

TRANSACTIONS

Gulf Coast Association of Geological Societies

22nd Annual Convention

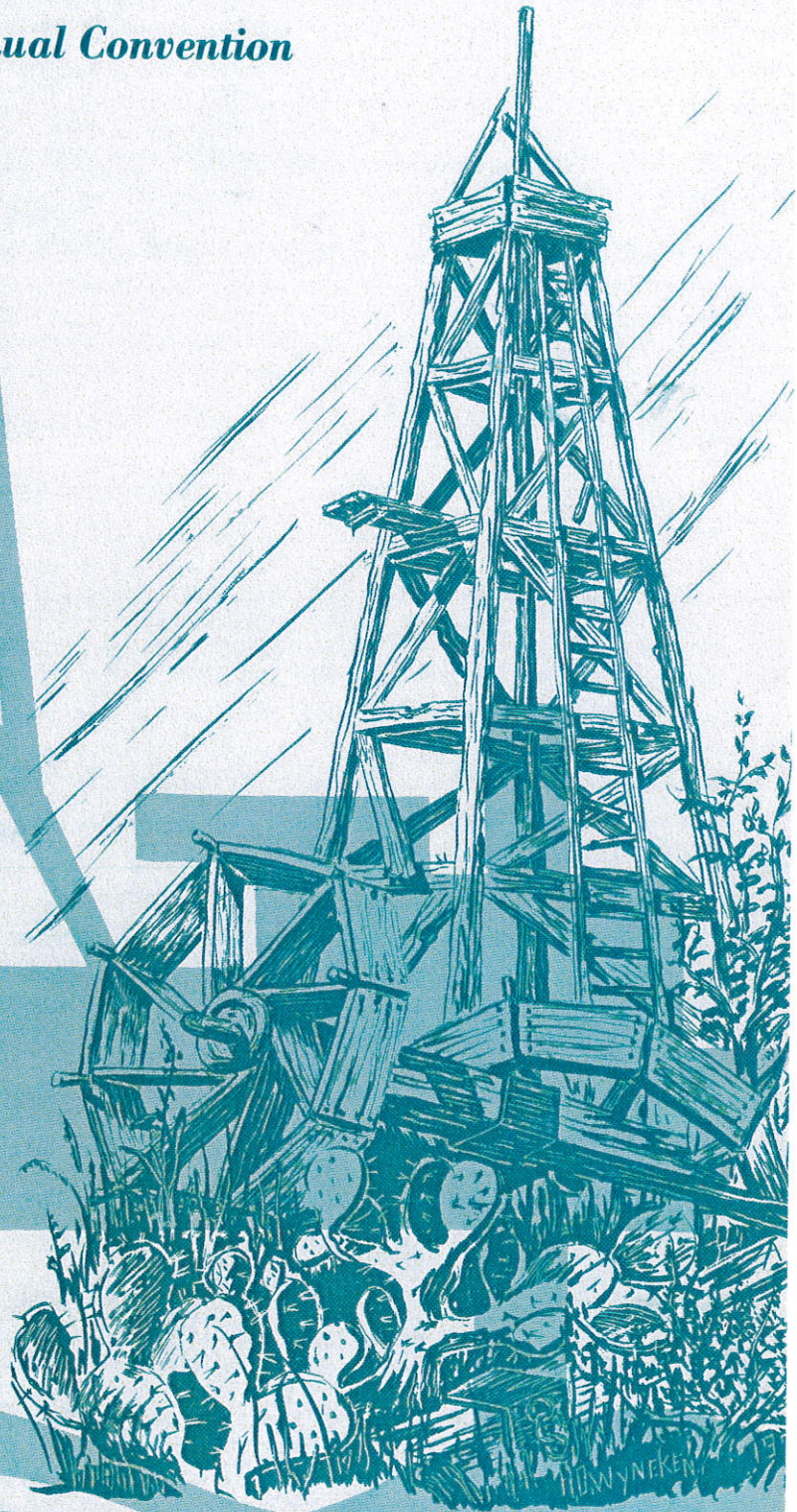
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East Texas Geological Society
Houston Geological Society
Lafayette Geological Society
Mississippi Geological Society
New Orleans Geological Society
Shreveport Geological Society
Southeastern Geological Society
South Texas Geological Society*

Theme:

*Exploration — Key
to the Energy Crisis*

Corpus Christi, Texas

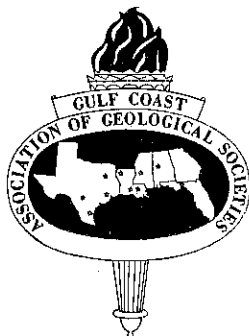
October 11, 12, 13, 1972



TRANSACTIONS

GULF COAST ASSOCIATION OF GEOLOGICAL SOCIETIES

A SECTION OF THE AMERICAN ASSOCIATION OF PETROLEUM GEOLOGISTS



VOLUME XXII, 1972

WILLIAM A. ATLEE

EDITOR

PREPARED FOR THE

*Twenty-Second Annual Meeting of the
Gulf Coast Association of Geological Societies*

