

SAN DIEGO ASSOCIATION OF GEOLOGISTS

www.sandiegoeologists.org

SDAG MEETING ANNOUNCEMENT

WEDNESDAY, OCTOBER 16, 2013

A YEAR IN KANDAHAR:

THE HYDROGEOLOGY OF SOUTHERN AFGHANISTAN

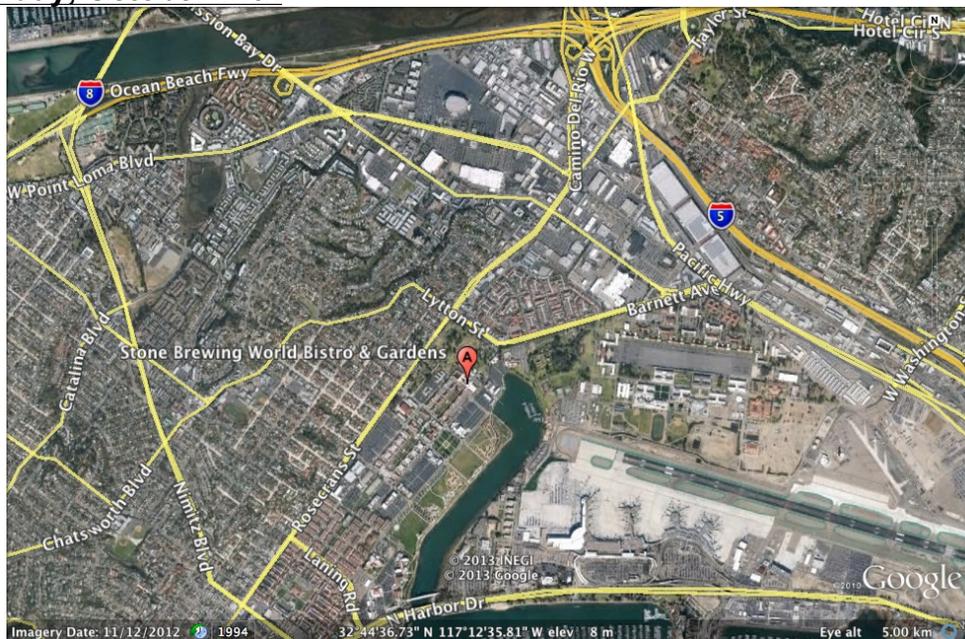
Presented by

Len Sinfield, P.G.

U.S. Navy Facilities Engineering Command

- Where:** Stone Brewery Liberty Station
2816 Historic Decatur Road #116, San Diego
(619) 269-2100
- When:** 5:30 pm – Social Hour
6:30 pm – Dinner
7:30 pm – Program
- Dinner:** Buffet
- Cost:** \$40 per person, \$5 discount for members, STUDENTS: \$25. Add \$5 if you did not make a reservation.

Reservations: Make your reservation online at www.sandiegoeologists.org no later than noon on **Friday, October 11th**.



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

SPEAKER ABSTRACT

Len Sinfield, P.G.
US Naval Facilities Engineering Command

A Year in Kandahar: The Hydrogeology of Southern Afghanistan

Water, especially drinking water, is one of the most effective weapon systems in counterinsurgency operations. Joint military and civilian teams within Provincial Reconstruction teams (PRTs) at small forward operating bases use potable water to help improve basic human health, sustain economic development, and win over the populace. This effective tool cannot be wielded without being entwined in the complexities of the geologic, hydrologic, and cultural environment of Afghanistan. Not only is Afghanistan the site of a cultural collision - the smashing of war, religion, west and east, Afghan tribes and people, and history into a complex *mélange* that Americans struggle to understand; it is also a land formed from a continental collision, the smashing of the Indian tectonic plate into the Russian Plate of Eurasia. It is the long river valleys between parallel linear mountains that follow the underlying structural fabric of Afghanistan where the agricultural base of the Afghan economy, opium poppies, and insurgency grows. The water that flows through and upon this fabric may in the end help save Afghanistan, a tectonic collision offering salvation for a human collision.

South of the Herat suture zone, Afghanistan is comprised primarily of thrust sheets of accreted oceanic crust. Trending primarily NE-SW, deep extensional grabens form the river valleys between similar trending steep compressional mountain ranges. Surface water within the provinces of Kandahar, Helmand, Farah, and Nimroz, as well as the Sistan Basin is not from these areas, but primarily flows from the mountains to the northeast. The amphibolite-grade greenschist facies metamorphosed basalts, black micritic limestones, and other bedrock materials of Kandahar have low water production, or produce geothermally-impacted groundwater with high total dissolved solids contents near faults. The distal portions of alluvial fans and deeper aquifers within the graben-formed river valleys offer the best chances of finding and producing sustainable drinking water resources.

