

NEWS

BULLETIN

mississippi geological society



VOLUME XIII
Number 1

SEPTEMBER, 1965

M G S E X E C U T I V E C O M M I T T E E

President	Sankey L. Blanton	Sun Oil Company
Vice President	Alan Jackson	Humble Oil & Ref. Co.
Secretary	S. W. Welch	Independent Geologist
Treasurer	W. A. Albright	The California Company
Past President	J. F. Bollman	Larco Drilling Corp.

1 9 6 5 - 6 C O M M I T T E E C H A I R M E N

Program	R. A. Worrell	Gulf Oil Corp.
Publications	J. S. Lancaster	The California Co.
Entertainment	J. M. Ridgway	Ridgway Management
News Bulletin	W. M. Frew	Continental Oil Co.
Nomenclature	E. B. Launius	Independent Geologist
Red Book Supplement	J. F. Fritz	Independent Geologist

A A P G D I S T R I C T R E P R E S E N T A T I V E S

Term Expires 1967.	D. C. Gifford	Marr Company
Term Expires 1967.	M. L. Oxley	Lone Star Producing Co.
Term Expires 1966.	W. D. Lynch	The California Co.

Fellow Members,

This year we will do everything we can to perk up our interest in geology. We will have the best speakers our science has to offer, a comprehensive program of field trips and study groups, and good fellowship.

Your officers and executive committee invite you to professionalize and we will do our best to make it pleasant.

Sincerely,

Sankey L. Blanton, Jr.

SEPTEMBER MONTHLY MEETING

"CERTIFICATION"

by

Dr. Grover E. Murray
Past President A.A.P.G.

On: Wednesday, September 22nd

At: Primos #3 (Near Sears)

Time: Dinner 6:30 P.M.

Price: Dinner \$3.00

For reservations, call Julius Ridgway before noon on Wednesday, 22nd, - FL 3-8349

The 1965-66 year of the Society opens with a discussion by Dr. Grover Murray, on the most controversial action undertaken by the A.A.P.G. in recent years. Most geologists have definite thoughts as to the value of certification to them, and these thoughts are usually widely divergent between individuals.

The geologists in favor of certification may consider it an additional manifestation of technical proficiency. Geologists against certification may either see no advantage in regards to their professional ambitions, or fear the development of a superior class of membership within the national society.

Major company management, neutral to date, might encourage certification because it gives them an additional line of recourse in cases of ethical malpractice. Some advantages may also accrue to a company by having "certified" company geologists testify in legal procedures.

The Executive Committee of the American Association of Petroleum Geologists has initiated a cross reference screening procedure with the A.I.P.G. to more fully verify an applicant's qualifications. Now, this certification procedural contact with A.I.P.G. has further irritated some geologists within a neighboring society. Last month our society received a copy of the following telegram:

Presidents and Representatives
AAPG Affiliated Geological Societies

Gentlemen:

I have been asked to forward this to you for your information. This is a copy of a telegram that was sent to the Executive Committee of the American Association of Petroleum Geologists.

"THE OFFICERS AND AAPG REPRESENTATIVES OF THE DALLAS GEOLOGICAL SOCIETY, MEETING IN EXECUTIVE SESSION, ON THIS THE SECOND DAY OF AUGUST, 1965, COMPOSED AND TRANSMIT THE FOLLOWING:

"THE EXECUTIVE COMMITTEE AND AAPG REPRESENTATIVES OF THE DALLAS GEOLOGICAL SOCIETY FEEL THAT THE EXECUTIVE COMMITTEE OF THE AAPG HAS MADE A BREACH OF FAITH WITH ITS MEMBERSHIP IN EXECUTING A CONTRACT FOR THE SCREENING OF CERTIFICATION APPLICANTS WITH AIPG. WE RECOMMEND THAT THE EXECUTIVE COMMITTEE RECONSIDER ITS DECISION AND PLACE THIS SUBJECT ON THE AGENDA OF THE AAPG BUSINESS COMMITTEE AT THE FIRST OPPORTUNITY. FURTHER, THE PRESENT AAPG SCREENING PROGRAM SHOULD BE CONTINUED UNTIL SUCH ACTION HAS BEEN CONSUMMATED."

D. A. Zimmerman, Secretary
Dallas Geological Society

To which our President replied:

Executive Committee
Dallas Geological Society
Box 2867
Dallas 21, Texas

Gentlemen:

The Executive Committee of the Mississippi Geological Society directs me to express concern over your telegram to the A.A.P.G. Executive Committee of August 3, 1965.

We believe that the Executive Committee was acting within its prerogatives, and since we strongly supported the election of Dr. Murray, we have every confidence in his and the rest of the Executive Committee's motives.

We are intensely interested in certification and have invited Dr. Murray to discuss the entire matter at our September 22 meeting in Jackson, Mississippi.

We would like to invite your representatives and any interested member of your society to join us in listening to Dr. Murray's discussion of certification.

Respectfully,

Sankey L. Blanton, Jr.
President, Mississippi Geological Society

So come on out to Primos #3 on Wednesday, 22nd and watch for the fireworks.

PROGRAMS TO COME

In keeping with the theme of "the best speakers our science has to offer," the Program Committee has sought out speakers of wide acclaim. Several of the speakers who will be with us later in the year will be:

Michel T. Halbouty - on an A.A.P.G. distinguished lecture tour.

John Maher, U.S.G.S. - "Offshore oil potential of the Atlantic Coastal Plain and Eastern Gulf Coast"

Dudley Hughes - "Statistics of oil finding in Mississippi"

Clarence Durham, L.S.U. - "Gulf basin tectonics"

A tentative major company speaker on "The Cotton Valley of Louisiana and Mississippi"

A tentative speaker from the Jet Propulsion Laboration

A handshake for Roy Worrell and Marve Horton of the Program Committee.

RECENT TRANSFERS

The California Co.

R. D. Beu, District Geologist, from Lafayette
R. M. White, District Geologist, to San Francisco
Owen Schooler, to Perth, Australia

Gulf Oil Co.

L. L. Kincade, geologist, to Morgan City

Mobil Oil Co.

Clermont H. Bruce, Senior geologist, to Corpus Christi

Pan American

Geologists, to the four winds in June, but mostly south to New Orleans

Skelly

Jim White, geologist, formerly with Sinclair in Jackson

Texaco

Lyle Case, District Geologist, from Ardmore, Oklahoma
Lynn Shannon, geologist, from Shreveport
S. D. Howery, geologist, from Shreveport
Shelby King, geologist, from Dallas

Union Producing Co.

B. C. Tucker, Exploration Manager, from Shreveport
Gary Parrish, geologist, from Monroe
T. A. Chandler, geological scout, from Tyler

OBITUARY

D. J. Munroe, Sr., retired District Geologist with Sun Oil Company in Tallahassee Florida, passed away September 1st.

NEW MISSISSIPPI STATE GEOLOGIST

William H. Moore, a graduate of Millsaps College, has been appointed Director and State Geologist of the Mississippi Geological Survey, replacing F. F. Mellen, resigned. Moore, who has been acting director since May 20, holds a masters degree in geology from Emory University.

FIELD TRIP NOTICE

ATLANTIC COASTAL PLAIN GEOLOGICAL ASSOCIATION
Sixth Annual Field Conference
Friday and Saturday, October 8-9, 1965

TERRACE SEDIMENT COMPLEXES IN CENTRAL SOUTH CAROLINA

Led By

D. J. Colquhoun
University of South Carolina

Henry S. Johnson, Jr. State Geologist
South Carolina State Development Board

The Coastal Plain of South Carolina possesses a series of well developed terraces and scarps south of the Congaree-Santee River system. Excellent outcrops are common in the vicinity of the higher terraces. A few meaningful outcrops are present in the vicinity of the lower. Many holes have been drilled and samples collected in order to examine the latter. The trip will include an examination of the physiographic terraces, facies changes, sedimentary structures, fossils, and environment of deposition.

Cost: Bus, hotel at Charleston, two box lunches, dinner and guidebook - \$25.00. Make your own reservation in Columbia for the night of the 7th, and if desirable the 9th. Inquire about Tremont Motel reservations.

Reservation: The trip is based on an expected attendance of 60 people. If you wish to participate, it will be necessary to mail a deposit of \$20.00 for each participant to:

D. J. Colquhoun, Department of Geology, University of South Carolina,
Columbia, South Carolina 29208

In order to confirm our commitments, we have to set a deadline. This is why we must ask you to send your reservation and check by September 20.

A final circular will be sent only to those who reply to the first circular by September 20.

A REMINDER - IF YOU HAVE NOT PAID YOUR 1965-1966 DUES, YOU MAY DO SO AT THE
SEPTEMBER 22ND MEETING.

Mississippi Geological Society
P. O. Box 422
Jackson, Mississippi



Mr. Stewart W. Welch
707 Vincent Bldg.
Jackson, Mississippi

NEWS

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mississippi geological society



VOLUME XIII
Number 2

OCTOBER, 1965

M G S E X E C U T I V E C O M M I T T E E

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Vice President	Alan Jackson	Humble Oil & Ref. Co.
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Treasurer	W. A. Albright	The California Company
Past President	J. F. Bollman	Larco Drilling Corp.

