

ASSOCIATION OF ENGINEERING GEOLOGISTS

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

THE ROCKY MOUNTAIN SECTION NEWSLETTER

MEETING DATE

**THURSDAY
JANUARY 10, 2002**

TIME

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

LOCATION

**GOLDEN
COMMUNITY
CENTER**
1470 10TH ST
Golden, CO
See Map Below

COST

\$20 Members
\$22 Non-members
Free for Students

RESERVATIONS

c/o AEG Reservation Line
(303) 790-2161 x 243
**BY NOON, FRIDAY
JANUARY 4th**

Robert Schuster will be presenting two talks at this meeting, both abstracts follow.

Dams Built on Pre-Existing Landslides

Robert L. Schuster, U.S. Geological Survey

This presentation summarizes the results of a study of 167 worldwide dams that have been constructed on pre-existing landslides. Many major landslides in the past have blocked, or partially, blocked river valleys, providing possible dam sites that have appeared at first sight to be admirable. Thus, dams occasionally were built on landslides without a complete understanding of the problems involved, often resulting in costly post-construction rehabilitation. Today, however, every effort is made in the selection of dam sites to utilize foundations and abutments that are generally impervious and capable of withstanding the stresses imposed by the proposed dam and reservoir under all probable loading conditions. Any pre-existing landslides that might impinge on the foundation or abutments of a dam should be carefully investigated.

If a pre-existing landslide is recognized in a dam foundation or abutment, the landslide deposits are often avoided in siting the dam or are removed during the stripping of the dam foundation and abutment contacts. However, it has often been found to be technically feasible and economically desirable to site and construct dams on known landslides or on the remnants of these features. In these cases, proven preventive and/or remedial measures have been used to ensure the stability of the foundations and abutments, and to reduce seepage to acceptable levels.

Usoi Landslide Dam, Southeastern Tajikistan

In 1911, a massive earthquake-triggered rock slide (volume: ~2 km³) dammed the Murgab River in the Pamir Range of southeastern Tajikistan. The still-existing blockage is 600 m high, by far the largest

dam, natural or man-made, in the world. Lake Sarez, impounded by this natural dam, is about 60 km long, with a maximum depth of approximately 550 m, and a volume of about 17 km³. The lake has never overtopped the dam; instead, it exits the downstream face as several large springs that regroup to form the Murgab River. There currently is about 50 m of freeboard between the lake surface and the lowest point of the dam crest, and the lake is rising at about 20 cm/yr.

If this natural dam were to fail, a worst-case scenario would endanger some five million people in the Bartang, Panj, and Amu Darya valleys downstream. Dam failure potentially could be due to: (1) seismic shaking, (2) catastrophic overtopping caused by a landslide entering the lake at high velocity from the valley wall, (3) surface erosion due to natural overtopping by the slowly rising lake, (4) internal erosion (piping), (5) instability caused by pressure of the lake against the dam, or (6) instability of the slopes that form the dam faces. Because of the high cost of installing physical remediation in the dam in this rugged mountain area (there are no roads to the dam), the main protective measures now being undertaken are hydrological monitoring at the dam and installation of a flood early-warning system downstream.

Change of Venue for January Meeting

The January meeting will be at the Golden Community Center (see above address and below map for directions). This is a change from the past four meetings when it has been held at the School of Mines museum. The Rocky Mountain Section AEG is considering using the museum on a more full-time basis. This is your chance, as members, to let us know what you think. The museum seems to work well from our perspective. Please talk to one of the officers at the January meeting or e-mail Tim Petz at chair@aeqrms.org with your input or preference. Thanks.

Spring 2002 Speakers and Locations

February 14th – CSM Student Center – Student Career Night

March 14th – Golden Community Center – Myles Carter, AEG President

April 11th – Golden Community Center – Dr. Perry Rahn, South Dakota School of Mines, AEG Jahns Distinguished Lecturer

May 9th – Golden Community Center – Open

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.

Tremendous December Meeting Turnout

Again we had a gigantic turnout for the December meeting. Thanks to Jonathan Caine of the U.S. Geological Survey and all involved.

Student Night

The Rocky Mountain Section is accepting abstracts for our annual Student/Career Night on February 14, 2002. Please submit abstracts to any officer. Selected students will be judged by a panel, and awarded accordingly. Past awards have been Bruntons and CASH! The student night will be held in the Student Center at the School of Mines, 16th and Maple, starting at 5:45 pm.

