

IN MEMORIAM
LEONARD F. BROWN, JR.

Dr. Leonard F. (Frank) Brown Jr., Professor Emeritus of Geological Sciences and a prominent, internationally known geologist, died December 25, 2016, at the age of eighty-eight.

Dr. Brown was well known to geoscientists worldwide for his seminal contributions in siliciclastic depositional systems—not only formulating the initial concepts, but also applying them to seismic stratigraphy, sequence stratigraphy, and coastal studies management. During his five-decade career, Frank had global influence as a researcher, consultant, and mentor. Frank made these contributions while working at the Bureau of Economic Geology in Austin (1957–60, 1966–89, 1998–2011) with a faculty appointment at The University of Texas at Austin (1971–89). He also taught at Baylor University (1960–69) and worked as a full-time international consultant from 1989 to 1996.

Professor Brown was a native of Oklahoma. He was born (1928) and raised in the small town of Drumright, where his father worked in the Gulf Oil production department. After high school, Frank financed his college education by working summers as a roustabout and sometimes as a roughneck. He finished a four-year premedical program at Baylor University in 1950 with a major in chemistry and biology. But rather than attending medical school, he decided to pursue a B.S. degree in geology, which he completed in 1951. He entered the University of Wisconsin at Madison in 1951, earning an M.S. degree in 1953 and a Ph.D. degree in geological and geophysical sciences in 1955.

In 1955, Frank accepted a job with Standard of Texas (Texas Chevron subsidiary) in Amarillo, Texas, but he left there in early 1957 to accept a position of research scientist at the

Texas Bureau of Economic Geology in Austin, where he began stratigraphic studies of Pennsylvanian strata on the Eastern Shelf of the Midland Basin.

In 1960, Brown became an Assistant Professor of Geology at Baylor University. There he taught many undergraduate and graduate courses; directed the Baylor Student Geological Society; established and edited the biannual Baylor Geological Studies bulletins; and supervised Baylor students who were researching the stratigraphy of Pennsylvanian rocks in North-Central Texas. Frank continued fieldwork in North-Central Texas for the Bureau of Economic Geology during the summers of 1961-63.

In 1966, Frank returned to the University of Texas at Austin full time as a Research Scientist, where he continued studying the Eastern Pennsylvanian Shelf of the Midland Basin. Frank also began a long-term research initiative on ancient deltas and other siliciclastic systems with Dr. William Fisher. Their work, centering on Cenozoic and Paleozoic deltas, led to the concept of “depositional systems,” first published in 1967. In 1969, Brown and Fisher, along with Al Scott and Joe McGowen, published a monograph titled *Delta Systems in the Exploration for Oil and Gas*, which quickly became the key publication on its subject. Brown and Fisher were later (1977) to introduce the concept of “systems tracts,” which, along with depositional systems, forms the core of modern sedimentology and stratigraphy.

In 1969, Frank undertook direction of the Bureau’s Gulf Coastal Environmental Geology project. Frank also showed breadth in his field by working on modern depositional systems and environmental geology. During the 1970s, this work resulted in a seven-volume environmental series covering the entire Texas coastal zone, comprising multicolor geologic maps of the Texas coastal Pleistocene and Holocene, as well as many derivative environmental maps emphasizing the impact of coastal processes and planning. Frank also managed the Bureau’s long-term nuclear

waste isolation study of the Palo Duro Basin (1977–85) for the U.S. Department of Energy, and was later involved in siting the Superconducting Super Collider for the State of Texas.

Brown was Associate Director of the Bureau of Economic Geology from 1971 to 1984 and then Senior Research Scientist from 1984 to 1989. During most of his tenure at the Bureau, Frank Brown served as a rigorous technical editor of all geological publications. A good writer himself, Frank imposed a high standard for clarity of thought and expression in the manuscripts he reviewed. His ubiquitous red ink filled the margins of the papers he edited.

In 1972, Brown and Fisher began a joint research and training venture with the Brazilian national oil company, Petrobras. For ten years, Bill and Frank brought Petrobras geologists and geophysicists to Austin for several months of intensive analysis of an offshore Brazilian basin. During their Brazilian studies they developed seismic stratigraphic interpretations of the passive and rifted Brazilian basins, which led to their memorable contribution to the *American Association of Petroleum Geologists (AAPG) Memoir 26* (1977) on seismic stratigraphy. Brown articulated his ideas from a direct principle basis and logically extended the concepts of depositional systems into their two-dimensional seismic stratigraphic signature. Because of his involvement in the *AAPG Memoir*, Frank taught in the AAPG Seismic Stratigraphy School during its ten-year life (1977–87).

From 1987 to 1989, Brown worked closely with three groups of geoscientists from Soekor, then the state oil company of South Africa, studying three offshore basins of South Africa. This work, which was published in the 1995 *AAPG Studies in Geology No. 41*, remains a premier publication illustrating how to do regional sequence stratigraphy and basin analysis by integrating different data sets.

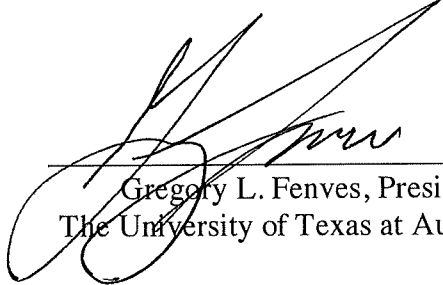
From 1989 to 1996, Dr. Brown, retired from The University of Texas at Austin and named Professor Emeritus, undertook full-time geological consulting . In 1998, he was invited to return to the Bureau of Economic Geology as a Senior Research Fellow, where he worked until his second retirement in 2011.

Frank's most important mission was always to disseminate fundamental stratigraphic concepts to the geological profession—originally in depositional systems, later in seismic stratigraphy, and finally in sequence stratigraphy. As a professor in Geological Sciences, Brown co-taught Depositional Systems, supervised seven Ph.D. and nine M.S. graduate students, and served on numerous thesis and dissertation committees. He served as an AAPG Distinguished Lecturer, racking up a record sixty-five presentations to academic departments and professional societies across the United States. As an international lecturer, Brown taught short courses in more than forty countries over a four-decade period.

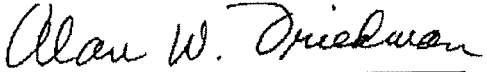
Several societies acknowledged Frank's lifetime contributions. From AAPG in 2010, he received its highest award—the Sidney Powers Medal—for his work in basin analysis. In 2007, he received the Gulf Coast Section SEPM Doris M. Curtis Medal, a career award recognizing his lifetime contributions in sedimentary geology. He was awarded the first honorary life membership of the Permian Basin Section SEPM in 1960. In 1990, he received the Monroe Cheney Award for contributions to the petroleum geology of the Southwest by the AAPG Southwest Section. In 2008 he received the AAPG Pioneer Award.

Frank and his wife, Linda, enjoyed living in Georgetown, Texas. She preceded him in death in 2015. Frank Brown was a brilliant and dedicated scientist with a keen appreciation for detail and thoroughness in his work and writings. His legacy will be the rigorous scholarship he practiced and inspired to advance key concepts in the geological sciences. He is missed by his

many colleagues in geology throughout the world and especially at The University of Texas at Austin.



Gregory L. Fenves, President
The University of Texas at Austin



Alan W. Friedman, Secretary
The General Faculty

This memorial resolution was prepared by a special committee consisting of Professors William L. Fisher (Chair), Robert G. Loucks, and Paul Weimer.