

# SAN DIEGO ASSOCIATION OF GEOLOGISTS

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

## SDAG MEETING ANNOUNCEMENT Wednesday, November 16, 2005

### *HARD ROAD WEST: HISTORY AND GEOLOGY ALONG THE GOLD RUSH TRAIL*

*presented by*  
**Keith Meldahl**  
Mira Costa College

**Where: Hilton Garden Inn Carlsbad Beach**

6450 Carlsbad Blvd, Carlsbad, California  
Tel: +1-760-476-0800 Fax: +1-760-476-0801

**When:** 6:00 pm – Social Hour  
7:00 pm – Dinner  
8:00 pm – Program

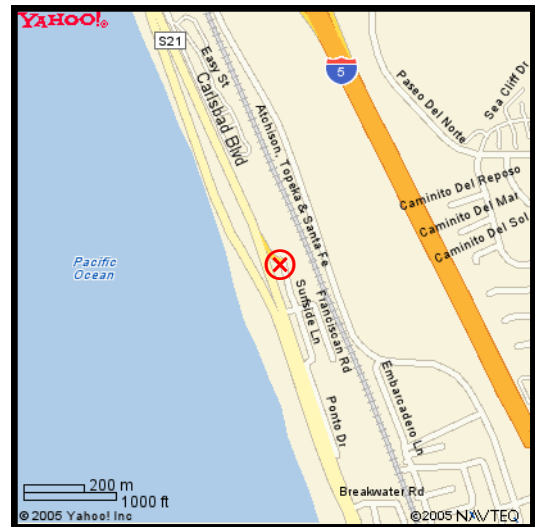
**Directions:** Take I-5 to Poinsettia Lane, west. Then turn right on Carlsbad Blvd 0.7 mi on your right.

**Dinner:** **Buffet:** Tossed Greens with Assorted Dressings, Fresh Sliced Fruit Display, Seared Chicken Breast with Mushroom and Basil Sauce, Oven Roasted Potatoes, Seasonal Fresh Vegetables, Chefs Selection of Assorted Desserts, Freshly Baked Rolls & Butter, Freshly Brewed Colombian Coffee, Decaffeinated Coffee, & Assorted Teas

**Cost:** \$25.00 per member/guests, \$15 per student. Add \$5.00 if you make no reservation.

**Reservations:** Make your reservation online at [www.sandiegogeologists.org](http://www.sandiegogeologists.org) or call the SDAG Reservation Hotline at (619) 255-8380, **no later than 9:00 a.m. Monday, November 14<sup>th</sup>.**

**RESERVATIONS CANNOT BE ACCEPTED AFTER Monday AT 9 AM.**



### 2005 EXECUTIVE COMMITTEE

**PRESIDENT** - Margaret R. Eggers; Eggers Environmental, Inc.; Ph: (760) 757-7711; [megggers@egggersenv.com](mailto:megggers@egggersenv.com)  
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**WEBMASTER** - Carolyn Glockhoff; Caro-Lion Enterprises, Ph: (858) 549-3396; [carolyn@caro-lion.com](mailto:carolyn@caro-lion.com)

## BIOGRAPHICAL SKETCH: KEITH MELDAHL



**Keith Meldahl** teaches geology and oceanography at Mira Costa College. Keith earned his doctorate from the University of Arizona in 1990, and taught for seven years at Oberlin College, Ohio, before coming to Mira Costa. His research for many years took him to Baja California, where he studied Neogene shell beds formed during the opening of the Gulf of California. Always a history buff, several years ago he began reading widely about the westward migration. He decided to spend his sabbatical during the 2004-2005 academic year exploring the history and geology of the Oregon-California Emigrant Trail. He is currently writing a book about the experience, to be published in late 2006 by the University of Chicago Press.

### ABSTRACT

#### HARD ROAD WEST: HISTORY AND GEOLOGY ALONG THE GOLD RUSH TRAIL

"History is all explained by geography," the poet and novelist Robert Penn Warren once wrote. This certainly is true for the history mid-nineteenth century emigrants crossing the North American Cordillera to reach California's gold.

Geologic history set the golden bait that lured thousands of forty-niners to California with dreams of wealth. It also put a brutal gauntlet of mountain barriers in their way. It decreed the courses of rivers, those life-sustaining corridors that determined the snaking routes of the overland trails. It raised the Sierra Nevada and Cascade Ranges, choking moisture out of westerly winds and making deserts that exacted tribute in the form of thirst, hunger, abandonment and death. In short, geologic forces built the stage and the props, and wrote large parts of the script, for the human drama of the westward migration.

