

GSA NEWS & INFORMATION

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Penrose Conferences Stimulate New Ideas, Research

By Faith Rogers

If you go to a Penrose Conference, expect an intense, focused experience, away from everyday distractions. The GSA-sponsored conferences, now in their 15th year, provide an opportunity for about 70 geoscientists per conference to live, work, and relax together, concentrating on one main subject.

A total of 74 Penrose Conferences have been held since 1969, when Brian J. Skinner, assisted by Robert E. Wallace, convened the first one, "Depositional Environment of the Porphyry Coppers" in Tucson, Arizona. This conference, organized originally by the Research Committee of the Society of Economic Geologists, was transferred to GSA's auspices by mutual agreement. Sixty-five of the conferences have been held in the United States, five in Canada, and one each in England, France, Italy, and Switzerland.

Penrose Conferences are usually five days long. Participants, who must apply to attend, are housed together, and no guests are permitted. Conferences must be self-supporting, with all expenses covered by attendance fees. The \$400 per person ceiling on costs was lifted by the GSA Council at its May 1983 meeting, in recognition of rising costs in general.

Proposal, Process, Participation

The process of convening a Penrose Conference, described in detail in the guidelines, begins at least one year before the conference. Conveners submit proposals to GSA for consideration by the Committee on Penrose Conferences. The committee prepares recommendations to GSA's Executive Committee (president, vice-president, past president, treasurer, and the chairman of the Committee on the Budget), which makes its decision either by mail ballot or at its next meeting, depending on the timing of the recommendation.

When a conference is approved, the conveners decide whether to use a professional conference coordinator to handle logistics. A majority of Penrose Conferences have been coordinated by Western Experience, headed by former GSA staff member Lois Elms. Conveners have the option, however, of handling planning details—meeting place, lodging, meals, publicity, collection of fees, mailings, etc.—themselves.

Conveners plan the conference program and enlist the key geoscientists needed to make the conference successful. At least one of the conveners must be a GSA member. The organizers must also screen applications to select attendees.

Stimulus, Not Publication

No scientific reports on Penrose Conferences are published, so participants can feel free to discuss controversial subjects and confidential material. Conference conveners prepare summary reports of the conferences, describing the main trends of thought and discussion at the meetings, rather than specific data and concepts presented.

Current Committee

Members of the Committee on Penrose Conferences serve three-year terms. They must either be past conveners or have attended two or more Penrose Conferences. The committee normally meets once a year; however, much of its business is conducted by telephone and mail. It currently consists of Chairman Kevin Burke (1984-1986), State University of New York at Albany; J. Wright Horton, Jr. (1983-1985), U.S. Geological Survey, Reston; George W. Viele, Jr. (1983-1985), University of Missouri, Columbia; and Richard J. Muiola (1984-1986), Mobil Research and Development Corporation, Dallas.

**Penrose Conference
General Guidelines**

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**Penrose Conference
Proposal Guidelines**

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**Calendar of
Penrose Conferences**

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Geology and Glitter: Reno Hosts the Annual Meeting November 5-8, 1984

by Sue Beggs

Reno is a unique combination of attractions. Even though "unique" is a sometimes abused word, it is a suitable adjective for this unusual city. Reno has a lot going for it—splendid geologic region, new hotels and meeting space, sophisticated gaming pleasures, and bigtime show business with top-name talent.

Hotels play a large part in the excitement and glitter that now surround Reno/Tahoe. The prime example is the MGM Grand Hotel, which will be GSA headquarters, with a block of 1,600 rooms. Almost all of the meeting functions, including technical sessions and exhibits, will be located there.

The MGM Grand Hotel is the largest resort hotel in northern Nevada, with 2,001 guest rooms and suites, 24-hour entertainment, sports and recreational facilities, and a two-hour show, "Hello Hollywood, Hello," which includes a DC-10 on stage, the San Francisco earthquake, a flood (6,000 gallons worth), and 150 dancers and singers.

The 26-story hotel, surrounded by 5,000 parking spaces, sits on 145 acres along the Truckee River. It has a huge swimming pool that is larger than Olympic size. The casino area has 100,000 square feet of floor space, larger than two football fields, and holds 2,000 slot machines, 10 crap tables, 102 blackjack tables, and 4 roulette wheels. Its security force is the fourth largest police force in the state of Nevada.

Free transportation will be provided from the MGM to downtown Reno, three highway miles away. Downtown hotels and casinos offer more entertainment features. Gambling is, however, only part of the Reno package. Many people visit Reno without spending a nickel on gaming. They enjoy the shows, the food, and the people-watching.

The Reno area has almost too many other options to enjoy within the time constraints of the GSA meeting. But, if you are thinking of side trips, remember that within a few miles are Lake Tahoe, Carson City, Virginia City, and The Ponderosa Ranch. San Francisco is 250 miles away.

The host committee at the Mackay School of Mines, University of Nevada, is preparing a wide range of field trips to introduce geologists to the region. The committee members are Reno residents who enjoy the area without ever visiting the casinos. They are proud of the variety Reno offers.

Stay tuned for your April *News & Information* for an update on the Reno meeting. This issue will include a listing of the field trips and the symposia, plus any other events scheduled to date.

FOR YOUR GSA RENO CALENDAR

THE 1984 PRESIDENTIAL ELECTION IS NOVEMBER 6. REMEMBER TO VOTE ABSENTEE. CHECK WITH YOUR LOCAL ELECTION BOARD NOW.

June 8	Abstracts Deadline
July 13	Joint Technical Program Committee
July 20	Acceptances Mailed
October 5	Preregistration Deadline
November 1-4	Premeeting Short Courses, Field Trips, and Symposia
November 5-8	Official Meeting Dates
November 8-19	Postmeeting Field Trips

THINK RENO!

NAGT Offers Clearinghouse for Summer Field Courses

Students having trouble finding an opening in a summer geology field course and summer field camps with unfilled openings can be put in touch with each other by contacting Tom Hendrix, Department of Geology, Grand Valley State College, Allendale, MI 49401; (616) 895-3191. Updates of field-camp openings will be made March 1 and April 1 and will be sent, free of charge, to students upon request. Inquiries about openings should

be by letter (with self-addressed, stamped envelope for reply) or by phone (no collect calls will be accepted). Directors who wish their field camps to be included with the service should fill out the form below and return it to Tom Hendrix (address above). Requests for field-camp updates will be sent out February 15 and March 15. This service is not meant to evaluate new or existing summer field courses or to solicit enrollment for any particular camp.

Summer Field Course Openings

.....

