

GSA NEWS & INFORMATION

Monthly Newsletter of
The Geological Society of America

VOLUME 9, NUMBER 3

MARCH 1987

Some Thoughts on the Technical Program, 1986 Annual Meeting in San Antonio

by **John C. Maxwell**
University of Texas, Austin

and **Eric C. Swanson**
University of Texas, San Antonio

The San Antonio meeting was a definite success. Over 4,500 people registered, and the 1,541 volunteered abstracts submitted were the second highest total for an annual meeting. Many people commented favorably on the technical program and also on the convenient setting, the spaciousness of the convention center, the exhibit area, and social functions. We are well aware that there were physical problems, such as inadequate lighting in the poster session area and a couple of catastrophes in meeting rooms, but, all in all, nothing that our highly competent meeting staff couldn't handle.

However, all else was not necessarily sweetness and light. The Joint Technical Program Committee (JTPC), made up of representatives from the associated societies and divisions of GSA and of at-large representatives, was forced by time and space constraints to decline 350 abstracts—23% of the total. Obviously, these 350 individuals were not especially pleased with the Technical Program, and we heard the familiar complaint that the Society is run by an "old boy" network unsympathetic to new ideas, especially ideas coming from younger and relatively unknown scientists.

When we look critically at the structure of the Technical Program, we have to admit that there may be evidence supporting this complaint. Symposia occupied 26 of the 77 half-day sessions devoted to oral papers. Under present procedures, the symposia form the framework of the Technical Program around which the remainder of the sessions are arranged. Because symposium conveners prefer slots early in the meeting, technical sessions are crowded toward the end. A call for symposium proposals is made more than a year prior to the annual meeting. Symposium titles and a list of speakers must be received by the Technical Program chairmen early in January preceding the meeting. By the nature of symposia, speakers tend to be recognized authorities in the chosen topic, perhaps selected for a mastery of the subject rather than for challenging new ideas. At any rate, not very many young scientists are apt to be invited to participate as symposium speakers.

These comments are not intended to denigrate symposia. It is obvious from comments we have heard that this year's symposia got high marks from people attending the sessions. Our own sampling of symposium papers would lead us to the same conclusion. We are bothered, however, that the present system leads to an unacceptably high percentage of volunteered papers which cannot be accommodated, and especially the perception that GSA is not hospitable to new ideas and to younger scientists. It is a cause of



John Maxwell



Eric Swanson

concern also that the present scheduling does not facilitate the presentation of the latest "hot" science at our annual meeting.

A promising mechanism for introducing more timely science and increasing the input of younger scientists was tried at the San Antonio meeting, and perhaps has been used during previous meetings. This mechanism is the "theme" session. Two such theme sessions were proposed by members just prior to the June 13 abstract deadline, one session dealing with new and somewhat contradictory research bearing on extinctions and the Cretaceous-Tertiary boundary problem, the other with recent and ongoing work on the complex geology of Italy and the central Mediterranean. In both cases, the abstracts for the theme sessions were considered by the JTPC, which accepted them and, where appropriate, added other independently submitted papers. These theme sessions, which were well received, served one principal function of a symposium: to inform the membership of late developments and ongoing research in a currently active area.

In the present mode of operations, 25 half-day symposia are authorized by Council. Each Associated Society and Division, by custom, controls one symposium, leaving eight at-large symposia available. The chairman and co-chairman of the Technical Program select and approve symposia in early January, long before the volunteered abstracts are received and the remainder of the

(continued on p. 62)

Technical Program '86 (continued from p. 61)

program fixed by the JTTC in July. The representatives from each Associated Society and Division control the makeup of the program in their discipline areas, subject only to a percentage reduction related to the total number of volunteered papers that can be accepted. If they chose, therefore, each Associated Society and Division could use its allotted symposium for a timely theme session, with abstracts due in June instead of January. Without any significant disruption of the system, the eight available outside symposia could equally well be developed as theme sessions on a competitive basis, the abstracts being evaluated with others during the JTTC meeting. Such a modification in the present procedures should result in a more timely and exciting technical program which would be hospitable to less well known and younger scientists.

In addition to the introduction of theme sessions as an important part of the program structure, we also propose that a "hot topic" session or sessions be planned for future meetings. We are all aware that some very significant research is approaching completion during the summer, just at the time abstracts are due at GSA, and five months before the annual meeting. We suggest that scientists at this stage of their research be encouraged to submit to the JTTC, prior to its July meeting, a request for a deferred abstract deadline, with appropriate justification for that request. The completed abstracts would be due perhaps four weeks prior to the annual meeting and evaluated by the Technical Program chairmen, with such help from their colleagues as they may request. These abstracts would then be incorporated in a special session or sessions, and the abstracts and program update added to the registration packet. Accepted abstracts could be published later,

NASA PLANETARY BIOLOGY SUMMER INTERNSHIPS

The Marine Biological Laboratory, Woods Hole, Massachusetts, invites applications from graduate students and seniors accepted in graduate programs for \$1,800 awards to participate in research at NASA centers and collaborating institutions during the summer. Application deadline: 1 April 1987. For information and applications, contact: Michael Enzien, Planetary Biology Intern Program, Department of Biology, Boston University, 2 Cummington Street, Boston, Mass. 02215. An Equal Opportunity/Affirmative Action Institution.

perhaps in an issue of *Geology*. We believe that this procedure would be attractive to active investigators, particularly the young ones just getting started, and would convey the proper message that the GSA is indeed hospitable to them and to new, even "off-the-wall" ideas.

We welcome comments. Please mail to either of us in care of GSA headquarters:

GSA
P.O. Box 9140
Boulder, CO 80301

[Editor's note: John Maxwell was Technical Program chairman and Eric Swanson was co-chairman for the 1986 GSA Annual Meeting.]

Report on Hazardous Waste Forum Published

GSA has published a report by its Committee on Geology and Public Policy, "Perspectives on the Management and Disposal of Hazardous Wastes." The eight-page publication summarizes a forum cosponsored by the Committee and GSA's Hydrogeology Division which was held at the 1985 GSA Annual Meeting in Orlando, Florida. Panelists for the forum were Rodney S. DeHan, Florida Department of Environmental Regulation; James J. Geraghty, Geraghty and Miller, Inc.; Linda Greer, Environmental Defense Fund; Ron Hoffer, U.S. Environmental Protection Agency; Francine Rudoff, U.S. Congress, Office of Technology Assessment; Mark T. Stewart, University of South Florida; and Russell Susag, Minnesota Mining and Manufacturing Company.

Copies of the report are available on request from Geological Society of America, Membership Department, P.O. Box 9140, Boulder, CO 80301; (303) 447-2020.

