# Association of Engineering Geologists

GEOLOGISTS

Southern California Section

# NEWSLETTER - August 1989

### Jeff Holt

Chairperson (805) 522-5174

### **Bob Hollingsworth**

Vice Chairperson (818) 889-0844

#### Eldon Gath

Secretary (714) 598-2856

## Jerry Treiman

Treasurer (213) 620-3560 c/o CDMG LA Office 107 S. Broadway, Room 1065 Los Angeles, CA 90012

#### James O'Tousa

Membership Drive Chairpersor (818) 889-0844 c/o Grover Hollingsworth & Assoc. 31129 Via Colinas, Suite 707 Westlake Village, CA 91362

### Kelly E. Rowe

AEG Newsletter Editor
12 Issues/year-\$20 to "AEG"
(818) 965-4048
(818) 964-3702 FAX
c/o Geraghty & Miller, Inc.
Ground-Water Consultants
17800 Castleton Street, Suite 175
City of Industry, CA 91748
Amer.Geop.Union TELENET
KOSMOS Computer Mail
Username: KROWF

2550 Beverly Blvd. \ Los Angeles, CA 90057

## Dinner Meeting Tuesday August 8th

- The Quiet Cannon Restaurant
  901 North Via San Clemente
  Montebello
- Gost \$20.00
- For reservations call by August 4th

  Jerry Treiman

(213) 620-3560 (CDMG LA Office)

Make reservations by Noon on the Friday before the Meeting

- □ 5:30 Social Hour
- **□** 6:45 Dinner

7:30 Announcements

🖬 8:00 Program

9:00 Section Affairs

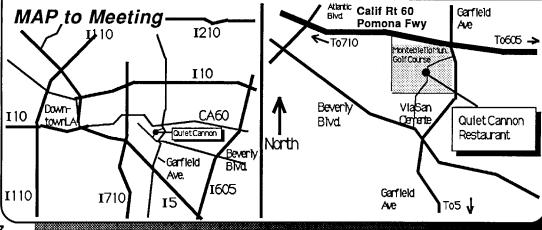
## Program

TOPIC Groundwater Basin Analysis without Modeling but with Computers

**SPEAKER** 

Alice Campbell, Hydrogeologist

Law Environmental Glendale, CA



# **Program**

**Topic & Speaker** 

Groundwater Basin Analysis without Modeling but with Computers

## Alice Campbell

Ms. Alice Campbell will address the increasingly more important subjects of groundwater/aquifer and basin modeling. Actual data will be used as examples from Solid Waste Assessment Test (SWAT) landfill studies, groundwater basin studies, fresh water and salt water balances and pumping tests.

Ms. Campbell will demonstrate that multiple analytical approaches and a good conceptual model are fundamental to analyze groundwater situations.

Alice Campbell is a hydrogeologist with Law Environmental.

Ms. Campbell holds a B.S. in Geology from UCLA, and a M.S. in Geology from California State University at Los Angeles. Ms. Campbell is a Registered Geologist in California and Arizona.

## THIS MONTH)

KellyERowe Hydrogeologis

Nominations for officers for 1989-1990 were taken at the July meeting. Proposed and seconded nominations were as follows: Chairperson - Robert Hollingsworth; Vice Chairperson - Eldon Gath; Secretary - Kelly E. Rowe; and Treasurer - Charles Daugherty. A voting ballot is enclosed. You will notice that you may also write-in a candidate Please take the opportunity to vote and return the ballot to John Byer,

c/o Kovacs-Byer & Assoc., at their Studio City address as soon as

July 1989

possible.

If you know an individual that wants to join AEG tell them to come to one of the monthly meetings to dispatch the forms. James O'Tousa, Membership Drive Chairperson, will be at the meetings with the forms and will assist potential members in filling them out. James says the forms are revised to make the process of filling them out and becoming a member now much easier.

Last month John Byer spoke about the Geopolitical History of Pulga and Potrero Canyons. These are two of the major canyons along the Pacific Palisades which have been left relatively undeveloped. Because of slope movement, housing along the edges of the canyons have been damaged to varying degrees. Development of these canyons will improve the stability of the slopes and provide additional recreational and housing facilities. John said that the plans for developing the canyons have undergone much close scrutiny for many decades by the local residents and the City, County & State regulatory agencies.

