New Editors Appointed for GSA Bulletin and Books


John M. Costa, U.S. Geological Survey Cascades Volcano Observatory, and Arthur G. Sylvester, University of California, Santa Barbara, will be the new Bulletin editors. They succeed Robert D. Hatcher, Jr., University of Tennessee, Knoxville, and William A. Thomas, University of Alabama, who are finishing two three-year terms with a one-year extension. Richard G. Hoppin, University of Iowa, will be the new editor of GSA books—Memoirs, Special Papers, Engineering Geology Case Histories, Reviews in Engineering Geology, and Microform Publications. He succeeds Campbell Craddock, University of Wisconsin, Madison, who is finishing two three-year terms.

Costa has been Chief of Research of the Water Resources Division at the Cascades Volcano Observatory since August 1986; he was with the National Research Program of the USGS Water Resources Division in Denver from 1983 to 1986. Previously, he was a professor in the Department of Geography at the University of Denver.

Sylvester began teaching at the University of California, Santa Barbara in 1968, after working as a research geologist with Shell Development. Currently, his main interests are structural geology, tectonics, and structural petrology.

Hoppin has been teaching at the University of Iowa since 1952. His current interests are structural geology, tectonics, and remote sensing.

All of the science editors for GSA publications work closely with headquarters staff in Boulder, Colorado, to ensure that submitted manuscripts are critically reviewed and in appropriate format for the journals or books. The Bulletin editors use a panel of Associate Editors to help them determine what papers should be published in the journal. An average of 22 manuscripts per month have been submitted to the Bulletin in 1988. The books editor handles inquiries from potential book authors and enlists appropriate reviewers for book manuscripts. GSA has published 17 books in the Memoirs and Special Papers series in 1988.

The science editors receive no salary for their GSA publications work, but GSA pays their publications-related expenses and for travel to meetings.

All manuscripts submitted to the Bulletin must be sent to GSA headquarters, 3300 Penrose Place (for courier mail) or P.O. Box 9140, Boulder, CO 80301, not to the science editors. Authors of potential GSA books should contact headquarters for information about manuscript submission.
National Research Council Seeks Applicants for Senior and Postdoctoral Research Associateships

The National Research Council announces the 1989 Resident, Cooperative, and Postdoctoral Research Associateship Programs for research in the sciences and engineering to be conducted on behalf of 30 federal agencies or research institutions, whose 115 participating research laboratories are located throughout the United States. The programs provide opportunities for Ph.D. scientists and engineers of unusual promise and ability to perform research on problems largely of their own choosing yet compatible with the research interests of the supporting laboratory.

Approximately 450 new full-time Associateships will be awarded on a competitive basis in 1989 for research in chemistry; earth and atmospheric sciences; engineering and applied sciences; biological, health, and behavioral sciences and biotechnology; mathematics; space and planetary sciences; and physics. Most of the programs are open to both U.S. and non-U.S. nationals, and to both recent Ph.D. degree recipients and senior investigators.

Awards are made for one or two years, renewable to a maximum of three years; senior applicants who have held the doctorate at least five years may request shorter tenure. Annual stipends for recent Ph.D.s for the 1989 program year will vary from $27,150 to $35,000, depending upon the sponsoring laboratory; stipends will be appropriately higher for senior Associates.

Reimbursement is provided for allowable relocation costs and for limited professional travel during tenure. The host laboratory provides the Associate with programmatic assistance including facilities, support services, necessary equipment, and travel necessary for the conduct of the approved research program.

Applications to the National Research Council must be postmarked no later than January 15, 1989 (December 15, 1988, for NASA), April 15, and August 15, 1989. Initial awards will be announced in March and April (July and November for the two later competitions); awards to alternates will be announced later.

Information on specific research opportunities and federal laboratories, as well as application materials, may be obtained from the Associateship Programs (GRA430A-D2), Office of Scientific and Engineering Personnel, National Research Council, 2101 Constitution Avenue, N.W., Washington, D.C. 20418, (202) 334-2760.

Alternates Receive Research Grants

Each year the GSA Committee on Research Grants selects recipients for grants up to the maximum amount of funding available for that year. An alternate group of recipients is also selected in the event that some of the grantees return part or all of their funds because they have received funding elsewhere or their research project changes. As the returned funds become available they are re-awarded by the Research Grants Administrator to the alternates named by the committee.

In 1988 six alternates received funding following the initial awarding of grants:

Jeremy J. Bartlett, McMaster University
Cathleen Beauchin, University of South Florida
Emily Anne CoBabe, Harvard University
Jeanne L. Cooper, Miami University
Cecilia A. Howkins, University of Toronto
Mary Beth Kitz, University of Pittsburgh
Kudos Again

Now that the Hydrogeology volume is safely at the printer and is expected to appear this month, it is time to acknowledge the outstanding effort by the editors, Bill Back, Joe Rosenhein, and Paul Seaber. They arranged for the peer reviews for their chapters, encouraged their authors to use the two-color option for text figures, and carefully worked over the chapter texts before sending them on to GSA for production. This was a major effort, coordinating the products of 98 authors and co-authors among 50 chapters. Many thanks to those listed below who helped to make this book possible.

J. D. Bredehoeft  T. Freeman  N. C. Krothe  S. S. Papadopulos  J. Thaikil
R. Chavez  P. Fritz  P. E. LaMoreaux  M. Pavich  F. W. Trainer
D. R. Coates  E. D. Gutentag  D. H. Lennox  D. Pederson  J. J. Vaccaro
G. H. Davis  D. L. Hanneman  J. M. Lesser  O. Plankinck  C. I. Voss
S. N. Davis  W. F. Harst  G. F. Lindholm  A. D. Randall  R. L. Wait
W. E. Dietrich  R. C. Heath  F. J. Longstaffe  R. Riva Palacio  W. C. Ward
P. A. Domenico  C. G. Higgins  H. Maathuis  J. M. Robb  J. B. Weeks
J. Downey  E. F. Hollyday  R. W. Maclay  J. D. Rogers  A. E. Weide
T. Dume  J. W. Hood  H. Meisler  S. Rojstacer  G. E. Welder
C. J. Ewart  D. G. Jorgensen  M. D. Mifflin  P. R. Seaber
R. N. Farvolden  J. P. Kempton  R. M. Norris  C. E. Sloan

Miscellanea

The list of authors and co-authors for the Hydrogeology volume brings to 1109 the number of contributors to the 13 completed DNAg books, and we still have 16 in the mill! In addition, we have in hand one completed book in Spanish (Geología Económica de México) that is now being translated. This book, edited by G. P. Salas, has 58 chapters and 77 authors. If we add these authors to those who contributed to the 11 transects and 3 major wall maps that have already been completed, the number of formal DNAg contributors who have completed their commitments is approaching 1400! That’s a bunch!

Many thanks to everybody who has completed a contribution, and best wishes for the coming year to all, including those whose commitments are still to be completed.

Association for Women Geoscientists Foundation Offers Scholarship

The Association for Women Geoscientists Foundation (AWGF) announces the availability of the Chrysalsis Scholarship to be awarded March 1, 1989. The $250 award will be made to a geoscience Master or Ph.D. candidate to cover expenses associated with finishing her thesis. Chrysalsis is for candidates who have returned to school after an interruption of one year or longer in their education. The support can be used for typing, drafting, child-care expenses, or anything necessary to allow a degree candidate to finish her thesis and enter a geoscience profession.

The applicant should write a letter stating her career goals and objectives and how she will use the money, and explaining the length and nature of the interruption to her education. Her thesis adviser must submit a letter stating when the candidate will finish her degree and what requirements are as yet unfinished. This letter should also include reference to the applicant’s prospects for future contributions to the geosciences. Two additional letters of recommendation are required.

Applications should be made by January 31, 1989, to the Foundation. For more information or applications, please write Chrysalsis Scholarship, Association for Women Geoscientists Foundation, c/o Resource Center for Associations, 10200 West 44th Avenue 8304, Wheat Ridge, CO 80033.
Science Advice for Congress
by James Evans
GSA Congressional Science Fellow

Decisions made by the U.S. Congress have a significant impact on the earth sciences. Through enacting legislation, Congress sets national priorities, establishes or terminates programs, and sets the funding priorities of these programs. These facts are obvious, but they have two important corollaries. First, because congressional action has such an effect on the earth sciences, as a profession we should be more aware and involved in the legislative process. Second, because of the critical importance of the exact phrasing of legislation, it is important that we assist Congress in developing better access to science advice.

For me, one of the most important lessons of “a year on the Hill” has been realizing the practical considerations that limit the flow of objective scientific advice to Congress. I would summarize these as follows: (1) There are practical and legal constraints on how scientists from federal agencies (such as the U.S. Geological Survey) can be involved in the legislative process; (2) there are relatively few technically trained staff directly working for Congress; and (3) there is increasing technical expertise demonstrated by special interest groups.

Role of Federal Agency Scientists
Earth science work for several federal agencies, such as the U.S. Geological Survey, National Aeronautics and Space Administration, National Oceanic and Atmospheric Administration, Bureau of Land Management, Environmental Protection Agency, and the Department of Energy. What constraints are placed on the manner in which these scientists interact with Congress?

First, these scientists are prohibited by law from initiating contacts on specific pieces of legislation that could be considered as an effort to lobby Congress. If Congress initiates a formal request for information, that request is channeled through agency heads and their congressional liaison staffs. It may be possible, under certain circumstances, for federal agency scientists to interact informally with congressional staff. However, if an agency is asked to “go on record” with formal written or oral testimony at a congressional hearing, the testimony is reviewed beforehand by the Office of Management and Budget (OMB).

OMB, as a matter of principle, is opposed to any legislation that calls for new programs or increased funding levels for existing programs, if this represents a change from the President’s Budget Request. OMB will not permit federal agency scientists to testify in favor of legislation that establishes such new programs or increases funding in such manner. This opposition is completely independent of the scientific or social merit of the legislation. One of the strongest possible lessons one can learn about the operation of our government comes from attending a hearing where federal agency scientists officially testify against the legislation that they helped formulate.