Winners in 1986 Annual Meeting Evaluation Drawing

GSA 1986 Annual Meeting attendees had an opportunity to fill out an evaluation form for the meeting. A drawing at GSA headquarters yielded the following winners:

A roundtrip airfare anywhere in the continental United States:
Ronit Nativ, University of Texas at Austin.

A roundtrip airfare to the 1987 Phoenix Annual Meeting:
Cyrus W. Field, Oregon State University.

Professional registration for the 1987 Phoenix Annual Meeting:
Barbara Menne, University of New Mexico.

We congratulate the winners, and we thank all of you who responded to the Annual Meeting evaluation. The results of the evaluation will be published in the May or June issue of *GSA News & Information*.

1987 ANNUAL MEETING • PHOENIX, ARIZONA

FIRST ANNOUNCEMENT available: APRIL 1
ABSTRACTS DEADLINE: JUNE 11
REGISTRATION ANNOUNCEMENT available: AUGUST 1
PREREGISTRATION DEADLINE: SEPTEMBER 25

For information: Meetings Department
GSA Headquarters
P.O. Box 9140
Boulder, CO 80301
(303) 447-2020

PHOENIX



CENTENNIAL NEWS

by Allison (Pete) Palmer

1986 Summary

Despite frustrations due to the DNAG Project moving more slowly than desired, predicted, scheduled, etc., 1986 was a busy year and a great deal of progress was made. Two books and three transects were published, two more books were in final production stages on December 31, and 19

more books are inching their way toward completion. Nine more volumes by the Geological Survey of Canada are in development.

The status of the 19 books to be published by GSA, as of December 31, 1986 is as follows:

	Chapters in production	Chapters in revision	Total chapters received	Chapters still due
<i>Geology of North America</i>				
Caribbean Region	9	6	15	3
Atlantic Margin	24	4	28	4
Precambrian	1	1	2	6
Appalachian/Ouachita	20	4	24	7
Sedimentary Cover	6	3	9	9
Arctic Ocean Region	13	10	23	9
Nonglacial Quaternary	1	9	10	11
U.S. Cordillera	2	7	9	12
Eastern Pacific	12	14	26	12
Economic Geology	3	11	14	26
North America Since Last Deglaciation*	1	20		21
Gulf of Mexico Basin*		10		9
Alaska*		19		19
Groundwater Hydrogeology*		38		12
Surface Water Hydrology*		12		1
<i>Centennial Field Guides</i>				
Rocky Mountain Section	99			1
Cordilleran Section	95			5
North-Central Section	87			13
South-Central Section	84			16

*Editors of these 5 volumes are handling the peer review process. Transmittal of revised chapters to GSA ready for production is to begin in 1987.

The in-house action on chapters for DNAG volumes is summarized below:

Geology of North America

- Chapters received for review—121
- Chapters received in final form—74
- Chapters processed to dummy stage—58
- Chapters printed—41 (Western North Atlantic)

Centennial Field Guides

- Chapters submitted for production—360
- Chapters processed to dummy stage—267
- Chapters printed—100 (Southeastern Section)

Centennial Special Volumes

- Chapters submitted for production—14
- Chapters processed to dummy stage—2
- Total chapters received—569
- (Includes both *Geology of North America* chapters received for review and those returned ready for copy-editing.)
- Total chapters processed to dummy stage—329
- Total chapters printed—141
- Total books printed—2

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

PHOENIX

INVITATION TO EXHIBIT

1987 GEOLOGICAL SOCIETY OF AMERICA GEOSCIENCE EXPOSITION

PHOENIX CIVIC CENTER • PHOENIX, ARIZONA • OCTOBER 26-29, 1987

Mountains. Canyons. Lakes. Rivers. Deserts. Indians. Museums. National Parks, National monuments. Palm trees, pine trees, Joshua trees, and 76 species of cacti. And on and on and on. Arizona is a vast, gorgeous state with almost incalculable variety. Geologists will be attracted to this popular destination as GSA meets for the first time in Phoenix.

The geologic wonderland of the Southern Cordillera includes the Rocky Mountains, the Colorado Plateau, much of the Basin and Range province, the Cordilleras of

Mexico, and the Rio Grande rift. Geologists will be treated to an array of field trips in these areas. They will also be challenged by data and conclusions from recent research that shows fresh insights and raises new questions about crustal origins and structure, ore provinces, regional facies, magmatism, intracontinental deformation, plateau uplift, and landscape evolution within this fascinating region.

This promises to be one of the Society's largest, most interesting meetings. Exhibitors can be guar-

anteed an enthusiastic, well-informed and influential group of geologists. The GSA technical and scientific exhibit in Phoenix will be an excellent, *cost-effective* opportunity to reach a unique geologic public. Whether an exhibitor is introducing a new product or service, promoting current products and services, identifying prospects, or gathering information on the competition, this will be the place to be for those wanting to have an impact on buying decisions of this group within the coming year.

ASSOCIATED SOCIETIES MEETING WITH GSA

Cushman Foundation
Geochemical Society
Geoscience Information Society
Mineralogical Society of America
National Association of Geology Teachers
Paleontological Society
Society of Economic Geologists

GSA REGISTRATION HISTORY

1979	San Diego	4,685
1980	Atlanta	4,285
1981	Cincinnati	4,670
1982	New Orleans	4,793
1983	Indianapolis	4,165
1984	Reno	6,065
1985	Orlando	4,409
1986	San Antonio	4,504

FUTURE MEETING DATES

Phoenix, AZ	October 26-29, 1987
Denver, CO	October 31-November 3, 1988
St. Louis, MO	November 6-9, 1989
Dallas, TX	October 29-November 1, 1990
San Diego, CA	October 21-24, 1991
Cincinnati, OH	October 26-29, 1992
Boston, MA	October 25-28, 1993

GSA'S TRADITION IN EXCELLENCE

The Geological Society of America is dedicated to the advancement of the science of geology. For close to 100 years, the Society has served the professional geologic community. From its headquarters, located in Boulder, Colorado, with a membership of more than 17,000, GSA has held a unique place as both leader and sponsor for the geosciences. The Society's primary activities are publication of scientific literature, organization of scientific meetings, and support of geologic research.

Registrants for GSA meetings include all segments of the geologic professions. Most registrants are GSA members with overlapping affiliation of one of the seven societies that meet jointly with GSA, providing a broadly based audience.

On the average, registrants are 95% male and 38 years old. Over 50% are employed by 300 different corporations. The other 50% are employed at over 400 major universities, institutions, and government agencies.

Throughout the course of this Annual Meeting and Exposition, a registrant could attend any of the approximately 80 technical sessions, symposia, short courses, field trips, not to mention the various alumni receptions, athletic events, luncheons, and special activities.

