BULLETIN

HOUSTON GEOLOGICAL SOCIETY

Volume 31
Number 9

MAY 8, 1989 (Dinner Meeting)
"The Tuscaloosa Rejuvenated: Beaver Dam Creek and Baywood Fields, St. Helena Parish, Louisiana"
Frank Harrison Jr., Consultant, Lafayette
Westin Oaks Hotel, 5011 Westheimer
Social Period 5:30 p.m., Dinner and Meeting 6:30 p.m.
Reservations made by name only, telephone 785-6402. Must be made or cancelled by noon Friday, May 5.

MAY 17, 1989 (Dinner Meeting)
HGS INTERNATIONAL EXPLORATIONISTS
"Bahrain Field Discovery: Syria's Euphrates Graben"
R. B. Clme, Pecan International, Houston
Westin Galleria Hotel, 5050 Alabama
Social Period 5:30 p.m., Dinner and Meeting 6:30 p.m.
Reservations by advance ticket purchase only (see page 91) Purchase tickets by Monday, May 15.

MAY 24, 1989 (Luncheon Meeting)
"The Tuscaloosa Trend of South Central Louisiana: A Ten-Year Update"
Cyro Callegari, C & R Exploration, New Orleans
Houston Club, 811 Rusk
Social Period 11:30 a.m., Lunch and Meeting 12:00 Noon
Reservations made by name only, telephone 785-6402. Must be made or cancelled by noon Monday, May 22.

MAY 24, 1989 (Dinner Meeting)
HGS ENVIRONMENTAL ENGINEERING GEOLOGISTS
"Waste Remediation at Superfund Sites"
Robert Foye Jr., Chemical Waste Management Inc., Houston
Wyatt's Cafeteria, Sharpstown Mall
Social Period 5:30 p.m., Dinner and Meeting 6:30 p.m.

MAY 27, 1989 HGS Field Trip
"Recent Sediments of Southeast Texas"
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— BULLETIN —

Editor ............................................................ John Sauri, Consultant 494-1475

The Houston Geological Society Bulletin is published monthly September through June by the Houston Geological Society, 7171 Harwin, Suite 314, Houston, Texas 77036. Subscription to the Bulletin is included in membership dues ($15.00 annually). Subscription price for non-members within the contiguous U.S. is $15.00 per year and $30.00 per year for those outside the contiguous U.S. Single copy price is $2.50. Subscriptions received after March 1 will be applied to the remainder of the fiscal year ending with the June issue and into the following year.

The Houston Geological Society was founded in 1923 and incorporated in 1973. The Society's objectives are to stimulate interest and promote the advancement of geology in this area, to disseminate and facilitate discussion of geological information, and to enhance professional interrelationships among geologists. The Society includes nearly 4,500 members locally and publishes special scientific publications in addition to a monthly Bulletin. The HGS also provides student scholarships and continuing education programs for professional geologists.

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HOUSTON GEOLOGICAL SOCIETY

BULLETIN

Vol. 31, No. 9

May, 1989

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PRICE SCHEDULE—MAY MEETINGS
(Non-members: add $2.00 to the meal price)
Westin Oaks Hotel, May 8
Dinner ................................................................. $20.06
Houston Club, May 24
Luncheon ............................................................................. $15.00
INTL EXPLORATIONISTS
Westin Gallena Hotel, May 17
Dinner .............................................................................. $20.00

RESERVATIONS POLICY
Reservations are made by calling the HGS office (713-6402). At the meeting, names are checked against the reservation list. Those with reservations will be sold tickets immediately. Those without reservations will be asked to wait for available seats, and a $2 surcharge will be added to the price of the ticket. All who do not honor their reservations will be billed for the price of the meal. If a reservation cannot be kept, please cancel or send someone in your place.

The Houston Geological Society office is located at 7171 Harwin, Suite 314, Houston, Texas 77036. The telephone number is (713) 785-6402.

Our Cover Photo
Mill on river in Huaxi village, 25 km. south of the city of Guiyang, Guizhou Province, southwestern China. Carbonates are steeply dipping along syncline to the right. The area has many Karst features and caves. (Photo courtesy of Harold Spradley)
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PRESIDENT'S COMMENTS

Diamonds really are forever. Diamonds are particularly interesting (and beautiful) samples of the deep Earth, and now it seems they are much older than most of us realized. Although diamonds have been recovered directly from kimberlite pipes for more than a century, their relationship to the kimberlite has remained controversial. The debate centers on whether the diamonds crystallized from the kimberlite magma or represented fragments of ancient mantle rock swept to the surface with the gas-charged kimberlite. Recent articles in the British journal Nature seem to have answered the question. Through careful analysis and age dating of garnet inclusions in diamonds from southern Africa, several researchers have independently established that these diamonds are more than three billion years old (3.2-3.3 b.y.). This makes the diamonds the same age as the mantle-derived eclogite xenoliths associated with the diamonds, and much, much older than the 90 million year age (Late Cretaceous) of the kimberlite pipes. If you thought that diamonds were special before, it is doubly true now. Not only are they among the oldest dated materials on earth, but their origin at depths more than 70 miles below the surface makes them truly exotic.

The ballots for the HGS election should be in your hands by now. Our Nominating Committee (Dan Smith, Chuck Noll and Mac McKinney) has assembled an outstanding slate of candidates for HGS office. Please take a few minutes to fill out your ballot and mail it in. Also, don't forget to vote on the proposed changes to the Constitution and Bylaws. Our new Ballot Committee chairperson, Lisa Crawford, will be busy after May 10th counting your ballots. If you would like to help out, give her a call. A few more volunteers would be greatly appreciated.

The recent talk by Chris Mathewson about the relative merits of registration of geologists in Texas has generated considerable interest and discussion among HGS members. The proposed legislation, the “Texas Geologists Practice Act,” will have a profound effect on every geologist in the state, and geologists from other states who conduct business in Texas from time to time. We will attempt to keep you informed about the status of the proposed legislation. Copies of the draft bill are available from the HGS office.

Our HGS year is rapidly drawing to a close. We have had some outstanding events and programs these past eight months, and we have a few more to go before beginning our summer recess. If you've not yet attended one of these functions, plan to do so this month. This is also a good time to mark your calendar for the Guest Night and Awards Dinner June 12. Bring a friend to hear Lynn Ashby and help us honor some special HGS members. Speaking of special members, if you have been a member of the Society for 25 years or more and have not yet received your 25-year certificate, call Margaret at the HGS office and let her know. We would like to honor you at Guest Night as well, but first we need to know who you are.

See you at the meetings!

DEET SCHUMACHER
MEETINGS

DINNER MEETING—MAY 8, 1989
FRANK W. HARRISON—Biographical Sketch

Frank W. Harrison Jr. is a consulting geologist in Lafayette, La. He received his B.S. in Geology from Louisiana State University in 1950. After serving in the United States Army for two years, he was employed by Union Producing Co.

Mr. Harrison worked for Union Producing Co. for four years before moving to Seaboard Oil in New Orleans. In 1956, he was district geologist for Trans-Tex Drilling Co. He became head geologist for American Natural Gas Prod. Co. in 1957. Since 1959, he has been a consulting geologist.

