

GSA NEWS & INFORMATION

Monthly Newsletter of
The Geological Society of America

VOLUME 7, NUMBER 5

MAY 1985

Volunteers Needed!

GSA Representative Program Expanded to Industry, Government Agencies

by F. Michael Wahl

GSA is launching a new representative program, targeting companies, agencies, and consultants throughout the country. The purpose is to broaden GSA's representation to include all employment sectors.

The new program is modeled on the successful campus representative program, begun in 1979 and now including 340 representatives at colleges and universities throughout North America.

Our goal is to designate a representative at all major company offices and governmental agencies throughout the country. For example, we hope to have a GSA company representative for Exxon in Houston, for Chevron in Denver, for the U.S. Geological Survey in Menlo Park, for the Illinois State Geological Survey, for Dames & Moore in San Francisco, etc. We want to develop a similar liaison with GSA members who are self-employed and serve as consultants. They would also represent major cities and geographic regions.

The representatives will serve as liaisons between GSA headquarters and their constituency in a particular city or region. They will provide information on the programs and benefits of the Society to other members in the region and explain to prospective members the benefits of joining GSA. Each representative will receive a notebook containing complete information on all programs, activities, publications, meetings, and other benefits that the Society provides its membership. Examples include

- *Bulletin*, *Geology*, and *GSA News & Information* every month
- 20% discount on GSA books and maps and charts

- \$25 discount for GSA's Employment Service
- \$10 discount on registration fees for Penrose Conferences
- \$35 reduction on Member/Fellow registration fees for GSA's Annual Meeting
- \$10 reduction on student registration fees for GSA's Annual Meeting
- Reduced registration fees for many GSA section meetings
- Reduced dues for spouse member (\$26 for 1985)
- Group term life insurance plan at reduced member rates
- Opportunity to participate in GSA's specialized divisions and to receive their newsletters
- Discount on subscriptions to *Engineering Geology Abstracts* for Engineering Geology Division affiliates
- Discount on Avis car rentals
- 25% discount on many Geological Society of London publications
- Reduced subscription rate on publications of the American Institute of Physics

We need your help as we establish this new communications link between GSA headquarters and the membership of the Society. If you are a Member or a Fellow and are interested in serving GSA as a representative for your company, agency, or group of the employment sector, please complete and return the form on page 70. Play an active role in the affairs of your Society, and be the first in your area to represent GSA!

**APPLICATION FORM FOR REPRESENTATIVES
IS ON P. 70**



CENTENNIAL NEWS

By Allison R. (Pete) Palmer

Spring 1985 Status Report

Preface

The Decade of North American Geology (DNAG) Project is beginning to bear fruit (or at least ripen). Most of the outlines for the regional volumes have been published in various issues of *GSA News & Information*. The DNAG Project has many components and well over a thousand contributors to its various parts. Almost all of the components are now in either the preparation or production phase. Production data are summarized below and represent status of the various components as of March 4.

The Geology of North America

Seven Final Coordinating Conferences for volumes in this series were held in 1984 and one has already been held this year. As a result, the following synthesis volumes are now in the production phase: *Sedimentary Cover of the Craton: U.S.*; *The Appalachian/Ouachita Regions*; *The Caribbean Region*; *The Atlantic Continental Margin: U.S.*; *The Gulf of Mexico Basin*; *The Cordilleran Orogen: Alaska*; *The Cordilleran Orogen: Conterminous U.S.*; *The Precambrian: U.S.*; and *The Western North Atlantic Region*. Some of these volumes may be published in 1985.

Final Coordinating Conferences are already scheduled for three more volumes: *The Arctic Ocean Region*, May 5-6; *Groundwaters of North America*, June 8-9; and *The Eastern Pacific Region*, July 20-21.

The only volume that still remains to be organized is *Economic Geology: U.S.* Only the coal part is organized; the editors for minerals and for oil and gas expect to set their organizational dates soon.

The nine Canadian volumes of *The Geology of North America* that are being prepared by the Geological Survey of Canada are now all organized and preliminary drafts of some chapters have been submitted to John Wheeler, who is coordinating the Canadian effort.

Volumes in Production

Title	Chapters in review & revision	Chapters in press
<i>Western North Atlantic Region</i>	13	19
<i>The Atlantic Continental Margin: U.S.</i>	13	2
<i>The Appalachian/ Ouachita Regions: U.S.</i>	11	2
<i>The Gulf of Mexico Basin</i>	7	
<i>The Sedimentary Cover of the Craton: U.S.</i>	5	
<i>The Caribbean Region</i>	5	
<i>The Cordilleran Orogen: Alaska</i>	4	
<i>The Cordilleran Orogen: Conterminous U.S.</i>		
<i>The Precambrian: U.S.</i>		

Continent-Ocean Transects

Final drafted copy ready for color separation has been received for 9 of the 23 continent/ocean transects. Most of these, which are listed below, will be published this spring.

- A-2 North Pacific Basin to Kuskowim Mountains
- B-1 Intermontane belt (Skeena Mountains) to Insular belt (Queen Charlotte Islands)
- B-2 Juan de Fuca to Alberta Plains
- B-3 Juan de Fuca spreading ridge to Montana thrust belt
- C-3 Southern California borderlands to Socorro, New Mexico
- D-1 Quebec to Orphan Knoll
- D-2 Grand Banks to J-anomaly
- D-3 Nova Scotia offshore
- D-4 Baffin Bay

Centennial Special Volumes

The Centennial volume by the History of Geology Division, *Geologists and Ideas: A History of North American Geology*, now has 23 chapters in press, and the editor hopes to have all of the remaining chapters through review and revision and submitted to GSA by the end of the spring. Every effort will be made to have this published by the time of the 1985 GSA meeting.

Two more volumes in this series are now in preparation: *The Heritage of Engineering Geology—The First Hundred Years*, by the Engineering Geology Division; and *Geomorphic Systems of North America*, by the Quaternary Geology and Geomorphology Division. Both are scheduled for publication in 1987. Special volumes to accompany the Continent-Ocean Transects and the series of four Neotectonic Maps are still in the planning stage.

Centennial Field Guides

Final selection has been made for the 100 sites to be described for each of the six Centennial Field Guides. Preliminary texts are now being reviewed in each section. Two sites for the North-Central Field Guide and one for the Rocky Mountain Field Guide have been typeset and dummied for display at the spring GSA Section meetings. Field guide sites for all volumes will be arriving for typesetting throughout 1985. Publication of most of these volumes will be during 1986.

Geologic and Geophysical Maps

Compilation of the Geologic, Tectonic, Gravity Anomaly, and Magnetic Anomaly maps of North America is in an advanced state, but publication is still about two years in the future. Compilation has begun on the Seismicity, Thermal Aspects, and Stress maps. The Neotectonics map is now being organized.