Exhibits are located in high traffic areas next to technical sessions, registration, poster sessions, and employment service. Food and beverage service is available in the exhibit hall on a daily basis as an incentive to attract registrants.

HOW DOES AN EXHIBITOR BENEFIT?

- Exhibiting is an OPPORTUNITY FOR THE SELLER AND THE BUYER TO MEET face-to-face where the products being shown can be demonstrated and handled in a setting controlled by the exhibitor.
- Exhibiting is the most COST-EFFECTIVE MARKETING tool available today. The average cost of reaching people in person individually, door-to-door, is nearly 2½ times the cost of exhibiting for only three days with the possibility of 5,000 prospects viewing your products or services! Cost effective, you bet!
- Registrants are a PRE-SELECTED AUDIENCE, attending the exhibit, there for the purpose of learning about new products and services.
- Exhibits are an OPPORTUNITY TO REACH PEOPLE who are ordinarily not accessible to sales representatives, and to uncover unknown buying interests.
- Exhibits are a place where buyers can do comparative shopping, a place to discuss their problems with technical people, and thus a place where the BUYING PROCESS CAN BE SHORTENED.
- Exhibits are an opportunity to SEE YOUR COMPETITION in a volatile market.

EXHIBITOR SCHEDULES

Move-In

Saturday, Oct. 24—8:00 a.m. to 5:00 p.m.

Sunday, Oct. 25—8:00 a.m. to 4:00 p.m.

Show Hours

Monday, Oct. 26—9:00 a.m. to 6:30 p.m.

Tuesday, Oct. 27—9:00 a.m. to 5:00 p.m.

Wednesday, Oct. 28—8:00 a.m. to 4:00 p.m.

Move-Out

Wednesday, Oct. 28—4:00 p.m. to 9:00 p.m.

Thursday, Oct. 29—8:00 a.m. to 12 noon

For additional exhibitor information complete and mail today:

Please type or print:

Company Name _____

Contact Person _____ Title _____

Address _____

City _____ State _____ Zip/Country _____

Phone () _____ ext. # _____

Describe Product/Service Exhibited: _____

Mail Request to: Kathy Ohmie, Exhibits Manager
Geological Society of America
P.O. Box 9140
Boulder, CO 80301
(303) 447-2020

Looking for a new job?

Are you looking for a new position in the field of geology? The GSA Employment Service offers an economical way to find one. Potential employers use the service to find the qualified individuals they need.

You may register any time throughout the year. Your name will be provided to all participating employers who seek individuals with your qualifications. If possible, take advantage of GSA's Employment Interview Service, which is conducted 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 October 26-29 for the 1987 GSA Annual Meeting in Phoenix, Arizona.

To register, complete the application form on the following page, prepare a one- to two-page résumé, and mail it with your payment to the address given below. One-year listing for GSA Members and Student Associates in good standing: \$25; non-members: \$50.

NOTE: If you plan to interview at the GSA Annual Meeting, GSA must receive your material **no later than August 14, 1987**. If we receive your materials by August 14, 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 October. Good luck with your job search!

For additional information and submission of forms, please contact

Clara Hodgson, Membership Coordinator
Geological Society of America
P.O. Box 9140, Boulder, CO 80301
(303) 447-2020


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 Form 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 1987, the cost of a printout of 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 boldface 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. Résumés for each applicant are available upon request at no additional charge.) If you have any questions about your personalized computerized search, GSA's Membership Department will assist you.

The GSA Employment Service is available year long. However, GSA also conducts the Employment Interview Service each fall in conjunction with the Society's Annual Meeting (this year in Phoenix, Arizona, October 26-29). 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 résumés at no additional charge, and a posting of all job openings.



1987
GEOLOGIC HAZARDS
SYMPOSIUM

MAY 12 - 17, 1987
Including Field Trips and
Technical Sessions


at
THE
ANCHORAGE HILTON HOTEL
ANCHORAGE, ALASKA
USA

TECHNICAL SESSIONS

<p>EARTHQUAKES</p> <ul style="list-style-type: none">• Landslides• Faults• Tsunamis	<p>SHALLOW DRILLING HAZARDS</p> <ul style="list-style-type: none">• Permafrost• Gas-hydrates• Biogenic Gas
<p>HYDROLOGIC HAZARDS</p> <ul style="list-style-type: none">• Auefs• Water Supply Problems• Septic Fields• Avalanches• Outburst Floods	<p>CONSTRUCTION PROBLEMS</p> <ul style="list-style-type: none">• Settlement• Slope Stability• Frost Heave
	<p>VOLCANOES</p> <ul style="list-style-type: none">• Lahars• Ash-falls

SUMMARY SESSION
General - for the Public

CONTACT: WILLIAM PYLE
1987 GEOLOGIC HAZARDS SYMPOSIUM
P.O. BOX 101288
ANCHORAGE, ALASKA 99510
19071 581-1020



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

In Memoriam

Rudolf O. Brunnschweiler
Canberra, Australia
August 8, 1986

Arthur D. Howard
Morehead City, North Carolina
November 22, 1986

Jon C. Cummings
Menlo Park, California
December 18, 1986

Sidney P. Opie
Reno, Nevada
November 5, 1986



**THE
GEOLOGICAL SOCIETY
OF AMERICA**

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

N&I 0387
FOR ACCTG. USE ONLY
Rec. \$25 \$50
Ck # _____
Ltr. _____
GSA _____
Add. _____

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

NAME (Mr. (Miss
(Mrs. (Ms.
(Dr. (last name first) _____ Date _____

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.

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

* 1. _____ 2. _____ 3. _____

*** 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	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	

- * **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

1/87



**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
	321. hydrochemistry	451. invertebrate	550. Planetology	800. Volcanology
200. General Geology	322. ground water	452. vertebrate	575. Quaternary Geology	
220. Geochemistry	323. surface water	453. micropaleontology	600. Regional Geology	
221. organic	330. Library	454. paleobotany	620. Remote Sensing	
222. high temperature	350. Mathematical Geology	455. paleoecology	621. photogeology	
223. low temperature	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) _____

More GSA Representatives Needed!

Two years ago, GSA launched a new representative program, targeting companies, agencies, and consultants throughout the country. The purpose was to broaden GSA's representation to include all employment sectors. The program was modeled on the successful campus representative program that was begun in 1979 and now includes 435 representatives at colleges and universities throughout North America.

