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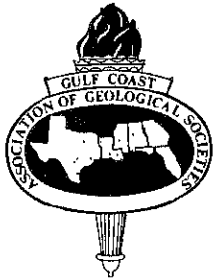
Transactions of the  
35th ANNUAL MEETING

AUSTIN, TEXAS  
OCTOBER 16, 17, 18, 1985



# TRANSACTIONS GULF COAST ASSOCIATION OF GEOLOGICAL SOCIETIES

A SECTION OF THE AMERICAN ASSOCIATION OF PETROLEUM GEOLOGISTS



AUSTIN GEOLOGICAL SOCIETY

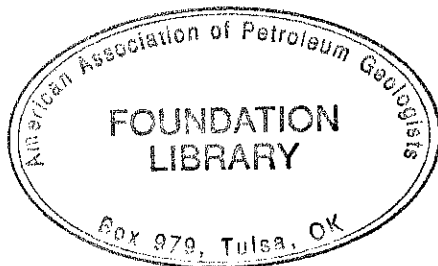
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THOMAS E. EWING  
Editor

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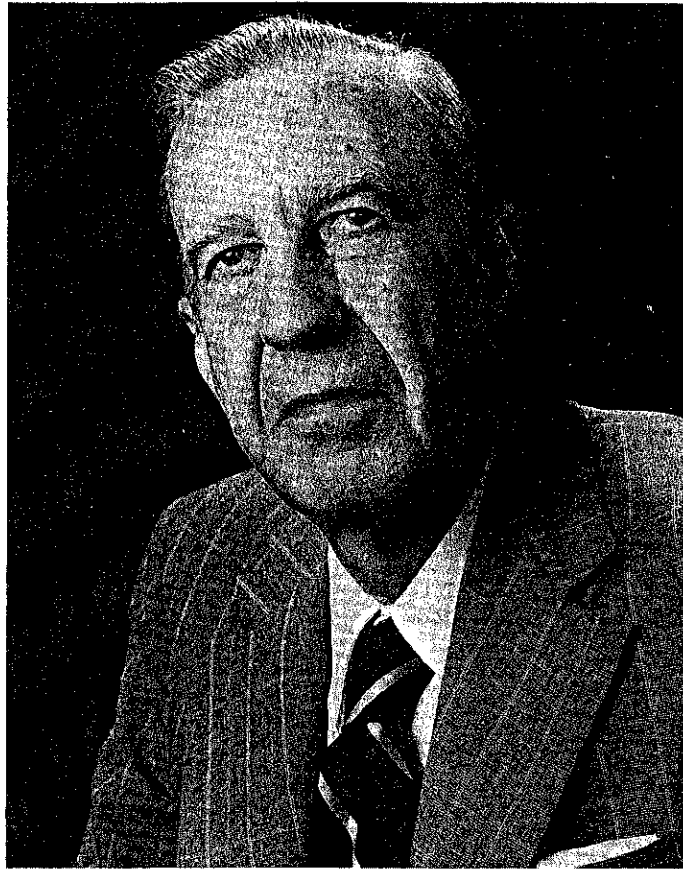
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# TRANSACTIONS VOLUME

## Dedicated to the Memory

### of



**Lyman Dorgan Toulmin**

The *Transactions* of the thirty-fifth annual meeting is dedicated to Lyman Dorgan Toulmin in honor of his outstanding contributions to the geology of the Gulf Coast Region and to the Gulf Coast Association of Geological Societies.

Lyman died Sunday, November 18, 1984 at his home in Tallahassee, Florida. Funeral Services were held at 3:00 p.m. Tuesday, November 20, at Springhill Cemetary in Mobile, Alabama. Lyman's families were long-time residents of that area and, in fact, the small community of Toulminville in northern Mobile retains their name to this date.

Lyman Toulmin was teacher, researcher, and a persistent explorer of paleontology and stratigraphy of the Gulf Coastal Plain of the southeast. He was a meticulous scientist and an outstanding professor that contributed to hundreds of students over the years who remember him as a gentleman and a scientist.

Lyman was born in Mobile, Alabama on July 4, 1904. He received a Bachelor's Degree at the University of Alabama in 1926 and a Master's Degree in 1934. He continued his formal education at Princeton University, receiving his Doctoral Degree in 1940. Lyman grew up in the Gulf Coastal Plain, and most of his early training and experience in geology was in his home state of Alabama. He knew personally Alabama's Dr. Eugene Allen Smith, a famous State Geologist; and in many ways Lyman was similar to the "little doctor", as Dr. Smith was known.

At Lyman's home in Mobile, in the back yard, there was a small white building that was his childhood study and experimental lab. He was interested in biology and botany and collected plant and animal specimens as well as rocks and fossils. It was natural that when he went to "the University" that he would continue these childhood interests.

Lyman related to me one of his earliest experiences with an adverse situation in geology. At one time, his father was a building contractor who had bid and successfully won a contract to construct a road across the Porter's Creek Clay in Marengo County. The rains came, the mudholes formed, and his father lost a great deal of money trying to build a road across what then was known as the Sucarnoochee Clay or, in Choctaw Indian terminology, "hog wallow."

After completing his formal education, Lyman became an instructor and then an Assistant Professor at Texas A&M from 1938 to 1942. In 1942 he became a geologist with the Geological Survey of Alabama where he remained until 1945. This was an important period in my life, for as a new graduate in geology, I was assigned to the U.S. Geological Survey Office at Tuscaloosa,

and Lyman and I began a long personal friendship, from which I benefited, not just as the result of years of scientific training but, as important, in the social graces — for Lyman was truly a gentleman of the Old South. He was patient, considerate, meticulous, and exacting scientifically.

It was during this time that we developed the concept that Alabama needed a new State Geologic Map. Dr. Eugene Allen Smith and his associates within the State and Federal Geological Surveys, had prepared the earlier report (Special Report 14, 1926), *Geology of Alabama*. The map in this report is still the latest published state geologic map and is now a collector's item.

As a part of my assignment to the U.S.G.S. office in Tuscaloosa and with Lyman working as a geologist with the Alabama Geological Survey, we began a systematic series of geologic, stratigraphic, and structural profiles along the north-south flowing rivers and key north-south highways as the first step in the remapping program. We also began a training program for younger geologists to carry out mapping in detail each county area. By 1976 all of the counties of the state had been remapped and were ready to begin a program of integration into a State map for Alabama. Each county geologic map was also the basis for companion maps on water resource and minerals and, in some areas, for an environmental atlas as an aid to proper resource development. The Survey is now compiling a new state map, scale 1:500,000, to be published in four parts. This new map would not have been possible however, unless Dr. Lyman Toulmin had the vision and concept for the development of this new map for the State many years before. He also recognized its importance for the future development of the state's mineral, water, and energy resources.

Lyman left the Alabama Geological Survey in 1945 to become an Associate Professor at Birmingham Southern until 1948. Then, he became an Associate Professor and, later, a full Professor at Florida State University from that date until the present. He, also, served, 1953-54, as a Visiting Professor at Louisiana State University.

Through all these years from 1943 on, Lyman continued to do field work in Alabama, and contribute to the knowledge of the geology, stratigraphy, and paleontology of the Gulf Coastal Plain. Even at present, there is an unpublished manuscript that remains at the Alabama Geological Survey on "The Stratigraphic Distribution of Paleocene and Eocene Fossils of the Eastern Gulf Coastal Region." This monograph, in press, will consist of about 700 pages and 72 plates of fossils.

A listing of Lyman's accomplishments does not really tell his full story. The Alabama Survey's salaries during the 1940's and Lyman's assignments amounted to a few thousand dollars per year, and the expense allowance of \$5.00 per day. Lyman and Gerry (Hulsart) were married in Tuscaloosa, while Lyman was still a geologist with the Alabama Survey. During these early years of marriage, my wife, Bunnie, and I spent many days, weeks, and months in the field with Lyman and Gerry completing river and highway profiles and geologic mapping. The women would travel by car and boat, prepare the meals, come rain or shine. Our workday started at sunrise and we quit when it got too dark. Lunches were beneath big oak trees along creek banks. We would find a private home to rent for a month or two at a time in Jackson, Thomasville, Butler or Silas, Alabama. The rent was cheap, we could do our own cooking, and prepare our next day's lunch. Though finances were slim, the rewards of fellowship and learning together were many. We travelled many hundreds of country paths, along creeks, through swamps, and took long boat trips, camping along the Tombigbee, and Chattahoochee Rivers and tributaries, to unravel the details of Alabama geology.

In all these years of close association, Lyman remained the same quiet personality, a true gentleman and scholar. He had a broad interest in art, was an excellent photographer, read widely on many subjects, and was an avid historian of the geology of Alabama. Two of his earlier experiences, that he delighted in relating, were about his service as a deck boy on a freighter to Europe and as a teacher of geology, physics and chemistry in the Mobile County High Schools from 1929 to 1934.

After Lyman left the Alabama Geological Survey in 1945, he worked each summer WAE with either the U.S.G.S. or the State Geological Survey. In 1961 he was offered the Assistant State Geologist's position in Alabama, with a substantial increase in income that would have allowed him to pursue his continuing interest in the remapping of the state. The position is appointed by the President of the University of Alabama in concurrence of the Governor. Lyman would have also become a Professor of Geology at the University. He accepted the proposal only to learn of internal conflict in the Geology Department at the University. Lyman withdrew rather than become involved. Unfortunately, Alabama lost the chance to regain one of its leading scientists.

Lyman was a contributing member of many professional societies. He was Councilor of the Society of Economic Paleontologists and Mineralogists; President of the Gulf Coast Section of the Society of Economic Paleontologists and Mineralogists; Editor of the *Journal of the American Association of Petroleum Geologists*; Secretary-Treasurer of the Southeast Section, Geological Society of America; an active Fellow of the Geological Society of America. Many of these activities were personally funded by Lyman, an indication of his devotion to his profession.

He was a member of Sigma Xi, Phi Beta Kappa, American Association of Petroleum Geologists, Paleontological Society, Society of Economic Paleontologists and Mineralogists, member of the American Association for the Advancement of Science, and many other professional societies.

