



# SAN DIEGO ASSOCIATION OF GEOLOGISTS

## 1988 EXECUTIVE COMMITTEE

### CHAIRPERSON

Jim Glaze  
Vadose, Inc.  
5755 Oberlain Dr, Suite #304  
San Diego, CA 92121  
(619) 552-1250

### VICE CHAIRPERSON

Jim Evans  
Engineering Geologist  
2926 Hannis Drive  
Vista, CA 92084  
(619) 758-3176

### SECRETARY

Diane Munbach  
Munbach Geotechnica.  
4626 Bay Summit Pla.  
San Diego, CA 92111  
(619) 275-2474

### TREASURER

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San Diego, CA 92120  
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### PUBLICATIONS COORDINATOR

John Hoobs  
Geocon Inc.  
9530 Dowdy Drive  
San Diego, CA 92126  
(619) 695-2880

## CHRISTMAS MEETING NOTICE WEDNESDAY DECEMBER 14, 1988

- TOPIC:** This month's meeting will feature a poster session presented by various Professor's and Students from San Diego State University.
- PLACE:** Kona Kai Club  
1551 Shelter Island Drive  
San Diego, CA
- DINNER:** Chicken Fonniestienne, Tossed Green Salad with Creamy Ranch Dressing, Rice Pilaf, Vegetable du jour, Rolls & Butter, Chocolate Mousse in Chocolate Shell, Coffee or Tea
- PRICE:** \$20.00

**TIME:** 6:00 - Social Hour & Posters  
7:00 - Dinner & Slide Show  
8:00 - Posters & Raffle

**Reservations Required:** By Noon Friday December 9, 1988. A reservation made is a reservation paid! **PHONE:** (619) 280-4321

The December Meeting will include an evening of Geological Poster Sessions presented by various Professor's and Students from San Diego State Geology Department, a short slide presentation by Woody Higdon of Geo-Tech Imagery, and will also feature the annual raffle. If you have any items to donate for a raffle, please call Diane Munbach (619) 275-2474. Voting and election of the SDAG 1989 Executive committee will also be held.

**CALL FOR PAPERS!** SDAG Plans to prepare a Publication entitled "Geologic Studies in San Diego, 1989" to accompany the SDAG 1989 Field Trip. Submission of either unpublished manuscripts or papers that have appeared elsewhere is encouraged. Get those papers published now, as the annual GSA Meeting is just around the corner in San Diego in 1991! The call for papers and DONATIONS should be directed to: Diane Munbach, 4626 Bay Summit Place, San Diego, Ca 92117 (619) 275-2474

**ANNOUNCEMENTS:** The San Diego State University Dept. of Geology Alumni Assoc. will be holding their 3rd annual field trip on February 24, 25, and 26, 1989 at the Red Rock Canyon State Recreation Area Campground, located on the west side of Highway 14 in eastern Kern County, about 25 miles northeast of Mojave, CA. The \$6.00 per night fee includes pit toilets, running water, tables and fire rings. Bring the family, your own camping (or trailering) gear, food and drink. Hope to see y'all there, in spaces numbered 40 - 50. Mr. Bill Elliott will field questions at (619) 586-0870

RED ROCK CANYON FIELD TRIP February 24, 25, and 26, 1989

Red Rock Canyon State Recreation Area is located in eastern Kern County, about half way between Mojave and Inyokern, along State Highway 14. This high desert area, at the western edge of the Mojave Block, can be expected to have warm days and cool to cold nights. Come prepared to experience possible weather extremes, some spectacular geology, and beautiful scenery! This area is tectonically active, and the climate is arid, so you can plan on seeing some excellent exposures (no poison oak to fight here).

The following has been excerpted from Whistler, D. P., 1987, Field Guide to the Geology of Red Rock Canyon and the Southern El Paso Mountains, Mojave Desert, California, NAGT-FWS, p. 1-5.

The geology of Red Rock Canyon and the southern El Paso Mountains spans an interval of time from Late Precambrian to Holocene. Major depositional episodes occurred in the later Paleozoic, Paleocene, Miocene, and Quaternary time. Plutonic intrusion occurred during the latest Permian and Mesozoic. The bulk of exposures in Red Rock Canyon document the later Miocene through Holocene history of the area, which is under major structural control by the Garlock and El Paso faults.

