



ASSOCIATION OF ENGINEERING GEOLOGISTS

"Serving Professionals in Engineering, Environmental, and Ground-Water Geology"

THE ROCKY MOUNTAIN SECTION NEWSLETTER

MEETING DATE

**THURSDAY
MAY 10, 2001**

TIME

5:45 p.m. Social Hour
6:30 p.m. Dinner
7:30 p.m. Presentations

LOCATION

GEOLOGY MUSEUM
Colorado School of Mines
Golden, CO

COST

\$20 Members
\$22 Non-members
\$10 Students

RESERVATIONS

c/o AEG Reservation Line
(303) 790-2161 x 243

**BY NOON, MONDAY
7 MAY**

Richard H. Jahns Lecture
Realism in volcano hazard zonation:
Does geo-engineering help provide a more accurate
assessment?

Dr. Bob Watters
University of Nevada, Reno
AEG Jahns Distinguished Lecturer

Significant rock strength reductions, as a result of weathering processes, often result in slope instability. The strength reduction caused by hydrothermal alteration is not well documented or understood. Hydrothermal alteration differs from weathering in one important aspect; it can be both laterally widespread, as in weathering, but also vertically continuous to great depth. Economic geologists have long recognized the relationship between alteration and mineralization, but only recently has this relationship been correlated with rock strength and applied to surface and underground mining or construction excavations. Extrapolating the concepts of engineering slope design to the volcano environment shows potential for improving hazard assessment.

Many stratovolcanoes exhibit significant hydrothermal alteration. Alteration is time-dependent; thus, an initial "stable" volcano undergoes a progressive rock strength reduction, as a result of argillic alteration, which may result in slope instability. Failure volume is related to degree of alteration, orientation of major structures, strength of other lithologies, and external forces such as seismic loading or fluid pressure from eruptive events. The failure mass may form a rock avalanche or lahar, depending on clay or water content. Travel distance for such failures is often measured in tens of kilometers. Many urban areas and transportation routes are constructed on debris deposits from these major events.

The Holocene record contains many of these events and the historical record is dotted with failure deposits (present - 400 years) throughout the world. Major slope instability can be independent of eruptive forces, particularly when the failure mass is small (< 0.1 cubic kilometers), consequently warning signs may not be readily apparent. Hazard zonation around volcanoes should consider failure volume, failure frequency, previous failure deposits, and the strength and location of weak and potentially unstable rock masses at the edifice and flanks of the volcano. Examples and analyses are presented from volcanoes in the Cascade Range (USA), eastern portion of the Mexican Volcanic Belt, and Equador. The types of field investigations performed at elevations up to 18,000 feet to obtain the raw strength data at the landslide source together with volcano modeling and hazard appraisal will be discussed.

Monthly Meeting Survey

As you are aware, the AEG meeting location changed this year from the Student Center at CSM to various locations throughout the Golden/Lakewood area. This decision was made by Section officers due to escalating costs for room, food and beverages at the Student Center, paired with a reduction in food quality and service. The May meeting will be the last presentation of this AEG-year, and officers are focused on selecting a more permanent meeting location for next year. Please take the time to answer a few questions, so that we can select the new meeting location taking into consideration what you, the Section members, value most:

1. Rank each topic on a scale of 1-10 (10 being very important) as they relate to meeting location:

- Distance to meeting from your home/office
- Cost
- Quality of meals
- Cost/type of happy hour beverages
- Having meal and presentation in same room/location
- Quality of room for presentations
- Consistent location

2. How much would you be willing to pay for a Section meeting meal?
3. How far would you be willing to drive (time or distance) for a Section meeting?

How Can We Better Serve Non-Front Range Members?

The Rocky Mountain Section is one of the most geographically extensive sections in the Association. Since the majority of members live and work in the Denver metropolitan area, Section activities are focused along the Colorado Front Range. Unfortunately, this meeting locale means that many of you in other states or regions in Colorado are not able to attend Section Meetings.

Section officers are exploring the idea of organizing regional sub-section meetings on a quarterly or semi-annual basis, so that AEGers throughout the Rocky Mountain Section are able to benefit from association membership. A local leader would spearhead the effort, with organizational assistance provided by the folks in Denver. In addition, attendance from a Section officer from Denver would be encouraged (travel schedules permitting).

What we need to know from you is your level of interest in attending/leading such regional meetings. Possible regional meeting locations could include: Grand Junction, CO; Albuquerque, NM; Rapid City, SD;

and Cheyenne, WY, or anywhere else a small group of interested AEGers resides. To provide your feedback, send an e-mail to Peggy Ganse at MAG@HaleyAldrich.com and let her know what's on your mind.

