

NEWS

BULLETIN



mississippi geological society

Vol. XIX, No. 1, Sept., 1971

FALL BARBECUE TO OPEN MGS 33RD YEAR

BARBECUE AT FOWLER LODGE

The Mississippi Geological Society will kickoff the 1971-72 year with the annual fall barbecue, Thursday, September 23, at the Fowler Buick Lodge on the Barnett Reservoir. Doors open at 4:30 p.m. and barbecue will be served around 6:30 p.m. Beer will be available when the doors open and normally a line begins forming about that time. So come early if your thirst is up. As usual, no charge is made but your 1971-72 MGS dues must be paid which can be done in advance or at the door. After the barbecue, there will be ample time to finish off the beer, visit with new and old acquaintances and/or participate in challenging sporting contests which have become established events at the barbecues.

Both the fall and spring barbecues are popular affairs with the membership and usually draw the largest crowds of the year. Consequently, the opportunity is ripe for all members to meet one another and exchange gossip concerning the oil patch and other areas.

T. C. Rader, Entertainment Chairman, has promised some good barbecue this year but he must know how many plan to attend so that he will have enough barbecue and beer to go around. If you plan to go, call either T. C. (948-4128), Skip Murrell (362-7758), or Jim Skeen (352-8589) by Tuesday noon, September 21, for reservations. Y'all come!



MISSISSIPPI GEOLOGICAL SOCIETY CALENDAR

- | | |
|----------|---|
| SEPT. 9 | WGA Membership Coffee
Home of Mrs. Lincoln Warren
10:00 a.m. to 12 noon |
| SEPT. 23 | Beer and Barbecue
Fowler Buick Lodge
Beer at 4:30 p.m.; Barbecue at 6:30 p.m. |

FOR RESERVATIONS TO BARBECUE, CALL T. C. RADER (948-4128), SKIP MURRELL (362-7758), OR JIM SKEEN (352-8589) BY NOON TUESDAY, SEPT. 21.

CHEVRON TO CLOSE JACKSON OFFICE

Chevron has announced the closing of its Jackson office effective October 1. The shut down includes both exploration and production staffs with most of the personnel reportedly moving to New Orleans. The move is part of an overall company realignment in which several other Chevron offices have recently been relocated.

Chevron's Jackson office has been a division office covering portions of the Southeast Region, East Coast, and Northern States. Approximately 100 persons are employed by Chevron in Jackson. The latest oil directory lists twenty-seven geologists and eight geophysicists, including supervisors, in the exploration and production departments.

The Mississippi Geological Society will undoubtedly feel an impact from this move in that Chevron personnel have long been staunch supporters of the Society, both in attendance and service. Further information concerning individuals will be announced in later issues of the Bulletin.

MGS GOLF TOURNEY IN OCT.

Plans are not yet complete for the Mississippi Geological Society fall golf tournament but Golf Chairman Don Franklin reports that it will be held sometime in the latter part of October. Details will be published in the next Bulletin but everyone should start making plans now to participate. Last year 47 turned out and all had an enjoyable time. The weather should be great so get your group up and be ready to play.

SCHOLARSHIP SET AT MISS. ST. BY GORDON GULMON

Gordon W. Gulmon of Natchez has established a 10 year scholarship grant of \$200 per year to be awarded annually to a student in geology at Mississippi State University. Announcement of the grant came from Troy J. Laswell, Chairman of the Department of Geology, and D. M. Allen, Director of the Mississippi State University Development Foundation.

The scholarship will first be awarded in the fall of 1971 to a junior or senior in geology based on academic performance and need.

A partner in the independent geological firm of Gulmon and Germany in Natchez, Gulmon is a member of the Mississippi Geological Society, a charter member of the American Institute of Professional Geologists and an active member of the American Association of Petroleum Geologists since 1942.

MISSISSIPPI GEOLOGICAL SOCIETY

OFFICERS

Larry Boland	President	Harkins & Co.
Charles Barton	1st Vice President	Am-Southwest Corp.
Buddy Twiner	2nd Vice President	Skelly Oil Co
Dean Kebert	Secretary	Southwest Gas
Larry Walter	Treasurer	Consultant
John Lancaster	Past President	Chevron

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Harold Karges	AAPG House of Delegates	Independent
Kevin Cahill	AAPG House of Delegates	Southeastern Exp.
John Lukert	GCAGS	Cities Service

NEWS BULLETIN STAFF

Dave Cate	Editor	Skelly Oil Co.
Harry Fritz	Advertising Mgr.	Gulf Oil Co.
Jim Skeen	Personal News	Schlumberger
Jim McMullen	Statistics	Chevron

PRINTED IN JACKSON, MISSISSIPPI

personal news-

by Jim Skeen

Don Long has joined Union of California's Geological staff in Jackson. Don was transferred from Union's office in New Orleans.

Charley Barton has moved to Pensacola for American-Southwest Corp. The move is temporary for Charley and he is slated to return to Jackson after feeling out the pulse of the oil patch in the Florida area.

Barney Flusche has transferred to Skelly's geophysical staff in Jackson from Oklahoma City. Prior to Oklahoma City, he was with Skelly in Shreveport.

Other new members to the Society are Sam Webb, consultant, Jackson, and Barney Pate, manager of Geology for Southwest Gas in Monroe, La.

GCAGS - SEPM "ACTION" IN NEW ORLEANS OCTOBER 13-15

The 21st Annual Meeting of the Gulf Coast Association of Geological Societies and Gulf Coast Section - Society of Economic Paleontologists and Mineralogists will be held October 13, 14, 15, 1971 at the Jung Hotel in New Orleans. Theme of the meeting is "Where The Action Is" and a number of interesting and informative papers has been assembled by both Societies.

The theme not only fits the convention program but also the city of New Orleans itself. Plenty of action will be available to the conventioneer wherever he goes. Convention entertainment includes the opening night cocktail party, a riverboat cruise and dance aboard the S.S. President, a "Food Fest" party featuring traditional New Orleans foods, a golf tournament, a deep sea fishing trip, and daily activities for the women.

Two pre-convention and two post-convention field trips are available. The featured trip is one to the southern portion of the coastal waters and barrier reef of British Honduras, Central America, to study carbonate sedimentation, reef development, and mixed carbonate-clastic sequences. The other trips will be to examine Tertiary outcrops in eastern Mississippi and western Alabama and to study deltaic processes in the Mississippi Delta complex of southern Louisiana.

WGA ELECTS OFFICERS FIRST MEETING SEPT. 9

The Women's Geological Auxillary has elected the following slate of officers for the 1971-72 year: President - Mrs. Jack Porter; 1st Vice-President - Mrs. Morton Phillips; 2nd Vice-President - Mrs. Lincoln Warren; Secretary - Mrs. Paul Gribas; Treasurer - Mrs. Leslie Franz; Reporter - Mrs. Earl Anderson; and Corresponding Secretary - Mrs. Joe Morgan.

The first meeting will be the annual membership coffee which will be held Thursday, September 9, from 10 a.m. to 12 noon at the Lincoln E. Warren residence, 4639 W. Cheryl Dr., Jackson.

SEPM EMPLOYMENT SERVICE AVAILABLE

The Gulf Coast Section of the Society of Economic Paleontologists and Mineralogists has established an employment service to coordinate job opportunities with available personnel. The duties of the Vice-President, Gulf Coast Section - SEPM, have been expanded to include the responsibility of managing the service.

Employers who wish to utilize this service should make their specific personnel needs known to the current Vice-President of the Section, Douglas E. Jones, P. O. Box 2926, University, Alabama, 35486, who will send resumes of appropriate applicants for consideration. Persons seeking employment should submit detailed resumes to Professor Jones who will match education and training with employer's needs. Both employers and applicants should be as specific as possible in describing needs and skills, geographic preference and anticipated salary.

from the editor

This issue of the News Bulletin marks the beginning of the 19th year of publication. It began in 1953 as a quarterly issue and has evolved over the years to its present status. The Bulletin was revised to its current format two years ago by Bob Beu and John Ryall and it seems to be well received by the membership. Believing in going with a winner, we therefore plan no significant changes in the coming year and will continue with the same general format.

One of the first realizations that comes with the editor position is that it is more a news gathering job than an editing job. There is no mountainous pile of material to leisurely edit for the next issue. Instead, we are constantly, often frantically, searching for worthwhile news items. Our time is limited, however, and thus we cannot devote as much effort looking for material as we would prefer. Therefore, a request is hereby extended to all members to submit material which they feel would be of interest to the membership. We are especially interested in technical articles by members or others concerning the geology not only of Mississippi but of the entire southeast region. The membership of the Society is of sufficient size that the contribution of technical articles should be no problem. Its circulation is also wide enough to assure a high level of exposure to the industry.

The Bulletin's Advertising Manager for this year is Harry Fritz, Gulf, who has contacted a larger number of potential advertisers than at any time in the past. The Bulletin is nearly self supporting money wise through the sponsor's contributions and it is Harry's goal to make it completely so. All who desire to advertise in the Bulletin are urged to forward their check as soon as possible. Jim Skeen, Schlumberger, will handle the Personal News this year. Jim covers a lot of territory but he may miss some news concerning members that would be of interest and so those with information should go ahead and call Jim rather than wait. Jim McMullen, Chevron, has kindly consented to compile statistics for the third year in a row. We all need to keep an eye on the Progress column which shows the discoveries and production trends for Mississippi. The Society needs a volunteer photographer to take pictures at the various functions throughout the year. Step forward, camera bug, and we'll buy the film. Austin's Secretarial Lettershop and Ridgways are the ones who take our sweat stained scribbings and turn them into a highly pleasing Bulletin. To them, an advance thanks.

Thus, the year begins. Our Bulletin objective is for increased member participation. With your help, the Bulletin will expand into a bigger and even better publication representative of a strong Society.

A great society can take the people out of the slums, but only a good society can take the slums out of the people.

president's notes

by Larry Boland

It is a great honor to have been elected to this office by the Society membership. It was quickly discovered that a good deal of work goes along with the honor, however; but there has been nothing but cooperation from people who have been asked to chair Committees or to do Society work.

It is traditional to thank the previous administration for its fine work, but in this instance they are more than due. John Lancaster and his Board solved some difficult problems with a minimum of trouble and effort. It may not be generally known, but with our present and still growing membership, the Society has become a part of big



LARRY BOLAND
President

business. Due to our size and to changes in Internal Revenue Department rulings, it has been necessary to have our bookkeeping affairs handled monthly on a professional basis. The Society is in good shape financially and it will be the endeavor of the present officers to increase our reserves or to at least maintain them at the present level.



CHARLES BARTON
1st Vice President

All the officers elected this year, except one, are holdovers and with their previous experience should make things run even more smoothly.

The following committee appointments have been made:

A. Standing Committees

AAPG	Harold Karges, Kevin Cahill
Entertainment	T. C. Rader
Field Trips	Bill Moore
Nomenclature	Phil Reeves
Program	Ed Minihan
Projection	John Paxton
Bulletin	Dave Cate
Publicity	Verne Culbertson

B. Special Committees

GCAGS Representative	John Lukert
Boy Scouts	Charlie Summers

In addition, AAPG has asked for additional men to serve on the Membership Committee and Bob Beu and Joe Morgan have kindly accepted appointment.

We can look forward to an active business and social year. The Program Chairman has already obtained several speakers of note - the object being to keep the subject close to home and pertinent to our profession.



BUDDY TWINER
2nd Vice President

Two barbecues are planned for the year and due to the great interest last year, the Fall Golf Tournament will be repeated.

Last year John Ryall edited what has to be considered one of the better Society publications in the country; with Dave Cate in charge there should be no lessening in quality.



DEAN KEBERT
Secretary

Verne Culbertson has agreed to handle Society publicity outside the Bulletin. Our profession seldom appears before the public and there are many favorable aspects we can present. One in particular is the excellent work done by several of our members with the Boy Scouts during the summer at Camp Kickapoo.



LARRY WALTER
Treasurer

Bill Moore, State Geologist, has planned a field trip this fall and is especially anxious to hear from the members as to where their particular areas of interest are.

PAY UP OR LOSE BULLETIN

This first issue of the Bulletin is being sent to all members of the Society whether current dues are paid or not. Our generosity ends October 1, however, and no more Bulletins will be mailed to those who do not pay their dues by that date. So if you are among the guilty, come across with the five bucks even if it means giving up smoking for a week or robbing the kids piggy bank or letting your hair grow over your collar because we are sure you won't want to miss the Bulletin and the little ray of sunshine it brings to your life each month. Amen.

meetings

September 23-25 - Field trip to Llano Uplift, Texas. Sponsored by the Shreveport Geological Society. Contact E. H. Morrow, Box 750, Shreveport, 71102.

September 29 - October 2 - Annual meeting of Mid-Continent Section of AAPG in Oklahoma City. Contact F. C. Jones, 202 Oil and Gas Bldg, Oklahoma City, 73102.

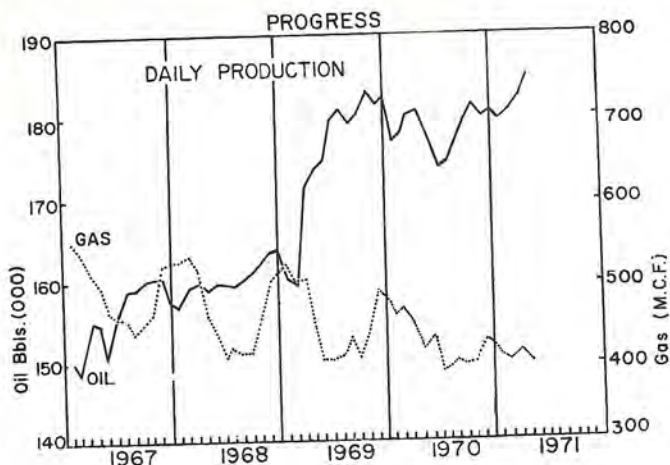
October 8-9 - Annual meeting of AIPG in Denver. Contact R. M. Lindvall, USGS, Denver Federal Center, Denver, 80225.

publications

Mississippi Geological Survey Bulletin 115, "Rankin County Geology and Mineral Resources" by Wilbur T. Baughman and others. The Bulletin is 226 pages in length with 40 figures, 35 tables and 5 plates, two in color. Contains discussions of the surface and subsurface geology, economic geology, ground water and ceramic test data of Rankin County. Cost is \$3 per copy post paid from the Mississippi Geological Survey, Box 4915, Jackson, 39216. Payment must accompany order.

progress-

by Jim McMullen



Daily Production: April, 1971 184,672 Bbls. Oil
401,643 MCF Gas
April, 1970 180,517 Bbls. Oil
422,778 MCF Gas

Box Score Discoveries: January - April, 1971

Eocene	UK	LK	CV	S.M.K.	Norphlet
2	0	2	1	0	0

Box Score Discoveries: January - April, 1970

Eocene	UK	LK	CV	S.M.K.	Norphlet
2	1	1	0	3	0

New Field Discoveries: January - April, 1971

Kirklin-
1-22-71 Southeastern Explor. No. 1 L. F. Davis
Sec. 11-1N-11E Walthall Co.
IPF (13,257-13,345) Paluxy
2150 MCFGPD
9/64" ch, TP 3075

Willow Glen-
1-6-71 Callon Pet. Co. No. 2 Willow Glen
Sec. 13-6N-3W Adams Co.
IPF (6061-6063) Wilson Ss
103 BOPD
12/64" ch, TP 90, Gvty 420

Tony Creek-
1-6-71 Fortenberry No. 1 USA 37-5
Sec. 37-6N-2E Franklin Co.
IPF (6344½-6346½) McShane Ss
103 BOPD & 5 MCFGPD
7.25/64" ch, TP 360, Gvty 390

Missionary-
2-20-71 Getty Oil Co. No. 1 Thigpen Unit 11-14
Sec. 11-3N-12E Jasper Co.
IPF (11,204-11,216) Cotton Valley
1101 BOPD
16/64" ch, TP 590, Gvty 43.90

Tiger-
2-23-71 Union Oil Co. of Calif. No. 1 USA
Sec. 33-6N-10W Jones Co.
IPF (14,137-186 & 14,392-432) Hosston
1010 MCFGD & 117 BOPD
48/64", TP 200, Gvty 48.50

LOCAL FIELD TRIP ROAD LOGS AVAILABLE

The Mississippi Geological Society has on file several extra copies of the road log and map for two short geological field trips in and around Jackson. The log was provided by the Mississippi Geological Survey and was printed in the December 1969 issue of the News Bulletin. Anyone wishing to obtain copies can do so by paying the postage and notifying the editor.

aapg news

1971-72 AAPG OFFICERS ANNOUNCED

Leadership of the world's largest geological organization has been assumed by a new slate of officers that is headed by Dr. Sherman A. Wengerd of Albuquerque, New Mexico. Dr. Wengerd, 55th president of the AAPG, is professor of geology at the University of New Mexico. He succeeds William H. Curry, a Casper, Wyoming, independent producer and consulting geologist. Curry will serve as chairman of the AAPG Advisory Council for the current fiscal year.

John A. Taylor, an Oklahoma City consulting geologist, serves as vice president, following John M. Browning, vice-chairman of the board of Tenneco Oil & Minerals, Ltd., Calgary, Alta., Canada. Ted L. Bear, a partner in Bear and Kistler, Los Angeles consulting geologists, is the new secretary, following James R. Jackson, Jr., district exploration manager, Humble, Houston. William B. Heroy, Jr., vice-president-finance and professor in geology at Southern Methodist University, will continue as treasurer for the second year of a two year term.

Dr. Frank E. Kottlowski, senior geologist and assistant director of the New Mexico State Bureau of Mines and Mineral Resources, Socorro, New Mexico, succeeds Dr. John D. Haun, Colorado School of Mines and consultant, as the editor of the AAPG Bulletin.

Also serving on the 1971-72 Executive Committee is George C. Hardin, Jr., president of Ada Oil Exploration Corp., Houston, who was elected chairman of the AAPG House of Delegates. He succeeds Dr. George R. Gibson, a consulting geologist of Midland, Texas. James E. Wilson, a Shell Oil Co. vice president, Denver, will serve on the current executive committee as the 1972-73 president-elect of the AAPG.

DRILLING STATISTICS RELEASED BY AAPG

An AAPG statistical analysis of drilling activity during 1970 shows that fewer wildcat wells were drilled than in 1969 but that more oil and gas was found. One conclusion drawn from the analysis was that if better economic incentives to drill more wells existed there would be more new discoveries to offset the threatening energy gap in this country.

Last year the United States petroleum industry drilled 29,467 wells of all kinds but only 7,693 of these were exploratory wells seeking new reserves. This is the lowest number of exploratory wells since 1949 and climaxes a 15 year decline in wildcatting.

The statistics show that of the 7,693 exploratory wells of all types, 5,069 (65.9%) were seeking to discover new fields entirely unconnected with existing production. These are the rank wildcats which offer the chance for big new discoveries. Nine out of 10 of these wildcats were dry and abandoned but the 5,069 tries discovered 493 new oil and gas fields of varying sizes. This represents a success record of 9.7%, which is 0.7% higher than 1969 and 1.2% higher than 1968. Historically, new-field wildcat drilling has resulted in a success record between 10 and 11%.

The 493 new fields contain approximately 798 million barrels of oil and 5.2 trillion cubic feet of natural gas. These volumes represent increases of 20% in oil and 13% in gas over 1969 discoveries, despite a decrease of 8% in the number of new fields discovered. North Slope reserves are not included because of the difficulty of estimating them and the uncertainty as to when these reserves may be available to consumers.

Only oil and gas fields meeting certain size specifications are considered by geologists to be "significant." Of the 493 new fields discovered in 1970, there were 129 which were classified as significant. This was 26% of the total, compared with only 22% in 1969. Of the 308 new oil fields, 73 (24%) were significant and of the 185 new gas

discoveries, 56 (30%) were classified as significant fields. One out of 10 new field wildcats was completed as a producer but only one out of 39 discovered an accumulation of hydrocarbons estimated to have an ultimate reserve in excess of 1,000,000 barrels of oil or its gas equivalent.

FIELD SEMINAR AT COLO. SCHOOL OF MINES

A five day geology field seminar will be held at the Colorado School of Mines September 20-25, 1971. Emphasis in the course is to be placed on the use of organic and inorganic sedimentary structures in reconstructing the environments of deposition and geometry of detrital sandstone bodies. Sandstones of the fluvial, deltaic, shoreline and marine environments will be discussed in detail. Application of these data can be related to exploration for stratigraphic traps of petroleum.

Classroom lectures for one-half day will be followed by one-half day field trips and/or field problems to demonstrate the recognition and interpretation of sedimentary environments in the geologic record. Outcrops of Paleozoic and Mesozoic rocks will be studied in the Golden area. Registration fee is \$300 and enrollment is limited. For additional information, contact Robert J. Weimer, Geology Dept., Colorado School of Mines, Golden, Colorado, 80401 (303-279-3381).

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517 First National Bank Bldg.-Jackson, Miss. 355-1528	
HILTON L. LADNER Petroleum Geologist	
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MISSISSIPPI GEOLOGICAL SOCIETY
P. O. Box 422
Jackson, Mississippi 39205

NEWS

BULLETIN

FREDERIC F. MELLEN
Geological Associates
1202 Standard Life Building
JACKSON, MISSISSIPPI 39201

SEP 30 1971



mississippi geological society

Vol. XIX, No. 2, October 1971

EAST NANCY FIELD SUBJECT FOR OCT. 5 "DUFFER'S DELIGHT" — OCT. 29

MARVIN OXLEY - DAN HERLIHY
TO PRESENT PAPER TO MGS

"Geology and Geophysics of East Nancy Field, Clarke County, Mississippi" will be the subject of a paper to be presented by Marvin Oxley and Dan Herlihy at the next meeting of the Mississippi Geological Society. The meeting will be held Tuesday, October 5, at the King's Inn in Maywood Mart, I-55 at Northside Drive. A social hour will begin at 5:30 p.m. and dinner will be served at 6:30 p.m.

Marvin Oxley is a well known member of the Mississippi Geological Society for which he has served in various capacities, including President. He received a B. A. degree in geology from Phillips University in 1955 and an M. S. degree in geology from the University of Oklahoma in 1958. He was associated with Lone Star Producing Company from 1957 to 1968 at which time he resigned to form his own company, Bison Oil Company, in Jackson. At the time of his resignation, he was District Geologist for Lone Star.



