

History of WV Mineral Industries - Oil and Gas, by West Virginia Geological and Economic Survey

Long before the arrival of European settlers, it is believed that the Native Americans recognized and perhaps used as a fuel source the "burning springs" and outflows of petroleum on the Little Kanawha, Kanawha, and Big Sandy rivers. Records show that the early settlers were also aware of the "burning springs" which were natural gas vents. One such burning spring, located on the Kanawha River, was visited by George Washington in 1775.

The oil and gas industry in West Virginia actually began as an outgrowth of the salt industry. In the early 1800s, oil and gas had no importance in West Virginia, and though saltmakers frequently hit oil or gas in their drilling, they considered it a nuisance. In fact, so much oil was diverted to the Kanawha River by salt manufactures that it was long known as "Old Greasy" to the boatmen. Gas was first struck in a well drilled for salt at Charleston in 1815. Once the value of oil and gas was realized, the Great Kanawha Valley region became a pioneer in the discovery of petroleum by boring and in the use of oil and gas on a commercial scale. By 1826, oil was used for lamps in workshops and factories. The drilling tools, jars, and casing, first developed in 1806 by the Ruffner brothers for the salt industry, became essential equipment to the petroleum industry of the United States.

On the Little Kanawha River, near the Hughes River, was a stream called Burning Springs Run, named because there were two springs at its mouth from which natural gas escaped. As early as 1781, Thomas Jefferson described the brilliant flame which could be produced by thrusting a lighted candle into the escaping gas at this site. Because gas and salt brine were often associated, the Rathbone brothers bored a salt well near these springs.

However, rather than salt, at a depth of 200 feet they hit petroleum and by boring deeper, they were able to produce 200 barrels per day in 1859. Although petroleum was not the treasure that the Rathbones sought, they were encouraged by their find and drilled a second well which yielded 1,200 barrels of petroleum daily. News of the Rathbone brothers' discovery spread rapidly and created tremendous excitement. By 1861, a town with several thousand inhabitants had sprung up. All of the light in the newly-formed town, including that for a brilliantly lit hotel, was provided by natural gas. The widespread use of gas in this town marked the beginning of the era of gas development in West Virginia. Meanwhile, hundreds of thousands of barrels of oil were being floated down the river to Parkersburg where they were then sent to other cities by rail or river. The Burning Springs oil field was one of only two oil fields in America prior to the Civil War. But by 1876, there were 292 wells in the State, producing a total of 900 barrels daily. Parkersburg was the chief oil market.

The Volcano oil field was discovered in 1860, and from 1865 to 1870 drilling was very active, producing from the Salt sand at a depth of about 360 feet. The heavy lubricants produced led to the development of West Virginia's first oil pipeline, from Volcano to Parkersburg, in 1879. Also at Volcano, in 1874, W. C. Stiles, Jr., invented the "endless wire" method of pumping many wells from a central engine. Using wheels, belts, and cables, perhaps as many as 40 wells could be pumped by one engine. One of the systems operated until 1974.

From 1879 to 1889, oil production declined steadily due in great part to the inability of the drillers to bore to the deeper sands and to deal with softer rock they encountered. But in 1889, large iron pipes were inserted to prevent clogging of the wells by crumbling walls, and with this discovery much deeper wells could be drilled. With the discovery of deeper oil sands, the Doll's Run, Eureka, Mannington, and Sistersville fields were found and developed. It was about this time that the anticlinal theory of gas and oil accumulation was first proposed. Dr. I.C. White, well-known geologist who later became West Virginia State Geologist, was one of the major initiators of this anticlinal theory, insisting that the theory be tested in West Virginia. His discovery and development of the Mannington oil field in 1888 proved the theory and convinced the oil industry of its importance. The Mannington field became one of the largest in the State, with the largest well producing about 1,600 barrels per day.

Thus, from its early beginnings at Burning Springs in 1859, the oil industry in West Virginia grew to reach its peak production



West Virginia Stakes Pioneer Claim

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Hello, Col. Drake? Are you sitting down for this?

As early as the 1820s, oil drilled from West Virginia wells was used as a light source and an industrial lubricant marking the first documented commercial use of oil in this country, says the author of a new history book on West Virginia's early oil and gas business.

David McKain, a Parkersburg, W.Va., businessman whose great-grandfathers participated in the oil boom of the 1860s, has authored a book that challenges Col. Edwin L. Drake and his neighboring Pennsylvanian long-time claim as the birthplace of the oil business

"This is an old oil producing area," McKain said. "West Virginia was at the very forefront of the oil business - but we had the Civil War to contend with in the first five years."

Where It All Began, a 400-page book with 270 pictures and maps detailing the history of the oil and gas business in West Virginia and Southeastern Ohio, contends that the oil business got its start in this area, and that Pennsylvania's illustrious Drake well was indebted to West Virginia drillers for drilling tools.