In Lyman's later years, his wife, Gerry, was his constant companion and avid supporter. She drove him everywhere that he wanted to go to carry out his field studies. She helped Lyman get to type localities and recollect fossil specimens. We always looked forward to our visits to Lyman's home in Tallahassee to review manuscripts for publication, or to go over plans for a coming field summer season. Lyman enjoyed social functions, and Gerry's parties at their home for faculty and town friends were highlights of the year's social scene.

Lyman's contribution as a professor and one-time head of the Department of Geology at Florida State University is described by Stephen S. Winters, former Dean of Arts & Science at F.S.U.: "Lyman was a rock for our department; and his gentle, soft spoken, civilized approach to a frantic world will be missed." Lyman's former students from Birmingham Southern are some of the best that I have ever employed. The same is true of those from L.S.U. and F.S.U. Many of them are now senior citizens in the field of geology throughout the world. What more fitting accomplishment can any man have.

Philip E. LaMoreaux, Sr.

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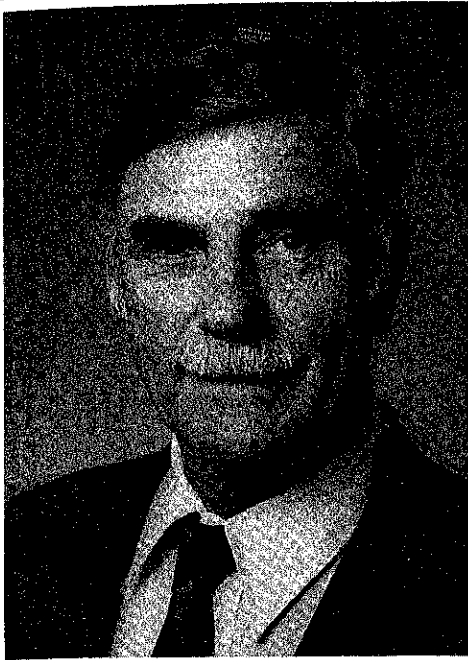
PRESIDENT..... William R. Meaney  
FIRST VICE-PRESIDENT..... Tom Dickerson  
SECOND VICE-PRESIDENT..... Gary Hanson  
SECRETARY..... Jim Black  
TREASURER..... T. R. McClellan

**SOUTH TEXAS GEOLOGICAL SOCIETY, B-100 Petroleum Center, San Antonio, Texas 78209**

PRESIDENT..... Lee T. Billingsley  
VICE-PRESIDENT..... John M. Long  
SECRETARY..... Robert Critchlow  
TREASURER..... W. Grant Ferguson

**SOUTHEASTERN GEOLOGICAL SOCIETY, P.O. Box 1634, Tallahassee, Florida 32302**

PRESIDENT..... Marvin Ivey  
VICE-PRESIDENT..... Marc DeFant  
SECRETARY/TREASURER..... Allen Stodghill



## REPORT OF THE PRESIDENT GULF COAST ASSOCIATION OF GEOLOGICAL SOCIETIES

E. G. (Jerry) Wermund

As president of the Gulf Coast Association of Geological Societies and as a member of the Austin Geological Society, I am pleased to greet you and to welcome you to Austin, Texas for the 35th annual meeting of the GCAGS.

I am certain that you will greatly enjoy your annual meeting in Austin. The meeting is the major business of this association each year, and it represents the dedication of the host society to the larger regional federation of geological societies having a common interest in the geology and the resource potential of the Gulf of Mexico Basin. The theme of this meeting, "Target on Resources," symbolizes several aspects of the situation of Gulf Coast professional geologists in 1985. The Gulf Coast explorationist operates in a maturing province where the "target" diminishes and the bull's-eye becomes smaller. At the same time, "resources" have increased dimensions. Oil and gas geologists still constitute the largest community in the Gulf Coast, but the other geological communities are growing—those who seek and manage water, find and develop mineral commodities and construction materials, and define the environment for continued and thoughtful development. All communities are well represented in your technical program, by presentations, in the transactions, and on field trips.

The heart and soul of every successful meeting are the members of the Convention Committee. In every area we have had dedicated, competent individuals who have given generously of much personal time. I thank them all. This year's leadership was shared by two General Chairmen, Bill Ehni and Ed Garner. Both have performed superbly, as attested to by your meetings in Austin. I am grateful to Bill Ehni for his organization, his selection of excellent committees, and his management of the initial preparation. It is unfortunate that the present difficult business climate for the geological explorationist—for the same resources that this meeting targets—was in part responsible for our losing Bill to Nevada, just three months before the meetings. Ed Garner has efficiently managed the final months of preparation, not an easy task. I both admire and thank Ed for courageously and effectively completing this difficult assignment.

The GCAGS remains in excellent financial condition under the fine management of Cliff Foss. As a result, John McCarty, Chairman of the Student Aid Committee, recommended, and the Executive Committee approved, that 21 students be funded up to a total of \$15,000 for the 1985 summer. John and his committee bring credit to the GCAGS through their good work with Gulf Coast universities and colleges. Thanks to Bob Boyer, GCAGS publications continue to be the best sellers, and innovative publishing ideas flourish. Lee Meltzer continues yeoman service, chairing the Awards and Nominations Committee. His efforts are reflected in the 1986 candidacy of both James Forgotson, Jr., and Anthony Reso for high offices in AAPG. Paul Strunk has long labored as our AAPG Advisory Council Representative; Sara Childress will continue these responsibilities. I am grateful for the achievements of these chairmen and their committee members.

The President is only as effective as his committee chairpersons and his fellow GCAGS officers. The 1984-85 Executive Committee has worked efficiently and well. I thank John Palmer, Past President; Dave Pope, Vice President; Doug Ratcliff, Treasurer; and Rizer Everett, Secretary. We often had to work responsively on short notice, which we managed to do in spite of distances and schedules.

Two events occurred during the development of this meeting, and to me they are symbolic of today. One was the need to change leadership in several committee areas, which reflects the economic problems of today's oil and gas industry. The second was the increased use of computers in fashioning this Austin convention; planners of the Shreveport meeting initiated the use of computers for the 1984 convention. This year's business and registration records were programmed and managed through the efforts of our Treasurer, Doug Ratcliff. For this he deserves special thanks. Also through his instigation, the GCAGS now owns its own computer system, which generated the badges you wear. This system is available to our Baton Rouge hosts and to future hosts for their use. The help of the staff at AAPG headquarters in modernizing our registration process is also appreciated.

Enjoy this 35th annual meeting of the GCAGS in Austin. I hope that you return home safely with new and exciting technical concepts, feelings of enjoyment from social and professional interactions, and many new and reestablished old friendships.

Jerry Wermund  
President  
Gulf Coast Association of Geological Societies  
and Gulf Coast Section, AAPG

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# GULF COAST ASSOCIATION OF GEOLOGICAL SOCIETIES

VICE PRESIDENT  
David E. Pope



SECRETARY  
Rizer Everett



TREASURER  
Doug Ratcliff





L. Edwin Garner



Thomas E. Ewing

## REPORT OF THE EDITOR 1985 GULF COAST ASSOCIATION OF GEOLOGICAL SOCIETIES *TRANSACTIONS*

The papers submitted for the permanent record of the 1985 Gulf Coast Association of Geological Societies meeting span a wide range of topics and areas. This year, an unusually large number of papers have been submitted on the topics of fluid flow in the Gulf Coast Basin (giving evidence for large-scale convective flow throughout the basin), geophysics (including seismicity, paleomagnetism and magnetotellurics as well as seismic reflection) and exploration techniques (including remote sensing and radiogeochimistry). Fewer papers were submitted this year on diagenesis and depositional systems. Geographically, almost half the papers concern Texas geology; the eastern Gulf of Mexico is poorly represented, but there are papers on the Federal Gulf of Mexico and on Mexico itself.

Thanks to the diligence of the authors, only 8% of the talks at the meeting will be represented only by abstracts — as low a number as the *Transactions* has had in recent years. About 45% of the authors work in departments of geological sciences in the universities; 36% come from the oil and gas industry, and 20% are employed at Federal offices or by state geological surveys. These proportions (for the GCAGS section only) are similar to the meetings of the past five years.

Publishing a work of this size requires the assistance of many. First, the members of the editorial committee, Dick Buffler, Chris Caran and Mary Ambrose, have been most helpful. I have worked especially with Dick Buffler as Technical Program chairman to evaluate talks and handle the mail load.

All papers this year were read by outside readers, as well as by the editor. The following, by their valuable remarks, vastly improved the scientific content and the stylistic quality of this year's volume: Don Bebout, Dick Buffler, Bill Galloway, Bob Morton, Malcolm Light, Noel Tyler, Linda Son-Ewing, Martin Jackson, Mike Fracasso, Chris Caran, Bill Corso, and Cliff Froelich.

Special thanks must be given to Chuck Mazyrack and Aus-Tex Printing and Mailing. Their high quality composing and printing and consistently fast turnaround made the task of publishing much easier. Finally, special thanks to Frontera Exploration Services for allowing me many hours of unpaid work, and to Professional Secretarial Services for handling copying and mailing.

Thomas E. Ewing  
1985 *Transactions* Editor

## REPORT OF THE PROGRAM CHAIRMAN THIRTY-FIFTH MEETING OF THE GULF COAST ASSOCIATION OF GEOLOGICAL SOCIETIES

I have really enjoyed working on the program and am looking forward to an exciting meeting. I wish to thank all the authors for being so cooperative and responsive. The quality of the papers this year is excellent. Thanks also go to many other people including 1) Tom Ewing for help putting the program together, and 2) Mary McBride and her speaker assistance committee. Special thanks go to my secretary, Ms. Kathy Moser, who spent many hours helping with all the correspondence related to putting the program together.

Richard T. Buffler  
1985 Program Chairman, GCAGS

## REPORT OF THE GENERAL CHAIRMAN THIRTY-FIFTH ANNUAL MEETING - 1985

On behalf of the Austin Geological Society and the many individuals who have helped to organize the 1985 annual meeting of the Gulf Coast Association of Geological Societies, it is my pleasure to welcome you to Austin. We have been looking forward to your visit for many months.

Planning for this convention began in early 1984. Chairmen and members of the various committees have worked diligently and contributed many hours of their time to plan and organize the activities of this year's convention. As you read your *Transactions*, please note the list of committee members who have worked for the success of this meeting. It has been my pleasure to work with these capable and industrious individuals.