(continued on p. 72)

Publications

Although no new publications appeared in 1984, there are several DNAG publications that are available and selling well. The DNAG Time Scale is now available in four formats: wall size (30" x 40"); page size, as single heavy paper sheet punched for a 3-ring binder; page size in packets of 50; and wallet size in packages of 25. The most popular formats are the wall-size and the packets of 50 page-size time scales. Over 500 copies of the small, soft-bound *Perspectives in Regional Geological Synthesis* published in 1982 have been sold since last year's spring report.

Financial Support

The DNAG Fund in the GSA Foundation has now reached the \$4 million mark in cash and pledges. Support from both industry and the GSA membership has been strong, and the fruits of the funding effort will begin to appear in significant numbers in 1985. The goal of \$4.5 to \$5 million is in sight.

Summary

All components of the DNAG Project are flourishing, although it has been difficult for many busy and visible people to set and maintain realistic deadlines for completion of responsibilities that they have accepted. However, almost all authors are proceeding as effectively as they can. The organizational phase of the DNAG Project is now largely completed and the production phase is building momentum daily.

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Applications Available for Fulbright Scholar Awards

The Council for International Exchange of Scholars (CIES) has announced the opening of competition for the 1986-1987 Fulbright Scholar Awards in research and university lecturing abroad.

The awards for the 1986-1987 academic year include 300 grants in research and 700 grants in university lecturing for periods ranging from three months to a full academic year. There are openings in more than 100 countries and, in a few cases, the opportunity for multi-country research is available. Fulbright Awards are granted in virtually all disciplines, and scholars in all academic ranks are eligible to apply. Applications are also encouraged from retired faculty and independent scholars.

Benefits include round-trip travel for the grantee and, for full academic year awards, one dependent; maintenance allowance to cover living costs of grantee and family; tuition allowance, in many countries, for school-age children; and book and baggage allowances.

The basic eligibility requirements for a Fulbright Award are U.S. citizenship; Ph.D. or comparable professional qualifications; university or college teaching experience; and, for selected assignments, proficiency in a foreign language.

Application deadlines for the 1986-1987 Awards are June 15, 1985 (for Australasia, India, Latin America and the Caribbean); September 15, 1985 (for Africa, Asia, Europe, and the Middle East); November 1, 1985 (for Junior Lectureships to France, Germany, Italy, and Spain); December 1, 1985 (for Administrator's Awards in Germany, Japan, and the United Kingdom); December 31, 1985 (for NATO Research Fellowships); and February 1, 1986 (for Seminar in German Civilization Awards, Spain Research Fellowships, and France and Germany Travel-Only Awards).

For more information and applications, call or write Council for International Exchange of Scholars, Eleven Dupont Circle N.W., Washington, D.C. 20036-1257; telephone (202) 939-5401.

PEOPLE

GSA Fellow **Albert W. Bally**, Rice University, has received the American Association of Petroleum Geologists President's Award for Best Special Publication of the year for his three-volume *Seismic Expression of Structural Styles — A Picture and Work Atlas*, published in 1983.

The Society of Economic Petrologists and Minerologists has given GSA Fellow **Robert N. Ginsburg**, University of Miami at Fisher Island, its highest award, the Twenhofel Medal for outstanding contributions to sedimentary geology.

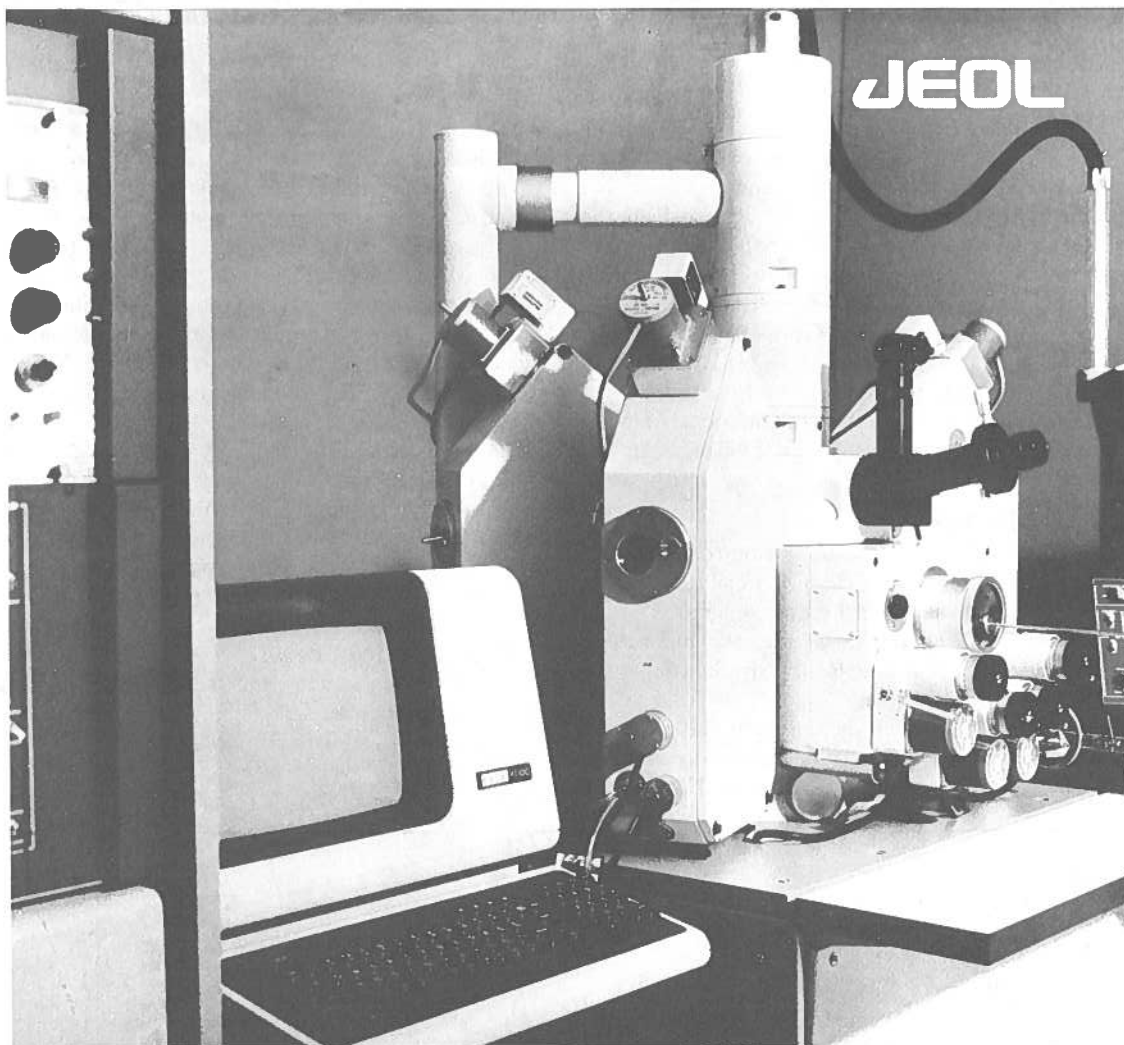
Member **Kathleen M. Johnson**, U.S. Geological Survey, Denver, has been elected vice-president of the Association for Women Geoscientists.

