

GSA NEWS & INFORMATION

Monthly Newsletter of
The Geological Society of America

VOLUME 8, NUMBER 7

July 1986

First GSA Congressional Fellowship Awarded

Jennifer Hess, a doctoral candidate in oceanography at the University of Rhode Island, has been named GSA's first Congressional Fellow. She will work as a special legislative assistant on the staff of a committee or member of the U.S. Congress from January through December 1987.

GSA's Committee on Geology and Public Policy proposed the fellowship to the GSA Council, which approved it at the October 1985 Council meeting. A selection committee consisting of Chairman John S. Scott, Geological Survey of Canada; Terry W. Offield, U.S. Geological Survey; and GSA Councilor Samuel S. Adams, Adams & Associates, Boulder, Colorado, reviewed applications and interviewed three finalists before choosing Hess for the fellowship.

Purpose

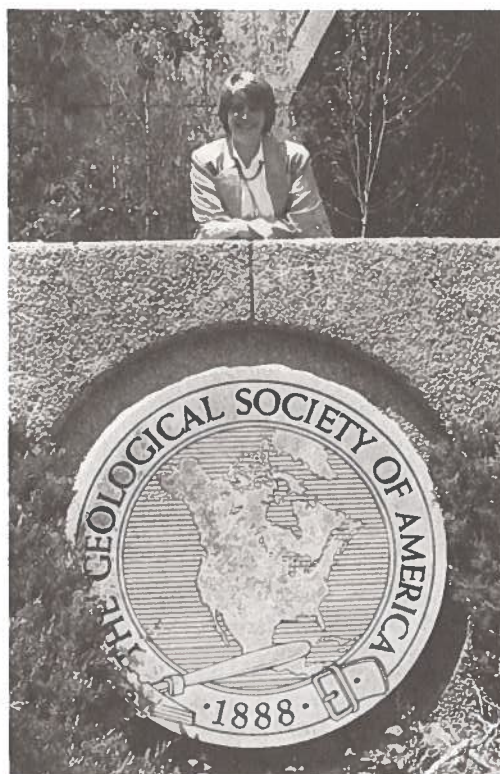
The fellowship is intended as a way to make practical contributions to more effective use of scientific knowledge in government, to educate the scientific and engineering community about the public policy process, and to broaden the perspective of that community and the governmental community regarding the value of such mutually beneficial interactions. Requirements for the fellowship include 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.

Successful Candidate

Jennifer Hess earned her B.S. degree (summa cum laude) in marine science and her M.S. degree in geology at the University of South Carolina, where she was elected to Phi Beta Kappa. She has worked on projects funded by the National Science Foundation involving impact of coastal development, growth rate of manganese nodules, and chemistry and geology of the oceans over geologic time. She has served on and chaired committees charged with evaluating and directing the educational and institutional policies of the University of Rhode Island Graduate School of Oceanography, where she is currently a research assistant and is working toward completion of her Ph.D. degree. She has participated in scientific cruises in the California borderland basins, the eastern equatorial Pacific, and the South Atlantic Bight.

"I find myself torn between wanting to work on issues with which I have familiarity, such as environmental conservation and climatic research, and those with which I have had less experience, such as disposal of nuclear wastes and hazardous materials," Hess said in her letter of application for the fellowship. "I am also

Jennifer Hess



keenly interested in congressional policy as it relates to education in America and to investment in basic research." When told she had been named the 1987 GSA Congressional Fellow, Hess reiterated that interest: "It's exciting to be in a position to help bridge the gap in public understanding of the purpose and relevance of basic research," she said. "I see my Congressional Fellow role as one of provider of unbiased information, and I want to work where I'll have the most impact."

Funding and Logistics

The GSA Congressional Fellowship, which provides a \$25,000 stipend and a limited relocation and travel allowance, will be funded by GSA and by a grant from the U.S. Geological Survey. 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. The fellow will report periodically to the GSA membership and to the Survey during the one-year period.

Geology and Bulletin To Mail Together

by Jim Clark
GSA Production Manager

Your copies of the *GSA Bulletin* and *Geology* will soon begin arriving together each month, enclosed in the same polyethylene wrapper. This step is being taken to eliminate the growing incidence of damage to *Geology* in the mails in recent months and to realize the postage savings involved in a combined second-class mailing.

During the past two years, mail-handling damage to copies of the *Bulletin* has been virtually eliminated by the use of this packaging medium, but the high cost has precluded using it separately for *Geology*.

In recent months, however, editorial and production schedules for the two journals have drawn closer together, suggesting the possibility of combined packaging. The GSA Production Staff obtained U.S. Postal Service approval of the plan and discovered in the process that a considerable postage savings also could result.

Approval by GSA's management in May cleared the way for implementation of the plan at the earliest possible date. Com-

puter programs have since been modified and arrangements have been made with the mailing house to begin the combined packaging in July or August.

If you are one of those who do not receive both the *Bulletin* and *Geology*, you will continue to receive the one journal, but packaged in poly.

Coincidentally, we will implement five-digit presorting, which will lower our postage costs still further and offset recent major postage increases. Presorting also should considerably improve delivery time throughout the United States. The Production Staff continues to investigate methods for improving delivery of copies outside the U.S., but so far new systems for world-wide delivery have proved prohibitively expensive for GSA.

The Production Staff is keenly interested in your comments about the condition of your journals when combined packaging begins. Address your comments to Jim Clark, GSA, P.O. Box 9140, Boulder, CO 80301.

1987 Dues Statements to be Sent Earlier

The 1987 membership dues statements are now being prepared for mailing about the first part of August, which is one month earlier this year than last. Please note that all dues-paying Fellows, Members, and Student Associates receive three monthly publications, *The Geological Society of America Bulletin*, *Geology*, and *GSA News & Information* as part of their membership package.

The annual dues for a Fellow or Member for 1987 will be \$70 for the entire package, including membership and 12 issues each of the *Bulletin*, *Geology*, and *GSA News & Information*. The required dues for Student Associates for the same package will be \$32 (the same as 1984, 1985, and 1986). Senior Members and Fellows may choose to receive the two journals for 1987 at a cost of \$36 (they already receive *GSA News & Information*).

Married couples who are both current GSA members will be allowed a reduction in 1987 dues. Married couples will pay \$70 for the first member (\$32 for Student Associates) and \$30 for the second. They will receive a single subscription to the *Bulletin* and *Geology*, but both members will continue to receive *News & Information* and ballots and other miscellaneous mailings. Please identify your spouse and indicate in the spaces provided on the back of the dues form who is requesting a reduction in dues. Please submit separate dues statements. *If a spouse is not currently a member*, do NOT send dues payment without requesting and completing an application for membership. The policy for married couples will apply only upon specific instructions from you.

Please inform us as soon as possible of any address change, as it usually takes 6 to 8 weeks to correct the files. Meanwhile, publications continue to be mailed to your former address. They are sent second class; therefore, the Post Office will not forward them without special instructions (and expense to you).

We must receive your 1987 dues payment no later than November 26, 1986, to avoid a delay in receipt of your 1987 GSA publications. If you have any questions or do not receive your 1987 dues statement, please contact the Membership Department.

PEOPLE

GSA Fellow **H. Edward Clifton**, U.S. Geological Survey, Menlo Park, California, has been elected 1986-1987 president of the Society of Economic Paleontologists and Mineralogists. President-elect is Fellow **William W. Hay**, University of Colorado, Boulder, and vice-president is Fellow **Roderick W. Tillman**, Tulsa, Oklahoma. SEPM councilors are GSA Members **Harry E. Cook**, USGS, Menlo Park, **Barbara H. Lidz**, USGS, Fisher Island Station, Florida, and **Molly F. Miller**, Vanderbilt University, Nashville, and Fellow **Norman D. Smith**, University of Illinois, Chicago.

GSA Fellow and *Bulletin* Editor **Robert D. Hatcher, Jr.**, will join the Department of Geological Sciences at the University of Tennessee as a distinguished scientist in a cooperative program of the university and the Oak Ridge National Laboratory; he assumes the post in July.

Fellow **Joel S. Watkins** has been appointed the Earl F. Cook Professor of Geosciences at Texas A&M University.

In Memoriam

H. William Menard
La Jolla, California
February 9, 1986

Stephen Riess
Escondido, California
December 1985

Kenneth D. Watson
Los Angeles, California
February 23, 1986

Vol. 8, no. 7 GSA News & Information July 1986

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

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

*Advertising: Contact James R. Clark or Ann H. Fogel (303) 447-2020.



CENTENNIAL NEWS

by Allison (Pete) Plamer

PROGRESS ON PUBLICATION SCHEDULE (as of May 12, 1986)

The notifications of "hard" deadline schedules sent in February to all authors of books promised in 1986 have produced some gratifying results, along with continued frustrations for both authors and those of us at GSA who want to produce the books.

The Western North Atlantic Region. This still needs the texts for the introduction and bathymetry chapters, and a revision of the text for the chapter on plate motions, all of which are in the hands of the editors. It now appears that these will be here no later than mid-June, which allows a revised publication target of October for this volume.

The Appalachian and Ouachita Regions. The only manuscripts that are still to be received for review are those on crustal character and on Appalachian tectonic synthesis by Robert Hatcher, and on the Benton and Broken Bow uplifts and Ouachita tectonic synthesis by George Viele. All of the key time-slice chapters for the Appalachian region are in review or revision. Publication of this book is delayed at least 2 months.

The Atlantic Continental Margin: U.S. Manuscripts for all of the chapters listed last month are yet to be received. These include three by Kim Klitgord (tectonic framework, geophysical data, and magnetic models), two by John Grow (Baltimore Canyon trough, and gravity models), one by Mike Steckler (basin subsidence), and one by Leonardo Seeber (earthquakes). This volume is also delayed at least 2 months.

