

GSA NEWS & INFORMATION

Monthly Newsletter of
The Geological Society of America

VOLUME 7, NUMBER 2

FEBRUARY 1985

Campus Representative Program Grows, But More Volunteers Are Needed

by Clara Hodgson

GSA needs 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.

Campus representatives, with the aid of a notebook of information provided by GSA's Membership Department, explain to interested students the benefits of being a GSA Student Associate:

- *Bulletin, Geology, and News & Information* every month
- 20% discount on GSA books and maps and charts
- \$25 discount for GSA's Employment Service
- \$10 discount for registration fees for Penrose Conferences
- \$10 reduction in student registration fees for GSA's Annual Meeting
- Reduced registration fees for many GSA section meetings
- Reduced dues for spouse member (\$26 for 1985)
- Group term life insurance plan

- 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 Avis car rentals
- 25% discount on many Geological Society of London publications
- Reduced subscription rate for publications of the American Institute of Physics

All GSA sections have joined the program, and there are now 323 active campus representatives, more than 100 over the number at this time last year. However, we need more volunteers. If you are a Member or Fellow and 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, Colorado 80301
(303) 447-2020

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

Cordilleran Section

William M. Adams University of Hawaii	Ruth B. Boeckerman Fullerton College	Donald W. Clay Arizona Western College	Jad Alan D'Allura Southern Oregon State College	James M. Evensen California Lutheran College
Norman R. Anderson University of Puget Sound	Charles H. Breitsprecher American River College	Gordon A. Clopine San Bernardino Valley College	Wilbert R. Danner University of British Columbia	Ernest H. Gilmour Eastern Washington University
Randall S. Babcock Western Washington University	Elwood R. Brooks California State University, Hayward	John R. Coash California State University, Bakersfield	E. Julius Dasch, Jr. Oregon State University	Nelson T. Hall Foothill College
Evelyn Joan Baldwin El Camino College	H. Paul Buchheim Loma Linda University	Wayne Colony Clark College	John G. Dennis California State University, Long Beach	Paul E. Hammond Portland State University
Bruce A. Blackerby California State University, Fresno	Robert J. Carson III Whitman College	John R. Crain College of the Sequoias	George C. Dunne California State University, Northridge	James W. Hawkins, Jr. University of California, San Diego
Thomas Ford Blake Moorpark College	Susan Cashman Humboldt State University	R. Keith Crowder University of Alaska, Fairbanks	Bernard W. Evans University of Washington	Edward A. Hay De Anza College
	John M. Christie University of California, Los Angeles			

(continued on p. 26)

Campus Representatives (continued from p. 25)
Cordilleran Section (continued)

Malcolm J. Hibbard University of Nevada, Reno	Dorothy L. Steller Cypress College
James C. Ingle, Jr. Stanford University	Martin L. Stout California State University, Los Angeles
Robert F. Kaar City College of San Francisco	Donald W. Tarman California State Polytechnic University
Terence T. Kato California State University, Chico	George A. Thompson Stanford University
Leo F. Laporte University of California, Santa Cruz	Dee D. Trent Citrus College
Michael T. Ledbetter Moss Landing Marine Laboratories	William B. Wadsworth Whittier College
Brian E. Lowes Pacific Lutheran University	Gary D. Webster Washington State University
Robert F. Lundin Arizona State University	David L. Weide University of Nevada, Las Vegas
Robert M. Norris University of California, Santa Barbara	John W. Williams San Jose State University
Shannon A. O'Dunn Grossmont College	Donald H. Zenger Pomona College

Rocky Mountain Section

Gary L. Peterson San Diego State University	Valentine Ansfeld University of South Dakota
James B. Phipps Grays Harbor College	James M. Barker New Mexico Bureau of Mines & Mineral Research
Bernard W. Pipkin University of Southern California	Stanley S. Beus Northern Arizona University
Charles C. Plummer California State University, Sacramento	Mary Lou Bevier Western State College of Colorado
Kazimierz M. Pohopien Mount San Antonio Community College	William L. Bilodeau University of Colorado, Denver
Gregory J. Retallack University of Oregon	Douglas C. Brew Ft. Lewis College
L. Don Ringe Central Washington University	Patricia Cashman Weber State College
Jason B. Saleeby California Institute of Technology	Eric Clausen Minot State College
Erwin Seibel San Francisco State University	Stephan G. Custer Montana State University
Kurt Servos Menlo College	Frank DeCourten University of Utah
David R. Sigurdson California State University, Dominquez Hills	Robert W. Fields University of Montana
	Donald Fiesinger Utah State University

E. D. Ghent University of Calgary
Paul K. Grogger University of Colorado, Colorado Springs
W. Kenneth Hamblin Brigham Young University
Peter E. Isaacson University of Idaho
Kenneth E. Kolm Colorado School of Mines
Mary J. Kraus University of Colorado, Boulder
Frederick J. Kuellmer New Mexico Institute of Mining & Technology
David R. Lageson Montana State University
John C. Mickelson South Dakota School of Mines & Technology
Jeffrey B. Noblett Colorado College
Henry T. Ore Idaho State University
Dexter Perkins III University of North Dakota
Richard C. Peterson Adams State College
John R. Reid, Jr. University of North Dakota
Frederick E. Schaeffer, Jr. University of Southern Colorado
Donald P. Schwert North Dakota State University
William R. Seager New Mexico State University
Tommy B. Thompson Colorado State University
John E. Warme Colorado School of Mines
Monte D. Wilson Boise State University
Lee Woodward University of New Mexico



North-Central Section

Richard C. Anderson Augustana College	John F. Hall Case Western Reserve University
Robert Anstey Michigan State University	C. Earl Harris, Jr. Youngstown State University
Donald W. Ash Indiana State University	W. Hilton Johnson University of Illinois
Donald L. Biggs Iowa State University of Science and Technology	Robert B. Jorstad Eastern Illinois University
Kenneth W. Bladh Wittenberg University	John S. Klasner Western Illinois University
Carl J. Bowser University of Wisconsin, Madison	David M. Knowles Lake Superior State College
Lynn A. Brant University of Northern Iowa	William M. Last University of Manitoba
Robert L. Brenner University of Iowa	Daniel N. Leavell Denison University
Paul A. Catacosinos Delta College	Beth Zigmont Lincoln Albion College
Lindgren L. Chyi University of Akron	Lawrence L. Malinconico, Jr. Southern Illinois University
James W. Collinson Ohio State University	Royal H. Mapes Ohio University
William S. Cordua University of Wisconsin, River Falls	Charles L. Matsch University of Minnesota, Duluth
Winston Crausaz Southwest Missouri State University	J. Gregory McHone Indiana University-Purdue University, Indianapolis
Frederick W. Cropp College of Wooster	Arthur Mirsky Indiana University-Purdue University, Indianapolis
Stuart L. Dean University of Toledo	Paul E. Myers University of Wisconsin, Eau Claire
Jimmy F. Diehl Michigan Technological University	John L. Nold Central Missouri State University
George Econ Jackson Community College	Richard A. Paull University of Wisconsin, Milwaukee
James H. Elwell Bemidji State University	Max W. Reams Olivet Nazarene College
C. Patrick Ervin Northern Illinois University	Lon C. Ruedisili University of Toledo
Philip W. Fralick Lakehead University	John R. Sans Ball State University
Thomas J. Freeman University of Missouri, Columbia	Frederick J. Sawkins University of Minnesota, Minneapolis
Charles I. Frye Northwest Missouri State University	Allan F. Schneider University of Wisconsin, Parkside

