

SAN DIEGO ASSOCIATION OF GEOLOGISTS

<http://www.sandiegoeologists.org>

SDAG MEETING ANNOUNCEMENT

Wednesday, August 15, 2018 *3rd Wednesday*

Hazards From Surface Fault Rupture and Ground Shaking: Engineering and Community Response

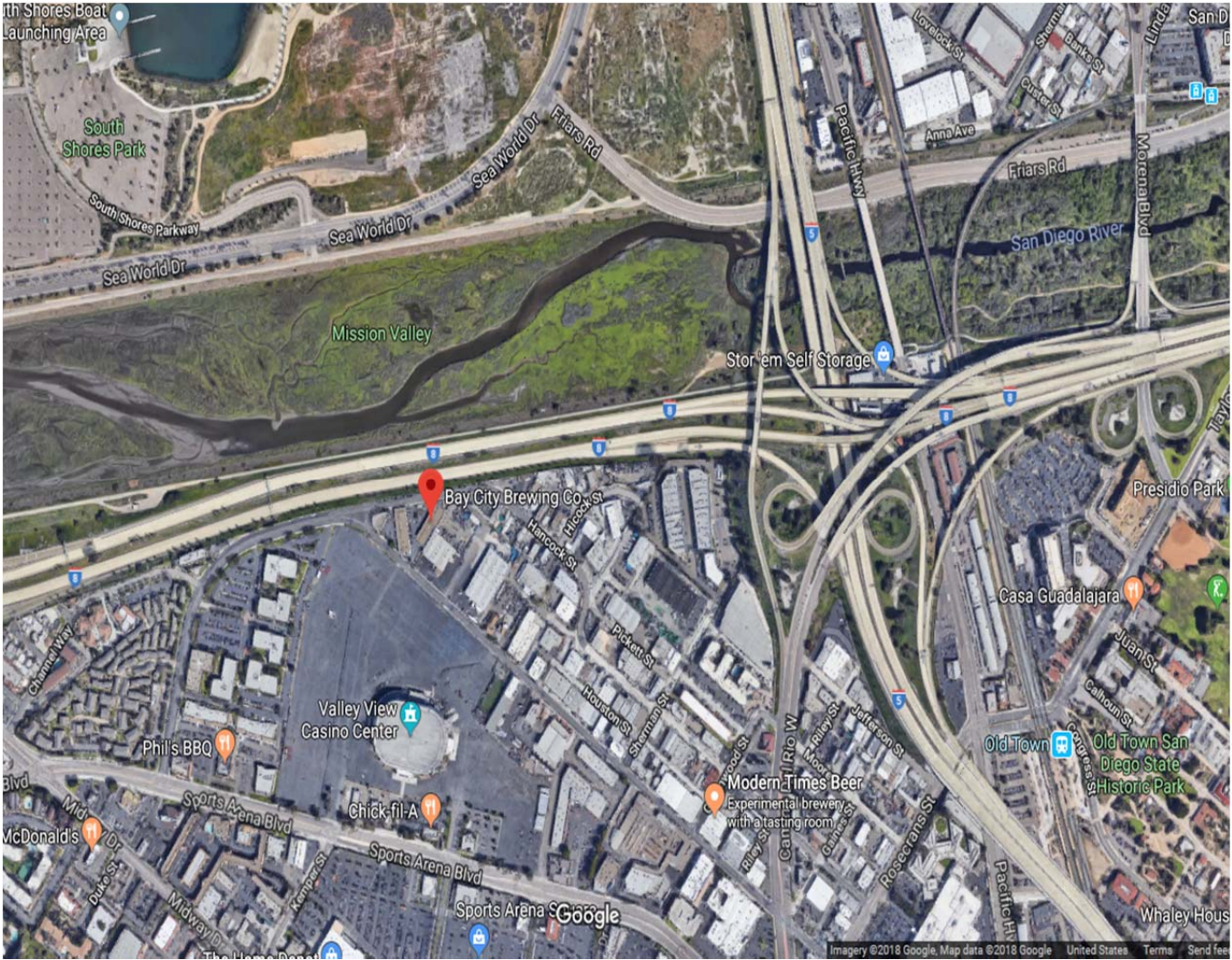
Presented by: *Dr. Alan Hull*

- Where:** **Bay City Brewery Co.**
3760 Hancock St, San Diego, CA 92110 (See Map)
- When:** 5:30 pm – Social Hour
6:30 pm – Dinner
7:30 pm – Presentation
- Dinner:** Tacos
- Cost:** \$30 Member, \$35 Non-Member, \$20 Students.
******If you reserve no later than August 13th by noon you will get a drink ticket for a free beer*** No discounts for drink tickets not used.***
- Reservations:** Make your reservation **online** at <http://www.sandiegoeologists.org/Meetings.html> later than noon, Monday, August 13th. Reservations cannot be guaranteed after Monday at noon, but are always preferred over walk-ins. **EARLY reservations well before the deadline are MUCH appreciated.**

Directions: FROM INTERSTATE 5: If you are heading south on the I-5 take exit 20 for Camino Del Rio W. Fairly quickly you will hang a right on Hancock St. and continue for about 0.5 miles until you reach Bay City Brewing on your left.

