



Los Angeles Basin Geological Society Newsletter

October Meeting: Thursday, October 24, 2002

Eldon Gath will speak on the Elsinore fault and it's relationship to the Santa Ana Mountains

Speaker Synopsis / Abstract

Eldon Gath will speak the question of the Elsinore fault being responsible for the uplift of the Santa Ana Mountains

Eldon Gath is the President of Earth Consultants International (ECI), a geological consulting firm formed in 1997. Eldon has nearly 20 years of professional consulting experience with southern California firms Pacific Soils Engineering and Leighton and Associates before forming ECI. He received his BS in Geology from the University of Minnesota in 1978, and has been in and out of all southern California graduate schools ever since. He is in the PhD program at UC Irvine. Eldon is a past president of the South Coast Geological Society, a past national president of the Association of Engineering Geologists, and is currently serving on the National Research Council committee to develop a research agenda for the National Earthquake Engineering Simulation program. He was the lead author (with Eric Runnerstrom and Lisa Grant) of the National Earthquake Hazard Reduction Program (NEHRP) Technical Report on *ACTIVE DEFORMATION AND EARTHQUAKE POTENTIAL OF THE SOUTHERN LOS ANGELES BASIN, ORANGE COUNTY, CALIFORNIA*, from which this talk is taken.

IS THE ELSINORE FAULT RESPONSIBLE FOR THE UPLIFT OF THE SANTA ANA MOUNTAINS? Rising to an elevation of nearly 1000 m, the Santa Ana Mountains dominate the skyline of Orange County, California. They are the northernmost extension of the California Peninsular Ranges, bounded by the Elsinore fault on the NE, the Irvine basin on the SW, and the

antecedent Santa Ana River on the north. The 5-6 mm/yr dextral slip Elsinore fault bifurcates into the 3 mm/yr slip rate Whittier fault, and 1.5-2 mm/yr slip rate Chino fault at the northern end of the Santa Ana Mountains. The remaining 1.5-2 mm/yr slip is unaccounted for. A suite of six fluvial terraces on the Puente Hills north of the antecedent Santa Ana River indicates an uplift rate of 0.4 mm/yr, possibly due to the Puente Hills blind thrust fault, not strain from the Elsinore fault. In this talk I will present a hypothesis that the Santa Ana Mountains uplift is occurring in response to termination of the Elsinore fault and the consumption of this missing slip. GIS-based geomorphic analysis has indicated the presence of eight probable erosional surfaces on the Santa Ana Mountains and Loma ridge. Recent geomorphic mapping along the SW margin of the Santa Ana Mountains has also revealed a suite of four uplifted fluvial fill terraces on the Peralta Hills and along Santiago Creek. Santiago Creek is trapped within the uplift of the Santa Ana Mountains by Loma Ridge, and these geomorphic surfaces were used to calculate a 0.3 mm/yr uplift rate and a 3.6 Ma emergence age for the Santa Ana Mountains. Santiago Creek formed ~2.4 Ma in conjunction with the initiation of the Loma Ridge structure, a parasitic structure that formed in response to compressional buckling of sedimentary strata on the flanks of the uplifting Santa Ana block. Hanging wall block faulting appears to have deflected Santiago Creek northerly ~1,200 m along five discrete block margin faults. The source of this strain is still undetermined, though it may be from the same north-vergent structures that are generating the San Joaquin Hills uplift in a complex interaction with other north-vergent structures in southern California.

Time, Place, And Cost

Time:

Thursday, October 24, 2002

Meeting Agenda

Lunch Served: 11:30 AM to 12:00PM

Announcements: 11:50 AM to 12:05 PM

Guest Speaker: 12:05 PM to 12:45 PM

Place:

The Grand at Willow Street Conference Center located at 4101 East Willow Street, Long Beach, CA. (562-426-0555). Take Lakewood Boulevard south from the San Diego Freeway (405), turn west onto Willow Street and turn right onto Grand Avenue at the sign for the Center. Park free in the garage structure.

