

Memorial to William Charles Rasmussen 1917-1973

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On May 11, 1973, Dr. William Charles Rasmussen died instantly when the jeep in which he and two others were riding detonated a land mine in South Vietnam. Thus ended a brilliant and highly productive career marked by keen observation, clear thinking, and accurate decisions.

“Bill” Rasmussen, as he was known to his associates, was born in Chicago, August 29, 1917. He attended the Chicago public schools and the University of Chicago, where he earned the bachelor of science degree in 1938 and the master of science degree, with honors, in 1939. He received his Ph.D. from Bryn Mawr in 1958. His chosen field was geology.

He became a member of the Geological Society of America in 1951 and a Fellow in 1956. His membership

in other scientific and professional societies included the American Association of Petroleum Geologists, the American Chemical Society, the American Geophysical Union, and the Soil Conservation Society of America. He was elected to Phi Beta Kappa in 1938 and to Sigma Xi in 1947.

Upon completion of his master's degree in 1939, he entered the employ of the Seismograph Sewal Corporation in Tulsa, Oklahoma.

In 1940 he received an appointment as Junior Geologist with the U.S. Geological Survey and was assigned to ground-water work in North Dakota, and thus began his long and fruitful career with the Survey.

It was in North Dakota that he found Genevieve Lokken, and they were married on January 2, 1942. They remained constant and devoted companions for the remainder of his life. In addition to Mrs. Rasmussen, he is survived by their four children, Mrs. Nicholas Karatinos, Mrs. George Pollard, Ms. Sally R. Belknap, and William C. Rasmussen, Jr.

In 1942 Bill responded to a call for specialists in ground water to enlist in a water-supply unit then being organized by the U.S. Army for the purpose of providing water for our troops engaged in the invasion of enemy-held territory. In two years he advanced in rank from private to captain. He was assigned to the forces invading Africa and Italy. The provision of water for invading troops required that he move into new areas with the advanced troops. He received four battle stars and the Bronze Star Medal for Meritorious Service at the Anzio Beachhead. After the war he returned to the Survey and was assigned to ground-water work in Austin, Texas.

From 1946 to 1948 he served as a full-time Associate Professor of Geology at Texas A&M College. Bill found the relatively quiet life of a full-time university professor not to his liking. Accordingly, after completing a summer session in 1948 as Associate Professor of Geology at the University of Texas in Austin, he entered briefly into the employ of the Speed Oil Company in Houston as a field geologist. He seems

to have been successful in this venture, but ground-water work had become his primary scientific interest and when the opportunity came, he returned to the Survey.

In 1949 he was placed in charge of the Survey office at Salisbury, Maryland, and began an intensive study of the ground-water resources of Maryland's eastern shore. Thus began one of the most productive periods of his career. The thick Coastal-Plain deposits on the peninsula between the Chesapeake Bay and the Atlantic Ocean yielded both fresh and salt waters. Their geology had been studied as an extension of the formations on the west side of the bay, but there had been no consistent study of the overall hydrogeology of the peninsula. This task remained for Rasmussen to accomplish insofar as the political subdivision of the peninsula would permit. Virginia was not, at that time, interested in the study and the southernmost part of the peninsula yielded only a few reference wells. Fortunately, the central (Maryland) part of the peninsula was the key unit and Rasmussen was able to extend his work into Delaware to a limited extent. His reports on the geology and ground-water resources of Maryland's eastern shore will stand as a basis for any future work on the peninsula.

In 1954 he became the Survey's District Geologist for the State of Delaware. He served in this capacity through 1959. Here again, he defined the basic framework of the hydrogeology of the state. It was during this period that he completed the requirements for the Ph.D. degree at Bryn Mawr and qualified as a Registered Professional Engineer in Delaware.

From 1960 to 1963 he was assigned to special confidential work that the Survey was performing for the Atomic Energy Commission.

In 1963 Bill requested and received an assignment in the foreign work that the Survey was then performing for U.S. Agency for International Development (AID). He was first assigned to Cambodia, but deteriorating diplomatic relations caused the withdrawal of all U.S. technical assistance about two months after his arrival. Subsequently, based upon his own observations during this time and upon the earlier work of others, he was able to prepare a reconnaissance-level report on the ground-water resources of Cambodia.

He was then assigned to Vietnam. For the following description of his work there I am indebted to Dao Duy, a Vietnamese geologist who was his close friend and associate.