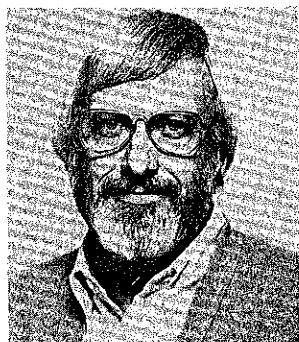
The program co-chairmen of the GCAGS and SEPM, and the field trip chairman have assembled a technical program that we believe will provide many opportunities for stimulating discussions and exchange of ideas. Numerous entertainment events have also been scheduled for your enjoyment. These include an icebreaker cocktail party; a dinner/dance; and various spouse's and guest's activities, such as a hospitality room, a luncheon, style show, and tours.

We are indebted to the many advertisers, exhibitors, sponsors for specific expenses, and donors who have so generously supported this year's meeting. It would not be possible to hold a GCAGS meetings without their support and assistance. We also extend our thanks to each registrant of the convention for their attendance and participation in all activities and for helping to make this year's event a success.

Mr. Bill Ehni deserves special credit for much of the early planning and coordination of the various committee activities. Although it was necessary for Bill to withdraw from the general chairmanship because of career changes, his early work made it easy for me to assume those duties.

It has been an honor and privilege to serve as General Chairman for this year's GCAGS Convention.

L.E. Garner  
1985 General Chairman, GCAGS



Richard T. Buffler

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# GULF COAST ASSOCIATION OF GEOLOGICAL SOCIETIES

## STANDING COMMITTEES

### AWARDS AND NOMINATIONS

Lee H. Meltzer, Chairman..... Independent  
Sarah C. Childress..... Williams Exploration  
John J. Amoruso..... Amoruso Petroleum Co.  
Paul M. Strunk..... American Shoreline Inc.

### FINANCE

Cliff Foss, Chairman..... Cockrell Corp.  
Harry E. Mathy..... Mathy Petroleum Inc.  
William R. Payne..... Independent

### FINANCIAL-AID-TO-STUDENTS

John McCarty, Chairman..... Conoco, Inc.  
Raymond W. Stephens..... Consulting Geologist  
Allen J. Scott..... R.P.I.

### PUBLICATIONS

Robert E. Boyer, Chairman..... University of Texas  
E.G. Wermund..... University of Texas

### ADVISORY

Paul M. Strunk..... American Shoreline Inc.

### HISTORICAL

Dave Pope..... Louisiana Geological Survey

# ORGANIZATION THIRTY-FIFTH ANNUAL MEETING

## GCAGS

### OFFICERS AND COMMITTEE ASSIGNMENTS

#### OFFICERS

President - E.G. Wermund, Bureau of Economic Geology, University of Texas at Austin

Vice President - David E. Pope, Louisiana Geological Survey

Secretary - Rizer Everett, Consulting Geologist

Treasurer - Douglas C. Ratcliff, Bureau of Economic Geology, University of Texas at Austin

Editor SEPM  
Committee -

James Sprinkle, Department of Geological Sciences, University of Texas at Austin, Chairman

Samuel P. Ellison, Department of Geological Sciences, University of Texas at Austin

Gary Kocurek, Department of Geological Sciences, University of Texas at Austin

E.F. McBride, Department of Geological Sciences, University of Texas at Austin

John K. Warren, Department of Geological Sciences, University of Texas at Austin

Richard T. Buffler, University of Texas Institute for Geophysics

#### 1985 CONVENTION COMMITTEES

General Chairman - L. Edwin Garner, Consulting Geologist

Vice Chairman GCAGS - William J. Ehni, Consulting Geologist

Vice Chairman SEPM - Don G. Bebout, Bureau of Economic Geology, University of Texas at Austin, Chairman

Advertising Committee - Robert T. Kent, Underground Resource Management, Inc., Chairman  
Karen Day, Underground Resource Management, Inc.  
Samuel B. Pole, Texas Department of Water Resources

Arrangements Committee - Missy Jackson, Bureau of Economic Geology, University of Texas at Austin, Co-Chairman  
Jan Sloan Posey, Consulting Geologist, Co-Chairman  
Susan J. Tewalt, Bureau of Economic Geology, University of Texas at Austin

Golf Tournament Committee - Robert W. Grayson, Consulting Geologist, Chairman  
Herman Loeb, Independent  
Ben J. Sorrell, Consulting Geologist

Tennis Tournament Committee - Perry Dumlao, Geotronics Corporation, Chairman

5 Kilometer Run Committee - Charles W. Kreitler, Bureau of Economic Geology, University of Texas at Austin, Chairman

Awards and Judging Committee - George D. Stanton, Independent Petroleum Geologist, Chairman

Editor GCAGS Committee - Thomas E. Ewing, Frontera Exploration Services, Chairman  
Richard T. Buffler, University of Texas at Austin Institute for Geophysics  
S. Christopher Caran, Bureau of Economic Geology, University of Texas at Austin  
Mary Ambrose, Bureau of Economic Geology, University of Texas at Austin

Entertainment  
Committee -

Exhibits Committee -

Barbara J. Stanton, Independent Petroleum Geologist, Chairman

W. Douglas Hall, Hall Southwest Water Consultants, Inc., Chairman

Marge Ellzey, Hall Southwest Water Consultants, Inc.

Doug Frick, Hall Southwest Water Consultants, Inc.

Jens Deichmann, Hall Southwest Water Consultants, Inc.

Field Trips Committee -

Jonathan G. Price, Bureau of Economic Geology, University of Texas at Austin, Chairman

S. Christopher Caran, Bureau of Economic Geology, University of Texas at Austin

Thomas E. Ewing, Frontera Exploration Services

James Garrison, Core Laboratories, Inc.

Mary W. McBride, Bureau of Economic Geology, University of Texas at Austin

Rainer Senger, Bureau of Economic Geology, University of Texas at Austin

Charles M. Woodruff, Consulting Geologist

Keith Young, Department of Geological Sciences, University of Texas at Austin

Housing Committee -

James W. Sansom, Texas Railroad Commission, Chairman

Printing Committee -

Robert S. Kier, Camp Dresser and McKee, Inc., Chairman

Sarah A. Landtiser, Camp Dresser and McKee, Inc.

Program Chairman  
GCAGS Committee -

Richard T. Buffler, University of Texas at Austin Institute for Geophysics, Chairman

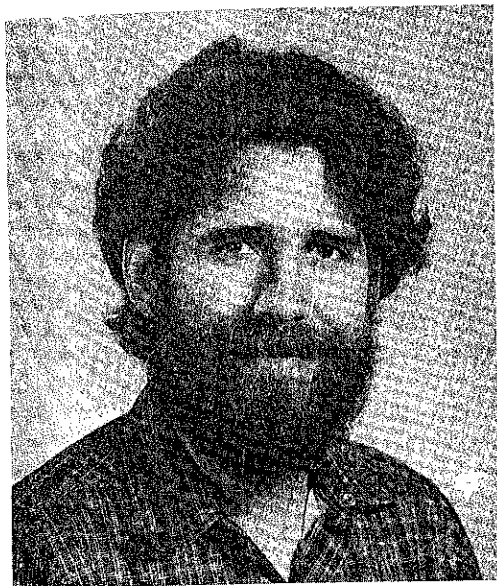
Program Chairman  
SEPM Committee -

Gary Kocurek, Department of Geological Sciences, University of Texas at Austin, Chairman

	E.F. McBride, Department of Geological Sciences, University of Texas at Austin		Patricia Moseley, Bureau of Economic Geology, University of Texas at Austin
	J.K. Warren, Department of Geological Sciences, University of Texas at Austin		LaJuana Barton, Bureau of Economic Geology, University of Texas at Austin
	James Sprinkle, Department of Geological Sciences, University of Texas at Austin		
Publicity Committee -	Thomas W. Grimshaw, Radian Corporation, Chairman	Speaker Assistance Committee -	Mary W. McBride, Bureau of Economic Geology, University of Texas at Austin, Chairman
	Will Boettner, Radian Corporation		Mary L. Ambrose, Bureau of Economic Geology, University of Texas at Austin
Registration Committee -	Rizer Everett, Consulting Geologist, Chairman		David Johns, Bureau of Economic Geology, University of Texas at Austin
	William C. Price, Texas Department of Health Resources	Spouses' Activities Committee-	Karen Thorenson, Geotronics Corporation, Chairman
	Allen G. Winslow, U.S. Geological Survey (Retired)		Vicki Cobb
	David J. Adilman, Student, Department of Geological Sciences, University of Texas at Austin		Sally Bybee
	Kenneth I. Owens, Consulting Geologist		Betty Moore
	Jack H. McClelland, Texasgulf, Inc. (Retired)	Tobin Theater Committee -	Anita Hornbeck
	Carolyn Condon, Bureau of Economic Geology, University of Texas at Austin		Susan Wermund
	Pat Downs, Bureau of Economic Geology, University of Texas at Austin		Carlton W. Hornbeck, Consulting Geologist, Chairman
	Rick Swanson, Bureau of Economic Geology, University of Texas at Austin	Transportation Committee -	Susan J. Tewalt, Bureau of Economic Geology, University of Texas at Austin
	Dan Fowler, Bureau of Economic Geology, University of Texas at Austin		Laura J. Pankonien, World Oil
			Robert L. Bluntzer, Texas Department of Water Resources, Chairman
			Felicia Boyd, Rollin W. Harden and Associates



**GULF COAST ASSOCIATION OF GEOLOGICAL SOCIETIES  
BEST PAPER AWARDS  
THIRTY-FOURTH ANNUAL MEETING  
SHREVEPORT, LOUISIANA**



**FIRST PLACE AWARD** and the **A.I. LEVORSEN MEMORIAL AWARD** was awarded to Mr. Gary Kinsland for his paper entitled "Basement Structure of the Gulf Coast: Interpretation of Gravity Anomalies Supported with Structural, Magnetic and Seismic Data."

Gary L. Kinsland was born in Eugene, Oregon and grew up on the Oregon coast. He received a B.S. degree in physics from the University of Rochester in 1969. He was awarded an M.S. degree in 1972 and a PhD in 1974 each in geology and each from the University of Rochester. After post doctoral research at the University of Rochester, he was a visiting assistant professor in geophysics at Arizona State University for the 1976-1977 year. From 1977 until the present he has been at the University of Southwestern Louisiana as a geophysicist. Gary has been active in and published research in high-pressure mantle mineral studies; fluid inclusion geothermometry; geopressured-geothermal resource evaluation; high resolution 3-d data acquisition, processing and interpretation; and mega tectonics inferred from geophysical data.

