

## Association of Environmental and Engineering Geologists California Central Coast Chapter, Southern California Section

www.aegsc.org/chapters/centralcoast

Robert J. Urban, President William "Bill" Tracy, Vice President Diane Love, Treasurer Else Wolff, Secretary

#### MARCH 2006 MEETING NOTICE

# GEOLOGIC MAPPING OF PALEOCURRENT INDICATORS AND IMPLICATION FOR TECTONIC SIGNIFICANCE TO FAULT RELATED FOLDING, MISSION RIDGE FAULT SANTA BARBARA COASTAL PLAIN, SANTA BARBARA COUNTY, CALIFORNIA

Wednesday, March 29, 2006 Rusty's Pizza, Goleta

(RSVP/Directions below)

6:00 pm- 7:00 pm Social Hour 7:00 pm – 8:00 pm Chapter Meeting

The March meeting is sponsored by:



This month's meeting is sure to be a controversial and interesting meeting. Mr. Tracy and Mr. Steele will be presenting data that conflict with recent geomorphic interpretations of geologic structure in the Santa Barbara region. We look forward to seeing you at the meeting!

For those of you who were expecting the Student Night presentations, as announced during our February meeting, this event has been postponed for April due to a conflict with 'Spring Break'. Please see further details within this newsletter.

#### Speakers:

Mr. William C. Tracy, PG, CEG, CHg, GP

Mr. James R. Steele, PG, CEG, CHg

#### Speakers' Brief Biographies:

Mr. Tracy is a California licensed Professional Geologist, Certified Engineering Geologist, Certified Hydrogeologist, and Professional Geophysicist. He is a geologist at the County of Santa Barbara.

Mr. Steele is a California licensed Professional Geologist, Certified Engineering Geologist, and Certified Hydrogeologist. Mr. Steele is a consulting geologist and works at TetraTech.

#### **Abstract**

# Geologic Mapping of Paleocurrent Indicators and Implication for Tectonic Significance to Fault Related Folding, Mission Ridge Fault Santa Barbara Coastal Plain, Santa Barbara County, California

by
William C. Tracy, P.G., C.E.G, C.Hg., G.P.,
&
James R. Steele, P.G., C.E.G, C.Hg

An anticlinal-blind thrust fault structure is proposed in contemporary interpretation by Keller and others (1999), and Gurrola and others (1991 and 2004) for Mission Ridge in Santa Barbara, California. The theory is based on geomorphic evidence and alleged north dipping attitudes on the north slope of Mission Ridge in areas with mapped landslides. Paleocurrent and indicators geomorphic features throughout Mission Ridge indicate a relatively constant southward dipping depositional regime orientation across the supposed anticline. The paleocurrent data conflicts with the alleged north-dipping bedding plane attitudes that infer the northern anticline limb used to support an anticlinal-blind thrust fault interpretation. Based on this data, uplift may be block faulting, and not folding.

#### The presentation includes

- A summary and interpretation of the Mission Ridge geology and geomorphology through review of published maps and reports;
- An evaluation of paleocurrent indicators exposed in Pleistocene Older Alluvium on Mission Ridge including a detailed evaluation of features exposed in the outcrop along Mountain Drive; and
- An interpretation of the Mission Ridge geomorphology through review of stereographic historical aerial photographs.

The general paleocurrent direction in paleochannels of Rattlesnake Fan was assessed through mapping imbricated clasts at three locations. South-dipping depositional features and landslide features that are in direct conflict with the alleged north-dipping regime proposed by Gurrola are examined in detail at the Mountain Drive outcrop. Paleochannel and landslide morphology at the Mountain Drive outcrop and Sheffield Reservoir that conflict with the alleged north-dipping bedding plane data and anticline proposed by Gurrola are further evaluated through review of stereographic historical aerial photographs.

#### **Chapter President Message**

Greetings CA Central Coast Chapter:

There is much exciting news to report to our Chapter. First, a little background on our Chapter's formation . . . Back in April of 2005, I began asking for AEG members in the Central Coast region to sign a petition to AEG National that would allow the beginning of the 'CA Central Coast Chapter.' A month later, we obtained the required number of petitions and AEG National approved the formation of the California Central Coast Chapter of the Southern California. At our organizational meeting in May 2005, volunteers filled the Chapter's officer positions, and were later elected. Thanks to the efforts of the fellow Chapter officers, we now have regular monthly meetings every last Wednesday of the month. Our February meeting marked a point in our Chapter's history. Charles Nestle (AEG Southern California Section Chair) attended our meeting and presented a certificate from AEG National that officially recognizes our Chapter. I would like to thank Mr. Nestle for traveling the distance from Los Angeles to attend our meeting and present the certificate to our Chapter.

