



SAN DIEGO ASSOCIATION OF GEOLOGISTS

<http://www.sandiegogeologists.org>

SDAG MEETING ANNOUNCEMENT

Wednesday, April 18, 2018 *3rd Wednesday*

Multiphase Modeling of Confined Pyroclastic Density Currents and the Effect on Entrainment and Mobility

Presented by: *Allison Kubo, SIO/UCSD*

Unraveling Subsurface Structural Geometry with SCAT (Statistical Curvature Analysis Technique

Presented by: *Ariella Goldstein, SDSU*

Implementing Sidescan Sonar, Sub-bottom Chirp Profiles, Multibeam Bathymetry, and Sediment Cores to Study Sediment Distribution, Tectonic Influences, and Submerged Paleo Landforms That May Contain Archaeological Resources Offshore the Northern Channel Islands of Southern California

Presented by: *Alexander Laws, SDSU*

Where: **Marina Village – Catalina Room**

1936 Quivira Way, San Diego, CA 92109 (See Map)

When: 5:30 pm – Social Hour

6:30 pm – Dinner

7:30 pm – Presentations

Dinner: Cesar Salad, Beef, Chicken and Pasta, Seasoned Vegetables.
Cash bar – Walawender Tavern.

Cost: \$25 Member, \$30 Non-Member, \$15 Students.
Add \$5 if you did not make a reservation.

Reservations: Make your reservation **online** at www.sandiegogeologists.org/meetings no later than noon, Monday, April 16th. 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: Take the Sea World Drive exit. From Sea World Drive, take West Mission Bay Drive on the 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 the 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. See above for the rest of the direction.

Map:



ABSTRACTS

Multiphase Modeling of Confined Pyroclastic Density Currents and the Effect on Entrainment and Mobility. Presented by: *Allison Kubo, SIO/UCSD*

Around explosive volcanic centers such as Mount Saint Helens, pyroclastic density currents (PDCs) pose a great risk to life and property. Understanding the dynamics of PDCs is difficult due to the complex turbulence regimes and the extreme danger associated with these currents, so computer modeling of PDCs is vital to mitigating hazards of future eruptions. Evidence from pyroclastic deposits at Mount Saint Helens and one-dimensional modeling suggest that channelization or confinement to a valley or gorge effectively increases run out distances. Dense flows are thought to scour and erode the bed leading to confinement for subsequent flows and could significantly change predicted mobility. Using NETL multiphase, finite volume, computational models (MFiX), we compared confined and unconfined flows using simplified geometries. We focused on bed stress conditions as a proxy for erosion and entrainment of gas as a measure of mobility. We show that even in simplified terrain channelization increases runout distance of flows on slopes of varying degrees and that shear stress on the bed would be likely to cause further channelization.

Unraveling Subsurface Structural Geometry with SCAT (Statistical Curvature Analysis Technique).

Presented by: *Ariella Goldstein, SDSU*

My undergraduate research is on track to answer or speculate a question in the field of structural geology. Currently, my project involves unraveling the structural geometry in the sub surface based on a technique called SCAT: statistical curvature analysis technique. The technique works to depict specific sub-surface structure based on dip angles from well logs plotted on graphs. Each unique trend on the graph is explicitly correlated to a type of fold. This technique can help oil and gas industries gain a better understanding of what's occurring underground in areas where there is little well control and available seismic data.

Implementing Sidescan Sonar, Sub-bottom Chirp Profiles, Multibeam Bathymetry, and Sediment Cores to Study Sediment Distribution, Tectonic Influences, and Submerged Paleo Landforms That May Contain Archaeological Resources Offshore the Northern Channel Islands of Southern California. Presented by: *Alexander Laws, SDSU*

My research implements sidescan sonar, sub-bottom Chirp profiles, multibeam bathymetry, and sediment cores to study sediment distribution, tectonic influences, and submerged paleo landforms that may contain archaeological resources offshore the Northern Channel Islands of Southern California. The Northern Channel Islands were a unified landmass during the last glacial maximum, when sea level was about 120 meters lower than present day sea level. Today, archaeological sites are found on the modern islands, suggesting that similar sites may exist on the now-submerged shelf that was exposed during lower sea levels. In our surveys, we have identified a strong acoustic reflector – interpreted to be the transgressive surface created by eustatic sea level rise since the last glacial maximum – that truncates plunging anticlines and synclines. Sediment distribution above the transgressive surface is largely variable due to differences in sediment sources and tectonic influences. Furthermore, the folding and truncation of sediment below the transgressive surface creates paleo landforms. By understanding the structural and stratigraphic controls on these paleo landforms, predictive modeling of submerged archaeological sites will be improved and lead to better resource management.