Congressional Staff Expertise
Over the past two decades, Congress has been confronted with increasingly technical issues and concerns and has responded by the enlargement of committee staff, hiring of technically trained personnel, and establishment of congressional agencies with a science-oriented mission. Despite these efforts, there is a real need for increased technical expertise.

None of the 535 members of Congress are earth scientists, and only a few have had any scientific training. Each member of Congress has a personal staff, which typically includes one of more people who specialize in scientific and environmental issues. The background of these staff members is confidential, but it is very unlikely that any are technically trained scientists, let alone earth scientists.

Most of the technically trained staff work for the committees and subcommittees. There are three Senate committees (Commerce, Science and Transportation; Energy and Natural Resources; Environment and Public Works) and four House committees (Energy and Commerce; Interior and Insular Affairs; Merchant Marine and Fisheries; Science, Space and Technology) with jurisdiction over scientific issues. The jurisdictions (and personnel) are further split into subcommittees. Committee (and subcommittee) staff consist of legal advisers, professional (technical) staff, and research assistants. There are generally one or more technically trained persons in each subcommittee, and several additional technically trained persons at the full committee level. Again, the background data are confidential, but I found only two earth scientists (one being last year’s GSA Congressional Science Fellow) among all the staff.

None of this discussion is intended to disparage the ability of the staff. Legal issues tend to dominate the activities surrounding legislation; thus, it is not surprising that considerably more of the staff have legal training than scientific training. Awareness of the legal implications of scientific programs or environmental laws is particularly high. In addition, as certain issues continue to come up year after year, many of the staff have had what amounts to extensive “on-the-job” scientific training.

In my opinion, the problem is that few of the staff members understand the assumptions and uncertainties behind scientific data. For example, I attended a hearing where an earth scientist made a graphic presentation of trends which seemed to clearly leak the audience to certain conclusions. However, the analysis of the data was questionable, which may invalidate the conclusions. Generally, scientists giving verbal testimony have about five minutes to make their presentation. Few of them use any of this time to present a candid analysis of the limitations of their data or analytical uncertainties, or even to make known disagreements with other scientists about interpretation of the data. As a result, scientists often project themselves before Congress as being considerably more certain of their results than they would if presenting the same to an audience of their peers.

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science Advice for Congress (continued from p. 324)

Iole of Congressional Agencies

These three agencies have scientific expertise and are directly responsive to the Congress: Congressional Research Service (CRS, a part of the Library of Congress), General Accounting Office (GAO), and Office of Technology Assessment (OTA). Each employs technically trained staff (see Table 1), and has a different mission.

Congressional Research Service. CRS staff members undertake reviews and analyses of issues at the request of individual members of Congress or committees. These requests can be public or confidential, and the resulting documents are not widely distributed. CRS also initiates various types of reports (e.g., issue briefs, information packages) about issues relevant to present legislation. The strong points of CRS research are that it is relatively fast (days to weeks) and comprehensive and provides statistical analysis, if needed. The limitation of CRS research is that it is generally a review of published documents.

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<th>Field</th>
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*Information on the Congressional Science Fellow program is included for purposes of discussion.

General Accounting Office. GAO undertakes studies at the request of any individual member of Congress or committees, but they are screened somewhat, because of the high volume of requests. The formal procedure of starting an OTA study requires that OTA staff members compile a detailed study proposal that is submitted to the OTA Governing Board (six Senators and six Representatives) for approval. OTA studies might take several years to complete, are public documents, and are widely distributed. OTA staff has a large number of technically trained personnel and also contracts outside expertise for specific projects. The strengths of OTA studies are examining the adequacy of present technology, future technology needs, and relationships between technology needs and legislative or funding needs. One limitation to OTA studies is the length of time needed to initiate and complete the studies.

Professional Lobbyists

As technical issues have become more important in Congress, the level of technical expertise among representatives of special interest groups has also grown. Many such groups routinely prepare and distribute position papers, technical reports, and analyses that support their goals. My experience this year led me to conclude that lobbyists typically provided honest responses to any question I asked. The problem is that lobbyists, of their own volition, will be selective about volunteering information that may work against their goals.

Summary

I end my assignment as a GSA Congressional Science Fellow by calling upon the Society to recognize that its needs, as a professional scientific society, go beyond its present level of involvement in legislative affairs. I suggest that the goals of the Society include a commitment to public service, to basic scientific research, and to science education—all of which depend upon actions of the U.S. Congress. Further, as I hope to have demonstrated, there are clear needs for the earth science community to provide advice to Congress. I suggest that a professional scientific society is uniquely suited to fulfill that role, because it is objective and nonpartisan and has a broad constituency of members from the academic, industrial, and governmental sectors.

I strongly support the Congressional Science Fellowship program sponsored by GSA; however, there are limits to what individual Fellows can accomplish. She or he will work for either the House or the Senate, for either the majority or minority party, and for either a personal office or committee. Each of these choices sequentially limits the scope of the activities the Fellow can be involved in. It would be a mistake to characterize the Fellow as some kind of roving scientific SWAT team. In fact, for areas outside his or her jurisdiction, the Fellow’s advice is neither solicited nor (in many cases) welcome.

I believe that the Society, while continuing to support the Congressional Science Fellowship program, should look for additional mechanisms for providing science advice to the Congress. One such way would be to establish an office and representative in Washington, D.C. The goals of this representative would be (1) to develop long-term contacts with appropriate committee staff; (2) to provide Congress with lists of expert witnesses on subjects of interest; (3) to distribute technical reports, analyses, or position papers that GSA may produce; (4) to testify on behalf of the Society; (5) to notify the membership about critical issues; and (6) to coordinate symposia for the purpose of educating congressional staff.

Thank you again for the opportunity to represent you as the GSA Congressional Science Fellow for 1987–1988.

CORRECTION
The Cordilleran and Rocky Mountain Sections Abstract Deadline: DECEMBER 12, 1988
The Geological Society of America will continue its annual research awards program in 1989. Eligibility is not restricted to GSA members. New application forms for the current year and detailed requirements are available each fall in the geology departments of colleges and universities offering graduate degrees in earth sciences. Forms are mailed annually to GSA Campus Representatives and department secretaries and chairmen in the United States and Canada. They are also available upon request from the Research Grants Administrator, Geological Society of America, P.O. Box 9140, Boulder, Colorado 80301. PLEASE USE ONLY THE 1989 APPLICATION AND APPRAISAL FORMS.

The primary role of the research grant program is to provide partial support of master’s and doctoral thesis research for graduate students at universities in the United States, Canada, Mexico, and Central America.

The Geological Society of America awarded $178,800 in grants in 1988. The awards went to 213 students doing research for advanced degrees. The average amount awarded was $850. The largest award was $1,500, but there is no predetermined maximum amount.

Confidential evaluations from two faculty members are required from master’s and doctoral candidates and must accompany applications submitted. PLEASE USE THE “APPRaisal OF APPLICANT” FORMS, WHICH ACCOMPANY THE 1989 APPLICATION FORMS.

Applications will also be accepted for the Harold T. Stearns Fellowship(s). These grants are awarded periodically in support of research on one or more aspects of the geology of Pacific Islands and of the circum-Pacific region. They are distinct from the GSA Penrose research grants and are restricted in their use to the particular region. The awardee(s) will be selected by the Research Grants Committee. Applications must be postmarked by February 15. Application forms are the same as those used for the Penrose research grants.

The Committee on Research Grants will meet in April to evaluate applications and award grants. In April, all applicants for grants will be informed of the committee’s actions by the Executive Director of the Geological Society of America.

ALL APPLICATIONS MUST BE SUBMITTED ON THE 1989 FORMS
AND POSTMARKED BY FEBRUARY 15, 1989
Final Announcement
SOUTH-CENTRAL SECTION, GSA, 23rd Annual Meeting
Arlington, Texas
March 12–14, 1989

The South-Central Section of the Geological Society of America will meet in the Arlington Rodeway Inn Conference Center, Arlington, Texas. The meeting is sponsored by the Department of Geology of the University of Texas at Arlington and will be held jointly with the Texas Section of the National Association of Geology Teachers.

LOCAL COMMITTEE
Chairman: Charles I. Smith, Department of Geology, University of Texas at Arlington, Box 19049, Arlington, TX 76019, (817) 273-2987.
Vice-Chairman and Meeting Manager: Donald F. Reaser, (817) 273-2984.
Field Trips: Merlynd K. Nestell, (817) 273-2983, and Juergen Schieber, (817) 273-2980.
Registration: Rex E. Crick, (817) 273-2987.

REGISTRATION
Registration is required for all participants in any event, including technical sessions, symposia, exhibits, planned social events, and field trips.

Preregistration. You are urged to register in advance to avoid the local committee in making final plans. A discount is offered to those who register before February 9, 1989, using the accompanying forms. Preregistration is required for those who plan to attend field trips. Return completed preregistration forms with a check or money order in U.S. currency (made payable to South-Central Section GSA Annual Meeting) to South-Central GSA, Department of Geology, Box 19049, University of Texas at Arlington, Arlington, TX 76019. Preregistration must be postmarked by February 9, 1989, to qualify for discounted registration rates. Refunds on canceled registrations will be made until February 9, 1989. After that date, no refunds will be made except for field trips or other events that are canceled or oversubscribed.

On-site Registration. Registration will take place on Sunday, March 12, 1989, from 3 to 8 p.m. at the Conference Desk of the Arlington Rodeway Inn and will continue there daily from 7:45 a.m. to 5 p.m. for the duration of the meeting. For lower registration fees and to assist the local committee in planning PREREGISTER BY FEBRUARY 9, 1989.

WELCOMING PARTY
A welcoming party for those attending the meeting will be held Sunday evening, March 12, from 6:30 to 8:30 p.m. in the Rodeway Inn Conference Center. Hors d'oeuvres will be served, and there will be a cash bar.

TECHNICAL PROGRAM
Oral and poster technical sessions on a variety of topics and symposia will be presented on Monday and Tuesday, March 13 and 14. In addition to the general sessions, the following symposia will be presented during the meeting. Contact the convener(s) of symposia for further information.

