

# SAN DIEGO ASSOCIATION OF GEOLOGISTS

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## SDAG MEETING ANNOUNCEMENT

**Wednesday, March 19, 2008**

*A) THE LUCKY 5 AND ORIFLAMME CANYON PLUTONS: KEY TEMPORAL MARKERS IN THE STRUCTURAL AND TECTONIC EVOLUTION OF THE PENINSULAR RANGES BATHOLITH, SE CALIFORNIA*

*B) DETERMINATION OF CRUSTAL THICKNESS IN THE CAUCASUS AND CASPIAN REGION USING RECEIVER FUNCTIONS*

*presented by*

**A) SDAG Student Scholarship Recipients: Melanie Biggs, SDSU Graduate Student, B) Rumi Takedatsu, SDSU Undergraduate Student**

**Where:** *Emiliano's Mexican Restaurant*  
6690 Mission Gorge Road, San Diego

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

**Directions:** FROM INTERSTATE 15: Take exit 7 for Friars Rd. toward Stadium; turn left at Friars Rd.; slight left at Mission Gorge Rd., make a U Turn at Old Cliffs road; restaurant is on your right (north) overlooking Admiral Baker golf course.

FROM INTERSTATE 8: Take the CA-163N exit. Follow signs for Friars Rd. E and merge onto Friars Rd.; slight left at Mission Gorge Rd.; make a U Turn at Old Cliffs road; restaurant is on your right (north) overlooking Admiral Baker golf course.

**Dinner:**

MEXICAN BUFFET, with meat or vegetable option

**Note:** a special entree will be prepared for vegetarians, but it will not be put out on the buffet; vegetarians should specifically request the vegetarian entree when they visit the buffet.

**Cost:** \$15 members and guests; \$10 for students, \$5. Add \$5 for non members and late registrants (after deadline below)

**Reservations:** Make your reservation online at [www.sandiegogeologists.org](http://www.sandiegogeologists.org) no later than noon, **Monday, March 17th**

## 2008 SDAG MEETING SCHEDULE - Mark your Calendars!

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

April 16	Stephanie Schwabe
May 21st	Chuck Houser (tentative)
June 11th	Joint mtg with South Coast Geological Society, San Juan Capistrano

### 2008 EXECUTIVE COMMITTEE

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## STUDENT BIO

SDAG GRADUATE SCHOLARSHIP RECIPIENT: Dr. Gary Girty, advisor



**Melanie Biggs**, a MS student in Geology at San Diego State University, was born and raised in San Diego and attended West Hills High School and Grossmont Community College before transferring to San Diego State University in 2003. She received her Bachelors degree in Geology from SDSU in 2006. Melanie's interest in the Peninsular Ranges began when she conducted undergraduate research with **Dr. Gary Girty** focusing on the timing and evolution of the Chocolate Mountains Anticlinorium in the Picacho State Recreation Area. As an undergraduate at SDSU, she also served as Vice President of the SDSU chapter of Associated Geology Students, taught with the Show-Me-Geology program, and worked with the department of Defense during the Strong Angel II communications demonstration in Kona, Hawaii. Melanie started the MS program in Geology at SDSU in the Spring of 2007 under the supervision of Dr. Gary Girty. As an MS student, she has worked on several projects, including granitoid weathering profiles in Santa Margarita Ecological Reserve and structural evolution of the Oriflamme and Lucky 5 plutons in the Peninsular Ranges.

## **ABSTRACT (A)**

### **THE LUCKY 5 AND ORIFLAMME CANYON PLUTONS: KEY TEMPORAL MARKERS IN THE STRUCTURAL AND TECTONIC EVOLUTION OF THE PENINSULAR RANGES BATHOLITH, SE CALIFORNIA**