MARVIN OXLEY

In addition to being a member of the MGS, Marvin is also a member of the American Association of Petroleum Geologists, the Jackson Geophysical Society, and is a Certified Petroleum Geologist. He has previously co-authored papers on Pool Creek Field, Bryan Field, and on the regional Jurassic stratigraphy of Mississippi, Alabama, and Florida.

Dan Herlihy is also a well known and long time member of the Mississippi Geological Society. He received the degree of Bachelor of Civil Engineering from Georgia Institute of Technology in 1947. He was



DAN HERLIHY

employed by Magnolia Petroleum Company in 1947 and worked in various capacities on gravity and seismic field crews until 1959. At that time, he was transferred to the Jackson office of Mobil Oil Corporation as Senior Geophysicist. Dan left Mobil in 1964 to join Delta Exploration in Jackson. In 1966, he left Delta to become a Consulting Geophysicist. Dan is a member of the Society of Exploration Geophysicists, the Jackson Geophysical Society, and is a registered professional engineer in Mississippi.

cists, the Jackson Geophysical Society, and is a registered professional engineer in Mississippi.

Marvin will present the paper to the MGS and to the upcoming GCAGS Convention in New Orleans while Dan will give the paper in Houston at the SEG Convention in November. This is the second paper they have co-authored. Last year, they presented a paper entitled "Bryan Field - A Sedimentary Anticline" which was well received by the MGS membership. It was also given at the 1970 SEG meeting and to the New Orleans Geophysical Society. We are sure their East Nancy paper will be as interesting as the Bryan Field paper and will contain information pertinent to exploration for Smackover traps in the Mississippi Salt Basin. Explorationists, especially those interested in the Smackover play, should make a special effort to attend this meeting.

GEOLOGY & GEOPHYSICS OF EAST NANCY FIELD CLARKE COUNTY, MISSISSIPPI

by
Marvin L. Oxley & Daniel E. Herlihy
ABSTRACT

East Nancy Field, discovered in April 1968, produces from two zones in the Smackover. Accumulation is the result of closure on a low relief salt anticline. The structure is "buried", exhibiting no reversal on horizons above the Cotton Valley. Consequently, shallow subsurface and gravity interpretations offer little aid in delineating the anomaly. East Nancy was first drilled, and apparently condemned, by Southwest Gas Producing Company in 1959, following an extensive conventional seismic program. The discovery well was located on the basis of CDP

MISSISSIPPI GEOLOGICAL SOCIETY CALENDAR

- | | |
|---------|---|
| Oct. 5 | Oxley-Herlihy Paper
Kings Inn, Maywood Mart
Social Hour 5:30 p.m., Dinner 6:30 p.m. |
| Oct. 19 | WGA Bridge-Luncheon
Colonial Country Club, 10:00 a.m. |
| Oct. 29 | MGS Golf Tournament
Live Oaks Golf Club
Tee Off Time 10:00 a.m. |

FOR RESERVATIONS TO OCT. 5 MEETING, CALL T. C. RADER (948-4128), SKIP MURRELL (362-7758), OR JIM SKEEN (352-8589) BY NOON MONDAY, OCT. 4.

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personal news-

by Jim Skeen

Gulf's new District Exploration Geologist is **Bill Penry** who transferred to Jackson from Roswell, New Mexico. Bill replaces Roy Worrell who was transferred to Houston earlier this year. Bill, his wife Aileen and their three children reside at 117 Scottsdale Drive in Jackson.

Herb Ferber retired from Gulf effective August 31. At the time of his retirement, Herb was District Geophysicist. He is the current President of the Jackson Geophysical Society and a well known member of the Mississippi Geological Society. Herb and his wife Rachel plan to continue living in Jackson.

Bob Nordling, Jr. has replaced Herb as Gulf's District Geophysicist. Bob and wife May transferred to Jackson from New Orleans. The couple and their twin boys reside at 231 Valley North Blvd. in Jackson.

Charlie Sommers has been transferred to Gulf's geological staff in Oklahoma City. Charlie was with Gulf in Jackson for 17 years.

Richard Elicker, formerly geologist with Gulf in Oklahoma City, has been transferred to the Jackson office as Regional Geologist. Rich, his wife Marty, and their three children reside at 110 Winthrop Circle in Jackson.

James Mefford has joined Cities Service's geological staff in Jackson. James, a recent graduate of West Virginia University, and wife Sue Ann reside at 212 Valley Ridge Dr. in Jackson.

Jerry Zoble, formerly with Occidental in Lafayette, has joined Kilroy Oil Co. in Jackson. Jerry is no stranger to Jackson, having been here previously with Pan American, now Amoco.

Shenandoah has expanded its exploration staff in Jackson with the addition of three geologists. **Ronald Coleman**, formerly in Shenandoah's Ft. Worth office, has transferred to Jackson as District Geologist. **Paul Gribas**, formerly with Cities Service and more recently an independent geologist in Jackson, has joined the company as staff geologist. **Richard Lewis**, recent Millsaps graduate, has been employed as a new geologist. In addition, **Woodrow Hobson** has joined Shenandoah as District Landman. He was previously with Tuscaloosa Title Co. of Tuscaloosa, Alabama.

Edwin L. Cox, oil and gas producer with home offices in Dallas, Texas, has opened a new office in Jackson at 127 South Roach Street in Suite 1405-07 Standard Life Building. **Prentis L. Boatner, Jr.** has been appointed manager. Mr. Boatner has been active in petroleum exploration in the Interior Salt Basin provinces of the Gulf Coast since 1949. A past president of the Shreveport Geological Society, he was District Exploration Manager for the ~~Oil~~ Oil and Gas Co. and later joined Humble in 1962 when the two companies merged.

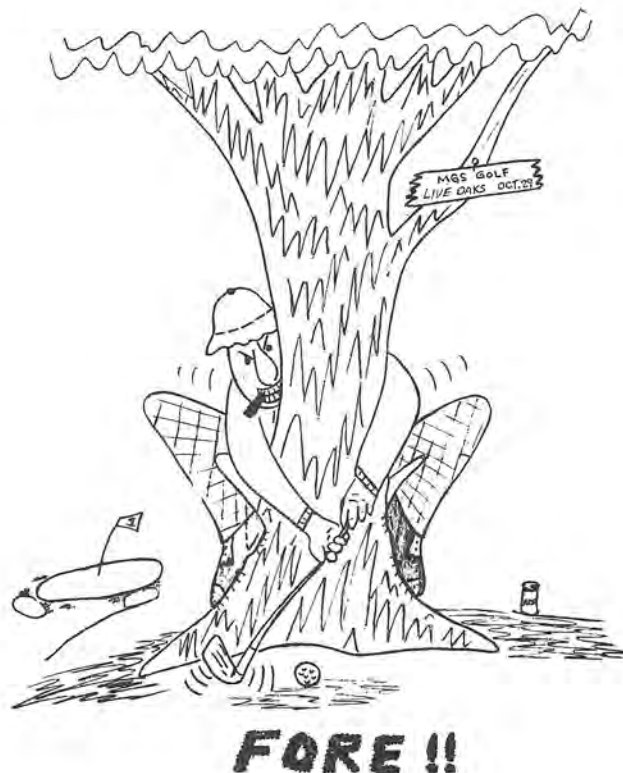
"DUFFER'S DELIGHT" OCTOBER 29

The annual Mississippi Geological Society Golf Tournament will be held Friday, October 29, at Live Oaks Golf Club. Tee off time is 10:00 a.m. and Golf Chairman Don Franklin requests that everyone make

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up their own foursomes. All golfers should come out whether or not they have a group beforehand and foursomes can be completed at the registration desk. Green fee is \$3.00.

Live Oaks is a challenging course and currently is in excellent shape. Coupled with the expected fine fall weather, this will provide an enjoyable time for all. The usual beer and soft drink wagons will be on the course to help cure the thirst of even the worst duffer. Some experts claim that the number of strokes a duffer takes on the course is proportional to the number of beers he consumes. If this is so, some of the MGS golfers really put away a lot of cold ones last year. But everyone went home happy. Prizes will be available for all types of golfers and, who knows, some lucky participant may get a hot streak going and cart home one of the big, beautiful championship trophies. Defending champions are Verne Culbertson and Rip Mason who tied for low gross honors last year. Either will be tough to unseat but all MGS golfers are urged to come out, even sneak out if necessary, and try on October 29.



meetings

October 23-24 - Field trip to Myrtle Beach, South Carolina. Sponsored by the Atlantic Coastal Plain Geological Association. Contact Jules Dubar, Dept. of Geology, Morehead State University, Morehead, Ky., 40351.

November 7-11 - Annual International Meeting of Society of Exploration Geophysicists in Houston. Write Box 3098, Tulsa, Okla., 74101.

publications

Mid-Continent Oil & Gas Association Booklet, "1971 Oil and Gas Facts, Mississippi & Alabama" compiled by Earl Evans, Jr. and Charles H. Williams, Jr. The booklet is 32 pages in length and contains numerous charts, graphs, and statistics concerning the petroleum industry of the two states. For further information, contact the Mid-Continent Oil & Gas Assoc., 455 North Lamar St., Jackson, 39202.

CURRY SPEECHES RECORDED

Excerpts of speeches made by William H. Curry during his year as President of the American Association of Petroleum Geologists, which ended July 1, have been read into the Congressional Record of the United States by Senator Clifford P. Hansen of Wyoming. These excerpts vary from the basic role of the American geologists to the crisis that may soon develop in the field of natural energy. Bill Curry was one of the most widely traveled presidents of the AAPG. An independent geologist and oil operator, he is well aware of the problems facing the petroleum industry today and, during his year of service, he was most willing to present his views and those of the Association to all persons whether in government service, private life, or the petroleum industry. Numerous items are read into the Congressional Record, some worthy but many not. Hopefully, the timely and worthy Curry excerpts will be read and the message heeded.

EXCERPTS FROM AAPG PRESIDENT WILLIAM H. CURRY SPEECHES DURING 1970-71 TERM OF OFFICE ON GEOLOGISTS

The American Association of Petroleum Geologists is the largest geological society in the world, comprised of 15,000 members in the United States and abroad. We are explorationists, primarily, dedicated to the advancement of geology, "especially as it relates to petroleum and natural gas" and to promoting "the technology of exploring for, finding, and producing these materials from the earth." Our long-range objective is "to be of maximum service to our members in their scientific interests and professional lives, and to enhance their status before the public."

We geologists would like to be of service to our country because we know whereof we speak in exploratory matters. We know the long lag time of three to five years from initiation of exploration to commercial production; the ten years of research that will be necessary to put oil shale and coal on stream; the long odds on discovery; that one just does not get new oil and gas by turning on a spigot; that we are credible people and speak for the good of the nation, and we believe that we can help.

PROFESSIONAL EDUCATION

The effects of the industry's so-called "poor image" brought about in part by misrepresentations in the press, half-truths, political prejudice, as well as certain company policies and practices, are being felt by our profession. Employment is down and geology majors in our universities and colleges are being discouraged from entering petroleum geology as a profession.

In order to combat these various and sundry threats, restrictions and limitations to our business, we must have an enlightened profession. Steps are being taken by AAPG, along with other professional groups, to equip their members (and, it is hoped, their management) for greater exploration efforts and capabilities. Continuing education and distinguished lecture series are providing up-to-date thinking and techniques.

PUBLIC AFFAIRS

Although we geologists believe a potential supply of oil and gas exists, and in our minds, we can find it, the distrust of our industry in the minds of many in Washington and the public at large deter us. Threats of nationalization, price control, and restrictive leasing practices all in addition to tight money, curtail our drilling. Conservationists in some cases have become extremists. Ridiculous statements about melting polar ice caps to flood our cities as a result of arctic oil spills, and offshore ecological imbalances due to drilling do nothing but alarm the public. Such suspicion renders honest dialogue impossible and darkens the industry's sincere efforts to correct errors.

Too often, I fear, many in our profession have taken a public-be-damned attitude, because they have kept themselves insulated from public concern. On a recent questionnaire, "image-building" was number 5 on a list of seven matters deemed of importance to our

membership. Now, some of our "chickens are coming home to roost" in the apathy, disinterest, and even the disbelief we encounter in our problems and opinions.

PETROLEUM POTENTIAL

Estimates of possible future producible oil are between 107 billion and 199 billion barrels, depending on differing estimates of recovery rates, along with more than 911 trillion cubic feet of gas. How much of this potential can be realized will depend on extraneous factors promulgated in the minds of the politicians and regulators.

I have been in business long enough to know that the people who get into real trouble are those negativists who say that oil and gas cannot be found. A great deal of production has been discovered in areas and under conditions of little faith, by the majority. For instance, there were some geologists who were going to "drink all the oil in East Texas" at one time. A part of the definition of a discoverer is one who explores for and finds oil or gas, where others had not thought it to be. This same danger of being a doubter extends to others than cautious geologists and applies in Washington, as well, today.

NEED FOR DRILLING

In view of the great future demand, as concerned Americans, we are alarmed that an all-out national exploratory effort is not going forward today.

The American Association of Petroleum Geologists makes a compilation of exploratory drilling statistics each year to record the total such wells, accumulated footage, and success ratios. For the year 1969, more discoveries were made as a result of more exploratory drilling. Nationally, exploratory drilling was up 9.3 percent, while the success ratio improved from 14.6 percent in 1968 to 17.5 percent in 1969. Overall, total drilling was off .3 percent.

The thesis that more drilling results in more oil and gas is difficult to deny.

FINDING OIL

The success of realizing future production will largely be dependent upon the political climate, which today controls the incentives, or lack of them, to make exploration feasible within our free enterprise system.

The professionals are ready, willing and able to do the job ahead, but currently are being deterred by forces outside their control. The programs that we might be working, in Alaska, on the continental shelves, on public lands of the west, in synthetic fuel research and development, are stymied to one degree or another by political prejudice and restrictive regulations. To overcome these barriers, we need the full weight of public opinion on our side.

POLITICAL CLIMATE

While geologists are being urged by colleagues and supervisors to be imaginative and to probe deeper waters or unconventional provinces, political prejudices threaten and impede the progress of exploration for oil and natural gas.

The full weight of responsibility for the nation's future supplies of natural gas, gasoline, and fuel oil rests largely in the minds of non-professionals and non-industry influences.

The weakness of our position in this dialogue is that we are attempting to answer irrationality, emotion, accusation and political prejudice with reason and logic. It is an uneven dialogue. The facts are that the industry's troubled position and the public's insecurity have been brought about largely by politics.

ECOLOGY

Geology is the only discipline that deals directly with the rocks of the earth, the oceans, and other waters, and the air with its climate. We know intimately of the wearing of one element upon the other and its consequences. We appreciate the good earth and its glory because most of us were attracted to geology in the first place by a love for the outdoors and a desire to keep it that way. By understanding earth's

elements, we believe that resource development can go forward with a preservation of the environment through careful planning and a cost accounting that will provide sufficient funds. In today's world, aesthetics are as much a cost item as any other factor of production. The public must realize this.

Risks of one sort or another cannot altogether be avoided, so industry must take its calculated chances and the American public also will have to understand that future supplies of light, fuel and power cannot be guaranteed without risk of cost increases, environmental changes, and pollution dangers, as well as dry holes.

An awareness of the environment and our responsibility to it are being established by an ad hoc Environmental Geology Committee. Geologists are keenly aware of environment because it and the consequences of change are expressed throughout the geologic column in fossilization, facies changes, rock types. Moreover, we are the first of our industry to go on the land and the first to produce in a drill stem test—if we are lucky. In order to go on to other exploration sites, we must properly take care of our first efforts to maintain the environment as we found it. Most of us were attracted to geology in the first place by our love for the outdoors and a desire to keep it that way. Geologists are in a total relationship with the earth, its mineral resources, and its people.

GAS SHORTAGE

There is a gas shortage right now, and new supplies in appreciable volume are several years away at best.

But the biggest shortage of all is talent. What the bureaucrats in Washington don't know is that gas is not found with a pencil doodling field maps or statistics. Gas is not found by a little black box, or an orbiting satellite, or by any of the new electronic and other devices which we all use to very good advantage.

Oil and gas are found in the minds of men. That has always been true and it still is, in spite of all the advances in scientific instruments and the new interpretive methods which prepare data for those minds and help the minds to say: "Drill here".

Oil and gas are found in the minds of men, but what men? Politicians? Statisticians? Regulatory officials? Not on your life. It is found in the minds of men trained and experienced in earth sciences, in exploratory techniques, in knowledge of the habitat of petroleum.

The low-price advocates preferred to listen to geological testimony that there was plenty of gas left in the ground to equal estimated needs up to the year 2000 or beyond. That is probably true. There is a great deal more gas still undiscovered. And yet we now have a shortage.

How come? Are geologists mixed up and self-contradictory? Not at all. The people who are mixed up are those who chose, to satisfy their own preconceived notions and prejudices, to consider the geological testimony contradictory and to select for belief only part of that testimony.

What was ignored—and what geologists should have made more clear to everyone in Washington and to the general public—was that, yes, there is a lot of gas undiscovered, but it will take time, talent, and treasure to discover it.

Geologists are now being called on to perform a miracle and end the gas shortage, whereas if geological advice had been sought and listened to years ago, there would be no gas shortage.

All during the past decade, the statistics on reserves, production, and consumption of natural gas plainly demonstrated that danger loomed ahead. The reserves-production ratio declined steadily from 20 to 18, to 15. Geologists knew that this spelled danger. They knew that very soon the deliverability of most gas fields would be less than the peak-day demand of the pipelines drawing on them. That would mean that on some winter days, many customers would have their gas service curtailed.

DOMESTIC INDUSTRY

The oil and gas industry for some time has been beating the drums for our domestic industry in order to emphasize the need for safe and

secure supplies of oil or gas for our own needs as well as to insure production, in case of war or other great demand. We have all seen the folly of too much dependence on foreign oil, yet our eastern critics wave this off with comments on the availability of Canadian and Venezuelan supplies. However, we cannot commandeer Canadian production and Venezuela, while imposing sharp new taxes, implies over-water transportation.

We know of the desire of major companies to find the giant oil and gas fields, and indeed, perhaps the best hunting grounds are overseas and in certain parts of the continental shelves. But, by being over water, they are militarily vulnerable, as well as politically unstable, so all of America's future should not be placed in these extended areas.

We must not foresake onshore America, because in crisis and in dependability, it will be at home we shall have to turn for future supplies of oil and gas. This includes getting on with oil shale and coal research and development.

CONTINENTAL SHELVES

The continental shelves are the greatest potential for new big oil and gas deposits. The onshore geological conditions often continue for many miles seaward and again, new sediments, structures and reefs appear offshore. Difficult as this exploration and development is, the Federal Government insists upon making it more expensive and restrictive. The request for raw data and the purchase of independent seismic records for presale evaluations add to the overall costs. The government cannot establish "value" by these methods because that comes only with drilling. What is really being talked about is price of leases in the market place.

The arbitrary cut-off of sovereignty at the 200 meter depth line proposed by the President, is an arbitrary and unrealistic boundary. Sovereignty and exploration should go to the outer edge of the shelf—to the toe of the slope. It will be more logical to extend exploration into deeper water on definite seismic features than to chance the uncertainties of stratigraphic trap exploration in shallower water. Though that may come later.

GCAGS CONVENTION REMINDER

All members are reminded of the 21st Annual Meeting of the GCAGS and SEPM in New Orleans, October 13-15. The theme is "Where The Action Is" which is appropriate for exploration in the Gulf Coast area. This annual meeting always has pertinent information for the explorationist interested in the entire Coast area and all MGS members are urged to attend if at all possible.

The Mississippi Geological Society is well represented on the technical program. In addition to the Oxley-Herlihy paper which has been discussed elsewhere in this issue, a paper concerning the Black Warrior Basin will be given by MGS members Larry Boland, Ed Minihan and W. A. Thomas. Also, the Society will have its usual booth to display the various publications for sale by the Society. Volunteers to man the booth will be appreciated and if you are interested, contact any of the Society officers.

WGA-BLACK GOLD LUNCHEON OCT. 19

The October meeting of the Women's Geological Auxiliary will be a bridge luncheon with Black Gold at the Colonial Country Club. The meeting begins at 10:00 a.m. on Tuesday, October 19. Chairman for the affair is Mrs. James L. Cummings, Jr.

On the average, every man, woman, and child in the United States uses three gallons of oil every day.

There were 216,059 service stations in the U. S. in 1969, an increase of less than 5 per cent over the 206,755 stations operating in 1958. By comparison, motor vehicle registrations increased more than 40 per cent in the same period.

TROUBLED? NEED INFO? CALL . . .

Is your address incorrect? Name misspelled? Didn't get your Bulletin? Want to buy publications? Want to volunteer information or services? Want to advertise? These and many other questions can be answered by various officers and committeemen of the Mississippi Geological Society. The main question is which person to call to get a prompt response. We've all had the frustrating experience of requesting aid and not getting results. Often this is due to not contacting the right person but sometimes it is due to the right person not acting.

The following persons are responsible for some of the areas of operation for the Society and are eager to please. MGS Secretary Dean Kebert handles the mailing and membership list so call him at 352-5051

if you didn't get your Bulletin, your name or address is incorrect, or you want to pay your dues. Anything concerning Bulletin advertising can be answered by Harry Fritz at 354-5221. Second Vice-President Buddy Twiner will be more than happy to furnish information concerning Society publications that are for sale. Contact him at 362-1655. Personal news should be reported to Jim Skeen at 352-8589. If you have material for publication in the News Bulletin, call Dave Cate at 362-1655. If you have a problem concerning the Society that is so monumentally important or confusing that only the head man can help, then call President Larry Boland at 353-2705. These people are either elected officials or volunteers and as such they should do their best to help. So if something's bugging you, bug them. It'll get results.