Institution _____ Course site _____

Date(s) of Course(s) _____ Sem. or Qtr. Credits _____

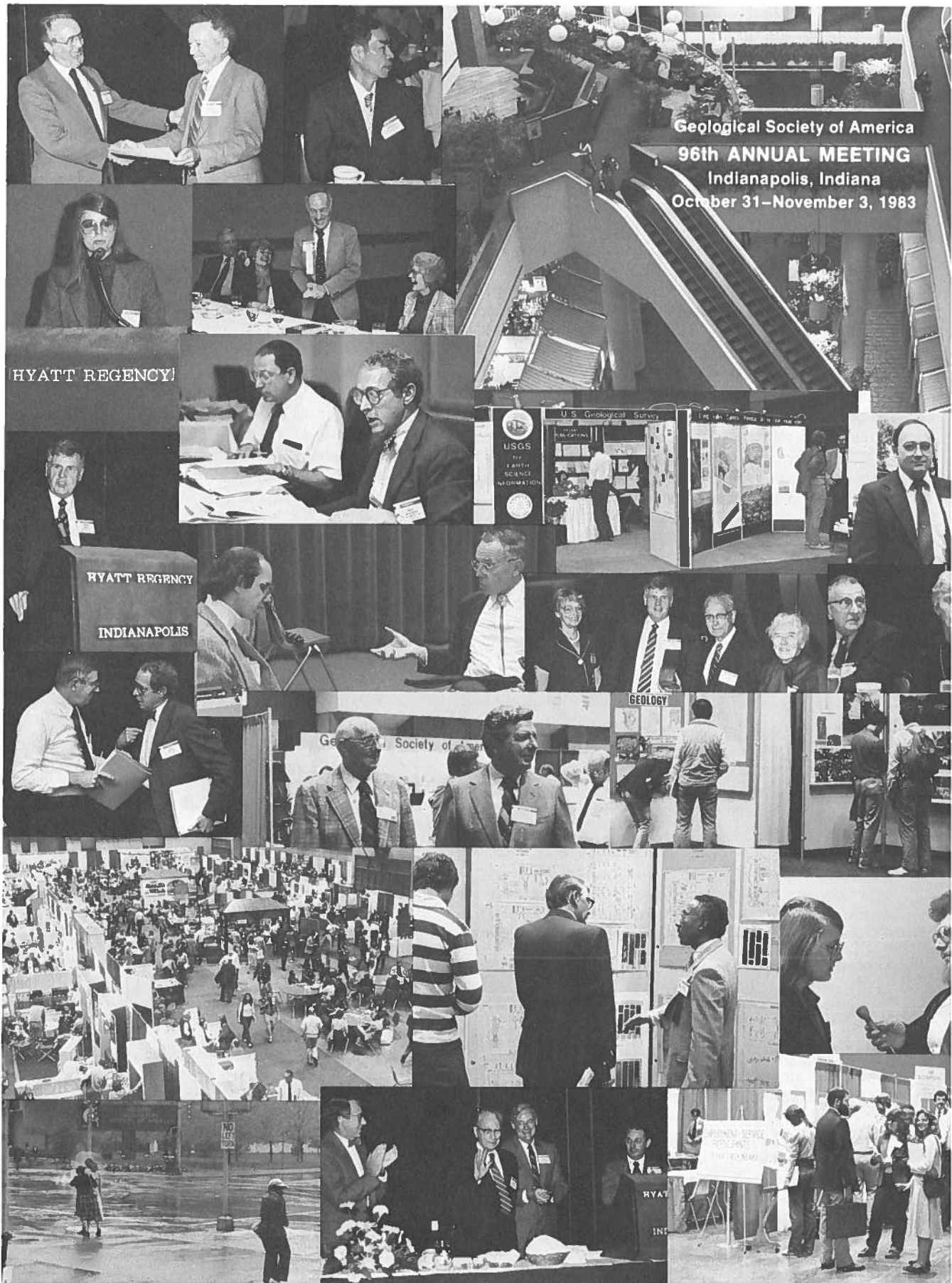
Will your course accept outside students? _____ Yes _____ No

Number of outside openings remaining as of _____

Date _____ No. of openings _____

If full, will you accept names for a waiting list? _____ Yes _____ No

Name, address and phone number of Field Camp Director _____



Geological Society of America
96th ANNUAL MEETING
 Indianapolis, Indiana
 October 31–November 3, 1983

HYATT REGENCY!

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GEOLOGY

Geological Society of America

MEMBER SERVICE REPRESENTATIVE
 THE HYATT REGENCY



PENROSE CONFERENCE GENERAL GUIDELINES

PURPOSE

The Penrose Conferences were established by the Geological Society of America in 1969 as an important effort in its promotion of the earth sciences. The conferences provide the opportunity for exchange of current information and exciting ideas pertaining to the science of geology and related fields. They are intended to stimulate and enhance individual and collaborative research and to accelerate the advance of the science by the interactions and development of new ideas. The conferences consist of a critical mass of active scientists from the Society, the national and international science communities, and students, sequestered in an attractive meeting place for several days of focused discussion. The participants do not seek simply to resolve technical controversies; their objectives are to provide stimulus and excitement for their field, to air new ideas and develop new associations, and to provoke new research on important questions.

SUBJECT

Ideal subjects for conferences are those earth science topics for which recent work suggests a potential for further significant advances in the near future. Each conference subject should be under current investigation and active discussion by able researchers in the field and/or in the laboratory. Topics should be broad enough so that a range of specialists can discuss them from several points of view, but not so broad that a lack of communication can develop.

CONVENERS

Conveners must have technical competence and be knowledgeable about current activities in the specialized fields that are to be represented at a conference. Responsibility for organizing a conference *must be shared by at least two conveners*, each of whom can draw upon his or her own experience and expertise in developing a well-integrated, effective conference program that will foster communication and stimulate research progress among experts in diverse but related fields. At least one of the conveners must be a member of GSA.

SIZE, TIME

It is essential that the conferences be informal. Groups should be small enough that personal discussion among all participants is encouraged, and large enough to provide diversity and depth. As an empirical rule, the maximum number for success is about 80. Normally, the minimum number required to convene a conference is 50.

Typically, conferences in the past have lasted five days. Participants are expected to attend the entire conference, and conferences that are longer than five days tend to force premature departure.

A period of approximately nine to twelve months between the date of approval by the Committee on Penrose Conferences and the date of the conference is normally required. In no case should there be less than six months from the time of conference announcement in *GSA News & Information* and *Geotimes* and the conference dates.

Care should be taken to avoid scheduling conferences at the same time as other scientific meetings, especially other GSA meetings, including other Penrose Conferences. Conveners should check the calendar of events in *Geotimes* before proposing a date. A schedule of future approved and recommended Penrose

Conferences will be provided prospective conveners with these general guidelines.

LOCATION

Essential qualities of a good site are that it be removed from the distraction of other meetings and other demands on the time and attention of the participants. The site should offer adequate meeting facilities and comfortable surroundings where participants can live, eat, work, and relax together. Climate, accessibility, meals, sleeping accommodations, recreational facilities, and economy should all be considered in selecting a site.

Although there are no restrictions about holding conferences anywhere in the world, logistics, cost, and other problems dictate caution in organizing conferences outside of North America. Conferences held outside of North America may add an important dimension to the Penrose Conference program. However, such conferences are approved only if there are special circumstances that make a North American site much less appropriate. For a conference convened outside of North America, the cost of special liability insurance must be included in the conference budget.

Conveners may suggest specific sites or, in the event they choose to work with a conference coordinator, suggest a geographical area within which the coordinator can negotiate a specific site. Final site selection must be approved by the Committee on Penrose Conferences. Conveners should not officially and formally negotiate with the site management before a proposal has been approved by the Committee on Penrose Conferences.

PARTICIPATION

Anyone interested in attending a specific conference is encouraged to contact the conveners of that conference. An invitation is not required for application to participate. However, conveners initially should invite a few key speakers necessary to the organization and success of the conference. Aside from these invitations issued in the early planning stages of a conference, the conveners use indications of interest from those actively working in the field to complete the list of conference participants. Participation is not restricted to members of the Geological Society of America. GSA members, however, will receive preference when there is a choice between equally qualified persons. The final decision on participation will be made by the conveners, whose decision shall not be subject to appeal. Acceptances for participation are not transferable.

Participation by graduate students is encouraged by providing incentives such as reduced registration fees. The cost of supporting graduate student participation is to be included in each conference budget.

All Penrose Conferences are announced in *GSA News & Information*, *Geotimes*, other earth science journals, and newsletters.

All participants are expected to live at the conference site. Spouses, families, and others who are not registered participants are requested not to visit the conference site and are not allowed to participate in conference activities.

All participants are expected to attend the entire conference, and all must pay the full conference registration fee. Exceptions can be made only for invited key speakers whose attendance is deemed essential by the conveners even though they may not be able to be present for the entire conference.