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

May 9, 2018	Monte Marshall
June 4, 2018	Tentative Joint Meeting w/ SCGS
July, 2018	TBD

2018 SDAG EXECUTIVE COMMITTEE

<u>PRESIDENT:</u>	Chris Livesey; liveseychris@yahoo.com
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SDAG PRESIDENT'S CORNER

April 2018,

I would like to thank Steve Jacobs for spearheading and leading a One Stop Wonder on March 31st to the Lawrence Canyon Fault in Oceanside, California.

We had a great turnout for our March meeting. Thank you Pat Abbott for your insightful presentation. I hope you have inspired some of the many students to expand on your work and follow up with an update presentation of their own! Speaking of presentations, this month our meeting will allow the 2017 scholarship awardees to discuss their research.

Also come enjoy a beverage from our guest bartender from Absolution Brewery!

Don't forget to visit our announcement section for upcoming events!

Sincerely,

Chris Livesey

ANNOUNCEMENTS

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!

Desert Symposium and Field Trip, April 20 – 23, 2018



The poster is for the 32nd Annual Desert Symposium and Field Trip. It features a yellow background with black and red text. At the top, it says 'SAVE THE DATES' in red. Below that, '32nd Annual' in black. The main title 'Desert Symposium and Field Trip' is in large black font. Below the title, it says 'Symposium: April 20-21, 2018 Zzyzx, CA' and 'Field Trip: April 22-23, 2018'. A box in the center contains the theme: 'Against the current: The Mojave River from sink to source'. Below this, it says 'Share your desert research with an oral or poster presentation. We encourage students to attend and compete for the Adams Best Student Presentation Award.' A table lists deadlines: Abstract deadline (20 Jan 2018), Final Paper submission deadline (20 Feb 2018), and Registration deadline (6 Apr 2018). It also mentions the field trip will camp at Owl Canyon Sunday night (Apr 22) and a third-day informal trip will be held in the Barstow area. At the bottom, it says 'For more information please visit DesertSymposium.org' and 'The 2018 Desert Symposium is being held in cooperation with the Desert Studies Center, California State University, Fullerton.' There are small illustrations of a desert landscape, a bird, and a tree.

SAVE THE DATES

32nd Annual

**Desert Symposium
and Field Trip**

Symposium: April 20-21, 2018 Zzyzx, CA
Field Trip: April 22-23, 2018

Theme
**Against the current:
The Mojave River from sink to source**

Share your desert research with an oral or poster presentation.
We encourage students to attend and compete for the
Adams Best Student Presentation Award.

Abstract deadline (for all presentations):	20 Jan 2018
Final Paper submission deadline:	20 Feb 2018
Registration deadline:	6 Apr 2018

The field trip will camp at Owl Canyon Sunday night (Apr 22). A third-day informal trip will be held in the Barstow area.

For more information please visit
DesertSymposium.org

The 2018 Desert Symposium is being held in cooperation with the Desert Studies Center, California State University, Fullerton.

2018 SDAG Field Trip Preliminary Information

2018 SDAG Field Trip October 12th to 14th 2018

Hello SDAG! Our field trip weekend has been finalized and we are well on our way to putting together, what I hope to be, a great trip. We will have road stops on the way to the Barstow area and then a day of hikes in the Rainbow/Basin and Owl Canyon Area. Our Sunday stop consists of the geology around Calico Ghost Town and the history of the ghost town.