AND REGIONAL A.A.P.G. MEETING

HELD IN COOPERATION WITH THE
GULF COAST SECTION OF THE

SOCIETY OF ECONOMIC PALEONTOLOGISTS AND MINERALOGISTS

GARY L. SPRAUL

S.E.P.M. EDITOR

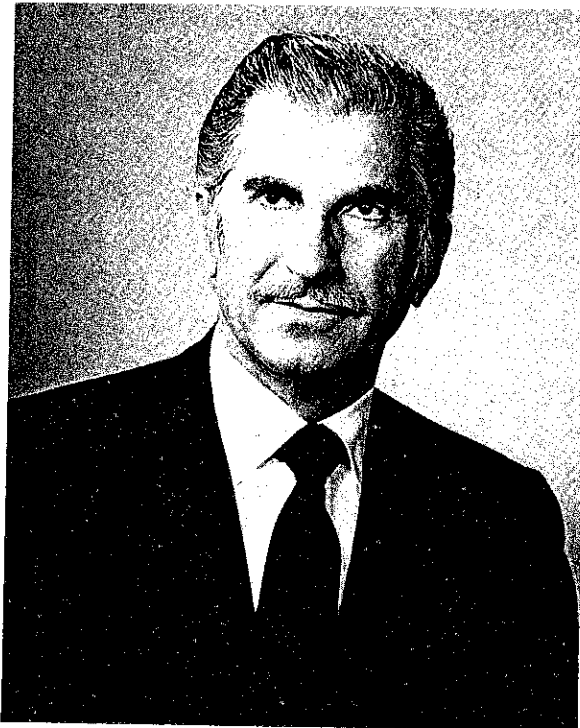
OCTOBER 11, 12, 13, 1972

CORPUS CHRISTI, TEXAS

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DEDICATION OF 1972 TRANSACTIONS VOLUME
TO
MICHEL T. HALBOUTY



The officers and committee chairmen of the GCAGS for 1971-72 dedicate the 1972 *Transactions* Volume XXII to Michel T. Halbouty, internationally known petroleum geologist and independent oil operator and for the past decade without a peer as a spokesman for both the petroleum industry and the working geologist. The dedication of the *Transactions* has for twenty years been an important way of honoring outstanding Gulf Coast geologists and our current recipient takes his place among the other distinguished geologists that have been so honored. It was the opinion of the 1972 Convention Committee that Michel T. Halbouty has done more to promote his profession and the petroleum industry than any other person – past or present – and it is our sincere belief that the unselfish actions of this man, as he has untiringly toured the nation at great personal sacrifice on behalf of petroleum explorationists everywhere, imminently qualify him for this honor. His dedicated service both to professional and scientific organizations is known to all and looking back over the past ten years to his earlier warnings of an impending energy crisis, of excessive governmental controls and of our need to improve the image of our industry one has the feeling that he is almost prophetic.

Michel T. Halbouty is a graduate of Texas A&M University with BS and MS Degrees in 1930 and 1931. He received that school's Distinguished Alumni Award in May of 1968. After graduation he joined the Yount-Lee Oil Company at Beaumont, Texas and in less than two years was promoted to Chief Geologist and Petroleum Engineer of the company, which at that time was the largest independent oil producer in the world. He remained in the above position until the company was sold to Stanolind Oil and Gas Company in 1935. During the period with the Yount-Lee Oil Company his recommendations resulted in the discovery of several major oil fields in the Texas-Louisiana Gulf Coast.

Following the sale of Yount-Lee Oil Company, Halbouty joined Glenn H. McCarthy, Inc. as Chief Geologist and Petroleum Engineer, Vice President and General Manager. In 1937 he left McCarthy to enter private consulting practice. Even during the short time he was with McCarthy several of his recommendations resulted in the discovery of oil fields in the Texas Gulf Coast.

In February, 1942, Halbouty was called to active duty in the Army as a Captain in the Infantry. Before entering the Army, Halbouty was geologically responsible for the discovery of nine new oil fields and extensions. During the course of his military career he served on the Army-Navy Petroleum Board, under the Joint Chiefs of Staff, as geologist and engineer in charge of domestic and foreign allied production. Halbouty was discharged from the Army in September, 1945, with the rank

of Lieutenant Colonel and was Chief of the Petroleum Production Section of the Army and Navy Petroleum Board at the time.

Halbouty re-entered the consulting business and, soon thereafter, began to drill his own wells as an operator. His first discovery was the Ashland Oil Field in Natchitoches Parish, Louisiana, on January 1, 1946. Since then he has been drilling wells throughout the United States, yet always specializing in Gulf Coast areas.

Halbouty has written and published over 185 papers, mainly on petroleum geology and petroleum engineering; one book is entitled *Petrographic and Physical Characteristics of Sands from Seven Gulf Coast Producing Horizons* and another is entitled *Salt Domes - Gulf Region, United States and Mexico* (the only such single volume on this subject in the world's scientific literature); he is co-author of the best seller, *Spindletop*, Random House, 1952, and is currently engaged as co-author in the writing of two new books, one on the giant East Texas Oil Field, which will be entitled *The Last Boom*, and the other entitled *The Book of Oil*.

In May, 1956, he received the Professional Degree in Geological Engineering from Texas A&M University (the first to be conferred by the University). In June, 1966, the Degree of Doctor of Engineering, Honoris Causa, was conferred upon him by the Montana College of Mineral Science and Technology.

In the Fall of 1964 and Spring of 1965, he was a Distinguished Lecturer for the Society of Petroleum Engineers of AIME and in the Fall of 1965 and Spring of 1966 he was a Distinguished Lecturer for the American Association of Petroleum Geologists.

In 1965, Halbouty received the Texas Mid-Continent Oil and Gas Association's Distinguished Service Award, presented to an independent for outstanding services and contributions to his industry and profession. In February, 1968, he was named Engineer of the Year by the Texas Society of Professional Engineers and the Engineer's Council of Houston. In April, 1969, Halbouty was awarded Honorary Membership in the American Association of Petroleum Geologists. In February, 1971, he received the DeGolyer Distinguished Service Medal of the Society of Petroleum Engineers of AIME.

He served as president of the world's largest organization of earth scientists, The American Association of Petroleum Geologists, for the 1966-67 term. His administration was characterized by his desire to get the true story of the petroleum industry before the public and by his efforts to better the situation of the working geologists. He chastised the companies for their hiring and firing practices and continually urged his fellow geologists to think more creatively. He was one of the most energetic presidents AAPG has ever had and the accomplishments during his tenure were laudable. It was during this time, primarily due to his unceasing efforts, that AAPG and GCAGS reached agreement whereby GCAGS accepted status as a Section of AAPG.

Halbouty is a member of many world-wide professional and technical societies, including the American Association of Petroleum Geologists; the Geological Society of America; the American Institute of Mining & Metallurgical Engineers; the Society of Petroleum Engineers of AIME; the American Association for Advancement of Science; the Society of Economic Paleontologists and Mineralogists of America; the Society of Exploration Geophysicists; the Seismological Society of Exploration Geophysicists; the Seismological Society of America; the American Institute of Professional Geologists; the Institute of Petroleum, London, England; International Association of Sedimentologists; the Asociacion Mexicana de Geologos Petroleros; et cetera. He is a member of the Houston Geological Society and counts as one of his most cherished honors the Honorary Life Membership that was conferred upon him in 1970 by that group of his peers.

Halbouty is President and Chairman of the Board of the Halbouty Alaska Oil Company. The company has discovered a gas field in this new state which is the first gas discovered by an independent in Alaska. In addition to his oil and gas operations Halbouty owns extensive banking interests and serves as Board Chairman of five Texas banks.

Halbouty takes a very active part in community and civic leadership. He is Chairman of the Board of Trustees of the Geosciences and Petroleum Engineering Foundation of Texas A&M University; he is a member of the Board of Trustees of the Texas Heart Institute, and Texas Children's Hospital, in Houston, Texas; he is President of the Sponsors' Club of the Houston Pin Oak Charity Horse Show, and serves on many other civic projects. In 1964, he was appointed Civil Defense Director for Houston at \$1.00 per year salary and has served continuously since his appointment.

Halbouty is an Episcopalian and is a member of the Church of St. John the Divine in Houston, Texas. He is married to the former Fay Renfro of Shawnee and Tulsa, Oklahoma. They have one daughter, Linda Fay, and one son, Thomas E. Kelly.

