulted anomaly at the top Frio level.

In **La Salle County**, Sexton Oil has staked a 5300' **basal Wilcox** test, 1-3/4 miles south-southwest of Edwards production at Stuart City Field. Fairly well-developed Wilcox sands should be encountered from 3700' to 4900'. The test is in a structural low at the Carrizo-Wilcox level, but trapping conditions may be enhanced by the older Stuart City reef immediately to the northwest. Other Wilcox producing areas to the northeast appear to be related to this hinge line feature.

An **upper Midway** sand **discovery** has been completed by Getty Oil at their #3 Baum in **Lavaca County**. The new field is just west of Sublime Field which produces from the Wilcox. Completion was from perforations 11,397-11,446' with an IPF of 83 BOPD plus 261 MCFGPD. No structural anomaly is evident at the top Wilcox horizon.

Patrick Petroleum has completed their #1 Johnson as the discovery well for Southwest Clay West Field in **Live Oak County**. The **Wilcox discovery** was completed from perforations 15,257-15,445' for an IPF of 429 MCFGPD plus 3 BCPD. It is on the southwest flank of the Clay West Field structure but produces from much deeper Wilcox sands.

Upper Texas Gulf Coast

ARCO Oil has staked a 12,000' **Wilcox** test at their #1 ARCO Fee Section 89, 2 miles south of Yegua production at Buna Field in **Jasper County**. Fairly well-developed Wilcox sands were present in the Gulf #1 Hankamer 5 miles west. The proposed test appears to be on the east flank of a structural high at the top Wilcox horizon.

A 12,500' **Frio** test has been staked by Conoco for **Jefferson County**, 2 miles southeast of Hackberry and *Marg* production in Gum Island Field. A thin stringer-type sand from 12,270-85' in the Amoco #1-A McFaddin 2-1/2 miles southeast may be one of the objectives in the proposed test. Regional southeast dip is interpreted for the proposed location at the top Frio horizon; however, a fault related feature may be present.

Mosbacher Production Co. has announced a 16,000' **Yegua** test at their #1 Daniel in **Liberty County**. The test is 3-1/4 miles south of Yegua and Frio production at Hull Southeast Field. Thin stringer-type Yegua sands were present in the Mecom #1 Boyt 1-1/2 miles southwest and the proposed test appears to be on a south plunging structural nose at the top Yegua horizon.

A **lower Frio discovery** has been announced by Pend Oreille at their #1 Chapman, 2 miles northeast of Dickinson Field in **Galveston County**. From perforations 12,046-12,064' the test flowed 372 BOPD and 2.1 MMCFGPD. The discovery appears to be on a fault anomaly on the northeast flank of the Dickinson Field structure.

A **Midway sand discovery** has been completed at the Ferguson #1 Underwood 2 miles west of Milbur Field in **Milam County**. From perforations 2856-98' the IPP was 50 BOPD with 30 MCFGPD and 40 BWPD. The discovery is within the Mexia-Talco fault complex.

South Louisiana

Austral Oil, et al, has staked a 15,000' **Miocene-***Cristellaria "I"* test 1-1/3 miles southeast of Rice Bayou Field in **Terrebonne Parish**. Fairly well-developed *Tex "L"* sands

were present in nearby tests and could be a potential objective at this test. At the *Textularia "L"* horizon the proposed test is downthrown from Rice Bayou Field but control for the fault is somewhat limited.

Also in **Terrebonne Parish**, Sandefer Petroleum Co. has scheduled their #1 Continental Land, a 16,500' **middle Miocene** test, 3 miles north-northwest of Bayou Copasaw Field. The *Cris "I"* sands were fairly well developed to approximately 14,000' but the *Cib op* section was primarily shale in nearby tests. At the *Cris "I"* horizon, the test is upthrown on the west dipping beds.

Campbell Energy has selected location for a 14,500' *Cib haz.* test, 2 miles southwest of Bayou Blue Southwest Field in **Iberville Parish**. The **upper Frio, lower Miocene** and **Anahuac** sands could be prospective at this test. At the *Camerina "A"* horizon the test is on the southwest flank of the Bayou Blue structure with entrapment anticipated to be partially stratigraphic.

In southwest Louisiana, Exxon has scheduled at 15,300' **Miocene** test in **Vermilion Parish**. The test is 1-1/2 miles northeast and upthrown from Miocene production at Pecan Island Field. *Cris "I", Rob "54",* and deeper sands are prospective at this test.

Also in **Vermilion Parish**, Superior has announced an 18,000' **Anahuac-Frio** test 1-1/3 miles east-southeast of Southeast Gueydan Field. The sands below 13,000' were limited in the Superior #1 Hore 1/2 mile southeast, but may improve updip at the proposed test. At the *Siphonina davisi* horizon, the #1 Hebert is located on the southeast flank of the Gueydan Southeast Field structure.

Pel-Tex has staked their #1 Dupont 2/3 mile southwest of West Lake Arthur Field in **Jefferson Davis Parish.** *Marg howei,* **Anahuac,** *Camerina "A",* and *Cib haz.* sands have fair to poor development in the area but could be potential objectives at this test. At the *Camerina "A"* horizon, the test appears to be downthrown on the south flank of the Lake Arthur Field structure.

Hughes & Hughes are testing at their #1 Cole, a **potential Lower Tuscaloosa discovery** in **St. Helena Parish**. From perforations 13,036-13,043', the test flowed 96 BOPD plus 46 MCFGPD. The discovery is 4-1/2 miles northwest of Tuscaloosa production at Greensburg Field and approximately on strike with this field.

Two **Miocene** zones have tested oil at the Pend Oreille #1 State Lease #9570 in **Plaquemines Parish**. From perforations 13,667-13,669', the lower zone flowed 144 BOPD plus 170 MCFGPD and a DST from 13,558-13,571' flowed 126 BOPD plus 120 MCFGPD. The discovery is on northeast dipping beds approximately on strike with Lake Washington Field 3 miles to the southeast.

