

# MEMORIALS



## **EARL E. GAERTNER 1927–2017**

**By Carrie A. Gaertner-Vogel**

Earl E. Gaertner was born in Hooker, Oklahoma on February 6, 1927 to parents O.E. “Dick” Gaertner and Grace Rich-Gaertner. He passed away peacefully at home on April 27, 2017 in Fredericksburg, Texas.

Earl attended public school through high school in the panhandle community of Adams, Oklahoma. Earl entered school during the Great Depression era (1929–1939) and grew up during the Dust Bowl of the prairies (1934–1940). During World War II, Earl lived with his aunt and uncle helping them farm and raise cattle. In 1944, at the age of 16, Earl became a Christian, which he considered to be the most important decision he made in his life.

In January 1945, during his senior year of high school, Earl made the decision to enlist in the US Navy. At the time, the war in Europe was winding down, but the Pacific War against Japan was still raging until the atomic bombs were dropped on Nagasaki and Hiroshima in August, 1945. Earl continued to serve on a Navy vessel through the armistice with Japan in Inchon, South Korea and Tsingtao, China.

In 1946, Earl was honorably discharged from the US Navy, returned home, and enrolled at East

Central University in Ada, Oklahoma. There, Earl and friends (which included a Navajo code talker named Sam Billison), were advised to take advantage of the G.I. Bill and Native American friendly colleges like the University of Oklahoma at Norman. Nicknamed “Cherokee”, Earl gladly moved to Norman to earn a bachelor degree in geological engineering.

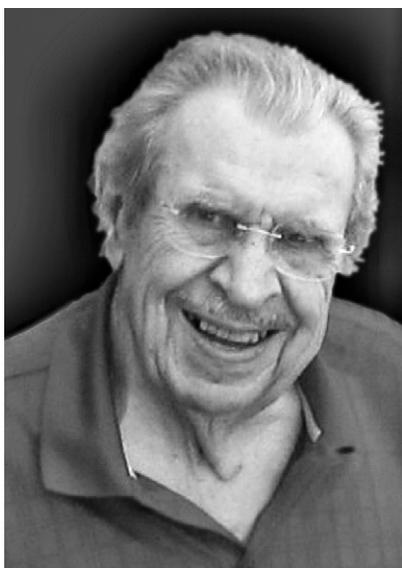
In 1951, Earl met a beautiful young lady named Jacqueline “Jackie” Bashford while working in Stamford, Texas. After a short courtship, the couple was married and ready to begin life in the oil patch living in Midland, Texas. The couple resided in Midland for 50 years. Earl was heavily involved in the oil exploration and development business at this time.

Earl and Jackie were blessed with three healthy children Carrie A. Gaertner-Vogel, Brock Gaertner, and Barry Gaertner. Earl and Jackie were both very involved in the First Baptist Church Sunday schools and Earl was a sign language Interpreter during services for many years.

Earl was a member of the Lions Club and a Mason for over 60 years. He belonged to several professional associations including AAPG and The Society of Independent Petroleum Earth Scientist, (SIPES). He held various offices in SIPES and served on the national board of directors. Earl loved the San Juan Mountains of southwest Colorado and family vacations were taken in Silverton and Durango from 1961 until 2000 when he retired.

Earl, Jackie, Carrie, and kids made a permanent move to Durango, Colorado. Earl was involved in the Durango Cowboy Gathering as a board member for 8+ years. He and Jackie traveled to cowboy poetry gatherings around the country and in Canada.

In 2008, Earl and Jackie returned to Texas and settled in Fredericksburg. Jackie, always a Texas girl, died on September 15, 2009 in the state she loved. Earl’s brother Glenn preceded him in death in 2008. Earl is also survived by his trusted friend and companion of six years, Vicky Brown of Fredericksburg, Texas. Surviving members of his family include daughter, Carrie A. Gaertner-Vogel, Durango, Colorado; sons, Brock Gaertner, Austin, Texas and Barry Gaertner, Centennial, Colorado. He is also survived by six grandchildren. Carrie’s children are Zach Vogel of San Jose, California and Catherine “Catt” Vogel of Durango, Colorado. Barry and wife Julie’s children are Abigail, Eva, and Elijah Gaertner. They are expecting a fourth child on June 25, 2017.



