I am convinced will be accounted in the future as the greatest gift to civilization of these United States—universal public education.

George White started the geology department at the University of New Hampshire when I was still in diapers, but he was long gone and I knew nothing of him when I arrived. We first met in Soviet Armenia within sight of the Turkish border and its presumed U.S. nuclear rocketery. It was June 1967. The inaugural meeting of INHIGEO, the History Division of the IUGS, opened with the announcement that war had broken out. George and I both felt protected, having had the foresight to bring along our wives.

We did it again the next year when our arrival for the 2nd INHIGEO meeting provoked the invasion of Czechoslovakia. The tanks were clanking down the cobbled streets beneath our window when my wife shook me awake and said "There's something going on out there." I rolled back to sleep mumbling something about how noisy they were collecting their garbage cans and in the middle of the night at that!

It is probably no longer possible for a College of Technology and a chairman of a Geology Department like Herb Tischler to support someone in another discipline (history) in another college. If I was able to help V. V. Tikhomirov and Rejier Hooykaas and George White in the first years of the International and National Committees for the History of Geology, it was in considerable measure because the University of New Hampshire helped to put me in a position to do so. Several N.H. interdisciplinary conferences developed out of that support and also my appointment to the editorial board of the Dictionary of Scientific Biography, a project which grew into 16 volumes and ultimately embraced more than 5,000 articles written by 1,000 biographers in 90 different countries. I consider myself privileged to have been there—to have worked at geology and history through the excitement of the twentieth century. Ours was the glory generation of the scientific revolution in geology as Newton's and Hook's was for physics. How fortunate for me to have met with friends and colleagues on five continents to share my enthusiasm for the earth sciences and their history! Thank you all for this award, for the years in which I have come to understand fully what Robert Hooke meant when he wrote that "the new philosophy hath a pleasure in it to rival that which men value the most, that of the senses themselves." They were good years, and it is good of you to cap them in this gracious way.

Presentation of the O. E. Meinzer Award to John A. Cherry

CITATION BY ROBERT N. FARVOLDEN

John A. Cherry, a friend and colleague, is the winner this year of the O. E. Meinzer Award, and it is a great honor and pleasure for me to give the citation.

John was born in Regina, Saskatchewan. His father was a federal civil servant, and so the family moved about, and John spent his high school years in Ottawa. He got his first degree in geological engineering from the University of Saskatchewan, where he met his wife, Joan Getty. His M.S. is from Berkeley. I first met them when they came to Illinois, where John was a student of George W. White. After post-doctoral study with Henri Schoeller at Bordeaux, they returned to Winnipeg in 1967, John as assistant professor in geology at the University of Manitoba where, incidentally, he was promoted within 2 years!

The Cherrys have two children, David and Andrea, both excellent athletes and students and obviously a source of great pride to the parents.

Last year, Pat Domenico chose this occasion to note how the Meinzer Awards mark the progress of scientific hydrogeology during the past 23 years or so. The tradition is maintained. John Cherry's work in contaminant hydrogeology is widely recognized as innovative, thorough, timely, and, above all, basic to our understanding of the migration of contaminants in the subsurface.

John Cherry's research all derives from field projects, some tied to sites of serious contamination, others designed specifically to investigate a parameter or condition of the shallow subsurface that might shed some light on the complex phenomena that are so difficult to deal with. The volume of the Journal of Hydrology for which the award was made is a good example of John's ability to take advantage of a field situation to pursue his scientific goals. First, he had the insight to appreciate the opportunity that this site presented. Then he designed excellent field experiments that led to a remarkable knowledge of a contaminant plume in a surficial sand.

Of course, the Borden studies followed the pattern of a series of field experiments John had already done at several other places. His initiation to contaminant hydrogeology came at the AECL Research Station at Pinawa, Manitoba, where officials had been assured that the lacustrine clays would provide an impermeable medium for disposal of low-level radioactive waste. Field studies soon showed otherwise, but as is so common in work of this sort, irrefutable data are hard to come by. So John extended his studies to a water-table sand aquifer at the AECL Research Station at Chalk River where an earlier "spill" provided an excellent source for a clearly recognizable plume. This field work required extreme care in sampling and measuring techniques, and progress was, at first, very slow, but eventually, the results and publications began to pour out. These, along with the book with Al Freeze, finally brought him the recognition he deserved. The work at Borden goes on, and I know of at least seven other places where he has very detailed field research projects under way.

We all have concerns about the research professor who cannot, or will not, teach. John Cherry is a gifted classroom instructor, entertaining and effective even in large classes. He has played a very major role in the development of our graduate program in ground water at Waterloo. For the past 13 years, our graduate students in hydrogeology have been required to take a course we call "field school." All of us participate and contribute but in the early years, it was John Cherry who insisted on the need for the
course and persisted in the development and management until it satisfied him. Now, it is a difficult, but fruitful week for all of us, and John is still the driving force behind it.