Michel T. Halbouty has demonstrated a prodigious capacity for hard work and his success in his chosen field has not dimmed this capacity. We wish him many years of continued success and happiness and we all hope to sit in the audience for years to come as he takes the podium and delivers his papers with his own unique brand of evangelical fervor. For all of us, it is a rare treat to hear our favorite spokesman - a man that has truly earned the respect and the gratitude of petroleum explorationists everywhere. Our battle cry will continue to be "Give 'em hell, Mike!"

Don R. Boyd

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¹ Presented at the 18th Annual Gulf Coast Section of S.E.P.M. Meeting, 1971, New Orleans, La.

THE COVER - The old wooden derrick, now only a nostalgic memory, served for many years to test the hunches, ideas, and economic daring of early-day wildcatters and to provide the necessary energy for our growing national economy. Today, highly sophisticated equipment is required in frequently hostile environments, both onshore and offshore, to match the imagination of modern explorationists. Now, as in the past, however, a hole in the ground is still the only available key for unlocking and supplying the vast and rapidly increasing energy needs of our nation.

- H. O. Wyneken

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REPORT OF THE PRESIDENT GULF COAST ASSOCIATION OF GEOLOGICAL SOCIETIES

The Gulf Coast Association of Geological Societies returns once again to Corpus Christi – “The Sparkling City by the Sea” – for its 22nd Annual Meeting and its fourth visit to our city for this most worthwhile educational and social event for Gulf Coast explorationists. We of the Corpus Christi Geological Society hope your short stay is a most pleasant one and that the papers presented during the meeting will be rewarding and stimulating to you as we all truly look to the future realizing that our theme of “Exploration – Key to the Energy Crisis” is a real and acute problem facing our industry and our nation. We feel that the papers comprising this year’s *Transactions* are of the same quality that for over two decades have made these volumes invaluable to Gulf Coast petroleum geologists. This year’s Program Chairman, Jim Stone, and our Editor, Bill Ailee, have labored long and diligently to bring such an outstanding suite of papers to fruition and we believe that the new concepts and ideas advanced in these papers will aid in a better understanding of the geology of our area.

GCAGS has not stood still this year. This represents the fifth year since GCAGS accepted status as a Section of AAPG and we now comprise over one-third of all geologists within AAPG. This year has again seen a growing cooperation between these two groups and I personally feel GCAGS and more particularly the geologists living within our geographic boundaries will make a continued impact on AAPG affairs. The Executive Committee is pleased to accept the proffered hand of friendship and help of our “big brother” in Tulsa and we appreciate the consideration given our Section in national affairs and policy.

Especially pleasing to all connected with it is the culmination of our five year project of a Tectonic Map of the Gulf Coast. Prepared under the direction of Harold Hickey as Chairman of the Committee, and with the aid of A. T. Green, Bob Sabate, Lee Meltzer and myself acting at various times as Chairmen and Vice Chairmen and Vice Chairmen of the Special Projects Committee, this map is believed to be a worthwhile contribution to our profession. Each member society through special committees presented their thoughts on the geology of their particular geographic area and the finished project truly represents many, many hours of intense work and dedication. Your Executive Committee, on behalf of all Gulf Coast geologists, will present Distinguished Service Awards to Harold, A. T. and Bob on opening morning of this meeting. The assistance of the AAPG Highway Map Committee and the expertise of its two capable leaders, Dr. H. B. (Pete) Renfro and Dr. Dan E. Feray, was invaluable in getting the map scribed and finally printed. All of us were saddened by the untimely death of Pete and the geological profession truly lost a gentleman and a scholar from its ranks. The GCAGS is deeply appreciative of the cooperation of the AAPG Highway Map Committee.

This year has seen the first revision of any magnitude of our Constitution and By-Laws since the inception of GCAGS in 1951 and our founding fathers are to be commended for their foresight. Discussion for the past several years has shown the need for modification of *Article III – Organization* to more accurately reflect the manner in which our officers are elected and the procedures by which the business of the Executive Committee is handled. There was no attempt to change our pattern of the past decade, only to update our Constitution to correspond to our methods of operation. Accordingly, the changes were proposed by the Executive Committee and sent to the ten member societies for approval or disapproval. All ten societies confirmed the need for said changes and the new Constitution and By-Laws now appear as amended in this year’s *Transactions*.

Your Association is in excellent financial shape and it is anticipated that future sales of the *Transactions* and of our two volume *Bibliography of Gulf Coast Literature* combined with our new *Tectonic Map* will allow us to remain financially strong. The sale of publications is our primary source of revenue and we are continually indebted to our hard working Chairmen of the Publications Committee, Barkley Souders and Jeff Morris.

The convention this year has been planned in its entirety by Jerry Sides and his dedicated group of volunteers – many of whom were transferred from Corpus Christi during the month or so preceding the convention as Corpus Christi witnessed the closing of exploration offices of three major oil companies. Our local society shall certainly miss these good workers and future GCAGS meetings will allow us the opportunity to renew these friendships. I personally doubt if any professional group’s convention is able to combine continuing education with a three day social event quite as effectively as does GCAGS. On behalf of the host Corpus Christi Geological Society and all its members as well as the officers of GCAGS, we bid you welcome to the 22nd Annual Meeting.

Please accept my thanks for the honor of having been selected to serve as President during the 1971-72 year.

Don R. Boyd
President
Gulf Coast Association of Geological Societies

CONSTITUTION AND BY-LAWS

GULF COAST ASSOCIATION OF GEOLOGICAL SOCIETIES

ARTICLE I – Name

This is a non-profit organization and shall be known as the “Gulf Coast Association of Geological Societies”. It is hereinafter referred to as “This Association.”

ARTICLE II – Object

The object of This Association is to provide for discussion and publication of papers on subjects and problems coming within the scope of the Geological profession and with particular emphasis on Gulf Coast geology.

ARTICLE III – Organization

This Association is an organization of AAPG-affiliated Geological Societies in the Gulf Coast Area.

SECTION 1.

The business of This Association shall be transacted by an Executive Committee composed of one representative from each member society and the President, Vice President, Secretary, Treasurer, and Past President. The Secretary and Treasurer shall be non-voting members of the Executive Committee. The Vice President, Secretary, and Treasurer shall be elected by the Executive Committee at the annual meeting. The Secretary and Treasurer shall be nominated by the Executive Committee of the local Geological Society next in line to host the annual meeting. The Vice President shall be nominated by the Executive Committee of the host society for the annual meeting two years hence and shall accede to the Presidency. Thus each year the President, Secretary and Treasurer will be from the host society with the Vice President providing continuity with the Executive Committee as he assumes the Presidency in the ensuing year. The duties of these officers shall be those customary to their respective offices.

