



SACRAMENTO

ASSOCIATION OF ENGINEERING GEOLOGISTS

AEG/GRA Joint Holiday Meeting

Meeting Announcement
&
Speaker Abstract



Section Meeting Date: December 8, 2004, 6:00 - 9:00 PM (**Wednesday**)

Meeting Location: **Andiamo Restaurant**
3145 Folsom Blvd.
Sacramento, CA

Meeting Time:	6:00 - 7:00	Sign-In & Social Hour
	7:00 - 7:45	Dinner
	7:45 - 8:00	Announcements
	8:00 - 8:45	Talk and Slide Show
	8:45 - 9:00	Questions & Answers



Engineering Geology Mapping in the Information Technology Age

SPEAKER: Jeffrey R. Keaton
Principal Engineering Geologist
AMEC Earth & Environmental, Inc.

Abstract

Observation remains the foundation of engineering geology mapping, but many aspects of observation are being supplemented and even revolutionized by information technology (IT). Data acquisition is being accomplished with the aid of pen-based computers, digital cameras, and global positioning system (GPS) receivers. Quantitative geophysical and geochemical field methods are being used to produce quantitative measures that can be contoured and/or combined with other forms of observations to construct useful derivative maps. Aerial and space-based spatial data provide base maps or targets for subsequent field observations. Geographic information system (GIS) and computer-aided sometimes during field data collection. Numerical analysis of observational data, including calculated grids derived from vector data, is being used to produce useful derivative products. Challenges for engineering geology practitioners pertain to accuracy of field data; structure of database fields; uniformity of symbols, lines, patterns, and colors; and consistency of derived geospatial map products. Engineering geology maps produced with GIS tools have the potential to mislead even sophisticated users for two reasons: 1) the strikingly professional appear-

ance of GIS maps implies precision even when uncertainties are specifically noted, and 2) field data can be collected as a series of seemingly independent observations and converted by a GIS technician into a professional-appearing map without the benefit of geologic principles or the repeated application of the multiple working hypothesis. Consequently, professional discipline is needed to effectively apply modern IT to engineering geology mapping. The true power IT has is its analytical capabilities which requires engineering geologic data to be in digital format.

A promising new technology is 3D Laser Scanning. Initially, this technology was applied to preparation of as-built plans of structures, such as refineries. Opportunities also exist for engineering geology and geotechnical field applications, such as orientation and spacing of joints in rock slopes and grain-size distribution of deposits that include particles too large to analyze in the laboratory. Specialized laser equipment and high-performance computers are required to manipulate huge data sets.

Jeffrey R. Keaton

Principal Engineering Geologist
AMEC Earth & Environmental, Inc.

Jeffrey R. Keaton is a Principal Engineering Geologist and Vice President in the Anaheim office of AMEC Earth & Environmental, Inc. His education consists of a BS degree in Geological Engineering from the University of Arizona (1971), a MS degree in Engineering (Geotechnical) from the University of California, Los Angeles (1972), and a PhD degree in Geology from Texas A&M University (1988). He is registered as a Professional Engineer in California, Utah, Alaska, and Arizona. He is also registered as a Professional Geologist in California, Arizona, and Utah, and certified as an Engineering Geologist in California and Washington.

Keaton was employed by Dames & Moore in Los Angeles (1970-1979) and Salt Lake City (1979-1988). He was employed by Sergent, Hauskins & Beckwith (which became AGRA Earth & Environmental, and then AMEC Earth & Environmental) in Salt Lake City (1988-1996), Phoenix (1996-2001), and currently in Anaheim.

Keaton served as Chairman of the Utah Section of the Association of Engineering Geologists in 1980-1982 and was the President of AEG in 1992-1993. He was Chairman of the Engineering Geology Division of the Geological Society of America in 1989-1990. He served as Chairman of the Transportation Research Board Committee on Engineering Geology from 1991 to 1997, as Chairman of TRB Committee on Exploration and Classification of Earth Materials from 1997 to 2002, and as Chairman of TRB Subcommittee on Scour Research from 1996 to 2002. In 2002, he became the Chairman of the TRB Section housing the seven committees that deal with Geology and Properties of Earth Materials. Keaton was one of the 11 members of the TRB Task Force which produced TRB Special Report 247 Landslides: Investigation and Mitigation in 1996; Keaton was principal author of Chapter 9, Surface Observation and Geologic Mapping, and Chapter 16, Important Considerations in Slope Design.

Keaton also is a member of American Geophysical Union, the GeoInstitute of the American Society of Civil Engineers, American Society of Mechanical Engineers, Earthquake Engineering Research Institute, Seismological Society of America, and the Society for Mining, Metallurgy, and Exploration (SME). He participates in the Accreditation Board for Engineering and Technology (ABET) through SME, making accreditation visits to undergraduate programs in geological engineering.

