

SAN DIEGO ASSOCIATION OF GEOLOGISTS

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SDAG MEETING ANNOUNCEMENT

WEDNESDAY, October 17, 2012

Old Woman Springs Fault

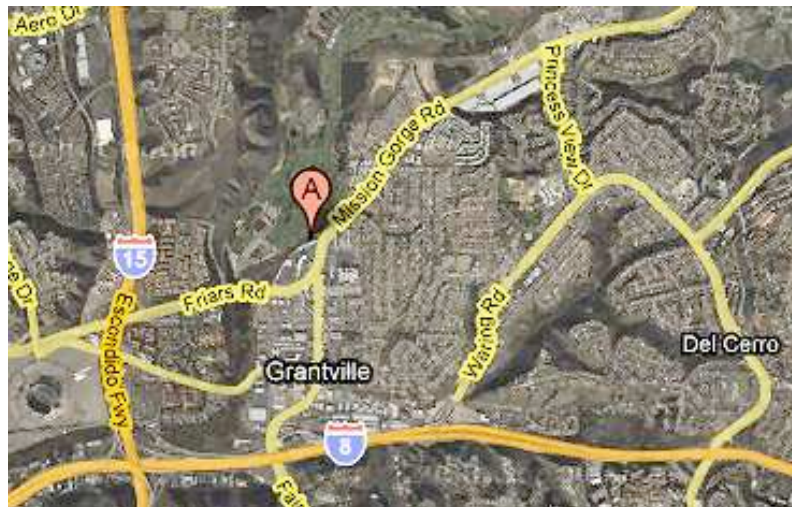
Presented by

Chuck Houser, MS, CEG, CHG
SCS Engineers

- Where:** **Emiliano's Mexican Restaurant** (Overlooking Admiral Baker Golf Course)
6690 Mission Gorge Road, San Diego, CA 92120
(619) 284-2460
- When:** 5:30 pm – Social Hour
6:30 pm – Dinner
7:15 pm – Program
- Dinner:** Mexicano fantastico. Beverage station. Cash bar.
- Cost:** \$30 per person, \$5 discount for members, STUDENTS: \$20. Add \$5 if you did not make a reservation.

Reservations: Make your reservation online at www.sandiegogeologists.org no later than noon, Monday, October 15th.

**RESERVATIONS CANNOT BE GUARANTEED AFTER MONDAY AT 12 NOON
BUT THEY ARE ALWAYS PREFERRED OVER WALK-INS**



SPEAKER ABSTRACT

Old Woman Springs Fault

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Tectonic geomorphic indicators of late Quaternary movement along the Old Woman Springs fault were mapped from Highway 247 southeast to the range front of the San Bernardino Mountains. The observed features include shutter ridges, pressure ridges, right-deflected drainages, beheaded channels, scarps, linear valleys, side-hill benches and breaks in slope, and vegetation lineaments. The consistent geomorphic data indicate a right-oblique sense of slip for the Old Woman Springs fault. North of Highway 247, the Old Woman Springs fault exhibits poor geomorphic expression. The Lenwood fault parallels the Old Woman Springs fault and has poor geomorphic expression in its southern portion adjacent to the well defined portion of the Old Woman Springs fault, but becomes well defined to the northwest adjacent the poorly defined portion of the Old Woman Springs fault. Additionally, the Old Woman Springs fault merges with the Lenwood fault at its northern and southern ends. This indicates that the Old Woman Springs fault is a strand of the Lenwood fault and that slip transfers from the Lenwood fault south of Soggy Lake to the Old Woman Springs fault as a right or releasing step.

The Old Woman Springs fault was trenched in two locations near the Old Woman Springs ranch. Stratigraphy encountered in Trench 1 included peat horizons that yielded several radiocarbon dates. Based on the results of radiocarbon analysis, the entire section exposed in Trench 1 (8 m) was deposited in the last 2000 years. Paleoseismic evidence demonstrates only one late Holocene event which produced rupture on the Old Woman Springs fault after A.D. 1470.