Cost:

Lunch and Speaker: \$17.00 with reservations

\$20.00 without reservations

Student: \$ 6.00 (Lunch and Speaker)

Reservations Are Essential

Please note the change in reservation policy and make your reservations with Mike Mills by Tuesday, October 22. Phone: (714) 220-9138 Ext. 13 or e-mail Mike at MILLSLABGS@HOTMAIL.COM

LABGS Future Meetings

Lunch meetings are held at *The Grand at Willow Street Conference Center*. Lunch starts at 11:30 AM

Fall / Winter Schedule 2002 - 2003

October 24, 2002

Eldon Gath – *Studying Earthquakes Using GPS and Other Emerging Technologies*

November 21, 2002

Mark Legg – *New surprises in the offshore California Borderland*

December 2002

No Meeting

January 23, 2003

Bjorn Paulsson / Karen Blake – *Imaging the Wilmington Oil Field Structure*

Luncheon Meeting Student Bonus

The first five (5) students to show up for the luncheon meeting will have their meal costs paid for courtesy of Mike Mills and Pacific Soils Engineering and the LABGS. In addition, all students attending the LABGS meeting will receive a free SEPM publication courtesy of the Pacific Section SEPM.

Announcements / Information

2002 – 2003 LABGS Secretary Position Filled

Ivan Aburto, a geologist with Breitburn Energy has volunteered to take over the secretary position. This position was left vacant in September due to our elected secretary Darrin Arthur, a Marine reservist being called to active duty.

AAPG House of Delegates Needed

Two of our four *House of Delegates* to AAPG are open. If you are a national AAPG active member and are interested in filling this vital position please contact Dalton Lockman. These are vital positions to the leadership for the AAPG, and for the future of the LABGS.

Tom Dibblee Turns 91

Believe it or Not? Tom Dibblee turns 91 on Friday, October 11. To celebrate, the Santa Barbara Museum of Natural History and the Dibblee Foundation will host the 2nd annual TD brunch. This event will begin at 11:30 am on October 26th with proceeds benefiting the map-making effort of Tom Dibblee. The cost for attending is \$50 per person. For more information contact Tammy Stewart at (805) 682-4711 ext 343 or visit www.sbnature.org/events.

If you haven't already heard, the Santa Barbara Museum of Natural History and the Dibblee Foundation are in the process of merging. The result of the merger will be the Dibblee Center of Earth Sciences at the Santa Barbara Museum. For this to be completed, additional monies need to be raised. You can help by attending this fund raiser or by donating additional monies to the Dibblee Foundation,



The LABGS is Hosting the 2003 PSAAPG / SPE-WR convention Long Beach, CA

Yes it's true, the LABGS along with the LA basin section of the Society of Petroleum Engineers will be hosting The 2003 Pacific Section AAPG Convention and Western Regional SPE Meeting. The meeting will be held at the Hilton Hotel in Long Beach, California with technical sessions running from May 21-23, 2003.

What does hosting a convention mean you ask? It means we have a responsibility to welcome the PSAAPG and help make the convention a success. For doing this, we should get rewarded with additional income (from the convention) so we can provide scholarships, quality programs, and services to our members and community.

This joint conference of petroleum engineers and geoscientists should present a stimulating forum for the exchange of ideas and innovations across disciplines. If you would like to help out with the planning please contact Dalton Lockman.

Message From the 2003 Convention Technical Program Chairpersons

The Pacific Section of the American Association of Petroleum Geologists and the Western Region of the Society of Petroleum Engineers will once again join forces 21-23 May 2003 in Long Beach, California. Continuing with the tradition of combined AAPG-SPE meetings (Long Beach 2000 and Anchorage 2002), a technical program will be assembled to maximize appeal to both geoscientists and engineers.

The theme of the meeting, *LA Basin: Original Urban Oilfield Legend*, has been chosen to highlight one of the meeting's primary focus areas: parallel discovery and development of subsurface and surface resources.

Numerous technical presentations, symposia, forum topics, short courses, and poster sessions will be devoted to other west coast-oriented aspects of geoscience and petroleum engineering as well.

Geoscientists and petroleum engineers will be able to acquire technical and practical benefits by participating in this combined conference, where the exchange of ideas and innovations should stimulate cross discipline communication and action. **Help us make this meeting a great technical success by documenting and sharing some of your best work**—details regarding abstract submission for an oral paper or a poster presentation can be viewed on the web at www.psaapg.org or by contacting:

John Cooper PSAAPG Program Chair (714) 278-2662 jcooper@fullerton.edu,

Glenn Swanson SPE Program Chair (562) 595-6440 gswanson@shpi.net,

We are seeking papers in (but not limited to) the following technical categories:

- Development of turbidite reservoirs
- Turbidite depositional systems
- Recent development of oil and gas fields in the LA Basin
- Offshore West Coast Symposium: update on California Exploitation
- Reservoir characterization and modeling
- Seismic developments in urban areas
- Elk Hills Development Symposium
- Geoscience and petroleum engineering education
- Advances in Formation evaluation: maximizing mature reservoirs
- Sequence Stratigraphy and basin analysis
- Chert formation along the Pacific rim
- Compressional tectonics/structural trends along active margins
- Compressional tectonics/ structural trends in the LA Basin
- Fault seal, pathways, and fluids
- Production geochemistry applications and integration into geology
- Geology information systems
- Oil and gas field in the western Transverse Ranges
- Southern California Borderland
- Environmental geology

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California Registered Geologist #634

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Center for Studies of Los Angeles Basin Subsurface Geology

The Center has gathered significant data from several sources in recent months and has this data available for you to use. The Center is located on the campus of CSULB, so come check it out! Contact: Dan Francis (562) 985-4929

This is a non-profit center – donations of money, volunteers and data are always needed. *Make Checks out to CSULB Foundation, and be noted to the Geology Department or the Data Preservation Project.*

LABGS Goals for 2002 - 2003

The LABGS officers have articulated our 2002 – 2003 goals. They are summarized into the four points below.

1. Provide an environment for networking and connecting with fellow geoscientist working in the LA Basin. This is carried out in the form of our luncheon meetings, field trips and our monthly newsletter.
2. Encourage student involvement in the society from the local colleges and universities. This is done through financial support to attend our monthly luncheons, and scholarships. We are currently working to budget additional annual scholarships to be awarded each spring.
3. Encourage K-12 teacher support via program funding and the PSAAPG Teacher of the Year Award program.
4. Provide technical presentations for professional growth on topics relevant to the geoscientist working in the LA Basin and the world. We currently hold our monthly meetings the forth Thursday of the month, Except in December, July and August where we conduct no meetings. During November we meet on the third Thursday of the month.

We would like everything that we do to be done with excellence. Therefore, our list may look short. However, as we get more help and grow, we can expand our roles and take on more.

Contact Us – The LABGS board

President: Dalton Lockman (323) 298-2242

dlockman@stockerresources.com

Vice President: Mike Mills (714) 220-9138, ext. 13

millslabgs@hotmail.com

Treasurer: Kristi Darby (213) 225-5900

kdarby@breitburn.com

Secretary: Ivan Aburto (213) 225-5900

iaburto@breitburn.com

Your Name Here!

Advertising in this newsletter is now available!

Advertising rates for a business card size add are \$60.00 for six issues. These fees help offset our publishing costs.

If interested, please contact Dalton Lockman



Los Angeles Basin Geological Society Membership Form

Join the LABGS and become a member of the Pacific Section AAPG all for one low price of \$12.00 per year - 2 West Coast Geoscience Organizations for the price of one



Membership Benefits

- LABGS Membership
- Monthly Luncheon Meetings with Strong Technical Programs
- Pacific Section AAPG Membership
- Pacific Section AAPG Bi-Monthly Newsletter
- Discounts for PSAAPG Bookstore Publications
- Bi-Annual West Coast Geoscience Directory - *next edition 6/03*
- Networking / Social Opportunities with Fellow Geoscientists

Current Annual LABGS/PSAAPG Dues

1 Year Option = \$12.00	\$ _____
3 Year Option = \$36.00	\$ _____

Extended E-Mail Announcement List Fees

To receive meeting notices from SJGS and CGS

1 Year Option = \$12.00	\$ _____
3 Year Option = \$36.00	\$ _____

PSAAPG Foundation Contributions

B. Hacker Publication Fund	\$ _____
Martin Van Couvering Fund	\$ _____
Dibble Map Foundation	\$ _____
California Well Sample Repository	\$ _____
John Kilkenny Scholarship Fund	\$ _____
PSAAPG Foundation Trust Fund	\$ _____

TOTAL PAYMENT

Total Amount Enclosed	\$ _____
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Essential Member Information

Last Name	_____
First Name	_____
Middle Initial	_____
E-Mail Address	_____
Mail Address	_____
Res or Bus ?	_____

Additional Directory Information

Employer	_____	
Position / Title	_____	
Bus Phone #	_____	
Res Phone #	_____	
Fax Phone #	_____	
Spouse's Name	_____	
Education	<i>Highest Degree</i>	<i>Year</i>
School	_____	

Signature _____

Annual membership is handled through PSAAPG and runs from July 1, through June 30.. If you are already a current member of PSAAPG and you selected LABGS affiliation you are already a member of the LABGS.

**Please Make Checks out to PSAAPG and mail along with member form to:
PSAAPG P.O. Box 1072, Bakersfield, CA 93302**