



SAN DIEGO ASSOCIATION OF GEOLOGISTS

1997 EXECUTIVE COMMITTEE

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MEETING ANNOUNCEMENT

WEDNESDAY, AUGUST 20, 1997

Place: Pea Soup Anderson's
850 Palomar Airport Rd.
Carlsbad, CA 1-800-266-7880

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

Directions: Palomar Airport Rd. exit off I-5, northeast corner.

Dinner: Buffet Special

Price: \$20.00 per person, checks payable to SDAG

Reserve by: 5 p.m. Tuesday, August 19 via voice mail to Lowell Lindsay, (619) 258-4905 x103. Leave name, affiliation, and number in party. Pls call to cancel if necessary.

Speaker: Gerald G. Kuhn,

Mr. Kuhn is a native of Encinitas, a graduate of San Diego State University, and by training and experience, a coastal and marine geologist. He is the Executive Director of the International Foundation for Applied Research in the Natural Sciences located in Carlsbad. Between 1976 and 1988, he was a geological research associate at UCSD Scripps Institute of Oceanography and was the last "chosen" colleague and student of the late Dr. Francis Shepard, the "Father of Marine Geology".

Together they published more than 40 papers on coastal changes related to climatic fluctuations, neotectonics, and paleo-liquefaction impacting the coastal terraces between Encinitas and San Clemente.

Title: Neotectonics in the North Coastal Area, San Diego County, California
(See abstract over.)

SDAG ANNOUNCEMENTS- 8/20/97

TENTATIVE PROGRAMS Meetings/programs are third Wednesday of month unless otherwise announced.

September 20	Annual Picnic- Mission Bay
October 17-19	Field Trip to Santa Cruz Island —Werner Landry
October 15	Colorado River Geology —Sue Tanges
November 19	Annual Poster Session- Old Spaghetti Factory
December 17	Paleo Update- Natural History Museum —Tom Demere
	New officer elections

SDAG NEWSLETTER DEADLINE is 25th of month. Please mail or fax items to Lowell Lindsay, address above.

SOUTH COAST GEOLOGICAL SOCIETY (SCGS) newsletter deadline is third Thursday of month. Mail items to Bill Goodman, (714) 442-2448 x121 or fax to (714) 476-8322. SCGS meets first Mondays of month. Call Bill for info.

CENTRAL COAST GEOLOGICAL SOCIETY (CCGS) info is Jeff Grover, 1321 18th St., Los Osos, CA 93402 (805) 546-3233.

CONGRATULATIONS to SDAG member Christie Hunter, recently of the State Division of Oil and Gas in El Centro, and now new editor of the CDMG California Geology magazine in Sacramento. If you don't yet, subscribe now.

1997 ANNUAL PICNIC of the combined SDAG/ASCE Geotechnical Group/SDSU Geology Alumni will be held on Saturday, 9/20/97 at the usual location. Volunteers are needed for shopping, site defense, cooking, etc. Please contact Tissa.

CORPORATE SPONSORS- Sincere thanks to these 1997 Corporate Sponsors who make educational assistance to a new generation of geologists:

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ABSTRACT OF PRESENTATION FOR SAN DIEGO ASSOCIATION OF GEOLOGISTS,
AUGUST 20, 1997

NEOTECTONICS IN THE NORTH COASTAL AREA, SAN DIEGO COUNTY, CALIFORNIA

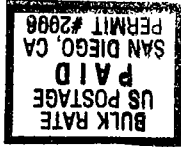
GERALD G. KUHN

NEW RESIDENTIAL TRACT, RAILROAD, FREEWAY, AND ROAD-CUT EXPOSURES IN NORTH-COASTAL SAN DIEGO COUNTY REVEAL LATE QUATERNARY FAULTS AS WELL AS PREVIOUSLY UNRECOGNIZED SAND BLOW DEPOSITS, FISSURE FILLS, LATERAL SPREADS AND OTHER PALEO-LIQUEFACTION SANDS DERIVED FROM UNDER-LYING, TERTIARY-AGE MARINE SEDIMENTS. A PALEO-LIQUEFACTION ORIGIN, RATHER THAN SOFT-SEDIMENT LOADING, IS DEDUCED FROM INTERNAL STRATIGRAPHY AND FROM THE PRESENCE OF SAND-INJECTED DIKES THROUGH MODERATELY DEVELOPED BURIED PALEOSOLS.

TWO FAULT SYSTEMS ARE READILY APPARENT: NW AND NE-STRIKING AND LOCALLY CROSS-CUTTING FEATURES EXPRESSED GEOMORPHICALLY BY AERIAL PHOTOGRAPHIC LINEAMENTS PROJECTING INTO KNOWN HOLOCENE FAULTS OFFSHORE, AND BY PROBABLE OFFSET, LOW-ORDER DRAINAGE AND BEACH RIDGES. THE FAULTS ARE NOW CLEARLY VISIBLE IN NEW, MASS-GRADING EXPOSURES, PARTICULARLY IN THE CARLSBAD AREA.

THE PALEO-LIQUEFACTION FEATURES EXTEND UPWARD INTO REGRESSIVE MARINE AND OVERLYING, PROGRADING CONTINENTAL DEPOSITS THAT MANTLE FLIGHTS OF MARINE TERRACE PLATFORMS RANGING FROM ABOUT 10 M TO 60M, AND IN AGE FROM ABOUT 80KA (LOWEST) TO 220KA. CROSSCUTTING STRATIGRAPHY AND RELATIVE WEATHERING RECORD AT LEAST THREE EPOCHS OF PALEO-LIQUEFACTION. SOME LATERAL SPREADS AND INJECTIONS DISPLACE THE BASE OF PALEO-INDIAN MIDDENS, BURIAL GROUNDS, AND OTHER ARCHAEOLOGICAL SITES (SAN DIEGUITO, LA JOLLAN, AND YUMAN CULTURES) LOCATED ON A 60M HIGH, NOW WELL-DRAINED TERRACE. LIQUEFACTION THUS TOOK PLACE DURING THE HOLOCENE FAR ABOVE MODERN GROUNDWATER LEVELS. WE SUGGEST THAT THIS PHENOMENON OCCURRED ONLY RARELY WHEN A STRONG SEISMIC EVENT COINCIDED WITH UNUSUALLY HIGH RAINFALL AND PERCHED WATER CONDITIONS. IF THIS HYPOTHESIS BE CORRECT, THEN THE NORTHERN SAN DIEGO COUNTY PALEOLIQUEFACTION FEATURES RECORD ONLY THE STRONGEST PALEO-EARTHQUAKES AFFECTING THE AREA. WE POSTULATE THAT THE LIKELY SOURCE IS THE NEWPORT-INGLEWOOD/ROSE CANYON FAULT ZONE LOCATED ABOUT 4KM TO 6KM OFFSHORE, WELL CAPABLE OF A M7+ EARTHQUAKE.

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