FROM INTERSTATE 8: Take the I-8 West to exit 2B for Camino Del Rio W. Fairly quickly you will hang a right on Hancock St. and continue for about 0.5 miles until you reach Bay City Brewing on your left.

Map:



ABSTRACTS

Hazards From Surface Fault Rupture and Ground Shaking: Engineering and Community Response

Presented by: ***Dr. Alan Hull***

It is almost 50 years since the California Legislature passed the Alquist-Priolo Earthquake Fault Zoning Act in response to the damage from the 1971 San Fernando earthquake and surface fault rupture. While California's strict zoning and regulatory response have not been replicated elsewhere in the world, governments and key industries worldwide have developed standards and guidelines to try and mitigate the shaking and surface rupture hazards posed by tectonically active faults. In parallel, science has greatly increased our understanding of coseismic faulting and the intensity of earthquake shaking. There are now methods and models to quantify the ground shaking and surface rupture potential, including the associated uncertainties.

This presentation uses examples from around the world to illustrate ways the mining, oil and gas and pipeline industries approach the potential impact of surface fault rupture and related hazards in their developments. The examples will be used to explore how faults at sites from both seismically active and quiescent areas are evaluated, and how the results, including uncertainties, are incorporated into probabilistic and deterministic models. Case studies will show the variety of regulatory approaches used within and beyond California; and to explore the needs of engineers and regulators from new scientific developments.

Biography:

Dr. Alan Hull is a Senior Practice Leader at Golder Associates in Irvine, CA. Alan is a geologist who focuses on paleoseismology, earthquake hazard assessment and the importance of seismically active faults in engineering analysis in design. Prior to joining Golder in 2001, Alan spent 20 years with the New Zealand Geological Survey (now GNS Science) undertaking basic and applied paleoseismic research from fault trenching and marine terrace studies. His consulting assignments for mining, oil and gas, government, and utility clients have been to understand the hazards from potentially seismogenic faults, probabilistic seismic hazard analyses (PSHA); and the engineering geology at sites in Africa, Asia, Central America, Europe, North and South America; and the South Pacific. Alan has authored more than 50 peer-reviewed journal articles and numerous client-focused reports. Alan was a member of the 2016-2018 Expert Panel supporting the update of California Geological Survey SP 42-- *Earthquake Fault Zones: A Guide for Government Agencies, Property Owners/Developers, and Geoscience Practitioners for Assessing Fault Rupture Hazards in California*.



UPCOMING MEETINGS

Meetings are usually held on the 3rd Wednesday of the month may change to accommodate the speaker and meeting place schedules. Check the SDAG website for updates

September, 2018	TBD
October 12 th – 14 th , 2018	No Meeting – Annual Field Trip! Please sign up on the website.
November, 2018	TBD

2018 SDAG EXECUTIVE COMMITTEE

<u>PRESIDENT:</u>	Chris Livesey; liveseychris@yahoo.com
<u>VICE PRESIDENT:</u>	Ken Haase; haase@geoconinc.com
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<u>PUBLICATIONS:</u>	Lowell Lindsay; <i>Sunbelt Publications</i> ; Ph: (619) 258-4911, x111; llindsay@sunbeltpub.com

SDAG PRESIDENT'S CORNER

August, 2018

There are many branches of earth sciences. I hope you have enjoyed the variegated subjects of our meeting thus far. This month we will hear about a topic that grabs everyone's attention who is witness to the effects of a shaking earth. In far historical times people had no idea the phenomenon occurring under their feet (if they could stand during an event!). Even today society is trying ways to engineer and better understand our topic of discussion this month.

"I was awakened by a tremendous earthquake, and though I hadn't ever before enjoyed a storm of this sort, the strange thrilling motion could not be mistaken, and I ran out of my cabin, both glad and frightened, shouting, "A noble earthquake! A noble earthquake" feeling sure I was going to learn something."

– John Muir

Sincerely,

Chris Livesey

SDAG President - 2018

ANNOUNCEMENTS

ONE-STOP WONDER CHALLENGE!

ONE OSW A MONTH IN 2018!

BE A PART OF SDAG HISTORY!

Have an idea for a one-day or half-day field trip?

Want to share your favorite aspect of San Diego
geology?

Contact SDAG to schedule your One-Stop
Wonder!

Your OSW may be chosen to be included in SDAG's One Stop
Wonder Guidebook!