John has been working on the Potrero Canyon development for a park and the Pulga Canyon development for additional housing. The more advanced development of Potrero Canyon was mandated to be done in three phases by the Coastal Commission: 1) excavate and explore for the construction of a subdrain system, partially fill to stabilize the canyon slopes; 2) perform additional fill operations in the canyon; 3) finalize park development with wetlands. This development has been accepted by local residents. Development of Pulga Canyon, however, for additional housing is not accepted by local residents. This same situation was true for Potrero Canyon a number of years ago when it was planned for housing. Nevertheless Pulga Canyon has some interesting problems to handle since it was partially used as a "non-hazardous materials" landfill

John found out that exploratory work within the coastal zone is considered development and is prohibited with a \$1,000/day fine. He cautions engineering geologists to be aware of this situation.

Announcing the Start of the Dibblee Geological Foundation Santa Monica Series Maps. The Dibblee Foundation is now offering the first two in a series of maps of the Santa Monica Mountains area. The Los Angeles and the Pasadena Quadrangle maps are now available for purchase at \$10.00 each in color or black and white. They can be obtained folded (or unfolded at \$11.00 per copy). A supply of the folded color maps and will be available at August meeting. Any of the other 23 maps already published for selected quadrangles in the the Santa Barbara and Ventura Counties by the Dibblee Foundation can be ordered from:

Los Padres Interpretive Association, Attention: Mr. E.R. Blakley, 958 Isleta Avenue, Santa Barbara, CA 93109

Please make your checks to the Dibblee Geological Foundation.

Continued on page 3

The Dibblee Foundation is proud to be able to bring these beautifully colored maps to publication and to be able to do so at a fraction of what it would cost government agencies. Even on a shoestring budget, it runs about \$10,000 to publish each 7.5 minute quadrangle. They have a goal to publish one quadrangle per month. For the 13-map series covering the Santa Monica Mountains they need to raise funds of at least \$130,000. Tax deductable donations will be greatly appreciated to continue this work.

As many of you know, the Dibblee Geological Foundation is a non-profit education corporation, and funding for map publication is entirely dependent on your on-going individual and corporate donation and from proceeds of map sales. Individual donors of \$500 or more and corporate donors of \$1,000 or more will be recognized in print on a map. Contributions are tax deductible and should be sent to:

### Dibblee Geological Foundation P.O. Box 60560 Santa Barbara, CA 93160

We encourage your financial support now, and we look forward to presenting more of these quality regional maps by Tom Dibblee of the Santa Monica Mountains and other areas of California in the near future.

The State Water Resources Control Board plans to have a public hearing on amendment of Article 5 (Water Quality Monitoring for Classified Waste Management Units (Landfills)), commencing with Section 2550, of Subchapter 15 of Chapter 3 of Title 23 of the California Code of Regulations. The public hearing in Los Angeles is scheduled for Wednesday, August 9, 1989 at 9:00 am, at the auditorium of the State Office Building at 107 South Broadway. Call (916) 322-0205 for additional information.

Call for papers and announcement for the 1989 AEG Southern California Section Annual Field Trip. The trip is scheduled for September 23, 1989. It will focus on Engineering Geology Along Coastal Orange County. If you have a paper you would like to include in the field trip guidebook, please contact Ed Steiner at Leighton & Associates at (714)250-7115. The cost of the field trip will be \$45 (\$25 for students). This includes lunch, transportation and a guidebook. Sign-ups will be taken at the August meeting. Sign up early as space is limited.