SPONSORSHIP

The Geological Society of America is the principal sponsor of the Penrose Conferences; however, the Society welcomes other societies, organizations, and institutions as co-sponsors. Conveners must identify sponsors in their proposals, and the Committee on Penrose Conferences reserves the right to approve co-sponsors at the time the proposals are being considered. Recognition is given to co-sponsors in the conference announcements, as well as during the conference.

FINANCING

The Society ordinarily accepts no fiscal responsibility for a conference. If a conference coordinator is contracted, the coordinator assumes fiscal responsibility. If the conveners do not use a coordinator, they accept full fiscal responsibility. In the latter case, conveners must prudently budget their conference funds in such a way as to break even. If surplus monies are generated, they must be returned to the Society. At the conclusion of a conference, a written financial report must be given to the Committee on Penrose Conferences and the GSA Council. If the services of a conference coordinator are utilized, it is the responsibility of the coordinator to prepare and transmit this report.

All contributions from USA private or corporate sources for the support of Penrose Conferences should be made to the GSA Foundation, P.O. Box 9140, Boulder, CO 80301, and should be earmarked for a specific conference. Contributions from the National Science Foundation or other governmental agencies need not be made through the Foundation. For more information, contact Dwight V. Roberts, GSA Foundation President, at the above address or by calling (303) 442-0941.

INITIATION OF A PROPOSAL

Anyone interested in convening a Penrose Conference may submit a proposal, but at least one of the conveners must be a member of the Geological Society of America. Guidelines for the preparation of a proposal accompany these general guidelines. Additional information not included in this document may be obtained by writing or calling

Executive Director
The Geological Society of America
3300 Penrose Place, P.O. Box 9140
Boulder, CO 80301 (303) 447-2020

Proposals for Penrose Conferences should be sent to

Executive Director
The Geological Society of America
3300 Penrose Place, P.O. Box 9140
Boulder, CO 80301

The Committee on Penrose Conferences reviews the proposals as they are received. In acceptance of a proposal, the Committee on Penrose Conferences may offer advice, which in some cases may be a condition of acceptance. The committee chairman will address an advisory letter to the conveners calling attention to any matters that seem likely to pose a problem that must be resolved if the conference is to be successful. Proposals are then recommended for approval or rejection by the Society's Executive Committee, which reserves full authority for the final approval.

PENROSE CONFERENCE COORDINATOR

Conveners are encouraged, but not required, to utilize the services of a professional conference coordinator to assist in all areas of nonprogram planning and execution. If utilized, the

coordinator assumes responsibility for all financial matters relating to the conference and associated field trips, if any. The coordinator also is responsible for negotiating arrangements with the conference facility concerning prices, space for meetings, food, recreation, lodging, transportation, scheduling projection facilities, and handling other administrative chores as they arise. During the conference, the coordinator will provide on-site assistance in nonprogram matters, thereby freeing the conveners to concentrate on the technical and scientific aspects of the program.

PROGRAM

Care must be taken not to overstructure the program and to allow sufficient time for free discussion by all participants. It is important to note that all participants need not expect to make formal presentations. Contributions also can be presented in informal discussions or in poster sessions. Detailed suggestions for structuring a program are provided in "Guidelines for Preparation of and Writing a Penrose Conference Proposal" which accompany these general guidelines.

CONFERENCE REPORTS AND PUBLICITY

As soon as conveners have been informed by the GSA Executive Director that their conference has been approved, they must prepare a conference announcement suitable for publication in appropriate scientific journals. If a coordinator is contracted, the announcement should be sent to the coordinator for editing and then forwarded to the Executive Director. Announcements of conferences not being planned by a coordinator should be sent directly to the Executive Director. During planning of the conference, periodic progress reports must be made to the Committee on Penrose Conferences by the conveners or the coordinator. As soon as the conference is over, the conveners are required to send a brief formal report to the Executive Director. The report should include an evaluation of the technical and logistical aspects of the conference based on the participants' comments and the conveners' experience, as well as suggestions for improvement of the Penrose Conference format as a whole.

Within three months after the conference, the conveners will submit a news report for publication in *Geology*. This report will cover the most interesting scientific and technical aspects of the conference, and, wherever appropriate, include recommendations on research opportunities and priorities that were developed during the conference and may be of value to organizations responsible for supporting and coordinating research in the field covered by the conference.

Reports may be sent out for review, and some may require revision as a result. Suggested guidelines for preparation of the reports are as follows:

1. Tell where and when the conference was held, what the objective of the conference was and whether it was achieved, and what happened at the conference.
2. Avoid discussion of weather, food, accommodations, etc.
3. List the participants in the conference.
4. Make reports brief and concise; in no case should they exceed six (6) double-spaced, typewritten manuscript pages.
5. Avoid formality; write in individual style.
6. Submit reports within three months after the conference.

The purpose of the report is to inform those not in attendance of the main trends of thought and discussion that prevailed at the conference. The report should not publish specific data or concepts for which individual participants expect to receive priority through publication of papers written by them in regular jour-

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Penrose Conference General Guidelines (continued from p. 23)

nals of their individual choice. In balancing the opposing needs to inform and to preserve priority, the conveners must perform this task with responsibility and delicacy.

Other similar reports on the conference may be prepared and submitted to other journals for publication, but only after the letter of acceptance to publish the initial report has been received from *Geology*.

As an incentive to free exchange of information and to encourage open and frank discussion, no formal scientific report may be derived from the conference. It is anticipated that symposia, at GSA meetings or elsewhere, may develop from some conferences. These should consist of a related series of formal papers, each reflecting the author's own ideas, rather than a synthesis of what was presented at a particular conference.

The Society hopes and expects that all participants will freely discuss with their colleagues the significant results of their partic-

ipation. The intent is that the conferences shall promote generation of new concepts and nurture new research efforts in all phases of the earth sciences.

ADHERENCE TO GUIDELINES

These guidelines, formulated by the Committee on Penrose Conferences and approved by the GSA Council, provide rules based on experience gained from past conferences; changes and improvements will be incorporated as experience dictates. Once approval has been given by the Society, the conveners are fully responsible for the conference in accordance with the guidelines, and their acceptance implies agreement to abide by them. In cases of flagrant violation of the guidelines, the Executive Director is empowered to take appropriate action, including postponement or cancellation of the conference.

May 1981; Revised November 1983

GUIDELINES FOR PREPARATION OF AND WRITING A PENROSE CONFERENCE PROPOSAL

The key to an efficient and prompt review of any proposal is that the proposal contain all of the information needed by the Committee on Penrose Conferences to make a decision. Each proposal submitted to the Society must contain the following information, outlined in the format set forth below. Proposals should be sent to the Executive Director of the Society with a simple cover letter signed by all conveners.

