

SAN DIEGO ASSOCIATION OF GEOLOGISTS

www.sandiegoeologists.org

SDAG MEETING ANNOUNCEMENT

WEDNESDAY, FEBRUARY 16TH, 2011

"Yellowstone National Park, 2010, from the Eyes of a Geologist"

Presented by

Stephen E. Jacobs, PG, CEG

Where: Catalina Room (southern end of MVCC) **SEE MAP**
Marina Village Conference Center
1936 Quivira Way, San Diego, CA 92109

When: 5:30 pm – Social Hour
6:30 pm – Dinner
7:15 pm – Program

Directions: FROM INTERSTATE 5: Take the SEA WORLD DRIVE exit. From SEA WORLD DRIVE, take WEST MISSION BAY DRIVE on your right. When you see the large green sign that says QUIVIRA ROAD, get in the farthest left of the two left turn lanes. Turn left, go one very short block and turn left again. Drive about one half mile and MARINA VILLAGE will be on your right.

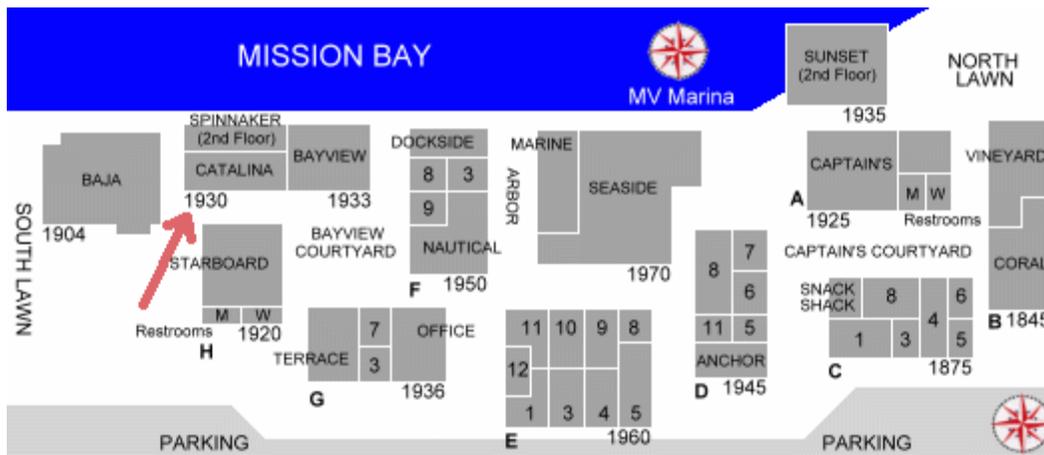
FROM INTERSTATE 8: Take the WEST MISSION BAY DRIVE exit to the right. You will be on INGRAHAM STREET for a short distance from which you will take the next exit marked WEST MISSION BAY DRIVE on your right. When you see the large green sign that says QUIVIRA ROAD, get in the farthest left of the two left turn lanes. Turn left, go one very short block and turn left again. Drive about one half mile and MARINA VILLAGE will be on your right.

Dinner: Mexican Buffet, Beverage station, dessert, 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.sandiegoeologists.org **no later than noon, Monday, February 14th.**

**RESERVATIONS CANNOT BE ACCEPTED AFTER MONDAY AT 12 NOON.
IF YOU DO NOT MAKE A RESERVATION, WE CANNOT GUARANTEE YOU A MEAL.**



2011 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!

March 16, 2011	Diane Murbach, Easter Earthquake - Liquefaction Observations
April 2011	TBA
May 2011	TBA

2011 EXECUTIVE COMMITTEE

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SPEAKER BIO

SPEAKER: STEPHEN E. JACOBS, PG, CEG, CONSULTANT ENGINEERING GEOLOGIST, 2871 SANFORD LANE, CARLSBAD, CA 92010-6553, STEPHENEJACOBS3019@GMAIL.COM