The American-built (1950's) Loya Walla Main canal is the main source of drinking water and also the main sewage disposal canal in Kandahar City. Two shallow aquifers ("Unconfined" and "City" Aquifers) also supply drinking water, but are also contaminated with sewage in their upper portions. Wells within shallow bedrock supply uncontaminated groundwater, but have high total dissolved solids content (approx. 2,500 ppm). In addition, bedrock wells cannot be drilled using standard Afghan cable tool/percussion drill rigs. Drillers, funded by NATO coalition forces under the Kandahar PRT and UN Habitat, used mud rotary drill rigs to install a series of drinking water wells in Kandahar City. A suitable deep aquifer was located within the southern portion of the city in the deeper portions of a down-dropped graben. In the area of Subdistrict 5, bedrock was encountered at a depth of 380 meters with a thick sequence of sandy alluvial saturated

sediment above it. These three wells will increase the City water supply by up to 40% once operational.

Water “Shuras” (In the Quran, meetings worthy of praise) at the PRTs were highly effective in finding Afghan solutions to Afghan water issues. Inexpensive passive seismic techniques may help map the deep alluvial aquifers and collaboration with Kandahar University and other emerging Afghan institutions will help with Afghanistan’s future.

SPEAKER BIO

Leonard (Len) Sinfield, a professional geologist, is a Drinking Water Compliance Manager for the US Naval Facilities Engineering Command (NAVFAC) in San Diego. NAVFAC provides engineering, contracting, and compliance support to the US Navy within San Diego, the Southwest, and globally. Len volunteered to forward deploy as a DoD civilian employee with the US Army Corps of Engineers in Kandahar, Afghanistan to support the ongoing International Security Assistance Force (ISAF)/NATO funded water supply improvement and groundwater exploration projects throughout Southern Afghanistan. Based out of Kandahar Airfield, his deployment started in March 2012 and ended in April 2013. The bulk of the work was in and around Kandahar City and outlying areas in Kandahar and Helmand Provinces, with a few projects in Farah, Herat, and Badghis provinces.

Len received his Bachelor's degree in geology at San Diego State University in 1984 and studied structural geology at the University of Idaho (Moscow) for two years before working for various environmental consulting firms in Maine, New Jersey, Ohio, Colorado, and finally, back to California. In 1996, he took a job with the Navy as an environmental remediation manager prior to switching to drinking water compliance in 2005. His previous overseas deployment was to Djibouti, Africa in 2009 to support water resources development in East Africa for the Combined Joint Task Force, Horn of Africa, based out of Camp Lemonier, Djibouti. His geologic mapping experiences in the deserts of Southern California while at SDSU prepared him well for the desert environment and geology of both Southern Afghanistan and Djibouti.



SDAG MEETING SCHEDULE - Mark Your Calendars!

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

| | |
|---|---|
| November 20, 2013 | Nick Clapp - Mojave Mining History |
| December 17, 2013 (third TUESDAY!) | Dr. Tom Deméré, San Diego Natural History Museum |



2013 EXECUTIVE COMMITTEE

PRESIDENT – Cari Gomes; *MiraCosta College* cg7783@yahoo.com

VICE PRESIDENT – Brian J. Olson; *FSR Engineering*; Ph: (858) 750-9243; bolson@fsrengineering.com

TREASURER – Lee Vanderhurst; Ph: (858) 531-7729; lee@leev-geology.com

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WEBMASTER – Carolyn Glockhoff; *Caro-Lion Enterprises*, Ph: (858) 549-3396; carolyn@caro-lion.com

PRESIDENT'S CORNER

Hello SDAG-ers!

We have so many exciting things going on within our association, I scarcely know where to start!

Our joint September meeting with EERI and ASCE was a lot of fun! Dr. Annie Kammerer was an enlightening and entertaining speaker!

Our October meeting promises to be a great one as well! Len Sinfield will be regaling us with his adventures drilling in Kandahar. We will be meeting at a brand new venue: Stone Brewery NTC!

We are also in the initial stages of our annual holiday meeting. Dr. Tom Demere has graciously agreed to host our meeting at the Natural History Museum on **Tuesday, December 17**. More details to follow soon!

Cari Gomes
SDAG President

GEOLOGY PHOTO OF THE MONTH



Thrust fault discovered in Poway!

