

Memorial to George Malcolm Fowler 1885-1972

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George Malcolm Fowler, E.M., Professional Engineer, noted as a world authority on the occurrence and origin of certain ore deposits (notably those of lead and zinc), died on July 8, 1972. A resident of Joplin, Missouri, since 1927, he had entered the Freeman Hospital on April 24 from his residence at the Mayflower Apartments. In his death, American applied economic geology lost one of its outstanding contributors. He is survived by two brothers, Charles H. Fowler of Salem, Oregon, and Chauncey R. Fowler of Lewistown, Montana. His widow is the former Lois Grant, a daughter of the head of the Northwestern University geology department, where Miss Grant served as chief administrative secretary until her marriage to George in 1936.

George was one of four sons of Scottish immigrants. His parents were married in Baltimore in 1876 and then shortly moved to Cheyenne. In 1879 they settled on a ranch near Lewistown, Montana, where George was born July 8, 1885.

George's early boyhood on the ranch with graduation from the Fergus High School in 1903 was followed by entrance into the Montana School of Mines after a postponement of five years because of lack of funds. At "Mines" he earned the E.M. degree in 1912, simultaneously carrying out duties in the school's laboratory and further supplementing his experience and income by work in nearby mines on weekends and holidays. His outstanding capacities were recognized when he received the Professional Engineering degree from the same institution—now the Montana College of Science and Technology—in 1935.

After three years of work in various capacities, geological and technical, George joined the Geological Department of the Anaconda Company, a connection maintained for twelve years. In 1919 he opened a Salt Lake office for the company, and served also as superintendent for the Montana-Canadian Gas Company and the West Dome Oil Company. While based at Salt Lake City he demonstrated, as one friend put it, the existence of large enough ore reserves in the intermontane states to justify the establishment of the Tooele Smelter and the organization of the International Mining and Smelting Company in Salt Lake City.

Meanwhile, his ability was recognized in the membership of many societies. A life member of the Society of Economic Geologists, he served on many of its committees, was a Councilor in 1936 through 1938, and again in 1946 to 1948, and was its Vice President in 1947. In 1963 he was elected to the Legion of Honor as a member of the American Institute of Mining, Metallurgical, and Petroleum Engineers; he had also served on many of its committees. He was a member of the American Association of

Petroleum Geologists, of the American Mining Congress, and the National Society of Professional Engineers. He was a Fellow and member of the Board of Directors of The Geological Society of America, and served for twenty years on the advisory council of the geology department of Princeton University. For over fifty years he was affiliated with A. F. and A. M. Lodges and Scottish Rite bodies in Butte and Joplin and with the Shrine Bagdad Temple in Butte. Other activities and memberships included the Joplin Rotary Club, the Joplin Historical Society, and the Joplin Chamber of Commerce. He was on the membership rolls of the Elks Club of Lewistown, the Mining Clubs of New York City and San Francisco, and the Cosmos Club of Washington, D.C.

In 1923 while working near Elko, Nevada, Fowler suffered a serious foot injury and was almost continuously hospitalized for much of two years. This required medical attention intermittently for the rest of his life—a difficulty he bore with characteristic fortitude and good cheer.

In 1925 George was sent by his company to study the ore deposits of the Missouri-Oklahoma-Kansas or Tri-State district. What he saw prompted him to establish a consulting office in Joplin in 1927. As consultant he served such leading mining companies as the Eagle-Picher Mining and Smelting Company, the New Jersey Zinc Company, the Commerce Mining and Royalty Company, his former employer Anaconda, the Bunker Hill Company, the Consolidated Mining and Smelting Company of Canada, and the United States Steel Company. Other clients included the Kansas City Southern Railroad, the International Telephone and Telegraph Company, the Texas Company, and the Great Northern Railroad.

Fowler's bibliography includes over twenty publications of note, concerned chiefly with lead, zinc, silver, and copper deposits—largely in Missouri and Oklahoma, but also in the intermontane states and Mexico. Perhaps his outstanding contribution was his detailed clarification of the stratigraphy in the Tri-State region, especially of the ore-bearing Boone formation. This work furnished clues to much of the successful ore exploration in that region by others as well as by himself. He published his knowledge freely, setting aside completely any personal economic considerations.

In addition to this excellent basic structural and stratigraphic work, Fowler became deeply involved in the argument about the genesis of lead and zinc deposits of the stratiform type. For a period, his was one of the minority voices advancing the now widely (though not wholly) accepted theory of their hydrothermal origin, as opposed to those who attributed the mineralization to deposition from descending or laterally moving waters. Fowler's ideas came to displace the earlier explanations, and were themselves embattled by a still later school—largely European—which argued for primary sedimentary origin followed by possible mobilization.

Throughout these sometimes heated discussions, Fowler (then still junior to many of his most vociferous opponents) preserved his calm and retained the respect and friendship of his opponents. It is a lasting tribute to the greatness of his character and humanity that he remained until his death the ideal, and indeed the idol, of those most familiar with the region where the greater part of his later years of geologic activity were spent.

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