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MISSISSIPPI GEOLOGICAL SOCIETY

P. O. Box 422
Jackson, Mississippi 39205



Mr. Fred F. Mellen
1202 Standard Life Bldg.
Jackson, Miss. 39201



NEWS

BULLETIN

mississippi geological society



VOL. XIX, NO. 3, NOVEMBER, 1971

PLATE TECTONICS TO BE DISCUSSED NOV. 16

DISTINGUISHED LECTURER
TO ADDRESS SOCIETY

PLATE TECTONICS AND MAINSTREAM
MANTLE CONVECTION

by Thomas H. Nelson

ABSTRACT

Mr. Thomas H. Nelson, a Research Associate for Esso Production Research and a Distinguished Lecturer sponsored by The American Association of Petroleum Geologists, will address the next meeting of the Mississippi Geological Society to be held Tuesday, November 16, at the King's Inn in Maywood Mart. The title of Mr. Nelson's lecture is "Plate Tectonics and Mainstream Mantle Convection". The meeting will begin with a social hour at 5:30 p.m. followed by dinner at 6:30 p.m.

Mr. Nelson was born in Mansfield, Massachusetts, on July 17, 1931, and received an A. B. degree in Geology from Brown University in 1953. He was employed by Shell Oil Company as an exploration geologist in the Rocky Mountain and Gulf Coast areas from 1953 to 1956. He joined Carter Oil Company in 1956 and worked as an exploration geologist in Elk City, Oklahoma, until 1957. From 1957 to 1958, he was with International Petroleum, Colombia, as an exploration geologist. In 1958, he again joined Carter and worked for Carter and later Humble in Rocky Mountain and Gulf Coast exploration geology until 1967. Since 1967, Mr. Nelson has been employed by Esso Production Research in Houston as a Research Associate engaged in worldwide geologic research.



THOMAS H. NELSON

Mr. Nelson will be speaking before 55 geological societies and university groups in the United States between October and March. Most MGS members are probably not too familiar with the subject of Mr. Nelson's lecture since it has only been recognized as a prominent geologic concept within the past few years. The meeting will therefore offer an excellent opportunity to update our geologic thinking and everyone is urged to attend.

MISSISSIPPI GEOLOGICAL SOCIETY CALENDAR

- Nov. 16 Nelson Paper
King's Inn, Maywood Mart
Social Hour: 5:30 p.m., Dinner: 6:30 p.m.
- Nov. 18 WGA Luncheon
Riverside Club House, 11:30 a.m.

FOR RESERVATIONS TO NOV. 16 MEETING, CALL T. C. RADER'S OFFICE (948-4128) OR JEANETTE DUNN (MURPHY OIL, 362-7758) BY NOON MONDAY, NOV. 15.

The divergent and convergent movement of lithospheric plates is apparently driven by a system of migrating convection cells within the earth's upper mantle. These convection cells upwell beneath the ridges of the Pacific, Atlantic and Indian Oceans. The history of sea-floor spreading is recorded by the linear magnetic anomalies paralleling ridge axes, by both the active and inactive scars of transform faults which originate between offset ridge segments, and by the increase in age of sediments on basement away from the ridge axes as determined by the JOIDES deep-sea drilling program.

If a zone of primary convective upwelling develops beneath a continent, there forms first a narrow trough, such as the Red Sea, characterized by extensional tectonics and, in places, thick evaporite sequences. Eventually a major ocean basin such as the Atlantic develops, with the spreading ridge preserved in a mid-ocean position.

Because the earth is not expanding in proportion to the rate of spreading, lithosphere capped primarily by oceanic crust is being reincorporated into the mantle along convergent plate boundaries or subduction zones. Active subduction zones are characterized by intermediate and deep focus earthquakes (Benioff zones), oceanic trenches, and compressional tectonics. The history of subduction is recorded in orogenic belts which differ in character depending upon the composition of the crust in the overthrust and underthrust plates and the direction of lithospheric underthrusting.

From present crustal relationships it appears that when underthrusting is westward, fragments of the overthrust plate break off and form island arcs that have young sea floor behind them. In contrast, where underthrusting is eastward, the margins of the overthrust plate remain intact and under general compressional stress.

This difference in crustal response to westward versus eastward underthrusting along active subduction zones has led us to conclude that an eastward-flowing, globe-encircling mainstream is present within the earth's upper mantle. Coupled to convection cells beneath the oceanic ridges, the mainstream forms a pattern of primary and secondary mantle upwelling which, in a kinematic model, indicates (1) that a form of asymmetric sea-floor spreading has created the small ocean basins behind island arcs associated with westward underthrust subduction zones; (2) that the depth to the base of convection varies systematically eastward from ridge to ridge, being shallowest beneath the East Pacific ridge and deepest beneath the Indian Ocean ridge; (3) that secondary zones of mantle upwelling are located along the leading edges of eastward migrating convection systems and underlie such features as the East African rift system; and (4) that plates descend into the mantle along subduction zones in response to the removal of material from below.

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meetings

November 24-27 - A short course for geologists and biologists in the geology of calcareous algae by the University of Miami. Study of algae banks, mats, stromatolites. Classroom and lab work. Includes field trip to Florida Keys, Contact R. N. Ginsburg, University of Miami, Fisher Island Station, Miami 33139 (305-672-1840).

December 3-4 - Field trip sponsored by the Alabama Geological Society to study Ordovician stratigraphy of the folded Appalachians. Contact J. A. Drahozal, Box 6184, University, Alabama 35486.

FALL BARBECUE WELL ATTENDED

The annual fall barbecue was held September 23 with a total of 130 in attendance. The beer was cold, the barbecue good, the fellowship warm (and noisy), and competition keen in the sporting events. Things were still going fairly strong late into the night and there was enough beer, thanks to a last minute donation by Schlumberger. Entertainment Chairman T. C. Rader and his aides, Skip Murrell and Jim Skeen did a fine job and we'll have all winter to anticipate the spring barbecue to be held next May. Alan Jackson won the door prize at the barbecue and he and his wife were to represent the MGS at a luncheon held at Kolb's Restaurant in New Orleans during the recent GCAGS Convention. Representatives from other member societies of the GCAGS were also present at the luncheon.

ATTENDANCE AT OCT. 5 MEETING -- 87
CO-SPONSORS WITH MGS - TRIAD AND SSC

from the editor

Take a few extra minutes when reading this issue of the News Bulletin and examine our advertising space on the last three pages. You should immediately note three things: (1) the advertising list is the largest the Society has ever had, (2) two ad styles are now available and (3) there are several new and varied advertisers this year. What you don't see is the effort and zeal put into the ad project by Harry Fritz. Harry not only contacted a larger number and wider variety of potential advertisers but also thought up the idea of offering two ad sizes. As a result, we now have 64 advertisers for a total income of \$1925. This goes a long, long way toward paying for the nine issues of the News Bulletin and we are justifiably proud of this accomplishment.

We like to think our advertisers buy space for two reasons. First is because the Bulletin offers them the opportunity to spread their name and services around the Mississippi oil patch at a nominal cost. In fact, the Bulletin goes to other areas which helps even more. Secondly, they are demonstrating their support for the Bulletin which they feel is a worthy publication. In return, therefore, we heartily recommend that the membership support our sponsors by using their services or by referring them to others who might use them.

So the next time you need help connected with the Mississippi oil industry, don't go walking through the yellow pages, go strolling through the Bulletin ads. Chances are you'll find what you need there!

HOUSTON SITE OF SEG MEETING

The 41st Annual International Meeting of the Society of Exploration Geophysicists will be held November 7 - 11 at the Albert Thomas Convention Center in Houston, Texas. Theme of the meeting is "Exploration Today...Energy Tomorrow". Papers have been grouped according to seventeen separate topics spread over twenty sessions. There's something for everyone, even one session on lunar geophysics (where we've sometimes thought our geophysical friends get their ideas). Other sessions are more down to earth including a paper by MGS member Dan Herlihy on the East Nancy Field of Clarke County, Mississippi. This paper was co-authored and presented by Marvin Oxley at the October meeting of the Mississippi Geological Society.

Plenty of entertainment has been arranged including two cocktail parties, dance, and a post-convention trip to Acapulco! A full ladies program is available as are special events such as a guided tour of the NASA Spacecraft Center. Like it says in the brochure, this meeting sounds like one not to miss, so if you can, go to Houston in November for fun and knowledge.

WGA LUNCHEON NOVEMBER 18

The next meeting of the Women's Geological Auxiliary will be a covered dish luncheon at the Riverside Club House on Thursday, November 18. Mrs. Herb Ferber is chairman for the affair which begins at 11:30 a.m.

personal news-

by Jim Skeen

Marshall Kern has resigned as geologist for Lone Star Producing Company to join M. H. Marr Company. Marshall is regional manager for Marr's southeastern states operations. The Dallas based company recently opened offices in Jackson at 1235 Petroleum Building.

Elwood Ruhl has joined Southeastern Exploration Company's geological staff in Jackson. Elwood was formerly with Chevron for several years in Jackson.

All other Chevron geologists in Jackson have been transferred to New Orleans with the exception of Bill Lynch who was transferred to Denver. Effective date for the New Orleans move was October 26.

In 1970 the petroleum industry's tax payments increased by 22%. Over the past two years its tax rose 40%, and in the past decade taxes have climbed 258%, compared with an increase of 89% for net income. For every dollar that net income rose, taxes increased by \$2.30. Says the Chase Manhattan Bank after a study of 28 leading oil companies, "The industry simply isn't generating enough profit to finance expansion on the scale necessary to meet future demands. Its prices haven't kept a sufficient edge over costs. The only cure is for the industry to charge more for what it sells."

On an average day, the oil and gas industry spends \$48 million for hose, motors, valves, instruments, chemicals and all other products and services needed to keep the industry going. This amounts to \$2 million an hour or \$20 billion a year.

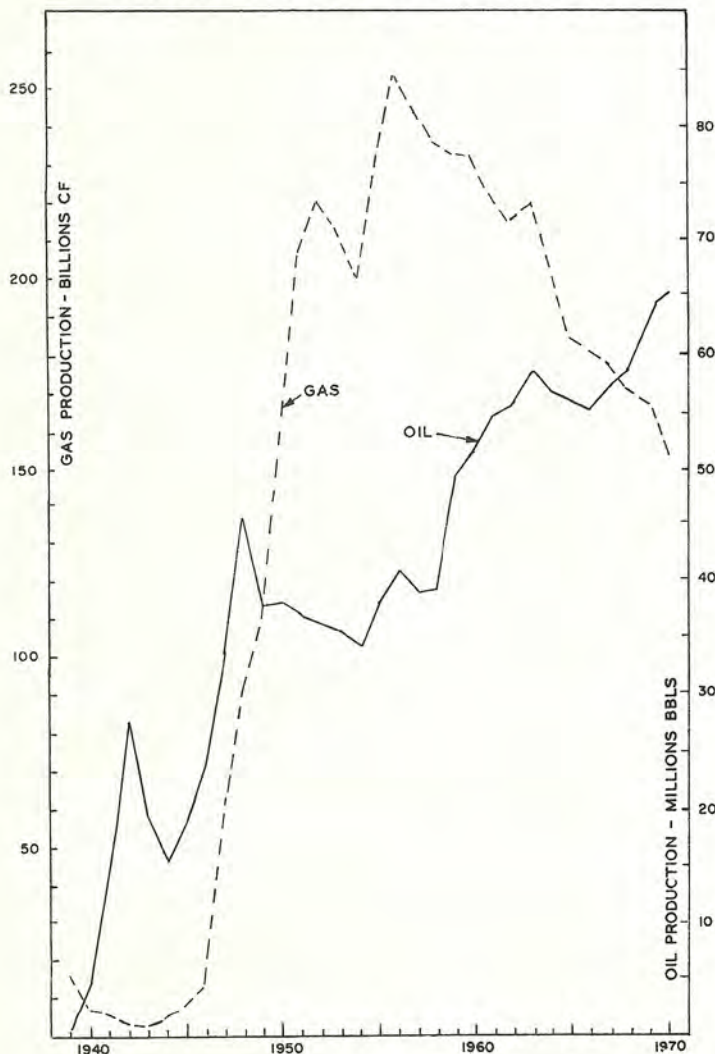
The Federal Power Commission reported that interstate pipelines sold 19.9 billion MCF of natural gas in 1970, about a 3% increase over 1969. All natural gas sales for the U.S. in 1970 rose 5.4% to 21.9 billion MCF.

MISSISSIPPI'S ANNUAL PRODUCTION TRENDS UP, DOWN

The headline isn't as mixed up as it sounds. The following chart illustrates what it means. Mississippi's oil production has increased steadily over the past few years whereas the gas production has declined almost continuously since the mid-1950's. The chart covers the years 1939, when Mississippi's first commercial oil was discovered, through 1970 when oil production reached an all time high of 65.1 million barrels. Unlike the oil trend, annual gas production peaked midway through the period and then started dropping at a rapid rate.

Close examination of the chart shows that oil production had started to decline during the mid-1960's. With the discovery and increased production of Jurassic oil, the trend reversed itself and climbed steadily to its high point at the end of 1970. This reversal was mainly due to exploration for newer and deeper reserves which required creative imagination, willingness to accept big risks, and the desire to explore on the part of industry. The challenge was met head on and the results are indicated by the chart. This is what is needed to turn the gas trend around. Actually, it may have already started with the near 20,000' wells being drilled in the southern part of the state. A lot of undrilled territory and many deep, untested reservoirs still remain in Mississippi. These will eventually be explored and, hopefully, the results will reverse the falling gas trend.

ANNUAL MISSISSIPPI PRODUCTION



1970 OIL AND GAS FACTS MISSISSIPPI & ALABAMA

**Mississippi's crude oil production during 1970 reached a new record of 65.1 million barrels. This enabled the state to maintain the rank of ninth in the nation. Natural gas production dropped to 154.1 million MCF which was tenth in the nation.

**Clarke County was the leading oil producer in Mississippi during 1970 with nearly 13 million barrels. Jasper County was second with 8.2 million barrels and Adams County was third with 7.3 million barrels. Jefferson Davis County was first in gas production with 33.8 billion cubic feet. Marion and Walthall Counties were close behind with 29.8 and 29.6 billion cubic feet, respectively. Clarke County also led in new discoveries with four.

**Deepest 1970 discovery in Mississippi was the South State Line Field in Greene County where the discovery well was completed at 18,207-227 in the Norphlet Formation. The shallowest discovery was at 4396-97 in the North Gardens Wilcox Field of Adams County.

**Of 211 Mississippi wildcat wells in 1970, 19 were completed as discoveries for a success ratio of 9.005%. The highest wildcat success ratio in Mississippi for the years 1958 through 1970 was 9.06% in 1966 and the lowest was 4.55% in 1968.

**Mississippi collected oil and gas severance taxes totaling \$13,035,421 during 1970. Total severance taxes collected to March, 1971, was \$220,000,000.

**Total average daily oil production for Mississippi in 1970 was 181,085 barrels. Estimated new oil reserves found in 1970 is 100,699,000 barrels.

**The estimated total value of oil and gas produced in Mississippi during 1970 was \$218,097,000.

**Taxes paid to counties and the state by pipelines during 1970 amounted to over \$16,750,000.

**Total estimated productive and non-productive acreage under lease in 1970 was 3.9 million acres which is 13% of the total land area of Mississippi. This compares to Louisiana which had 33.6% of the total land area under lease in 1970.

**During 1970, 31 wildcats were drilled in Alabama of which 5 were productive for a 16.1% success ratio. Four of the producers are Smackover wells. The other is a Mississippian sandstone discovery in the Black Warrior Basin.

**Approximately 7.3 million barrels of oil were produced from 556 Alabama wells in 1970 which brought the cumulative total to slightly over 115 million barrels.

**The most active Alabama counties by far in terms of leasing activity were Washington and Lamar Counties with about 167,000 and 150,000 acres leased, respectively. Over 586,000 acres were leased in Alabama during 1970 of which 436,000 were in the Jurassic trend of southwest Alabama.

**Alabama has 455,000 acres of offshore land on which no wells have been drilled except for two wells in Mobile Bay during the early 1950's.

**The estimated field cost for seismic exploration in Alabama during 1970 was \$5,500,000.

(Source: Mid-Continent Oil & Gas Association Booklet "Oil and Gas Facts" compiled by Earl Evans, Jr. and Charles Williams, Jr.)

MISSISSIPPI GEOLOGICAL SOCIETY PUBLICATIONS LIST

MAPS AND PRODUCTION DATA FOR OIL AND GAS FIELDS

1. Wilcox Fields of Southwest Mississippi, 171 fields, 350 pp, type Wilcox log, 3 ring loose leaf binder \$25.00

Mesozoic-Paleozoic Producing Areas of Miss. & Ala.

2. Volume I, October 1957, 57 fields, 154 pp, 2 composite columnar logs clothbound \$ 3.00

(continued on next page)

(continued from page 3)

3. Volume II, July 1963, 143 pp, 3 ring binder (with supplement 1, 15 fields, 48 pp). \$ 10.00
4. Volume II, Supplements 2, 3, 4 & 5; 20 fields, 51 pp. \$ 7.50
5. Volume II, Supplements 4 & 5, 10 fields, 20 pp. \$ 5.00
6. Volumes I & II with supplements 1,2,3,4 & 5 \$20.00

GUIDEBOOKS

7. Sixth Field Trip—Upper Eocene, Oligocene, and Lower Miocene of Central Miss., June, 1948, 74 pp, 27 illustrations \$ 5.00
8. Seventh Field Trip—Pre-Cambrian and Paleozoic Rocks of Northern Alabama and South-Central Tennessee, August, 1949, 89 pp, 30 illustrations \$ 4.00
9. Ninth Field Trip—Claiborne of Western Alabama and Eastern Mississippi, September, 1952, 94 pp, 14 illustrations \$ 4.50
10. Eleventh Field Trip—Paleozoic Rocks, Central Tennessee and Northwest Alabama, May, 1954, 67 pp, 28 illustrations \$ 4.00
11. Fourteenth Field Trip—Upper Cretaceous of Northeast Mississippi and West Central Alabama, May, 1959, 29 pp, illustrated with road log \$ 2.50
12. Fifteenth Field Trip—Cenozoic of South-eastern Mississippi and Southwestern Alabama, May, 1960, 52 pp, illustrated with road log \$ 3.00
13. Sixteenth Field Trip—The Paleozoics of Northwest Arkansas, Magnet Cove, Arkansas Valley, Ouachita Mountains, Ozark Highlands, May, 1962, 48 pp, illustrated with road log and correlation chart \$ 5.50

NOTE: The Guidebook Series is not an annual publication. The books are guides to field-trips sponsored by the Mississippi Geological Society. New editions will be published in the future.

OTHERS

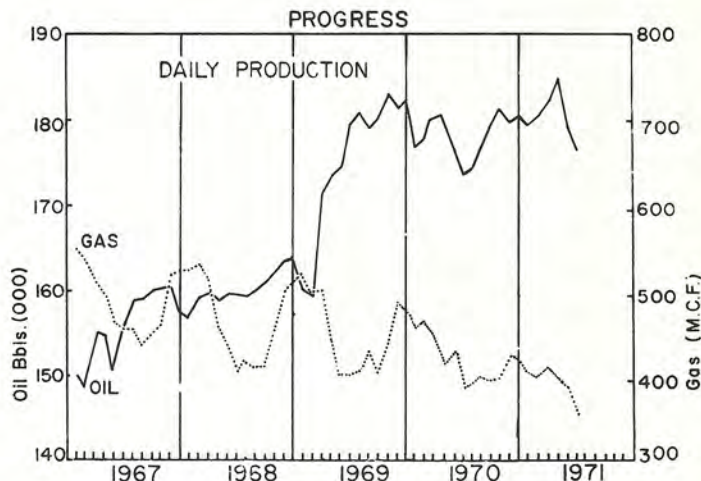
14. Mesozoic Composite Log of South Mississippi and South Alabama, October, 1957 \$ 1.00
15. Paleozoic Composite Log of Black Warrior Basin, Mississippi and Alabama \$ 1.00
16. General Geology of Mississippi, Tom McGlothlin, May, 1943, 62 pp, 16 illustrations \$.50

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progress-

by Jim McMullen



Daily Production:	June, 1971	177,046 Bbls. Oil
		354,642 MCF Gas
	June, 1970	173,985 Bbls. Oil
		389,689 MCF Gas

Box Score Discoveries:	January - June, 1971				
Eocene	UK	LK	CV	SMK	Norphlet
3	0	2	1	1	0

Box Score Discoveries:	January - June, 1970				
Eocene	UK	LK	CV	SMK	Norphlet
2	1	2	0	4	1

New Field Discoveries: May - June, 1971

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IPF (5870-5872) Parker "A"
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6/13/71 Sec. 7-15N-3W Humphreys Co.
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MISSISSIPPI GEOLOGICAL SOCIETY

P. O. Box 422
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NEWS

BULLETIN

mississippi geological society

VOL. XIX, NO 4, DECEMBER, 1971



SPACE PHOTOS AND OIL EXPLORATION DEC. 15

FORMER NASA PHOTO EXPERT TO PRESENT PAPER

The next meeting of the Mississippi Geological Society will be held Wednesday, December 15, at the King's Inn in Maywood Mart. Guest speaker will be Mr. Herbert A. Tiedemann, a geological specialist in space photography for Trollinger Geological Associates, Inc., of Denver. The title of Mr. Tiedemann's paper is "Earth Resources Photography - Payoffs in Space". The meeting will begin with a social hour at 5:30 p.m. followed by dinner at 6:30 p.m.

Trollinger Geological Associates are Denver based photogeologic consultants and Mr. Tiedemann is in charge of the Remote Sensing Division which utilizes space-photography in the search for petroleum and minerals. Mr. Tiedemann received a B.A. degree from Ohio Wesleyan University in 1952 and a M.S. degree in Geology from the University of Tennessee in 1956. He was formerly with the National Aeronautics and Space Administration at the Manned Spacecraft Center in Houston where he helped formulate photographic planning for the Gemini and Apollo astronauts. His office at the Photographic Technology Lab was responsible for coordinating map and data production for NASA's earth-looking photography and for providing photographic materials and information to scientists throughout the world. Mr. Tiedemann lectured extensively for NASA and he has written several illustrated articles on the astronaut photography program.



HERBERT A. TIEDEMANN

Prior to going to Houston, Mr. Tiedemann was at the Goddard Space Flight Center in Greenbelt, Maryland, where he pursued geologic investigations of areas covered by satellite photography. His previous experience was concentrated in the southeastern United States where he served as geologist for Vanderbilt University, Vulcan Materials Corporation and the Tennessee Division of Geology. Mr. Tiedemann's lectures and material are highly recommended by those who have heard him speak. This meeting should be one of the most interesting to be held this year and a large turnout is expected.