Call for Papers on Baja California Geology for Volume to be published by Pacific Section SEPM in conjunction with the Fall 1989 Field Trip (Sept. 14-15). If you have some Baja California research results, please consider publishing them in the forthcoming volume on Geologic Research in Baja California. During this early planning stage there is a need to know how many people are interested in participating. Please send the working title of your manuscript to Dr. Pat Abbott, Department of Geological Sciences, San Diego State University, San Diego, CA 92182-0337, or call (619)594-5586 for further information. Rough drafts of manuscripts will be needed for review by mid-July. Edited manuscripts will be returned to authors for preparation as camera-ready copy on oversized format sheets in typical Pacific Section SEPM style. It is expected that many manuscripts will be submitted for a noteworthy volume on Baja California geology.

## Seminars/Meetings/FieldTrips

#### **AUGUST 1989**

2-4 "First International Congress on Toxic Combustion Byproducts: Formation and Control", UCLA Cost: \$300. Contact: Dr. Larry Ross, UCLA Engineering Research Center, 6722 Boelter Hall, Los Angeles, CA 90024.

14-17 "Ground Water and Vadose Zone Monitoring and Sampling Technology", ASTM Detroit, Michigan. Standards Technology Training Cost: \$595. CONTACT (215)299-5480. ASTM, Accounting Control Dept., 1916 Race Street, Philadelphia, PA 19103.

21-25 "Stocastic and Geostatistical Analysis for Groundwater Modeling", Dr. Robert Hoeksema (Calvin College), Dr. Leslie Smith (U of British Columbia), and Dr. Aly El-Kadi (IGWMC) International Ground Water Modeling Center Short Course. CONTACT (317)283-9458.

### **SEPTEMBER 1989**

14-15 Pacific Section SEPM Annual Field Trip"Baja California Geology", CONTACT: Dr. Pat Abbott (619)594-5586.

23 AEG So. Calif. Section Annual Field Trip"Engineering Geology Along Coastal Orange County", Sign-ups at the monthly meeting or CONTACT: Ed Steiner at Leighton & Associates at (714)250-7115.

25-27 "Corrective Action for Containing and Controlling Ground Water Contamination", at Cathedral Hill Hotel, San Francisco, NWWA Assoc. of GW Scientists and Engineers. P.O. Box 182039/Dept. #017/ Columbus, OH 43218 CONTACT (614)761-1711.

25-27 "Fracture Trace Analysis", at Cathedral Hill Hotel, San Francisco, NWWA Assoc. of GW Scientists and Engineers. P.O. Box 182039/Dept. #017/Columbus, OH 43218 CONTACT (614)761-1711.

28 "Environmental Site Assessments - One-Day Course", at Cathedral Hill Hotel, San Francisco, NWWA Assoc. of GW Scientists and Engineers. P.O. Box 182039/Dept. #017/ Columbus, OH 43218 CONTACT (614)761-1711.

28 "DRASTIC Workshop", at Cathedral Hill Hotel, San Francisco, NWWA Assoc. of GW Scientists and Engineers. P.O. Box 182039/Dept. #017/ Columbus, OH 43218 CONTACT (614)761-1711.

#### OCTOBER 1989

1-6 "AEG 32nd Annual Meeting at Vail Colorado, Marriott's Mark Resort Theme "Engineering Geology of Mountain and Plain" hosted by the AEG Rocky Mountain Section Symposia: "Engineering Geology Problems of Large Landslides" Contact Jerome V. DeGraff, AEG Landslide Committee Chairman (209)487-5640; Short Courses 1) Groundwater Contamination Transport Modeling 2) Landslide Mitigation Techniques; Field Trips 1) Glenwood Canyon Highway Project, 2) Vail Pass Highway Project, 3) a marble quarry in the Vail area, 4) Dillon Dam and other water-supply projects, and 5) a tour of landslides and debris flows in the mountainous terrain surrounding Vail.CONTACT: for Registration (303)744-7105 Ralph G. Mock, Chen-Northern, 96 S. Zuni St., Denver, CO 80223.

14-15 "Geology of Northern Baja California" Fall Field Trip Pacific Section SEPM. San Diego State University, Pat Abbott, Ph.D. and the geology faculty at the Universidad Autonoma de Baja California (UABC) are organizing visits to prime localities for rocks and structures ranging in age from Ordovician to Holocene. CONTACT: (619)594-5586.

