
Richard Roberts Hice (*Pennsylvania*)

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Richard Roberts Hice is remembered today primarily for his role as state geologist of the Third Geological Survey (or Commission) of Pennsylvania (1899–1919). Yet, as “a man of broad interests and a keen observer” (Ashley, 1926, p. 95), Hice was also an accomplished businessman, consulting geologist, and expert on the economic geology of western Pennsylvania. In addition, he was a strong conservationist. Hice was affiliated with several scientific and technical organizations,



and devoted considerable attention to some. He loved geology and enjoyed research and writing; his work was published in a number of scientific journals. He also had a keen interest in other fields of science, such as astronomy. He traveled extensively in the United States, and maintained a winter home in Fort Myers, Fla., where he cultivated orange trees. Hice was known to many for his engaging personality and strong physique. Blue-eyed and fair-haired, he was described by Ashley (1926, p. 94) as having “a breezy, hearty manner that made him good company wherever he went.”

The second child of Judge Henry and Ruth Ann (née Ralston) Hice, a prominent western Pennsylvania family, Richard Hice was born on August 19, 1865, in the town of Beaver—about 25 miles northwest of Pittsburgh. Sadly, Hice was only 7 when his mother died in 1872, though his father later remarried. Hice was a lifelong resident of Beaver. He was educated at local public schools and graduated from Geneva College, Beaver Falls, Pa., in 1886, with a baccalaureate in natural sciences. Held in high esteem for a very successful career, he was later awarded an honorary Sc.D. by his alma mater in 1913. Following graduation from college, Hice read law under his father, but discontinued his studies 6 months before completion. It was decided that he should pursue a career involving outdoor work, owing to health concerns (Ashley, 1926).

Hice initially worked for a fledgling natural gas company, but around 1891 joined the newly founded Fallston Fire Clay Co. located several miles north of Beaver. He held several supervisory and executive positions with this company until late 1909. The Fallston Fire Clay Co. specialized in the manufacture of face brick and mined its own clay from the “lower productive” coal measures (Middle Pennsylvanian Allegheny Formation). By 1890, Hice’s enthusiasm for geology solidified, particularly as it pertained to western Pennsylvania. His earliest published research dealt with Pleistocene river terraces and preglacial drainage of the Beaver and Ohio River Valleys. Within a few years, he was a recognized expert on the local geology and clay occurrences of Beaver County (Hopkins, 1898, p. 6).

On April 12, 1893, Hice married May Kells in her hometown of Citra, Fla. Tragically, their first child was stillborn the following year. Thereafter, they had one daughter, Eva Kells Hice. During the 1890’s, Hice joined the National Brick Manufacturers Association, an industry trade group. Just before the start of the 13th annual convention of the NBMA, held in Columbus, Ohio, in 1899, Hice attended the organizational meeting of the American Ceramic Society and became a charter member. The Society was initially a separate part of the NBMA, and its purpose was to promote scientific research in all fields of ceramics. Hice remained deeply committed to the Society and its principles throughout his life, and was elected its president for 1915–16.

By the end of the 19th century, the geology of the commonwealth had been investigated by both the First (1836–42, 1851–58) and Second (1874–95) Geological Surveys of Pennsylvania. Nevertheless, growing demand by the public for an accurate topographic map of the state and by business interests for more detailed information on the economic geology of western Pennsylvania compelled the Pennsylvania General Assembly to consider a Third Geological Survey. Thus, a bill was introduced in the state legislature, entitled “an act to authorize the topographic and geological survey of the State in co-operation with the United States Geological Survey.” Signed into law by Gov. William A. Stone on April 28, 1899, Act 78 called for the governor to appoint a commission consisting of three unpaid citizens of the state, who would confer and negotiate with the U.S. Geological Survey to develop and implement a cooperative topographic and geologic mapping program. The commission would also provide oversight to protect and ensure state interests. Emphasis was on topographic mapping. The law allowed for the expenditure by the state of up to \$20,000 per year for the first 2 years (the legislative biennial cycle), provided that the USGS spent an equivalent amount. Independent of this, the USGS also bore all the expenses for printing and publication. The three original commissioners of the Topographic and Geologic Survey Commission of Pennsylvania were George W. McNees, Simon Harrold, and Fred D. Barker, and they signed the cooperative agreement with Charles D. Walcott, director of the USGS, on July 12, 1899. With the death of Harrold in 1902, Hice was selected to replace him.

As time went on, Hice became the secretary and chief representative of the Commission. One of his important assignments resulted from President Theodore Roosevelt's growing national conservation movement. From May 13–15, 1908, the president convened a Conference of Governors at the White House to call attention to the management and use of the nation's natural resources. Just prior to the conference, state geologists met with the director and staff of the USGS in Washington, D.C., to discuss conservation issues, including the need for increased topographic mapping. Commissioner Hice represented the Topographic and Geologic Survey of Pennsylvania. Before the 2-day meeting ended on May 12, 1908, the state geologists also organized the Association of American State Geologists to achieve greater political clout through a unified voice on matters of common interest.