Charles R. Singler Youngstown State University	David J. Fitzgerald St. Mary's University	James R. Underwood, Jr. Kansas State University	John F. Hubert University of Massachusetts	Robert C. Ramsdell Montclair State College
Mohan K. Sood Northeastern Illinois University	T. S. Ghaly East Texas State University	John D. Vitek Oklahoma State University	David M. Hutchison Hartwick College	William D. Romey St. Lawrence University
Darryl B. Tharalson Chadron State College	John R. Giardino Texas A&M University	Northeastern Section		Peter S. Rosen Northeastern University
David Towell Indiana University, Bloomington	Robert Grayson, Jr. Baylor University	Gail M. Ashley Rutgers University	Raymond L. Joesten University of Connecticut	Denis W. Roy Université du Québec, Chicoutimi
Paul Tychsen University of Wisconsin, Superior	Edwin T. Green Southwestern Oklahoma University	Gordon C. Baird State University of New York, Fredonia	John H. Johnsen Vassar College	Martin S. Rutstein State University of New York, New Paltz
Kenneth J. VanDellen Macomb County Community College	John C. Gries Wichita State University	Daniel F. Belknap University of Maine, Orono	Kathleen M. Kemp University of Toronto	Constance Sancetta Columbia University
William J. Wayne University of Nebraska, Lincoln	Russell Harmon Southern Methodist University	Archie W. Berry, Jr. University of Maine, Farmington	Simon Klemperer Cornell University	Bruce W. Selleck Colgate University
Terry R. West Purdue University	James O. Jones University of Texas, San Antonio	Robert F. Boutilier Bridgewater State College	Andrew Kucserik State University of New York, Buffalo	William S. Shaw St. Francis Xavier University
Peter M. Whelan University of Minnesota, Morris	Philip Kehler University of Arkansas, Little Rock	Arthur H. Brownlow Boston University	Robert G. LaFleur Rensselaer Polytechnic Institute	David H. Speidel Queens College, City University of New York
Chester Wilson Charles Stewart Mott Community College	David Lambert Texas Christian University	J. Allan Cain University of Rhode Island	Edward G. Lidiak University of Pittsburgh	George C. Stephens George Washington University
Henry H. Woodard Beloit College	David V. LeMone University of Texas, El Paso	Barry W. Cameron Acadia University	Donald H. Lindsley State University of New York, Stony Brook	Morton D. Strassberg Suffolk County Community College
Davis A. Young Calvin College	William H. Matthews III Lamar University	Anthony E. Cok Adelphi University	Arthur P. Loring York College, City University of New York	Herbert Tischler University of New Hampshire
South-Central Section		Maria Luisa Crawford Bryn Mawr College	Michael T. Lukert Edinboro University	Anita C. VanderHorck Kutztown University
James S. Aber Emporia State University	Richard M. Mitterer University of Texas, Dallas	H. Allen Curran Smith College	Lawrence W. Lundgren, Jr. University of Rochester	Donald W. Watson Slippery Rock University
Ernest E. Angino University of Kansas	Robert C. Morris University of Arkansas, Fayetteville	Peter P. David Université de Montréal	Constantine T. Manos State University of New York, New Paltz	C. Gil Wiswall New England College
Donald R. Baker Rice University	David M. Rohr Sul Ross State University	Phillip Thompson Davis Mount Holyoke College	Lawrence R. Matson Ulster County Community College	Donald L. Woodrow Hobart & William Smith Colleges
Calvin G. Barnes Texas Tech University	Austin A. Sartin Stephen F. Austin State University	R. Laurence Davis Alfred University	Charles M. Merguerian Hofstra University	Southeastern Section
C. Alan Berkebile Corpus Christi State University	John M. Sharp, Jr. University of Texas, Austin	John A. Diemer State University of New York, Plattsburgh	Robert Metz Kean College of New Jersey	Gary C. Allen University of New Orleans
Gregory Conrad Sam Houston State University	Charles I. Smith University of Texas, Arlington	G. Nelson Eby University of Lowell	Gerard V. Middleton McMaster University	Charles C. Almy, Jr. Guilford College
Kevin Crowley University of Oklahoma	Douglas Smith University of Texas, Austin	Edward B. Evenson Lehigh University	Donald S. Miller Rensselaer Polytechnic Institute	James W. Batchelor McNeese State University
Athene Cua Trinity University	Michael J. Smith Rice University	Carol Faul University of Pennsylvania	Cathryn R. Newton Syracuse University	Denny N. Bearce University of Alabama, Birmingham
Stanley C. Finney Oklahoma State University	Robert J. Stanton, Jr. Texas A&M University	William T. Fox Williams College	Lawrence E. O'Brien Orange County Community College	John Bender University of North Carolina
	Bryan Tapp University of Tulsa	Mary Jo Hall Rider College	Donald A. Parks New York University	Paul K. Birkhead Clemson University
	William Thomann Texas A&I University	Mary Louise Hill Temple University		(continued on page 28)
	Page Twiss Kansas State University	Alice Lynn Hoersch La Salle College		

Campus Representatives (continued from p. 27)**Southeastern Section** (continued)

Ernest Blythe, Jr. University of Tennessee, Martin	Nathan L. Green University of Alabama, University	Peter G. Kimmel George Mason University	William A. Ranson Furman University	Daniel A. Sundeen University of Southern Mississippi
Scott F. Burns Louisiana Tech University	John W. Harrington Wofford College	David T. King, Jr. Auburn University	Loren A. Raymond Appalachian State University	John Thrailkill University of Kentucky
Gary R. Byerly Louisiana State University	Kenneth O. Hasson East Tennessee State University	Carl F. Koch Old Dominion University	Mark Rich University of Georgia	James F. Tull Florida State University
Wayne F. Canis University of North Alabama	Charles T. Helfrich Eastern Kentucky University	William F. Kohland Middle Tennessee State University	Stanley R. Riggs East Carolina University	Sam B. Upchurch University of South Florida, Tampa
James Carew College of Charleston	S. Duncan Heron, Jr. Duke University	Otto C. Kopp University of Tennessee, Knoxville	Gene D. Robinson James Madison University	Charles E. Weaver Georgia Institute of Technology
Robert B. Cook, Jr. Auburn University	Willis A. Holland, Jr. Miami-Dade Community College	Stephen W. Lenhart Radford University	Ernest E. Russell Mississippi State University	Charles W. Welby North Carolina State University
James H. Darrell II Georgia Southern College	Robert J. Horodyski Tulane University	Brian E. Lock University of Southwestern Louisiana	Richard P. Sanders West Georgia College	Peter W. Whaley Murray State University
Rene A. DeHon Northeast Louisiana University	Graham H. Hunt University of Louisville	James P. May The Citadel	Frederic L. Schwab Washington & Lee University	John T. Wilcox Western Carolina University
Robert W. Deininger Memphis State University	John R. Huntsman University of North Carolina	Richard S. Mitchell University of Virginia	Robert Self Nicholls State University	Robert L. Wilson University of Tennessee, Chattanooga
John M. Dennison University of North Carolina	Wayne C. Isphording University of South Alabama	Frederick Nagle, Jr. University of Miami	Nolan G. Shaw Centenary College	Stephen S. Winters Florida State University
Larry J. Doyle University of South Florida, St. Petersburg	Gerald H. Johnson College of William & Mary	Donald W. Neal East Carolina University	A. Krishna Sinha Virginia Polytechnic Institute and State University	Other
Grenville Draper Florida International University	Wendell B. Johnson Millsaps College	David E. Ogren Georgia State University	William B. Size Emory University	Brian E. Harry University of the West Indies
Noland E. Fields, Jr. Western Kentucky University	William H. Kanes University of South Carolina	Michael R. Perfit University of Florida	Melvin O. Smith Tennessee Technological University	Kerry R. Kelts Swiss Federal Institute of Technology
William J. Frazier Columbus College	Phillip R. Kemmerly Austin Peay State University	John C. Phillely Morehead State University	Albert C. Staheli University of Mississippi	Ramon Enrique Ornelas-Solis University of Sonora
		Brad Quiambao Furman University	Richard G. Stearns Vanderbilt University	

Meeting Saver Fares Available to 1985 South-Central Section Meeting

GSA's South-Central Section has made arrangements with American Airlines to get the least expensive and most direct route to the 1985 South-Central Section meeting in Fayetteville, Arkansas, April 15-16. American is offering a Meeting Saver Fare of 35% off full day-coach (Y) fare on tickets purchased 45 days before departure, or 30% off the Y fare for tickets purchased 14 days before departure, or any special published fare (whichever is lower). From Canada, American offers Meeting Saver Fares of 25% off full Y, or any other fare, for tickets purchased at least 14 days before departure, with a minimum stay of 3 days. There is a \$30.00 cancellation fee on all Meeting Saver Fares.

Direct flights to Fayetteville are available via Metro (American Eagle), an American carrier with connections through Dallas. American has created a special STAR file in their computers containing information about flights to the meeting. For complete details, call the American Airlines Service Desk toll-free Monday through Friday, 8:30 a.m.-5:00 p.m. your local time, at 1-800-443-1790 (in Texas, 1-800-792-1160). Tell the American Meeting Specialist you are attending the GSA South-Central Meeting and that the STAR file is No. S 8551. In Canada, call the local American Airline Reservation Desk and ask to be transferred to the Meeting Service Desk.

Vol. 7, no. 2 GSA News & Information February 1985

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

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

**1985 GSA ANNUAL MEETING
ORLANDO, FLORIDA**

June 7 Abstracts Deadline
September 27 Preregistration Deadline
October 4 Housing Deadline



CENTENNIAL NEWS

By Allison R. (Pete) Palmer

Hydrogeology Division DNAG Projects Now Well Underway

The Final Coordinating Conference for *The Groundwater Hydrogeology of North America* is now scheduled for June 8-9, 1985, in Denver. Reviewable chapter texts are due at that time.

The outline for *The Surface Water Hydrology of North America* that is reproduced below grew out of the organizational meeting for this volume that was held July 7-8, 1984, in Denver. Detailed chapter outlines are already in the hands of the editors, and text preparation is in progress. The Final Coordinating Conference for this volume is tentatively scheduled for January 1986.

Both volumes are scheduled for publication during 1986.