23-27 "Multiphase Organic Transport Modeling with Emphasis on Pollution by Hydrocarbons" Dr. John Parker and Dr. Jagath Kaluarachchi (VA Poly Inst.), Dr. Marian Kemblowski (Shell Development Co.) and Dr. Aly El-Kadi (IGWMC) International Ground Water Modeling Center Short Course. CONTACT (317)283-9458.

Proceedings available from Southern California Earthquake Preparedness Project on: The seismic Risk in the San Diego Region Workshop on the Rose Canyon Fault System - June 29-30, 1989, San Diego.

#### **NOVEMBER 1989**

28-30 "Critical Issues in Underground Storage Tank Management" at Doubletree Hotel, San Diego, NWWA Assoc. of GW Scientists and Engineers. P.O. Box 182039/Dept. #017/ Columbus, OH 43218 CONTACT (614)761-1711. 28-30 "Risk Assessment for the Ground Water Scientist" at Doubletree Hotel, San Diego, NWWA Assoc. of GW Scientists and Engineers. P.O. Box 182039/Dept. #017/ Columbus, OH 43218 CONTACT (614)761-1711.

#### **DECEMBER 1989**

1 "Environmental Site Assessments - One-Day Course", at Doubletree Hotel, San Diego, NWWA Assoc. of GW Scientists and Engineers. P.O. Box 182039/Dept. #017/Columbus, OH 43218 CONTACT (614)761-1711.

## Association of Engineering Geologists

## Policy statement on earth science education in elementary and secondary schools Adopted by the Board of Directors: April 23, 1989

It is the position of the Association of Engineering Geologists that the education of the public in the basic elements of earth science emphasizing geology and geologic processes is vital to the well-being and effective operation of governments. Increasingly critical decisions are needed with regard to natural resources, including mineral, energy and ground water. Elected officials are making complex decisions with very expensive and longterm ramifications dealing with the disposal of hazardous wastes, the protection and management of ground water, the development of effective land use plans, among others. As the population grows, and the urban centers expand into marginal lands, geologic processes including earthquakes, floods, coastal erosion and landslides will directly impact more and more citizens.

Informed decisions must be made on matters which require an understanding of earth science; therefore, it is essential that quality academic instruction be provided. It is most reasonable that this instruction be provided at the elementary and secondary levels where attendance is mandatory rather than at institutions of higher learning attended by a smaller percentage of citizens. Instruction in earth science allows individuals to make better, more informed, decisions about the earth Earth-science studies should by its very nature include many elements of other sciences; chemistry, physics, meteorology, and the general principles of the scientific method of data collection, formulation of hypotheses, experimentation, analyses, and conclusion. Appropriate instruction should incorporate timely information about the students' natural surroundings on both a local and world-wide scale. This instruction should emphasize those elements of the science important in "living" as opposed to needless memorization of unimportant data.

All countries need skilled and well-educated scientists of many types to sustain and improve the standard of living. Frequently, career paths are selected at ar early age, based upon elementary and secondary school experiences. Early opportunities to learn about the earth may enhance the chances of forming a pool of talented students electing careers in earth science.

The Association of Engineering Geologists encourages school administrators and faculty to provide quality earth science education and to include support with adequate resources and well-prepared faculty. Parents are encouraged to request that such instruction be provided for their children. Professionals are encouraged to become involved in the enhancement of earthscience education by offering their assistance to the local school districts.

Additional copies of the Policy Statement can be obtained free of charge by contacting Executive Director Edwin A. Blackey, Ir., Association of Engineering Geologists, Post Office Box 132, Sudbury, Massachusetts 01776-0001, Telephone (508) 443-4639.