The Arctic Region. Chapters in this book that are now a month past the deadline for receipt of reviewable text include:

2. History of geological and geophysical exploration—F. Roots and others.
11. Magnetotelluric data—A. Camfield
17. Alaskan continental margin—A. Grantz
20. Chukchi continental borderland—J. Hall
23. Canada basin—A. Grantz
24. Cretaceous and Cenozoic faunal and paleogeographic history—D. Hopkins and others
- 26-29. Four Quaternary chapters by B. Pelletier, S. Blasco, D. Dinter, and M. Holmes
- 30 and 32. Mineral resources chapters on petroleum (N. Heimela) and nonfuel hard minerals (P. Hale)

33. Constraints imposed by plate tectonics—D. Engebretson and others
34. Synopsis of leading hypotheses on the origin of the Arctic Basin—L. Lawver and others

Sixteen chapters have been submitted for review, and four of these are through revision and into production.

Precambrian: Conterminous U.S. Three multi-author megachapters that were due by the beginning of April are still to be received for review:

5. The transcontinental Proterozoic province—L. T. Silver and others
6. Proterozoic rocks east and southeast of the Grenville Front—D. Rankin and others
7. Precambrian rocks of the northern Rocky Mountains and the Basin and Range province—M. Reynolds and others

At least one of these will not be received until July 1, so publication of this volume is now delayed to early 1987. The other two regional megachapters are written; one is in production and the other has been through peer review and is being revised.

The Gulf of Mexico Basin. All peer reviewing for this volume is being handled by its editor, Amos Salvador. However, publication will be delayed because of good news. PEMEX geologists in Mexico City are hard at work on additions to the time-slice chapters that include eastern Mexico. These additions are now promised to Amos Salvador at the end of July. This important information will be a valuable addition to this volume, and the resultant publication delay into early 1987 will be worth waiting for.

The Caribbean Region. Only three of the chapters due by mid-April remain to be received for review:

2. Crustal character—J. Case and others
7. Northern South America—G. Dengo and others
10. Seismicity—W. McCann

Despite the delays that are causing slippage of publication dates for some volumes, texts for the DNAG chapters are arriving at better than 50 per month. More than half of the texts for the Centennial Field Guides, and for all volumes of *The Geology of North America* that GSA will publish are now written. Progress during the past year is summarized in the next section.

DECADE OF NORTH AMERICAN GEOLOGY STATUS REPORT Spring 1986

On the scale of a year, quite a bit happens in the DNAG Project. This report covers the 14 months from mid-March, 1985 through mid-May, 1986. It is a slightly updated version of the report to the GSA Council at its May meeting.

During the 14-month period, three Organizational Conferences and six Final Coordinating Conferences were held for volumes of *The Geology of North America*. The Organizational Conferences involved an additional volume, *Quaternary Nonglacial Geology: Conterminous U.S.*, and the final two parts of the volume *Economic Geology: U.S.*

The Final Coordinating Conferences involved *The Arctic Region; North America and Adjacent Oceans During the Last Deglaciation; Ground Water Hydrogeology; The Eastern Pacific Region; Surface Water Hydrology*; and the parts of *Economic Geology: U.S.* dealing with coal and with oil and gas. Only two Final Coordinating Conferences remain: the Mineral Deposits section of the *Economic Geology: U.S.* volume (June 1986), and *Quaternary Nonglacial Geology* (September 1986).

In addition, there were organizational meetings of the

(continued on p. 124)

DNAG Status Report (continued from p. 123)
 compilers of the *Neotectonics Map of North America*, and of the co-editors for the volume to accompany that map and the other three of the neotectonics series. These are the joint Centennial efforts of the Geophysics Division and the Structure and Tectonics Division.

Publication schedules were set in February for all 1986 books promised in the prepublication announcement sent out last fall. Those promises had been made by GSA on the basis of the latest commitments from the authors at the end of last summer. It was obvious by early this year that too many authors were not keeping to their own schedules and that "hard" deadlines had to be set. The "hard" dates were set beyond any of the promised dates for completion of individual chapters. Special purple memos with deadlines for each phase of production of each volume and an explanation of the time involved in each step of production were sent to all authors. The production schedule was published in the May issue of *GSA News & Information*. Six books have now passed the dates by which all manuscripts should have been submitted to the review process, and there are still a few authors who have not submitted manuscripts. With more than 1000 advance orders for partial or full sets of DNAG publications in hand, we are keeping our customers informed through this column of the sources of delays in completion of their books.

Despite the frustrations of trying to get commitments completed on some reasonable time scale (a frustration shared by John Wheeler for the Canadian volumes of *The Geology of North America*), books are being completed. The volume by the History of Geology Division, *Geologists and Ideas: A History of North American Geology* was published in time for the GSA Annual Meeting last fall. The *Centennial Field Guide* for the Southeastern Section was completely in hand by mid-March and will be published in August, as promised. Progress on all other DNAG components is summarized below.

The Geology of North America

Title	Chaps. completed	Chaps. in production	Total chaps. in book
<i>The Western North Atlantic Region</i>	39	38	41
<i>The Appalachian and Ouachita Regions:</i>	24	14	32
<i>The Atlantic Continental Margin: U.S.</i>	24	16	34
<i>The Arctic Region</i>	15	3	36
<i>Precambrian: Conterminous U.S.</i>	2	1	8
<i>The Caribbean Region</i>	16	2	20
<i>The Gulf of Mexico Basin</i>	11	-	19
<i>Sedimentary Cover of the Craton: U.S.</i>	9	4	19
<i>The Eastern Pacific Region</i>	18	-	40
<i>Ground Water Hydrogeology</i>	35	-	50
<i>Surface Water Hydrology</i>	4	-	13
<i>North America and Adjacent Oceans</i>			
<i>During the Last Deglaciation</i>	9	-	21
<i>The Cordilleran Orogen: Alaska</i>	11	-	30
<i>The Cordilleran Orogen: Conterminous U.S.</i>	4	-	21
<i>Economic Geology: U.S.(coal)</i>	1	-	11
	222	78	395

For comparison, last March only 9 books were through all organizational stages, and a total of only 81 chapters had been submitted.

Centennial Field Guides

Title	Chapters completed	Chapters in production	Total chapters in book
<i>Southeastern Section</i>	100	100	100
<i>North-Central Section</i>	70	67	100
<i>Cordilleran Section</i>	54	45	100
<i>Rocky Mountain Section</i>	52	50	100
<i>South-Central Section</i>	31	14	100
<i>Northeastern Section</i>	23	14	100
	330	290	600

For comparison, 3 chapters had reached production stage by last March.

Transects

Eleven transects have been received for publication. Nine of these are printed, and color proofs have been reviewed by the authors for the other two. A year ago, nine transects had been received and none had been printed. These multiple-author compilations have the same kinds of delays, often by the same people, as the DNAG volumes.

Centennial Special Volumes

In addition to the volume from the History of Geology Division, already published, volumes are now in preparation by the Geophysics and the Structure and Tectonics Divisions (jointly), the Quaternary Geology and Geomorphology Division, the Engineering Geology Division, and the Archaeological Geology Division. A volume is also planned to accompany the transects. All of these are scheduled for publication in 1987 or 1988.

Most Centennial Special Volumes are projects of GSA's Divisions. However, the Centennial projects of the Coal Geology Division and the Hydrogeology Division are incorporated as volumes or parts of volumes in *The Geology of North America*.

Geologic and Geophysical Maps

All maps are in preparation and are scheduled for publication in 1987 or 1988.

Summary

The DNAG Project continues to proceed at a steady pace. For every component there are delays and frustrations for a variety of reasons. Establishment of a publication schedule has produced some needed discipline, and all publications except perhaps the final summary volume of *The Geology of North America* should be completed by our Centennial Meeting in 1988.

Instruments and Lab Equipment Needed

Donations of scientific equipment are critically needed by Argentinian earth and ocean scientists.

Argentina is facing an extremely difficult economic situation, in which President Raúl Alfonsín is applying measures of tight austerity. At the same time, the democratically elected government is trying to rebuild the universities and restore scientific research in Argentina after years of neglect. Some Argentine scientists living abroad have returned and others are helping in different ways, but equipment replacement is a key constraint.

Transportation of donated equipment is being furnished free by the national shipping company (ELMA) and Aerolíneas Argentinas, and customs and tax facilitations are provided. Donated

materials will be furnished only to nonprofit and governmental institutes and may not be sold.

Illustrative of the many kinds of items urgently needed are microscopes, analytical lab equipment for chemical or isotopic measurements, X-ray diffraction, sedimentologic analysis, magnetometers, gravity meters, oceanographic winches, personal computers or minicomputers and peripherals. Please consider donating only equipment in good working order.

For more information, please contact the Argentine Embassy, Monica Peralta Ramos, 1600 New Hampshire N.W., Washington, D.C. 20009; phone (202) 939-6421.

CALL FOR PAPERS FOR 1987 GSA SECTION MEETINGS

Northeastern Section

Pittsburgh Hilton
Pittsburgh, Pennsylvania
March 4-7, 1987

ABSTRACT DEADLINE:
October 14, 1986

Submit completed abstracts to
Jack D. Donahue
Dept. of Geology
University of Pittsburgh
Pittsburgh, PA 15260
(412) 624-4708

South-Central Section

Waco Convention Center
Waco, Texas
March 30-31, 1987

ABSTRACT DEADLINE:
November 7, 1986

Submit completed abstracts to
Don Parker
Dept. of Geology
Baylor University
Waco, TX 76798
(817) 755-2361

Rocky Mountain Section

University of Colorado
Boulder, Colorado
May 2-4, 1987

ABSTRACT DEADLINE:
December 5, 1986

Submit completed abstracts to
William C. Bradley
Dept. of Geological Sciences
University of Colorado
Boulder, CO 80309
(303) 492-6188

Southeastern Section

Omni International Hotel
Norfolk, Virginia
March 26-27, 1987

ABSTRACT DEADLINE:
November 5, 1986

Submit completed abstracts to
Stephen J. Culver
Dept. of Geological Sciences
Old Dominion University
Norfolk, VA 23508
(804) 440-4301

North-Central Section

St. Paul Hotel
St. Paul, Minnesota
April 30-May 1, 1987

ABSTRACT DEADLINE:
December 12, 1986

Submit completed abstracts to
Robert E. Sloan
Dept. of Geology & Geophysics
University of Minnesota
Minneapolis, MN 55455
(612) 373-4567

Cordilleran Section

University of Hawaii
Hilo, Hawaii
May 18-20, 1987

ABSTRACT DEADLINE:
December 29, 1986

Submit completed abstracts to
Walter C. Dudley, Jr.
University of Hawaii at Hilo
College of Arts and Sciences
Geology Department
Hilo, HI 96720
(808) 961-9383

1987 ABSTRACT FORM REQUEST

To: GSA Abstracts Coordinator
P.O. Box 9140
Boulder, CO 80301

Please send _____ copies of the 1987 GSA abstract form. I understand that the same form may be used for all 1987 GSA meetings—the six Section Meetings and the Annual Meeting.