Mr. Jacobs received a B.S. in Geology from U.C.L.A. in 1971, received an M.S. degree in geology specializing in paleontology from the University of Nebraska-Lincoln in 1973, and another M.S. degree in geology specializing in engineering geology from California State University-Los Angeles in 1982. He has been practicing engineering geology since 1979. He has worked on a variety of projects throughout California, Nevada and Arizona involving geologic and geotechnical investigations for residential and commercial developments and litigation studies, fault investigations, seismic hazard and groundwater studies, and geologic inspections for feasibility of residential purchase. Most recently Mr. Jacobs has performed geologic mapping in the San Vicente Water Pipeline and Mission Trails Pipeline Tunnels for San Diego County Water Authority from July 2007 to December 2009, and for the new San Diego Downtown Central Library from September 2010 to February 2011.

Mr. Jacobs has published several articles and abstracts on paleontology, landslides, geologic structures, and tsunami deposits, and prepared several geology field trip guidebooks. Most recent research includes two or three articles on the Pleistocene Paleontology and Stratigraphy of the Palos Verdes Peninsula in southern California. He is a member of the Geological Society of America, Association of Engineering Geologist, San Diego Association of Geologists, and South Coast Geological Society.

SPEAKER ABSTRACT

“Yellowstone National Park, 2010, from the Eyes of a Geologist”

The Yellowstone region of Wyoming and Montana is one of the most interesting places in the world to see geology, scenery and wildlife. This region includes not only Yellowstone and Grand Teton National Parks, but it also has the site of the 1959 M 7.5 earthquake at Lake Hebgen, spectacular Precambrian and Pleistocene (glacial) geology along Beartooth Highway, Hot Springs State Park at Thermopolis, and Precambrian Stillwater (Ultramafic) Complex.

Yellowstone was the country's first national park established in 1872 as a result of the famous survey of the area by Ferdinand V. Hayden in 1870-1871. Yellowstone has an active volcano, experiences approximately 2,000 earthquakes annually, contains approximately 10,000 thermal features, more than 3,000 geysers, approximately 290 waterfalls, 15 feet or higher, flowing year-round, and one of the world's largest calderas, measuring 45 by 30 miles (72 by 48 km). It also has one of the world's largest petrified forests.

The Yellowstone hotspot is the largest hotspot under a continent and among the largest of some thirty active hot spots on Earth. The North American plate of the Earth's crust has drifted southwesterly over the Yellowstone hotspot at about 1 inch per year. About 16 million years ago, the hotspot was beneath what is now northern Nevada near its border with Oregon and Idaho. As the continent drifted southwest, the hotspot (even though stationary) in effect moved northeast beneath Oregon's southeast corner (by 10 my), then across Idaho to Wyoming (by 6.6 my). It ended up beneath Yellowstone about 2 million years ago. The 3 Yellowstone calderas emitted about 300 to 2,500 times the volume of ash as compared to that emitted by the Mt. St. Helens eruption in 1980.

In the tour of Yellowstone, I will illustrate features of volcanism and hydrothermal activity including spectacular travertine hot springs terraces at Mammoth Hot Springs, geysers, multi-colored thermal pools and springs in the Norris, Lower, Midway, Upper and West Thumb Geyser Basins, and spectacular waterfalls and volcanic deposits in the Grand Canyon of the Yellowstone River. As a special treat the tour will include one of the famous (but one of the best kept secrets in the park) fossil petrified forests in Yellowstone with upright tree trunks and stumps. While [petrified wood](#) is not the rarest of fossils what is so remarkable about these fossil trees is the fact that the trees were preserved in an upright position. In addition, many forms of wildlife were seen during my visit including geese, elk, deer, bison and wildflowers. Bears, moose and wolves were not seen, but do live in Yellowstone.

After Yellowstone, the tour continues on to the Grand Teton created as a result of normal faulting and sculpted by glacial erosion as illustrated by the spectacular views of glacially carved peaks and lakes. Beartooth Highway offers another opportunity to view glacial topography. At Hebgen Lake, the tour will show some fault scarps photographed during the 1959 earthquake and current views of the area, and the Madison Canyon landslide that created Earthquake Lake. More travertine deposits will be seen at Hot Springs State Park in Thermopolis, Wyoming. Finally, we will visit the Benbow Chromite Mine in the Precambrian Stillwater Complex in the Beartooth Range of Montana. The Stillwater Complex consists of layered ultramafic plutonic rocks of mainly anorthosite, gabbro, norite, bronzitite, and peridotite. The chromite from the Benbow Mine is in a peridotite.