Harrison has been a member of AAPG since 1954. He served on numerous committees before becoming AAPG president in 1981. He has also been president of the Gulf Coast Association of Geological Societies, the Lafayette Geological Society, the Louisiana Association of Independent Producers and Royalty Owners, and vice president of the Society of Independent Professional Earth Scientists. Moreover, he is a member of AIPG, the Geological Society of America, the Houston Geological Society and the New Orleans Geological Society. Harrison has written several papers on south Louisiana geology.

THE TUSCALOOSA REJUVENATED:
BEAVER DAM CREEK AND BAYWOOD FIELDS
ST. HELENA PARISH, LOUISIANA

Recent discoveries in the Tuscaloosa formation (Lower-Upper Cretaceous) of Southeast Louisiana have opened a new trend, which has the potential of yielding large reserves of oil and gas. Beaver Dam field, located in St. Helena Parish and discovered in early 1987, is presently being developed, and has a potential reserve of 50 BCF gas and 5,000,000 barrels of condensate.

Beaver Dam Creek and Baywood fields are located along a paleoshoreline of Tuscaloosa age characterized by channel fills and point bars, many of which form hydrocarbon traps such as the Greensburg and Lake Rosemond Fields.

Both the Baywood and Beaver Dam Creek fields produce from the Tuscaloosa “A” member. The sand, at a depth of 14,500', does not require protective pipe to reach. The trapping mechanism for Baywood and Beaver Dam Creek appears to be structural-stratigraphic. Seismic data, geological mapping and cross sections suggest that many other potential traps, located along this interdeltaic shore-zone depositional system, have hydrocarbon potential similar to the Beaver Dam Creek and Baywood fields. Using Beaver Dam Creek and Baywood as an analog, it is almost certain that additional fields can be uncovered along the 50 mile paleoshoreline.

Subsurface and seismic data are the basic exploration techniques used to locate features along the trend. Synthetic seismograms, models and seismic inversion or “seislogs” are employed to augment the seismic stratigraphic interpretation. First, a network of synthetic seismograms are developed to identify the seismic signature of the Tuscaloosa “A” sand so it can be located on seismic sections. Models are used to define shoreline features and clearly identify prospective areas of good sand development and porosity. Sand pinchouts on seismic lines are clearly evident from an abrupt change in seismic character. In addition, prospective areas are usually associated with pronounced flattening and in some cases subtle arching along the Tuscaloosa paleoshoreline.

LUNCHEON MEETING—MAY 24, 1989
CARLO C. CRISTINA—Biographical Sketch

Carlo C. Christina, a native of New Orleans, is a graduate of Louisiana State University where he received a B.S. degree in Geology in 1951. He is currently president of C & R Exploration Inc., which he co-founded in 1980.

Mr. Christina’s experience includes 17 years with Exchange Oil and Gas Corp. during which time he was senior vice president in charge of exploration and served as a member of its Board of Directors. For three and a half years immediately prior to C & R, Mr. Christina was employed by Martin Exploration as senior vice president of exploration. His prior experience also includes employment with Southern Natural Gas Co.

Mr. Christina is currently president of the New Orleans Geological Society, and is an active member of the American Association of Petroleum Geologists and the Society of Independent Professional Earth Scientists.

THE TUSCALOOSA TREND OF
SOUTH CENTRAL LOUISIANA:
A TEN-YEAR UPDATE

The original paper “The Lower Tuscaloosa Trend of South Central Louisiana: You Ain’t Seen Nothing Till You’ve Seen the Tuscaloosa” was presented to the Houston Geological Society in January, 1980.

Since the original presentation, several new fields have been discovered. The producing structures, reservoir capa-
bilities and regional extent of the play have been more precisely defined. This presentation serves as an update to that paper.

The earlier presentation described the Tuscaloosa trend as a band 220 miles long and 30 miles wide, basinward of the Lower Cretaceous shelf edge, and extending from the Louisiana-Mississippi border through Lake Pontchartrain to the Texas border. Subsequent drilling has established that the best production is concentrated in an area immediately north, west and east of Baton Rouge, known as the Baton Rouge Mega-structure. Deep tests outside this area have established production, but have resulted in disappointing reserves.

Production within the Baton Rouge Mega-structure has been as prolific as originally projected. The seven original fields in this area have produced more than 38.4 million barrels of condensate and 785 billion cubic feet of gas. Two additional fields, discovered in this same area since the original paper was presented, have produced approximately 2.6 million barrels of liquids and 215 billion cubic feet of gas.

To place the deep Tuscaloosa play in historical perspective, the intense level of drilling activity and establishment of new reserves corresponded with an all-time high in product price and exploration investment. Gas prices during this period ranged from $5 per thousand BTU to a high of $9 per thousand BTU. The Baton Rouge Mega-structure was delineated during this period and must now be considered a mature area. The most attractive future possibilities in the Tuscaloosa trend appear to be in the shallower, normally pressured area north of the shelf edge. New exploration techniques continue to generate interest in these large, undrilled areas. The economics of drilling these prospects are favorable, in spite of today’s product prices.

RESERVOIR GEOPHYSICS SHORT COURSE UNIVERSITY OF HOUSTON

The Department of Geosciences at the University of Houston, in cooperation with the Houston Petroleum Research Center, will be offering a five-day short course entitled “Reservoir Geophysics,” May 15-19, 1989 at the University of Houston. This course is intended for reservoir engineers, petroleum engineers, development engineers and geologists, and will stress ways in which modern geophysical techniques can be used to characterize, develop and monitor existing reservoirs. The course fee of $795 will include all lecture notes and workshop materials. For more information, please contact Dr. Stuart Hall, Dept. of Geosciences, University of Houston, Houston, Texas 77204-5503.

TRADER’S COLUMN


HGS ELECTION—A REMINDER

Ballots should have reached members by about April 20 and should be returned by May 10.
INTERNATIONAL EXPLORATIONISTS

Chairman's Column

How to increase creativity in exploration? “Become more like Walt Disney,” says Norm Foster, current AAPG president, who spoke to the HGS at the March dinner meeting. This idea is certainly worth thinking about, and applying to our individual international exploration efforts.

Disney clearly visualized his cartoon characters, notably Mickey and Minnie, before he ever put them down on paper. Entire stories, scenes and character relationships evolved using the same process.

This thinking can be applied to basin evaluation. Saturate yourself with data, let it incubate and illumination will follow. Clarify depositional environments and ancient landscapes for others by drawing them.

Interpreting the data forces a decision toward what is most reasonable within the realm of possibilities. Test new ideas by gathering more data, acquiring seismic, drilling, etc.

Using a Disneyesque approach to new ideas may bring us ultimately closer to finding that all-elusive giant.

DENISE STONE

INTERNATIONAL EXPLORATIONISTS
DINNER MEETING—MAY 17, 1989

ROBERT BRUCE CLINE—Biographical Sketch

Robert Bruce Cline, chief geologist, Pecten International, joined Pecten in May, 1988 after 20 years in domestic exploration. He received a B.S. in Geology from Lamar University in 1965, and an M.S. in Geology from the University of Nevada in 1967.

Mr. Cline joined Shell in 1967 as an exploitation engineer in Midland, Texas. He has served as geologist, district manager, manager of geology and chief geologist within the Shell Oil companies. He authored the Kerr Basin chapter of the Geological Society of America DNAG volume on North American Craton.