Name _____

Organization _____

Address _____

City _____ State _____ Zip _____

_____ Please check here if you have NOT been receiving mailings about GSA's publication sales but would like to be added to our mailing list.

GSA Research Grants To Help Fund 168 Proposals in 1986-1987

by **June Forstrom**
Administrator, Research Grants

Increased funding has allowed the GSA Committee on Research Grants to support almost the same proportion of proposals this year as last, despite a 19% increase in number of applications received for 1986. The committee—Chairman Sharon Mosher, members Timothy A. Cross, Nancy Lindsley-Griffin, George H. Brimhall, Jr., and James F. Tull, and National Science Foundation Conferee Ian D. MacGregor—met in Boulder, Colorado, in April.

The committee had a budget of \$146,275 including donations from oil companies (\$6500), income from the Harold T. Stearns Fund (\$4600), the Arthur L. Day Fund (\$675), and contributions made by GSA members through the GSA Foundation (\$8145). The budget also included \$125,000 interest from the Penrose Endowment and a gift of \$1355 from the GSA Foundation. The Gladys W. Cole Memorial Research Award was \$1800, which is interest from the Cole Award Fund.

A total of 624 proposals were received (101 more than in 1985), of which 168 were recommended for support. These included 133 doctoral proposals and 35 master's proposals. In total, 27% of the applications received were recommended for funding—compared to 28% for 1985 and 21% for 1984. The size of the average award increased from \$834 in 1985 to \$871 in 1986. Total dollar requests were \$648,038.

Awards

Robert K. Fahnestock Award. This grant is awarded to the applicant with the best proposal in fluvial geomorphology and sediment transport. The 1986 nominee is Kevin M. Wilson, University of Colorado, for "Sedimentary Mass Balance and Runoff of Africa from 220 M.Y. to Present: Effect on Paleooceanography."

Harold T. Stearns Fellowship Award. The four candidates for this award, for research on aspects of the geology of the Pacific Islands and the circum-Pacific region, are Kevin J. Kveton, University of Washington, Seattle, for "Progressive Deformation of the Orca Group Subduction Complex and Its Bearing on the Paleogene Accretionary History of the Prince William Terrane, Western Prince William Sound, Alaska"; Randall Alan Marrett, Cornell University, for "Structural Geometries and Kinematics of the El Toro Lineament in the Andean Foreland of Northwestern Argentina: Foreland Deformation and Hinterland Uplift"; William C. McClelland, University of Arizona, Tucson, for "Structural, Stratigraphic and Geochronologic Analysis of the Gravina-Nutzotin Flysch Basin, a Complex Suture Zone in Central Southeastern Alaska"; and Fang Wu, University of Michigan, Ann Arbor, "An Apparent Polar Wander Path (APWP) for South China and Its Implications for the Tectonic Evolution of Asia."

Gladys W. Cole Memorial Research Award. This award goes to Peter W. Birkeland, University of Colorado, to investigate the development of calcic soils on slopes in the Great Basin as a function of time.

Industrial Donations and Awards. Donations from Conoco, Inc. (\$2000), Marathon Oil Foundation (\$2500), and Mobil Oil Corporation (\$2000) are funding grants for the following applicants:

James A. Beer, Cornell University, for "Depositional Processes and Sandstone Body Geometry in an Actively Subsiding Foreland Basin, La Rioja Province, Argentina"; Elizabeth Burton, Washington University, St. Louis, for "Pore Water Geochemistry and Early Diagenesis of Shallow Marine Carbonates"; Thomas R. Clifton, University of California, Santa Cruz, for "Field Study of Flood-related Deposits in Ancient Fluvial Systems"; Jose J.L. Dominguez, University of Miami, for "Influence of Sea Level

Variations in the Development of Sandstone Shoreline Sequences"; Richard P. Langford, University of Utah, Salt Lake City, for "Modern and Ancient Fluvial-Eolian Interactions"; Robert A. McCollum, University of Oklahoma, Norman, for "Relationship between Authigenic Magnetite and Hydrocarbons: Testing the Hypothesis in the Lyons Sandstone, Denver Basin, Colorado"; JoAnn Muramoto Nicholson, Cornell University, for "Biogeochemical Processes of Metal and Sulfur Deposition in a Microbial Mat"; Carol Kindle Lee Roark, Cornell University, for "The Impact of Gypsum Dehydration upon Basin Development"; Barbara Saffer, Louisiana State University, Baton Rouge, for "Low-temperature Secondary Magnetite—A Potential Tool in Understanding Petroleum Migration"; Peter Schwans, Ohio State University, Columbus, for "Synorogenic Clastics in West-Central Utah, a Study of Depositional Sequence Evolution in the Foreland of the Cretaceous Thrust-fold Belt in Response to Tectonism, Basin Subsidence, and Eustasy"; Neil S. Summer, University of California, Davis, for "The Diagenesis and Maturation of Sediments underlying Plateau Volcanics, Oregon"; Michael L. Wells, Cornell University, for "Geometric and Kinematic Analysis of Low-angle, Younger-over-Older Faults in the Sevier Belt Hinterland, Black Pine Mountains, Idaho."

Outstanding Mention. The Committee on Research Grants specially recognized 20 of the funded proposals as being of exceptionally high merit in conception and presentation:

Andrew P. Barth, University of Southern California, Los Angeles, for "Mesozoic Magmatism at Mid-crustal Levels, San Gabriel Mountains, California, and Relation to Tectonic History of the San Gabriel Terrane"; Gray Edward Bebout, University of California, Los Angeles, for "An Evaluation of the Metasomatic Processes Attending Subduction of Oceanic Material: Catalina Schist Terrane, Santa Catalina Island, California"; Gaboury Benoit, Massachusetts Institute of Technology, for "Geochemistry of ^{210}Pb in Freshwater Sediments"; Robyn Jeanette Burnham, University of Washington, Seattle, for "Fluvial Plant Deposition: A Model for Interpreting Early Tertiary Sediments"; Elizabeth Burton, Washington University, St. Louis, for "Pore Water Geochemistry and Early Diagenesis of Shallow Marine Carbonates"; Stephen J. Cook, University of Utah, Salt Lake City, for "Fluid-Rock Interactions During Prograde Regional Metamorphism of Northern Idaho's Belt Supergroup"; Kevin P. Corbett, University of California, Los Angeles, for "The Role of Basal Plate Strata in Thrust Faulting: Strain Partitioning in the Last Chance Thrust System, Eastern California"; Susan M. DeBari, Stanford University, for "Petrogenesis of Mafic and Ultramafic Rocks of the Sierra de Fiambala, Argentina, and Their Bearing on the Tectonic History of the Andes"; Mary S. Hubbard, Massachusetts Institute of Technology, for "Thermal Evolution and Structure of an Intraplate Subduction Zone: The Main Central Thrust, Eastern Nepal"; Jay L. Jackson, University of Southern California, Los Angeles, for "Structural Analysis of the Eastern Terminus of the Volcano Valley Fault, Little Belt Mountains, Central Montana"; Kevin J. Kveton, University of Washington, Seattle, for "Progressive Deformation of the Orca Group Subduction Complex and Its Bearing on the Paleogene Accretionary History of the Prince William Terrane, Western Prince William Sound, Alaska"; Brian D. Leavy, New Mexico Institute of Mining & Technology, for "Dating of Young Volcanic Rocks Using the Buildup of Cosmogenic Light, Rare Isotopes"; Randall Alan Marrett, Cornell University, for "Structural Geometries and Kinematics of the El Toro Lineament

in the Andean Foreland of Northwestern Argentina: Foreland Deformation and Hinterland Uplift"; William C. McClelland, University of Arizona, Tucson, for "Structural, Stratigraphic, and Geochronologic Analysis of the Gravina-Nutzotin Flysch Basin, a Complex Suture Zone in Central Southeastern Alaska"; Gregory Thomas Norrell, State University of New York, Albany, for "Structural Analysis of the Josephine Peridotite, Northwestern California"; John Anthony Tarduno, Stanford University, for "Paleomagnetic Investigation of Accreted Limestones of the Circum-Pacific Region"; Heather Elizabeth Trim, University of California, Los Angeles, for "Skarn Genesis: A Study of the Role of Fluorine in the Transport and Deposition of Mineralizing Components"; Michael L. Wells, Cornell University, for "Geometric and Kinematic Analysis of Low-angle, Younger-over-Older Faults in the Sevier Belt Hinterland, Black Pine Mountains, Idaho"; Ellen E. Wohl, University of Arizona, Tucson, for "Northern Australian Paleofloods as a Record of ENSO Events"; Fang Wu, University of Michigan, Ann Arbor, for "An Apparent Polar Wander Path (APWP) for South China and Its Implications for the Tectonic Evolution of Asia."

