MEMORIAL OF HEINRICH RIES

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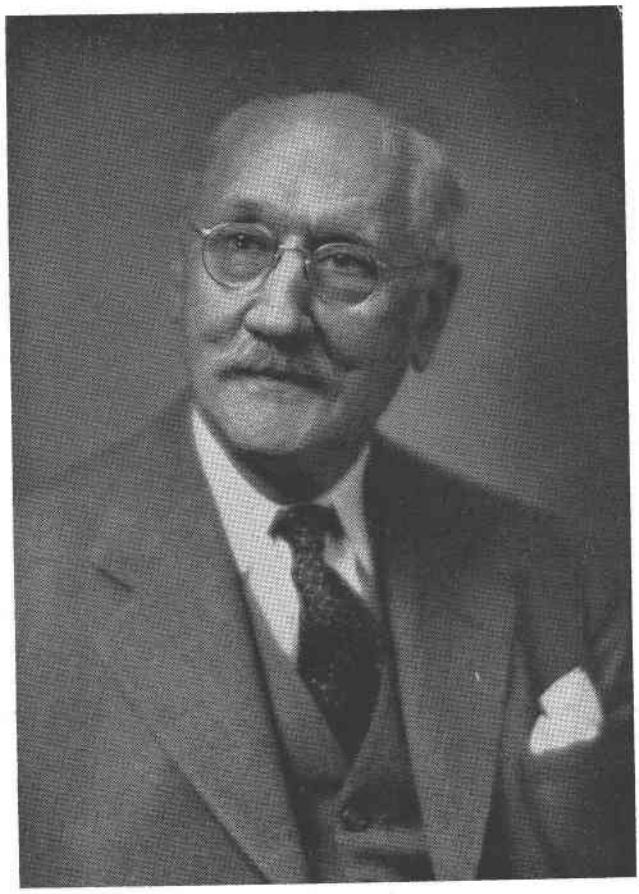
The sudden and unexpected passing of Dr. Heinrich Ries, Professor Emeritus of Geology of Cornell University, at his home in Ithaca, New York, on April 11, 1951, came as a shock to his many friends here and abroad. Death came in the midst of many activities less than three weeks before his eightieth birthday, and only two days before he was to have been the honored guest of the Central New York Chapter of the American Foundrymen's Association at a "Dr. Heinrich Ries Night." On that occasion he was to have been presented with a bronze plaque bearing the inscription, "In sincere appreciation of active leadership and contribution to the foundry industry in the field of sand research." His passing ended a long distinguished career as a teacher and mineral scientist in which he gained recognition as one of the leaders in the field of the nonmetallic mineral deposits. His pioneering work on clays and foundry sands will long be remembered and will remain a lasting monument of his achievements.

Dr. Ries was born in Brooklyn, New York, on April 30, 1871, the son of Heinrich and Caroline Bowman (Atkins) Ries. As a youth he had the advantages of an education obtained in part in this country and in part abroad. It is possible that his early studies and travels in Europe had served to arouse an interest in minerals, but in any event this interest was manifest when he enrolled as a student in the Columbia University School of Mines. He remained there to receive his Ph.B. degree in 1892 and then transferred to the School of Pure Science from which he was awarded an A.M. degree in 1894 and the Ph.D. in 1896. This training he supplemented with study at the University of Berlin and Polytechnikum during the winter of 1897–1898.

His long career as a teacher began while he was still a student at Columbia University. He served as Assistant in Mineralogy during the school year 1896–1897 and also as Lecturer in the Public Schools of New York City during the winters of 1895–1897. In 1898 Dr. Ries came to Cornell University as an Instructor in Economic Geology. In 1902 he was advanced to Assistant Professor and in 1906 to Professor of Economic Geology, a position he held until his retirement as Emeritus Professor in 1939. In 1914 he became the Head of the Department of Geology and served in that capacity for the next 23 years.

His professional career began while he was still at school and continued long after his retirement from academic work. He began his field work as an Assistant on the New York Geological Survey in 1891 and then



HEINRICH RIES
1871–1951

served again in 1892 and 1895. His work in the field won him early recognition and after graduation from the Columbia University School of Mines he was assigned to a report on the clays of New York state. As very little attention had hitherto been given to the study of clays, Dr. Ries had to formulate objectives and methods and so successful was he in this and so well received was his report that his services were soon in demand by other States, the Federal Government, and Canada. He was thus engaged by the North Carolina Geological Survey in the Fall of 1895, the Maryland Geological Survey in the spring of 1897, the Alabama Geological Survey in the summer of 1898, the Michigan Geological Survey in the summers of 1899 and 1906, the New Jersey

Geological Survey in the summers of 1900 and 1901, the University of Texas Mineral Survey in the summer of 1903, the Wisconsin Geological Survey in the summer of 1904, the Virginia Geological Survey in the summers of 1905, 1916, and 1922, the Canada Geological Survey in the summers of 1909, 1910, 1911, 1912, and 1913, and the Kentucky Geological Survey in the summer of 1923. He was also employed as Special Agent, U. S. Geological Survey from 1895 to 1910 and again from 1918 to 1919. While busily engaged on the reports based on all this field work he also found time to write a book on clays, which also added greatly to his prestige.

