

John Joyce Carter: From Civil War Hero to Petroleum Entrepreneur*

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Early Years

John Joyce Carter ([Figure 1](#)) came to America at the age of three and grew to become a highly decorated Civil War hero and a successful oil businessman. He was born in Westport, Ireland, on June 16, 1842, the son of John Carter, a wealthy storekeeper, and Cecelia Joyce Carter. His parents died soon after his birth, and unscrupulous relatives and others lost his father's estate. They then married off John's only sister, Honora, to a 19-year-old cousin who was soon to sail to America, and his sister undertook the care of her brother. They relocated to Nunda, N.Y., a small town just outside Rochester, sometime around 1845.

When the Civil War broke out, Carter served as a private with the 33rd Infantry Regiment of the New York State Volunteers. He was promoted through the ranks during his enlistment, eventually attaining the rank of captain.

The Battle of Antietam

The Battle of Antietam was fought on September 17, 1862 ([Figure 2](#)), and was the culmination of the Maryland Campaign of 1862, the first invasion of the North by Confederate Gen. Robert E. Lee. The 12-hour battle began at dawn on September 17. For the next seven hours there were three major Union attacks on the Confederate left. More men were killed or wounded at Antietam than on any other single day of the Civil War. Federal losses were 12,410; Confederate losses 10,700. Although neither side gained a decisive victory, Lee's failure to carry the war effort effectively into the North caused Great Britain to postpone recognition of the Confederate government and gave President Lincoln the opportunity for which he had been waiting to issue the Emancipation Proclamation.

John Carter, as a second lieutenant commanding Company B of the 33rd New York, moved across the fields of the Mumma Farm to the right toward Dunker Church. They were separated from the rest of the brigade because they were forced to halt to allow an artillery battery to pass. By the time Carter's men could resume their advance, the rest of the brigade had gone ahead a considerable distance. Confederate forces occupying the West Woods fired upon the regiment's right wings; the regiment flew into confusion and began falling back in disorder. Carter

reacted instantly, throwing his company across the pike just north of Dunker Church. Unnoticed by the Confederates, Carter commanded his men to halt and close ranks. The company then touched off several volleys as fast as they could, directly into the Rebels' flank throwing them back in disarray. The chaos created by Carter's company gave them enough time to wheel the 33rd about and cap their weapons. The entire regiment then delivered two volleys into the Confederates, who were already beginning to break from Carter's sudden assault. Though severely outnumbered, Carter then ordered his company to charge into the enemy's flank with a yell so loud that the Confederates became convinced a large force had descended upon them from nowhere and fled back into the woods. Carter was awarded the Congressional Medal of Honor for his initiative and bravery.

During the two years after Antietam, Carter took part in the battles at Williamsburg, Mechanicsville, Golding's Farm, Fredericksburg and Marye's Heights/Salem Church. Carter was mustered out with his regiment on June 2, 1863.

Wanting to continue to serve the war effort, Carter received permission to raise a company of cavalry, which he accomplished in 30 days. He was then mustered in as captain of Company D of the 1st New York Veteran Cavalry on October 10, 1863, and served in this capacity until February of 1865. As a cavalry officer, Carter was wounded twice, had five horses killed under him in action, refused amputation of his leg, led four successful cavalry charges in as many engagements and saw battle at places like Upperville, Snickersville, New Market, Winchester and Waynesboro with the Army of West Virginia. After four years, three months and 15 days of service in the Grand Army of the Republic, Carter was mustered out of service at Rochester, N.Y., on August 2, 1865.

Carter Oil

After the war, Carter returned to Nunda, N.Y., and married Emma Gibbs in June, 1866, but they soon relocated to Titusville, Pa., and opened a clothing store. In 1877 he invested in an oil-drilling venture, which was very successful.

In 1893, he founded the Carter Oil Company and served as president of that company until his resignation in 1915([Figure 3](#)). The Carter Oil Company became an affiliate of the Standard Oil Company in 1895, and as president of the Carter Oil Company, Carter was called upon by Standard Oil to make inspection trips and report on existing conditions and prospects for further development by Standard Oil. From 1906 to 1913 Carter was asked to examine opportunities in California, Japan, and Peru, where he proposed the purchase of extensive holdings in oil-bearing properties. Carter was also instrumental in purchasing holdings in Oklahoma just before he retired.

In 1915 the Carter Oil Company opened a western division and began producing oil in the west. Carter, now 73, resigned as president. Following his resignation, Carter Oil expanded further, opening an office in Tulsa in 1915, and between 1915 and 1926, huge oil pools were developed in Oklahoma and Kansas, and soon after established the Carter Oil Research Laboratory. In 1929, Carter Oil purchased Humble Oil and Refining Company (for \$3 million) and Slick-Urschel Oil leases in Oklahoma City (for \$5 million).