Other Successful Applicants. Other applicants who were recommended for funding are the following: Elaine Angela Aliberti, Warren D. Allmon, Deborah J. Anthony, Teresa Mary Atwill, Renee L. Aubry, Roger J. Barnaby, Margaret Elaine Berry, Jennifer Glee Blank, Anne L. Bloomfield, David C. Buesch, George S. Burr, Marcus Bursik, Jeffrey E. Campbell, Florie Andre Caporuscio, Rebecca Williams Carmody, Karen E. Carter, Joyce Castro, Michael T. Colucci, Spencer J. Cotkin, Randolph Cumbest, Ralph L. Dawes, Yildirim Dilek, Joseph L. Domagalski, Timothy Douthit, Mary L. Droser, Joseph Patrick Dugan, Jr., Paul A. Dunn, Carol A. Eddy, Gloria Eisenstadt, Barbara Jean Ellis, Emmett Evanoff, Craig Stratton Feibel, Peter B. Flemings, Kathleen A. Garland, Mario Joseph Giaramita, William Bryce

Gilmour, John W. Goodge, Laurel B. Goodwin, Mark Buchanan Gordon, Martha E. Grier, Fraser K. Hamilton, Mark Donald Hannington, Ronald A. Harris, Ann L. Heatherington, Teunis Heyn, Michele Marie Hluchy, Thomas Emory Hoak, Peter Newhall Holden, Todd Housh, Pamela Elizabeth Jansma, Paul W. Jewell, Kirk Richard Johnson, Victor Yeargan Johnson, Stephen T. Johnston, Sanjeev Kalaswad, Michael A. Kaminski, Annie Kersting, Mary Beth Kitz, William J. Knox, Jr., Matthew Joseph Kramer, Conrad C. Labandeira, Alan P. Lester, Marjorie Levy, Scott R. Linneman, Christina Livesey, Karen Bettina Loomis, Karen Marie Lumino, Erik Lundin, Francis J. Magilligan, Pamela Ellen McIntire, Mathew R. McMackin, Mark McNaught, Christopher M. Menges, Klaus Mezger, Carl J. Michelsen, Joanne Kluessendorf Mikulic, Giulio Milazzo, Peter Ashley Mitchell, Howard Mooers, Claudia I. Mora, George B. Morgan, VI, Stephen J. Naruk, Tina M. Niemi, Jennifer A. O'Brien, Curtis M. Oldenburg, Jean M. Olson, Naomi Oreskes, Matthew L. Paige, Roy Timothy Patterson, Tony D. Peterson, Stephen M. Phillips, Lee S. Pierce, Ellen J. Prager, Carol Prentice, Charles P. Regan, Paul R. Renne, James Mark Renner, Susan M. Roberts, Mary K. Roden, Robert M. Ross, William D. Rowe, Jr., Charles M. Rubin, W. John Russell, Dorothy Irene Sack, Michael Savarese, Theodore A. Scambos, Daniel C. Schneiderreit, Robert R. Seal II, David Scott Shafer, R. Craig Shipp, David Scott Silverberg, Brenda Sirois, Praveen Srivastava, Glenn B. Stracher, Bart Andrew Stryhas, Ian E. Taylor, Susan Taylor, Anne Valerie Thomas, Troy Richard Thompson, Jennifer A. Thomson, Alain F. Trial, David Raiford Turner, William Ussler III, Greg A. Valentine, Wim T. VanMiddelaar, Julie Kay Vry, E. Timothy Wallin, Delpfine E. Welch, Bradley T. Werner, David B. Westjohn, Michael T. Whalen, Christine Anne White, Michael C. Wizevich, Virginia Leigh Yingling, Gene M. Yogodzinski, Edward D. Young, and Feng Zhaodong.

Council Lists Nominees, Honorary Fellows, Medalists, Meeting Dates

The GSA Council approved at its May 1986 meeting the following councilor nominations, honorary fellowships, medalists, and annual meeting cities and dates.

Nominees for Council

For Councilor (1987-1988) and President (1987)

Jack E. Oliver; Ithaca, New York

For Councilor and Vice-President (1987)

Albert W. Bally; Houston, Texas

For Councilor and Treasurer (1987)

Robert L. Fuchs; Denver, Colorado

For Councilors (1987-1989)

William W. Hay; Boulder, Colorado

Marcus E. Milling; Dallas, Texas

John S. Scott; Ottawa, Ontario, Canada

Stephen H. Stow; Oak Ridge, Tennessee

1986 Honorary Fellowships

Alexander Borisovich Ronov, V. I. Vernadsky Institute of Geochemistry and Analytical Chemistry, USSR Academy of Sciences, Moscow, USSR

David Headley Green, Department of Geology, University of Tasmania, Hobart, Tasmania

Tu Guangzhi, Institute of Geochemistry, Academia Sinica, Guiyang, Guizhou Province, Peoples' Republic of China

1986 Medalists

Penrose Medal

Laurence L. Sloss

Department of Geological Sciences

Northwestern University

Evanston, Illinois 60201

Day Medal

E-an Zen

U.S. Geological Survey

959 National Center

Reston, Virginia 22092

Future GSA Annual Meeting Dates

1986	November 10-13	San Antonio, Texas
1987	October 26-29	Phoenix, Arizona
1988	October 31-November 3	Denver, Colorado
1989	November 6-9	St. Louis, Missouri
1990	October 29-November 1	Dallas, Texas
1991	October 21-24	San Diego, California
1992	October 26-29	Cincinnati, Ohio
1993	October 25-28	Boston, Massachusetts

SEARCHING FOR A NEW GEOSCIENTIST?

When was the last time you hired a new employee? Do you remember how much time and effort you wasted in your search for a qualified geoscientist? Let the GSA computerized search file make your job easier.

How does it work? Complete the Employer's Request for Earth Science Applicants on the following page. Remember to specify educational and professional experience requirements as well as the specialty area or areas of expertise your applicant should have. The GSA computer will take it from there.

You will receive a printout that includes the applicants' names, addresses, phone numbers, areas of specialty, type of employment desired, degrees held, years of professional experience, and current employment status. In 1986, the cost of a printout for one or two specialty codes is \$125. For example, in a recent job search for an analyst of inorganic materials, the employer requested the specialty codes of geochemistry and petrology. Each additional specialty is \$45. A printout of the entire applicant listing in all specialties is available for \$350. (Specialty codes printed in bold-face type are considered major headings. If you select a specialty code printed in bold-face type, your listing will contain applicants within the related subspecialties as well. If you request a listing of one of the subspecialties, applicants coded under the major category will be included but not those coded under the other related subspecialties. Resumes for each applicant are available upon request at no additional charge.) If you have any questions about your personalized computer search, GSA's Membership Department will assist you.

The GSA Employment Service is available year long. Now is an excellent time to use the service—in conjunction with the annual *Employment Interview Service*. The interview service is offered each fall at the Society's Annual Meeting. The 1986

Annual Meeting will be held in San Antonio, Texas, November 10-13. You may rent interview space in half-day increments from GSA. Our staff will schedule all interviews with applicants for you, the recruiter. In addition, GSA offers a message service, complete listing of applicants, copies of resumes at no additional charge, and a posting of all vacancies.

You can attend the Annual Meeting and still have that new position filled before you return to work! See you in San Antonio.

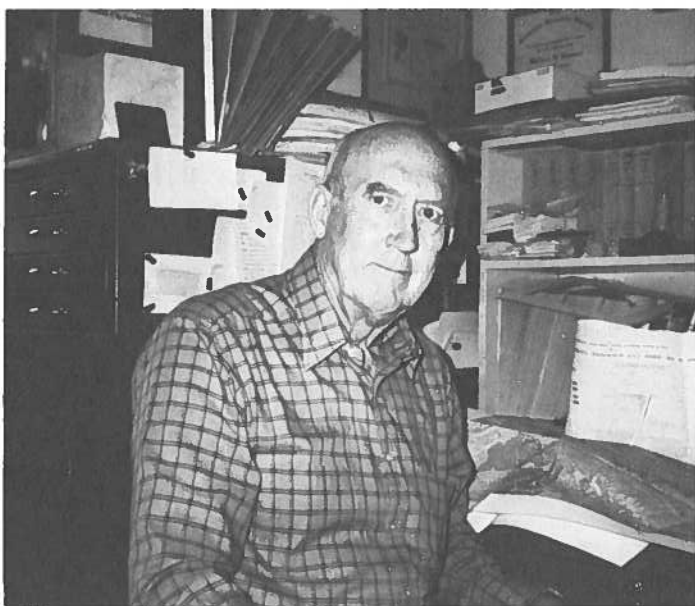
CAN YOU INTERVIEW IN NOVEMBER?

Are you looking for a new position in the field of geology? Would you like to interview with potential employers in November? Take advantage of GSA's *Employment Interview Service*, which is provided each fall in conjunction with the Society's Annual Meeting. The service brings potential employers and employees together for face-to-face interviews. Mark your calendar for November 10-13, 1986, in San Antonio, Texas.

If you plan to interview at the GSA Annual Meeting, GSA **must** receive your material no later than *August 25, 1986*. Complete the application on the following page and send it with a one- or two-page resume and your check, money order, or charge information to the address on the form. A one-year listing for GSA members and students costs \$25; the cost for nonmembers is \$50. If we receive your materials by August 25, your record will be included in the information that **employers** receive prior to the meeting. Submit your forms early to receive maximum exposure! Don't forget to indicate on your application form that you would like to interview in November.

Plan now for the annual *Interview Service* in San Antonio. See you there!

APPLICANT AND EMPLOYER FORMS ARE BACK-TO-BACK ON THE FOLLOWING PAGES →



GSA Map and Chart Editor Wallace R. Hansen

New Map and Chart Editor Named

The GSA Council has appointed Wallace Hansen GSA's Map and Chart editor. Hansen will replace John C. Reed, Jr., who ended his second term as editor early because of his appointment as vice-president for field trips for the 28th International Geological Congress.

Hansen, of the U.S. Geological Survey, Denver, has worked on the geology of the northern Great Plains, central Massachusetts, the central and southern Rockies of Utah and Colorado, the Colorado Plateau, Alaskan earthquakes, and the Colorado Front Range urban corridor. He has been editor of the *Association of Economic Geologists Bulletin* and an Associate Editor for the *GSA Bulletin*. Hansen has received the U.S. Department of the Interior Meritorious Service Award and Distinguished Service Award. He is a GSA Fellow and a member of the Association of Economic Geologists, the Rocky Mountain Association of Geologists, and the Association of Earth Science Editors. He is currently working on the seventh edition of *Suggestions to Authors of the Reports of the United States Geological Survey*.