***** Notes *****

Please welcome Brian J. Olson as the new SDAG secretary, your link to announcements and membership.

Don't forget- we always need speakers! Anyone interested in presenting a talk for the monthly dinner meetings should contact our new prez Chuck Houser.

PRESIDENTS CORNER, FEBRUARY 2011

Happy February and greetings from Tucson! If you have any interest in mineral collecting and you've never made the pilgrimage here for the big show, you might want to reconsider. Not only will you see many fine mineral specimens, but you will also have opportunity to see many items of great geological interest. The fossils are fantastic, including many very large ammonites from Calgary, a beautifully colored variety referred to as Ammolite. Yesterday at Hotel Tucson (formerly known as Inn Suites), I came across some large slabs of orbicular granite from Australia. So the geologist, not just the mineral collector, can make many good "finds" at this show.



Orbicular Granite From Australia – See more of my photos from the show, later in this Newsletter.

At our February meeting, Steve Jacobs will be giving us a geologist's perspective of Yellowstone National Park. Geologically speaking, Yellowstone is an important place, both for the wonderful geological processes in place there, and for the past volcanic activity and future volcanic potential. Come to the Catalina Room on February 16 for good Mexican food and great pictures and discussion about Yellowstone.

The third printing of the 2010 guidebook will be out soon, so if you are waiting anxiously to get your copy, you shouldn't have much longer to wait. Finally (here's the nag), if you haven't yet done so, please be sure to get your membership renewals in to us soon. For those of you who have, thanks! And of course, thank you to our corporate sponsors!

Chuck Houser

2010 SPONSORS - THANK YOU!!

Note the new nomenclature since 2010: Sponsors, Corporate Sponsors, and Patrons provide a significant portion of SDGS's and SDAG's operating and scholarship budgets. By making your payments to SDGS (a 501(c)3 public benefit nonprofit educational corporation) you may be able to claim a tax deduction. In addition to monthly recognition for your contribution, you are entitled to additional benefits as listed on the Sponsorship Form included in this newsletter.



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Greg Cranham, Consulting Geologist	Stone Brewing Company
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Coming Soon: Those that have already stepped up in 2011

Request for Sponsors: 2011 SDAG/SDGS and Publication SPONSORS

On behalf of the San Diego Geological Society, Inc. (SDGS), a public benefit 501(c)3 nonprofit educational corporation, we would like to request tax deductible Donations at our San Diego Association of Geologists (SDAG)

The list of paid Sponsors and the forms to become a Sponsor are located on the SDAG web site at: <http://www.sandiegogeologists.org/Sponsors.html>.

Your donation will further the SDGS mission to promote geology and related fields in the greater San Diego region, operating through the San Diego Association of Geologists (SDAG), a committee of SDGS. To achieve our primary educational objective, we organize frequent field trips and maintain a program of monthly meetings featuring speakers on current geological topics. We also publish field trip guidebooks and other publications related to geology and natural history. We encourage scholarship and research by awarding scholarships from the elementary through graduate levels. With your \$100

"EMERALD" donation, your name/business will be listed as a sponsor on the SDAG web site (<http://www.sandiegogeologists.org/>) and in the monthly SDAG meeting newsletters. With your \$500 "RUBY" or \$1,000 or more "DIAMOND" level donation, your business card will also be included on the SDAG web site and in the monthly SDAG meeting newsletters. In addition, as a "\$1,000 or more DIAMOND" level donation you will be presented with a thank you plaque. Should you have any questions regarding a Sponsorship, please contact our non-profit SDGS Secretary (Diane Murbach) at 619-865-4333.

Reminder: Annual Membership Dues for 2011!

SDAG Membership dues are due! If you have not done so, please complete the form at the end of the newsletter and send to the stated PO Box with a check for \$25, to keep yourself in good standing. That's \$2.08 per month, what a bargain!