**SECOND PLACE** was awarded to Ms. Sara K. Stewart for her paper entitled "Smackover and Haynesville Facies Relationships in North Central East Texas."

Sara Kemp Stewart received her Bachelor of Science Degree in geology from Louisiana State University in 1981. She completed her Master of Science Degree in geology at L.S.U. in 1984 where she studied the Smackover and Haynesville Formations under the guidance of Dr. Clyde H. Moore. Her thesis, entitled, "Upper Jurassic of Central East Texas: Regional Stratigraphy and Diagenesis" was part of a regional group study of the East Texas basin conducted at the Applied Carbonate Research Program at L.S.U.

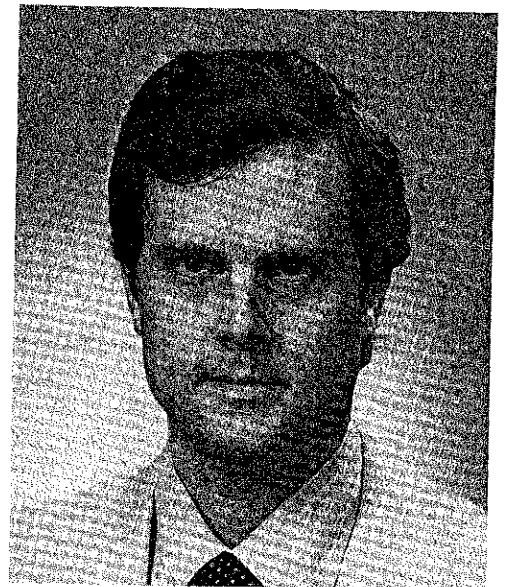
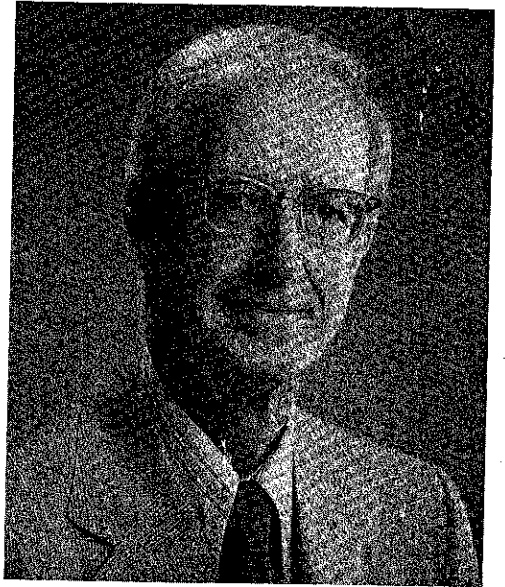
Currently, Sara resides in Houston, Texas. She is employed by Pennzoil Exploration and Production Company where she works in the marine offshore division as an associate geophysicist.



**THIRD PLACE** was awarded to Mr. C. Lane Sartor and Mr. Stephen R. Howard for their paper entitled "Petroleum Geology of the East Dykesville Field, Smackover 'C' Sand, Claiborne and Webster Parishes, Louisiana."

C. Lane Sartor is Vice-President and Manager of Exploration for Wheless Industries, Inc. of Shreveport, Louisiana. He received his B.A. degree in Geology from Washington and Lee University in 1942. After military service as an aerial photo interpreter, he was employed by Barnsdall Oil Co. as a geologist, working in the Cretaceous and Jurassic trends of the Upper Gulf Coast. He joined Pan Am Southern Corp. in 1950 as District Geologist in North Louisiana and Mississippi areas. Since 1954 he has been employed by the Wheless interests as geologist and manager in several executive positions. He has authored several papers on oil and gas fields of the Ark-La-Tex and contributed to publications of the Shreveport Geological Society. Mr. Sartor is a member of AAPG, AIPG and the Shreveport Geological Society. He served as President of GCAGS in 1976.

Stephen R. Howard received his B.S. in Geology from Texas Tech University in 1979. He is currently employed by Wheless Drilling Company in Shreveport, Louisiana. He is a staff geologist and works the Ark-La-Tex area. Mr. Howard is a member of the Shreveport Geological Society and American Association of Petroleum Geologists.



**GULF COAST ASSOCIATION OF GEOLOGICAL SOCIETIES  
BEST PAPER AWARDS, AND A.I. LEVORSEN MEMORIAL AWARDS**

	First Award	Second Award	Third Award
1959	J.E. Walters	R.L. Oakes	H.A. Bernard C.F. Major, Jr. B.S. Parrott
1960	Not awarded		
1961	R.D. Ocamb	D.I. Andrews J.C. Stipe	R.P. Fietz K.R. Scott W.E. Hayes
1962	D.R. Tucker	R.J. Granberry R.C. Wilshusen	G.C. Glaser (tie)# W.R. Walton (tie)
1963	E.H. Rainwater	V. Peppard	S.L. Blanton, Jr.
1964	E.H. Rainwater	D.R. Boyd B.F. Dyer	J.L. Arps
1965	C.R. Kolb J.R. van Lopik	G.R. Kellough	Not awarded
1966	B.J. Sloan, Jr.*	W.R. Paine	R.E. Gernant R.V. Kesling
1967	H. Yarborough, Jr.*	W.A. Price	J. Ewing (tie) J.C. Meyers (tie)
1968	J.D. Myers*	E.H. Rainwater	D.J. Hughes
1969	P.O. Roehl	J.K. Rogers*	D.F. McNamee (tie) L.F. Brown (tie)
1970	J.J. Amoruso*	R.R. Berg	J.F. Harris
1971	H. Yarborough, Jr.*	D.A. Reel (tie) G.M. Griffin B.J. Sloane (tie) J.A. Hartman (tie)	Not awarded
1972	R.R. Berg*	M.T. Halbouty	J.J. Amoruso
1973+	R.D. Woods J.W. Addington	R.D. Ottman P.L. Keyes M.A. Ziegler	R.R. Berg R.L. Findley
1974	D.H. Kupfer*	J.M. Coleman L.D. Wright J.N. Schyda T. Whelan	C.A. Parker
1975	W.L. Seal J.A. Gilreath	J.D. Meyers*	B.P. Baganz J.C. Horne J.C. Ferm
1976	J.D. Robinson* A.R. Troell*	J.W. Becher C.H. Moore	J. Neel
1977	D.K. Davies* W.R. Almon*	J.O. Lewis	J.O. Snowden W.B. Simmons E.B. Troughber R.W. Stephens
1978	C.T. Siemers*	J.W. Lund J.S. King R.E. Berlitz J.A. Gilreath	E.F. McBride

	First Award	Second Award	Third Award
1979	C.D. Winker	R.R. Berg*	C.C. Christina K.G. Martin
1980	E.A. Mancini* D.J. Benson*	F.W. Harrison, Jr.	G.M. Gatenby
1981	E.C. Roy, Jr.* M. Eidelbach* N. Trumbly*	J.L. Coleman, Jr. C.J. Coleman	G.J. Grabowski, Jr.
1982	T.E. Ewing* S.C. Caran*	D.J. Benson E.A. Mancini	R.R. Berg M.F. Habeck
1983	J.W. Cagle* M.A. Khan*	W.M. Ahr H.B. Hull, Jr.	T.E. Ewing (tie) C.H. Moore (tie)
1984	G. Kinsland*	S.K. Stewart	C.L. Sartor S.R. Howard

\*—A.I. Levorsen Memorial Award recipient. This award is given by the AAPG to the paper that best exemplifies creative ideas in oil and gas exploration.

+—The A.I. Levorsen Memorial Award was given in 1973 to J.M. Coleman and L.D. Wright.

#—Glaser and Walton received First Place in the Paleontology Division for their 1962 paper.

# CONSTITUTION AND BY-LAWS

## GULF COAST ASSOCIATION OF GEOLOGICAL SOCIETIES

### CONSTITUTION

#### 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 Vice-President, Secretary, and Treasurer shall be elected by the Executive Committee at the annual meeting. The Secretary and Treasurer shall be non-voting members of the Executive Committee. 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 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 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 Bylaws.

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

#### ARTICLE IV—Meetings

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 Finance Committee, to the credit of This Association, or invested in U.S. Government Bonds at the discretion of the Finance 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.

# BYLAWS

## 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 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 Annual Meeting bank account of This Association

on his sole signature, but in the event of his absence or incapacity to act, withdrawals or payments by checks 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 on the Annual Meeting 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 of the Annual Meeting to the Finance Committee by March 1st following the Annual Meeting. The office of Treasurer shall be bonded as directed by the Executive Committee.

## III. FINANCE COMMITTEE

The Finance Committee shall be responsible for investing and managing the funds of the Association. They shall be responsible for advancing to the Treasurer the necessary funds for operating the Annual Meeting and shall disburse funds for expenses and projects not related to the Annual Meeting as directed by the President upon approval by the Executive Committee. The Committee shall have authority to invest the funds as outlined in Article VI. They shall prepare a financial report on the Association's funds and submit it at each meeting of the Executive Committee. They shall also keep an inventory and storage of publications and equipment owned by the Association. They will keep a set of books in accordance with good accounting practices and will submit the books for auditing as requested by the Executive Committee. The Committee will oversee the preparation and submittal of the Association's Annual Income Tax Return. The Committee will also keep a file of these financial reports, as well as the report of the Treasurer for each Annual Meeting, for access by officers and representatives of the annual meetings for future years. The Committee shall consist of three members serving staggered three-year terms, such that each year one member will complete his term and a new member will be appointed in his place. The President of the Association, with the approval of the Executive Committee, shall appoint the members of the Finance Committee and they shall elect their own Chairman. Members of the Finance Committee shall be bonded as directed by the Executive Committee.

