

SAN DIEGO ASSOCIATION OF GEOLOGISTS

www.sandiegogeologists.org

SDAG MEETING ANNOUNCEMENT Wednesday, March 16, 2005

STUDENT PRESENTATIONS

presented by

ANGELA HOTZ
USD

CHARLES LIPKA
SDSU

Where: Giovanni's Restaurant
9353 Clairemont Mesa Blvd.
San Diego, CA 92123
(858) 279-6700

When: 6:00 pm – Attitude Adjustment Hour
7:00 pm – Dinner
8:00 pm – Program

Directions: Giovanni's Restaurant is located at the southwest corner of Ruffin Road and Clairemont Mesa Blvd. (Shopping center at the corner of Ruffin Road, ½ mile west of I-15. Ample free parking.)

Dinner: **All you can eat** Scrumptious Pizza and Salad Buffet and tea or soda. Beer available at the bar.

Cost: \$20.00 per member and guests, \$10 for students. Add \$5.00 if you did not make a reservation.

Reservations: Make your reservation **online** at www.sandiegogeologists.org or call the SDAG Reservation Hotline at (619) 255-8380, **no later than 9:00 a.m. Monday, March 14th.**

RESERVATIONS CANNOT BE ACCEPTED AFTER Monday AT 9 AM.

2005 EXECUTIVE COMMITTEE

PRESIDENT - Margaret R. Eggers; *Eggers Environmental, Inc.*; Ph: (760) 757-7711; megggers@eggersenv.com

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TREASURER - Sarah Gray; *University of San Diego*, Ph: (619) 260-4098; fax: (619)260-6874; sgray@san Diego.edu

PUBLICATIONS - Lowell Lindsay; *Sunbelt Publications*; Ph:(619)258-4911 x111; fax:(619)258-4916; llindsay@sunbeltpub.com

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

BIOGRAPHICAL SKETCH: ANGI HOTZ

Angi Hotz earned a B.S. in Biology from San Diego State University in 2000. Shortly thereafter, she began working in the field of environmental toxicology and has continued to do so ever since. In the fall of 2001, Angi entered the Marine Science graduate program at the University of San Diego with the intention of building her resume in toxicology further. There she joined Dr. Michel Boudrias' team to conduct environmental research in Baja; Angi just completed her Master's degree. Angi continues to work at Nautilus Environmental where she oversees the quality assurance program for two laboratories.

ABSTRACT:

Water and sediment quality in Bahía Magdalena (BCS, Mexico) and their relation to copper concentrations measured in white clam tissue (*Chione californiensis*)

Bahía Magdalena, located in Baja California Sur, Mexico, is a highly productive bay with commercially important resources such as sardines, shrimp, lobster, abalone, clams, and scallops. The bay houses a thriving port, aquaculture facilities, and a productive fish cannery (La Conservera Cal Mex). Due to the heavy use of this bay for commercial purposes, adverse anthropogenic impact has been observed (Malatesta et al. 2002). Their study found that the fish cannery was the most significant contributor to pollution in the bay. In continuing efforts to further investigate the magnitude of impact on a variety of water and sediment quality parameters, as well as the impacts of copper on benthic macrofauna directly associated with the cannery effluent discharge, water and sediment samples, and white clams (*Chione californiensis*) were collected at selected sites throughout Bahía Magdalena during two different seasons: summer 2002 and winter 2003. Sediment samples were evaluated for grain size, mineral composition, and organic content, as well as acid-extractable copper. Temperature, salinity, dissolved oxygen (DO), pH and total copper were measured in each seawater sample. Wet and dry weights, as well as total copper concentrations were measured for clam gills, and remaining soft body tissues.

Results showed that, with respect to seawater, elevated DO, lower salinity, and elevated copper concentrations were measured at the Cannery sites than at the reference sites in August 2002 (when La Conservera Cal Mex was in operation). All of these differences were either directly or indirectly related to the discharge of effluent. Sediments were composed primarily of quartz, and had low organic content. Sediments at the cannery sites did exhibit higher proportions of rock fragments and larger grain sizes than did the sediments at the reference sites, suggesting a slight anthropogenic impact. Results for acid-extractable copper suggested that there is a natural source of copper in addition to a potential point source at the cannery. Copper concentrations measured in clam tissues suggest that there are sources of copper at the Cannery and San Buto sites, but not at Las Dunas. At all sites and for both sampling events, copper bioaccumulation demonstrated a negative correlation to tissue weight; smaller clams were generally richer in copper than larger ones. Linear regression analyses between copper concentrations in overlying water or sediment and clam tissues revealed that the route of exposure to copper for *C. californiensis* is likely through overlying water.

