



# SAN DIEGO ASSOCIATION OF GEOLOGISTS

<http://www.znet.com/~sdag>

## 2000 EXECUTIVE COMMITTEE

### PRESIDENT

**Greg Cranham**  
Hargis + Associates, Inc.  
Mission City Corporate Center  
2365 Northside Drive, Suite C-100  
San Diego, California 92108  
Ph: (619) 521-0165 x 108  
fax: (619) 521-8580  
gcranham@hargis.com

### VICE PRESIDENT

**Barbara B. Birnbaum**  
2724 Tokalon Street  
San Diego, CA 92110  
Ph: (619) 276-9711  
fax: (619) 276-9713  
barbbb@gateway.net

### SECRETARY

**Bob Stroh**  
Ninyo & Moore  
5710 Ruffin Road  
San Diego, CA 92123  
Ph: (858) 576-1000  
fax: (858) 576-9600  
rstroh@ninyoandmoore.com

### TREASURER

**Patrick Brooks**  
Kleinfelder, Inc.  
1230 Columbia Street  
Suite 400  
San Diego, CA 92101  
Ph: (619) 744-3083  
fax: (619) 687-8787  
gpbrooks@bechtel.com

## MEETING ANNOUNCEMENT

**Thursday, May 18, 2000**

**Where:** **The Chula Vista Nature Center**  
1000 Gunpowder Point  
(E Street and Bay Boulevard in Chula Vista)  
Phone: (619) 409-5900

**When:** 6:00 pm – Social Hour  
7:00 pm – Dinner  
8:30 pm – Program

**Directions:** Interstate 5 south, take the E Street off-ramp in Chula Vista, go about 1 block west. Park your vehicle at the free parking lot located 1 block west of I-5, which is at the intersection of E Street and Bay Boulevard. Wait for the tram for your ride to the Nature Center (the tram will be running from 6:00 to 9:30pm).

**Dinner:** "Traditional Mexican Favorites" catered by El Torito. Dinner includes appetizers, tamales, enchiladas, flautas, meat brochettes, rice and beans, salad and fruit bar, with beer and soft drinks.

**Cost:** \$20.00 per person with reservation, Students with ID \$10.00. Walk-in price is \$25.00

**Reservations:** Make your reservation **online** through the SDAG website at <http://www.znet.com/~sdag> or call the SDAG Reservation Line at Ninyo & Moore: 858/974-6994, Ext. 1760, before 5pm on Friday, May 12. Contact Bob Stroh at Ninyo & Moore with any questions.

**Program:** GROUND FISSURES, SUBSIDENCE AND LITIGATION: CHALLENGES FOR THE GEOSCIENCE COMMUNITY IN THE TEMECULA-MURRIETA AREA, SOUTHWESTERN RIVERSIDE COUNTY, CALIFORNIA

**Speaker:** Dr. Roy J. Shlemon

### **Biography**

Roy J. Shlemon received his doctorate from the University of California at Berkeley. Formerly on the faculty of the University of California at Davis and the Louisiana State University at Baton Rouge, Dr. Shlemon has served as a consultant to the geotechnical community, private developers, attorneys and government agencies for the past 30 years. His technical specialties are Quaternary geology, geomorphology and soil stratigraphy, particularly as applied to engineering practice. His consulting experience ranges from gold, platinum and tin-mining investigations in Latin America, to fault-activity

assessments throughout the world. Dr. Shlemon is an active member of many local, national and international professional organizations; and he also serves as a Technical Reviewer for City of Murrieta and the County of Riverside, focusing mainly on the origin and mitigation of ground fissures.

**Abstract**

In 1989 ground fissures and subsidence were observed in a new housing development near Pala Road, about 1 mile south of “Old Town” Temecula. The fissures soon trended several miles to the north. Litigation inevitably followed, and over \$ 50 M of damages were alleged. The ensuing (pun intended) geotechnical investigations showed that the fissures coincided with a previously unknown active fault and were probably caused by pumping of several, then-new, ~1,000-ft deep wells. This “Murrieta Creek fault” delimits the western boundary of the Elsinore Trough in this area, and is now encompassed by a Riverside County “subsidence zone” and by a State of California “A-P zone.”