Upcoming Events

Free Popular Geology Lectures

The Friends of Dinosaur Ridge have announced that the following "popular geology" lectures will be held at the Lutheran Church of the Master at the intersection of Jewell, Alameda Blvd., and Bear Creek Parkway in Lakewood, Colorado. All are free and open to the public. Contact 303-697-DINO (303-697-3466) for further information

Thursday, May 3, 2001, 7:00 pm "History of Coal Mining in Jefferson County, Colorado"
Chris Carroll, Colorado Geological Survey

Section News

1. Long time Section treasurer Sam Bartlett is retiring from the U. S. Bureau of Reclamation on May 3 after over 30 years of federal service. Most recently, Sam has been the group manager for one of the two engineering geology groups at the Technical Service Center in Denver. Sam's departure follows on the heels of the retirements of fellow RMS members Mark McKeown and Sandy Kunzer. Mark and Sandy each also had over 30 years of federal service. Sam, Mark, and Sandy will be greatly missed at Reclamation. However, we wish them the best in their retirement.
2. The Association Awards Committee is still seeking nominations for the following three awards:
 - a. **Douglas R. Piteau Outstanding Young Member Award** - This award is presented to a Member or Associate Member who is age 35 or under, and has excelled in one (or more) of the following 3 areas: technical accomplishment, service to AEG (including local section involvement), or service to the engineering geology profession.
 - b. **Claire P. Holdredge Award** - This award is presented for a publication by a Member(s) within the past 5 years that is judged to be an outstanding contribution to the engineering geology profession.
 - c. **Floyd T. Johnson Service Award** - This award is presented to a Member for outstanding active and faithful service to the Association over a minimum of 9 years. Board members are not eligible until 1 year after leaving office. Nominations must be validated via endorsement by 3 Members having different Section affiliations. This award is not necessarily conferred annually.

The deadline for nominations to be considered for awards in 2001 is May 30, 2001. If you think any Rocky Mountain Section Members are deserving of these awards, please send nominations to Bill Cole, AEG Awards Committee Manager, c/o Cotton, Shires and Associates, Inc., 330 Village Lane, Los Gatos, CA 95030 (or to bcole@cottonshires.com). For more information, please consult the AEG Directory or website, or send questions to Bill Cole.

4. Please forward newsworthy items for the RMS newsletter to Doug Boyer at dboyer@do.usbr.gov

Section Website

The RMS website is up and running! And it looks simply outstanding! Peggy and her husband Jack have made great strides in getting this up and running. Members can look at meeting abstracts, download the newsletter, RSVP to meetings, and contact Section officers. The address is temporarily located at <http://home.earthlink.net/~jganse/aeg> until a permanent home is found.

RMS Officer Contact List

Chairperson	Peggy Ganse, Haley & Aldrich, 303.534.5789, ext. 3210, MAG@haleyaldrich.com
Chair-elect	Tim Petz, Church & Associates, Inc., 303.463.9317, tpetz@geo-church.com
Secretary	Jim Wright, GEI Consultants, Inc., 303.662.0100, jwright@geiconsultants.com
Treasurer	Sam Bartlett, U.S. Bureau of Reclamation, 303.445.3142, srbartlett@do.usbr.gov
Membership	Scott Walker, GEI Consultants, Inc., 303.662.0100, srwalker@geiconsultants.com
Newsletter	Doug Boyer, U.S. Bureau of Reclamation, 303.445.3074, dboyer@do.usbr.gov

Future Section Leaders

The Section is seeking interest in persons interested in becoming a part of the Section leadership team. There will be openings next year for both Section treasurer and Section secretary. This is a great way to learn and become involved in business end of the Section as well as make great contacts at the local and national levels. Persons interested in participating in these positions should contact Peggy, Tim, or Jim.

Fall 2001/Spring 2002 Tentative Speakers

September 13 – Dr. Christoph Goss (Rocky Mountain Consultants) – Rehabilitation of the Laramie-Poudre Tunnel

October 11 - Jim Lambrechts (Haley & Aldrich) – Ground Improvement of Compressible Clay Soil

November 8- Jon White (CGS) - Study of Collapsible Soils Across Colorado

December 13- Jon Caine (USGS) – Family Night, Pole to Pole - A Geologic Journey of Antarctica and Greenland

January 10 - Bob Schuster (retired USGS) - Dams Built on Pre-Existing Landslides (keynote address at GeoEng 2000 in Melbourne)

February 14 - Student Night

March, April, May – Open, AEG President

Please let Peggy Ganse or Tim Petz know if you or someone you know would be interested in giving a talk at an upcoming RMS meeting.