1 9 6 5 - 6 6 C O M M I T T E E C H A I R M E N

Program	R. A. Worrell	Gulf Oil Corporation
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Term Expires 1967	D. C. Gifford	Marr Company
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Term Expires 1966	W. D. Lynch	The California Company

OCTOBER MONTHLY MEETING

"STATISTICS OF OIL PRODUCTION IN MISSISSIPPI"

by

DUDLEY HUGHES

When: Tuesday, October 12th Where: King Edward Hotel

Time: Social - 6:00 PM Price: \$2.75
Dinner - 7:00 PM

For Reservations call Riley Hagen before noon on Tuesday,

October 12th - FL4-1671

PAY YOUR 1965-66 DUES TO HELP SUPPORT THIS YEAR'S OUTSTANDING PROGRAM OF SPEAKERS.

W A N T E D: OUT-OF-TOWN CORRESPONDENTS FOR THE NEWS BULLETIN

The September meeting with Dr. Grover E. Murray, Past President of A.A.P.G., was the most enthusiastic in recent years. Dr. Murray discussed many aspects of the history and problems involved with certification which were entirely new to the local membership. The paid attendance was 67, and approximately two-thirds remained until after 10:00 PM for a lengthy question and answer period.

This was probably the first geological dinner meeting in history that was disbanded at the request of the proprietor because of the late hour.

FUTURE MEETINGS:

Keep the evening of NOVEMBER 9th free for MICHEL T. HALBOUTY'S A.A.P.G. distinguished lecture on "Professionalism."

- More about this program in the next Bulletin.

A joint meeting of the M.G.S. and the Geophysical Society has been scheduled on NOVEMBER 29TH. The speaker will be DR. ALBERT MISSIN of the U.S.G.S., who will present a talk on the Alaska Earthquake of 1963. His slides are supposed to be the best available from U.S.G.S. files.

- More about this program later.

The program committee has just received a commitment from the Jet Propulsion Laboratory to supply their best speaker for a date in FEBRUARY.

The proposed subject will be a briefing on the United States Planetary Exploration Program with an emphasis on the final report of the flight of Mariner 4.

- More about this program later.

Two new features will appear in the next Bulletin:

1. Notable News from Neighboring Societies.

2. Did You Know That.....

Mississippi Geological Society
P. O. Box 422
Jackson, Mississippi

Mr. Stewart W. Welch
707 Vincent Bldg.
Jackson, Mississippi



NEWS BULLETIN



Mississippi Geological Society

VOLUME XIII
Number 3

NOVEMBER, 1965

M G S E X E C U T I V E C O M M I T T E E

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Vice PresidentAlan JacksonHumble Oil & Ref. Co.
SecretaryS. W. WelchIndependent Geologist
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A A P G D I S T R I C T R E P R E S E N T A T I V E S

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Term Expires 1967M. L. OxleyLone Star Producing Co.
Term Expires 1966W. D. LynchThe California Co.

NOVEMBER MEETING

"ECONOMICS - THE NEW DIMENSION IN GEOLOGICAL THINKING"
by
MICHEL T. HALBOUTY

When: Tuesday, November 9th Where: King Edward Hotel
Time: Social 5:30 PM (Free!) Price: \$3.00
 Dinner 6:30 PM

FOR RESERVATIONS: Call Riley Hagen before noon on Tuesday,
November 9th - FL 4-1671

Mississippi Geophysical Society - Mississippi Geological Society
Joint Meeting - November 29

"THE ALASKA EARTHQUAKE OF MARCH 27, 1964"
by

Dr. S. L. Algermissen, USC & GS
(see following article)

Where: Kings Inn Time: Social 5:30 PM
Price: \$3.00 Dinner 6:30 PM
 Lecture 7:30 PM

FOR RESERVATIONS: Call Riley Hagen before noon on Friday,
November 29th - FL 4-1671

Michel T. Halbouty, presidential nominee of AAPG for 1966, is probably the best and most widely known spokesman of the petroleum industry. His appearance in Jackson as an American Association of Petroleum Geologists Distinguished Lecturer will most certainly be memorable.

Lecture Abstract

The current problems of expensive exploration, imports, overcapacity in production and refining, and the continued loss of investment capital through increased government control have brought about reduced margins of profits and steady declines in drilling, discoveries, reserves and employment to the United States petroleum industry in recent years. The average petroleum geologist knows little about these matters. He has limited his interest to geology--period! The geologist has not concerned himself with these complexities and, therefore, knows very little of the many difficulties the petroleum industry continually faces.

The geologist must come out of hibernation and look at the industry as a whole. His knowledge must expand beyond his own science. He has to broaden his thinking into the area of economics more than ever before. The geologist must keep up with the changes in every phase of the industry.

The geologist must look outward--not just straight ahead but in all directions. He must be aware of what is happening in today's new technology, the ever-changing economic conditions, new political concepts, the intense fuel competition, world petroleum outlook and world markets--but above all, he must learn what significance all of these things have on his industry, his company and on his own future as an explorationist.

The geologist should realize that the petroleum industry must prosper within all of its phases if he, himself, is to prosper. He, therefore, must take a more direct and positive interest in the four dominant problems which constantly confront the industry: geological, technological, economic and political. The geologist has an inherent knowledge of the first, knows a little about the second and is completely oblivious of the third and fourth. To become more effective as an explorer or developer he must become more involved and astute in all of these challenges.

The economic factor is the most important to management, therefore, the geologist must begin to make economics the new dimension in his geological thinking. The growing pressure on management to produce profits demands that the geologist prepare a comprehensive economic assessment of his exploratory planning, efforts, and recommendations. Such appraisals will surely sharpen and upgrade the exploratory effort and will do much toward bringing about greater success in the explorer's search for petroleum to meet the demands of the future.

The lecture is illustrated with colored slides.

Dr. S. T. Algermissen received a B.S. degree in geology from the Missouri School of Mines in 1953. From 1954 to 1957 he did graduate work in geophysics at St. Louis University and Washington University, receiving a M.A. in 1955 and a Ph. D. in 1957 from Washington University, St. Louis, Missouri.

Upon graduation, he was employed by Sinclair Research Laboratories, Inc. as a Project Engineer. He joined the staff of the University of Utah as Assistant Professor of Geophysics in the fall of 1959. Dr. Algermissen has been Chief of the Data Analyses and Research Branch, Seismology Division, U. S. Coast and Geodetic Survey for the past two years. He is presently on a Society of Exploration Geophysicists Distinguished Lecturer tour.

"THE ALASKA EARTHQUAKE OF MARCH 27, 1964"

"The earthquake of magnitude 8.4 that occurred in Prince William Sound at 5:35 p.m. March 27, 1964, created havoc in Anchorage and other south-central Alaskan cities and ranks as one of the world's great earthquakes. The earthquake induced landslides, vibration damage, and seismic sea wave caused losses in excess of \$500,000,000. The extent and nature of this damage will be reviewed and illustrated. Crustal uplift exceeded 40 feet and subsidence was greater than 6 feet. Contour maps on this movement have been prepared, based on the tide gauges and shoreline studies. Six aftershocks greater than magnitude 6.0 occurred within ten hours following the main shock. Over one thousand aftershocks have been located by the Coast and Geodetic Survey in a belt 150 miles wide by 500 miles long. The distribution of these aftershocks, the nature of the faulting in the main shock and major aftershocks, and the strain release

characteristics of the aftershock sequence have been related to the Geodetic control established after the earthquake and will be reviewed in some detail. A mechanism for the earthquake and its aftershocks has been derived."

1965 - 1966 DUES ARE DELINQUENT

YOU CAN ASSURE THE SUCCESS OF THE OUTSTANDING PROGRAM OF SPEAKERS PREPARED FOR THIS YEAR BY MAILING YOUR 1965 - 66 DUES IMMEDIATELY.

M E M O R A N D U M

To: Presidents of Sections of the Association and
Presidents of Affiliated and Cooperating Societies

From: Gordon I. Atwater and Michel T. Halbouty

Subject: A.A.P.G. Presidential Election 1966-67

In an effort to keep the forthcoming election out of the realm of politics and maintain it as the thoughtful and dignified procedure which it ideally should be, we, as nominees for the presidency of the American Association of Petroleum Geologists, for 1966, respectfully request that all members, societies, sections, and organizations, refrain from any mass mailings on our behalf either to the membership at large, or to alumni or other groups.

We sincerely trust that you not only read this letter in your membership meetings, but also publish it in your bulletins or periodicals.

SOCIETY AFFAIRS

A number of complaints have been received by the society leadership this fall concerning the lack of "spirit" during the social hour which precedes each monthly dinner meeting. The reason for the lack of refreshments is economic, although the complainers generally fail to also acknowledge the current law enforcement climate in Jackson in regards to this subject.

During the past several years, we have been without industrial sponsors for the social hours and the expense has been borne by the society. The cost has been covered in part by a modest drink donation, in part by a small increase in the price of the dinner (which decreases attendance), and in large part by the treasury.

Primary source of society income is membership dues. Paid membership to date is approximately 230. Membership last year was 260, and three years ago it was 405. The decline is primarily due to several large geological staffs being moved out of Jackson. Even with the dues increase, the dues income for this year is less than for recent years.