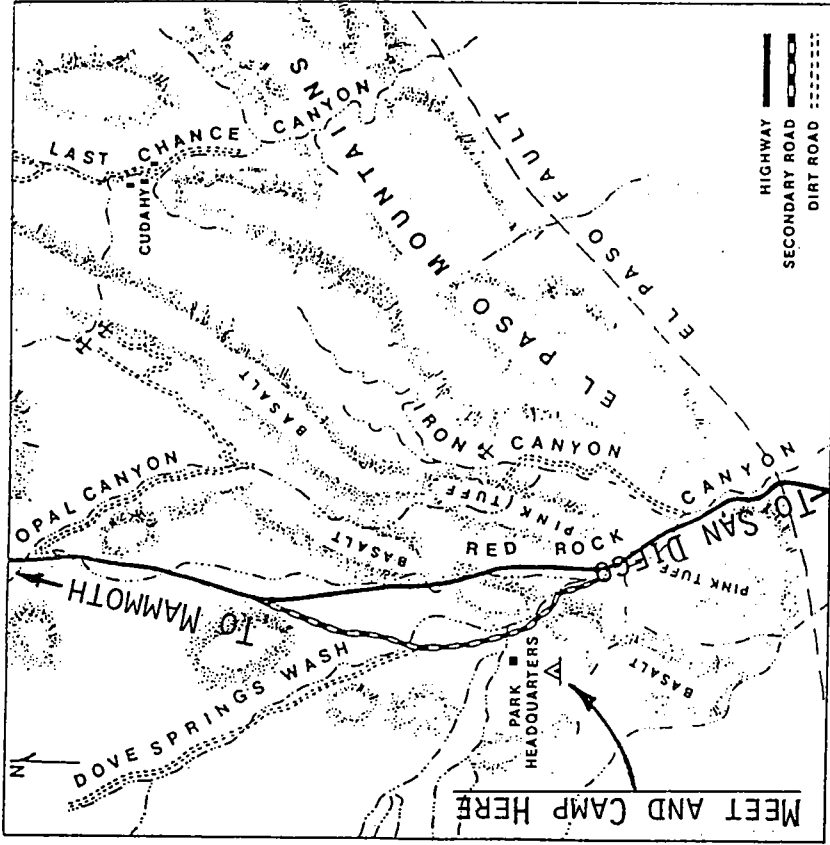
The oldest rocks exposed in the El Paso Mountains are the highly metamorphosed Precambrian chlorite-quartz-albite-sericite Mesquite Schist which forms the basement upon which the slightly metamorphosed, Late Paleozoic, marine Garlock Formation has been deposited.

The Garlock Formation and the Mesquite Schist have been intruded by a complex of plutonic rocks ranging in composition from hornblende-quartz diorite to granite. One of these intrusive units, a highly fractured and jointed granophyre plug, surrounds the gorge at the entrance to Red Rock Canyon.

The Paleozoic and Mesozoic rocks are deeply eroded, and are unconformably overlain by the Paleocene continental Goler Formation, a thick succession composed primarily of conglomerates and sandstones. Occasional finer-grained rocks in the Goler Formation have produced sparse, but diagnostic, vertebrate fossils.

The dominant exposures in Red Rock Canyon are Middle and Late Miocene volcanics and clastics lumped together as the Ricardo Formation. The Ricardo Formation is overlain by several episodes of Quaternary alluvial deposition derived primarily from the emerging Sierra Nevada. These deposits demonstrate a complex history of down-cutting, terrace, and pediment development.

The dominant structural feature of the area is the Garlock fault and its major splay, the El Paso fault. The Garlock fault is a major transform fault which separates the relatively stable Mojave Block to the south from the major crustal extensional area of the Basin and Range Province to the north. A cumulative left-lateral displacement of 48 to 64 kilometers has been demonstrated for the Garlock fault zone. Alluvial fans that are offset from their source canyons along the front of the El Paso Mountains indicate at least 18 kilometers, or roughly 1/3 of the cumulative displacement, has occurred during the past 1.5 million years.



Index map of the Red Rock Canyon area (After Whistler, 1987)

S D S U GEOLOGY DEPARTMENT ALUMNI

3RD ANNUAL FIELD TRIP

RED ROCK CANYON - EASTERN KERN COUNTY

FEBRUARY 24, 25, 26, 1989

Y'ALL COME !!!