As GSA Map and Chart editor, Hansen will see that maps submitted are appropriately reviewed and will instruct authors of accepted maps about preparation for printing.



**THE
GEOLOGICAL SOCIETY
OF AMERICA**

3300 Penrose Place, P.O. Box 9140
Boulder, Colorado 80301
(303) 447-2020

EMPLOYER'S REQUEST FOR EARTH SCIENCE APPLICANTS

(Please type or print legibly)

Name _____ Date _____

Organization _____

Mailing address _____

City _____ State _____ Zip code _____ Telephone number _____
(Area code) Number

SPECIALTY CODES (see list below)

List the specialty code numbers that you wish to order, or check here if you want entire file of applicants in ALL specialties.

1. _____ 2. _____ 3. _____ 4. _____ 5. _____ 6. _____

POSITION DATA: What position(s) do you expect to fill? _____

In what area(s)? _____

Degree requirements _____ Number of positions available _____

SPECIALTY CODES

100. Economic Geology	224. stable isotopes	352. statistical geology	501. exploration	630. Science Editing
101. coal geology	225. geochronology	400. Mineralogy	502. subsurface	650. Sedimentology
102. geothermal, etc.	250. Geomorphology	401. crystallography	stratigraphy	651. sedimentary processes
103. metallic deposits	300. Geophysics	402. clay mineralogy	520. Petrology	652. sedimentary environments
104. nonmetallic deposits	301. seismic	410. Museum (curator)	521. igneous	720. Stratigraphy
105. mining geology	302. gravity/magnetics	420. Oceanography	522. metamorphic	750. Structural Geology
120. Engineering Geology	303. seismicity	421. marine geology	523. sedimentary (clastic)	751. tectonics
150. Environmental Geology	304. paleomagnetism	422. coastal geology	524. sedimentary (carbonate)	752. tectonophysics
160. Public Education & Communication	320. Hydrogeology	450. Paleontology	525. experimental	753. rock mechanics
200. General Geology	321. hydrochemistry	451. invertebrate	550. Planetology	800. Volcanology
220. Geochemistry	322. ground water	452. vertebrate	575. Quaternary Geology	
221. organic	323. surface water	453. micropaleontology	600. Regional Geology	
222. high temperature	330. Library	454. paleobotany	620. Remote Sensing	
223. low temperature	350. Mathematical Geology	455. paleoecology	621. photogeology	
	351. computer science	500. Petroleum Geology	622. photogrammetry	

Applicants seeking employment in:

- Academic
 Government
 Industry
 Other _____

Minimum degree required

- None
 B.A. or B.S.
 M.A. or M.S.
 Ph.D

Minimum professional experience

- None
 1-5 yrs.
 6-plus

Experience desired (yrs.)

	None	1-5	6-plus
Administrative	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Exploration/Production	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Field	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Research	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Teaching	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Employment in: U.S. only U.S. with foreign assignments Either

Foreign Languages: French German Russian Other _____ Not required

I am interested in interviewing applicants through the GSA Employment Service at the 19 _____ Annual Meeting in _____

See attached sheet for current fee schedule.

1. I agree to use this service for valid recruiting purposes.
2. I agree that no placement charges will be assessed to any applicant participating in the GSA Employment Matching Service.

Total fee enclosed\$ _____
or invoice requested\$ _____

Signature (required) _____



THE GEOLOGICAL SOCIETY OF AMERICA

3300 Penrose Place, P.O. Box 9140
Boulder, Colorado 80301
(303) 447-2020

N&I 0886
FOR ACCTG. USE ONLY
Rec. \$25 \$50
Ck # _____
Ltr. _____
GSA _____
Add. _____

APPLICATION FOR EMPLOYMENT MATCHING SERVICE (Please type or print legibly with black ink)

(Mr.)
NAME (Ms.) _____ **Date** _____
(last name first)

Mailing Address _____

City _____ **State** _____ **Zip Code** _____

Date Available _____ **Telephone** (_____) _____ **Business** _____ **Home** _____ **Visa** _____
area code If not U.S. citizen, list visa

Members of GSA ONLY: Check here if you **DO NOT WISH** to have this number included in the Membership Directory

EXPERIENCE

Must use specialty codes listed below. Choose three that best describe your expertise in order of importance.

* 1. _____ 2. _____ 3. _____

Interested in

- Academic
- Government
- Industry
- Other

TYPE OF POSITION DESIRED

Specific interest

- Administration
- Exploration/Production
- Field
- Research
- Teaching

Will accept employment in

- U.S. only
- U.S. with foreign assignments
- Either

* PRESENT SPECIALTY

Choose one from codes listed below _____ **YEARS EXPERIENCE IN THIS SPECIALTY** _____

PRESENT EMPLOYER _____

Give number of years experience for any of the following that are applicable:

Administrative _____ Exploration/Production _____ Field _____ Research _____ Teaching _____ Total geological working experience _____

KNOWLEDGE OF FOREIGN LANGUAGES: French _____ ; German _____ ; Russian _____ ; Spanish _____ ; Other _____

ACADEMIC TRAINING

College or University	Degree (rec'd or expected)	Year	Major	Minor

Postgraduate work beyond highest degree in (field) _____ **Number of years** _____

SPECIALTY CODES

Select those that best describe your ability. Use codes in bold face only when other breakdowns are inadequate.

100. Economic Geology	224. stable isotopes	352. statistical geology	501. exploration	630. Science Editing
101. coal geology	225. geochronology	400. Mineralogy	502. subsurface stratigraphy	650. Sedimentology
102. geothermal, etc.	250. Geomorphology	401. crystallography	520. Petrology	651. sedimentary processes
103. metallic deposits	300. Geophysics	402. clay mineralogy	521. igneous	652. sedimentary environments
104. nonmetallic deposits	301. seismic	410. Museum (curator)	522. metamorphic	720. Stratigraphy
105. mining geology	302. gravity/magnetics	420. Oceanography	523. sedimentary (clastic)	750. Structural Geology
120. Engineering Geology	303. seismicity	421. marine geology	524. sedimentary (carbonate)	751. tectonics
150. Environmental Geology	304. paleomagnetism	422. coastal geology	525. experimental	752. tectonophysics
160. Public Education & Communication	320. Hydrogeology	450. Paleontology	550. Planetology	753. rock mechanics
200. General Geology	321. hydrochemistry	451. invertebrate	575. Quaternary Geology	800. Volcanology
220. Geochemistry	322. ground water	452. vertebrate	600. Regional Geology	
221. organic	323. surface water	453. micropaleontology	620. Remote Sensing	
222. high temperature	330. Library	454. paleobotany	621. photogeology	
223. low temperature	350. Mathematical Geology	455. paleoecology	622. photogrammetry	
	351. computer science	500. Petroleum Geology		

* **Résumé must be attached, limited to two pages, typewritten on one side only, to be acceptable for reproduction to employers. Include your name, address, and phone number; concise details of work experience; and majors/minors on degrees.**

* **Fee: \$25 if you are a Member or Student Associate of GSA in good standing (Member # _____) \$50 if you are not a member of GSA. Payment in U.S. funds (check, money order, or charge information MUST ACCOMPANY FORM). MAKE CHECK PAYABLE TO THE GEOLOGICAL SOCIETY OF AMERICA.**

Check or Money Order
 MasterCard VISA
 American Exp. Diners Club
 CHOICE Carte Bleue
 Barclay Card Access
 EuroCard Standard Bank Card

Card Expires Mo Yr _____
Card Number _____
Signature _____ (Required for credit card payment)

I agree to release GSA or their representatives from responsibility for errors that may occur in processing or distributing this data. I understand that GSA makes **no guarantees** of contact by an employer in this service. I agree to notify GSA Employment Service immediately of (1) change of address, (2) acceptance of a position.

I will attend the 19 _____ GSA Annual Meeting in _____

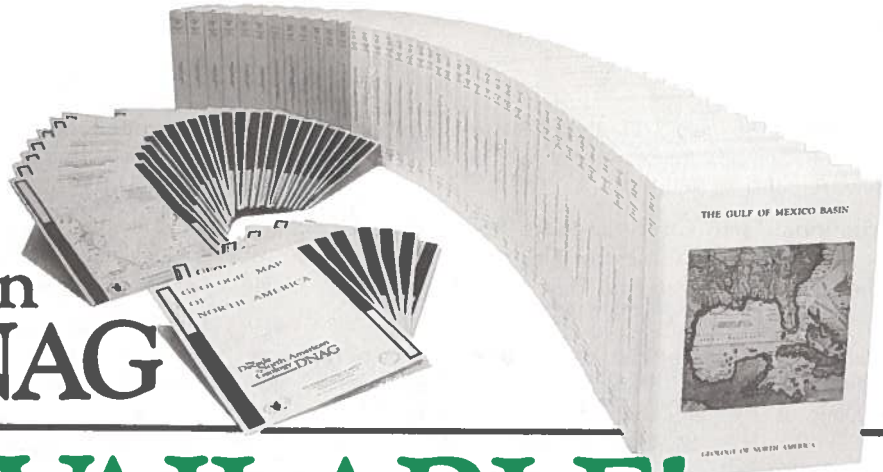
* **SIGNATURE (required)**

* **THESE ITEMS ARE ABSOLUTELY NECESSARY TO PROCESS THIS APPLICATION**

This application will be active for 1 year

1/86

The Decade of North American Geology DNAG



NOW AVAILABLE!

CONTINENT-OCEAN TRANSECTS

Each transect contains all or most of the following information: Free-air gravity and magnetic anomaly profiles, heat flow measurements, geologic cross section with no vertical exaggeration, multi-channel seismic reflection profiles, tectonic kindred cross section with vertical exaggeration, geologic map, stratigraphic diagram, an index map. All transects are on a scale of 1:500,000 and include a text and file envelope.