Not really. An optical illusion resulting from no depth perception and angle of vision. The “fault” is actually the crest of a ridge in front of a steep cut slope in the background and the apparently offset “bedding” below the “fault surface” are slope benches.

Weed Removal Leads to Discovery of New Fault at Cabrillo National Monument in San Diego!

Don Vaughn

Geotechnical Exploration Inc

dvaughn@gei-sd.com

As part of the upcoming National Park Service Centennial Celebration, rangers at Cabrillo National Monument initiated a policy last year to be "weed free" by 2016, the year of the centennial. Cabrillo National Monument, situated at the southern tip of the Point Loma Peninsula is the only National Park Service unit within San Diego County. [www.nps.gov/cabr/index.htm]. The Monument was founded by proclamation signed by President Woodrow Wilson in 1913 and was incorporated into the National Park System in the 1930s. The Monument therefore is celebrating its own centennial this year with a three-day event planned for October 12-14. [www.cabrillocentennial.org]

The "weed free" policy in the Monument has resulted in the physical removal of various plants deemed to be "weeds" (what is a "weed" can be a subject of surprising complexity) and in the instance described herein, in the exposure of a "new" fault previously covered by ice plant! See Figure 1.

An alert visitor (mwh) in July of this year observed an outcrop in a road cut that appeared to be faulted. The outcrop is located on the south side of the southwestern parking lot at Cabrillo; the first parking area on the right that one drives by, just a short distance from the park entry (see Figure 2). This area was recently exposed by the removal of ice plant draping over the outcrop as part of the "weed free" program. The author and an associate contacted the park's Head of Natural Resources, Dr. Keith Lombardo, and obtained permission for a reconnaissance level trek on and over the fault and along its apparent trend. (Natural, cultural and historical resources are protected in all National Parks, but are accessible to researchers with permission.)

The Point Loma peninsula as depicted on the geologic map of the Point Loma Quadrangle (see Figure 3) is comprised primarily of Cretaceous and Pleistocene rocks (Kennedy, 1975). Well exposed along the coast at the base of the peninsula within the Monument are thinly layered rocks of the Point Loma Formation (Kp); interbedded fine-grained dusky-yellow sandstone and olive-gray shale and mudstone. These rocks are conformably overlain by rocks of the Cabrillo Formation (Kcc and Kcs), medium-grained sandstone and cross-bedded cobble conglomerate. The Point Loma Formation represents outer to middle submarine fan deposits; the overlying Cabrillo Formation represents coarser middle fan deposits. The Cabrillo Formation is well exposed in natural outcroppings within the upper part of the Monument.

The Cabrillo Formation is locally and unconformably overlain by the Pleistocene Lindavista Formation (more currently referred to as Quaternary very old paralic deposits, Qvop, per Kennedy and Tan, 2008) on the upper part of the peninsula within the Monument. See Figure 3. These attractive iron-oxide stained rocks underlie a small mesa where the old lighthouse on the Monument is located. This mesa was also locally excavated to emplace coastal observation bunkers for big gun targeting during WWII just south of the southwestern parking lot (and just west of the Monument's Coast Defense Exhibit, including an old radio shack). This mesa is faulted and the fault is readily seen in the high cut slope on the south side of the southwestern parking lot.

The fault is a normal fault and juxtaposes the Lindavista Formation on the east with the Cabrillo Formation sandstone on the west. It strikes generally N25W and dips 65 to 80 degrees to the northeast. Up top, near the WWII observation bunker, the unconformable depositional contact between the Pleistocene Lindavista Formation and Cretaceous Cabrillo Formation is apparent on the slope, west of the fault. The Lindavista forms a prominent red ledge, or cemented hammer-ringing cap (marker bed) in this area and along the mesa boundaries. This cap rock marker has been downthrown and these hammer ringing rocks are apparent near the base of the slope, east of the fault. We were able to trace the fault laterally and even measure the throw (vertical component of net slip). Preliminary hand-level measurements suggest about 30-35 feet of vertical displacement of this marker horizon.

The fault is apparent over several hundred feet, though there may be several parallel strands. It appears to be coincident with or parallel to another mapped fault (Kennedy, Tan, Chapman and Chase, 1975) just to the north. We also found the fault in the cut/excavated slopes behind the radio shack. There are also several small, filled joints parallel to the fault on either side at the type exposure, but especially the west side. The cracking and filling most likely occurred over the period of active faulting. Interestingly, a soil horizon appears to have developed over the downthrown Lindavista Formation. This soil horizon does not appear to be present on the mesa. The fault is most likely part of the Point Loma Fault system that is partly responsible for the formation of the peninsula and San Diego Bay. Some estimates have the Lindavista Formation offset about 150 meters between the peninsula and SD Bay.