Surface Water Hydrology of North America

Introduction—M. L. Moss, M. G. Wolman, H. C. Riggs

Contributors to Streamflow

Influence of the Atmosphere—S. A. Changnon, Jr.,
F. K. Hare

Climate Controls of the Hydrologic Cycle
Precipitation Distribution and Controlling
Processes

Evaporation and Transpiration; Distributions
and Controlling Processes

Thermal Climate

Interpreting Precipitation Data

Influence of Land and Vegetation—K. E. Saxton,
S. Y. Shiau

Features Characterizing a Hydrologic Land-
scape

Hydrologic Regions of North America

Physical Processes of Waters on the Land

The Distribution of Surface Water in Rivers

Streamflow in Time and Space—H. C. Riggs, D. K.
Harvey

Definitions and Characteristics

Variation of Runoff Throughout North America
and Controlling Factors

Floods—H. F. Matthai, E. Watt

Annual Floods at a Point: Factors Affecting
Magnitude and Variability Throughout
North America

Annual Floods along a Channel

Maximum Floods, Mud, and Sheet Flows,
Flood Stages, Historic Floods

Low Flows and Hydrologic Drought—J. R. Rogers,
J. F. Daniel

Distinction Between Low Flows and Droughts

Low Flows: Definitions and Causes of

Variations in Time and Space

Hydrologic Droughts: Frequency and Duration

Lakes and Wetlands—T. C. Winter, M-K. Woo

Hydrogeologic Factors That Affect Distribution of
Lakes and Wetlands

Distribution of Lakes and Wetlands in North
America

Interaction of Hydrogeologic Setting and Chemical
and Biological Processes

Lakes and Wetlands as Integrators of Ecological
History of their Basins

Hydrogeochemistry of Rivers and Lakes—J. D. Hem,
A. Demayo

Geochemical Processes and Chemical Principles in
Quantification

Nature of Water Quality and Methods for Collection
Data Organization and Correlation

Geochemical Characteristics of North American
Drainage Systems

The Distribution of Biota in Rivers and Lakes—
R. Patrick

Communities of Aquatic Life: Structure and
Function

Headwater Streams: Gradients, Topography, Flow,
and Quality

Geographic Variations of Large Mainstream Rivers
and the River Mouth

Geographic Distributions of Biota in North Ameri-
can River Systems

Sediment Yield and Erosion—R. H. Meade, M. G.
Wolman

Measurement and Definition

Factors Influencing Land Erosion

Regional Patterns of Sediment Yields: Temporal
and Spatial Variations

Characteristics of Transported Materials

Loci of Deposition and Geologic Significance of
Erosion and Sediment Yield

Hydrology and the Riverscape—L. B. Leopold,
M. A. Church

Zonal Features Dominant: Climatic and Hydrologic
Regimes

Azonal Influences: Geology and Geologic History
Significant Major River Systems

The Hydrologic Budget and the Influence of Man—
R. M. Hirsch, C. Day

The Water Budget for Large Regions of North
America

Changes in Temporal Distribution of Streamflows,
Flood Frequency, and Rates of Transport of
Constituents

Final Announcement

CORDILLERAN SECTION, GSA, 81st Annual Meeting Vancouver, British Columbia May 8-10, 1985

The Cordilleran Section of the Geological Society of America and the Pacific Coast Section of the Paleontological Society will hold their annual meetings at the University of British Columbia, Vancouver, Canada, May 8-10, 1985. The meeting is sponsored jointly by the Department of Geological Sciences of the University of British Columbia and by the Cordilleran Section of the Geological Association of Canada.

REGISTRATION

Preregistration will be done by mail up to April 1, 1985. On-site registration will take place from 1700 to 2200 hours on May 7 in the lobby of Gage Towers, University of British Columbia, from 0730 to 1700 hours May 8 and 9, and from 0800 to 1200 hours on May 10 in the foyer of the Instructional Resources Centre, University of British Columbia. Preregistration fees are Canadian \$46 (or equivalent in U.S. funds) for professional members, and Canadian \$60 (or U.S. equivalent) for professionals who are not members of GSA. Preregistration fees for students will be Canadian \$13 for GSA members and Canadian \$20 for non-members. An extra charge of Canadian \$13 will be applied for professionals and of Canadian \$7 for students registering after April 1. To qualify for the GSA Student Associate rate you must show your 1985 GSA membership card when picking up your registration packet. To qualify for the nonmember student rate, you must show your student ID when registering or picking up your preregistration packet.

Preregistration is required of those professionals or students wishing to participate in field trips.

TECHNICAL PROGRAM

Technical sessions will be scheduled as oral presentations and poster sessions on Wednesday, May 8, Thursday, May 9, and Friday, May 10.

SYMPOSIA

- A. **DNAG—Western Canada Preview.** H. Gabrielse, J. O. Wheeler.
- B. **Mesozoic-Cenozoic Subduction Complexes, Northeast Pacific Margin.** J. C. Moore, Terry Pavlis.
- C. **Geology and Tectonics of Terranes of the Insular Belt and Coast Mountains, British Columbia to Alaska.** G. Gehrels, A. Sutherland-Brown, R. B. Campbell.
- D. **Northern Cascades and Southern Coast Mountains, Washington and British Columbia.** E. H. Brown, G. J. Woodsworth.
- E. **Tethyan Exotic Terranes in Western North America.** W. R. Danner.
- F. **Metamorphic Core Complexes, from Okanagan to Yukon.** R. R. Parrish, D. J. Tempelman-Kluit.
- G. **Mass Wasting in Mountain Watersheds.** J. V. DeGraff, J. W. Williams.
- H. **Geological Consequences of Plant Life on Earth.** G. Retallack.

PLENARY LECTURE

The Canadian Lithoprobe Project. R. M. Clowes et al.

PROJECTION EQUIPMENT

All slides used in presentations must be standard 35 mm (2" x 2"). Talks should be prepared for presentation with a single

projector. A speaker ready room is available where slides are to be loaded and previewed. Slide trays will be provided.

SPECIAL EVENTS

A no-host reception will be held from 1930 to 2300 hours on Tuesday, May 7, in the Ballroom at the Student Union Building, University of British Columbia.

The Cordilleran Section of the Geological Society of America will hold a business meeting and luncheon at 1215 hours, Thursday, May 9, 1985, in the Isabel MacInnes Lounge, Gage Towers, University of British Columbia.

Times and locations of other special events will be given in the program or announced at the registration desk.

An outdoor salmon barbecue will be held Thursday, May 9, beginning at 1800 hours. A limited number of tickets will be sold at Canadian \$13.

EXHIBIT SPACE

A limited amount of space will be available on the ground level of the Geological Sciences Building for the duration of the meeting. Spaces 8' x 8' will be assigned on a first-come, first-served basis up to March 1, 1985, at Canadian \$400 for commercial exhibitors and at a reduced rate for educational and nonprofit institutions. For additional information, write to W. H. Mathews, Chmn., GSA Cord. Sect. '85, c/o Geological Sciences, University of B.C., Vancouver, B.C., Canada V6T 2B4.

STUDENT FINANCIAL ASSISTANCE

The Cordilleran Section has funds to subsidize travel costs for Cordilleran Section GSA Student Associate Members. Student Associates presenting a paper or poster session should apply by March 1, 1985, for financial assistance. Application forms are available from

Martin Stout
Department of Geology
California State University
Los Angeles, CA 90032

Preregistration for the meeting is required for a student to be eligible. Successful applicants will be notified prior to the meeting. Awards may be picked up at the registration desk.

FIELD TRIPS

Premeeting

1. **Island Copper's Porphyry Deposit and Westmin Resources Massive Sulphide Deposits, Vancouver Island (May 6-7).** R. Walker, J. Fleming. This is a two-day trip, starting at Campbell River and ending in Vancouver, to examine two producing mines on Vancouver Island. The Island Copper mine produces copper, gold, silver, and some molybdenum. We will visit the open-pit workings and see the main host units. At

(continued on page 32)

PREREGISTRATION FORM

Cordilleran Section, GSA, 81st Annual Meeting
May 8-10, 1985
Vancouver, B.C., Canada

IMPORTANT

1. Full payment must accompany registration.
2. Register one professional or student per form.
3. Your check will be your receipt. Copy this form for your records.
4. Preregistration deadline: **Must be received by April 1, 1985.** (Warning: mail from United States is commonly delayed up to 1 week on entering Canada.)

5. Refund policy: written request must be received by April 7, 1985. No refunds after April 7. Refunds subject to a Canadian \$7 processing fee.

Make check payable to
GSA CORD SEC '85
c/o Dept. Geological Sciences
University of B.C.
Vancouver, B.C., Canada V6T 2B4

In the event of a Canadian mail strike, please send form to: GSA Cord Sec '85, c/o Jean Kinney, GSA, P.O. Box 9140, Boulder, CO 80301.

Please print or type.

Name _____
last first initial

Registered as: Professional Student Spouse/Guest

Name for badge (abbreviate): _____

Affiliation (abbreviate for badge): _____ Spouse/Guest name for badge _____

Professional address _____

City _____ State/Province _____ Zip _____

Phone: Business _____ Home _____

GSA member: yes no Speaker: yes no GSA Student Assoc.: yes no

REGISTRATION FEES

Preregistration (up to April 1, 1985)

	Canadian \$	or	U.S. \$ equiv.
GSA Member	46	\$	_____
Other Professional	60	\$	_____
GSA Student Associate	13	\$	_____
Non-GSA student	20	\$	_____
Spouse/Guest	N/C		

Registration, (after April 1, 1985)

GSA Member	59	\$	_____
Other Professional	73	\$	_____
GSA Student Associate	20	\$	_____
Non-GSA student	27	\$	_____
Spouse/Guest	N/C		

GSA Luncheon, Thursday, May 9

Salmon Barbecue

Abstracts with Programs

(for those not receiving copy direct from GSA)

Field-Trip Registration male female

All field-trip participants must preregister for the meeting. *Deadline for registration is April 1, 1985.* Prices given are in Canadian dollars, but payment in U.S. equivalent is acceptable.