Contact Monte Murbach for scheduling!

montemurbach@gmail.com

2018 SDAG Field Trip

Friday October 12, 2018 through Sunday October 14, 2018

From our Vice President Ken Haase:

Hello SDAG. The field trip details are being finalized and the signup form is ready to go! Please get your signups in early, we have a great trip planned. Sign up sheets can be printed off the SDAG website and either mailed in or taken to the Treasurer at the next meeting. We will also have sign up sheets at the meeting.

Our trip this year will take place from Friday October 12th through Sunday October 14th. Our first stop will be Blue Cut in San Bernardino County and we will venture north from there. Saturday has a few short, flat hikes that provide a wealth of geologic knowledge. We will close out the trip with a tour of Calico Ghost town. If you have any questions about the signup form email Ken Haase at haase@geoconinc.com. We also need Honda 2000 generators for the field trip so we can provide early morning power to the campsite. If you have a spare generator to loan please email Ken Haase. Hope to see you on the trip!

A detailed itinerary will follow in late August or early September.

Free Back Issues of California Geology

Free back issues of California Geology will be brought forth at this month's meeting. Several years are organized in binders, going back as early as 1967! Also, some paleontology texts, yours for the taking. See Todd Wirths at the meeting. Rock on!!

Absolution by the Sea - Now Open For Business!!

Long time SDAG member and past president, Cari Gomes, has assisted in opening a new brewery-restaurant called Absolution by the Sea, from Absolution Brewing Company. The restaurant is located at 7536 Fay Avenue, La Jolla, CA 92037. Phone 619-202-4152. Come enjoy great craft beer and food with your fellow geologists!

OSW ANNOUNCEMENT from Monte

Please join us Sunday August 12, 2018 at Fault Line Park in Downtown San Diego for the next One Stop Wonder. We will meet at the Park at 10 AM. We will discuss the local faulting associated with the Rose Canyon Fault system and discuss the make up of the very interesting Park. We will then move to the northern edge of the park and have a late breakfast/brunch at Amplified Ale works which overlooks the park. They have brews and brews - coffees and ales and great food from vegetarian to animal protein. (If potatoes have eyes is that still a vegan dish??)

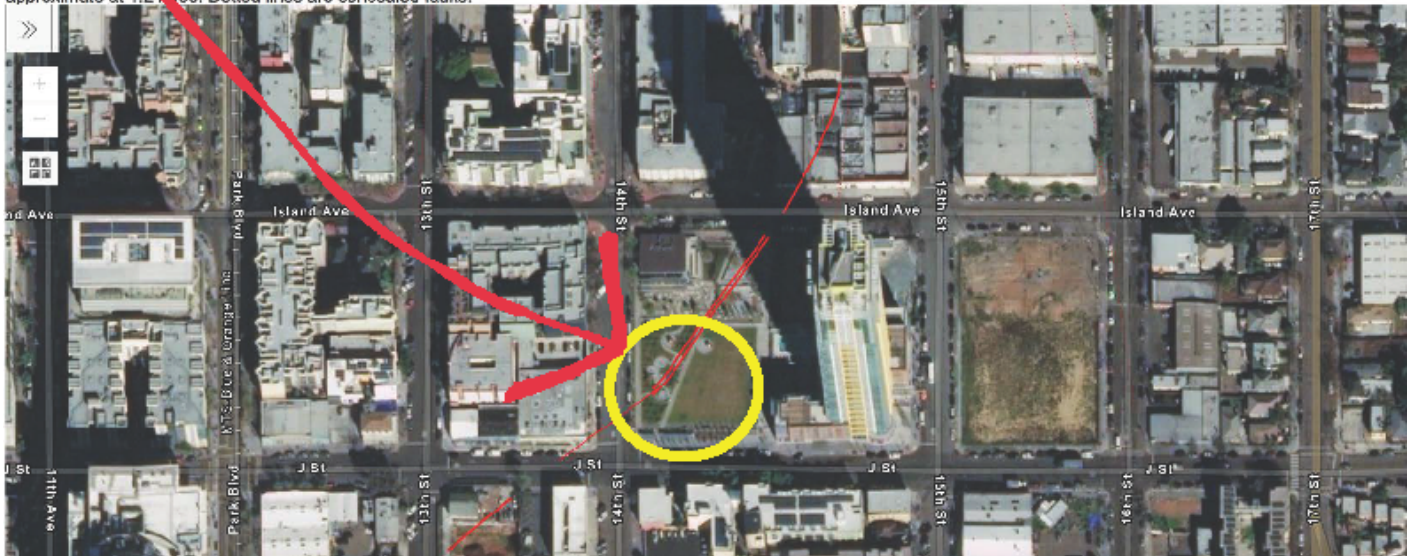
The park is located at the northeast corner of 14th and "J" Streets. Street parking is free on Sundays. See you at 10 AM sharp! Please see the attached location map for more information.

