



# ASSOCIATION OF ENGINEERING GEOLOGISTS

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

## THE ROCKY MOUNTAIN SECTION NEWSLETTER

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

### MEETING DATE

THURSDAY  
DECEMBER 11, 2003

### TIME

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

### LOCATION

BERTHOUD HALL  
2<sup>nd</sup> Floor  
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  
[meetings@aegrms.org](mailto:meetings@aegrms.org)  
**BY NOON, TUESDAY  
DECEMBER 9<sup>th</sup>**

### December Meeting is *Family Night!*

Please feel free to bring significant others, children, and/or guests for dinner and an exciting presentation on earthquakes by Harley Benz and others from the NEIC.

### Why Monitor for Earthquakes? The Role of the National Earthquake Information Center in Emergency Response and Mitigation

H. M. Benz, D. Wald, P. Earle, and the Staff of the National Earthquake Information Center

Annualized economic losses due to earthquakes are estimated at \$4B per year. While we cannot prevent earthquakes from happening, we can both minimize their impact on society through the development of thoughtful mitigation strategies and effective emergency response that aims to reduce loss of life and speed recovery. Earthquakes are known to occur in 39 states and are of great concern to US interests both in the United States and abroad. Consequently, the federal government established the National Earthquake Information Center (NEIC) to provide comprehensive seismic monitoring of the Nation for response, assessment and mitigation.

We will introduce the audience to the how, why and what of NEIC's mission. We will use colorful illustrations of past devastating earthquakes to motivate the needs of the Nation to respond to an earthquake's occurrence.

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In order to build more resilient communities, we will show the development of new procedures, tools and products that can be used by the emergency response community to rapidly assess the damage and impact of earthquakes. These new developments are best illustrated through a series of provocative photographs and illustrations of recent large, damaging earthquakes that have occurred in the United States, Turkey and Taiwan. These earthquakes are used as case studies showing the usefulness of new and emerging tools designed to improve the Nation's ability to respond to earthquakes.

The National Earthquake Information Center is a unique national and Colorado resource for monitoring earthquakes and for educating the public on the dynamic earth. This talk is designed to both inform the geoscience professional on the contributions of NEIC to earth science and to educate the family on large-scale tectonic processes and an awareness of earthquakes and their devastating impact on society.

## Words from the Chair

Hope this message finds you in good health, spirits and full of ten pounds of turkey and turkey leftovers. Due to the holiday, this newsletter is going out a week late. I hope this doesn't deter anyone from attending this month's talk featuring Harley Benz from the National Earthquake Information Center (NEIC). His talk will be a multi-media extravaganza featuring pictures and video of past earthquake events all the while teaching us the importance of the NEIC. This meeting is family night, so bring the entire gang.

Call for papers will be distributed soon to all members with email for the 2004 Geoconference co-hosted by ASCE, AEG and CAGE **(Please see attachment)**. The meeting is scheduled for October 22, 2004 and the topic is "H<sub>2</sub>GEO, Geotechnical Engineering for Water Resources." The call for papers will be available at the next meeting or you can contact either Becky Roland, or myself and we can email you a copy.

Attached to this month's newsletter is the draft legislation that proposes to move the Colorado Geological Survey (CGS) to the Colorado School of Mines (CSM) **(Please see attachment)**. I spent some time at the last meeting discussing this issue that will have an impact on the geologic industry, regardless of whether the legislation is passed or not. Ramey Johnson, the state representative sponsoring the bill, has requested our input as an organization. AEG needs to respond by the end of the month. Please feel free to read the draft bill and email your response. I think the best way to respond is to form a committee that will meet this month to draft a response on behalf AEG, however we need volunteers. If no one is interested then I will draft a response myself. I am against this since the response should represent the comments of all of the Rocky

Mountain Section and not just myself since I will be short of time to read all the emails and adequately formulate an opinion that is representative of AEG-RMS. Please contact me if interested. (\*\*\*)Due to the size of the document, it will not be included in the hard copy mailings. Please contact Darin Duran or Kristi McQuiddy if you would like a copy of the bill, and it will be available on the website.)

Peggy Ganse and I traveled up to Rapid City on November 21 in order to provide support for the formation of their own chapter and to discuss with them the status of AEG and the section. I also gave a talk on the latest developments in engineering in the swelling soil environment. On November 22, they treated Peggy and I to a field trip showing geotechnical related mishaps in the Rapid City area. This was an eye opening experience that indicated to me that in certain situations there is a need for city and/or county involvement to ensure that engineers be involved in order to protect the health and safety of the public. For example, in Rapid City there are several non-reinforced retaining walls constructed without drains in excess of 20 feet in height that are supported by bricks alone! None of these walls were designed by engineers.