The GCAGS representative to the Advisory Council of the American Association of Petroleum Geologists shall be selected by the Executive Committee of GCAGS and shall be an ex officio, non-voting member of the GCAGS Executive Committee.

Each member society shall designate a representative to the Executive Committee and in the event the chosen representative cannot attend any given Executive Committee meeting, an alternate representative shall be appointed by the member society to attend and vote in the absence of the representative. The representative, when practicable, shall be an officer or past officer of the society he represents.

Each Society thus shall have one vote on actions taken by the Executive Committee with the exception that the host society, the next annual host society and the immediate past host society will be entitled to two votes by virtue of their members holding the offices of President, Vice President and Past President.

The officers of the Executive Committee shall be elected for a term of one year. They shall be elected and assume their duties as soon after the annual meeting of This Association as is practicable. Any vacancies shall be filled by the Executive Committee as provided above in Paragraph 1.

SECTION 2.

The business of This Association shall be conducted by the Executive Committee. A simple majority vote of the members present at meetings is required to effect decisions, except in those matters which require a greater majority, as set forth in the Constitution and By-Laws.

A quorum shall consist of more than one-half of the voting members of the Executive Committee.

ARTICLE IV – Meetings

SECTION 1.

There shall be an annual meeting of This Association, the time and place of which shall be determined by the Executive Committee.

ARTICLE V – Publications

There shall be an annual *Transactions* published by This Association, which shall contain papers presented at the annual meeting, and such other material as selected by the Executive Committee. The Executive Committee is authorized to have published additional bulletins, and other material which they feel will further the object of This Association.

ARTICLE VI – Funds

The funds of This Association shall be deposited in any national bank or Federally insured Savings and Loan Association selected by the Executive Committee, to the credit of This Association, or invested in U.S. Government Bonds at the discretion of the Executive Committee.

ARTICLE VII – Amendments

Amendments to this Constitution may be proposed by the Executive Committee, or by any two member societies. Proposed amendments shall be submitted to each of the member societies in writing. It shall require an affirmative vote of three-fourths of the member societies to ratify an amendment to this Constitution.

ARTICLE VIII – Later Affiliation

Non-member Geological Societies in the Gulf Coast Area which are affiliated with AAPG may petition the Executive Committee for membership and shall be accepted by an affirmative vote of three-fourths of the Executive Committee.

AMENDMENT I

Any member society may resign from This Association at any time by written notice to the Executive Committee. There shall be no obligation to transfer to such resigning society any portion of This Association's funds.

AMENDMENT II

This Association shall terminate at such time as a majority of the member societies shall so vote. Upon dissolution all funds and other property shall be divided equally among the member societies.

BY-LAWS

I. COMMITTEES:

The President, with the approval of the Executive Committee, shall appoint the Annual Meeting Chairman, and the following permanent committees:

- A. Publications
- B. Advertising
- C. Publicity

Appointment to these committees shall be for a term of one year.

1. Annual Meeting Chairman

The Annual Meeting Chairman shall direct the staging of the annual meeting, and shall have the authority to appoint such additional committees as he deems necessary.

2. Publications

The Publications Committee shall be responsible for obtaining papers for presentation at the annual meeting, and for editing and publishing the annual *Transactions*. It shall endeavor to stimulate geologists in the Gulf Coast to prepare papers which can be collected and published in the *Transactions*, symposium or other form in order to further the object of This Association as set forth in Article II of the Constitution. This committee shall be composed of one member from each of the affiliated societies.

3. Advertising

The Advertising Committee shall be responsible for obtaining advertisements in the publications of This Association, as directed by the Executive Committee. This committee shall be composed of one member from each of the member societies.

4. Publicity

The Publicity Committee shall be responsible for obtaining maximum national and local publicity of the activities of This Association. Also it shall be the responsibility of this committee to stimulate interest and participation in association affairs. The Executive Committee shall function as the Publicity Committee.

The President, with the approval of the Executive Committee, may appoint such additional committees as are necessary to conduct the business of This Association.

II. TREASURER:

The Treasurer shall have the authority to issue checks against the Bank account of This Association on his sole signature, but in the event of his absence or incapacity to act, withdrawals or payments by check may be made on the signature of the President during the continuance of the absence, or incapacity, of the Treasurer. In this event, the identity and authority of the President, and the circumstances relating to the absence or incapacity of the Treasurer, shall be certified by the Executive Committee, if so required by the depository. The Treasurer shall submit a financial report at each meeting of the Executive Committee and shall keep a set of books in accordance with good accounting practices. He shall submit the books for auditing at the end of his term of office.

The Treasurer shall keep an inventory, and storage record, of back publications and equipment owned by This Association. The office of Treasurer shall be bonded as directed by the Executive Committee.

III. These By Laws may be amended by an affirmative vote of three-fourths of the Executive Committee.

IV. There shall be no dues.

REPORT OF THE GENERAL CHAIRMAN 22nd ANNUAL MEETING - 1972

Shortly after the conclusion of the 1970 Annual Meeting in Shreveport, the planning and staging of this year's 22nd Annual Meeting was begun. In order that we might prepare and present to you a timely program of technical papers, the theme "Exploration - Key to the Energy Crisis" was chosen. Through the effort of our Program Chairman, Mr. James Stone, we feel that an outstanding group of papers and speakers have been assembled to present their thoughts to you.

The theme of this convention is truly a sign of the times. The G.C.A.G.S. represents the largest body of active explorationists in the A.A.P.G. and, therefore, in the world. We need to stand and make known to the people and the government the need for a sound, domestic exploration program to insure the finding and developing of oil and gas reserves that are so vital to our national security. Too much dependence on a foreign supply puts us at the mercy of political upheavals in all parts of the world, yet this is what some of our governmental officials are saying we should do.

Due to the efforts of several of our committee chairmen, we have been able to hold the cost of the convention in line with those of the immediate past and we have maintained the registration fee previously set by the 1971 Convention. Outstanding work on the part of the Advertising and Exhibits Chairmen has produced sufficient income, coupled with the registration fee, that will allow the G.C.A.G.S. to have a convention that shows a balanced budget.

Your Convention Committee hopes that the 1972 Convention will be a memorable occasion for you and that we have fulfilled the mandate given to us from past conventions of having presented a worthwhile and stimulating program.

I wish to express my deep appreciation to the officers and members of the Corpus Christi Geological Society, and their wives, for all their time and effort spent in preparing for this convention. The assistance of last year's General Chairman, Mr. Robert Williamson, of the New Orleans Geological Society, was of great help to me. The cooperation of the officers of the G.C.A.G.S., and especially of this year's President, Mr. Don Boyd, throughout the planning and staging of this convention, has been outstanding.