MESOZOIC TREND

East Texas Basin

In the East Texas Basin, Mulkey Engineering is waiting on rig at their #1 Hill, a 16,000' **Cotton Valley** test in **Leon County**. The proposed test is 2-1/4 miles southwest of Cotton Valley Lime production at Branton Field. The Cotton Valley Lime should be fairly well developed at the #1 Hill but the structural position is speculative due to lack of subsurface control.

Cities Service has staked an 11,800' **Smackover** test 2-1/2 miles northeast of Kildare Field in **Cass County**. The Cotton Valley Lime-Smackover carbonate zones are fairly well developed in this area. Production is limited primarily to structural anomalies which is speculative at the proposed test.

In **Rusk County**, near the south end of the East Texas Field, Wessely Energy is drilling a 12,500' **Cotton Valley Lime** test. The test is 1-1/2 miles north of Good Springs West Field. The Cotton Valley Lime is developed in a "bank" facies on this west flank of the Sabine Uplift and production occurs at the optimum buildup of the carbonate unit. This test appears to be on the northeast flank of the Good Spring West anomaly.

A new **Pettet gas discovery** has been completed by Petts Oil, et al, at their #1 Latimer in **Rusk County**. The discovery is about 1-1/2 miles northwest of Garrison Field and although it is located on a southeast plunging nose at the Pettet horizon, production probably is related to stratigraphic conditions.

Exchange Oil & Gas has completed their #1 Fleming as a **Rodessa discovery** in **Smith County**. The discovery is 1-3/4 miles northwest of Paluxy production at Lindale Northeast Field. It is on the west flank of a northeast-southwest trending faulted anomaly at Paluxy level.

North Louisiana - South Arkansas

In the North Louisiana-South Arkansas area, **Smackover** drilling continues to dominate the wildcat activity.

Herbert E. Russell has spotted a 7300' **Smackover** test at the #1 Runyan-Dodson 3-3/4 miles north of Barlow Branch Field in **Columbia County**, Arkansas. The Reynolds oolite is fairly well developed in this part of South Arkansas but only regional south dip is apparent at the Smackover horizon.

In the Monroe-Sharkey Uplift area, Spirit Petroleum Company has scheduled a 6500' **Smackover** test at their #1 Monterey. The proposed test is in **Morehouse Parish** about mid way between Ouachita Field to the west and Epps Field to the east. The Smackover carbonate section should have fair reservoir quality in this area with regional west dip indicated at the Smackover level.

The Pettet continues to be an active exploration target in the Caddo-Pine Island Field area with two recent completions. John D. Caruthers has completed the #1 Melton from Pettet perfs 5364-74' for an IPF of 212 BOPD and the D. W. Chumley #1 Jacobs reported an IPF of 210 BOPD from perfs 5370-78'. Both tests are on the north flank of the Pine Island Field structure.

MAFLA

In **Escambia County, Alabama,** Texaco has selected location for a 15,100' **Smackover** wildcat 7-1/2 miles northwest of Big Escambia Field. Fairly good Smackover carbonates are present in this area. A broad southwest plunging nose is present at the Smackover level.

A rank **Smackover** wildcat in the Humphreys-Holmes Basin in the northwest part of the South Mississippi Basin has been permitted by Rush Oil at their #1 Trail Lake Gin Co. 22-15. The 9000' **Washington County, Mississippi** test is in an area of limited Smackover control and the structural and stratigraphic conditions are poorly known.

Harkins & Co. has announced an 18,500' **Smackover** test two miles west of Tallahala Creek Field in **Smith County, Mississippi**. The Haynesville-Smackover section is well developed at Tallahala Creek Field and the proposed test is on the west flank of the field structure at the Smackover horizon.

A **Miocene discovery** has been announced by Mobil in the Mobile Bay Field area of **Baldwin County, Alabama**. From perforations 2754-73', an IPF of 4 MMCFGPD was reported. This appears to be similar to other Miocene production to the east, also in Baldwin County, Alabama.

Pennzoil has completed their #1 Board of Supervisors as a **Norphlet sand discovery** on the northwest flank of the Pisgah Field structure in **Rankin County, Mississippi**. Completion was from Norphlet or lower Smackover sand perforations 15,946-16,040' for an IPF of 5 MMCFGPD. This is in an area of CO_2 production from the Smackover-Norphlet, but the gas content was not reported.

Adams Exploration has completed their #1 Newman located about 7 miles northwest of **Sligo** production at Learnered Field in **Hinds County, Mississippi**. Production was probably from **upper Cotton Valley** with perfs at 16,491-532' and in IPF of 3.6 MMCFGPD. Regional southwest dip is indicated for this area although a local anomaly is probably present at the discovery.

R. Dick Miller
Geomap Company

NATIONAL ASSOCIATION OF BLACK GEOLOGISTS AND GEOPHYSICISTS FOUNDED

The National Association of Black Geologists and Geophysicists is a non-profit organization established in June, 1981. The founders are from the Houston-Dallas area.

The objectives of the NABGG are to:

(1) provide and encourage continuing education in both the geological and geophysical sciences
(2) establish professional relationships among black geoscientists and maintain a current roster of blacks involved in the geosciences
(3) act as liaison to other geoscience organizations
(4) disseminate information about career opportunities in the geosciences to this and other minority groups
(5) encourage minority students by providing financial aid, counseling, and assistance in obtaining meaningful summer employment

The NABGG recognizes the many opportunities in industry for well trained minority geoscientists. The organization is committed to "bridging the gap" between industry and universities with minority geoscience students.