Included are photos of the meeting, the group attending the field trip and the road conditions on the way up. Please note the SNOW! Rapid City received over a foot of snow on Friday that continued on into Saturday, the most snow received in Rapid City in over three years. Dr. Rahn warned us on Friday not to even attempt the drive up. The roads however remained open and since a little snow can't deter Peggy and I, we made it in time for the meeting and back home in time for dinner on Saturday. Many thanks to the hospitality of the Rapid City members, the students, and Dr. Rahn for quenching our thirst for beer after the meeting.

Darin Duran



Rapid City meeting



Rapid City field trip



South Dakota snowstorm!

## RMS 2003-2004 Speakers

January 30, 2004- *David Simon AEG President.*

February 12, 2004 - Student Night, *Students from South Dakota School of Mines and Technology and Colorado School of Mines*

March 11, 2004 - TBD

April 8, 2004 - TBD

May 13, 2004 - TBD

## An Engineering Geologist's Experiences by Charles Robinson

I was forced into the Engineering Geology Branch of the US Geological Survey in 1958. Charles A. Anderson, the Chief Geologist of the USGS, gave me my choice of assignments: 1) could join the Engineering Geology Branch, 2) be a Groundwater Geologist in North Dakota, or 3) quit. Ed Eckel was then Chief of the Engineering Geology Branch, and I had known him for ten years. When I joined the Survey in 1948 (the Mineral Deposits Branch) there were few Geologists assigned to Denver at that time and we soon all knew each other.

I soon learned that I knew a lot more about engineering than most of the geologists in the Branch. As an undergraduate at the Michigan College of Mining and Technology, I had to take courses in the "Fundamentals of Engineering." In that school, you couldn't get a degree in any subject without taking the basic engineering courses. Most of the Geologists in the Engineering Branch had degrees from Liberal Arts Colleges. I knew what a stress strain curve was.

My first assignment in Colorado was the surface geology of the Harold D. Roberts Tunnel. Dr. Earnest E. Wahlstrom, Professor at the University of Colorado and Consultant to the Denver Water Board, approached Ed Eckel with the idea that the Survey should participate in doing the geology of the tunnel. Here was a tunnel being constructed

for 23.34 miles under the Colorado Front Range. Under Wahlstrom, the underground geology was being mapped by Dr. Lawrence A. Warner, a professor at CU and V. Quentin Hornback, Chief Geologist, Denver Water Department. My assignment was to map the surface geology over the tunnel and work with other Geologists in the publication of the Geology of Roberts Tunnel by the USGS. Fieldwork and report preparation: 1959-1965.

The resulting report is a classic in Engineering Geology; US Geological Survey Professional Paper 831, in 5 chapters, 1981. The geology of the surface was mapped at 1:24,000 and the tunnel at 1:6,000. The significance of the report, other than the record of the geology across much of the front range, is the correlations made by Wahlstrom, Warner, and myself between the geology at depth and at the surface, the tunnel geology and support, groundwater, feeler holes, rate of progress, and cost.

Next month, the Eisenhower Tunnel . . .

## AGI Government Affairs Program

Final Action on FY 2003 Appropriations Could Cut Geoscience Programs! For more information on this important topic, visit the AEG-RMS website [www.aegrms.org](http://www.aegrms.org) and click on AGI GOVERNMENT AFFAIRS MONTHLY REVIEW.



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## **New Website and E-mail**

During the summer the section upgraded our hosting service for the website. Along with this we now have the capability to send out e-mails from our website. We are planning improvements to the website, if you have any ideas or contents please contact Ed Friend at [webmaster@aegrms.org](mailto:webmaster@aegrms.org).

## **Vail Memories**

We haven't seen many photos! If you have any memories or pictures of the Vail meeting you would like to share with the section please send them to Kristi McQuiddy at [newsletter@aegrms.org](mailto:newsletter@aegrms.org). We will be setting up a gallery on the website and our space is nearly unlimited to start sending those pictures and articles. We would like to run photos throughout the winter and spring.

## **Aspiring Employees**

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

## **Parting Words**

Our very busy fall has turned into a very busy early winter so far for us. As Darin said, the newsletter is a week late due to the holiday. Hope that everyone had a fun and safe holiday. Ed has fixed the website, so log on! The call for papers and the bill proposing the CGS move to CSM will be available on the website, as well as any Vail 2003 Memories we receive.

Also, please, please remember to keep us posted on your most current email addresses so that we can keep our address book up-to-date and save on hard copy mailings. We've had a few responses from last month's plea, so thank you to those people. We think that we are pretty much up-to-date now, and we want to stay that way.

Hope to see everyone and their families at Family Night!

The Editors  
Kristi McQuiddy  
Ed Friend



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