

Memorial to Caswell Silver

1916–1988

NOLAN ASHBURN

Denver, Colorado

Cas Silver died Tuesday afternoon, October 18, 1988, while at his condominium in Santa Fe, New Mexico, following a heart attack. He had been in poor health for more than two years, and had been seeking alternative locations because of respiratory difficulties, which were severely aggravated by trying to live at his home in Denver, Colorado, with its high-altitude smog problems.

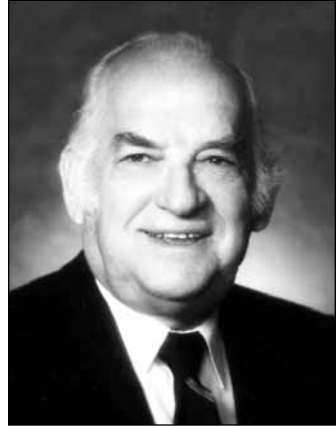
Cas was born on June 25, 1916, in New York City, the next to the youngest in a family of four brothers and one sister. His family moved to Waterbury, Connecticut, where he grew up and attended high school. He started at the University of Connecticut as a mechanical engineering student in 1934, but rather severe asthmatic problems caused him to look for a more favorable climate in the west.

He came to Albuquerque, New Mexico, in the late summer of 1936 on his way to Phoenix, Arizona, and stopped off at the University of New Mexico where he met Vincent C. Kelley, the head of the geology department. Kelley had an immediate effect on Cas when he extolled the virtues of geology as a profession and the University of New Mexico as the best place to pursue it. Cas stayed in Albuquerque and became totally immersed in the “western mystique.” His academic interests ranged from geology, geography, and mathematics to Indian lore, jewelry, tribal rituals, language, Western birds, cattle and sheep ranching, silver and gold mining, and oil and gas exploration and production.

With his health fully restored, he graduated in 1940 with a Bachelor’s degree in geology and mathematics. Following graduation, his geological career began with the USGS, mapping one of the silver mining districts in the San Juan Mountains of Colorado with Vincent Kelley and Wilbur Burbank. He worked the following year as an assistant topographic and hydrographic engineer with the U.S. Coast and Geodetic Survey in the area of the Cape Fear arch in North Carolina.

He joined the U.S. Navy in 1942 and spent some three years in the Photo Interpretation Branch of Naval Intelligence in the South Pacific at such island locations as Guadalcanal and Hawaii. When World War II ended, Cas returned to the University of New Mexico as an advanced degree student and geology instructor. He received a Master’s degree in geology and physics in 1946.

His first foray in oil and gas exploration came shortly after graduation when he joined M. J. Florance of Florance Drilling Company, Farmington, New Mexico, as a consultant and partner in a gas exploration and development program in the San Juan basin. Cas, after numerous field trips in the area and considerable research of other gas fields in the United States, had become convinced that the low-permeability, low-porosity gas-charged sands of the Cretaceous Mesaverde Formation would be a major source of gas supply, and could be profitably produced when stimulated. Under his direction, Florance drilled four of the first five Mesaverde gas wells in the giant Blanco field in New Mexico, which later developed into more than 200,000 ac of gas production.



During the next decade (1949–1959), after becoming an independent operator as well as continuing his consulting work in both oil and gas exploration and in precious metals mining, Cas actively pursued geologic research and promoted the local geological societies. He became a member of the American Association of Petroleum Geologists and a fellow of the Geological Society of America, gave papers at the AAPG Rocky Mountain Section Meetings, led New Mexico Geological Society field trips, and joined the Society of Economic Geologists. During this time, he wrote more than a dozen scientific papers, many of which were published in the *AAPG Bulletin* and the Society of Economic Geologists journal, *Economic Geology*. He co-authored a book with Vincent Kelley on *The Geology of The Caballo Mountain*, published by the University of New Mexico Press in 1952.

A few of his more prominent articles during this era are “Occurrence of Gas in Cretaceous Rocks of San Juan Basin,” *New Mexico Geological Society Guidebook*, 1950; “Cretaceous Stratigraphy of the San Juan Basin,” *New Mexico Geological Society Guidebook*, 1951; “Stratigraphic Possibility in the San Juan Basin,” *New Mexico Geological Society Guidebook*, 1951; “Manganese Deposits of the Mogollon Rim,” *Economic Geology*, 1955; “Relation of Coastal and Submarine Topography to Cretaceous Stratigraphy,” *Four Corner Guidebook to San Juan Basin*, 1957; and “Principles of Gas Occurrence, San Juan Basin,” *AAPG Memoir 9, Natural Gases of North America*, 1968.

Cas moved his family and his business headquarters to Denver, Colorado, from Albuquerque, New Mexico, in September 1959. San Juan basin gas exploration had reached a mature stage by this time, and the Cretaceous sands of the northern and central Rockies seemed to offer greater wildcat potential for the independent operator.

I first met Cas in the spring of 1960 in Denver, Colorado. He had recently purchased the controlling stock interest, but not a majority interest, in Sundance Oil Company, a Utah corporation. Sundance then was one of the many oil and mining companies listed and trading on the Salt Lake City Stock Exchange, and aptly described as a Penny Stock Company. It had a small royalty income and no full-time employees. During the next 24 years, Cas devoted himself to building Sundance Oil Company into a model independent exploration company. Under his leadership and dedication to hard work, the company discovered and developed numerous Cretaceous oil fields such as Nile, Tap, and Latigo in Colorado; Bridgeport, Bertramson, and Middle Creek in Nebraska; and after expanding into Canada in 1971, several very sizeable oil and gas fields in Alberta, namely, Minburn-Manville, Wintering Hills, Buffalo Creek, Kirkpatrick Lake, Dunvegan, and Westeros South Glauconite Pool (“Hoadley”).

As a result of this exploration success, the company moved from the Salt Lake City Stock Exchange to the Pacific Coast Stock Exchange and finally to the American Stock Exchange in 1976. The number of shares and shareholders increased substantially and its price per share moved upward from a penny stock to the \$50 range.

In addition to serving Sundance Oil Company as president, chief executive officer, and chairman of the board, Cas remained in close contact with AAPG, GSA, and other scientific organizations. He was on the National Energy Committee following the oil embargo and on the AAPG Strategic Committee for Public Affairs and served as adviser to the Geological Society of America and as first chairman of the Board of Trustees of the GSA Foundation. His paper on “Entrapment of Petroleum in Isolated Porous Bodies,” published in the *AAPG Bulletin* in 1973 (v. 57, no. 4, p. 726–740) was generally acknowledged as a fundamental work on petroleum geology.

After Sundance Oil Company was sold to Soquip in 1984, Cas started a privately held exploration company named Argentia Corporation, a Colorado corporation, which continued to explore and develop Cretaceous and Pennsylvanian oil fields in Colorado, Nebraska, and Wyoming.

Cas's most recent contribution to geological science was the founding of the Caswell Silver Foundation to advance geological education and research at the University of New Mexico.

After close association with Caswell for 28 years, I would describe him as a brilliant geologist, a fine scientific writer, an enlightened teacher, and an astute businessman. He was completely dedicated and totally involved in the task at hand whether it was business, research, a cause he espoused, or a person who merited backing. In any endeavor, he was a 24-hour-a-day worker. For me, he supplied all the best qualities that one searches for in an older brother, teacher, friend, and business partner.

Cas married Elizabeth Bauserman on August 5, 1946. He is survived by Elizabeth; two daughters, Ann Silver Philleo of Crestone, Colorado, and Sue Silver Harivandi of Oakland, California; three grandchildren; his sister, Esther; and brothers, Alexander and Leon.

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