

# SAN DIEGO ASSOCIATION OF GEOLOGISTS

http://www.sandiegogeologists.org

## SDAG MEETING ANNOUNCEMENT

Wednesday, July 18, 2018 \*3rd Wednesday\*

# Microbial Ecology of the S, Fe, Mn, and Ca Cycles in the San <u>Diego River</u>

Presented by: Ms. Eleanora (Norrie) Robbins, San Diego River Park Foundation

Where: The Alamo Mexican Cafe, San Diego

2543 Congress St., San Diego, CA 92110 (See Map)

When: 5:30 pm – Social Hour

6:30 pm - Dinner

7:30 pm - Presentation

**Dinner:** Mexican Buffet

Cost: \$25 Member, \$30 Non-Member, \$15 Students.

Add \$5 if you did not make a reservation.

Reservations: Make your reservation online at http://www.sandiegogeologists.org/Meetings.html later

than noon, Monday, July 16<sup>th</sup>. Reservations cannot be guaranteed after Monday at noon, but are always preferred over walk-ins. **EARLY reservations well** 

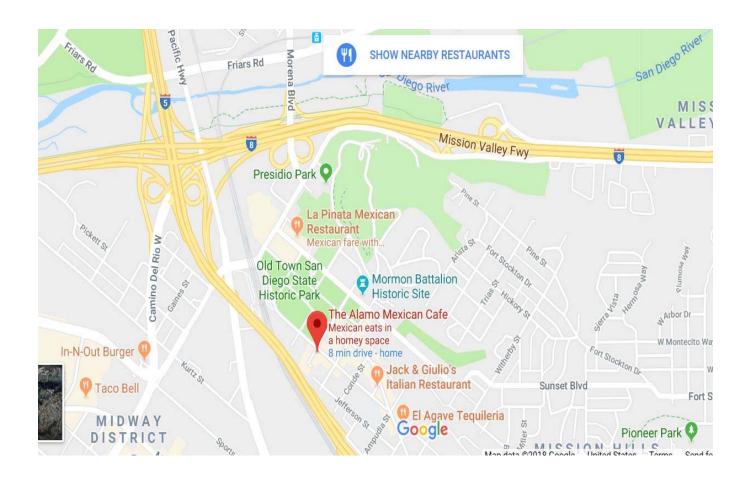
before the deadline are MUCH appreciated.

## **Directions:**

<u>FROM INTERSTATE 5</u>: Take the Old Town Avenue exit. Proceed east on Old Town Avenue. Turn left onto San Diego Avenue and then left at the fork onto Congress Street. The restaurant is located approximately three blocks to the north on the left (west) side of the street.

<u>FROM INTERSTATE 15</u>: Take Highway 163 south to Mission Valley and then take Interstate 8 west. Take the Taylor Street/Hotel Circle exit and head west on Taylor Street. Turn left (south) onto Congress Street. The restaurant is located approximately three blocks to the south on the right (west) side of the street.

## Map:



## **ABSTRACTS**

# Microbial Ecology of the S, Fe, Mn, and Ca Cycles in the San <u>Diego River</u>

Presented by: Ms. Eleanora (Norrie) Robbins, San Diego River Park Foundation

The distinctive precipitates of the microbial populations involved in the S, Fe, Mn, and Ca cycles in the San Diego River are a result of interplay between mineralogy of the rocks in the watershed, sparse rainfall, ground- and surface-water anoxia, and runoff of high sulfate treated imported water (i.e. the Colorado River). The precipitates are often colorful. These include the red-orange Fe flocculates of the iron oxidizers, the black Mn-oxide coatings of the Mn-oxidizers on cobbles in riffles, the soft calcareous marl and hard calcareous tufa precipitated by cyanobacteria, and the purple (sulfide oxidizers) and black (sulfate reducers) precipitates of the bacteria participating in the S cycle. The oily biofilms of an iron oxidizer where ground water discharges and the white biofilms of a sulfide oxidizer where the water is quiescent are always viewed by the public with suspicion.

## **Biography:**

Eleanora (Norrie) Robbins is a biogeologist who has been volunteering for the San Diego River Park Foundation. Our River Watch Team samples 15 sites along the river monthly, which led to this research. Otherwise, Norrie is retired from the USGS in Reston (2001) and retired from SDSU (2015).

## **UPCOMING MEETINGS**

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

September, 2018	TBD
October, 2018	No Meeting –Annual Field Trip
November, 2018	TBD

# 2018 SDAG EXECUTIVE COMMITTEE

PRESIDENT: Chris Livesey; <u>liveseychris@yahoo.com</u>

VICE PRESIDENT: Ken Haase; <a href="mailto:haase@geoconinc.com">haase@geoconinc.com</a>

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llindsay@sunbeltpub.com

# SDAG PRESIDENT'S CORNER

July 2018,

This is your mid-year warning to start your New Year's resolution for 2018. If you have already been going strong on your resolution...you are way ahead of me! I am particularly excited about this month's topic of discussion. As geologist we always see the natural painted features nature has fingerprinted among the rocks at the surface and the fractures in exploratory trenches. I look forward to seeing you this month!

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

Sincerely,

**Chris Livesey** 

## **ANNOUNCEMENTS**

# ONE-STOP WONDER CHALLENGE! ONE OSW A MONTHIN 2018! BEAPART 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

This year's field trip will take us to the Mojave Desert looking at geologic features created by the San Andreas and Calico Faults and some of the human history of the area. I am looking for volunteers for helping on the trip as well as someone who can lend one or more Honda 2000 generators that are quiet so we can provide early morning power at the campsite. Email <a href="mailto:haase@geoconinc.com">haase@geoconinc.com</a> if you have a generator or have any other questions. Signup form and pricing are being developed now. Hope you can join us!