A few years later, similar fissures occurred in the “California Oaks” area of Murrieta. Streets were tilted, houses were distressed, and infrastructure was disrupted. Ironically, however, fissure, subsidence and differential settlement proved to be caused by urban-induced groundwater rise, resulting in hydrocollapse (hydroconsolidation) of previously unsaturated, left-in-place alluvium. Locally, water levels rose 90 ft in 2 years! Here, too, ~\$ 50 M of damages were alleged, and litigation ensued between water providers, property developers, house builders, home owners, government agencies, and geotechnical firms. To mitigate subsidence and fissure-prone terrane, Riverside County, and later the newly incorporated City of Murrieta, established the “California Oaks Special Geologic Report Zone” (1991), wherein specific geotechnical investigation are required, and ultimately reviewed and acknowledged (compliance) by the governing agency.

Riverside County also recognized the deleterious effects of hydrocollapse in the “Silverhawk” area, immediately north of Temecula, and there established another Special Geologic Report Zone (1994). However, following litigation brought by a developer, the Zone was “dropped” a few years later. Yet, after hundreds of new homes were built, homeowner class-action suits are now taking place, alleging, among other things, the “construction defect” cause of action. Whether or not the Silverhawk Zone is re-established remains to be seen.

Subsidence, ground fissures and differential settlement in the Temecula-Murrieta area posed dramatic, if not traumatic, challenges to the geoscience community. Technically, the professional standard-of-practice has substantially improved, for most geologists and engineers now recognize that the hydrocollapse potential is much more widespread than previously thought, particularly where rapid urbanization and water importation accelerates water-level rise. Legally, the spate of litigation produced much ill will; however some geoscientists economically benefited from the required investigations; but others, unfortunately, were named as defendants. Nevertheless, the Temecula-Murrieta experience shows that money spent for land subsidence and ground-fissure investigation *prior* to construction can negate the need for many “special zones.” The cost of such early investigation pales in comparison with those for damage repair, for seemingly endless litigation, and for loss of good will.

**UPCOMING 2000 MEETINGS:**

June 3-4	Tentative weekend for the 2000 SDAG Field Trip: Geology and Enology in the Temecula Valley
July 19	Joint meeting with the Inland Geological Society at the Hungry Hunter, Temecula, Speaker: Paul Remeika, Anza-Borrego paleontology
August 16	TBA
September 16 (tentative)	SDAG / ASCE / SDSU Alumni picnic. Ski Beach, Mission Bay
October 18	Joint meeting with the Society of Mining Engineers, location TBA, Speakers: David Peterson and George Jefferson on The Hydrothermal Origin of the Fish Creek Gypsum Deposit
November 15	Tim Smith (UCLA), Crustal-Mantle Evolution on Mars: Paleo Plate Tectonics? Meeting Location: TBA
December 20	Tom Deméré, San Diego Natural History Museum Paleontology Update, Scholarship announcements and SDAG elections.

## 2000 CORPORATE SPONSORSHIP

To all of our corporate sponsors, thank you very much! Their generosity allows us to plan the annual field trip and produce field guides, to host the SDAG/SDSU picnic on Mission Bay, support student participation at a greatly reduced price, produce this monthly newsletter, and to provide scholarship funds to local geology students.

### 2000 Corporate Sponsors

Barbara Johnston	Katy Freese
Daryl Streiff	Joe Egan
David and Jan Steller	Donald R. Sorben
Joe Corones	Carole L. Ziegler
Rob Hawk, City of San Diego	David Rightmer
Bill Elliot	Anne Sturz
SAIC	Vinje & Middleton Engineering, Inc.
Geocon Inc.	Geotechnics Incorporated
Geo-Tech Imagery Intl.	Mission Geoscience, Inc.
Geotechnical Exploration Inc.	Southland Geotechnical Consultants
Hargis + Associates, Inc.	Kleinfelder
Earth Consultants International	Christian Wheeler Engineering
Zeiser Kling Consultants, Inc.	Ninyo & Moore
HP Labs (TEG/Mobile One)	Pacific Soils Engineering, Inc.