Student Night Booths

Get in Quick! We have booths available to show off your product and/or your company for only 100 dollars. A free dinner is included with each booth booking. We have a limited number, Hurry! We had some space constraints last year, although we assure you this will not be a problem for Student/Career Night 2002.

Symposium at Rocky Mountain GSA Meeting 2002

An engineering geology symposium entitled, "Hillslope and Mountain Slope Hazards in the Rocky Mountains" will be held at the 2002 Rocky Mountain Section meeting of the Geological Society of America on May 7-9, 2002 in Cedar City, Utah. The goal of the symposium is to gather those geologists and engineers in the region who are dealing with all varieties of slope issues to share experiences, research, and solutions. Information on the meeting can be found at <http://www.geosociety.org/sectdiv/rockymtn/02rmmtg.htm>. Abstracts are currently being accepted for the symposium, so if you are interested in speaking, please contact one of the symposium organizers (Paul Santi, psanti@mines.edu 303 273-3108 or Francis Ashland, fashland.nrugs@state.ut.us 801 537-3380).

Geological Society of America National Meeting 2002

The 2002 GSA meeting will be held here in Denver next October 27-30. The Engineering Geology Division of GSA is beginning to assemble a program. General information on the meeting and the forms for submitting session proposals is available at <http://www.geosociety.org>. If you have questions for which you cannot find the answer on the web page, please contact Judy Ehlenor jehlen@tec.army.mil or Bill Haneberg, bill@haneberg.com.

The deadlines are coming up fast. Below is a list of deadlines and contacts:

Jan. 17, 2002 Proposals for Topical Sessions or Pardee Keynote Symposia due by midnight, Mountain Standard Time. Electronic submission required. Proposal forms are now available at www.geosociety.org.

July 16, 2002 Abstracts due by midnight, Mountain Daylight Time.

National Student Section Award

I was pleased to sit with many AEG student members and discuss the National AEG Student Section Award, available this year. This will be presented during the National Meeting in Reno, NV in 2002. Alyssa Kohlman and Jessica Humble (our new acting student president) will be working to accomplish this. I think we have a great chance as our student section is very strong and motivated. I thank the students whom were available to eat wings and drink soda and beer with me. It is hard to be president.....sometimes. Tim Petz, Chair, RMS.

Colorado School of Mines Student Chapter

The Colorado School of Mines Student Chapter would like to announce several upcoming events which may be of interest to Rocky Mountain Section members.

Saturday, January 12, 2002 will be "AEG Winter Weekend Getaway".

We'll be meeting at 6:15 AM in the staff lot at Berthoud Hall and carpooling up to Copper Mountain.

Wednesday, January 16, 2002 at 6:00PM in Berthoud Hall, Room 108, we will be hosting our **2nd Annual Career Advisory Panel** to help students prepare for Student Night. The program will begin with short, informal presentations to the students by representatives of the various sectors of geological engineering. The panel will then answer student questions about careers or employment and then finally meet with students individually to review resumes, cover letters, or help with interview questions and skills.

The following is a tentative schedule of events.

5:30 Set up
6:00 Announcements, introductions, and dinner
6:10 Presentations
7:00 Q & A
7:30 Individual resume assistance
8:30 Conclusion

Due to time constraints, there will only be four presentations. However, last year's event was a huge success and resume helpers were in high demand. If anyone wants to join us to help students with their resumes and interview skills after the discussion, please stop by. This is an excellent opportunity for your firm to influence student careers and to meet some of the future leaders in our industry from one of the most respected schools in the country.

For more information about any CSM Student Chapter Event, please contact alyssakohlman@hotmail.com

Aspiring Employees

Many resumes from students graduating in the very near future have been received. Employers, please contact Tim Petz chair@aegrms.org for information regarding potential employees for summer part-time or full-time work. Students can drop off your information with Tim at the meetings or via e-mail.

Your Business Card Here

The section is looking for companies or individuals who would like to advertise their products or services in the section newsletter and on the website. This is anything from a business card to a larger spread. Prices will start as low as \$50 for both newsletter and website exposure. If you are interested, contact Ed Friend webmaster@aegrms.org or Kristi McQuiddy newsletter@aegrms.org.