Keaton specializes in quantifying hazardous natural processes for use in design and risk analysis. He has written numerous articles regarding engineering geology mapping, debris flows, landslides, collapsible soils, subsidence, fault rupture, earthquake-induced liquefaction, earthquake ground motion, and case histories.

The First Annual AEG Sacramento Student Night: A Great Success!!

On October 26th, our Section put on its first joint meeting with Sacramento State faculty and students. It was a smash success, attended by 6 CSUS faculty staff and initiated with 9 poster presentations during the extended social/cocktail hour. Posters ranged from Master's student topics to undergraduate projects and were so impressive that they all received awards! Tim McCrink gave a riveting talk on the status of California's Geologic Survey's accomplishments in recent years regarding geologic and seismic hazards that was fascinating to the students and faculty and extremely beneficial to our regular members also. The evening was topped off with the announcement of our 2004 Student Scholarship awardees. Our very own Keith Millard, Eric Chase, and BJ Bailey presented the awards and the deserving student recipients were Wendy Orr from CSUS and also our very own Secretary Nate Manley! It was the first but certainly not the last student night for us. The follow-up comments were all very positive and we hope to make this a tradition each Fall.

A Message from Your Board

The personal contributions of our members in the professions of engineering geology, geophysics, and environmental geology are the foundation on which our profession is built. We all contribute to our profession because of our passion for the practice in which we live. Tom Dibblee, who passed on earlier this month, was the very essence of this passion. He lived, loved, and built a great deal of our profession that is now his legacy and our challenge. One of our members, Eric Chase, recently wrote me an email sharing his dialogue with a mutual professor of ours at Cal State LA, Dr. Perry Ehlig, who was very close to Tom. Eric's email and recollection of Tom through Perry Ehlig says it all. I want to share those memories with you in honor of Tom, a true friend and founder of our profession. He will be deeply missed by all and certainly not forgotten:

"With the passing of the legendary Tom Dibblee, I was moved to send along some recollections. Can any of us really appreciate the entirety of Tom's vast body of work, which is still being brought to light through the good work of the Dibblee Foundation? The word "vast" even seems to fall short of the mark. Tom was an unusual character, which worked to the great benefit of all of us involved in geology here in California and throughout the west.

My late friend Dr. Perry Ehlig told me several stories about following Diblee around in the Mojave in the 50's. Perry said Tom had an old coupe, which he would live out of sometimes for weeks at a time. He would eat out of a paper sack kept in the back seat, never cooking anything. One night his dinner was a head of lettuce, that he just sat on a rock and ate whole, like you would an apple. He went to bed just after sundown, and when he woke he spent no more than 5 minutes getting dressed, eating something out of the bag, and then either driving off or walking off. He never stopped during the day, striding around on those long legs.

I once told Perry I was having trouble understanding Tom when he spoke to me at a South Coast Geological Society meeting. Perry said that he never completely understood the things Tom was saying, even when they were both younger men. Tom spoke through his work, and it was eloquent.

I never knew anyone remotely like him, nor will I likely ever meet another. A genius in many respects, and a great shining light into the geologic history of the American west."

**FACSIMILE TRANSMITTAL
(OR E-MAIL BY CLICKING LINK BELOW)**

To: Dianne Tibbs (Youngdahl Consulting Group)

e-mail: mail@youngdahl.net

Phone: 916.933.0633

Fax: 916.933.6482

From: _____

Subject: December 2004 AEG Sac Section Meeting

Date: December 8, 2004 (**Wednesday Evening**)

Place: **Andiamos Restaurant**
3145 Folsom Blvd, Sacramento

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*See the next page for dinner and cost information for this special event.



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DECEMBER MEETING



When: Wednesday, December 8th, 2004

Where: Andiamo
3145 Folsom Blvd
Sacramento, CA

Time: 6:00 p.m. Social/Cocktail Hour, 7:00 p.m. Dinner, 8:00 p.m. Lecture

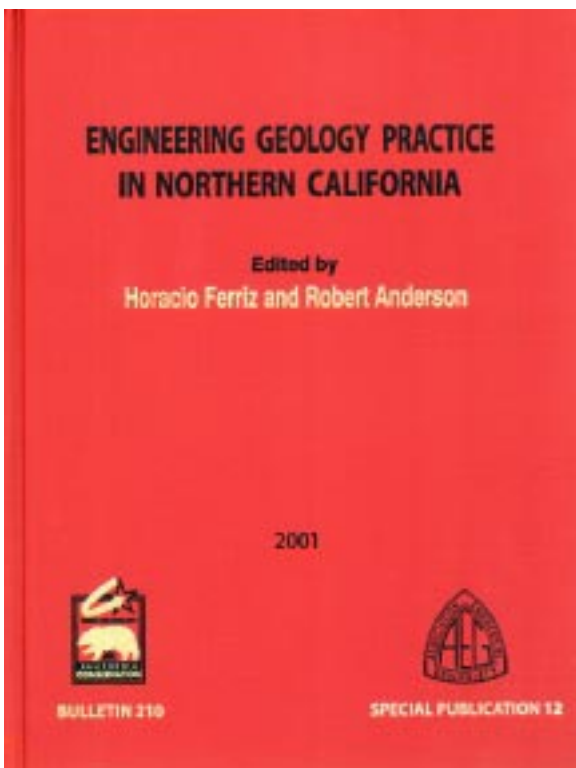
R.S.V.P: It is very important that RSVP's be received by Friday, December 5th in order to ensure the costs listed below. The meal price is based on a specific # of reservations. Please help us keep the cost low by sending in your RSVP to Victoria Walker at Youngdahl Consulting Group, Inc., by 5:00 p.m. on Friday, December 5th. Phone (916) 933-0633; Fax (916) 933-6482.