MONTHLY MEETINGS

The NABGG holds monthly meetings which typically include lectures or workshops as well as social periods. These are open to the public and held on the first Thursday of each month, September through June, at the Americana Hotel (3301 Southwest Freeway, across from Greenway Plaza). This month, Ms. Constance House, technical associate with Exxon Production Research Co., will speak on "Petrophysics Experiments." The meeting will be held Thursday, January 6, 1983 at 7:00 P.M. Call Carolyn Kenner-Varner at Getty for information.

MEMBERSHIP

The membership consists of persons engaged in the professional application and development of the geological and geophysical sciences. Additional information and membership applications may be obtained from

Membership Committee
P.O. Box 720157
Houston, Texas 77272

HGS EMPLOYMENT COLUMN

The HGS employment column is an extension of the HGS Personnel Committee and its primary goal is to help geologists seeking positions get in touch with prospective employers. We shall list 'situations wanted' by HGS members at no cost. Companies may list 'positions open' for a nominal donation to the Memorial Scholarship Fund. In addition, the Personnel Committee periodically will attempt to summarize the unadvertised "positions wanted" and "positions available" that exist in their files.

Individuals interested in placing an ad should send a brief description of experience and position desired to:

Personnel Committee
Houston Geological Society
6916 Ashcroft
Houston, Texas 77081

Upon receipt, the Personnel Committee will assign a code number to the person. This small committee (two persons) will have sole knowledge of those seeking positions. When written responses to a code number are received, the Personnel Committee will forward the *unopened* letter to the person placing the ad. (The committee will *not* respond to phone calls.) At that point, HGS will have no further part in the communication between geologist and prospective employer.

SITUATIONS WANTED

GEOLOGIST 5 yrs. of industry experience, working on Masters degree, would like part time work (up to 20 hrs/wk) as Geologist or Geotech. Code 110.

GEOLOGIST 2 yrs. of exp. in Onshore Texas and Louisiana. Desires position with progressive, active organization in Exploration or Production Depts. Code 220.

INDEPENDENT GEOLOGIST/MANAGER with 25 yrs. exp. in the Louisiana/Texas Gulf Coast Area desires partial retainer for overhead and project costs. Code 330.

GEOLOGIST 6 yrs. exp. in Texas and South Louisiana desires position in the Houston area. Code 440.

GEOLOGIST 3 yrs. exp. in Gulf Coast, completes MS in Geology June 1, desires position with large independent or major oil company. Code 550.

GEOLOGIST/GEOPHYSICIST 2 yrs. exp. Master's degree (Cornell U.) would like work in exploration and/or development. Flexible, can relocate or travel. Code 660.

PROFESSIONAL AND ORGANIZATIONAL NEWS

PROFESSIONAL AND ORGANIZATIONAL NEWS may be sent to Mrs. Virginia Lee Bick, Apt. 1701, 1701 Victoria Station Drive, Victoria, Texas 77901, or telephoned to 512-572-8858. Announcements must be sent six weeks in advance of publication in the *Bulletin.*

"Professional and Organizational News" relies largely upon HGS members to send in news about movement within the Society. Obviously, a lot more change occurs than is reported. If you are making a move or know of a member who is making a move, send it to Virginia.

HGS BOY SCOUT COMMITTEE

In its most recent meeting, the Boy Scout Committee had 7 of its 24 members present and spent the period discussing the committee's objectives. Representatives of the Sam Houston Area Council of the Boy Scouts attended and briefed the committee on the mechanics of organizing an Explorer Post. They also provided a listing of over 600 high school students who had indicated an interest in careers in geology or geophysics in a recent BSA Career Interest Survey. The Committee decided that the first priority would be to locate companies that would cooperate by providing a meeting place for the proposed Posts.

From a letter to approximately 30 companies, the committee had 14 replies and, as of this time, 6 potential meeting places are being considered. A big vote of appreciation must be extended to the following companies for their cooperation:

Amoco Production Company
Esso Exploration, Inc.
Exxon Company, USA
Exxon Production Research Company
Seiscom Delta, Inc.
Texoma Production Company

A canvas of the committee membership has produced expressions of 8 members desiring to work with Explorer Posts at those locations. It is anticipated that the other 16 members will respond in the near future. When the leadership of the Posts is established, a meeting will be held at these company locations to plan the program and prepare the invitations to the potential Post members.

It would appear that the Houston Geological Society will - in fact - be sponsoring, in cooperation with numerous industry companies, our objective number of Geology/Geophysics Explorer Posts by the end of 1982.

1983 ENTERTAINMENT CALENDAR

The Entertainment Committee is responsible for organizing the social activities of the HGS and is one of the largest and most active of the HGS committees. This year the committee has arranged the following events.

EVENT	COORDINATOR	SPONSOR(S)
Las Vegas Night February	**Mac McKinney** (Aminoil) 827-5536	
Racketball March 4, Friday	**Stu Stouffer** (Hunt) 681-9742	**Ex-Log**
***Tennis**	**Wayne Sealy** (Core Lab) 460-9600	
***Golf**	**Larry Smith** (ERCO) 820-4871	
Fun Skeet & Trap Shoot May 14, Saturday (Registration deadline January 18)	**David Lazor** (Valero) 497-6711	**Dresser**
Bar-B-Q May 20, Friday	**Bonnie Snyder** (Consultant) 652-2960	**Data Log**

*Possibly combined

If you wish to volunteer, please contact the appropriate coordinator.

1982-83 ENTERTAINMENT CONTRIBUTORS

The donations from these contributors help to offset the cost of the events and allow for a larger number of events to be held each year. We greatly appreciate the support of our contributors.