BIOGRAPHICAL SKETCH: CHARLES LIPKA

Charles Lipka is currently at San Diego State University working toward his Master's degree with thesis advisor David Huntley. Mr. Lipka also works as a staff hydrogeologist with NorthShore Engineering, Inc., in Carlsbad. While completing his B.S. in geology at Temple University he had the opportunity to work with the USGS Trenton, New Jersey, office studying temporal variation in MTBE contamination in recreational lakes.

ABSTRACT: DEPOSITIONAL SIMULATION OF AQUIFER HETEROGENEITY

The modeling of the movement of contaminants dissolved in groundwater requires accurate information about the distribution of geologic units. The characterization of the subsurface geology at contaminated sites is typically based on soil samples collected through various drilling methods. The soil sample data may be used to generate cross sections that will be utilized to build three-dimensional models or stochastically produce random distributions of permeability. Both of these methodologies often under represent the continuity of high permeability features, such as channel deposits. Continuous or interconnected, high permeability features have been found to form preferential flow paths for contaminants moving with groundwater.

One approach to overcoming data limitations in geologic characterization is depositional simulation. SEDSIM is a three-dimensional sedimentary process simulator based on physics of fluid motions in open channels. This presentation will explore the problem of modeling the movement of contaminants with limited geologic data and the potential use of SEDSIM to provide a better representation of the continuity of high permeability features.

PRESIDENT'S CORNER:

- I'd like to take this opportunity to say **THANK YOU** to our Corporate Sponsors. I have noted that many of these wonderful companies and individuals have supported SDAG at this level consistently for years. The Corporate Sponsor support allows us to give out **TWO** scholarships a year, and subsidizes student attendance to our dinner meetings. SDAG is extremely grateful to its corporate sponsors!!! The benefits to our sponsors includes a special mention in the yearly field trip guide (these published guides are quite popular and hang around people's desks and bookshelves for years 'cause they're very useful!); Corporate weblink on our SDAG website, and special mention at our monthly meetings. Our two student presenters this month are a great reason why you should consider Corporate Sponsorship if you're not already one. These two "new" geologists have done really good work and are a credit to our geologic community. SDAG is proud to support these newly or soon to be graduated students!
- **GOT JOBS???** Don't forget the SDAG website and newsletter always contain the most recent job openings that are of interest to our members. If you're hunting for a job, check out our webpage first. Companies are always sending us information on openings and we post them to the website immediately (Thanks Carolyn!). This is a service to all our members we hope is truly helpful.
- Come join us for the convivial atmosphere of Giovanni's and see what's going on with geo-research at USD and SDSU with our two scholarship presenters.

-- Margaret Eggers

ANNOUNCEMENTS:

Short Course Announcement: EVALUATION & MITIGATION OF SEISMIC HAZARDS AN INTENSE TWO-DAY COURSE APRIL 8-9, 2005 SAN DIEGO, CA

A short course for geotechnical professionals on evaluation and mitigation of seismic hazards. The course is sponsored by San Diego ASCE Geotechnical section and SDAG, in partnership with UC Berkeley's Department of Civil and Environmental Engineering. To sign up, please use the form linked to our website: www.sandiegoengineers.org. The course is taught by leading researchers and experts in seismic hazards: J. D. Bray, UCB; R. B. Seed, UCB; J. Pestana, UCB; N. Abrahamson, UCB; T. Rockwell, SDSU

Location:

Tom Ham's Lighthouse, 2150 Harbor Island Drive, San Diego, CA (619) 291-9110

Cost

The fee is \$450 and includes: Comprehensive Course Notes, and Daily Breakfast, Lunch, and Coffee

Friday 7:00 am - 4:00 pm

Seismicity and Earthquake Engineering Overview,
Selection and Use of Strong Motion Data,
Empirical Evidence of the Influence of Soils on
Ground Shaking Characteristics,
Dynamic Soil Properties and Their Evaluation,
Seismic Site Response Evaluation.