## Presenting AEG 1989 Southern California Section Members

John F. Dablow

Charles W. Daugherty

Mark Stephen Oborne

Michael E. Osburn

Jeffrie L.T. Owen

Kenneth R. Patton

Michael Andrew

Manfred Plaschke

Piepenburg

Michael Lance Pfister

#### Affiliate Members

Norman Bradlev Chester A. Carville John H. Dailey John T. Gaffey, PhD Welford E. Garner Eric. V. Graf G. S. Kovacs James McWee Joel Gilbert Metcalf Fred Romani E.Douglas Schwantes Roger A. Shervington J M Wool

#### Associate Members

Kevin B. Aardahl

Dean Armstrong

Paul Kenton Aue

John T Barnhart

Eric A. Boone

Hilary J. Brook

William C. Cain

Daniel L. Carlson

Debbie A. Carroll

Dora Chew

Brian P. Bergeron

Morris A. Balderman

Kevin Terence Brady

John Jeffrey Butelo

Gregory Steven Byrne

Steven Carl Chandler

Jeannette Anne Calhoun

Garrick Alan Anderson

Charles R. Clark Patrick Cobb Timothy Stephen Conroy Joseph A. Cota Giuseppe Cugno Colin Cunningham Christopher W Dean Steve Drussell Michael M. Easterly Sharon K. Estrin Theresa C. Fall Jeffrey Irwin Farrar Eric S. Fordham James L. Glaze Jackson E. Goffman William Goodman Keith E. Green Jennifer Gregory Warren W. Gross Rachel M. Gulliver Ronald Gutier Barry S Haskell Robert N. Hawk Richard S. Hazen Elizabeth Herbert Woodrow L. Higdon Dorinda Sue Himes Russel Dale Hinkle John Henry Hoobs Masood S. Hooseini Arturo M. Hovos Charles Donald Hubbard David Huntley Brent J. Inghram Jon A. Irvine Stephen E. Jacobs Terence Leigh Jenkins Mary Hume Jolly John Juhrand Scott T. Kerwin Roy C. Kiser Jeffrey Carl Kofoed Elizabeth T. Lafferty Rodrigo Lazo Michael I. Leary Martin Lieurance Robert Clark Lindsay James Warren Lovekin Amir Matin Kathleen A. McDonnell James R. McLaughlin Vernon R. McLean John Edward McNamara Richard D. Merker Timothy E. Metcalfe Mark Ives Miller William Allen Mitchell Daniel J. Morikawa Rosalind Munro Ralph A. Murphy Gerald A. Nicoll Erin Kathleen O'Connell 4 James O'Tousa

David W. Poppler Harry D. Pouncey Iohn R. Powell Kathleen Anne Proffer James Patrick Quinn Iulie Anna Reese Steven R. Ridenour Marina Robertson Mary Murdock Rohrer Perry W. Russell Jan Richard Rutenbergs Gregory F. Rzonca Ali Sadr Eugenia M. Sangines Mark E. Schmoll Daniel Schneidereit David L. Schug Christopher J. Sexton Alan W. Spang Herbert Michael Spitz Craig A. Stewart Ray Sugiura Mark Swiatek Linda Lee Tandy Gary E. Taylor Patrick A. Thomas Lynn J. Thompson James R. Trotter Edward W. Tschupp Clin Lamont Twitchell Keith A. Valdez John T. Waggoner Gary W. Wallace Randall S. Weidner D. Clinton Williams H. Chris Winsor Theodore M. Wolfe Leff Wolff Mark R. Wood Terri T. Wright Frederick L. Zeiser John T. Zellmer Rob Moble William G. Hannah Dr. Mason L. Hill David I. Leeds Tiong J. Liem Cecil E. Hollon Harley A. Tucker

#### Members

David A. Adams Herbert G. Adams Donald O. Asquith Harry S. Audell James Barton Robert T. Bean Vijay K. Bedi Russell C Bingley Dr. Joe Birman Eugene L. Blanck Patrick V. Boales Paul Bogseth John C. Bowman Miguel Woodhouse Brave George E. Brogan Arthur Richard Brown Glenn A. Brown Jeffrey D. Brown Mark E. Bryant Charles I. Buckley Daniel D. Bush John W Byer Alice M. Campbell Paul L.V. Campo Lawrence R. Cann William F. Cavan Michael S. Chapin Eric D. Chase Dr. Bruce R. Clark Bryan A. Miller-Hicks Timothy S. Cleath Robert T. Misen Joseph W. Cobarrubias Paul E. Mooney Return Francis Moore K. Douglas Cook Douglas E. Moran Ray M. Coudray Raymond L. Moresco Donald B. Crawford Earl R. Morley Richard Crook Richard N. Morris David Cummings David E. Custenborder Mike M. Mukae