AAPG INSURANCE
BIG 6 DRILLING
DATA LOG
ERCO
GEO DATA SERVICE
GEOPHYSICAL TREND
GEOREX DATA, INC.
INDEXGEO & ASSOC.
JACK COLLE & ASSOC.
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PALEO-DATA, INC.
PETROLEUM INFORMATION
RICHARD SEISMIC SERVICES
R. BREWER & CO.
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S. SCHAFER & ASSOC.
TELEDYNE EXPLORATION

LSU SEEKS CHAIRMAN FOR DEPARTMENT OF GEOLOGY

The Department of Geology, LSU, invites applications for the position of Professor and Chairman, to be filled during the 1983-84 academic year. LSU is seeking an earth scientist of national or international stature with research, academic, or industrial experience. The Department is a well-equipped, research-oriented organization with a faculty that should approach twenty by 1983. Construction of a new Geology Building annex is scheduled to begin within one year. LSU's location and strong ties to industry make this position particularly attractive relative to the Department's growth potential.

The successful candidate must demonstrate outstanding leadership ability. Applicants should submit to the Search Committee their curriculum vitae and a statement of their philosophy of governance. They should also arrange to have three letters of recommendation sent directly to the Search Committee. Preference will be given to applications received by February 15, 1983. Applications, nominations, and inquiries should be addressed to:

Clyde H. Moore
Chairman, Search Committee
Department of Geology
Louisiana State University
Baton Rouge, LA 70803

LSU is an equal opportunity/affirmative action employer.

JOINT GEOSAT-NASA/JPL TEST CASE PROGRAM REPORT (UPDATE)

The latest we have heard from NASA/JPL is to expect the 3-volume joint Geosat-NASA/JPL Test Case Program Report to be ready in February, 1983. All indications are that the Report will be most informative and become an excellent reference work for this new exploration technology.

The first Thematic Mapper (TM) images have been returned from LANDSAT 4. The 30-meter resolution gives a great deal of detail. These images are from the first 4 bands only, as the other 3, which are in the 1.6 - 2.2 micron region, will be turned on only after the satellite is completely outgassed.

2nd ANNUAL

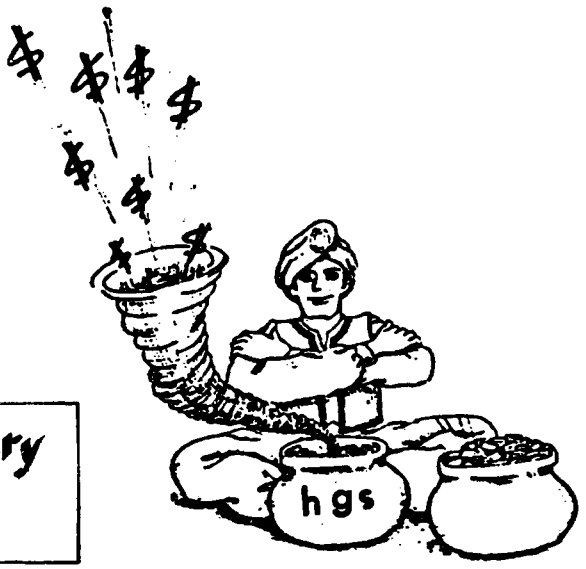
LAS VEGAS NIGHT

Better prizes than last year!!

Coming Friday, February 25
Marriott West Loop Hotel
8:00 to 11:00 p.m.

Free hors d'oeuvres!
Free wine!

$20.00 per person



Watch the February Bulletin for ticket info.

SKEET & TRAP SHOOT 1983

The Entertainment Committee is tentatively planning a **Skeet and Trap Shoot** this spring at the **Greater Houston Gun Club,** providing at least 75 people will participate. This event is open to HGS members and their guests (geophysicists, engineers, landmen, service company personnel, and wives) and will be held **Saturday, May 14, 1983** at **9:30 A.M.** The estimated cost per person of $35 in advance ($45 for late comers) will include shells (12 and 20 guage), birds, trophies and refreshments. Registration details will be available at least 6 weeks prior to the shoot.

If you and your friends are interested, please fill out the form below and mail it to **David Lazor**, c/o Valero, 11767 Katy, Suite 660, Houston, Texas, 77079 **before January 18, 1983.**

SKEET & TRAP SHOOT 1983

I am interested in this event and plan to pre-register.

NAME _____ COMPANY _____

ADDRESS _____ PHONE _____

_____

_____

No. of Guests _____

I prefer: _____ 100 birds; 50 skeet & 50 trap

_____ 100 birds; 25 skeet, 25 trap (16 Yard), 50 handicap trap.

_____ Team Trophies _____ Individual Trophies

I recommend: _____

_____

Co-ordinator: David Lazor (713) 497-6711 (Valero)

SCHEDULE — HGS TECHNICAL PROGRAMS 1983

January 10 -
Evening meeting with SPE @ Westin Oaks Hotel
Speaker - Robert B. Truman
Topic - "Integrated Results: Interpretation of Logs with Thin Section Data"

January 26 -
Luncheon meeting @ Sheraton Houston Hotel
Speaker - Anita Harris
Topic - "Conodonts for Hydrocarbon Exploration Strategies"

February 16 -
Luncheon meeting @ the Meridien Hotel
Speaker - Lee T. Billingsley
Topic - "Geometry Mechanisms of Folding Related to Growth Faulting in Nordheim Field Area (Wilcox), Dewitt County, Texas"

February 28 -
Dinner meeting with HAPL @ Westin Galleria Hotel
Speaker - John Rankin
Topic - To be announced

March 7 -
Dinner meeting with GSH @ the Westin Galleria Hotel
Speaker - Frank H. T. Rhodes
Topic - To be announced

March 23 -
Luncheon meeting @ the Sheraton Houston Hotel
Speaker - Steward Chuber
Topic - "Productive Lower Wilcox Stratigraphic Traps from An Entrenched Valley in Kinkler Field, Lavaca County, Texas"

April 11 -
Luncheon meeting @ the Meridien Hotel
Evening meeting @ the Westchase Hilton Hotel
Speaker (both April 11 meetings) Ernest A. Mancini
Topic - "Petroleum Potential of S.W. Alabama"

May 9 -
Evening meeting @ the Westin Oaks
Speaker - William H. Roberts III
Topic - "Gulf Coast Magic"

May 25 -
Luncheon meeting @ the Sheraton Houston Hotel
Speaker - Thomas E. Ewing
Topic - "Late Cretaceous Volcanism in South and Central Texas - Stratigraphic, Structural, and Seismic Models"

June 13 -
Evening meeting (Guest Night) @ the Westin Oaks Hotel
Speaker - John B. Anderson
Topic - "Exploring Antarctica's Continental Shelf"

HOUSTON GEOLOGICAL SOCIETY
MEMBERSHIP APPLICATION

To be eligible for active membership, an applicant shall: (1) have a degree in geology or an allied science from a recognized college or university and shall be directly engaged in the application of geology, or shall (2) have been engaged in geological work during at least the preceding five years.

