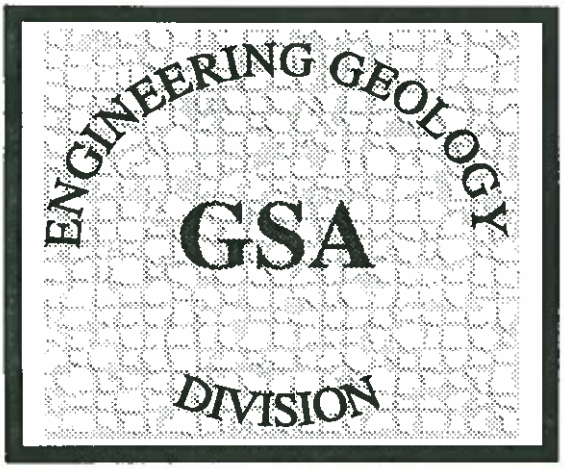
The Engineering Geologist

THE GEOLOGICAL SOCIETY OF AMERICA

NEWSLETTER OF THE ENGINEERING GEOLOGY DIVISION OF THE GEOLOGICAL SOCIETY OF AMERICA

Volume 28, Number 1 **March 1993**



CHAIRMAN'S MESSAGE

During my term as chairman of the Engineering Geology Division, I intend to use this forum to solicit the opinions of the Division membership, suggest some actions for the membership to take, and address some of the advantages of Division affiliation. Let me start by soliciting your opinion. The Long-Range Planning Committee for the Division has suggested changing the name of the Division from Engineering Geology to Environmental and Engineering Geology. A decision by the Management Board was deferred until October 1993 to provide sufficient time to pool the Division membership on this issue.

I marked the start of my career as a geologist with my Master's at Utah State University. Because my thesis was the geomorphology of an area in northern Utah, I considered myself a geomorphologist. I still considered myself a geomorphologist while working on a research project funded by the USDA Forest Service in which I addressed the problem of landslide hazard assessment. Just as my thesis had involved mapping landslides, so did this research project. When I left Utah State, I took a position with the USDA Forest Service in central Utah. I was called an environmental geologist because my work called for close coordination with the hydrologists, soil scientists, and fisheries biologists concerned with watershed erosion and water quality. I still mapped landslides and dealt with questions of landslide hazard. In 1981, I transferred to a National Forest in California. My position was under the direction of the Forest Engineer and I worked closely with the geotechnical engineer. Now I was called an engineering geologist. Much of my work still involved erosion and water quality issues, but focused on their interaction with road construction and other engineering projects. The major activities I engaged in were mapping landslides and addressing slope stability issues.

So after twenty years of work primarily dealing with landslide hazard assessment, should I consider myself a geomorphologist, an environmental geologist, or an engineering geologist? The definition of engineering geology is the application of geologic data, techniques, and principles to the study of naturally occurring rock and soil materials or groundwater for the purpose of assuring that geologic factors affecting the location, planning, design, construction, operation, maintenance of engineering structures, and the development of groundwater resources, are properly recognized and adequately interpreted, utilized, and presented for use in engineer-

ing practice." (Gary and others, 1974). The definition of environmental geology is "The collection, analysis, and application of geologic data and principles to problems created by human occupancy and use of the physical environment, including the maximization of a rapidly shrinking living space and resource base to the needs of man, the minimization of the deleterious effects of man's interaction with the Earth, and the accommodation of the exponentially increasing human population to the finite resources and terrain of the Earth." Gary and others, 1974). A close examination of the definitions shows a common thread of concern for human interaction with the geologic environment. Another common point is the application of geologic data and principles to understand these interactions. The third common thread is a focus on stewardship, the need for geologic factors to be properly recognized and applied to problems created by human occupancy and use of the physical environment.

I personally feel comfortable with being termed either an environmental geologist or engineering geologist. My professional experience leads me to conclude that individuals who call themselves environmental geologists and those who call themselves engineering geologists have common cause. Therefore, the Engineering Geology Division should provide all of these professionals with a forum for addressing issues of mutual concern. The unresolved question is whether everyone feels comfortable with the name, "Engineering Geology Division" for this grouping of professionals sharing a concern for human activities and the geologic environment. I would like to hear from the Division membership on this issue. Please send your comments to me or to any other EGD officer (Rhea Graham or John Rockaway). Let us know your feelings and reasonings so a decision at the October 1993 Management Board meeting will have an accurate sense of how the membership feels about this issue.

