



## ASSOCIATION OF ENGINEERING GEOLOGISTS

Southern California Section

*"Serving Professionals in Engineering, Environmental,  
and Groundwater Geology Since 1957"*

### NEWSLETTER - JULY 2004

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**Date:** **Tuesday, July 10, 2004**  
**Location:** Steven's Steak House, 5332 Stevens Place, Commerce, CA  
**Time:** Social Hour: 6:00 PM; Dinner: 7:00 PM; Presentations: 7:45 PM  
**Reservations:** Call (949) 253-5924 ex 564, or email Brian Villalobos, by **Noon, Monday, July 9**  
**Cost:** \$25 per person with reservations, \$30 at the door; \$12 for students with valid student ID.

**Presenter:** Dr. Robert D. Jackson

**Topic:** Maximum Magnitude for a Fault?

**Abstract:** Most fault-based forecasts assume the upper magnitude limit depends on fault length or area. For example, the source model in the CGS/USGS seismic hazard report for California assume the Wells and Coppersmith (1994; W&C) relation adjusted for uncertainty. However, the magnitudes estimated by applying W&C (or similar regression relationships) to mapped fault lengths are inconsistent with California earthquake data. First, several earthquakes violated the assumption that mapped fault dimension limits rupture size. Second, the magnitude distribution obtained using W&C for all of California is inconsistent with observations.

We examined previously mapped faults where California earthquakes might have occurred. None of the quakes on the W&C list ruptured a previously mapped fault or segment from end to end. Five events out of 16 ruptured past the ends and some others could not be associated with mapped faults. Whether unmapped faults or segments existed before the quakes is an open question, but mapped fault termini don't stop earthquakes.

We constructed a statewide source model based on a new fault activity map. We jointed collinear faults with gaps under 20 km to make longer, single faults. Using observed slip rate and length, we estimated moment rate and magnitude distribution for each fault assuming a truncated Gutenberg-Richter magnitude distribution, W&S, and  $b=1$ . We then determined the  $a$ -value to match the tectonic moment rate for each fault, and summed all faults to get a theoretical statewide magnitude distribution.

This distribution forecasts a significantly higher rate than reported in the Topozada catalogue in the magnitude range 6-7. Other models based on W&C share the same discrepancy.

Biographical Info: Dr. Jackson is a professor at UCLA since 1981 and is currently the Chair of the Department of Earth and Space Sciences. He graduated from the Department of Physics at Cal Tech in 1965 and received his Ph.D. from the Department of Earth and Planetary Sciences at MIT in 1969.

Dr. Jackson has received numerous awards and honors and is a fellow of various professional societies. Dr. Jackson has served as an officer or on panels for the American Geophysical Union, National Academy of Sciences/Natural Research Council and Southern California Earthquake Center to mention a few. He has authored or co-authored over a dozen articles and papers on earthquakes including topics such as forecasting, probabilities, stress-strain, hazard source models and crustal deformation.

**2003-2004 CONTRIBUTORS (Thank You!)**

Earth Consultants International, Eldon Gath

Joe Cota

Robertson Geotechnical, Inc.

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Business Card	\$10/month	\$100/year
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1/4 page	\$35/month	\$350/year
Full page	\$50/month	\$500/year

## EMPLOYMENT OPPORTUNITIES

### **City of Los Angeles (8-04)**

The City of Los Angeles Department of Building and Safety is currently searching for a licensed Geotechnical Engineer for the position of Geotechnical Engineer I in the Grading Division. The work environment is very fast-paced with constant challenges. The salary is competitive with excellent benefits. Anyone interested in this position should contact Andy Szpikowski (213 /482-0493) or Dana Prevost (213/482-0488)

### **Allan E. Seward (7-04)**

Allan E. Seward Engineering Geology, Inc. (AESEGI) is an established company for over 26 years with an office in the City of Santa Clarita. AESEGI now employs a current staff of approximately 22, which includes Registered Geotechnical and Civil Engineers, Certified Engineering Geologists, Staff Engineers and Geologists, Laboratory and Field Technicians as well as our office support staff.

We are currently seeking a staff/project-level geotechnical engineer and a soil technician to join our professional team to perform geotechnical investigations in Northern Los Angeles County and adjoining cities. We are interested in dynamic and motivated individuals with the leadership skills to grow within an expanding operation. We offer an excellent compensation package.

Please send resume to:

Dharmesh Amin, Allan E. Seward engineering Geology, Inc., 27825 Smyth Drive, Valencia, CA 91355.  
(Fax) 661-294 0833, Email: Damin@ SewardGeo.com.

### **Ninyo & Moore (7-04)**

Ninyo & Moore Geotechnical and Environmental Sciences Consultants has an immediate opening for Staff and Sr. Staff Geologists and Geotechnical Engineers in their San Diego and Irvine, CA offices. Please send your resume to Carol Price at Ninyo & Moore, 475 Goddard, Suite 200, Irvine, CA 92618, or fax your resume to (949) 753-7071.