IV. These Bylaws may be amended by an affirmative vote of three-fourths of the Executive Committee.

V. There shall be no dues.

# GULF COAST ASSOCIATION OF GEOLOGICAL SOCIETIES PAST OFFICERS AND CONVENTION CHAIRMEN

YEAR	HOST CITY	PRESIDENT	VICE-PRESIDENT	SECRETARY	TREASURER	CONVENTION CHAIRMAN
1951	New Orleans	L. Bowling	T.H. Philpott	J.S. Spencer	E.M. Baysinger	
1952	Corpus Christi	W.M. Chaddock, Jr.	W.A. Gorman	W.A. Peterson	T.D. Barber	W.J. Nugent
1953	Shreveport	R.T. Wade	D.D. Uferback	F.H. Webster	K. Carter	
1954	Houston	W.R. Canada	W.H. Knight	C.W. Holcomb	E.W. Kimball	R.D. Sprague
1955	Biloxi	A.E. Blanton	L.D. Traupe	R.A. Davis	C.C. Barber	G.J. Joyce
1956	San Antonio	R.L. Layden	M.W. Beckman	E.T. Musselman	A.F. Scott	T.H. Philpott
1957	New Orleans	H.N. Hickey	P. Montgomery	J.F. Moss	W.H. Wallace, Jr.	R.C. Wilshusen
1958	Corpus Christi	E.A. Lohse	R.W. Grayson	W.W. Woolfolk	J.A. Wheeler	O.G. Bell
1959	Houston	G.C. Hardin, Jr.	L. Harvey	A.W. Wood	E.G. Jeffreys	A.E. Blanton
1960	Biloxi	M.F. Kirby	D.N. Osburn	H.O. Woodbury	E.L. Ames	L.L. Palmer
1961	San Antonio	D. Dassow	E.P. Roth	W.E. Bancroft	K. Soule	L.H. Meltzer
1962	New Orleans	T.H. Philpott	J.C. Byrd	R.W. Luker	R.E. Rogers	H.J. Tyler
1963	Shreveport	J.C. Byrd	E. Knott	K.C. Harkins, Jr.	D.A. Pedrotti	B.F. Dryer
1964	Corpus Christi	K. Knott	R.E. Fairchild	W.A. Robbins, Jr.	J.L. George, Jr.	E.A. Lohse
1965	Houston	R.E. Fairchild	A.M. Borland	M.L. Frazier, Sr.	J.S. Schoelen	R.R. Copeland
1966	Lafayette	A.M. Borland	J.H. Hensley	L.G. Hughes	L.C. Bryant	M.O. Turner
1967	San Antonio	W.L. Stapp	M.D. Horton	J.W. Yon, Jr.	E.D. Minihan	L.E. Warren
1968	Jackson	M.D. Horton	R.O. Vernon	C.E. Brown	C.W. Hendry, Jr.	H.S. Puri
1969	Miami	R.O. Vernon	H.J. Tyler	M.L. Dwight	B.C. Tucker	J.O. Goffe
1970	Shreveport	H.J. Tyler	L.H. Meltzer	M.H. Oakes	P.G. Gray	R.G. Williamson
1971	New Orleans	L.H. Meltzer	D.R. Boyd	M.E. Hole, Jr.	J.E. Melton	J.M. Sides
1972	New Orleans	D.R. Boyd	F.M. Schall, Jr.	T.J. Eby, Jr.	P.W. Cawthon, Jr.	C.E. Harrison
1973	Corpus Christi	F.M. Schall, Jr.	S.J. Lysinger	W.E. Taylor	J.J. Bellamy	F.W. Harrison, Jr.
1974	Houston	S.J. Lysinger	W.H. Moore	J.T. Palmer	H.L. Ladner	C.H. Williams, Jr.
1975	Lafayette	W.H. Moore	C.L. Sartor	A.E. Bell	C.E. Brown	L.E. Jordan
1976	Jackson	C.L. Sartor	R.E. Boyer	R.M. Swords	F.L. Osborne, Jr.	E.G. Wermund, Jr.
1977	Shreveport	R.E. Boyer	P.G. Roy	S.L. Perkins	C.J. Corona	Jules Braunstein
1978	Austin	R.W. Stephens	E.C. Roy, Jr.	J.W. Shirley	L.C. Bryant	George His
1979	New Orleans	E.C. Roy, Jr.	F.W. Harrison, Jr.	T.J. Wintermute	R.A. Anderson	M.A. Munchrath
1980	San Antonio	F.W. Harrison, Jr.	P.M. Strunk	C.G. Beckwith	W.R. Payne	Wilson Humphrey
1981	Lafayette	P.M. Strunk	J.J. Amoruso	S.A. Horton	C.A. Baird	J.O. Lewis
1982	Corpus Christi	J.J. Amoruso	S.C. Childress	C.S. Cook	P.D. Cate	J.C. Marble
1983	Houston	S.C. Childress	J.P. Palmer	Rizer Everett	E.W. Saye	J.M. Forgotsen, Jr.
1984	Jackson	J.T. Palmer	E.G. Wermund		D.C. Ratcliff	L.E. Garner
1985	Shreveport	E.G. Wermund	D.E. Pope			
1985	Austin					

# GULF COAST ASSOCIATION OF GEOLOGICAL SOCIETIES

## Honorary Members

R.R. Berg (1985)  
D.R. Boyd (1982)  
J. Braunstein (1982)  
M.T. Halbouty (1982)  
F.W. Harrison, Jr. (1982)

L.H. Meltzer (1982)  
H.N. Hickey (1982)  
R.J. LeBlanc, Sr. (1984)  
S.J. Lysinger (1983)  
J.O. Lewis (1983)

W.R. Paine (1984)  
E.C. Roy, Jr. (1983)  
F.L. Smith, Jr. (1983)  
P.M. Strunk (1983)  
M.O. Turner (1984)

## HONORARY MEMBERSHIP



**Robert R. Berg**

Bob Berg's contributions to geology have set standards by which many of us are now measured. Professionalism, service, and "just good science" come to mind when I try to summarize what Bob has done since he got his Ph.D. at the University of Minnesota in 1951. Some of the special blend of classroom theory and practical knowledge that is characteristic of this first M.T. Halbouty Professor at Texas A&M has roots in Bob's experiences as a geologist for the California Company and as a consultant. He moved to A&M in 1967 to head the Geology Department in the new College of Geosciences and went on to become Associate Dean of the College and Director of the Office of University Research. While he was doing those jobs, he published some of his present 50-plus papers and over 30 abstracts, he taught short courses for industry and developed graduate courses in sandstone depositional environments and petroleum geology that attracted (and still do) standing-room crowds from half a dozen departments. His papers have won four Levorsen awards and he has won the Former Students' awards at A&M for excellence in both teaching and research. He has been author of five papers published in the *GCAGS Transactions* and co-author of eight others. For two of the five he received Levorsen awards out of the total of four mentioned above and six of the thirteen *Transactions* papers were chosen for first, second, or third place. Another kind of "special award" is the word of mouth that one hears in nearly any country when he speaks about petroleum geologists and gets the reply: "Oh yes, Dr. Berg in Texas." Bob's record of service to the profession includes stints as President of AIPG, Associate Editor of AAPG and GSA, and Candidate President-elect for AAPG. His service has been recognized with the Ben H. Parker Medal (AIPG) and honorary membership in RMAG and AAPG. He is continually honored by his legion of former students who find their way back to his office to "keep in touch." That's the mark of a natural teacher. His excellence in the classroom, his demands as a professor, and his sense of humor and dignity make Bob Berg a special person with special talents. It is fitting indeed that GCAGS should grant Dr. Robert R. Berg Honorary Membership in the Association.

Wayne M. Ahr



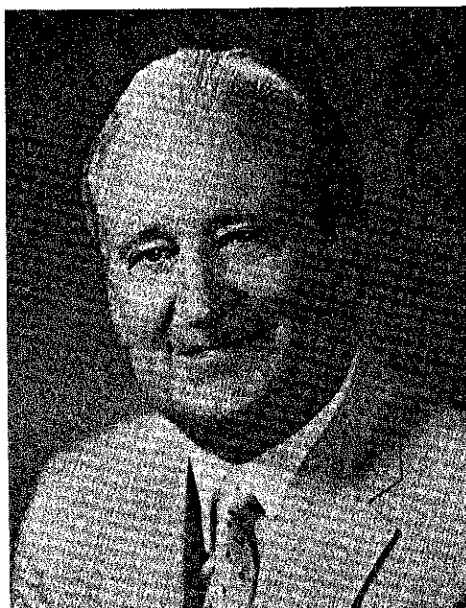
## GULF COAST ASSOCIATION OF GEOLOGICAL SOCIETIES Distinguished Service Awards

1982: R.E. Boyer  
1983: none awarded  
1984: A.T. Green, Jr.  
1985: C.E. Harrison

P.B. Souders  
DeWitt C. VanSiclen  
R.W. Stephens, Jr.

B.C. Tucker

### DISTINGUISHED SERVICE AWARD



**Clyde E. Harrison**

Clyde Harrison has participated in many local geological society activities and has been on the Executive Committee of the Houston Geological Society. His contributions to GCAGS have been very substantial. In 1973 he was the General Chairman for the highly successful Houston convention. More recently he served for three years as Chairman of the important Finance Committee where he gave generously of his time in administering the investments of GCAGS funds in the most careful and responsible manner.

He has left a legacy of involvement and leadership not only for GCAGS but also for other professional and civic organizations in many "oil patch" cities over the years. Through his enthusiasm and good nature he has made friends whose list reads like the membership of a geological society. It all began at Midland between 1953-58 and again in 1962-65, then in Wichita Falls between 1958-62, in Shreveport 1965-67, Lafayette 1967-68, and finally in Houston where Clyde presently resides. Part of Clyde's success is due to the continuous help provided by his congenial wife, Marilyn, who has arranged many of the social events for which Clyde was responsible.

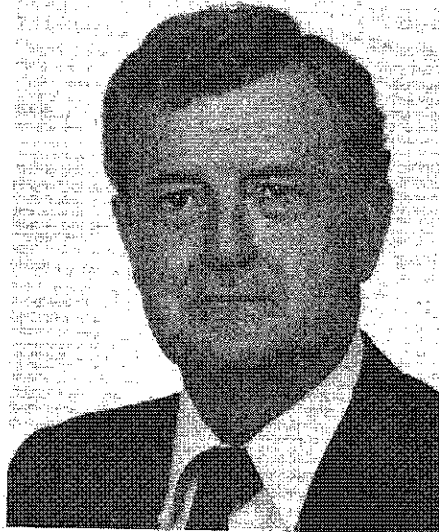
Clyde graduated from Shawnee Oklahoma High School in 1944 and, after a year with the U.S. Navy, received a B.S. in geology from the University of Oklahoma in 1949. Following four years with Wellog Engineering, he joined Conoco and worked with them until 1976 when O'Donohoe & Harrison, Inc. was formed. In 1983 Clyde joined the ranks of independent consultants and offices now in downtown Houston.

