



Howard L. Hartman

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1924–2002

Elected in 1994

*“For the engineering design, codification, and practice of
mine ventilation and air conditioning.”*

BY RAJA V. RAMANI AND JAN M. MUTMANSKY

HOWARD HARTMAN is a familiar name to over five decades of mining engineers through his authoritative text, *Mine Ventilation and Air Conditioning* (Ronald Press, 1961). Howard dedicated the first edition of the book to George McElroy, Ray Mancha, and John Warren, whom he termed modern giants of mine ventilation. Here we recognize Howard Hartman as a worthy addition to this illustrious list, and we take this opportunity to provide a brief background of his outstanding career.

Born in Indianapolis, Indiana, on August 7, 1924, Howard received his primary and secondary school education in Indianapolis. He then began his college education at the Colorado School of Mines in 1942 but joined the U.S. Navy in 1944. He received his B.S. and M.S. degrees from the Pennsylvania State University in 1946 and 1947 and his Ph.D. from the University of Minnesota in 1953, all in mining engineering. Howard was a registered professional engineer in the states of Colorado and Pennsylvania. In the years 1948 through 1950, he worked for Phelps Dodge Corporation in Bisbee, Arizona, and for the Arizona Mine Inspector’s Office in Phoenix.

Howard embarked on an academic career of over four decades as an instructor in mining engineering at Penn State in 1947. After earning his Ph.D., he returned to the Colorado School of Mines as an assistant professor and quickly rose to the rank of associate professor and then became Acting Head of the Department of Mining Engineering. In 1957 he went back to Penn State as Professor and Head of the Department of Mining Engineering. Between 1963 and 1980, Howard held the titles of Associate Dean of the College of Engineering at Penn State (1963–1967); Dean of the School of Engineering, California State University, Sacramento (1967–1971); and Dean of the School of Engineering, Vanderbilt University (1971–1980). In all these assignments, Howard was an innovator, creating the first work-study program in mining engineering at Penn State and helping to establish the new program in socioengineering at California State University, Sacramento, and the technology and public policy program at Vanderbilt. He joined the University of Alabama in 1980 as the first holder of the Garry Neil Drummond Endowed Chair in Mining Engineering, retiring in 1989 with an emeritus title.

Continuing his academic endeavors well into his retirement, Howard edited the monumental *Mining Engineering Handbook* (Society for Mining, Metallurgy & Exploration [SME], 1992) over a period of five years. As senior editor, he coordinated the efforts of six co-editors, 20 section editors, and 242 authors, producing a two-volume, 2,300-page, highly referenced handbook for mining engineers worldwide. He was also lead author and editor of the third edition of *Mine Ventilation and Air Conditioning* (John Wiley & Sons, 1997), which he originally authored in 1961. He then worked on the revision of his 1982 text, *Introductory Mining Engineering* (John Wiley & Sons, 2002) until his death in 2002 from the effects of Parkinson's disease. These texts reveal Howard's attention to the details of science, engineering, and technology and his dedication to solved examples, mind-broadening exercises, and references for further study and research.

Students' needs, particularly support for their education, were never far from Howard's mind. He established the

Howard Hartman Honor Scholarship Fund in Mining Engineering at Penn State, which benefits students to this day from the royalties on his mine ventilation texts.

Howard did pioneering research in the areas of rock mechanics, ventilation, rapid excavation, and drilling and served as a consultant to a number of mining and drilling companies and government agencies. During his distinguished career, he advised 28 students to advanced degrees, including eight who received the Ph.D. He organized the first symposiums in the United States in rock mechanics, rapid excavation, surface mining, technology and public policy, and mine ventilation through SME. He was an author or editor of over 100 papers, books, and symposium proceedings.

Howard was appointed Chairman of the Federal Metal and Nonmetallic Mine Safety Board of Review (1971–1975) by President Nixon. He was also a member of the National Academy of Sciences Committee on Tunneling Technology from 1974 to 1977. He visited many universities around the country and abroad to lecture on mine ventilation, rock mechanics, and tunneling and was recognized in *Who's Who in America* (1964).

Numerous awards for his distinguished contributions to the science and technology of mining engineering were presented to Howard. He received the American Institute of Mining, Metallurgical, and Petroleum Engineers Mineral Industry Education Award in 1965 and the Canadian Institute of Mining and Metallurgy's Distinguished Lecturer Award in Rock Mechanics in 1966. He won several prestigious awards from the SME, including the Distinguished Member Award (1982), the Daniel Jackling Award (1990), and the Howard Eavenson Award (1993). In 1989, SME created the Howard L. Hartman Award to honor Howard and to recognize individuals who have made outstanding contributions to the field of mine ventilation. He was the first recipient of the award. In 1994 Howard was elected to the National Academy of Engineering, a distinction accorded to few engineers and scientists to recognize their contributions to the advancement of engineering sciences and technology.

During his student days at Penn State, Howard met a fellow student, Bonnie Lee Sherrill, a home economics major from Bentleyville, Pennsylvania. Ever since their marriage in 1947, Bonnie has been the number one supporter of Howard, and her contributions to his professional endeavors were enormous. Howard and Bonnie had a great many shared interests, including hiking, opera, and vacationing in the national parks, particularly Yosemite National Park, where many of the rangers and staff knew them on a first-name basis.

Dr. Hartman is survived by his wife, Bonnie Sherrill Hartman, of Carmichael, California; by his daughter Sherilyn Hartman-Knoll, of Carmichael, California; and son Greg and wife Cheryle, of Flagstaff, Arizona. In addition, he is survived by six grandchildren and two great grandchildren.

It is our pleasure to have known Howard in all of his many roles—professor, mentor, author, leader, administrator, and most of all, friend.