Vol. 7, no. 5 GSA News & Information May 1985

GSA NEWS & INFORMATION (ISSN 0164-5854) is the monthly newsletter of The Geological Society of America, Inc., P.O. Box 9140, Boulder, Colorado 80301. Second-class postage rates paid at Boulder, Colorado.

Prepared from contributions from the staff and membership. Executive Director: F. Michael Wahl; Managing Editor: Faith Rogers; Associate Editor: Lee Gladish; Director of Communications: Nancy A. Reed; Production and Advertising Manager: James R. Clark; Marketing/Advertising Assistant: Ann H. Fogel; Assistant Production Manager: Meredith Larson; Production Assistants: Joan Manly and June E. Thomas.

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Two Screens, Two Projectors for 1985 Annual Meeting

By Sue Beggs
GSA Meetings Manager

More than 1800 speakers presented papers at GSA's 1984 Annual Meeting — about one in every four registrants. That's a lot of presentations, many of them fascinating and well done, but many others not so well done. Representing all those in the audience who could not hear or understand what was presented, GSA is offering its best advice on how you can be heard, understood — and REMEMBERED. This is the first of three articles on preparing and giving a paper at GSA's Annual Meeting. Articles in the June and July issues of *GSA News and Information* will focus on making effective slides and on becoming a memorable speaker. All of this information will be repeated in the Speaker's Kit that will be sent in August to those whose abstracts have been accepted.

Two Screens, Two Projectors

For the first time at a GSA meeting, all session rooms will be supplied with TWO screens and TWO 35-mm projectors. This is a major change for those familiar with the one-projector system. This change has been made in the belief that the two-screen presentation offers a better opportunity for the speaker to get the point across to the audience.

Many speakers use the two-screen presentation and are comfortable with the procedure. For many others, however, this will be another hurdle to overcome in their presentation. (Not only

are the data supposed to match the abstract that was accepted, they also will be presented in a multi-screen format.)

You do NOT have to use the two-screen presentation. You may use just one screen and one 35-mm projector, or you may use the overhead projector provided in each room. Of course, you may elect the poster-session medium instead.

For those using the two-screen presentation, here's the procedure used to avoid confusion and to make your presentation a success. GSA's system is patterned after AAPG's method. We are thankful to AAPG for giving us their advice.

1. Lay out your slides, two by two.
2. Mark each slide with a "thumb spot" in the lower left corner of the frame when the slide is held in the right reading position. Then rotate the slide 180° so that the thumb spot is in the upper right-hand corner.
3. Now number the slides so that you can read the number when the slide is in the tray ready for projection. Number the slides consecutively, each number appearing only ONCE in the slide set.
4. If you wish to show the same slide more than once during your talk, make duplicates of it, and give each its own number. Again, do not repeat numbers.

(continued)

A new GSA Special Paper by A.M.C. Şengör, the product of his long-standing interest in Tethyan problems.

With this work, Şengör hoped to fill an important gap he saw in the regional tectonic literature of Eurasia, namely a synthetic overview of the early history of the Alpine-Himalayan mountain ranges and its expected implications for the "Tethyan paradox," first brought into focus by Alan Smith of Cambridge.

GSA Special Paper 195: **The Cimmeride Orogenic System and the Tectonics of Eurasia**, by A.M. Celâl Şengör, 8½" × 11", paperback, 91 pages, illustrated, with subject & author indexes and one folded map insert. ISBN 0-8137-2195-4, CIP, paperback . . . \$17.00.

The CIMMERIDE OROGENIC SYSTEM and the TECTONICS of EURASIA

A. M. Celâl Şengör




SPECIAL PAPER
195

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5. If a slide is to be repeated consecutively, the slide can be held on the screen and need not be duplicated.
6. If one screen is to be blank, insert a blank slide into the series. The blank slide is not numbered.
7. Slide cards will be available both in your Speaker's Kit and on-site. (See illustration.) Since the slide cards are the instruction of slide order, prepare TWO slide cards — one for yourself and one for the projectionist. List the appropriate slides under "Screen One" and "Screen Two."
8. Set up your slide trays, one for each screen.
9. Label your trays "Screen One" and "Screen Two." Your name, session time, and location will also be marked on the label.
10. Turn in your trays to your projectionist one-half hour prior to your presentation.

Because there are so many speakers at its meetings, GSA does not provide a speaker instruction breakfast. We do equip a Speaker Ready Room with all the items you will need for rehearsing your presentation: Slide trays, slide cards, tray labels, 35-mm projectors and screens, viewing trays, speaker timer, and lectern. The session assistants in the Ready Room give help and can answer your questions.

You are also encouraged to get a feel for the room where you'll be speaking. If your room is available at the end of the day's sessions, use the lectern and microphone to rehearse. The projectors are removed at the end of the day, so you probably won't be able to rehearse your slides other than in the Ready Room.

We'd be glad to hear your suggestions. Please drop me a line.
Sue Beggs, GSA, P.O. Box 9140, Boulder, CO 80301

SAMPLE SLIDE CARD

Speaker _____

Paper Time 9:45 am

Session Thurs PM
Day of Week A.M. or P.M.

Room George Blossom

Screen 1 to Audience left	Screen 2 to Audience right
1	2
3	4
Hold	5
6	7
Hold	8
Hold	9
10	11
Blank	12
13	14
off	off

Fill all spaces (with slide no., "Off," "Hold," or "Blank").

Technical Session Room Equipment

- 2 35-mm projectors with appropriate lenses; Xenon projectors are used whenever possible for room seating 500 persons. Otherwise, 35-mm projectors with bright light and extra throw lens are used. Projection is from the rear of the room.
 - 2 screens appropriate to ceiling height and room size
 - 1 overhead projector
 - 1 electric pointer
 - 1 D'san three-light Limitimer
 - 1 lectern with light and microphone on a riser
 - 1 head table with two session chairmen, also on the riser
 - 1 projectionist
 - 1 session assistant
 - 1 sign at room entrance to indicate paper in progress
- Not provided: 16-mm projectors; acetate and markers for the overheads

Pan American Development Foundation Asks for Donations of Periodicals, Books

Those periodicals and books stacking up, unused, in your library may be useful to the Pan American Development Foundation (PADF) Books for Development program. The program needs books and journal series for universities and other learning and research centers in the Latin American and Caribbean areas, where there are tremendous needs to improve libraries and provide students with bibliographies in many fields, including geoscience.