THAYYEM FIELD DISCOVERY: SYRIA'S EUPHRATES GRABEN

A Pecten International-led exploration group (Pecten, Shell, Deminex, Syria Petroleum) established the first commercial oil discovery in the Euphrates Graben area of Syria in 1984 with the discovery of the Thayyem field. The discovery well, the Thayyem No. 1, located 15 km south of the town of Deir Ez Zor in eastern Syria, tested 5,885 BOPD, 36.4°API, low sulphur crude from the Lower Cretaceous Rutbah sandstone at approximately 9,800 feet.

The Thayyem discovery was the culmination of an exploration effort that included basin analysis and hydrocarbon habitat studies over much of Syria. The study team consisted of explorers from Pecten, Shell and Syria Petroleum Co.

The Euphrates Graben consists of pre-Early to Middle Cretaceous sedimentary sequences, which are rifted into rotated fault blocks, covered and infilled by Upper Cretaceous and Tertiary strata. A marine incursion into the rift setting resulted in the deposition of rich source rocks which may provide a charge, if mature, and seal to the rotated and eroded fault blocks. These blocks may contain the Lower Cretaceous Rutbah and/or Triassic Mulussa reservoir units. Minor post-rift adjustments caused limited structural inversion and reverse movement along fault zones.

Local geological factors at Thayyem include an upthrown fault block of Lower Cretaceous Rutbah bounded by a down-to-the-graben fault of varying throw and slight lateral movement, an across-fault charge and a gently folded sealing section. Estimated ultimate recovery for Thayyem field is 150 MMBO.

Continued exploration by Al Furat Petroleum Co. (Pecten, Syrian Shell Petroleum Development, Deminex, Syria Petroleum Co.) led to substantial additional discoveries in Deir Ez Zor block, and an ongoing exploration and development program in the adjacent Ash Sham block.

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Sita Oil Exploration House Inc.
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INTERNATIONAL EXPLORATIONISTS
MEETING INFORMATION
Westin Galleria Hotel, May 17
Dinner (5:30 p.m.) ...................... $20.00

Admission to all International meetings is by advance ticket purchase only. Tickets may be purchased from representatives in the International departments of most companies or by sending a check for $20.00 and a stamped, self-addressed envelope to:
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7171 Harwin, Suite 314
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Ticket distribution and receipts are handled by Chris Nicholson (629-6600, x3903). All inquiries should be directed between 8 a.m. and 4 p.m.

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Houston Geological Society Bulletin, May 1989
Chairman's Column

You are invited to attend the next Environmental and Engineering Geology Committee meeting on Wednesday, May 10, 1989. It will be held at the usual place and time - Charlie's Hamburger Joint on Ella Blvd. at 6 p.m.

In addition to our regular business, Mr. Mike Pitre will talk to us about the Nederland Disposal Site. This is the largest facility to be bioremediated for more than five years, thus making it the first long term bioremediation project in the nation.

At this meeting, we also plan to review our activities for the past year, and discuss our plans for next year and future years. We invite you to join us and share your ideas with the committee, or just listen and find out what we're about.

On May 24, we will host a dinner meeting at Wyatt's Cafeteria in Sharpstown Mall at 6:30 p.m. Robert Foye Jr. will speak about the latest technology associated with superfund sites. Please read his abstract and biography in the Bulletin and mark your calendar to attend this meeting.

See you at one of our activities.

SHERYL H. LENTINI
Chairman

ENVIRONMENTAL/ENGINEERING GEOLOGY DINNER MEETING—MAY 24, 1989

ROBERT FOYE JR.

WASTE REMEDIATION AT SUPERFUND SITES

Robert Foye Jr., Ph.D., P.E. is southern region general manager for the Environmental Remedial Action Division (ENRAC) of Chemical Waste Management Inc. (CWMI). He received his Bachelor degree in Engineering from West Point (1960) and his Masters and Doctorate degrees in Civil Engineering from Texas A&M (1966, 1972). Prior to joining ENRAC, Dr. Foye served as head of the Waste Management Group at Woodward Clyde Consultants in Houston. Dr. Foye's presentation to the HGS will include a general overview of ENRAC's Waste Remediation and Superfund projects.

UST (UNDERGROUND STORAGE TANK) SEMINAR

DATE: May 6, 1989
LOCATION: Houston Community College
            Paul Revere Campus
            (Briar Forest at West Belt)
SPEAKERS: Marilyn Czimer Long
            Texas Water Commission,
            District 6 UST Manager
R. Kreigel
            Groundwater Technology Director
A. C. Howles
            Groundwater Technology,
            Hydrogeologist
SUBJECTS: EPA final UST regulations, current and proposed Texas UST regulations, overview of storage system management, videos illustrating the manufacture of steel and FRP tanks (proper installation and operation), remediation topics

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PERSPECTIVE

PROMISES, PROMISES...

by KES BARCAS

George Bush's campaign platform promised four more years of the same conservative style of his predecessor. However, there are some substantial departures from Reagan's energy priorities. Oil and Gas financial incentives proposed by the new administration are making Congress take notice. This contrasts with the rejection or non-recognition of similar bills offered by the previous administration.

Although the majority of Americans believe Bush will not live up to his campaign promise of no new taxes, perhaps his promise to bolster the petroleum industry will come to pass. The president's pre-inaugural stand on energy and the environment, as stated in his campaign material, is quoted below.

ENERGY

"We need an energy policy that makes us less dependent on foreign oil. The best way to meet our objectives is to continue freeing the energy market from burdensome regulation. I strongly support policies that let the free market prevail. This is the best way to avoid shortages and to assure the long-term health of our industry.

Unnecessary restraints have imposed barriers to competition, prevented industry diversification, undermined our competitive position in the world market and deprived both consumers and the economy of the benefits of a competitive, free market system.

HYDROCARBONS AND SYNTHETIC FUELS

Some candidates have turned to the idea of an oil fee to stimulate more exploration and drilling. I do not favor that approach.

An oil import fee amounts to another tax increase. An oil import fee would hurt the economy by raising the price of oil and would provide no reduction in the deficit.

The problem is that a $5 per barrel oil import fee would increase the cost of fuel by about ten cents per gallon, according to the Department of Energy. Home heating oil prices would rise drastically, and consumers in Texas — as elsewhere — would be hurt. Petroleum-based production costs would go up, and such a tax increase would make us guilty of the same protectionism we complain about in others.

A strong domestic oil industry is vital to the national security of this country — an America dependent on foreign oil is an America that one day could be subjected to shortages and rationing. Therefore, I favor more incentives for our domestic oil industry. We should:

1. Deregulate natural gas now;
2. Open up the Alaska Refuge for exploration and development;
3. Repeal Windfall Profits Tax;
4. Encourage the use of methanol (along with ethanol);
5. Lease the Outer Continental Shelf for oil drilling with environmental safeguards;
6. Increase the fill rate of the Strategic Petroleum Oil Reserve;
7. Increase the depletion allowance;
8. Have the DOE help more with research money for secondary and tertiary recovery methods.

And finally, we should look at the tax structure to find ways to encourage more drilling and domestic production — make it prospective and it will not be inflationary at all.