MISSISSIPPI GEOLOGICAL SOCIETY CALENDAR

DEC. 9 WGA-Black Gold Open House
David Miller Home
3:00 to 6:00 p.m.

DEC. 15 Tiedemann Paper
King's Inn, Maywood Mart
Social Hour 5:30 p.m. - Dinner 6:30 p.m.

FOR RESERVATIONS TO DEC. 15 MEETING, CALL T. C. RADER'S OFFICE (948-4128) OR JEANETTE DUNN (MURPHY OIL, 362-7758) BY NOON MONDAY, DEC. 13.

"DUFFER'S DELIGHT" HELD OCT. 29 VERNE CULBERTSON WINS AGAIN

Defending champion Verne Culbertson withstood all challengers to win the 1971 Mississippi Geological Society Golf Tournament held October 29 at Live Oaks Golf Club. Verne's low gross score of 78 enabled him to become the first to win the beautiful new traveling trophy donated to the Society this year by Dresser Atlas. The first golfer to win the trophy three times gets to keep it and at the rate Verne's going, he'll claim it in two more years. Steve Dennis won second low gross honors while Bob Graham and Ray Foil finished as first and second low net winners, Tom Wagner won the high gross prize with a score substantially above the century mark. His prize was two golf lessons but Tom said he was reluctant to accept them because he felt they should go to someone who really needed help.

Winners in the Gross Low Ball Foursome were Ed Launius, Charlie McClellan, Don Williams and Lincoln Warren. The Net Low Ball Foursome contest ended in a tie between the groups of Aaron Cook, Don Long, Al Beasley, Don Franklin and Buddy Morton, Bob Graham, Marcial Forester, T. C. Rader. Other winners were: Least Putts - Don Williams; Longest Drive - Glen Clark; Closest to No. 7 Hole - Marvin Oxley; Closest to No. 11 Hole - John Jones; Most Birdies - Bob Neely; Most Pars - Rip Mason; Most 3's - Buddy Cleveland; Most 4's - Bill Brett; Most 5's - W. R. Smith; Most 6's - Marcial Forester.

This tournament proved to be possibly the best ever held by the Society as indicated by the turnout of 65 golfers, which may be a record itself. The event has been dubbed the "Duffer's Delight" in the News Bulletin and it proved to be just that as plenty of enthusiastic duffers assaulted the popular Live Oaks course. One member of a bewildered threesome that happened to get mixed up in the tournament was heard to remark somewhat sourly "I hope they are better geologists than they are golfers". Regardless of the scores, everyone enjoyed the tournament and that is really why it's held.

Golf Chairman Don Franklin is to be congratulated for a well run event. Don lined up plenty of nice prizes ranging from golf balls to golf shoes. Thanks also goes to Dresser Atlas for donating the impressive trophy and for supplying each registrant with a free golf ball (with Dresser Atlas printed on it naturally). People are going to be finding Dresser golf balls all over Live Oaks in the future. They may not know who or what Dresser Atlas is but they're going to think it's a widespread outfit. Finally, the following prize contributors are to be commended for their support. Without their help, the tournament would not be nearly as successful as it is.

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meetings

January 3 - 14 - A short course in advanced petroleum geology sponsored by the University of Tulsa. Covers practical applications of the newer concepts in geology and geophysics. Subjects such as new geophysical methods, evaluation of prospects, photogeology, exploration for sandstone bodies and fluid geology are among the many taught by recognized leaders in petroleum exploration. Cost is \$400. Contact Dr. Glenn S. Visher, University of Tulsa, 1133 North Lewis Ave., Tulsa, Oklahoma 74110.

publications-

"Petroleum Potential of The Black Warrior Basin" by L. F. Boland and E. D. Minihan, GCAGS Transactions, Volume XXI, 1971, pp. 139-158. Contains discussion of oil potential in relation to regional tectonic framework and stratigraphy. Also contains 12 figures, including three regional stratigraphic cross sections, and selected reference table. Presented at the 21st Annual GCAGS-SEPM Convention, Oct. 13-15, 1971.

ATTENDANCE AT NOV. 16 MEETING

80

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from the editor

Relocation of exploration staffs into centralized locations by major oil companies is always accompanied by pro and con opinions from those most affected by the move, the explorationists themselves. Some argue that it doesn't matter where the office is while others argue that exploration should be done "in the area". In support of the latter, we have lifted the following comments from the Lafayette Geological Society Bulletin for reprint in this column. They were written by the President of that Society, Jack Van Amringe, and the final paragraph in particular is food for thought.

"The consolidation of entire exploration staffs of major companies into one major city, often into one building, seems to be the trend these days, an irreversible trend. The cost profit squeeze that all companies are experiencing has forced companies to economize in many ways. An obvious move is to consolidate facilities. A common comment is that subsurface geology, reservoir engineering, geophysical interpretations, etc., can be done anywhere. Why maintain numerous detached field offices when the same work can be done in one facility and everyone will be together? The computer has been a centralizing influence.

"I seriously question the wisdom of centralizing large exploration staffs, particularly into the heart of a major city. Generally, I think an individual geologist's interest in an area is directly proportional to his proximity to that area. Being where the action is; getting to know the local culture, the terrain, the people, the industry's operations and activities are as much a part of exploring an area as slipping logs day after day in a sterile office building.

"Furthermore, I believe, consolidation tends to centralize thinking and possibly channel efforts rather than allowing for expanded thought and different methods to accomplish similar goals.

"Exploration is the backbone of the petroleum industry and the explorationist should be set in an environment where he will have the incentive to apply all his capabilities toward the most difficult, frustrating, yet awarding task, that of locating hidden hydrocarbons. This is not and never will be a routine assignment. As a matter of fact, one of my pet peeves about working in a big city is the routine way everyone must work, made necessary primarily by the transportation problem.

"With oil and gas becoming increasingly hard to find, will the industry make it more difficult and less attractive for the explorationists to find it?"

personal news-

Clarence Gilbert has resigned from Skelly Oil Company to open an office in Jackson for Freedom Oil Company of Montgomery, Alabama. Clarence, formerly Senior Exploration Geologist with Skelly, has been active in petroleum exploration in Mississippi and Alabama for the past 11 years. His office address and phone are 433 Petroleum Building and 354-8619.

Jack Porter, formerly Senior Geologist with Chevron in Jackson, has resigned to join Cities Service Oil Co. Jack is presently in Cities' Jackson office but is scheduled to be transferred to their geological staff in Tulsa.

API ADVERTISING AVAILABLE

API bumper stickers, decals and lapel buttons which state the API theme, "A Country That Runs on Oil Can't Afford to Run Short", are available in lots of one hundred each to anyone interested in purchasing them. Cost of the bumper stickers is \$6.50 per hundred, the decals are \$3.70 per hundred and lapel buttons are \$4.90 per hundred. Orders can be made to Jim Shelby, Advertising Manager, API, 1801 K. Street N. W., Washington, D. C. 20006.

WGA-BLACK GOLD MEET DEC. 9

The Women's Geological Auxiliary and Black Gold will jointly open the holiday season with a Sherry Open House on December 9 at the David Miller home on 4059 Boxwood Circle. Chairman for the affair, which is scheduled from 3:00 p.m. to 6:00 p.m., is Mrs. William E. Linn.



HAPPY HOLIDAYS

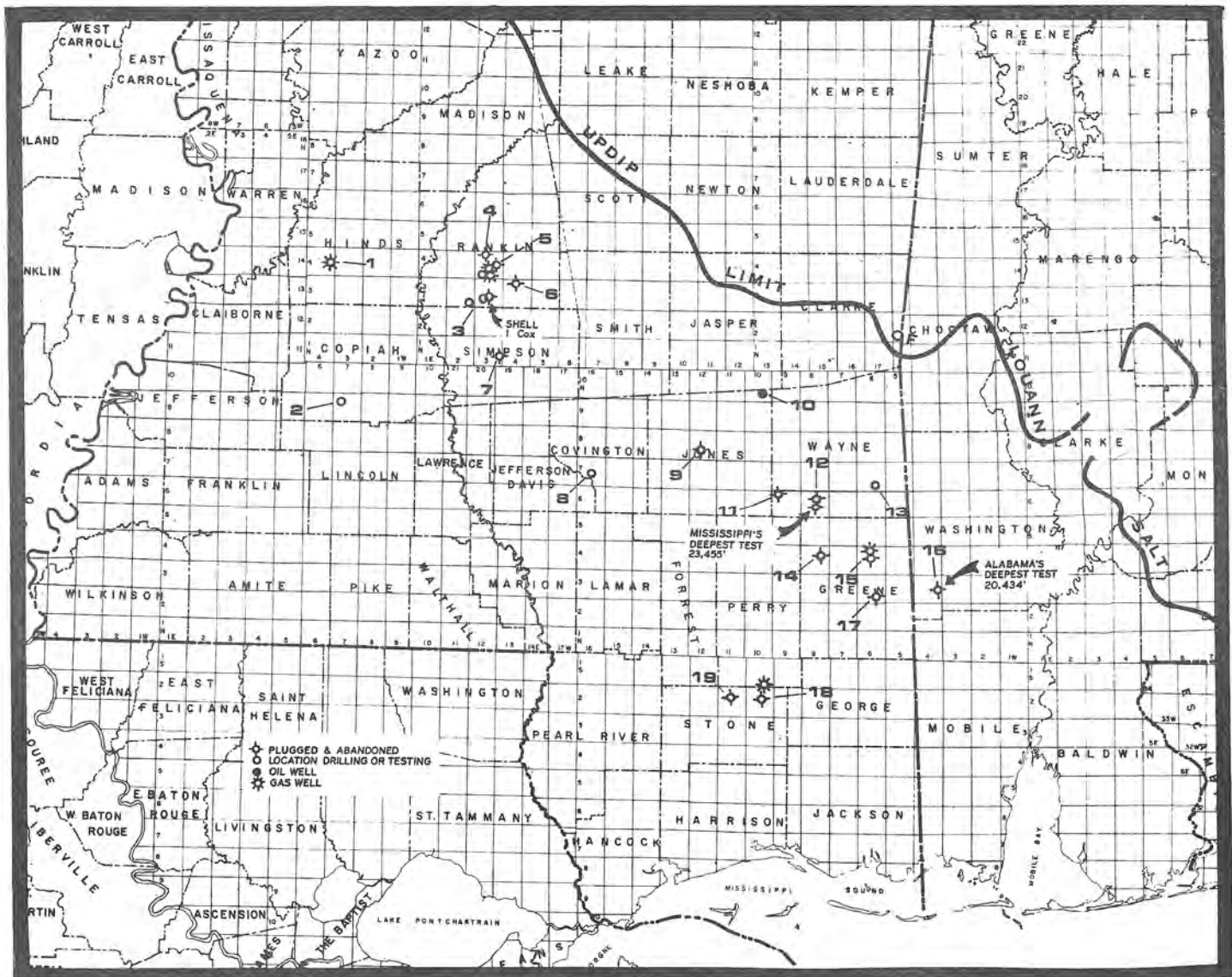
MISSISSIPPI ALSO LAND OF DEEP DRILLING

Most people may immediately think of places such as the Delaware or Anadarko Basins whenever the subject of deep drilling comes up. This is to be expected in view of the number of ultra-deep tests currently being drilled or already drilled in these areas. However, the Interior Salt Basin of Mississippi and part of Alabama have also seen several deep tests as indicated on the following map and tabulation. Many of these may not be as impressive as some of the Texas and Oklahoma tests, especially the monstrous 27,000 to 28,000' attempts now being made, but they still represent major drilling achievements. Also, they represent only the beginning of a deep drilling campaign that is almost certain to expand as the search for hydrocarbon reserves moves into the still wide open deep areas of Mississippi and Alabama. This search could easily result in some wildcats that would rival in depth the Texas and Oklahoma giants.

A "deep" test is arbitrarily defined for this writeup as one with a total depth of 20,000' or greater. Nowadays, a test in this depth range is not as awesome a project as it once seemed but it still represents a big undertaking regardless of the operator's size. This is especially true in Mississippi where high pressures and the very real possibility of a major blowout accompanied by dangerous H₂S gas go hand in hand at the

greater depths. The Shell No. 1 Cox in southern Rankin County, Mississippi provided a prime example of this danger when it blew out in March, 1970. The blowout, which occurred below 21,000' in the Smackover, resulted in the temporary evacuation of area residents and over a year of relief well drilling before it was completely and safely plugged. Also associated with the blowout was the death of a rig worker.

To the best of our knowledge, there were 26 Mississippi tests either staked, drilling, testing, or completed in the 20,000' category as of November 5, 1971. In addition, there was one Alabama test over 20,000'. These tests have been numbered either separately or in clusters on the map below which also shows the approximate updip limit of the Louann Salt for orientation purposes. Shell Oil Company has led the deep search by far with nearly half the tests bearing their name as operator. Cities Service, Phillips, and Murphy are the only other companies listed as operator on more than one deep test. Experts on the oil and gas scene of Mississippi and Alabama are invited to see how many of the test they can name before looking at the tabulated list on page four. Let us know if we've missed any.



MISSISSIPPI AND ALABAMA BIGGIES

The following are the Mississippi and Alabama tests reaching or projected to a total depth of 20,000' or greater. The numbers correspond to those on the map on page three but we don't guarantee the accuracy of all the information because some of the tests are still tight holes and complete data are not yet available.

1. Shell No. 1 Shell-McNair, Sec. 13-4N-4W, Hinds County. TD 22,736' in Haynesville, Completed as Sligo gas well at 13304-57 (10-69).
2. Cities Service No. 1-A Sanders, Sec. 8-9N-7E, Copiah County. Proposed 22,000' Smackover test. Drilling below 20,400'.
3. PINEY WOODS AREA, RANKIN COUNTY
 - Shell No. 1 Ridgway Management, Sec. 35-3N-2E. Proposed 22,800' Norphlet test. Drilling below 9800'.
 - Shell No. 2 Cox et al, Sec. 29-3N-3E, TD 21,344' in Smackover. Running liner to test Smackover.
 - Shell No. 1 Cox, Sec. 28-3N-3E. Blew out, burned, cratered at 21,122' in Smackover. P & A.
4. Humble No. 1 Ridgway Management, Sec. 4-4N-3E, Rankin County. TD 20,484' in Norphlet. P & A (9-68).
5. THOMASVILLE FIELD AREA, RANKIN COUNTY
 - Shell No. 1 Crain, Sec. 32-4N-3E. TD 20,587' in Norphlet. Smackover gas well SI, waiting on completion of gas processing plant.
 - Shell No. 1 Burch Unit, Sec. 33-4N-3E. TD 20,597' in Smackover. Smackover gas well. SI, waiting on completion of gas processing plant.
 - Shell No. 1 Garrett, Sec. 28-4N-3E. TD 20,451' in Smackover. Smackover gas well. SI, waiting on completion of gas processing plant.
 - Shell No. 1 D'Lo Royalties, Sec. 27-4N-3E. TD 20,724' in Smackover. P & A in Smackover, uphole left open for possible future disposal well.
6. Shell No. 1 Martin, Sec. 3-3N-4E, Rankin County. TD 20,903' in Louann Salt. P & A (9-71).
7. Phillips No. 1-B Zellerbach, Sec. 25-1N-3E, Simpson County. TD 21,052' in Smackover. P & A (12-66).
8. Skelly-Mallard No. 1 King, Sec. 21-7N-16W, Covington County. Proposed 20,000' Cotton Valley test. Location.
9. Murphy-Buttes-Huber No. 1 Neill, Sec. 21-8N-12W, Jones County. TD 20,640' in lower Jurassic? J & A (8-71).
10. Lone Star No. 1 Bryan Unit, Sec. 23-10N-10W, Jones County. TD 21,105' in Louann Salt. Completed as Cotton Valley oil well at 14039-102 (8-69).
11. Cities Service No. 1 USA, Sec. 5-6N-9W, Wayne County. TD 21,838' in Smackover? J & A (5-71).
12. Murphy No. 1 USA, Sec. 10-6N-8W, Wayne County. TD 20,389' in Haynesville? P & A (5-68).
 - Shell-Murphy No. 1 USA, Sec. 22-6N-8W, Wayne County. TD 23,455' in lower Jurassic? Mississippi's deepest test, P & A (9-71).
13. Getty No. 1 Rodgers Heirs, Sec. 26-7N-6W, Wayne County. Proposed 21,500' Smackover test. Drilling below 13,500'.
14. Cities Service No. 1-B Robinson, Sec. 11-4N-8W, Greene County. TD 20,627' in Haynesville. P & A (3-67).
15. Shell No. 1 Lankford, Sec. 4-4N-6W, Greene County. TD 20,561' in Smackover? J & A (8-69). Although junked, abandoned and not producing, well was classified as a discovery (Jonathon Field) after reportedly testing gas with H₂S and high pressures near total depth.

Shell No. 1 Robinson, Sec. 9-4N-6W, Greene County. TD 21,621' in Louann Salt. P & A (4-70).

16. Damson No. 1 Tyler-Odom, Sec. 13-3N-4W, Washington County, Alabama. TD 20,434' in Norphlet? P & A (7-71). Alabama's deepest test. OWDD, originally drilled to 18,741' by H. L. Hunt (3-61).
17. Shell-Placid No. 1 Barnes, Sec. 26-3N-6W, Greene County. TD 20,970' in Smackover? P & A (7-65).
18. Phillips No. 1 Josephine "A", Sec. 35-1S-10W, Perry County. TD 20,138' in Louann Salt. Completed as shut-in gas discovery (Black Creek Field) from Smackover at 19768-777. High H₂S content (78%), never produced.
 - Phillips No. 1 Flurry "A", Sec. 10-2S-10W, Stone County. TD 20,090' in Louann Salt. P & A (7-69).
19. Vasen No. 1 Vasen Fee, Sec. 9-2S-11W, Stone County. TD 20,450' in Louann Salt. P & A (6-55). OWDD, originally drilled to 11,209' by Vasen (11-46).

WINTER QUARTER GRADUATE COURSES AT USM

The regular continuing series of Monday night graduate courses offered each quarter by the Geology Department of the University of Southern Mississippi will be continued during the 1971-1972 Winter Quarter with Geology 505 - Paleoclimatology. This course is open for graduate credit only, and the classes will meet from 6:30 until 10 p.m.; four quarter hours of credit are awarded for completion of this course. Paleoclimatology will be conducted by Dr. R. L. Bowen, Department Chairman. Additionally, Geology 420-G420, Sedimentology, also for four hours credit, but open either to seniors or graduate students, will be conducted on Tuesday nights by Dr. Charles Hoskin.

Registration for both courses will take place from 5 to 8 p.m. on Monday, November 29, at Hattiesburg, and the first classes will be held that week. The quarter finishes the last week of February. Applications for admission to the courses are available from the USM Admissions Office, Box 11, Southern Station, Hattiesburg, Mississippi 39401, and they should be secured and completed by mid-November. The courses will be conducted in the Walker Science Building on the USM campus. For further information, call (area 601, tel. 266-7195) or write Dr. Bowen (Box 44, Southern Station, Hattiesburg, Miss. 39401).

(Editor's Note: The above notice was received after the November Bulletin had already gone to press. If anyone is interested in these courses, it is recommended they contact Dr. Bowen to inquire about the possibility of late registration.)

Senator John Tower, R-Tex., says the biggest problem facing the oil industry is the political muscle of the anti-oil consuming region of the Northeastern U.S., which believes the industry is "living off the fat of the land and charging too much for oil." He said hopefully a national energy policy study planned by a Senate committee will come up with solutions to this problem.

Presidential aspirant Senator McGovern (D-S.D.) has called for elimination of oil and gas percentage depletion provisions and of the oil import program. In a speech before the Harvard Law Forum, McGovern claimed the oil imports program adds 5.7¢ to every gallon of gasoline, costs the average family in New York state \$102.32 a year, and adds \$140 annually to home heating costs of the average family in Massachusetts.

Season's Greetings

1280 SPACING SET IN RANKIN COUNTY GAS FIELD

The Mississippi Oil and Gas Board recently approved Shell Oil Company's petition for 1280 acre spacing in the deep Thomasville Field of southern Rankin County, Mississippi. The increase from 640 acre spacing was granted on a temporary basis from November 1, 1971, to January 1, 1974. During this time period, Shell will have the opportunity to produce sour gas from three Smackover wells completed near 20,000'. At the end of the period, Shell will then be required to show that one well can effectively and properly drain 1280 acres to maintain the spacing.

According to testimony given by Shell, production from the field should begin with completion of a gas processing plant in the spring of 1972. There are currently three wells capable of production with room on the field structure for others but Shell plans no additional tests for about two years in order to gain production experience and history. All the processed gas will be sold in Mississippi.

Two Wells, the No. 1 Garrett and the No. 1 Burch, are essentially completed wells and the third, the No. 1 Crain, has had production casing set but will not be completed until after the gas plant is ready. Production will come from the upper part of the Smackover Formation which consists of alternating sandstone and carbonate layers. The carbonate zones are tight and actual production will be from the sandstone zones. The gas is dry but has a high H₂S content. An analysis of the No. 1 Garrett gas indicates an H₂S content of 34.71% and a methane content of 56.15% compared to 33.16% H₂S and 55.80% methane for the No. 1 Burch. The other major gas constituent is CO₂ which accounts for 8.7% of the Garrett gas and 9.23% of the Burch gas. The BHP for the field is estimated to be around 17,500 psi and the bottom hole temperature is about 325°. Costs connected with this type field are, needless to say, high. Shell's representative testified that each well has cost an average \$4.5 million completed and that Shell has so far invested \$32.8 million in the area. Operating cost of the gas plant alone is estimated to be \$2 million per year. Special tubing must come from Canada and it costs \$1 per inch.