CSM Silent Auction

The CSM Student Chapter of AEG's Annual Silent Auction was a success again this year, thanks to the support of our donors and the Rocky Mountain Section. The auction was held on March 8th at the Green

Center during the Rocky Mountain Section's regular monthly meeting. The funds raised are used toward AEG activities, including field trips to construction or remediation projects of engineering and geological significance and bi-weekly meetings with speakers from industry who offer the students an opportunity to become familiar with real engineering problems and real solutions. In addition, if budget allows, funds will be used to send students to the AEG Annual Meeting 2001 that will be held in St. Louis, Missouri. These students will learn about the most recent developments and newest technologies in the field of Geological Engineering.

The purpose and goal of the student chapter is to produce better, more informed engineers. Because we are considered a "professional" organization, we receive no financial support from the school. That is why we turn to members of the community. AEG would like to thank the following donors for their generous support:

- The CSM Geology Museum donated several fine mineral specimens
- Underwater Phantaseas donated a scuba course, class, & pool session
- Peaberry Coffee donated 5 large coffee drinks and a gift set with 1 lb. of coffee and 2 mugs
- The Meridian Relaxation Center of Golden donated a one-hour massage
- The Hilltop Cafe of Golden donated a \$50 gift certificate
- The Table Mountain Inn of Golden donated a \$50 gift certificate
- Magiano's Little Italy donated 2 \$25 gift certificates
- Jose O'Shea's of Lakewood donated 2 free entree's
- Don Wachter of Boulder Works made several sets of stone coasters for us
- Harry Siebert donated some cartoons and a sign from the White Pine Mine
- Sweet Catering (the RMS meeting caterers) donated dinner for four, delivered
- The CSM bookstore donated a mines logo jacket
- The Golden Hotel donated 1 night's stay in a Standard Room
- The Astor House Museum donated 4 tickets to the Museum and to the Clear Creek History Park
- Bare Essentials in the Denver Pavillions donated a unisex body care gift set
- Woody's Pizza in Golden donated 2 large pizzas
- Tan the Moon of Lakewood donated a gold tanning package

Again, we'd like to thank these donors, as well as the Rocky Mountain Section, for their generous support. If you'd like more information about the CSM Student Chapter of the Association of Engineering Geologists, please contact alysakohlman@hotmail.com or jhiggins@mines.edu

AEG 2001 Annual Meeting

The St. Louis AEG Section is pleased to announce the St. Louis Annual Meeting. The joint meeting with American Institute of Professional Geologists (AIPG) will have some new formats and synergies with our allied organization. The meeting venue will be at the Hyatt, Union Station, St. Louis.

- **Field Trips.** Six field trips are presently planned for pre- or post-meeting attendance.
- **Short courses.** Eight professional development and technical short courses are presently planned for pre- or post-meeting
- **Symposia.** Seven diverse symposia topics for the St. Louis Annual Meeting consist of both invited and volunteered abstracts.
- **Technical Sessions.** Technical sessions are planned for the three meeting days. Abstracts are requested for oral and poster presentations. Ten topics have been chosen to elicit interest. Abstracts on other

topics are welcome and will be fit into the program. Abstracts will be selected from the submissions based on quality, professional content, and available space and time for presentation. The ten proposed topics are: **Case Histories in Engineering Geology; Coastal and River Engineering Geology; Earthquake Issues for Intraplate Regions; Engineering Geology for Construction Practices; Engineering & Environmental Geophysical Case Histories; Environmental Investigation & Clean-Up; Environmental Practice in EPA Regions V & VII; Geologic Solutions to Transportation Concerns: Highways & Waterways; Ground-water Investigations;** and, **Midwest US Geologic Hazards: Recognition & Risk Management.** Contact Greg Hempen [Gregory.L.Hempen@mvs02.usace.army.mil] for more information.

The abstract deadline is 1 MAY 01. Submitting an abstract is quite easy. The website for abstract submission is www.aegweb.org/annual_meetings/2001/abstract_submittal.html Abstract authors are welcome to contact Technical Program Chair Hempen or Meeting Director Julie Keaton for information or discussion. Abstracts are formally submitted through the above website. Those submitting abstracts should expect a quick abstract receipt reply followed later by an acceptance notice in early June 2001.

Past Section Chairs

Can you help us complete the following list? If you can, please forward the information to Tim or Jim. Thanks!

2000	Tom Terry	1971
1999	Doug Boyer	1970
1998	Jim Chamness	1969
1997	Mike Hattel	1968
1996	Alan Howard	
1995	Ed Church	
1994	Greg Sherman	
1993	Sergis Hansen	
1992	Don Ganzer	
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1987	Jeff Hynes	
1986	Linda Hadley	
1985	Mike West	
1984	Susan Steele	
1983	William Smith	
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