SDAG One Stop Wonder (OSW) Meeting Location 10:00am Sunday August 12, 2018 at Fault Line Park in Downtown San Diego: We will meet at the Park at 10 AM. We will discuss the local faulting associated with the Rose Canyon Fault system and discuss the make up of this very interesting Park. Bring your Fault Trench Investigation Stories. We will then move to the NW corner of the park and have a late breakfast or early lunch at "Amplified Ale Works" which overlooks Fault Line Park. They have coffees, ales and great food.

The park is located at the northeast corner of 14th and "J" Streets. Street parking is free on Sundays. See you at 10 AM sharp!

DRAFT Provisional Fault Map for San Diego/Tijuana Earthquake Scenario

Note: California Geological Survey (CGS) Fault data uses the scale 1:24,000 [v.3.0, 2016]. CGS suggests users defer to San Diego City fault data, where marked, for increased accuracy. SD City Faults: Location and activity of faults are based chiefly on interpretation of information contained in geologic reports by private consultants. The City of San Diego identifies active faults as Holocene ($\leq 11,000$ yr) and potentially active as Quaternary (up to 1.6my). Fault investigations are ongoing that may require future revision of this map. This map is not a substitute for a site specific fault investigation. Clicking on a line/feature will reveal metadata. Solid lines are well located at 1:24,000. Dashed lines are approximate at 1:24,000. Dotted lines are concealed faults.