## GEORGES PARDO

1920–2017

By Timothy A. Anderson

Georges Pardo wrote a number of memorials for other AAPG members (Hollis Hedberg, Hans Renz, Mauro Beltrandi, Harold Funkhouser, and, perhaps, others) and now it is time for his because he passed away on March 1, 2017, about a month short of his 97th birthday.

Georges was highly intelligent and very creative. He was not well recognized outside of Gulf Oil where he worked his entire professional career. Georges did not pursue such recognition, perhaps because much of what he worked on was company confidential.

Georges was born in France on April 4, 1920 and finished high school in 1938. In 1939, he joined his father in Venezuela for summer vacation. With war breaking out in Europe, he remained in Venezuela and found geology mostly through happenstance. During his geologic education, he worked in the summer for Mene Grande Oil Company and had his first extensive contact with

Hollis Hedberg who was to become his mentor, friend, and role model for many years. In Georges' own words, "... in the fall of 1943 after obtaining my geologist diploma cum laude from the Instituto, I joined Mene Grande as a paleontologist, and thus started my active forty-one year career with Gulf Oil Corporation."

A colorful career it was, living in Venezuela, Cuba, Pittsburgh, Coral Gables, and Houston, but working on hydrocarbon exploration worldwide. Georges loved the good, abundant data available in Gulf. Even with support for his work at high levels in Gulf Oil, many of his new ideas and concepts did not find favor with others in the company. That was unfortunate, because he often turned out to be right.

For example, in 1967, Georges embarked on a crusade for direct detection of hydrocarbons, having noticed, in well logs, density and velocity anomalies of gas sands in United States Gulf of Mexico coast sediments. He was convinced those anomalies should produce strong seismic reflections. The seismic data of the day were commonly processed to enhance continuity and suppress amplitude differences (using, for example, "automatic gain control" and "trace equalization"). Georges had seismic data processed to preserve amplitude information and the resultant profiles showed his predicted high-amplitudes for gas sands. Middle level Gulf Oil management had essentially no interest in Georges' direct detection of hydrocarbons until other companies began to apply the same methods to display "bright spots." Interestingly enough, Georges always insisted that seeing the gas anomalies was not just an indication

of gas, but, by showing gas caps or leaked gas, might well lead to oil.

I first met Georges in 1976, when I came to work in a special group he managed carrying out regional exploration not being done by local offices or using methods they ignored. Ultimately called the Central Exploration Group, it existed until 1985, when Gulf completed its merger with Chevron. People in his group worked on worldwide exploration projects, but the final push was on the Gulf of Mexico, Georges' favorite because he was convinced much more oil and gas remained to be found there.

Partly through experience with layered salt in Cabinda, Angola, and from hints on Gulf of Mexico seismic data, Georges was convinced that the GOM salt was not "bottomless" and that there was subsalt potential, so he initiated the "Alpha" project in about 1980. This led to the West Cameron 505/2 well, which drilled through 1670 ft of salt and came out into Miocene–Pliocene sediments. Those results and a subsequent well, together with abundant regional data, provided for an entirely new concept of GOM salt tectonics very similar to what is accepted today. The Pardo subsalt story was nicely documented in an article by David Brown in the February 1997 issue of the *AAPG Explorer*.

While at Gulf, Georges would occasionally offer insight into what one might call professional philosophy. I once asked him how to choose ideas or concepts to pursue and his reply was, "Aim in a profitable direction." "Profitable" can be interpreted in so many ways! One of the very bright people working for him complained of dissatisfaction and Georges replied, "Intelligent people are always

dissatisfied.” He was often skeptical about fashionable geologic ideas, but, if he found that those ideas had a good, factual, and well-reasoned basis, he happily embraced them.

Georges retired in late 1984 at age 64 from Gulf Oil as the merger of Gulf and Chevron was nearly complete. Leaving the company did not mean that his powerful intellect retired.

