

ASSOCIATION OF ENGINEERING GEOLOGISTS

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

THE ROCKY MOUNTAIN SECTION NEWSLETTER

www.aegrms.org

MEETING DATE

**THURSDAY
MAY 8, 2003**

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
meetings@aeqrms.org
**BY NOON, TUESDAY
MAY 6th**

A Case history of the 25th Avenue Gravel Pit, Storage Reservoir and Inlet/Outlet Structures, Greeley, Colorado

Steve Kuehr and David Bixler
Lyman Henn, Inc.

Lyman Henn, Inc. provided engineering services for design and construction of an 8,400 ft long slurry wall to create a gravel pit storage reservoir. This water storage will serve to relieve augmentation liability and provide water re-timing ability for the City. A slurry wall that encloses two adjacent reclaimed gravel pits was designed. Work performed included a supplemental geotechnical investigation, site-specific surveying, a technical feasibility study, an initial design and cost estimate, an evaluation of design/build contracting, and preparation of final design and specifications. Lyman Henn, Inc. also provided construction management and quality control for the project, and is currently implementing the 90-day liner test, which is required by the State Engineer's Office (SEO). A work plan for conducting the test was prepared and approved by the SEO.

Vail 2003 Planning Meeting

There will be another planning meeting on May 6, 2003 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 \$7 per person. Contact Mike Hattel, vail2003@aeqrms.org for any further information.

Check your e-mail for notices on planning meetings during the summer months and any other upcoming Vail 2003 information.

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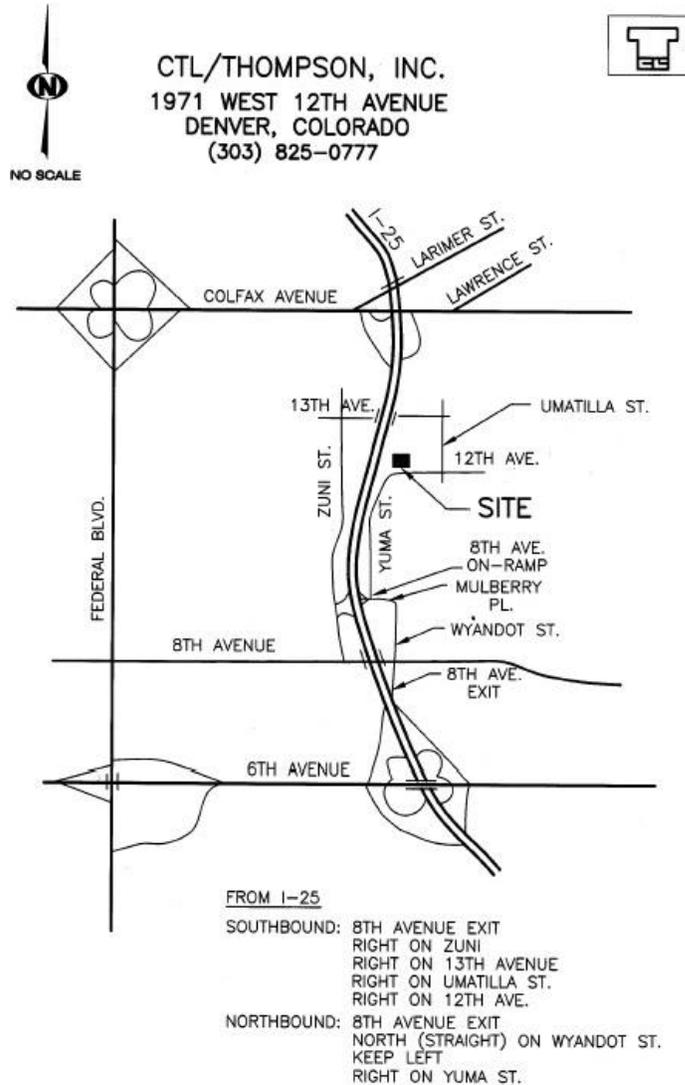
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Vail Abstract Deadline

May 1st is the deadline for submittal of your abstracts for the September 15 - 21 Annual Meeting in Vail, Colorado.

All the technical session subject categories are listed on the website at http://www.aegweb.org/annual_meetings/2003/pdf/brochure.pdf. Look them over and start thinking about matching up one of your interesting projects or experiences to one of the sessions. All the details for getting your abstract to Julie Keaton are listed on the webpage.

New Mexico Subsection Meeting - WE DID IT!