It becomes readily apparent that the limited resources of our society cannot support the cost of social hours, comparable to past years, and also provide the membership with high calibre after-dinner speakers.

Please consider a portion of ARTICLE II - OBJECTS, of our society constitution:

"The objects of this society are: (1) the stimulation of interest in geology and related sciences; (2) the encouragement of scientific research among members; (3) the promotion of social and professional fellowship among members; (4) the dissemination and discussion of geological information; (5)....."

Since the primary purpose of the society is to stimulate interest in geology and related sciences, as well as social fellowship, the decision was made during this past summer to devote the resources of our organization to acquiring quality speakers. These men are generally from out-of-state, and their expenses incurred while traveling to and from Jackson are reimbursed by the society.

There are a considerable number of geologists in Mississippi who are not members of the society. These men and women generally feel that the society does not offer them sufficient professional and intellectual stimulation. The up-grading of our program this year, at considerable expense, is a necessary attempt to attract new members in order to bolster our rapidly declining membership roll.

In short, gentlemen, if you desire either or both of the very necessary sophisticated program of speakers for this year and social hours of former opulence, get out and beat the bushes for new members so we can better afford both aspects of our professional organization.

In immediate response to the hue and cry, the Executive Committee is investigating several avenues leading to renewed serving of refreshments during the social hour. Among the considerations involved are incorporation of the society to protect the officers and individual members from potential legal complications, and re-establishment of sponsored social hours.

This entire subject will probably be discussed to a much greater degree during a forthcoming business meeting.

W. M. F.

NOTABLE NEWS FROM NEIGHBORING SOCIETIES

NEW ORLEANS

N.O.G.S. set a membership record in 1965 with a total of 803 members. Twenty per cent of the present membership were enrolled for the first time this year.

CORPUS CHRISTI

For the past two years the Education Committee of the Corpus Christi Geological Society has given lectures on earth science to teacher and student groups in the Corpus Christi Public School System.

A four-hour work shop was conducted last August for 30 Corpus Christi school teachers. These teachers were later taken on a field trip which included visits to an oil field where the basic geology of the field was discussed, and a gravel pit where vertebrate bones were collected.

Mr. Stewart W. Welch
707 Vincent Bldg.
Jackson, Mississippi

MISSISSIPPI GEOLOGICAL SOCIETY
P. O. Box 422
Jackson, Mississippi



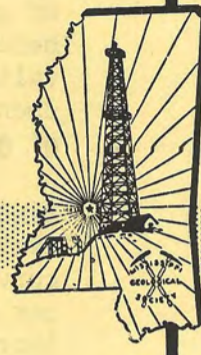
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NEWS

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mississippi geological society



VOLUME XIII
Number 4

DECEMBER, 1965

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1 9 6 5 - 6 C O M M I T T E E C H A I R M E N

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DECEMBER MEETING

"THE EFFECT OF DECREASE IN POROSITY WITH DEPTH ON OIL
AND GAS RESERVES IN SANDSTONE RESERVOIRS"

by

DR. GORDON I. ATWATER
A.A.P.G. DISTINGUISHED LECTURE TOUR

<u>When:</u> Monday December 13th	<u>Where:</u> King Edward Hotel
<u>Time:</u> Social 5:30	
Dinner 6:30 - Lecture 7:30	<u>Price:</u> \$3.00

For Dinner Reservations: Call Julius Ridgway before noon on
Monday, December 13th - 353-8349.

Dr. Atwater's paper was given before the annual A.A.P.G. meeting in New Orleans this past spring and won the Matson Award as the outstanding paper presented during the convention. Because of the many favorable comments about this paper, Dr. Atwater consented to join the A.A.P.G.'s Distinguished Lecture Tour.

Dr. Atwater was born in Wisconsin and holds a B.A. in Economics and a M.S. in Geology from the University of Iowa. He later received a Ph.D. in Geology from the University of Wisconsin. His professional experience was gained during employment as a geologist by Amerada, Skelly, and William Helis, prior to becoming a consulting geologist in New Orleans in 1946. He is presently presidential nominee of A.A.P.G. for 1966-67.

ABSTRACT

THE EFFECT OF DECREASE IN POROSITY WITH DEPTH ON OIL AND GAS
RESERVES IN SANDSTONE RESERVOIRS

Geologists and engineers have frequently made the premise that the amount of gas in place per unit volume increases as greater depths are penetrated, because of the attendant higher reservoir pressures. In order to test the validity of this premise, a study was made of the effect of depth of burial upon the other variables in the standard formula used to calculate the amount of oil and gas in place.

Sandstone porosity data were obtained for more than 17,000 samples of conventional cores, including samples from 101 fields of South Louisiana. A curve constructed from these data demonstrates that the amount of void space per unit volume available for the accumulation of oil and gas decreases with increasing depth. This decrease in porosity, 1.285 per cent of total volume per 1,000 feet of burial, is the most important single factor controlling the amount of oil or gas in place per unit volume of sandstone reservoir rock. Exploration and development management should be conscious of the diminishing returns to be anticipated as greater depths are explored.

Porosities associated with abnormally pressured reservoirs were studied, as was the incidence of abnormally pressured reservoirs in South Louisiana as a function of depth burial. The porosities of the abnormally pressured reservoirs, averaged by 1,000 foot depth increments, fit a straight line plot of porosities from all reservoirs.

It appears to be a reasonable hypothesis that the observed decrease in sandstone porosities with depth provides the mechanism creating the abnormal pressures so frequently encountered in oil and gas reservoirs of South Louisiana.

SOCIETY AFFAIRS

W. A. Albright, treasurer of the Mississippi Geological Society, was recently transferred to New Orleans. The Nominating Committee has nominated Joe Carl and Dean Kebert, both with Chevron, to stand for a special election to fill the vacancy. Additional nominations will be asked for at the December 13th meeting.

LETTER FROM THE PRESIDENT

The A.A.P.G. is developing the mechanism to sponsor educational seminars for all member societies. Of course we would bear the expenses of such a venture. However, it would be tailored to fit our needs; all good, up-to-date information with no filler and no snow.

Quite frankly, the executive committee needs a realistic expression of how you feel. There is a society officer within talking distance almost everywhere.

If you missed Halbouty, you cheated yourself. The refreshments were free, the group congenial, and the speaker had a meaningful, well delivered message. Gordon Atwater should be as good, and the topic just as pertinent. If you can't come early - make the talk, vitalize your job a little. The alternative is not altogether the fault of the organization you work for.

Sankey L. Blanton

NOTABLE NEWS FROM NEIGHBORING SOCIETIES

NEW ORLEANS GEOLOGICAL SOCIETY ANNOUNCES LATEST PUBLICATION

Informed sources recently revealed that the latest publication of the NOGS, two years in the making, is now available to the public. "Oil and Gas Fields of Southeast Louisiana," the pride and joy of many hours of devotion by the committee pledged to its completion, is the first of at least two volumes eventually planned.

Incorporated in Volume I are 32 articles covering 39 fields. Included are structure maps, type logs and cross sections. Data sheets provide information such as geology, well data, production, and reserves.

Don't be that 10% that never gets the word! Cut out the order blank below and avail yourself of this valuable contribution to the geological profession.

NEW ORLEANS GEOLOGICAL SOCIETY
P.O. BOX 52172
NEW ORLEANS, LOUISIANA 70150

Please send _____ copies of "Oil and Gas Fields of Southeast Louisiana"
@ \$10.00 per copy.

Name _____
Company _____
Address _____

ALABAMA GEOLOGICAL SOCIETY

Third Annual Field Trip
December 3 & 4, 1965

"Structural Development of the Southernmost Appalachians"

Chronology of the major structural events in the southern Appalachians during the Paleozoic Era will be emphasized by interpretation of those aspects of Paleozoic stratigraphy which bear upon the problem. Interpretations of, and problems relative to, unconformities, polymictic conglomerates, slump structures, and facies trends served as focal points for the trip.

Unfortunately, notice of this trip was received after the November News Bulletin went to press.

Separate copies of the guidebook may be available from William A. Thomas, Department of Geology, Birmingham-Southern College, Birmingham, Alabama.

PETITION PRESENTED TO GOVERNOR JOHNSON

On October 20, 1965, a petition was presented to Governor Paul B. Johnson bearing over 1000 signatures, requesting that he recommend to the 1966 regular Legislative Session the appropriation of funds for the building of an adequate Mississippi Geological Survey Building and for proper staffing of the Department. The petition was presented by a group composed of John Callon, President, Mississippi-Alabama Division, Midcontinent Oil & Gas Association; Sankey Blanton, President, Mississippi Geological Society; Jim Mitchell, President and Tom Tillman, Committee Chairman, Jackson Geophysical Society; Bob Schabillion, President, Mississippi Gem & Mineral Society; Fred Mellen, Certified Professional Geologist; and Ben Chase Callon, Independent.

Previously, the objectives of the petition had been approved by resolutions of the organizations represented at the meeting with the Governor. The petition was presented in a handsome black leather notebook containing about 75 pages of signatures, letters to the Governor, copies of resolutions, and photographs of new geological survey buildings of other states. At least 275 geologists, 25 geophysicists, 25 engineers, 100 oil operators and brokers, 100 lawyers, 70 bankers and 11 drilling contractors signed the petition.