PLEASE PRINT DATE_____

_____
LAST NAME FIRST INITIAL

To the EXECUTIVE BOARD:

I hereby apply for ☐ ACTIVE ☐ ASSOCIATE membership in the HOUSTON GEOLOGICAL SOCIETY and pledge myself to abide by its Constitution and Bylaws.

Signature: _____

This application must be endorsed by two active members.

Name (print): _____ Signature: _____

Name (print): _____ Signature: _____

APPLICANT: PLEASE TYPE OR PRINT

HGS DIRECTORY & MEMBERSHIP FILE

_____
LAST NAME FIRST INITIAL NICKNAME

_____
COMPANY POSITION OR TITLE

_____
COMPANY MAILING ADDRESS CITY STATE ZIP CODE COMPANY PHONE

_____
HOME ADDRESS CITY STATE ZIP CODE HOME PHONE

SCHOOL _____ DEGREE _____ MAJOR _____ YEAR _____
_____ _____ _____ _____

PROFESSIONAL AFFILIATIONS AAPG ☐ GSA ☐ SEG ☐ SEPM ☐ AIME ☐ SPWLA ☐
APGS ☐ PS ☐ AGU ☐ SIPES ☐ SPE ☐ OTHER _____

LOCAL AFFILIATIONS GSH ACTIVE ☐ GSH HON. ☐ SEPM G. C. SEC. ☐

SPOUSE'S NAME _____ PREFERRED MAILING ADDRESS HOME ☐ BUS. ☐

OUTLINE OF EXPERIENCE: _____
_____

Annual dues, $15.00 must accompany application. HGS operates on a fiscal year: July 1 - June 30.

Upon completing this application, please return entire form along with your Dues to:

Houston Geological Society
6916 Ashcroft
Houston, Texas 77081
771-8315

SPACE BELOW TO BE USED FOR PROCESSING ONLY

Action of Membership Committee:

Received_____ Approved for ☐ ACTIVE ☐ ASSOCIATE membership

Membership Chairman: _____ Date: _____

Action of Executive Board:

Approved: _____ (Secretary) Date: _____

GEOSAT COMMITTEE — LITERATURE ON SATELLITE — GENERATED GEOLOGIC DATA

The value of satellite-generated data when used as an exploration tool is explained in a general brochure and background report offered by the Geosat Committee, Inc.

A not-for-profit organization formed in 1976, the Committee has played an important role in setting scientific standards and alerting government agencies worldwide to the need for advanced remote sensing systems in the exploration of natural resources.

Of particular interest to exploration and engineering geologists, the Geosat literature covers a range of topics pertaining to the role of satellite-generated data in gathering geological information. The brochure and background report discuss Geosat Committee objectives and operations, and the significance of a state-of-the-art remote sensing device known as the Thematic Mapper which NASA is now flying on LANDSAT 4.

Offered free of charge, the literature is available by contacting The Geosat Committee, Inc., 153 Kearny Street, Suite 209, San Francisco, California 94108, (415) 981-6265.

NEW ASSOCIATE MEMBERS

BARRON, BRIAN J.
Well Spotter
Petroleum Information Corp.
P.O. Box 1702
Houston, Texas 77251
961-5660

BONIN, DANIEL J.
Houston Sales
Geotech Inc.
1715 Indian Wells Dr.
Houston, Texas 77459
437-2925

BURNSIDE, ANNE A.
Accounting Assistant
Nortex Gas & Oil Co.
P.O. Box 4420
Houston, Texas 77210
940-5187

McQUEEN, ALVIN L.
Geophysical Technician
Exxon Company USA
P.O. Box 2180 4550 Dacoma
Houston, Texas 77001
680-5475

NEW ACTIVE MEMBERS

AMBROSE, JEFFREY A.
Geologist
Nuclear Geophysical Industry
6620 Harwin #280
Houston, Texas 77003
789-0783

ASH, MARGARET
Geophysicist
Cities Service Co.
5100 Southwest Frwy.
Houston, Texas 77027
850-6166

BEAN, BRIAN E.
Geologist
Phillips Petroleum Co.
P.O. Box 1967
Houston, Texas 77001
669-3435

BELLEMORE, BARBARA A.
Geologist
Shell Oil Co.
P.O. Box 527
Houston, Texas 77001
870-2425

BLOOM, JONATHAN I.
Exploration Geologist
Exxon Company USA
P.O. Box 4279 - 440 Benmar
Houston, Texas 77001
591-5338

BOONE, DANIEL E.
Chairman of the Board
I D L Inc.
1415 N. Loop W.
Houston, Texas 77008
880-1230

BRAND, MARTIN D.
Associate Geologist
Kerr-McGee Corp.
3 Northpoint #300
Houston, Texas 77060
448-4800

BREEN, ROY P.
Geophysicist
Gulf Oil Expl. & Prod. Co.
P.O. Box 1635
Houston, Texas 77251
754-1960

BUNDSCHU, A. LINDSAY
Geophysicist
Cities Service Co.
P.O. Box 27570
Houston, Texas 77227
850-6302