With additional purchases, this made Carter Oil one of the largest oil companies in the United States. By 1949, Carter Oil had produced a half billion barrels of oil since 1893 and had more than 4000 employees. In the early 1960s, Carter Oil merged with Humble Oil and Esso to become Exxon, which after the merger with Mobil is now named ExxonMobil.

Carter developed pneumonia; on January 3, 1917, he died at the age of 74 and was buried atop a small hill in Woodlawn Cemetery on the edge of Titusville, Pennsylvania.

Carter Oil Innovations

Carter Oil was one of the most innovative companies, not just in the petroleum business, but in general:

- In 1904 Carter instituted one of the first annuity programs for employees in the United States.
- In 1910, seeing the future of the automobile, he built the Anschutz gasoline plant in Sistersville, W.V., the largest in the world, and the first of 30 plants Carter Oil would build in West Virginia and Ohio.
- In 1913, he instituted paid vacations for workers.
- Just before his retirement, he instituted the first eight-hour workday.
- Later, death and sickness benefits were added to this package.
- Carter Oil was among oil industry leaders in exploration, drilling methods, production and refining techniques as well as marketing practices.
- Carter Oil was also a pioneer in utilizing technology and a scientific approach to petroleum exploration, and Will H. Aspinwall is considered one of the first full-time geologists ever hired by an oil company. Carter employed him when others scorned the use of “rock hounds.”

A Carter Oil Legacy: Sequence and Seismic Stratigraphy

The Carter Oil Company Research Laboratory was one of the industry’s best and was the initial employer of Peter Vail, Robert Mitchum and John Sangree. The lab eventually merged with Humble Oil to form the Exxon Production Research Laboratory, and all three men were instrumental in the development of Seismic and Sequence Stratigraphy. Stratigraphy, once considered to be a somewhat routine and mundane discipline consisting mainly of the dry cataloguing of lithostratigraphic units, has undergone a dramatic renaissance. With the advent of the genetic stratigraphic paradigm over the last three decades, stratigraphers have radically altered how we perceive and, therefore, interpret the rock record.

Genetic stratigraphy lies at the core of three main stratigraphic paradigms: genetic stratigraphic sequences, allostratigraphy, and sequence stratigraphy. The recognition of stratigraphic breaks is essential in any genetic stratigraphic paradigm but, also, is commonly a difficult task, particularly in subsurface analysis. Discontinuities reflect processes that are external to the depositional system (allogenic), which may initiate or terminate deposition of sedimentologically related facies successions. Interpreting the origin of the discontinuity can be vital in resolving depositional environments of associated deposits and in determining the allogenic controls on depositional systems. To accomplish this requires the integration of facies relationships, physical sedimentology, seismic stratigraphy and sequence stratigraphic techniques.

Vail, Mitchum, and Sangree all completed doctorates at Northwestern University, with the team of W.C. Krumbein, Ed Dapples, and Larry Sloss, who discarded the old notions of geology and taught exciting new, open-minded stratigraphy and sedimentology.

At Carter Oil, Vail, Mitchum, and Sangree played key roles in nurturing the growing concepts of both seismic and sequence stratigraphy. When Vail introduced these concepts, the effects on stratigraphic geology and seismic interpretation were comparable to that of plate tectonics on structural geology. It represented a fundamental paradigm shift and changed forever how we view and interpret rocks. Analysts say that Vail visualized sequence stratigraphy; Mitchum wrote it down; and Sangree sold it. These concepts then were born at Northwestern University and nurtured at the Carter Oil Research Laboratory in Tulsa before being unveiled at Exxon Production Research.

The early history of the oil industry in North America is populated by people who took risks and challenged the norms. John J. Carter was such a man – an immigrant from Ireland who came to America and fulfilled the American dream. His journey took him from the battlefields of Antietam where he was awarded the Congressional Medal of Honor to the oil fields of Pennsylvania and establishing Carter Oil, which segued into ExxonMobil, nowadays the world’s largest private, as opposed to government, oil company.

Authors

S. George Pemberton ([Figure 4](#)) is currently the C. R. Stelck Chair in Petroleum Geology and a Distinguished Professor in the Department of Earth and Atmospheric Sciences at the University of Alberta. The main thrust of his research pertains to the application of ichnology to petroleum exploration and exploitation. His recent work has been on the application of ichnology to the flow of fluids through the reservoir in both clastic and carbonate settings. He has actively worked on major hydrocarbon-bearing units all over the world.