The field structure is reportedly due to a deep seated salt feature and is bordered on the west side by a major down-to-the-west fault. The pool has a gas column of over 700' above an estimated water level at -20,030'. Maximum pay interval to date is in the No. 1 Burch which has a total of 260' greater than 6% porosity and .1 md permeability. Average porosity for the interval is 9.5%. The No. 1 Garrett has 206' of pay averaging 8% porosity and the No. 1 Crain has 118' which averages 7.2% porosity. The highest average permeability measured in the pay zones is in the No. 1 Garrett with 2.3 md. The No. 1 D'Lo Royalty will be plugged in the Smackover due to the lack of sufficient pay interval. The Smackover only has 6' of porosity averaging 5%. The No. 1 Crain, the highest well in the field, is the only one to test the Norphlet Formation, which is reportedly water saturated. The following map, which shows the approved 1280 acre units, is contoured on top of the Smackover sandstone pay interval and is similar to the exhibit submitted by Shell at the hearing.

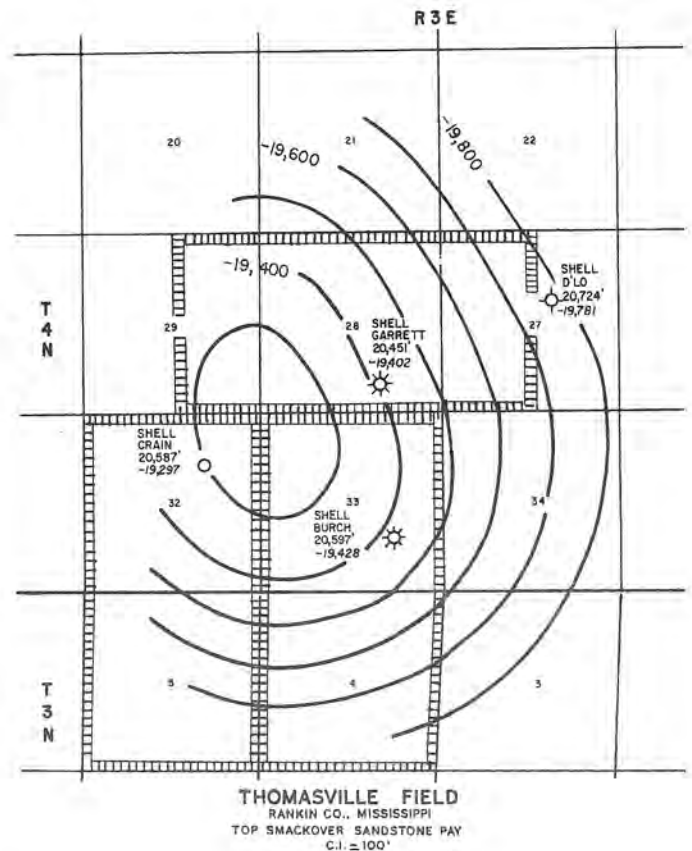
aapg news -

STUDY SHOWS HIGH U.S. OIL AND GAS POTENTIAL

Have all the oil and natural gas reserves been discovered in the United States? The answer from 147 of the nation's top geologists is an emphatic no. In an authoritative study commissioned by the U.S. government, this blue ribbon committee of explorationists estimates that eventually three to six times our present reserves of 39 billion barrels of crude oil and from two to four times present natural gas reserves of 290 trillion cubic feet will be obtained. These conclusions are part of a 1,500 page, two-volume report on "Future Petroleum Provinces of the United States", recently published by the American Association of Petroleum Geologists. It is the result of a three year study made at the request of the Department of the Interior in 1967.

Under the direction of the National Petroleum Council, top geologists of major oil companies and independent consulting geologists were assigned to report on the geology and producing potential of all

(continued next column)



(STUDY SHOWS continued)

possible productive areas of the United States. The geologists report that within the U.S. a total area of 3.2 million square miles is geologically favorable for the occurrence of petroleum. This includes Alaska, the continental shelves of all coasts, and the ocean slope to a depth of 8,200 feet. Only 30% of this area is productive which leaves plenty of room to drill.

As might be expected, the estimates of individual geologists as to how much oil and gas will be discovered and produced are widely varied and range from conservative to highly optimistic. Estimates of potential crude oil reserves, exclusive of known reserves, range from 227 to 436 billion barrels of original oil in place. Approximately 32% of this would be brought to the surface by methods now in use, but new producing technology could raise the recovery rate to 60%. Estimates of potential natural gas reserves as yet undiscovered range from 595 to 1,227 trillion cubic feet of recoverable gas and the editors of the book conclude that more than 900 trillion cubic feet will be obtained.

The books contain a detailed evaluation of the various estimates but conclude that the numbers are less important than the evidence of the high petroleum potential for the future. The volumes represent a massive compilation of published and unpublished data about the geology of every possibly favorable area of the U.S. Also, the volumes are charged with oil finding ideas, much proprietary information heretofore secret, and excellent references for further study. The compilation was edited by Ira H. Cram, retired Chairman of the Board of Continental Oil Co.

Cram states in the introduction that new technology in oil hunting and deep drilling, plus the information in the volumes, make it possible

(continued next page)

(STUDY SHOWS continued)

to expect that much of the potential oil and gas will be discovered ultimately. He reasons that one discovery leads to another and that each discovery also contributes new data on the occurrence of petroleum. He points out that very few sedimentary basins have been drilled to "basement", that is, to rocks which cannot contain oil and gas, although some of the big new oil and gas fields have been discovered at very great depths. He therefore suggests that deeper drilling in areas already producing should yield other big new finds.

However, Cram ends his introduction with a word of warning. He says exploratory drilling must be accelerated because new discoveries are not keeping pace with consumer demands for oil and gas and the undiscovered fields will be harder to find than the old ones were. Unless oil companies and independent wildcatters can anticipate a profit from the high risks involved, most of the potential new reserves will remain undiscovered and useless, he maintains. Therefore, Cram concludes that the future supply of oil and gas depends more on economic and political conditions affecting the drilling industry than on geology and technology.

WORLDWIDE OIL EXPLORATION BOOMS

There's a boom in exploration for oil virtually all around the world, particularly in those countries which have little or no oil production at present. This is one of the highlights of the review of worldwide petroleum developments made annually by The American Association of Petroleum Geologists. Only a few big new oil fields were found last year, but the discoveries that were made stimulated the scramble for concessions and exploration permits. The most exciting discoveries of 1970 were offshore, off Norway, Scotland, Spain, Trinidad, Indonesia, New Zealand and Brunei. There were also discoveries in the jungles of interior South America, but it was the offshore discoveries that caused the most interest. As a result, nearly every coastal nation around the world has issued permits for offshore exploration.

Oil production worldwide increased last year, but primarily in the old established exporters - Venezuela, Russia, and the Middle East, plus the booming new oil giant of Nigeria. Production declined slightly in most of the smaller producing countries. An exception was Australia, where rapidly increasing output promises to make that nation self-sufficient in Petroleum. In our own Western Hemisphere, Venezuela, which for many years has produced 80% of Latin American oil, increased its output by a modest 3.2% last year, while Argentina went up 10.1%, Mexico up 5.5% and Colombia up 3.7%. Other countries showed losses, and the area as a whole dropped about 2% in oil output during 1970.

Prospects continue to be very good in South America. Big discoveries were made in the interior jungles east of the Andes in Colombia, Ecuador and Peru and this oil will be on the world market as soon as pipelines are completed. There is a spurt of seismograph activity and wildcat drilling in Argentina, and Bolivia appears to have reversed its policy of nationalism and again is inviting foreign operators after a period of stagnation in oil development. Despite this activity, the

geologists predict that no South American nation will challenge Venezuela's preeminence. They point out that the three areas on the continent most promising for the discovery of big oil are all in Venezuela - the south end of Lake Maracaibo, the delta of the Orinoco River, and the Gulf of Venezuela.

The hot spot of the Caribbean at the moment is Trinidad. Major oil and gas discoveries off the east coast of the island early in 1970 brought a congregation of drilling rigs and a scramble for permits in additional offshore areas. Production continued to decline in Trinidad's old onshore fields, but the new discoveries are counted on to maintain Trinidad's importance in oil.

All of Europe was excited by the discovery of really big oil reserves in Norwegian, Scottish and Dutch waters of the North Sea. These discoveries stimulated further wildcatting in Europe, not only in other parts of the North Sea and adjacent waters but also in the Mediterranean. Spain, which heretofore has had only two small onshore fields, rejoiced at the discovery of a good-sized oil pool offshore near Valencia, a discovery which spurred further drilling in the area. It also accelerated exploration in other parts of the Mediterranean, particularly off the coasts of Italy, Greece and Yugoslavia.

In the big Arab oil-producing states in the Middle East and North Africa, routine but not spectacular discoveries were made during 1970, although development work advanced and crude oil production increased. Egypt showed a surprising increase of 34% in production despite the fact that some of her larger fields are occupied by the Israelis.

The fastest growing oil country in the world is Nigeria, which increased its oil production 101% during 1970 as it recovered from the Biafran civil war. Nigeria is now producing as much oil as all Latin America except Venezuela. Most of this production is from offshore fields, as is the output of new but promising finds off Gabon, Congo, and Angola. These finds have excited the rest of the continent, and offshore concessions have been granted and exploratory work is underway in every coastal nation in West, South, and East Africa.

In the Far East, Australia and New Zealand brought in giant-size offshore oil and gas fields in 1970, and the exploratory fever spread through all of Southeast Asia. Four significant offshore discoveries were made in Indonesia and one off Brunei, with the result that offshore concessions were granted or were being negotiated by Malaysia, Thailand, Cambodia, Viet Nam, Taiwan, Korea and Japan. Boundary disputes between nations claiming various areas of these Asian waters are expected to delay active drilling programs there.

Hi! have a Merry Christmas

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MISSISSIPPI GEOLOGICAL SOCIETY

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NEWS

BULLETIN

mississippi geological society

VOL. XIX, NO 5, JANUARY, 1972.



CARBONATE BEACH SEQUENCE TOPIC FOR JAN. 4

LSU PROFESSOR
TO ADDRESS SOCIETY

The January meeting of the Mississippi Geological Society will be held Tuesday, January 4, at the King's Inn in Maywood Mart. Dr. Clyde H. Moore, Jr., Associate Professor of Geology at Louisiana State University, will present a paper entitled "Pore System Evolution In A Cretaceous Carbonate Beach Sequence". A social hour beginning at 5:30 p.m. will precede dinner which begins at 6:30 p.m.

Dr. Moore was born June 10, 1933, in Jacksonville, Florida, and received a B.S. degree in geology from Louisiana State University in 1955. In 1959, he received his M.S. degree from the University of Texas and was awarded his Ph.D in 1961 from the same institution. Dr. Moore began his geological work career with Shell Development Company as a Research Geologist from 1961 to 1966. His assignments included Cretaceous carbonate stratigraphic studies in central West Texas, reconnaissance of recent shoreline sand bodies from Delaware to Cape Kennedy on the Atlantic Coast and ancient clastic turbidite basin analysis along the Pacific Coast. He joined the staff of the Department of Geology at L.S.U. in January, 1966, where he is presently an associate professor. Dr. Moore's current research interests are widespread and include carbonate cementation and diagenesis, pore system evaluation in carbonate rock facies as related to depositional environments and diagenesis, total carbonate sediment budgets in the reef environment and deep fore reef sediment transport. These research interests are currently being pursued in Texas, Alabama, Florida, Grand Cayman Island and Jamaica W. I.



CLYDE H. MOORE, JR.

Dr. Moore's professional affiliations include the American Association of Petroleum Geologists, Society of Economic Paleontologists and Mineralogists, Geological Society of America and Sigma Xi. Dr. Moore has done considerable research in carbonate beach sequences and his lecture should provide new and valuable information for the explorationist in Mississippi. The membership is urged to start the new year off right with a large turnout to hear this paper.

"A country that runs on oil can't afford to run short"

PORE SYSTEM EVOLUTION IN A CRETACEOUS
CARBONATE BEACH SEQUENCE

Clyde H. Moore, Jr.
Louisiana State University, Baton Rouge, La.
ABSTRACT

The carbonate beach sequence can be divided into a backshore (dolomite), an upper foreshore (mollusc lime grainstone), a lower foreshore (mollusc lime packstone), and an offshore zone (pellet lime packstone). This sequence represents a prograding-beach supratidal complex. The early diagenetic history can be divided into two phases; the beach-backshore accretion phase is characterized by intertidal and submarine cementation with aragonite cements under marine phreatic and vadose conditions. A meteoric phreatic lens within the beach was the site of concurrent grain solution and precipitation of calcite cements. The post backshore accretion phase is characterized by dolomitization of the supratidal, and wholesale silicification of the upper foreshore by reflux waters from the prograding supratidal. Late post-burial solution took place after the sequence was uplifted, probably during Balcones faulting (Miocene-Pleistocene).

The beach proper is characterized by secondary mollusc moldic porosity. The highest porosity-permeability values (39% and 460 md.) are found in the base of the upper foreshore and top of the lower foreshore zones. The backshore dolomites have intercrystalline porosity averaging 33% with a permeability of 18 md. The offshore pellet packstones have intercrystalline porosity averaging 29% and 36 md. The concentration of secondary porosity and permeability in the middle of the beach is a function of early cementation and silicification of the upper foreshore that created a permeability barrier at the top of the sequence while the normal depositional fabrics of the offshore zone had the same effect at the base of the sequence, effectively restricting the major flow of a later groundwater system to the middle of the beach. Total rock history, therefore, including both deposition and diagenesis, is the key to effective pore system analysis.

*This paper is being presented jointly by Moore and James M. Smitherman (Humble, Denver, Colorado) and Steven H. Allen (ARCO, Corpus Christi, Texas) at the 24th International Congress Montreal, Canada in August 1972. It will be republished in its entirety prior to the Congress.

MISSISSIPPI GEOLOGICAL SOCIETY CALENDAR

- Jan. 4 Moore Paper
 King's Inn, Maywood Mart
 Social Hour 5:30 p.m. - Dinner 6:30 p.m.
- Jan. 13 WGA Informal Coffee
 Edgewood Terrace Club Room
 10:00 a.m.

FOR RESERVATIONS TO JAN. 4 MEETING, CALL T. C. RADER'S OFFICE (948-4128) OR JEANETTE DUNN (MURPHY OIL, 362-7758) BY NOON MONDAY, JAN. 3.

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from the editor

Ever feel like your work is getting to you? Same old thing, day in, day out until everything you do reminds you of the problems at the salt mine? Geology's great but sometimes all work and no play makes Jack an idiot. Take the geologist in the following spoof, which was originally published in the Oil & Gas Journal in 1956 by former chief editorial writer Henry D. Ralph, he's either ready for the funny farm or promotion to chief geologist. The story, with Ralph's lead-in, goes like this:

BLUE-PLATE GEOLOGY

IT'S NOT often that we print a contribution in this department. And for a very good reason: We don't get many.

However, we must live right, for just as we were getting ready to go on vacation, and with what we laughingly call our mind full of schedules and travel folders instead of deep thoughts for this column, a contribution came in over the transom. Just like money from home.

For a fraction of a second we hesitated about using it because it's about geologists, and we have received some anonymous threatening letters as a result of some of our previous writings about the rockhound profession in a not completely serious and complimentary vein.

But our doubts were resolved when we discovered that this piece was written by a geologist, for he not only lives geology, but eats it, too.

Here's his essay, verbatim:

Mark Geric had been studying structure maps since 7 o'clock that morning and he would probably still be at it at 7 o'clock that evening.

Now, in Gay's Diner, seated next to Hank Marvins, he wanted to eat some lunch and forget structure for a half hour.

His mind and his eyes were fixed blankly on his shoes when the waitress brought him his order of roast beef, green peas, mashed potatoes and gravy, and tossed salad. His mind was still blank when he picked up his knife and fork and poised them, ready to cut off a corner of the roast.

"I couldn't figure what you were doing," Marvins told him later. "For a good 30 sec. you sat there holding your knife and fork, just staring at your plate! What the Sam Hill were you thinking about?"

"Well," said Geric, "it took me that long to figure out the structure of my lunch."

"To figure out the stru...? you balny?" Marvins asked.

"You see the floor of the basin was exposed Precambrian china, and the tension fracture across it obviously was there before anything was deposited.

(continued next column)

"An overthrust fault brought the roast beef into the area next, leaving particles of beef debris leading across the edge of the basin.

"The gravy on the beef was extruded next, since it underlay everything but the beef. Part of the extruded gravy was then covered with a poorly consolidated conglomerate of green peas. The gravy extrusive had not yet solidified so the green-pea conglomerate mingled with it to a small degree.

"The deposition of the mashed potatoes was the most violent action of all, with large potato splashes on the far side of the green pea conglomerate and the beef Klippe.

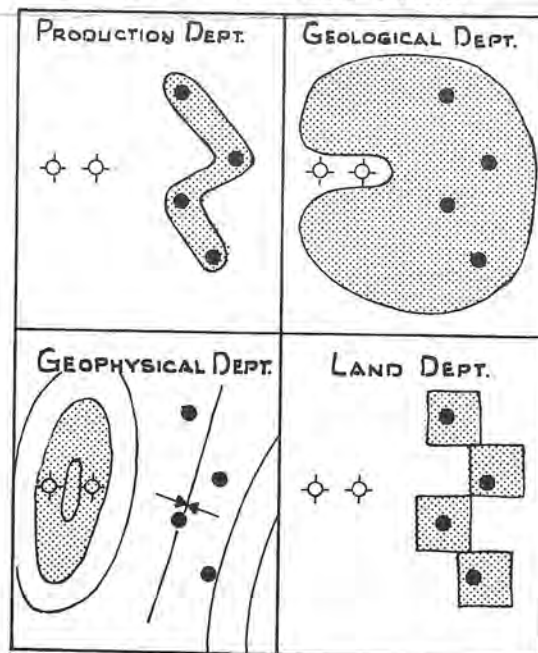
"Next came the tossed salad conglomerate which, with one exception, overlay everything else. Though the salad conglomerate was well concentrated directly over a small area of Precambrian china, some of the lettuce and carrots lay exposed on the previously deposited elements.

"The cook had almost forgotten to put gravy on the potatoes, and since the potatoes were closely associated with the tossed salad conglomerate, the salad received a good share of the final cruption of the viscous gravy."

WGA COFFEE JAN. 13

The Women's Geological Auxillary will hold an informal coffee on January 13 at the Edgewood Terrace Club Room, 220 Edgewood Terrace Drive. Chairman for the meeting, which begins at 10:00 a.m., is Mrs. John Myers.

THE PROSPECT AS SEEN BY.....



publications-

USGS PROFESSIONAL PAPER 659 "GEOLOGIC FRAMEWORK & PETROLEUM POTENTIAL OF THE ATLANTIC COASTAL PLAIN & CONTINENTAL SHELF"

USGS Professional Paper 659 "Geologic Framework and Petroleum Potential of the Atlantic Coastal Plain and Continental Shelf" by John C. Maher with a section on stratigraphy by John C. Maher and Esther R. Applin. Publication contains 232 pages, 20 plates, 9 figures, and 4 tables. Price is \$6.75 and copies may be obtained from the Supt. of Documents, Government Printing Office, Washington D. C., 20402.

MGS MEMBERS RECEIVE AAPG APPOINTMENTS

Sherman A. Wengerd, President of the American Association of Petroleum Geologists, recently announced the appointment of numerous AAPG Chairmen and Committee Members throughout the United States. Those appointed from Mississippi are: Robert D. Beu, Membership Committee; Wilbur H. Knight, Field Trip Research and Coordination Committee; Kevin E. Cahill and Harold E. Karges, House of Delegates; Robert D. Menefee, Committee on Statistics of Drilling; all of Jackson, and Troy J. Laswell, Academic Advisory Committee, of State College.

In announcing these appointments, Wengerd said, "These men are truly professional scientists who place service to their science and their fellow professionals above personal interests - the committees are the structure and strength of an organization such as AAPG."

MGS MEMBERSHIP DOWN

As of November 1, total membership of the Mississippi Geological Society was 370 which was 29 less than the 399 total listed on February 1, 1971. The difference can be attributed almost entirely to Chevron's move to New Orleans in October that resulted in the net loss of 25 members. The November total consisted of 327 members, including 9 honorary members, and 43 associates.

The geographic distribution was divided among 10 states and Mississippi was the leader with 230 members and 40 associates. Louisiana was next with 48 members and 1 associate followed by Texas with 35 members and 1 associate. Alabama ranked fourth with 4 and 1 while Arkansas and Oklahoma were next with 3 members each. Colorado, Florida, Michigan, and Maryland each had one member.

The Mississippi distribution was as follows with members listed first and associates second: Jackson, 181-29; Natchez, 19-7; Hattiesburg, 6-0; Laurel, 5-2; Vicksburg, 5-0; Columbia, 3-0; Clinton, 3-0; State College, 2-0; Canton, 2-0; Meridian, 1-0; Gulfport, 1-0; University, 1-0; Waynesboro, 1-0; McComb, 0-1; and Purvis, 0-1.

The membership list was reorganized November 1 and last year's members and associates who had not paid their current dues were removed from the mailing list. Undoubtedly, there are several who have forgotten to pay this year's dues. If so, checks should be sent to MGS Secretary Dean Kebert and names will be replaced on the mailing list. The Mississippi Geological Society, as do other geological societies, needs all the support it can get and a decreasing membership is to be avoided if at all possible.

Consumers of gas in the U.S. will require 54.9 trillion cubic feet in 1995, plus an additional 3.2 trillion cubic feet for field use. The 1995 figure is 157% times the total gas usage in 1970, which amounted to 21.4 trillion cubic feet. This growth means an average annual compound growth of 3.8%.

1971 EARTH SCIENCE DEMAND SLOW

According to a survey made by the AGI, recruitment and hiring of 1971 earth science graduates was considerably slower than in 1970. The new graduate not only had fewer choices of jobs and locations but the median salary computed for all type earth scientists was less for bachelors and masters than in 1970. The median for bachelors was \$8500 compared to \$8650 in 1970 and \$10,200 for masters compared to \$10,500 in 1970. PhDs remained the same at \$12,000. A total of 110 U. S. department chairmen responded to the salary question. Actually, the starting salaries are deceiving as far as the petroleum industry is concerned. The AGI article points out that a survey response from 21 petroleum companies employing new bachelor graduates in 1970 showed that the median salary was \$9900 with a high of \$11,760 and a low of \$6000. Master and PhD graduates would be even higher.