We now have 67 company, 36 agency, and 35 consultant GSA representatives. However, we need more volunteers. Our goal is to designate a representative at all major company offices and governmental agencies throughout the country. For example, we hope to have a GSA representative for Exxon in Thousand Oaks, for Chevron in San Ramon, for the Oklahoma Geological Survey in Norman, for the Geological Survey of Canada in Vancouver, for the U.S. Geological Survey in Tucson, etc. We want to develop a similar liaison with GSA members who are self-employed and serve as consultants. They would also represent major cities and geographic regions.

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

- *Bulletin*, *Geology*, and *News & Information* every month
- 20% discount on GSA books, maps, and charts
- \$25 discount for GSA's Employment Service (applicants)
- \$10 discount for registration fees for Penrose Conferences
- \$20 reduction in Student Associate registration fees for GSA's Annual Meeting
- \$40 reduction on Member/Fellow registration fees for GSA's Annual Meeting
- Reduced registration fees for many GSA section meetings
- Reduced dues for spouse members

- 25% discount on Member Standing Order Plan
- Special discounts on Decade of North American Geology publications
- Group term life insurance plan at reduced member rates
- Opportunity to participate in GSA's specialized divisions and to receive their newsletters
- Opportunity to apply for student grants-in-aid in the Southeastern Section
- Discount for subscriptions to *Engineering Geology Abstracts* for Engineering Geology Division affiliates
- Discount for National car rentals
- 25% discount on many Geological Society of London publications
- Reduced subscription rates for publications of the American Institute of Physics
- Opportunity to participate and vote in the chosen section
- Opportunity to vote in election of officers (Members and Fellows only)

We need your help to continue this communications link between GSA headquarters and the membership of the Society. If you are a Member or Fellow (not Student Associate) and are interested in serving GSA as a representative for your company, agency, or group of the employment sector, please complete and return the form below. Play an active role in the affairs of your Society and be the first in your area to represent GSA!

We thank the following GSA representatives now serving to keep the program growing.

CURRENT GSA REPRESENTATIVES

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Steven W. Nelson—U.S. Geological Survey, Anchorage

Arizona

Peter A. Drobeck—Kingman
David A. Stephenson—Dames & Moore, Phoenix

(continued on p. 70)

APPLICATION FOR REPRESENTATIVE

I would like to represent GSA as a

- GSA Company/Corporate Representative GSA Self-Employed/Consultant Representative
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(Federal, State/Province, or Local)

Name of the Company, Agency, or Group you wish to represent: _____

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(Please print) _____

Business Phone: () _____

Mail form to:

Clara Hodgson, Membership Coordinator, Geological Society of America, P.O. Box 9140, Boulder, CO 80301, (303) 447-2020

GSA Reps (continued from p. 70)

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Mark Adams—Dames & Moore, San Francisco
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Stephen M. Decker—Texaco, Los Angeles
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William H. Price—Rockwell Hanford Operations, Richland

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Robert Raymond, Jr.—Los Alamos National Laboratories, Los Alamos
Robert E. Riecker—Los Alamos National Laboratories, Los Alamos
Margaret A. Rogers—Margaret Anne Rogers & Associates, Inc., Los Alamos

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Joseph Sarnecki—Carter Mining Company, Gillette

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Meredith Eggers Ostrom—Wisconsin Geological & Natural History Survey, Madison

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Raymond W. Mitchell—Conoco, Inc., Ponca City
David A. Morris—Phillips Petroleum Company, Bartlesville

Texas

Robert S. Barnard—Corpus Christi
Tori B. Barr—Exxon Company, Midland
William P. Bosworth—Marathon International Oil Company, Houston
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Richard George Chalcraft—Chevron USA, Midland
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G. Thomas Farmer, Jr.—ERT-A Resource Engineering Company, Houston
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Andrew H. Rorick—U.S. Forest Service, Lufkin
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Ted A. Maxwell—Smithsonian Institution
Susan L. Richardson—National Museum of Natural History

Maryland

William C.B. Gates—U.S. Army Environmental Hygiene Agency, Aberdeen Proving Ground
Charles Frederick Wall—Bechtel, Inc., Gaithersburg

(continued on p. 71)

GSA Repts (continued from p. 69)

Massachusetts

Timothy H. Ling—U.S. Geological Survey, Woods Hole

New York

Robert H. Fickies—New York State Geological Survey, Albany
James M. Gibson—Amerada Hess Corporation, New York
Eileen D. Gilligan—Syracuse, New York State
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David L. Palmerton, Jr.—Buffalo and western New York State
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David E. Hassrick—Applied Geotechnical & Environmental Service Corporation, Norristown
Kevin D. Svitana—Benatec Associates, Harrisburg

Province Quebec

Pierre LaSalle—Quebec Department of Energy & Resources

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Theodore M. Gurr—Gurr & Associates, Lakeland
Robert J. Kinsley-Momberger—Environmental Science & Engineering, Inc., Gainesville
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Walter Schmidt—Florida Geological Survey, Tallahassee

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Peter Clyde Johnston—Roy F. Weston, Inc., Decatur

Kentucky

Ian McKay Johnston—Kentucky Geological Survey, Lexington

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Steven K. Mittweide—South Carolina Geological Survey, Columbia

Tennessee

Phyllis M. Garman—Garman Geologic Consulting, Nashville

Virginia

Bruce Doe—U.S. Geological Survey, Reston
Wilson N. Felder—TRW Systems Division, McLean
John J. Hnat—Amherst
Eileen M. Sullivan—Virginia Water Control Board, Richmond

Other

India

Ram N. Choudhary—Oil & Natural Gas Commission, Bombay

The Netherlands

Adrian F. Richards—Fugro Geotechnical Engr., B.V.

New and Recent Publications from GSA

Below is a list of publications released by GSA in the past few months—an addendum to our publications catalog, which will be revised this year—and some to be published soon.

If gaps in the publication sequence appear in the listing below, check our current catalog. The “missing” item may already be listed there.

Copies of GSA's current publication catalog, including complete listings of DNAG publications, are available free from GSA Marketing, P.O. Box 9140, Boulder, CO 80301.

Memoir 164: *Blueschists and Eclogites*, 1986, edited by B. W. Evans and E. H. Brown. 8½" × 11" format, hardbound, 432 pages, with illustrated dust cover, with CIP, ISBN 0-8137-1164-9. List price: \$55.00.

Special Paper 202: *Correlation of Silurian Rocks of China*, 1986, edited by A. J. Boucot and W.B.N. Berry. 8½" × 11" format, paperback, 88 pages, plus one oversize pocket-plate, with CIP, ISBN 0-8137-2202-0. List price: \$16.50.

Special Paper 205: *The Geology and Geochemistry of Cenozoic Topaz Rhyolites from the Western United States*, 1986, by E. H. Christiansen, M. F. Sheridan, and D. M. Burt. 8½" × 11" format, paperback, 88 pages, with CIP, ISBN 0-8137-2205-5. List price: \$16.00.