Our Chapter has been experiencing or preparing a few "firsts" . . .

This is our first actual newsletter. Our prior monthly meeting announcements were by email.

The CA Central Coast Chapter will be offering our first student scholarship in the month of April. One of the mission goals of AEG and our Chapter is to reach out to the future geologists of our profession, i.e. -students, and encourage their participation in our organization. To make progress with this never ceasing task, I am pleased to announce that our Chapter will now be offering an annual student scholarship to be offered at our Annual Student Night Meeting every April. The scholarship is named in honor of Dr. John W. Williams, San Jose State University, whom is a former AEG National President, a leader in the profession of engineering geology. and an AEG member who has throughout a long and distinguished career encouraged student participation in AEG. More details of the scholarship and about Dr. Williams are provided later in this newsletter. I encourage you to attend and support the Student Night meeting this April.

The CA Central Coast Chapter has had our first monthly meeting sponsor, URS Corporation. We now have additional monthly meeting sponsors such as our March meeting sponsor, Michael F. Hoover – Consulting

Geologist. Thank you sponsors!

I look forward to many more 'firsts' for our Chapter such as a technical session, field trip, Chapter publication, . . . I encourage you to participate in our Chapter's activities to make more of these 'firsts' occur. And most of all, I look forward to seeing you attend your first AEG CA Central Coast Chapter meeting!

On another note, if you are not currently an AEG member, I encourage you to become a member or renew your annual dues. AEG is the organization that best embodies our profession. AEG has long been involved with looking out for consulting geologists' interests. For instance, AEG has provided lobbying support in the political arena when our profession has come under fire. Last vear. AEG lobbving efforts helped protect the autonomy of our professional practice by preventing new or revised laws from combining the Board of Geologists & Geophysicists with the Board of Professional Engineers and Licensed Land Surveyors. In addition, members of AEG are actively involved with stewardship of our profession by speaking out in response to the recent decision by the Board of Geologists & Geophysicists to eliminate the California Specific Examination from requirements to become a California licensed Professional Geologist. It is through the funds that are generated by membership dues. including our Southern California Section dues. that allows us to pay for lobbyists and lobbying efforts on our behalf. So please, become a member!

Best of regards, Robert J. Urban President AEG CA Central Coast Chapter





Charles Nestle (left), AEG Southern California Section Chair, presents a certificate from AEG National, which officially recognizes the California Central Coast Chapter of the Southern California Section, to Robert Urban (right), Chapter President and founding member.

#### **Announcements**

Please email announcements to <a href="mailto:lavapoet@verizon.net">lavapoet@verizon.net</a>, thank you.

#### Centennial Earthquake Conference, April 18-22 in San Francisco

Important Deadlines are fast approaching. Registration fees increase after March 18! Field Trip and Tutorials:

A wide variety of exciting field trips is being offered in conjunction with the 2006 conference, including four overnight trips. If you are interested in an overnight trip, please register for it as soon as possible, and definitely before March 18, or it may be cancelled. The shorter field trips and tutorials are filling up quickly, so please be sure to register for those before it's too late at: <a href="http://www.1906eqconf.org">http://www.1906eqconf.org</a>
Search all technical sessions at:

http://submissions.miracd.com/8ncee/Itinerary/Search Home.asp

Details of only the SSA program available at: <a href="http://www.seismosoc.org/meetings/meetings.html">http://www.seismosoc.org/meetings/meetings.html</a>
Overview of the entire joint meeting available at: <a href="http://www.1906eqconf.org/schedGlance.htm">http://www.1906eqconf.org/schedGlance.htm</a>
Student volunteer opportunities described at: <a href="http://www.1906eqconf.org/studentVolunteer.htm">http://www.1906eqconf.org/studentVolunteer.htm</a>

## First Annual North American Landslide Conference, Vail, CO

The Conference will hold four days of technical sessions on Monday and Tuesday, June 4-5, 2007, and on Thursday and Friday, June 7-8, 2007. Wednesday, June 6, 2007, will be devoted to 1-day **Technical Excursions** that are included within the registration fees.

The technical program is designed to address the **Conference Themes**, which include **13 Principal Topics**.

The Technical Program will consist of plenary sessions in the mornings and multiple parallel technical sessions in the afternoons. The morning sessions will contain Keynote and Invited Addresses, supplemented in some cases by debates or panel discussions. A total of 15-20 individual addresses are planned. The afternoon technical sessions will accommodate 125-150 presentations. Additional presentations will be accommodated as posters – these will be presented for review and debate during morning and afternoon breaks and luncheons.