Proposal Outline

1. A short expression of the subject, by title. Normally, this title would be the same one that is used on announcements, publicity, and in any correspondence regarding the conference even before it is approved.
2. A description of the subject. What is the conference all about? What is the objective of the conference?
3. A statement explaining how a conference on this subject will meet the purpose and objectives that have been set forth for the Penrose Conferences in the general guidelines. What new ideas, unresolved controversy, or potential future significant advances pertaining to the subject justify the need for a conference?
4. List of several key speakers and their fields of interest, with an indication of their willingness and ability to participate. This indication normally would be in the form of letters to the convener from the key speakers. Documented phone calls are less satisfactory. This is a particularly critical item in the review of the proposal because the success of a conference is largely a function of *who* participates.
5. A preliminary general outline of sessions. Even though preliminary, an outline of the schedule is important because it forces careful thought about relevance, organization, and treatment of subject matter. The schedule might include tentative titles and speakers for key presentations, as well as some indication of the gross structure of the program or how the time will be used. Such information permits evaluation of the reasonableness of the conference content in terms of the time available.
6. A suggested geographic location or locations. The geographic location, and even the precise site of a conference, commonly will be dictated by a field trip plan, and little choice will be available. For conferences without associated field trips, a wider range of possibilities obviously will be possible, and alternate sites should be identified. Regardless, conveners planning to use a coordinator are strongly advised against making formal contacts with the site management. Experience has been that a professional coordinator can negotiate much better when such contact has not been made.
7. A choice of preferred and alternate dates (or at least a preference for the time of year). In selecting the dates, refer to the appropriate discussion in the Penrose Conference General Guidelines. Be sure to allow enough time, normally no less than one year, for processing the proposal and advertising the conference. Check the schedule of GSA section meetings which appears from time to time in *GSA News & Information*, and check the *Geotimes* monthly calendar of events for possible conflicts. A schedule of future approved and recommended Penrose Conferences will be provided prospective conveners with these guidelines.
8. Anticipated number of participants. If the anticipated number is above 80 or below 50, an explanation and justification should be included.
9. A description of the nature and logistics of any field trip that is a suggested part of the conference. How and when will the trip fit into the program? Generally, what is its length and destination? What forms of transportation will be needed? Will there be any difficulty in arranging this transportation?
10. A statement on any international participants who might be considered and the source and amount of anticipated financial support for their participation. For most conferences, international participation is essential for success, but in many cases the expense of overseas travel is prohibitive. Potential outside sources of funding for partially defraying the expenses of selected foreign participants should be identified, but no official contact with the source should be made until after the proposal has been approved.
11. A statement indicating the willingness of the conveners to abide by the Penrose Conference General Guidelines and

their intent, or lack thereof, to ask the Executive Director to contract a meeting coordinator. Conveners who do not opt for the services of a coordinator are reminded that they must accept full fiscal responsibility for the conference. In planning their budget, they should be aware that the registration fee for a conference normally includes all costs, even field trips.

12. Identification of co-sponsors, if any, and their roles in the conference.

13. Curriculum vitae for each of the conveners, including telephone numbers and a list of publications and projects that qualify each for leading the proposed conference.

Proposers are reminded that complete and adequate proposals are essential to speedy approval. Experience has shown that a year or more is generally needed between approval date and conference date; thus, inadequate proposals may result in the loss of the hoped-for date.

CALENDAR OF PENROSE CONFERENCES FOR 1984 and 1985

The conferences are normally scheduled for five days. Registration fees include food and lodging, based on double accommodations. Transportation from the nearest airport to the conference site, and return, is also normally included, as well as all other conference costs except personal incidentals. For further information on any of the conferences, contact the convenue(s) at the addresses and telephone numbers given. The application form should be mailed to the convenue(s) of the conference you wish to attend.

The West-African Connection—Evolution of the Central Atlantic Ocean and Its Continental Margins

January 16-21, 1984

Villages Vacances Familles
Giens 83400 Hyeres, France

Conveners: John Rodgers, Dept. of Geology & Geophysics, Yale University, New Haven, CT 06520; (203) 436-1188 or (203) 432-4658 (Ms. Casey); Xavier T. LePichon, Paris University, 52 Rue Marillac, Trosly-Breuil, Cuise La Motte 60350, France; Jean Sougy, Lab. Géologie W—Africaine, Faculté des Sciences et Techniques de Saint-Jerome, Marseille University, 13397 Marseille, Cedex 13, France; (91) 98 90 10 p. 510.

Processes and Products of Multistage Melting and Metasomatism in the Mantle

April 29-May 4, 1984

Gold Canyon Ranch
Apache Junction, Arizona

Registration fee: \$425

Conveners: Jane E. Pike, U.S. Geological Survey, MS 75, 345

Middlefield Road, Menlo Park, CA 94025; (415) 323-8111, ext. 2505 or ext. 2238 (Irene Rogers); Arthur L. Boettcher, Dept. of Earth & Space Sciences, University of California, Los Angeles, CA 90024; (213) 825-8868 (direct) or (213) 825-3880 (dept.); Frederick A. Frey, Dept. of Earth & Planetary Sciences, Massachusetts Institute of Technology, Cambridge, MA 02139; (617) 253-3381; Frank M. Richter, Dept. of Geophysical Sciences, University of Chicago, 5734 Ellis Avenue, Chicago, IL 60637; (312) 962-8101 (dept.).

Structural Styles and Deformational Fabrics of Accretionary Complexes

April 29-May 4, 1984

Eureka Inn
Eureka, California 95501

Registration fee: \$425

Conveners: J. Casey Moore, Dept. of Earth Sciences, University of California, Santa Cruz, CA 95064; (408) 429-2574; Daniel E. Karig, Dept. of Geological Sciences, Cornell University, Ithaca, NY 14850; (607) 256-3679; Darrel S. Cowan, Dept. of Geological Sciences, University of Washington, Seattle, WA 98195; (206) 543-4033.

Melanges of the Appalachian Orogen

June 23-30, 1984

Stephenville, Newfoundland

Registration fee: Not available at press time

Conveners: Harold Williams, Dept. of Earth Sciences, Memorial University of Newfoundland, St. Johns, Newfoundland A1B 3X5,

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Application for participation in a Penrose Conference

Title of Penrose Conference _____

Your name and title _____

Organization _____

Mailing address _____

Street or P.O. Box

City and State

Zip Code

Telephone number _____

Area Code

Number

Field of interest _____

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

Penrose Conferences (continued from p. 25)

Canada; (709) 737-8142 (dept.); Nicholas Rast, Dept. of Geology, University of Kentucky, Lexington, KY 40506; (606) 257-6222 (dept.); Brenna E. Lorenz, Dept. of Earth Sciences, University of Arkansas, Little Rock, AR 72204; (501) 569-3300 (dept.).

Transport Processes in Fractured Rock

September 23-28, 1984

Park City, Utah

Registration fee: Not available at press time

Conveners: Leslie J. Smith, Dept. of Geological Sciences, University of British Columbia, Vancouver, British Columbia V6T 2B4, Canada; (604) 228-2449; Frank W. Schwartz, Dept. of Geology, University of Alberta, Edmonton, Alberta T6G 2E3, Canada; (403) 432-3265.

Geomorphic and Stratigraphic Indicators of Quaternary-Neogene Climatic Change in Arid and Semi-arid Environments

Winter 1984 or spring 1985

Probably in the Lake Havasu, Arizona, and Mojave Desert, California, area

Registration fee: Not available at press time

Conveners: John C. Dohrenwend, U.S. Geological Survey, MS 41, 345 Middlefield Road, Menlo Park, CA 94025; (415) 323-8111, ext. 2580; Leslie D. McFadden, Dept. of Geology, University of New Mexico, Albuquerque, NM 87131; (505) 277-4204 (dept.); Stephen G. Wells, Dept. of Geology, University of New Mexico, Albuquerque, NM 87131; (505) 277-4204 (dept.).

MEETINGS

1984

Prospectors and Developers Association 52nd Annual Convention, March 4-7, 1984, Toronto, Canada. Information: PDA, Suite 219, 159 Bay St., Toronto, Ontario M5J 1J7, Canada; (416) 362-1969.

Society of Exploration Geophysicists and Office of Naval Research 4th Symposium on Three-Dimensional Marine Data Collection, Processing, Interpretation, and Presentation, March 13-15, 1984, Bay St. Louis, Mississippi. Information: Myron Webb, University of Southern Mississippi, Long Beach, MS 39560; (601) 688-3054.

Third International Symposium on Land Subsidence, March 19-25, 1984, Venice, Italy. Information: A. Ivan Johnson, Woodward-Clyde Consultants, 7600 East Orchard Rd., Harlequin Plaza North, Englewood, CO 80111.

Exploration for Ore Deposits of the North American Cordillera, March 25-28, 1984, Reno, Nevada. Information: Chester E. Nichols, P.O. Box 9777, University Station, Reno, NV 89507.

