

# ASSOCIATION OF ENGINEERING GEOLOGISTS

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

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## THE ROCKY MOUNTAIN SECTION NEWSLETTER

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[www.aegrms.org](http://www.aegrms.org)

### MEETING DATE

**THURSDAY  
DECEMBER 12, 2002**

### 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  
See map below

### COST

\$20 Members  
\$22 Non-members  
Free for Students first  
time, \$10 then after

### RESERVATIONS

c/o AEG Reservation Line  
(303) 790-2161 x 243 or  
[meeting@aeqrms.org](mailto:meeting@aeqrms.org)  
**BY NOON, TUESDAY  
DECEMBER 10<sup>th</sup>**

## **Wet Dinosaurs. . . Ground Water in the Denver Basin**

Bob Raynolds  
Denver Museum of Science and Nature, Denver, CO

This presentation will examine the geology of the Denver Basin Aquifers. Several dinosaur and mammal are fossils are in the rocks that bring you your groundwater and drinking water. Don't forget, it's family night. Bob Raynolds talk will be fun and educational for young and old alike.

## **Texas Geologist Licensing Application Available**

Senate Bill 405 of the 77th Legislature created the Texas Board of Professional Geoscientists to regulate the practice of geoscience in Texas. Licenses will be required by September 2003.

New - Applications for a Professional Geoscientist License are now available!

Application Forms <http://www.tbpg.state.tx.us/index.htm>

AIPG Texas Section <http://www.aipg-tx.org/anmviewer.asp?a=67>

## **Utah Geologist Licensing Application Available**

The Professional Geologist Application is on the Internet now at <http://www.dopl.utah.gov/licensing/geologist.html> The rules will be effective September 4th and available soon after.

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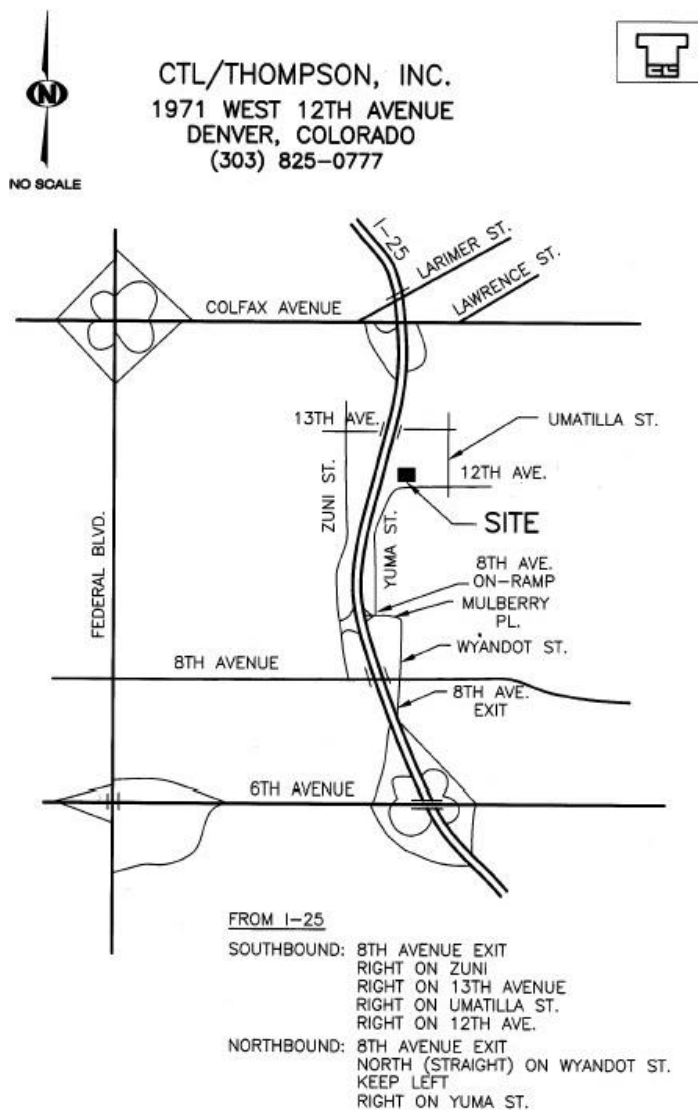
[www.aegrms.org](http://www.aegrms.org)

## Case Histories

This is a guest column we hope to continue with contributions from AEG members. Harry Siebert has again offered a column. We are looking for other professionals to share their insight and knowledge with their peers through this medium. If you have an article to contribute contact Kristi McQuiddy [newsletter@aegrms.org](mailto:newsletter@aegrms.org).

## Vail 2003 Planning Meeting

There will be another planning meeting on December 3, 2002 at 6pm. The meeting will be at CTL Thompson (1971 West 12th Avenue - 303-825-0777). Refreshment and Pizza will be purchased. Cost will be \$8 per person.