Prospective donors should write to Pan American Development Foundation, Books for Development, 1889 F St. N.W., Washington, DC 20006, and include a detailed list of what they want to donate.

PADF is a nonprofit voluntary organization, established in 1962, that encourages private-sector involvement in economic and social development of disadvantaged people in Latin America and the Caribbean.

NOTICE

Add to the list of symposia for the 1985 GSA Annual Meeting in Orlando, Florida (see *GSA News & Information*, April 1985, p. 60):

25. **Holocene Sea Level History and Depositional Response along the U.S. Middle Atlantic and Southeastern Coast.**
Frank W. Stapor.

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GSA Sections and Divisions, 1985

SECTIONS

GSA has six regional North American sections, generally including GSA members who live within the geographical limits of each section. (Members who live in one section but have a professional interest in another section can become members of the section of interest.) Each section holds annual technical and business meetings. The number of voting members shown for each section is as of December 31, 1984.

Cordilleran Section

Geographic area: Alaska, Arizona south of lat 35°N, California, Hawaii, Nevada, Oregon, Washington, British Columbia, Yukon, Northwest Territories

Voting members: 2,903

Officers: chairman, vice-chairman, and secretary to be elected at section annual meeting, May 8-11, 1985; J. William Schopf, past-chairman

Rocky Mountain Section

Geographic area: Arizona north of lat 35°N, Colorado, Idaho, Montana, New Mexico, North Dakota, South Dakota, Utah, Wyoming, Alberta, Saskatchewan

Voting members: 2,039

Officers: Stanley S. Beus, chairman; David M. Best, vice-chairman; Kenneth E. Kolm, secretary; Claude Spinosa, past chairman; Monte D. Wilson, past vice-chairman

North-Central Section

Geographic area: Illinois, Indiana, Iowa, Michigan, Minnesota, Missouri, Nebraska, Ohio, Wisconsin, Manitoba, Ontario west of 89th meridian

Voting members: 987

Officers: Richard A. Heimlich, chairman; Rodney M. Feldmann, vice-chairman; Kenneth G. Brill, Jr., secretary; Jonathan H. Berg, past chairman; Clarence J. Casella, past vice-chairman

South-Central Section

Geographic area: Arkansas, Kansas, Oklahoma, Texas

Voting members: 1,477

Officers: Robert C. Morris, chairman; John D. McFarland III, vice-chairman; Page C. Twiss, secretary-treasurer; Richard M. Mitterer, past chairman

Northeastern Section

Geographic area: Connecticut, Delaware, District of Columbia, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont, New Brunswick, Newfoundland, Nova Scotia, Prince Edward Island, Quebec, Ontario east of 89th meridian

Voting members: 1,840

Officers: John B. Lyons, chairman; Harold W. Borns, Jr., vice-chairman; Kenneth N. Weaver, secretary; Rolfe S. Stanley, past chairman

Southeastern Section

Geographic area: Alabama, Florida, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, South Carolina, Tennessee, Virginia, West Virginia

Voting members: 1,383

Officers: Gilles O. Allard, chairman; Robert W. Deininger, vice-chairman; Stephen H. Stow, secretary-treasurer; Donald T. Secor, Jr., past chairman; Kenneth R. Walker, past vice-chairman

DIVISIONS

GSA's nine specialty divisions provide a focus for members interested in a particular discipline. The divisions hold annual business meetings in conjunction with the Society's annual meeting, and each division publishes a newsletter periodically. Division membership totals are as of December 31, 1984.

Archaeological Geology Division

Members: 406

Officers: David M. Hopkins, chairman; Charles J. Vitaliano, first vice-chairman; John A. Gifford, second vice-chairman; Vance T. Holliday, secretary-treasurer; Harold W. Borns, Jr., past chairman

Coal Geology Division

Members: 528

Officers: Edwin R. Landis, chairman; C. Blaine Cecil, first vice-chairman; Daniel J. Casagrande, second vice-chairman; Gilbert E. Smith, secretary; Donald D. Carr, past chairman

Engineering Geology Division

Members: 990

Officers: Robert L. Schuster, chairman; David M. Cruden, chairman-elect; Christopher C. Mathewson, secretary; Frank W. Wilson, past chairman

Geophysics Division

Members: 626

Officers: Nikolas I. Christensen, chairman; William E. Bonini, first vice-chairman; Bryan L. Isacks, second vice-chairman; Mary Lou Zoback, secretary-treasurer; Peter Dehlinger, past chairman

History of Geology Division

Members: 385

Officers: Joseph T. Gregory, chairman; J. Thomas Dutro, Jr., first vice-chairman; William M. Jordan, second vice-chairman; Michele L. Aldrich, secretary-treasurer; Hubert C. Skinner, past chairman

Hydrogeology Division

Members: 984

Officers: Grover H. Emrich, chairman; William Back, first vice-chairman; Wayne A. Pettyjohn, second vice-chairman; Phyllis M. Garman, secretary-treasurer; George H. Davis, past chairman

Planetary Geology Division

Members: 346

Officers: Donald U. Wise, chairman; Victor R. Baker, first vice-chairman; Arden L. Albee, second vice-chairman; Raymond E. Arvidson, secretary-treasurer; Robin Brett, past chairman

Quaternary Geology & Geomorphology Division

Members: 1,205

Officers: Donald F. Eschman, chairman; Gail M. Ashley, first vice-chairman; Victor R. Baker, second vice-chairman; Richard F. Madole, secretary; Donald J. Easterbrook, past chairman

Structural Geology & Tectonics Division

Members: 1,847

Officers: Robert S. Yeats, chairman; Winthrop D. Means, first vice-chairman; John H. Spang, second vice-chairman; James A. Helwig, secretary-treasurer; Campbell Craddock, past chairman

1986 Penrose Conference Slated

A GSA Penrose Conference, "Reefal Development in a Terrigenous Province," will be held May 17-21, 1986, at Veracruz, Mexico. Conveners are Paul R. Krutak (ARCO Exploration Company, P.O. Box 51408, Lafayette, LA 70505), (318) 264-4452, and Raul Gio-Argaez (Secretario Particular, Secretaria de la Rectoria, Sexto Piso, Torre de Rectoria, Universidad Nacional Autonoma de Mexico, C. P. 04510 Delegacion Coyoacan, Mexico, D. F., Mexico), (905) 579-7528. The conference will be cosponsored by Atlantic Richfield Company, Universidad Nacional Autonoma de Mexico, and the North American Micropaleontology Section of the Society of Economic Paleontologists and Mineralogists.