This fault is an obvious feature and the perfect example to show your friends who are always asking you "What does a fault look like?" Take a trip out to the Monument in your car or on your bike and show them! Several other mapped faults are also visible within the Monument, notably along the Bay Side Trail (see Kern, 1983).

The discovery of this fault has really excited the Monument rangers who are all dedicated to husbanding their precious resources, including the geologic resources, in keeping with their Mission. Plans include a wayside sign in the parking lot depicting the fault and providing interpretative information for the almost 900,000 annual visitors from across the country and around the world! This feature is also ripe for research. Should any students or other researchers feel so inclined to do additional work on this fault please contact Dr. Keith Lombardo (619-523-4581, keith.lombardo@nps.gov), Head of Natural Resources at Cabrillo National Monument.

References

- Abbott, Patrick L.; 1999; *The Rise and Fall of San Diego*; Sunbelt Publications.
- Brown, Joseph E.; 1981; *Cabrillo National Monument*; Cabrillo National Monument Foundation.
- Houk, Rose, Editor; 2004; *Understanding the Life of Point Loma*; Cabrillo National Monument Foundation, (CNMF)
- Kennedy, M.P., 1975; *Geology of the Point Loma Quadrangle in Geology of the San Diego Metropolitan Area, California*; Ca. Division Mines & Geology, Bulletin 200.
- Kennedy, M.P., Sean Sieng Tan, Rodger H. Chapman and Gordon W. Chase; 1975; *Character and Recency of Faulting, San Diego Metropolitan Area, California*; Ca. Division of Mines & Geology Special Report 123.
- Kennedy, M.P. and SS. Tan, 2008, *Geologic Map of the San Diego 30'x60' Quadrangle*; Ca. Geological Survey and the USGS.
- Kern, John Philip; 1983; *Earthquakes and Faults in San Diego*; Pickle Press.



Figure 1 Recent ice plant removal has resulted in an exposure of a fault at Cabrillo National Monument. Darker Pleistocene Lindavista Formation on the left is juxtaposed against lighter Cretaceous Cabrillo Formation on the right. View south. See text and Figures 2 and 3 for the location.

ANNOUNCEMENTS

SDAG Field Trip 2013

San Luis Rey on Display: A Geoscientific Panorama in Northern San Diego County

The 2013 San Diego Association of Geologists annual field trip will examine the geology and natural history unique to the San Luis Rey River Valley, a "jewel" in northern San Diego County, California. We expect to have geoscience to interest and entertain all.

With the assistance of our own local contributors, we will be afforded looks into the petrology, mineralogy, hydrology, geomorphology, paleontology, archeology and more!

DATES: **August 19, 2013:** Last day to guarantee reservation spots. Hereafter, reservations are on a space-available basis.

Friday, November 8th: (Optional) Afternoon check-in to the Campground. Socializing.

Saturday, November 9th: Road Log Run. With an early am start, we will take a consolidated collection of vehicles through some of the more noteworthy waypoints. Lunch, snacks, an evening camp presentation, and dinner will be provided.

Sunday, November 10th: After a continental breakfast*, we will complete a road log. Spend the balance of the day prospecting for semiprecious stones, and going underground at the Oceanview mine above Pala**. A gourmet outdoor lunch and refreshments will be provided.

Base camp is the Lilac Oaks Campground in Valley Center. We have the entirety of the Hawk's Nest Group Camp reserved. www.lilacoakscampground.com/. Includes rustic restrooms with showers. picnic benches in camp. Due to limited vehicular space in the group camp, be prepared for vehicle parking on the adjacent soccer field (map attached).

* After departing the campground Sunday morning, transportation will be by individual private vehicles for Sunday's activities. Any road log stops, as well as the Oceanview Mine, will have suitable room for our numerous vehicles.

** Part of the visit is to include a geologist-guided trip into the mine workings. Good physical mobility is a requisite of the mine owners, and liability releases for all attendees will need to be executed

RECOMMENDED EQUIPMENT: Bring everything you need to get a good night's sleep, Tent, etc. Folding chair and evening drinking vessel.
A one to five gallon bucket and gardening gloves (for Sunday).
A camera, and anything else you may require to geologize.

COST: \$175 per person. Discount for SDAG members and students. Fee includes guidebook, campground fee, five meals, snacks, and beverages. Fees are non-refundable. All ages welcome. The campground and Oceanview mine activity in particular are very "kid friendly" and stand to be lifelong memories.