The alluvial fan surface and adjacent right-deflected drainage at the location of Trench 2 were surveyed. A topographic map was generated for quantitative analysis of the magnitude of offset of the alluvial fan. Projection of the fan apex and comparison to the modern alignment of the drainage as it exits the range front suggests approximately 9 m of right lateral offset of the alluvial fan.

Several soil pits were excavated on the offset alluvial fan surface near Trench 2. Exposed soil horizons were described, collected, and analyzed for grain size distribution, bulk density, and secondary carbonate content. Stage I to II+ carbonate development was observed in two profiles described. These soils were compared to similar dated soils in the Mojave desert region. Similar values for carbonate stage and soil development indices suggest the fan was deposited during the late Pleistocene to early Holocene (10,000 to 20,000 yBP). The slip rate for the Old Woman Springs fault calculated from the age of the fan surface and offset of the fan surface is 0.45 to 0.9 mm/yr.

A previous study on the Lenwood fault places the timing of the most recent surface rupturing earthquake at 1.2 to 2 Ka. If the Old Woman Springs fault is a strand of the Lenwood fault as suggested here, and they rupture together, then the younger apparent age for the timing of the last event on the Old Woman Springs fault indicated reworking of the detrital charcoal samples used for age control in the Lenwood fault study. Alternatively, each fault may have ruptured independently.

SPEAKER BIO

Chuck Houser obtained his Master of Science degree from SDSU in 1997. He has about 28 years of experience working in the engineering and environmental geology fields. He currently is a hydrogeologist with SCS Engineers in San Diego. In his spare time (like he has much of that!), he enjoys mineral collecting, fly fishing, flying, and spending time with his wife of 26 years, Cindy. He has two daughters and lives in east El Cajon in the same house he grew up in.

SDAG MEETING SCHEDULE - Mark Your Calendars!

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

November 14, 2012	Joint meeting with EERI: Dr. Tara C. Hutchinson, Department of Structural Engineering, UCSD
December 19, 2012	Dr. Tom Deméré, Curator of Paleontology, San Diego Natural History Museum
January 16, 2013	Joint meeting with EERI, speaker TBA
February 27, 2013	Al Trujillo, Professor of Oceanography, Palomar College



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PRESIDENT'S CORNER

First of all, I want to praise Cari Gomes for an excellent field trip - the geology, sights, speakers, menu, and accommodations were spot-on. Thanks go to Greg Cranham for an abundance of select brews et vins, and to the Murbachs for just about everything else! And how about that guidebook? Cari and Dave Bloom established a new level of literary excellence for SDAG; what a terrific publication. Thanks to all!

Last month I was working at sites located in the West Antelope Basin, east of Tejon Pass, in southern Kern County. Work finished early one day - what to do? I decided to check out nearby Hungry Valley State Vehicular Recreation Area, just south of Gorman off I-5. After a friendly conversation with the park rangers (actually, peace officers), I got a free 30-minute pass and I was on my way to explore. This place is wide-open semi-desert country, the state's second largest off-road park (after Ocotillo Wells SVRA) at 19,000 acres, and the geology is outstanding.

The park is located near the confluence of the San Andreas, Garlock, and San Gabriel faults, right under the Big Bend of the San Andreas. Major geologic units present include the Pliocene non-marine Hungry Valley Formation, the Miocene marine Peace Valley Formation, Precambrian gneisses, and Cretaceous granitics. As you can imagine, the area's structural geology is complex. Could this be an SDAG field trip destination in the future? It's worth looking into - hopefully the South Coast Geological Society didn't cover it recently. The park has several campsites strewn across its width, and, as you can imagine, lots and lots of dirt roads and trails accessing the geology. Yes, dirt bikers populate the park... I bet we could reserve a campsite far from the others, making camping tolerable against background motorcycle noise - or is that the other way around, the need to protect the poor off-roaders from our late night hijinks?