The Lucky 5 pluton truncates S1a, a continuous foliation, and associated folds in the Triassic Julian Schist. Peraluminous muscovite granite/granodiorite along the margin of the Lucky 5 grades into a core of amphibole-biotite granite/granodiorite. Most Lucky 5 samples exhibit hypidomorphic granular textures. However, along its easternmost margin a discontinuous ~2-3 m thick zone of weakly foliated rock has been mapped. Laser ablation ICP-MS U-Pb analyses of 30 zircon grains yield a crystallization age of  $130.3 \pm 2.6$  Ma for the Lucky 5. To the east of the thin foliated zone in the Lucky 5, a ~2.5 km wide screen of the Julian Schist separates the Lucky 5 from the Oriflamme Canyon pluton. Within the screen a continuous foliation (S1b) in the Julian Schist is defined by the aligned (001) facies of phyllosilicates and stretched and flattened quartzofeldspathic aggregates. S1b can be traced eastward into the Oriflamme Canyon pluton where it is represented by a mylonitic foliation defined by elongated and flattened quartz ribbons that are transected by west verging shear bands dipping ~30-40° eastward. Map-scale kink bands fold both S1b in the Julian Schist and the mylonitic foliation in the Oriflamme Canyon pluton. Laser ablation ICP-MS U-Pb analyses of 27 zircon grains yield a crystallization age of  $116.1 \pm 2.4$  Ma for the Oriflamme Canyon pluton. The above data suggest the following. (1) S1a and associated folds in the Julian Schist are older than ~130 Ma, and therefore represent pre- to early batholithic deformation associated with the development of the Cuyamaca Laguna Mountains shear zone during the Late Jurassic or earliest Cretaceous. (2) The Oriflamme Canyon pluton was intruded during NE-SW shortening. As a result, the thermally softened region in and around the intruding pluton yielded resulting in the SW emplacement of a segment of the Julian Schist over the Lucky 5 pluton and the formation of S1b ~116 Ma. This phase of range-perpendicular shortening occurred during the orthogonal subduction between the Farallon and North American plates 110-120 Ma. (3) Map-scale NW trending kink bands fold both S1b in the Julian Schist and the mylonitic foliation in the Oriflamme Canyon, and are therefore post-116 Ma. They are tentatively interpreted to represent range parallel shortening that may be associated with strike-slip faulting.

## **ABSTRACT (B)**

### **SDAG UNDERGRADUATE SCHOLARSHIP RECIPIENT**

Rumi Takedatsu,  
San Diego State Dept. of Geology  
Advisor Dr. Robert J. Mellors

### **DETERMINATION OF CRUSTAL THICKNESS IN THE CAUCASUS AND CASPIAN REGION USING RECEIVER FUNCTIONS**

The collision of the Arabian plate and Eurasia has created complex tectonics and structure in the Caucasus and Caspian region. In particular, the South Caspian Basin has a very different lithospheric structure from the surrounding region. According to Russian refraction analysis in 1960s, the South Caspian Basin has been filled by unusually thick sediment layer directly over possible oceanic crust, without a granitic layer. Because the detailed lithospheric and seismic structures in the region are not well known, various hypotheses to explain the structure have been suggested, and they are still controversial topics. One way to estimate crustal thickness is to use receiver functions. Receiver functions are a well-established technique to determine the boundary between crust and upper mantle (Moho) using three-component

broadband seismograms. We use receiver functions based on seismic data from 14 broadband stations in Azerbaijan to identify P to S converted phases, and then determine the time differences between P and the P to S converted phases to estimate the depth of Moho beneath the each station. The best depth is determined by comparing theoretical receiver functions with the observed receiver functions. So far, we have good results for the structure beneath station LKR on the Caspian coast. We estimate that the Moho depth beneath the station is about 35 km and the crust consists of a thin sedimentary layer (5 km with  $V_p = 3.0$  km/s) overlying a thicker crystalline layer (30km with  $V_p = 7.0$ km/s). Our goal is to estimate Moho depth in the region and understand regional tectonics.

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## **ANNOUNCEMENTS**

President's Corner, March 2008

For this month's SDAG meeting at Emilianos Mexican Restaurant, we will honor our SDAG graduate and undergraduate Student Scholarship winners, Melanie Biggs and Rumi Takedatsu from SDSU. Thank you to all of our corporate sponsors who make our scholarship program possible. In addition to scholarships to undergraduate and graduate students in earth sciences, we hope to support San Diego secondary students who are participating in our local science fairs. Next month we will switch our focus to the tropics and will be welcoming USD instructor Dr. Stephanie Schwabe to give us a presentation about her research studying cave formation in the Bahamas. Dr. Schwabe will show video footage from deep dives into Bahamian blue holes...so stay tuned for information about our April meeting.