Each geologic province through which the emigrants passed—the Foreland Ranges, Overthrust Belt, Snake River Plain and Basin & Range—presented them with its own peculiar challenges. After the Laramide Orogeny raised the Foreland Ranges in Wyoming, a rising tide of basin fill buried the mountains so deeply that only the highest ranges poked out. Streams established paths above the buried ranges and then, with the onset of regional uplift about five million years ago, the streams sawed superposed canyons across the ranges. These often-impassable canyons forced the emigrants onto rough, arid bypass routes, and caused many to scratch their heads in wonder; why, they asked, would a river go through a mountain when it could have gone around? In the Overthrust Belt, thin-skinned thrusting has heaped the rocks into a corrugated landscape of north-south trending ridges and valleys that made for some of the toughest going on the overland trail. Crossing the Basin & Range wasn't much better. Here the emigrants had no choice but to follow the Humboldt River—the longest stream of the Great Basin. The Humboldt was—and remains—a hateful stream, muddy and salty from evaporation, shrinking downstream before expiring at Humboldt Sink, 40 miles shy of the Sierra Nevada. Beyond that, the going just got worse as the emigrants met the Forty-Mile Desert, a nearly waterless stretch of burning sand and rock that caused more death and misery than any other section of the overland trail. The reward for running this gauntlet was to face the ramparts of the Sierra Nevada, with 9000-foot-high passes that threatened snow and a frozen fate to stragglers. "Any man who makes a trip by land to California deserves to find a fortune," forty-niner Alonzo Delano declared. Most, however, found only poverty.

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### ANNOUNCEMENTS:

#### **2005 SDAG MEETING SCHEDULE - Mark your Calendars!**

Meetings are usually on the 3<sup>rd</sup> Wednesday of the month but may change to accommodate speaker and meeting place schedules. Check here for updates!

December 21	Annual Holiday Meeting at San Diego Natural History Museum!
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## **ANNOUNCEMENTS (CONTINUED):**

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**San Diego Chapter AEG Meeting.** The November 15 speaker will be Tony Sawyer of the San Diego County Department of Environmental Health. He'll discuss boring and well permitting issues. Meeting is at Ninyo & Moore's office, social hour at 5:30. I'm looking for RSVPs.

*Jonathan Goodmacher, PG, CEG; Principal Geologist, Manager  
Ninyo & Moore, 5710 Ruffin Road, San Diego, California 92123  
Phone: 858.576.1000x1227, Facsimile: 858.576.9600, Mobile: 858.518.1392*

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**Annual conference of the California Mission Studies Association (CMSA)** will be held at **Mission San Diego** on **February 17-19, 2006**. The Friday evening program will include a keynote address by engineering experts on seismic damage and proposed retrofitting to Mission San Miguel. Saturday's program will be a series of talks on the history, ethnology and archaeology of various California Missions and other Spanish colonial settlements. The Sunday program will be a series of short field trips around San Diego County, including a walking tour of the Mission Dam and Flume system in Mission Trails Regional Park led by Bill White and Greg Cranham (reference the 1999 SDAG field volume). Registration materials and other information is also available at the CMSA web site, <http://www.ca-missions.org/conf.html>. SDAG members welcome -- see you there! - Greg Cranham

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GSA GeoHostel: **The Tectonic Development of Southern California**, from the Beaches of San Diego to the San Andreas Fault, **11-16 March 2006**, Best Western Seven Seas, San Diego, Best Western Date Tree Hotel, Indio, (5 days, 6 nights). Scientific Co-Leaders: Monte Marshall, SDSU, Emeritus. Mario V. Caputo, Mt. San Antonio College, Walnut, California. Michael J. Walawender, SDSU, Emeritus. US\$1495 for GSA members; US\$1545 for spouses; US\$1595 for nonmembers. - November 2005 GSA Today

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### **ANZA-BORREGO INSTITUTE PROGRAMS AND EVENTS**

**November 5: The Bear Mountain Conglomerate and the Chocolate Mountains Anticlinorium's - 9:30 am - 5 pm.** The Chocolate Mountains anticlinorium is a large complicated fold that lies just to the south of Picacho State Recreation Area. Join SDSU Professor Gary Girty in the day-long field course as we explore the geologic history of this unique. M: \$45; NM: \$55

**November 6: Slot Canyons of Anza-Borrego - 8 am to 2:30 pm.** Come and explore some of the more than 20 slot canyons in the Anza-Borrego Desert with photographer/ naturalist Paul Johnson. M: \$35; NM: \$45

**November 15: Capture the Desert Sky: Getting Started - 9 am to 1 pm.** Often the desert sky appears in photos as an afterthought, or worse, completely ignored. Come for one or all five sessions of this 5-part hands-on course with well-known astronomer-author-photographer Dennis Mammana. The program is open to all those fascinated by the dramatic and changing sky. M: \$35 per session; \$160; NM: \$45 per session; \$200 full series.

