Memorial to Charles Edward Jacob
1914–1970

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Charles E. Jacob, internationally recognized authority on theoretical and applied hydrology, died suddenly of a heart attack in Los Angeles, on January 30. Funeral services were in Orem, Utah, his family home, and burial in Provo, Utah.

At the time of his death he was Senior Hydrologist and Professor of Hydrology at the New Mexico Institute of Mining and Technology, Socorro, New Mexico, a position he had held since 1965. In addition to his teaching and research activities at New Mexico Tech, Jacob had continued, on a part-time basis, his U.S. and international consulting activity through C. E. Jacob & Associates, Inc., his consulting firm in Los Angeles.

Born September 3, 1914 in Mesa, Arizona, Jacob grew up in Salt Lake City, and attended the School of Mines and Engineering of the University of Utah, from which he graduated with honors in 1935, with a B.S. in Civil Engineering. During the following academic year he attended Columbia University, New York City, where he received an M.S. degree in Civil Engineering (Hydraulics) in 1936.

From 1936 to 1947 he was a hydraulic engineer with the (then) Ground Water Division, U.S. Geological Survey, working initially on Long Island, New York, and later in Texas, Florida, and Washington, D.C. At the time of his resignation, he was Chief of the Geological Survey’s Section of Ground Water Hydraulics. From 1947 to 1952 he was Head of the Department of Geophysics, College of Mines and Mineral Industries, University of Utah, where he was engaged in teaching pure and applied geophysics, including courses in groundwater hydrology and hydraulics. He was Associate Professor of Geology at Brigham Young University from 1953 to 1955, and was Lecturer in Hydrology at California Institute of Technology from 1959 to 1962.

In 1965 he was appointed Chairman of the Department of Groundwater Hydrology at New Mexico Institute of Mining and Technology, Socorro, New Mexico. In this position he replaced Dr. Mahdi S. Hantush, who was returning to his native Baghdad, Iraq. Hantush, who had formed the graduate Department of Groundwater Hydrology at New Mexico Institute of Mining and Technology in 1955, had studied for his Ph.D. under Jacob at the University of Utah. At
New Mexico Tech, Jacob was instrumental in uniting the former departments of Geology, Geophysics, and Hydrology into an expanded Department of Geosciences.


He was a Fellow of The Geological Society of America, Fellow of the American Society of Civil Engineers, and a member of the American Geophysical Union, Society of Petroleum Engineers of AIME, and the California Association of Engineering Geologists. He had been Chairman of the Committee on Fluid Permeation of the American Standards Association; Chairman of the Committee on Permeability, American Geophysical Union; Chairman of the Committee on Ground Water Hydraulics, American Society of Civil Engineers; member of the Committee on the Metric System, American Geophysical Union; member of the Committee on Groundwater, American Geophysical Union; member of the Committee on Permeability Code, American Petroleum Institute; member of the Committee on Subsurface Drainage, Highway Research Board of the National Research Council; and member of the Program Development and Review Board, New Mexico Water Resources Research Institute.

In 1947 Jacob received the Geological Society of Washington prize for the best paper presented to the Society, and in 1948 he was awarded the Rudolph Hering Medal of the American Society of Civil Engineers. He was a Registered Professional Engineer in Arizona, California, Colorado, Nevada, New Mexico, and Utah.

Jacob married Thelma M. Gustaveson on July 6, 1936, in Salt Lake City. She died January 31, 1969, one year, less one day, before he died. Their two sons and four daughters survive them, as do ten grandchildren. Surviving also are two brothers and one sister. Jacob was active until his death in the Church of Jesus Christ of the Latter-Day Saints.

Ed Jacob, "Jake" to many of his friends in the Geological Survey and elsewhere, was an energetic, personable, friendly man. Professionally he was dynamic, imaginative, and productive; he left his mark on a developing science.
BIBLIOGRAPHY OF CHARLES EDWARD JACOB


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