Many of the Administration's energy initiatives should be continued because there is plenty left to do. Deregulating natural gas, eliminating the Windfall Profits Tax, filling the Strategic Petroleum Reserve, and developing clean coal technologies fit into this category. But these policies alone will not resolve the fundamental problem we face down the road — namely overdependence on imported oil, especially from the volatile Middle East.

We should try to develop long-term energy resources without sacrificing the short-term benefit of low world-wide oil prices. Such prices are keeping inflation down. But we also have available local energy sources that can be tapped on relatively short notice in the event of another oil cutoff, either real or threatened.

How can we do this? Coal is our ultimate trump card, but using it in clean liquid or gas form on a vast scale simply is not economical at today's prices. What we need is an environmentally sound bridge — and for that, more and more signs are pointing at natural gas and other related alternative fuels, such as propane, methanol, and ethanol.

Natural gas is the cleanest fuel available, easily transported in both gas and liquid (methanol) form, and usable as both a boiler and transportation fuel. Indeed, as a transportation fuel (in the form of CNG or methanol), it can substantially reduce urban pollution and as a boiler fuel it could cut down on acid rain. Equally important, we have much more untapped natural gas than we do crude oil.

What we need, then, is a major effort to exploit this great natural resource. We must reverse the current trend of some of the major domestic energy companies to invest half or more of their exploration budgets overseas. One way to start this shift to gas without subsidy or tariff is to clear away the regulatory and informational barriers to its use for pollution abatement. Another is to encourage automakers to produce cars that run on either gasoline or alternative fuels giving the consumer a wider range of choices. If alternative fuels can be introduced in a major way into transportation, ethanol will also play a significant role, providing a boost in the farm economy as well.

continued
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Natural gas requires no processing for use in a boiler. Even natural gas derivatives (such as CNG or methanol for transportation) do not require much in the way of processing; gas wells require much less maintenance and last much longer than oil wells, and conversion into liquid form does not involve many of the oil refinery complexities now occasioned by two-way capacity for boilers to switch from either coal or oil to gas, and for cars to switch from gasoline to methanol or CNG, natural gas becomes the ultimate strategic reserve — ready to use virtually at a moment’s notice in the event traditional forms of energy become unavailable for one reason or another.

ENVIRONMENT
We all have an obligation to protect our environment. Not only can government make a difference in preserving our environment, but so can the voluntary efforts of private organizations and dedicated individuals in every part of our country. We want environmental regulation based on good research and sound data that is vigorously and uniformly enforced. In the long run, environmental protection and economic development are not only compatible, they are entwined. We should strive for cooperation, rather than confrontation, among competing interests in the environmental arena. We should encourage industry to identify and provide innovative technological solutions to environmental challenges.

Toxic wastes
We must push harder on enforcement, streamline and accelerate the process, promote voluntary settlement procedures, reduce regulatory barriers to new and innovative cleanup technologies, and bring the states more actively into the effort.

Solid waste
There is no single solution to this problem. We must provide incentives for minimizing waste, target research and development in environmentally-sound ways to dispose of waste that cannot be recycled.

Groundwater
Once groundwater is contaminated, the damage can be almost irreversible. That is why we must give a high priority to groundwater protection, with federal leadership and state implementation.

Clean air
Despite good progress in reducing emissions from cars, factories, and power plants, approximately 80 metropolitan areas are still not meeting federal clean air standards. I am looking to the marketplace for innovative solutions, like the use of oxygenated fuels. As head of the Presidential Task Force on Regulatory Relief, I have taken the lead in encouraging greater use of ethanol and methanol, which hold the promise of significantly reducing smog and acid rain caused by automobile emissions.

Acid rain
We can no longer afford simply to study the problem of acid rain. We must begin to take effective action for a national commitment to continue to reduce emissions of sulfur and nitrogen oxide. We must develop new clean-coal technology and other pollution control incentives. We should pursue initiatives that have emerged from our dialogue with Canada, and, if they do not produce results, establish specific emission reduction goals that promise steady progress toward cleaner air.

International cooperation
Our nation is well-equipped, especially in technical expertise, to give strong international leadership to global environmental problems, like extinction of species, massive soil erosion, and destruction of tropical rain forests. International environmental cooperation will be a foreign policy priority in a Bush Administration.

Stratospheric ozone
I am proud of my role in getting the Administration to take the lead in developing and promoting a multilateral agreement to reduce the use of chlorofluorocarbons around the world. This treaty sets a major precedent. For the first time, we gave a multilateral treaty that commits countries to take effective action against a worldwide environmental problem.

Outdoors
I support many of the recommendations made last year by the President’s Commission on American Outdoors, for example, the encouragement of public-private partnerships for recreation, the creation of greenways and strengthening of urban parks, and protection of rivers, streams, and wetlands.”

Call For Papers
“FINDING OIL WITH A COMPUTER: CASE HISTORIES, TOOLS, AND TECHNIQUES”

The Permian Basin Graduate Center is planning its second symposium on the practical use of micro-computers in the exploration and development of oil and gas reserves, with applications and examples from the Permian Basin of West Texas and southeast New Mexico.

We are inviting papers for oral presentation and for publication in a symposium volume to accompany the meeting.

The meeting is scheduled for early fall, 1989. Our first symposium featured 25 speakers in two full days of technical sessions, and attracted more than 230 people.

“Finding oil” is defined in the broadest sense. Discovering new pay zones in old wells through advanced log analysis techniques, enhancing recovery of existing reserves through petroleum engineering and extending the limits of known fields would all legitimately qualify as “finding” new oil and gas reserves.

We would like to emphasize the multi-disciplinary use of computers in every aspect of exploration, development and reservoir management. We expect to feature papers from geology, geophysics and petroleum engineering.

Submissions should follow the general format of articles in the AAPG Bulletin for style, sub-heads, references, etc. Papers should be typed, double-spaced on one side of paper, and should include a complete title, abstract and list of authors and company affiliations. Figures should be camera ready originals and each should be clearly identified and prepared on its own separate sheet. The figure captions should be on a separate page, since they will be typeset for continuity with the rest of the papers.

Deadline for receipt of papers is June 1, 1989.

We will also have a limited number of exhibit booths available for companies with computer-related products and services. We encourage potential industry exhibitors to contact us as early as possible to reserve space.
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ASSOCIATION FOR WOMEN GEOSCIENTISTS SELECTS 1989 NATIONAL BOARD

Marilyn J. Suiter, a geologist with the American Geological Institute, Washington, D.C., is new Association for Women Geoscientists (AWG) president.

Suiter directs special programs and proposals for the Institute as well as editing the AGI publication Geospectrum. She previously served as AWG Editor in 1987 and as a delegate from the Oklahoma City chapter 1984-86. In addition to AWG, Suiter is active in many professional organizations including Membership Chair for the American Association for Blacks in Energy. She received her B.A. in geology from Franklin & Marshall College in 1978 and her M.S. in Earth Science from Wesleyan University in 1981.

Other new officers are:

Suzanne Takken, vice president, Oklahoma City, Oklahoma. Takken is president of Olanda Enterprises Inc., and does consulting oil and gas exploration and investments. She is an honorary life member and past president of the Oklahoma City Geological Society. Takken received her B.S. in Geology from the University of Michigan in 1947.