Meals *	Members	Non-Members	Students	At the Door or Without RSVP
Pasta Primavera - pasta tossed with steamed seasonal vegetables in a light parmesan cream sauce.	\$27.00	\$29.00	\$14.00	\$30.00
Rotisserie Chicken – half roasted chicken with lemon, garlic and fresh herbs, served with cornbread apple stuffing, mashed potatoes and vegetables.	\$30.00	\$32.00	\$16.00	\$33.00
Atlantic Salmon – charbroiled and served with roasted pineapple salsa, pasta and fresh vegetables.	\$32.00	\$34.00	\$25.00	\$35.00
Prime Rib – a generous slice of prime rib oven-roasted with garlic and crushed black peppercorns, served au jus with a baked potato and vegetables.	\$36.00	\$38.00	\$29.00	\$39.00

**All entrees include Caesar salad, coffee, tea or soda. Tax, room rental, speaker's gift, and gratuity included.*

PLEASE NOTE – AEG will be billed for meals based upon your reservation whether you attend or not. Therefore, if you reserve and do not attend you will be invoiced for the cost of the meal.

Thank you and have a Happy Holiday Season!



ORDER FORM

The Sacramento and San Francisco Sections of AEG, in partnership with the California Geological Survey (formerly Division of Mines & Geology), are pleased to announce the availability of the long anticipated hard-bound treatise on State of the Practice for Engineering Geology in northern California.

Only 600 volumes were published of this significant reference work. The hands-on case studies cover seismicity and fault hazards, landslides, facilities and infrastructure, tunnels and transportation, residential development, and assorted geologic hazards. The volume also includes two richly detailed summary overviews, one on northern California geology and the other on the groundwater resources of northern California. The complete Table of Contents may be viewed on the AEG Sacramento Section's website at: <http://www.aegsacto.org>

Please return this order form with check to: Victoria Walker, AEG Sac Section Treasurer
c/o Youngdahl Consulting Group
1234 Glenhaven Court
El Dorado Hills, CA 95762

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E-mail: _____

Please make check payable to AEG - Sacramento Section & label "CGS Bull. 210/AEG S.P. 12".

Number of Volumes @ \$95.00 ea. _____ (plus \$5 postage if mailed)

Sac Section Volume Sponsors Discount 20% (\$95- \$19 = \$76)

AEG 2004 Annual Dues Paid Before Sept. 30, 2003: Discount 15% (\$95- \$14.25 = \$80.75)

Sac Section Members in Good Standing Discount 10% (\$95 - \$9.50 = \$85.50)

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and save \$5.00 for shipping _____

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amount to cover mailing _____

Our Sac Section 2004 Calendar as it currently stands (11.26.04):

January 27 th	Bruce Hilton, Kleinfelder: The California High Speed Rail System
February 23 rd	Scott Burns, AEG: Wine and Geology
March 6 th	Field Trip - Wine & Rocks of the Sierra Foothills Trip Leader: George Wheeldon [Charter Bus]
March 30 th	Horatio Ferriz
April 23 rd	Seismic Hazards Analysis Workshop, Part II
April 27 th	Dave Simon, AEG National: The "Downtown Fault" in Salt Lake City, Utah
May 25 th	David Sederquist, Youngdahl Consulting Group: Our Changing Perspectives on the Management of Naturally Occurring Asbestos, a Geologist's View
June 29 th	Dr. H. Gary Greene, Moss Landing Marine Laboratories: Tsunami Generating Landslides Along the California Margin
July	No Meeting
August 17 st	Dr. Jim Ellis, Mapping with Remote Sensing &GIS
September	AEG Annual Meeting: Deerborne, Michigan
October 26 th	California State University Sacramento Student Night Tim McCrink, CGS: Seismic Ground Failure Mapping at the California Geological Survey
December 8th	AEG/GRA Joint Holiday Meeting Jeff Keaton: AEG Distinguished Jahns Lecturer

AEG-SAC Section
<<http://www.aegsacto.org>>
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