Jerry DeGraff
Chairman

AWARDS AWARDS AWARDS AWARDS

STUDENT RESEARCH AWARD

LAUREN HAMMACK
Earth Resources Department
Colorado State University

The Student Research Award was presented to Lauren Hammack. The title of Lauren's research is "Hydraulics of Debris Flows and Floods at Warm Springs Rapids on the Yampa River, Colorado." In the absence of Ms Hammack, the certificate of recognition was presented to Dr. Ellen Wohl, Ms Hammack's advisor, at the Division's luncheon in Cincinnati.

The Student Research Award is made possible by the interest earned on the Division's Anniversary Fund. The Anniversary Fund still needs contributions even though it seems to have reached the $10,000 level to maintain its identity within the GSA Foundation funds.

E. B. BURWELL, JR., AWARD

George A. Kiersch

The E. B. Burwell, Jr., Award was presented to Professor George A. Kiersch at the EGD Annual Meeting and Awards Luncheon on October 28, 1992 in Cincinnati. The award was given for the DNAG volume, The Heritage of Engineering Geology: The First One Hundred Years. George conceived, directed, and edited the volume as well as authored or co-authored five of the chapters. Ellis Krinitzsky, the citationist, noted that the

volume includes instructive discussions of surface water, ground water, slopes, faults, sea coasts, permafrost, construction materials, subsidence, and earthquakes. He also noted that the volume contains discussions of the state-of-the-art as well as descriptions of useful experience. (see Page 4).

DISTINGUISHED PRACTICE AWARD

JAMES E. SLOSSON

The Distinguished Practice Award of the EGD was presented to James E. Slosson at the Cincinnati Annual GSA meeting. The citation of the award reads as follows: *As State Geologist of California James E. Slosson early recognized the need for increased public awareness of geologic hazards and the need for careful engineering geologic studies of hazardous areas. Jim has served on the California Seismic Safety Commission and several other state and national committees. In his geologic consulting work in southern California he has conducted original and meticulous studies of some of the most controversial hazardous areas (such as the Palos Verdes Peninsula and the Malibu coast) in the nation. His career exemplifies the need to keep abreast of academic research and to meld the results with the need for field solutions of engineering geology problems.*

MERITORIOUS SERVICE AWARD

JOHN W. WILLIAMS

The Meritorious Service Award of the EGD was presented to John W. Williams at the Cincinnati annual GSA meeting. The citation of the awards reads:
John W. Williams, Chairman of the Department of Geology, San Jose State University, has distinguished himself and brought honor to the profession of Engineering Geology through his efforts in education of Engineering Geologists. His efforts have touched many, from kindergarten through members of professional societies. He plays an active role in the transmission of academic research results to the world of practical problems and solutions. His professional practice and service have benefited both the profession and the public.

RICHARD H. JAHNS LECTURER 1993

ROY J. SHLEMONS

Roy J. Shlemons of Roy J. Shlemons and Associates, Inc., Newport Beach, California was chosen as the 1993 Jahns Lecturer. The lectureship, jointly sponsored by the EGD and AEG, is awarded in even-numbered years by the EGD for the following year to a "practitioner" and in odd-numbered years at the AEG annual meeting for the following year. Two topics proposed by Roy for his 1993 tour are:

1. Applications of Quaternary Geology and Soil-Stratigraphy to Engineering Geology
2. Earth Fissures and the Engineering Geologist: The Challenge of Technical and Forensic Investiga tions.

The basic purpose of the Jahns Lectureship is to provide an opportunity for undergraduate geology majors to learn more about Engineering Geology.

GEORGE A. KIERSCH

RECEIVES THE 1992

E. B. BURWELL, JR., AWARD

The E. B. Burwell, Jr., Award serves two purposes. It is a memorial to E. B. Burwell, Jr., a leader in the practice of modern engineering geology and first chief geologist for the U. S. Army Corps of Engineers, the largest engineering organization in the world; and it recognizes a published work that has enhanced our knowledge and advanced our profession. To maintain great distinction in these categories, an award recipient is eligible from anywhere in the world and does not need to be a member of this Society.