Conference Goals

The conference has two goals: (1) to examine *in the field* a modern example of reefal buildup in a terrigenous environment, and (2) to analyze three specific stratigraphic criteria (carbonate-terrigenous facies variation, volcanoclastic-carbonate diagenesis, biogeographic provincialism) that served to characterize such accumulations throughout the Phanerozoic Eon.

Field Trip

The reefs at Veracruz, Mexico, are an ideal example of reefal accumulation in a terrigenous setting. A two-day field excursion on these reefs and the adjacent Laguna Mandinga will be followed by three days of focused discussion on the stratigraphic criteria.

Unresolved Controversies

The origin of the Veracruz reefs is obscure. They carry the typical West Indian-Caribbean coral fauna that characterizes the Yucatan Shelf reefs. Yet they are one of only three carbonate banks in the entire western Gulf of Mexico. How did the pelagic coral larvae arrive at Veracruz? What major current gyres affected their transport? Why did larvae settle in environments that are today (like Cabo Rojo at Tampico, Mexico) dominated by terrigenous debris? Or did larvae settle and metamorphose to

form coralla, and eventually reefs, at a lower sea-level stand sometime during the Pleistocene?

The carbonate bank microfauna of the Gulf of Mexico should comprise a partially endemic assemblage that is adapted to the relatively lower water temperature and more pronounced seasonal changes in these latitudes. Potential participants interested in the origin of modern and fossil faunas of the Gulf of Mexico and possible immigration routes from the Caribbean Sea are encouraged to apply.

Inter-reef detrital sediments at Anton Lizardo (immediately south of Veracruz) contain various clays. Beach sand on the Anton Lizardo headland is rich in glass as well as volcanic rock fragments. Organic-rich sediments (mangrove swamps at Laguna Mandinga) occur nearby. These sediments change to reefal carbonates over horizontal distances of less than 1 km. Diagenesis of the labile constituents in these clastics and carbonates would undoubtedly generate many pore-fill secondary minerals. Geologists attending this conference will have an excellent opportunity to directly observe these variations and to discuss volcanoclastic diagenesis as well as generation and paragenesis of secondary minerals in a mixed carbonate-terrigenous environment.

Registration

Interested persons should write to Paul R. Krutak at the address above. Inquiries should include specific reasons for attendance and a brief summary of research and/or work experience relevant to the conference topic. Graduate students with pertinent research interests are welcome to apply. Most of the conference will be devoted to discussion; however, persons desiring to present an oral paper or poster should submit a title and abstract-length summary no later than **December 1, 1985**, which is also the deadline for applications. The registration fee will be between \$400 and \$500, including food, lodging, and the two-day field trip.

Application for participation in a Penrose Conference

Title of Penrose Conference _____

Your name and title _____

Organization _____

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Street or P.O. Box

City and State

Zip Code

Telephone number _____

Area Code

Number

Field of interest _____

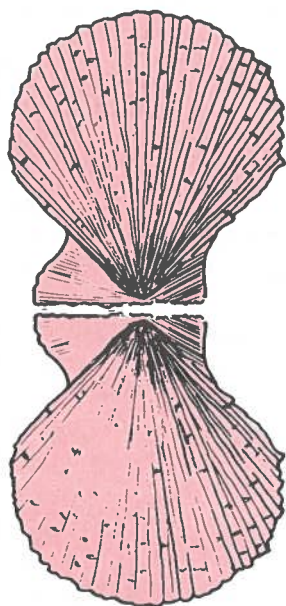
Please state briefly what your interest and experience have been with regard to the conference topic.

1985 ANNUAL MEETING AND EXPOSITION

OCTOBER 28-31, 1985
ORANGE COUNTY CONVENTION/CMIC CENTER
ORLANDO, FLORIDA

ABSTRACTS DUE/JUNE 7
For Abstract Forms (303) 447-8850

PREREGISTRATION DUE/SEPTEMBER 27
For Meeting Information (303) 447-2020

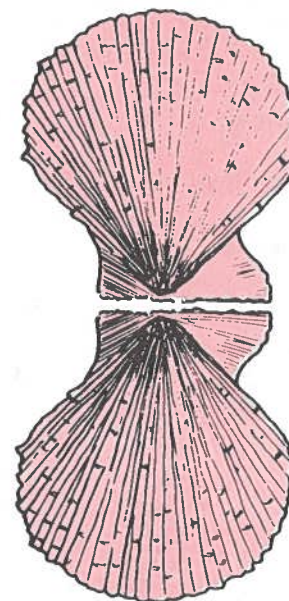


ORLANDO WELCOME

Orlando, one of the world's most popular tourist destinations, offers endless entertainment. Within a 20-minute drive is the WALT DISNEY WORLD® Complex, which includes the MAGIC KINGDOM® and the EPCOT Center (Experimental Prototype Community of Tomorrow). Sea World is within 10 minutes of the Convention Center. Within a 30-minute drive is Cypress Gardens, and within a 60-minute drive are both Busch Gardens and the Kennedy Space Center. The October meeting dates offer the advantage of good weather during a lull in the tourist season.

SPECIAL EVENTS

Welcoming Party. Arrive in time for the opening-night reception at the Convention Center, 6-9 p.m. At the same time, you may register for the meeting, if you didn't preregister, and view the exhibits.



Sea World. Wednesday evening, October 30. Sea World of Orlando has earned its reputation as one of the nation's top attractions, and it sets the standard for aquatic zoological parks. Sea World will feature four major shows for the GSA evening: Shamu, Dolphins, Waterski, and Shark Encounter. The evening also includes a casual, outdoor meal, soft drinks and beer, and live music.

Shakespeare's Tavern. Monday or Tuesday evening, October 28 or October 29. Extraordinary entertainment is the talent of colorfully costumed characters right out of the pages of history. William Shakespeare is the host overseeing the authentic Olde English song and dance festivities. For atmosphere, think Tom Jones, not Hamlet. This is a bawdy, six-course feast made for hearty appetites. It's an evening of pageantry, revelry, frivolity.

WALT DISNEY WORLD® Resort—Special Two-Day Pass. A special two-day pass will be available for GSA registrants and guests who want to visit the WALT DISNEY WORLD® Resort. This special pass provides back-and-forth access to both the MAGIC KINGDOM® and EPCOT Center during any two days between October 24 and November 3. The two-day pass includes all rides, attractions, and adventures. It also includes parking. The adult pass will be offered at a 10% discount. The passes may be purchased with your meeting registration.

Guest Program. Orlando is a wonderland of tourist adventures. It offers many attractions for adults and children that cannot be found anywhere else, especially in one location. Trips to these various attractions can be arranged easily by individuals through the hotel concierge or, in advance, by your travel agent.