No matter where you encounter Clyde, at the HGS, AAPG, SIPES, or GCAGS gatherings, he always has a friendly smile and hearty handshake. He has a positive attitude and always speaks well of his fellow men, for Clyde is a great guy and a true friend.

The GCAGS honors itself in presenting the Distinguished Service Award to its truly deserving member, Clyde E. Harrison.

Stewart Chuber

## DISTINGUISHED SERVICE AWARD



**Raymond W. Stephens, Jr.**

Raymond W. Stephens, Jr., Independent Petroleum Geologist and Consulting Professor of Petroleum Geology at the University of New Orleans, is the recipient of the Gulf Coast Association of Geological Societies' Distinguished Service Award.

Ray Stephens was born in Marietta, Georgia. After service in the U.S. Navy, he returned to his home state and the University of Georgia where he was awarded the B.S. degree in geology in 1951. He was recalled to military duty that same year and served as Commanding Officer of a U.S. Air Force Radar Base in Alaska. He then entered Louisiana State University, where he received the M.S. degree in 1956 and the Ph.D. in 1960, both in geology.

The following nine years were devoted to the oil industry, first as a geologist for Shell Oil Company in Baton Rouge and New Orleans, then as District Geologist for Pubco Petroleum in New Orleans and as an Associate with Crawford Oil Company.

In the fall of 1968, Ray became a Special Lecturer at the University of New Orleans (then Louisiana State University in New Orleans), teaching a section of introductory geology. The following year he joined the Department of Earth Sciences full time as an Assistant Professor, rising through the ranks to Professor and serving two years as Assistant Dean of the College of Sciences. During these years Ray developed a comprehensive and innovative course in "Subsurface Geologic Methods," in which he taught students to apply the principles learned in their other geology courses to the problems of oil and gas exploration and development. Many highly successful petroleum geologists made their first subsurface map and learned the principles of oil finding in this course, a fact in which Ray takes justifiable pride. In 1981, Ray returned to the oil industry full time, as a successful independent, but continues to teach his subsurface course to a filled-to-capacity class each semester.

Ray has participated actively in the geological profession throughout his career. He was a member of the GCAGS editorial committee in 1968, First Vice President of the New Orleans Geological Society in 1969, Program Chairman of the 1971 GCAGS Annual Meeting, President of the New Orleans Geological Society in 1973, and President of GCAGS in 1977-78. In addition to authoring several GCAGS *Transactions* papers, he edited Volume II of the GCAGS Publication, "Readings in Gulf Coast Geology." Ray currently serves as a member of the Interstate Oil Compact Commission.

Ray Stephens truly has a distinguished record of service to the petroleum industry, to geological education, and to the geologic profession.

J.O. Snowden

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**GULF COAST SECTION  
SOCIETY OF ECONOMIC PALEONTOLOGISTS  
AND MINERALOGISTS  
1984-1985 OFFICERS**

PRESIDENT

Ernest A. Mancini  
Geological Survey of Alabama  
P.O. Box O, University Station  
Tuscaloosa, Alabama 35486

PRESIDENT-ELECT

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Morris Geological Enterprises  
11422 Hornbrook Drive  
Houston, Texas 77099

VICE-PRESIDENT

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Harahan, Louisiana 70123

SECRETARY

John G. McPherson  
Mobil Research & Development Corp.  
Dallas Research Labs, P.O. Box 819047  
Dallas, Texas 75381

TREASURER

John B. Anderson  
Department of Geology  
Rice University, Box 1892  
Houston, Texas 77251

PAST PRESIDENT

Don G. Bebout  
Bureau of Economic Geology  
The University of Texas at Austin  
Box X, University Station  
Austin, Texas 78713-7508

**1985 ANNUAL CONVENTION COMMITTEE**

VICE CHAIRMAN

Don G. Bebout  
Bureau of Economic Geology  
The University of Texas at Austin  
Box X, University Station  
Austin, Texas 78713-7508

PROGRAM CHAIRMAN

Gary Kocurek  
Department of Geological Sciences  
The University of Texas at Austin  
Austin, Texas 78713-7909

EDITOR

James Sprinkle  
Department of Geological Sciences  
The University of Texas at Austin  
Austin, Texas 78713-7909

AWARDS CHAIRMAN

Michael J. Nault  
Tenneco Oil Company  
P.O. Box 39300  
Lafayette, Louisiana 70503

**REPORT OF THE PRESIDENT  
GULF COAST SECTION  
SOCIETY OF ECONOMIC PALEONTOLOGISTS AND MINERALOGISTS  
1985**



**Ernest A. Mancini**

The Gulf Coast Section of the Society of Economic Paleontologists and Mineralogists (GCS/SEPM) thanks the Gulf Coast Association of Geological Societies (GCAGS) for the opportunity to join with them in this our third annual meeting. The planning of the 35th Annual Meeting of the GCAGS/SEPM was successful because of the dedicated work of Don G. Bebout, GCS/SEPM Vice Chairman for the convention, Gary Kocurek, GCS/SEPM Program Chairman, James T. Sprinkle, GCS/SEPM Editor, and Michael J. Nault, GCS/SEPM Awards Chairman. A core workshop, "Lower Cretaceous Depositional Environments from Shoreline to Slope," sponsored by GCS/SEPM and the Texas Bureau of Economic Geology and organized by Don G. Bebout and Doug Ratcliff, was an important part of the Annual Meeting.

The GCS/SEPM Annual Research Conference was held in Austin in November and was attended by about 350 geologists. The topic of the conference was "Characteristics of Gulf Basin Deep-Water Sediments and Their Exploration Potential." The success of the conference can be attributed to the work of the Cochairmen of the Program Advisory Committee, Arnold Bouma and James M. Coleman, and their committee members and the Chairman of the Research Conference Committee, Don G. Bebout, and his committee members. The volume containing papers from the 4th Annual Research Conference, "Habitat of Oil and Gas in the Gulf Coast," is being printed. The agenda for the 6th Research Conference, "Timing of Siliciclastic Diagenesis: Relation to Hydrocarbon Migration," is being planned by Ray E. Ferrell, Jr., and Earle F. McBride. The Research Conference approach has been favorably received by the scientific community and therefore should continue to be an integral function of GCS/SEPM.

The topic for the 1985 Annual GCS/SEPM field trip is the platform Comanchean section of central Texas. Rena Bonem, Robert Grayson, and O.T. Howard of Baylor University are the field trip leaders. The trip has been expertly organized and all the participants will enjoy learning more about the fluvial to epeiric marine rocks of the Trinity, Fredericksburg, and Washita Groups.

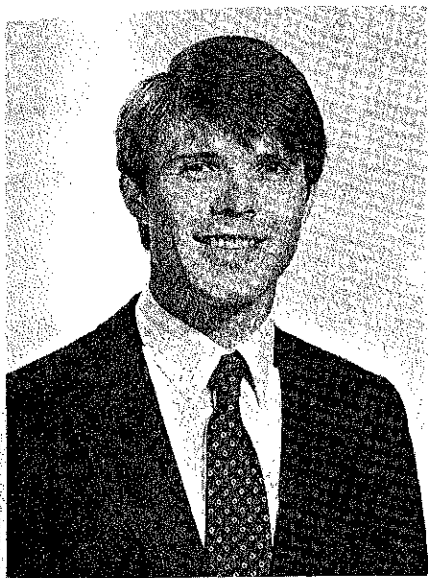
The GCS/SEPM Foundation continues to prosper under the directorship of Bob Perkins. Claude M. Quigley (Chairman), Doris M. Curtis, and Edward B. Picou, Jr., served as Foundation Trustees for much of the year. Doris M. Curtis became chairman during the year, and William P.S. Ventress replaced Claude M. Quigley on the Board of Trustees. Tax-exempt contributions to the Foundation have aided the Section in holding the Annual Research Conference, publishing proceedings and guidebooks, and providing support for graduate research on Gulf Coastal Plain topics. Ten Foundation Scholarships of \$500 each were awarded in 1985. Emily Stoudt, Chairman of the Grant Review Board, and her committee members worked diligently to evaluate the proposals. Gene Martin, Chairman of the Special Projects Committee, has played a very important role in raising the funds necessary to carry out the functions of the Foundation.

The accomplishments of the Section this past year are a result of the dedicated service of members of the Executive Council: Susan J. Conger Morris (President-Elect), J.M. Crosbie (Vice President), John G. McPherson (Secretary), John B. Anderson (Treasurer), and Don G. Bebout (Past President), and the hard work of numerous members of the Section, particularly the Business Representatives.

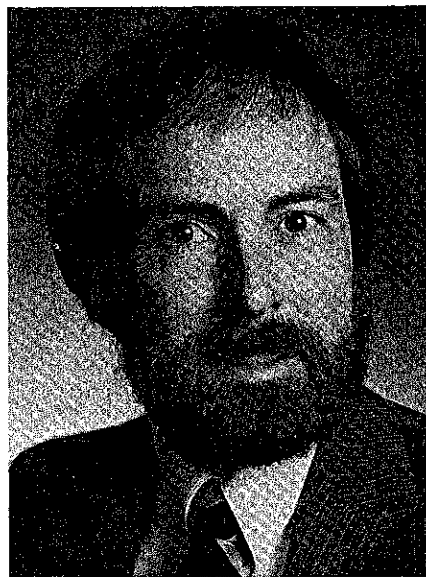
I thank all of those listed above for the time and energy they contributed to the Section. I especially would like to thank the membership of GCS/SEPM for the honor of allowing me to serve the Section.

