

Memorial to M. Hans Frohberg 1901-1970

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Hans Frohberg was born in Germany in 1901 and first came to the North American continent in 1927 with a degree in Mining Engineering from Freiberg, a combination of business sense and scientific curiosity, and an inexhaustible fund of energy. He enrolled for graduate work at the University of Minnesota, where he worked under Professors W. H. Emmons and Gruner. He returned to Freiberg to take his Doctorate and then came back to Minnesota in 1932, where his bride Hertha joined him. They were married in Professor Gruner's house. For the next two years he worked as research assistant and instructor at the University of Minnesota, interspersed

with some field work in Canada. In 1934, the Frohbergs moved to Canada, where they made their home until Hans' death on August 30th, 1970.

Dr. Frohberg's first position was as manager of a gold mine in the Michipicoten district of Ontario. Later he filled a variety of mining and geological positions in the vicinity of Ontario and Manitoba. From 1943, he made his base in Toronto, working first for several mining companies and, after 1947, as a consultant, during which his activities took him from Canada to many parts of the world. He was particularly experienced in Central and South America and it was his reports on a fluorite deposit in Mexico that played a major part in its acquisition and expanded production by a Canadian company.

From 1958 until his death, Dr. Frohberg acted as Technical Consultant to both the Ontario Securities Commission and the Toronto Stock Exchange. These positions require an unusually high standard of integrity, unbiased judgment, and knowledge of both business and technology in mining matters. It is an indication of Hans Frohberg's reputation and character that he was offered this position and carried it out in a manner that commanded universal respect. During part of this period, he represented the Mining Branch on the Council of the Association of Professional Engineers of Ontario, for which he received a Certificate of Appreciation from the President.

I have dwelt thus far on the technical and engineering side of Hans Frohberg's life. In addition, as all his friends know, he was a devoted scientist who was among the founders of the Toronto Geological Discussion Group and of the Geological Association of Canada, of which he served as President

in 1961 and 1962. Mineralogy was his special love, and he was President of the Mineralogical Association of Canada in 1966. He was elected a Fellow of The Geological Society of America in 1953, and many will remember his forceful but good-natured comments at meetings of the Society and of the Society of Economic Geologists, of which he was also a member.

His published papers ranged from the economic—his Doctoral thesis was on the ore deposits of the Michipicoten area of Ontario—to the mineralogical, and from English to German. He was the first to observe riebeckite in the Michipicoten district (*American Mineralogist*, 1939). He described millerite in an unusual association in the Temagami district of Ontario in a paper with E. W. Nuffield (*Neues Jahrbuch für Mineralogie*, 1960). With D. C. Harris and E. W. Nuffield, he published “Studies of Mineral Sulfo-Salts XIX—Selenian Polybasite” (*Canadian Mineralogist*, 1965). He was one of the translators into English of his friend Professor Ramdohr’s “The Ore Minerals and their Intergrowth” and he was asked to contribute a paper, selecting the subject of tin mineralization at Mount Pleasant, New Brunswick, at the 200th anniversary celebrations of his alma mater, Freiberg.

Through his detailed and wide-ranging interest in mineralogy, he was known to many members of the staffs of university departments of geology and mineralogy and of museums throughout the North American continent and in Europe. He was honoured by a newly discovered mineral (the tellurium analogue of marcasite), being named “frohbergite” by Dr. R. M. Thompson, whom he aided in identifying the mineral.

One of the main contributions of Hans Frohberg to geological science was the remarkable mineral collection he amassed—one of the finest private collections in Canada—which could only have been accomplished by one with an unusual combination of energy and an encyclopaedic knowledge of mineralogy, and with the enthusiastic cooperation of his wife. As a private collection it was somewhat unusual, in aiming at the research aspect of mineralogy, rather than concentrating purely on the crystallographic and aesthetic aspects. This collection has now been acquired by the Royal Ontario Museum, of which Dr. Frohberg was an honorary member, and a memorial trust has been set up and supported by many of his friends, for additions to the collection. This is a particularly suitable and lasting tribute to a scientist and mining engineer of ability and integrity.

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