Most of us do a lot of field work and depend on the results for our research. Not many of us have the imagination and insight that marks John's work. He is always ready with a new idea, and he shares new ideas freely with anyone who is lucky enough to be working with him. He is a generous and supportive colleague.

Everyone in our group at Waterloo has made use of the various devices and techniques invented by John and his colleagues, including Gerry Grisk, Paul Johnson, David Lee, and others.

All this would seem to make a full work day if not a full life, but John is also very active outside the university. He is a pretty good athlete and still plays hockey twice a week, once with the department team on Friday afternoons. In our group, time off is considered a condition of employment by all male staff and grad students! He also plays with a team of professionals—doctors, dentists, and lawyers, that is; not professional hockey players. He is a downhill skier of no mean talent, but I am happy to report that he is only a mediocre tennis player. His wife can beat him at will, and even I can beat him if his serve is off. Neither of us is getting much better.

John Cherry brings great credit to our discipline and to our Hydrogeology Division and, in every respect, is a worthy recipient of the O. E. Meinzer Award.

RESPONSE BY JOHN A. CHERRY

It was indeed a pleasure to learn that I had been selected to receive the 1985 Meinzer Award. The series of co-authored papers for which the award was given pertains to the Borden Landfill, situated northwest of Toronto. This landfill is nothing more than a little old garbage dump, but like many old waste-disposal sites that I have known during the past 18 years, it has for me a great fascination. My rather intense interest in the subsurface anatomy of old waste-disposal sites worries my wife, amuses my mother, and completely baffles my two teenage children. My neighbors take note, when I walk on their lawns, as to whether or not I am wearing my landfill field boots. The hydrogeologic community, however, has always been tolerant of such activities and now, very unexpectedly but to my great satisfaction, the Hydrogeology Division, through the Meinzer Award, has provided me with a good reason for enthusiasm for continuation of such research. My children, on the other hand, now suspect that the entire hydrogeological profession is eccentric.

I think that there is still much to be learned from very detailed studies of waste disposal sites and from various types of field experiments at these sites, from small-scale short-term experiments to those that are large scale and long term. I expect to be involved with such research for some time to come, and I hope that this type of work will be useful in society's quest for better environmental protection.

I arrived at the University of Waterloo in 1971. Three years before this, however, I began my first field study, which took place at a shallow radioactive-waste-disposal facility in western Canada. This study was the first in which I became involved after a post-doctorate year focused on ground-water geochemistry. My involvement with this site came about completely by chance. Prior to this, I had no knowledge of or interest in contaminant hydrogeology. Between 1968 and 1971, I plodded along with this field study. I had difficulty identifying the important questions, and when I did run across good questions, I usually found that I was lacking techniques to uncover answers to the questions. In 1970, Bob Farvolden arrived at the University of Waterloo as chairman of the Department of Earth Sciences. Bob proceeded to assemble a large group of professors interested in ground-water research. I had the great fortune to be asked by Bob to join his group. In the same year, Peter Fritz arrived and opened our eyes to the considerable role that environmental isotopes can play in field hydrogeologic studies. Emil Frind brought advanced numerical modeling methods and an eye for ground-water physics. He was followed by Eric Reardon, an aqueous geochemist who brought a real knowledge of chemical thermodynamics to bear on ground-water problems; John Greenhouse, a geophysicist who focused many modern geophysical tools on contaminated ground-water systems; and then Bob Gillham, a soil physicist who brought innovative experimental methods. More recent additions include Jim Barker in organic ground-water geochemistry, Shaun Frape in inorganic ground-water geochemistry, and Ed Sudicky in stochastic and analytical modeling. During Bob Farvolden's tenure as department chairman and then dean, covering a period of 11 years, my requests to him for space, technicians, and field equipment of all kinds were never ending. His hair went from brown to gray and his squash game lost some of its edge as he continued to take time to help us along in every way possible. For me, collaboration with these fine colleagues and the considerable resources provided to us by the University of Waterloo and by Canadian funding agencies changed my world of hydrogeologic field studies. In this new world, interesting questions were identified in abundance, and new possibilities for acquiring answers were a basis for continual enthusiasm.

Each of the papers in the special volume of the Journal of Hydrology cited in the Meinzer Award has two or three co-authors. These co-authors are my colleagues on the faculty at Waterloo, as well as graduate students of several years ago. It is a result of a collaborative effort in every way that I am here today to receive this award.

I would also like to mention that George Davis, as editor of the Journal of Hydrology, accommodated my unusual request that our rather large number of papers on a single field site be published as a group in one issue of the journal. This rarely happens in refereed journals. We very much appreciated the influence that George exerted on our behalf.