Be sure to keep October 17<sup>th</sup>-19<sup>th</sup>, 2008 open for our annual field trip to the northern Coachella Valley. Scott Snyder is putting together an exciting program. If you have any ideas for field trip stops, papers or would like to help out with logistics, please contact Scott as soon as possible. He is putting together an annual field trip subcommittee and would love to get more of you involved.

If you can't wait until October to knock around some rocks with your SDAG buddies, why not participate in one of our "ONE STOP WONDER" afternoon field trips? The "one stop wonders" are meant to be shorter field activities where our members can share each other's company and knowledge of rocks and cool places. Any one of you should feel free to suggest or organize a One Stop Wonder. Just send Bryan and me an email with a brief description of what you want to do and when you want to do it. We'll get the information out to our membership as soon as we can.

Sarah

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**National Association of Geoscience Teachers Far Western Section Spring 2008 Field Conference *Geoscience Investigations in Northern San Diego County and Beyond: Student-Directed Explorations* March 14-16, 2008**, hosted by Palomar, MiraCosta, and CSU San Marcos. We hope that you'll join us for an exploration of geoscience field trips in and around northern San Diego County. Unlike some NAGT field trips that explore remote locations, much of this conference will be held in an urban setting and highlight some of the field trips we do during half-day or full-day trips with students enrolled in our geology, geography, oceanography and Earth science classes. See [www.palomar.edu/earthscience](http://www.palomar.edu/earthscience) for more information.

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**From the Coast Geological Society 2008 Desert Symposium Field Trip: April 19-21, 2008, “Development of the Colorado River and its entry into the Salton Trough.”** The field trip will explore geographic extent of the Bouse Formation and contrast fresh water deposits with deposits containing marine fossils. Examine sediments at Anza-Borrego that indicate when the Colorado River entered the Salton Trough. Drive from eastern Mojave Desert pinon-juniper plateaus to the Sonoran vegetation of the Colorado Desert. Contact [wpresch@fullerton.edu](mailto:wpresch@fullerton.edu) more information.

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**Rocks with Provenance Needed for a Reference Collection for Typing and Sourcing San Diego Co. Artifacts**

The San Diego Archaeological Center and local archaeologists need a county-wide reference collection of local rocks from outcrops. The collection will be an important resource for archaeologists involved in typing and sourcing stone artifacts from the San Diego area.

Norrie Robbins, adjunct faculty in the Dept. of Geological Sciences at SDSU, is spearheading this volunteer effort. She notes that geologists use a much wider variety of descriptors for rocks than do archaeologists. One of the objectives of this project is to cross-reference archaeological categories with geological ones to help develop a mutually understandable terminology and to improve sourcing. Rock specimens in the reference collection will be identified by spatial coordinates and both geological and archaeological descriptors.

Please contact Norrie ([nrobbins@geology.sdsu.edu](mailto:nrobbins@geology.sdsu.edu), 619-303-9095) with any questions and to arrange pick up of specimens. Specimens may also be placed in her mailbox at SDSU or dropped off at the Center (please indicate Attention: Rebecca Nathan). In addition, Dr. Robbins or Dr. Tim Gross will be available at most meetings of the San Diego County Archaeological Society (SDCAS) and San Diego Association of Geologists (SDAG) to accept specimens. Building the reference collection is a long-term project. There is no time limit for making your contributions.

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**John Shelton Exhibit at the SD Natural History Museum—May 11 to November 2, 2008**

The photography exhibition, a retrospective of Shelton’s work, marks the first time works by the legendary geologist will be exhibited to the public. A geologist filled with a love for music and machines, John Shelton is best known for his pioneering aerial photography. Formerly an associate professor of geology at Pomona College, he has always been intensely interested in the process of learning. Shelton’s love and knowledge of flying enabled him to reveal geologic features and processes through his aerial photographs of wondrous landscapes. His aerial photographs of North America are especially invaluable today, when diminishing air quality makes some of his shots irreplaceable.