MEETINGS AROUND THE REGION:



The Earthquake Engineering Research Institute's (EERI) Annual Meeting will be held February 9-12, 2011 in San Diego at the Hyatt Regency Hotel, La Jolla, CA. The meeting theme "Earthquakes without Borders" combines emergency response professionals, geologists, geotechnical engineers, structural engineers and students.

The program will highlight cross-border issues, the regions' tsunami risk, integration of research and practice, application of strong motion records, and lessons learned from the major earthquakes in 2010. Meeting information and registration is available at <http://www.eeri.org/site/2011-annual-meeting>.

CALL FOR PAPERS!! For the 2011 SDAG Field Trip Guidebook:

"GEOLOGY AND MINING HISTORY OF THE EASTERN IMPERIAL COUNTY REGION"

This year's San Diego Association of Geologists field trip and guidebook will focus on the area of eastern Imperial County: essentially, the areas east of the Imperial sand dunes, and any outlying areas that are relevant. The guidebook would have these "sections": Structural and basement geology, mines (including history), Neogene geology and paleontology, and the road log(s). Papers might include subjects such as the Chocolate Mountains anticlinorium, detachment faults, geologic units such as the Bouse Fm., Orocopia Schist, etc. Historical papers on the Hedges/Tumco mining district in the Cargo Muchacho Mountains and the Potholes gold mine on the river have been promised so far, as well as cutting-edge geological papers. First draft manuscripts are due September 2, 2011.

The field trip is scheduled for November 4, 5, and 6, 2011, and camp will likely be at the Picacho State Recreation Area, about 25 miles north of Winterhaven, on the Colorado River. The geology is

simply fantastic! Contact Todd Wirths, field trip guidebook editor, at todd@wirths.com or 858-337-0098 to discuss logistics or for more information.

New Exhibit Open at the San Diego Maritime Museum: "Mapping the Pacific Coast"

Mapping the Pacific Coast: Coronado to Lewis and Clark. This world-class exhibition showcases 45 magnificent maps, books and illustrations dated 1544 through 1802, the very first explorations of our West Coast by Europeans. Many of the documents included in the exhibition tell dramatic stories with references to explorers such as Juan Rodriguez Cabrillo, Sir Francis Drake and Captain James Cook; all of whom left their mark on the Pacific Coast. These historic stories are told through original maps of the time, and illustrations (the earliest being woodcuts and the majority being copperplate engravings, many in original hand-coloring). This exhibit is enhanced by an audio tour and catalog, and is on display on the Berkley now through March 30, 2011. More information regarding this and other exhibits can be found on the museum's website at: www.sdmaritime.org. The museum is located at 1492 North Harbor Dr., downtown San Diego. For more details, call: (619) 234-9153. *Thanks to Greg Cranham for finding this, he highly recommends it!*

2011 Desert Symposium: "Southern Exposure: A Trip through Southern California Outcrops"

Plan to share your research with a presentation or a poster at the fabulous Zzyzx, California Desert Studies Center. The event is being held on April 22-23, 2011, with an accompanying field trip on April 23-25, 2011. Interested parties should contact William Presch Ph.D., Director of Desert Studies, Department Biological Sciences, California State University, Fullerton, at 657-278 2215 wpresch@fullerton.edu. For more info go to the Desert Studies Center website at <http://biology.fullerton.edu/dsc>



JOB OPENINGS!

Paleontological Field Monitor Position: The Department of Paleontology at the San Diego Natural History Museum has openings for paleontological field monitors. Both a full time position with benefits and part time temporary positions (without benefits) are available. All work is funded through contracts. Work will include field monitoring of construction-related exposures of potentially fossiliferous sedimentary rocks (Cenozoic and upper Mesozoic marine and/or non-marine rock units) in the Southern California region. Field monitors will be expected to collect exposed fossils and record relevant stratigraphic and taphonomic data. Opportunities for fossil preparation are also possible. Depending on experience, the field monitor may also be

involved in preparing final reports of findings. Must be able to lift at least 50 lbs and have a valid Driver's License. Start date: 15 January 2011.