**November 12: Introduction to Desert Climate and Weather - 10 am to 3 pm:** Join us for one or all three sessions of this 3-part series as we examine the role of climate in shaping the physical and biological landscapes of the Anza-Borrego Desert with Professor Michael Wangler. M: \$35 per session, \$95 full series; NM: \$45 per session, \$125 full series.

**November 13: Drought, Heat & Fire - 9 am to 4 pm:** This field course will explore the effects of drought, heat and fire on the landscapes of the Anza-Borrego desert. M: \$35; NM: \$45

**November 19-20: Fossil Treasures of the Anza-Borrego Desert:** Come learn from the experts and authors of the soon- to- be published *Fossil Treasures of the Anza-Borrego Desert* during this two-day symposium exploring North America's richest continuous fossil record for the last seven million years. The program is open to the general public. M: \$125; NM: \$150

All fees and donations support activities and programs promoting conservation and stewardship of the Anza-Borrego Desert State Park® and surrounding region.

For information about programs and registration call (760) 767-4063 or visit us online at [www.theabf.org](http://www.theabf.org)

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## **ANNOUNCEMENTS (CONTINUED):**

**Thank you SDAG Corporate Sponsor Sherry Bloom, Coldwell Banker Real Estate** for use of printer and copy machine to produce this newsletter!

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**DO YOU WANT TO GET MORE INVOLVED WITH SDAG?** Consider bring an officer! We hold our officer election at the December meeting. Let any of the current officers know you're interested. Call or email our SDAG Secretary, **David Bloom** at 619-571-3470 OR [secretary@sandiegogeologists.org](mailto:secretary@sandiegogeologists.org), or contact any of the other officers. Contact info is at our website: [www.sandiegogeologists.org](http://www.sandiegogeologists.org).

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**DO YOU HAVE AN ANNOUNCEMENT??** Do you have an event, job opening, field trip or other announcement you would like to share with our members?? Just call or email our SDAG Secretary, **David Bloom** at 619-571-3470 OR [secretary@sandiegogeologists.org](mailto:secretary@sandiegogeologists.org).

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**2006 SDAG Membership** form is included in this newsletter. Please consider renewing for 2006. It is our active membership that makes SDAG able to do what we do: monthly presentations at dinner meetings, annual field trip, student scholarships, publications, education sponsorship, half-day and full-day field trips and other activities.

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**SDAG Wear:** - Monte (Murbach) has a variety of shirts, hats, visors and even a nice vest with the SDAG logo. A small selection is available for purchase at the meetings; all SDAG wear can be ordered from Monte.

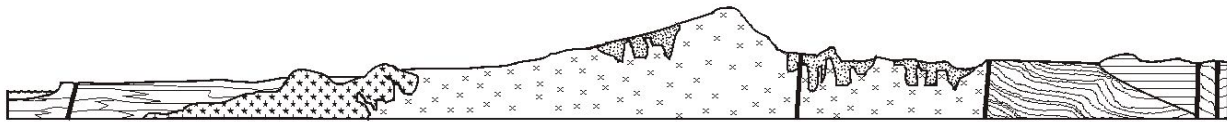
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## **2005 CORPORATE SPONSORS - THANK YOU!!**

Corporate sponsors provide a significant portion of SDAG's operating and scholarship budget. In addition to monthly recognition for your contribution, you are entitled to a free Internet "link" from [SDAG's Website](http://www.sandiegogeologists.org). We also list Corporate Sponsors in our annual SDAG Field Trip Volume.

***Please consider SDAG sponsorship in 2006!***

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# SAN DIEGO ASSOCIATION OF GEOLOGISTS

www.sandiegogeologists.org

## 2006 MEMBERSHIP FORM

NAME: \_\_\_\_\_

Please type or print clearly, and check your chosen delivery address below.