Jerry M. Sides
General Chairman

REPORT OF THE TRANSACTIONS EDITOR

Having a *Transactions* is, I imagine, somewhat analogous to motherhood. The early days are fraught with expectations and uncertainties. Gradually, the "baby" begins to grow and take shape; and, even though the editor knows that he is going to have something, he really does not know just what it will be like. By summer, labor pains begin to increase in frequency and duration. Finally, one day in August, the "baby" has gone to press – the program chairman, authors, editors, advertising and printing chairmen have delivered!

The conception of a *Transactions*, however, should be enjoyed instead of being a perennial exasperation for the program chairman, printing chairman, and editors. This year, for instance, far too many authors started too late and pulled out at the last minute. One of the original goals of the program chairman and publication committee was to hold the number of abstracts published to a minimum. However, for innumerable reasons beyond elaboration, too many abstracts without accompanying papers – over thirty percent of the program – were, of necessity, included in this year's publication. It is very unfortunate that less than twenty percent of our Gulf Coast geologists will have an opportunity to hear these excellent papers.

For over two decades, some of the finest papers relating to Gulf Coast geology have been published in the *Transactions*. This year is no exception. The reader will find many creative, motivating, and enlightening papers in this year's publication. The excellence of several of this year's contributions will mark them for years to come as invaluable references to the geology of the Gulf Coast. It is hoped that this year's *Transactions*, with all of its shortcomings, will stand tall among its twenty-one predecessors and will serve our professional community well.

Transfers of Corpus Christi personnel by several oil companies were announced during June of this year. Those being transferred that were directly involved with the *Transactions* included the program, printing, and advertising chairmen, and the editor of the Gulf Coast Section of SEPM. These gentlemen are to be commended for the unshirking manner in which they completed their assigned duties and responsibilities under disrupting circumstances.

Serving as editor has been an educational, gratifying and, at times, "character building" experience. It was a personal pleasure and privilege working with all committeemen involved with this publication as well as the congenial management and staff of Golden-Banner Press. Jim Stone did an excellent job of soliciting and designing a well-balanced program in keeping with the timely convention theme. The editorial assistance of Clyde Beckwith in Houston, Fred Stickland in New Orleans, and Bob Marshall, locally, was very much appreciated. Gary L. Spraul is commended for an excellent job of editing the Gulf Coast Section of SEPM manuscripts included in this volume.

Once again, our organization is indebted to H. O. Wyneken in Houston for this year's cover, which he designed to express the convention theme. Hank's talented art work enhances the covers of the 1964 *Transactions*, Corpus Christi Geological Society, and Coastal Bend Geophysical Society Bulletins, and several field trip guide books, including this year's GCAGS Padre Island guide book.

Thanks are extended to the management of Humble Oil & Refining Company for authorization to participate in this worthwhile professional activity and for provision of necessary secretarial support. Mrs. Ann Lewis deserves special recognition for good naturedly handling much of the editorial typing and mailing involved.

William A. Atlee
1972 *Transactions* Editor

REPORT OF GULF COAST SECTION - S.E.P.M. EDITOR

My special appreciation to the local editors and business representatives for their assistance. To the authors, who met our deadlines so punctually, you have earned by profound gratitude. Particular thanks go to President Bill Hay and Program Chairman Gene Martin, also to my right hand Mary Pena. To Mobil Oil Corporation management, my profound appreciation for their understanding and gracious permission to complete this task. Finally, to my wife, Jane, my special thanks for her patience at this particular time which was concurrent with our transfer.

The contributions of the GCS-SEPM members to this year's *Transactions* are outstanding in their depth and diversity. The subject matter ranges from paleoecology through sedimentation and stratigraphy to geochemistry. However, everyone can appreciate the fact that the basic data so forcefully and expertly treated herein lends a better understanding towards achieving our goal of the convention theme "Exploration – Key to the Energy Crisis".

Gary L. Spraul
Editor
GCS-SEPM

ORGANIZATION TWENTY-SECOND ANNUAL MEETING

JERRY M. SIDES – GENERAL CHAIRMAN
WILLIAM R. PAYNE – VICE CHAIRMAN

Advertising

Aaron L. Chauvin, Jr., Chairman
Fred Dix, Corpus Christi
Jim Ewbank, Tyler
Joe Fritz, Mississippi
Chris Jensen, Southeastern
Milton G. Johnson, San Antonio
Ben Mayfield, Lafayette
Merton M. Osborn, Houston
W. Leon Scarbrough, Alabama
Joe Sullins, Shreveport
George Thomas, New Orleans

Arrangements

William R. Payne

Awards

Richard C. Peryam

Editor

William A. Atlee
Associate Editors:
Clyde Beckwith, Houston
Vern L. Culbertson, Jackson
Bruce Fox, Tyler
R. N. Hargis, San Antonio
Edward Hoffman, Lafayette
John W. Kofoed, Miami
P. E. LaMoreaux, Tuscaloosa
R. P. Marshall, Corpus Christi
E. B. McDaniels, Shreveport
Fred Strickland, New Orleans
Cover Design:
H. O. Wyneken, Houston

Entertainment

G. M. Heinzelmann, Jr., Chairman

Exhibits

Robert W. Meier
Robert F. Giltner

Field Trips

Robert F. Travis, Chairman
Stephen Allen
Richard E. Dunlap
Walter D. Hodgson
Robert N. Tench

Golf Tournament

Joseph A. O'Brien, Chairman
Glenn E. Wilson

Hotels and Housing

Benton C. Phillips
Joseph V. McCullough

Ladies Activities

Mrs. Paul M. Strunk (Marion)
Mrs. John P. Griesbach (Johanne)

Printing

David C. Callaway, Chairman
S. W. Leonard

Program

James A. Stone

Publicity

Michael G. Pitzer, Chairman

Registration

Cliff McTee, Chairman
John Hearn
Joe Hybner
William H. Miller

Speakers Assistance

Jack R. Birchum

Tobin Theater

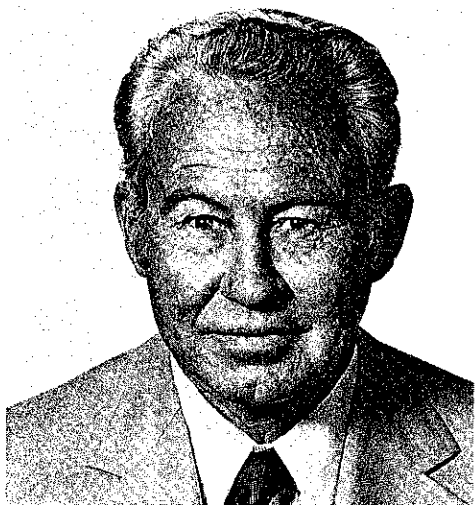
Charles E. Jacobs, Chairman
Robert F. Giltner
M. H. Oakes

Transportation

Leroy L. Manka

GULF COAST ASSOCIATION OF GEOLOGICAL SOCIETIES BEST PAPER AWARDS, TWENTY-FIRST ANNUAL MEETING NEW ORLEANS, LOUISIANA

The 1971 G.C.A.G.S. Awards Committee selected the following geologists as recipients of the Twenty-First Annual Convention Awards. One first-place and three second-place winners were selected as the most significant or timely oral presentations and/or fully printed papers.