Early in his career Dr. Ries became acquainted with Dr. Richard Moldenke, the celebrated metallurgist, and from this acquaintance developed an interest in foundry sands. Soon information on foundry sands was included in many of his State reports, and in the course of time more and more of his attention was directed to this important resource. When several technical societies organized a committee to study foundry sand back in the early twenties he was a member of that committee. From 1923 to 1928 he served as Chairman of the Committee on Standard Tests on Sands, American Foundrymen's Association, from 1928 to 1945 as Technical Director in charge of Sand Research, and from 1945 to his death as Chairman of the Association's Sand Division. At Cornell University he established the first laboratory in the country for research on foundry sands and much of the research that has been done on foundry sands since has been done in this laboratory. At the time of his death he was still active in directing this research. In recognition and appreciation of his work on foundry sands the American Foundrymen's Association awarded him the Joseph S. Seaman Gold Medal in 1936, and was prepared to honor him again with a testimonial dinner and bronze plaque on April 13, 1951, when death intervened. Honors also came from Alfred University which awarded him the Honorary Degree of Doctor of Science in 1945.

Recognizing the need of textbooks in the then young fields of Economic and Engineering Geology, Dr. Ries set to work to meet this need. In 1905 came the first edition of his well known and widely used text on *Economic Geology* which appeared in seven editions, the last in 1937. The text on *Engineering Geology* of which he was senior author had five editions. His book on *Clays, Occurrence, Properties, and Uses*, has appeared in three editions and was being readied for the fourth edition at the time of his death. Altogether he was author or coauthor of eight books prepared for use in the classroom.

Dr. Ries belonged to and took part in the activities of many professional and scientific societies. He was a Charter and Honorary Member

of the American Ceramic Society and Honorary Member of the American Foundrymen's Association, the Rochester Academy of Science, and the Kentucky Academy of Science. In addition he had the distinction of Honorary Life Membership in the Canadian Institute of Mining and Metallurgy and the American Association for the Advancement of Science (Member in 1892, Fellow in 1898, and Life Member in 1939). He was a Life Fellow of the Geological Society of America and the American Geographical Society and a Life Member of the American Institute of Mining and Metallurgical Engineers. He was also a Member of the British Ceramic Society, the American Association of Petroleum Geologists, the Society of Economic Geologists, the Seismological Society of America, the Society of Economic Paleontologists and Mineralogists, and the National Geographic Society, and a Fellow of the Mineralogical Society of America. His activities in these organizations included a term as Vice President of the American Ceramic Society in 1903–1904 and President in 1910–1911. In 1925 he became Vice President of the Geological Society of America and in 1929, President. From 1902 to 1905 he was a Member of the Board of Managers of the American Mining Engineers and from 1910 to 1926, Chairman of the Committee on Non-metallics of the American Institute of Mining and Metallurgical Engineers. There were also the various appointments with the American Foundrymen's Association which occupied so much of his time in later years.

His activities were not entirely restricted to the affairs of the geological and other societies. In 1895 he served on the Jury of Awards at the Cotton States and International Exposition at Atlanta, Georgia; in 1901 the Pan-American Exposition in Buffalo, New York; and in 1904, the Louisiana Purchase Exposition in St. Louis, Missouri.

Dr. Ries took great delight in attending the meetings of the various societies to which he belonged. He missed very few meetings and could always be counted upon to be present at the annual meetings of the Geological Society of America and affiliated Societies and the annual meetings of the American Institute of Mining and Metallurgical Engineers. He delivered few addresses in later years but often entered into discussions. He preferred to spend his time in the halls where he could meet and converse with people. The papers could be read later and more profitably in the privacy of his study. Other meetings from which he obtained much enjoyment were those of the International Geological Congress. It was his good fortune to attend the meeting in Russia in 1897 as a delegate from Columbia University and the meetings in France in 1900, in Mexico in 1909, in Canada in 1913, and in Washington in 1933 as delegate from Cornell University.

Dr. Ries was a kindly person who enjoyed the company of other

people. He was never too busy to put his work aside and listen to what others had to say. His office was always open to his students and off-campus friends and he was always ready to discuss their problems with them. He was deeply interested in his students and this interest did not end at graduation. It was his desire always to keep in touch with his graduates, watch their progress, and assist them in any way he could to better their condition. He maintained a voluminous correspondence not only with his students and former students but also with a host of others with whom he had become acquainted. He was always at home to those who wished to see him and encouraged his students to come to his home on Sunday afternoons.

His interest in his friends and people added greatly to his enjoyment of travel. In later years he kept his summers open so that he could be free to travel as he saw fit and do the things he enjoyed doing most. It gave him the greatest of pleasure to plan trips to the West Coast, trips which in the course of time became an annual event. He scheduled his trips so as to include summer meetings of the societies to which he belonged which gave him opportunity to meet more of his friends and make more acquaintances. Then accompanied by friends he enjoyed visiting places of geologic interest, and particularly those places which would afford him data for his lectures and for his books on economic and engineering geology. As expected, Dr. Ries was most interested in visiting the non-metalliferous deposits which throughout his life remained his chief concern. However, he had a deep appreciation of mountain scenery and the geomorphic processes behind the scenery and arranged to include trips to the National Parks and other places of scenic and geologic content. His friends in the West are going to miss these pleasant summer excursions.

Dr. Ries was a tireless and prodigious worker. Idleness was not a part of his life. When compelled to retire from academic work, he yielded gracefully but transferred his energies to his sand research and to committee and consulting work. He would have none of the armchair repose that is supposed to come to one after a long job well done. His interest was in the future and there was always the work of tomorrow. This work must now be carried on by the students whom he helped to train. We all regret the passing of one of the last of the older school of pioneering geologists. His contributions will long be remembered. He served long and faithfully and led an active and full life to the very day of his death.

His first wife, Mrs. Millie Timmerman Ries, died in 1942. He remarried in 1948, but his second wife, Mrs. Adelyn Halsy Gregg Ries, passed away early in 1950. He is survived by two two sons, Professor

Victor H. Ries of Ohio State University, and Professor Donald T. Ries of Illinois State Normal University.

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