Please consider becoming a Corporate Sponsor of SDAG. In addition to monthly recognition for your contribution, you will be entitled to a free internet "link" from the SDAG Website, and we plan to list our sponsors at the front of the SDAG Field Trip Volume.

### SDAG NEWSLETTER:

If you have any information, announcements, ads or suggestions for an upcoming newsletter, please submit it to Bob Stroh (2000 SDAG Secretary). Any news regarding upcoming events that may be of interest to the Association or news of your business can be submitted. The submittal deadline for the June SDAG newsletter is Wednesday, May 31, 2000.

### ANNOUNCEMENTS:

**Last month's meeting** at The Big Stone Lodge in Poway was by most peoples opinion a unique venue which ultimately enhanced the informative talks given by the SDAG scholarship award recipients. The meeting had a moderate turn out of near 45 people (which was just comfortable for the area). The "Feast" featured Barbecued Tri-Tip and Chicken, BBQ baked beans, red potato salad, cole slaw, rolls, chips & salsa; lemonade, iced tea, coffee; dessert, and was a satisfying meal.

**Field Trip.** Joe Corones has arranged a mini-Field Trip for San Diego Association of Geologists members to see the landfill liner that is currently being installed at the City of San Diego's Miramar Landfill. Mike Thompson of the City's Environmental Services Department Engineering Staff will be on site to give a short presentation on the liner and the installation techniques. The Field Trip will be on Saturday May 13th. 9:00 AM to 11:00 AM. Call Joe Corones at (858) 492-5034 for information and/or to put your name on the list to attend.

**New published paper from one of our own.** 1999 SDAG scholarship recipient Jennifer Lewis of SDSU, who presented her research on "Crustal Thickness of the Northern Peninsular Ranges, Southern California, from Teleseismic Receiver Functions" at the March 1999 monthly meeting, has published a paper on a related topic with co-authors Steven M. Day and Harold Magistrale of SDSU and Jennifer Eakins and Frank Vernon of Scripps Institute of Oceanography at UCSD. See "Regional crustal thickness variations of the Peninsular Ranges, southern California" in the April 2000 issue of *Geology*, pages 303-306.

**The 1999 SDAG Field Trip volume has arrived!** The publication will be available for purchase at our monthly meetings and at fine book stores around southern California. Field trip attendees should have received their copy by now, if not, please contact one of the SDAG officers.

**Deformation, Dinosaurs, and Darwin.** For those interested in examining the Deformation of the Andes Mountains, Dinosaur Digs, and sites that Darwin visited while in Argentina during his voyage on the Beagle, examine the Geological Society of America web site for the particulars of the July 24 to August 13, GeoVenture to Argentina led by Jim Reynolds and Dottie Stout.

<http://www.geosociety.org/meetings/gv/gt002.htm>

Or for more information contact: Dorothy L. Stout, Ph.D. at Ph. 703 306 1665 x5851

FAX 703 306 0445 or e-mail: [dstout@nsf.gov](mailto:dstout@nsf.gov). <http://www.nsf.gov>

**Grand Canyon Raft Trip** - There are still a few spaces available for an 8-day motorized raft trip through the Grand Canyon scheduled for June 9-16, 2000. For more info, contact Sue Tanges at 619-442-8022 or [s.tanges@worldnet.att.net](mailto:s.tanges@worldnet.att.net).