1. Intraplate and Alkaline Magmatism. John A. Wolff, Dept. Geology, University of Texas, Arlington, TX 76019.
3. Secondary Magnetic Minerals and Their Implications for Exploration and Paleomagnetism. R. Douglas Elmore, School of Geology and Geophysics, University of Oklahoma, Norman, OK 73019; Chad McCabe, Dept. Geology, Louisiana State University, Baton Rouge, LA 70803.
6. Midcontinent Middle and Late Pennsylvanian Chronostratigraphy, Biostratigraphy, and Paleoecology. Merlynd K. Nestell, Dept. Geology, University of Texas, Arlington, TX 76019, and leaders of Middle and Late Pennsylvanian field trip.

STUDENT AWARDS
The South-Central Section will present three cash awards ($200, $100, $50) for the best student papers. The first-place winner is eligible to receive up to $300 for travel to the 1989 GSA Annual Meeting in St. Louis. Only student-written and student-presented papers are eligible.

FIELD TRIPS
Participants in field trips must preregister for the meeting. Field-trip registration is on a first-come, first-served basis. Preregistration for field trips, accompanied by full payment, must be postmarked by February 9, 1989. Requests for refunds will be honored until that date. Trips may be canceled by South-Central GSA if registration is insufficient or for reasons beyond our control. If a trip is oversubscribed or canceled, the field-trip fee will be refunded. (If you are not attending meeting technical sessions, the registration fee will also be refunded.) Notification of cancellation will be made if possible by March 1, 1989. All field trips will depart from the Rodeway Inn.

1. Stratigraphic and Structural Overview of Upper Cretaceous Rocks Exposed in the Waxahachie Vicinity, Northeast Texas. A one-day visit to classic Dallas area Upper Cretaceous exposures of the Eagle Ford Shale, Austin Chalk, and Taylor Marl near and at the proposed Dallas/Fort Worth site of the Superconducting Super Collider. Donald F. Reaser, Dept. Geology, University of Texas, Arlington, TX 76019

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South-Central Section (continued from p. 327)
Limit: 25; cost: $25, including transportation, catered bar-b-que lunch in historic Waxahachie, and guidebook. Bus departs Rodeway Inn Conference Center at 8:30 a.m., Saturday, March 11.

2. Middle and Late Pennsylvanian Chronostratigraphic Boundaries in North-Central Texas: Glacial Eustatic Events, Biostratigraphy, and Paleoecology. A two-day field trip in the Mineral Wells–Jacksboro–Graham area to examine classic Middle and Upper Pennsylvanian exposures related to chronostratigraphic boundaries. Planned in conjunction with Symposium 6. Darwin R. Boardman and James E. Barrick, Dept. Geology, Texas Tech University, Lubbock, TX 79409; Jim Cocke, Dept. Geology, Southwest Missouri State University, Warrensburg, MO 65304; Meryl K. Nestell, Dept. Geology, University of Texas, Arlington, TX 76019.
Limit: 40; cost: $125, including transportation, two buffet breakfasts, two lunches, snacks, lodging (double occupancy, two nights, Park Inn, Mineral Wells, Texas), and guidebook. Saturday and Sunday, March 11 and 12. Bus departs Rodeway Inn Conference Center at 6 p.m., Monday, March 10. Guidebook will be available after the meeting from Department of Geosciences, Texas Tech University, Lubbock, TX 79409.

3. Clastic-Carbonate Shoreline Depositional Environments of the Glen Rose Formation (Lower Cretaceous) in North-Central Texas. A one-day trip to visit classic exposures and dinosaur tracks in the Glen Rose Formation in the Glen Rose area. Gail R. Bergen, Reservoir Inc., Houston, TX 77045; Jeffrey G. Pittman, Wann Langston, Jr., Vertebrate Paleontology Lab., Balcones Research Center, University of Texas, Austin, TX 78712; Bob F. Perkins, Graduate School, University of Texas, Arlington, TX 76019.
Limit: 40; cost: $30, including transportation, one lunch, snacks, and guidebook. Bus departs Rodeway Inn Conference Center 8 a.m., Sunday, March 12.

4. Archeological Geology in the Upper Trinity Basin. Planned in conjunction with Symposium 4. A one-day field trip will provide participants with the opportunity to visit localities in the Trinity River Basin with excellent exposures of upper Quaternary alluvium, soils, and archeological horizons. The trip will focus on local alluvial history, paleoenvironments, and records of site-formation processes. C. Reid Ferring, Inst. Applied Sciences, University of North Texas, Denton, TX 76203; Duane Peter, Geomarine, Forth Worth, TX 76102; Brooks Ellwood, Dept. Geology, University of Texas, Arlington, TX 76019.
Limit: 40; cost: $40, including transportation, one lunch, and guidebook. Bus departs Rodeway Inn Conference Center 7:30 a.m., Sunday, March 12.

PUBLICATIONS
Abstracts with Programs for the meeting and copies of the field-trip guidebooks can be purchased at the registration desk.

PROJECTION EQUIPMENT
Two 35-mm slide projectors, two screens, and a light pointer will be provided in each technical session and symposium. Carousel trays will not be provided. Overhead projectors will not be available.

EXHIBITS
Exhibits will be adjacent to the technical session rooms in the same room with poster presentations. The cost of booths for educational and nonprofit institutions will be reduced. For further information, contact C. I. Smith, Dept. Geology, University of Texas, P.O. Box 19049, Arlington, TX 76019, (817) 273-2987.

SPECIAL EVENTS
Welcoming Party: From 6:30 to 8:30 p.m., Sunday evening, March 12, 1989, in the Johnson Station and Cross Timbers rooms of the Rodeway Inn Conference Center. Hors d’oeuvres with cash bar.
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South-Central Section (continued from p. 328)
Annual Banquet: GSA South-Central Section, in the Dallas and Fort Worth rooms of the Rodeway Inn at 7 p.m., March 13. Free beer, cash bar, and appetizers available at 6 p.m. Cost: $12.50, including tax and gratuity. Following the banquet there will be a brief business meeting. The after-dinner speaker will be Peter A. Scholle, who holds the Claude C. Albritton Chair in Geological Sciences at Southern Methodist University.
National Association of Geology Teachers, Texas Section Luncheon: At 12 noon, March 13, Dallas Room. Cost: $9, including tax and gratuity.
GSA South-Central Section Paleontology Luncheon: At 12 noon, March 14, Dallas Room. Cost: $9, including tax and gratuity.

SPouse AND Guest Program
We have not made special arrangements for guest activities, but personnel at the registration desk can provide literature and other information on places of interest in the area. Fort Worth’s museum complex (Kimbell Art Museum, Amon Carter Museum, Museum of Modern Art, and Museum of Science and History), recognized throughout the nation for its variety and quality, is only 20 minutes from the Rodeway Inn. Thirty minutes in the opposite direction is Dallas, with, among other points of interest, Williams Square at Los Colinas (actually in Irving) and Prestonwood Mall in north Dallas. Both are renowned for their artistic decor and fine stores. Unfortunately, Six Flags Amusement Park, adjacent to the Rodeway, will not open until the week after the meeting.

PREREGISTRATION FORM
South-Central Section, GSA, 23rd Annual Meeting
March 12–14, 1989, Arlington, Texas

Important
1. Full payment must accompany registration.
2. Register one professional or student per form.
3. Students requesting special housing rates: check box in lower right corner.
4. Your check will be your receipt. Copy this form for your records. If you wish acknowledgment of your preregistration, please enclose a self-addressed, stamped envelope.
5. Preregistration deadline: Must be postmarked no later than February 9, 1989. Preregistration deadline for field trips is also February 9.

Name __________________________________________ (Last or family name)
                                             (First) (Middle)
Registered as:  Professional    Student    Spouse or Guest
Affiliation (abbreviate for badge) ________________________________________________
Professional address ____________________________________________________________
Telephone: (                               ) _______________________ Nickname for badge ______________________
GSA Member: yes no  GSA Student Associate: yes no

Preregistration (postmarked by Feb, 9, 1989)  GSA Member $36.00
Other Professional $42.00
GSA Student Associate $12.00
Other Student $15.00

Registration (postmarked after Feb, 9, 1989)
GSA Member $42.00
Other Professional $47.00
GSA Student Associate $15.00
Other Student $18.00

Spouse or guest registration $10.00

Special Events
South-Central Section Banquet (March 13) $12.50
Texas Section NAGT Luncheon (March 13) $9.00
GSA South-Central Section Paleontology Luncheon (March 14) $9.00

Field Trips (preregistration must be postmarked by Feb, 9, 1989)
1. Upper Cretaceous Rocks, Waxahachie Vicinity (Saturday, March 11) $25.00
2. Pennsylvaniaian Chronostratigraphy (Saturday and Sunday, March 11 and 12) $125.00
3. Glen Rose Depositional Environments (Sunday, March 12) $30.00
4. Archeological Geology (Sunday, March 12) $40.00

TOTAL FEES $_________________________

Enclose check or money order (U.S. funds) payable to South-Central GSA

Mail completed registration form and full payment to
South-Central GSA
Department of Geology
Box 19049
U.T. Arlington
Arlington, TX 76019

☐ I request special student housing rates and room assignment.

University affiliation __________________________________________
South-Central Section (continued from p. 329)

TRAVEL

Arlington is between Dallas and Fort Worth and only 20
minutes southwest of the Dallas/Fort Worth Airport. The Rodeway
Inn (31 on detailed map of Arlington) is located just off I-30 (old
Dallas-Fort Worth Turnpike) near the Six Flags Amusement Park
(B on regional map). The Rodeway provides transportation to and
from the Dallas/Fort Worth Airport.

HOUSING

A block of rooms at special rates has been reserved at the
Rodeway Inn, where all meeting activities will be held. There are
other motels in the area (see map), but they have not been asked to
provide reduced rates.

Rodeway Inn Rates

$48 (plus tax) per room with 1 or 2 double beds, for 1-4
persons.
$75 (plus tax) for suites, with wet bar and refrigerator, for 6
persons.