As a special consideration for GSA guests, additional customized programs are being arranged by your Orlando host committee. Guest tours are planned for Kennedy Space Center, Apoka (the fern capitol of the world), and historic Winter Park, where the world's largest selection of Tiffany glass can be seen. Other programs under consideration are a tasting seminar and programs on food sculpture and Florida citrus culture.

The Kennedy Space Center trip will include a guided professional tour of the center and the entire history of the space program. You will see exhibits of the actual rockets and missiles from America's moon exploration program. Luncheon is included.

The Hospitality Room will be open daily at the Marriott to welcome you, members of your family, and other guests.

Alumni Night. The traditional alumni night (Monday, October 28) may not be so traditional in Orlando! We're close to completing plans for a surprise that will take us out of the hotel ballroom and into a new and exciting atmosphere. Stay tuned! If you would like to schedule an alumni reception, please contact Jean Kinney, GSA headquarters, before June 1.

MEETINGS

1985

IGCP Field Workshop and Seminar on Neogene Phosphorites of the Southeastern United States, May 6-15, 1985, North Carolina and Florida. Information: Stanley R. Riggs, Dept. of Geology, East Carolina University, Greenville, NC 27834; (919) 757-6360.

Symposium on Neutral Models in Evolutionary Biology, May 10-11, 1985, Chicago, Illinois. Information: Matthew H. Nitecki, Dept. of Geology, Field Museum of Natural History, Roosevelt Rd. at Lake Shore Dr., Chicago, IL 60605; (312) 922-9410.

Geological Association of Canada-Mineralogical Association of Canada Annual Meeting, May 15-18, 1985, Fredericton, New Brunswick, Canada. Information: H. W. Van de Poll, Dept. of Geology, University of New Brunswick, P.O. Box 4400, Fredericton, N.B., Canada E3B 5A3; (506) 453-4803; Telex 014-46-202.

IGCP Symposium on Genesis of Neogene to Modern Phosphorites, May 16-17, 1985, Tallahassee, Florida. Information: William C. Burnett, Dept. of Oceanography, Florida State University, Tallahassee, FL 32306; (904) 644-6700.

Mount St. Helens Five Years Later, May 16-18, 1985, Cheney, Washington. Information: Michael M. Folsom or Sarah A.C. Keller, Dept. of Geography and Anthropology, Eastern Washington University, Cheney, Washington 99004; (509) 359-2433.

Symposium on Degradation of Materials Due to Acid Rain, June 17-19, 1985, Arlington, Virginia. Information: Bruce R. Doe,

U.S. Department of the Interior, National Park Service, Washington, DC 20240.

26th U.S. Symposium on Rock Mechanics, June 26-28, 1985, Rapid City, South Dakota. Information: Eileen Ashworth, Dept. of Mining Engineering, South Dakota School of Mines and Technology, Rapid City, SD 57701-3995; (605) 394-2344.

International Symposium on Karst Water Resources, July 7-19, 1985, Ankara and Antalya, Turkey. Information: A. Ivan Johnson, Woodward-Clyde Consultants, 7600 East Orchard Rd., Harlequin Plaza North, Englewood, CO 80111.

Conference on Stable Isotopes and Fluid Processes in Mineralization, July 10-12, 1985, Brisbane, Australia. Information: John M.W. Rynn, Dept. of Geology and Mineralogy, University of Queensland, St. Lucia, Queensland 4067, Australia.

International Estuarine Conference, July 28-August 2, 1985, Durham, New Hampshire. Information: Bjorn Kjerfve, Belle W. Baruch Institute for Marine Biology and Coastal Research, University of South Carolina, Columbia, SC 29208; (803) 777-4529.

International Clay Conference, July 28-August 2, 1985, Denver, Colorado. Information: Western Experience, Ltd., 2450 Central Ave., P2, Boulder, CO 80302; (303) 449-3352.

Society of Economic Paleontologists and Mineralogists 2nd Annual Midyear Meeting, Golden Prospects for Science and Industry, August 11-14, 1985, Golden, Colorado. Informa-

Tectonic Evolution of a Forearc Terrane, Southern Scotia Ridge, Antarctica
By Ian W. D. Dalziel

PANTHALASSA
Southern Scotia Ridge
GONDWANALAND
Antarctic Peninsula
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SPECIAL PAPER 200

GSA Special Paper 200:
Tectonic Evolution of a Forearc Terrane, Southern Scotia Ridge, Antarctica, by Ian W. D. Dalziel, 8½" × 11", paperback, 37 pages, illustrated. ISBN 0-8137-2200-4, CIP, paperback \$ 9.00.

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MEETINGS

tion: Steve Sonnenberg, 1000 Writer Square, 1512 Larimer St., Denver, CO 80202; (303) 571-1314.

Zeolite '85, August 12-16, 1985, Budapest, Hungary. Information: J. Engelhardt, Central Research Institute for Chemistry, Hungarian Academy of Sciences, H-1525 Budapest, P.O. Box 17, Hungary.

Sixth Gondwana Symposium, August 19-23, 1985, Columbus, Ohio. Information: Sixth Gondwana Symposium, Institute of Polar Studies, Ohio State University, Columbus, OH 43210; (614) 422-6531.

IVth Chilean Geological Congress, August 19-24, 1985, Antofagasta, Chile. Information: Organizing Committee, IVth Chilean Geological Congress, Dept. of Geosciences, Universidad del Norte, Casilla 1280, Antofagasta, Chile; phone 222040-205.

International Symposium on Geothermal Energy, August 26-30, 1985, Kailua-Kona, Hawaii. Information: Geothermal Resources Council, P.O. Box 1350, Davis, CA 95617-1350; (916) 758-2360.

Symposium on Modern and Ancient Clastic Tidal Deposits, August 26-28, 1985, Utrecht, Netherlands. Information: S. D. Nio, Comparative Sedimentology Division, University of Utrecht, Budapestlaan 4, 3584 CD Utrecht, Netherlands; telephone 030/53.51.21.

Tectonostratigraphic Terranes of Circum-Pacific Orogenic Belts and Their Relationships to Energy and Mineral Resources, August 26-29, 1985, Sydney, Australia. Information: Secretary, 3rd Circum-Pacific Terrane Conference, Earth Resources Foundation, Edgeworth David Building, University of Sydney, New South Wales 2006, Australia.

Problems of the Stratigraphy and Paleogeography of Loesses, September 6-10, 1985, Lublin, Poland. Information: Henryk Maruszczak, Department of Physical Geography, University Marie Curie-Sklodowska, Akademicka 19, 20-33 Lublin, Poland.

6th International Conference on Basement Tectonics, September 16-20, 1985, Santa Fe, New Mexico. Information: M. J. Aldrich, Jr., Mail Stop D462, Los Alamos National Laboratory, Los Alamos, NM 87545; (505) 667-1495 or 7590.