Andrea Glover

New Mexico finally had an AEG Subsection meeting. After years of complaints that AEG does not exist south of Denver, several members got together and set up the first NM AEG Subsection meeting. Mountains of thanks go out to Peggy Ganse who was wonderful enough to drive down from Denver to give us a wonderful talk about Geotechnical Investigations and Ground Characterization of Tunneling. Thanks are also given to David Cushman who drove down with Peggy to help and to Deborah Tilgreen who helped provide the drive to get this meeting achieved.

Our meeting was located at the New Mexico Institute of Mining and Technology (NM Tech) on April 4. The campus was beautiful with bulbs, flowers, and trees in bloom. Eighteen people attended this inaugural meeting. Representatives were present from NM Tech, New Mexico State University, NM Bureau of Geology and Mineral Resources, and the Bureau of Reclamation. Several graduate students from Brazil also attended the meeting.



New Mexico plans on having quarterly meetings and rotating them around the state. Several people have mentioned maybe having a geology based hike/field trip as our next meeting. If you are interested in getting notes from our April meeting or participating in any future meetings, please call or e-mail Andrea Glover at (505) 462-3617 or aglover@uc.usbr.gov.

Case Histories

Harry Siebert has been very gracious to offer us his case histories throughout the year. We are looking for other professionals to share their insight and knowledge with their peers through this medium, and are hoping for more involvement next year (you have the whole summer to think about some great articles!). If you have an article to contribute contact Kristi McQuiddy newsletter@aeqrms.org.

Common Misconceptions About The Roles of Discontinuities In Rock Mass Behavior

Harry Siebert

This article points out some problems that exist relative to discontinuities in rock that are problems. Most people start out assuming rock is hard and durable. We know this is not a reasonable assumption. Examples of how the ancient civilizations utilized fractures, joints, and rock type to quarry rock for walls, magnificent structures, and water works could help us better understand the behaviors of the rock mass. Rock quarried to a manageable size by the Anasazi can be viewed at Mesa Verde in Colorado.

I was exposed to defective structure in petrology and optical mineralogy and how rock differs from steel and concrete. In time, slope stability was a lot easier to understand. To start understanding the rock, there is a lot that can be done: research previous work, field review the natural conditions, look at air photos, check geologic maps, detail what data must be gathered, map outcrops, locate drill holes and test pits, stereographic net plotting, and if appropriate uniaxial compressive strength testing and direct shear testing of discontinuities. The goal is to determine ultimate rock mass strength and modify it for the site conditions. Is this a structure foundation, slope, or underground excavation? Select the appropriate software for final analysis. If you're working near a slope, try to prepare some cross sections to determine a preliminary slope ratio. Use a software program to

compare with the hand prepared cross sections. Review failure planes and prepare final recommendations. Artificial support should be considered in order to avoid future problems. You will know if the recommendations are adequate and the project can move into final design. Detailed special provisions may be requested for final design.

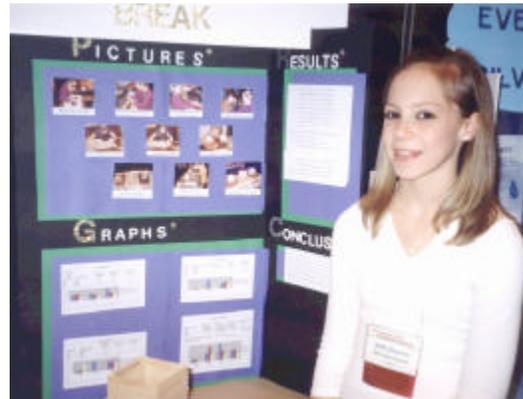
If the project is shelved, prepare a memo stating that the rock mechanics section must be reviewed. A project that sits for three years or more really needs to be reviewed as new technical models and design approaches may be available.

State Science Fair Winners to Attend AEG Annual Meeting

The Vail 2003 Planning Committee has committed to sponsoring two Colorado State Science and Engineering Fair Winners at the AEG Annual Meeting in Vail this September. The winners were selected on April 11, 2003 by AEG member TC Wait and the Special Awards Judges from the Colorado Geological Survey. The Fair was held at the Lory Student Center at the Colorado State University and presented the outstanding science fair projects from across the state. The two AEG winners were 7th grader Joelle Dozoretz of Aurora in the Junior Division for her project “Shake ‘n’ Break” and 11th grader Jade Brooks of Fort Garland in the Senior Division for her project “Hydrophobicity: How Hydrophobic Soils Affect Runoff Within A Watershed.” The Special Awards were determined on the basis of each project’s practical application of the principles of Engineering Geology. Both winners have been invited, along with their sponsors, to spend two nights in Vail to present their projects as part of the Poster Sessions. This will be a wonderful opportunity for these young geoscientists to meet professionals in the field of Engineering Geology, observe some of the tools and methods used, and to attend Engineering Geology presentations.