Meeting attendees should contact the Rodeway directly (and
identify themselves as GSA South-Central Section attendees) to
make reservations, at (817) 640-7080.

Special Student Accommodations: $11 to $14 (including tax)
per person in multiple-occupancy rooms. Higher rates apply for
rooms not fully occupied. Rooms will be either for 4 persons
(2 double beds) or 6-person suites (3 double beds with wet bar and
refrigerator). These low rates are available subject to the following:
1. Preregistration is required. A space is provided on the form
to request student housing rates.
2. Occupancy must be for both Sunday and Monday nights
(March 12 and 13). Additional nights will be at regular convention
rates.

The meeting management will make room assignments. If
possible, students with the same university affiliation will be housed
together.
FROM THE GSA BOOKSHELF

Special Papers

LACCOLITHS; MECHANICS OF EMPLACEMENT AND GROWTH
by Charles E. Corry (SPE220, $27.50)

THE LATE CRETACEOUS SAN JUAN THRUST SYSTEM, SAN JUAN ISLANDS,
WASHINGTON
by M.T. Brandon, Darrell S. Cowan, and Joseph A. Vance (SPE221, $19.00)

GEOMETRIES AND MECHANISMS OF THRUSTING, WITH SPECIAL REFERENCE
TO THE APPALACHIANS
by G. Mitra (SPE222, $35.00)

THE ART OF GEOLOGY
edited by E.M. Morris and F. Michael Wahl (SPE225, $37.50)

DATING QUATERNARY SEDIMENTS
edited by D.J. Easterbrook (SPE227, $28.75)

Memoirs

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THE NOTEBOOKS OF G.K. GILBERT, 1875-76
edited by Charles B. Hunt (MWR167, $36.00)

THE CRETACEOUS SYSTEM OF SOUTHERN SOUTH AMERICA
by A.C. Biscardi (MWR168, $32.00)

GEOLGY AND PALEONTOLOGY OF SEYMOUR ISLAND, ANTARCTIC PENINSULA
edited by R.M. Feldmann and M.O. Woodburne (MWR169, $85.00)

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(303) 447/2020 or 1/800/GSA1988

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HAVE YOU PAID YOUR 1989 DUES?

Last year, most members remitted their annual dues payment before the November 30 deadline. As a result, they received their GSA publications without delay. This year, the timing is again critical because all section meeting Abstracts with Programs will be mailed to members early in 1989. If we do not receive your dues payment before mid-December, you may not receive that much-needed Abstracts with Programs in time for the section meeting that you plan to attend. Remember, back orders take 6 to 8 weeks to reach you! Please use the 1989 dues and publications selection form mailed to you earlier. Dues for 1989 are $70 for Members and Fellows and $32 for Students (the same as 1988).

If you have any questions, please call or write the GSA Membership Services Department, P.O. Box 9140, Boulder, CO 80301, (303) 447-2020.

Don’t risk missing a single issue of GSA News & Information! If you’re planning on changing your address, please give us 8 weeks notice. Simply write in your new address below and mail this coupon — ALONG WITH YOUR SUBSCRIPTION MAILING LABEL — to:
(please print)
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Phone number during business hours ( ) ........

If you do not wish to have this number included in the Membership Directory, check here .

Please change my voting section to: ..............................................
The Geological Society of America invites applications for the 1989–1990 Congressional Science Fellowship. The Fellow selected will spend a year (September 1989–August 1990) in the office of an individual member of Congress or a congressional committee advising on a wide range of scientific issues as they pertain to public questions. Guided by the American Association for the Advancement of Science, the Fellow selects a congressional staff position in which he or she can work on major legislative issues.

CRITERIA
The program is aimed at highly qualified earth scientists in early or mid-career. Candidates should have exceptional competence in some area of the earth sciences, cognizance of a broad range of matters outside the Fellow’s particular area, and a strong interest in working on a range of public policy problems.

AWARD
The GSA Congressional Science Fellowship carries with it a $28,000 stipend and a limited relocation and travel allowance. The fellowship is funded by GSA and by a grant from the U.S. Geological Survey. (Employees of the USGS are ineligible to apply for this fellowship.)

TO APPLY
Procedures for application and detailed requirements are available in the geology departments of most colleges and universities in the United States or upon request from

Executive Director
Geological Society of America
P.O. Box 9140
Boulder, Colorado 80301

Deadline for receipt of all application materials is March 15, 1989
Guide to
USA Legislative Information
and Contacts

Edited by
Jennifer Hess
Congressional Science Fellow
Herndon, Virginia

Geological Society of America
Committee on Geology and Public Policy
C. Edward Buchwald, Chairman
Northfield, Minnesota

MaryAnn L. Malinconico
Carbondale, Illinois

Diana C. Dale
Houston, Texas

Robert C. Milici
Charlottesville, Virginia

Howard G. Wilshire
Menlo Park, California

Marcus E. Milling
Austin, Texas

Clement F. Shearer
Reston, Virginia

Samuel J. Tuthill
Amana, Iowa
The purpose of this guide is to assist members of the Geological Society of America (GSA) in communicating with legislators and government officials in the USA on matters relating to the geosciences to issues of public policy, and to delineate some of the constraints under which GSA must operate when undertaking activities in this area. This guide is intended to encourage the participation of the individual geoscientist as an articulate, technically educated citizen in the public arena. Such activity would enhance the influence of geoscientists in formulating policy concerning areas in which we are uniquely qualified to contribute.

LEGISLATIVE PROCESS

Before becoming law and having funds appropriated to carry it out, legislation at the federal level and at most state levels go through more than 20 different steps. Certain steps offer opportunity for persons and groups to provide information with both written and in-person testimony. A few of the key steps in the legislative process are presented.

For a proposed law to be enacted, it must go through an authorization process and, if it requires money, a separate funding or appropriations process. This is necessary in each chamber or house of the legislature. Generally, if legislation is authorized but no funds are appropriated, little if anything is accomplished.

At the federal level and in most state legislatures the authorization and the appropriations processes in each house are handled in separate steps by different legislative committees. Assignment of a bill to the proper committee is handled by the parliamentarian of each chamber, and is based upon the content of the bill and the jurisdiction of the committee(s). Often, if the content of the bill is sufficiently broad, the bill will be referred to more than one committee. This is known as joint referral.

Once a bill is in committee, a subcommittee is assigned responsibility to consider and recommend action on activities to the full committee. A successful bill must be voted out of subcommittee and out of full committee, and it must pass a vote on the floor of each chamber. Within each step of the process, the bill can be amended and changed.

The House and Senate Budget Committees are responsible for developing the overall budget for the federal government. Authorizing committees are responsible for individual federal agencies, developing their budget ceilings and overseeing their programs and priorities. The House and Senate Appropriations Committees are responsible for legislation that enables the agencies to expend funds. The Senate Finance Committee and the House Ways and Means Committee are responsible for taxes (as well as other legislation).

Although any member of Congress can introduce a bill on any topic, it is generally the members of the appropriate subcommittee and committee who have the most influence over the bill. (For this reason, legislation is crafted in such a way that it is referred by the parliamentarian to a committee of which the legislator introducing the bill is a member.) The most influential members are the chairman (member of the majority party in that chamber), the ranking minority member (member of the minority party) of the committee and subcommittee, and the sponsor of the bill.

At the federal level, all appropriations bills originate in the House of Representatives. If either the authorization or appropriation approved by the Senate differs from the provisions approved by the House, a conference committee is established with representation from each legislative chamber. The conference committee is asked to form a compromise version of the differences within a limited time. The conference recommendations must be acted on by each house of Congress. The unified version of the bill is then submitted to the President for action. If vetoed by the President, the bill must have the approval of two-thirds of the members of both the Senate and House to be enacted. Proposed legislation may die for lack of approval or definitive action at the various steps in this process.

Since many major decisions on legislation at federal, state, and local levels of government are made in committees, the members seek information and opinions of important groups and individuals for help in making their decisions. Views from the government agency officials concerned with the activity that would be affected if it became law are usually requested by the committee(s) considering the bill. Relevant facts and scientific opinion are also welcomed by the committees.
Often information is solicited prior to the drafting of legislation, in informational hearings before the Congress. Usually before a bill is drafted, a hearing record is established which delineates the need for the legislation and provides support for the bill.

LEGISLATIVE INFORMATION: WHERE TO GET IT

Before you react to proposals for legislation, familiarity with the written specifics of the proposed legislative measures is necessary. This is also a sound practice when you wish to comment on a proposed government agency regulation. Get a copy of the bill (proposed legislation) or of the public law and/or the related agency regulation that is of concern.

Once you know the specifics of what is being proposed, your comments and recommendations can be better addressed to the scientific implications. If you agree with the proposed action, say so. Whenever you disagree with proposed legislation or government regulatory rules but do agree with the intent or with a part of what is proposed, say that. If you disagree, suggest alternatives. Most legislators and agency administrators will appreciate favorable comments. They will usually work hard to accommodate responsible suggestions, particularly from sources who have been interested enough to tell them when they have been pleased with their work.

To Obtain a Copy of a Federal Bill (Proposed Legislation)

1. Write or telephone the legislator who has introduced the bill and request a copy. Cite the bill’s title and number, if known. The number will be preceded by “S” if introduced in the Senate or “H.R.” if introduced in the House of Representatives (e.g., S 123 or H.R. 123). You may also request bills from the Senate Document Room, B-04 Hart Building, Washington, DC 20510.

Sometimes identical bills are introduced at the same time before both houses. Often multiple bills are introduced on the same topic in each house during a congressional session by different sponsors. Often a bill will be introduced in one house and returned to one (or more) committee(s) in that house for consideration and recommendations before the same or a revised version is considered by the other house via its committee(s) on the subject. Sometimes a copy of draft legislation (no number assigned) may be obtained from members of the committee considering a particular measure or need.

When requesting a copy of a bill, give the bill number if it is known. If you do not have the bill number, cite the bill’s title or subject and intent and the date (or approximately when) it was introduced. Allow five days after the date introduced before requesting a bill. Enclose a self-addressed mailing label. Quantity is limited to one copy of up to six items per day. No phone requests are honored.