- A-2 Kodiak to Kuskokwim, Alaska**
R. von Huene, S. Box, B. Detterman, M. Fisher, C. Moore, H. Pulpan, 1985. One sheet in color, each 55" x 41" TRA A-2 Rolled \$9.50; folded \$7.50
- B-1 Intermontane Belt (Skeena Mountains) to Insular Belt (Queen Charlotte Islands)**
C.J. Yorath, G.J. Woodsworth, R.P. Riddihough, R.G. Currie, R.D. Hyndman, C.G. Rogers, D.A. Seemann, A.D. Collins, 1985. Two sheets in color, each 52" x 39" TRA B-1 Rolled \$17.00; folded \$15.00
- B-2 Juan de Fuca Plate to Alberta Plains**
J.W.H. Monger, R.M. Clowes, R.A. Price, P.S. Simony, R.P. Riddihough, G.J. Woodsworth, 1985. Two sheets in color, each 55" x 40" TRA B-2 Rolled \$17.00; folded \$15.00
- C-3 Pacific Abyssal Plain to the Rio Grande Rift**
J.D. Gibson, D.G. Howell, G.S. Fuis, J.G. Vedder, 1985. Three sheets in color, each 54 1/2" x 41" TRA C-3 Rolled \$24.50; folded \$22.50

CENTENNIAL SPECIAL VOLUMES

Four topical volumes prepared by four of GSA's discipline-oriented Divisions.

Ideal for course work on the history of geology.
Geologists and Ideas: A History of North American Geology.

Edited by Ellen T. Drake and William M. Jordan, 1985.
Thirty-three chapters of fascinating reading ranging on subjects from geosynclines to plate tectonics, from the origin of life to the origins of caves and craters, from James Hall to George Gaylord Simpson, from the Arctic to Mexico, and from deep-sea drilling to orbital remote sensing. A product of the Decade of North American Geology project and the GSA History of Geology Division. CSV-1, 520p., ISBN 0-8137-5301-5, CIP, hardbound \$37.50

Check, money order (in U.S. funds), or most major credit cards accepted. Credit card users provide full name, card name, card number, and expiration date. Colorado residents add sales tax. We pay surface postage on prepaid orders.



ORDER TODAY BY MAJOR CREDIT CARD.
USE OUR CONVENIENT TOLL FREE NUMBER:
1-800-GSA-1988 (outside Colorado only). (303) 447-2020 (inside Colorado).
GSA, Publication Sales • PO Box 9140 • Boulder, CO 80301 • (303) 447-2020

PLUS!

- Geologic Time Scales in Four Different Formats:**
Package of 50, 8 1/2" x 11", drilled for 3-ring binder.
ORDER CTS-1 \$8.00
1 sheet, 8 1/2" x 11", plastic coated, drilled for 3-ring binder.
ORDER CTS-2 \$1.25
Wallet size, printed 2 sides, package of 25. ORDER CTS-3 \$6.00
Wall size, 30" x 36"
ORDER MC-50 Rolled, \$8.50

AND

Perspectives in Regional Geological Synthesis: Planning for The Geology of North America, edited by A.R. Palmer, 1982. A valuable set of preview statements and/or annotated outlines describing the organization of geological information for the volumes of regional geology in **The Geology of North America** series. DNAG Special Publication 1, 182p., ISBN 0-8137-5201-9, CIP, sturdy leatherette binding \$7.50

SOON TO BE RELEASED Orders Now Being Accepted

- Continent-Ocean Transects**
- D-1 Northern Appalachian: (West sheet) Grenville Province, Quebec, to Newfoundland**, C.E. Keen, R.T. Haworth
ORDER TRA D-1 Rolled \$17.00
folded \$15.00
- D-2 Transform Margin South of Grand Banks: Offshore Eastern Canada**, C.E. Keen, R.T. Haworth
ORDER TRA D-2 Rolled \$9.50
folded \$7.50
- D-3 Rifted Continental Margin Off Nova Scotia: Offshore Eastern Canada**, C.E. Keen, R.T. Haworth
ORDER TRA D-3 Rolled \$9.50
folded \$7.50
- D-4 Rifted Continental Margin Off Labrador**, C.E. Keen, R.T. Haworth
ORDER TRA D-4 Rolled \$9.50
folded \$7.50

THE GEOLOGICAL SOCIETY OF AMERICA

MEETINGS

1986

Geocongress '86, July 7-11, 1986, Johannesburg, South Africa. Information: Symposium Secretariat, S. 339, CSIR, P.O. Box 395, Pretoria, Republic of South Africa 0001.

International Field Conference on Proterozoic Geochemistry, July 13-19, 1986, central Colorado. Information: K. C. Condie, Dept. of Geoscience, New Mexico Institute of Mining and Technology, Socorro, NM 87801.

International Mineralogical Association 14th General Meeting, July 13-18, 1986, Stanford, California. Information: IMA 1986, Dept. of Geology, Stanford University, Stanford, CA 94305; (415) 723-8103; Telex 348404STANSRD STNU.

Science in the National Parks 1986 Conference, July 13-18, 1986, Fort Collins, Colorado. Information: Raymond Herrmann or Calvin R. Cummings, 339 Aylesworth Hall, Colorado State University, Fort Collins, CO 80523; (303) 491-7573.

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

Mars: The Evolution of Its Climate and Atmosphere, July 18-19, 1986, Washington, D.C. Information: Pamela Jones, Lunar and Planetary Institute, 3303 NASA Road 1, Houston, TX 77058; (713) 486-2150.

International Symposium on Natural and Man-made Hazards, August 3-9, 1986, Rimouski, Quebec, Canada. Information: Mohammed El-Sabh, Dept. d'océanographie, Université du Québec à Rimouski, 310, avenue des Ursulines, Rimouski, Québec G5L 3A1, Canada; (418) 724-1755; Telex 051-31623.

Symposium on Intermontane Basins: Sedimentology, Tectonics, and Mineral Resources, August 4-7, 1986, Chiang Mai, Thailand. Information: S. D. Nio, Comparative Sedimentology Div., State University of Utrecht, P.O. Box 80.021, 3508 TA Utrecht, Netherlands.

Third International Humic Substances Society Meeting, August 4-8, 1986, Oslo, Norway. Information: Egil Gjessing, Norwegian Institute for Water Research, P.O. Box 333, Blindern, Oslo 3, Norway, or Wesley L. Campbell, IHSS Standards & Reference Committee, 5293 Ward Rd., Arvada, CO 80002; (303) 236-3615.

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

Energy Resources in Asia, August 11-14, 1986, Hong Kong. Information: Asian Research Service, G.P.O. Box 2232, Hong Kong.

Fourth International Kimberlite Conference, August 11-15, 1986, Perth, Western Australia. Information: J. D. Lewis, Geological Survey of Western Australia, Mineral House, 66 Adelaide Terrace, Perth, Western Australia.

North American Paleontological Convention IV, August 11-15, 1986, Boulder, Colorado. Information: NAPC IV, Box 315, University of Colorado, Boulder, CO 80309-0315; (303) 492-8069.

Basins of Eastern Canada and Worldwide Analogues, August 13-15, 1986, Halifax, Nova Scotia. Information: Secretary, Dept. of Oceanography, Dalhousie University, Halifax, Nova Scotia, Canada B3H 4J1.

Friends of the Pleistocene, Midwest Cell, August 15-17, 1986, Lawrence, Kansas. Information: W. C. Johnson, Dept. Geography, University of Kansas, Lawrence, KS 66045; (913) 864-5143.

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

International Association on the Genesis of Ore Deposits Seventh Symposium, August 18-22, 1986, Lulea, Sweden. Information: Inger Wallin, Centek Conference, S-951 87 Lulea, Sweden.

37th Annual Highway Geology Symposium, August 20-22, 1986, Helena, Montana. Information: Joseph E. Armstrong, Montana Dept. of Highways, 2701 Prospect Ave., Helena, MT 59620; (406) 444-6280.

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

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

International Symposium on Remote Sensing for Resources Development and Environmental Management, August 25-29, 1986, Enschede, Netherlands. Information: Secretariat Symposium Commission VII, ISPRS, c/o ITC, P.O. Box 6, 7500 AA Enschede, Netherlands; Telex 44525.

Iberian Terranes and Their Regional Correlation, September 1-6, 1986, Oviedo, Spain. Information: E. Martinez-Garcia, Dept. de Geotectónica, Facultad de Geología, Universidad de Oviedo, 33005 Oviedo, Spain.

International Conference on Landscapes of the Southern Hemisphere, September 2-7, 1986, Adelaide, South Australia. Information: Jon Firman, C/-S.A. Dept. of Mines and Energy, P.O. Box 151, Eastwood, S.A. 5063, Australia.

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

1986 International Gas Research Conference, September 8-11, 1986, Toronto, Ontario. Information: 1986 International Gas Research Conference, c/o Gas Research Institute, 8600 West Bryn Mawr Ave., Chicago, IL 60631; (312) 399-8300, Telex 253812 or 503802.

International Association of Hydrogeologists Congress, September 8-15, 1986, Karlovy Vary, Czechoslovakia. Information: A. Zaporozec, AIH, 3817 Mineral Point Rd., Madison, WI 53705.

The 1985 Mexico Earthquakes—Factors Involved and Lessons Learned, September 19-21, 1986, Mexico City, Mexico. Information: Elizabeth Yee, American Society of Civil Engineers, 345 East 47th St., New York, NY 10017; (212) 705-7496.

Society for Organic Petrology Third Annual Meeting, September 22-24, 1986, Lexington, Kentucky. Information: Nancy Hopper, OISTL, University of Kentucky, Lexington, KY 40506; (606) 257-2837.

(continued next page)

Oceans '86 Conference and Exposition, September 23-25, 1986, Washington, D.C. Information: Oceans '86, Suite 500, 2000 Florida Ave., N.W., Washington, DC 20009; (301) 279-4700.

National Association of Geology Teachers East-Central Section Annual Meeting, September 26-28, 1986, Muncie, Indiana. Information: Harlan H. Roepke, Dept. of Geology, Ball State University, Muncie, IN 47306; (317) 285-8266.

Society of Economic Paleontologists and Mineralogists Third Annual Midyear Meeting, September 26-28, 1986, Raleigh, North Carolina. Information: Chuck Nittrouer, Dept. of Marine, Earth and Atmospheric Sciences, North Carolina State University, Raleigh, NC 27695.