Selena Billington, secretary, Denver, Colorado. Billington is a geophysicist at the U.S. Bureau of Mines. Using her seismology expertise, she is attempting to find ways to predict or control rock bursts, a major safety concern in hard-rock mines. Billington graduated from Harvey Mudd College with a B.S. in Chemistry in 1971 and received her Ph.D. in Seismology from Cornell University in 1980.

Catherine Gavigan, treasurer, Greenwich, Connecticut. Gavigan is vice president of John S. Herold Inc., a company which provides financial analyses of oil and gas companies. She received her B.A. in Geology from Williams College in 1970 and an M.S. in Geology from Stanford University in 1984.

Virginia Murphy Sand, editor, New Philadelphia, Ohio. Sand is associate professor in Geology at Kent State University, Tuscarawas Campus. She has received several teaching awards and is active in many professional organizations. In addition, Sand is a consultant for several local attorneys on environmental cases. She received a B.S. in Geology from Northwestern University and an M.A.T. in Earth Science from Kent State University.

ON THE MOVE

Dr. Gail Bloomer has joined HyTEXplor as executive vice president, Geophysics and Marketing. Gail was formerly with Gulf Oil as manager of geologic studies, and at Kerr-McGee as chief geologist.

Allen K. Cregg has joined the Geological Sciences Dept. of Core Laboratories, Dallas, Texas as senior project geologist. He was previously an exploration geologist with Shell Western E & P Inc., Houston, Texas.

M. L. "Newt" Feldman, former Ashland, Inexco and Exxon geologist, has joined Wolf Land Co. as a senior exploration advisor.

L. David Gossett has recently become executive vice president, Geology, at HyTEXplor Inc. Dave was previously with Mobil Oil and Monsanto.

Amy S. Mohler, past president, Houston, Texas. Mohler is a geophysicist for Texas Eastern Exploration and Production Co. She received her B.S. in Geology and mathematics with honors from the University of Toledo, and an M.S. in Geophysics from the University of Nevada at Reno.

AWG is a national professional organization with fourteen chapters and nearly 100 members. It has been recently approved as an affiliate of the American Association for the Advancement of Science.

HOUSTON GEOLOGICAL AUXILIARY

Our last meeting of the 1988-89 year will be at the Houstonian. Chairpersons Dorothy Harlan and Joy Payne and their committee will present an outstanding luncheon and program. Also, it is that special time when I turn over the gavel to Myrtis Trowbridge.

I have been fortunate to be surrounded by a marvelous board. My year as president has been a joy. Our programs entertained us in style, thanks to our incomparable Suzy Allen and the committee chairpersons she chose. Of course, the socials wouldn't have been successful if Kathryn Bennett and Mary Harle hadn't put in many hours building up our membership.

With a watchful eye, Joyce Champeny kept our finances in order, and Tina Hoffman's minutes reminded us of our duties. Mildred Davis kept the HGS informed of our activities and helped when necessary. Our new Office Rescue Squad committee helped the HGS office several times under the guidance of Joanne McDuffie, who willingly took on the job when asked.

Carolyn Holland, with the help of Suzy's dextrous hand, did a superb job with name tags. Carolyn also provided a marvelous setting for a board meeting and the newcomers luncheon. Daisy Wood, Jean Richardson and their Notification Committee did a fantastic job of keeping us informed. The beautiful yearbook, provided at the September meeting, shows the hard work and diligence of Theresa Barker and Marge Krone.

Anne Boutte' brought news of members and events with a well-presented Eclectic Log. Helyn Romberg provided photos to tell the history of our organization. Historian Pat Hollingshead kept them in the heavy albums she carried to the meetings so members could reminisce.

My year would not have been such a pleasure if I hadn't had the support and love of my husband, John. I'm so fortunate!

My best wishes go to Myrtis Trowbridge, who is already hard at work planning a great year for 1989-90. Thanks to all supporters of the Houston Geological Auxiliary.

PAT HEFNER

W. N. (Mac) McKinney Jr., past president of the Houston Geological Society, has been reassigned to the position of manager of new ventures for Sonat Exploration Co.

Reginal (Reggie) Spiller has been named manager, international exploration for Dallas-based Maxus Energy Corp.

David T. Threinen has recently moved his consulting office to 12454 Cutten Road, Suite "H", Houston, Texas 77066. Tel. 440-4908.
NEW RADAR IMAGERY OF LOUISIANA

Background
On July 6-9, 1988, the northern third of Louisiana and a small portion of west central Mississippi were mapped using a state-of-the-art, side-looking airborne radar (SLAR) mapping system, Synthetic Aperture Radar (SAR). More than 16,000 sq. miles of terrain were mapped in the Shreveport, La. and Jackson, Ms. 2° topographic quadranges.

The area was flown as part of the U.S. Geological Survey sponsored National Mapping Program. The Louisiana site was chosen for inclusion in the 1987 mapping program as a result of a proposal submitted by the Louisiana Geological Survey (LGS).

Deliverables to be sent to the LGS include raw data in the form of computer tapes and documentation, mission flight logs, one set each of original and duplicate strip coverage of the Alexandria, La. and Natchez, Ms. 2° topographic quadrangles.

A second SLAR mapping proposal was prepared and forwarded to the USGS in July, 1988 to request additional coverage of the Alexandria, La. and Natchez, Ms. 2° topographic quadrangles plus portions of the Baton Rouge, Mobile, and Hattiesburg quads, or about 30,000 sq. miles of territory. The proposal received a favorable review by the USGS and has subsequently been placed on the priority list for SLAR data acquisition.

Applications
The SLAR mapping program is particularly useful to the oil and gas industry in Louisiana because SAR has been extensively used throughout the world for detecting linear geologic features such as fault zones in densely vegetated areas. Many onshore oil and gas fields in Louisiana are associated with fault related structures. SAR imagery will help Louisiana’s ailing oil and gas industry by aiding in the identification of additional petroleum prospects. Moreover, this program costs Louisiana nothing to participate in, and may lead to important new petroleum discoveries of great economic benefit to the state.

SAR imagery is suitable for mapping other types of mineral and non-mineral resources. Louisiana has low grade iron ore deposits in the northern part of the state, lignite in west-central Louisiana and extensive sand, gravel, and clay deposits scattered throughout.

SLAR imagery also has important environmental applications in the field of ground water geology. For example, it can help identify and interpret the role of geomorphic and structural controls on ground water movement, water quality and aquifer vulnerability. It can be used to map and refine outcrop boundaries and recharge zones. Preliminary results suggest that specific signature anomalies occur when electromagnetic radiation is reflected from targets contained within surface waste disposal sites. As such, SLAR may have an application for detecting abandoned hazardous waste sites and other disposal facilities.

For additional information, contact Mr. Bradford C. Hanson of the Louisiana Geological Survey, Box G, Baton Rouge, Louisiana 70893 (1-504-388-5320).

CALL FOR PAPERS
Late Cambrian-Ordovician Geology of the Southern Midcontinent
October 18-19, 1989
Norman, Oklahoma

The Oklahoma Geological Survey is sponsoring a symposium/workshop dealing with all aspects of Late Cambrian-Ordovician geology of the Southern Midcontinent. Topics to be covered include sedimentology, diagenesis, petroleum occurrence and exploration, other mineral resources, geologic history, and other subjects important to understanding the geology of Late Cambrian and Ordovician rocks of the region. The area of interest includes all of Oklahoma, north Texas, Texas Panhandle, northeast New Mexico, southeast Colorado, southern Kansas, southwest Missouri, and western Arkansas. If you have been doing exploration in the Southern Midcontinent or studies on any of these topics, and have an interesting paper to present, we welcome your contribution toward making this a highly successful symposium/workshop.