Home Address: \_\_\_\_\_

☐ Include in directory \_\_\_\_\_

Work Address: \_\_\_\_\_

☐ Include in directory \_\_\_\_\_

*Please include company or other affiliation*

Preferred Mailing Address (Check One): ☐ Home ☐ Work

E-mail Address: ☐ \_\_\_\_\_  
*Check box for email delivery*

Website: \_\_\_\_\_

Field(s) of Interest: \_\_\_\_\_  
\_\_\_\_\_

Phone: Home: (     )     Work: (     )     Cell: (     )

<b>Dues:</b>	_____ Student Member (email delivery only)	<b>\$ 5.00</b>
<b>(check choice)</b>	_____ Student Member (add US mail delivery)	<b>\$ 10.00</b>
	_____ Regular Member (email delivery only)	<b>\$ 15.00</b>
	_____ Regular Member (add US mail delivery)	<b>\$ 20.00</b>
	_____ Corporate Sponsor ( <input type="checkbox"/> email + <input type="checkbox"/> US mail delivery)	<b>\$100.00</b>

☐ New Member ☐ Continuing Member

Date: \_\_\_\_\_ Check for change of mailing address: ☐

Please enclose a check payable to SDAG, and mail to:

Sarah Gray  
Marine and Environmental Studies Department  
University of San Diego  
5998 Alcala Park  
San Diego, CA 92110



## JOB OPENINGS!

**Hargis + Associates, Inc.**, a San Diego based consulting firm specializing in **hydrogeology and engineering**, and **SDAG Corporate Sponsor** currently has opportunities in our San Diego, California office. We are currently looking to fill the following positions:

**Staff Engineer:** Candidate would have a B.S. Degree in Chemical, Civil, or Mechanical Engineering, EIT Certification and/or a Masters Degree is a plus. Only entry level candidates will be considered. Candidate should possess strong writing and presentation skills. Position will be based in San Diego, California, and will require some travel and field work. OSHA 40-hour training preferred, but not mandatory.

**Project Hydrogeologist:** Candidate would have a B.S. Degree in Geology, and 5 to 7 years relevant experience, including experience with sampling, well installation, work plan and report preparation, project management, cost estimating and scheduling. California Professional Geologist (PG), or ability to obtain within one year preferred. Masters degree or computer groundwater modeling experience is a plus. Candidate should possess strong organizational, writing and presentation skills. Position will be based in San Diego, and will require some travel and field work. OSHA 40-hour training required.

Hargis + Associates offer competitive salaries and benefits, and a challenging work atmosphere. Hargis + Associates is an Equal Opportunity Employer. To learn more about Hargis + Associates, please visit our website at: [www.hargis.com](http://www.hargis.com).

No phone calls please. Qualified candidates should send resumes, along with a cover letter summarizing experience and salary requirements to:

Hargis + Associates, Inc.  
Attention: Phil Rosenberg  
2365 Northside Drive, Suite C-100  
San Diego, CA 92108



### PROFESSIONAL GEOLOGIST

**Rincon Consultants, Inc.** is an environmental sciences, planning, and engineering consulting firm with offices in Ventura, San Luis Obispo, and Carlsbad, California. The firm, a leader in environmental impact assessment, planning, biological resources, and soil assessment and remediation, seeks a **Professional Geologist** to work from the **Carlsbad** office.

#### THE DUTIES OF THE PROFESSIONAL GEOLOGIST MAY INCLUDE:

- Supervise periodic Phase I and Phase II environmental assessments
- Supervise the investigation, assessment, design, and remediation of contaminated soil or groundwater
- Supervise field mapping, borehole logging, and aerial photographic analysis
- Supervise subsurface investigations for residential, commercial, and public work projects
- Write, review, and approve technical reports and proposals
- Manage projects: job assignment, tracking, coordinating, meetings, and scheduling; guideline and permit enforcement; troubleshooting; etc.
- Develop new business

#### REQUIREMENTS:

- BS or higher in Geology or Engineering
- California PG license
- 5-10 years supervisory and environmental project management experience
- OSHA health and safety training for hazardous waste sites
- Excellent verbal and written communication skills
- Well-organized, analytical, hard-worker, and good team player/leader

#### TO APPLY:

E-mail your Microsoft Word cover letter and resume to Julie Marshall at [jmarshall@rinconconsultants.com](mailto:jmarshall@rinconconsultants.com)

## LAST WORD

**2005 FIELD TRIP, TRAINS, VEINS, AND OIKOCRYSTS: SAN DIEGO'S SOUTHERN BACKCOUNTRY** -- was a big success!. Kudos go to Phil Farquharson for organizing such a full and varied trip. There were about 70 participants, the most we've had on a field trip in years. We are grateful to the experts who presented their research findings at the various stops. Thanks to all the field trip helpers who contributed to making the trip run so smoothly. Thank you photographers Sue Tanges, Norrie Robbins, Glen Foss, and Diane Murbach for providing the photos for the collage.





**San Diego Association of Geologists  
c/o David M. Bloom  
3728 Mt. Almagosa Place  
San Diego, CA 92111**