A. Premeeting

1. Island Copper, etc.—May 6-7	Canadian \$ 155	\$	_____
2. Porphyry deposits—May 5-7	Canadian \$ 210	\$	_____
3. Cordilleran cross section—May 4-7	Canadian \$ 320	\$	_____
4. Slope hazards—May 6-7	Canadian \$ 150	\$	_____
5. Early Tertiary volcanics—May 5-7	Canadian \$ 200	\$	_____
6. Chukanut Formation—May 7	Canadian \$ 48	\$	_____
7. Mesozoic melange—May 4-7	Canadian \$ 300	\$	_____
8. LITHOPROBE profile—May 5-7	Canadian \$ 195	\$	_____
9. Precious metals—May 6-7	Canadian \$ 137	\$	_____

B. Postmeeting

10. Gulf Islands cruise—May 11	Canadian \$ 100	\$	_____
11. Base-metal deposits—May 11-14	Canadian \$ 310	\$	_____
12. Southern Shuswap complex—May 11-14	Canadian \$ 370	\$	_____
13. Tethyan exotic terrane—May 11-13	Canadian \$ 205	\$	_____
14. Tectonostratigraphic terrane—May 10-12	Canadian \$ 418	\$	_____
15. Late Quaternary—May 11-12	Canadian \$ 135	\$	_____
16. Adams Plateau—May 11-12	Canadian \$ 295	\$	_____

If a trip is filled or canceled, my other choices are:

Premeeting _____ Postmeeting _____
trip no. leader(s) trip no. leader(s)

Cordilleran Section Annual Meeting*(continued from page 30)*

Westmin Resources (gold, silver, copper, lead, zinc, and cadmium) we will study inactive surface workings and drill core. Please bring hard hats and steel-toed boots; rain gear and warm clothes are advisable. **Limit: 43. Cost: Canadian \$155**, includes transportation from Campbell River to Vancouver, accommodation, lunches, breakfasts, and guidebook.

2. Porphyry Deposits of Southern British Columbia (May 5-7). W. J. McMillan, V. A. Preto. This three-day trip leaves from and returns to Vancouver. We will examine lithology, alteration, and settings of alkalic copper-gold and calc-alkalic copper-molybdenum deposits in southern British Columbia. Please bring warm clothes, steel-toed boots, hard hats, and safety glasses, if you can. **Limit: 35. Cost: Canadian \$210**, includes transportation, accommodation, lunches, and guidebooks.

3. Cordilleran Cross Section, Calgary to Vancouver (May 4-7). J.W.H. Monger, R. A. Price, J. A. Roddick. This four-day bus ride from Calgary to Vancouver starts on the North American craton, proceeds through the Rocky Mountain fold and thrust belt and accreted terranes of the Intermontane Belt, and finishes in the Coast Plutonic Complex. Observations are keyed to a tectonic model for continuity. Please bring warm clothes and rain gear. No long hikes are planned. Some travel is on rough gravel roads. **Limit: 44. Cost: Canadian \$320**, includes transportation from Calgary to Vancouver, accommodation, all meals, and guidebook.

4. Slope Hazards in the Southern Coast Mountains of British Columbia (May 6-7). L. E. Jackson, J. J. Clague, M. Church. This two-day trip leaves from and returns to Vancouver. We will examine geologic hazards along the Howe Sound-Whistler corridor, including debris-flow and debris-avalanche deposits, and we will discuss late Pleistocene glaciation and Quaternary volcanism. **Limit: 40. Cost: Canadian \$150**, includes transportation, all meals, accommodation, and guidebook.

5. Volcanology and Structure of Early Tertiary Outliers in South-Central British Columbia (May 5-7). B. N. Church. This three-day trip from and back to Vancouver will focus on the early Tertiary, fault-bounded, volcanic assemblage and related sedimentary strata near Penticton and Kelowna. Warm clothes are recommended. **Limit: 15. Cost: Canadian \$200**, includes transportation to and from Vancouver, meals, accommodation, and guidebook.

6. Stratigraphy and Sedimentology of the Eocene Chukanut Formation on Bellingham Bay, Washington (May 7). S. Y. Johnson. This is a one-day bus trip through the Eocene Chukanut Formation along Bellingham Bay. The unit comprises 6000 m of alluvial strata and is one of the thickest nonmarine sequences in North America. We will concentrate on stratigraphy, sedimentology, and fluvial facies analysis and the interaction of tectonics and sedimentation. **Limit: 30. Cost: Canadian \$48**, includes transportation from and back to Vancouver, lunch, and guidebook.

7. Mesozoic Melange of the Pacific Rim Complex, Western Vancouver Island (May 4-7). M. T. Brandon. This is a three-and-a-half-day trip from and back to Vancouver. Coastal outcrops on western Vancouver Island afford excellent exposures of Lower Cretaceous melange and an Upper Triassic arc-volcanic basement that underlies the melange. We will focus on the origin of the melange and its relationship to the Wrangellia terrane of Vancouver Island. Several of the field stops will involve hikes (about 20 minutes) and walking over rocky coastal exposures. Rain gear, warm clothing, and hiking boots are recommended.

Limit: 30. Cost: Canadian \$300, includes transportation, all meals, accommodation, and guidebook.

8. LITHOPROBE Profile Across Southern Vancouver Island: Geology and Tectonics (May 5-7). A. Sutherland-Brown, C. J. Yorath. This is a three-day trip leaving from and returning to Vancouver. We will examine all components of Wrangellia and overlying molasse and will relate these to deep seismic reflection data of LITHOPROBE. Please bring warm clothes and rain gear. **Limit: 30. Cost: Canadian \$195**, includes transportation, accommodation, lunches, and guidebook.

9. Precious Metal Mineralization in Southwestern British Columbia (May 6-7). G. E. Ray, S. Coombes, R.J.E. Niels. This is a two-day trip from and back to Vancouver to visit five precious-metal properties in southwestern British Columbia. We will focus on the stratigraphy, geochemistry, and tectonic setting. On the first day we will examine mineralized veins along the Harrison Lake fracture system, at the defunct RN (Au) and Providence (Zn, Pb, Ag, Au) mines, and at Doctors Point (Au, Ag, As). On the second day we will visit the currently operating Carolin Mine gold deposit (underground and surface) and the defunct Emancipation gold mine. Please bring warm clothes, rain gear, and steel-toed boots. Hard hats and lights will be supplied. **Limit: 34. Cost: Canadian \$137**, includes transportation, lunches, accommodation, and guidebook.

Postmeeting

10. Gulf Islands Boat Cruise; Geology and Scenery (May 11). C. J. Yorath. This is a one-day boat cruise from Vancouver's scenic harbor through the Strait of Georgia and the scenic Gulf Islands. Participants will be introduced to the spectacular scenery and geology of the Gulf Islands. **Limit: 60. Cost: Canadian \$100**, includes transportation to and from Vancouver, lunch.

11. Base-Metal Deposits in Southeastern British Columbia (May 11-13). T. Høy. This three-day trip starts in Vancouver and ends in Cranbrook. We will visit three base-metal massive sulphide deposits: (1) Goldstream, a copper-zinc volcanogenic deposit similar to the Besshi type in Japan; (2) Reeves, a deformed, stratabound, carbonate-hosted, lead-zinc deposit; (3) Sullivan, a clastic-hosted, Proterozoic lead-zinc deposit. The trip will also focus on the stratigraphic and tectonic setting of these deposits and of other mineralized camps in southeastern British Columbia. Warm clothes and rain gear are recommended. **Limit: 30. Cost: Canadian \$310**, includes transportation, lunches, accommodation, and guidebook.

12. Metamorphic Complexes and Extensional Tectonics, Southern Shuswap Complex, Southeastern British Columbia (May 11-14). R. Parrish, S. Carr, D. Parkinson. For this three-and-a-half-day trip, we will fly to Castlegar and return to Vancouver by bus. We will examine low-angle detachment faults and fault-zone rocks bounding the Shuswap Complex. The structure, age, metamorphism, and U/Pb geochronology of the metamorphic complexes, which form the lower plate, will also be studied. Outcrops will be examined in the context of compressional and/or extensional models. Please bring rain gear and warm clothes. **Limit: 40. Cost: Canadian \$370**, includes flight to Castlegar and return to Vancouver by bus, accommodation, all meals, and guidebook.

13. Tethyan Exotic Terranes in Southern British Columbia (May 11-13). W. R. Danner. This three-day trip by bus from and back to Vancouver will be based in Cache Creek, with side trips from there. There will be some 1-km hikes and a few steep hillsides. We will visit the well-known Tethyan fusuline locality at Marble Canyon. Bedded radiolarian chert of Permian and Trias-

sic age will be examined. The famous Mr. Mike's melange, which forms a major plate boundary, will also be studied. Please bring rain gear and warm clothes. **Limit: 35. Cost: Canadian \$205**, includes transportation, accommodation, and all meals.