Second International Conference on Ground-Water Quality Research, March 27-29, 1984, Tulsa, Oklahoma. Information: Norman N. Dunham or Ann Redelfs, University Center for Water Research, Oklahoma State University, 203 Whitehurst, Stillwater, OK 74078; (405) 624-6995.

Mid America Paleontology Society National Fossil Exposition VI, April 13-15, 1984, Macomb, Illinois. Information: Doug Johnson, P.O. Box 184, Donnellson, IA 52625; (319) 835-5957.

International Conference on Case Histories in Geotechnical Engineering, May 6-11, 1984, St. Louis, Missouri. Information: Shamsher Prakash, University of Missouri—Rolla, Rolla, MO 65401; (314) 341-4461.

International Groundwater Symposium on Groundwater Resources Utilization and Contaminant Hydrogeology, May 21-23, 1984, Montreal, Canada. Information: A. Kohut, Ministry of the Environment, Victoria, British Columbia V8V 1X5, Canada.

25th U.S. Symposium on Rock Mechanics, June 25-27, 1984, Evanston, Illinois. Information: Charles H. Dowding, Dept. of Civil Engineering, Northwestern University, Evanston, IL 60201; (312) 492-7270.

International Symposium on Deep Structure of the Continental Crust: Results from Reflection Seismology, June 26-28, 1984, Ithaca, New York. Information: Muawia Barazangi,

Dept. of Geological Sciences, Cornell University, Ithaca, NY 14853; (607) 256-6411; Telex 937478.

Canning Basin Symposium, June 27-29, 1984, Perth, Western Australia. Information: Phil Connard, Shell Development (Australia) Pty. Ltd., G.P.O., Box W2050, Perth, W. A. 6001, Australia.

Western Research Institute and U.S. Department of Energy Tar Sand Symposium, June 27-29, 1984, Vail, Colorado. Information: L. C. Marchant, Western Research Institute, P.O. Box 3395, University Station, Laramie, WY 82071.

Fossil Fuels of Europe Conference, July 15-18, 1984, Geneva, Switzerland. Information: AAPG, P.O. Box 979, Tulsa, OK 74101; (918) 584-2555.

8th World Conference on Earthquake Engineering, July 21-28, 1984, San Francisco, California. Information: EERI-8WCEE, 2620 Telegraph Ave., Berkeley, CA 94704.

Current Issues in Systematics, international meeting, July 1984, London, England. Information: C. J. Humphries, Dept. of Botany, British Museum, Cromwell Rd., London SW7 5BD, England; 01-589 6323, ext. 405.

27th International Geological Congress, August 4-14, 1984, Moscow, USSR. Information: Secretary General, 27th International Geological Congress, Institute of the Lithosphere, USSR Academy of Sciences, 22, Staromonetny, Moscow, 109180, USSR; 231-48-36; Telex: LITOS 411484.

International Cartographic Association 12th Conference and 7th General Assembly, August 6-10, 1984, Perth, Australia. Information: ICA Conference Director, P.O. Box 6208, Hay St. East Perth, Western Australia 6001; Telex AA95791 Minewa.

American Quaternary Association Eighth Biennial Meeting, August 13-15, 1984, Boulder, Colorado. Information: AMQUA, Office of Conference Services, Campus Box 153, University of Colorado, Boulder, CO 80310; (303) 492-5151.

NATO Advanced Study Institute Field Excursion in the British Caledonides, August 19-September 2, 1984. Information: A. L. Harris, Jane Herdman Laboratories of Geology, University of Liverpool, Brownlow St., P.O. Box 147, Liverpool L69 3BX, England.

Symposium on Evolution of the Caledonide-Appalachian Orogen, September 3-8, 1984, Glasgow, Scotland. Information: Matt Bates, A. T. Mays, 12 Nineyard St., Scottcoats, Scotland KA21 5HP, U.K.

Meetings (continued from p. 26)

Oceans 84: Industry, Government, and Education—Designs for the Future, Conference and Exposition, September 10-12, 1984, Washington, D.C. Information: Oceans 84, Marine Technology Society, 1730 M St., N.W., Suite 412, Washington, DC 20036; (202) 659-3251. (Abstracts deadline is February 6, 1984.)

International Gas Research Conference, September 10-13, 1984, Washington, D.C. Information: L. Hirsch, 8600 West Bryn Mawr Ave., Chicago, IL 60631; (312) 399-8300; Telex 253812.

Recent Advances in Petroleum Exploration and Development, September 24-28, 1984, Beijing, China. Information: BHP Petroleum, G.P.O. Box 1911R, Melbourne, 3001, Australia.

Clay Minerals Society Annual Meeting, September 30-October 3, 1984, Baton Rouge, Louisiana. Information: Ray E. Ferrell, Dept. of Geology, Louisiana State University, Baton Rouge, LA 70803; (504) 388-5306.

International Symposium on Recent Investigations in the Zone of Aeration, October 1-5, 1984, Munich, West Germany. Information: P. Udluft, Inst. für Wasserchemie der TU München, Marchioninstr. 17, 8000 München 70, West Germany; telephone 089/7095 7086-98-80.

American Institute of Petroleum Geologists Annual Meeting, October 17-19, 1984, Orlando, Florida. Information: Bobby J. Timmons, Timmons Associates, P.O. Box 50606, Jacksonville Beach, FL 32250; (904) 246-4533.

International Conference on Ground-Water Technology, November 12-17, 1984, Johannesburg, South Africa. Information: David M. Nielsen, National Water Well Association, 500 West Wilson Bridge Rd., Worthington, OH 43085; (614) 846-9355.

Ophiolites through Time, November 13-15, 1984, Nancy, France. Information: Jacqueline Desmons, Université de Nancy I, Faculté des Sciences, Laboratoire de Petrologie, B.P. n° 239, F-54506 Vandoeuvre-les-Nancy Cedex, France. (Abstracts deadline is September 1, 1984.)

1985

International Association of Hydrogeologists 17th International Congress, Hydrogeology of Rocks of Low Permeability, January 7-12, 1985, Tucson, Arizona. Information: Eugene S. Simpson, Hydrology & Water Resources, University of Arizona, Tucson, AZ 85721.

Salts and Brines '85, February 24-28, 1985, New York. Information: William C. Larson, Twin Cities Research Center, Bureau of Mines, 5629 Minnehaha Ave. S., Minneapolis, MN 55417; (612) 725-3464. (Abstracts due April 30, 1984.)

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

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

Sixth Gondwana Symposium, August 19-23, 1985, Columbus, Ohio. Information: Sixth Gondwana Symposium, Institute of Polar Studies, Ohio State University, Columbus, OH 43210; (614) 422-5431.

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

GSA 1984

Section Meetings

Northeastern Section, March 15-17, 1984, Providence, Rhode Island

South-Central Section, March 26-27, 1984, Dallas, Texas

North-Central and Southeastern Sections, April 4-6, 1984, Lexington, Kentucky

Rocky Mountain Section, May 11-12, Durango, Colorado

Cordilleran Section, May 30-June 1, Anchorage, Alaska

Annual Meeting, GSA and Associated Societies, November 5-8, 1984, Reno, Nevada

STATEMENT OF THE U.S. NATIONAL COMMITTEE ON GEOLOGY REGARDING THE 27th INTERNATIONAL GEOLOGICAL CONGRESS

The U.S. National Committee on Geology is dedicated to the continuing and valuable functions of the international scientific programs embodied in the International Union of Geological Sciences (IUGS) and the International Geological Congress (IGC). Although recent troubling events have raised questions about participation in the 1984 IGC meeting to be held in Moscow, it is the position of the U.S. National Committee on Geology that participation in the activities of both the IGC and the IUGS is required for the continuing health and growth of important international science programs. On the other hand, the Committee recognizes that individual scientists must make a personal decision with regard to participation.

