

## Information Sheet

**R**      **Gross, Henry Emmett, 1906-1982.**  
**837**      **Papers, 1921-1981 (bulk 1937-1949).**  
            **Eighteen folders.**

This collection is available at [The State Historical Society of Missouri](http://www.mshs.org). If you would like more information, please contact us at [shsresearch@umsystem.edu](mailto:shsresearch@umsystem.edu).

These are the professional papers of Henry Emmett Gross, an engineer, inventor, and map-maker from Webster Groves, Missouri. Most of the collection concerns his patents for deep ocean oil drilling and marine salvage.

Henry Emmett Gross was born 1906 in what is now Glendale, Missouri. He attended the Missouri School of Mines and Metallurgy at Rolla, receiving the Bachelor of Science degree in Mine Engineering in 1928. He pursued postgraduate work at the University of Illinois at Urbana, 1931-1933, and then returned to Rolla, where he received the Engineer of Mines degree from the Missouri School of Mines and Metallurgy in 1934. He was a professor of Petroleum Engineering at the University of Oklahoma at Norman, 1936-1938, and Associate Professor of Petroleum Engineering at the Agricultural and Mechanical College of Texas at College Station from 1938-1941. Also in 1941, he married Margrete Wilhelmine Brauer in Norman, Oklahoma. During most of World War Two, Gross was a production analyst for the Petroleum Administration for War working in Chicago, Illinois. In 1945, he became the chief petroleum engineer for the Kingwood Oil Company at Effingham, Illinois.

Gross referred to himself as a mining engineer by training, but a petroleum production engineer by practice. From his undergraduate college days, Gross was interested in submarine oil well drilling. His 1934 thesis, "Foundations for Aquatic Oil Wells," was his first exposition on the subject. It would lead to four patents on foundations for drilling platforms at sea, 1941-1950. Visionary at the time, some of Gross's inventions for marine foundations were optioned to the Humble Oil Company and Standard Oil Company and later became commonplace in offshore oil production. A corollary to his interest in deep sea drilling was marine salvage at depths prohibiting use of divers. His work in this field was rewarded by a patent, "Apparatus for Salvage," a method of deep ocean ship salvage using drill stems as lifting apparatus, in 1947.

In 1946, Gross took over the map-making business of his uncle, Herman W. Gross, in Webster Groves, Missouri. He produced wall maps, street maps, and guides to Saint Louis and the metropolitan area until his retirement in 1972. In 1978, Gross received honors as a fifty-year member of the American Institute of Mining, Metallurgical, and Petroleum Engineers, and in 1980 he was accepted into the prestigious Explorer's Club. Gross died on 3 April 1982 in Webster Groves, Missouri.

Henry Emmett Gross's papers were donated by his estate to the University of Missouri in 1984. The earliest materials include his diploma from the Webster Groves High School (1921), and class papers and his professional thesis from the Missouri School of Mines and Metallurgy at Rolla, 1928-1934. There are also files containing a brief autobiographical sketch, other biographical information, and copies of professional publications. The bulk of the collection concerns his inventions and patents, and consists of correspondence with petroleum industry leaders and governmental officials, Humble Oil Company and Standard Oil Development Company executives, and patent attorneys Hubert E. Clark, Lester B. Clark, and Keith Misgades. There are also files on his various patents, offering a view of the patenting process including the protracted negotiations with patent examiners. Gross never succeeded in patenting his planetary torque converter, but successfully patented and marketed his marine foundations. His patented "Apparatus for Salvage," was not monetarily successful, although Gross later suspected that his method was used on the *Glomar Explorer* to lift a sunken Russian submarine from the ocean floor.

There are only a few items regarding Gross's successful career as a cartographer of the St. Louis metropolitan area. The last items in the collection concern the "Seminex" controversy in the Missouri Synod of the Lutheran Church, his honors from the American Institute of Mining, Metallurgical, and Petroleum Engineers, and membership in the Explorers Club.

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These are the professional papers of Henry Emmett Gross, an engineer, inventor, and map-maker from Webster Groves, Missouri. Most of the collection concerns his patents for deep sea oil drilling and marine salvage.

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- F. 02: Classroom exercises, diplomas, professional certificates, 1921-1978
- F. 03: "Foundations for Aquatic Oil Wells," thesis, Schools of Mines and Metallurgy (Rolla, Mo.), 1934
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