**2008 CORPORATE SPONSORS - THANK YOU!!**

Corporate sponsors provide a significant portion of SDAG’s operating and scholarship budget. In addition to monthly recognition for your contribution, you are entitled to a free Internet “link” from [SDAG’s Website](#). We also list Corporate Sponsors in our annual SDAG Field Trip Volume. **Please consider SDAG sponsorship in 2009!**

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Sue Tanges, Southland Geotechnical	<a href="#">Julie Moore, SPL Laboratories</a>
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Jan and Dave Steller	
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## **JOB OPENINGS!**

**Layne GeoSciences**, a division of *Layne Christensen Company*, the nation's largest groundwater resource development contractor, is seeking candidates for a *Senior Level Hydrogeologist* position. This position will be based in our Fontana, CA facility. Qualified candidates will possess:

- BS/MS in Geology, Hydrogeology, or Engineering Geology with emphasis on groundwater resources
- Minimum 8-10 years of experience in performing hydrogeological studies (e.g., groundwater exploration and/or water resource development, production well installation and design, wellfield design, surface and borehole (geophysics))
- Excellent written and verbal communication skills, good computer skills

The successful candidate will be involved in hydrogeological studies at project locations primarily in the southwestern US. Candidate may have periodic travel requirements and must be a motivated, self-starting individual looking for a challenging, key position in an expanding organization.

Qualified candidates are encouraged to send a resume to: *Layne GeoSciences* ATTN: Mr. Tony Morgan *Manager-West Coast Operations* 11001 Etiwanda Avenue Fontana, CA 92337, 909-390-2833 909-390-6097 FAX

Resumes should be submitted by email to [tmorgan@laynechristensen.com](mailto:tmorgan@laynechristensen.com).

We are a drug-free and smoke-free workplace. EOE/M/F/D/V

### **Geologist/Hydrogeologist II - Brown and Caldwell**

Evaluate, select, and apply standard geological techniques, procedures, and criteria to make adaptations and modifications. Work on assignments with clear and specified objectives. Investigate limited number of variables. Direct field crews drilling bore holes and collect samples of rocks and soil for chemical analysis.

**Qualifications:** MS degree or BS degree and 2-3 years of professional geological or hydrogeological experience.

**Contact Candy Engelstad**, HR/Administrative Manager, Brown and Caldwell, [cengelstad@brwncald.com](mailto:cengelstad@brwncald.com)

Tel: (858) 514-8822 Fax: (858) 514-8833

**URS Corporation**, a nationwide, multidisciplinary consulting firm and the largest design firm in the country, has a strong project backlog in San Diego County in the transportation and water resources markets. We are seeking qualified candidates for the following positions for our San Diego office:

**Engineering Geologist** (Requisition #URS16201): Geologist/Engineering Geologist with 0 to 5 years of experience in consulting engineering firm; preferably with master's degree. Responsible for supervising field explorations, geologic mapping, and report preparation. Should be experienced in logging borings in soil and rock, knowledge of Caltrans investigation procedures a plus.

**Geotechnical Engineer** (Requisition #URS24208): Civil/Geotechnical Engineer with 0 to 5 years of experience in consulting engineering firm; preferably with master's degree. Responsible for planning field and laboratory programs, engineering analyses, and report preparation. Strong analytical skills and communication skills a must. URS is an Equal Opportunity Employer and strongly supports diversity in our work force (M/F/V/D). We offer competitive salaries and a comprehensive benefits package. For immediate consideration, please submit to [mike\\_blackmore@urscorp.com](mailto:mike_blackmore@urscorp.com) or apply on-line under the Careers section of our website ([www.urscorp.com](http://www.urscorp.com)) using the requisition number shown in parentheses above.

**Tetra Tech EC**, a world leader in environmental engineering and consulting, is seeking an **Entry Level Geologist in our San Diego, CA office.**

The qualified candidate will have a Bachelor of Science degree in Geology, hydrogeology, or related field with 0-3 years experience. Primary responsibility will be to assist senior personnel in the planning and execution of projects. The chosen candidate will learn a variety of field sampling and drilling methods for site investigation and remediation projects and perform the acquisition of samples (soil and groundwater) in the field. Good analytical and writing skills required. Up to 50% of time may be in the field on project sites mostly in the Bay area.

Tetra Tech EC, Inc. is an Equal Opportunity Employer and we value team-oriented workplace and workforce diversity. We invite resumes from all interested parties including women, minorities, veterans and persons with disabilities. Tetra Tech offers their employees a comprehensive compensation package and the opportunity to work on large scale government projects.