### Directory of Geoscience Departments – Now Available

The latest edition of the Directory of Geoscience Departments (DGD) - the definitive source for information about college and university geoscience departments in the United States and in 44 countries has just been published by the American Geological Institute (AGI).

The Directory of Geoscience Departments, 44th Edition, provides a state-sorted listing of 2,023 geoscience departments, research departments and institutes and their faculty and staff. The leadership of the major geoscience professional and scientific societies in the United States has also been added to this edition of the DGD. This edition lists non-U.S. departments in 44 countries. A statistics section derived from the data used to compile this publication is

included for the first time. In addition to information about geoscience departments, their faculty, and the faculty specialties, the DGD includes listings of U.S. state geological surveys, professional and scientific geoscience societies, and faculty contact information. Other valuable features include departments that are also listed in AGI's comprehensive Guide to Geoscience Departments; the most recent enrollments and degrees granted; and an expanded listing of federal agencies that employ or are of interest to geoscientists.

Published in soft cover (6î x 9î), the 608-page Directory of Geoscience Departments, 44th Edition (ISBN 0-922152-78-0), is available from AGI and can be ordered online from AGI Publications at <a href="https://www.agiweb.org/pubs">www.agiweb.org/pubs</a>, by phone at (703) 379-2480, or through Amazon.com. The list price is \$29.95; members of AGI member societies are eligible to purchase one copy at 20 percent off list price.

The American Geological Institute is a nonprofit federation of 44 scientific and professional associations that represent more than 120,000 geologists, geophysicists, and other earth scientists. Founded in 1948, AGI provides information services to geoscientists, serves as a voice of shared interests in our profession, plays a major role in strengthening geoscience education, and strives to increase public awareness of the vital role the geosciences play in mankind's use of resources and interaction with the environment. More information about AGI can be found at http://www.agiweb.org. The Institute also provides a public-outreach web site, http://www.earthscienceworld.org.



## Annual Student Night in April & Dr. John W. Williams Scholarship

The CA Central Coast Chapter is pleased to announce the First Annual Student Night that will be held for the April meeting. This is an important Chapter event that is designed to establish a link between academia and the profession, as well as encourage student participation in AEG. Come attend to meet potential 'new hires' or to learn about current research from regional universities.

Three students will deliver a 15 to 20 minute presentation of their research or projects that are pertinent to our profession. As a token of the Chapter's appreciation, each student presenter will be offered an Annual Student Membership to AEG. In addition, the student that gives the best presentation, as voted by attending members that night, will receive the Central Coast Chapter's - Dr. John W. Williams scholarship.

#### CA Central Coast Chapter Dr. John W. Williams Scholarship

Dr. John W. Williams is an active AEG member of the San Francisco Section, professor of engineering geology and Department Chair at San Jose State University (1976 – present), and former AEG National President (1988), secretary, and Vice President, Dr. Williams has served as the Association of State Boards of Geology (ASBOG) President and a founding Officer and President of the Engineering Geology Foundation (1996). In addition to acting as President for a number of additional organizations. Dr. Williams has served as Chair on: the Examination Committee for the California Board of Registration for Geologists and Geophysicists (1978-2000), the Ethics Committee for the ASBOG (2002 present), and the Examination Committee for ASBOG (2002 – present). Dr. Williams

acts as the advisor to the San Francisco Section Student Chapter and has throughout his career encouraged student membership and participation in AEG.

Dr. Williams has received numerous awards over the years of service to AEG and our profession. He has received the Floyd T. Johnston Service Award (1998) from AEG and the Meritorious Service Award (1992) from the Engineering Geology Division of the Geological Society of America.

Dr. Williams earned doctorate (1970) and masters of science (1968) degrees in geology from Stanford University and a bachelors of science (1967) degree in geology from the College of William and Mary, VA. Dr. Williams is a licensed Professional Geologist, Certified Hydrogeologist, and a Certified Engineering Geologist. He began his career working for the California Division of Mines and Geology (now the California Geological Survey) from 1971 through 1976 then became a professor at San Jose State University in 1976 and has continued teaching through the present. Many consulting geologists have received mentorship from Dr. Williams.

The CA Central Coast Chapter recognizes the important contributions of Dr. Williams to AEG and our profession. We hope that our scholarship brings awareness of Dr. Williams' contributions to future professional geologists.

To make a donation to the Dr. John W. Williams Scholarship fund, please contact Robert Urban at <a href="mailto:robert urban@urscorp.com">robert urban@urscorp.com</a> or Diane Love at Diane.Love@tetratech.com.