OSW – Encinitas Copper Mine

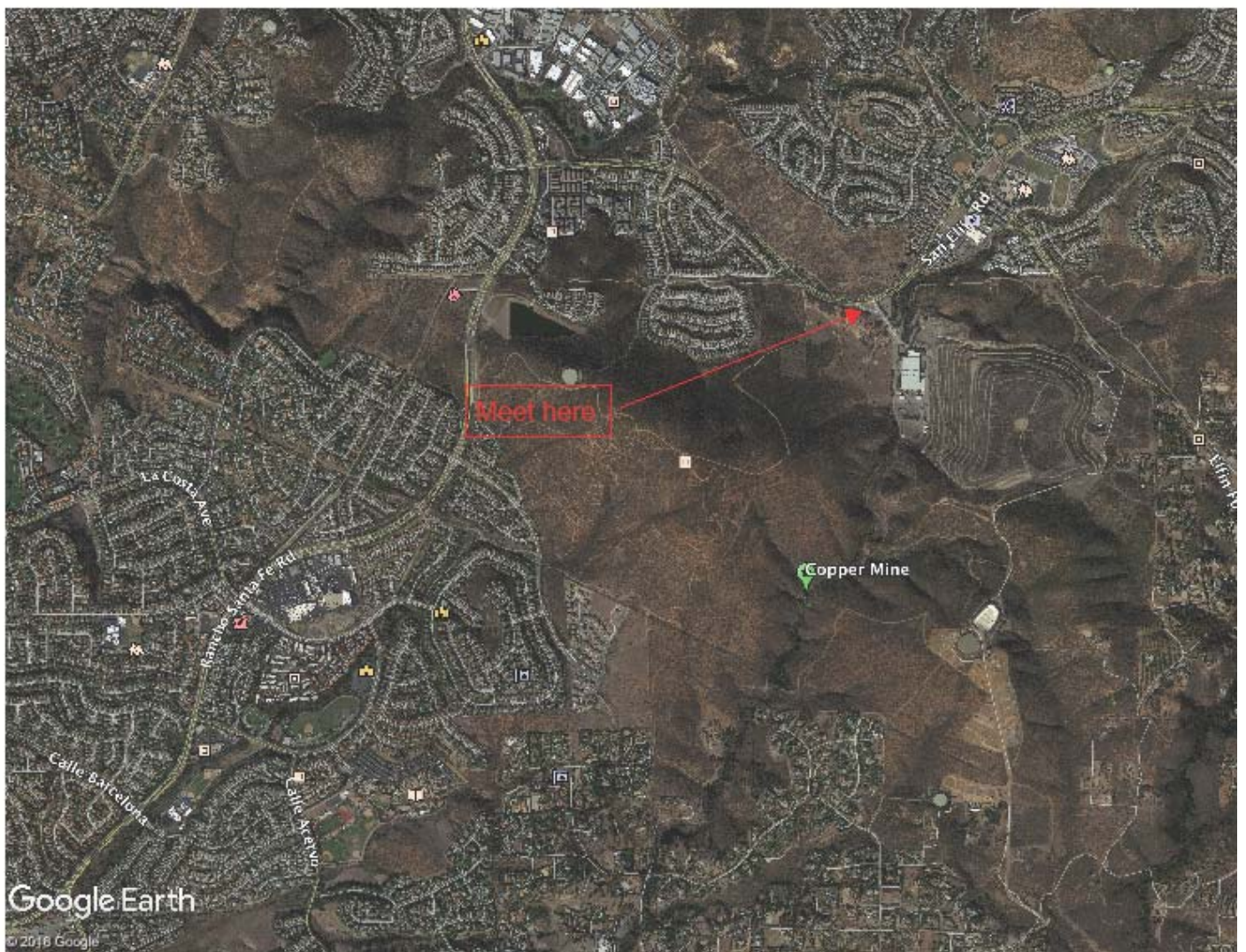
Date: Saturday, September 1, 2018

Time: 9:00

Location: Encinitas Copper Mine, La Costa Preserve

Directions: Take Rancho Santa Fe Road in San Marcos to San Elijo Road and turn east. Pass Fallsview Road on the right and turn right at the following road towards the old landfill. Park along the road.

The hike to the copper mine will be relatively easy and mostly flat.



EERI San Diego Regional Chapter Events

Early Bird Registration Ends Tuesday, July 31, 2018

Dear members and friends of the EERI San Diego Chapter,

We are quickly approaching the July 31, 2018, deadline for early bird registrations.

[Register now](#) to avoid registration cost increases and secure your spot. Special discounts apply when registering for both events.

Venue

San Diego State University
Hardy Memorial Tower, Room HT-140
5500 Campanile Drive
San Diego, CA 92182

A 1-Day Short Course

“Using DEEPSOIL: An equivalent linear and nonlinear seismic site response analysis software platform”

Presenter: **Prof. Youssef Hashash** (M.EERI,1999), University of Illinois at Urbana-Champaign
Thursday, August 23, 2018, 8:00am – 5:00pm

This short course will introduce the latest release of DEEPSOIL (V7) for seismic site response analysis (SRA). The course will provide attendees with a background on SRA and the development of the DEEPSOIL platform. It will cover the various modules available including motion processing, equivalent linear analysis, and nonlinear analysis with and without pore water pressure generation. The course will also include a number of hands-on exercises to gain familiarity with the development of model input and evaluation of analysis results.

Kenji Ishihara Colloquium Series on Earthquake Geotechnical Engineering

“Seismic Settlements”

Keynote Speakers: **Prof. Jonathan Bray** (M.EERI,1990) (UC Berkeley) and **Prof. Kohji Tokimatsu** (M.EERI, 1994) (TSRC, Japan)
Friday, August 24, 2018, 8:00am – 5:00pm

This colloquium series will focus on seismic settlements – the topics are oriented towards geotechnical engineers, structural engineers, engineering geologists, architects, civil engineers, researchers, and students. Speakers set to present at this colloquium include **Prof. Jonathan Bray** (M.EERI,1990) (UC Berkeley), **Prof. Kohji Tokimatsu** (M.EERI,1994) (Tokyo Soil Research Co.), **Prof. Youssef Hashash** (M.EERI,1999) (UIUC), **Prof. Susumu Yasuda** (M.EERI,1995) (Tokyo Denki University), **Craig Comartin** (M.EERI,1987) (CDComartin, Inc.), **Stephen Harris** (M.EERI,1986) (SGH), among other professionals and professors from the US and Japan.

[REGISTER HERE](#)

SAVE THE DATE!

National Association of State Boards of Geology

ASBOG® 2018 Fall Council of Examiners (COE) Workshop and Field Trip

Marriott Hotel, Monterey, CA

November 1-3, 2018

COE WORKSHOP PRELIMINARY INFORMATION

The National Association of State Boards of Geologists (ASBOG) Needs You!

ASBOG will hold its fall Council of Examiners (COE) Workshop in Monterey, California on Friday and Saturday, November 2, and 3, 2018. A field trip will be arranged for Thursday November 1, 2018.

The purpose of the COE is to review the fall 2018 ASBOG examinations just given and review the subsequent examinations proposed for spring 2019. Licensed geologists are needed to participate. While these subject matter experts (SMEs) typically are drawn from among members of various state geology boards, additional volunteers are sought from the COE host state and its adjacent ASBOG-member states that use passing of the ASBOG examinations as licensing requirements. Over the long term, ASBOG has developed applicable and fair examinations used to lead to geologist licensing.

The COE Workshop process is a key component of expanding and maintaining relevant and defensible examinations for applicants seeking geologist licensing. Geologist SMEs play a critical role in providing sufficient professional experience to the COE Workshop, which gives fair weight to all geologist task areas. ASBOG conducts a Task Analysis every 5 years to support the COE's strict examination review process. Analysis results maintain the relevancy and currency of the examinations.