American Institute of Professional Geologists Annual Meeting, September 17-21, 1985, St. Paul, Minnesota. Information: Robert E. Pendergast, Geotechnical Engineering Corp., 1925 Oakcrest Ave., Roseville, MN 55113; (612) 636-7744.

Second International Mine Water Congress, September 17-21, 1985, Granada, Spain. Information: R. Fernandez Rubio, School of Mines, Technical University of Madrid, Rios Rosas, 21, Madrid 3, Spain.

High Heat Production Granites, Hydrothermal Circulation and Ore Genesis, September 22-25, 1985, Cornwall, England. Information: Conference Office, Institution of Mining and Metallurgy, 44 Portland Pl., London W1N 4BR, England; 01-580 3802, Telex 261410 IMM.G.

Computer Applications in Oil and Gas Exploration and Development, October 3-5, 1985, Wichita, Kansas. Information: D. F. Merriam, Dept. of Geology, Wichita State University, Wichita, KS 67208; (316) 689-3140.

Association of Engineering Geologists Annual Meeting, October 7-11, 1985, Winston-Salem, North Carolina. Information: Norman R. Tilford, Ebasco Services, 2211 Meadowview, Greensboro, NC 27047; (919) 855-7500.

International Symposium on Management of Hazardous Chemical Waste Sites, October 9-10, 1985, Winston-Salem, North Carolina. Information: Norman R. Tilford, Dept. of Geology, Texas A&M University, College Station, TX 77843-3115; (409) 845-9682.

Recent Advances in Interpretations of Late Paleozoic Cyclothem, Midcontinent SEPM Field Conference, October 11-13, 1985, Lawrence, Kansas. Information: W. L. Watney, Kansas Geological Survey, 1930 Constant Ave.—Campus West, Lawrence, KS 66044; (913) 864-4991.

Geological Society of America Annual Meeting, October 28-31, 1985, Orlando, Florida. Information: Anthony F. Randazzo, Dept. of Geology, University of Florida, Gainesville, FL 32611; (904) 392-6127.

GSA 1985

Penrose Conference

Terranes in the Circum-Atlantic Paleozoic Orogens, May 27-June 2, 1985, Halifax, Nova Scotia. Information: John D. Keppie, Nova Scotia Department of Mines & Energy, P.O. Box 1087, 1690 Hollis St., Halifax, Nova Scotia, Canada B3J 2X1; (902) 424-5943 or 4015.

Section Meeting

Cordilleran Section, May 8-10, 1985, Vancouver, British Columbia. Information: W. H. Mathews, Dept. Geological Sciences, University of British Columbia, Vancouver, B.C., Canada V6T 2B4; (604) 228-2624.

Committees and Council

(all in Boulder, Colorado)

Executive Committee—May 1

Audit Committee—May 1

Section Secretaries—May 1

Council—May 2, 3

Joint Technical Program Committee—July 12

Annual Meeting—October 28-31, Orlando, Florida

1986

6th Offshore South East Asia Conference, January 28-31, 1986, Singapore. Information: D. H. Morgan, SEAPEX OSEA Committee, Marathon Petroleum Exploration, Ltd., P.O. Box 227, Tanglin Post Office, Singapore 9124.

International Volcanological Congress, February 1-9, 1986, New Zealand. Information: John A. Gamble, Victoria University, Private Bag, Wellington, New Zealand.

Fourth Federal Sedimentation Conference, March 24-27, 1986, Las Vegas, Nevada. Information: Doug Glysson, U.S. Geological Survey, 412 National Center, Reston, VA 22092; (703) 860-6834.

(continued on p. 82)

Geochemistry and Mineralisation of Proterozoic Volcanic Suites, April 2-5, 1986, Nottingham, England. Information: Tim Pharaoh, Deep Geology Research Group, British Geological Survey, Keyworth, Nottingham NG12 5GG, England. (Abstracts deadline is May 1, 1985.)

International Symposium on Coal and Coal-bearing Strata, April 8-11, 1986, London. Information: A.C. Scott, Geology Dept., Chelsea College, 552 King's Road, London SW10 0UA, England.

Geological Association of Canada—Mineralogical Association of Canada Annual Meeting, May 19-21, 1986, Ottawa, Ontario. Information: J. A. Donaldson, Dept. of Geology, Carlton University, Ottawa, Ontario K1S 5B6, Canada; (613) 231-2630.

Third International Conference on Geoscience Information, June 1-5, 1986, Adelaide, Australia. Information: Secretary, Organising Committee 3ICGI, Australian Mineral Foundation, PB97, Glenside, South Australia 5065.

6th International Conference on Geochronology, Cosmochronology and Isotope Geology, June 30-July 4, 1986, Cambridge, England. Information: Organising Committee, Sixth International Conference, Dept. of Earth Sciences, University of Cambridge, Downing St., Cambridge CB2 3EQ, England.

Geocongress '86, July 7-11, 1986, Johannesburg, South Africa. Pretoria, Republic of South Africa 0001.

Deep Seismic Reflection Profiling of the Continental Lithosphere, July 15-17, 1986, Cambridge, England. Information: Bullard Laboratories, Madingley Rise, Madingley Rd., Cambridge CB3 0EZ, England.

Fifth International Symposium on Water-Rock Interaction, August 8-17, 1986, Reykjavik, Iceland. Information: Halldor Armannsson, Orkustofnun — National Energy Authority, Grensasvegur 9, 108 Reykjavik, Iceland.

Circum-Pacific Energy and Mineral Resources Conference, August 17-22, 1986, Singapore. Information: Allen G. Hatley, c/o Gaffney, Cline & Assoc., P.O. Box 76309, Dallas, TX 75379.

International Symposium on Large Rock Caverns, August 25-28, 1986, Helsinki, Finland. Information: International Symposium on Large Rock Caverns, Technical Research Center of Finland, Lehtisaarentie 2, SF-00340 Helsinki, Finland; telephone 358-0-4566172; Telex 122972 vttha sf.

Third U.S. National Conference on Earthquake Engineering, August 24-28, 1986, Charleston, South Carolina. Information: James E. Beavers, Martin Marietta Energy Systems, Inc., Bldg. 9733-4, M/S 2, P.O. Box Y, Oak Ridge, TN 37831.