17th Annual Binghamton Geomorphology Symposium on Aeolian Geomorphology, September 27-28, 1986, Guelph, Ontario. Information: William G. Nickling, Dept. of Geography, University of Guelph, Guelph, Ontario, Canada N1G 2W1; (519) 824-4120.

Geothermal Resources Council Annual Meeting, September 29-October 1, 1986, Palm Springs, California. Information: Geothermal Resources Council, P.O. Box 1350, Davis, CA 95617; (916) 758-2360.

American Association of Petroleum Geologists Eastern Section, October 2-4, 1986, Ann Arbor, Michigan. Information: Paul A. Catacosinos, Dept. of Geology, Delta College, University Center, MI 48710; (517) 686-9252.

Association of Engineering Geologists 29th Annual Meeting, October 5-9, 1986, San Francisco, California. Information: Alan D. Tryhorn, 1986 AEG Annual Meeting, GeoResource Consultants, Inc., 851 Harrison St., San Francisco, CA 94107; (415) 777-3177.

sultants, Inc., 851 Harrison St., San Francisco, CA 94107; (415) 777-3177.

Symposium on Water Problems of National Concern, October 16-17, 1986, Washington, D.C. Information: Helen Klose, American Institute of Hydrology, P.O. Box 14251, St. Paul, MN 55114; (612) 379-1030.

Kansas Geological Society 38th Annual Field Conference, October 17-18, 1986. Information: D. F. Merriam, Dept. of Geology, Wichita State University, Wichita, KS 67208; (316) 689-3140.

American Association of Stratigraphic Palynologists Annual Meeting (with Congrès Internationale du Microflore Paléozoïque), October 29-31, 1986, New York, New York. Information: Dan Habib, Graduate School of City University of New York, 33 West 42nd St., New York, New York 10036; (212) 790-4218.

Society of Economic Paleontologists and Mineralogists Mid-Continent Section Annual Field Conference, October 30-November 1, 1986, Ponca City, Oklahoma. Information: William A. Morgan, Conoco, Inc., 1000 S. Pine, Ponca City, OK 74603; (405) 767-2853.

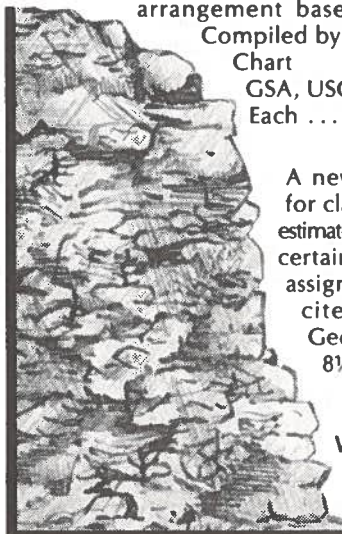
17th Annual Underwater Mining Institute, November 2-5, 1986, Biloxi, Mississippi. Information: Underwater Mining Institute, University of Wisconsin Sea Grant Institute, 1800 University Ave., Madison, WI 53705.

International Conference on Coastal Engineering, November 9-14, 1986, Taipei, Taiwan. Information: Billy L. Edge, Cubit Engineering Limited, 207 East Bay St., Suite 311, Charleston, SC 29401.

(continued on p. 134)

GEOLOGIC Classroom & Field Aids

An essential and handy 5" x 7½" flip chart with 115 color chips giving precise rock colors for all geologic purposes. Provides numerical designations for *hue*, *value*, and *chroma*. Form and arrangement based on Munsell system; color names based on ISCC-NBS system.



Compiled by
Chart

ROCK COLOR CHART

Rock-Color
Committee of

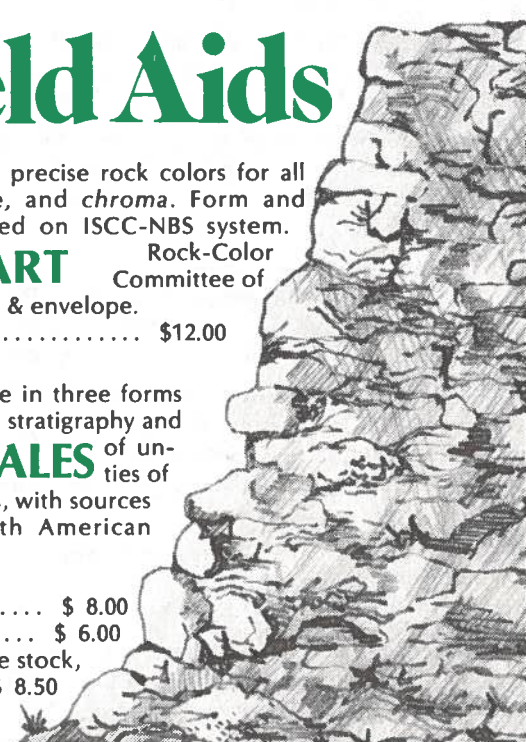
GSA, USGS, AAPG, SEG, and AASG. With text, mask, & envelope.

Each \$12.00

A new chronostigraphic and numeric time scale in three forms for class and field use. Includes magnetic reversal stratigraphy and estimates of uncertainties of assigned Paleozoic and Mesozoic numerical ages, with sources cited. Prepared by GSA's Decade of North American Geology project.

GEOLOGIC TIME SCALES

8½" x 11", 3-hole drilled, on heavy stock,
package of 50 \$ 8.00
Wallet-size vinyl cards, package of 25 \$ 6.00
Wall-size poster, 30" x 36", on heavy, durable stock,
rolled, in tube, each \$ 8.50



MEETINGS (continued from p. 133)

Geological Society of America Annual Meeting, November 10-13, 1986, San Antonio, Texas. Information: Meetings Dept., GSA, P.O. Box 9140, Boulder, CO 80301; (303) 447-2020.

National Symposium on Surface Mining, Hydrology, Sedimentology, and Reclamation, December 8-12, 1986, Lexington, Kentucky. Information: Donald H. Graves, T.P. Cooper Building, University of Kentucky, Lexington, KY 40546-0073; (606) 257-2906.

International Society for Reef Studies Annual Meeting, December 12-14, 1986, Marburg, West Germany. Information: Heinrich L. Zankl, Dept. of Geology, Inst. für Geologie und Palaontologie, Lahnberg, D-3550, Marburg, West Germany.

GSA 1986

Program Review Committee, July 17, Boulder, Colorado

Joint Technical Program Committee, July 18, Boulder

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

Penrose Conferences

Synsedimentary Tectonics, September 7-12, 1986, Durango, Colorado. Information: William A. Thomas, Dept. of Geology, University of Alabama, University, AL 35486; (205) 348-1880.

Laramide Beneath the Prairies, October 13-17, 1986, Rapid City, South Dakota. Information: Alvis L. Lisenbee, Dept. of Geological Engineering, South Dakota School of Mines, Rapid City, SD 57701; (605) 394-2463 or 2461.

Archaeological Geology: Environmental Siting and Material Usage, December 6-11, 1986, Saint Simons Island, Georgia. Information: Charles J. Vitaliano, Dept. Geology, Indiana University, 1005 East Tenth Street, Bloomington, IN 47405; (812) 335-1407.

1987

Palaeoenvironment of East Asia—2nd International Conference, January 9-14, 1987, Hong Kong. Information: E.K.Y. Chen, Centre of Asian Studies, University of Hong Kong, Hong Kong. (*Abstracts due July 31, 1986.*)

Hawaii Symposium on How Volcanoes Work, January 19-23, 1987, Hilo, Hawaii. Information: Robert Decker, U.S. Geological Survey, MS 910, 345 Middlefield Rd., Menlo Park, CA 94025.

International Symposium on Granites and Associated Mineralizations, January 21-31, 1987, Salvador, Brazil. Information: Augusto J. Pedreira, ISGAM, SME-CPM, Rua Ceara, 3-Pituba, 40.000, Salvador, Bahia, Brazil.

Canadian Reef Research Symposium, January 27-30, 1987, Banff, Alberta, Canada. Information: Canadian Reef Research Symposium, University of Calgary, Conference Office, 2500 University Dr. N.W., Calgary, Alberta T2N 1N4, Canada.

Sinkholes and the Environmental Impacts of Karst—2nd Multidisciplinary Conference, February 9-11, 1987, Orlando, Florida. Information: Barry F. Beck, College of Engineering, University of Central Florida, Orlando, FL 32816. (*Abstracts due August 15, 1986.*)

18th Annual Lunar and Planetary Science Conference, March 16-20, 1987, Houston, Texas. Information: Pamela Jones, 3303 NASA Rd. 1, Houston, TX 77058; (713) 486-2150.

Phanerozoic Ironstones and Related Deposits, April 7-8, 1987, Sheffield, England. Information: Gordon Taylor, Dept. of Science, Luton CHE, Park Square, Luton LU1 3JU, England. (*Abstracts due August 31, 1986.*)

Analysis of Naturally Fractured Reservoirs, May 4-8, 1987, Snowbird, Utah. Information: Jane Rider, AAPG Education Dept., P.O. Box 979, Tulsa, OK 74101-0979; (918) 584-2555.

Coastal Sediments '87, May 12-14, 1987, New Orleans, Louisiana. Information: Nicholas C. Kraus, USAE Waterways Experiment Station, Coastal Engineering Research Center, P.O. Box 631, Attn. WESCR-P, Vicksburg, MS 39180-0631.

Coastal Lowlands Symposium: Geology and Geotechnology, May 25-27, 1987, The Hague, Netherlands. Information: Coastal Lowlands Symposium, c/o CONGREX, Keizersgracht 610, 1017 EP Amsterdam, The Netherlands; Telex NL-14527.

Geological Association of Canada—Mineralogical Association of Canada Annual Meeting, May 25-27, 1987, Saskatoon, Saskatchewan. Information: W. O. Kupsch, Dept. of Geological Sciences, University of Saskatchewan, Saskatoon, Saskatchewan S7N 0W0, Canada; (306) 966-5696.

