

## 1995 C.V. THEIS AWARD

*Citation*

*A. Ivan Johnson*

The C.V. Theis Award, named in honor of one of the great leaders in hydrology is presented for major contributions in the field of ground-water hydrology. The AIH award committee and executive committee are delighted to present the 1995 C.V. Theis Award to A. Ivan Johnson for his outstanding work in the development of standard hydrologic techniques, his leadership role in professional organizations, and his training of young hydrogeologists from all parts of the world. He always is a dedicated worker and a valued, enthusiastic colleague.

Ivan has established countaintless laboratory methods and techniques for soil and ground-water hydrology. He has authored over 130 technical papers and served as an officer of more than 20 domestic and international scientific societies. He has been a member of the AIH Advisory Board since 1987.

John and I first met Ivan in Denver at the U.S. Geological Survey offices in the early 1960's. At that time Ivan was Chief of the National Hydrologic Laboratory. We individually considered ourselves very lucky to have worked with him as well as other prominent Denver ground-water hydrologists Bob Stallman, Stan Lohman, and Ted Moulder.

Time does not permit us to describe his many contributions, therefore, we will highlight only a few. During Ivan's 31 year career with the U.S. Geological Survey, he established the National Hydrologic Laboratory, National Special Equipment Unit and the National Training Center. The National Training Center still is extremely active and has trained thousands of Water Resources Division personnel, Survey cooperators, and international scientists. He also served as Assistant preparing the interagency National Handbook of Recommended Methods. Ivan also was involved in pioneering research in artificial recharge and specific yield. For his service to USGS he was awarded the Department of Interior Merit Award, Meritorious Service Award, and the John Wesley Powell Award.

Ivan is tireless in his efforts on behalf of national and international technical organizations. He has received many awards honoring his contributions to professional association such as the ANSI Finegan Standards Medal, ASTM William T. Cavanaugh Memorial Award and Frank W. Reinhart Award; IAHS Honorary President Award; AWRA President's Outstanding Service and Ico Iben Awards; and the ASCE Royce J. Tipton Award and Honorary Membership.

Ivan is a graduate of the University of Nebraska, where he received a BS degree in civil engineering and a BA in mathematics. After retiring from the USGS in 1979, he spent five years consulting for Woodward-Clyde Consultants. In 1984, he formed his own consulting firm, A. Ivan Johnson, Inc., in Arvada, Colorado.

When his best friends are asked, "How does Ivan find time for all his many activities?",

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the answer is always the same, "his best friend and wife, Betty," without whose help many of Ivan's contributions would not have been possible.

*John E. Moore*  
J.W. Patterson and Assoc.  
Denver, Colorado

*William R. Hotckiss*  
U.S. Geological Survey, WRD  
Denver, Colorado

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### A. IVAN JOHNSON

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#### *Acceptance Speech*

I am greatly pleased and honored to receive the C.V. Theis Award from the American Institute of Hydrology and to be in the company of so many distinguished former award recipients whom I have known. I had the privilege of knowing and working with "C.V.," a great scientist and good friend for the 31 years of my career in the U.S. Geological Survey. In joining USGS in 1948, I was very fortunate to have the opportunity to also work with or at least know well, many of the greats of the early years in the science of hydrology--including Stan Lohman, Luna Leopold, and Bob Averett, all of whom are being honored here by means of AIH dedicated symposia. I also have had the pleasant opportunity to work closely and frequently with John Moore through our many activities in USGS, IAH, and ASTM, so I thank him for presenting the citation.

It is interesting to note that AIH also is sponsoring a Nuclear Hydrology Symposium during this meeting. I either did some field work or analyzed soil and rock samples for many of the former Atomic Energy Commission bases. It was through some of this work that I finally had the opportunity to work very closely with C.V. Theis. Because C.V.'s position as an advisor to the nuclear hydrology studies for AEC, in 1959 he asked me to develop a sand model study of the pattern of wetting of liquid wastes from an infiltration basin in dry porous media. Of course, this was in the years before the wide use of computers for modeling. We spent many late nights discussing what might happen and then later what did happen during the test runs. Luckily we had made lapse-time movies of the infiltration runs so we had a good record of what actually happened after two years of model runs.

My next opportunity to work closely with C.V. was in 1965 when he and I were appointed by the Ground Water Branch to the USGS Committee on Redefinition of Ground-Water Terms. Under the leadership of Stan Lohman, the Committee started with terms defined by O.E. Meinzer, the "father" of ground-water hydrology, in his classic U.S.G.S. Water Supply Paper 494, "Outline of Ground-Water Hydrology, with Definitions." The last committee meeting, which finalized the Committee's recommendations published later as Water Supply Paper 1988, was held in April 1970 in Albuquerque, the day before C.V.'s retirement.

When I was Chief of the USGS National Training Center in Denver, we were providing 24 weeks of hydrologic training twice per year to the young new employees of the Water

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Resources Division and to international participants. For the training in fluvial sediment work, I would take the class to the Albuquerque, New Mexico office where there was located one of the largest sediment laboratories and also a field research site. I would announce that I had arranged for CV to speak to them and they always expressed surprise that anyone so famous for such a long time as Dr. Theis could still be alive. To most of us who knew C.V., he was a generally unassuming, quiet man but with a rather wry sense of humor. He would meet with these young people each time and tell them how he had spent the first several decades of his career promoting the Theis equation and the next several decades cautioning people that there were limits to its use. CV thus expounded eloquently upon a subject that I had emphasized to the class of trainees--there is no single magical tool for solving hydrologic problems--the hydrologist must be prepared to use many tools. To those people who may not have had the opportunity to know C.V. personally, I suggest reading USGS Water-Supply Paper 2415, an interesting summary of C.V.'s life and work as prepared by Al Clebsch.

In conclusion, I must say I have been very fortunate in my career. I had many varied, challenging, and inspiring assignments, supervisors who were open-minded to new proposals, and top-notch staff members dedicated to producing good scientific work. In addition, I could not have accomplished as much as I did if I had not been blessed with constant support from friends and technical society committee members, and from a very supportive wife and three children, all of whom helped me accomplish any contributions I made to the science of hydrology. I take this opportunity to thank them, and the AIH Awards Committee and the AIH Board that approved my award. This is definitely a high point of my career.

The C.V. Theis award was first established in 1986 by the American Institute of Hydrology. It is named in honor of C.V. Theis, one of the truly great leaders in the hydrological sciences. The award is presented for a major contribution in the field of ground-water hydrology.