Saturday 7:00 am - 4:00 pm

Evaluation and Mitigation of Soil Liquefaction
Hazard,
Surface Fault Rupture,
An Overview of Other Issues.

ANNOUNCEMENTS (CONTINUED):

2005 SDAG MEMBERSHIPS are now being accepted. Please be sure to renew to continue receiving the newsletter. Your membership supports our activities. And your membership provides you priority on our field trip. We adore our Corporate Sponsors. Thank you to all the Corporate Sponsors who renewed! Please consider renewing your Corporate Sponsorship for 2005. A membership form can be downloaded at our website.

POSTPONED: 19th ANNUAL SDSU GEOLOGY ALUMNI FIELD TRIP

WHEN: April 1-3 ← **Note Changed Date!**

We regret to inform you that the last major storm has washed out portions of the Box and Painted Canyon Roads. Therefore, the SDSU Geology Alumni fieldtrip, scheduled for March 5 and 6, has been postponed until the weekend of April 2 and 3. The road department hopes that both roads will be open by then, or at least Box Canyon Road (Hwy. 195). As the beginning of April draws near, go the Geology dept. website: <http://www.geology.sdsu.edu> and click on 'field trip into' for the latest info on road conditions and any further change of plans! Thanks for your patience!
-- Monte Marshall

Paul Wetmore will lead a field trip **NORTHERN ALISITOS ARC SEGMENT: ANCESTRAL AGUA BLANCA FAULT REGION** on April 3rd as part of the Peninsular Geological Society's VII International Meeting on the Geology of the Baja California April 3-6. If interested, please send a message to Jorge Ledesma at ledesma@uabc.mx and send your payment to Richard Sedlock before February 28th. The cost of the trip is \$90.00 US dollars and includes field guide, lunch and drinks. The trip will start and finish at the Santa Isabel hotel.

Send a check or money order before February 28th payable to "Richard Sedlock": Dr. Richard L. Sedlock, Department of Geology, San Jose State University, San Jose CA 95192-0102; phone: (408) 924-5020, fax: (408) 924-5053 sedlock@geosun1.sjsu.edu

Meeting fee:

Member PGS \$ 120.00 US dlls

Profesional \$ 160.00 US dlls

Student \$ 70.00 US dlls

For more info: <http://geologia.igeolcu.unam.mx/proyecto/SGP/caratulaSGP.html>

2005 SDAG MEETING SCHEDULE - Mark your Calendars!

We'll fill out the schedule as we get speaker confirmations and finalize meeting places. Meetings are usually on the 3rd Wednesday of the month but may change to accommodate speaker and meeting place schedules. Check here for updates!

April 20	Monte Marshall, "Mountain Building from the Alps to New Zealand" Bali Hai Shelter Island
May 19** **NOTE This is a Thursday!!	Rick Halsey, The Chaparral Institute Mission Trails Park Nature Center
June 15	TBD
July 20	TBD
August 17	TBD
September 21	Phil Farquharson - Carrizo Gorge talk
October 22-23	Annual Field Trip – Carrizo Gorge!!! (Note: dates are tentative.)
November	TBD
December 21 (?)	Annual Holiday Meeting at San Diego Natural History Museum!

ANNOUNCEMENTS (CONTINUED):

San Diego Association of Geologists February 12, 2005. One-Stop Field Trip (One Stop Wonder).

Diane noted no one showed up for the morning bike ride. Monte waited 1.5 hours for Lie Tyles....

On a balmy Saturday morning several intrepid geologists (namely Phil F., Diane and Monte M., David B., Don L., Greg C. and Carole Z. - last names deleted so that we cannot be thanked) stormed Dana Middle School through the convenient hole in the baseball field fence. (It was noted that the hole was previously made by others.) This approach was required since we had started out on a trek from Phil's backyard across the "Phil Farquharson Canyon Graben."

Telescopes and binoculars were provided for those geologists that admitted that it was actually raining in San Diego (yet again!) and stayed high and dry back at Phil's (Margaret E. and Sue B.). Ty L. avoided it all by coming just in time for BBQ. Umbrella ratio to Rock hammers: 2:1...

Diane quickly found that she could avoid sinking in the quicksand by doing sight geology from a dump truck. Go Diane!

How many formations can we see in one stop?