For 1992, the recipient of this honor is **Professor George A. Kiersch.** He has distinguished himself as an educator, a researcher, and a practitioner. In these few moments that are allotted to me, I cannot do justice to the breadth of his contributions, but let me state some of the most salient.

In academia, he led the way in expanding geology beyond its traditional paths into those that have given geology its importance in engineering, exploration, and control of the environment. As a consultant, he was an advisor for nearly two hundred projects in the United States and over the world, and he was involved in nearly a hundred legal cases including issues before the World Court. Also he wrote 350 papers and reports, five books, and was editor for eight other books, and he served in many useful capacities in eight professional societies. This wealth of involvement came together in the work for which we are honoring him: The Heritage of Engineering Geology, the First Hundred Years. This is a symposium volume that scans the state-of-the-art and which Professor Kiersch conceived, directed, edited, and authored. The work contains 25 important reviews. Five bear Professor Kiersch's name.

This book is much more than its title tells us. It is a history of engineering geology and of its leaders and it is a detailed summary of the state-of-the-art in its many aspects.

Engineering Geology interacts with many other fields. As a consequence, it is subject to encroachments by non-geologists. Civil engineers, soil mechanics specialists, hydraulic engineers, even seismologists, are apt to claim expertise at the expense of engineering geologists. They do so only with disadvantages to their projects because the engineering geologist is better prepared for those tasks. A book such as this amply shows what constitutes the engineering geologist's domain.

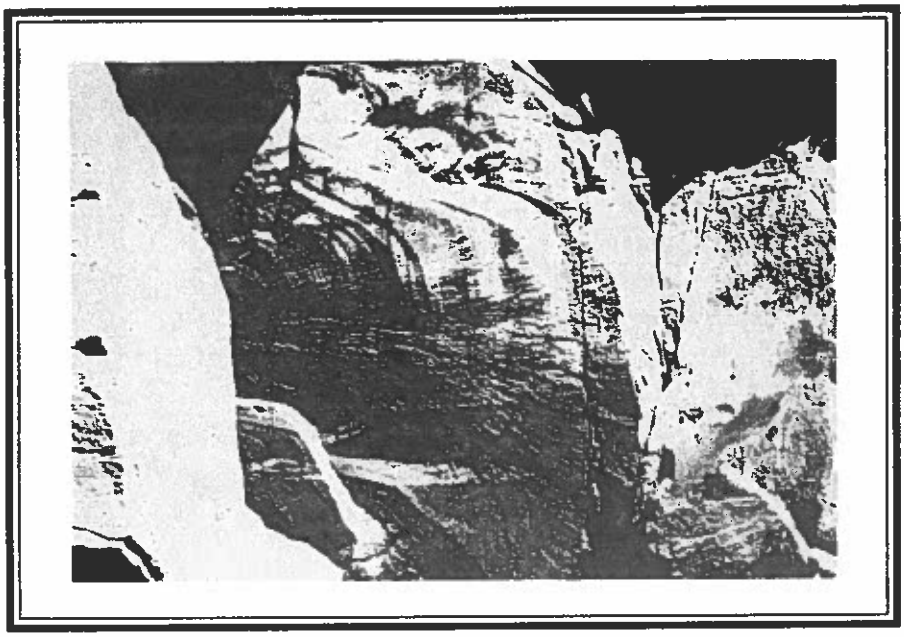
Professor Kiersch's book surveys the relevances to engineering geological processes, gives a comprehensive survey of the methods in accomplishing geological investigations, and discusses failures, litigation, and the geologist's responsibilities. There are instructive discussions of surface and ground water, sea coasts, slopes, subsidence, faults, earthquakes, rebound from unloading, permafrost, construction materials, and siting. The state-of-the-art is here, as well as extensive collections of useful experience.

This book is a credit to the many experienced professionals who contributed their knowledge, but the greatest credit rests with George Kiersch who not only added much to the content of the book but performed a valuable service to the profession by bringing together this superb group of reviews. This is a book that every engineering geologist can read with pride in his profession, and that users of engineering geology can read with an appreciation of its worth.

The Geological Society
(Petroleum Group/Tectonic Studies Group)

THEMATIC MEETING ON FRACTOGRAPHY
13-14 September 1993
London, United Kingdom

One or two day meeting to be preceded by a Short Field Trip



CALL FOR PAPERS

Contributions are invited for a Thematic Meeting on Fractography. The meeting is aimed at presenting and discussing *Fractography* as an emerging specialized discipline within the broad field of FRACTURE STUDIES.