QUESTIONS ??? - CALL BILL ELLIOTT @ 586-0870

The Department of Geological Sciences at San Diego State has received a grant of \$150,000 from the W.M. Keck Foundation to help establish a Dept. equipment fund. Annual interest earned by the fund will be used to purchase equipment essential to our ability to prepare students properly for careers in the geological sciences. The fund is literally a lifesaver for us, as reductions in state funding have reached catastrophic proportions. This grant was made with the provision that it be matched dollar for dollar from other sources. The Dean of the College of Sciences has agreed to provide \$100,000 from a special one-time only College fund, leaving us with the challenge of raising the final \$50,000. I ask you to join me in pledging the largest amount you can and to make it easier your contribution can be payable over a three year period. Also if you work for a company that has an employee gift matching program, the amount of your contribution could be doubled or even tripled. (Phil Kenn, Chairman, Dept. of Geological Sciences, San Diego State University, San Diego, CA 92182)  
 Note: Mike Hart of Geocoin, Inc. will give the fund drive a sendoff with a donation of \$10,000!

The following courses will be among the listing for San Diego State Geological Dept. night courses for the Winter Semester:

COURSE DESCRIPTIONS OF INTEREST

Geology 600 - Behavior of Subsurface Organic Contaminants  
 Instructor - Dr. Donn Marrin, Adjunct Professor of Geological Sciences, San Diego State University  
 Time - Thursday, 7 to 9:30 pm

Description - Examines the physical, chemical, and biological factors which influence the mobility and persistence of organic chemicals in the subsurface environment. Current practices of fate/transport modeling, hazard assessment, field investigation/monitoring, and site remediation will be evaluated on the basis of recent research. Emphasis will be placed on contaminant behavior within saturated and unsaturated zones, and on chemical partitioning/migration among surface waters, aquifers, and soils.

Prerequisite - Introductory course in ground water hydrology or experience in ground water hydrology or hazardous waste site investigations

Geology 651 - Numerical Modeling of Ground Water Flow  
 Instructor - Dr. David Huntley, Professor of Geological Sciences, San Diego State University.  
 Time - Tuesday, 5 to 7:30 pm

Description - Theoretical and practical aspects of ground water flow and solute transport modeling. This course focusses on the theoretical development of, mathematical solution to, and practical limitations of finite difference modeling of ground water flow. In addition, finite element modeling of ground water and solute transport as well as finite difference modeling of solute transport will be discussed in lecture. Students will write their own finite difference ground water flow codes and will use one or more existing codes designed to simulate ground water flow.

Prerequisite - Introductory course in ground water hydrology and ability to write computer program in Fortran, Pascal, C, or Basic.

Qualified students may register for either or both of these classes through San Diego State University Extension.

Due to the recent cut backs, both California State University at Los Angeles and San Diego State University have a need for field trip funds to cover such items as gasoline, camping fees and an occasional meal out in the bush. We all know that field trips are essential for getting a grasp on the basic geologic concepts. Don't forget these students are your future employees. So please contribute to both these universities to enable geology field trips to continue. Please send your checks directly to the universities to the addresses indicated below. A minimum donation of \$10.00 is appreciated. Corporate donations are encouraged. The goal is to attain \$1000.00 per school by January 1, 1989.

Check made out to:  
Dept. of Geology, CSULA

Check made out to:  
SDSU  
Dept. of Geological Sciences

Mail to:  
California State University  
at Los Angeles  
Los Angeles, CA 90032  
ATTN: Dr. Martin Stout

Mail to:  
San Diego State University  
Dept. of Geological Sciences  
San Diego, CA 92182-1337  
ATTN: Dr. Pat Abbott

**JOB OPPORTUNITIES:** Geotechnical/Environmental Consultant has immediate openings for engineers and geologists, preferably with Masters Degree and/or some applicable experience in the San Diego area. Please submit resumes in confidence to: Ninyo & Moore, 10225 Barnes Canyon Rd, Suite A-112, San Diego, CA 92121  
Attention: Mr. Avram Ninyo

York Research Consultants, an environmental consulting firm, is looking to retain a California Registered Geologist to review their environmental reports (soil and groundwater) on an as needed basis. Please contact James R. Farris or Arthur E. Rubenstein at York Research Consultants, 8525 Anjans Drive, Suite M San Diego, Ca 92126 (619)530-2922

### VOTE 1989 SDAG EXECUTIVE COMMITTEE

The following slate of candidates has been nominated for the 1989 Executive Committee. Please make your wishes known by voting for the following slate of officers or by writing in the candidate of your choice. Please bring to the December 14, 1988 meeting where the results will be tabulated and announced.

------(cut here)-----

CHAIRPERSON	VICE CHAIRPERSON	SECRETARY	TREASURER
Jim Evans	Diane Munbach	John Hooba	Sue Tanges
<u>write-in</u>	<u>write-in</u>	<u>write-in</u>	<u>write-in</u>