Candidates who are interested in joining our dynamic team should submit a resume to Tetra Tech EC at [northwest.web@tteci.com](mailto:northwest.web@tteci.com). Resumes should include salary requirements. Please visit our website at [www.tteci.com](http://www.tteci.com) or [www.tetratech.com](http://www.tetratech.com) to see the array of services that we provide and exciting projects we are currently working on.

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**TN & Associates, Inc.** specializes in environmental services, natural resources, infrastructure engineering, and construction services. Our San Diego office is currently looking to fill the following positions:

**Staff Geologist:** Geologist to perform office and field assignments for environmental site assessment and remediation projects. Position will involve soil borings, monitoring well installations, soil and water sampling, historical research investigations, data management, construction documentation and construction QA/QC, and report writing. Ability to adapt to both office and field environments a must. OSHA 40-hour training a plus. Periodic travel is required. **Project Geologist:** Geologist with 3 to 7 years experience required in conducting all aspects of field investigations including limited site assessments, multi-task remedial investigations and remedial actions with a strong emphasis in technical writing skills. The ideal candidate will have experience in data analysis and reporting. PG registration and OSHA 40-hour training a plus. Work will entail some fieldwork and travel, mainly within California. Experience with government projects (DOD, USACE, AFCEE, Navy and USEPA) landfills and stormwater engineering/compliance a plus.

We offer a competitive salary, benefits package and friendly working environment. Equal Opportunity Employer. Please mail or fax your resume and letter of interest to: T N & Associates, Inc., 2247 San Diego Avenue, Suite 238, San Diego CA 92110, fax 619-291-8100.

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**CDM** is looking for a fulltime **Engineering Geologist** to join its geotechnical division in the West Coast. The successful candidate will be responsible for the following:

- Conduct geologic field investigations on a wide range of public and private projects involving seismic evaluations, landslides, and subsurface soil, rock and water conditions for dams, buildings, water and waste water treatment facilities, transportation projects and remedial actions.
- Perform and supervise geotechnical and geo-environmental analysis, design, and construction engineering services.
- Provide project management for geotechnical and geo-environmental projects including the preparation of scope, schedules and budgets.
- Contribute to business development and proposal efforts and prepare technical reports.
- **Requirements:**
- Demonstrate the ability to perform quality-engineering geology services while adhering to project scope, budget, and schedule.
- Must have at least 10 years experience in geological engineering.
- M.S. in engineering geology or related discipline required
- Must be a CA Certified Engineering Geologist (CEG)
- Major project experience involving seismic and fault investigation is a must.
- OSHA 40-hour HAZWOPER training desirable.
- Excellent written and verbal communication skills required.

CDM has consistently earned industry recognition for our innovative project solutions. Recognition by respected professional organizations, such as the American Academy of Environmental Engineers, the American Council of Engineering Companies, and the Design-Build Institute of America, is a testament to CDM's delivery of exceptional service and the right total solutions for each client's needs. We are an equal opportunity employer. Qualified candidates can send resumes to [mcshefferylj@cdm.com](mailto:mcshefferylj@cdm.com).

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### **Principal Hydrogeologist**

Looking to make a real impact at work? Ready to "Never be bored"? Natural born leader? Work for an industry leader.....Join MACTEC.

**MACTEC Engineering and Consulting, Inc.** is a leading consulting firm providing engineering, environmental and remedial construction services to public and private clients worldwide. Operating with over 3,000 employees in 100 offices nationwide with a global reach, MACTEC is currently ranked 31st among *Engineering News-Record's* top 500 design firms.

**MACTEC's** Irvine office is in search of a **Principal Hydrogeologist** to lead the geological and hydrogeological efforts, manage a team of committed technical staff members and advance business development opportunities within a variety of clients and projects. This is an excellent opportunity for the "natural born leader" who wants to utilize their technical and leadership skills!

### **Scope of Role:**

1. Provides hydrogeological guidance and support for soil and groundwater remediation.
2. Develops and presents new approaches and services within environmental consulting market
3. Assumes project management roles and leads site investigation efforts
4. Conducts fate and transport modeling, pump tests and capture zone analysis
5. Develops site specific hydrogeological model.
6. Prepares and deliver technical reports, communications and presentations.