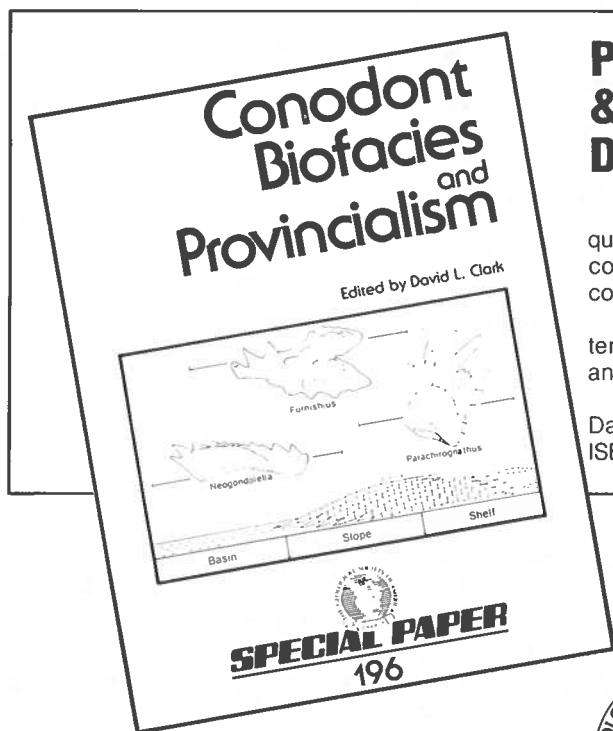
Second International Conference on Paleoceanography, September 7-12, 1986, Woods Hole, Massachusetts. Information: W.A. Berggren, Dept. of Geology & Geophysics, Woods Hole Oceanographic Institution, Woods Hole, MA 02543.

GSA 1986

Penrose Conference

Reefal Development in a Terrigenous Province, May 17-21, 1986, Veracruz, Mexico. Information: Paul R. Krutak, ARCO Exploration Co., P.O. Box 51408, Lafayette, LA 70505; (318) 264-4452.

Annual Meeting—November 10-13, 1986, San Antonio, Texas.



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Positions Open

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The Department of Earth Sciences, Memorial University of Newfoundland, with over 30 faculty and a new Centre for Earth Resources Research, is expanding into areas related to North Atlantic offshore geology, petroleum exploration and development. Applications for tenure-track positions are invited from specialists in: Clay Mineralogy, Offshore Engineering Geology, Marine Geophysics, Experimental Aspects of Mineral Deposits, Atlantic Lithostratigraphy, and Mineralogy. A one-year appointment in Geophysics is available. In accordance with Canadian Immigration requirements, this advertisement is directed to Canadian citizens and permanent residents. All positions are subject to budget. Send applications, curriculum vitae and names of three referees to: Dr. Christopher R. Barnes, Head, Department of Earth Sciences, Memorial University of Newfoundland, St. John's, Nfld., A1B 3X5, Canada.

TECTONIC GEOMORPHOLOGY Memphis State University

Memphis State University invites applications for a position in Tectonic Geomorphology. This position will be a joint appointment between the Tennessee Earthquake Information Center and the Department of Geology. The successful candidate will be expected to carry on an active research program with the Tennessee Earthquake Information Center, teach part-time in the Department of Geological Sciences and work with the local building industry. Research focus will be on geomorphic problems in seismically active

regions. Opportunities to pursue research in neotectonics, subsidence and liquefaction phenomena, landslide hazard evaluation and study of fluvial response to seismic events are available in the immediate area.

The candidate should have completed all requirements for the Ph.D. Salary and rank are open and commensurate with experience. Qualified applicants should submit a curriculum vita, a statement of research interests and the names, addresses and phone numbers of three references. Application Deadline: May 31, 1985. Send to Search Committee, Department of Geology/TEIC, Memphis State University, Memphis, TN 38152.

3 NEW FACULTY POSITIONS: GEOPHYSICS Memphis State University

The State of Tennessee has established a Center for Seismic Studies at Memphis State University and the Tennessee Earthquake Information Center (TEIC). As part of this major program three permanent research faculty positions have been approved and funded for the 1985--86 academic year. Therefore, we seek highly qualified, highly motivated individuals for positions in the following fields: 1) Seismology (Observational/theoretical); 2) Applied/Exploration Geophysics; 3) Tectonophysics/Solid Earth Geophysics. A Ph.D. or completion of all requirements toward a Ph.D. is required except for (2) where extensive industry experience may substitute. Any specialty in the above fields will be considered but research interests in continental lithospheric studies and mid-plate seismology are especially encouraged.

A senior researcher is sought for one position at the full professor level. Other positions to be filled at the assistant or associate professor level. Salary is commensurate with experience and is intended to be competitive with industry. The positions offer a number of exceptional opportunities for research-oriented individuals, including 1) joint appointments to TEIC and Dept. of Geological Sciences; 2) research priority, limited teaching duties; 3) State agreement of objective: Ph.D. program in geophysics; 4) MSU is an original member institution of IRIS; 5) VAX 11/785 and PDP 11/44 dedicated for research use; 6) two telemetry seismic networks (35 stations) - Central U.S.; and southern Appalachians. Applications: Send resume, names of three professional references and reprints of several publications (if available) to: Dr. Arch C. Johnston; Memphis State University; Memphis, TN 38152; Telephone (901) 454-2007. Application Deadline: May 31, 1985 (possible extensions for some positions). Telephone or written inquiries for additional information are welcome.

Memphis State is an Equal Opportunity/Affirmative Action University.

PETROLEUM GEOLOGY

TENNESSEE TECHNOLOGICAL UNIVERSITY
The Department of Earth Sciences invites application for a tenure/track position in petroleum geology with secondary interest in either stratigraphy/sedimentation or geophysics/exploration techniques. Starting date is September 1, 1985. Ph.D. is required. Rank open but entry level applicants preferred.

Teaching duties will include introductory courses and field geology together with upper division courses in applicant's specialty. The

successful candidate will be expected to develop a research program leading to scholarly publications.

Closing date for application: 31 May 1985. Applicants should send letter stating teaching and research interests, resume, transcripts, and 3 letters of reference to: Dr. H. Wayne Leimer, Search Committee, Department of Earth Sciences, Tennessee Technological University, Cookeville, Tennessee 38505, (615) 528-3522. TTU IS AN EQUAL-OPPORTUNITY/AFFIRMATIVE ACTION EMPLOYER.

MESOZOIC PALYNOLOGIST

The U.S. Geological Survey, Geologic Division, Branch of Paleontology and Stratigraphy announces a vacancy for research geologist in Mesozoic palynology. Duties include conduct of biostratigraphic investigations and original research on fossil palynomorphs, with emphasis on the U.S. Atlantic and Gulf coastal plains. Position is to be located at USGS National Center, Reston, Virginia. Applicants should be U.S. citizens. Position salary and grade negotiable based on career experience (salary range \$31,619 - \$67,940 per annum, GS-12 to GS-15). For further information contact: T.A. Ager, 970 National Center, U.S. Geological Survey, Reston, Virginia 22092, Phone: (703) 860-7745.

Application must include Standard Form 171 (SF -171), Personal Qualifications Statement, available from above address or any Federal Personnel Office. Application must be received by T.A. Ager by 15 July, 1985.

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ABSTRACTS DEADLINE JUNE 7

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