Special Paper 206: *Relative Motions Between Oceanic and Continental Plates in the Pacific Basin*, 1986, by David C. Engebretson, Allan Cox, and Richard G. Gordon. 8½" × 11" format, paperback, 64 pages, with CIP, ISBN 0-8137-2206-3. List price: \$12.50.

Special Paper 208: *Extensional Tectonics of the Southwestern*

***United States: A Perspective on Processes and Kinematics*, 1986, by Larry Mayer. 8½" × 11" format, paperback, 130 pages, with CIP, ISBN 0-8137-2208-X. List price: \$17.50.**

Special Paper 210: *Paleoenvironmental and Tectonic Controls in Coal-Forming Basins of the United States*, 1987, edited by Paul C. Lyons and Charles L. Rice. 8½" × 11" format, paperback, 208 pages, with CIP, ISBN 0-8137-2210-1. List price: \$25.00.

MC-51: *Geologic Map and Description of Structure and Stratigraphy, La Madre Mountain, Spring Mountains, Nevada*, 1985, by Gary J. Axen. One 2-color sheet, 30" × 46", with 17-page text. List price: \$11.50 rolled; \$9.50 folded.

MC-53: *Residual Magnetic Anomaly Chart of the Arctic Ocean Region*, 1986, compiled by L. C. Kovacs and others. One sheet in color, 40" × 51", with text on chart and data on obverse side, supplied in illustrated file envelope. Only available folded. List price: \$8.00.

MC-54: *Regional Geologic Cross-Section Series of Neogene-Quaternary Deposits, Louisiana Continental Shelf*, 1986, by Gerald L. Shideler. Four sheets, 42" × 58", with 2-page text, in two file envelopes. List price: \$30.00 rolled; \$28.00 folded.

MC-55: *Geologic Map of the Lake Atitlan Volcanoes*, 1986, by Glen T. Penfield and others. One sheet, 25" × 30", with 1-page text. List price: \$11.00 rolled; \$9.00 folded.

MC-57: *The Geology of Ellsworth Mountains, Antarctica*, 1986, by Campbell Craddock and others. One sheet in color, 33" × 59". List price: \$11.00 rolled; \$9.00 folded.

(continued on p. 72)

New GSA Publications (continued from p. 71)

MC-58: *Tectonic Strip Maps of Alpine-Himalayan and Circum-Pacific Orogenic Belts (Great Circle Projections)*, 1986, by William R. Dickinson and others. One sheet, 40½" × 63", with text on maps. List price: \$13.00 rolled; \$11.00 folded.

MC-59: *The Geology of Plate Margins*, 1986, by Gregory R. Wessel. One 4-color sheet, 38½" × 52½", detailed text on map. List price: \$14.50 rolled; \$12.50 folded.

MC-59A: *The Geology of Plate Margins*, 1986, by Gregory R. Wessel. A super classroom or field aid! Packs of 10 sheets of notebook-sized, full-color version of MC-59; specially coated to resist moisture and wear. List price: \$12.00.

MP-16: *Bibliography and Index of Paleozoic Crinoids, 1974-1980*, by G. D. Webster. On 5 microfiche cards, in 98-frame, 24× format. List price: \$10.00.

Centennial Field Guide Volume 6: Southeastern Section of GSA, 1986, edited by T. L. Neathery. 8½" × 11", hardbound, 477 pages, with CIP, ISBN 0-8137-5406-2. List price: \$40.50.

Geology of North America Volume M: The Western North Atlantic, 1986, edited by P. R. Vogt and B. E. Tucholke. 8½" × 11", hardbound, 720 pages, 11 plates in slipcase, with CIP, ISBN 0-8137-5202-7. List price: \$47.50.

Continent-Ocean Transect G: Canadian Arctic, Somerset Island to Canada Basin, 1986, by J. F. Sweeney and others. Two sheets in color, 40½" × 57", with 5-page text. List price: \$17.40 folded; \$19.40 rolled.

Coming soon

Special Paper 209: *The Cretaceous-Tertiary boundary in the San Juan and Raton basins, New Mexico and Colorado*, 1987, edited by James E. Fassett and J. Keith Rigby.

Memoir 166: *Structural Fabrics in Deep Sea Drilling Project Cores from Forearcs*, 1987, edited by J. Casey Moore.

MC-28S: *Geologic Section Maps Across Brooks Range and Arctic Slope to Beaufort Sea, Alaska*, 1987, by C. G. Mull and others. One sheet, in color, 42" × 58", in an oversize illustrated file envelope. Available folded or rolled.

MC-56: *Bathymetry of the Arctic Ocean*, 1987, compiled by R. K. Perry and H. S. Fleming. One sheet in color, 43" × 59", in illustrated file envelope. Only available folded.

Call for 1988 Field Trips

**GSA Centennial Celebration • Denver, Colorado
October 31-November 3, 1988**

Field trips for the **GSA Centennial Celebration 1988** should have a flavor different from field trips for our regular annual meetings. Not only are the paradigms for interpretation of geologic data in all parts of earth science largely different, but many have been replaced. Looking back to the past to see how our thought processes have changed can help prepare us for the similar changes that no doubt will take place in the next 100 years.

In keeping with the GSA Centennial theme, the focus of the trips should be on geologic problems or areas of classic geology about which our understanding now is much different from what it was 100 years ago. Flamboyant notions such as "Along Part of the 40th Parallel with King" would be welcome.

The following guidelines should be followed:

- Eighteen to perhaps as many as 24 field trips, about evenly divided before and after the meeting, will be selected from those offered.

- Pre-Centennial trips may start and end at any point of convenient access, but travel to Denver at the conclusion of the trip should be arranged.

- Post-Centennial trips should start in Denver; travel to initial point should be part of the field trip. The trip may end at any convenient point for dispersal.

- Length should be 1-3 days for most trips, but longer ones are possible.

- Although the trips will have a topical or areal orientation, as much information as possible should be included on development of geologic knowledge and changes in concepts as our science has matured in the past 100 years.

It will be helpful if all proposals can be in the same format, and a form has been prepared for your use. In order for the summer of 1987 to be available to field trip leaders for work on the trip, as needed, please respond by **April 30, 1987**. Write or call one of the addresses or phone numbers below, and the form will be sent to you along with a brief statement of duties and responsibilities of field trip leaders.

1988 Field Trip Chairman
Gregory S. Holden
Geology Department
Colorado School of Mines
Golden, CO 80401
Phone: (303) 273-3800

or
GSA Headquarters
Meetings Department
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Boulder, CO 80301
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Geological Society of America



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CRITERIA

Requirements for the Fellowship should include a Ph.D. and 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 \$25,000 stipend and a limited relocation and travel allowance.

