

## THE FIRST OIL WELL IN THE WORLD

*Fathi Habashi, Laval University*

In the recent article (1) entitled “The Art of Distillation and the Dawn of the Hydrocarbon Society” published in the *Bulletin for History of Chemistry*, the author states that Edwin L. Drake (1819-1880) drilled at Titusville, Pennsylvania a well that produced crude oil on August 27, 1859. “Thus the oil industry began as we know it today.” In this connection, the present writer would like to point out that the oil industry actually began one year earlier in 1858 when the Canadian entrepreneur James Miller Williams (1818-1890) (Fig. 1) drilled and successfully produced oil in the township of Enniskillen between Lake Erie and Lake Huron near the town later named Oil Springs in what is now Southwest Ontario. In 1857 Williams had begun looking for oil on the banks of the Thames River, at Bothwell. Unsuccessful, he moved to the gum beds of Enniskillen, Lambton County. On Black Creek, a tributary of the Sydenham River, he extracted oil, yielding 5 to 100 barrels of oil a day. When drilling was made 100 feet below the rock, the well produced 60 barrels a day. Williams built a simple refinery on the banks of Black Creek, and his operation, the J. M. Williams Company, was actually North America’s



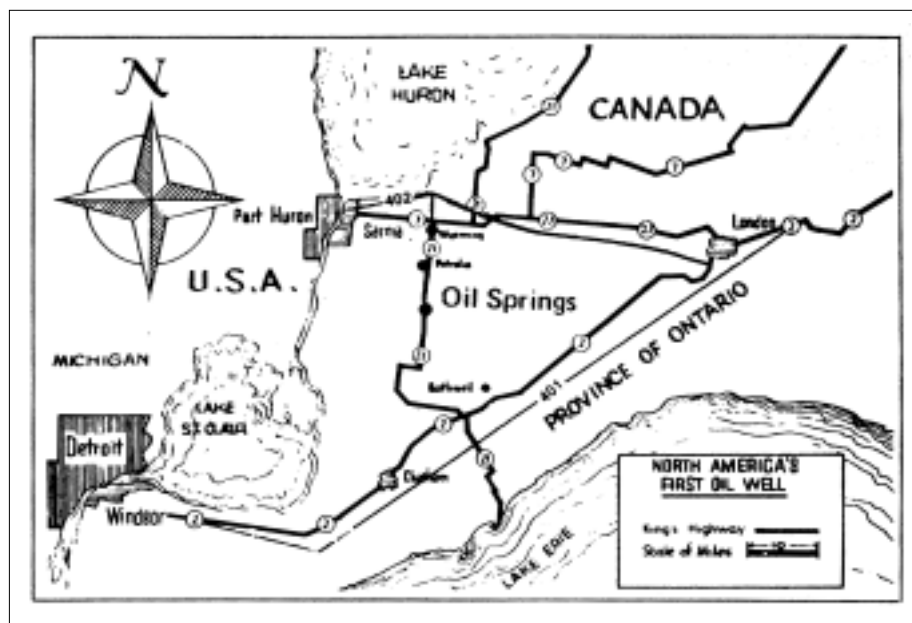
**Figure 1.** James Miller Williams (1818-1890) courtesy Oil Museum of Canada, Oil Springs, Ontario.

first oil company. In 1860 his company became known as the Canadian Oil Company. Nearly a hundred wells were drilled in the area, and production averaged 20 barrels a day. In 1860 James Williams moved his refinery to Hamilton where he carried on business until he died in 1890 (2).

Although Canada had launched North America’s first oil boom, developments in the United States were taking place that would eventually overshadow Canadian efforts. When Drake drilled a hole at Titusville and found oil at about 21 meters, he quickly took credit as being the “father” of the oil industry in North America. By 1860, the US was producing over thirty times the Canadian oil production.

### The “Gum Beds”

Even before Williams dug his well, the sticky crude oil called “gum beds” of the area caused by oil seepage near the creek had been refined into asphalt, paints, and resins by native peoples and had been reported by early French explorers. In fact, the world’s first oil company, the International Mining and Manufacturing Company, had received its charter



*Figure 2.* Location of North America's first oil well in Oil Springs, Ontario (near Sarnia). *Courtesy Oil Museum of Canada.*

from the Canadian Parliament in 1854 to produce asphalt, varnishes, burning fluids, and caulking materials for ships. Lack of transport for their products forced the owners to sell out to Williams, who took commercial development a step further by digging a well which produced 50 barrels of oil per day in 1858.

### Petrolia

A few kilometers north of Oil Springs is the small town of Petrolia, which in its heyday was the richest little town in Canada. Store shelves were stocked with exotic imports. Wealthy oilmen, builders, and merchants erected their fine mansions, an opera house, and a racing track. Oil field fires destroyed many early frame buildings. As a result fire stations were as important to the community as the oil derricks. The arrival of the Great Western Railway in 1858 and the commercial oil find at Oil Springs that same year led to dramatic growth of Sarnia. Refineries were built and oil arrived first by train and in 1865 by wagon. Refined and crude oil was shipped as far as London and Liverpool in England.