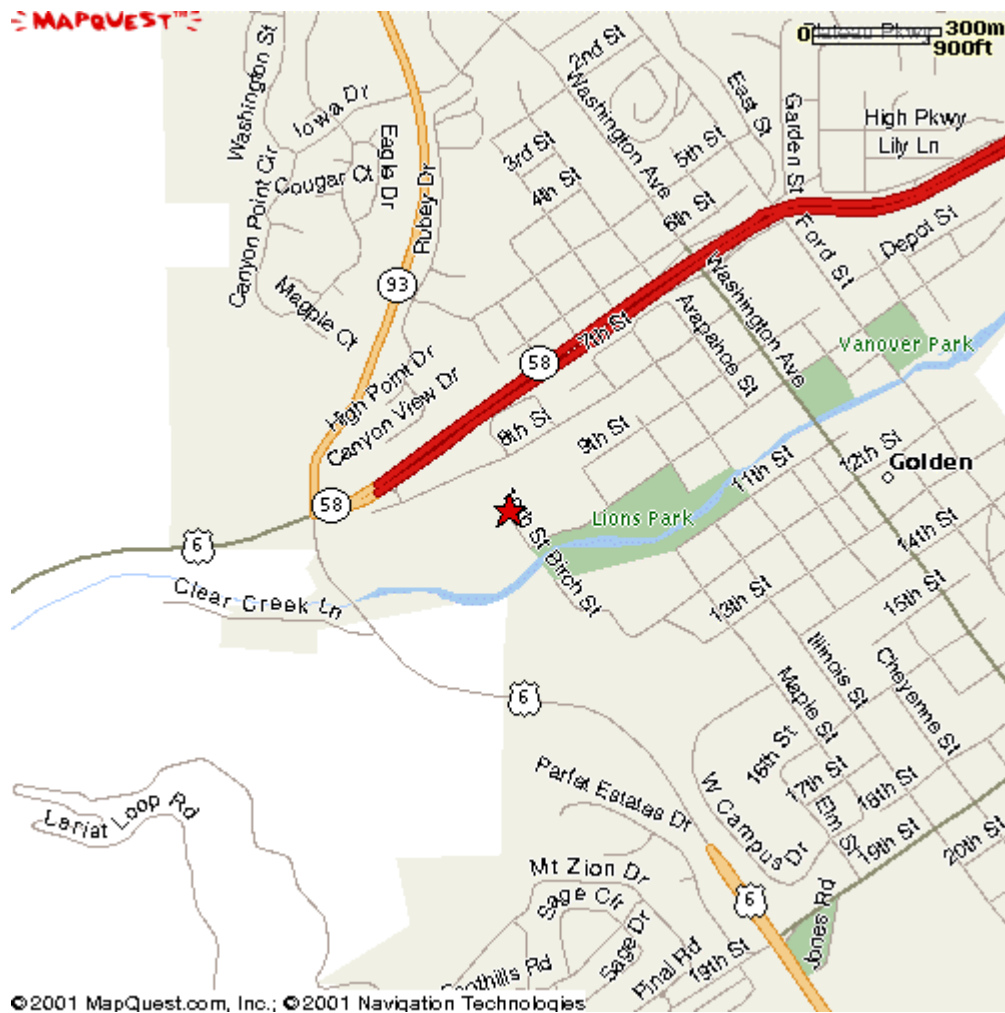
Section News

1. Al Paige, an engineering geologist and a member of the Rocky Mountain Section, passed away October 8, 2001 at the age of 72. Paige was born in Grand Junction, attended the University of Alaska at Fairbanks as an undergrad, and earned a master's in geology from the University of Washington. In addition to being a geologist and engineer, he was a mountain climber, scuba diver, humorist, and family man.
2. Alyssa Kohlman is actively seeking speakers for the CSM Student Section. Please contact her at alyssakohlman@hotmail.com if you are interested in sharing your knowledge and experience.
3. Please forward any newsworthy items to Kristi McQuiddy newsletter@aegrms.org.

4. Please forward any webworthy items to Ed Friend at webmaster@aeqrms.org. The website is located at <http://www.aeqrms.org>.