The symposium/workshop will consist of about 18 papers presented orally and about 20 informal poster presentations. The proceedings will be published by the OGS about eight months after the meeting. We expect manuscripts to be completed and submitted by October, 1989, at the time of the symposium/workshop.

Please submit a preliminary title and abstract for your presentation by June 1, 1989, to Kenneth S. Johnson, Oklahoma Geological Survey, University of Oklahoma, Norman, OK 73019 (phone: 405/325-3031). Abstracts should be typed, single-spaced and should not exceed one page. They should be camera-ready for an abstracts volume that will be printed for the meeting. The steering committee will select the program of speakers and posters based upon the abstracts that are submitted. Please indicate if you prefer to give the paper orally, in poster format, or both.

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## MAY

### CALENDAR of EVENTS 1989

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### GEO-EVENTS

#### MEETINGS
- **Oil & Gas SIG, M.D. Anderson Hall, University of St. Thomas, 7 p.m., May 3.**
- **GSH Annual Awards Dinner, SEG President Ken Larner, "Connections—Ya Gotta Have 'Em," Lakeside Country Club, 6:30 p.m., May 4.**
- **HGS Dinner Meeting, Frank Harrison, "The Tuscaloosa Rejuvenated: Beaver Dam Creek and Baywood Fields, St. Helena Parish, Louisiana," Westin Oaks, 5:30 p.m., May 8.**
- **UH Geological Alumni Association Luncheon, Petroleum Club, 11:45 a.m., May 10.**
- **HGS Environmental Committee Meeting, Charlie's Hamburger Joint, 2222 Ella Blvd., 6 p.m., May 10.**
- **SPWLA Westside Luncheon, Holiday Inn-Houston West (1-10 & Hwy. 6), 11:30 a.m., May 10.**
- **SPE Luncheon, White Hall Hotel, 7 p.m., May 11.**
- **SPWLA Greenspoint Luncheon, NL Industries Cafeteria, 12 Noon, May 11.**
- **SPWLA Cased Hole Luncheon, Marriott Galleria, 11:30 a.m., May 17.**
- **HGS International Dinner Meeting, R. B. Cline, Pecten International, "Thayyem Field Discovery: Syria's Euphrates Graben," Westin Galleria Hotel, 5:30 p.m., May 17.**
- **SIPES Luncheon, Doris M. Curtis, "Source of the Oil in the Gulf Coast Cenezoic Reservoirs," Petroleum Club, 11:30 a.m., May 23.**

#### SPWLA Luncheon, Petroleum Club, 11:30 a.m., May 23.


#### HGS Environmental Dinner Meeting, Robert Foye Jr., “Waste Remediation at Superfund Sites,” Wyatt's Cafeteria, Sharpstown Mall, 6:30 p.m., May 24.

#### SCHOOLS AND FIELD TRIPS
- **AAPG Workshop, Howard Yorston, Interpretation Consultants Inc., “Salt Tectonics,” Doubletree Post Oak, May 15.**
- **HGS Field Trip, Recent Sediments of Southeast Texas, Rufus Leblanc, May 27.**

#### OTHER EVENTS
- **Offshore Technology Conference, Astrodomain, May 1-4.**
- **GSH Annual Meeting/BBQ, Bavarian Gardens, 3296 Feagan St., 5-8 p.m., May 18.**
COMMITTEE NEWS

PENNZOIL MAKES GIFT TO HGS

David S. “Scotty” Holland, president and CEO of Pennzoil Exploration and Production Co., recently presented a check to the Houston Geological Society on behalf of Pennzoil for $250. The donation was placed in the HGS Undergraduate Scholarship Fund. The HGS greatly appreciates Pennzoil’s continuing interest in and support of our activities and programs.

HGS UNDERGRADUATE SCHOLARSHIP FOUNDATION SAYS THANKS

The HGS Undergraduate Scholarship Foundation extends its appreciation to the numerous corporations listed below for their generous contributions. Their contributions, totaling $10,000, enable the USF to continue building a financial foundation from which scholarships can be awarded to outstanding undergraduate geology majors. Our THANKS are expressed to the HGS Board members who helped secure the contributions and to the following companies:

- Amoco
- Anadarko
- Arco
- Chevron
- Coastal
- Conoco
- Elf Aquitaine
- Enron
- Exxon
- William Gibson
- Kerr-McGee
- Marathon
- Meridian
- Mobil
- Pennzoil
- Pogo
- Prairie
- Primary Fuels
- Rutherford
- Sandefer Oil & Gas
- Sandefer Offshore
- Shell
- Sonat
- Standard Oil
- Sun
- Tenneco
- Texaco USA
- Texas Crude
- L.L. & E
- Transco
- Union Pacific

NOMINATIONS SOUGHT FOR AAPG AWARDS

The Houston Geological Society is seeking nominations from its membership of individuals who should be considered for AAPG awards. These awards include:

- Sidney Powers Memorial Award
- Honorary AAPG Membership
- Distinguished Service Award
- Human Needs Award
- Public Service Award
- Journalism Award

Your nominations must be submitted to Barbara Bentley, chairman of the HGS Awards Committee, by June 1, 1989 to be considered for this year’s AAPG Awards Program. Nominations received after June 1 will be considered for 1990. If you have any questions about the requirements for the above mentioned awards, please contact Barbara Bentley at 556-4451.

UPCOMING FIELD TRIPS

Recent Sediments of Southeast Texas (1 Day) .................. May 27, 1989
3-D Seismic Acquisition ........................................ Postponed to September 30, 1989
South Texas Nuclear Project ................................. June 23, 1989
Modern Carbonate Sedimentation, San Salvador, Bahamas  
Postponed to November, 1989

A Glimpse at Proposed 1989-1990 Field Trips:

- 3-D Seismic Acquisition .................................. September 30, 1989
- Carboniferous Geology of the Northern Llano Uplift, Southern Fort Worth Basin, and Concho Platform ................. Late October-November, 1989
- Modern Carbonate Sedimentation, San Salvador, Bahamas .................. November, 1989
- Recent Sediments of Southeast Texas (1-2 Days) .................. open date
- Environmental Committee Field Trips ...................... open dates

HGS UNDERGRADUATE SCHOLARSHIP FUND ACKNOWLEDGES CONTRIBUTORS

The HGS Undergraduate Scholarship Fund gratefully acknowledges the following contributors:

- D. S. Haglund
- David W. Rapp
- Mrs. A. L. Selig (in memory of Paul K. Goodrich)

These contributions will be used to help further the education of outstanding students at several local universities.

ACADEMIC LIAISON COMMITTEE

The Academic Liaison Committee has a wide variety of materials available for use by members in their work with teachers, schools, and other groups. The committee has the following items:

- Over 190 slides and several 16mm films and VHS tapes on a wide variety of geological topics.
- Over 65 different types of minerals.
- Numerous volcanic and metamorphic rock specimens.
- A large collection of fossils, including sponges, corals, brachiopods, gastropods, ammonites, bivalves, trilobites and echinoids.
- Fossil fish and ferns, dinosaur bones, and shark’s teeth.