CARR, DAVID J.
Division Geologist
Moore-McCormack Energy
2950 N. Loop W. #1045
Houston, Texas 77092
681-4433

CARROLL, RICHARD F.
Geologist
AGIP Petroleum Co. Inc.
2950 N. Loop W. #300
Houston, Texas 77092
688-6281

DANKO, JEFFREY H.
Geologist
Exxon Company USA
P.O. Box 2180 4450 Dacoma
Houston, Texas 77001
680-6313

DAVIS JR., JOHN W. S.
Geologist
Mark Producing Inc.
1 Riverway #2100
Houston, Texas 77056
552-6100

DAVIS, WARREN L.
Div. Director Expl. Projects
Conoco Inc.
P.O. Box 2197
Houston, Texas 77252
965-2200

DAWE, G. LYMAN
Sr. Staff Geologist
Energy Reserves Group
12700 Northborough #400
Houston, Texas 77067
537-6811

DAY, RONALD A.
Sr. Geologist
Zapata Exploration Co.
P.O. Box 4240
Houston, Texas 77210
226-6230

DICE, KENNETH R.
Geologist
Energy Reserves Group
12700 Northborough #400
Houston, Texas 77067
537-6811

EVANS, LINK A.
Geologist
Kerr-McGee Corp.
3 Northpoint #300
Houston, Texas 77060
448-4800

FONTINELLE, ROBERT C.
Sr. Geophysicist
Phillips Petroleum Co.
P.O. Box 1967
Houston, Texas 77001
669-3686

FOSTER, NORMAN H.
Independent Geologist
1700 Broadway #2216
Denver, Colorado 80290
831-6012

GARCIA, RODOLFO
Exploration Manager
Monsanto Oil Co.
5051 Westheimer #1300
Houston, Texas 77056
877-5919

GAY, NORMAN K.
Geologist
Texaco Inc.
P.O. Box 430
Bellaire, Texas 77401
432-2656

GREDELL, MARK E.
Geologist
Challenge Oil & Gas
10633 Shadow Wood Dr.
Houston, Texas 77043
467-7436

GRESH, ROGER T.
Sr. Geologist
Exxon Company USA
P.O. Box 2180 4550 Dacoma
Houston, Texas 77001
680-5505

GROVE, DONALD E.
Group Leader
Keplinger & Associates
1200 Milam #3200
Houston, Texas 77002
651-3127

HAHNENBERG, JAMES J.
Associate Geologist
Marathon Oil Co.
P.O. Box 3128
Houston, Texas 77001
629-6600

HARPER, KENNARD
Staff Geologist
Trend Exploration
777 Grant St. #600
Denver, Colorado 80203
861-2472

HELM, KENNETH R.
Geologist
Pennzoil Co.
P.O. Box 2967
Houston, Texas 77252
236-7214

HORTON, ROBERT B.
Geologist
Amoco Production Co.
P.O. Box 3092
Houston, Texas 77253
652-5222

HOUSE, VALERIE H.
Geologist
Texaco Inc.
P.O. Box 430 E-615 BOB
Bellaire, Texas 77401
432-2637

PROPOSED RULES GOVERNING FOSSIL AND HOBBY MINERAL COLLECTION ON PUBLIC LANDS

Proposed rules on collecting fossils, petrified wood and hobby mineral materials from the public lands have been issued by the Interior Department's Bureau of Land Management (BLM).

The rules would supplement current regulations, which allow only limited collection of paleontologic resources and hobby mineral materials. Under the proposed rules, more types of fossils could be collected. However, the proposal would help curtail losses of scientifically valuable fossils and protect public lands from unnecessary damage.

The proposed rules would require a permit for collecting fossils in protected areas, or for collecting for commercial purposes. Specimens collected without proper permits could not be sold, traded or bartered.

Applications for permits would be approved or denied within 30 days after receipt in the appropriate BLM Office, or the requestor would be notified of reasons why additional time would be necessary. No time extension for granting permits would exceed 30 days. Applications would have to be accompanied by a $25 non-refundable filing fee.

Anyone finding fossils suspected of having significant scientific interest would be required to notify BLM, and the specimens would be placed in museums or university collections.

(Continued on next page)

BULLETIN COMMITTEE

EDITOR

RICHARD S. BISHOP, Exxon Co. USA, Ste. 1061, 4550 Dacoma, Houston, Tx. 77092, Ph. (713) 680-5469.

ASSOCIATE EDITOR

SUSAN CONGER-MORRIS, Gulf Oil Exploration and Production co., P.O. box 1635, Houston, TX. 77001, Ph. (713) 754-7695.

ASSISTANT EDITORS

CYNTHIA SHAUER LANGSTAFF, Exxon Co. USA, Ste. 1030, 4550 Dacoma, Houston, Tx. 77092, Ph. (713) 680-5956.

JERRY A. WATSON, Consulting Geologist, 2500 Tanglewilde, Ste. 150, Houston, Tx. 77063, Ph. (713) 783-2828.

ADVERTISING COMMITTEE

CLAUDIA P. LUDWIG, Ph. (713) 723-2511.

HOUSTON GEOLOGICAL SOCIETY

The Houston Geological Society was founded in 1923 and incorporated in 1975. Its objectives are to stimulate interest and promote advancement in geology for this area, to disseminate and facilitate discussion of geological information, to enhance professional interrelationships among geologists in the area, and to aid and encourage academic training in the science of geology.

The *Bulletin* is published monthly except July and August. Subscription price for nonmembers within the contiguous U.S. is $15 per year and $30 per year for those outside the contiguous U.S. Members outside the contiguous U.S. will be billed additionally for air mail service. Single copy price is $2.00. Claims for nonreceipt in the contiguous U.S. should be made within two months of the date of issue; claims from elsewhere within four months.