Erin Pemberton ([Figure 5](#)) is a geoscientist covering the fields of sedimentology and stratigraphy with a keen interest in seismic-stratigraphic analysis and depositional systems interpretation. She recently graduated with her doctorate in geology and geophysics from the University of Calgary and now works in the Subsurface Technology Sedimentology and Stratigraphy Group at ConocoPhillips in Houston.

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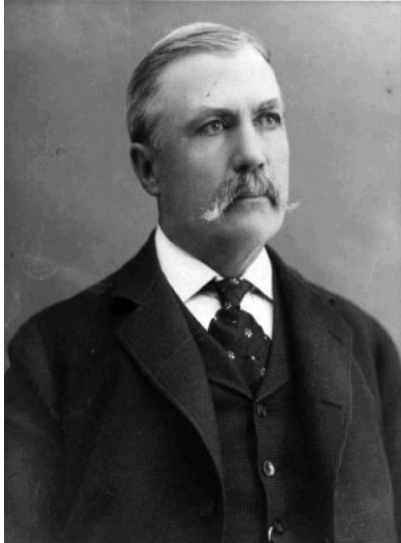


Figure 1. John Joyce Carter.

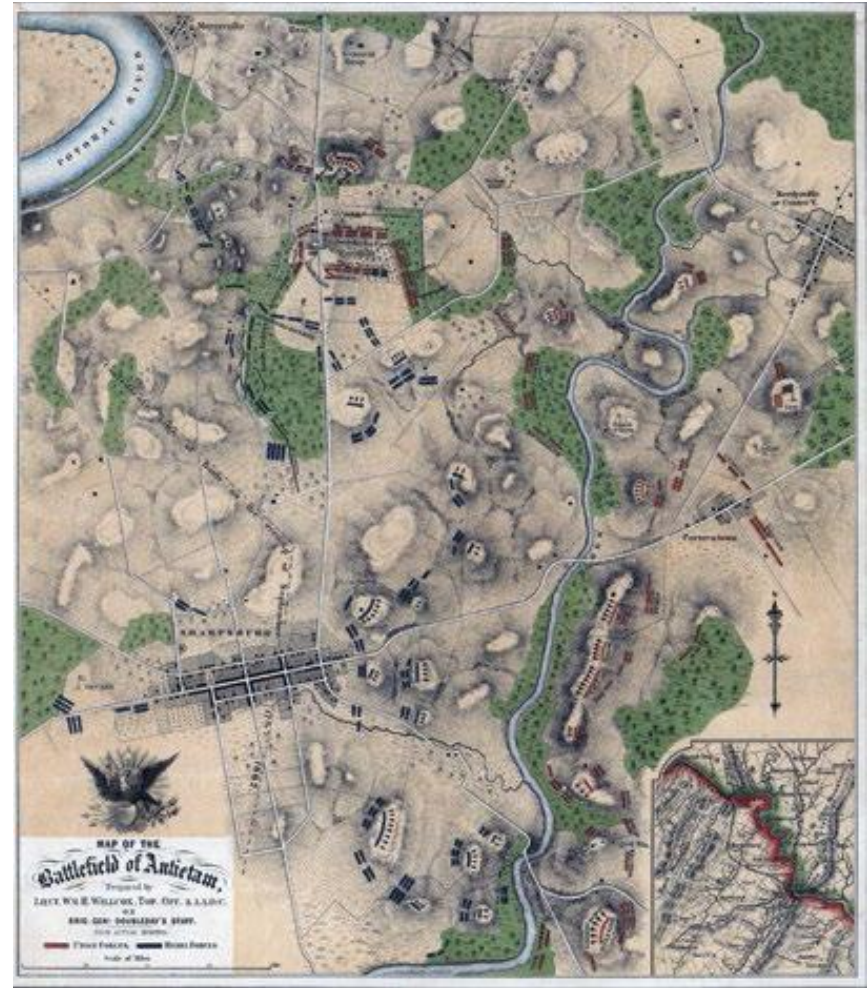


Figure 2. Map of the battlefield of Antietam/Sharpsburg depicting Union and Confederate forces on Sept. 17, 1862. Antietam was the bloodiest single day of the Civil War, with almost 23,000 soldiers killed or wounded. Courtesy the Library of Congress.



Figure 3. Vintage magazine ad from Oil and Gas Journal. The picture was taken at the Carter Oil Company's Sistersville, W.V., headquarters in 1889. The two men holding the dog are Col. John J. Carter, founder of the company, and Will H. Aspinwall, one of the first geologists ever hired by an oil company, employed by Carter when others scorned the use of "rock hounds." The image is from the senior author's collection.



Figure 4. S. George Pemberton.



Figure 5. Erin A.L. Pemberton.