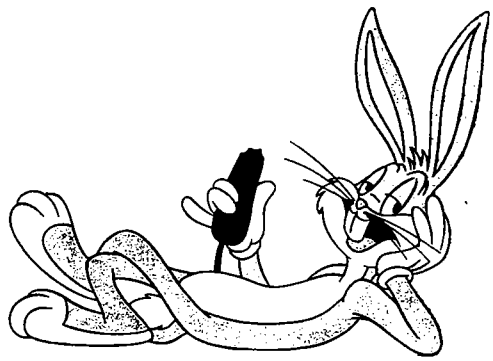
SAN DIEGO ASSOCIATION OF GEOLOGISTS



MEETING NOTICE

WEDNESDAY, September 19, 1990

SPEAKER: Dr. Roy J. Shlemon

TOPIC: "Ground Fissures in the Southwestern United States: An Increasing Geotechnical Challenge"

PLACE: La Jolla Village Inn
I-5 & La Jolla Village Drive
San Diego

TIME: 6:00 - Social Hour
7:00 - Dinner
8:00 - Program

DINNER: Greek salad, fresh sea bass, rice pilaf, fresh vegetable medley, cracked wheat rolls & butter, chocolate mousse pie, coffee, tea or milk

PRICE: $20.00

RESERVATIONS REQUIRED! By noon, Monday, September 17. Please phone in your reservation ASAP to the receptionist at **Leighton and Associates**, (619)292-8030. Please call Leighton and Associates if you need to cancel your reservation.

SUMMARY: Dr. Shlemon received the Ph.D. degree from the University of California, Berkeley (in the late Pleistocene). He was formerly on the faculty of the University of California at Davis and the Louisiana State University, Baton Rouge. For the past 20 years he has been teaching and consulting in the general fields of Quaternary geology, geomorphology, and soil stratigraphy, particularly for dating faults and for neotectonic and geomorphic investigations for proposed nuclear plants, large dams, waste sites, LNG facilities and residential and commercial developments worldwide. His topic is one of particular interest to the geotechnical community in southern California. An abstract of Dr. Shlemon's talk is provided on the following page.

Roy J. Shlemon

GROUND FISSURES IN THE SOUTHWESTERN UNITED STATES: AN INCREASING GEOTECHNICAL CHALLENGE

Ground fissures, often associated with regional subsidence, are particularly well documented in the San Joaquin, Santa Clara and San Jacinto Valleys of California, and in the Phoenix and Tucson Basins of Arizona. Groundwater withdrawal is the favored causation hypothesis, but neotectonics or other local factors cannot be ruled out.

Recent fissures in the Temecula Valley damaged both residential and commercial structure; and litigation continues. These fissures generally define the surface trace of a newly-designated "active" fault. Hypotheses for fissure causation range from groundwater withdrawal to aseismic creep.

A 62-ft deep scraper trench emplaced across one of several fissures near Lakeview Hot Springs (San Jacinto Valley) showed that paleo-fissures extended below trench depth, that they were not associated with near-surface faults, and that they were probably part of the feeder system for nearby hot springs. Adjacent fissures, however, may well be caused by groundwater withdrawal: proposed mitigation measures include positive drainage, over-excavation, emplacement of geotextiles, and installation of flexible coupling for high-pressure lines.

Presently "growing" fissures systems coincide with the Claremont branch of the San Jacinto Fault near Quail Lake (Gilman Springs Road, Riverside County) where scarps 3 to 4-ft high bound 40 to 50-ft wide grabens; and those near Lancaster in the Antelope Valley. Fissures west of Phoenix near Luke Air Force Base may be caused by extraction of salt from a near-surface diapir; elsewhere in the basin, groundwater withdrawal best explains fissure origin.

Fissures near Las Vegas have damaged scores of single-family residences; causation may relate to aseismic creep as well as to accelerated subsidence owing to groundwater withdrawal. In west Texas (Hudspeth County) both modern and paleo-fissures are present in a proposed low-level radioactive waste site. Fissure causation is presently unknown, but regional tectonics is suspected.

The ground fissure problem in the southwestern United States is increasing as development extends onto previously sparsely-populated terrain. Fissures are thus an increasing challenge to geotechnical consultants, and now often require investigations of the same level as those for surface faulting potential, liquefaction, and slope instability.

ANNOUNCEMENTS:

1. The annual SDAG publication and field trip are currently being organized based on the papers already submitted. Due to requests for deadline extensions, the date of the publication is still pending. If you are currently working on a paper and have not yet submitted, please contact John Hoobs at Geocon (phone 558-6900). (Don't feel bad if it's taking longer than you thought...you are not alone!)

2. The South Coast Geological Society 1990 field trip will be to the Whipple Mountains and the Colorado River Extensional Terrain. Dr. Greg Davis will lead the trip and participation by other leading experts is anticipated. The trip is scheduled for October 27-28, 1990. For more information, call Lavon Lewis at (714)830-4396.

3. The northern portion of San Diego County was flown in False Color Infrared Vertical Stereo Pairs on June 6, 1990. The flight area is bounded on the north by the Riverside County line, the west by the ocean, the east by the National Forest, and the south by Escondido. The flight scale is 1:24,000. For additional information and flight maps, contact Woody Higdon at Geo-Tech Imagery, (619)754-8423.

4. SDAG is looking for Corporate sponsors to help in our yearly expenses. If you or your company would like to become a 1990 corporate sponsor and be recognized in our SDAG newsletter, directory, and at the following month's meeting, send a minimum $100 contribution to SDAG c/o Sue Tanges at Leighton and Associates.

5. On September 11, the SCGS and AEG-SCS will hold a joint meeting at the El Adobe restaurant in San Juan Capistrano. Mark Legg will be the speaker and will discuss offshore faulting. SDAG encourages our members to attend this event.

6. The ASCE, San Diego Section, Geotechnical Engineering Division's monthly meeting is scheduled for Monday, September 17 at the Stardust Hotel. Mr. Larry Olsen will discuss Nondestructive Testing Applications in Geotechnical Engineering. Please call Steve Coolong at 589-7499 for more information.

7. Deadline for announcements to be included in the October newsletter is September 25. Please submit in writing to Sue Tanges at Leighton and Associates (FAX (619) 292-0771).

EMPLOYMENT OPPORTUNITIES:

1. Geotechnical Engineers - Great opportunity - Openings in our San Diego, Newport Beach, and Sacramento offices. Project level, 3-5 years geotechnical experience, Calif. registration preferred. Excellent salary & benefits. Send resume to Owen Consultants, 10065 Old Grove Road, San Diego, California 92131, (619)695-3150.

2. Alton Geoscience is actively looking for experienced hydrogeologists and geologists for the San Diego office. Successful applicants will be team players with strong written and oral communication skills. Highly competitive salaries and benefits. Please submit resume in confidence to Alton Geoscience, 5764 Pacific Center Blvd, Suite 101, San Diego, California 92121.

BEST WISHES TO ALL OF YOU TAKING THE RG/CEG EXAMS !!!!!!