## Doug Boyer, Chief, Dam Safety Branch

Doug Boyer with the U.S. Bureau of Reclamation has taken a detail with the Colorado Division of Water Resources, State Engineer's Office as Chief, Dam Safety Branch. Doug will be detailed to the state for up to two years. His new contact information is:

Doug Boyer  
Colorado Division of Water Resources  
818 Centennial Building  
1313 Sherman Street  
Denver, Colorado 80203

phone: (303) 866-3581 x 274  
fax: (303) 866-3589  
e-mail: [doug.boyer@state.co.us](mailto:doug.boyer@state.co.us)

## Rock Bolts

Harry Seibert

The use of rock bolts seem to generate questions; here are a few of my thoughts-

How clean should the borehole be and how much deviation can be tolerated? The borehole walls should be bare rock for grouted bolts. Expansion bolts require a clean bottom hole to insure a mechanical bond of the expansion shell to the borehole wall. Another reason is the material that may end up in the borehole bottom may cause the bond to weaken over time because of rock fragments acting as a moisture trap. Always check the drill dust for pH by mixing with distilled water if a concern exists. Cleaning the borehole with a boiler brush and water works. Sometimes air will be adequate. This is especially important when the rock bolt is fully grouted. The boiler brush technique was used by a drilling firm out of Upper Black Eddy, PA.

Deviation of the borehole should be kept to a minimum. Once a borehole exceeds the first drill rod about ten feet then drilling technique is critical. This can be a problem with expansion

shells. A fully grouted rock bolt that is considered a dowel still requires a straight or true borehole to develop uniform bond strength in case of movement along a shear zone. A driller or drilling superintendent with ten years of civil works experience for most projects is required. Mining may have a large number of roof bolts and generally modern rock bolts for roofs require a trained operator. Specifications need to be written to avoid installation problems. A side issue is group loading and it should be obvious that all bolts have to "be on the money". Never assume that rock bolts are easy unless you have X-Ray eyes. Once your technical effort to design a stable surface is in the hands of a driller, you do not know when that telephone may ring.

## RMS 2002-2003 Speakers


January 9, 2003 - TBD

February 13, 2003 - Student Night, *Students from South Dakota School of Mines and Technology and Colorado School of Mines*

March 13, 2003 - TBD

April 10, 2003 - TBD

May 8, 2003 - TBD

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|---|-------------------------|--|
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## Interest Survey for Potential Courses at Colorado School of Mines

CSM is considering offering 2 courses in 2003-2004 that may be of interest to the engineering

geology community. Both courses would be taught by Dr. James P. McCalpin of GEO-HAZ Consulting, partly on the CSM campus in Golden and partly at field locations elsewhere in Colorado. The purpose of this survey is to determine whether professionals might be interested in attending the courses, and if so, what schedule would be most convenient to them.

**Fall, 2003: Advanced Geomorphology (Quaternary Stratigraphy and Soils)**

**3 Credit Hours, graduate level.** This course will be patterned after 2 courses taught by Pete Birkeland at CU during the 1970s -1990s, and will discuss the stratigraphy and chronology of glacial and nonglacial deposits of the western USA, with particular emphasis on Colorado. We will also describe typical soil formation on deposits of various ages, and how buried soils and soil stratigraphy can be used to interpret exposures of Quaternary deposits. Field trips will be in the Front Range (Pinedale/Bull Lake/ pre-Bull Lake glacial deposits; Rocky Flats/Verdos/Slocum/Louviers/Broadway/Piney Creek/post-Piney Creek alluvial deposits.). Prerequisite: a geomorphology course or permission of Instructor.

**Spring, 2004: Neotectonics and Paleoseismology, 3 Credit Hours, graduate level.** This course covers the recognition and interpretation of neotectonic landforms and deposits, such as active fault traces, liquefaction, and earthquake-induced landslides. Emphasis will be on recognizing and mapping active fault traces, measuring displaced landforms, trenching the fault, and logging the trench. We will excavate a new trench in the San Luis Valley part of the Rio Grande rift and students will learn trench logging and safety techniques. The course will use McCalpin's 1996 book "Paleoseismology" as a text. Half of the course will be taught at CSM in Golden, and the other half at the Crestone Science Center in Crestone, CO ([www.geohaz.com](http://www.geohaz.com)). Prerequisite: Advanced Geomorphology is advised, although not required.

Please indicate your potential interest in taking a course, with 1 as the least interest and 5 as the

most interest, and mail your reply to [mccalpin@geohaz.com](mailto:mccalpin@geohaz.com):

**Fall, 03: Advanced Geomorphology**

1      2      3      4      5

**Spring, 04: Neotectonics and Paleoseismology**

1      2      3      4      5

What course schedule would you prefer?