The Governor was told:

"The people who have joined in the signing of this Petition know that the Mississippi Geological Survey is under-staffed, under-financed, inadequately housed, and not in a position to receive a vast amount of information which is being destroyed annually by exploration companies through the lack of a satisfactory repository. Such a repository would require a high-caliber professional service to insure that donated geological and geophysical records would be used only for the benefit of the Public.

The Mississippi Geological Survey through its findings in the past has contributed many hundreds of millions of dollars to the State's economy, and we are of the opinion that the Survey needs to be strengthened, its work intensified and the results of its work made available through the channels of publication to those of industry who can make the most of these studies.

We respectfully recommend your careful study of this Petition and assure you of our interest in working with you for the welfare and proper development of the mineral natural resources of our State."

The Governor responded that "Geology is hard to sell to the Public," but that he would take the petition and study it and then see what he could do.

The presenting of a petition is not enough. It must be made clear to members of the State's Administration, to members of the Legislature, and to influential citizens that a State Geological Survey can be and should be the strong right arm to commercial geological research and mineral resource development; that Mississippi can vastly improve its competitive position among the states of the nation simply by giving adequate support to its Mississippi Geological Survey.

Incidentally, the Mississippi Geological Survey was set up by the Legislature in 1850 - 29 years before the U. S. G. S. was commissioned - and is one of the oldest Surveys in the Nation. Despite this it has received over the 115-year period less than \$1.5 million; even with this meagre amount (see M.G.S. Bul. 100, "Mississippi Geological Survey - a Centennial"), it has been one of the most productive departments of Mississippi or of any other state.

Therefore, as geologists or as workers with geological data, we should stand together and let our voices be heard as one so that the Administration and the Legislature will receive the message distinctly. This movement, now that it has been initiated, should be followed up on an individual basis through personal contacts with Legislators and those of administrative influence in State Government. A.A.P.G. is seeking support of Geology from the President of the United States for its 50th Anniversary program. Surely, if the one Johnson can come to the support of our Noble Science, the other should do no less.

F. F. Mellen

TRANSFERS AND ADDITIONS

CHEVRON

- W. A. Albright, geologist, transferred to New Orleans as Lead Geologist, Delta Division
G. B. Vockroth, Lead Development Geologist, transferred to New Orleans as a geophysicist.
W. B. Alexander, geologist, new employee from University of Oklahoma.
W. S. Williams, geologist, new employee from University of Colorado.
W. M. Whiting, geologist, new employee from Michigan State University.

MISSISSIPPI GEOLOGICAL SURVEY

- T. Dinkins, geologist, formerly with Trowbridge Sample Service, is now associated with the State Survey.

MOBIL

- R. D. Miller, geologist, transferred from Dallas
-

DID YOU KNOW THAT.....

In 1960, the Mississippi Geological Society had 361 members, of which 136 are still listed on the 1965-66 membership list accompanying this issue of the Bulletin.

In November, 1965, the Mississippi Geological Society had 263 members -- let's promote membership.

There are seven Mississippi geologists listed in the charter membership roster of the American Institute of Professional Geologists. Yet, only three of these geologists are members of the Mississippi Geological Society. Does not professionalism begin at home?

Mr. Stewart W. Welch
707 Vincent Bldg.
Jackson, Mississippi

Mississippi Geological Society
P. O. Box 422
Jackson, Mississippi



551

NEWS

BULLETIN



mississippi geological society

VOLUME XIII
Number 5

JANUARY, 1966

M G S E X E C U T I V E C O M M I T T E E

President	Sankey L. Blanton	Sun Oil Company
Vice President	Alan Jackson	Humble Oil & Ref. Co.
Secretary	S. W. Welch	Independent Geologist
Treasurer	W. A. Albright.	Chevron Oil Co.
Past President.	J. F. Bollman	Larco Drilling Corp.

1 9 6 5 - 6 6 C O M M I T T E E C H A I R M E N

Program	M. D. Horton	Chevron Oil Co.
Publications.	J. S. Lancaster	Chevron Oil Co.
Entertainment	J. M. Ridgway	Ridgway Management
News Bulletin	W. M. Frew.	Continental Oil Co.
Nomenclature	E. B. Launius	Independent Geologist
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A A P G D I S T R I C T R E P R E S E N T A T I V E S

Term Expires 1967	D. C. Gifford	Marr Company
Term Expires 1967	M. L. Oxley	Lone Star Producing Co.
Term Expires 1966	W. D. Lynch	The California Co.

JANUARY MEETING

GULF BASIN TECTONICS

by

Clarence Durham, L.S.U.

8
11
56
75
75

When: Monday, January 10th
Time: Social - 5.30
Dinner - 6.30
Lecture - 7:30

Where: King Edward Hotel
Price: \$3.00

For Dinner Reservations: Call Julius Ridgway before noon on Monday, January 10th - 354-3811

LETTER FROM THE PRESIDENT

It was pleasant to see so many interested geologists at the December meeting. We really hadn't planned one, but the opportunity to listen to a good man just couldn't be passed up.

The first half of our year was involved with our professional image. The second will be scientific.

The executive committee realizes that it is difficult for some of us to be present at the dinner. Our meetings are in three units: the social hour (sponsored),

40

dinner, and the presentation of a paper pertaining to geology. You are welcome at any or all of these. Although we are accustomed to thinking of the paper and dinner as one, this is not necessarily so! The paper is the real article and you are welcome to come when you can.

We still need some constructive "chit-chat" on the A. A. P. G. "Continuing Education Program."

Sankey L. Blanton

* * * * *

JET PROPULSION LABORATORY PROGRAM

On February 28, 1966, the Mississippi Geological Society will host a special program to be held from 7:30 to 9:00 PM in the Olympic Room of the Heidelberg Hotel. Guest speaker will be Mr. D. W. Douglas, of Jet Propulsion Laboratory, Pasadena, California. Flight Director of the Mariner III and IV mission to Mars, Mr. Douglas will present a briefing on the United States Planetary Exploration Program, with emphasis on the Mariner mission to Mars. Presentation will include lantern slides of the recent Mariner flyby of Mars. It is believed that much of the material to be covered has not been available to the general public, and will represent the first release of the final report on the Mariner IV mission.

Arrangements for this special program were initiated last September by Mr. Marvin D. Horton, Program Chairman. In October, the Executive Committee appointed X. M. (Frank) Frascogna, Program Coordinator to assist Marvin Horton in the planning and development of this special program.

Frank Frascogna advises that this will be no charge family affair, and that tickets will be required for admission. Invitations have and will continue to be extended to scientific and allied organizations throughout the state. It is estimated that 1000-1500 persons will attend this exceptional program.

Remember the date: February 28; place: Olympic Room, Heidelberg Hotel;
and time: 7:30 PM.

Out--of-town readers of this Bulletin who would like to attend this admittance-by-ticket-only meeting should write X. M. Frascogna, P. O. Box 10653, Jackson, Miss., for tickets.

Anyone wishing to work on Frank's committee should contact him. This would be an excellent opportunity for new members of the Society to broaden their list of professional acquaintances.

SHORT COURSE IN COASTAL PROCESSES AND PALEOGEOGRAPHY

The Florida State University
Tallahassee, Florida

Modern coastal processes--and their use in making paleogeographic interpretations --will be the subject of a short course in geology, to be offered at Florida State University in the spring of 1966. Dates for the formal course will be April 27-May 11, with an optional field trip to be held May 12-15. The trip will begin and end on the F.S.U. campus in Tallahassee.

Ordinarily offered to advanced graduate students as a semester program, the course will be compressed into two weeks so that professionally-employed geologists can take advantage of it. The course will be offered on either a "credit" (3 semester hours) or a "no credit" basis.

Topics which will be covered are structural control, coastal dynamics, sediment transport, beaches and related coastal features, marine terraces, sea level changes, deltas, the shelf, directional properties of sediments, scalar properties, physical non-structural attributes, chemistry of sediments, and specific examples of shorelines of the past. The emphasis throughout will be on shallow-water near-shore low-energy deposition, the coastal process which was most important in forming those shorelines now preserved in the rock record. The four-day field trip will include visits to zero, low, moderate, and high energy coasts, inspection of modern and ancient reefs of several different types, studies of a variety of detailed coastal features, and examination of mangrove swamps and coastal marshes.

Most of the course will be taught by Dr. William F. Tanner, associate professor of geology, who has specialized in this subject. He is the author of many professional papers on coastal dynamics, sediment transport and paleogeography, and has an extensive background in petroleum and pure research, both surface and subsurface, the the general area of paleogeography.

The tuition fee will be \$90 for persons who are not residents of Florida. Living costs and field trip expenses will be in addition to the fee. Application for the course, accompanied by a separate, non-refundable \$10 application fee, must be made by March 1, 1966. Queries may be directed to the Chairman, Department of Geology, Florida State University, Tallahassee, Florida.