"Bill arrived in Vietnam in April 1964 and began what was, perhaps, his greatest contribution to human welfare. He initiated a nationwide program for the creation of rural water supplies (mostly based on ground water) that contributed much to public health. Ground-water hydrology and ground-water development were new in Vietnam." [Six months later some 16 drilling rigs were putting down village wells at the rate of 50 a month and surface-water purification units were being installed at the rate of 5 a month.] "With the collaboration of two young Vietnamese geologists, Bill undertook the formidable task of compiling all the available and disparate data on soils, borings, water wells (dug and drilled), pedology, and soils engineering. He prepared comprehensive reports on the geology of the Quaternary in Vietnam and taught and trained native Vietnamese. When he left the U.S. Mission (in 1966), he had compiled more than a thousand well logs, trained eight Vietnamese geologists in the field of hydrogeology, and trained almost 300 drillers in the fundamental and advanced techniques of well drilling. It is difficult to estimate the long-term benefits of this work, which was undertaken with his customary enthusiasm, dedication, and energy.

"Upon completion of his assignment with AID in April 1966, he decided to leave government service and go into consulting in Vietnam as hydrologic advisor to the Officer in Charge of Construction, Naval Facilities Engineering Command (NFFC).

He was responsible for the siting of water wells in support of the U.S. Armed Forces. Without exaggeration it can be said that probably every individual in the U.S. Armed Forces in Vietnam drank water from the wells that he sited.

"One of Bill's greatest achievements within the NFEC was to induce young engineers to recognize the importance of geology and its related disciplines. As past president of the Society of American Military Engineers Chapter in Saigon, Bill initiated seminars and conferences on geology and hydrology. His talks on the hydrology of Cam Ranh Peninsula are well remembered by those who were in Vietnam."

Bill was basically a scholar with an avid thirst for knowledge, which he sought by every means at his disposal. This was, perhaps, best exemplified by his persistence in improving his formal education through evening courses and independent research, in the course of which he achieved his Ph.D. degree when more than forty years of age. It was also apparent in the breadth of his reading and in the alacrity, acuity, and good humor with which he discussed technical matters with fellow scientists. His command of the language was superb. Words flowed freely, quickly, and in ordered sequence, never seeming out of phase with the thoughts he was expressing.

He was also inherently a teacher, eager to share his knowledge with others. This characteristic stood out throughout his career, both in formal teaching and in assignments where it was his duty to direct and supervise others. In addition to the full-time teaching at Texas A&M and at the University of Texas, he taught evening and weekend courses in geology and chemistry at the Maryland State Teachers College, Salisbury, Maryland, and at Lincoln University in Pennsylvania for several semesters. To his pupils and subordinates he imparted not only knowledge but his own enthusiasm and desire to learn. To quote one of his former subordinates: "He was dedicated to his chosen profession and his enthusiasm was contagious. Bill had seemingly boundless energy and remarkable recuperative powers following adversity. He had a zest for life so seldom observed in the problem-beset world of recent years." Another had this to say: "Bill was a leader and a teacher. . . . He was not afraid to use his imagination and he exhorted his staff to do likewise. His enthusiasm was great and he infected others by it, thus creating in us a spirit of true team effort."

In 1961 when he was being considered for a reassignment with the Survey, the Chief of the Training Section wrote: "Mr. Rasmussen is a very energetic, enthusiastic person who willingly gives of his time and effort above and beyond the normal requirements of whatever position he occupies. For example, he participated in a National Science Foundation Institute in radiochemistry at Philadelphia College of Pharmacy and Science this past summer. He has produced more reports than any other GS-12 in the branch."

Bill was an "idea man" of apparently boundless imagination. He was eager, alert, and keenly observant. The things he observed and did not immediately understand were a challenge to him and his approach to them resulted in ideas that he expounded with eloquence and clarity. His capacity to arrive at sound conclusions resulted in the abandonment of some ideas and staunch support of those he believed well founded.

His energy and breadth of interest led him to participate in many community activities and participation often became leadership. While in Salisbury, he joined the Soil Conservation Society of America and became president of its Eastern Shore Section. He was active in his church and Sunday school and became a ruling elder in the Presbyterian Church. His sincerity and eloquence inspired confidence. His dedication and enthusiasm led him to accept responsibility. His energy resulted in accomplishment.

Small of stature but big of heart, Bill loved his fellowmen. Superbly self-confident,

he was nonetheless gentle and courteous to all. He was, above all, devoted to his family and this devotion and his basic sense of responsibility inspired most of the major changes in his work pattern and assignments. His sudden departure leaves a void that will not easily be filled.

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