I am always looking for volunteers to assist in geologic areas of interest or general interest in helping on the trip. I will start taking signups in June or July. If you have questions or ideas, send them to Ken Haase at haase@geoconinc.com

ASCE GeoInstitute San Diego Chapter Meeting

Wednesday, April 11th, 6:00 PM to 8:30 PM

Join the San Diego Geo-Institute on Wednesday, April 11th for Graduate Student Technical Presentations. This month's speakers are Grace Parker, PhD Candidate at University of California Los Angeles, and Ahmed Ebeido and Ismaail Ghaaowd, PhD Candidates at University of California San Diego. Prior to the students' presentation, Prof. I. M. Idriss will host a discussion forum talking about a variety of seismic topics in geotechnical engineering. The meeting will be held at Loft at UC San Diego, Price Center East, 4th Floor (9500 Gilman Drive, La Jolla, CA 92093).

Registration Link :

<http://events.r20.constantcontact.com/register/event?oeidk=a07ef8yn3z2196e691b&llr=n8ruf8oab>

For registration questions, contact:

Mahdi Khalizad (MKhalizad@Geosyntec.com<mailto:MKhalizad@Geosyntec.com>) or
Congpu Yao (congpuy@groupdelta.com<mailto:congpuy@groupdelta.com>)

National Drone Conference, Palomar College, July 6, 2018

Please join us for our National Drone Conference<<http://www.palomaruas.weebly.com/>> at Palomar College in North San Diego County on Friday, July 6, 2018! Our conference this year will feature a number of technical sessions with guest speakers from the fields of aerial cinematography, archeology, construction inspection, education, environmental conservation, mapping and surveying, photography, and much more! We will feature guest speakers from organizations such as General Atomics, California Community College system, University of California system, Southern California Edison, City of San Diego, and NV5. Please see the conference agenda here<<https://palomaruas.weebly.com/program.html>>.

* Early-bird registration is \$25 for military and academic attendees (e.g. students/faculty) and \$45 for non-academic and non-military attendees until May 30th, 2018.

* Regular registration is \$40 for military and academic attendees (e.g. students/faculty) and \$75 for non-academic and non-military attendees after May 30th, 2018.

Registration includes: access to our technical sessions and exhibits, as well as breakfast and lunch (catered by Habit Burger).

Don't miss this opportunity to learn from and connect with professionals, students, veterans, and educators in this exciting industry. Space is limited, register today at

www.palomaruas.weebly.com<<http://www.palomaruas.weebly.com>>!

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.

Structural Engineers Association of San Diego Joint Meeting with EERI

5:30pm, April 17, 2018 at Stone Brewery Point Loma

Register here: <https://seaosd.starchapter.com/meet-reg1.php?mi=35102&id=34>

2017 Mexico City Earthquake Briefing and Lessons Learned

Presentation Outline:

On the 32nd anniversary of the 8.1 earthquake that devastated Mexico City on September 19, 1985, a magnitude 7.1 earthquake occurred 120 km from Mexico City. This September 19, 2017 earthquake resulted in approximately 44 collapsed buildings, over 1,000 damaged buildings, and 369 deaths. Private firms, educational institutions, and research institutes sent reconnaissance teams to observe the damage and help local authorities with building assessments. Members from three different organizations will provide a debrief and lessons learned.

Speakers:

Jorge Meneses, PhD, PE, GE, D.GE, F. ASCE – Part of GEER Team: Geotechnical and Seismology

Jeremy T. Callister, SE – Part of Degenkolb Engineers Team: Building damage within Mexico City

Darin Aveyard, PE – Part of Reid Middleton Team: ⁹Building damage and Lifelines

Gem, Mineral and Fossil Show!!



Looking For A Sample of Ardath Shale

I am curating an exhibit for the La Jolla Historical Society about Canyons. We would like to include a specific exhibit - a chunk of Ardath Shale. It ties in to so many of our other items: how La Jolla was formed, ecology and native plants, as well as the issue of landslides. For example, the Soledad Mountain Road slope failure of a few years ago was related to the geology: heavy soils over Ardath Shale...according to the reports I've been reading. I'd like to show our visitors what exactly Ardath Shale looks like.

Does your organization have a sample of this type of rock? If not, can you suggest where I might find a sample large enough to put on display?