PAPERS NEEDED FOR A.A.P.G. BULLETIN

A memorandum (12/10/65) from John M. Hills, Committee for Publication, A.A.P.G., states:

*** Publications Director Meyerhoff reminds me that the Bulletin is in need of good manuscripts. Will you please encourage the geologists in your District to complete and send in any papers that they have been thinking of finishing and been putting off. Also many talks before the local societies on oil or gas fields, regional stratigraphy, or structure would make good Bulletin subjects. Perhaps the local speakers may wish to reach a wider audience this way. Certainly it would be to the advantage of the AAPG members to gain wider knowledge through the Bulletin.

The development of papers and their publication offers three-fold benefits: first, to the writers through the disciplination and consolidation of professional thinking, benefited to no small degree by the constructive criticisms always evoked; second, to the younger geologists coming into the District who look to the geological "literature" for professional and technical information on the areas of their interests and responsibilities; and third, in presentations of the geological features of the District to hundreds of workers elsewhere who have interest in the District at various times and in varying degrees, making a permanent record of the subject matter.

Even a book review may call attention to a source of important information that some of us may be overlooking. For example, Charlie Barton has written a review which has been accepted and will appear in an early number of the Bulletin on "Hinds County Geology and Mineral Resources," by Moore, et al.

The 1965 DEVELOPMENT PAPER is being prepared by Robert B. Ross (senior author) and William J. Huff (junior author). The 1966 paper will be prepared by Dr. Huff (senior author) and by a junior author not yet selected. With the unprecedented development activity now going on in Mississippi and the other Southeastern States an exceptional opportunity is offered by the authorships of these papers. If you would like to serve a two-year period as a development paper author, please indicate it to Messrs. Ross or Huff or to the undersigned so that full consideration may be given to the early selection of a replacement.

Fred Mellen, Member,
A.A.P.G. Publications Committee

* * * * *

Dr. Joseph D. Martinez, Professor of Petroleum Engineering and Director of the Institute for Saline Studies at Louisiana State University, addressed the New Orleans Geological Society on December 15th. Topic of his talk was "L.S.U. Explores the Saline Environment." The abstract of his talk may be of interest to many of you.

An Institute for Saline Studies has been organized at Louisiana State University. The research objectives of this Institute are to understand, to control, and to utilize the saline environment which exists in both the solid and the liquid phase.

To better understand the saline environment will require investigations in geology, oceanography, hydrology, meteorology, and limnology. Specific projects might range from those designed to study the origin of salt in the oceans and connate waters to mechanics of deformation and intrusion of evaporites. The relation of membrane properties of clays to problems of diagenesis and hydrology would be a very timely subject. It might be expected that many of the basic research projects will fall in this one of the three aims of the Institute.

Many of the applied and engineering research projects will best be categorized under controlling and utilizing the saline environment. Prevention and correction of saline intrusion in both surface and underground waters is a matter of great importance to the geohydrologist. Various methods of mining evaporites, extraction of metals from saline solutions and desalination of sea water are problems which primarily challenge the engineer.

There are compelling reasons which justify this step by L.S.U. to become a focal point for research in the geology and technology of salt. Its strategic location --so near to the salt water--fresh water interface and in a great salt dome province--especially encourages this action. More significantly, however, the organization merely formalizes a history of research along these lines at L.S.U. by Howe, Taylor, Murray, Atwater, Kupfer, and others. It is hoped that the interdisciplinary nature of the Institute will explosively expand their work.

* * * * *

Charles W. Welby, formerly on the faculty at Mississippi Southern University and presently at the University of North Carolina, presented a paper at the Geological Society of America Annual Meeting in Kansas City, November 4-6, 1965. The abstract is reprinted here for local interest.

HEMATITE-SIDERITE SPHERULES, A CLUE TO DEPOSITIONAL ENVIRONMENT, TUSCALOOSA FORMATION, EAST-CENTRAL MISSISSIPPI

Spherules and oolites of siderite and hematite in alternating layers are found in sands and some shales of the Upper Cretaceous Tuscaloosa Formation of east-central Mississippi as well as in sediments as young as the Miocene. The spherules and oolites show alternating bands of hematite and siderite, indicating a delicate chemical balance in their formation. The physical relations of the spherules within the sediments indicate that they are syngenetic and that they may provide a clue to the nature of the bottom conditions at the time of sediment accumulation.

Calculations based upon free energy, P_{CO_2} , Eh, and pH relationships at atmospheric pressure and 25°C describe the limits of the chemical conditions under which the spherules may form. Bottom conditions of near-normal pH and of Eh ranging between -0.3 and -0.4 volts appear favorable for formation of the banded structures. Fe^{2+} concentrations of 10^{-4} to 10^{-6} appear to be sufficient. A P_{CO_2} slightly in excess of the present partial pressure of carbon dioxide in sea water also appears to be required. It is suggested from the physical and chemical evidence at hand that the spherules accumulated in lagoonal and near-shore environments and that current activity distributed them through the clean quartz sands with which they are often associated. Those spherules found in shales are interpreted as having been trapped near their point of formation.

TRANSFERS AND PROMOTIONS

Baxter Smith, geologist has taken early retirement from Sun Oil Company.

Joseph Morgan, newly appointed Exploration Manager of Skelly's Jackson office is moving here from Wichita, Kansas.

Julius Ridgway, formerly Vice-President and petroleum consultant for Ridgway Management, Inc. is now Ass't. Manager of First National Bank's Petroleum Department.

NOTICE.....NOTICE.....Sponsors of the Society's social hours are.....
SCHLUMBERGER.....HYCALOG.....LANE WELLS.....WELLCORE. Show your appreciation by patronizing our sponsors!

Mississippi Geological Society
P. O. Box 422
Jackson, Mississippi

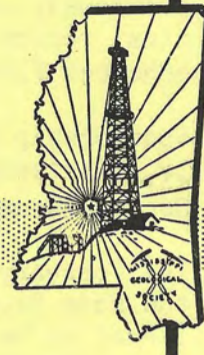


Mr. Stewart W. Welch
707 Vincent Bldg.
Jackson, Mississippi

NEWS

BULLETIN

mississippi geological society



VOLUME XIII
Number 6

FEBRUARY, 1966

M G S E X E C U T I V E C O M M I T T E E

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Vice President	Alan Jackson	Humble Oil & Ref. Co.
Secretary	S. W. Welch	Independent Geologist
Treasurer	W. A. Albright	Chevron Oil Company
Past President	J. F. Bollman	Larco Drilling Corp.

1 9 6 5 - 6 6 C O M M I T T E E C H A I R M E N

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Term Expires 1967	M. L. Oxley	Lone Starr Producing Co.
Term Expires 1966	W. D. Lynch	The California Co.

FEBRUARY MEETING

THE MARINER IV MISSION

by

Mr. D. W. Douglas

Flight Director of Mariner III & IV Missions

Dinner Meeting

<u>When:</u> Monday, February 28, 1966	<u>Where:</u> Rose Room, Heidelberg Hotel
<u>Time:</u> Social - 5:30 PM	
Dinner - 6:00	Rose Room, Heidelberg Hotel
<u>Lecture</u> - 7:30	Olympic Room, Heidelberg Hotel
Dinner - \$3.00	

For Dinner Reservations: Call Julius Ridgway before noon on Monday, February 28th - 354-3811. Out-of-town members planning to attend the dinner meeting should send a postcard to Mr. Julius Ridgway, P. O. Box 187, Jackson, Mississippi

On February 28, 1966, the Mississippi Geological Society will host a program to be held from 7:30 to 9:00 P.M. in the Olympic Room of the Heidelberg Hotel. Guest speaker will be Dr. D. W. Douglas, of Jet Propulsion Laboratory, Pasadena, California. Flight Director of the Mariner III & IV Missions to Mars, Mr. Douglas will present a briefing on the United States Planetary Exploration Program, with emphasis on the Mariner IV Mission to Mars. It is believed that much of the material to be covered has not been previously available to the general public, and will represent the first release of the final report on the Mariner IV Mission. Presentation will include many of the greatly enhanced fly-by photographs of Mars which have not yet been released.

Sponsorship assistance for this program is being provided by Mississippi Geophysical Society, Mississippi Association of Petroleum Landmen, Desk and Derrick Club, and Geological Society Women's Auxiliary.

The February dinner meeting of the M.G.S. will be held, preceding Mr. Douglas' talk, in the Rose Room of the Heidelberg Hotel. A social period is scheduled at 5:30 PM with dinner to be served at 6:00 PM. After dinner, the members will retire to the Olympic Room for the Mariner Program. A series of industry and space program related movies will be presented in the Olympic Room during the dinner meeting for early non-member arrivals.

Arrangements for this special program were initiated last September by Mr. Marvin D. Horton, Program Chairman. In October, the Executive Committee appointed X. M. Frascogna, Program Coordinator to plan and supervise the arrangements for this special program. Assisting Mr. Frascogna are: E. B. Launius and D. M. Morgan, Liaison and Finance; W. M. Frew and J. F. Womack, Publicity; M. L. Oxley and J. M. Pulliam, Accommodations; C. C. Bush and K. B. Keary, Reception and Seating; Lucille Harris, Tickets and Correspondence; and, C. C. Humphris and Mrs. J. G. Goodwin, Special Exhibits and Decorations.