The IGC is the forum at which scientists from all nations meet to discuss the geological sciences. An invitation to convene the 28th International Congress in the United States in 1989 will be presented and voted on at the 27th Congress in Moscow, USSR, during August 1984. The planned invitation from the United States offers an essential means for continuation of the IGC. The IUGS is a member of the International Council of Scientific Unions, which advocates the freedom to travel to scientific meetings throughout the world.

The U.S. National Committee on Geology supports both the IUGS and the IGC by nominating an official delegation to the IUGS meeting and by endorsing U.S. representation at the scientific meetings held during the 27th IGC in Moscow, as well as offering an invitation to hold the 28th Congress in the United States.

Queries concerning the 27th IGC should be addressed to the Secretary of the USNC/Geology, L. Hoover, U.S. Geological Survey, 917 National Center, Reston, VA 22092.

ROCKY MOUNTAIN SECTION, GSA Annual Meeting, Durango, Colorado, May 11-12, 1984

The Department of Geology of Fort Lewis College and the Four Corners Geological Society will host the 37th Annual Meeting of the Rocky Mountain Section of the Geological Society of America on May 11 and 12 (Friday and Saturday), 1984. The meetings will be held on the campus of Fort Lewis College.

Local Committee Chairman: John A. Campbell, Department of Geology, Fort Lewis College, Durango, CO 81301, (303) 247-7748

Program Committee Chairman: Jack A. Ellingson, Department of Geology, Fort Lewis College, Durango, CO 81301, (303) 247-7244

Field-Trip Chairman: Douglas Brew, Department of Geology, Fort Lewis College, Durango, CO 81301, (303) 247-7767

REGISTRATION

All persons participating in any events of the meeting must be registered.

Preregistration: You are urged to preregister to aid the local committee in making final plans. **Preregistration forms, with payment, must be postmarked no later than Friday, April 13, 1984.** Complete the registration form and return with a check or money order in U.S. currency, made payable to the Rocky Mountain Section GSA, to Rocky Mountain Section GSA, Department of Geology, Fort Lewis College, Durango, CO 81301. Those planning to attend field trips must preregister. Refunds for canceled preregistration will be made in full until April 25, 1984. After this date no refunds will be made except for cancellation of a field trip.

On-Site Registration: Registration, and pick-up of meeting materials by those who have preregistered, will be at the welcoming party, from 1800 to 2000 hours on Thursday, May 10, from 0800 to 1630 hours on May 11, and from 0800 to 1200 hours on May 12 in the lobby of the Administration Building on the Fort Lewis College campus. One-day registration will be available.

TECHNICAL PROGRAM

Technical sessions will be scheduled as oral presentations and poster sessions on Friday, May 11 and Saturday, May 12.

Symposia

1. **Geology of the San Juan Basin.** Christine E. Turner-Peterson and Jim Fassett.
2. **Ogden Tweto Memorial Symposium on the Precambrian Geology of the Southern Rocky Mountain Region.** Barbara J. Tewksbury.
3. **Economic Deposits in Volcanic Rocks.** Tommy B. Thompson.

FIELD TRIPS

Field-trip registrants must also preregister for the meeting. Field-trip registration is on a first-come basis. If a trip is oversubscribed or canceled, the full trip fee will be refunded. **Preregistration for field trips must be received by April 13, 1984,** accompanied by full payment. Trips may be canceled if registration is insufficient. **No trip refunds will be made after April 25, 1984.** Field-trip chairman is Douglas Brew, Department of Geology, Fort Lewis College, Durango, CO 81301; (303) 247-7767.

Premeeting

1. **Paleotectonic Development of the San Juan Mountains, Southwest Colorado** (May 10). Leaders: D. L. Baars, J. A. Ellingson. Departs 0800 hours from Fort Lewis College, Durango; returns 1800 hours. **Limit: 90. Cost: \$35,** including transportation, box lunch, and guidebook.
2. **The Ojo Alamo Sandstone and the Cretaceous-Tertiary Boundary Problem, San Juan Basin, New Mexico** (May 8-10). Leader: J. E. Fassett. Departs 0800 hours, May 8, from Fort Lewis College, Durango; returns 1800 hours, May 10. **Limit: 70. Cost: \$100,** including transportation, lodging, box lunches, and guidebook.
3. **Nonmarine Depositional Environments and Paleosol Development in the Upper Triassic Dolores Formation, Southwestern Colorado** (May 9-10). Leader: R. H. Blodgett. Departs 0800 hours, May 9 from Fort Lewis College, Durango; returns 1800 hours, May 10. **Limit: 40. Cost: \$95,** including transportation, lodging, meals, and guidebook.
4. **Quaternary Deposits and Soils in the Durango Area, Colorado** (May 10). Leaders: D. W. Moore, M. Gillam. Departs 0800 hours from Fort Lewis College, Durango; returns 1800 hours. **Limit: 80. Cost: \$35,** including transportation, box lunch, and guidebook.
5. **Jurassic Depositional Environments in the Southern and Western San Juan Basin** (May 9-10). Leaders: A. C. Huffman, R. E. Thyden, S. M. Condon. Departs 0800 hours, May 9, from Albuquerque, New Mexico; returns 1800 hours, May 10, to Durango. **Limit: 27. Cost: \$90,** including two nights' lodging (one is night before trip, at motel from which trip originates), transportation, all meals except breakfast May 10, and guidebook.

Postmeeting

6. **Geology of the Animas River Valley from Durango to Silverton as viewed from the Durango and Silverton Narrow Gauge Railroad** (May 13). Train departs 0800 hours from Durango and Silverton Narrow Gauge Station, downtown Durango, and returns by 1730 hours. **Limit: 90. Cost: \$30,** including train fare and guidebook.

During the meeting

7. **Geology of the Durango Area** (May 11 and May 12, mornings and afternoons). Half-day trip in Lower Animas Valley, to be run when demand warrants. **Cost: \$5,** including transportation and road log.

SPECIAL EVENTS

Welcoming Party. An informal gathering will be held for all registrants from 1800 to 2200 hours, May 10, 1984, in the Diamond Circle Theater, Strater Hotel, 699 Main Avenue in downtown Durango. A cash bar and snacks will be available.

Annual Banquet. The annual banquet will be held in the Fort Lewis College ballroom in the College Union Building,

Friday, May 11, 1984, from 1800 to 2200 hours. A cash bar will be available at 1800 hours. Entertainment will be provided.

Annual Business Meeting. The annual business meeting will be held at noon, Saturday, May 12, in the College Union Building. Election of officers for 1984, selection of a meeting site for 1986, and other section business will be on the agenda.

Southwest Section of NAGT. A lunch for all those interested in the Southwest Section of the National Association of Geology Teachers will be held at noon, Friday, May 11, in the College Union Building. The section has not been active in recent years. For more information, contact Frank Bowman, Department of Geology, Fort Lewis College, Durango, CO 81301; (303) 247-7834.

Rocky Mountain Section Campus Representatives Breakfast, May 11, at 0700 hours. Check registration desk for location.

Rocky Mountain Section Management Board Breakfast, May 12, at 0700 hours.