One thing that impressed me about Hungry Valley SVRA was how little erosion there was on trails up and down the parks' hills. If you've driven by off-road sites, you've probably seen the extensive damage to hillsides after years of use. Not here. I didn't see trails that suffered from the effects of rills or gullies, except maybe a few major trailheads. Furthermore, bikers are required to stay on trails, with the result that much of the park is untouched. Very nice.

Last but not least, my ongoing blurb on our state parks: "And they all lived happily ever after." Bill AB1478 was signed last month by Gov. Jerry Brown to keep funds flowing to parks, like beer at an SDAG field trip. It says: "The bill would appropriate \$20,500,000 from the State Parks and Recreation Fund to the department for expenditure as specified. The bill would prohibit the department from closing or proposing the closure of a state park in the 2012-13 and 2013-14 fiscal years. The bill would also appropriate \$10,000,000 from the Safe Drinking Water, Water Quality and Water Supply, Flood Control, River and Coastal Protection Bond Act of 2006, to be expended as specified, including for purposes of capital outlay and support for capital outlay projects of a state park." Very nice!

Todd Wirths
President



ANNOUNCEMENTS

GREAT CALIFORNIA SHAKE OUT! On October 18, at 10:18 am, millions of people throughout California will drop, cover, and hold on during a state-wide earthquake drill. To register and learn more about how to participate visit the website at www.shakeout.org/california/.

ONE STOP WONDER (Actually, three stops)

When: Saturday October 20th, 9 am

Subject: "Flood deposited sandstone of Ramona" as discussed in: "Preliminary Search for Eltanin Impact Tsunami Deposits: A Possible Early Pleistocene Chronozone," in *Waiting for Tsunami – Coastal Hazards of Northern San Diego County; 2012 SDAG Field Trip Guidebook*, Cari Gomes, ed. Mapped and described (as QTf/QTs) in: Preliminary Geologic Map of the Ramona Quadrangle, 2006. ftp://ftp.consrv.ca.gov/pub/dmg/rgmp/Prelim_geo_pdf/Ramona_prelim.pdf

Where: The OSW begins in Ramona at the large parking area outside the entrance to Swartz Canyon County Park (aka Mt. Gower Open Space Preserve). Located at the northeast end of (17090) Gunn Stage Road, San Diego County Estates, Ramona [33° 01' 30" x 116° 47' 49"]. Directions: SR-67 or SR-78 (or Wildcat Canyon Rd./Barona Rd.) to San Vicente Rd., east; then north on Gunn Stage Rd. From this location we will make one brief additional stop and then drive to Tierrasanta. The trip will conclude after viewing the base of the Lindavista Formation at the south end of Santo Road, Tierrasanta Community, San Diego [32° 48' 03" x 117° 06' 22"].

VOLUNTEERS NEEDED! SCOUT GEOLOGY DAY Jerry Shiller is looking for volunteers to assist with Scout Geology Day on October 27th. Volunteers are needed between 7:30 am and 2:00 pm and will participate as instructors or helpers. Boy Scouts will have the opportunity to earn the Geology Merit Badge, and Cub Scouts will be working on Science belt loops and the Geologist Activity Pin. The event will be held at the Vulcan Materials San Diego Quarry on Black Mountain Road. For more information, please contact Jerry at idgeology@cox.net.