Ernest A. Mancini  
President, GCS/SEPM

**GULF COAST SECTION  
SOCIETY OF ECONOMIC PALEONTOLOGISTS AND MINERALOGISTS  
BEST PAPER AWARDS, THIRTY-FOURTH ANNUAL MEETING  
SHREVEPORT, LOUISIANA**



Mark R. Ulrich



J. Richard Kyle



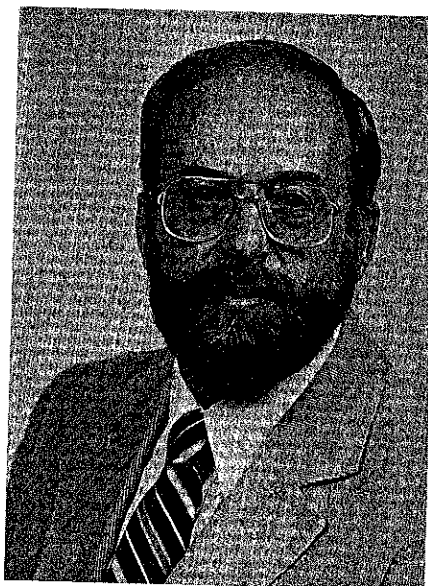
Peter E. Price

The **GCS/SEPM BEST PUBLISHED PAPER AWARD** was presented to Mark R. Ulrich, J. Richard Kyle and Peter E. Price for the paper "Metallic sulfide deposits in the Winnfield Salt Dome, Louisiana: Evidence for episodic introduction of metalliferous brines during cap rock formation."

Mark R. Ulrich attended Pennsylvania State University and received a B.S. degree in Mineral Economics in 1979. After working at Consolidation Coal Company as an economic analyst, he returned to Pennsylvania State University and received a B.S. degree in Geology. He will receive his M.A. degree in Geology from the University of Texas at Austin in 1985. He has worked for the University of Texas at Austin as a teaching assistant, the Texas Bureau of Economic Geology as a research assistant and for Marathon Petroleum as a geologist evaluating Gulf Coast salt domes for their Pb-Zn-Au potential. He is currently employed by Mobil Oil, conducting petrographic and fluid inclusion studies with their Applied Stratigraphy group. He is a member of the American Association of Petroleum Geologists.

J. Richard Kyle received degrees in geology from Tennessee Technological University (B.S., 1970), the University of Tennessee (M.S., 1973), and the University of Western Ontario (Ph.D., 1977). He has worked as a minerals exploration geologist for a number of companies including Cominco American, Exxon Minerals, and Marathon Resources. He joined the faculty of the University of Texas at Austin in 1978 and currently is an associate professor in the Department of Geological Sciences. His research interests include the relation between salt tectonics, formation waters, hydrocarbons, and sulfide deposits in the Gulf Coast, the origin of stratiform mineral deposits in sedimentary and volcanic environments, application of fluid inclusions to geologic studies, and energy and minerals exploration.

Peter E. Price is an advanced research scientist with Marathon Oil Company. His experience includes 15 years in base and precious metal, gem, and industrial mineral exploration and exploration management. For the last two years, he has been involved in hydrocarbon exploration research with emphasis on techniques of geochemical exploration, studies of fluid-rock interaction, and investigation of salt dome caprock development. Price holds an M.S. degree from the University of Kentucky and is a professional geological photographer.



Dr. Mervin Kontrovitz

**THE GCS/SEPM EXCELLENCE OF PRESENTATION AWARD** was presented to Dr. Mervin Kontrovitz for his presentation of the paper "A study of the morphology and dioptrics of some ostracode eyespots" by M. Kontrovitz and J.H. Myers.

Mervin Kontrovitz is Associate Professor and Head of the Department of Geosciences at Northeast Louisiana University (NLU). He received his B.S. in Geology from the University of Toledo (1958), an M.S. in Geology from the University of Florida (1966), and the Ph.D. in Geology from Tulane University (1970).

Kontrovitz was a member of the faculty of Geology at Rider College from 1970 to 1980, serving as chairman for his last five years at that institution. In 1980, he went to NLU as Department Head. His research and publications have centered on paleoenvironmental reconstructions and taphonomy and diagenesis of calcareous microfossils. He has received financial support from the NSF, Research Corporation, and Société Nationale Elf Aquitaine.

Dr. Kontrovitz is a member of the Society of Economic Paleontologists and Mineralogists, the Geological Society of America, the American Association for the Advancement of Science, the Paleontological Society, International Paleontological Association, British Micropalaeontological Society, and the International Ostracode Research Group.

## GULF COAST SECTION SEPM BEST PAPER AWARDS

Year	Best Published Paper	Excellence of Presentation
1984	M.R. Ulrich J.R. Kyle P.E. Price	M. Kontrovitz
1983	E.C. Kusters A. Bailey	D.B. Prior
1982	J. Mazzullo	C.D. Winker
1981+	T.A. Daws A.V. Applegate J.C. Palacas	C.R. Handford

Before 1981, awards were awarded for first, second and third place.

Year	First Place	Second Place	Third Place
1980	A.W. Cleaves	I.L. van Heerden H.H. Roberts	T.A. Hansen
1979	L.C. Price J.L. Clayton L.L. Rumen	C.W. Poag R.C. Tresslar	R.E. Casey L.W. Gust R.A. Reynolds D.H. Williams A. Leavesley T. Duis J.M. Spaw
1978	A. Thomson	C.W. Poag	J.A. Schiebout
1977	C.D. Winker J.D. Howard	W.C. Isphording	R.M. Looney V.R. Baker
1976	C.J. Stuart C.A. Caughey	R.R. Berg R.R. Powell	C.W. Poag P.C. Valentine
1975	J.L. Wilson	K.F. Wantland M.E. York	W.C. Isphording
1974	G.M. Friedman	W.F. Tanner C.R. Berquist	R.J. Moiola D. Weiser A.B. Spencer
1973	W.F. Tanner	R.J. Moiola A.B. Spencer	P.A. Thayer (tie) W.J. Cleary E. O'Donnell (tie) A.P. Wright
1972	W.F. Tanner	A.E. Weidie J.L. Wolleben E.F. McBride	P.A. Thayer D.A. Textoris
1971	R.W. Maxwell, Jr.	C.W. Poag	E.A. Shinn
1970	W.W. Hay S.W. Wise, Jr. R.D. Stieglitz	J.B. Dunlap, Jr.	W.L. Fisher C.V. Proctor, Jr. W.E. Galloway J.S. Nagle

+—and Best Poster Award to E.A. Mancini

## GULF COAST SECTION — SEPM HONORARY MEMBERS

Ester Applin (1964)  
Alva C. Ellisore (1964)  
Marcus A. Hanna (1964)  
Henry V. Howe (1964)  
Hedwig T. Kniker (1964)  
Winnie McGamery (1964)  
John R. Sandidge (1964)  
J.B. Garrett, Jr. (1965)  
E.H. Rainwater (1966)  
Henryk Bronislaw Stenzel (1971)  
Jules Braunstein (1973)  
Grover E. Murray (1973)

Harold V. Anderson (1975)  
Lyman D. Toulmin (1975)  
Doris M. Curtis (1977)  
Stuart A. Levinson (1978)  
Fred L. Smith, Jr. (1978)  
Charles W. Stuckey (1978)  
William R. Paine (1980)  
Frank E. Lozo, Jr. (1981)  
Gene B. Martin (1984)  
Bob F. Perkins (1984)  
Edward B. Picou, Jr. (1984)

## GULF COAST SECTION — SEPM PAST OFFICERS

	PRESIDENT	VICE-PRESIDENT	SECRETARY	TREASURER
1953-1954	Stuart A. Levinson	Grover E. Murray	William H. Akers	Frank V. Stevensen
1954-1955	Charles W. Stuckey, Jr.	E.H. Rainwater	William H. Akers	Fred L. Smith, Jr.
1955-1956	E.H. Rainwater	Frank S. Westmoreland	Hugh A. Bernard	Eleanor T. Caldwell
1956-1957	Lloyd M. Pyeatt	J.O. Colle	H. Dillingham, Jr.	Eleanor T. Caldwell
1957-1958	J.O. Colle	Fred L. Smith, Jr.	Harold V. Andersen	William G. Parker
1958-1959	Marcus A. Hanna	Claude M. Quigley	Fred E. Smith	Bernard L. Hill, Jr.
1959-1960	David E. Pope	A.D. Ellis, Jr.	Gordon C. Munsey	H.A. Chun
1960-1961	Claude M. Quigley	Harold V. Andersen	E. Ann Butler	Edward Marks
1961-1962	Harold V. Andersen	Theodore D. Cook	Benjamin J. Petrussek	Albert D. Warren
1962-1963	Albert D. Warren	Ernest H. Horton	Blair S. Parrott	Henry H. Phillips
1963-1964	Lyman D. Toulmin	E. Ann Butler	Charles C. Albers	John E. Kilgore
1964-1965	Howard L. Tipsword	Benjamin J. Petrussek	D. Jeter Smith	Emmett R. Adams
1965-1966	John B. Dunlap, Jr.	John J.W. Rogers	M. Ray Bane	Charles B. Morris
1966-1967	Hubert C. Skinner	Richard P. Zingula	Gene Ross Kellough	Gene B. Martin
1967-1968	Benjamin J. Petrussek	Dan McGregor	Garrett Briggs	Herbert A. Elliott, Jr.
1968-1969	William A. Atlee	Edgar B. O'Quinn	James W. Fowler	William E. Steinkraus
1969-1970	Fred L. Smith, Jr.	Kenneth L. Loep	Robert K. Sylvester	C. Wylie Poag, Jr.
1970-1971	Jules Braunstein	Douglas E. Jones	Walter H. Trenchard	Robert N. Davids
1971-1972	William W. Hay	William E. Steinkraus	Karl J. Koenig	Gerald R. Stude
1972-1973	C. Wylie Poag, Jr.	Emmett R. Adams	Gerald R. Stude	Joan B. Strough
1973-1974	Edward B. Picou, Jr.	Walter H. Trenchard	Lawrence C. Menconi	J. Loyd Tuttle, Jr.
1974-1975	Emmett R. Adams	Clifton A. Couture	Herbert A. Elliott, Jr.	Doris M. Curtis
1975-1976	James L. Lamb	Lawrence C. Menconi	William S. Grubb	John L. Carney
1976-1977	Clifton A. Couture	Eleanor T. Caldwell	Sherwood W. Wise, Jr.	Joseph E. Boudreaux
1977-1978	Gerald R. Strude	William P.S. Ventress	Gary R. Roberson	George C. Esker, III
1978-1979	Willard P. Leutze	Bob F. Perkins	Walter P. Kessinger	Kenneth A. Hodgkinson
1979-1980	Gene B. Martin	John L. Carney	Mary Ann Rafle	Arthur S. Waterman
1980-1981	Bob F. Perkins	Don G. Bebout	Sheila C. Barnette	Ted Karmen
1981-1982	William P.S. Ventress	Kenneth A. Hodgkinson	Brian J. O'Neill	Kurt Geitzenauer
1982-1983	John L. Carney	Ernest A. Mancini	Susan J. Conger Morris	Kevin C. Kilmartin
1983-1984	Don G. Bebout	Michael J. Nault	Susan J. Conger Morris	Nelson B. Yoder
1984-1985	Ernest A. Mancini	J.M. Crosbie	John G. McPherson	John B. Anderson



# BY-LAWS OF GULF COAST SECTION OF THE SOCIETY OF ECONOMIC PALEONTOLOGISTS AND MINERALOGISTS

## ARTICLE 1.—OBJECT

- 1.01 The object of the Gulf Coast Section of the Society of Economic Paleontologists and Mineralogists is to promote the science of stratigraphy in the Gulf Coast states through research in paleontology and sedimentary petrology, especially as it relates to petroleum geology. The Corporation, herein referred to as the "Section," will be closely associated with the Gulf Coast Association of Geological Societies and will cooperate with it and with the local geological societies of which it is composed for the furtherance of mutual objectives.