Much good work was accomplished by the USGS during the first few years of the Third Survey, including unprecedented quantitative geologic mapping in parts of western Pennsylvania and detailed reports on areal economic resources. (Other geologic mapping by the USGS was conducted in the eastern part of the state that was not part of the cooperative agreement.) Topographic surveys, involving many persons, resulted in dozens of 15-minute quadrangles being controlled and mapped. Some highlights and contributions of the Topographic and Geologic Survey Commission of Pennsylvania were discussed by Sevon (1987).

Though acknowledging the importance and success of the cooperative program with the USGS, the commissioners recognized the urgent need to create an independent and "permanent geological survey" at the state level to conduct geologic investigations. A state survey with a proper annual appropriation would ensure ongoing collection, analysis, dissemination, and preservation of detailed geologic information from throughout Pennsylvania and would encourage conservation in the mineral industries (Pennsylvania Geological Survey, 1911). The act creating the independent state geological survey was finally approved and signed into law on May 13, 1909.

The independent state survey operated under the purview of the Topographic and Geologic Survey Commission. The Commission now had the legislative authority to appoint a state geologist and selected one of its own—Richard Hice—who accepted the position in October 1909. Hice, by background and temperament, was a practical scientist and businessman and believed that "the primary purpose of a Geological Survey is the encouragement of the mineral production of the State" (Hice, 1912, p. 156). Hice maintained the office of state geologist in Beaver.

Unfortunately, thereafter, the Third Survey was chronically underfunded. The inadequate biennial appropriations of the legislature were further cut by successive governors "because of insufficient State revenue" (Pennsylvania Geological Survey, 1912, p. 22). No new cooperative geologic mapping was initiated. Cooperative topographic mapping continued on a reduced scale. Independent geologic work had to rely on Pennsylvania academicians and college upperclassmen, whose studies were often already under way prior to Survey involvement. The Third Survey could only afford to pay per diem wages and some field expenses. Other than for some clerical support, there was no money for permanent staff or full-time geologic assistants. Hice spent most of his time collecting and compiling geologic information and statistics in cooperation with the USGS, answering service requests, performing administrative duties, and editing and producing the various state reports.

In 1915, the appropriation bill for the Survey was vetoed by the governor, and the work of the Third Survey ceased on June 1. Little is known of Hice's activities during the next 2 years. He may have continued to function as state geologist for a while, but then probably became a consulting geologist to support his family. He was also more involved with the American Ceramic Society as its president for 1 year, though the work was largely ceremonial.

Funds for the Third Survey were restored during the 1917 legislative session. With the entry of the United States into World War I and the involvement of the USGS in the war effort, little cooperative work was accomplished in Pennsylvania over the next 2 years, however. Some additional independent state investigations were begun, but only one state geologic report was completed. Two years later, new legislation was passed and signed into law by the governor on June 7, 1919, creating the modern Fourth Geological Survey of Pennsylvania, which was designated the Bureau of Topographic and Geologic Survey, initially in the Pennsylvania Department of Internal Affairs. The act also abolished the Topographic and Geologic Survey Commission, and Hice's formal tenure with the Survey came to an end.

Given the generally lukewarm support of the general assembly and the inadequate biennial appropriations, Hice and the Topographic and Geologic Survey Commission of Pennsylvania probably accomplished as much as could be expected. The total estimated cost of the Third Survey, excluding printing and publications, was \$540,000 (\$310,000 from the state and \$230,000 from the USGS). The cooperative work with the USGS resulted in topographic-map coverage for 56 percent of the state (U.S. Geological Survey, 1919, p. 125). In addition, cooperative geologic mapping was initiated in 31 quadrangles; 27 of the resulting maps were published in folios before 1919. A number of associated economic bulletins were released as well. The USGS also mapped the geology of several other quadrangles on its own in southeastern, south-central, and western Pennsylvania. The Topographic and Geologic Survey Commission independently produced six progress reports and 12 numbered reports.

Hice showed no interest in applying for the office of state geologist in the new Survey, but urged quick action in filling the position so that the appointee could attend an upcoming AASG meeting. Nevertheless, Hice was asked to stay on as acting state geologist until his replacement was selected (Hice, 1919; McNees, 1919). In late August 1919, Dr. George H. Ashley was appointed first state geologist of the Fourth Geological Survey, and his employment began on September 1. Ashley (1919) asked Hice to finish his current Survey work before leaving, which involved the location and testing of sources of limestone aggregate in western Pennsylvania for the Highway Department. Hice completed his study in October 1919.

Hice spent the remainder of his career in private practice as a consulting geologist. He devoted much of his attention to the analysis and evaluation of natural gas reserves throughout the United States. In his work, he traveled frequently to Louisiana, Oklahoma, Texas, and West Virginia.

By 1922, Hice was in declining health, and the following year, he spent several months resting at his winter home in Florida to comply with doctor's orders (Hice, 1922, 1923). He continued to travel and consult extensively, however. Thus, friends and colleagues alike were surprised by his unexpected death at his home in Beaver on March 27, 1925. He was buried locally at the Beaver Cemetery. Hice was a charter member and former president of the American Ceramic Society and a fellow of the Geological Society of America. He was also a member of the Association of American State Geologists, American Institute of Mining Engineers, Engineers Society of Western Pennsylvania,