The meeting will cover all aspects of fractography in geology: discuss its uses, limitations, and the prospect for improving the technique as a tool in determining the types of fractures (e.g. shear vs extension), their propagation direction, rate of propagation, relative age, the orientation of the causative stresses, and their regional and local tectonic implications.

The meeting will be of interest to all geologists and engineers who are involved in studies of fractured rocks, particularly in the oil industry.

It is hoped to arrange for publication of contributions.

For further details please contact the convener:

Dr. M. S. Ameen
Geoscience Limited
Silwood Park, Buckhurst Road
Ascot SL5 7QW England
Telephone: 0344 872220
Fax: 0344 872438

CALL FOR PAPERS

Contributions are being solicited for a volume on clay and shale slope instability which will be submitted for publication to the Geological Society of America in the *Reviews* in the Engineering Geology series. It is anticipated that the volume will cover a wide range of topics pertaining to clay and shale slopes including characterization of shear strength and other engineering properties; aspects of hill slope hydrology related to slope stability; mechanical analyses of slope stability; the influence of structural and stratigraphic details on slope stability; regional and local hazard assessment; and case histories of both failures and remedial efforts. Papers that integrate both geological and engineering aspects of clay and shale slope instability are especially welcome.

Manuscripts will be subjected to peer review and revision, if necessary, before acceptance. A guide for authors is currently in preparation. Target date for submission of manuscripts, along with the names and addresses of at least two qualified reviewers, is **June 1, 1993.** For additional information, please contact either of the two co-editors listed below:

Dr. William C. Haneberg
New Mexico Bureau of Mines and Mineral Resources
Campus Station
Socorro NM 87801
505/835-5808

Dr. Scott A. Anderson
Department of Civil Engineering
University of Hawaii
Holmes Hall 383
2540 Dole Street
Honolulu HI 96822
808/956-9859

1993 OFFICERS ENGINEERING GEOLOGY DIVISION

This will confirm the official tally of the Engineering Geology Division ballots. There were 907 ballots mailed to the members of the Division of which 106 valid ballots were returned to headquarters.

The results of the election of officers for 1993 are as follows:

Jerome V. DeGraff, Chairman
A. Keith Turner (write in)

Rhea Lydia Graham, Chairman-Elect

John D. Rockaway, Secretary

Michael W. Hart, Management Board Representative

No comments appeared on the ballots. The tally of votes was checked and rechecked.

10/19/92

7th CONGRESS OF THE INTERNATIONAL ASSOCIATION OF ENGINEERING GEOLOGY

The Congress will be held in Lisbon, Portugal, September 5-9, 1994. The theme of the Congress is "Turning the Century with Engineering Geology."

If you would like Bulletin No. 1, please contact the USC/AIEG Secretary:

Mr. Roger Ilsley
R. I. Geotechnical, Inc.
3494 North Shepard Avenue
Milwaukee, WI 53211.

AWARDS COMMITTEE SEEKING NOMINATIONS

The EGD Awards Committee is seeking nominations from the members for the Meritorious Service and Distinguished Practice Awards to be presented in Boston 1993. The nominations should be sent to:

Dr. Charles Welby
Department of Marine,
Earth, & Atmospheric Sciences
Box 8208
North Carolina State University
Raleigh, North Carolina 27695-8208

John Williams, Meritorious Service Award; Jim Slosson, Distinguished Practice Award

A Note from the Editor

I have not received a lot of information for this edition. Please do not hesitate to send me items you would like included in our newsletter. It is difficult to create a newsletter if we don't receive any input from the members. Please send any items you have to my office: J. R. Giardino, Department of Geography, Texas A&M University, College Station, Texas 77843-3147. If you would like to FAX your information my FAX number is 409/862-4487. My phone number is 409/845-7141.

Engineering Geology Division 1993 Officers

CharlesWelby, Past Chairman; Genevieve Atwood, Councilor/Division Liaison; Jerry DeGraff, Chairman; Rhea Graham, Chairman-Elect; Michael Hart, Member-at-Large; John Rockaway was not present

The Geological Society of America

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