The survey also revealed that by 1975, the petroleum industry, which now employs more than half of all earth scientists, expects to hire 29% fewer new bachelor geologists, 7% fewer masters but 10% more PhDs. Also, the petroleum companies want their future new employees to have more mathematics, economics, computer science, writing, business management, statistics, physics, chemistry, structural geology, stratigraphy, and sedimentation in the curriculum. Whew! Wonder if they would settle for a seasoned hand with 10-20 or more years experience in prospect hunting? Probably not. One earth science field not expected to be favorable for future employment is oceanography. According to the survey, employers project very little demand for oceanographers and 1971 enrollment by schools responding to the survey was down 20% from 1970.

BLACK WARRIOR BASIN SECTIONS AVAILABLE

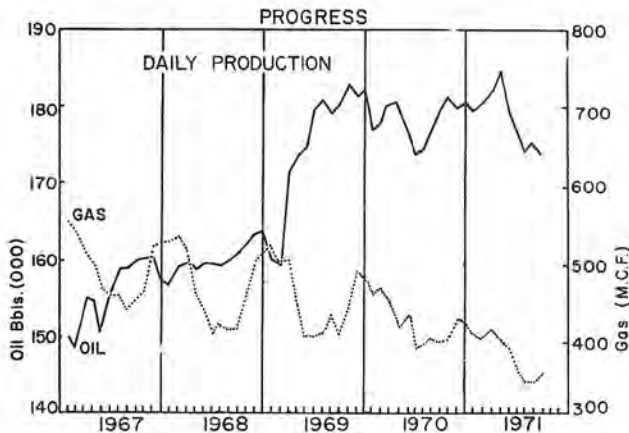
Reproducible films for a series of Black Warrior basin correlation cross sections have been unexpectedly discovered in the MGS files and prints are once again being offered for sale to interested persons. The sections were prepared by the Mississippi Geological Society Paleozoic Study Group in the early 1950's and were listed on the Society's publication list until recently when the last prints were used up. Exploratory activity has increased in the Basin during the last two years but the sections are still applicable and useful for those interested in trying to untangle the complicated correlation problems.

Price for each section is \$2.00 or a bargain price of \$7.00 is available for all six sections. The sections and a brief description of each are listed below. Orders should be made to the attention of the Publication Manager, Mississippi Geological Society, P. O. Box 422, Jackson, Mississippi 39205.

1. Lafayette County, Mississippi, to Walker County, Alabama; Mississippian Chester Series, Vertical Scale 1" = 400', 20" x 31", 11 wells, 1953.
2. Clay County, Mississippi, to Lauderdale County, Alabama; Mississippian Chester Series, Vertical Scale 1" = 400', 20" x 29", 10 wells, 1953.
3. Clay County to Monroe County, Mississippi; Muldon Field Area and Vicinity, Mississippian Chester Series, Vertical Scale 1" = 400', 10 wells, 1953.
4. Monroe County, Mississippi, to Giles County, Tennessee; Pre-Chesterian Series, Vertical Scale 1" = 400', 19" x 32", 7 wells.
5. Independence County, Arkansas, to Walker County, Alabama; Pre-Chesterian Series, Vertical Scale 1" = 400', 18" x 30", 10 wells.
6. Newton County, Mississippi, to Giles County, Tennessee; Surface to Basement or Cambro-Ordovician, Vertical Scale 1" = 600', Horizontal Scale 1" = 16 miles, 23" x 33", 12 wells, 1949.

progress-

by Jim McMullen



Daily Production:	September, 1971	174,009 Bbls. Oil
		353,677 MCF Gas
	September, 1970	179,504 Bbls. Oil
		390,918 MCF Gas

Box Score Discoveries: January – September, 1971

Eocene	UK	LK	CV	SMK	Norphlet
4	2	2	1	1	0

Box Score Discoveries: January – September, 1970

Eocene	UK	LK	CV	SMK	Norphlet
3	1	4	0	4	1

(continued next column)

New Field Discoveries: July – September, 1971

- | | |
|---------------------------|--|
| Two Mile Creek
7-15-71 | Hinds No. 1 Dixie & Phoenix Minerals
Sec. 6-1S-16W, Pearl River County
IPF (9103-20) Lower Tuscaloosa
1350 MCFGPD & 15 BCPD
open chk, TP 915 |
| Zion Hill
8-12-71 | H. D. Baker No. 1 Fenn 17-12
Sec. 17-4N-5E, Amite County
IPF (11124-132) Tuscaloosa
207 BOPD & 222 MCFGPD
10/64" chk, TP 1075, Gvty 41° |
| Long Lake
8-23-71 | Meiers-Lasher No. 1 Armstrong Oakland
Sec. 32-6N-3W, Adams County
IPF (6097-6101) Wilcox
108 BOPD
8/64" chk, TP 320, Gvty 43° |

CORRECTION: In last month's Bulletin, there is an error or two (or three or more) that should be corrected. Heaven knows we want to be as accurate as possible at all times so this opportunity is taken to "set the record straight". Besides, we're short of Bulletin material this month and this blurb will take up an inch or two of space. It was stated on page four that the Phillips No. 1 Josephine "A", Sec. 35-1S-10W, Perry County, Mississippi, was completed as a shut-in Smackover gas discovery at 19,768-777 and never produced. Ain't so. According to the Oil and Gas Board production book (and who would've ever thought to look there), the well was abandoned in 1969 after having produced 6900 MCFG. Also, the offset test in Sec. 10-2S-10W, Stone County, was listed as the Phillips No. 1 Flurry "A" whereas everyone knows that Pan American Sulphur Company of Mississippi was the other operator. This isn't big stuff, folks, but we want you to know we're trying to give you the straight scoop even though it sometimes fails to come through.

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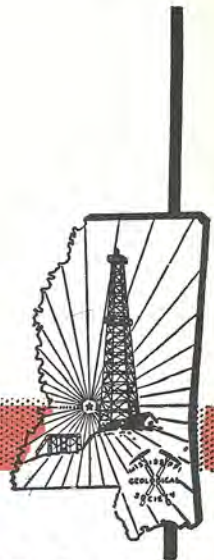
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NEWS

BULLETIN

mississippi geological society



VOL. XIX, NO. 7, MARCH, 1972

GEORGIA PIEDMONT GEOLOGY TOPIC MARCH 14

GEORGIA GEOLOGY CHIEF TO ADDRESS SOCIETY

The March meeting of the Mississippi Geological Society will be held Tuesday, March 14, at the King's Inn in Maywood Mart, I-55 North. Dr. Joseph B. Murray, Chief Geologist for the Georgia Department of Mines, Mining and Geology will present a paper entitled "Recent Investigations in the Georgia Piedmont and Blue Ridge". A social hour beginning at 5:30 p.m. will precede dinner which begins at 6:30 p.m.

Dr. Murray was born July 29, 1933, in Birmingham, Alabama. He attended elementary and secondary schools in Tennessee and was graduated from the University of Chattanooga in 1955 with a B.A. degree in geology. After serving two years active duty as an artillery officer in the U.S. Army, he attended the University of Tennessee where he received his M.S. degree in geology in 1960. In 1971, he received a Ph.D. in geology from Case Western Reserve University in Cleveland, Ohio.

Dr. Murray was employed for six years as Assistant Professor of Geology at Grove City College, Grove City, Pennsylvania. He has also been employed by the Tennessee Valley Authority in the Maps and Surveys Branch. Dr. Murray is a member of the Geological Society of America, the Society of Economic Paleontologists and Mineralogists, the Georgia Geological Society and the Georgia Academy of Science.

This talk should be of interest to all explorationists interested in Southeast geology. Petroleum exploration in Georgia has been minimal and information gained from Dr. Murray's lecture may enable the prospect hunter to apply some new ideas to the subsurface. Most MGS members are probably unfamiliar with the Georgia Piedmont area and the lecture will therefore offer an excellent opportunity to gather some new knowledge.

MISSISSIPPI GEOLOGICAL SOCIETY CALENDAR

MAR. 10 - WGA - Black Gold Couples Barbecue
Fowler Lodge, 7:00 P.M.

MAR. 14 - Murray Talk
King's Inn, Maywood Mart
Social Hour 5:30 P.M. - Dinner 6:30 P.M.

FOR RESERVATIONS TO MAR. 14 MEETING, CALL T. C.
RADER'S OFFICE (948-4128) BY NOON MONDAY, MAR. 13.

MGS TO BEGIN JURASSIC STUDY

The Executive Committee of the Mississippi Geological Society has approved plans for the Society to begin a detailed study of the Jurassic System in Mississippi, Alabama and Florida. The first phase will be to construct a series of regional dip sections across the three state area. Wilbur Knight, Jackson consultant, will head the initial committee consisting of area independents and major company representatives. Committee members are being assembled and cross section and nomenclature work is expected to begin immediately according to Larry Boland, MGS President. Hopefully, the sections along with a descriptive text will be available for sale to interested parties in about six months.

The current intent is for the cross sections to provide a foundation on which a full scale study of the Jurassic System can later be prepared and published. This would include regional stratigraphic and structural discussions, maps and possibly field studies. The total project, if carried to completion, will probably require a time period extending at least through the 1972-73 year.

This project is timely and extremely worthwhile because the Jurassic is, and will be for some time to come, a major exploratory objective in the three states. Not only will the project supply needed income for the Society but it will also provide a valuable source of information for companies and individuals interested in Jurassic exploration. The MGS membership is urged to support this project wholeheartedly, either in spirit or by contribution of materials and information if needed. An organization like the MGS must be active to survive and there are few better ways to be active than through an undertaking of this sort. Progress reports will be published periodically in the News Bulletin.

Members of the cross section committee are: Charles Barton, American Southwest Corp.; Marshall Kern, M. H. Marr Co.; Marvin Oxley, Bison Oil Co.; Jerry Zoble, Kilroy Oil Co.; all of Jackson and W. O. Hampton, Amoco Production Co.; Bruce Bartolo, Getty Oil Co.; Jack Lucas, Shell Oil Co.; Paul Kees, Humble Oil and Refining; Bob Beu, Chevron Oil Co.; all of New Orleans.

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from the editor

It's not often that we receive material from members to be published in the Bulletin. In fact, it's darned seldom. Nevertheless, there have been a few times when we've missed publishing something because it was received too late to be included in the appropriate Bulletin. In order to prevent this from occurring again, we want to impress on all members to send information about a month or more in advance. For instance, material for this Bulletin should have been received no later than the first week of February.

The News Bulletin may not seem like much of a project to some but it sometimes becomes a monumental task to assemble material which should be both relevant and of interest to the membership. Once this is done, we like to allow adequate time for the typists and printers to make a pleasing copy. So, once the rough material leaves the editor's hands, it takes from 3 to 4 weeks for it to be typed, composed, set, printed, folded, stamped, mailed and delivered. Three separate firms (Austin's Secretarial Lettershop, Ridgway's and Modern Duplicating and Lettering Service) are used for these services and all do an excellent job. However, it still requires a lengthy time period from start to finish and most members have been unaware of this. Now that everyone knows, all we need do is sit back and wait on the flood of interesting material that is sure to come in the first of every month!

MGS STUDENT LOAN AVAILABLE

The Mississippi Geological Society is pleased to announce an interest free loan has been made available to the geological departments of the major state schools which offer degrees in the science. The loan will be the amount of the yearly interest collected from the Society's savings account and will go to a needy student in geology selected by the recipient department. By luck of the draw, the geological department at Millsaps College in Jackson will receive this year's loan of \$205.00. Next year, the loan will be offered to the departments at either Mississippi State, Ole Miss or Southern Mississippi.

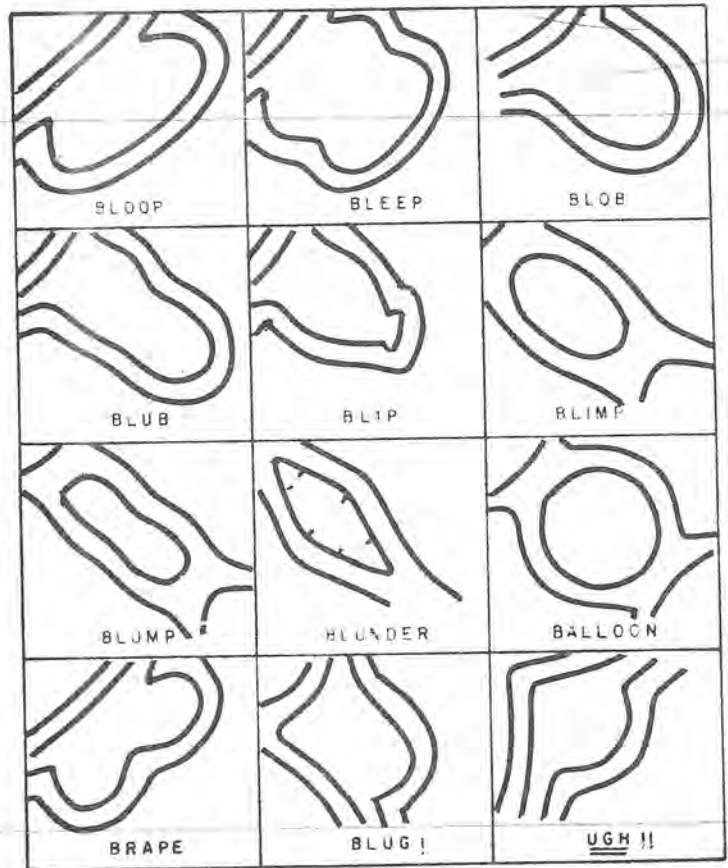
THE GEOPHYSICIST, BLESS HIM

A geophysicist is a person who passes as an exacting expert on the basis of being able to turn out with prolific fortitude infinite strings of incomprehensible formulae calculated with micromatic precision from vague assumptions derived from debatable figures which are based on inconclusive experiments carried out with instruments of problematic accuracy by persons of doubtful reliability and questionable intellect for the avowed purpose of confounding a hopeless group of fanatics known as geologists.

Department of Interior has adopted rules by which it could exercise an option to get its 1/6th royalty in oil instead of cash from offshore wells. The royalty oil would be sold to refiners who meet the federal small business test: i.e., those having not more than 1,000 employees, not more than 30,000 bpd of capacity, and showing a shortage of crude.

BLOOP! BLOOP! EVERYBODY LOVES A BLOOPER

Probably no structure map has ever been contoured successfully or at least coherently without the aid of several bloopers. Everyone knows what a bloop is; it's the bulge you put in an otherwise unimaginative series of parallel contours to make the supervisor think you know something he doesn't. However, no geologist has ever been able to leave well enough alone and this includes the bloop. As a result, the bloop has evolved into many strange and contorted shapes, some of which are shown below. To the best of our knowledge, these were published some years back in a Standard Oil (N. J.) newsletter but most of them should be very familiar to everyone. If this is hard to believe, pull out your latest structure map and look at it closely. Don't worry too much if your examination shows you are basically a blooper but if it shows you tend to be an ugher, then burn that map, baby, and start all over 'cause you've done gone off the deep end.



AN APOLOGY TO OUR ADVERTISERS

No one was more surprised than your editor when last month's Bulletin was opened and it was discovered that part of our advertising list had not been printed. This was one of the unfortunate errors that occasionally slips through during printing operations. The only thing we can do now is apologize and beg the forgiveness of our advertisers. It won't happen again. We consider our advertisers to be special folks because they support the Bulletin and, normally, great pains are taken to be sure the ads are correctly printed and in order. The advertisers that were omitted are listed below.

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personal news-

Tom Clements, formerly Senior Geophysicists with Skelly Oil Co. in Jackson for the past three years, has resigned to become a consulting geophysicist in Jackson. Tom has over 10 years oil company experience in the Gulf Coast and Southeast areas. Prior to working with Skelly, he was with Pan American (Amoco) in Jackson, Shreveport and Oklahoma City. He will have offices in the Standard Life Building.

Joe Bradley has returned to Jackson as District Geologist for Southwest Gas Producing Company. Joe was previously in Jackson before joining Southwest in Monroe, Louisiana.

Sherod Harris has joined Skelly's geological staff in Jackson after being transferred from the Oklahoma City office. Sherod, a Senior Geologist, has 23 years experience with Skelly primarily in Rocky Mountain and Mid-Continent geology.

Jim Williams and **Dean Kebert**, formerly with Southwest Gas, have joined Victor P. Smith and Associates, Ltd. in Jackson. Their offices are located at 1241 Deposit Guaranty National Bank Building.

Aaron Cook, previously Assistant Sales Manager for Dresser Atlas in Jackson, has been transferred to Houston where he will be the Administrative Assistant to the Manager of Dresser's U.S. operations. His replacement is **Jerry Callison** who has been Regional Log Analyst in New Orleans. **Gary Wettler**, formerly Sales Engineer in Laurel, replaces Callison in New Orleans.

Dave King, District Manager for Schlumberger in Natchez, has been transferred to Gretna, Louisiana as District Manager. **Bill Krell** will move from Schlumberger's Los Angeles office to replace Dave.

Jim White, Senior Geologist with Skelly in Jackson, has completed the classroom requirements for a M.S. degree in geology with a minor in Business Management at the University of Southern Mississippi in Hattiesburg. Jim has attended Southern's Monday night graduate geology program for the past 3 years. He received his B.S. degree in geology from Mississippi State University in 1951. His thesis at Southern will be a subsurface study with Dr. Richard L. Bowen, Chairman of the Department, as major adviser.

COST SQUEEZE! MEETING PRICE RAISED

Effective with the February meeting of the Mississippi Geological Society, the price of the monthly get together has been raised from the previous \$4.00 to \$5.00. The new price covers the cost of the steak dinner and two chits for drinks during the social hour. If your thirst cannot be quenched with two drinks, you'll either have to pay for extras or drink a few before coming to the meeting. However, the thinking man will acquire a tee totaler friend (or two or three) and persuade him to part with his chits. The true blue boozer may have to hustle a bit but he should be able to get around the free drink limit.

Seriously, the increase is considered necessary by the executive committee because the social hour expenses have consistently risen despite the contribution usually made by one or more sponsor at each meeting. However, this year's contributor list was smaller than in previous years and the Society will have to pick up the entire tab for the last three regular meetings. Also, the Society prefers to spread its resources over several projects such as the Jurassic study, student loan, barbecues, golf tournament, excess Bulletin costs, etc. rather than concentrating solely on financing an unlimited social hour.

meetings

March 26 - 29 - Annual meeting of Southeastern Section of Geological Society of America, Tuscaloosa, Alabama. Technical sessions on Monday and Tuesday, 27th and 28th, and field trip to Piedmont and Coastal Plain Provinces on Wednesday, 29th. Contact W. Gary Hooeks, Program Chairman, Dept. of Geology, Box 1945, University, Alabama 35486.

WGA-BLACK GOLD COUPLES BARBECUE MARCH 10

The Women's Geological Auxiliary and Black Gold have scheduled a barbecue at Fowler Lodge on the Barnett Reservoir, Friday, March 10. This is the annual meeting for couples and should be one of the more enjoyable events of the year. Chairman for the affair, which begins at 7:00 p.m. is Mrs. Marvin Oxley.

USM GEOLOGY NIGHT COURSE AVAILABLE

The Spring Quarter night graduate course offering in geology at the University of Southern Mississippi, Hattiesburg, will be Geology 530 - Advanced Structural Geology conducted by Dr. Dan A. Sundeen. Registration is Monday, March 6, from 5:00 to 7:30 p.m. and the first class meets Wednesday, March 8, from 6:30 to 8:00 p.m. Regular class meetings will be on Monday nights from March 13 through May 15 from 6:30 to 10:00 p.m. for a total of four quarter hours credit. Applications for admission can be secured from the USM Admissions Office, Box 11, Southern Station, Hattiesburg 39401. For additional information, contact Dr. Richard L. Bowen, Chairman, Geology Dept., USM, Box 44. Southern Station or call 601-266-7195.

MGS PUBLICATION CORRECTION

Due to printing difficulties, the Society is unable to offer the Newton County, Mississippi, to Giles County, Tennessee, cross section as announced in the January Bulletin. This section is number six on the list of Black Warrior Basin sections offered for sale in that issue of the Bulletin. However, the remaining five sections are available for \$2.00 each or at the bargain price of \$7.00 per set.

publications

Circular 70 of the Geological Survey of Alabama, "Oil and Gas Exploration in Alabama in 1970" by Donald B. Moore. Contains statistics, tables, figures, etc., pertaining to petroleum exploration activities and discoveries in Alabama during 1970. Consists of 25 pages, 7 illustrations and 1 table. Cost is \$1.00 and can be ordered from Publication Sales Division, Geological Survey of Alabama, P. O. Drawer O, University, Alabama 35486.

Map 99 of the Geological Survey of Alabama, "Subsurface Geology of Southwest Alabama" contoured on the Lower Tuscaloosa by Donald B. Moore. Covers the Jurassic area of Alabama on a scale 1" = 3 miles and contour interval of 100'. Cost is \$1.50 and can be obtained from above address.

CALL FOR PAPERS 1972 GCAGS - GCS - SEPM CONVENTION

The Gulf Coast Association of Geological Societies and the Gulf Coast Section - SEPM extends an invitation for submittal of technical papers to be presented at the 22nd annual meeting to be held in Corpus Christi, Texas, October 11, 12, and 13, 1972. The theme of this year's meeting is EXPLORATION - THE KEY TO THE ENERGY CRISIS. The convention will stress the need of increased exploration and drilling to provide additional reserves to ease the energy crisis.

It is necessary that titles and at least a preliminary abstract be submitted by April 1. The final abstract should be submitted by May 1. Papers should be completely edited and corrected for grammar and punctuation and the illustrations ready for reproduction and in the hands of the editor not later than June 10 for publication in the Transactions. A list of suggestions to assist authors in the preparation of papers has been assembled by the GCAGS. Request for presentation forms are also available. These contain detailed instructions on how to assemble data and where to send it. If anyone is interested, please contact the editor for this information.

A report by the National Research Council prepared for the Environmental Protection Agency finds that the average American, even in the cities, consumes more lead in food and beverages than he inhales from the atmosphere, and potential danger exists for only those whose work continuously exposes them to high levels of lead. Another finding is that atmospheric lead is almost exclusively an urban problem and despite the rapid increase in the use of leaded gasoline, a high degree of dispersal of these burned additives has prevented concomitant rise in atmospheric concentrations of lead. The average lead content of the air in most major U.S. cities hasn't changed in over 15 years.