Second Symposium on the South Atlantic Evolution, July 23-25, 1987, Rio de Janeiro, Brazil. Information: Dimas Dias-Brito, PETROBRAS/CENPES, Ilha do Fundão, Quadra 7, Rio de Janeiro - 21.910 - Brazil; and P. Y. Berthou, Laboratoire de Géologie des Bassins Sédimentaires, Tour 14-15 4eme ETAGE 4, Place Jussieu, 75252 Paris, Cedex 05, France.

4th International Congress of the Regional Committee on Pacific Neogene Stratigraphy (affiliated with IUGS) and joint meeting of **IGCP Project 246**, July 29-31, 1987, Berkeley, California. Information: Charlotte Brunner, Chairperson of Organizing Committee, Dept. of Paleontology, University of California, Berkeley, CA 94720.

International Symposium on Erosion and Sedimentation in the Pacific Rim, August 3-7, 1987, Corvallis, Oregon. Information: 1987 Corvallis Symposium, Conference Coordinator, College of Forestry, Oregon State University, Corvallis, OR 97331; (503) 754-2004.

Society of Economic Paleontologists and Mineralogists Fourth Annual Midyear Meeting, August 20-23, 1987, Austin, Texas. Information: Robert A. Morton, University of Texas, Bureau of Economic Geology, University Station, Box X, Austin, TX 78712; (512) 471-1534.

International Congress on Geology, Structure, Mineralization, and Economics of the Pacific Rim, August 26-29, 1987, Queensland, Australia. Information: C/-Aus. IMM Congress Secretariat, P.O. Box 731, Toowong 4066, Queensland, Australia.

Sixth International Congress on Rock Mechanics, August 31-September 3, 1987, Montreal, Quebec, Canada. Information: J. Franklin, Dept. of Earth Sciences, University of Waterloo, Waterloo, Ontario N2L 3G1, Canada.

XI International Congress of Carboniferous Stratigraphy and Geology, September 7-11, 1987, Beijing, China. Information: Yang Jingzhi, Nanjing Institute of Geology and Paleontology, Academia Sinica, Nanjing, China.

Society of Economic Paleontologists and Mineralogists Fourth Annual Midyear Meeting, September 11-14, 1987, Austin, Texas. Information: SEPM, P.O. Box 4756, Tulsa, OK 74159; (918) 743-9765.

18th Annual Geomorphology Symposium on Catastrophic Flooding, September 25-27, 1987, Oxford, Ohio. Information: Larry Mayer, Dept. of Geology, Miami University, Oxford, OH 45056; (513) 529-3218.

International Conference on Geophysical and Geochemical Exploration for Minerals and Groundwater, September 27-October 1, 1987, Toronto, Ontario. Information: Exploration '87, c/o 222 Snidercroft Rd., Concord, Ontario L4K 1B5, Canada; (416) 669-2280; Telex 06-964570.

CLASSIFIED ADVERTISING

Ads (or cancellations) for the September issue must reach the GSA office by July 15. Contact Advertising Department (303) 447-2020.

Per line per issue	1x	3x	6x	12x
Situations Wanted:	\$1.25	\$1.10	\$.95	\$.85
Positions Open:	\$3.00	\$2.64	\$2.28	\$2.04
Consultants:	\$3.00	\$2.64	\$2.28	\$2.04
Services & Supplies:	\$3.20	\$2.81	\$2.43	\$2.17

Code number \$2.75 extra.

Agencies and organizations may submit purchase order or payment with copy. Individuals must send prepayment with copy. To determine cost, count 44 characters per line, including all punctuation and blank spaces.

To answer coded ads, use this address: Code # , GSA News, P.O. Box 9140, Boulder, CO 80301.

All coded mail will be forwarded within 24 hours of arrival at GSA News office.

Situations Wanted

CHALLENGE ORIENTED Sr. mineral explorationist. MSc with 14 years solid field/project management experience in diverse terranes. Seeks contemporary opportunities in earth sciences. Prefer western location, limited travel. Reply code #1034.

GEOLOGIST, BS, male, some graduate experience. Strong background in theoretical petrology-metamorphic and metasomatic; hydrothermal geochemistry, tectonics, structural analysis. Currently employed in management/supervisory capacity. I seek employment/experience in metallic minerals industry. Excellent verbal/written communication skills, driven worker. Willing to relocate. Excellent resume + refs upon request. Reply code #1036.

ECONOMIC GEOLOGIST. Mineralogist/petrologist/structural geologist seeks management or senior technical position. 20 years worldwide mining/exploration/research/teaching; antimony, coal, copper, diamonds, gold, nickel, oil, platinum, tin. Most recently 3 years evaluation of Texas, Louisiana lignites to optimize mining/end use. Mineralogical evaluation of flotation problems. Ph.D., US citizen, member GSA, SME. Reply code #1039.

GEOLOGIST, BS. Entry level, interested in ground-water contamination and water resource development at CERCLA and RCRA sites. Willing to travel. Reply code #1037.

Positions Open

Employers seeking qualified earth science job candidates! This column will be read every month by more than 15,500 earth scientists around the world. These readers are some of the most highly qualified in every discipline. They're the scientists you most want to contact. Check our low rates for this column. See above for details and closing dates.

Consultants

MEETING COORDINATORS: Western Experience offers coordination of Earth Science meetings of all types including field trips. If you need assistance call us at our new location. Phone (619) 722-0027. Address 2369 Carriage Circle, Ocean-side, CA 92056.

Services & Supplies

FIELD EQUIPMENT! For the lowest prices and our unbeatable guarantee of 100% satisfaction, check our listings of field hammers—Brunton compasses—magnifiers—pouches—plus over 2,000 other products for the geoscientist. Call today for a catalog: 1-800-742-2677. It's absolutely free! Geoscience Resources, 2990 Anthony Road, Burlington, NC 27215.

TAKE THE SHIRTS OFF OUR BACKS SALE! Did you miss getting one of our GSA T-shirts at the GSA 1985 Annual Meeting in Orlando? Would you like another for the approaching warm weather? Two styles available in four fashionable colors. Each T-shirt is \$5.00. (1) "GSA 85" written across the actual seismogram of the Mexico City earthquake. Black (S,M,L) or royal blue (M only) with white lettering. (2) "ORLANDO 1985 Geological Society of America Annual Meeting" with meeting shell design logo. Turquoise with white or light grey with purple lettering. Both in S,M,L, and XL. Send check (with return mailing address) to: UF Geology Club, Department of Geology, University of Florida, Gainesville, FL 32611. Be sure to include size and color of each style with your order. For more information call 904-392-2128.

FOR SALE: MICROSCOPES. Two Unitron ZSB binocs; one Nikon SMZ10 trinoc; one Olympus CHC binoc; one Olympus binoc. Also one IEC Model K Centrifuge. For further information contact H.M. Meadow, McClelland Engineers, 2140 Eastman Ave., Ventura, CA 93003. Phone (805) 644-5535.

EARTHQUAKE BOOKS, Free catalog. Specialty Book Service EH, P.O. Box 210250, San Francisco, CA 94121.

SCIENCE BOOKS, Free Catalog. Specialty Book Service SH, P.O. Box 210250, San Francisco, CA 94121.

Cave Minerals of the World

By Carol A. Hill and Paolo Forti with a historical introduction by Trevor R. Shaw.

Grotesquely twisted helictites, cave pearls polished to a high luster, satin-petalled cave flowers, and the moonmilk (gnome's milk) of ancient medicine—all of these and many other speleothems are portrayed in this new and exciting book. Almost 200 different minerals are described, and nearly 180 color and black and white photographs, graphs, and drawings illustrate the splendor of cave minerals from all over the world.

Approximately 260 pages, including 16 in full color, glossary, bibliography, and index. \$24.95 (pb); \$29.95 (hb). Include \$1.50 P&H.

Order From: National Speleological Society Bookstore
Dept. B-2
Cave Avenue
Huntsville, AL 35810



BELTS

For GSA and other buckles.

Brochure sent on request.

SHERER CUSTOM SADDLES

P.O. BOX 385

FRANKTOWN, COLO. 80116

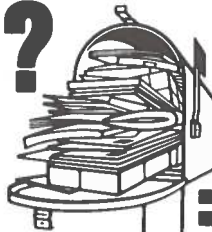
RESERVE THIS SPACE TO ADVERTISE TO 15,500 POTENTIAL CUSTOMERS.

CALL US TODAY!

447-2020

JOURNAL ADVERTISING CLASSIFIED ADVERTISING

MOVING?



The Geological Society of America
Membership Department
P.O. Box 9140
Boulder, Colorado 80301

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)

Name

Address

City State Zip

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 GSA SEAL
NOW A HUSKY,
SOLID-BRASS
BELT BUCKLE
FOR FIELD OR EVERYDAY WEAR



The distinguished GSA seal rendered as a husky, solid-brass belt buckle. This gold on black DynaBuckle® is a deeply etched casting, 2-3/4" diameter, slightly curved for comfort, for belts to 1-7/8" wide at buckle loop, and has an angled adjusting tooth.

A GREAT GIFT IDEA \$9.75
member discount will apply

WEAR ONE
ORDER YOURS TODAY!

Check, money order (in U.S. funds), or credit cards below accepted. Credit card users must provide their full name, card name, card number, and expiration date. Colorado residents add sales tax. We pay surface postage on prepaid orders.

MasterCard * VISA * American Express * CHOICE
Carte Bleue * Barclay Card * Access
EuroCard * Standard Bank Card



GSA Publication Sales
P.O. Box 9140
Boulder, CO 80301 • (303) 447-2020

THE GEOLOGICAL SOCIETY OF AMERICA

INSIDE _ _ _

New Congressional Fellow	p. 121
Call for Papers: GSA Section Meetings	p. 125
Research Grants	p. 126
GSA Employment Service	p. 128



**THE
GEOLOGICAL SOCIETY
OF AMERICA**
3300 Penrose Place • P.O. Box 9140
Boulder, CO 80301

SECOND CLASS
Postage Paid
at Boulder, Colorado
and at additional mailing office