We are actively seeking sponsors for this unique opportunity. If you or your company would like to sponsor or contribute to the participation of these two outstanding students, please contact

Sam Bartlett at (303) 988-2426 (Email: SamuelBartlett@aol.com), TC Wait at (303) 697-4486 (Email: tc.wait@state.co.us), or Mike Hattel at (303) 665-1400 (Email: mhattel@msn.com). When in Vail, please stop by and say “hello” to these future scientists; who knows, maybe we can convince them of the tremendous opportunities in becoming Engineering Geologists!



Ms. Joelle Dozoretz and her project demonstrating the different seismic effects on structures placed on clay, silt, and sand.



Ms. Jade Brooks and her project evaluating post-wildfire conditions in the Million Fire burn area near South Fork, Colorado.

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 and click on AGI GOVERNMENT AFFAIRS MONTHLY REVIEW.



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Aspiring Employees

Many resumes from students graduating in the very near future have been received. Employers, please contact Tim Petz 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 or Kristi McQuiddy newsletter@aegrms.org.

Parting Words

This is the last newsletter of the 2002-2003 year and the second season under our belt. As usual we had a few bumps in the road, but in all, we think the sophomore jinx passed us by. We do appreciate all the help from other members and contributing authors, this is your section and newsletter, we just put the words on paper.

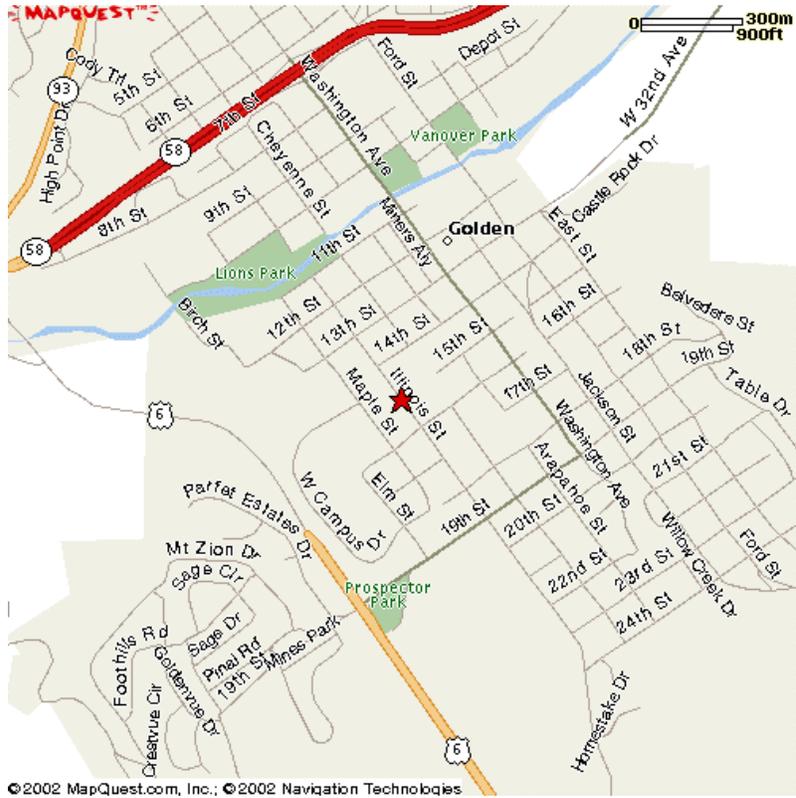
It will be a busy summer for the Vail 2003 planning committee and e-mail notices will be sent during the summer to keep people up to speed. Currently no mailings are planned for the summer. The next newsletter will be in August.

New Mexico had a great kickoff meeting and hopefully we are developing a core group to further this area of the section. If there are other areas of the section that would like to have a meeting, please contact one of the board of directors on the second page, we will offer any support we can.

Have a great summer, see you in the fall and in Vail.

The Editors

Ed Friend
Kristi McQuiddy



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