**Key Qualifications:**

1. BS/MS/PhD (Geology/Hydrogeology)
2. Min 10 years experience, must have consulting experience as well
3. Must have groundwater modeling experience, CA certification preferred
4. PG, CHG registration in CA required
5. Excellent communication and leadership skills

**MACTEC's benefit offerings include health, dental, vision, short and long term disability, life insurance, paid vacation, sick, holidays, a 401(k) match and tuition reimbursement. More information can be found on our website at [www.MACTEC.com](http://www.MACTEC.com)**

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Since 1986, clients have turned to **Ninyo & Moore** for innovative solutions to complex geotechnical and environmental challenges. As a leading geotechnical and environmental sciences engineering and consulting firm, Ninyo & Moore provides specialized services to clients in both the public and private sectors. With offices in Colorado, California, Nevada and Arizona, the firm is fully committed to being responsive, cost-efficient, and thorough in meeting its clients' project needs and objectives.

Ninyo & Moore Geotechnical & Environmental Sciences Consultants has immediate employment opportunities in our Denver, Irvine, Las Vegas, Oakland, Phoenix, and San Diego offices. Positions include Engineers and Geologists of all levels, including **Staff Engineers and Geologists, Project Engineers and Geologists, Staff and Project Environmental Scientists, Chief Geotechnical Engineer, and Construction Field and Laboratory Technicians.**

The successful candidates should have a BS or MS degree for staff-level positions and five years or more of experience for project to senior-level positions. The candidates should be detailed oriented and have excellent verbal and written communication skills. Professional Engineer (PE) and/or Professional Geologist (PG) registrations preferred.

Ninyo & Moore offers a competitive salary, excellent benefits and an opportunity for professional growth. Please visit our website for complete and detailed job descriptions and to submit your resume in confidence at [www.ninyoandmoore.com/careers](http://www.ninyoandmoore.com/careers) or mail to our corporate office at 5710 Ruffin Road, San Diego, CA 92123, Attention: Human Resources. EOE

**Hargis + Associates, Inc.**, a San Diego based consulting firm specializing in **hydrogeology and engineering**, and **SDAG Corporate Sponsor** currently has opportunities in our San Diego, California office. We are currently looking to fill the following positions:

**CAD Technician:** Ideal candidate is a highly qualified professional for preparation of engineering and geologic graphics. Position requires experience in *AutoCAD* and with engineering process design. Experience with *Civil 3D*, *Land Development Desktop*, *Autoplant*, and *Arcview* a plus.

**Staff Engineer:** Candidate would have a B.S. Degree in Chemical, Civil, or Mechanical Engineering and 3 to 5 years relevant experience including design, operation, and maintenance of remediation systems. Masters degree and registration is a plus. Candidate should possess strong writing and presentation skills. Position will be based in San Diego, California, and will require some travel and field work. Valid driver's license and U.S. Citizenship required. OSHA 40-hour training preferred, but not mandatory.

**Hydrogeologist:** Candidate would have a B.S. Degree in Geology and M. S. Degree would be a plus. Entry level position, with work including soil and groundwater sampling, well installation, aquifer test analysis, and report preparation. Candidate should possess strong writing and presentation skills. Candidate with Hydrogeology coursework or GIS background is a positive. Position will be based in San Diego, and will require travel and field work. Only entry level candidates will be considered. Valid driver's license and U.S. Citizenship required. OSHA 40-hour training preferred, but not mandatory.

**Staff Hydrogeologist:** Position requires minimum a B.S. Degree in Geology, and 3 to 5 years relevant experience, including experience with soils and groundwater sampling, well installation, work plan and report preparation, task management, cost estimating and scheduling. Candidate should possess strong organizational, writing and presentation skills. California Professional Geologist (PG), or ability to obtain within two years, groundwater modeling experience, and Masters degree is a plus. Position will be based in San Diego, and will require some travel and field work. Valid driver's license and U.S. Citizenship required. OSHA 40-hour training required.

Hargis + Associates offer competitive salaries and benefits, and a challenging work atmosphere. Hargis + Associates in an Equal Opportunity Employer. To learn more about Hargis + Associates, please visit our website at: [www.hargis.com](http://www.hargis.com).