TO APPLY

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The Decade of North American Geology DNAG



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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

B-3: Juan de Fuca Spreading Ridge to Montana Thrust Belt

D.S. Cowan, C.J. Potter, 1985. Three sheets in color, each 50" x 40"

TRA B-3 Rolled \$26.30; folded \$24.30

C-2: Central California Offshore to Colorado Plateau (San Francisco to Socorro)

J. Saleeby and others, 1986. Two sheets in color, 40½" x 56"

TRA C-2 Rolled \$18.20; folded \$16.20

C-3: Pacific Abyssal Plain to the Rio Grande Rift

D.G. Howell, J.D. Gibson, G.S. Fuis, J.H. Knapp, G.B. Haxel, B.R. Keller, L.T. Silver, J.G. Vedder, 1985. Three sheets in color, each 54½" x 41"

TRA C-3 Rolled \$24.50; folded \$22.50

D-1: Northern Appalachian: (West sheet) Grenville Province, Quebec, to Newfoundland. (East sheet) Rifted Margin Offshore Northeast Newfoundland

R.T. Haworth, H. Williams, C.E. Keen, 1985. Two sheets in color, each 56½" x 41"

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, 1985. One sheet in color, 38" x 57"

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, 1985. One sheet in color, 38" x 57"

TRA D-3 Rolled \$ 9.50; folded \$ 7.50

D-4: Rifted Continental Margin Off Labrador

C.E. Keen, R.T. Haworth, 1985. One sheet in color, 32" x 54½"

TRA D-4 Rolled \$ 9.50; folded \$ 7.50

G: Canadian Arctic, Somerset Island to Canada Basin

J.F. Sweeney and others, 1986. Two sheets in color, 40½" x 57", with 5-page text

TRA G Rolled \$19.40; folded \$17.40

VOLUMES

Centennial Special Volumes

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

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edited by Ellen T. Drake and William M. Jordan, 1985.

CSV-1, 520 p., ISBN 0-8137-5301-5, CIP, hard bound \$37.50

Centennial Field Guides

Six volumes prepared by each of the six sections of GSA describing 100 outstanding geologic localities within that Section.

Centennial Field Guide, Volume 6, Southeastern Section of GSA.

edited by T.L. Neathery, 1986.

CFG-6, 477 p., ISBN 0-8137-5406-2, CIP, hardbound \$40.50

Geology of North America

The centerpiece of the DNAG project, a modern synthesis of the geology and geophysics of North America and adjacent oceanic regions.

Geology of North America, Volume M, The Western North Atlantic Region.

edited by P.R. Vogt and B.E. Tucholke, 1986.

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THE GEOLOGICAL SOCIETY OF AMERICA

MEETINGS

(Asterisk indicates new or changed information)

1987

Prospectors and Developers Association of Canada 55th Annual Convention, March 8-11, 1987, Toronto, Ontario. Information: Susan Sikala, Prospectors and Developers Association, Suite 420, 74 Victoria St., Toronto, Ontario M5C 2A5, Canada; (416) 362-1969.

U.S. Geological Survey Third Annual McKelvey Forum, on all aspects of mineral resources research in the U.S. Geological Survey, March 11-12, 1987, Denver, Colorado. Information: Buhler and Abraham, Inc. (Forum organizers), (301) 681-3980.

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.

Ninth Geophysical Convention of Turkey, March 23-27, 1987, Ankara, Turkey. Information: TMMOB Jeofizik Mühendisleri Odası, Türkiye Jeofizik Bilimsel ve Teknik Kurultayı, Yürütme Kurulu, Bayindir Sok. 7/14. P.K. 255, Kizilay-Ankara, Turkey.

Seismological Society of America Annual Meeting, March 25-27, 1987, Santa Barbara, California. Information: SSA Headquarters, 6431 Fairmount Ave., Suite 7, El Cerrito, CA 94350; (415) 525-5474.

Workshop to Develop Scientific Drilling Initiatives in the South Atlantic and Adjacent Southern Ocean, April 6-8, 1987, Woods Hole, Massachusetts. Information: J. A. Austin, Jr., Inst. for

Geophysics, University of Texas, 4920 North I.H. 35, Austin, TX 78751.

23rd Annual Symposium on Engineering Geology and Soils Engineering, April 6-9, 1987, Logan, Utah. Information: James McCalpin, Department of Geology, Utah State University, Logan, UT 84322-0705; (801) 750-1273.

7th Biannual Petroleum Conference of Turkey, April 6-10, 1987, Ankara, Turkey. Information: Necdet Pamir Türkiye, Petrolleri A.O. Üretim Grubu Müdafaa Cad. No: 22 Bakanlıklar, Ankara, Turkey; telephone 17 91 60/453-553.

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.

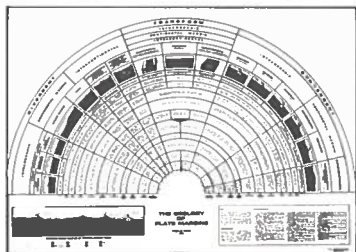
Mathematical Geologists of the United States 1987 Conference, Emerging Concepts, April 13-15, 1987, Redwood City, California. Information: Harry M. Parker, Fluor Engineering, Inc., 10 Twin Dolphin Dr., Redwood City, CA 94065.

Geologic Causes of Natural Radionuclide Anomalies, April 21-22, 1987, St. Louis, Missouri. Information: GEORAD Conference, Missouri Dept. of Natural Resources, P.O. Box 250, Rolla, MO 65401; (314) 364-1752.

Association for Women Geoscientists 10th Anniversary Conference, April 23-26, 1987, San Francisco, California.

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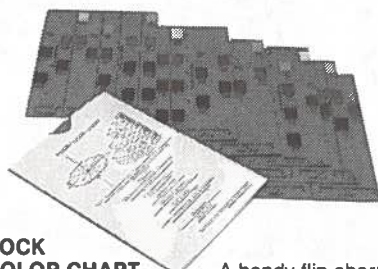
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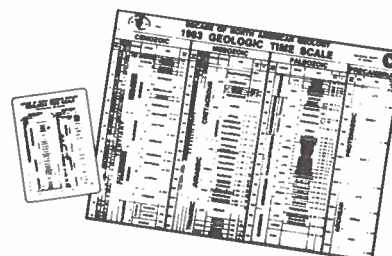
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Meetings (continued from p. 75)

Information: Association for Women Geoscientists, Resource Center for Associations, 10200 W. 44th Ave., 304, Wheat Ridge, CO 80033; (303) 422-2615.