**Thanks to Lowell Lindsay** and Sunbelt Publications for housing the SDAG Library and Archives. Any SDAG member may peruse our collection of past SDAG field guide volumes as well as a complete collection of California *Geology* magazines back to 1971. You are welcome to stop by during business hours at 1250 Fayette Street in El Cajon, or call (619) 258-4911 to set up an appointment (especially for after-hours or weekend research).

**CHEERS!** The SDAG beer pint glasses are in and are available for \$10.00 each. They're great-looking, sturdy, and a "must" for every SDAG member! Buy one (or a few!) at the next meeting.

**SDAG website:** Carolyn Glockhoff continues to update and manage our ever-evolving website. If you haven't yet seen this excellent and useful resource, check it out at: [www.znet.com/~sdag](http://www.znet.com/~sdag). Also, send the URLs of your favorite geology sites to Carolyn ([carolion@aznet.net](mailto:carolion@aznet.net)) for listing on the Geologic Links page.

**South Coast Geological Society (SCGS):** The SCGS usually meets on the first Monday of every month, in Orange County. For more SCGS information, visit their new website at: [www.southcoastgeo.org](http://www.southcoastgeo.org), or contact this year's SCGS President, Bill Goodman at (949) 442-2442.

**Sincere thanks to Daryl Streiff,** who generously donated a copy of every volume of SDAG publications from the SDAG founding in 1972 through 1995, with the exception of the years 1983 and 1984. These volumes are available for review and are currently housed in the SDAG archive/library, which is located at Sunbelt Publications (contact Lowell Lindsay).

**Sincere thanks to Joe Egan,** who generously donated his collection of *California Geology* magazines dating back to 1971. *California Geology* has published extensively on topics of interest to professional geologist, educators, students and interested laymen throughout California. These volumes are available for review and are currently housed in the SDAG archive/library, which is located at Sunbelt Publications (contact Lowell Lindsay)

**The Gordon Gastil Endowed Scholarship Fund** continues to seek donations of any amount. Gifts of \$ 500.00 or more will be recognized on a plaque to be placed in the remodeled Geology Building. Donations can be sent through SDAG, or contact Pia or Marie, Department of Geological Sciences, SDSU, at (619) 594-5586.

## **POSITIONS WANTED:**

- Geology student seeks entry-level position with a company related to the field of Geology. Extensive background in administration, very creative, and extremely adaptable to new job requirements and a

variety of tasks. Will be happy to send a copy of resume to any interested party. Please contact Priscilla Endres-Graves at 619/670-4307 or email [priscilla\\_endresgraves@hotmail.com](mailto:priscilla_endresgraves@hotmail.com).

## POSITIONS AVAILABLE:

- County of San Diego Department of Planning and Land Use Job Announcements  
**Environmental Management Specialist I** Annual Salary: \$35,297.60-\$42,910.40  
Options Available: Generalist, Archaeology, Biology, Geology, Noise  
**Environmental Management Specialist II** Annual Salary: \$40,393.60-\$49,088.00  
Options Available: Generalist, Archaeology, Biology, Geology, Noise  
**Environmental Management Specialist III** Annual Salary: \$46,696.00-\$56,763.20  
**Environmental Management Coordinator** Annual Salary: \$53,705.60-\$65,270.40

Job Summary: Incumbents are responsible for processing a variety of projects in evaluating discretionary project applications for compliance with the California Environmental Quality Act (CEQA), environmental laws, ordinances and policies and general principles relating to environmental resource planning. Distinguishing characteristics between the EMS I, II, and III are the complexity of projects assigned and supervision required while working. EMS III positions are assigned the most complex, difficult, and sensitive projects usually involving completion of an Environmental Impact Report. Environmental Management Coordinators lead and coordinate the processing of discretionary project applications focusing on projects that result in an Environmental Impact Report.

Applications are required. Please visit the county web site <http://www.co.san-diego.ca.us> to download applications. You can also contact John Peterson for individual questions about the positions. His number is (858) 694-3820.