RESERVATIONS: In order to guarantee spots the mine tour and tourmaline dig, SDAG must expedite the reservation schedule. We are still accommodating reservations on a space available basis, but we unfortunately CANNOT guarantee a full-featured trip. Please contact us (below) to check on space availability prior to submitting the following.

ADDITIONAL INFO/QUESTIONS: Contact SDAG VP Brian J. Olson at bolson@fsengineering.com.

ANNOUNCEMENTS

AESE ANNUAL MEETING REGISTRATION IS OPEN Meeting registration and hotel reservations are open for the 47th annual meeting of the Association of Earth Science Editors (AESE), “Native Resources: Building on the Bedrock of Geoscience Editing,” to be held **October 10–13, 2013**, in Tulsa, Oklahoma. AESE will meet in the top-rated Courtyard by Marriott Tulsa Downtown, 415 South Boston Avenue, the recently renovated historic Atlas Life Insurance building in the Art Deco district of “America’s Most Beautiful City.” Tulsa was the “Oil Capital of the World” for several decades and a center of development for petroleum geoscience.

The meeting will include an opening reception, technical talks, field trips, freelancers’ breakfast, survey editors’ breakfast, business luncheon, awards dinner with entertainment, and optional free-time activities. The board will meet at 1 p.m. October 10 and 9 a.m. October 14.

Hotel reservations are due by September 26. Be sure to ask for the AESE room rate of \$89 per night.

The field trips will focus on “Exploring our Black Gold Legacy: The Geology, Art, and Architecture of Oklahoma Oil Men.”

AESE members are involved in editing and publication of material pertaining to the earth sciences. AESE provides a forum for the interchange of ideas for more effective dissemination of earth-science information to the scientific community, educators and students, and the public.

For details about the meeting, see the registration form. For more information, contact Rowena Mills, host chair, hrmills777@yahoo.com, visit www.aese.org.

AESE REGISTRATION FORM
Association of Earth Science Editors 47th Annual Meeting
Tulsa, Oklahoma, October 10–13, 2013

Full name _____
 First name for badge _____
 Affiliation for badge _____
 Address _____
 City/state (province)/ZIP (postal code) _____ Country _____
 Telephone (_____) _____ Fax (_____) _____
 E-mail (for registration confirmation) _____

REGISTRATION

Full registration fees cover admission to all sessions, opening reception, business lunch, awards banquet, and field trips.

AESE members

| | | | | | |
|--------------|--------------------------|-------|-------------------|-------|----------|
| Full meeting | On or before September 1 | \$295 | After September 1 | \$345 | \$ _____ |
| One day | On or before September 1 | \$125 | After September 1 | \$150 | \$ _____ |

Nonmembers

| | | | | | |
|--------------|--------------------------|-------|-------------------|-------|----------|
| Full meeting | On or before September 1 | \$345 | After September 1 | \$395 | \$ _____ |
| One day | On or before September 1 | \$150 | After September 1 | \$175 | \$ _____ |

Nonmember registration includes membership for the remainder of AESE's fiscal year.

Guest registration (includes opening reception, awards banquet, one half-day field trip, one full-day field trip)

\$150 (U.S.) each for _____ person(s) \$ _____

If guest wishes to attend the business luncheon on Friday, October 11, please add \$25 \$ _____

Guest name(s) _____

Optional events

| | | |
|---|------|----------|
| State, provincial, and national surveys editors' breakfast (Friday, October 11) | \$20 | \$ _____ |
| Freelancers' breakfast (Saturday, October 12) | \$20 | \$ _____ |

TOTAL FEES ENCLOSED \$ _____

Board: First board meeting 1 p.m. October 10; second board meeting 9 a.m. October 14. Plan your travel accordingly.

I plan to attend:

| | |
|---|---|
| <input type="checkbox"/> Opening reception (Thursday evening) | <input type="checkbox"/> AESE business luncheon (Friday) |
| <input type="checkbox"/> Awards banquet (Saturday evening) | <input type="checkbox"/> Half-day field trip (Saturday afternoon) |
| <input type="checkbox"/> Survey editors' breakfast (Friday) | <input type="checkbox"/> Full-day field trip (Sunday) |
| <input type="checkbox"/> Freelancers' breakfast (Saturday) | |

Dietary and/or transportation restrictions _____ (Add extra page if needed.)

For further information about the meeting, e-mail
 Rowena Mills, host chairman
 hrmills777@yahoo.com

Pay by credit card or PayPal at
<http://www.aese.org/paypal.html>

*All checks must be electronically transferable to a U.S. bank that is imprinted on the check and includes the nine-digit routing number between "smiley faces." Checks without the nine-digit routing number will be returned.