Society of Economic Paleontologists and Mineralogists Permian Basin Section Spring Field Conference, April 29–May 2, 1987. Information: Chris Chandler, P.O. Box 2990, Midland, TX 79702; (915) 675-0575.

National Association of Geology Teachers Eastern Section Annual Meeting and Field Trips, May 1–3, 1987, Stone Ridge, New York. Information: Lawrence R. Matson, Dept. of Geology, Ulster County Community College, Stone Ridge, NY 12484; (914) 687-7621, ext. 371.

Canadian Institute of Mining and Metallurgy 89th Annual Meeting, May 3–7, 1987, Toronto, Ontario. Information: Ivana Savic, CIM, 1130 Sherbrooke St. W., Suite 400, Montreal, Quebec H3A 2M8, Canada; (514) 842-3461.

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.

10th Annual Spring Systematics Symposium, Evolutionary Ideas of Progress, May 9, 1987, Chicago, Illinois. Information: Matthew H. Nitecki, Field Museum of Natural History, Roosevelt Rd. at Lakeshore Dr., Chicago, IL 60605-2496; telephone (312) 922-9410.

Institute on Lake Superior Geology Annual Meeting, May 11–14, 1987, Wawa, Ontario. Information: E. D. Frey, P.O. Box 57, Wawa, Ontario P0S 1K0, Canada; (705) 856-4883.

Geology of Industrial Minerals, 23rd Annual Forum, May 11–15, 1987, North Aurora, Illinois. Information: James W. Baxter, Illinois State Geological Survey, 615 E. Peabody Dr., Champaign, IL 61820; (217) 333-5107.

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.

Geologic Hazards Symposium, May 12–17, Anchorage, Alaska. Information: William Pyle, 1987 Geologic Hazards Symposium, P.O. Box 101288, Anchorage, AK 99510.

Midwest Friends of the Pleistocene Annual Meeting, May 15–17, 1987, Mansfield, Ohio. Information: John P. Szabo, Dept. of Geology, University of Akron, Akron, OH 44325; (216) 375-7630.

International Geoscience and Remote Sensing Symposium, May 18–21, 1987, Ann Arbor, Michigan. Information: Joan Eadie, Secretariat, University of Michigan Extension Service, Dept. of Conferences and Institutes, 200 Hill St., Ann Arbor, MI 48104-3297.

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.

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Meetings (continued from p. 76)

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.

28th U.S. Symposium on Rock Mechanics, June 29-July 1, 1987, Tucson, Arizona. Information: 28th U.S. Symposium on Rock Mechanics, Special Professional Education, Box 9, Harvill Bldg., University of Arizona, Tucson, AZ 85721; (602) 621-5104 or 621-3054.

***Society of Professional Well Log Analysts 28th Annual Symposium**, June 29-July 3, 1987, London, England. Information: SPWLA Symposium, c/o The Geological Society, Burlington House, Piccadilly, London W1V 0JU, England.

First International Congress, Geochemistry and Cosmochemistry, June 30-July 6, 1987, Paris, France. Information: C. J. Allegre, Lab. de Géochimie et Cosmochimie, 4 place Jussieu, Tour 14, 3 étage, 75252 Paris Cedex, France; telephone 43.54.84.63.

Growth of Continental Crust workshop, July 13-17, 1987, Oxford, England. Information: Pamela Jones, Lunar and Planetary Institute, 3303 NASA Road 1, Houston, TX 77058.

Second Symposium on the South Atlantic Evolution, July 23-25, 1987, Rio de Janeiro, Brazil. Information: Dimas Dias-Brito, Ilha do Fundão, Quadra 7, Rio de Janeiro - 21.910 - Brazil; and P. Y. Berthou, Lab. de Géologie des Bassins Sédimentaires,

Tour 14-15, 4 étage, 4 place Jussieu, 75252 Paris Cedex 05, France.

Tectonic Setting of Layered Intrusives, July 27-28, 1987, Pretoria, South Africa. Information: Secretary, Indaba Organising Committee, Dept. of Geology, University of Pretoria, Pretoria, South Africa.

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.

5th Magmatic Sulphide Field Conference, August 3-13, 1987, Zimbabwe. Information: A. Martin, Geological Society of Zimbabwe, P.O. Box 8427, Causeway, Harare, Zimbabwe.

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.

Devonian System 2nd International Symposium, August 17-20, 1987, Calgary, Alberta. Information: Second International Symposium Devonian System, c/o Canadian Society of Petroleum Geologists, 505, 206 - 7 Ave. S.W., Calgary, Alberta T2P 0W7, Canada; (403) 264-5610.

7th International Conference on Basement Tectonics, August
(continued on p. 78)

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Meetings (continued from p. 77)

17-21, 1987, Kingston, Ontario, Canada. Information: Bob Mason, c/o Events Management Inc., 4 Catarauqui St., Suite 209, Kingston, Ontario K7K 1Z7, Canada; (613) 547-5093.

Society of Economic Paleontologists and Mineralogists Fourth Annual Midyear Meeting, August 20-23, 1987, Austin, Texas. Information: SEPM, P.O. Box 4756, Tulsa, OK 74159; (918) 743-9765.

XVI Pacific Science Congress, August 20-30, 1987, Seoul, Korea. Information: Choon Ho Park, XVI Pacific Science Congress, K.P.O. Box 1008, Seoul 110, Korea; telephone (2) 733-4478; Telex ILSKOR 23881.

International Symposium on Nonmarine Cretaceous Correlations, August 25-30, 1987, Urumqi, China. Information: Shen Yanbin, Nanjing Institute of Geology & Paleontology, Nanjing, People's Republic of China; or Niall J. Mateer, 1467 N. 17th, Laramie, WY 82070.

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.

***Third International Symposium on Observation of the Continental Crust through Drilling**, September 7-10, 1987, Mora and Orsa, Sweden. Information: Deep Drilling in Crystalline Bedrock, c/o Stockholm Convention Bureau, Box 6911, S-10239 Stockholm, Sweden.

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.

International Workshop on Computerized Basin Analysis, September 7-12, 1987, Szeged, Hungary. Information: Laszlo Somos, Geological Survey of Hungary, Pf. 106, H-1442, Budapest, Hungary; telephone (36-1) 634 431; Telex 225 220 mafi h.

***International Symposium on the Terminal Precambrian and Cambrian Geology**, September 8-14, 1987, Yichang, China. Information: Wang Xiaofeng, secretariat, Yichang Institute of Geology and Mineral Resources, Chinese Academy of Geological Sciences, P.O. Box 502, Yichang, Hubei, China.