Mr. Douglas attended high school in Monticello, Mississippi, and later attended Copiah-Lincoln Junior College. In 1955, he received a Bachelor of Science degree in Aeronautical Engineering from Mississippi State University. From 1955 to 1956, Mr. Douglas was employed by Chance Vaught Aircraft in Flight Test Engineering on Navy F8U Crusader fighter aircraft. In 1957, he became associated with Jet Propulsion Laboratory in supersonic and hypersonic aerodynamic research. Mr. Douglas became Assistant Flight Director in 1962, for the Mariner I and II Missions to Venus. In 1963, he became Flight Director for the Mariner III and IV Missions to Mars. Presently, Mr. Douglas is Assistant Manager of the Space Flight Operations Section and is Flight Director for the Mariner 1967 Mission to Venus.

Out-of-town readers of this Bulletin who would like to attend this Mariner program should write X. M. Frascogna, P. O. Box 10653, Jackson, Mississippi, for free tickets.

A description of the Mariner and other planetary exploration programs as well as a history of the development of Jet Propulsion Laboratory, is presented here to provide background for Mr. Douglas' talk.

JET PROPULSION LABORATORY

In 1965, in the eighth year of the space age that began with a Russian Sputnik in 1957, the United States increased the tempo of its determined scientific-engineering assault on the objectives of unmanned exploration of our solar system.

Two intricate creations of American technology were instrumented to provide close-up pictures of the lunar surface. Another traversed millions of miles of space to report at close range with electronic instruments on the planet Mars.

The moon craft were Rangers, VII, VIII and IX, equipped with six television systems and transmitters to radio back to Earth photographs of the moon's surface. Thousands of pictures were taken and transmitted during the last minutes of the 66 hour missions as the Rangers hurtled towards the moon at a velocity of more than 5000 mph.

The spacecraft for the Mars mission was the Mariner IV, second generation spacecraft to the Mariner II that successfully performed a flyby mission of the planet Venus in 1962.

The Mariner Mars spacecraft was launched Nov. 28, 1964 and encountered Mars on July 14, 1965, radioing back information of the Martian environment and recording 22 pictures of the Martian surface. The photos show that the 1% portion of the Martian surface photographed by Mariner IV was riven with moon-like craters.

The Mariner Mars mission also yielded a determination of the Martian atmospheric pressure. This information is being factored into the design of the Voyager class interplanetary vehicle. Voyager will weigh some 6,000 to 10,000 pounds and will be equipped

to orbit Mars and to land an instrumented capsule on the Martian surface. The atmospheric pressure information returned by Mariner IV occultation experiment is vital data in the design of a capsule to descend through the Martian atmosphere and land on the Martian surface. The first flight of the Voyager is scheduled for 1971. The giant step being taken in the Voyager mission is best illustrated by the difference in weight between Mariner IV's 575 pounds and the first Voyager spacecraft which will be 6,000 pounds.

A fourth class of unmanned spacecraft, the Surveyor, a lunar soft-lander, and follow-on to the Ranger series, will soon receive its first flight test when engineering-test spacecraft will be launched by the Atlas-Centaur combination from Cape Kennedy.

The source of the scientific and engineering talent required to conceive and execute these American space projects is the Jet Propulsion Laboratory of the California Institute of Technology, in Pasadena, California.

The Laboratory's unique role--operated by its parent, the California Institute of Technology, for the National Aeronautics and Space Administration and charged with prime responsibility for the unmanned exploration of the moon and planets--has been earned by its early contributions to rocketry and its subsequent evolution into a center capable of fusing high order scientific concepts with first rate engineering ability. A capability that has yielded an impressive string of achievements from the early JATO rocket motors to the unparalleled success of Mariner II.

The forerunners of today's 4000 man staff were a handful of engineering students at the California Institute of Technology who, in 1936, gathered in a remote dry wash at the base of the foothills of the Sierra Madre Mountains north of the city of Pasadena to experiment with rocket fuels, motors and engines. Their mentor was the legendary Dr. Theodore von Karman, director of the Guggenheim Aeronautical Laboratory at CIT.

This fledgling effort was recognized three years later when Dr. von Karman established the Army Air Corp Rocket Research Project, with a \$10,000 grant from the National Academy of Sciences, to develop a rocket that could assist airplane takeoff.

Liquid and solid fuels were already in development by the Guggenheim group as was a solid rocket capable of burning for 12 seconds and developing 28 pounds of thrust. This rocket motor was the forerunner of the JATO units ultimately developed for the Air Corps. The 28 pound thrust solid motor gave way to a 1000 pound thrust liquid engine that, used in series, could lift a bomber off a runway in a fraction of the conventional time. The development of these rockets advanced the technology in the important areas of controlling the burning time rate of solids, developing storable solids, the casting of solids, solving ignition and pulsating problems of liquid engines and myriad other engineering stumbling blocks.

Two industrial firms also sprang from this early work. Aerojet Engineering Company was formed by von Karman to produce the first solid fuel JATO units and later, the liquid fuel version. Thiokol was a supplier, to the CIT group, of material for their solid rockets and today is among the leaders in the nation's space industry.

During the war years, JPL's rocketry capabilities were utilized for development of military rockets and JPL contributed to the national war effort by designing barrage rockets, aircraft rockets and anti-submarine rockets.

In the post war years, JPL's engineers and scientists worked with the country's first scientific rockets and military missiles. Development by JPL of the Corporal and Sergeant military rocket systems was based on earlier successes with the Private rocket, the WAC Corporal and the Bumper WAC.

Here, in these years, JPL began to develop the broad base of disciplines that now supports its space efforts. As the rocketry projects became more sophisticated the need for support from practically all branches of science and engineering became apparent. The need for light weight instrumentation, for reliable communications, for better materials, for research in dozens of areas--these urgent demands made by the still-new technology of rocketry acted as a magnet to pull together men trained in engineering and scientific skills that would eventually represent almost the entire spectrum of knowledge.

On January 31, 1958, a JPL-Army team responded to the Soviet Sputnik challenge and orbited Explorer I. The satellite was developed by JPL...as were the upper three stages that were boosted by the Army's Jupiter-C rocket.

The same year saw the formation of the National Aeronautics and Space Administration and JPL became part of the new agency that was to lead American technology into the demanding new age of space exploration.

Through the years since the first small band of students gathered in a remote area outside the city of Pasadena, JPL has grown to cover nearly 150 acres with office buildings, spacecraft testing and assembly facilities, machine shops and a host of supporting functions.

A new nine-story Central Engineering building dominates the foothill site of the Laboratory. A new cafeteria was recently opened to accommodate the increased staff that people the research laboratories; the antenna testing range on a ridge overlooking the area; the 25-foot simulator and the 10-foot simulator that can duplicate the cold and vacuum of space and reproduce the spectrum of the sun; the huge three-story space flight command center capable of controlling two spacecraft missions at a time; and the buildings housing the divisions--space science, tele-communications, propulsion, engineering mechanics, systems, guidance and control, and engineering facilities--that provide the talent and manpower enabling the project offices to convert carefully formulated objectives into glittering hardware and successful missions.

Microwave antennas sprout from the top of the new nine story building, a link to the JPL tracking station in the Mojave Desert. This is one of the five sites--others at Woomera and Canberra, Australia; Madrid, Spain, and Johannesburg, South Africa--that form the Deep Space Net (DSN). This global network is designed to track lunar and planetary spacecraft and provide two-way communication. In the Mariner mission to Venus, the 85-ft. diameter antennas of the DSIF flashed commands to the spacecraft at the Venus distance, 36 million miles, and received signals from Mariner at a distance of 54 million miles. So powerful are these stations that they successfully received a signal that had dwindled in the vastness of space from its original 3-watt strength at the spacecraft to a mere whisper of electromagnetic energy-- .000,000,000,000, 000, 002 watts.

In the recently successful Mariner IV mission a two-way communication with the spacecraft was maintained over distances of up to 190 million miles. This was accomplished with the 85-foot in diameter antennas of the Deep Space Net. The future holds antennas 210-feet in diameter with the capability of communicating with the spacecraft at the very edge of our solar system.

Headed by Dr. William Pickering, JPL today is focusing its immediate attention on the Surveyor lunar spacecraft and the Voyager series of interplanetary spacecraft.

In the wings, about to come on stage is the Surveyor, designed to soft land on the lunar surface--a difficult engineering feat--and prepare the way of the manned lunar landings. Just offstage is a heavier class of interplanetary spacecraft, the Voyager series. This craft will have the capability of landing a heavy capsule on the surface of Mars. One of the capsule functions will reflect the prime reason for the exploration of space--to determine if there is life elsewhere in the solar system.

JPL was also responsible to NASA for a broad research program in most of the scientific disciplines.

ADDENDUM:

In December of 1965, NASA cancelled the planned 1971 Voyager Mars orbiter and authorized three more Mariner missions; one to Venus in 1967, using a modified Mariner IV flight spare, and two missions to Mars in 1969 using a completely new spacecraft. The scientific payloads for these missions have not yet been defined.

The Voyager missions to soft-land capsules on Mars in 1973 and 1975 are still scheduled as originally planned.