In fact, McKain claims, the Drake well even used "Pure West Virginia Lubricating Oil" to lubricate its drilling machinery.

He also claims in the book that many modern drilling tools were developed in West Virginia in the early 1800s. The book also focuses on the political

influence that industry leaders had on the creation of the state of West Virginia in the midst of the turmoil of the Civil War.

McKain said it took him about five years to write his book - and he's now working on a sequel.

The book was the result of a casual investigation into the early history of the oil and gas industry. As part of his research, he and his co-author went through old newspapers from 1865 to 1913 and researched libraries and courthouse records.

"I was appalled," he said, "that nobody had done anything with such an interesting story."

A Piece of History

McKain's work led to more than just a publication. While researching the book with co-author, Bernard Allen, a history professor at West Virginia University in Parkersburg, McKain also established the Oil & Gas Museum in Parkersburg.

The Museum features a collection of artifacts, papers and documents from the oil and gas industry. It also has a replica of an old oilfield office.

The nonprofit museum is housed in a four-story building, and the first floor is already filled up with artifacts. "We're working on the second floor now," he said.

Retired petroleum geologist and AAPG member George Grow Jr. recently donated an historic oil well site at Burning Springs in Wirt County, W.Va., to the museum to help create a memorial and park recognizing Burning Springs' role as the first West Virginia oil boomtown.

The well is located about 30 miles from the

museum, which is in downtown Parkersburg.

Grow, of Westfield, N.J., deeded the well site along with five acres of land adjacent to the museum.

"They're going to try to clean it out and pump a little bit of oil," Grow said. "It hasn't been active in many years."

Once it is refurbished, he said, it will be the oldest producing well in the world.

Where It All Began?

The donated well was first drilled in June 1860 by J.C. Rathbone, using a steam engine for power. It was a natural 100-barrel-per-day gusher at only 140 feet. The well began producing just a few months after the Drake well came in, he said. Drake's well found oil in August, 1859.

Grow's grandfather reassembled the Rathbone tract at the turn of the century and eventually accumulated over 1,000 acres of land there.

With the discovery of oil, the small village of Burning Springs soon became a boomtown and its population grew to more than 3,000 people.

"There are still a few shallow wells producing there in Burning Springs," Grow said.

Grow noted that many drilling techniques were developed in the West Virginia area. The area and the Drake well were developed simultaneously, he said.

He said his grandfather George Noah Grow bought the lease on the well in 1903. From then

on, his family has owned the lease and acquired more property. "I've worked in the oil patch all my life, for the last 65 years," he said.

Many of the artifacts in the Parkersburg museum came from Grow's property, including old engines and drilling equipment and "some Rube Goldberg pumping arrangements."

"So much of the early history of the industry has been lost," he said. "Few present day geologists appreciate the evolution of the techniques."

A demonstration of old pumping equipment will be featured at the site once it is established as a small park.

McKain, who serves as president of the Historic Association and curator of the museum, said a volunteer will clean the donated well site. "It's been 30 or 40 years since it produced," he said.

Boom, Then Bust

McKain operates a tool company that makes oil, gas and water well drilling and fishing tools in Parkersburg, and his roots to the area are deep. His family was involved in the early oil industry in Pennsylvania.

The oil boom started in Pennsylvania and West Virginia in 1859 but when the Civil War broke out in 1860, the development of the industry was halted in West Virginia, he said.

"Parkersburg was put under martial law during the war," McKain said. "Everything collapsed for the duration."

The Rebels later burned the Burning Springs oilfield as a military target, but it was rebuilt after the war. A well at the Burning Springs site that was drilled

at the same time as Col. Drake's was rebuilt after the war and produced for many years, he said.

Before the Civil War, the high quality oil found in Parkersburg was worth \$20 to \$30 a barrel. He likes to point out that in today's economy, that represents about \$2,000 a barrel.

At the start of the war, those wells in the Burning Springs field were producing from 200 to 500 barrels a day. Later they were cut back to about 50 barrels a day.

The early wells were drilled down only to 100 to 139 feet - in fact, the very first wells were only 50 to 100 feet deep. About 20 years later, wells were commonly drilled down to 1,700 to 2,000 feet.

McKain said that much of the big money that was made at the time came through land speculation. "However," he added, "they couldn't find oil except in the area from Burning Springs to Marietta, Ohio."

"It became a major oil industry center into the 1920s and then started dying down."

Today most of the oil and gas business in West Virginia is centered in Charleston while Parkersburg, which has a metropolitan population of about 100,000, has several plastics businesses.

But despite West Virginia's rich petroleum heritage, local history buffs didn't take as much interest in the state's oil industry as did those in neighboring Pennsylvania.

"No one paid attention to it," he said. "It's hard to go back now and unravel it."

"The general view is that West Virginia's oil and gas development was an extension of the Pennsylvania field southerly in the early 1890s at Sistersville," he said, "not recognizing that oil's early development and excitement started in the Little Kanawha and Ohio