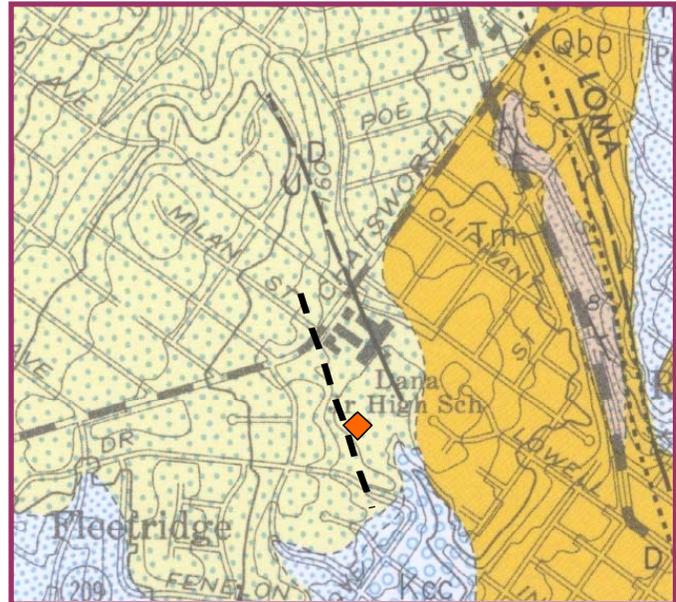
Lindavista terrace deposits, San Diego Formation, Cretaceous Cah Brillah, Bay Point all

were suggested for the various rocks seen in the cut face. A fault will usually answer most of these types of questions where interruptions occur. After a few beers and a glass of wine, it was decided that what appeared to be two faults was actually only one. OK, prior to the adult beverages, we observed on the cut slope (which ranged in height about 10 to 30 feet) from left to right: Lindavista Fm. faulted against Cretaceous Cabrillo (apparent dip: 10 degrees), faulted against good ol' Linda, once again. So... we were looking at a cut slope where a fault entered at the left and exited at the right. Phil suggests the fault displaces strata down to the east. Horizontal displacement cannot be ruled out. The temporary slope is cut steeper than 1:1. *Ouch*. It is raining. *Glug Glug*. There is a 6-inch drain from above draining on the temporary slope face. *Ouch*. Surficial failures were occurring just below a gazebo. We stayed away...

True to tradition, rain or no rain, tri-tip BBQ was enjoyed by all, including mascots Chewy and Spot.

Addendum: We also proved that slipping through wet ice plant and weeds is the best way to clean muddy hiking boots.

Blame the authors: Carole and Phil and Le Monte.



Field trip stop indicated by red diamond (◆). Dashed line (- - -) shows approximate location of Farquharson Graben fault seen in the fresh cut face, field of Dana School. Base map: Kennedy, 1975.

See photos at:

http://www.geology-guy.com/sdaq_osw_12feb05/

SDAG 2005 Annual Fall Field Trip and campout is tentatively scheduled for the weekend of October 22-23. We will explore the geology of Carrizo Gorge in cooperation with the Carrizo Gorge Railway. We are limiting participants to 100. Current active SDAG members will have priority, so please renew your membership today! Registration and additional info to follow.

San Diego is the home of the **Gemological Institute of America (GIA)** and is hosting the 4th International Gemological Symposium **25-27 August 2006**- field trip is to the Pala pegmatite district. Contact info: **Dr. James Shigley** jshigley@gia.edu or www.gia.edu

SDAG Wear: - Monte (Murbach) has a variety of shirts, hats, visors and even a nice vest with the SDAG logo. A small selection is available for purchase at the meetings; all SDAG wear can be ordered from Monte.

ANNOUNCEMENTS (CONTINUED):

2005 Inland Geological Society Meetings

April 6, 2005 - John Izbicki, California Coastal Plain and Desert Areas, Water Resources Division, U.S. Geological Survey, San Diego: "Studies Results on Chromium in the Mojave Desert"

May 17, 2005 (Tuesday) - Speaker(s): Sponsored by CSU-SB, Geology Department, Dr. Alan Smith, Department Chair (with Erik Melchiorre): "Tour of New Facilities and Short Discussions of Programs, Geology Department, California State University, San Bernardino," hosted by CSU-SB, joint IGS joint meeting with Southern California Section, Society of Mining, Metallurgy and Exploration (SME).