If you would like to join the committee and use any of these materials in talks to schools about geology or similar subjects, please call John Chronic at 933-3371.
HGS FIELD TRIPS
RECENT SEDIMENTS OF SOUTHEAST TEXAS

May 27, 1989
Bus will leave Rice Stadium at 8 a.m.

Cost: $40
(includes guidebook, lunch, and refreshments).

Registration forms must be received by May 19.
Telephone inquiries not encouraged unless absolutely necessary.

(Information Contact: Wynn Gajkowski 739-3034)

Instructor: Rufus J. Leblanc
Rufus Leblanc School of Clastic Sediments

SOUTH TEXAS NUCLEAR PROJECT
DATE & LOCATION: June 23, 1989, (Friday)
Field trip departs from HL&P's Bellaire Service Center, 4320 Bissonnet at 8 a.m.

SCOPE OF TRIP: Provide a unique opportunity to tour the much acclaimed South Texas Nuclear Project. Cameras will be permitted. Houston Lighting & Power will provide bus transportation and a luncheon at the Blessing Hotel. Registration is limited to 10 - 14 people. HGS will try to schedule additional field trips to STNP if sufficient interest warrants.

INSTRUCTORS: Houston Lighting & Power Personnel
COST: Free (Courtesy of Houston Lighting & Power)

REGISTRATION FORM
NAME: ____________________________
ADDRESS: ____________________________
Phone (home) ____________________________ (work) ____________________________

I am registering for (please check):
☐ Recent Sediments of Southeast Texas
☐ South Texas Nuclear Project

Enclose check payable to HOUSTON GEOLOGICAL SOCIETY.
Return with this form to: Houston Geological Society, 7171 Harwin, Suite 314, Houston, Texas 77036

MOVING?
Call Margaret at
785-6402

WOOLEY EXPLORATION
Actively seeking oil & gas prospects in Texas & Louisiana.
Close-in or wildcats — preferably open acreage ideas —
Normal pressure prospects.
3657 Briarpark, Suite 105
Houston, Texas 77042
(713) 781-8974
# HGS Personnel Placement Form

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**Willing to Relocate**  
**Resume on File**  
**Willing to Work Contract**  
**U.S. Citizen**

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Mail To:  
Houston Geological Society  
Personnel Placement Computer Service  
7171 Harwin, Suite 314  
Houston, Texas 77036
BOOK REVIEW


“Scientific” Creationism is one of those strange pseudo-scientific issues that should be able to ignore. Until about 1980, scientists did ignore creationism, and that proved to be a monumental mistake. Creationists claim that there is objective scientific evidence for a young Earth and for special creation of all living “kinds,” but “scientific” creationism is quackery, pure and simple. It is, as the Supreme Court recently confirmed, the creation (pun intended) of a handful of fundamentalists who want to inject their religious dogma into the classrooms of the public schools. Creationism is quackery, pure and simple. It is, as the Supreme Court recently confirmed, the creation (pun intended) of a handful of fundamentalists who want to inject their religious dogma into the classrooms of the public schools. It has become an important issue not because of intellectual content—there is none—but because the creationists have had considerable success in modifying the educational system more to their liking.

The arguments used by the “scientific” creationists in their assault on education are typically arcane and invariably couched in the technical jargon of thermodynamics, taxonomy, molecular biology, astrophysics, and other scientific subspecialties. Upon close scrutiny, of course, the creationists’ “scientific evidence” invariably turns out to be fraudulent, but to the average educator, parent, or politician, the fraud is not apparent and the evidence and logic may appear to be reasonable. Even the uninitiated scientist may hard put to quickly identify and refute the flaws in the creationists’ twisted data and convoluted reasoning. Only within the past five years has there appeared a body of literature to deal with this problem by refuting, point by point, the tenets of “scientific” creationism. This new book by Arthur Strahler, geologist and professor emeritus of Columbia University, is one of the best of this valuable genre.

Science and Earth History is a big book—54 chapters and 552 pages. It is well illustrated, rich in detail, and uncommonly readable. Strahler has divided his work into ten parts. The first two parts are introductory in nature. Part I, Science and Pseudoscience, is about the attributes of science and the scientific method and the differences between science, religion, and pseudoscience. It should be required reading for all scientists and science educators, whether or not the issue of creationism is of interest to them. Part II, Introduction, is a discussion of creationism, its tenets, and its recent popularity. The remaining eight parts are the meat of the book, in which Strahler neatly dissects the “science” of creationism and exposes its many fallacies, fables, and fabrications. Strahler’s technique is simple, straightforward, and consistent. First he explains how science views a particular finding or phenomenon and then explains the creationists’ position and arguments and why they are wrong. Like a chef creating a good spaghetti sauce, Strahler leaves little out. Creationists’ arguments for a young Earth, space with Riemannian curvature, changes in the speed of light, flood geology, hydraulic stratigraphy, special creation of all living “kinds,” lack of transitional forms, fatal flaws in molecular phylogeny, a post-flood population explosion—these things and more are thoroughly and thoughtfully discussed.

Strahler’s easy style makes this book a delight to read, and his thorough research has resulted in the most comprehensive work on the subject so far. It contains information of interest and lasting value to everyone interested in or touched by the creation/evolution controversy—and that includes nearly everyone, whether they know it or not. Moreover, this book is fun to read, and it is apparent that Strahler had fun writing it. Science and science education owe Arthur Strahler hearty thanks for devoting his energy, his intellect, and his artful pen to this important issue. My recommendation is that you read this book and keep it handy on your bookshelf. Better yet, donate a copy to your nearby public school science department.

G. Brent Dalrymple
U.S. Geological Survey

(Reprinted from Geology, January, 1989)

CORRECTION

In the April Bulletin, we inadvertently included some of George Kronman’s biographical information in the biography for Larry Bartell, candidate for HGS Treasurer. Under professional activities, it should read that Mr. Bartell was a contributor to the Typical Oil and Gas Fields of Southeast Texas, Vol. II in 1987 and served on the AAPG National Convention Information Committee in 1988. He has been a member of the AAPG House of Delegates since 1988. Corrected biographies for the Treasurer’s race have been mailed with your ballot. We deeply regret this error.
Texas Gulf Coast

Killam Oil has commenced operations at their #3 Gutierrez, a 15,000' lower Wilcox test one mile southwest of the Carrizo Wilcox discovery for Southwest Comitas Field in Zapata County. Deepest lower Wilcox production in the area is from the Lobo interval (below 14,000') in the heavily drilled El Huerfano Field, 5-1/2 miles north. At the Carrizo Wilcox horizon, the wildcat spots on northeast dip upthrown to a major down-to-the-east regional fault—in a similar structural setting as much of the El Huerfano production to the north.

Farther east, in Brooks County, Texas Coastal Petroleum has completed the #1 TCP/Hooper #1 as a new Yegua discovery 5-1/2 miles southeast of Miocene and shallow Frio production at Alta Verde Field. Flow rate was 1,440 MCFGPD from 7730-42'. Structure at the Yegua horizon is regional east dip, based on very limited control.