Regards,

Susan Krzywicki

susankrzywicki@mac.com

www.susankrzywicki.com

(619) 318-4590

[California Native Plant Society](#), [Ocean Friendly Gardens](#)

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

52nd AESE Annual Meeting – Niagara Falls, New York

September 26th to 29th 2018

Mark your calendars! The 52nd annual meeting of the Association of Earth Science Editors will take place in Niagara Falls, New York, September 26 to 29, 2018.

AESE's meetings generally consist of 2 days of technical sessions and a 1-day field trip. Please join us for a fun-filled and educational experience September 2018. Meeting headquarters will be the Conference and Event Center Niagara Falls. The meeting hotel will be the Sheraton at the Falls, on Third Street, where a block of rooms has been set aside for attendees, at a nightly rate of US\$139 (\$129 for room + \$10 facility fee).

Niagara Falls has been a prime tourist destination since the mid-19th century. People come from around the world to see just the falls, themselves. But there is so much more to explore on both the American and Canadian sides of the falls, from world class wineries, Niagara Falls State Park (providing close access to the American and Bridal Veil falls), Niagara Gorge hiking trails, and art galleries to the Schoellkopf Power

Plant museum (providing easy access to the bottom of the gorge), Niagara rapids jet boat tours, Old Fort Niagara, Niagara-on-the-Lake and more....so remember to bring your passports if you wish to take in all that the area has to offer!

The meeting is open to anyone interested in earth science editing, publishing and outreach. The program is in the initial planning stage. Watch for meeting updates on AESE's web page www.aese.org. A closed Facebook group has been set up to share information <https://www.facebook.com/groups/123266368358780/>. For more information, please contact host chair, Marg Rutka, marg.rutka@ontario.ca, and technical program chair, Phil Farquharson philfarq@gmail.com.

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.sandiegogeologists.org/SDAG_Pubs_authors.pdf

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

Interactive Fault Map for San Diego

As part of the update for the San Diego-Tijuana Earthquake Planning Scenario, Working Group No. 1's "Fault Map Subcommittee" has completed the first publicly available bi-national active and potentially active fault map. This interactive GIS map includes the first publicly available active and potentially fault map locations from the City of San Diego. The City of San Diego fault locations 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). City of San Diego fault investigations are ongoing that may require future revision of this map. This map is not a substitute for a site specific fault investigation. The map also includes an updated fault map layer from the State CGS. CGS suggests users defer to the City of San Diego fault data, where marked, for increased accuracy. The map also integrated the faults south of the border for a bi-national cross border view. You can expand the map legend on the left side to see the fault ages and sources for each layer that can be turned on or off for the map view. You can select from 1 of 12 base maps. You can click on the fault line on the map to see the meta-data source. This map includes the yellow dashed SURFACE FAULT RUPTURE location layer that will be used for the infrastructure, social, and economic impacts and emergency response for the update to the Earthquake Scenario. In addition, active and potentially active fault investigation locations from private companies are planned to be added to this map as a resource. This map is an on-going project and resource as our knowledge increases about local active and potentially active faults.

The link is available at: http://www.sandiegoeologists.org/Faults_map.html

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).

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.

Saltstraumen Metasedimentary Rock Outcrop Photo, Bodo, Norway

By Gregory T. Farrand, July 2016



Attached is a photo was taken in June 2016 by SDAG member Gregory Farrand during his vacation in Norway and other countries in the Scandinavia, Baltic and Scotland regions. The photo shows deformed Paleozoic thin-bedded metasedimentary rock (gneiss, mica schist and marble) as exposed in a strait at Saltstraumen near the town of Bodo, Norway, north of the Arctic Circle. Differences in erosion or dissolution of the layers caused the 3D effect along the bedding. Evidently the deformation occurred during the Caledonian Orogeny, 490 to 390 million years ago. He came across this outcrop in a zodiac boat while searching for Sea Eagle's, birds similar to the American Bald Eagle. The Saltstraumen strait is also noted for whirlpools or maelstroms caused by turbulent tidal flow through the narrow channel.

Saltstraumen Metasedimentary Rock Outcrop Photo



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. Harais**

H&P 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

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Contact: **Louise Adams or Suzie Nawikas**



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