Immediate openings exist for Geotechnical Engineers and Geologists and a Senior Technical Marketing Associate in their San Diego office. Submit resumes to our Corporate office: Ninyo & Moore, 5710 Ruffin Road, San Diego, California 92123, Attention: Ms. Margot A. Graves (EOE) Please visit us at our web site at [www.ninyoandmoore.com](http://www.ninyoandmoore.com)

### **American Geotechnical (7-04)**

American Geotechnical a twenty year old geotechnical consulting firm is seeking mid to sr level CEG's to join our growing team. We have great salary and benefits package based on experience. Master preferred. Excellent written and verbal skills required. 5 years of Construction and Forensic experience a minimum. Please e-mail [Langenwi@amgt.com](mailto:Langenwi@amgt.com) plain text only or contact me at 714/685-3907x234 to find out more about this great opportunity.

Jennifer Langenwalter, Client Services Director  
American Geotechnical  
714/685-3900

### **Geomatrix/Accolo**

Accolo, a community helping each other find jobs and people for jobs, has been asked to help fill this job. To apply or refer someone you know, please go to:

<http://www.accolo.com/webapp/orion/public/ReferApplyJob.jsp?ID1=`enexy>

We are seeking a Project Geologist/Hydrogeologist, for work on groundwater supplies; characterizing soil and groundwater conditions for site cleanup and redevelopment at a former industrial facility; or contributing to two wastewater expansion projects at a potato-processing facility in Argentina.

Geomatrix is a mid-sized, employee-owned firm with about 300 people in offices throughout the U.S. and Canada. As a project team geologist/hydrogeologist based in Costa Mesa, California, your first assignments will prove your adaptability as you supervise drilling, sample soil and groundwater, test aquifers, and analyze and interpret data. In the field, you will exercise judgment as a project manager, scoping out project parameters, selecting sub-contractors, assigning staff and overseeing the entire field program. In house, you will analyze data and report your findings to clients and regulatory agencies. Working with an upwardly mobile organization that fosters continuing education for its people, you will not just sharpen your existing skills but broaden them significantly.

Jerry Bires, Accolo Consultant, 415-785-7833, x209

[jbires@accolo.com](mailto:jbires@accolo.com)

### **| Provost and Pritchard Engineering Group, Inc. (7-04)**

The ideal candidate would have a BS in geologic science, MS, preferably in hydrogeology. 3-5 years experience, knowledge of range of modeling tools in Quantitative Risk Assessment . Understanding of regulatory environment, chemistry background and registered Geologist/Hydrogeologist.

Broad based duties may include preparation of cost estimates, workplans and permits; scheduling and oversight of utility locating, geophysics, excavation, drillers, and construction subcontractors; geologic and hydrogeologic interpretation from soil borings, excavations, trenches and monitor wells; installation of groundwater and vadose zone wells; sampling of groundwater, soils, and soil gases; remediation feasibility testing, design, construction, and implementation; data analysis and report preparation; and project and budget management.

Compensation: salary commensurate with qualifications. Great benefit package including 401(k), ESOP, medical, vision, dental, and more. Refer to the Provost & Pritchard website for additional information about Provost & Pritchard.

Interested candidates should submit resumes to [jbazarian@ppeng.com](mailto:jbazarian@ppeng.com).



**HARGIS + ASSOCIATES, INC.**  
HYDROGEOLOGY • ENGINEERING

25<sup>th</sup>  
Anniversary  
2 0 0 4

Mission City Corporate Center  
2365 Northside Drive, Suite C-100  
San Diego, CA 92108  
Phone: 619.521.0165  
Fax: 619.521.8580

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

Staff Hydrogeologist: (2 positions) Candidates would have a B.S. Degree in Geology, and 3 to 5 years relevant experience, including experience with sampling, well installation, work plan and report preparation. Candidate should possess strong writing and presentation skills. GIS skills, Masters Degree and/or California registration is a plus. Position will be based in San Diego, and will require some travel and field work. OSHA 40-hour training required.

Project Hydrogeologist: Candidate would have a B.S. Degree in Geology, and 5 to 7 years relevant experience, including experience with sampling, well installation, work plan and report preparation, task/project management, cost estimating and scheduling. Registered Geologist (RG), or ability to obtain within one year preferred. Masters Degree is a plus. Candidate should possess strong organizational, writing and presentation skills. Position will be based in San Diego, and will require some travel and field work. OSHA 40-hour training required.

Staff Engineer: Candidate would have B.S. Degree in Chemical, Civil, or Mechanical Engineering and EIT Certification, and 2 to 4 years of 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, and may require some travel and field work. OSHA 40-hour training preferred, but not mandatory.

Senior Engineer: Candidate would have a B.S. Degree in Civil Engineering and registration in Arizona with ten+ years of relevant experience, including design, operation, and maintenance of remediation systems. Masters Degree and/or California registration is a plus. Strong leadership, writing and presentation skills required. Position will be based in Mesa and may require some travel and field work. OSHA 40-hour training and MSHA training preferred, but not mandatory. Excellent opportunity for an experienced, registered Arizona Civil Engineer. Some travel may be 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](http://www.hargis.com).

No phone calls please. Qualified candidates should send resume, 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

**Other Offices:**  
Mesa, AZ  
Tucson, AZ  
Dallas, TX

AEG Southern California Section  
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Westlake Village, CA 91362