Recent Publications of Mariner IV data are as follows:

1. Mariner IV Photography of Mars: Initial Results, Science, Vol. 149, 6 August 1965, pp 627-630.
2. Mariner IV Measurements near Mars: Initial Results, Science, Vol. 149, 10 September 1965, pp 1226-1248.
3. Some Geologic Problems of Mars, by Alden A. Loomis, 1965, Geol. Soc. Amer. Bull., Vol. 76, No. 10, pp 1083-1104.

* * * * *

Our society president, Sankey L. Blanton, requests that all members give some thought to the A.A.P.G. "Continuing Education Program." A survey will be made in the near future to determine which subjects are most desired for refresher courses.

CLEAN-UP COMING

Members of the Mississippi Geological Society are invited to attend a public meeting of the Water Pollution Control Advisory Board of the Department of Health, Education and Welfare, to be held in Jackson on Friday, February 25, 1966, at the Heidelberg Hotel. Coffee will be served at 8:45 AM, prior to the meeting.

NEW A.A.P.G. DISTRICT REPRESENTATIVE

Because of the transfer of Donald C. Gifford to Dallas, Texas, he will not be able to serve as District Representative in the Mississippi District.

If, for some reason, a representative has to give up his duties in any given district, the A.A.P.G. Executive Committee authorizes the automatic replacement of a representative by declaring the candidate still living in the district, who received the next highest number of votes in the election of district representatives, for replacement. Therefore, Robert B. Ross has been selected to serve the remainder of Don Gifford's term. Bob Ross' term of office becomes effective immediately, and he will serve through the 1967 annual convention.

A.I.P.G. NEWS

Past-President Martin Van Couvering of Pasadena plans to visit Mississippi later in the year (1966). Present officers of the Institute are:

- President - Ben H. Parker
- Vice-President - James Boyd
- Secretary-Treasurer - Jay Glenn Marks
- Editor - Sherman A. Wengerd
- Advisory Board Members - Michael T. Halbouty, Neilson Rudd, Arthur O. Spaulding, and Allen C. Tester

Troy Laswell has advised that an approved form of by-laws suitable for adoption by the planned Mississippi Section, American Institute of Professional Geologists is at hand and ready for study and execution.

Some misunderstandings about qualifications for membership in A.I.P.G. need further explaining. Applicants must be full members of any one of a list of 14 scientific societies, including A.A.P.G., A.G.U., A.A.S.G., A.E. G., G.S.A., S.E.G., S.Ex.G., S.E.P.M., and M.S.A. "Sponsors need not be A.I.P.G. members only, but may be full members of one of the above societies," but they must be professional geologists. Five sponsors are needed and three business references. Delays in processing applications are commonly caused by failure of sponsors and references to send their letters of endorsement of the candidate in promptly. The candidate should make certain that sponsors and references understand the importance of getting these letters mailed immediately. Application for A.I.P.G. membership, which, if approved, certifies the applicant as a "Certified Professional Geologist," is relatively simple, and the forms provided are accompanied by a simplified check list for applicant's convenience. The spirit of A.I.P.G. is its Code of Ethics with which the applicant must be thoroughly familiar.

Information about the Institute may be had from Arthur F. Brunton, Executive Secretary, American Institute of Professional Geologists, P. O. Box 836, Golden, Colorado, 80402 or from local members. The following members will be glad to answer any questions or to assist prospective members:

- X. M. Frascogna, Sr., Publicity Chairman
- G. W. Gulmon, Coordinator
- Fred Mellen, Coordinator

LATE PALEOZOIC GLACIATIONS

Richard L. Bowen, Associate Professor of Geology at the University of Southern Mississippi, presented a paper on late Paleozoic glaciations in the southern hemisphere at the annual meeting of the Geological Society of America, Kansas City, November 4, 1965. The abstract of the paper is as follows:

VALIDITY OF COMPARISONS BETWEEN LATE PALEOZOIC AND QUATERNARY GLACIATIONS

Comparison of Late Paleozoic glacial sequences measured in eastern Australia, Brazil, and Uruguay with other described "Gondwana" sequences permits estimating the number of glacial stages represented. In "cratonic" sections of eastern Australia six stages may be present, although many more till units occur elsewhere. In the Parana Basin, Brazil, well-preserved, subhorizontal, essentially complete sections contain at least six glacial stages, with marine and nonmarine sediments. In Uruguay, three glacial stages remain preserved. Incomplete sections in Argentina and Bolivia indicate that perhaps five glacial stages occur in Upper Carboniferous and Permian sequences. In Africa, data are meager, but five glacial stages may occur in the Congo. In Antarctica, although nine tills occur in one section, all may not represent individual glacial stages. Two glacial(?) stages have been reported in India. Four classical Pleistocene stages thus compare with six or more Late Paleozoic glacial stages for "Gondwana" regions.

Indicated maximum extensions of 30,000,000 - 43,000,000 km² (Australia, 6,000,000 km²; Indian subcontinent, 5,000,000 km²(?); Southern Africa, 9,000,000 - 12,000,000 km²; South America, 7,000,000 - 1,000,000 km²; Antarctica, 3,000,000 - 8,000,000 km²; other, 1,000,000 km²) of Late Paleozoic "Gondwana" ice sheets compare remarkably with the 32,000,000 km² maximum Quaternary glacial extent estimated for the Northern Hemisphere.

Validity of such comparisons between the two glaciations depends largely on whether the earlier frigid epoch(s) were synchronous (all latest Upper Carboniferous - earliest Permian) or time-transgressive from continent to continent (middle Carboniferous in Argentina to middle Permian in Australia). At present, indications of eustatism reflected in Late Paleozoic sequences (repetitions of till-marine beds - carbonaceous beds-till) and recent palynological determinations favor synchronicity.

TRANSFERS

CONTINENTAL OIL COMPANY - J. O. Wafer, geologist, was recently transferred to Los Angeles.

PLACID OIL COMPANY - Kevin Cahill, geologist, recently moved to Jackson from Shreveport,

TEXACO - Charles Brinkley, Assistant District Geologist, was recently promoted and transferred to Jackson from New Orleans.

M. R. (Bob) Douglass, geologist, was recently recently transferred to Jackson from New Orleans.

John Boyd, geologist, also transferred to Jackson from New Orleans.

E. S. Gilson, geologist, transferred to Lexington, Ky.

T. R. Larimer, geologist, transferred to Casper, Wyoming.

B. F. Scales, transferred to New Orleans.

MARR COMPANY - D. C. Gifford, geologist, has been transferred to Dallas, Texas.

E. L. ERICKSON - E. D. Minihan, formerly a geologist with Placid Oil Co., is now associated with E. L. Erickson, Dallas, Texas, as Jackson Exploration Manager.



Mississippi Geological Society
P. O. Box 422
Jackson, Mississippi

Mr. Stewart W. Welch
707 Vincent Bldg.
Jackson, Mississippi

NEWS

BULLETIN

mississippi geological society



VOLUME XIII
Number 7

MARCH, 1966

M G S E X E C U T I V E C O M M I T T E E

President	Sankey L. Blanton	Sun Oil Company
Vice President	Alan Jackson	Humble Oil & Ref. Co.
Secretary	S. W. Welch	Independent Geologist
Treasurer	Joe Carl	Chevron Oil Co.
Past President	J. F. Bollman	Larco Drilling Corp.

1 9 6 5 - 6 6 C O M M I T T E E C H A I R M E N

Program	M. D. Horton	Chevron Oil Co.
Publications	J. S. Lancaster	Chevron Oil Co.
Entertainment	J. M. Ridgway	Ridgway Management
News Bulletin	W. M. Frew	Continental Oil Co.
Nomenclature	E. B. Launius	Independent Geologist
Red Book Supplement	J. F. Fritz	Independent Geologist

A A P G D I S T R I C T R E P R E S E N T A T I V E S

Term Expires 1967	R. B. Ross	Murphy Corporation
Term Expires 1967	M. L. Oxley	Lone Starr Producing Co.
Term Expires 1966	W. D. Lynch	Chevron Oil Co.

MARCH MEETING

A BASIC DISCUSSION OF CARBONATES

by

Phillip Braithwaite

Sun Oil Company, Dallas, Texas

<u>When:</u> Monday, March 28, 1966	<u>Where:</u> King Edward Hotel
<u>Time:</u> Social - 5:30	
Dinner - 6:30	<u>Price:</u> \$3.00
Lecture - 7:30	

For Dinner Reservations: Call Julius Ridgway before noon on Monday, March 28th - 354-3811

LETTER FROM THE PRESIDENT

We have been to Mars and back. My family enjoyed it immensely and hope you are yours enjoyed it too.

I'm sure you know that Frank Frascogna carried the ball all the way for us. John Bell Williams deserves our appreciation and support. We felt that our image in Mississippi would be enhanced by a Mississippian of national standing and John Bell Williams flew down and back solely to introduce our speaker. (continued next page)

We still have some excellent programs to come including the dance and golf tournament.

Sincerely,

Sankey L. Blanton, Jr.

COMING ATTRACTIONS:

April Meeting: John C. Maher, U.S.G.S., will present a paper "Geologic framework and petroleum potential of the Atlantic Coast," on Thursday, April 21.