Communication about manuscripts and editorial matters should be directed to the Editor. Inquires 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

This month's cover photo shows the development of West Columbia Field, circa 1919. Photo is courtesy of the *Bank of the Southwest Frank J. Schlueter Collection, Houston Metropolitan Research Center, Houston Public Library.*

NEW ACTIVE MEMBERS (Continued)

JOHNSON, LINDA JEAN
Assoc. Geological Engineer
Shell Oil Co.
P.O. Box 991
Houston, Texas 77001
870-3782

JORDAN, J. KIRK
Geologist
Sonat Exploration Co
P.O. Box 1513
Houston, Texas 77001
940-4048

KAMON, KENNETH R.
Geological Engineer
Tennessee Gas Transmission
P.O. Box 2511
Houston, Texas 77001
757-3819

KICK, ROBERT M.
Sr. Geologist
Exxon Company USA
P.O. Box 2180 4550 Dacoma
Houston, Texas 77001
680-6941

KING, HARRY J.
Area Geologist
Conoco Inc.
P.O. Box 2197
Houston, Texas 77252
965-2212

KOCH, CHAPIN F.
Geologist
Exxon Company USA
P.O. Box 4279
Houston, Texas 77001
591-5150

KOLTERMAN III, JOHN C. F.
Geologist
4800 Lamonte #1602
Houston, Texas 77092
883-6378

KOTHMANN, S. WINNARD
Geologist
Esso Exploration Inc.
P.O. Box 146
Houston, Texas 77001
932-5889

LEFTWICH JR., JOHN T.
Exploration Geologist
Milestone Petrolaum
2350 N. Belt E. #700
Houston, Texas 77032
442-4444

LEIPZIG, MARTIN R.
Associate Geologist
Conoco Inc.
P.O. Box 2197
Houston, Texas 77252
965-3928

LYASCH, YORY F.
Associate Geophysicist
Conoco Inc.
P.O. Box 2197
Houston, Texas 77252
965-2989

MASSAD, MARILYN L.
Geophysicist
Exxon Company USA
P.O. Box 4279
Houston, Texas 77001
591-5331

MAUCH, JOSEPH J.
Associate Geologist
Getty Oil Co.
6750 W. Loop S. #400
Bellaire, Texas 77401
668-8400

MAYNARD, AMY K.
Exploration Geologist
Exxon Company USA
P.O. Box 4279
Houston, Texas 77001
591-5490

MIKESCH, JAMES J.
Geologist
Louisiana Land & Expl. Co.
2950 N. Loop W. #1200
Houston, Texas 77092
957-6400

MURPHEY, CHARLES F.
Petroleum Geophysicist
Amoco Production Co.
P.O. Box 3092
Houston, Texas 77001
652-8439

NEELY, LAURA L.
Geologist
Arco Exploration Co.
P.O. Box 1346
Houston, Texas 77251
966-6778

NEFF, DIANE E.
Assistant Geologist
Quadra Oil & Gas
6100 Corporate Dr.
Houston, Texas 77036
270-1548

NOEL, JAMES A.
Geologist
G & P Exploration
4800 San Felipe #620
Houston, Texas 77056
627-2875

NORMAN, MARK D.
Geologist
Enserch Exploration Inc.
5100 Westheimer #400
Houston, Texas 77056
626-5700

O'DONNELL, JAMES E.
Production Geologist
Texen Resources
363 N. Belt #250
Houston, Texas 77060
999-5376

PARISI, WILLIAM A.
Geologist
Eaton Operating Co.
3104 Edloe #200
Houston, Texas 77027
627-9764

PATIN, GARY J.
Staff Geologist
First Energy Corp.
333 Clay St. #1540
Houston, Texas 77002
759-0715

PAYNE, GARY O.
Geophysicist
Superior Oil Co.
P.O. Box 4100
Woodlands, Texas 77380
363-8458

PULLEY, RICHARD L.
Sr. Geologist
Cities Service Co. Intl.
P.O. Box 642
Houston, Texas 77001
683-2203

SAMMIS, NEIL C.
Sr. Petroleum Geophysicist
Exxon Company USA
P.O. Box 2180 4450 Dacoma
Houston, Texas 77001
680-5494

SATTERFIELD, JOSEPH I.
Associate Geologist
Marathon Oil Co.
P.O. Box 3128
Houston, Texas 77001
629-6600

SAUTTER, NANCY J.
Geologist
Phillips Petroleum Co.
P.O. Box 1967
Houston, Texas 77001
669-3666

SCHNEIDER, JAMES W.
Geologist
Self Employed
3623-Tanglewilde
Houston, Texas 77063
782-4700

SELVIUS, DOUGLAS B.
Geologist
Tenneco Oil Co.
P.O. Box 2888
Houston, Texas 77001
757-4485

SWANSON, TERESA H.
Geologist
Arco Exploretion Co.
P.O. Box 1346
Houston, Texas 77251
965-6182

TERRELL, WILLIAM C.
Geologist
Gulf Oil Corp.
P.O. Box 2100
Houston, Texas 77252
754-1479

VERCELLINO JR., JOHN B.
Chief Production Gaologist
Exxon Company USA
P.O. Box 2180
Houston, Texas 77001
656-1530

VEST, HARRY A.
Cretaceous Project Supvsr.
Conoco Inc.
P.O. Box 2197
Houston, Texas 77252
965-2565

(Continued on page 32)

R. P. AKKERMAN
Geologist EXPLORATION Engineer
CONSULTANT
Review of Subsurface Data
3425 Bradford Place 668-4327
Houston, Texas 77025

T. WAYNE CAMPBELL
PALEO-DATA, INC.
CONSULTING PALEONTOLOGIST AND GEOLOGIST
6619 FLEUR De LIS DRIVE
NEW ORLEANS, LOUISIANA 70124
(504) 488-3711