2. Other sources of information on proposed legislation:
   a. The staff director of the committee to which the bill has been referred for consideration can be a valuable source of up-to-date information on what is happening on bills referred to that committee. Sometimes staff will supply a copy of a specific bill the committee is considering. The staff director can also provide a list of the hearings scheduled on a particular bill or topic.
   b. See the legislature’s public proceedings for the day the bill was introduced. When a bill is introduced, the legislator will often cite background on need and rationale for provisions in the bill to assist congressional colleagues and other interested parties in considering it. At the federal level, the U.S. Congressional Record is published for each day that one or both houses are in session. (Subscriptions to the U.S. Congressional Record are $225 per year or $1.50 per copy, prepaid, from U.S. Government Printing Office, Washington, DC 20402.)

3. In most instances, however, the bill itself is not reproduced in the U.S. Congressional Record, and mention is made only of the bill’s topic and sponsor on the day of its introduction.

To Obtain a Copy of Federal Hearings or Committee Reports

Contact the committee handling the matter. The publication process takes from one to three months. The records of some hearings, but not all, are also on sale from the Government Printing Office. A copy of statements of witnesses is best obtained from them at the time of the hearing.
Sometimes extra copies left from those supplied by the witness at the time of the hearing may be obtained from the committee.

To Obtain a Copy of a Federal Law
Write to the U.S. Government Printing Office, Washington, DC 20402, or to the Senate Document Room. When requesting, give the number of the public law. The number will be preceded by the letters “P.L.” The first digits designate the session of Congress that enacted the law. The remaining numbers, preceded by a dash, are those identifying the law; they are usually used in referring to it (e.g., P.L. 98-1234). Enclose a self-addressed mailing label.

To Obtain Government Regulations and Legal Notices
Write for single copies to the government agency or department responsible for administering activities in the specific area (e.g., the Environmental Protection Agency [EPA] for environmental standards, the U.S. Geological Survey [USGS] for offshore drilling).

Alternatively, request these from the office of the Federal Register if the specific volume number and/or date are known. Official operational regulations and notices issued by federal agencies are required to be published in the Federal Register. (Subscriptions to the Federal Register are $340 per year or $1.50 per issue, prepaid. This periodical, the Congressional Directory, and the U.S. Government Organization Manual [see below] are all available from Superintendent of Documents, U.S. Government Printing Office [GPO], Washington, DC 20402. There are no restrictions on reproducing any of the materials in these government documents, with the exception of copyrighted articles.)

Public legislative records of the state legislatures are available, as well as subscriptions to state notices of official regulations and notices, by request to the state chief executive.

To Obtain Names and Addresses of Legislators, Congressional Committees, and Executive Officials
There is a Congressional Directory of federal legislators and legislative committees published for each Congress and distributed by the U.S. Government Printing Office (address given above). The price is $15.

Another useful handbook is the U.S. Government Organization Manual, available from the GPO for $20 (1987–1988 edition; address given above). It contains information on the responsibilities and organizational structure of the federal agencies and certain advisory, study, and regulatory boards, committees, and commissions. This book lists the names of top staff administrators for various operations within each federal agency, and for study and regulatory commissions. This publication and the GPO Congressional Directory are not usually available until several months after start of the legislative sessions. To pick up materials published by the Government Printing Office in person:

In Washington, D.C.: Go to the GPO Bookstore, 710 North Capitol Street, Washington, DC 20402. Call (202) 783-3238 to place an order for later pickup.

In other cities: There are GPO branches in eleven cities across the nation. Locations of these branches may be obtained upon request from the Superintendent of Documents, U.S. GPO, Washington, DC 20402.

To Obtain Information on Legislation at the State Level
There are different legislative structures, calendars, and information procedures among the states. In general, the process described above for the federal level is typical in states with bicameral or two legislative chambers. The state Chamber of Commerce and state League of Women Voters are frequently good sources of information about the state legislative process and its members.

LIMITATIONS OF INVOLVEMENT BY GSA
Caution is needed in submitting uninvited testimony or comment in the name of a tax-exempt society before federal, state, or local legislative bodies. GSA, like many groups in the scientific/education fields, is classified under section 501(c)(3) of the federal tax law (Internal Revenue Service [IRS] Code). These groups are not incorporated to lobby any governmental level for any cause, and if they do so to any "substantial" extent, they could lose their tax-exempt status.
Such tax-exempt groups are prohibited from participating in any way in election campaigns. Certain activity of scientific groups, such as conferences, seminars, and news reports may be considered as part of a larger and "substantial" legislative program if the thrust is toward shaping opinion and encouraging participation on legislative issues. It is important to evaluate the appropriateness of any specific program activity in relation to GSA's total operations and to avoid a series of activities that, when put together, relate to influencing policy at any level of government—not just on the federal scene.

There are other scientific and educational organizations also classified as "tax-exempt" under sections 501(c)(4), (c)(5), or (c)(6) of the IRS Code. They have fewer restrictions than those under 501(c)(3) on participating in legislative activities. These non-501(c)(3) tax-exempt classifications include many of the "professional societies" of scientists. Such groups do not pay federal taxes on income from member dues or on income from providing scientific or educational services to the members or to the general public. However, income from activities not "directly related" to its scientific/educational purposes is taxable. Unlike the 501(c)(3), voluntary gifts from individuals, corporations, etc., to non-501(c)(3) "tax-exempt" societies are not tax deductible for the contributor. Public gifts or contributions to such societies are not tax deductible for the donor, these societies do not have the lobbying restriction.

This does not mean that a 501(c)(3) tax-exempt society, and GSA specifically, cannot express its viewpoint at all to legislators on subjects relevant to them. They may respond to invitations or testimony from legislative committees. The initiation will usually come from one individual peaking on behalf of the committee. Legislative committees of the U.S. Congress may issue standing invitations to tax-exempt organizations with desired expertise. Such open invitations, however, must be renewed by the legislative committee for each Congress. Invited testimony does not weigh as heavily on questions of whether positions presented are appropriately "lobbying" in nature by the person or organization whose point of view is requested. Such organizations present factual data and viewpoints of scientists to help the legislators in making their decisions on subjects related to the society's expertise.

**PERSONAL COMMUNICATION TO LEGISLATORS**

Members of GSA may wish to express their opinions as individuals on legislation or budgets affecting the earth sciences, especially when an official statement on a subject has not been issued. Such individual participation is helpful to reinforce testimony given by others, or to show the range of viewpoints relating to it.

A 501(c)(3) organization should be most careful, however, in urging its members or the public to contact members of a legislative body. The resulting activity might be weighed in determining whether the total legislative activities are substantial. The society may point out legislation of possible interest to the members and provide a nonpartisan analysis citing arguments both pro and con. This information must be made available to all those expressing interest.

Letters from constituents in their respective election districts are important to congressmen and senators. You may write in response to an issue or to provide general background. Remember that legislators and staff are dealing with many diverse and technical issues, many of which demand immediate action. Therefore, the more specific you can provide about an issue, the better your information will be received. Facts, figures, and statistics are welcome information. Letters from scientists who know the implications of issues from their own studies and those of others and who are familiar with the local situation can be especially valuable to a senator or congressman in considering how to vote on issues important to his or her constituents.

If you disagree on an issue, remember a letter of complaint carries more weight when accompanied by solutions or alternatives. Solutions provide the basis for dialogue. If you agree with the legislator's position, thank him or her for their support. Positive comments are always noticed.

Letters received early in the congressional session help alert elected officials to issues that concern the citizens they represent. The best time to write to members of congressional committees on a particular subject is when the topic is pending before that committee or when the bill is before the full Senate or House. Letters to the President and members of his cabinet are more effective when the administration is planning policy or drafting legislation or when an agency is in the
process of developing regulations to carry out a new law. If you have met those who represent you in the legislature, it helps. When you are known, a telephone call or letter from you can carry more weight with the legislator in considering the information you wish to share. Because of this, you may wish to make it a point to visit the legislative representative from your area to discuss an issue of current interest to him/her or to you.

Information about your federal senators and representatives (their committee assignments, civic memberships, etc.) is given in the Congressional Directory. Another valuable source of continuing information about your legislative representatives is the newsletters issued from their offices to keep constituents informed of their activities. You can be placed on the mailing list by request to their offices.

Letters to legislators are most effective when they are courteous, brief, and to the point and directed to one issue in each letter. Handwritten letters are fine, but make sure to include your mailing address. Mention of your professional or occupational qualifications related to the subject matter will help. Enclose related material from other sources on the topic for added impact. Do not send a mimeographed form letter. It also is not advisable to send a carbon copy of a letter addressed to one representative to another. Each letter should be addressed individually. Even if you frequently disagree with your senator or congresswoman, share your viewpoint.

A quick and inexpensive way of communicating with representatives or senators is by Western Union Mailgram. The cost is $12.85 for the first 50 words or less and $3.95 for each additional group of 50 words, including the name and address. (There is a higher rate for messages from Alaska and Hawaii.) The message is hand-delivered by the next business day.

Communications, whether by mailgram, telephone, or letter, to a representative or senator from his or her home state or district, are especially significant to most legislators.

HOW TO PRESENT SCIENTIFIC TESTIMONY

Commonly, there is a short lead time on legislative and government agency hearings. Members of the scientific community, as well as all others, must tailor their operations to respond within the time that the legislators provide if their viewpoints are to be considered. With input from the scientific community, decisions by those in the public sector can be based on the latest factual information available.

If you have never testified on a scientific matter, you may wonder what it is like and how to be effective. The circumstances are very different from those at a scientific meeting, where discussion usually is oriented to the technical aspects of the subject. A typical hearing, in contrast, more nearly resembles an adversary advocacy situation, where people with particular interests try to make those interests known and to have their point of view accepted. The legislators, and eventually the legislature, will make the decisions.

Conclusions based on scientific investigations receive more attention than the route by which they are reached. The primary purpose of the hearing is to make it possible to word a bill so that it is technically sound and meets most of the issues involved.