The COE Workshop is a 2-stage process with parallel sessions for both the fundamental and professional examinations. The SMEs receive instruction from ASBOG's psychometrician on the Workshop process. On the first day, each SME unofficially takes the most recently given ASBOG fundamental or professional examination. Then, the psychometrician guides a comparative discussion of the groups' collective examination results with those of the recent, fall examinees. Each item is either accepted as given, double-keyed, or removed from the item pool. Individual examinee comments are considered and discussed. Generally, seldom-used, new, or unclear items are reviewed by the COE group, especially if performance results are of concern. If time permits, SMEs are encouraged to write new items for the item pool.

This process is repeated on the second day to review and test items to be included in the spring examinations. The groups then evaluate the historic performance of items, and improve items that need improving.

ASBOG needs your participation as a COE Workshop SME. **Please email a statement of interest, and your credentials and contact information to Ms. Deana Sneyd, ASBOG Executive Director, at dsneyd@asbog.org.**

To qualify, each SME must have:

- A current license in good standing as a geologist in an ASBOG-member state.
- Worked as a professional geologist in industry, academia, or government.
- Be prepared to serve on the COE with no ASBOG reimbursement of any travel expenses.
- Agreed to ASBOG terms and conditions, provided under separate cover, to participate.

Please Note: This is a VOLUNTEER opportunity. ASBOG is a non-profit organization and is unable to reimburse travel expenses or pay for your time. However, they do provide some meals as part of the COE. The COE location rotates throughout the country and is unlikely to be in California again for 3 to 5 years. This is a unique and important opportunity to contribute to the geologic profession.

Volcanology Speaker Wanted!

Wavelength Brewery (our last meeting venue) in Vista is looking for a geologist or volcanologist to give a voluntary talk on the recent volcanic activity going on in Hawaii. If anyone is interested in doing this please contact the brewery. Here is a link to their webpage: www.wavelengthbrewco.com



****Identify This Rock****

Thanks to those of you who boldly submitted an identification and description for this rock. We had some really good names but the best two that I could tell were 1) metamorphosed oolitic sandstone clast (unidentified) and 2) spherulitic rhyolite (Vic Camp). Thanks again for participating! If you submitted those names you can see me at the next meeting and I'll buy you a beer ☺

Professional Geologists Needed-Occupational Analysis Task Force Committee for BPELSG Exam Update

We need your help ...

The Board for Professional Engineers, Land Surveyors, and Geologists is conducting an occupational analysis regarding the profession of geology.

We are inviting California professional geologists to participate in an online survey to identify the tasks and knowledge that are relevant to the profession of California geology.

The purpose of the occupational analysis is to obtain feedback from a representative group of licensees and use the results to update the California Specific Exam for Professional Geologists.

This online survey is an essential step to ensure that the exam is current, relevant, and practice-related.

This is your chance for your voice to be heard.

If you would like to participate, please provide your email address and name to Erin LaPerle at (916) 263-1848 or by email to Erin.LaPerle@dca.ca.gov.

We anticipate releasing the survey in summer 2018.



**Board for Professional Engineers,
Land Surveyors, and Geologists**
2535 Capitol Oaks Drive, Suite 300
Sacramento, CA 95833

phone: (916) 263-1848
email: Erin.LaPerle@dca.ca.gov
www.bpelsg.ca.gov

Geological Society of America Annual Meeting

www.geosociety.org

2018

Field Trip Proposal Deadline: December 1, 2017

Technical Session/Short Course Proposal Deadline: February 1, 2018

Abstract Deadline: August 14, 2018

Meeting: November 4th to 7th 2018, Indianapolis, Indiana

Yonder Dynamics – UC San Diego Student Robotics Organization



Allison Kubo is the Science lead for Yonder Dynamics a university rover team at UC San Diego and an Earth Science student at Scripps. She reached out to SDAG looking for sponsors for their rover this year. Part of the competition is an analysis of the geologic settings of the area and soil retrieved by the rover which incorporates soil moisture, conductivity, and chemical testing.

She would be happy to partner with SDAG or anyone interested in the project.

Here are links to the team's website and sponsorship package:

[Yonder Dynamics](#)

[Yonder Dynamics Sponsorship Package](#)

SDAG Research Tool

SDAG RESEARCH TOOL - 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, up the San Luis Rey River in 2013, from Coast to Cactus in 2014, and finally over the edge to the Coyote Mountains in 2015. 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.sandiegoeologists.org/SDAG_Pubs_authors.pdf

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

Interactive Fault Map for San Diego - Tijuana

As part of the update for the San Diego-Tijuana Earthquake Planning Scenario, Working Group No. 1's "Fault Map Subcommittee" completed the first publicly available bi-national active and potentially active fault map (http://sandiego.eeri.org/?page_id=265). This interactive GIS map includes the first publicly available active and potentially fault map locations from the City of San Diego. The map also integrated the faults south of the border for a bi-national cross border view. This map is an on-going project as our knowledge increases about local active and potentially active faults.