14. Thrust and Strike-Slip Faults Bounding Tectonostratigraphic Terranes, Central British Columbia (May 10-12). L. Struik. The trip leaves from and returns to Vancouver. We will see cataclastic basalt along the west border of the Slide Mountain terrane, clastics of the Barkerville terrane, cataclastic ultramafic rocks of the Crooked Amphibolite and its contact with the Quesnel terrane, and Barkerville terrane rocks in the Lightning Creek anticlinorium and near Island Mountain and Cariboo Gold Quartz mine sites. We will see Slide Mountain terrane chert on Cariboo terrane Pennsylvanian limestone and Cariboo terrane quartzite on Barkerville terrane siliceous phyllite. **Limit: 10. Cost: Canadian \$418**, includes transportation, accommodation, all meals, and guidebook.

15. Late Quaternary Geology of Southwestern British Columbia (May 11-12). J.E.A. Armstrong, J. J. Clague, R. J. Hebda. This trips leaves from and returns to Vancouver. We will examine

Quaternary geology of the Fraser Lowland, including late- and mid-Wisconsin and older deposits. Glaciomarine deposits, which are of particular interest, will be studied. **Limit: 40. Cost: Canadian \$135**, includes transportation, accommodation, all meals, and guidebook.

16. Geology and Mineral Deposits of Adams Plateau-Clearwater Region (May 11-12). V. Preto, P. Schiarizza. This two-day trip starts and ends in Vancouver. The Eagle Bay and Fennell Formations flank the Shuswap metamorphic complex and consist of felsic to mafic volcanics and related sedimentary rocks of Devonian to Permian age. Five types of mineral deposits, representing depositional environments from inner arc to ocean floor, are recognized. We will examine the rocks and deposits. Please bring warm clothes and rain gear. **Limit: 12. Cost: Canadian \$295**, includes transportation, accommodation, lunches, and guidebook.

ABSTRACTS WITH PROGRAMS

Abstracts with Programs will be mailed to members of the GSA Cordilleran Section who have ordered and paid for the

HOUSING FORM

Cordilleran Section, GSA, May 8-10, 1985
UBC Conference Centre, Vancouver, British Columbia

Name: Mr. Mrs. Ms. _____

Address: _____

ARRIVAL DATE: _____

EXPECTED ARRIVAL TIME: _____

Check-in time: 2 p.m.

DEPARTURE DATE: _____

EXPECTED DEPARTURE TIME: _____

Check-out time: 11 a.m.

Accommodation is available on campus beginning May 7, 1985. For those wishing accommodation after the conference, please indicate the additional nights required below.

ACCOMMODATION REQUIREMENTS

Number required		
_____	Single room	Canadian \$24
_____	Adjacent single rooms (family rate)	Canadian \$18
_____	Suite, single occupancy	Canadian \$35
_____	Suite, double occupancy	Canadian \$45

Rates are given in Canadian dollars and are subject to an additional 7% Provincial Hotel Tax.

Deposits Not Required

NAME(S) OF ACCOMPANYING PERSONS

M F _____

M F _____

M F _____

DEADLINE FOR RECEIPT OF RESERVATIONS: APRIL 1, 1985

Please complete and send to:
UBC CONFERENCE CENTRE, RESERVATIONS
University of British Columbia
2071 West Mall
Vancouver, B.C., Canada V6T 1Y9 Phone: (604) 228-2963

In the event of a Canadian mail strike, please send form to:
GSA Cord Sec '85
c/o Jean Kinney
GSA, P.O. Box 9140
Boulder, CO 80301

CORDILLERAN SECTION (continued from page 33)

book with their 1985 GSA membership dues. Be sure to bring your copy to the meeting. A limited number of copies of *Abstracts with Programs* will be available for purchase at the registration desk.

GUIDEBOOKS

Guidebooks for field trips will be provided to participants on the field trips. Additional copies of the guidebooks may be purchased at the registration desk. After the meeting the guidebooks may be obtained from

Cordilleran Section
Geological Association of Canada
P.O. Box 398, Station A
Vancouver, B.C., Canada V6C 2N2

CURRENCY

Payment of registration and field-trip charges may be made in either United States dollars or their Canadian equivalent as of the time of payment (in November 1984, one Canadian dollar was worth about 75 U.S. cents). U.S. attendees are, however, advised to obtain Canadian currency, either at their home bank or at a Canadian bank, of which there are two in the vicinity of the meeting, to cover purchase of meals, incidentals, etc.

HOUSING

Accommodation is available in the Walter Gage Complex at the University of British Columbia. The Gage Complex consists of three modern 17-storey towers; each floor of the towers is divided into four apartments, each containing six single private bedrooms, a large shared bathroom, and a lounge area. The rate for a single room is Canadian \$24. Family members will be

accommodated in adjacent single rooms at a reduced rate of Canadian \$18 per person. There are also a limited number of self-contained private suites available on a first-come, first-served basis, ranging from Canadian \$35 to \$45.

Please reserve your accommodation no later than April 1, 1985, by returning the housing form, printed here, to the UBC Conference Centre. Payment in Canadian funds is requested at the time of check-in, by cash, traveler's check or credit card (Visa and Mastercard accepted).

Limited complimentary parking is available at the Walter Gage Complex for attendees staying there.

Meal service is available in the SUBWAY cafeteria of the street from the Walter Gage Complex. The cafeteria operates on a cash basis from 7 a.m. to 7 p.m. daily.

For attendees preferring accommodation more convenient to the city center, we have requested space at

Holiday Inn. Broadway 711 West Broadway Vancouver, B.C., Canada V5Z 3Y2 Phone (604) 879-0511	Centennial Motor Hotel 898 West Broadway Vancouver, B.C., Canada V5Z 1J8 Phone (604) 872-8661
---	--

Single: Canadian \$57 + tax	Single: Canadian \$39 + tax
Double or twin: Canadian \$64 + tax	Double or twin: Canadian \$42 + tax

These two hotels are located 10 km (6 mi) east of the university campus, where the meetings will be held. Public bus transport is readily available (one change of bus needed) between hotels and campus.

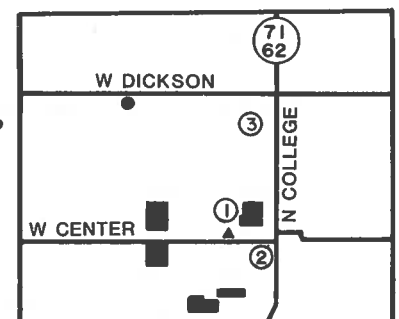
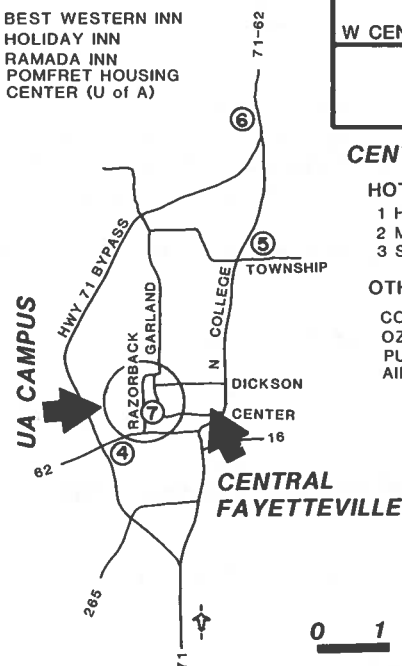
Delegates electing to stay at one of these hotels should make their own reservations, identifying themselves with the GSA meeting.

GOING TO THE SOUTH-CENTRAL SECTION MEETING?

The housing maps at the right were omitted from the final announcement for the GSA 1985 South-Central Section meeting, April 15-16, 1985, in Fayetteville, Arkansas. See *News & Information*, January 1985, p. 6-8 for the meeting final announcement. Rates, addresses, and phone numbers for the hotels and motels indicated on these maps are given on p. 8 of the January issue of *News & Information*.

FAYETTEVILLE HIGHWAY/STREET MAP WITH OUTLYING MOTELS

- 4 BEST WESTERN INN
- 5 HOLIDAY INN
- 6 RAMADA INN
- 7 POMFRET HOUSING CENTER (U of A)



CENTRAL FAYETTEVILLE

HOTEL/MOTELS

- 1 HILTON HOTEL
- 2 MOUNTAIN INN
- 3 SANDS MOTEL

OTHER

- CONTINUING EDUCATION CENTER ▲
- OZARK MOUNTAIN SMOKE HOUSE ●
- PUBLIC PARKING LOTS ■
- AIRPORT ✈

South-Central Section Meeting to Feature Symposium on Alkalic Rocks and Kimberlites

J. B. Dawson of the University of Sheffield and Peter H. Nixon of the University of Leeds will present keynote addresses at a two-day symposium, Alkalic Rocks and Kimberlites, which will be held as part of the GSA South-Central Section meeting in Fayetteville, Arkansas, April 15-16, 1985. The South-Central Section has awarded a \$1000 grant to support travel of foreign scientists and students.

Fifty-four papers on all aspects of alkaline magmatism (mantle metasomatism, kimberlites and related rocks, oceanic alkalic rocks, continental alkalic rocks) will be presented by researchers from throughout the United States, Canada, Great Britain, and France. The symposium will conclude with a two-day, post-meeting field trip to study the alkalic and kimberlitic rocks of Arkansas. Papers presented at the symposium are planned for publication in two GSA Special Papers (Volume 1: Kimberlites and Mantle Processes; Volume 2: Alkalic Magmatism of Continents and Ocean Basins).