Union Pacific Resources is drilling below 1200' at their #1 Sam Tuckness, a 4000' Georgetown wildcat 4 miles northeast of Georgetown oil production at the one-west Minutemen Field in Zavala County. About a mile southeast, drilling operations have been completed at the #2 Suzanne Tuckness and the #1 Murphy, also Georgetown tests, with no information released so far. Structure at the Edwards "A" horizon is regional southeast dip with broad local nosing.

In Goliad County, Royal Oil & Gas has staked a 10,200' Wilcox test just west of shallow Frio production at CKP Field, and 3 miles southeast of Frio, Vicksburg, Yegua and Wilcox production at Karen Beauchamp Field. The #1 Gregorczyk is 2 1/4 miles east of a 9515' dry hole (Harkness #1-B Fimbie) which logged reservoir quality Wilcox sands from 8510' to TD. At the top Wilcox horizon, the wildcat spots on southeast dip, immediately upthrown to an east-west down-to-the-coast regional fault.

Terra Resources will drill a 15,000' Wilcox test about a mile southeast of lower Wilcox gas production at Benbow Field in Lavaca County. The #1 Borchers Heirs is 2000' east of a depleted upper Wilcox gas well, the Union #1-C Borchers, which logged lower Wilcox sands of apparent reservoir quality below 10,800', but was initially completed from 8525-27' for 1,810 MCFGPD. At the top Wilcox horizon, the wildcat spots near the crest of a broad southeast plunging nose.

Farther east, in Wharton County, Cox & Perkins will attempt to establish additional Yegua production 3-1/2 miles northeast of their Pierce Ridge Yegua gas field. The #1 O. B. Ranch, scheduled to 11,300', is about a mile southeast of Frio and Miocene production at Pierce Ranch Field. At the Vicksburg horizon the new test spots on irregular, southeast dip, down dip and downthrown to a local down-to-the-south fault.

Famcor Oil will drill a 7800' Wilcox test 3-1/4 miles northeast of Wilcox production at Warren Field in Tyler County. The #1 Feagin is 200' east of the Prudential #1 Feagin, et al, which reported no tests or shows before abandonment at TD 7931'. At the top Wilcox horizon, the wildcat spots on moderate southeast dip, downthrown to a down-to-the-south regional fault.

South Louisiana

Burk Royalty has staked a 13,500' Wilcox wildcat about 6 miles northeast of Wilcox production at North Singer Field in Beauregard Parish. The #1 Hughes is located within 3500' of three dry Wilcox tests, one of which, the Magnolia #1 Central C&C, tested 76 BOPD from perfs at 11,912'29' about 160 below a 300-foot fault cut. Structure at the Wilcox horizon is irregular southeast regional dip interrupted by several down-to-the-southeast faults.

In adjoining Calcasieu Parish, Maralo, Inc. has completed the #1 Iles as a new upper Cockfield discovery, 2-1/2 miles northwest of Starks Field (Miocene, Anahuac and Frio production). Flow rate was 302 BOPD and 342 MCFGPD from 11,348-366'. Structure at the Hayes horizon is regional southeast dip.

A 17,000' wildcat has been staked by Lamson Petroleum 2-3/4 miles east of Frio production at North Maurice Field in Lafayette Parish. The #1 Billeaud, et al should evaluate sands down through the Bol mex. At the Marg tex horizon the new test spots on moderate southeast dip, with more complex faulting possible at Bol mex depth.

In adjoining St. Martin Parish, Bass Enterprises will drill a 14,300' Nonion struma test 1-3/4 miles west of Bayou La Rose Field, productive from the Hayes, Marg tex and Bol mex. At the Marg tex horizon the wildcat appears to be located on the west flank of the Bayou La Rose Field structure, downthrown to the northernmost of three down-to-the-south faults.

Meridian Oil has staked the #1 Rhodes Estate, a 12,500' Miocene test 1-1/4 miles southeast of upper and middle Miocene production at Dulac Field in Terrebonne Parish. At the Big 2 horizon the wildcat spots on the southeast flank of the Dulac Field structure, downthrown to a large down-to-the-southeast fault which separates the new venture from existing field production.

MESOZOIC TREND

East Texas

Phykio Energy will drill a 10,700' James wildcat 1-1/4 miles northeast of James production at Sand Trap Field in Henderson County. The #1 West is about 4000' southwest of an 11,461' Travis Peak dry hole (Armer, et al #1 Greer) which drill stem tested the James at 10,760'83' with no reported shows. At the top James horizon the new test appears to be located within a downthrown fault block along the northwest flank of Fairway Field, down dip from Sand Trap Field production.

In adjoining Van Zandt County, Peltco Oil has released completion data for their new Rodessa gas discovery about one mile southeast of Rodessa production at Martins Mill Field. The #1 Marsh flowed 6,700 MCFGPD from 8493-8506'. Structure at the base Massive Anhydrite is irregular southeast dip off the Martins Mill Field structure.

Farther north, also in Van Zandt County, Wasson Energy and Dallas Production have staked a 15,000' Smackover test 2-1/2 miles north of Rodessa and Smackover production at Grand Saline Field. The #1 Holland-Browning is about 3500' north of the Mobil #1 Holland, a 14,824' dry hole which encountered salt at 12,603' and...
apparently never reached the Smackover. At the top Smackover horizon the wildcat appears to be situated in a salt withdrawal syncline within the Smackover downdip salt anticline trend.

**North Louisiana**

Tamarack Petroleum will drill a 7550’ *James* test in northwestern Winn Parish, 4 miles south of Rodessa and Hosston gas production at Saline Field. The #3 Placid, et al is about a mile northwest of the Bodcaw #2 Fee, an 8516’ Sligo dry hole in which the James section is faulted out by an approximate 200-foot fault. Structure at the base Massive Anhydrite appears to be irregular south dip with local faulting, based on limited control.

Farther east, also in Winn Parish, Walsh Operating has scheduled an 11,750’ *Hosston* wildcat 3-1/4 miles north of Wilcox production at the one-well Dodson Field, and 10 miles southeast of nearest Hosston production at Jonesboro Field in Jackson Parish. The #1 Watson Estate is about a mile northwest of the Continental/Justiss #1 Tremont Lumber Co., a 16,155’ dry hole which tested non-commercial quantities of gas from two zones in the Cotton Valley. At the base Massive Anhydrite horizon, the new venture spots on the west flank of a prominent southwest plunging nose.

Placid Oil will drill a 13,000’ *Sligo* test between Nebo-Hemphill and South Jena Fields in LaSalle Parish in the midst of shallow Wilcox production, and 60 miles southeast of nearest Sligo production at Black Lake Field in Natchi-
toches Parish. The #1 IPB Walker, et al is 3 miles northeast of the only other Sligo test in the area, the Bodcaw #136 LLS-Bodcaw Fee, which logged a well-developed Sligo section with some possible porosity and was abandoned at 13,191' with no cores or tests reported. At the top Lower Cretaceous horizon, the wildcat appears to be situated on a subtle south plunging nose, based on sparse control.

**Alabama**

A new Smackover oil discovery has been completed by Moore-McCormack Energy, 2-1/4 miles southwest of Smackover production at Appleton Field in Escambia County. The #1 Gallagher flowed 1,160 BOPD and 1,229 MCFGPD from perfs at 13,265-287' (OA). At the top Smackover horizon, the new producer spots on the southwest flank of a small but prominent south plunging nose, probably indicative of another basement high along the south plunging Conecuh Ridge.

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