You can expand the map legend on the left side to select layers that can be turned on or off for the map view. You can also select from 1 of 12 base maps at the base map icon. You can click on the fault line in your map layer view to see the meta-data source. In addition, the City of San Diego Seismic Safety Study Geologic Hazards & Faults Maps are available in the layer titled "GeoHaz SD City." Please note that the City "Zone 12 Potentially Active" fault layers was not included in this data, therefore you will need to use the City Maps to find Zone 12.

The Fault Map link is available at: http://www.sandiegogeologists.org/Faults_map.html

Please contact Diane Murbach (dianemurbach@gmail.com 619-865-4333), Chair for the SDTJ Earthquake Scenario Working Group #1 - Earth Science, if you have any questions, or see any errors on this new fault map.

I would like to thank Carolyn Glockhoff for her endless GIS work, Jim Quinn and the City for providing their data and time, Jerry Treiman with CGS for his time preparing the Surface Rupture and providing their new State fault data layer, and Luis Mendoza at CICESE for providing the faults south of the border. Please contact Diane Murbach (dianemurbach@gmail.com), Chair for the SD-TJ Earthquake Scenario Working Group #1 - Earth Science, if you have any questions, or see any errors on this new fault map.

Diane Murbach (619) 865-4333

Engineering Geologist, C.E.G.

www.murbachgeotech.com

Request for 2018 SDAG/SDGS 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 for our San Diego Association of Geologists (SDAG) group. 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.

Call for Articles

SDAG invites members to submit articles on their current research or an interesting project they are working on for publication in the monthly newsletter. The article should be no more than 1 page in length. Photos are welcomed; too. Please submit articles to the SDAG secretary via email.

Geo Job Listings

Trevet is an Environmental and Engineering Consulting Firm headquartered in San Diego, CA. We are seeking a **full-time staff level Geologist or Environmental Scientist**. Two to five years of experience preferred. At a minimum a bachelor's degree in geology, engineering, or a related scientific discipline is required. Must be eligible to work in the United States, and on Department of Defense installations. Ability to travel for extended duration (2 to 3 weeks) is required. The ideal candidate will possess great attention to detail, excellent written and verbal communication skills, and ability to work independently and within a team.

Duties will include a combination of field and office related tasks.

Field experience should include:

- Installation of soil borings using multiple drilling methods
- Describing soil using the USCS and ASTM classification systems
- Installing and abandoning groundwater monitoring wells
- Field sampling of groundwater, soil, and soil gas
- Remediation system operation and sampling

Field work may be performed at project sites with environmental media (e.g., soil, sediment, groundwater, surface water, etc.) that has been impacted with hazardous substances and/or hazardous wastes.

Office experience should include:

- Field data collection, analysis, and interpretation
- Preparation of data in visual, graphical, and tabular formats
- Technical report writing

Other Requirements

Familiarity with CERCLA/RCRA requirements

OSHA 40-Hour HAZWOPER Training with current 8-hour refresher class preferred.

Trevet is an Equal Opportunity Employer

Please apply at

<http://www.trevetinc.com/>



Entry-Staff Hydrogeologist

OVERVIEW:

Hargis + Associates, Inc. (H+A) is an environmental consulting and engineering firm founded in 1979 with a commitment to providing high-quality, cost-effective services for our clients. We are headquartered in San Diego and have offices in Sacramento, CA, and Phoenix and Tucson, AZ. Our practice focuses on large facility investigation and remediation projects for Fortune 500 clients where we provide responsive, practical and innovative solutions for the treatment of soil, vapor and groundwater contamination. H+A also provides hydrogeologic and engineering services for groundwater resources assessment, stormwater management, and environmental regulatory and litigation support. H+A employs a staff of approximately 60 hydrogeologists, geologists, engineers, industrial hygienist, and project support personnel.

We are currently seeking an entry-staff level hydrogeologist to join our San Diego office supporting environmental investigation and remediation projects located throughout Southern California. These projects are primarily focused on the characterization and remediation of soil, vapors, and groundwater impacts at large industrial sites. In addition to implementing fieldwork for site investigations, the position will also involve data entry, interpretation, and technical report writing for various soil and groundwater monitoring programs.

RESPONSIBILITIES:

- Implement/and support field investigations for soil sampling, groundwater sampling, borehole drilling, and well installations.
- Complete tasks requiring utilization of critical-thinking skills, scientific, geologic, and engineering analytical techniques.
- Assist in the preparation of reports, work plans, sampling and analysis plans, remedial investigation reports, and groundwater monitoring reports under the direction and guidance of a Senior Geologist/Engineer/Scientist.
- Follow corporate health and safety and quality management plan standards.