# One Stop Wonder!! Cerro de la Calavera, Carlsbad, July 21, 2018

Come join other SDAG members to explore the geology of Cerro de la Calavera in Carlsbad on Saturday, July 21<sup>st</sup>. The field trip will be led by Stephen Jacobs. The main attraction is the Miocene (?) dacite plug volcano and columnar jointing exposed in the mountain. Attendees will meet at 10am on Saturday, July 21. The hike to and back from the volcano and presentation should take about 2 hours. The trail is easy to moderate. See second attachment of google earth image showing the location of the trailhead and parking area along Strata Drive in Carlsbad. A few copies of an excerpt from the 2012 SDAG guidebook to Cerro de la Calavera will be brought to the field trip to share. If you have your own copy of the 2012 SDAG guidebook you may want to bring that along.

## 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!!

## **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** <a href="mailto:dsneyd@asbog.org">dsneyd@asbog.org</a>.

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.

<u>Please Note</u>: 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.

## 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!

# Geologist Wanted to Help with Mineral Exploration in Northern Baja

A man named Jack Shelburne (owner of Majuba Mining) is looking for a geologist to help with his mineral exploration team in northern baja. He can be reached at 801-381-5527.

# **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: <a href="https://www.wavelengthbrewco.com">www.wavelengthbrewco.com</a>

## Mineralogist Wanted to Identify Potential For Valuable Ore

A man named Brian Stewart is looking for help identifying the possibility for valuable ore in a pegmatitic vein deposit on his property in Temecula, CA. He says there are exposures of faults nearby and is pretty excited by some of these pegmatitic veins but needs some expert advice. He can be reached at 619-408-8441. Will Split Profits!! ;- D

## \*\*Expert Petrologist Needed to Identify This Unique Rock\*\*



If you have a good idea of what this rock is please respond to the SDAG secretary. Thanks!!

# <u>Professional Geologists Needed-Occupational Analysis Task Force</u> 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 4<sup>th</sup> to 7<sup>th</sup> 2018, Indianapolis, Indiana

# 52<sup>nd</sup> AESE Annual Meeting – Niagara Falls, New York

September 26<sup>th</sup> to 29<sup>th</sup> 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-19<sup>th</sup> 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 <a href="www.aese.org">www.aese.org</a>. A closed Facebook group has been set up to share information <a href="https://www.facebook.com/groups/123266368358780/">https://www.facebook.com/groups/123266368358780/</a>. For more information, please contact host chair, Marg Rutka, <a href="marg.rutka@ontario.ca">marg.rutka@ontario.ca</a>, and technical program chair, Phil Farquharson <a href="philfarq@gmail.com">philfarq@gmail.com</a>.

# 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 (<= 11.000vr) 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: <a href="http://www.sandiegogeologists.org/Faults\_map.html">http://www.sandiegogeologists.org/Faults\_map.html</a>

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 (<u>dianemurbach@gmail.com</u>), 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: <a href="http://www.sandiegogeologists.org/Sponsors.html">http://www.sandiegogeologists.org/Sponsors.html</a>.

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 <a href="mailto:hargisinfo@hargis.com">hargisinfo@hargis.com</a>

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 (<u>clivesey@geotekusa.com</u>).

## 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 <u>secretary@sandiegogeologists.org</u> and I will try and put them in the newsletter. Provide a short description of the picture.



Photo Taken By Mike Hart

"Clark Lake at the foot of the Santa Rosa Mountains and Coyote Mountain when it actually had water in Winter of 2010"



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



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Contact: Rupert Adams, CEG

**Geocon Incorporated** 

6960 Flanders Drive, San Diego, CA 92121 P1 858.558.6900

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.

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EXCAVATING,

**DEMOLITION, BREAKERS** 

Atlas Excavating & Breakers has been providing operated equipment rentals and excavating services to contractors & geologists in San Diego and Riverside counties sine 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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858-275-6454

Trevet is a San Diego-based environmental engineering and consulting 8(a)-certified small business enterprise.



Leighton is a multidiscipline engineering firm, providing geotechnical, environmental, and testing and inspection services. Founded in 1961, Leighton provides engineering solutions to public agencies, property owners, and facilities. With offices located in San Diego, Irvine, Los Angeles, Temecula, Rancho Cucamonga, Palm Desert, Santa Clarita, Ventura, and Bakersfield, we efficiently service any region of Southern California. Our professional staff of Registered Geotechnical Engineers, Professional Geologists and Certified Engineering Geologists, Registered Hydrogeologists, and Registered Environmental Assessors and Certified Inspectors provide decades of local experience for the successful completion of your projects.

For additional information, please contact Bob Stroh (rstroh@leightongroup.com)

Website link: <a href="http://www.leightongroup.com">http://www.leightongroup.com</a>

- <u>Dr. Pat Abbott</u> SDSU Professor of Geology, Emeritus
- Marty and Sherry Bloom
- Joe Corones
- Greg Cranham Consulting Geologist
- Damon DeYoung Battelle
- Dr. Margaret R. Eggers, CHG <u>Eggers Environmental</u>, <u>Inc.</u>
- Karen Evans for Jim Evans (Deceased)
- Phil Farquharson Geology Guy
- Carolyn Glockhoff <u>Caro-Lion Enterprises</u>
- Cari Gomes
- Dr. Sarah Gray

- Dr. Monte Marshall—SDSU Prof. of Geology & Geophysics, Emeritus
- John Minch
- James R. Ashby/Mission Geoscience, Inc.
- Jennifer Morton <u>Terramar Environmental</u>
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- Les Reed—Geotechnical Exploration Inc.
- Rothman Creative (Fritz Rothman 619-278-1771)
- Gerald Shiller
- Scott Snyder

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