June 1, 2005 - Dr. Gary Fuis, U.S. Geological Survey, Menlo Park, CA: "Geophysical and Geological results of active-source (dynamite) deep seismic work in southern CA leading to identification of a hazard in the form of a major decollement beneath the San Gabriel Mountains, and apparent connection to the Puente Hills thrust fault system" (subject, not talk title)

Santa Barbara Museum of Natural History Dibblee Geology Center presents ten new Tom Dibblee maps of the San Francisco Bay area and the San Joaquin Valley region created by legendary Thomas W. Dibblee. This set will complete a major section of northern California mapped by Dibblee himself. The process of digital map-making enables the Dibblee Geology Center to complete maps in a timely manner while preserving the integrity of Dibblee's work.

Over the course of 75 years, Dibblee created maps that have been instrumental in understanding California's geology. Dibblee, who personally mapped more than a quarter of the state of California - from the Mohave Desert to the Santa Cruz Mountains - remained actively involved in the publication of each new map until his death in November, 2004. The magnitude, integrity, and permanence of Dibblee's geologic mapping are truly unprecedented and legendary which is why it is the first priority of the Dibblee Geology Center to complete the publication of Tom's maps.

Dibblee maps are renowned for their high quality and serve a diverse group of users such as engineering geologists, oil companies, U.S. Forest Service, environmentalists, and students, among others. To date, the Dibblee Geology Center has released 127 maps and 3 CDs. The newest maps are 7.5-minute quadrangles of:

San Joaquin Valley Area

DF141 Cholame Hills
DF143 Orchard Peak
DF139 Parkfield
DF142 Cholame Valley
DF144 Cholame

San Francisco Bay Area

DF146 Benicia
DF148 Briones Valley
DF145 Mare Island
DF147 Richmond
DF149 Walnut Creek

To purchase Dibblee maps go to the Museum's online store at www.sbnature.org/estore or the Museum's Gift Shop at 2559 Puesta del Sol Road in Santa Barbara or call (805) 682-4711, ext. 122. Dibblee maps are available rolled (\$20.00 plus tax) and folded (\$15.00 plus tax) - shipping and handling are additional if ordering online or by phone. For more information contact Mary Anne Prince via email at mprince@sbnature2.org

South Coast Geological Society Field Trip Guidebook 2004 (Catalina Island) will be available at our next meeting for \$45. See Bill Elliott.

70th Street Trolley Station will open this summer. Would anyone be interested in helping provide information, graphics, or ideas for a public display showing the geology (e.g., geologic history, stratigraphy, tectonics, etc.)? If so, please contact David Bloom at 619-524-6967 OR secretary@sandiegoeologists.org

DO YOU HAVE AN ANNOUNCEMENT?? Do you have an event, job opening, field trip or other announcement you would like to share with our members?? Just call or email our SDAG Secretary, **David Bloom** at 619-524-6967 OR secretary@sandiegoeologists.org.

JOB OPENINGS!

Ninyo & Moore's San Diego Environmental Division has immediate employment opportunities for individuals with California certifications and experience performing and overseeing asbestos and lead-based paint field projects. Appropriate certifications include Certified Asbestos Consultant, Site Surveillance Technician, and Lead Inspector/Assessor/Project Monitor. Individuals with California asbestos and lead experience and certifications is preferred. Experience with Phase I and II Environmental Site Assessments is a plus, but is not required. Please forward resumes to the attention of Ms. Margot Graves, Ninyo & Moore, 5710 Ruffin Road, San Diego, California 92123 or mgraves@ninyoandmoore.com. Ninyo & Moore is an Equal Opportunity Employer.

URS is looking for a Senior Geologist for their Environmental Sciences group, San Diego office. Requirements are BS in Geology. Candidate should be pursuing licensure as a geologist within the next 1-2 years. 5 years of geology environmental, some regulatory agency experience a plus. Experience with regulatory guidelines such as the Site assessment and mitigation manual, among others. **JOB DESCRIPTION:** Assist project managers in performing environmental investigations. Ability to successfully complete the following - Manage small project from the start to finish with limited supervision. Log borings in accordance with USCS. Install monitoring wells; provide fieldwork oversight of subcontractors. Prepare work plans. Be familiar with laboratory analyses and waste characterization. Evaluate analytical data. Assist with preparation of reports summarizing field procedures and results. You can submit a resume through the URS website (www.urscorp.com), look under "Careers." This is job solicitation #URS2221.