Gulf Oil had sent Georges to Cuba from 1952 to 1955 to evaluate its oil potential. The group he headed at that time carried out extensive mapping and laboratory work. The effort did not lead to additional involvement by Gulf Oil, but Georges never forgot the fascinating geology of the island and, after retiring, began reevaluating

the Gulf data and reviewing everything available in the public domain. The result was published by the AAPG as the *Geology of Cuba* (AAPG Studies in Geology 58) in 2009 when Georges was 89. That volume certainly contains abundant data and conclusions, but I find it fascinating that he produced all of the illustrations himself, skillfully and tirelessly manipulating graphics and data programs on his home computer. Larry Nation provided more detail about the background of the *Geology of Cuba* in an article in the May 2009 *AAPG Explorer*.

After retiring, Georges developed a strong interest in global warming and climate change. As usual, he was first very skeptical, but that

skepticism slowly changed to acceptance as he gathered an enormous amount of data using primarily Internet sources. After completion of his Cuba publication, we corresponded extensively about the climate-related data he found and his observations based on those data. Despite my strong encouragement to publish some of his results, they are now gone with our loss of Georges.

Georges’ daughters, Mary Pardo (by his first wife Rosario) and Gina Minzenmeyer (by his second wife Jane), are his closest remaining relatives and graciously agreed to this memorial. Georges’ wife of 45 years, Violet, passed away at age 74 in 2010 when Georges was 90.

## NEW RELEASES

**Global Chemical Kinetics of Fossil Fuels: How to Model Maturation and Pyrolysis**, Alan K. Burnham (2017). 315 p. Published by Springer, Van Godewijkstraat 30, 3311 GX Dordrecht, The Netherlands. Price \$89.99.

**Exploration and Production of Oceanic Natural Gas Hydrate: Critical Factors for Commercialization**, Michael D. Max and Arthur H. Johnson (2016). 405 p. Published by Springer, Van Godewijkstraat 30, 3311 GX Dordrecht, The Netherlands. Price \$259.00.

**Natural Gas: A Commercial Perspective**, Andrej Pustisek and Michael Karasz (2017). 243 p. Published by Springer, Van Godewijkstraat 30, 3311 GX Dordrecht, The Netherlands. Price \$139.00.

**Atlas of Trace Fossils in Well Core: Appearance, Taxonomy and Interpretation**, Dirk Knaust (2017). 209 p. Published by Springer, Van Godewijkstraat 30, 3311 GX Dordrecht, The Netherlands. Price \$119.00.

## BOOK REVIEW

***Understanding Oil and Gas Shows in the Search for Hydrocarbons***. By John Dolson, 2016. Springer-Verlag. GmbH & Co. Heidelberg, Germany: 486 pages. Hardcover: \$199.00, \$149 for eBook: ISBN 978-3-319-29710-1.

Review by John B. Thomas

In the earth sciences, most learned papers and books published focus on a specific geographic area (e.g. the Grand Canyon) or a topic (petrology of feldspar minerals). Such scholarly works are excellent but rarely is a comprehensive book published on a holistic topic like *Understanding Oil and Gas Shows in the Search for Hydrocarbons*, authored by John Dolson.

He does an outstanding job introducing terminology and technique in his conversational style that establishes well a rapport with the reader. It becomes an easy reference guide for earth scientists who have practiced their "art" for many years as well as the industry newcomer. His very personal writing style shows what is truly important assessing shows and seals. He wants you to be a better explorationist or petrophysicist or engineer and he is willing to share his experience and that of others in a book that invites repeated consultation.

The structure of each of nine chapters is consistent and well done. They begin with an abstract and chapter organization. Next is the text, which is well referenced and illustrated. Each ends with a summary section. The figure captions are very complete. Case studies in each chapter reinforce the topics covered.

Chapter 5, for example, discusses quantification of seals and saturation using capillary pressure, show assessment, and Winland R35 plots. Examples from North America, Egypt, India, and Russia on which the author has personally worked, shares data that were both useful or incomplete. And if the reader is not familiar a topic such as Winland estimation of pore throat radii, just turn to the appropriate Appendix that includes the requisite Excel spreadsheet template to use! How can you estimate seal capacity from logs, geochemical data, gas curves? You can find it in this compendium.

Having worked on many of the plays and fields cited in this publication, I applaud the author for the completeness of his case studies. From mudlog shows to fluid inclusion shows, the book is a map on how to improve the search for hydrocarbons. The content of this book will be invaluable to our industry for years to come. The author has done us a great service.