Requirements: A minimum of a B.S. in geology or a related discipline with an emphasis in paleontology. Experience in field paleontology and stratigraphy is preferred. Salary is dependent upon the applicant's experience. For general information about our paleontology mitigation program, please visit <http://www.paleoservices.org>. Please mail or email resumes to: Melissa Soetaert (paleo@sdnhm.org; 619-255-0309) ; Department of Paleontology; San Diego Natural History Museum; P.O. Box 121390 San Diego, CA 92112-1390

CITY OF SAN DIEGO EMPLOYMENT OPPORTUNITY (#T2968) Title: **ASSOCIATE ENGINEERING GEOLOGIST: POSTED 2/4/2011**

The Position: Associate Engineering Geologist positions review grading and drainage plans as well as building permits for adverse geotechnical conditions, specifically where public easements are proposed; review primary, final or as-graded (as-built) geotechnical or geologic reports for new projects or to verify compliance with state and local ordinances, and permit conditions; maintain the City's geologic hazard maps and advise and assist customers regarding geologic requirements and resources; supervise Assistant Engineering Geologist and/or Student Engineer positions; and perform other duties as assigned. Application Filing Period: February 4 through March 8, 2011. Further Information available at <http://apps.sandiego.gov/pjaol8/bulletins/4811.pdf>



Title: **SENIOR ENGINEERING GEOLOGIST** Posted: 01/27/11

Job Description: The California Geological Survey (CGS) is recruiting for an Engineering Geologist to join the Geological Mapping Program (GMP). The incumbent will be under the general direction and supervision of the Supervising Engineering Geologist in the Geologic Mapping program. The incumbent plans, directs and coordinates the preparation of geologic maps. Responsible for development of plans for carrying out program mandates. Supervises engineering geologists and support staff in Regional Geologic Mapping Project; maintains awareness of status of every project staff are working on; prepares budget requests and grant proposals including estimates of program needs in terms of personnel, equipment and operating expenses; prepares annual work plans, grant proposals and performance appraisals of staff; reviews edits and transmits reports and maps to the Supervising Engineering Geologist. In addition to supervising geologic mapping staff, the incumbent independently prepares geologic maps using aerial photographs, aerial and satellite imagery, digital topography, and geologic map data. Compiles digital geologic map from available sources and fieldwork into a geologic map. Prepares geologic maps, using geographic information system (GIS). Writes reports summarizing regional geology, landslide characteristics, geologic material, engineering properties, seismicity, and analyses used to prepare maps. Stays current with technological advances in engineering geology, seismology, geographic information systems, and remote sensing applications. Works with professional peers in CGS, other governmental agencies, academia, and private industry to maintain a state-of-the-art mapping program and assist in technology transfer. Participates in outreach efforts to local government, news media, professional organizations, and the general public. Assists public safety agencies by inspecting and assessing life-safety, utility, transportation, and private property damage potential from earthquakes, severe storm events and post-fire rainstorms. Locates and maps ground-failure features following large earthquakes. Desirable qualifications: Excellent verbal and written communication skills. Knowledge of, and ability to use, Geographic Information System (GIS) software. Registration as a Professional Geologist in California. Ability to manage multiple tasks and work in a team environment. Who may apply: Individuals who are currently in the classification, eligible for lateral transfer or with list eligibility may apply. SROA and Surplus candidates should attach 'surplus letters' to their applications. Training and Development Assignments may be considered. Applications will be screened and only the most qualified candidates will be interviewed. Please submit a State application and résumé indicating position #538-104-3751-593 to: Chris Wills, Department of Conservation, California Geological Survey, 801 K Street, MS 12-32, Sacramento, CA 95814. For specific questions regarding this position or to request a copy of the duty statement, please contact Chris Wills at (916)323-8553 or email at chris.wills@conservation.ca.gov.

Hurry- Final Filing Date is 2/11/2011

MORE PHOTOS FROM CHUCK HOUSER - TUCSON GEM AND MINERAL SHOW