Mail registration form and check* or money order payable to AESE in U.S. funds to

Mary Ann Schmidt
 554 Chess Street
 Pittsburgh PA 15205-3212
 (412) 268-4708
maryanns@andrew.cmu.edu

HOTEL DEADLINE SEPTEMBER 26
 Call the Courtyard by Marriott Downtown, 415 S. Boston Ave., Tulsa, at 918-508-7400 or 877-894-2809. **Ask for the AESE rate of \$89 per night by Sept. 26.**

ANNOUNCEMENTS

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.

CALL FOR PHOTOS! SDAG invites members to submit photographs of an interesting geologic feature for publication in the Geology Photo of the Month section of the newsletter. Please submit your photo along with a caption to the SDAG secretary via email.

VINTAGE SDAG GUIDEBOOKS NOW AVAILABLE FOR FREE DOWNLOAD! If you want to complete your collection, or just see what SDAG was up to in the 1970s, check out our website's publication page, and scroll all the way down: <http://www.sandiegogeologists.org/Publications.html> In addition to our very first publication in 1972, a field trip to Otay Mesa, you'll find our 1973 *Geology and Hazards of San Diego* volume, the first of two guidebooks to the Coronado Islands, in 1978, and our 1987 field guide to the gold mines of Julian. Happy reading!

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

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

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

WAREHOUSE & OFFICE SPACE AVAILABLE in El Cajon, short-term rental or long-term lease. Warehouse from 3125 to 6250 s.f. Two offices. Mix and match to fit your needs. Ideal for geotech operations; best possible rates and we are geology-friendly. Contact Lowell Lindsay (619) 258-4911 x111, LLindsay@Sunbeltpub.com

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## JOB OPENINGS

*de maximis, inc.*, a nationwide firm specializing in project coordination, currently has opportunities for contract employees to provide services in Ecuador. We currently have an opportunity to provide these services and it is our understanding that there are several positions available. We understand that the initial assignment is 1 year. At least one position will require full time presence in Ecuador and the other positions could be done on a rotational basis. Strong spanish skills are essential as well as 3 to 10 years of professional experience. Work assignments and logistics will be handled from domestic de maximis offices.

**Project Staff and Project Managers:** Candidates would have a B.S. Degree in Environmental Science with either an Engineering or Geology degree as a plus. Candidate should have 3 to 10 years relevant experience in the environmental consulting industry. Candidates needs to have demonstrated site investigation knowledge, work plan and report preparation, task management, cost estimating and scheduling experience. The candidates should be detail oriented and have excellent verbal and written communication skills. Professional Geologist or Engineer or ability to obtain within two years, and Masters degree is a plus. Positions will be based in Ecuador (initially), and will require travel and field work.

*de maximis, inc.* offers competitive salaries and benefits, and a challenging work atmosphere. To learn more visit our website at: [www.demaximis.com](http://www.demaximis.com).

No phone calls. Qualified candidates should send resumes, along with a cover letter summarizing experience and salary requirements to:

*de maximis, inc.*  
Attention: Jack Keener  
1322 Scott St, Suite 104  
San Diego, CA 92106  
[jkeener@demaximis.com](mailto:jkeener@demaximis.com)

and,

Steve Myers  
*de maximis, inc.*  
Albany, New York  
[smyers@demaximis.com](mailto:smyers@demaximis.com)

## **Groundwater & Environmental Services, Inc. (GES)**

**Our San Diego, CA office seeks entry level Geologists, Environmental Scientists and Engineers to join their team.**

### **Responsibilities and Duties:**

- Participates in monitoring well installations and sampling events
- Records data, prepares reports, provides analysis and interpretations of findings based on scientific experimentation and existing knowledge
- Completes quarterly groundwater monitoring reports
- Performs hydrogeological assessments regarding groundwater flows to identify contamination impact and related concerns
- Compiles and completes field notes on each event/site
- Researches information relating to identifying geological formations and soil delineation studies and prepares reports and geological maps based on the findings
- Participates in the identification of viable remedial solutions consistent with all Federal, state, and local regulations
- Performs groundwater sampling, gauging and product bailing, and surveying

### **Requirements and Skills**

- A Bachelor's degree or higher in geology, environmental science, engineering or related scientific discipline.
- 0-2+ years of related experience. UST work and retail petroleum experience a big plus.
- Must be detail-oriented, and a team player with good communication, analytical, organization, and time management skills.
- Must have a clean driving record and be able to drive a company vehicle.
- Drug/Alcohol screening and a background check are required.