When testifying, you can say whatever is factually relevant. The following suggestions are intended to be helpful so that what you have to say may have the greatest impact:

- **Introduce yourself at the beginning of your oral statement.** "I am Dr. John D. Smith from Mesaki University. I am pleased to have the opportunity to testify today on . . . ."

- **Orient your testimony to the bill.** Specific suggestions for wording will be very helpful. Keep in mind that any law must be enforceable at reasonable cost by whatever officials are involved.

- **Be brief and direct.** Your prepared statement, whether short or long, can be left with the chairman. You will be more effective if you do not read your statement or even its summary, but rather summarize extemporaneously directly on the subject.

- **Don’t use mathematics or jargon.** They will be unfamiliar to your audience. Emphasize results or conclusions of your work and their relevance to the bill. Omit the analysis in oral testimony; put it in the written material for the record. Legislators will understand your specialized language about as well as you understand theirs; hence, much is to be said in favor of straightforward English.

- **Keep the presentation simple.** Use slides and other special-equipment methods only when necessary. Whenever possible, use printed bar graphs and pie charts as part of your written presentation. Refer to them by page number.
Make clear the distinction between the facts and your value judgments. For example, it may seem obvious to you that X dollars (or fatalities or whatever) are enormous or insignificant, but it will be more useful to give the numerical value of X expressed also as a percentage of some well-understood factor. You may know that a million gallons is not very much, but a lot of people need some perspective. You may, of course, give your own value judgment as to whether something is good or bad, as may anyone else.

Topics of particular interest are specific impacts on employment, the economic situation, taxes, and health. Showing the relationship of a technical factor to these matters is particularly helpful. However, GSA, as a scientific membership society that is tax-exempt for public donations, should avoid positions that would benefit the individual members. Self-interest positions are not appropriate.

Plan to make your main points in no more than five minutes. If few people come, you may be allotted ten minutes; more time is rare. Keep in mind the possibility that much of what you believe is essential will be covered by previous speakers. If you concur, acknowledge what they say and carry on from there with your own new points.

Ask who else will be testifying at the hearing with you. Knowing the other panelists will help you anticipate the direction of the questions from the members.

Ask what the objectives of the hearing are. This will enable you to focus your testimony accordingly. In most cases you will be able to make your written comments as comprehensive as you wish; however, oral statements are generally limited to five minutes (often this is enforced quite strictly). Ask, if these constraints are not specified.

Ask what members sit on the committee and who will be likely to attend the hearing. Provide information pertinent to the members’ home states if this is possible. It ensures their attendance at the hearing, and their attention during the hearing.

Choose the wording of your testimony carefully. You could find yourself quoted in tomorrow’s newspaper.

Expect a few questions. You will be asked for your interpretation of the facts as they affect the bill under consideration. If you are questioned intensively, it will often be to clarify apparent or real conflicts in your own testimony, with other testimony on the subject, with viewpoints held by one or a group of the legislators, or with earlier briefing information from the committee staff. Be sure to stick to the facts available to you. Even if you’ve limited your testimony strictly to facts, you can expect to be asked your opinion somewhere in the question-and-answer period.

Don’t be distressed or offended by apparently unrelated activity in the hearing room. Congress is a very busy place where other events often intrude on hearings.

Form for Written Testimony
The statement should begin with a heading that gives the name of the committee or other group before whom the testimony is submitted, the date of the hearing, and the name and primary affiliation of the person submitting the statement. As an example:

Testimony Before the Subcommittee on Environment of the U.S. Senate Committee on Commerce by Dr. John D. Smith, Chairman Department of Geophysics Mesaki University Mesaki, Minnesota 55812 October 3, 1987

The statement should be typed, double-spaced, on one side of the paper. For congressional hearings, 50-75 copies are requested to be delivered, if possible, 3-4 days in advance. A copy is then made available to each committee member for review before the hearing. The other copies are for staff, the press, and interested individuals at the hearing. It is always wise to have 5-10 extra copies at the hearing, especially if advance copies have not been supplied.

Generally, the written statement can be as comprehensive as you wish. If additional information is required to make the points clearer, it can be supplied later for the written record.

October 1988

Acknowledgment
The Geological Society of America thanks the American Geophysical Union for the use of the AGU legislative guide, which was adapted to GSA use.
Guide to USA Legislative Information and Contacts
Final Announcement
NORTHEASTERN SECTION, GSA, 24th Annual Meeting
New Brunswick, New Jersey
March 23–25, 1989

Rutgers University—New Brunswick, together with Rider College, Rutgers University—Newark, and Princeton University will host the Geological Society of America Northeastern Section meeting at the Hyatt Regency in New Brunswick. The Eastern Section of the Society of Economic Paleontologists and Mineralogists (ES—SEPM), The Northeastern Section of the Paleontological Society (NE—PS), and the Eastern Section of the National Association of Geology Teachers (ES—NAGT) will be meeting with the GSA Northeastern Section. The meeting will run from Thursday noon (March 23) through Saturday (March 25). Field trips will be on Sunday (March 26).

REGISTRATION
Registration is required for everyone participating in any event connected with the meeting.

Preregistration. You are urged to register early so that the local committee can plan more efficiently. Your registration form and payment must be postmarked no later than February 23, 1989. Complete the registration form and return it with a check or money order in U.S. currency, made payable to Northeastern Section GSA, to M. J. Hall, Dept. Geological and Marine Sciences, Rider College, Lawrenceville, NJ 08648-3099. Those planning to attend field trips must register separately for the field trip and pay the fee directly to the leader by March 1, 1989. Refunds on canceled preregistration will be made in full until March 1, 1989. After that date, no refund will be made except for cancellation of a field trip for insufficient enrollment.

On-Site Registration. On-site registration, and pick-up of meeting material by those who have preregistered, will be from 9 am to 10 pm on Thursday, 7 am to 5 pm on Friday, and 7 am to noon on Saturday. Registration will be in the front lobby of the Hyatt Regency.

TRANSPORTATION
New Brunswick, New Jersey, is centrally located in the GSA Northeastern Section.

Ground Transportation. New Brunswick is situated on the Amtrak NJ Transit rail system and can also be reached easily by bus or car via the New Jersey Turnpike, the Garden State Parkway, and Interstate 287.

Air Travel. From Newark Airport, take a taxi or limousine to Newark Train Station ($6) and take a New Jersey Transit train to New Brunswick ($5); or take the Salem Limousine directly to East Brunswick ($15) and a taxi to the Hyatt Regency ($5). From Philadelphia Airport, take the airport shuttle train to the Philadelphia 30th Street Station ($4), then the SEPTA line to Trenton ($4), and then a New Jersey Transit train to New Brunswick ($5). It is a two-block walk from the train station to the Hyatt Hotel. Parking is available at the Hyatt for guests; others may use university parking lots three blocks away.

TECHNICAL PROGRAM
Technical sessions are scheduled as oral and poster sessions from Thursday, March 23, 1 p.m., through Saturday, March 25. Oral sessions will be held on the ground and second floors of the Hyatt Regency; posters will be in the basement Expo Hall. Poster Booths (8' x 8') will consist of three 4' x 8' Homesote tack boards.

Poster Sessions
The option of using computer or video media for presentation of research results will be available as an alternative to poster graphic displays. For additional information regarding technical posters, contact Michael Carr, Dept. Geological Sciences, Rutgers University, New Brunswick, NJ 08903, (201) 932-3619.

SYMPOSIA


**Preregistration Form**  
**Northeastern Section GSA, 24th Annual Meeting**  
**March 23-25, 1989, New Brunswick, New Jersey**

**IMPORTANT**  
2. FULL payment and form MUST accompany all preregistration requests. Unpaid purchase orders are NOT accepted as valid registration.  
3. Cancellation deadline: March 1, 1989. No refunds or cancellations given after this date.  
4. Register one professional or one student per form.  
5. Fill in receipt section at bottom. This will be in your packet at registration desk.  
6. Copy this preregistration form for your records.

**PLEASE PRINT OR TYPE**

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Affiliation

Professional address

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**PREREGERATION (Before FEBRUARY 23, 1989)**

| Entire Meeting | Professional—GSA Member (or affiliate checked above) | $45.00 |
|               | Professional—Nonmember | $55.00 |
|               | Student—Member (see verification requirement below) | $15.00 |
|               | Student—Nonmember or Guest | $20.00 |
|               | One Day Only Professional—Member | $20.00 |
|               | Professional—Nonmember | $30.00 |
|               | Student—Member | $10.00 |
|               | Student—Nonmember or Guest | $15.00 |

**REGISTRATION (After FEBRUARY 23, 1989)**

| Entire Meeting | Professional—GSA Member (or affiliate checked above) | $50.00 |
|               | Professional—Nonmember | $60.00 |
|               | Student—Member (see verification requirement below) | $20.00 |
|               | Student—Nonmember or Guest | $25.00 |
|               | One Day Only Professional—Member | $30.00 |
|               | Professional—Nonmember | $35.00 |
|               | Student—Member | $15.00 |
|               | Student—Nonmember or Guest | $20.00 |

**SPECIAL EVENTS**

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<tr>
<td>Short Course</td>
<td>Microstructures, March 22, 23</td>
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<td>Association for Women Geoscientists Panel</td>
<td>March 23</td>
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<td>ES—NAGT past-presidents and officers luncheon, March 24</td>
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<td>ES—NAGT breakfast business meeting, March 25</td>
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<tr>
<td>GSA Northeastern Section Banquet (and business meeting), March 24</td>
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<tr>
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**Abstracts with Programs—reserved (on-site pick-up)**

**Total fees**

Enclose check or money order in U.S. funds payable to Northeastern Section GSA

**Student verification**

Signature of dept. head or GSA Campus Representative

Mail completed meeting preregistration form and full payment to M.J. Hall, Dept. Geological and Marine Sciences, Rider College, 2083 Lawrenceville Rd., Lawrenceville, NJ 08648-3009

**RECEIPT:** Please fill in; receipt will be in your packet at registration desk.

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Northeastern Section (continued from p. 341)
wick, NJ 08903; Leonardo Seeber, Lamont-Doherty Geologi-
cal Observatory, Palisades, NY 10964.