#### **Last Month's Meeting**

Our February meeting featured John Powell and Dr. John Minch, both from the Dibblee Foundation. They spoke to the Chapter about the extraordinary career and contributions of Tom Dibblee. Their

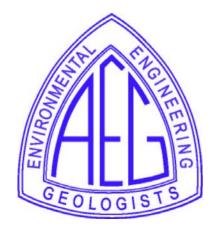
presentation not only highlighted the incredible contribution of Tom's geologic mapping throughout California, but also revealed details about Tom as a person and husband. Tom Dibblee is truly a remarkable person!

#### Thank You!

There are many thanks to be for contributors that are helping our Chapter grow. First, The CA Central Coast Chapter gives many thanks to our monthly meeting corporate sponsors: **URS Corporation** (February) and **Michael F. Hoover** (March). Our Chapter would also like to thank **Lawson & Associates** for making a donation to our Chapter. Their financial support is greatly appreciated!

At our February meeting, the **Dibblee Foundation** generously donated Dibblee
maps to attending AEG members. Thank
you, **Dibblee Foundation**!

Second, our Chapter acknowledges the outstanding help of **Dr. Kerry Cato**, **Cato Geosciences**, for acting beyond the call of duty and serving as our Webmaster. **Dr. Cato** currently serves as the Section Webmaster and has greatly enhanced our Chapter by designing and updating our webpage. Thank you **Dr. Cato**!



#### **Chapter Sponsors**



URS Corporation 130 Robin Hill Road, Suite 100 Santa Barbara, CA 93117 805.964.6010



MICHAEL F. HOOVER
Consulting Geologist • Hydrologist

Michael Hoover Consulting Geologist – Hydrologist Santa Barbara, CA 805.569.9670

The Association of Environmental & Engineering Geologists CA Central Coast Chapter is currently seeking monthly meeting sponsorship. Benefits of becoming a monthly meeting sponsor include: 1) sponsor's name or logo placed on our Chapter website indicating the month of sponsorship, 2) listing as a Corporate Sponsor in our monthly newsletter, and 3) recognition at the monthly meeting. Our Chapter is asking for a donation of \$150 for becoming a monthly meeting sponsor . . . a small price for the recognition that you contribute to the professional society that best embodies our professional practice.

#### **Directions to Meeting**

#### **Monthly Meetings**

Monthly meetings will take place on the last Wednesday of every month at Rusty's Pizza in Goleta. Social hour begins at 6 pm; the meeting begins at 7pm.

For more information or to be added to the CA Central Coast Chapter email list, please contact Robert Urban via email at robert urban@urscorp.com.

#### Location:

Rusty's Pizza, 270 Storke Road, Goleta (Santa Barbara)

#### **Directions:**

1. Driving Northbound or Southbound on Highway 101;

- 2. Exit on Storke Road;
- 3. Turn Left (if you were traveling northbound), Right (if you were traveling southbound);
- 4. Turn Left at the first stoplight past Hollister Road:
- 5. Rusty's is on the left.

#### Donation/Cost:

AEG members = \$15; non-AEG members = \$20; Students = \$5

<u>Please:</u> If you plan on attending the meeting, please email <u>lavapoet@verizon.net</u> a confirmation of your attendance by the Tuesday preceding the meeting date. This greatly helps in ordering the food for attendees. However, if you forget to email, please still do attend the meeting. Thank you.

#### **JOB POSTINGS**

If you would like to place a job announcement, please email the listing to <a href="mailto:lavapoet@verizon.net">lavapoet@verizon.net</a>, thank you!



2045 Royal Avenue, Ste. 125 Simi Valley, CA 93065

Tele: (805) 579-3434 Fax: (805) 579-3435 Email: <u>kesmond@lgcgeo.com</u> Website: <u>www.lgcgeo.com</u>

LGC is looking for dynamic individuals to join our team and work on some of Orange, Los Angeles, Ventura, San Bernardino, Santa Barbara and Kern Counties' most interesting and technically challenging projects. If you are an experienced geotechnical professional, or just starting your career, please do no hesitate to contact us. All inquiries will be considered

in the utmost confidence. We look forward to hearing from you.

## AEG CA Central Coast Chapter Contact Information

#### **President**

Robert Urban URS Corporation 130 Robin Hill Lane, Suite 100 Santa Barbara, CA 93117 Phone: 805.964.6010 robert urban@urscorp.com

#### **Vice President**

Bill Tracy County of Santa Barbara 4415 Cathedral Oaks Blvd. Santa Barbara, CA

#### Treasurer

Diane Love Tetra Tech, Inc. 4213 State Street Santa Barbara, CA 93117 Phone: 805-681-3100 ext 141 Diane.Love@tetratech.com

#### Secretary

Else Wolff URS Corporation 130 Robin Hill Lane, Suite 100 Santa Barbara, CA 93117 Phone: 805.964.6010

Phone: 805.964.6010 else wolff@urscorp.com