1. Night classes (6-9 pm, 6 meetings during the 16-week semester)
2. Weekend classes (4 whole weekends during the 16-week semester)

## Rocky Mountain Section Outreach Program

Attempts are being made to increase member participation in the outlying areas of the section. If you have ideas for an event, contact Ed Friend at [webmaster@aeqrms.org](mailto:webmaster@aeqrms.org).

## Words from the Chair

The CSM Student Chapter Silent auction was a big success thanks to the hard work of the Student Section and generous bids from the section members. The guest speaker for the November meeting was David Bieber of Geocon Consultants, Inc. whose topic was the effects of naturally occurring asbestos. David is also the current AEG Treasurer and was informative and forthright about the recovery of the AEG finances. Also joining us at the meeting was Becky Rowland from AEG Headquarters in Denver who will play an integral part in that recovery.

An important aspect of assessing the current financial situation of AEG is an accurate accounting of all members, their status and the payment of membership dues. Attached to this newsletter is a list of Rocky Mountain Section members as currently accounted for on the master list from Becky Roland. Please check your information as it appears and notify Becky [aeg@aegweb.org](mailto:aeg@aegweb.org), or her staff with any corrections or membership dues payments. If you know of any current section member that may be uncertain

about remaining in AEG please remind them that this year our section will host the annual meeting in Vail. This will be a great opportunity to renew friendships and rejuvenate interest in the profession by inviting current and potential new members to attend the Vail 2003 meeting.

Our guest speaker for the December spouses/family night meeting will be Bob Reynolds of the Museum of Nature and Science. Bob has spent large part of his career in geology and paleontology in the Colorado Front Range area and has sponsored public outreach programs relating science to people's everyday lives. I hope you will view this as an opportunity to bring along friends or family and treat them to an entertaining evening. Please remember to RSVP by Tuesday, December 10, 2002, to ensure that everyone who did make a reservation will not have to accommodate those who did not.

Thanks  
Jim Wright

## Aspiring Employees

Many resumes from students graduating in the very near future have been received. Employers, please contact Tim Petz [chair@aeqrms.org](mailto:chair@aeqrms.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 (\$10/month), quarter page spread (\$20/month), to a half page exposition (\$40/month). If you are interested, contact Ed Friend [webmaster@aeqrms.org](mailto:webmaster@aeqrms.org) or Kristi McQuiddy [newsletter@aeqrms.org](mailto:newsletter@aeqrms.org).

## Parting Words

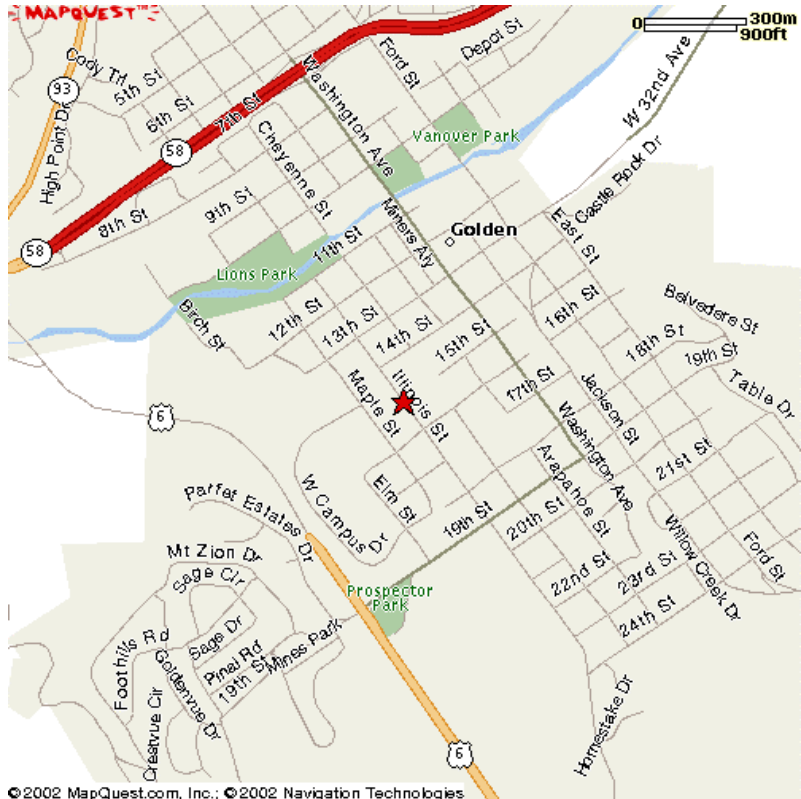
The November meeting was another huge success. We had well over 40 people attend and most everyone RSVPed. The next Vail 2003 meeting is just around the corner on December 3, there is still much to do before next fall.

Hope to see everyone and their families on December 12<sup>th</sup>.

Have a happy and safe Holiday

The Editors

Ed Friend  
Kristi McQuiddy



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