**Our comprehensive benefits include:** medical, dental, vision, prescription card, 401k, FSA, LTD, STD, New Parent Leave, 529 CollegeBound Fund, Tuition Assistance, Bonus Plan, and more.

GES is an equal opportunity/affirmative action employer that strongly values diversity.  
EOE/AA/M/F/V/D

Click here to apply: <https://www.hirebridge.com/v3/application/applink.aspx?cid=6004&jid=205941>

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**GES is growing and seeks experienced Mid-Level Geologists, Environmental Scientists and Engineers with environmental consulting experience to join their San Diego, CA team.**

**Responsibilities and Duties:**

- Responsible for most aspects of case management/project management with senior oversight.
- Prepares technically accurate, complete and concise work plans based on evaluation of site data needs.
- Performs or manages the implementation of project work plans including staff briefing, scheduling, subcontractor coordination and sample collection.
- Evaluates, analyzes and interprets technical data relative to project-specific goals, creates and interprets accurate data display graphs and figures, completes basic fate and transport analysis, and identifies data gaps and data needs leading to development of a Conceptual Site Model.
- Works with and mentors junior staff to ensure all resources are in place for proper fieldwork and reporting execution.
- Develops and manages budgets, evaluates budget vs. plan and analyzes cost control efficiencies.
- Communicates with clients, third party and regulatory agents regarding project status, schedules and compliance issues.
- Ensures adherence to client and corporate contract specifications in all activities including Health, Safety, Security, and Environment.

**Requirements and Skills**

- A Bachelor's degree or higher in Geology, Environmental Science or Engineering
- 4-7+ years of related experience. Experience must include hands on field and office based in environmental consulting field. Case management experience on retail petroleum and/or industrial projects preferred
- Must possess excellent communication and technical writing skills and be able to independently prepare a complete deliverable report with a focus on QA/QC
- Must have working knowledge of California's environmental regulations.
- Demonstrated proficiency with Microsoft Office suite, Adobe, geologic logging/cross section programs required. Experience with database/graphics management (Access, GIS, CAD) a plus
- A Background Check and an Alcohol/Drug Screening are required, as well as an assessment of core skills based on GES' internal position level guidelines.

**Our comprehensive benefits include:** medical, dental, vision, prescription, 401k, FSA, LTD, STD, New Parent Leave, 529 CollegeBound Fund, Tuition Assistance, Bonus Plan, and more.

GES is an equal opportunity/affirmative action employer that strongly values diversity. EOE/AA/M/F/V/D

Click here to apply: <https://www.hirebridge.com/v3/application/applink.aspx?cid=6004&jid=205942>

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**GES seeks a Project Manager with environmental consulting experience to handle project oversight for our San Diego, CA office.**

**Responsibilities and Duties:**

- Oversees a portfolio of diverse environmental projects and supervises technical and field staff
- Manages client interaction and financial and resource allocation
- Provides senior project oversight and expert technical input on complex projects
- Reviews and approves project related documents and deliverables
- Evaluates subsurface characteristics for remediation projects, remedial system design, and regulatory negotiations
- Conducts performance reviews and project team meetings to review current and future projects, discuss project and/or employee issues, and staff workloads
- Collaborates with the Site Operations Manager to target new areas and opportunities for business
- Generates leads and develops new business opportunities through networking

**Requirements and Skills**

- A Bachelor's degree or higher in Geology, Environmental Science, Engineering or a related major
- 10-15+ years of technical environmental consulting experience in Site Investigation & Remediation, Due Diligence and Planning for petroleum and/or industrial clients is required
- Business development experience is a plus
- Advanced knowledge of California's environmental regulations
- Professional Geologist or Engineer certification (California) is a plus
- A Background Check and Drug/Alcohol screen are required

**Our comprehensive benefits program includes:** medical, dental, vision, prescription, 401k, FSA, STD, LTD, New Parent Leave, 529 CollegeBound Fund, Tuition Assistance, Bonus Plan, and more.