HUNTER YARBOROUGH

First Prize and A. I. Levorsen Award: To Hunter Yarborough, a Senior Geological Scientist of Humble Oil & Refining Company's Headquarters Exploration Group, for his paper entitled "Sedimentary Environments and the Occurrence of Major Hydrocarbon Accumulations". Hunter attended The University of Texas from 1934 to 1940, receiving a B.S. Degree in Geology with Honors and minors in physics and petroleum engineering. Two years were spent in graduate studies. During World War II, he served as a naval aviator in both the Atlantic and Pacific theatres. Following the War, Mr. Yarborough has worked for Humble Oil & Refining Company conducting subsurface and surface geological and geophysical studies in the exploration for oil and gas over much of the United States. He has been active in all phases of geological and geophysical research and has traveled over much of the Free World working and consulting with active exploration groups.

Mr. Yarborough is a Certified Petroleum Geologist; a member of The American Association of Petroleum Geologists; a Fellow of The Geological Society of America; a member of The Society of Exploration Geophysicists; a Registered Professional Engineer, California; and a member of Sigma Gamma Epsilon and Rho Kappa, honorary geological fraternities. He has served as Distinguished Lecturer

of The American Association of Petroleum Geologists, and has given technical addresses on oil finding to many of the universities and most of the geological societies of the United States. He is a recent recipient of The A.I. Levorsen Memorial Award.



DAVID A. REEL



GEORGE M. GRIFFIN

Second Prize (1): To David A. Reel Exploration Geologist with Getty Oil Company in New Orleans, for co-authorship of "Potentially Petroliferous Trends in Florida as Defined by Geothermal Gradients". Mr. Reel recently earned both a B.A. Degree and a M.A. Degree in Geology from the University of South Florida. Following graduation from USF in 1970, Mr. Reel did a year of post-graduate work at Louisiana State University where he held a teaching assistantship immediately prior to accepting a position of exploration geologist with Getty Oil Company in 1971. Thesis research of geothermal and heat flow data of Florida resulted in the prize winning paper. Mr. Reel is an active member of the New Orleans Geological Society.

To George M. Griffin, co-author, who is a Professor of Geology at the University of Florida. Following receipt of a B.A. Degree, 1952, and a M.S. Degree, 1954, in Geology from the University of North Carolina, Professor Griffin was a research geologist for eleven years with Shell Development Company in Houston, Texas. While in Houston, he earned a Ph.D. degree in

Geology from Rice University in 1960. Dr. Griffin was Head of Geology Department, Ohio State University, Dayton Campus from 1965 to 1966; Project Leader, Continental Slope Deep Drilling Project, Gulf Oil Corp., World-Wide Technical Service Center, Houston, Texas, from 1966 to 1967; Associate Professor, Department of Geology, University of South Florida, Tampa, Florida, from 1967 to 1970; Associate Scientist Marine Science Institute, U. S. F., St. Petersburg, Florida, from 1967 to 1972; Professor of Geology, Geology Department, University of Florida, Gainesville, Florida, from 1970 to 1972.

Dr. Griffin's main research interests and publications pertain to origin, distribution, and subsurface alteration of clay minerals; geothermal gradients and heat flow in the S. E. United States; turbidity in coastal waters; X-Ray diffractive methods for analysis of sediments; structural development of Yucatan Straits and S. E. Gulf of Mexico Region. Societies include AAPG - Regional Chairman Geothermal Survey of North America and member of Geothermal Gradient Committee.



B. J. SLOANE

Second Prize (2): To B. J. Sloane, Exploration Geologist with Atlantic Richfield Company for his paper entitled "Recent Developments in the Miocene *Planulina* Gas Trend of South Louisiana". Mr. Sloane, born Opelousas, Louisiana, earned a B.S. Degree in Geology from the University of Southwestern Louisiana in 1953. Following graduation he served for two years as a USAF Lieutenant prior to entering Louisiana State University where he received his M.S. Degree in Geology in 1957. Mr. Sloane was an exploration geologist for Shell Company from 1957 to 1962, a consulting geologist from 1963 to 1966, affiliated with Moncrief and Sloane from 1966 to 1968, and exploration geologist with Sinclair Oil and Gas Company from 1968 to 1969. From 1969 until the present, Mr. Sloane has served as an exploration geologist with Atlantic Richfield Company. Mr. Sloane's publications include "The Subsurface Bodcaw Sand in Louisiana" and "The Structural History of the Houma Embayment".

Second Prize (3): To Dr. J. A. Hartman, Regional Geological Engineer for Shell Oil Company's Southern Region, for his paper entitled "G₂ Channel Sandstone Main Pass Block 35 Field". Following service in the U. S. Army, Dr. Hartman earned his B.S. Degree in Geology from Beloit College in 1951, and his M.S. and Ph.D. degrees in 1955 and 1957, respectively, from the University of Wisconsin. Following graduation from Beloit College, from 1951 to 1957, Dr. Hartman was employed by Reynolds Jamaica Mines, Ltd., Jamaica, B.W.I.; U. S. Steel in New York; and Union Carbide Ore Company in Surinam. Assignments involved exploration, evaluation, and exploitation of bauxite, iron-ore, copper ore, manganese, and columbite-tantalite. Dr. Hartman has been employed by Shell Oil Company, New Orleans, from 1957 to present in various capacities including Division Geological Engineer and Division Petroleum Engineer. Eighteen months were spent with Shell Development Company in Houston working on salt dome research.

Dr. Hartman has a lengthy list of diversified publications dealing with bauxite mineralogy, and offshore and onshore oil fields and reservoirs in the southeastern United States. His professional affiliations include AAPG, NOGS, AIME, AAAS, and XL.