Consumers of gas in the U.S. will require 54.9 trillion cubic feet in 1995, plus an additional 3.2 trillion cubic feet for field use. The 1995 figure is 157% times the total gas usage in 1970, which amounted to 21.4 trillion cubic feet. This growth means an average annual compound growth of 3.8%.

The government raked in \$346 million in royalties from oil and gas production in the Outer Continental Shelf during 1971. The Gulf of Mexico wells accounted for \$330 million of the total, while \$16 million came from offshore California. Offshore holdings generated 72% of all royalties the government collected in 1971 from the production of oil, gas and other minerals on federal and Indian lands. The 1971 total of \$475 million taken in royalties was a new record.

Did you hear the one about the Aggie who went hunting and met a sweet young thing in the woods? The Aggie said, "Are you game?" She wriggled all over and replied, "I sure am". So he shot her.

MGS POETRY DEPARTMENT

Last month we ran a poem entitled "The Wildcat Well" by an unknown author. We have since learned that it was written by Buster Pusser, Chevron Field Foreman in Reedy Creek, Mississippi. The poem we published was slightly different from Mr. Pusser's original version but the two are undoubtedly from the same source. To acknowledge Mr. Pusser's work, we are printing another of his poems entitled "A Pumper's Prayer".

A PUMPER'S PRAYER

*Give me a lease where the weeds don't grow,
In a level country where they have no snow,
With three nice wells in one straight row,
Where you open one gate and they all flow;
With a road that's paved, level and straight,
Nice cattle guards and only one gate,
With a shade tree over every well,
And a boss who can say, "They all look swell."
With a modern house by a shady nook,
A fishing stream, or a good trout brook,
And a boy big enough to bait the hook;
Where all your allowable is just right,
And you don't get up in the middle of the night,
But can sleep 'till the sun comes out of the east,
And look out of the window and see the whole lease.
Now, Lord, if you have no such lease on hand,
Please fix me one up, in the Promised Land.*

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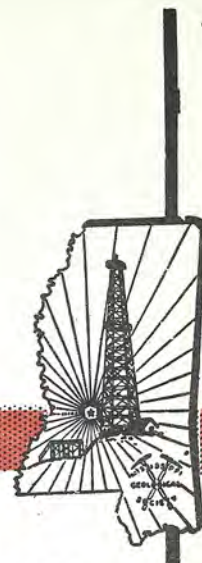
MISSISSIPPI GEOLOGICAL SOCIETY

P. O. Box 422
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NEWS

BULLETIN

mississippi geological society



VOL. XIX, No. 8, APRIL, 1972

GEOLOGY AND ENVIRONMENTAL PROBLEMS APR. 26

**DISTINGUISHED LECTURER
GUEST SPEAKER**

**ABSTRACT
Environmental Geology and Genetic Mapping
L. F. Brown, Jr.**

The April meeting of the Mississippi Geological Society will be Wednesday, April 26, at the King's Inn in Maywood Mart, I-55 North. Dr. L. F. Brown, Jr., Associate Director for Research Bureau of Economic Geology and Professor of Geological Sciences at the University of Texas, will present a paper entitled "Environmental Geology and Genetic Mapping". Dr. Brown is a Distinguished Lecturer sponsored by the American Association of Petroleum Geologists. The meeting will begin with a social hour at 5:30 p.m. followed by dinner at 6:30 p.m.

One of the most critical problems facing the world during the last decades of this century will be the effect of expanding population with its myriad needs for water, sanitation, recreation, and proper land use, coupled with complementary industrial expansion in developing megalopolis belts. A paradox exists between a concern about the ultimate supply of natural resources necessary to maintain the present western life style, and a growing concern about diminishing resources and the impact of accelerating exploitation on delicately balanced or endangered environments and ecosystems. Environmental management is the key to proper balance between exploitation and conservation.

Environmental Geology is, above all else, the practical or functional application of the science to critical environmental problems; geologists have for years similarly applied the science to mineral exploration and investigations of earth history and processes. More and more traditionally trained geologists will begin filling an increasing number of positions involving environmental studies; these tasks will require the best in research and application that the science of geology has to offer.

A major geological thrust is needed at this time to define and inventory natural environmental systems, their present status, and the impact of human modification. The principal geological tool in the battle against pollution, diminishing resources, and indiscriminant land use will be properly conceived and innovative geologic maps. The United States is poorly covered by geologic maps of adequate scale and proper concept for solving impact problems. Maps should be composed principally of genetic units, even if they do not conform to traditional maps nor formally accepted nomenclature. For example, first-order environmental units may include substrate units or facies such as fluvial channel-fill sand or reef limestone; vegetational units such as salt marsh or grass-stabilized dunes; landforms such as tidal deltas or highly dissected badlands; process-defined units such as land-slide areas or storm-washover channels; and man-made units. Maps of genetic units allow rapid derivation of special-use environmental maps for a broad spectrum of scientists and non-scientists. Delineation of genetic units allows three-dimensional extrapolation and interpolation of physical properties to predict the behavior of material under varied land use.

(continued on next page)

Dr. Brown was born June 1, 1928, in Seminole, Oklahoma. He attended Oklahoma State University from 1946-48 and graduated from Baylor University in 1951 with a B.S. in Geology, cum laude. He received his M.S. in Geology from the University of Wisconsin in 1953 and his Ph.D (soils minor) from the same institution in 1955. Dr. Brown began his professional experience as an instructor at Baylor from 1949 to 1952. He was Alumni Research Assistant from 1952-55 and instructor at Wisconsin. Dr. Brown was employed as an Exploration Geologist by Standard Oil of Texas from 1955-57. He joined the Bureau of Economic Geology, University of Texas, in 1957 and worked as a Research Scientist until 1960. He returned to Baylor University in 1960 as an Assistant Professor of Geology and later became an Associate Professor. During 1961-63, he did summer field research for the Bureau of Economic Geology. Dr. Brown left Baylor in 1966 to assume his present position of Associate Director (Research), Bureau of Economic Geology-Professor of Geological Sciences, The University of Texas at Austin.



L. F. BROWN, JR.

Dr. Brown holds memberships in Sigma Xi, AAPG, Permian Basin Chapter of SEPM, GSA (Fellow) and SEPM. He has approximately 25 publications on Texas Upper Paleozoic stratigraphy; depositional systems including deltaic and fluvial facies; environmental geology of the Texas coastal zone; and contributions to various Texas mapping programs in both ancient rocks and Pleistocene and Modern Holocene sediments. He will be speaking before 20 geological societies and university groups in the United States between April 24 and May 12. In addition to the talk for the MGS, he will also be presenting a second paper entitled "Upper Paleozoic Fluvial-Deltaic, Shelf, and Slope Depositional Systems in a Cratonic Basin, West-Central Texas" during his tour.

MISSISSIPPI GEOLOGICAL SOCIETY CALENDAR

APRIL 26 Brown Paper, King's Inn, Maywood Mart
Social Hour 5:30 P.M., Dinner 6:30 P.M.

FOR RESERVATIONS TO MEETING, CALL T. C. RADER'S
OFFICE (948-4128) BY NOON, TUESDAY, APRIL 25.

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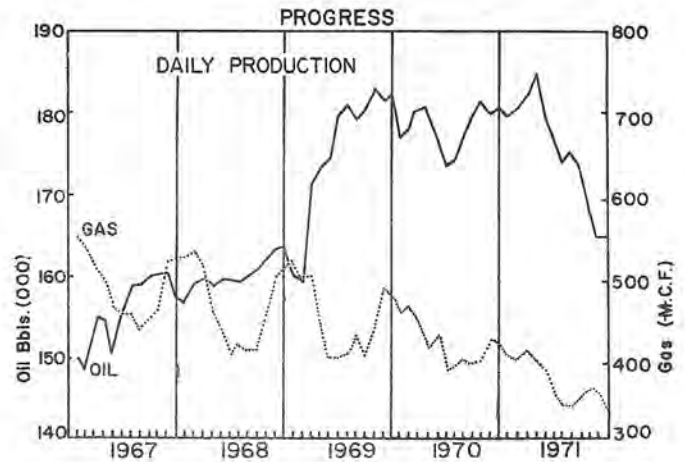
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progress-



(ABSTRACT continued)

Results of environmental geologic investigations should be presented using innovative formats and techniques that encourage interdisciplinary communication, unite diverse specialists, and allow all experts to focus simultaneously on impact problems. Coupled with computer data storage, the environmental geologic map and derivative maps provide a current record of natural environments, processes and materials, as well as a permanent record of rates of erosion, deposition, and human modification and exploitation. Planners, economists, engineers, biologists, chemists, lawyers, legislative councils, and others can plot, plan, refer, and digest specific environmental data that are visually related to detailed inventory maps depicting the distribution and nature of fundamental natural systems.

Approximately 12 man-years of environmental geologic and derivative mapping and study in the 18,000-square mile Texas Coastal Zone by the Texas Bureau of Economic Geology have resulted in text and 64 full-color maps including Environmental Geology, Current Land Use, Physical Properties, Environments and Biologic Assemblages, Active Processes, Mineral and Energy Resources, Man-Made Features and Water Systems, Rainfall, Discharge and Surface Salinity, and Topography-Bathymetry. The "Environmental Geologic Atlas of the Texas Coastal Zone" provides a case history with which the philosophy approaches and results of an extensive environmental investigation can be evaluated.

LGS PUBLICATIONS AVAILABLE

The Lafayette Geological Society has recently revised prices on its publication list which is published below. If anyone is interested in these items, orders can be made to the attention of Jimmy Jones, P. O. Box 51896, Lafayette, 70501.

South La. type logs, Western portion (logs 1-30), 1955	.....	\$45.00
South La. type logs, Central portion (logs 31-60), 1956	.....	45.00
South La. type logs, Central-Eastern (logs 61-86), 1957	.....	40.00
South La. type logs, Eastern portion (logs 86-114), 1958	.....	45.00
Copy of any type log (1-114)	.....	Ea...1.50
Typical Fields of SW La., Vol. 1 & Supplement, 1964-67	.....	12.00
Supplement to Vol 1, 1967	.....	2.00
Tertiary of Central La., 1968 Field Trip Guidebook	.....	3.00
Typical Fields of SW La., Vol. II, 1970	.....	10.00
Photo Directory, 1970	.....	2.00

NOMINATING COMMITTEE AT WORK

A Nominating Committee is hard at work selecting a slate of candidates for officer and delegate positions during the 1972-73 Mississippi Geological Society year. The new officers and delegates will be chosen at the Spring barbecue in May which is the last official MGS function of the current year. The nominees will be announced in next month's News Bulletin.

Daily Production:	December, 1971	165,425 Bbls. Oil			
		342,784 MCF Gas			
	December, 1970	180,904 Bbls. Oil			
		427,580 MCF Gas			
Box Score Discoveries:	January - December, 1971				
Eocene	UK	LK	CV	SMK	Norphlet
4	3	2	1	5	1
Box Score Discoveries:	January - December, 1970				
Eocene	UK	LK	CV	SMK	Norphlet
7	1	4	0	6	2
New Field Discoveries:	November - December, 1971				
Garland Creek	Pruet & Hughes No. 1 Cooley				
9-7-71	Sec. 3-10N-7W, Clarke County				
	Swabbed (13,615-621) Smackover				
	234 BOPD & 126 BWPD				
	Gvty 34°				
Lake Utopia	Amoco No. 1 Haynes (Dual Completion)				
11-17-71	Sec. 1-1N-13E, Jasper County				
	IPF (14,174-184 & 14,189-197) U, Smackover				
	797 BOPD				
	Gvty 39.5°, chk 24/64", TP 540				
	IPF (14,873-885 & 14,890-897) L. Smackover				
	214 BOPD				
	Gvty 43.3°, chk 20/64", TP 165				
Archusa Springs	Amoco No. 1 Dabbs				
11-18-71	Sec. 13-2N-15E, Clarke County				
	IPF (12,533-538) Norphlet				
	216 BOPD				
	Gvty 31.4°, chk 7/64", TP 800				
Piney Woods	Shell No. 2-Cox				
11-24-71	Sec. 29-3N-3E, Rankin County				
	SI (21,098-307 OA) Smackover				
Fomosla	Amoco No. 1 Barrett				
12-19-71	Sec. 22-16N-2W, Humphreys County				
	IPF (9384-98) Smackover				
	2183 MCFGD & 132 BCD				
	Gvty 54.8°, chk 18/64", TP 1326				
Center Point	Southwest Gas Prod. Co. No. 33-7 Quinn				
12-20-71	Sec. 33-6N-6E, Lincoln County				
	IPF (10,723-724), Lower Tuscaloosa				
	188 BOPD				
	Gvty 44.8°, chk 8/64", TP 1350				

personal news-

Kevin Cahill has resigned from Southeastern Exploration to open a consulting geological office in Jackson. Prior to joining Southeastern, he was with Placid in Jackson. He will office at 1290 Petroleum Bldg., Telephone 355-0280.

Ed Andress, former geophysicist with Chevron, has joined Southeastern Exploration in Jackson. Ed was previously in Jackson for several years with Chevron.

Southeastern Exploration has moved its Jackson offices from the First National Bank Building to 620 Petroleum Building - mailing address is Box 2212 and the phone number is the same.

OIL AND GAS LAW SEMINAR BOOKLET FOR SALE

The Mississippi Landmen's Association and the Mississippi Oil and Gas Lawyer's Association sponsored a seminar in April, 1971, covering the topic of oil and gas law in Mississippi, Alabama and Florida. The papers presented at the seminar by authorities in the field of oil and gas law have been published in a 181 page booklet. Some of the topics included are Mississippi State Mineral Leasing Authorities, Spacing of Wells in Mississippi, Regulation of Air and Water Pollution in Mississippi and Recent Developments in Mississippi Oil and Gas Law. A limited supply of the booklets are available at a cost of \$10.00. Funds received from the sales will be used to help finance the next oil and gas law seminar which the sponsors plan for the spring of 1973. Copies of the booklet may be obtained by sending your check payable to "Mississippi Oil and Gas Seminar" to either A. E. Taylor, Cities Service Oil Company, P. O. Box 12026, Jackson, Mississippi, 39211, or Joe Stephens, P. O. Box 326, Jackson, Mississippi 39205.

meetings-

April 26 - 28 25th Annual Meeting of the Midwestern Societies of the SEG, Midland, Texas. Contact SEG Headquarters, Box 3098, Tulsa 74101.

publications-

"The Bryan Field - A Sedimentary Anticline" by Marvin L. Oxley and Daniel E. Herlihy. Published by the SEG in Vol. 37, No. 1 (February, 1972) issue of Geophysics. Paper has 9 pages and 12 figures describing and illustrating the geophysical and geological aspects of the Bryan Field, a classic "turtleback" structure in Jones County, Mississippi. Presented at the October, 1970, meeting of the MGS, the 1970 Annual SEG meeting and the 1971 midwestern SEG meeting.

EVOLUTION OF THE SMACKOVER PLAY TEXAS TO FLORIDA

ABSTRACT
Stephen E. Collins
Dallas Exploration Co.
Dallas, Texas

Jurassic reservoirs are the primary exploration target for majors and independents along the updip area of the Gulf Coast area from East Texas through South Arkansas, North Louisiana, Mississippi, Alabama, and northwestern Florida. These carbonate reservoirs were deposited as shelf-edge limestones that rimmed the Gulf of Mexico and represent the lineation of the Gulf Coast shoreline as it appeared during Jurassic time, 180 million years ago.

The Smackover is characterized by considerable variation in facies distribution, lithology, type structures, producing characteristics and depth. These variations make it quite hard to properly evaluate Smackover prospects. Smackover reservoir rocks are limited to those areas where Buckner and/or Haynesville anhydrites occur. In the downdip areas the Buckner disappears and one finds undifferentiated

Jurassic limestones from the top of the Cotton valley limestone to the top of the Salt. In the downdip facies, a Smackover top cannot be picked and the only potential reservoir rocks are those which occur in generally low permeability oolitic limestones within the top several hundred feet of the Cotton Valley lime section.

Modern stacking seismic techniques are still inadequate for distinguishing between types of anticlines. In the East Texas-North Louisiana-Mississippi portion of the trend, seismic reflection can be mapped at the top salt and Cotton Valley lime levels only. Consequently, the complex faulting and facies changes occurring in the complex Buckner-Smackover interval cannot be clearly seen.

Depths vary from 6,500 to 11,000 ft. in the Arkansas area. The reservoir consists mostly of very oolitic limestones occurring at the top of the Smackover. Most Smackover fields in Arkansas are all elongate east-west. Porosity and permeabilities are generally excellent. Production is mostly sweet oil. Walker Creek and new Welcome Field opened major reserves from seemingly pure stratigraphic traps. Activity now is the highest in 20 years. Although drilled on a seismic closure, Walker Creek trap appears to be entirely stratigraphic from a porous oolite bar deposited along an old shoreline.

Smackover activity in North Louisiana has been more steady with the main area of interest centering along the updip fault closures of the regional Haynesville graben system. Here, the Smackover is absent within a regional graben system and production is mostly confined to the upthrown fault closures. Drilling is hazardous since these faults die out above the Smackover and close well control is needed to pinpoint the fault. Rewards are good along this trend because the pays stack up vertically over very small areas giving good payback but requiring numerous wells.

In East Texas, the Smackover reservoirs are generally dolomitic limestones, oomoldic dolomites, or sucrosic dolomites rather than oolitic limestones. Most of the fields are H₂S gas-condensate and deep. There are geographically different types of Smackover production in East Texas.

Newly opened Jay field in Santa Rose County, Florida, a Humble discovery, extended the play 90 miles southeast and reportedly has giant-size reserves with estimates as high as 100 to 250 million bbl. covering an entire township. Shell has recently made three major gas strikes in areas which many felt were too far basinward. Total reserves in these three areas are large.

One main problem to the Smackover hunter is to convince the land-oriented geologist, the reservoir man, and the computer-oriented geologist that given the right geological conditions, the factual situation of having a Smackover prospect covering only 600 acres and offsetting a dense dry hole is not necessarily bad.

The Jurassic play in the Southeast is a real frontier area. Seismic is expensive, up to \$2,500/mile, north critical dip is hard to find, gravity becomes more difficult to interpret due to increased carbonates, and well control is sparse and inadequate to predict reservoir rocks confidently. But there will be lots of giant oil fields found here anyway.

(Abstract of paper presented to the February meeting of the Shreveport Geological Society. The full paper was printed in the May 17, 1971, issue of the Oil and Gas Journal. - Editor)

LOST AND FOUND DEPT. - Found after the March 14 meeting - Savinello brand Italian pipe. Owner can contact Charles Barton, 354-2513.

According to preliminary figures released by the Bureau of Mines, Mississippi's mineral production totaled \$268 million in 1971, an increase of \$18 million over 1970. Oil and gas accounted for \$236 million or 88 percent of the total value. This was an increase of 73 percent and reflected a rise in average wellhead value of 23 cents per barrel. Nonmetals production increased 8.6 percent to \$32.2 million. Sand and gravel which is the principal nonmetal commodity increased 2.4 percent to \$12.4 million. Production and value for cement, clay and lime also increased. The total 1971 value is a new record for mineral production in Mississippi.

AAPG CHALLENGES USGS STATEMENT

A recent Department of Interior and USGS economic forecast on U.S. petroleum has been labeled "Unnecessarily gloomy" by the AAPG. Dr. Hubert Risser, USGS minerals economist, had stated that there "appears to be little or no likelihood that the U.S. will ever again become completely self-sufficient in oil."

In reply, Dr. Sherman A. Wengerd, AAPG President, said: "It is particularly ironic that such pessimism should be coming out of Washington since the AAPG reported last October on a three year study by 147 top U.S. geologists that stated: "Three to six times present U.S. oil reserves of 39 billion barrels may yet be discovered and from two to four times the present natural gas reserves of 290 trillion cubic feet." Dr. Wengerd pointed out the study was made at the request of the Department of the Interior. He further stated "that if exploration is encouraged by the U.S. government rather than discouraged, American reserves can again be built up to the point where there will be no increased reliance on foreign oil sources". He emphasized, "We recognize a point that the federal government has obviously ignored for too long; there is, conservatively, at least a five year time lag between exploration and discovery of oil to the time of production."

Dr. Wengerd added, "The further creation of a negative psychological climate in the U.S. for developing domestic oil reserves works against the best interests of the American energy consumer and the American labor force that produces the important basic commodities of oil and natural gas. Right now, American professional and technical skills are being employed by other nations, unfriendly as well as friendly, to develop their oil and gas reserves, while at home, exploration offshore and continental is being discouraged". He summed up his statement by saying that if geologists disagree or debate publicly statements of other professionals such as economists, elected officials will eventually get the idea that doing anything to intelligently encourage better domestic fuels exploration is better than being apathetic and letting our proved talent waste away. He said, "At least, we all agree we're short in domestic supplies of oil and gas for the future and falling farther behind every day. To reach an agreement of this sort is in itself quite an achievement!"

THAT'S A BIG SNAKE! !

The item below, reprinted in World Oil as it appeared in a recent Jakarta, Indonesia, newspaper illustrates one of the dangers that exist in South Sumatra oil field activity. The thought occurred that this would make a tremendous TV commercial for a well known watch company that shows its product still ticking after being put through all sorts of physical ordeals. Of course, they might now have a heckuva time finding someone to take it down to the bottom of a South Sumatra oil well!

SNAKE IN WELL SWALLOWS THREE MEN

JAKARTA—A giant python swallowed three men at the bottom of a 90-foot oil well at Muara Megang, South Sumatra. The victims were in a 420-man team employed by the Indonesian State Oil monopoly, Pertamina.

When the leader of the team, Mr. Luskito, failed to emerge from the well after two hours, a second man, Mr. Rusli, was lowered to investigate. When he failed to return a third man, Mr. Amin, went down, but did not reappear.

Using a telescope members of the team saw a huge python moving below.

A fourth man armed with dynamite was lowered into the well. The snake immediately reared up at him. Realizing that his mates had been swallowed, the man asked to be pulled up and dropped the charge, killing the python.

The three victims were found in the snake's stomach. Mr. Luskito's watch was still ticking.