## ARTICLE 2.—MEMBERS

- 2.01 The Section shall have members, associate members, charter members, and honorary members.
- 2.02 Members shall be persons engaged in paleontologic, petrographic or stratigraphic studies that have application to the geology of petroleum, who are members or associate members of the Society of Economic Paleontologists and Mineralogists and who work or reside in the Gulf Coast province of the states of Texas, Louisiana, Mississippi, Alabama, Georgia or Florida, or whose interest or work is principally within these states. Membership, once obtained, shall not be dependent upon continued residence in the aforementioned states.
- 2.03 Associate members shall be persons engaged in paleontologic, petrographic or stratigraphic studies that have application to the geology of petroleum, who work or reside in the Gulf Coast province of the above mentioned states, and who are not members or associate members of the Society of Economic Paleontologists and Mineralogists. Associates shall enjoy all the privileges of membership, save that they shall not hold office. Election to membership in the Society of Economic Paleontologists and Mineralogists will automatically advance associates to members.
- 2.04 Charter members are those whose applications for membership were received before the first nomination of officers. They shall enjoy all the privileges of members and, hereinafter, are included in all references to "members."
- 2.05 The Council may elect as honorary members persons who have contributed distinguished service to the science of stratigraphy, paleontology or sedimentary petrology, especially as they relate to petroleum geology in the Gulf Coast. Honorary members shall not be required to pay dues.
- 2.06 Each candidate for membership shall submit to the Secretary an application on a form authorized by the Council for this purpose.
- 2.07 New members and associates enrolled after September 15 shall be considered as having paid their dues for the next calendar year.

## ARTICLE 3.—COUNCIL AND OFFICERS

- 3.01 Executive authority of the Section is vested in a board of directors known as the "Council" consisting of six members who are duly elected by the members, as follows: President, President-Elect, Secretary, Treasurer, and the most recently retired Past President.
- 3.02 The President shall discharge the usual duties of a president, as well as act as presiding officer at all meetings of the Section and Council. He shall appoint an Editor, Program Chairman, Committee Chairmen and Business Representatives.
- 3.03 The Vice-President shall assume the duties of the President in the case of the absence or disability of the latter. He shall also be Chairman of the Membership Committee and Chairman of the Employment Counseling Committee.
- 3.04 The Secretary shall keep records of the proceedings of the Section and a complete list of the membership. He shall attend to the preparation and mailing of notices, membership application blanks and other materials necessary to the business of the Section.
- 3.05 The Treasurer shall have custody of all funds of the Section. He shall keep account of the receipts and disbursements, and submit his account to the membership at the end of each year.
- 3.06 The Council shall consider all candidates for membership and pass on the qualifications of the applicants; shall have control and management of the affairs and funds of the Section; shall designate the time and place of the Annual Meeting.
- 3.07 The President and Vice-President shall not serve for more than one (1) year, except that if the Vice-President succeeds to the position of Acting President, he may be elected to a full term as President.
- 3.08 In the event that neither the President nor Vice-President is available to serve as presiding officer of the Section, the immediate Past President shall assume the President's duties.
- 3.09 The President-Elect shall serve for one (1) year as such, and in the following year he shall assume the office of President. He shall have no administrative authority except as a member of the Council. He shall acquaint himself with all the details of the office of President and generally prepare himself to serve as President. He shall be responsible for the preparation of the annual meeting for the ensuing year.
- 3.10 A vacancy occurring in the offices of Vice-President, Secretary or Treasurer shall be filled by Council appointment.
- 3.11 A vacancy occurring in the office of President-Elect shall be filled by mail ballot by the membership through a special election called by the Council.

## ARTICLE 4.—MEETINGS OF MEMBERS

- 4.01 The Section shall hold at least one stated meeting each year, which shall be known as the Annual Meeting. This meeting will usually be held in conjunction with the Annual Meeting of the Gulf Coast Association of Geological Societies.
- 4.02 The program for the Annual Meeting shall be arranged by the Program Chairman in conjunction with the Chairman designated by the Gulf Coast Association of Geological Societies to arrange for its own program. In general, it will be desirable that the contributions from members of the Section be included in the main program rather than being allotted to a separate session.
- 4.03 At the time of the Annual Meeting, a Business Meeting shall be held for the transaction of Section business.

## ARTICLE 5.—AMENDMENT OF BYLAWS

- 5.01 These Bylaws may be amended by a two-thirds vote of returned mail ballots received by the Secretary sixty (60) days after proposal of amendments with provision for vote is mailed to the members. Any proposed amendments must have the approval of a majority of the Council before being submitted to the members.
- 5.02 A petition containing the signatures of twenty (20) active members is considered sufficient to bring before the Council a proposed change in the Bylaws. A majority vote of the Council is also considered sufficient to initiate a proposed change.

## ARTICLE 6.—DUES

- 6.01 The fiscal year of the Section shall commence on October 1 and expire of September 30 of the following year.
- 6.02 The annual dues of the members and associates of the Section shall be four dollars (\$4.00). Penalty of fifty cents (.50) shall be assessed for late payments. The fifty cents (.50) late penalty shall be waived upon payment of dues for two more years.
- 6.03 A bill for dues shall be mailed to each member and associate before January 1 of each year. Members and Associates who have not paid their annual dues by April 1 shall be dropped from the membership rolls.
- 6.04 Members and Associates dropped for non-payment of dues may apply to the Council for reinstatement and be reinstated by majority vote of the Council.
- 6.05 Members or Associates may, at their discretion, pay their annual dues in advance for periods of up to five (5) years.

## ARTICLE 7.—FINANCIAL PROCEDURE

- 7.01 No officer or member shall enter into contract or disburse any of the Section's funds, without the co-signature of a member of the Council. Disbursal of a sum in excess of Five Hundred Dollars (\$500.00) must be approved by a majority of the Council.

## ARTICLE 8.—ELECTIONS

- 8.01 The President shall appoint two (2) nominating committees, instructing each committee to submit nominations for President-Elect, Vice-President, Secretary, and Treasurer. These nominations shall be in the Secretary's hands before July 15. If desired, the same person may be nominated by the two committees for the offices of Secretary and Treasurer, but the nominations for President-Elect and Vice-President shall not include the names of the same person on the two slates. The nominations of the first committee to file its report will have precedence in case of overlapping nominations and the other committee shall then be requested to change its nomination. A candidate for office must be an active member and reside in the Gulf Coast at the time of his nomination.
- 8.02 Ballots containing the nominations for officers, arranged alphabetically under each office, shall be prepared by the Secretary and mailed to each member of the Section on or before July 15. The ballots received by the Secretary before September 15 shall be counted by him. Receipt of a plurality of the votes cast for any office shall constitute election. In case of a tie vote, members of the Council shall cast one additional deciding vote.
- 8.03 Results of balloting shall be announced at the Annual Meeting, and the new officers shall enter upon duty at the adjournment of the Meeting.

## ARTICLE 9.—PUBLICATIONS

- 9.01 The Section Editor, appointed by the President, shall actively solicit papers from the Section membership for presentation at the Annual Meeting. He shall cooperate with the editor of the Gulf Coast Association of Geological Societies' TRANSACTIONS volume in preparing papers delivered at the meeting for publication in this volume. He shall cooperate with the editors of the Society of Paleontologists and Mineralogists' journals by helping to arrange for publication in these periodicals of suitable papers which come to his attention.
- 9.02 Members of the Section may purchase one copy of each Section publication at a discount of 20 percent off the advertised price.

## ARTICLE 10.—BUSINESS REPRESENTATIVES

- 1001 The President shall appoint one representative from each group of members in each local geological society affiliated with the Gulf Coast Association of Geological Societies and in other localities as needed. Each representative shall have an up-to-date list of the members residing in his vicinity. He will notify these members concerning any matters of Section policy which may be relayed to him by the President and shall have the authority to convene a meeting of those members to determine their views concerning Section affairs. He will report the results of such meetings to the President of the Section. He will cooperate with the Section Editor in the soliciting of papers to be presented at the Annual Meeting and with the Chairman of the Membership Committee in recruiting new members for the Section.

## ARTICLE 11.—AUDIT

1101 The President shall appoint an Auditing Committee which shall review the accounts presented by the Treasurer. The approval of the Treasurer's books by the committee shall be required before his final report will be accepted. The Treasurer shall submit a provisional report at the Annual Meeting, and his final audit shall be accomplished not later than 30 days thereafter.

The Constitution of the GCS-SEPM was originally adopted in 1954 and was amended in 1960, 1962, 1966, 1969, 1971, 1972, 1975, and 1981.

The Section was incorporated under the laws of the State of Texas in 1981, and these Bylaws were adopted at that time in place of the original Constitution and its amendments. These Bylaws embody all of the provisions of the original Constitution and its amendments.