Paul Davis Frank Denison George DeVries Robert H. Dickey Gregory N. Doyle Steven W. Draper Sophie M. Dreifuss Iohn Theodore Dunian Ray Eastman Dan R. Eberhart John R. Ege Dr. Perry L. Ehlig William J. Elliott Richard F. Escandon Adonis B. Esmilla Edward W. Fall Andrew E. Farkas John S. Ferguson Monte E. Ray Dr. Alfred P. Fernandez Donald L. Fife James E. Fisher John H. Foster S. Thomas Freeman William A. Gallant Eldon M. Gath Daniel R. Gillette Robinson Dale D. Glenn Richard T. Gorman Thomas C. Gray Gerald I. Grimen David J. Grover Gary Guacci Paul D. Guptill Patrick Hamilton Dennis L. Hannan John H. Hansen John A. Hanson Michael W. Hart Russell G. Harter Dr. George E. Heim Jonathan C. Herwig Edward F. Hill Gerald C. Hill Bruce R. Hilton John F. Hoefferle Don (Rick) Hoffman Robert A. Hollingsworth Jeffrey W. Holt Lawrence T. Jansen Dr. Jeffrey A. Johnson Mervin E. Johnson Jay L. Smith Michael Johnson Daniel Kalin Robert W. Keil Charles Kendall Donald B. Kowalewsky Roy C. Kroll Herman T. Kuper Steven A. Kupferman George Stolt Dr. Donald L. Lamar George R. Larson Daryl Streiff Robert A. Larson Gary L. Lass Paul Timothy Latiolait Dr. F. Beach Leighton W.Lavon Lewis C.Eric Lindvall R. Bruce Lockwood Richard E. Lownes Richard Lung Robert I. Lynn Mark G. Mackowski John F. Mann Robert Jay Marks Donald L. McCann Paul L. McClay Steven R. McCollum John J. McCormick Patrick McNamara Jerrold L. McNey Sheldon E. Medall Dr. Paul M. Merifield Dr. Richard H. Merrian John D Merrill Eugene D. Michael James R. Miller

William R. Munson Diane Murbach Steve J. Nacht Rodney H. Nelson Wendell L. Nichols Theodore D. Nickerson Claude B. Parker Charles H. Parsons Warren D. Pedersen Robert D. Perry Larry L. Peterson Dr. Howard J. Pincus Michael R. Ploessel Clifford Ralph Pollock Dana Victor Prevost Richard J. Proctor Richard Z. Radwanski Richard M. Ramirez David II. Randell Gary S. Rasmussen Laslia Dean Read Benjamin P. Reyes Joseph F. Riccio Carrol A. Richards John J. Roberts Hugh S. Robertson Brian Anthony Iames D. Rodine Phillip Seth Rosenberg Kelly E. Rowe Robert W. Ruff John A. Sayers Raymond J. Scaramella Bruce A. Schell J. Wayne Schick Mark B. Schluter Carl D. Schrenk Donn Carl Schwartzkopf Steven I., Scott C.Michael Scullin Allan E. Seward N.Thomas Sheahan Warren L. Sherling David M. Sherman Kendall I. Sherrod Dr. Roy J. Shlemon Ronald Z. Shmerling Raymond C. Sholes David B. Simon Dr. James E. Slosson Theodore L. Smith Howard A. Speliman Mark S. Spykerman Steve Stankov Edward A. Steiner John R. Stellar Robert L. Stollar Gary F Stoney Dr. Martin L. Stout Charles G. Sudduth Steven C. Suitt Charles A. Swift Susan Elaine Tanges Richard O. Thies Robert L. Thurman Ivan O. Tkatch Jerome A. Treiman Alfred N. Venton William Waisgerber Stephen M. Watry Timothy C. Welch John B. Weldon Sanford L. Werner Philip J. West Karl H. Wiehe Kenneth Lee Wilson Edward J. Zielbauer Robert I. Zweigler

This listing is from the Association's corporate office in Massachusetts and represents the update of current members as of July 1989.