There were 371 wells drilled to 15,000' or deeper in the United States during 1971. Of this total, 52 were 20,000' or deeper. Louisiana was the leader in the overall category with 153 followed by Texas with 111 and Mississippi with 42. However, Texas led the 20,000' and over bracket with 35 followed by Mississippi with 7 and Louisiana with 5.

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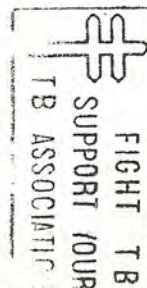
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MISSISSIPPI GEOLOGICAL SOCIETY

P. O. Box 422
Jackson, Mississippi 39205



Mr. Fred F. Mellen
1202 Standard Life Bldg.
Jackson, Miss. 39201



NEWS

BULLETIN

mississippi geological society



VOL. XIX, NO. 9, MAY, 1972

ELECTION AND BARBECUE END YEAR MAY 23

LAST MEETING AT FOWLER LODGE

Election of 1972-73 officers and delegates for the Mississippi Geological Society will be held in conjunction with the annual spring barbecue at Fowler Buick Lodge on Barnett Reservoir, Tuesday, May 23. Members unable to attend the barbecue can obtain absentee ballots from Secretary Dean Kebert. The lodge will open at 4:30 p.m. and beer will be available until closing, whenever that occurs. The barbecue will be served at about 6:30 p.m. There is no charge for members but reservations are a must and everyone should call T. C. Rader's office at 948-4128 no later than Monday noon, May 22, to reserve a spot at the table.

A Nominating Committee headed by Julius Ridgway has selected the following list of candidates for office in the Mississippi Geological Society during 1972-73. Brief biographies and pictures of the candidates are published elsewhere in this issue of the Bulletin.

President

Charles Barton - American Southwest Corp.
Larry Walter - Consulting Geologist

First Vice-President

Jerry Kinsley - Lone Star Prod. Company
Buddy Twiner - Skelly Oil Company

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Skip Murrell - Murphy Oil Corp.
Dean Kebert - Victor Smith & Assoc.

Treasurer

Joe Franklin - Gulf Oil Co.
Elwood Ruhl - Southeastern Exploration

Secretary

Dave Cate - Skelly Oil Co.
Riley Hagan - Clement & Stover

In addition, the Nominating Committee has submitted the following nominees to represent the MGS in the AAPG House of Delegates. AAPG members of the Society will vote for one (1) as Delegate for the next two years.

Larry Boland - Harkins & Co.
Alan Jackson - Consultant
Howard Samsel - Union Oil Co. of Calif.

Helmerich & Payne, Inc., Tulsa, is reportedly building two heavy rigs to work the deep Jurassic trend of the southeastern United States. The rigs are capable of drilling to more than 25,000' and are scheduled to spud their first holes this summer in Mississippi under separate contracts with Watson Oil Corp. and McCulloch Oil Corp.

REVIEW OF 1971 - 72 YEAR

by Larry Boland

As the Mississippi Geological Society's active year 1971-1972 draws to an end, a short review and a few comments seem in order.

It has been an honor and a privilege to me personally to have held an office in a Society such as ours. Without false modesty and with much pride and sense of responsibility, one has to realize the geological profession is becoming more and more important to America. The so-called "energy crisis" can do nothing else but put more demands on our brains and initiative to find more of the minerals now in such short supply. The individual members of the Society should work toward the end of making the public and our political representatives understand that industry, in particular the petroleum segment, must have the wherewithal and incentive to find replacement for the vast reserves we are so rapidly depleting.

Another important plus for me the past year has been the opportunity to work with an invaluable group of dedicated and willing officers and committee chairmen. It does not take long to realize that an organization such as ours does not function of its own inertia, but must be propelled by some capable and experienced hands. It would be most proper to mention specific names but rather than risk omitting a single name, it should suffice to say that no request has been refused, the entire group functioned as a team and the best interests of the Society motivated each man.

In the first issue of our bulletin this year it was stated we hoped to have the Society in as good shape financially as we found it. An examination of the excellent Treasurer's Report filed by Larry Walter in this issue of the News Bulletin shows this to be true after a fashion. However, it should be remembered that the Society faces some fairly large expenditures in the next few months; such as the Spring Barbecue and reproduction costs (Jurassic Cross-Sections). It is anticipated that we will have to go into our savings account before the end of the current year. A check of the Treasurer's Report shows that the Society took in \$2,483.00 in "Meetings" and "contributions" and put out \$3,590.31, leaving a deficit of \$1,107.31. Much of this deficit occurs because many of our previous sponsors have not been able to maintain their contributions at the previous level and the Society has had to make up the difference. This has been rectified to some extent by our new policy during the Hospitality Hour.

Another area in which your Executive Committee feels that a change is needed is that of dues. The Committee strongly recommends that dues be increased to \$10.00 per year. The present dues of \$5.00 can in no way cover but a small portion of the costs of the Spring and Fall Barbecue/Beer meetings. Even at an increased price it is evident that our membership in the Society is a bargain from every viewpoint

More cheerful news is that the Society's publications are still in demand and an increase is forecast. A new supplement of Jurassic Fields will shortly be ready for the market.

(continued on page 2)

MISSISSIPPI GEOLOGICAL SOCIETY

OFFICERS

Larry Boland	President	Harkins & Co.
Charles Barton	1st Vice President	Am-Southwest Corp.
Buddy Twiner	2nd Vice President	Skelly Oil Co.
Dean Kebert	Secretary	Victor P. Smith
Larry Walter	Treasurer	Consultant
John Lancaster	Past President	Chevron

REPRESENTATIVES

Harold Karges	AAPG House of Delegates	Independent
Kevin Cahill	AAPG House of Delegates	Southeastern Exp.
John Lukert	GCAGS	Cities Service

NEWS BULLETIN STAFF

Dave Cate	Editor	Skelly Oil Co.
Harry Fritz	Advertising Mgr.	Gulf Oil Co.
Jim Skeen	Personal News	Schlumberger
Jim McMullen	Statistics	Chevron

PRINTED IN JACKSON, MISSISSIPPI

ABSENTEE BALLOTS AVAILABLE

The Bylaws of the Mississippi Geological Society dictate that the election of officers shall be held at the last regular meeting of the Society before the summer recess. This meeting is always the Spring Barbecue held in May. The Bylaws further provide that if any member cannot be present at the election meeting, he may request and obtain an absentee ballot from the Secretary of the Society to be sealed and returned to the Secretary before the election meeting. The Secretary will in turn deliver the sealed ballots to the Election Judges at the meeting. Therefore, if you cannot be present at the May-23 meeting and desire to vote, please contact Secretary Dean Kebert in care of the Society address or by phone at 601-354-0237 to obtain an absentee ballot.

MISSISSIPPI GEOLOGICAL SOCIETY

Treasurer's Report

June 1, 1971 - April 5, 1972

Income:	
Bulletin Advertising	\$2,075.00
Publications Income	1,554.50
Meetings Income	1,637.50
Contributions (Meetings)	845.50
Dues Collected	<u>1,835.00</u>
Total Income	\$7,947.50
Expenditures:	
Publication Costs	\$1,889.56
Meeting Expense	3,498.84
Secretarial Services	554.30
Postage	398.12
Office Supplies	102.29
Storage & Insurance	141.12
Speaker Expense	227.22
Equipment Rental	91.47
Accounting & Audit	35.00
Bank Service Charges	15.28
G.C.A.G.S. & A.A.P.G.	160.00
Miscellaneous	<u>59.86</u>
Total Expenditures	\$7,173.06
Bank Balance June 1, 1971	\$ 122.90
Income	7,947.50
Total	\$8,070.40
Expenses	<u>7,173.06</u>
Bank Balance April 5, 1972	\$ 897.34
Savings Account	
Balance - June 1, 1971	\$3,903.42
Interest (Jan. 1, 1971 - Dec. 31, 1971)	<u>205.02</u>
Balance - April 5, 1972	\$4,108.44

According to reports by the American Petroleum Institute and the American Gas Association, proved United States reserves at the end of 1971 were 38.1 billion barrels crude oil and 278.8 trillion cubic feet natural gas. The crude total was down 900 million barrels from the total at the end of 1970 and the gas total was off 12 trillion cubic feet from the 1970 total. Crude production during 1971 was 3.3 billion barrels and gas production was 22.1 trillion cubic feet. API President Frank Ikard was quoted as saying that crude reserves in the Lower 48 states are at the lowest point in 20 years and gas reserves are the lowest since 1957.

(REVIEW continued from page 1)

One of the most significant developments of the year has been the formation of a Mississippi Geological Society Cross-Section Committee. A series of approximately eight (8) dip sections is being constructed by various consultants and major oil company representatives. This work should be ready in late Fall for publication and sale by the Society. This should be an important source of income for the future. It should be mentioned that there was a marked interest and willingness to cooperate shown by all those contacted to serve on the Committee.

The Nominating Committee has presented you with an excellent slate of candidates for election. Many other people were contacted for permission to place their names in nomination, but for their own reasons declined. The floor will be open for nominations, however, and the membership should feel free to nominate whomsoever they wish.

In closing, let me again thank the members, officers and various chairmen and members of their committees for making this an enjoyable and rewarding year. My sincere hope is that the Society and the geological profession will thrive and prosper in the coming years.

CANDIDATES FOR AAPG HOUSE OF DELEGATES

AAPG Delegates are elected for two (2) year terms beginning on July 1 following their election. AAPG members of the Mississippi Geological Society are asked to vote for one (1) of the following as Delegate for the Society. The runners-up shall be the Delegate's alternates (first and second alternate determined by the number of votes received) in the event he is unable to fulfill his obligations. The duties of the Delegate are: (1) represent his local society to the AAPG; (2) be familiar with the AAPG's Constitution, Bylaws, current policies and programs; (3) keep the leaders of his Society and his alternates informed as to the AAPG's program of activities; (4) process requests from the Executive Committee regarding eligibility of applicants for AAPG membership; (5) process requests from the Board of Certification regarding applicants for Certification by the AAPG; (6) attend the meetings of the House of Delegates and (7) actively solicit AAPG memberships from eligible geologists.

LARRY BOLAND

Education: Univ. of Kentucky, B.S. 1940; Grad. work 1945-46.
 Employment: USGS 1946-47; Amerada 1947-70; Harkins & Co. 1970-present
 Societies: AAPG (Cert. Pet. Geol.); MGS (1st V.P. 1971; Pres. 1971-72).

ALAN JACKSON

Education: LSU B.S. 1947, M.S. 1951
 Employment: Humble Oil 1951-69; Consultant 1969-present
 Societies: AAPG; MGS (Secretary 1960-61)

HOWARD SAMSEL

Education: UCLA, M.S. 1951
 Employment: Union Oil of Calif. 1951-present
 Societies: AAPG (Cert. Pet. Geol.); Jackson Geophysical; MGS

CANDIDATES FOR PRESIDENT

The duties of the President shall be to preside at all meetings, maintain order, call special meetings subject to the approval of the Board of Directors, appoint all committees, and shall delegate members to represent the Society. He may at his option serve on any committee. He shall, together with the Treasurer, sign all checks, drafts, contracts, and all other obligations of the Society. In the temporary absence of any other officer of the Society, he shall have the power to appoint a member to assume the duties pro tempore.



CHARLES A. BARTON

Education: 1949 B.S., Millsaps College
1952 M.S., University of Illinois

Employment: 1951-53 Continental Oil Company
1953-59 Skelly Oil Co.
1959 - American SW Corporation

Societies: MGS-1959 Editor, News Bulletin
1970-71 2nd Vice President
1971-72 1st Vice President



LARRY E. WALTER, JR.

Education: 1958 B.S. University of Kansas
1959 M.S. University of Kansas

Employment: 1960-68 Pan American
1968-70 Skelly Oil Company
1970 - Consultant

Societies: AAPG Jackson Geophysical MAPL
MGS-1970-71 Secretary
1971-72 Treasurer

CANDIDATES FOR FIRST VICE-PRESIDENT

Shall assume the office of the President in case of a vacancy from any cause in that office, and shall assume the duties of the President in case of the absence or disability of the latter. He shall be at the disposal of the President for any duty necessary to the proper functioning of the Society.



JAMES W. TWINER

Education: 1960 B.S. Mississippi State University

Employment: 1963-68 Chevron Oil Company
1968 - Skelly Oil Company

Societies: Jackson Geophysical
MGS-1969-70 Projectionist
1969-70 News Bulletin Staff
1970-71 Treasurer
1971-72 2nd Vice President



GERALD W. KINSLEY

Education: 1958 B.S. University of Missouri
1960 M.S. University of Missouri

Employment: 1960-70 Texaco, Inc.
1970 Independent Geol.
1970-Lonc Star Prod.

Societies: AAPG MAPL
MGS-1968 GCAGS Conv. Com.

CANDIDATES FOR SECOND VICE-PRESIDENT

Shall be responsible for the maintenance and supervision of the various publications of the Society, and shall organize the necessary committees to properly administer the care, maintenance and revision of the publications necessary to providing current information on various subjects of geologic interest and the keeping of records.



F. DEAN KEBERT

Education: 1954 B.A. University of Missouri
1956 M.S. University of Missouri
Employment: 1956-69 Chevron Oil Company
1969-72 Southwest Gas Prod.
1972- Victor P. Smith
Societies: AAPG Jackson Geophysical
MGS-1969-70 Entertainment Com.
1969-70 News Bulletin Staff
1971-72 Secretary



FRANK A. MURRELL

Education: 1960 B.S. Mississippi State University
Employment: 1960-69 Chevron Oil Company
1969 - Murphy Oil Corporation
Societies: AAPG
MGS-1970-71 Entertainment Com. Chmn.
1971-72 Entertainment Com.

CANDIDATES FOR TREASURER

Shall assume the duties of the President in case of the temporary absence of both the President and First Vice President. He, together with the President shall have charge of the financial affairs of the Society. He shall submit an annual report and inventory at the last meeting before the summer recess, and any other special reports upon the request of the President. He shall receive and disburse all monies; however, expenditures in excess of one hundred dollars shall be made only with the approval of the Board of Directors. During the month of August, the Treasurer shall send statements or notices of dues to all members, except honorary members.



JOSEPH C. FRANKLIN, JR.

Education: 1957 B.S. Millsaps College
Employment: 1957 - Gulf Oil Company
Societies: AAPG Jackson Geophysical
MGS



ELWOOD M. RUHL

Education: 1954 B.A. Michigan State
1961 M.S. Michigan State
Employment: 1961-71 Chevron Oil Company
1971 - Southeastern Exploration
Societies: MGS

CANDIDATES FOR SECRETARY

Shall assume the duties of the President in case of the temporary absence of all the other officers, except the Second Vice President. It shall be the duty of the Secretary to fully and permanently record the minutes of all the meetings of the Society and all meetings of the Board of Directors. He shall prepare and distribute by mail not later than October 15 a membership list and a list of committee assignments. It shall be his duty to prepare and keep in his possession at every meeting a copy of the Bylaws with all amendments thereto. He shall be responsible for all secretarial duties connected with affairs of the Society. He shall prepare all ballots and papers necessary to any Society election.



DAVID CATE

Education: 1960 B.S. University of Arkansas
1962 M.S. University of Arkansas

Employment: 1961-66 Texaco, Inc.
1966 – Skelly Oil Company

Societies: AAPG
MGS-1970-71 Associate Editor News Bulletin
1971-72 Editor, News Bulletin



RILEY HAGAN, JR.

Education: 1959 B.S. University of Texas

Employment: 1959-71 United Prod. Company
1971 – Clement & Stover

Societies: AAPG API Shreveport Geol. Soc. MGS

* * * * *

GEOLOGISTS CAN BE PROS

From time to time, we have reprinted articles from other publications which we feel have a pertinent message concerning the geological profession and/or oil industry in general. The following was written by Frank Crawford, President of the New Orleans Geological Society, and is one of the best we've seen. Geologists, company and independent alike, will do well to read this article carefully and thoughtfully. Their management or clients and investors should too.

— Editor

* * *

Last month in this column, the Society's First Vice President wrote a very fine thought provoking article on change in our local geological profession and exhorted our members to become pros. I would like to continue this dialogue but in a different vein and from a different standpoint.

I agree that our petroleum province is in its mature stages of development and that CHANGE must come but the change does not necessarily mean that the petroleum geologist must change to non-petroleum fields. He can change to a professional in petroleum geology and have a long, rewarding future even here in a maturing province.

I feel I can speak with some authority on mature provinces having spent most of my early career in the Ark-La-Tex Area. An area is usually considered "mature" when traps for hydrocarbons are no longer easily found with the seismograph. North Louisiana and South Arkansas were already "mature" when I got there over 20 years ago and by the 1960's these areas were so mature they were "over-ripe".

What has happened in the last few years in this mature province? First off a lot of petroleum geologists, majors and independents, gave up and went into other fields of endeavor. A few hung in there and did some badly needed sound thinking and subsurface work. This effort resulted in

the discovery of additional fields, two of which are Black Lake and Walker Creek.

Black Lake Field, Natchitoches Parish, Louisiana is a porosity pinchout in the Sligo formation. Reflection seismograph had condemned the area as a structural closure. Subsurface data from scattered dry holes indicated the presence of the stratigraphic trap and the discovery well was located on the basis of subsurface geological work. Discovered in 1964, this field had reserves of 121 million barrels of liquids and 669 billion cubic feet of gas. Gross income will exceed \$500,000,000. Not bad for a mature province.

You cannot find a petroleum province more mature than South Arkansas. Twenty-five years ago, the geological profession knew all about the Smackover formation in southern Arkansas. Every country lane, pasture or pine thicket had been crossed with flags and shooting truck ruts. Everyone, save a few hardworking subsurface geologists, knew that there could not be an undiscovered, good Smackover field left in the state of Arkansas. The discovery well of the Walker Creek Field, Lafayette County, was drilled in 1968 in an area that was on regional south dip and in an area that the "experts" knew to be barren of Smackover porosity. Walker Creek is a porosity trap in the upper Smackover. Four years after discovery, the field is 10 miles long, 1½ miles wide and still open on both ends. Proven reserves exceed 25 million barrels. The "Walker Creek Trend" is now one of the hottest plays in the Gulf Coast with most of the majors leading the way.

In the maturing province of onshore South Louisiana we all know of several stratigraphic traps of substantial size with significant reserves. But the search for stratigraphic traps is not our only future. Many undetected structural traps with significant reserves remain also. In recent months I have been associated with the drilling of two wells that extended a field in the Miocene Trend. These wells were located strictly on basic subsurface work; migrating a fault and locating the wells such that the

(continued next page)

(GEOLOGISTS continued)

prospective sands would be encountered in optimum position upthrown to the fault. In other words, "sharpshooting" a small target. This small target has added over 100 billion cubic feet of gas to this small, in areal extent, field. If you do not think 100MMM e.f. of undedicated gas is significant in this mature province, check with one of the gas purchasers.

There are several other examples of recent successful exploration efforts in this province that could be listed. The point is the importance of maintaining an open mind toward the mature province. Someone once said, "where there is an open mind there will always be a frontier." This is particularly true for the petroleum geologist.

In 1956, a major company executive informed his exploration personnel that all of the major reserves in onshore South Louisiana had already been found—none were left. This company had been fairly successful in South Louisiana up to that time. Sure enough, since that date this company has not found any additional reserves onshore, major or minor, even though they continued to maintain a large, but dispirited and disgruntled exploration staff. For these petroleum geologists this region became a mature province 16 years ago and they ceased to work at their profession.

In the early 1960's another major company with substantial production in Mississippi decided that province was so mature that they stored all geological files, maps, logs, seis data, etc. pertaining to Miss.-Ala.-Fla. in a warehouse in a distant city. This company does not have one barrel of production in the Jurassic Trend. At one time the company had extensive leaseholds in Clarke County, Miss., Escambia County, Ala. and Santa Rosa County, Florida.

Some years ago, shortly after I went into the independent field, a friend who had had some success in South Louisiana informed me that I was taking the wrong approach to the independent business in trying to solve the geology of this province. He held that the only hope in finding reserves was by promoting volume drilling and trusting to luck. I insisted on being a geologist first and a promoter second. He could have been right in that what production I have found has been about equally divided between correct geology and luck and more holes might have resulted in more production. Nevertheless, I am more convinced than ever that the objective of the petroleum geologist in this mature province

must be the recognition of traps through the use and projection of subsurface data. I have found that the harder I work the luckier I get.

As an independent, I look at many deals, company farmouts and joint interest projects. In addition, I work on ideas and prospects that I originate. Selected prospects and deals are then submitted to clients and investors. At no time in recent years have prospects based on sound geology been in greater demand by major company management or the independent investor. At no time has the petroleum geologist had more opportunity to practice his profession than now, as a major company employee or as an independent. Unfortunately much of the work is incomplete and of poor quality. It is in the mature province that the petroleum geologist, deciphering the subsurface geology, is of the greatest value. But he must learn to "sharpshoot", gather and use all of the information available, including seismic data. The days of "shotgunning" are over—volume drilling and weak subsurface "leads" used as an excuse to get a seis survey with the hope that something will turn up.

Working the subsurface geology in our mature province requires some dedication, discipline, and competence. It is time consuming and often quite tedious for we are dealing in three dimensions. Preoccupation with coffee breaks, bull sessions, car pools, etc. won't get the job done. Neither will bitching about the boss or the lack of "easy" drilling money. As Sherm Wengard, AAPG President has said, "A person becomes a professional when he looks forward more to completion of a project than he does to 5 o'clock quitting time."

I join our First Vice President in calling for our members to be pros. Pros can play in any league, but we still have a petroleum league in which to play. The professional petroleum geologist can and will succeed in the frontier or the mature province. The other will fall by the wayside.

. . . ; "And therefore never send to know for whom the bell tolls; It tolls for thee."

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FORTENBERY DRILLING COMPANY, INC.	
Drilling Contractor P. O. Box 430 Natchez, Miss. 445-5568	
LESTER & WITCHER ABSTRACT CO.	
P. O. Drawer 1730 Jackson, Miss.	
DRESSER-MAGCOBAR	
Jackson, Mississippi	948-5511
AMERICA SOUTHWEST CORP.	
Box 936, Jackson, Miss. 354-2513 Gulf Coast Drilling & Exploration	
CHAMPLIN PETROLEUM COMPANY	
Suite 212 New Orleans, Louisiana	225 Baronne St. 851-3660

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