KENNETH E. DAVIS
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12851 Jones Rd.
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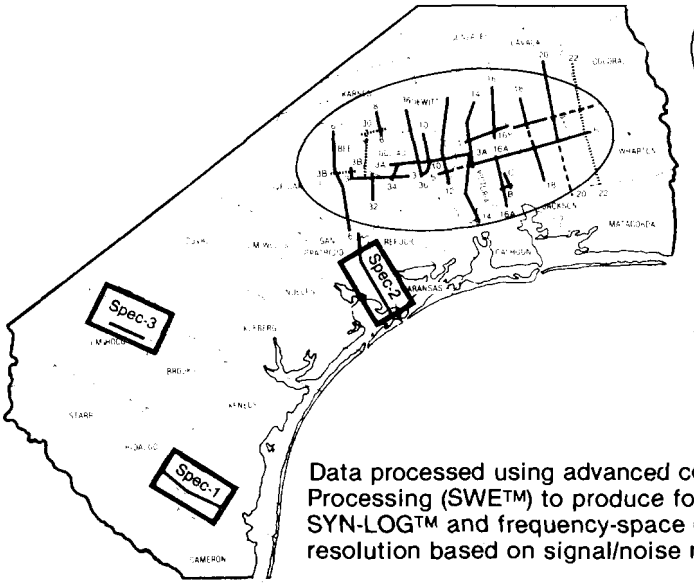

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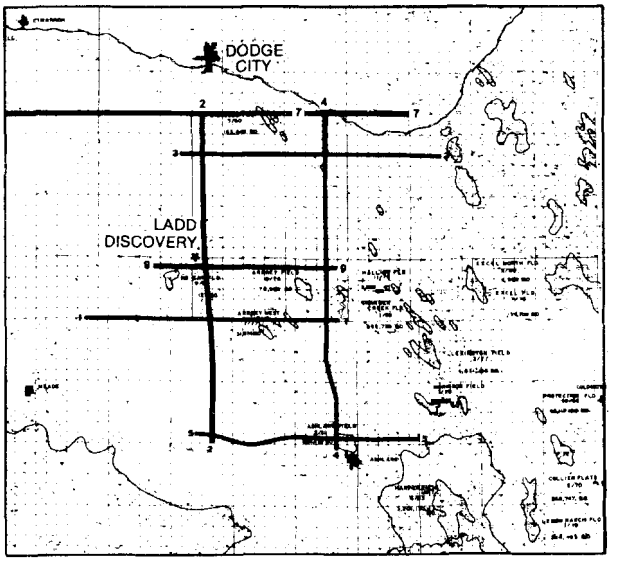

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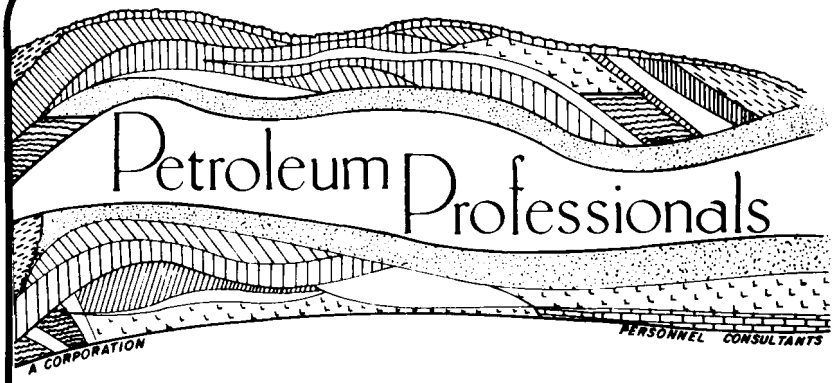

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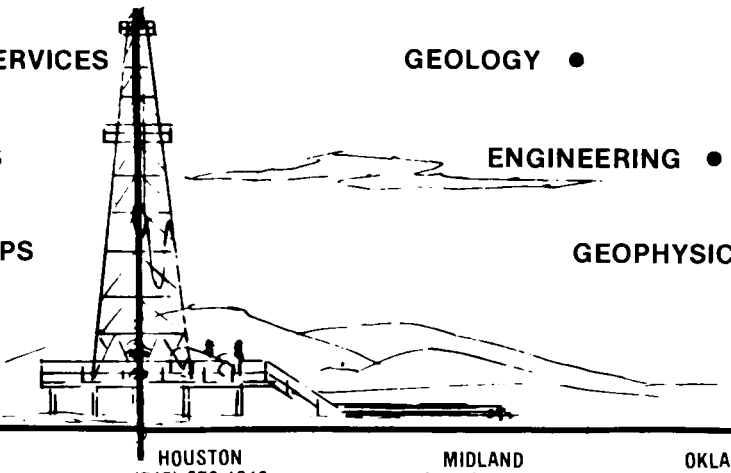

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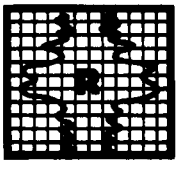

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		(SPE/AIME HOLDS SEVERAL MEETINGS EACH MONTH CALL 462-8882 FOR INFORMATION)				New Year's Day 1
2	3	4	5	6	7	8
9	HGS DINNER MEETING R.B. TRUMAN WESTIN OAKS HOTEL 10	11	UH ALUMNI LUNCHEON PETROLEUM CLUB 658-8262 12	13	14	15
16	GEOPHYSICAL SOCIETY OF HOUSTON LUNCHEON STOUFFER'S HOTEL 771-8330 17	SPWLA DOWNTOWN: 780-4545 NORTHSIDE: 972-1749 WESTSIDE: 972-6972 18	GEO-WIVES LUNCHEON 392-6252 19	SIPES LUNCHEON PETROLEUM CLUB 659-7837 20	21	22
23	24	25	HGS LUNCHEON MEETING ANITA HARRIS SHERATON HOUSTON HOTEL 777 POLK AVE. 26	27	28	29
30	31					January

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