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## MEMORIAL OF FRANK L. HESS

September 4, 1871–August 29, 1955

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Frank L. Hess was born on September 4, 1871, in Streator, Illinois and died in Washington, D. C. August 29, 1955, a few days before his 85th birthday. Mr. Hess's career was essentially spent with the U. S. Geological Survey (1901–1925) and the U. S. Bureau of Mines (1925–1943). From 1918 until his death he was also Honorary Custodian of Rare Metals and Rare Earths at the Smithsonian Institution.

Hess was elected a Fellow of the Mineralogical Society of America in 1924, and a Fellow of the Geological Society of America in 1921. He belonged also to the Society of Economic Geologists, the Geological Society of Washington, The Washington Academy of Sciences, and the American Institute of Mining and Metallurgical Engineers, and at various times held offices in some of these organizations.

The Hess family originally lived in several places in the east but while Frank was quite young they moved to California and there Frank and his brothers were engaged in ranching. Frank once said, "I enjoyed that life and was not afraid of hard work, but one day I realized that without an education the rest of my life would be spent in physical labor, so I resolved to go to Stanford." The records show that Frank Hess received his degree from Stanford in 1903, where he was also a departmental assistant from 1901 to 1903.

It is not known what motivated Frank to become a geologist but it might well have been the influence of Bailey Willis at Stanford. At any rate, it was a fortunate selection because Frank came as near as any man is likely to come to fulfilling the public's image of what a geologist should look like and be. He had tremendous physical strength, a clear, friendly voice, and while talking with others his attitude showed that he was listening and that he considered their remarks important. People with such traits make friends easily. Frank was always well received and those he met never seemed to forget him. Wherever prospectors or miners lived in the West, they knew of Hess and whenever they learned a person was from Washington, they would invariably ask, "Do you know Frank Hess?"

Frank was an economic geologist with a special interest in the occurrence and resources of tin, tungsten, and rare earth metals. He not only



*Frank L. Hess*

knew of the geology of such deposits within the United States; he knew the people who managed the operations and those who lived in the vicinity. Occasionally he took a leave of absence from his government duties to do consulting work in foreign lands and his travels took him to South America, China, and Malaysia.

While on the staff of the United States Geological Survey, Hess had the opportunity to observe many pegmatites and to have numerous discussions with his associates about the sequence of events that took place in pegmatite formation. It was Hess who sparked the idea of the replacement process. He proposed the name *tactite* for the rock of complex mineralogy formed by contact metamorphism of limestone, dolomite or other soluble rocks into which foreign matter from intruding magmas has been introduced by hot solutions or gases.

No one can recall Frank Hess being in a serious auto accident but he certainly could not have qualified for a best driver award. One day in North Carolina, Frank was driving and both of us were looking for a trail on which we could turn off the road. On rounding the bend, we suddenly met a car, driven by a local man, coming head on. Both drivers swerved to avoid impact and the cars came to a stop almost side by side with both drivers slightly startled. As quick as lightning, Frank stuck his head out of the window and in that strong, clear, yet friendly voice said: "My, but I am glad to meet you. My name is Frank Hess and friends tell me that I am the world's poorest driver, but now I see that I am not." By that time Frank was out of the car with a map in his hand, and a grin on his face asking the man about local trails and whom we should see to get permission to go on the field roads. A few hours later the three of us were eating in a cafe and by this time these two "world's worst drivers" were acting like old pals.

On another occasion Hess told a group lunching together in an office during the early days of the great depression that they should join him and start buying ore which then was selling for less than it cost to produce. His arguments were, the concentrate could be stored in vacant buildings of which there were many, it would neither spoil nor burn, if the roof leaked there would be no water damage, and nobody would be likely to steal it. Later, I recall asking about this activity and his reply was, "I felt that it was the thing to do; it may not have helped much but it hurt nobody and I think I understand this sort of business." The day came when he liquidated the Hess stockpile and I hope at a profit, because he used these funds in another activity which Frank and his wife, Eva, shared equally.

Frank and Eva Hess had no children but they were father and mother to scores of unfortunate children. They specialized in giving children care

beyond that which their parents could provide in overcoming certain physical handicaps. These were children Frank saw during his travels and he knew that there was little chance of any of them getting professional service they needed where they lived. This activity was a part of the Hess family life until Mrs. Hess's health made it impossible to continue the good work. A few years before Frank's death we were chatting at lunch and I asked him about this project and recall being told that for an interval of ten years there was not a week when they did not have one or more of these children in one of Washington's hospitals. Their only reward was the inner glow which comes to those who do such services. Nobody was ever imposed on by Frank Hess, but on the other hand, I have never known a man on whom others made greater demands. But doing things for others was Frank's way of life.

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## MEMORIAL OF ELWOOD S. MOORE

August 3, 1879-March 26, 1966

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Elwood S. Moore, Emeritus Professor of Geology, University of Toronto, died on March 26, 1966, in Ottawa. During his professional career he saw Canada's mining industry grow from its pioneer beginning to its present stature. In the latter part of his term as head of the Department of Geological Sciences, he had to cope with the unprecedented numbers of post-war students. These developments presented him with increasing responsibilities as a geologist, teacher, and administrator, responsibilities which he discharged with his usual quiet efficiency and unswerving integrity.

Dr. Moore was a man of friendly reserve, not easy to know well, but well worth the knowing; a quiet-spoken man, whose words carried all the