The April 15 morning session, Mantle Metasomatism and the Origin of Alkaline Magmas, will begin with a keynote address by J. B. Dawson, Kimberlites—Old and New Thoughts. Papers scheduled are A Model of Mantle Metasomatism by H. G. Wilshire; Relationship of Mantle Metasomatism to Alkaline Volcanism: Cause or Effect? by M. F. Roden; Melt-Peridotite Interactions: Mantle Metasomatism at P 20 Kb by J. K. Meen; Relation of Patent and Cryptic Metasomatism from Studies of Composite Xenoliths by J. E. Neilson-Pike; Styles of Metasomatism in the Mantle—Implications for Alkali Basalt Genesis by P. D. Kempton; Generation of Alkaline Magmas by Pressure Release in Within-Plate Oceanic and Continental Provinces by J. Lameyre; Kimberlite-transported Nodules from Colorado-Wyoming: Enrichment of Shallow Lithosphere by Metasomatism by D. H. Egger, M. E. McCallum, and M. B. Kirkley; A Comparative Study of Garnet Peridotite Nodules from Potassic Volcanic Rocks and Kimberlite by D. Smith; Glimmerites, MARID and PKP Xenoliths from Kimberly, RSA by R. A. Jones, F. R. Boyd, and D. J. Schulze; and Interpretation of the Sulfide Assemblages in a Suite of Xenoliths from Kilbourne Hole, New Mexico by E. L. Dromgoole and J. D. Pasteris.

The April 15 afternoon session, Kimberlites and Similar Rocks, will include Carbonatites—Clues to Mantle Evolution by K. Bell and J. Blenkinsop; Low-Alkali Carbonatites in Alkaline Complexes: Separate Mantle Sources for Carbonate and Alkalis? by A. H. Treiman; The Westland Dike Swarm, New Zealand: Radiogenic Isotope Study of the Lamprophyre-Carbonatitic Rock Suite and Some of its Xenoliths by B. Barreiro and A. F. Cooper; Alkalic Ultramafic Magmas, Missouri Breaks, Montana: The Kimberlite-Alnoite Continuum by B. C. Hearn, Jr.; Alnoite in the Sierras Subandinas, Northern Argentina by H.O.A. Meyer and L. M. Villar; Alkaline Igneous Rocks and Carbonatites of Paraguay by A. N. Mariano and M. D. Druecker; Magma-Mixing and Kimberlite Genesis: Mineralogical, Petrological, and Trace Element Evidence by J. W. Shervais and L. A. Taylor; Compositional Trends of Spinels in Kimberlites and Lamproites by R. H. Mitchell; Geology and Mineralogy of the Twin Knobs #1 Lamproite, Pike County, Arkansas by M. A. Waldman, T. E. McCandless, and H. T. Dummett; A Review and Comparison of Kansas Kimberlites by W. L. Mansker, B. D. Richards, and G. P. Cole; Late Cretaceous Kimberlite and Lamproite Occurrences in Eastern Kansas, U.S.A. by P. Berendsen, R. L. Cullers, W. L. Mansker, and G. P. Cole; The Diamondiferous Pamali Breccia, SE Kali-

mantan, Indonesia: Intrusive Kimberlite Breccia or Sedimentary Conglomerate? by S. C. Bergman, L. G. Krol, and W. Truner; and The Old Cold Route of Kaapvaal Craton by F. R. Boyd.

The April 16 morning session, Alkalic Rocks: Oceanic, will begin with a keynote address, Mantle Xenoliths and the Generation of Alkalic Melts by P. Nixon. Papers will include Experimental Constraints on the Genesis of Alkalic Basalt Lavas by R. O. Sack and I. Carmichael; Evidence from Basal Cumulates in Ophiolites for Alkalic Character of Early Oceanic Magmas by C. Evans; The Speiss Ridge—Early Stages of Construction of a “Hot Spot” Volcano on the Southwest Indian Ridge by H.J.B. Dick and W. B. Bryan; Petrogenesis of Basalts from the Walvis Ridge, a Chain of Alkaline Volcanos by V. J. Dietrich and M. F. Carman; Isotopic Signature of the Suboceanic Mantle under the Ontong-Java Plateau, South West Pacific by C. R. Neal and J. P. Davidson; Alkali Basalts of Cascade Head, Oregon: Seamounts or Transition Zone Volcanism? by M.A.W. Barnes; Alkalic Rocks from SW Pacific Island Arcs: Subduction or Rift-Related? by M. R. Perfit; Boninites, Arc Tholeiites and an “Ocean Island” Mantle Source in Arc Petrogenesis by S. H. Bloomer; Silica Oversaturated and Undersaturated Miaskitic Alkaline Trends of Kerguelen Archipelago by J. F. Beaux and A. Giret; Jurassic Intraplate Volcanism: Alkaline and Transitional Subalkaline Metabasalts in the Franciscan Complex Melange, California by J. W. Shervais; and Temporal Evolution of Alkaline Magmatism in the Northern Canadian Cordillera by G. E. Eiche, D. M. Francis, and J. N. Ludden.

The April 16 afternoon session, Alkalic Rocks—Continental, will include The Cameroon Line, West Africa, and Its Bearing on the Origin of Oceanic and Continental Alkali Basalt by J. G. Fitton; Geochemical Comparison of Alkaline Volcanism in Oceanic and Continental Settings: Clarion Island versus the Eastern Trans-Pecos Magmatic Province by D. O. Nelson and K. L. Nelson; Alkalic Rocks of Contrasting Tectonic Settings in Trans-Pecos Texas by J. G. Price, C. D. Henry, D. S. Barker, and D. F. Parker; Late Cretaceous Nephelinite to Phonolite Magmatism, Balcones Province, Texas by D. S. Barker, R. H. Mitchell, and D. McKay; Igneous Petrology and Structural Geology of Nine Point Mesa, Brewster County, Texas by P. Bobeck; Slickrock Mountain Intrusive Complex, Big Bend National Park, Texas by E. Hill and C. G. Barnes; Chemical Characterization of Cambrian Basaltic Liquids from the Southern Oklahoma Aulacogen by M. C. Gilbert and S. S. Hughes; U-Th-Pb Ages of Large Zircon Crystals from the Potash Sulfur Springs Igneous Complex, Garland County, Arkansas by R. E. Zartman; Mineralogy and Petrology of Lamprophyric and Carbonatitic Dikes, Central Arkansas by E. D. Mullen and S. Murphy; Isotopic Relationships in Arkansas Cretaceous Alkalic Complexes by G. R. Tilton, D. M. Frost, and S. T. Kwon; Petrology of Alkaline Rocks in the Carbonatite Complex at Iron Hill, Powderhorn District, Gunnison County, Colorado—New Geochemical and Isotopic Data by T. J. Armbrustmacher and K. Futa; Combined Rb/Sr and Sm/Nd Systems Study on Three Alkaline Intrusive Complexes in Northwestern Montana by K. Futa and T. J. Armbrustmacher; and Complex Zoning of Clinopyroxene in Shonkinites and Mafic Phonolites, Highwood Mountains, Montana: Evidence for Periodic Mixing with a K-rich Basanitic Magma by H. E. O'Brien, A. H. Irving, and I. S. McCallum.

An accompanying poster session will include Arkansas Vana-

(continued on page 36)

Symposium (continued from page 35)

dium Exploration Samples by J. M. Howard; Factors Affecting Garnet Metamerism and Applications in Kimberlite Evaluation/Exploration by J. T. Springfield and W. L. Mansker; Solidification of Nepheline Syenitic Magma, Tenerife, Canary Islands: The First and Last Liquids and Crystals by J. A. Wolff; Tectonic Setting of Xenolith-rich Alkalic Intrusions in New England and Adjacent Quebec by J. McHorne and N. A. Williams; Cenozoic Alkalic Volcanic Provinces of Mainland Asia by J. L. Whitford-Stark; and Alkalic Magmatism Subsequent to Collision in the Pan-African Belt of the Adrar Des Iforas (Mali) by J. P. Liegeois and R. Black.

Symposium conveners are Ellen D. Mullen, University of Arkansas, and Jill D. Pasteris, Washington University. The Alkalic Rocks and Kimberlites symposium has initiated a program of grants by the South-Central Section to encourage and support the presentation of major symposia or other innovative and productive activities at South-Central Section annual meetings.

For more information, and preregistration forms for the 1985 South-Central Section meeting, see the January 1985 issue of *GSA News & Information* or contact General Chairman Robert C. Morris, Department of Geology, 118 Ozark Hall, University of Arkansas, Fayetteville, AR 72701; phone (501) 575-3355.

Reno Meeting Pros and Cons

by Sue Beggs

From the Meetings Manager's Daily Notebook . . .

Monday, November 5, 1984

I've just made a check of all the technical-session rooms. The rooms are full, but only one has Standing Room Only. The technical equipment is the best it's ever been. AVW does a good job; some say it's the best audio-visual contractor in the business.

These 20' ceilings at the MGM have made it possible to set up 12' x 12' screens. The large screens mean we've been able to utilize high-intensity ORC 500 Xenon projectors. They are in seven out of ten rooms. We have made a commitment to improving the technical aspects of this meeting—and it shows. Good comments from speakers and listeners.