Spring Dance & Golf Tournament: The Society's annual spring dance and golf tournament has been scheduled for Friday, April 22nd. Details will be discussed in the next issue of the Bulletin.

NEW HONORARY MEMBERS

Paul L. and Esther R. Applin, and Baxter L. Smith were elected to honorary membership in the Mississippi Geological Society at the last business meeting. This action is in recognition of many years of outstanding professional work by the Applins, and in recognition of many years of dedicated work in society affairs by Baxter Smith.

A. A. P. G. SEMINARS

A recent canvass of the membership to determine the degree of interest in the A.A.P.G. Continuing Education Program has indicated that at least 45 members are willing to pay for a seminar course. The Executive Committee is planning to move forward to develop a program. The first choice of the majority of respondents was a short course in carbonates.

JET PROPULSION PROGRAM

The February meeting which featured Mr. D. W. Douglas, Flight Director of the Mariner Program, was an outstanding success. Attendance was in excess of one thousand people. The program was video taped by WLBT-TV and aired later in the evening. Men and women responsible for developing the program are:

Marvin D. Horton - Program Chairman	M. L. Oxley and J. M. Pulliam - Accommodations
X. M. Frascogna - Program Coordinator	C. C. Bush - Reception and Seating
Dan M. Morgan - Liaison & Finance	C. C. Humphris - Decorations
W. M. Frew and J. F. Womack - Publicity	Dean Kebert - Projection
Lucille Harris (Desk & Derrick Club) - Tickets & Correspondence	

We have further information on Mr. Braithwaite's talk. It will be in the nature of a general survey of carbonates, covering composition, diagenesis, facies, classification and logging. Illustrations of recent carbonates from Florida and the Bahamas and ancient carbonates from the United States and Canada will be used to show some of the common features.

We anticipate an excellent talk. Don't miss this one on March 28th.

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APRIL, 1966

APRIL MEETING

GEOLOGIC FRAMEWORK AND PETROLEUM POTENTIAL OF THE ATLANTIC COAST

by
John C. Maher
United States Geological Survey

When: Thursday, April 21st

Where: Sun 'n Sand

Time: 12:00 Noon

Price: \$3.00

For Dinner Reservations call Julius Ridgway before noon Thursday
April 21st - 354-3811

ANNUAL SPRING DANCE and GOLF TOURNAMENT

Spring Dance

FRIDAY, APRIL 22nd

Golf Tournament

Shady Oaks Country Club
Jules Barlow Orchestra
Refreshments - 7:00 PM
Buffet - 8:30 PM
Door Prizes
\$5.00 per Person

Shady Oaks Country Club
18 Holes - Handicap Play
Prizes
MGS Members only
Green Fee - \$3.00
Tee Off Time - 9:00 AM

PRESIDENT'S LETTER

The Society year is almost over. Soon it will be time for our beer bust and election. Quite honestly, I've had a ball; your officers and committeemen have huddled regularly and talked out the few problems we had. I really wish there was a way to let you know how much Marv Horton, Frank Frascogna, Bill Frew, Julius Ridgway, and John Lancaster have accomplished this year.

I surely enjoyed Mr. Braithwaite's paper. This was a "look and find out" session, and I was pleased with the well illustrated confrontation with carbonates. John Maher's paper on the Atlantic Coast ought to be similar next Thursday noon.

Since I'm a beer and patio man, I'll see you golfers at the Dance!

Sankey L. Blanton

Geologic Framework and Petroleum Potential of the Atlantic Coast
by
John C. Maher

ABSTRACT

The Atlantic Coastal Plain and Continental Shelf of North America are represented by a belt of Mesozoic and Cenozoic rocks, 150 to 300 miles wide and 2,400 miles long, extending from southern Florida to the Grand Banks of Newfoundland. The volume of Mesozoic and Cenozoic rocks exceeds 450,000 cubic miles, more than one-half of which is seaward far enough to contain marine source rocks in sufficient proportion to attract exploration for petroleum. Rocks of Jurassic(?) and Early Cretaceous age are among the worthy exploration targets.

MISSISSIPPI GEOLOGICAL SOCIETY GOLF TOURNAMENT

This year's annual golf tournament will be held Friday, April 22, at Shady Oaks Country Club. Tee off time will begin at 9:00 until 12:00 Noon. Only Shady Oaks Club members will be allowed to tee off between Noon and 1:00 PM, and any late MGS golfers can tee off after 1:00 PM. Green fee for this handicap event will be \$3.00. All play will be by foursomes which may be pre-arranged or will be made up for you by the registration committee at the golf course. Handicaps will be assigned based on previous years scores; or, if this is your first MGS tournament, you will be asked to turn in your average 18 hole score when registering at the course.

Refreshments will be served on the course. Trophies and prizes will be awarded at the Annual Spring Dinner-Dance at the Shady Oaks Country Club that evening.

Special acknowledgement is due to the following men:

GOLF COMMITTEE

Chairman - Charles Barton - Gulf Coast
Refreshments - Ed Kendrick - Independent
Refreshments - J. B. Wheat - Baroid
Registration - Ned Phillips - Lane-Wells
Registration - Bill Whigham - National Supply
Longest Drive - James Taylor - Ridgway's
Hole-in-One - Rex Hewitt - R. Merrill Harris

MAKE PLANS NOW!

DON'T MISS THE BEST DANCE OF THE YEAR

BUY TICKETS

FROM YOUR COMPANY REPRESENTATIVE OR DANCE COMMITTEE:

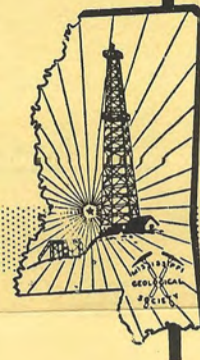
DEE LAYMAN, c/o VICTOR P. SMITH, 236 BLDG.
CHARLES BARTON, GULF COAST D & E, MILNER BLDG.
JULIUS RIDGWAY, FNB BLDG.
MARVIN OXLEY, LONE STAR, PETROLEUM BLDG.
GENE TAYLOR, UNION PROD. CO., UNITED GAS BLDG.
BILL FREW, CONTINENTAL, STANDARD LIFE BLDG.

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VOLUME XIII
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MAY, 1966

M G S EXECUTIVE COMMITTEE

President	Sankey L. Blanton	Sun Oil Company
Vice President	Alan Jackson	Humble Oil & Ref. Co.
Secretary	S. W. Welch	Independent Geologist
Treasurer	Joe Carl	Chevron Oil Co.
Past President	J. F. Bollman	Larco Drilling Corp.

1965 - 66 COMMITTEE CHAIRMEN

Program	M. D. Horton	Chevron Oil Co.
Publications	J. S. Lancaster	Chevron Oil Co.
Entertainment	J. M. Ridgway	Ridgway Management
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A. A. P. G. DISTRICT REPRESENTATIVE

Term Expires 1967	R. B. Ross	Murphy Corporation
Term Expires 1967	M. L. Oxley	Lone Star Producing Co.
Term Expires 1966	W. D. Lynch	Chenvron Oil Co.

BEER, BARBEQUE, AND ELECTIONS

The Mississippi Geological Society will have its annual election party at the Mississippi Power and Light Lodge Wednesday, May 11. Beer drinking, voting, etc., will commence at four. Please try to be there on time, and the men counting the votes, etc. will be able to enjoy the party also.

If an ole buddy is in town, call Julius and tell him to prepare for an extra mounth--otherwise, be very pious and tell everyone else that this is restricted to society members.

At any rate, Julius would appreciate a call -- 354-3811.

ohm-meter

Bill Frew has come through with an excellent slate of officers as follows:

President

Alan Jackson-Humble Oil-wife's name is Helen. They have two children. Alan graduated from L.S.U. in 1951. He is our present Vice President, was a Field Trip leader in 1961, etc.

Marvin Horton-Calco-wife's name is "Jan". They have two children. Marv graduated from the University of Nebraska in 1953, is our present Program Chairman, was on the Black Warrior Basin Committee, etc.

Vice President

Julius Ridgway-Petroleum Dept., First National Bank-wife's name is Sybil. Julius graduated from Ole Miss in 1956. He is our entertainment chairman and has served on many committees.

Jim Pulliam-Sun Oil-wife's name is Sandra. They have four children. Jim graduated from the University of Missouri in 1954, was on the Arrangements Committee for the Mariner 4 meeting, etc.

Secretary

Joe Carl-Calco-wife's name is Pat. Joe graduated from Alabama in 1952, Oklahoma in 1956. He is our present Treasurer and has served on the various committees.

Lyle Case-Texaco-wife's name is Barbara. They have three children. Lyle graduated from the University of Iowa and recently moved here from Ardmore, Oklahoma. He was very active in the Ardmore Geological Society.

Treasurer

Ed Minihan-Erickson-wife's name is Delores. They have two children. Ed graduated from the Oklahoma State University in 1955. He has worked on the Projection Committee, Black Warrior Basin Committee, etc.

John Lancaster-Calco-wife's nickname is "Nezzie". They have three children. John graduated from Texas A & M in 1952. He is presently on the Publication Committee, has served on the Correlation Committee, etc.

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