Spouse/Guest Activities. Durango is the center for tourism for the Four Corners region and southern San Juan Mountains. Of the many activities available, the Durango and Silverton Narrow Gauge Railroad is the best known. The train will be running a short half-day trip to Cascade Creek, Monday through Friday. On Saturday, May 12, it will start its full run to Silverton. If you are interested in one of these trips, contact the Durango and Silverton Narrow Gauge Railroad

(continued on page 30)

PREREGISTRATION FORM

Rocky Mountain Section, GSA, 37th Annual Meeting
May 11-12, 1984, Durango, Colorado

IMPORTANT

1. Full payment must accompany registration.
2. Register one: professional, student, or spouse/guest.
3. Your check will be your receipt.
Copy this form for your records.
4. Preregistration deadline: **Must be postmarked no later than April 13, 1984.**

For Official Use Only	
M.O. # _____	Personal check _____
Other check _____	Issued by _____
Amount _____	

Name _____
Last First Middle

Registered as: Professional Student Spouse/Guest

Affiliation (abbreviate for badge) _____

Professional address _____

City _____ State _____ Zip _____

Phone: Business _____ Home _____

GSA Member Speaker GSA Student Associate Session Chairperson

Preregistration, professional	\$ 20.00	\$ _____
Registration (after April 13), professional	30.00	\$ _____
Preregistration, student	8.00	\$ _____
Registration (after April 13), student	10.00	\$ _____
Spouse/guest registration	8.00	\$ _____
Annual Banquet	10.00	\$ _____
Business Luncheon	6.00	\$ _____
One-day registration	15.00	\$ _____

Field Trip Preregistration

All field-trip participants must also preregister for the meeting.

Field Trip 1. Paleotectonic Development of the San Juan Mountains, Southwest Colorado	\$ 35.00	\$ _____
Field Trip 2. The Ojo Alamo Sandstone and the Cretaceous-Tertiary Boundary Problem, San Juan Basin, New Mexico	100.00	\$ _____
Field Trip 3. Nonmarine Depositional Environments and Paleosol Development in the Upper Triassic Dolores Formation, Southwestern Colorado	95.00	\$ _____
Field Trip 4. Quaternary Deposits and Soils in the Durango Area	35.00	\$ _____
Field Trip 5. Jurassic Depositional Environments in the Southern and Western San Juan Basin	90.00	\$ _____
Field Trip 6. Geology of the Animas Valley from Durango to Silverton as viewed from the Durango and Silverton Narrow Gauge Railroad	30.00	\$ _____
Field Trip 7. Geology of the Durango Area	5.00	\$ _____

Total Fees—

Enclose check or money order, U.S. funds, payable to Rocky Mountain Section, Geological Society of America

Mail completed preregistration forms and fees to

Rocky Mountain Section GSA,
Department of Geology,
Fort Lewis College,
Durango, CO 81301.

Refunds on canceled preregistrations will be made in full until April 25, 1984. After that date no refunds will be made, except for canceled field trips.

Rocky Mountain Section (continued from page 29)

Co., 479 Main Avenue, Durango, CO 81301, (303) 247-2733 for tickets and information. (Note that Field Trip 7 on Sunday, May 13, will be on the train.) A trip to Mesa Verde National Park is planned for Friday, May 11, from 0900 to 1700 hours at a cost of \$10/person, including a box lunch. Those interested are asked to preregister.

STUDENT AWARDS

The Rocky Mountain Section will award \$100 for the best student paper and \$50 for the runner-up. Both oral and poster-session presentations will be eligible. The abstract must be by one author and be designated on the abstract form as a student paper.

EXHIBITS

Exhibit space will be available near the technical sessions. Space is limited; thus, standard size or small booths would be appropriate. Educational and nonprofit institutions will pay a reduced rate. For additional information, contact John A. Campbell, Department of Geology, Fort Lewis College, Durango, CO 81301.

TRAVEL

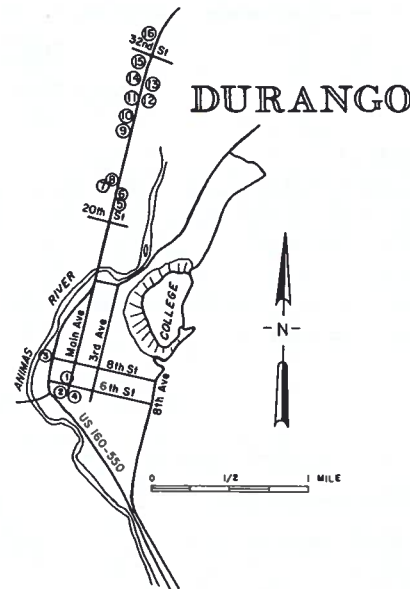
Durango is served by Aspen, Frontier, Sun West, and Trans Colorado Airlines. The town and campus are about 18 miles northwest of the airport, and both limousine and taxi service are available. The city of Durango operates a public bus system that serves the town and campus and may operate to the airport by May.

HOUSING

Several newly constructed apartments located on the Fort Lewis College campus have been reserved for the meeting. Each apartment consists of two bedrooms, living room, kitchen,

and bath. Daily rates (double occupancy) are \$14.25/person, or \$25.25/person including all meals. Student rates are \$9.25/person, or \$18.50 with meals. First preference will be given to students. To reserve a room, contact James D. Collier, Department of Geology, Fort Lewis College, Durango, CO 81301; (303) 247-7129.

Durango has more than 40 hotels and motels. Listed below are the 16 that are close to the Fort Lewis campus and are served by the city bus system. A shuttle-bus system will also serve these motels and hotels during the meeting. **No blocks of rooms are reserved**, so contact the hotel or motel directly as soon as possible. A list of all hotels and motels in the area will be sent on request. Prices listed are as of December 1983. Some motels will be offering special GSA rates. See map for locations.



Name	Address	Phone (303)	Single	Double	Distance to campus (mi)
1. Strater Hotel	699 Main Ave.	247-4431	\$40	\$44	1.0
2. General Palmer House Hotel	567 Main Ave.	247-4747 1-800-528-1234	\$40	\$50	1.0
3. Holiday Inn	800 Camino Del Rio	247-5393	\$39	\$45	1.0
4. Travel Lodge	150 5th St.	247-0955 1-800-255-3050	\$38	\$38	1.0
5. Adobe Inn	2178 Main Ave.	247-2743 1-800-251-8773	\$28	\$38	1.5
6. Hidden Valley Motel	2202 Main Ave.	247-0460	\$24	\$28	1.5
7. Brookside Motel	2331 Main Ave.	259-0150	\$14	\$16	1.5
8. Travel Inn Motel	2391 Main Ave.	247-0593	\$20	\$26	1.5
9. Thunderbird Lodge	2701 Main Ave.	259-2540 1-800-251-8773	\$24	\$34	2.5
10. Sunset Motel	2855 Main Ave.	247-2653	\$26	\$34	2.5
11. Silver Spruce	2929 Main Ave.	247-2202	\$18	\$22	2.5
12. Comfort Inn	2930 Main Ave.	259-5373 1-800-228-5150	\$28	\$44	2.5
13. Landmark Motel	3030 Main Ave.	259-1333	\$34	\$40	2.5
14. Manor Motel	3077 Main Ave.	247-5222	\$17	\$19	2.5
15. Spanish Trails	3141 Main Ave.	247-4173	\$25	\$38	2.5
16. Best Western Mountain Shadows	3255 Main Ave.	247-5285 1-800-528-1234	\$38	\$44	2.5

Campus Representative Volunteers Needed

GSA wants a campus representative at every college or university that has a geology program, to provide information about GSA services to students.

The Campus Representative Program began in 1979 in GSA's Southeastern Section, under the leadership of Thornton L. Neathery. Active GSA members in the section were recruited to serve as campus representatives, establishing a communications link between GSA headquarters and present and prospective Student Associates.

All GSA sections have joined the program, and there are

now 219 active campus representatives. However, we need more volunteers. If you are interested in serving GSA as a campus representative for your college or university, please contact

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

We thank the following campus representatives now serving the Society.