In 1862, at the height of the oil boom, Southwestern Ontario was called Canada West. A plank road was built linking the "Oil Capital of the World," Oil Springs, with Sarnia. Regular stage coach lines covered the 25 miles route four times a day. It was a toll road that al-

lowed crude oil to be transported to Sarnia and to refining centers beyond. Paved sections of the historic thoroughfare have become a principal route between Sarnia and central Lambton County.

The Oil Well Supply Company was founded in 1866 in Petrolia by Hector McKenzie, a machinist who later joined forces with a blacksmith James Joyce, to manufacture drill rings, special tools for the oil industry, as well as pumps and valves. Petrolia was also the seat of "Nitro" plants. Nitroglycerine was used to "shoot" oil wells to make them more productive. The detonation caused by the explosive would crack the oil-bearing formation and free more oil for production. The manufacture and transport of the liquid explosive constituted a dangerous business. All the "Nitro" plants eventually blew up.

Oil wells were pumped dry; demand changed from time to time, and outside competition hurt the domestic market. In addition, the economic depression in the 1870s greatly slowed down the regional petroleum industry. However, the slowdown in Canada was a boon to other countries. In 1874 the first contingent of Petrolia drillers left for Java, and others followed to Persia, Romania, Venezuela, Borneo, and Austria. They took with them their tools, blueprints, their expertise, and determination.

## Sarnia

New oil and gas deposits are being discovered each year throughout southwestern Ontario and out in the Great Lakes. At Sarnia, Canada's "Chemical Valley," are the most modern oil refineries, processing hundreds of thousands of barrels of oil daily and the many satellite plants processing its byproducts for thousands of uses. The Bushnell refinery, the first along the river, built in 1871, was later bought by Standard Oil and eventually became the site of Imperial Oil's modern refinery. Other heavy industry, including foundries and manufacturing plants, was located nearby. However, it was World War II that stimulated growth within the construction of petrochemical industries. The Japanese had cut off supplies of natural rubber from the Far East and the Allies needed a substitute. Polymer Corporation (now Polysa) was set up next door to Imperial Oil to produce synthetic rubber from Imperial's feedstock.

The oil drilling technology developed in these fields was exported worldwide by local drillers. Many of the original oil and refining companies are still located in nearby Sarnia. Approximately 400 wells still produce oil from the fields where the boom began over a hundred years ago. In the past 100 years, local wells have produced over 10 million barrels of oil. Experts believe that only a portion of the oil reserves has been tapped and that the potential for additional production exists.

## Biographical Note

Williams was born September 14, 1818 in Camden, New Jersey of Welsh parentage. He left school early and was apprenticed to a Camden carriage maker. In 1840 his family moved to London, upper Canada, when he was 22. In 1842 he married and began a carriage manufacturing business. In 1846 he moved to Hamilton and joined the Hamilton Coach Factory. When Williams sold his carriage interests in 1852, he served as a city alderman. In 1856 he again sold his business and bought the International Mining and Manufacturing Company. This operation, on property called Victoria and later known as Oil Springs, lasted for three or four years, but his interests were diverted when he began his quest for oil in 1857.

At the London Exhibition in 1862 Williams received two medals: one for being the first to produce crude oil and the second as the first to refine oils. In 1865-66, with a capital of \$50,000, the company increased its

employees and production. An advertisement listed the firm as manufacturing illuminating and machinery oil; and as wholesale dealers in benzine and coal oil lamps. Their celebrated product was "Victoria Oil." In 1867, he became Hamilton's first provincial representative at the Ontario Legislature, on a Liberal ticket. In 1870, the directory showed his office at 27 King Street West and a refinery on the eastern limits, with his son and James Cummings as partners. A year later, he appeared as president of the Canadian Carbon Oil Company and was elected to parliament.

On retirement from parliament in 1879 Williams was appointed Registrar for Wentworth, a post he held until his death. It appears that in 1880 he sold his oil interests in Hamilton and went into the metal stamping industry, one of the first to make stamped tin ware. He died on November 25, 1890, at age 72. He was buried in the Hamilton Cemetery, Lot 6, E3.

## REFERENCES AND NOTES

1. M. D. Saltzman, "The Art of Distillation and the Dawn of the Hydrocarbon Society," *Bull. Hist. Chem.*, **1999**, 24, 53-60.
2. Details of this history can be found in two brochures: "Our Petroleum Challenge," Petroleum Resources Communication Foundation, Calgary, Alberta, 6<sup>th</sup> ed., 1999; "Oil Heritage District," The Oil Museum of Canada, Kelly Road, Oil Springs, Ontario (Fig. 2). Oil Springs is 35 km southeast of Sarnia. Opened in 1960, the museum is located on the site where Williams dug his first well.

## ABOUT THE AUTHOR

Fathi Habashi is Professor of Extractive Metallurgy, Department of Mining & Metallurgy, Laval University, Cité Universitaire, Québec, Canada G1K 7P4. Among his many publications are *A History of Metallurgy*, 1994; *Principles of Extractive Metallurgy*, 4 volumes, 1969-1998; and *Handbook of Extractive Metallurgy*, 4 volumes, 1997. He can be reached by e-mail: Fathi.Habashi@gmn.ulaval.ca

[See Saltzman's response, p 67.]