- FIELD TECHNICIAN – Ogden Environmental and Energy Services is looking for a field technician to conduct soil and water sampling, drilling oversight, groundwater monitoring, well construction and O&M of remediation systems. Must have satisfactorily obtained a HS diploma, some relevant experience/training, be mechanically inclined in the areas of piping, electrical components, and common computer software. Must be 40 hour HAZWOPER trained. If interested, please submit resume to OEEES, 5510 Morehouse Drive, San Diego CA 92121 or fax: (858) 458-0943. EEO/AA.
- PETRA GEOTECHNICAL, INC. The Environmental Division of Petra Geotechnical, Inc. has an immediate opportunity for a senior level Environmental Professional for its corporate office in Costa Mesa, which serves all of Southern California. Ideal candidate will play a key role in the positive development and growth of the division. Requirements include California Registered Geologist, as well as excellent communication skills, motivation, and ability to work as a team player is essential. Please send your resume (in confidence) to Marlaigne Hudnall @ Petra Geotechnical, Inc., Environmental Division, 3185-A Airway Avenue, Costa Mesa, CA 92626. EOE
- ANTHONY-TAYLOR CONSULTANTS, a full-service engineering and architectural firm, is currently seeking senior staff and project-level geologists and engineers for our northern S.D. county office. The ideal candidates will have experience in engineering and/or environmental areas and have good people skills. We offer an excellent compensation package as well as a pleasant work environment. We also have opportunities for soils technicians and special inspectors. For immediate consideration, please fax resume to (760) 738-8232; Attn: Bruce Taylor.
- GEOCON Incorporated is searching for talented people to help handle their ever-increasing workload. Currently openings:
  - ◇ Senior Staff Geotechnical Engineer with 2-4 years experience. BSCE required, MSCE preferred. Registration desirable. Previous experience in land development a plus.
  - ◇ Project Geotechnical Engineer with 3-5 years experience. BSCE required, MSCE preferred. Registration required. Experience in land development a plus.
  - ◇ Engineering Field Technician with 2+ years experience desired but not mandatory. Land development and/or hillside experience a plus.

Please send resumes to: James E. Likins, President. Geocon Incorporated, 6960 Flanders Drive, San Diego, CA 92121-2974. Fax (619) 558-6159. No phone calls please. Geocon is an equal opportunity employer. **(Geocon, Inc. is a SDAG Corporate Sponsor)**

- GEOSYNTEC CONSULTANTS, a National environmental consulting firm, seeks individuals for our San Diego office with a BS or MS in geology or hydrogeology, with 1-3 years experience in environmental field work. Specific experience should include: lithologic logging; monitoring well installation; soil, sediment, surface water, and ground-water sampling; aquifer pumping test; slug tests; and management of subcontractors. Ideal candidate will have good oral/written skills. Travel required; physically fit & clean driving record. Competitive salary with excellent benefit package. Fax resumes to (858) 674-6586 or email to [twest@geosyntec.com](mailto:twest@geosyntec.com) EOE M/F/V/D
- STAFF ENGINEERS & SOIL TECHNICIANS – Southern California Soil & Testing, Inc. (SCST) has positions available for experienced staff engineers and soil technicians. SCST is trying to fill 2-3 positions with geotechnical professionals with several years experience towards registration and certification. SCST offers a comprehensive compensation and benefit package, and the opportunity to work on a wide range of projects. Resumes should be forwarded in confidence to SCST, 6280 Riverdale Street, San Diego, CA 92160-0627, Attention: Steve Jensen, or fax to (619) 280-4717.
- NINYO & MOORE, an equal Opportunity Employer, has several job openings in San Diego County and Southern Riverside County for Field Technicians with soil and concrete testing experience. ACI and nuclear gauge certifications are preferred. Please send resume or fax in confidence to: Mark Cuthbert, 5710 Ruffin Road, San Diego, CA 92123. 858/974-6989. **(Ninyo & Moore is a SDAG Corporate Sponsor)**

As a service to our members, SDAG welcomes job postings - either for jobs wanted or open positions. Please submit any geo-type Want Ads to the SDAG newsletter editor (SDAG Secretary), Bob Stroh.