10. Paleosols. Sponsored by ES—SEPM. David E. Fastovsky,
Dept. Geology, University of Rhode Island, Kingston,
RI 02881.

11. Depositional Sequences on the Middle Atlantic Con-
tinental Margin. Kenneth G. Miller, Dept. Geological Sciences,
Rutgers University, New Brunswick, NJ 08903; C. Wylie

12. Paleontological Event Horizons: Stratigraphic, Ecologi-
cal, and Evolutionary Implications. Sponsored by NE—PS.
Carlton E. Brett, Dept. Geological Sciences, University of
Rochester, Rochester, NY 14627; Gordon C. Baird, Dept.
Geoscience, SUNY College of Fredonia, Fredonia, NY 14063.

Special Symposium—Poster Session
Classic Field Sites for Teaching Geology in the Northeast.
Sponsored by ES—NAGT. Loretta Molitor, Dept. Physics/
Geology, Towson State University, Towson, MD 21204.

ROCKET EQUIPMENT
All slides must fit in a standard 35-mm carousel tray. Two
projectors and two screens will be provided in each of the technical
sessions. If possible, bring your own loaded tray(s) to the meeting.
Extra trays and projection equipment will be available in the
presider’s Ready Room. Please label trays with your name, session,
and/or/and right-hand screen, and time of paper; give trays to the
president 20 minutes before the beginning of the session.

OB RECRUITMENT SERVICE
Many job opportunities are available in both governmental
agencies and the private sector for geologists and hydrogeologists
with B.S., M.S., or Ph.D. degrees. Facilities will be made available
for job seekers and recruiters. Recruiters will receive space
and time allocations for interviewing and a file of all applicants
that attend the meeting. Job seekers should send to the address below
an Application for Employment Matching Service (see below),
their resume (two-page limit), and (3) $10 to cover copying and
distribution to prospective employers. Checks should be made
payable to Northeastern Section GSA. For more information
and employment forms, contact Claude T. Herzberg, Dept. Geolog-
ical Sciences, Rutgers University, New Brunswick, NJ 08903,
(01) 932-3154.

HORT COURSE
Irrotex in Deformed Rocks
wednesday, 1-5 p.m., March 22, and Thursday, 9 a.m.—noon,
arch 23; Room 249, Wright Laboratory, Busch Campus, Rutgers
University, Piscataway, NJ 08854. Lecturer: Carol Simpson, Dept.
Earth and Planetary Sciences, Johns Hopkins University, Baltimore,
D 21218.

The course provides a brief introduction to aspects of lattice
location theory relevant to the interpretation of deformation-
duced microstructures. Participants will spend at least half of the
six hour time using petrographic microscopes to identify and interpret
tural deformation in quartz or feldspathic mylonites.
Course notes are included. Cancellation or refund deadline is
March 1, 1989.

OKING, CAMERAS, AND
OUND-EQUIPMENT POLICY
Northeastern Section policy prohibits the use of cameras or
sound-recording equipment at technical sessions and poster
sessions. A no-smoking policy has been adopted by the Program
Committee and will be followed in all meeting rooms and organized
social events.

EXHIBITS
Exhibits of geological research equipment and educational
material will be on display in the basement Expo Hall adjacent to the
poster session, job recruitment service area, and refreshment area.
Booths (8' x 8') are framed with pipe and drape and contain table
and chairs; the cost is $200. A special rate of $120 is available for
nonprofit and educational organizations. For additional information,
contact John H. Puffer, Dept. Geological Sciences, Rutgers
University, Newark, NJ 07102, (201) 648-5238 or 648-5100.

SCIENCE THEATER
A complete program of film and video titles and show times will
be included in the registration packet.

SPECIAL EVENTS
Thursday, March 23
Association for Women Geoscientists Panel—“Two-career
Relationships,” 5-7 p.m.
Welcoming Party, Hyatt Regency, 8-11 p.m.

Friday, March 24
Alumnae-Alumni Reception, 6:30-7:30 p.m.
Annual Banquet and Business Meeting, 7:30-10 p.m.

STUDENT AWARDS
Awards will be made for outstanding student papers (oral
category and poster category) presented at the technical sessions.
To be eligible and judged, an abstract must be written exclusively
by a student and must be designated on the abstract form as a
student paper.

HOUSING
Block Bookings at reduced rates have been made at the Hyatt
and the Sheraton. The Hyatt is the site of the meeting and is within
walking distance of the amenities of downtown New Brunswick,
including bus and train stations. The Sheraton is about five miles
away. A shuttle bus will be run between the two hotels. Use the
Housing Form to make your reservations directly with the
hotels. If you want us to help you find roommates to make up a
triple or quad, send us the Roommate Form, and we will attempt to
help you.

Hyatt Regency Hotel, 2 Albany St., New Brunswick, NJ 08901,
(201) 873-1234
Single—$82
Double—$82
Triple—$87
Quad—$92

Sheraton Regal Inn, Kingsbridge Rd., Piscataway, NJ 08854,
(201) 469-5700
Single—$55
Double—$55
Triple—$60
Quad—$65

New Jersey sales tax of 6% will be added to rates.
Rooms have two double beds or double and rollaway.
Rooms will be reserved for this meeting until February 23, 1989.

(continued on p. 345)
Northeastern Section (continued from p. 343)

FIELD TRIPS

Fees for all trips are $20 for GSA members, $30 for non-members, and $10 for students.


For information on and registration (including payment) for individual field trips, please contact the field trip leader.

Housing Form
Geological Society of America Northeastern Section, March 23–25, 1989

Arrival date ________________________________ Departure date ________________________________

Person requesting housing (type or print)

Last name ________________________________

First name ________________________________

Name of institution or firm ________________________________

Street address or P.O. box number ________________________________

City ________________________________ State ____________ Zip code ____________

Phone ( ) ____________ day ( ) ____________ evening

CRÉC DOUBLE TRIPLE QUAD (circle one)

Remittance for one night must accompany this form.

Lake checks payable to the Hyatt Regency or Sheraton Regal.

Reservation is by credit card:

Card number ________________________________

Expiration date ________________________________

Signature ________________________________

MAIL THIS FORM TO THE HOTEL OF YOUR CHOICE (Hyatt or Sheraton)

Roommate Form

you want assistance in finding roommates, return this form by January 23, 1989, to H. Hewins, Dept. Geological Sciences, Rutgers University, New Brunswick, NJ 08903

Are you or Sheraton? ________________________________

Double/Triple/Quad? ________________________________

Sex (M/F) ________________________________

Nonsmoker/Smoker ________________________________

Arrive ________________________________ Depart ________________________________

Name ________________________________

Address ________________________________

Phone ( ) ____________ day ( ) ____________ evening, weekend

IA NEWS & INFORMATION, December 1988
The Century Ends

On December 31, GSA's first century, the Centennial year, and the Century Challenge will all end, a sort of triple witching hour. The month of December is the last opportunity for GSA members to honor this milestone in our Society's history by making a tax-deductible gift to the Century Challenge.

If you've put off joining the Century Challenge and adding your dollars to this growing pool of research funds, take time before the end of the year to send in the coupon on page 348 along with your gift.

A Potpourri of Tax Planning Ideas

December is always a time for some financial soul-searching. Even though 1988 tax rates are lower, tax planning at this time of the year can still save you dollars. The Tax Reform Act of 1986 caused major changes in the way we calculate our income taxes, and along the way eliminated or severely reduced many of the deductions against income that had become a way of life at tax time. Charitable contributions remain one of the few deductions that survived the legislators' pruning.

Direct gifts of cash are the most common form of contribution to the GSA Foundation. Century Challenge and GEOSTAR are the two principal funds, the purpose of both being the support of geologic research. The Foundation also manages several sector funds with special purposes, including Penrose Conferences, the Antoinette Lierman Medlin Scholarship, the Allan V. Cox Award, the Engineering Geology Division Award, DNAG, Publications, and Minority, to name a few.

Donors to the GSA Foundation, September 1988

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Gifts of appreciated securities produce a double tax benefit. The amount of the deduction is equal to the value of the securities on the day of the transfer to the Foundation. The donor pays no capital gains tax as a result of the transaction. Whether you hold the certificates or they are in a broker account, transfer to the Foundation is a simple matter. You may call us for specific instructions in the way to do this.

Life insurance can be an excellent year-end gift. If you own a policy that is no longer needed for family financial security, a transfer of ownership will allow a 1988 deduction equal to the fair market value of the policy. If there continue to be future premiums, payment of these will create deductions in the years paid.

In the October and November Foundation News we discussed planned giving, a current gift of a future interest. By this technique one can receive an immediate tax deduction and an annual income for life. The principal tools of planned giving are the charitable remainder annuity trust and unitrust and the pooled income fund.

Tax strategy is important in developing a year-end plan. For some individuals, it may be advantageous to optimize taxable income in 1988. For others, maximum deductions this year and deferral of income until 1989 may be the best course of action. Personal strategy is a subject to be developed and refined with the guidance of one's tax advisor. We have a worksheet that may be helpful to you in initiating this process. Call the Foundation office for a copy.
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1988
Geochemistry of Gulf Coast Oils and Gases, December 4-7, 1988, New Orleans, Louisiana. Information: Dietmar Schumacher, Pennzoil Co., P.O. Box 2967, Houston, TX 77252, (713) 546-4028, or Mahlon C. Kennicutt, Geochemical and Environmental Research Group, Texas A&M University, Ten South Graham Rd., College Station, TX 77840; (409) 690-0095.


1989

Australasian Tectonics, February 6-10, 1989, Kangaroo Island, Australia. Information: A. Grady, c/o Dept. of Earth Science, Flinders University, Bedford Park, SA 5042, Australia.


Society of Mining Engineers Annual Meeting, February 27-28, 1989, Las Vegas, Nevada. Information: Society of Mining Engineers, Meetings Dept., P.O. Box 625002, Littleton, CO 80162-5002; (303) 973-9550; Telex 881988; Fax (303) 973-3845.