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

Hydrogeologist/GIS Environmental Scientist: Candidate would have a B.S. Degree in Geology or related field, and expertise in ArcView GIS and related applications. Ideal candidate would have experience with sampling, well installation, aquifer test analysis, and/or groundwater modeling. Position will be based in San Diego, and may require some travel and field work. OSHA 40-hour training preferred. Entry level candidates with a strong GIS background will be considered.

Staff Hydrogeologist: Candidate would have 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. Registered Geologist (RG), 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. OSHA 40-hour training required.

Hargis + Associates offer competitive salaries and benefits, and a challenging work atmosphere. Hargis + Associates is an Equal Opportunity Employer. To learn more about Hargis + Associates, please visit our website at:

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: Kim Stransky
 2365 Northside Drive, Suite C-100
 San Diego, CA 92108

<i>Code</i>	<i>Position</i>	<i>Department</i>	<i>Location</i>
04-75	Staff or Sr. Staff Eng/Geo/Scientist	Environmental	Rancho
04-85	Engineering Technician II	Geotechnical	Rancho
04-86	Engineering Technician II	Geotechnical	Rancho
04-72	Lab Technician I	Laboratory	Irvine
05-01	Sr. Project Engineer	Geotechnical	Irvine
05-03	CAD Operator	Geotechnical	Irvine
05-08	Staff Geologist	Geotechnical	Irvine
04-81	Office Assistant	Geotechnical	San Diego
04-57	Project Engineer	Environmental	San Diego
05-12	Staff Engineer or Geologist	Environmental	San Diego
04-43	Engineering Technician II or Senior	Geotechnical	St. Clarita
05-06	Staff Engineer	Geotechnical	St. Clarita
04-63	Sr. Project Engineer (PE or GE)	Geotechnical	Temecula
04-76	Project Engineer	Environmental	Temecula
04-83	Sr. Project/Bus Development	Enviro/Geo	TBD

Send resume to: Robert Garrett, Hunt Patton & Brazeal, Inc., rgarrett@huntpatton.com, 918-434-3538

JOB OPENINGS! (CONTINUED)

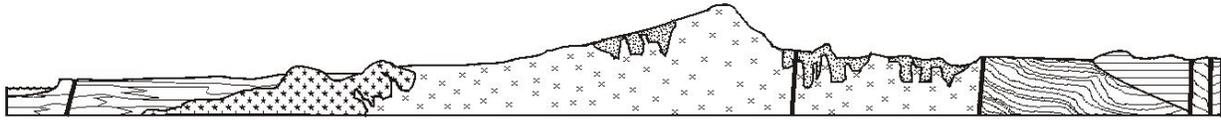
**Geotechnical/Environmental-Civil Design/Survey-Testing/Inspection
Construction Testing & Engineering, Inc. (CTE)**

CTE, a leader for more than 15 years in consulting engineering, survey, and testing/inspection, is actively searching for qualified **Engineers, Geologists, QC Mgrs, and Surveyors** for our corporate office building in Escondido and new office in San Diego. Professional registration is preferred, but not mandatory. Also seeking **Drafters, Soils Technicians, Special Inspectors, and Survey personnel**. Compensation is highly dependant on previous experience. Tremendous growth and management potential exists for all positions. For more information contact or forward resumes to: CTE, Attention Natasha, Phone: 760.746.4955, Fax: 760.746.9806, Email: Natasha@cte-inc.net

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A significant portion of the SDAG operating and scholarship budget is provided by corporate sponsorship. Please consider renewing your Corporate Sponsorship for 2005! In addition to monthly recognition for your contribution, you will be entitled to a free Internet "link" from the [SDAG Website](#), and all Corporate Sponsors are listed in the front of the annual SDAG Field Trip Volume.

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Dr. Sarah Gray - University of San Diego	



SAN DIEGO ASSOCIATION OF GEOLOGISTS

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| | _____ Regular Member (email delivery only) | \$ 15.00 |
| | _____ Regular Member (add US mail delivery) | \$ 20.00 |
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Date: _____ Check for change of mailing address:

Please enclose a check payable to SDAG, and mail to:

Sarah Gray
Marine and Environmental Studies Department
University of San Diego
5998 Alcalá Park
San Diego, CA 92110

**San Diego Association of Geologists
c/o David M. Bloom
3728 Mt. Almagosa Place
San Diego, CA 92111**