Presentation of the O. E. Meinzer Award to
Stanley Nelson Davis

CITATION BY FRANCIS R. HALL

I am honored to be asked to cite Stanley N. Davis, my close friend and long-time professional colleague, as the recipient this year of the O. E. Meinzer Award.

Stan was born in Rio de Janeiro, Brazil, of American parents, but he spent his formative years in the San Joaquin Valley of California. I rather suspect that life in the valley had an influence on his decision to go into geology/hydrogeology. He received all of his degrees in geology: a B.S. from the University of Nevada, an M.S. from the University of Kansas, and a Ph.D. from Yale University in 1955. That represents what could be called a good geographic distribution.

After various summer and other short-term positions, his academic career began at Stanford in 1954. I came on the scene as a graduate student in 1956. My immediate problem as a hardy veteran of 5 years in rural Kentucky with the U.S. Geological Survey was what to do with a professor who was about my own age and whose strongest curse word was “fap.” Well, I learned to say “fap,” too, and the rest worked out fine. I do not believe that it was entirely coincidental that one of his early major studies, and the one on which I worked, was located in the San Joaquin Valley. In any event, I soon discovered that he expected his graduate students, or any student for that matter, to do well, that he would not spoon feed, and that he expected students to be well prepared if they wanted his advice. Also, although he is a kind, gentle person, he does not much appreciate fools or malcontents.

Stan left Stanford in the late 1960s for the University of Missouri, where he also got into administrative activities, and then he went on to Indiana University. From there, he went to the University of Arizona, where he has had an important role in building up the very fine Department of Hydrology and Water Resources. As a personal aside, I have always believed that Stanford made a mistake when Stan was allowed to get away, and I suspect the same could be said for Missouri and Indiana. In any event, Arizona is clearly the big winner.

Two important works on tracers and age dating of ground water are the basis for the Meinzer Award, but I am not sure Stan feels they are his best works. For example, one need only mention Hydrogeology, which he co-authored with De Wiest and which has been translated into Spanish and Russian, or Geology, our physical environment with Reitand and Peetron, which has been translated into Japanese. In addition, there are the numerous journal articles, book reviews, editorials, and agency and consulting reports that clearly demonstrate his impressive professional productivity. I am not sure how many M.S. candidates he has worked with over the years, but his résumé shows major involvement with more than 20 Ph.D. candidates, so he has certainly paid his academic dues, too. On the informal side, it is always interesting to hear Stan tell about the Stephan Riess and water witching episodes at Stanford as well as some of his other adventures.

A close examination of Stan’s publications or simply working with him shows some of his strong personal characteristics. He does things carefully and thoroughly, and when he develops interests, he pursues them in detail and over long time periods. Good examples are his publications in Spanish and his work in Spanish-speaking countries. Other examples are his work on the hydrogeology of volcanic islands, his compilations of porosity and permeability of earth materials, and his deep interest in tracers and age dating. When I was still a graduate student, he was intrigued with possible uses for chlorine-36 in ground water, whereas few others showed that interest. After all, nobody knew much about it, and you couldn’t measure it anyhow. Nevertheless, years later when instrumentation and more knowledge became available, he was well prepared to do something about it.

It would seem to me that Stan can be considered a classical hydrogeologist. His basic interests are always in real problems in real materials. Where descriptions are required, he describes; where definitions are required, he defines; and where measurements are required, he measures. If the use of mathematics and/or statistics will improve interpretation of results, then they are incorporated into his studies. Mathematics and statistics, however, are not used as an end in themselves or to obscure inadequate results. I believe O. E. Meinzer would approve of his receiving this award!
RESPONSE BY
STANLEY NELSON DAVIS

Thank you very much for those gracious words. Citations can usually be classified as (1) clear distortions of the truth, (2) carefully selected bits of truth, or (3) the whole truth. Knowing Francis' complete honesty, I was sure that he would not distort the truth, but I was a bit afraid that he might try to tell the whole truth. I am glad that he was in a very selective mood when he pieced together his remarks.

Professor Francis R. Hall was my first Ph.D. student. This was one reason that I wanted him to be the citationist, but even more important was the fact that he was at the same time my best instructor. Despite my potpourri of experience with the U.S. Army, U.S. Bureau of Reclamation, and the Kansas Geological Survey, I still had numerous large and embarrassing gaps in my theoretical as well as practical knowledge. Francis was a godsend.

This brings me to the first point I wish to make. Our acquisition of skills and knowledge is through numerous channels, and for university professors, the most important channels are commonly graduate students. Although not uniformly successful, I have tried to involve graduate students in projects that interest them, projects which often did not correspond closely with my own research interests. This, in part, may account for my somewhat meandering career, but it has, from a personal point of view, resulted in my continuing education and, I hope, also that of the graduate students. With varying degrees of my own involvement, graduate students and I have looked at such diverse topics as remote sensing of springs, convective transport of heat, microstrain caused by ground-water pumping, the bromide content of sewage effluent, characterization of natural organic compounds in water, and the estimation of the natural neutron flux in the deep subsurface. This may sound like academic anarchy, and indeed it is intended to approach anarchy as closely as possible without wandering away from intellectual honesty, careful data collection, and rational analysis. This system only works, however, with at least one other ingredient, and that is advice from a host of able researchers and scholars. This is my second point.

Hydrogeology has always been central to the work of my graduate students as well as my own work. Nevertheless, our lines of inquiry have radiated rapidly into uncharted territory where the help from other disciplines has been desperately needed. I have been fortunate in this regard, for I have been associated with several outstanding universities with unusually cooperative and well-informed researchers. They have been an essential part of the education of all of my graduate students as well as myself.

Professors who give short talks always include three points. I will break with tradition. I have no third point. Before I close, however, I wish to introduce the inevitable list of people to whom I owe special thanks. I started by listing hydrogeologists. Unfortunately, the list grew so large that it was almost equivalent to the membership list of the entire Hydrogeology Division. This turned out to be impractical to present, so I have chosen to mention only four of the many outstanding scientists outside of hydrogeology who have had a positive influence on my life. These are (1) John C. Frye, who almost converted me to a career in Pleistocene stratigraphy and in the process taught me to enjoy completely all aspects of the earth sciences; (2) Richard Foster Flint, who, although not intending to cause the trauma, thoroughly frightened me into trying seriously to write proper English, a task which I had tried to ignore earlier in my career; (3) Konrad B. Krauskopf, who demonstrated to me that scholarship, outstanding research, and superb teaching are not at all incompatible but should be blended together in the academic world; and (4) Alden Carpenter, who, without knowing it, exposed me to more geochemistry during extended lunch conversations than I could ever possibly retain.

In closing, I am immensely pleased and proud that I was chosen for the 1989 Meinzer Award. My pride, however, is fully tempered by the realization, voiced in one way or another by all former recipients, that good fortune, talented students, and helpful associates really should be given the credit. Thank you.