Of course, the invoice for this is going to reflect the improved equipment. The 1984 equipment expense will increase by 123%, to \$10,900. Because all the Xenon equipment is best used with union labor, the labor costs have also increased. That invoice will be around \$10,561—up 200%.

Wait until we get to Orlando! We're committed to two screens, two projectors in each technical session room—plus an overhead. This is an improvement we've been moving toward for several years. With [Executive Director] F. M. Wahl's encouragement and the blessing of the Program Review Committee, we're finally taking the plunge for 1985.

Wednesday, November 7

Even with 6000 registrants here, the meeting is running smoothly—well, at least without major disaster or crisis. Of course, I hear complaints. Among the most frequent . . . and my favorite responses:

Why aren't papers given in 20-minute intervals? . . . And why aren't all papers scheduled to start and end at the same times?

We are limited in the number of rooms and the number of hours; therefore, we must limit the number of papers that can be presented. In order to avoid too many conflicting sessions, Council has set the maximum number of sessions (exclusive of posters) at 72. In four days, this allows 9-10 sessions each half day. In 15-minute segments, this permits four papers an hour. In 20-minute segments, there would be time for only three papers; therefore, the rejection rate for submitted abstracts would have to increase.

Making the talk times consistent also has its thorny side. Each of the seven associated societies holds its own annual meeting in conjunction with GSA. Most of the societies want more autonomy than they now have, but at least they may schedule their speakers in a way they find appropriate to their program. Symposia conveners have wide latitude; therefore, symposia vary considerably in their format.

(continued on page 37)

Conference Speaker's Affidavit*

I, _____, being of sound mind and body, upon agreeing to deliver a paper at the _____, do solemnly swear to abide by the following rules for speakers:

1. I will not read my paper aloud to a bored audience, most of whom are fully capable of reading, themselves.
2. I will not show totally unreadable slides to an audience and then apologize to the audience for the fact that there wasn't time to prepare readable slides.
3. I will show no slides with writing that cannot be read on the slide when held in my hand before my eyes without the use of a magnifying glass.
4. I will use no overhead projector in my arsenal of visual aids.
5. I agree to deliver my paper in _____ minutes and to begin a three-minute summary of my presentation when the yellow light goes on at the speaker's rostrum.
6. I understand that if I insist on speaking beyond my allotted _____ minutes, a red light will be flashed repeatedly at the speaker's rostrum, making the audience fully aware that I have failed to adequately organize myself in order to maintain the program schedule.
7. Finally, I recognize that all of these rules have been established to maximize the educational benefit to the attendees who are investing valuable time and money to attend this conference in order to gain knowledge from eminently qualified speakers such as myself.

It is my understanding that the penalty for not heeding these rules will be one or more of the following:

1. Forfeiture of remaining time on schedule
2. Stoning by audience
3. Execution of trap door below speaker's platform
4. Hissing, booing, tomato throwing
5. Double billing of registration fees.

Signature of speaker taking this solemn oath

*Thanks to National Water Well Association.

Pros and Cons (continued from page 36)

Why do some talks run over the time maximum?

Here I think we're making progress. We've always encouraged session chairmen to adhere to the schedule, regardless of who was speaking. This year the Session Chairmen Breakfasts are giving the Technical Program Chairmen a chance to add some clout to the rules. Of course, everyone enjoys some coffee and sweet rolls—especially a geologist. Anyway, the message will be reinforced. Perhaps we should serve beer, too!

Some terrible slides . . . and boring talks. Why can't you do something?

We would like to do something. "Effective Slides," a technical presentation memo, goes to each speaker, but it has little effect on some speakers. Do they read their mail? Is the memo effective? I like the Conference Speaker's Affidavit suggested by a constructive meeting critic (see p. 36). I wonder if this would get results.

Thursday, November 8

Well, it's almost over. Been at the MGM Grand for 12 days. I'm tired of Bowling Alley food. We'll all be glad to go home. It has been a great year, though . . . and already we're working on the future. 1985 is underway. 1986 is coming up. Some thoughts for those who plan ahead. (Better put this in *News & Information*.)

Geologists who like to organize or to take part in a 1986 symposium should contact the Technical Program Chairman now, even though the official invitation will not go to the GSA divisions and associated societies until September 1985. The deadline will be January 1, 1986.

The GSA Council has set a limit of 22 symposia—one half-day session for each associated society and GSA division, leaving six for at-large sponsorship. The best way to be involved in a symposium is to contact the appropriate society or division during the early months of 1985. Usually the secretary or program chairman knows the ropes.

Friday, November 9

Going back to Boulder soon. Can't wait to start on Orlando. . . .

And the Book and Buckle Winners Are . . .

"I never win anything," some of them claimed as they dropped their drawing entries into the box at the GSA exhibit for the 1984 Annual Meeting, in Reno. The drawings, for GSA Special Paper 198, *Melanges, Their Nature, Origin, and Significance*, edited by Loren A. Raymond, and for the new GSA solid-brass belt buckle, were held twice daily at the GSA exhibit booth.

Some of the people who never win anything broke that record at Reno.

Winners of Special Paper 198 are Charles E. Fisher, Cambridge, Massachusetts; Nora Foley, Reston, Virginia; Allen Hatheway, Rolla, Missouri; Tom Hulsebosch, Laramie, Wyoming; Ed Laine, Narragansett, Rhode Island; Carol Mount, Reno, Nevada; and Simon Peacock, Los Angeles, California.

The belt buckle, a new GSA product that proved to be popular at the Reno meeting, was won by Darlene Batatian, Menlo Park, California; Byron R. Berger, Golden, Colorado; Joyce Kistler, Menlo Park, California; James Murowchick, Edmonton, Alberta, Canada; and June R.P. Ross, Bellingham, Washington.

Southeastern Section Speakers Program

GSA's Southeastern Section has a new Speakers Program, with a roster of 72 speakers, offering nearly 150 talks on topics of geologic interest.

Southeastern Section Campus Representatives voted to implement the program at its spring 1984 meeting. Earth science department heads at colleges and universities within the geographical boundaries of the Southeastern Section were contacted to determine interest in the program for the 1984-1985 academic year; 25 departments responded positively and provided lists of available speakers. Otto Kopp, University of Tennessee, has organized the program and keeps track of its progress.

In late February 1985, the earth science departments will be surveyed to determine the extent of their participation and how successful the program has been. A revised list of speakers and topics will be compiled for the 1985-1986 academic year. Departments that did not participate during 1984-1985 will be contacted again to determine if they want to participate. The Southeastern Section may expand the program to include speakers from non-academic institutions—state surveys, national laboratories, energy and mining companies, etc.

For the List of Speakers, containing information on whom to contact to arrange for a speaker, write or call Membership Department, GSA, P.O. Box 9140, Boulder, CO 80301; (303) 447-2020. Interested parties in the Southeastern Section who did not respond to last year's correspondence or those from adjacent sections should contact Otto C. Kopp, Department of Geological Sciences, University of Tennessee, Knoxville, TN 37916.

Memorial Preprints

The following memorial preprints are now available, free of charge, by writing to GSA, P.O. Box 9140, Boulder, CO 80301.

Julian Devereaux Barksdale, by Eric S. Cheney
C. Harry Burgess, by Paul A. Bailly
Louis Dubertret, by Philip E. LaMoreaux
Paul Warren Hughes, by Alice Hughes
Berlen Clifford Money maker, by J. B. Perry
Chauncey Glenn Tillman, by W. D. Lowry
George Prior Woollard, by Valerie M. Godley

1986 GSA ANNUAL MEETING SAN ANTONIO, TEXAS

CALL FOR FIELD TRIP PROPOSALS

Contact:

E. G. Wermund
Bureau of Economic Geology
University of Texas, Austin
Austin, TX 78712

(512) 471-1534

1986 TECHNICAL PROGRAM

Contact:

John C. Maxwell
Dept. of Geological Sciences
University of Texas, Austin
Austin, TX 78712

(512) 471-5172

MEETINGS

1985

U.S. Geological Survey Forum on Research in Mineral Resources, February 6-7, 1985, Denver, Colorado. Information: William R. Miller, USGS, P.O. Box 25046, M.S. 912, Federal Center, Denver, CO 80225; (303) 236-5558.

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.

American Institute of Mining, Metallurgical and Petroleum Engineers Annual Meeting, February 24-28, 1985, New York. Information: Joan M. Andelman, AIME, 345 E. 47th St., New York, NY 10017; (212) 705-7677.

Geology of the Oceans, Geologische Vereinigung 75th annual meeting, February 27-March 2, 1985. Information: Michael Sarnthein, Geologisch-Palaeontologisches Institut, Universitaet, Ols-hausenstrasse, D-2300 Kiel, Federal Republic of Germany.

Paul F. Kerr Memorial Symposium, February 28, 1985, New York. Information: Otto C. Kopp, Dept. of Geological Sciences, University of Tennessee, Knoxville, TN 37996-1410.

North American Energy Markets Conference, March 4-5, 1985, Toronto, Ontario. Information: Shane Streifel, Canadian Energy Research Institute, 3512-33 St. N.W., Calgary, Alberta T2L 2A6, Canada; (403) 282-1231.