RMS Officer Contact List

| | |
|-------------|--|
| Chairperson | Tim Petz, Church & Associates, Inc., 303.463.9317, chair@aeqrms.org |
| Chair-elect | Jim Wright, GEI Consultants, Inc., 303.662.0100, chair-elect@aeqrms.org |
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| Past Chair | Peggy Ganse, Haley & Aldrich, 303.534.5789, ext. 3210, pastchair@aeqrms.org |



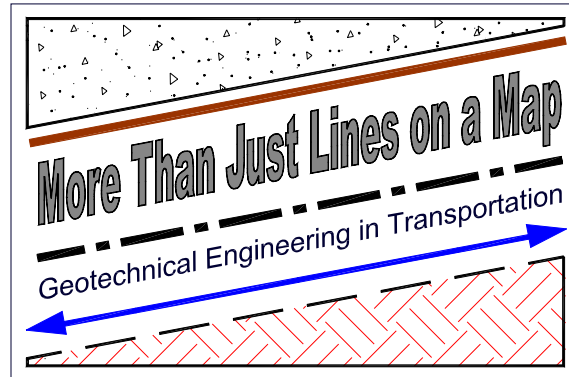
GOLDEN COMMUNITY CENTER LOCATION

*Geotechnical Engineering in Transportation –
“More Than Just Lines on a Map.”*

**Inverness Hotel, October 4, 2002
Denver, Colorado**



Co-sponsors



The Geotechnical Group of the Colorado Section of the American Society of Civil Engineers has organized a one-day seminar on some aspect of geotechnology every other year since 1984. The Rocky Mountain Section of the Association of Engineering Geologists and the Colorado Association of Geotechnical Engineers will join us in organizing this event for 2002. The seminar is currently planned as a one-day event to be held on Friday October 4, 2002. The theme of the seminar will be “*Geotechnical Engineering in Transportation – More Than Just Lines on a Map.*” The focus will be on geotechnical engineering analysis and design in transportation projects. Such projects may include: **highways, runways, railways, subways, waterways, walkways, bikeways, bridges, tunnels, pipelines, utilities, conveyor systems, and related facilities.**

The seminar planning committee is requesting individuals interested in presenting a paper to submit a brief (approximately 200-word) **abstract by February 15, 2002**. This abstract is informal for committee review, not for publication. Selected authors will then be **notified by March 8, 2002** and asked to submit an electronic or photo-ready copy of the **paper by June 1, 2002**. The papers will be published in the seminar proceedings and distributed at the conference. The ideal paper will focus on solving practical problems using innovative or non-traditional approaches, and will include discussions of both the theoretical and construction aspects of projects.

Potential topics for presentations include, but are not necessarily limited to, the following:

- Project planning
- Project delivery systems (design/build)
- Innovative field investigation techniques
- New laboratory testing methods
- New sources of data (e.g., electronic media, Internet, etc.)
- Innovative methods of analyzing or interpreting data to solve geotechnical problems in transportation
- Application of practical (not necessarily traditional) techniques in selecting design properties
- State-of-the-art technical approaches in geotechnical analysis and design
- Seismic studies and retrofitting
- Rehabilitation, redevelopment and reevaluation of old systems

- Innovative geotechnical construction methods such as those related to:
 - Subgrade soil stabilization/modification
 - Subgrade design and drainage/Innovative pavement designs
 - Use of geosynthetics/lightweight fills/reinforced fills
 - Landslide/hillside/rockfall mitigation
 - Surface and/or ground water control/interesting excavation methods
 - Bridge foundations, tunnel linings and stability
 - Ground anchors and tieback walls, micropiles, soil nails
 - Mechanically stabilized earth (MSE) walls
 - Structure protection and security/work in the urban environment
- Innovative construction monitoring techniques
- Environmental issues such as:
 - Wetland exchange
 - Reuse or redevelopment of contaminated sites (brownfields)
- Value engineering
- Risk quantification and failure analysis
- Structure maintenance
- Instrumentation and monitoring including practical approaches, data collection methods, and validating data and/or interpretation
- Case histories, focusing on one or more of the following:
 - Use of the Observational Method
 - Colorado/Rocky Mountain experience (DIA, T-REX, CDOT)
 - Demonstrations of the significance of data interpretation
 - Shortcomings in data gathering
 - What didn't work

Individuals offering to make a presentation should be prepared to speak for approximately 20 to 30 minutes, provide graphics during the presentation (Power-Point, slides, overheads, etc.), and provide in advance a written summary paper or previously published paper that can be reproduced as part of the seminar proceedings.

Please e-mail your abstract (MS-WORD format) by 5:00 pm Mountain time February 15, 2002, to Jim Gill at contourengineer@aol.com or fax to at (303) 697-2655. With the abstract, please indicate your name, your role in the subject matter, your daytime telephone number, and your return fax number or e-mail address. Respondents should expect a reply from the planning committee by March 8, 2002. Photo-ready or electronic (preferred) copies of the reports will be due **by June 1** and published in the seminar proceedings.

Thank you in advance for your interest.

