

Memorial to Howard R. Gould (1921–2013)

ARTHUR R. GREEN

*ExxonMobil Exploration Company, Retired
Gig Harbor, Washington, USA*

Howard R. Gould, an outstanding geoscientist, died in DeKalb, Illinois, on 29 August 2013. He was born in Adrian, West Virginia, and was a long-time resident of Houston, Texas.

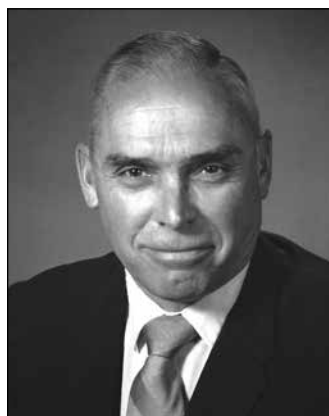
Throughout his long career, he received recognition for his research in marine geology, oceanography, and facies geology and for his dedication to the advancement of his profession through leadership in a broad spectrum of professional activities. He was a much-respected scientific leader, mentor and role model to many young geoscientists.

He received his B.A. in geology in 1943 from the University of Minnesota and for the next three years served as marine geologist and oceanographer for the University of California Division of War Research and as special consultant to the U.S. Navy. It was here that he learned how widespread is the application of geology and oceanography to the solution of problems that arise from the interaction of people and their environments. His job was to teach submarine officers how applied oceanography can be used in undersea warfare.

Following a year at the Scripps Institution of Oceanography, he worked several years for the U.S. Geological Survey conducting an investigation of Lake Mead turbidity currents and their significance in sedimentary processes. This classic study, completed for his doctorate in 1953 under K.O. Emery at the University of Southern California, appears in the SEPM Special Publication *Turbidity Currents and the Transportation of Coarse Sediments to Deep Water*. By mentoring young geoscientists, Howard followed in the footsteps of those who had been such remarkable mentors to him.

It was while he was at USC that he met and married Marilyn Bradley, a fellow graduate student in marine biology. Howard continued his work with the USGS in Florida, Maine, and Colorado before taking an assistant professorship in oceanography and marine geology at the University of Washington.

In 1956, he joined the Humble Oil and Refining Company's Geologic Research Center. He became Humble's coordinator of facies geology and, later, served as chief of geologic research. He became manager of the Stratigraphic Geology Division following the merger with Jersey Production Research to form Esso Production Research Company. In 1967, he was honored by being named research scientist, the highest technical ranking in the company at the time. Early on he became an important scientific advisor to Esso Production Research Company on offshore geologic research, ocean policy, and environmental issues. In this connection, he was Exxon's representative to several university-industry association organizations, including Woods Hole Oceanographic Institution, Lamont-Doherty Geological Observatory of Columbia University,



and Oregon State University Graduate School of Oceanography. He remained at Exxon until retiring in 1986.

In addition to his research on fundamental aspects of sedimentation and his responsibilities as the senior geologic scientist at the Exxon Upstream Research facility in Houston, he was a prodigious worker in service to his profession. He became a driving force in many industry, academic, and governmental institutions. It was his vision that the geosciences would benefit from a cross-fertilization of ideas and interdisciplinary research from all earth scientists, no matter what their specific discipline or affiliation, when feasible. This passion for bringing geoscientists together is reflected in his active role in many professional organizations throughout his entire career. The scope of his contributions is remarkable.

Howard served as president of the Geological Society of America (GSA) from 1980 to 1981 following many active years with the organization. He was a councilor (1976–1978) and Fellow and served on numerous committees over many years. He was a driving force in the Centennial Decade program to commemorate the society's 100th anniversary in 1988, which gained full momentum and a plan for funding it during his term in office. Under the leadership of Pete Palmer, the centerpiece project, The Decade of North American Geology, moved swiftly ahead with Howard's plans for funding the program. The 27 regional synthesis volumes and continent-wide geological and geophysical maps were to become the first major synthesis of North American geology since the development of the concepts of plate tectonics.

Howard was a very active member of the American Association of Petroleum Geologists (AAPG). He was chairman of the AAPG Research Committee, where he helped guide the geothermal survey of North America to successful completion and established a liaison with the NASA Space Orbiting Program. He was chairman of the Continuing Education Committee. In 1967, Howard took part in the Distinguished Lecture Series, speaking at college and university campuses across the United States about "Sedimentary Facies and Their Importance in Oil Finding." He received the AAPG Distinguished Service Award in 1972, was elected as an Honorary Member in 1979, and became an AAPG Foundation Trustee Associate in 1997.

In addition to his involvement with the AAPG, Howard was an enthusiastic participant in the American Geological Institute (AGI). Following his service on the governing board, he was elected president in 1984. For his exceptional and beneficial long-term service to AGI, in 1989, he was honored with the William B. Heroy, Jr. Distinguished Service Award.

But Howard's commitment in the field reached even further, as his service on numerous National Science Foundation (NSF) committees attests. Associated with the JOIDES Deep Sea Drilling Project since its inception in 1968, Howard served on its Steering Committee in addition to becoming an initial member of JOIDES Safety & Pollution Prevention Advisory Committee, where he lent his expertise in the selection of the first drilling sites. Following his work with JOIDES, he was named Exxon's scientific liaison contact for the International Phase of Ocean Drilling (IPOD) program, begun in 1975 and managed by Scripps Institution of Oceanography. From 1986 to 1989, Howard continued in his commitment to NSF, serving as a member of the committee on Deep Observations and Sampling of the Earth's Continental Crust (DOSECC).