## Professional Services Business-card size advertisment space

TECHNOLOGY CORP.

available for \$ 50.00/year.

## One Source for All Your Geotechnical Instruments

We offer a full line of Geotechnical . Inclinometers Instruments with accessories and • Inclinometer Casing support at competitive prices. Ask us about our rental systems.

A SUBSIDIARY OF ROCHESTER INSTRUMENT SYSTEMS

3860 148th Avenue N.E., Redmond, Washington 98052 USA Phone: (206) 883 7300 Telex: 15-2070 Fax: (206) 882-1412

- Tilt Sensors
- Piezometers
- Settlement Systems
- Load Cells
- Data Acquisition **Systems**



Stephen W. Jensen Principal Geologist

10225 Barnes Canyon Road Suite A-112 San Diego, California 92121

(619) 457-0400

Soil Engineering • Geology • Groundwater

RICH DARBY

MIKE HOWORTH



DRILLING & EXCAVATION CO.

"WE DRILL & DIG HOLES.." TESTPITS/BCRINGS, CAISSONS, FOOTINGS GRADEBEAMS, UNDERPINNINGS/PADS, SEEPAGE PITS, MONITORING WELLS, DEWATERING WELLS AND RETAINING STRUCTURES.

76 N. Sierra Bonita Avenue, # 4 Pasadena, CA 91106

818-793-5293

## **MOORE & TABER GROUTING DIVISION**

Compaction Grouting • Level Surveys Structure Distress Investigations

4530 E. LA PALMA AVE. • ANAHEIM, CA 92807 • (714) 779-2591

5620 DISTRICT BLVD . SUITE 103 • BAKERSFIELD, CA 93313 • (805) 833-1743

16760 WEST BERNARDO DR. • SAN DIEGO, CA 92127 • (619) 487-2113

ZIP-A-DIP Combination protractor, scales, and most efficient apparent dip calculator designed.

Only \$3.00 each (2-10/\$2.50; 11+/\$2.00). Brochure describes ZIP-A-DIP, stereonet plotters, stratigraph, field bags and quantity prices.

Please send brochure only

ZIP-A-DIPS Quantity\_\_\_\_ \_\_\_\_\_ Amount \$ \_\_

Name

TO SIERRA BRAVO COMPANY

#### GEOPHYSICS FOR:

ENGINEERING-GROUNDWATER-ENVIRONMENT

- SEISMIC REFRACTION/REFLECTION
- GROUND PENETRATING RADAR
  - ELECTRICAL
  - MAGNETICS
    - GRAVITY

PROPERTY TRANSFER SURVEYS SITE ASSESSMENT SURVEYS GEOPHYSICAL EQUIPMENT RENTAL

PO BOX 152 WOODBRIDGE CA 95258 (209) 339-8791

## THE BORING COMPANY

P.O. BOX 17538 IRVINE CA.

714-551-1002

92714

We are specialists in HORIZONTAL BORING from 1" to 6" diameter and up to 600' length.

"Compare Us We're Unchallenged"

# PRESSURE

GROUT

Steven C. Chandler Grouting Engineer

125 South Linden Ave. So. San Francisco CA 94080-6466 415/871-2244

831 East D St. Wilmington CA 90744-6007 213/513-0773

## DID IT MOVE, OR DIDN'T IT?



Our automated deformation-sensing systems give you the graphic answer!

Now, track the tilts, bulges, bends and displacements of • Dams • Tunnels

- Tanks Landslides Bridges
- Buildings Roofs Any Structure.

Our systems take continuous static and dynamic readings. Then report to you. Wherever you are in the world.

- ➤ Structural testing
- ► Warning of unsafe conditions
- ► Long-term monitoring

**APPLIED GEOMECHANICS** 

1336 Brommer St., Santa Cruz, CA 95062, [408] 462-2801 • Fax (408) 462-4418

5

## Positions Available

Advertisements for Student & Part-Time "Positions Available" are Welcome. There is no charge for advertisement.