J. A. HARTMAN

GULF COAST ASSOCIATION OF GEOLOGICAL SOCIETIES

PAST OFFICERS AND CONVENTION CHAIRMEN

YEAR	HOST SOCIETY	PRES.	V. PRES.	SEC.	TREAS.	CONVENTION CHAIRMAN
1951	New Orleans	L. Bowling				
1952	Corpus Christi	W. M. Cradlick				
1953	Shreveport	R. T. Wade		J. S. Spencer		E. J. Nugent
1954	Houston	W. R. Canada	W. H. Knight	W. A. Peterson	E. W. Kimball	
1955	Biloxi	A. E. Blanton	L. D. Troupe	F. H. Webster	C. C. Barber	
1956	San Antonio	R. L. Layden	M. W. Beckman	C. W. Holcomb	A. F. Scott	
1957	New Orleans	H. N. Hickey	P. Montgomery	R. A. Davis	K. C. Anderson	
1958	Corpus Christi	E. A. Lohse	R. W. Grayson	E. T. Musselman	W. H. Wallace, Jr.	
1959	Houston	G. C. Hardin, Jr.	L. Harvey	J. F. Moss	J. A. Wheller	O. G. Bell
1960	Biloxi	M. F. Kirby	D. N. Osburn	W. W. Woolfolk	E. G. Jeffreys	A. E. Blanton
1961	San Antonio	D. Dassow	E. P. Roth	A. W. Wood	E. L. Ames	L. L. Palmer
1962	New Orleans	T. H. Philpott	J. C. Byrd	H. O. Woodbury	K. Soule	L. H. Meltzer
1963	Shreveport	J. C. Byrd	E. Knott	W. E. Bancroft	R. E. Rogers	H. J. Tyler
1964	Corpus Christi	E. Knott	R. E. Fairchild	R. W. Luker	D. A. Petrotti	B. F. Dyer
1965	Houston	R. E. Fairchild	A. M. Borland	K. C. Harkins, Jr.	J. L. George, Jr.	E. A. Lohse
1966	Lafayette	A. M. Borland	J. H. Hensley	W. A. Robbins, Jr.	J. S. Schoelen	R. R. Copeland
1967	San Antonio	W. L. Stapp	M. D. Horton	M. L. Frazier, Sr.	L. C. Bryant	M. O. Turner
1968	Jackson	M. D. Horton	R. O. Vernon	L. G. Hughes	E. D. Minihan	L. E. Warren
1969	Miami	R. O. Vernon	H. J. Tyler	J. W. Yon, Jr.	C. W. Hendry, Jr.	H. S. Puri
1970	Shreveport	H. J. Tyler	L. H. Meltzer	C. E. Brown	B. C. Tucker	J. O. Goffe
1971	New Orleans	L. H. Meltzer	D. R. Boyd	M. L. Dwight	P. G. Gray	R. G. Williamson
1972	Corpus Christi	D. R. Boyd	F. M. Schall	M. H. Oakes	J. E. Melton	J. M. Sides

GULF COAST SECTION SOCIETY OF ECONOMIC PALEONTOLOGISTS AND MINERALOGISTS

OFFICERS

President: HAY, WILLIAM W., School of Marine & Atmospheric Science, University of Miami, 10 Rickenbacker Causeway, Miami, Florida 33149

Vice-President: STEINKRAUS, WILLIAM E., Chevron Oil Company, The California Company Division, 1111 Tulane Avenue, New Orleans, Louisiana 70112

Secretary: KOENIG, KARL J., Department of Geology, Texas A&M University, College Station, Texas 77843.

Treasurer: STUDE, GERALD R., Humble Oil and Refining Company, P. O. Box 61975, New Orleans, Louisiana 70160

Program Chairman: MARTIN, GENE B., Atlantic Richfield Company, P. O. Box 1981, Corpus Christi, Texas 78403

Editor: SPRAUL, GARY L., Mobil Oil Company, P. O. Box 2448, Corpus Christi, Texas 78403

BUSINESS REPRESENTATIVES

ALABAMA

University: Joiner, Thomas J., Geological Survey of Alabama, P. O. Drawer O, University, Alabama 35486

FLORIDA

Tallahassee: Wise, Sherwood, Department of Geology, The Florida State University, Tallahassee, Florida 32306.

LOUISIANA

Lafayette: Wright, Roland F., Phillips Petroleum Company, P. O. Box 51185 OCS, Lafayette, Louisiana 70501.

New Orleans: Adams, Emmett R., Shell Oil Company, P. O. Box 60775, New Orleans, Louisiana.

Shreveport: Vieaux, Don, Phillips Petroleum Company, P. O. Drawer 1729, Shreveport, Louisiana 71102.

MISSISSIPPI

Starkville: Russell, Ernest E., Mississippi State University, Box R, State College, Mississippi 39762

TEXAS

Austin: Eargle, D. H., U. S Geological Survey, 801 Federal Center, Austin, Texas 78701

Beaumont: Eveland, H. E., Lamar State College, Beaumont, Texas 77705

College Station: Koenig, Karl J., Department of Geology, Texas A&M University, College Station, Texas 77843.

Corpus Christi: Martin, Gene B., Atlantic Richfield Company, P. O. Box 1981, Corpus Christi, Texas 78403.

Dallas: Butler, E. Ann, Atlantic Richfield Company, P. O. Box 2819, Dallas, Texas 75221.

Houston: Lamb, James L., ESSO Production Research Company, P. O. Box 2189, Houston, Texas 77001

San Antonio: Montgomery, P. A., Jr., Montgomery's Stratigraphic Service, 1517 Milam Building, San Antonio, Texas 78205.

REPORT OF THE PRESIDENT GULF COAST SECTION SOCIETY OF ECONOMIC PALEONTOLOGISTS AND MINERALOGISTS

The Gulf Coast Section of the Society of Economic Paleontologists and Mineralogists has enjoyed another successful year. Our Section continues to serve a very valuable function as focus for communication and activity in the areas of stratigraphy, sedimentology, mineralogy, and paleontology in the Gulf Coast. Our membership now stands at nearly four hundred.

Your president was able to attend the SEPM Council Sessions at both Washington (November, 1971), in connection with the GSA Annual Meeting, and Denver (April 1972), during the AAPG-SEPM Annual Convention. The SEPM Council discussed the growth of regional sections in some detail. Our section has been cited as an example of what can be accomplished by a strong, active group. Other active sections exist, and new sections are being formed where previously there were none. In the course of these discussions the matters of section boundaries and membership was considered. The boundaries of the Gulf Coast section seem to be well defined by tradition, including the coastal plain of Texas, Louisiana, Mississippi, Alabama, and Florida, and corresponding to the boundaries of the GCAGS. Regarding membership, our section had passed an amendment in 1966 stating that full members of the section need not reside in the Gulf Coast area; membership was to be considered a function of individual interest and activity. The principle that members of a section represent a community of interest rather than a strictly geographic community was recognized by the SEPM officers. As a means of expressing his hearty approval of this principle, Orville Bandy, President of SEPM for 1971-72 and a resident of the Los Angeles area, joined our section. We are pleased and honored to have him as a member of our section, and to welcome others who live elsewhere but whose interests are primarily in the Gulf Coast.