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California State University, Hayward

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Whitman College

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Robert W. Webb
University of California, Santa Barbara

Gary D. Webster
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South-Central Section (continued from p. 31)

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Loren A. Raymond
Appalachian State University

Mark Rich
University of Georgia

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East Carolina University

Gene D. Robinson
James Madison University



Southeastern Section (continued from p. 32)

Ernest E. Russell
Mississippi State University

Richard P. Sanders
West Georgia College

Frederic L. Schwab
Washington & Lee University

Robert Self
Nicholls State University

Nolan G. Shaw
Centenary College

A. Krishna Sinha
Virginia Polytechnic Institute
and State University

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Michael Aragon
New Mexico State University
Joseph Mario Lovato
University of New Mexico
Lisa Navarrete
University of New Mexico
Pablo Sanchez
New Mexico State University
Kerrie M. Stewart
University of New Orleans

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Southern Connecticut State University
Daniel Arteaga
Colorado School of Mines
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Northern Arizona University
Ruth Elaine Blake
Wayne State University
Glenn Allen Brooks
University of Southern Mississippi
Janice C. Bryant
Vassar College
Paul Christy
University of Southwestern Louisiana
Mozella R. Collier
University of New Orleans—Lakefront
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University of Texas at Austin
Robert DeBerry
University of Georgia
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Southampton College of Long Island
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Christine Lopez
New Mexico Highlands University
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Rocky Mountain College
Jonathan Peterson
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Robert Solis
University of Iowa
Renata L. Tervalon
San Francisco State University
Lisa D. White
San Francisco State University
Graduates
Shelly June Bougan
Arizona State University
Rufus Catchings
Stanford University
Jerry B. Coleman
University of Maryland
Laura L. Dominguez
Syracuse University
Charles R. Elerson
University of Wisconsin—Milwaukee
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Ronald A. Parker
University of North Carolina
at Chapel Hill
Marsha Quinones
State University of New York
at Stony Brook
Lori C. Robison
University of Arizona
Ronald Wynn Sheets
Ohio State University
Andriene Swallow
Arizona State University
Peter K. Valles
University of California, Los Angeles
Raul J. Viera
University of Southwestern Louisiana
Roseann Vincent
Brooklyn College of the City University
of New York
Howard West
Rice University
Elijah White, Jr.
University of North Carolina
at Chapel Hill
Sherilyn Williams
Johns Hopkins University
Dawn J. Wright
Texas A&M University
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The AGI Minority Participation Program was formed to establish objectives and goals for attracting science-oriented students of Black, Hispanic, and American Indian ethnic origin into one of the geoscience disciplines. The scholarships are based on academic achievement to date, financial need, and judged potential for future professional geoscience success. The program was started in January 1975.

The scholarship program is dependent upon funds contrib-

uted by industrial firms, member professional societies, and individuals. The Advisory Committee wants to broaden its base of financial support for the program. Contact American Geological Institute, 4220 King Street, Alexandria, VA 22302-5001; (703) 379-2480, for more information.

Black, Hispanic, or American Indian students who want to be considered for scholarships for the 1984-1985 academic year should direct inquiries to AGI at the address above.

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PEOPLE

GSA Member **Kathleen M. Johnson**, USGS, Denver, is 1983-1984 secretary of the Association of Women Geoscientists.

Fellow **Charles J. Mankin**, Oklahoma Geological Survey and University of Oklahoma Energy Resources Institute, has been elected vice-president of the American Institute of Professional Geologists.

Fellow **Robert J. Weimer**, professor at Colorado School of Mines, has been named the 1984 winner of the American Association of Petroleum Geologists' Sidney Powers Medal.

Ogden Tweto Memorial Fund Established

A fund to support graduate student research in the geology of Colorado has been established in memory of Ogden Tweto, U.S. Geological Survey, Denver (retired). Tweto, A USGS geologist for more than 40 years and recipient of the Department of Interior's Distinguished Service Award, died November 23, 1983.

Contributions to the fund, established by the Colorado Scientific Society, can be made by check to the CSS Tweto Memorial Fund, addressed to Nancy Naeser, Treasurer, Colorado Scientific Society, U.S. Geological Survey, MS 424, Federal Center, Denver, CO 80225.

In Memoriam

Patricia L. Arndt
Berkeley, California
October 5, 1983

Jurgen H. Illies
Karlsruhe, West Germany
August 2, 1982

Sara F. Langer
Palisades, New York

Donald L. Smith
Bozeman, Montana
July 31, 1983

Robert F. Black
Willimantic, Connecticut

Olaf P. Jenkins
Pacific Grove, California

Eric R. Nielsen
Houston, Texas

Carl W.A. Supp
Baltimore, Maryland
August 18, 1983

Keith J. Coke
Central, Arizona
February 1983

Reuben Kachadoorian
Los Altos, California

George C. Oldham
Ridgefield, Washington
March 21, 1982

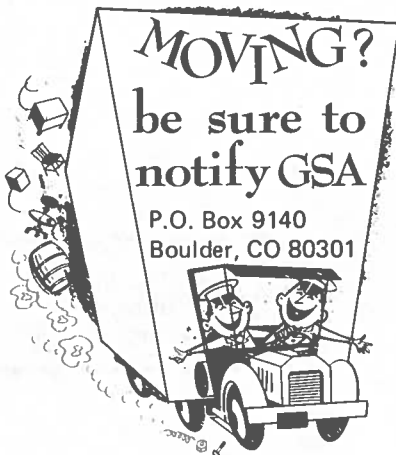
Ogden L. Tweto
Denver, Colorado
November 23, 1983

James O. Harder
Rapid City, South Dakota

Simon Lake III
Port St. Lucie, Florida
July 9, 1982

Georges Ordonez
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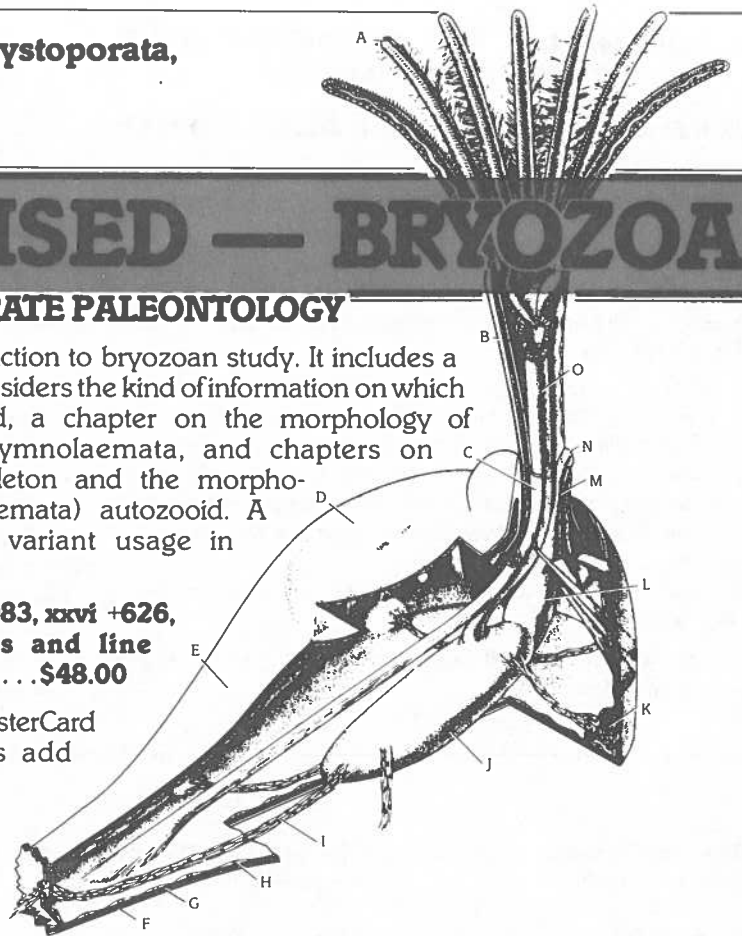
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