# SDAG Field Trip 2000: Geology and Enology of the Temecula Valley Area

The 2000 San Diego Association of Geologists (SDAG) annual field trip and associated volume theme, will be **Geology and Enology of the Temecula Valley Area, Riverside County, CA**. The trip will look at the geology of the region, including fault zones, soil conditions, ground subsidence, landslides, and other unique features. There will also be discussion about local soil conditions and how they influence the quantity and quality of wine grape production. The Field Trip chair is Barbara Birnbaum, Vice President of SDAG, and the co-editors of the guidebook are Barbara Birnbaum and Kerry Cato.

**DATES / ITINERARY:**

June 3-4, 2000 (weekend after Memorial Day).  
 Saturday morning – meet at Lake Skinner private group campground (the “Equestrian Camp”) at 8:00am for check-in, orientation, continental breakfast, and bag lunch. Private/chartered bus will leave at 9:00am for Temecula Valley field trip locations (including wine tasting, of course), and return to same campground late Saturday afternoon (leave your vehicles at this Lake Skinner private/safe camp area all day Saturday). Saturday night – camp and catered dinner at same Lake Skinner private group campground. Sunday – continental breakfast and campground departure, followed by visits to additional geologic locations in Temecula Valley area, using personal vehicles.

**COST:** \$85.00 per person if postmarked by May 12<sup>th</sup>, \$95.00 per person thereafter. Sorry, no student discount rates this year. Fee includes guidebook, campground fee, Saturday transportation (private/chartered bus), four meals (Saturday B, L, & D, and Sunday B), wine tasting and miscellaneous charges. Fees are non-refundable. All ages welcome, but must (of course) be over 21 to taste wine.

**TRANSPORTATION:**

Group transportation (private/chartered bus) will be provided on Saturday, departing from and returning to Lake Skinner private group campground. 4WD vehicle not necessary, but dirt road to group camp/meeting area can be muddy if it rains. Sunday transportation will be individual/personal vehicles (4WD not required but high clearance vehicles recommended). As always, carpooling is recommended. Please note on your registration form (below) if you need a ride or can provide a ride, and we will try to help out. A location map for the Saturday morning meeting location will be mailed (or e-mailed) to those with trip reservations by May 30, 2000.

**RESPOND:** As soon as possible. Please fill out the reservation form, below.

**FOR INFO:** Contact Barbara Birnbaum, SDAG Vice President (see newsletter header for contact info).

.....  
**2000 SDAG FIELD TRIP REGISTRATION FORM** **TODAY'S DATE:** \_\_\_\_\_, 2000

NAME(S): \_\_\_\_\_

ADDRESS: \_\_\_\_\_

CITY/STATE: \_\_\_\_\_ ZIP: \_\_\_\_\_

DAY PHONE: \_\_\_\_\_ EVENING PHONE: \_\_\_\_\_

E-MAIL ADDRESS (to be used for field trip purposes only): \_\_\_\_\_

TOTAL NUMBER AND FEE FOR YOUR PARTY (VEHICLE)

Full fee @ \$ 85/ea.	X	_____ participants:	\$ _____
Late fee @ \$10/ea.	X	_____ participants:	\$ _____
<b>TOTAL ENCLOSED:</b>			<b>\$ _____</b>

MAIL THIS FORM AND YOUR CHECK (payable to SDAG) TO:

**Patrick Brooks**  
 Kleinfelder, Inc.  
 1230 Columbia Street, Ste 400  
 San Diego, CA 92101

- Please let Barbara Birnbaum know if you would also like to camp on Friday night (\$10 per vehicle).
- You will receive trip information and a map in return mail by May 30th.

**San Diego Association of Geologists**  
**c/o Bob Stroh**  
**Ninyo & Moore**  
**5710 Ruffin Road**  
**San Diego, CA 92123**