Quality as well as quantity of papers offered for our Annual Meeting continues to increase each year. It was not possible to accept all papers for this year's meeting in Corpus Christi, and restrictions on the size of the *Transactions* imposed by economic considerations have made it necessary to represent a few of the contributions to the SEPM program by publication of an abstract alone. The difficult job of selection and organization of the sessions has been ably carried out by Gene Martin, and the time and energy consuming task of editing by Gary Spraul; we are much indebted to both of these gentlemen, as well as to their colleagues who helped them perform their functions with efficiency and dispatch.

The field trip to study Mesozoic-Paleogene sediments of northern Mexico has been led by Al Weidie and James Wolleben, with your Vice President, William Steinkraus, acting as Field Trip Chairman. The organization of trips of this sort depends heavily on the energy and perseverance of the Field Trip Chairman and Leaders, and I am sure that all who participated in the trip are grateful for their efforts.

This year Richard Zingula moved from Houston to Canada. Dick had been Chairman of the Type Localities Committee for a number of years, and deserves a great deal of credit for the success of the Type Localities Project. He has performed a great service to the Section, and we are sorry to see him leave the area. The work of the Type Localities Committee will proceed with continued vigor under the Chairmanship of C. Everett Brett.

The New Orleans, Lafayette and Houston chapters deserve special recognition and commendation for their highly active local groups. In each of these cities the local committees organize and present interesting programs at regular meetings. Their efforts are greatly appreciated by the GCS membership.

It has been a pleasure to serve as your President this year. Most of the work of the section is performed, however, not by the President, but by the local business representatives who gather information for the newsletters, encourage contribution of papers to the annual meeting, and perform the task of liason between the council and the membership. To them, I wish to express my heartiest thanks.

Finally, I would like to thank the fine group of officers who have served on your council during this year: William E. Steinkraus, Vice President; Karl J. Koenig, Secretary; Gerald R. Stude, Treasurer; and Jules Braunstein, Past President.

William W. Hay

PUBLICATIONS OF THE GULF COAST SECTION - S.E.P.M.

(These may be ordered from CAMBE Geological Services, Inc., 1809 Louisiana Street, Houston, Texas 77002).

Units I, II, and III of the Gulf Coast Type Locality
 Descriptions (each) \$2.50

FIELD TRIP GUIDEBOOKS

1961 – Middle Eocene, Houston County, Texas \$3.00

1962 – Little Stave Creek – Salt Mountain Limestone,
 Jackson, Alabama \$3.00

1967 – Selected Cretaceous and Tertiary Depositional Environments
 of Texas \$4.00

1969 – Late Cenozoic Stratigraphy of Southwest Florida \$3.00

1969 – Geological Guidebook to Neogene Sections in Jamaica,
 West Indies \$1.80

1970 – Lonestar, Texas Iron Ore Deposits \$4.90

Include Sales Tax – Texas 5%
 Louisiana 5%

All Foreign orders add \$1.00/volume

Sub Total _____

ALL ORDERS MUST BE PREPAID (EXCEPT STANDING ORDERS)

Prices effective October 1, 1972

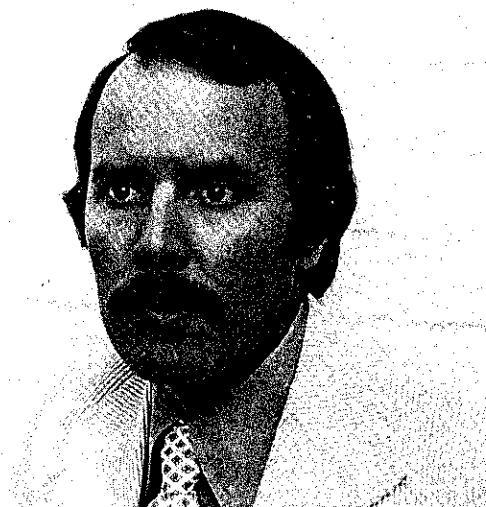
GULF COAST SECTION OF S.E.P.M. BEST PAPER AWARDS, TWENTY-FIRST ANNUAL MEETING NEW ORLEANS, LOUISIANA



ROBERT W. MAXWELL

First Prize: To Robert W. Maxwell, Jr., development geologist with The California Company (Standard Oil Company of California), Lafayette, Louisiana, for his paper entitled "Origin and Chronology of Alabama River Terraces". Bob is a native of Ohio and served in the Armed Forces from 1966 to 1969. He earned his B. S. from Florida State University in 1969 and will receive his M. S. degree in geology in 1972 from the same institution. He is an associate member of Sigma XI and a member of the American Association for The Advancement of Science.

Second Prize: To Claude Wylie Poag, Assistant Professor in the Department of Geological Oceanography at Texas A&M University, College Station, for his paper, "A Reevaluation of the Gulf Coast Pliocene - Pleistocene Boundary". Dr. Poag earned a B. S. degree in Geology from Florida State University, an M. S. in Geology from Louisiana State University, and a Ph.D. in Paleontology from Tulane University. He was employed by Chevron Oil Company as a micropaleontologist for eight years before joining the faculty of the Texas A&M University Department of Oceanography in 1970. He is the author of several papers treating Gulf Coast microfaunas, especially the aspects of biostratigraphy, paleoecology, and systematics.



CLAUDE WYLIE POAG



EUGENE A. SHINN

Third Prize: To Eugene A. Shinn, Staff Marine Specialist, Shell Oil Company, Houston, Texas, for his paper, "Aspects of Diagenesis of Algal Cup Reefs in Bermuda". Gene is a native of the Florida Keys and received his B. S. in biology from the University of Miami in 1957. In 1958, he joined Shell Oil Company and has worked extensively with carbonates in Florida, the Bahamas, the Persian Gulf and the subsurface of the southern United States. His paper, "Burrowing in Recent Lime Sediments", published in the *Journal of Paleontology*, won the annual best paper award. He was also co-author with Ginsburg and Stockman of a paper dealing with algal mud production, which won a runner-up award in the *Journal of Sedimentary Petrology*. Using his background in photography, he produced three technical training films. These films, *Bahama Tidal Flats*, *Carbonate Sands*, and *Sedimentation on a Carbonate Platform Margin*, have become a standard part of sedimentation courses in universities both in the United States and in Europe.

PUBLICATIONS OF THE GULF COAST ASSOCIATION OF GEOLOGICAL SOCIETIES

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