GES is an equal opportunity/affirmative action employer that strongly values diversity.  
EOE/AA/M/F/V/D

Click here to apply: <https://www.hirebridge.com/v3/application/applink.aspx?cid=6004&jid=205944>

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**GES San Diego office seeks a Senior Level Geologist, Environmental Scientist or Engineer, with an environmental consulting background, to join our team.**

**Responsibilities and Duties:**

- Self performs or directs junior staff in the oversight of soil boring activities, monitoring well installations, and other field activities including the oversight of subcontractors.
- Authors site work plan and proposals for more complex scopes of work including: comprehensive site characterizations and remedial action plans. These reports should contain multiple level and interrelated interpretations and conclusions as well as identify recommendations based on the conclusions.
- Provides technical and some financial oversight of medium size project sites. Technical responsibilities may include monitoring contaminant concentrations and fate/transport properties, QA/QC of data collected and documents generated, and ensuring compliance with applicable regulations. Financial duties may include evaluate budgets vs. plans, analyze cost control efficiencies, and review pre-bills and invoices.
- Communicates with third party and regulatory agents regarding schedules and compliance issues.
- Follows client contract specifications in all filed-related activities and informs project group of those specifications.
- Adheres to all GES Health & Safety standards and all Company Policies & Procedures in all project and field-related activities.

**Requirements and Skills**

- A Bachelor's degree or higher in Geology, Environmental Science, Engineering or a similar major.
- 8-15+ years of related experience. Experience should include: investigation, reporting and remediation of retail petroleum work or handling large volumes of a similar type work.
- Experience with Underground Storage Tanks (UST & LUST) and working knowledge of California's environmental regulations are required.
- Must possess excellent communication, teamwork, analytical, organizational, technical writing, and client service skills
- Professional certification a plus
- Drug/Alcohol Screening and a Background Check are required

**Our comprehensive benefits program includes:** medical, dental, vision, prescription, 401k, FSA, STD, LTD, New Parent Leave, 529 CollegeBound Fund, Tuition Assistance, Bonus Plan, and more.

GES is an equal opportunity/affirmative action employer that strongly values diversity. EOE/AA/M/F/V/D

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## **GES seeks an Office Lead / Senior Environmental Professional, to join their San Diego team.**

Our successful candidate will be responsible for managing complex project work, providing senior level technical guidance, spearheading client diversification initiatives, developing current customer relationships, and overseeing productivity, diversification, and profit and loss (P&L) for the San Diego office, while supporting and executing all corporate programs, policies, and procedures in a positive, can do manner.

### **Responsibilities and Duties:**

- Manages client interaction; personnel; and operational profit and loss (P&L) for our San Diego operations;
- Provides senior oversight, review and approval to project data, documents and deliverables to ensure technical, regulatory requirements and goals are adhered to, as well as, ensures company and client QA/QC standards are met.
- Develops strategies to generate leads for new business and participates in all aspects of bid and proposal preparation.
- Conducts performance reviews and project team meetings to review current and future projects, discuss project and/or employee issues, and manage staff workloads.

### **Requirements and Skills**

- A Bachelor's degree or higher in Geology, Environmental Science, Engineering or related;
- 10-15+ years of engineering and environmental consulting experience in California;
- Experience managing P&L and overseeing an environmental consulting office;
- Business development experience and a strong network within the San Diego area's environmental market (petroleum, industrial, etc.)
- Strong background in building an organizational structure, business processes/functions, and financials;
- Must have excellent employee relations skills and be able to identify, address, and resolve issues in a timely manner;
- Professional Engineer (PE) certification (California) is a plus; and
- A Background Check and Drug/Alcohol screen are required.

Our comprehensive benefits program includes: medical, dental, vision, prescription, 401k, FSA, STD, LTD, New Parent Leave, 529 CollegeBound Fund, Tuition Assistance, Bonus Plan, and more.

GES is an equal opportunity/affirmative action employer that strongly values diversity.  
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## **SEEKING JOB OPPORTUNITIES**

**Geological Engineer:** I am an outgoing and enthusiastic geologic engineer with several years experience working on geological field projects, writing technical reports, and completing rigorous data analysis on large and complex data sets. Through my experience I have developed the ability to think critically, learn quickly, and communicate exceptionally both at the technical and non-technical level. I am an MS graduate with a degree in geological engineering from South Dakota School of Mines and Technology. I have 3 years of experience doing geotechnical investigations, geochemical assessments, and groundwater modeling at compromised sites and underground environments. Detailed work experience, education and more at <http://www.linkedin.com/pub/tessa-van-beek/51/46a/272> . Email Tessa Van Beek at [tessaj@gmail.com](mailto:tessaj@gmail.com) for more information.

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I am a recent MS graduate in Geological Sciences, Hydrogeology from SDSU looking to work in hydrogeology, water resources, or natural resources management. My thesis was a study involving groundwater modeling. Additionally, I have eight years of local experience in environmental consulting. Please contact Cheryl Martin (Johnson) at [cheryl\\_k\\_johnson@yahoo.com](mailto:cheryl_k_johnson@yahoo.com) or call me at (619)-992-9335.

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

Contact: Clay Clifton

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

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

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