Prospectors and Developers Association 53rd Annual Convention, March 10-14, 1985, Toronto, Ontario, Canada. Information: Prospectors and Developers Association, Suite 420, 74 Victoria St., Toronto, Ontario, Canada M5C 2A5; (416) 362-1969.

American Association of Petroleum Geologists Annual Convention, March 24-27, 1985, New Orleans, Louisiana. Information: Kathy Watson, AAPG, P.O. Box 979, Tulsa, OK 74101; (918) 584-2555.

Analytical Chemistry in the Exploration, Mining and Processing of Materials, 2nd International Symposium, April 15-19, 1985, Pretoria, South Africa. Information: Symposium Secretariat S.328, CSIR, P.O. Box 395, Pretoria, 0001 South Africa.

Texas A&M Geodynamics Research Program 7th Annual Symposium, Intraplate Deformation: Characteristics, Processes and Causes, April 25-26, College Station, Texas. Information: Texas A&M Geodynamics Research Program, Texas A&M University, College Station, TX 77843-3114; (409) 845-8477.

Symposium on Organics and Ore Deposits, April 25-26, 1985, Denver, Colorado. Information: Denver Region Exploration Geologists Society, 5025 Ward Rd., Suite 508, Wheat Ridge, CO 80033.

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

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

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

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

Mount St. Helens Five Years Later, May 16-18, 1985, Cheney, Washington. Information: Michael M. Folsom or Sarah A.C. Keller, Dept. of Geography and Anthropology, Eastern Washington University, Cheney, Washington 99004; (509) 359-2433. Abstracts deadline is March 15, 1985.

Symposium on Degradation of Materials Due to Acid Rain, June 17-19, 1985, Arlington, Virginia. Information: Bruce R. Doe, U.S. Department of the Interior, National Park Service, Washington, DC 20240.

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

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

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

International Estuarine Conference, July 28-August 2, 1985, Durham, New Hampshire. Information: Bjorn Kjerfve, Belle W. Baruch Institute for Marine Biology and Coastal Research, University of South Carolina, Columbia, SC 29208; (803) 777-4529. Abstracts deadline is February 18, 1985.

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

Society of Economic Paleontologists and Mineralogists 2nd Annual Midyear Meeting, Golden Prospects for Science and Industry, August 11-14, 1985, Golden, Colorado. Information: Steve Sonnenberg, 1000 Writer Square, 1512 Larimer St., Denver, CO 80202; (303) 571-1314.

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

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

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

CLASSIFIED ADVERTISING

Ads (or cancellations) for the April issue must reach the GSA office by February 15.

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

Code number \$2.75 extra.

Agencies and organizations may submit purchase order or payment with copy. Individuals must send prepayment with copy. To determine cost, count 40 characters per line, including all punctuation and blank spaces.

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

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

Situations Wanted

PACKMULE, 21, geology B.S., graduate-school bound, willing to travel, experience over money, field or lab, summer 1985, communicates well, carries heavy loads. S. Ude, 1109 Huntleigh Dr. Naperville, IL 60540. 02 04

INDUSTRIAL MINERALS GEOLOGIST, 37, MS, 1974. Varied experience: mapping, core drilling, mine production, some exploration. Computer literate in both Basic and Fortran. Seeks position at any level: industry, government, or consulting. Code #1001 GSA News. 01 06

Positions Open

ISOTOPE GEOCHEMIST OR ECONOMIC GEOLOGIST
University of Washington
The Department of Geological Sciences invites applications for a tenure-track appointment at

the Assistant Professor level with specialization in isotope geochemistry or economic geology. The position will be available in the fall of 1985. Candidates must hold a Ph.D. degree and be committed to establishing a nationally prominent research program. Applicants in isotope geochemistry should have experience in the measurement of isotopic abundances in radiogenic systems, and in the application of isotopic data in solving problems in petrology, crust and mantle evolution, or cosmochemistry. Applicants in economic geology should have a strong background in geochemistry with particular research interests in the application of chemical principles to the processes of ore genesis. Candidates will be expected to teach at both the undergraduate and graduate levels and to supervise graduate research.

Send letter of application, (including description of research interests), curriculum vitae, and names of four referees to Chairman, Search Committee, Department of Geological Sciences, AJ-20, University of Washington, Seattle, WA 98195.

The University of Washington is an affirmative action/equal opportunity employer. 01 02

UNIVERSITY OF SOUTH CAROLINA

The Department of Geology is soliciting applications for an anticipated tenure-track faculty position in solid earth geophysics at an assistant professor level to begin in August 1985. Current areas of interest to the department include seismology, exploration and regional geophysics, and tectonophysics. The successful candidate is expected to develop a strong research program, and teach graduate and undergraduate courses. Send letters of application accompanied by a vita, description of research, and names of at least three references to Pradeep Talwani, Geology Department, University of South Carolina, Columbia, SC 29208. Closing date for applications is February 28, 1985. The University of South Carolina is an equal opportunity/affirmative action employer.

Consultants

Geologic consulting firms & Individuals! Use this new, low cost GSA advertising medium to promote your services throughout the geologic community. More than 13,500 earth scientists from around the world, working in every discipline, read this news magazine every month. Talk to them! See above for rates, details, and closing dates.

Services and Supplies

PRIVATE LIBRARY OF GSA BULLETIN FOR SALE. Consists of: Volume years 1953 thru 1961 (4 single copies missing); 1964 thru 1973 (2 single copies missing). Copies are unbound, in excellent condition. Sell only as set, price is negotiable, and portion of proceeds will be donated to GSA Foundation. Write Code #1002 GSA News. 02 04

ELECTRON PROBE. Fully operative manual 3-channel ARL-EMX instrument with TN-2000 analyzer. Electronics partly updated; one spectrometer rebuilt. Available now. Contact D. Smith, Dept. Geology, University of Texas, Austin, TX 78713.

TEACHERS: Best selection of 35mm slides! Paleontology, mineralogy, geologic processes, aerial photos, more! Crystal models. Geological Education Aids, 17 Leisure Drive, Kirksville, MO 63501. 02 04

QUALITY BINDERS for your copies of *Bulletin* and *Geology*. Holds 12 issues; has extra wire for loose inserts, handsomely gold stamped; index window on spine; rich, leatherette cover—*Bulletin*, tan—*Geology*, maroon. Price \$10. Member discount applies. Contact Publication Sales, GSA, P.O. Box 9140, Boulder, CO 80301.

MEETINGS

1985 Penrose Conferences

Geomorphic and Stratigraphic Indicators of Neogene-Quaternary Climatic Change in Arid and Semiarid Environments, April 14-19, 1985, Lake Havasu, Arizona. Information: John C. Dohrenwend, U.S. Geological Survey, M.S. 41, 345 Middlefield Rd., Menlo Park, CA 94025; (415) 323-8111, ext. 2169.

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

1985 GSA Section Meetings

Northeastern Section, March 13-16, 1985, Lancaster, Pennsylvania. Information: William M. Jordan, Dept. Earth Sciences, Millersville University, Millersville, PA 17551; (717) 872-3289.

Southeastern Section, March 20-22, 1985, Knoxville, Tennessee. Information: Kenneth R. Walker, Dept. Geological Sciences, University of Tennessee, Knoxville, TN 37996; (615) 974-5499.

South-Central Section, April 14-16, 1985, Fayetteville, Arkansas. Information: Robert C. Morris, Dept. of Geology, OH 118, University of Arkansas, Fayetteville, AR 72701; (501) 575-3355.

Rocky Mountain Section, April 22-24, 1985, Boise, Idaho. Information: Claude Spinosa, Dept. Geology and Geophysics, Boise State University, Boise, ID 83725; (208) 385-3660.

North-Central Section, April 25-26, 1985, DeKalb, Illinois. Information: Jonathan H. Berg, Dept. Geology, Northern Illinois University, DeKalb, IL 60115; (815) 753-1943.

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



GSA Members . . . SAVE 25% ON GSA PUBLICATIONS*

with our Member Standing Order Plan!

We've changed our Standing Order Plan to give special consideration to GSA Members who want to save time and money and insure that they receive every new title issued in one or more of GSA's publications series, listed below.

Yes, you may enter a standing order for just one of the publication series below . . . or for as many of them as you like. Send today for complete details and a contract form. We'll rush the material to you with no obligation.

Check one or more series in which you're interested . . .

Regular GSA Publications

- Memoirs
- Special Papers
- Engineering Geology Reviews
- Engineering Geology Case Histories
- Maps & Charts (folded only)
- Microform Publications
- Memorials
- Treatise on Invertebrate Paleontology

Decade of North American Geology Publications

- Continent-Ocean Transects
- Geology of N. America (Memoirs)
- Geologic Map of N. America
- Centennial Field Guides

NAME _____
ADDRESS _____
ADDRESS _____
CITY _____ STATE _____ ZIP _____

Mail to: Marketing Manager • P.O. Box 9140 • Boulder, CO 80301 • (303) 447-2020

**Standing order plans cover only non-periodical publications.*

INSIDE _ _ _

Campus Representative Program	p. 25
Cordilleran Section Annual Meeting	p. 30
South-Central Section Symposium	p. 35
Book and Buckle Winners	p. 37



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

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