NEW SDAG RESEARCH TOOL NOW AVAILABLE! A comprehensive listing of all papers published by SDAG, whether as annual field trip guidebooks or special publications, is now available on our website. Entries are sorted by primary author, or chronologically by date of publication, from our first guidebook in 1972 (40 years ago!) to all things Picacho in 2011. These can be accessed or downloaded as .pdf files. They are fully searchable in Adobe Reader or Acrobat, so if you are researching a topic, "tsunami" for example, you can search for that keyword. This listing will be updated as new books are published. Thanks to Greg Peterson and Hargis + Associates, Inc., for making this possible. See the links below:

http://www.sandiegogeologists.org/SDAG_Pubs_authors.pdf

http://www.sandiegogeologists.org/SDAG_Pubs_chronological.pdf

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IN MEMORIAM



Dr. Russell Gordon Gastil passed away at home on the afternoon of September 29, 2012, in the loving company of his dear wife, Janet Manly Gastil, his four children (Garth, Mary, George, and John), his grandson William, and three of his long-time geology colleagues. His last days were spent listening to his family sharing stories, reading his poems aloud, singing selections from his Tremble Clefs songbook, and reminiscing on their shared lives together in San Diego, on family vacations, and on geologic field trips.

Dr. Gastil had a long and distinguished career as a professor and researcher in the geosciences. He joined the faculty of SDSU in 1959 and spent the next five decades inspiring hundreds of geology students. Along with colleagues and students, he mapped thousands of square miles in Arizona, California, and Mexico, including the entire Baja peninsula! In 2002 he was awarded the Dibble Medal in recognition of his accomplishments. His contributions to geology and the geosciences community were numerous and will surely impact many future generations of geologists. He will be greatly missed by the SDAG community.

A memorial service will be held on Saturday, October 27, 2012, at 2pm at the [San Diego Friends Meeting](#), located at [3850 Westgate Place, San Diego, CA](#).

[Please click here to read Dr. Gastil's Obituary](#)



Dr. F. Beach Leighton, founder of Leighton and Associates and Professor Emeritus at Whittier College, passed away at his home in La Quinta, California, on October 3, 2012. Dr. Leighton was a leader in the field of engineering geology and has been internationally recognized with Distinguished Practice and Career Awards. With offices throughout California, his consulting firm became a leader in landslide prevention and control and hillside development.

A memorial service will be held at 2:00 pm on Saturday, October 13, 2012 at Fairhaven Memorial Services, 27856 Center Drive, Mission Viejo, 92692.

[Please click here to read Dr. Leighton's Obituary](#)



Mark Bellows, SDAG Member and alumnus of the SDSU Geology Department, passed away on October 2, 2012. A memorial service will be held at Fort Rosecrans on October 17, 2012, at 11:00 am.



SEEKING JOB OPPORTUNITIES

Qualifications Summary and Objective: I have 14 years experience directing surface water quality monitoring programs with a proven record of excelling in monitoring plan implementation, quality control, public notification and continuous improvement in operational effectiveness and efficiency. I have built and maintained relationships with key staff in academia, industry, and all levels of government in San Diego and California. I have a widely applicable skill set which includes: analytical thinking, communication and writing skills, data analysis and management, inter and intra-agency project coordination, and staff supervision and training. My objective is to obtain a career position with an industry leader where I can contribute my skills to build the success of my employer as well grow professionally. Detailed work experience, education and more at www.linkedin.com/in/cbclifton2010. Email cbc2006@cox.net or 619-964-1776.

Contact: Clay Clifton

ENGINEERING GEOLOGIST- California PG, MS Geology, over 13 years of applied geotechnical experience, proficient in geotechnical investigations, hazard evaluations, geophysical surveys, construction management and quality control, engineering analyses, special interest in earthquake-hazard and seismic design related applications, strong problem-solving and organizational skills. Detailed resume upon request: Anna, 201-407-7461, Afyodorova103@gmail.com

ENTRY-LEVEL ENVIRONMENTAL SCIENTIST - I am a recent UCSB graduate with a double major in Environmental Studies (BS) and Geology (BS, Earth Systems emphasis) who is looking to begin a career in environmental consulting. I have prior lab experience in both professional and academic settings. I am looking to establish myself with a passionate and hard working environmental firm in the San Diego region. For further information about my credentials and work experience please contact Georgi Chertkov at georgichertkov@gmail.com or call me at 505-412-3107.



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