Career Opportunity For Principal Hydrogeologist

Immediate opening available for a Principal Hydrogeologist. Duties will include development and management of water resources and groundwater contamination/remediation projects. The successful candidate will have a proven record of project development and management, M.S. degree, California registration as a geologist, 7+ years professional experience with excellent technical and communication skills. Position will be in southern or central California. Salary is negotiable and commensurate with experience.

Call (805) 644-5535 or send resume to: McClelland Consultants Attention: Michael R. Ploessel 2140 Eastman Avenue Ventura, CA 93003

> Career Opportunity For Senior Engineering Geologist

Immediate opening available for a highly versatile Senior Engineering Geologist. The successful candidate will plan and supervise comprehensive engineering geological studies and be the Senior Staff Consultant on complex multi-disciplinary projects. M.S. degree, 5+ years diverse professional experience, C.E.G., and excellent technical and communication skills are required. California experience should include work in several of the following: slope stability, hillside grading, fault/seismicity evaluation, EIR/EIS, geohydrology/water resources, distressed property excavations, site assessments, soil and groundwater contamination and remediation. Salary is negotiable and commensurate with experience.

Call (805) 644-5535 or send resume to:

McClelland Consultants Attention: Michael R. Ploessel 2140 Eastman Avenue Ventura, CA 93003 Career Opportunity For Supervising Geologist

An open examination is planned to be administered by the California Department of Conservation soon. A Supervising Geologist in the Department's Div. of Mines and Geology administers one of five major programs of the organization: mineral resources, environmental protection, geologic hazards, earthquake engineering, or geologic information and support; is responsible for operational planning, budgeting, reviewing and evaluating achievements, and preparing reports. Requirements: registration as a geologist in California at the time of appointment; college degree in geological sciences or mining engineering; five years of increasingly responsible professional experience in geology or mining engineering, with at least two years of highly responsible supervisory capacity (graduate work may be substituted.

Contact or Send application/resume (by Sept. 29, 1989) to:

Department of Conservation Attention: Exam Analyst (PT) 1416 Ninth Street, Room 1347 Sacramento, CA 95814

Camarillo, CA 93011

Career Opportunity For Geologist

Growing geotechnical firm needs a Registered Geologist in California to establish a geology department. Requirements are a minimum 5 years of experience in the Los Angeles and Ventura counties area.

Call (805) 484-3657 or send resume to:
Tierra Tech. Testing Lab, Inc.
Attention: Kenneth J. Palos
388 Dawson Drive
P.O. Box 3240

Career Opportunities For

Geologists...

Project Geologist/Hydrogeologist at Riverside office. Requirements are a B.S. degree and Registration as a Geologist in California with a minimum of 5 years of experience in the environmental services field. Responsibilities will include project management and supervision of the Environmental Services department.

Senior/Project Geologists at Riverside and Orange County offices. Requirements are a B.S. degree and Registration as a Geologist in California (CEG highly desirable) and a minimum of 4 years experience. Responsibilities will include project management and to provide geology support for both field and office.

Staff Geologists...at Riverside office. Requirements are a B.S. degree and prior experience in hazardous waste assessment to perform field investigations and to prepare proposals.

at Orange County and Valencia offices. Requirements are a B.S. degree to perform mapping, subsurface exploration and downhole logging.

Salary is negotiable and commensurate with experience.

Salary is negotiable and commensurate with exp Call (714) 250-1421 or send resume to:

Leighton and Associates, Inc. Attention: Human Resources 1151 Duryea

Irvine, California 92714

Career Opportunity For Geotechnical Engineer

Immediate opening is available for a geotechnical engineer. Requirements are California registration and 5 - 10 years experience in waste disposal facility design - hydrology experience a plus.

Call (918) 848-0214 or send resume to: Law Environmental, Inc. Attention: J. Johnson 3420 N. San Fernando Blvd. Burbank, CA 91504

Kelly E. Rowe AEG Newsletter Editor c/o Geraghty & Miller, Inc. 17800 Castleton Street, Suite 175 City of Industry, CA 91748