Howard championed the earth sciences through his active participation in numerous organizations, including the Society of Economic Paleontologists and Mineralogists (SEPM) where he was elected an Honorary Member in 1976; American Association for the Advancement of Science (AAAS) in which he was a Fellow and served as both chairman of the Geology and Geography Division and as a council member. His long-time membership in the International Union of Geological Sciences (IUGS) served as preparation for his chairmanship of the Advisory Board for Research and Development from 1985 to 1987. Indeed, Howard's organizational skills, talents, and focused commitment to his field greatly impacted the many committees on

which he served, committees such as for the American Petroleum Institute, National Petroleum Council, the American Geophysical Union, Marine Technology Society, Gulf Coast Association of Geological Societies and others too numerous to list.

Certainly, Howard R. Gould was a dedicated scientist, a mentor to many and an outstanding technical leader and organizer. He was much in demand because once he took on a project it was completed with excellence, on time, and on budget.

Howard approached his tennis the same as his science—with organization, precision, and enthusiasm. Both he and his wife, Marilyn, were natural athletes, forming a mixed doubles pair in their courting days at the University of Southern California and continuing to be fierce competitors long after retirement.

It is fitting that in 1999, the pair established the Howard Ross Gould and Marilyn Bradley Gould Graduate Research Fellowship in Earth Sciences at the University of Southern California, where, as young scientists, they first met. The fellowship is given annually to a graduate student. In addition, the Goulds' generosity continues to support the American Geological Institute Foundation's Howard Ross Gould and Marilyn Bradley Gould Earth Science Education Endowment Fund, established to strengthen K–12 earth science educational curricula.

Preceded in death by his wife, Marilyn Bradley Gould, he is survived by his son, Bradley H. Gould, M.D., his daughter, Suzanne Gould Coffield, and his grandchildren, Kit and Sarah Coffield.

He will be missed by his colleagues and fondly remembered by those he helped in their scientific and technical careers, as well as his many friends and family.

ACKNOWLEDGMENT

I want to thank Howard's daughter, Suzanne Gould Coffield, for the records she provided and the insights into her father's life.

SELECTED BIBLIOGRAPHY OF HOWARD R. GOULD

- 1948 (with K.O. Emery) A code for expressing grain size distribution: *Journal of Sedimentary Petrology*, v. 18, no. 1, p. 14–23.
- 1949 (with F.B. Shepard and K.O. Emery) Distribution of sediments on East Asiatic continental shelf: University of Southern California, Allan Hancock Foundation P.b., Occasional Paper no. 9, 38 p., 26 pls., 3 charts (under separate cover).
- 1951 Some quantitative aspects of Lake Mead turbidity current, *in* Hough, J.L., ed., *Turbidity Currents and the Transportation of Coarse Sediments to Deep Water—A Symposium: Society of Economic Paleontologists and Mineralogists Special Publication 2*, p. 34–52, doi:10.2110/pec.51.02.0034.
- 1952 (with K.O. Emery, F.P. Shepard, and W.S. Butcher) Submarine geology off San Diego, California: *Journal of Geology*, v. 60, no. 6, p. 511–548.
- 1956 (with R.H. Stewart) Continental terrace sediments in the northeastern Gulf of New Mexico, *in* Hough, J.L., and Menard, H.W., eds., *Finding Ancient Shorelines – A Symposium: Society of Economic Paleontologists and Mineralogists Special Publication 3*, p. 1–20, doi:10.2110/pec.55.01.0002.
- 1958 (with T.F. Budinger) Control of sedimentation and bottom configuration by convection currents, Lake Washington, Washington: *Journal of Marine Research*, v. 17, p. 183–198.
- 1960 Characteristics of the accumulated sediment (Chap.) N *in* Pt. 5, *Comprehensive Survey of Sedimentation in Lake Mead (Arizona-Nevada) 1948–1949: U.S. Geological Survey Professional Paper 295*, p. 149–186.

- 1970 The Mississippi delta complex, *in* Morgan, J.P., and Shaver, R.H., eds., *Deltaic Sedimentation, Modern and Ancient: Society of Economic Paleontologists and Mineralogists Special Publication 15*, p. 3–30, doi:10.2110/pec.70.11.0003.
- 1972 Environment indicators—a key to the stratigraphic record *in* Rigby, J.K., and Hamblin, W.K., eds., *Recognition of Ancient Sedimentary Environment: Society of Economic Paleontologists and Mineralogists Special Publication 16*, p. 1–3, doi:10.2110/pec.72.02.0001.
- 1972 Introduction to geologic methods for locating stratigraphic traps, *in* King, R.E., ed., *Stratigraphic Oil Fields—Classification, Exploration Methods, and Case Histories: American Association of Petroleum Geologists Memoir 16*, p. 11–13.
- 1973 Minerals from the sea, *in* Vetter, R.C., ed., *Oceanography—The Last Frontier*: New York, Basic Books, Inc., 399 p.