(continued on p. 34)

GSA NEWS & INFORMATION, December 19
Meetings (continued from p. 348)


Shallow Gas and Leaky Reservoirs, April 10-11, 1989, Stavanger, Norway. Information: Norwegian Petroleum Society, P.O. Box 1897- Vika, 0124 Oslo 1, Norway; phone 47-2-207025; Telex 77 322 nepet n.


American Association of Petroleum Geologists Annual Meeting, April 23-26, 1989, San Antonio, Texas. Information: AAPG, P.O. Box 979, Tulsa, OK 74101; (918) 584-2555.


American Geophysical Union Spring Meeting, May 8-12, 1989, Baltimore, Maryland. Information: AGU, Convention Director, 900 Florida Avenue, N.W., Washington, DC 20009; (202) 462-6903.


Geological Association of Canada-Mineralogical Association of Canada Joint Annual Meeting, May 14-17, 1989, Montreal, Quebec, Canada. Information: Colin Stearn, Rm. 238, 450 University St., Montreal, Quebec H3A 2A7, Canada; (514) 398-4082.


Dunes '89: Geomorphology and Ecology of Desert and Coastal Sand Dunes, August 14-17, 1989, Swakopmund, Namibia. Information: Dunes '89, c/o J. D. Ward, P.O. Box 2168, Windhoek 9000, Namibia.


14th International Conference on Organic Geochemistry, September 18-22, 1989, Paris, France. Information: Yolande Rondot, Institut Français du Pétrole, BP 311, 92506 Rueil-Malmaison cedex, France; phone 33(1) 47.49.02.14; Telex A 203050 F.


Seventh Thematic Conference on Remote Sensing for Exploration Geoecology, October 2-6, 1989, Calgary, Alberta, Canada. Information: Robert H. Rogers, ERIM, P.O. Box 8618, Ann Arbor, MI 48107-8618; (313) 994-1200, ext. 3382.

Structural and Tectonic Modelling and Its Application to Petroleum Geology, October 18-20, 1989, Stavanger, Norway. Information: Norwegian Petroleum Society, P.O. Box 1897 - Vika, 0124 Oslo 1, Norway; phone 47-2-207025; Telex 77 322 nepet n.


World Gold '89, November 5-8, 1989, Reno, Nevada. Information: Meetings Dept., World Gold '89, Society of Mining Engineers, P.O. Box 625002, Littleton, CO 80162, (303) 973-9550; Telex 881988.
Positions Open

CALIFORNIA STATE UNIVERSITY LONG BEACH

The Department of Geological Sciences invites applications for one tenure-track appointment at the rank of assistant professor beginning fall semester 1989. Ph.D. in an appropriate field required.

The person appointed will be responsible for instruction in one or more of the following subdisciplines: engineering geology, geohydrology, geochemistry, and stratigraphy/geomorphology. A strong commitment to teaching at both the graduate and undergraduate levels is required. Applicants must have a Ph.D. in an appropriate field. Applications are due by December 15, 1989. The University is an Equal Opportunity/Affirmative Action employer.

HYDROGEOLOGIST

UNIVERSITY OF NEBRASKA—LINCOLN

The Conservation and Survey Division is seeking a Hydrogeologist for an annual full-time tenure leading position (rank open). Requires Ph.D. in Hydrogeology or Geology with specialization in hydrogeology. Must be familiar with geochemical processes and experienced in numerical modeling as applied to groundwater flow and solute transport. Will develop and implement an innovative research program in quantitative hydrogeology in Nebraska. Responsibilities include acquisition of funds to support research. Development and maintenance of working relationship with other departments of the University and with personnel in governmental agencies, private industry and individuals involved in water resources is expected. Opportunities to teach and advise graduate students are available. Send detailed resume, transcripts, and names, addresses and telephone numbers of references before January 20, 1989 (or until suitable applicant is found thereafter) to: Jerry F. Ayers, Hydrogeologist Search Committee, Conservation and Survey Division, 113 Nebraska Hall, University of Nebraska—Lincoln, Lincoln, Nebraska 68588-0517. Affirmative Action/Equal Opportunity Employer.

GEOCHEMISTRY LABORATORY TECHNICIAN

The Department of Terrestrial Magnetism, Carnegie Institution of Washington, a privately-funded research institution focusing on studies in geochemistry, geophysics, and astronomy. Responsibilities include maintenance of a clean wet chemical laboratory for radiogenic isotope studies, support for and use of thermal ionization mass spectrometers, preparation and analysis of standards and samples for plasma atomic emission spectrometry (ICP) and isotope ratio mass spectrometry and ICP emissions. Geologic background (B.S. or M.S.) and geochemistry lab experience preferred. Familiarity with instrumentation and computers helpful. Salary is $16,000 plus additional benefits, which include medical insurance and retirement plan. Applications close January 28, 1989. Carnegie Institution of Washington is an Equal Opportunity Employer.

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We are an established consulting firm continuing to expand our market position. This expansion has resulted in the need for an experienced professional to join our Chicago staff.

The applicant we select will possess a strong background in hydrogeology with in-depth experience in private sector RIFPS work. A Bachelor's degree in Engineering or Geology and proven managerial skills are required.

Reporting to our Vice-President, this position will assume overall responsibility for the technical, managerial and marketing aspects of various assignments. We offer an excellent salary and comprehensive fringe benefits.

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The ART OF GEOLOGY

edited by
E. M. Moores and F. Michael Wahl, 1988

Inspired by the beautiful geologic photos on the covers of GSA’s monthly journal, Geology, this volume reproduces many of those close-up photos, augmented by numerous fine new additions. Some 250 full-color photos are presented in 70 photo essays that explore unusual and interesting geologic views from around the world. These pictures, taken by dozens of earth scientists while they work, were selected from among hundreds submitted. Photos are accompanied by brief texts edited for nonscientists, although scientists will certainly find the volume interesting—especially for explaining geologic forms and concepts to friends and family. Each photo essay features one or more large-format pictures accompanied by smaller, supplementary views. The Art of Geology is a deluxe hardbound edition, full color throughout, 9" X 12", on fine paper, complete with a colorful dust jacket. Volume editor E. M. Moores also edited the journal Geology for six years; F. Michael Wahl is Executive Director of GSA.


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Consultants

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JUHLS Science Advisory Committee,
The International Lithosphere Program Working Group
on the Nature and Evolution of the Oceanic Lithosphere,
and the W.M. Keck Geodynamics Program of the
Woods Hole Oceanographic Institution

Workshop on
Drilling the Oceanic Lower Crust
and Upper Mantle

March 7 – 9, 1989 – Woods Hole, MA

ODP Leg 118 successfully drilled and recovered nearly a half kilometer of gabbro in 17 days on the SW Indian Ridge. This shows dramatically that where exposed, or once layer 2 is penetrated, oceanic layer 3 can be drilled with ease.

The purpose of this workshop is to assemble a wide variety of investigators from the ocean and earth science communities to review our current state of understanding of the geology and geophysics of the oceanic lower crust and upper mantle and to establish the major objectives for deep crustal drilling. The goal is to identify the opportunities and strategies for this drilling, and write a detailed program for the next decade. Members of the workshop will be asked to participate in the development of mature drilling proposals and become proponents for clearly identified drilling targets.

Attendance will be open, though limited to 200. Advance registration is required. Graduate students are encouraged to attend, but travel funds for U.S. participants are available through JUHLS, and some funds for foreign participants are available through the WHOI Geodynamics Program. Some invited talks will be accepted for the presentation portion of the conference, and individual drilling proposals are invited as poster sessions. The meeting conveners is Dr. Henry J.B. Dick. Abstracts and questions regarding participation, travel funds and accommodations should be directed to:

Janet Johnson, Dept. of Geology & Geophysics
Woods Hole Oceanographic Institution
Woods Hole, MA 02543
Tel: 508-548-1400, ext. 2623

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A NEWS & INFORMATION, December 1988
NEW! SPECIAL PRODUCTS

GSA LAPEL PINS
Wear the GSA seal on your jacket, blouse, or even as a tie-tack! We have two pins to offer. (1) Cloisonne pin is gold plated and dramatically decorated with black, white, and red enameled. (2) Die-cast brass produces exceptionally fine detail set off beautifully by black lacquer in the indentations. Each pin is 3/4" in diameter and is complete with nail and clutch.
PIN001 Cloisonne pin, $5.00
PIN002 Brass pin, $5.00

GSA DESK CLOCK/CALENDAR
A quartz clock/calendar set in an attractive, crystal-like clear plastic desk stand. Set to display clock only, or to alternate between clock and calendar display. Face plate features GSA seal and the words, "GSA ... Dynamic through time." Stands 2-1/4" high, is 3-1/2" wide, and comes with long-life battery.
CLK001, $10.00

LEATHER KEY TAG, GSA SEAL
This classic leather key tag, with its beautiful and dramatic GSA seal in die-cast brass, is reminiscent of the fine harness medallions of yesteryear. Leather is dark brown, GSA seal is 1-3/8" diameter, and brass key ring is 1-1/4" diameter.
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PHOTO/TIME SCALE
This handy field tool combines GSA's popular photo scale and DNAG time scale. On one side is our Author's Photo Scale, calibrated boldly in centimeters (10) and U.S. inches (4). Includes a GSA seal for fine focus and an evaluation scale for granular material from 1 to 5 millimeters diameter. The reverse side includes the complete DNAG Geologic Time Scale, the same size as our wallet-sized version. Sturdy 20-ml X 2-1/2" X 6-1/2" tan vinyl printed in blue.
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PTS002, packs of 10, $6.50

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Symposium on Oil and Gas Exploration of the Great Basin
This symposium was presented in Las Vegas, Nevada, at the 1988 meeting of the Cordilleran Section of GSA. It includes eight presentations of about 20 minutes each. Visuals focus on the graphics presented, not on the presenters. Edited to remove coffee breaks, etc., and recorded at standard play speed (SP) to permit fast-scanning. Comes with a printed program containing abstracts of each presentation.
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Northeastern Section 1989 Meeting ........................................... p. 341

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