American Association of Petroleum Geologists Rocky Mountain Section meeting, September 13-16, 1987, Boise, Idaho. Information: David H. Hawk, J.R. Simplot Co., 999 Main St., Boise, ID 83707; (208) 336-2110.

18th Annual Geomorphology Symposium on Catastrophic Flooding, September 26-28, 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.

Fifth International Flint Symposium, September 27-October 2,

1987, Bordeaux, France. Information: 5th International Flint Symposium, Secretaire General, c/o Michel Lenoir, Institut du Quaternaire, Batiment de Géologie, Avenue des Facultés, Université de Bordeaux I, 33405 Talence Cedex, France.

Troodos 87: Ophiolites and Oceanic Lithosphere, October 5-10, 1987, Nicosia, Cyprus. Information: Troodos 87 Symposium, Geological Survey Dept., Nicosia, Cyprus.

***Society of Economic Paleontologists and Mineralogists Great Lakes Section Annual Meeting** and fall field trip, October 9-11, 1987, southern Indiana. Information: J. R. Dodd, Dept. of Geology, Indiana University, Bloomington, IN 47405; (812) 335-5322 or 5581.

Geothermal Resources Council Annual Meeting, October 12-16, 1987, Sparks, Nevada. Information: Geothermal Resources Council, P.O. Box 1350, Davis, CA 95617-1350; (916) 758-2360.

Mathematical Methods in Geology, 16th Annual Geochautauqua, October 12-16, 1987, Pribiam, Czechoslovakia. Information: V. Nemec, Geindustria, Geologicka 2, 152 00 Praha 5, Barrandov, Czechoslovakia; telephone (42-2) 590228 or (42-2) 7811801.

Society of Economic Paleontologists and Mineralogists Gulf Coast Section 8th Annual Research Conference, Paleontological Applications in Petroleum Exploration, December 6-9, 1987, Houston, Texas. Information: Charles L. McNulty, Dept. of Geology, University of Texas, UTA Box 19049, Arlington, TX 76019; (817) 273-2979.

GSA 1987

Section Meetings

Northeastern Section, March 4-7, 1987, Pittsburgh, Pennsylvania
Southeastern Section, March 26-27, 1987, Norfolk, Virginia
South-Central Section, March 30-31, 1987, Waco, Texas
North-Central Section, April 30-May 1, 1987, St. Paul, Minnesota
Rocky Mountain Section, May 2-4, 1987, Boulder, Colorado
Cordilleran Section, May 20-22, 1987, Hilo, Hawaii

Annual Meeting, October 26-29, Phoenix, Arizona

Penrose Conferences

Geochemistry of Waters in Deep Sedimentary Basins, March 16-20, 1987, Oxnard, California. Information: Yousif K. Kharaka, U.S. Geological Survey, Water Resources Division, M.S. 427, 345 Middlefield Rd., Menlo Park, CA 94025; (415) 323-8111, ext. 2523.

Late Quaternary Sea Level: The Marine and Terrestrial Record, April 6-12, 1987, Ferry Reach, Bermuda. Information: James L. Carew, Dept. of Geology, College of Charleston, Charleston, SC 29424; (803) 792-5589.

The Construction of Geological Cross Sections: Techniques, Assumptions, and Methods, May 3-8, 1987, Rosendale, New York. Information: Peter A. Geiser, Dept. of Geology and Geophysics, University of Connecticut, Storrs, CT 06268; (203) 486-4432 or 4433.

Glacial Facies Models, May 3-8, 1987, Manitoulin Island, Ontario. Information: Nicholas Eyles, Dept. of Geology, Scarborough Campus, University of Toronto, Scarborough, Ontario M1C 1A4, Canada; (416) 284-3336.

Geological Decisions for the 21st Century, July 12-17, 1987, Steamboat Springs, Colorado. Information: David A. Stephenson, Dames & Moore, Pointe Corporate Centre, 7500 North Dreamy Draw Dr., Suite 145, Phoenix, AZ 85020; (602) 371-1110.

Paleoenvironmental Interpretation of Paleosols, September

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Meetings (continued from p. 78)

11-17, 1987, Warm Springs Indian Reservation, Oregon. Information: Greg Retallack, Dept. of Geology, University of Oregon, Eugene, OR 97403-1272.

Cordilleran Metamorphic Core Complexes, Revisited: Implications for Crustal Extension and Shortening in the North American Cordillera, September 13-18, 1987, Elko, Nevada. Information: Arthur W. Snoke, Dept. of Geology and Geophysics, P.O. Box 3006, University of Wyoming, Laramie, WY 82071; (307) 766-5457.

***Exposed Cross Sections through the Continental Crust,** September 27-October 2, 1987, Killarney, Ontario, Canada. Information: David M. Fountain, Dept. of Geology & Geophysics, University of Wyoming, P.O. Box 3006, University Station, Laramie, WY 82071.

1988

Bicentennial Gold 88, May 16-20, 1988, Melbourne, Australia. Information: R. R. Keays, Dept. of Geology, University of Melbourne, Parkville, Victoria 3052, Australia; telephone (03) 345 1844; Telex AA35185. (Abstracts due September 30, 1987.)

Geological Association of Canada-Mineralogical Association of Canada-Canadian Society of Petrological Geologists Joint Annual Meeting, May 22-25, 1988, St. John's, Newfoundland. Information: John Fleming, Newfoundland Dept. of Mines and

Energy, P.O. Box 4750, St. John's, Newfoundland A1C 5T7, Canada; (709) 576-2768.

Case Histories in Geotechnical Engineering 2nd International Conference, June 1-5, 1988, St. Louis, Missouri. Information: Shamsheer Prakash, Room 308, Dept. of Civil Engineering, University of Missouri, Rolla, MO 65401; (314) 341-4461. (Abstracts due March 31, 1987.)

Seismic Probing of the Continents and Their Margins International Symposium, July 6-8, 1988, Canberra, Australia. Information: Jim Leven, Bureau of Mineral Resources, P.O. Box 378, Canberra, ACT 2601, Australia; telephone (062) 499111; Telex AA62109.

Permafrost 5th International Conference, August 2-5, 1988, Trondheim, Norway. Information: V International Conference on Permafrost, Norwegian Institute of Technology, Studies Administration, N-7034 Trondheim-NTH, Norway.

***International Symposium on Engineering Geology: Study, Preservation and Protection of Ancient Works, Monuments and Historical Sites,** September 19-23, 1988, Athens, Greece. Information: Paul G. Marinos, Greek Committee of Engineering Geology, 1988 Symposium Secretariat, P.O. Box 19140, GR-117 10 Athens, Greece; Telex 45 4312 POLX. (Summaries of papers due April 30, 1987.)

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1987 GSA Annual Meeting

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