REQUIREMENTS:

- BS degree in geology, hydrogeology or related technical discipline is required.
- 1-3 years of field experience in environmental consulting is preferred.
- Experience with geologic, engineering, scientific, or general environmental projects and data interpretation.
- Field experience with drilling, sampling (soil and groundwater), and well installations is a plus.
- OSHA 40-hr. HAZWOPER, current refresher preferred; training provided.
- General computer knowledge (Microsoft Office, Email); GIS and other environmental software experience is a plus.
- Excellent organizational and sound written/oral communication skills.
- Local candidates only; must be eligible to work in the United States.

PHYSICAL DEMANDS:

- Ability to drive, travel and/or perform field work approximately 50% of the time; some overnight and extended travel.
- Ability to lift 45 pounds.
- Must be able to perform the following actions while conducting fieldwork: stooping/kneeling/crouching, standing for long periods of time, pulling/pushing and lifting equipment and supplies, walking on uneven terrain.
- Ability to work in outdoor environments and hot/arid conditions.
- Ability and willingness to work long hours and in proximity to loud noises and hazards (i.e., proximity to moving mechanical parts, moving vehicles, and exposure to chemicals, fumes, odors, dusts, and gases).

Those who seek to apply may submit a cover letter and resume via email to hargisinfo@hargis.com

All qualified applicants will receive consideration for employment without regard to race, color, national origin, ancestry, sex, gender, gender identity, gender expression, age, sexual orientation, religious creed, physical or mental disability, medical condition, genetic information, marital status, veteran status, or any other classification protected by applicable federal, state, or local law.

Geologist Wanted in Corona, CA

GeoTek in Corona is looking for a geologist to prepare reports, Contact Chris Livesey (clivesey@geotekusa.com).

MP Materials, Mountain Pass, CA

Seeking Industrial Hygienist/Radiation Safety Officer

Please contact:

Chris Baker

Senior Environmental Specialist

m: 562.331.4507

cbaker@mpmaterials.com | www.mpmaterials.com

PHOTO OF THE MONTH

If you would like to submit a photo, email them to secretary@sandiegogeologists.org and I will try and put them in the newsletter. Provide a short description of the picture.



Photo Taken By Diane and Monte Murbach, July 5, 2018 at Pahoa, Hawaii

View East of the Kilauea Volcano Lower East Rift Zone (LERZ) Active lava output from Fissure 8 towards the Ocean. You can see the LERZ lineament and the active lava entry at the Ocean in the distance. At the time of this picture the lava delta into the Ocean had created 585 additional acres for the State of Hawaii. The green buildings located in the middle of the recent flows, between Fissure 8 and the Ocean, are the Puna Geothermal Venture (PGV) complex. The active Fissure 8 is within the Leilani Estates Subdivision.



HARGIS+ASSOCIATES, INC
HYDROGEOLOGY • ENGINEERING

Hargis + Associates, Inc. is an environmental consulting firm specializing in hydrogeology and engineering. We are headquartered in San Diego, California and have offices in Mesa and Tucson, Arizona. Our practice areas include all aspects of hydrogeology and engineering.

As a client service organization, we pride ourselves in being attentive and efficient in meeting our client's needs and solving their problems. In addition to our technical expertise, communication and responsive coordination are hallmarks of our reputation.

We invite you to explore our website to learn more about our firm and the services we provide. We welcome the opportunity to discuss our consulting expertise directly with you.

Contact: **Dr. David R. Hargis**



Mobile Geochemistry Inc.

H&P Mobile Geochemistry is an industry-leading provider of environmental lab services. With ten mobile labs and five direct push sampling trucks and unparalleled experience, H&P's repertoire of environmental lab services includes many forms of environmental lab sampling techniques all the way to on site field analysis services. H&P has successfully and accurately performed environmental lab services delivering quality results to our clients for over 16 years.

2470 Impala Dr., Carlsbad, CA 92010
(800) 834-9888

Contact: **Louise Adams or Suzie Nawikas**



Tetra Tech is a leading provider of consulting, engineering, and technical services worldwide. We are a diverse company, including individuals with expertise in science, research, engineering, construction, and information technology. Our strength is in collectively providing integrated services—delivering the best solutions to meet our clients' needs.

<http://www.tetrattech.com>



Contact: **Rupert Adams, CEG**

Geocon Incorporated
6960 Flanders Drive, San Diego, CA 92121
P | 858.558.6900

*San Diego / Riverside County / Palm Desert / Los Angeles /
Orange County / Bakersfield / Bay Area / Fairfield / Sacramento*



**EXCAVATING,
DEMOLITION, BREAKERS**

Atlas Excavating & Breakers has been providing operated equipment rentals and excavating services to contractors & geologists in San Diego and Riverside counties since 1991. We offer Mini Ex., 4x4 Backhoe & large excavators up to 75,000 pounds. "40 hour Haz Whopper" trained operator. Asphalt/concrete removal & replacement.

Contact: **Barry Anderson**

760-754-1337



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