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

Hargis + Associates, Inc.  
Attention: Jennifer Layton  
2365 Northside Drive, Suite C-100  
San Diego, CA 92108

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**The San Diego Natural History Museum** is run and operated by the San Diego Society of Natural History, a private non-profit scientific organization incorporated in 1874. The Museum's mission is to interpret the natural world through research, education and exhibits; to promote understanding of the evolution and diversity of Southern California and the peninsula of Baja California; and to inspire in all a respect for nature and the environment.

Within the Museum, the Department of PaleoServices (DPS) specializes in paleontological resource management. Our focus is on the recognition, recovery, and preservation of the significant and unique paleontological resources that occur in this region. The activities of DPS are helping to preserve significant fossil assemblages and are directly contributing to the growth of the important paleontological research collections at the Museum. We are currently looking to fill the following position:

**Paleontological Field Manager:** Position responsibilities include coordination of paleontological field activities (i.e., supervision of field monitors in prospecting for and collection of fossils and the recording of stratigraphic, taphonomic, geographic, and topographic data) and production of final project reports that summarize the methods and preliminary results of paleontological salvage activities. Other duties include generation of initial discovery letter reports for City, County, and/or State agency managers and generation of paleontological resource assessment technical reports. Opportunities also include paleontological field work in the Southern California region and working with the extensive fossil collections of the San Diego Natural History Museum.

Qualified candidates must have at least a B.S. Degree in Geology or Paleobiology; 2 to 3 years of relevant experience (especially sedimentary geology and paleontology); excellent supervisory/managerial, verbal, written, and interpersonal skills; and a strong work ethic, intense drive, and initiative for quality and customer service. This position is a regular, full-time salaried position with a generous benefits package (e.g., full medical and 401K plan). Compensation will be based on individual qualifications and experience (annual salary range \$40,000 to \$60,000).

Please send resumes to Yvonne Kugies ([ykugies@sdnhm.org](mailto:ykugies@sdnhm.org))

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## **GEOLOGISTS WANTED for Uranium Exploration & Development Projects**

**Ur-Energy USA, Inc** is a rapidly growing uranium exploration and development company with offices in Littleton, Colorado and Casper, Wyoming. We are currently seeking six field-oriented graduate geologists to fill permanent and summer positions. Applicants should have US citizenship or permanent residency. For additional information about the company, visit [www.ur-energy.com](http://www.ur-energy.com). Brief descriptions for open positions follow:

**Two Permanent Project Geologist Positions.** Assignment location could be in our Casper, Wyoming office or in any other domestic location where Ur-Energy is active. The positions call for field-experienced geologists who will have the independent responsibility of developing and overseeing activities for exploration projects that might occur in any geologic environment.

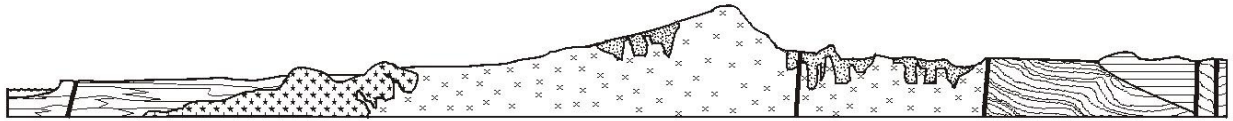
**One Permanent Field Geologist Position.** This position will be under the supervision of a Project Geologist and will involve field activities associated with the development of an In Situ Recovery project in Wyoming.

**Three Summer Geologist Positions.** We currently have two summer field positions open in our Casper, Wyoming office and one summer position open in our Littleton, Colorado office. For all three positions, we are looking for BS graduates who are planning to go on to or are currently involved with graduate studies, and who will be available from the end of the spring semester to the beginning of the fall semester.

Please contact one of the following individuals for detailed information:

Cal VanHolland  
Exploration Manager, Wyoming  
5880 Enterprise Drive, Suite 200  
Casper, WY 82609  
307-265-2373  
[cal.vanholland@ur-energyusa.com](mailto:cal.vanholland@ur-energyusa.com)

or Hank Johnson  
Corporate Development Manager  
10758 W. Centennial Rd, Suite 200  
Littleton, CO 80127  
1-866-981-4588  
[hank.johnson@ur-energyusa.com](mailto:hank.johnson@ur-energyusa.com)



# SAN DIEGO ASSOCIATION OF GEOLOGISTS

[www.sandiegoeologists.org](http://www.sandiegoeologists.org)

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