

ABRAHAM GESNER (1797-1864): PETROLEUM PIONEER

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Abraham Gesner, one of the early petroleum pioneers, was born in Cornwallis, Nova Scotia, May 2, 1797, when this province was still a British Colony. His professional training was in medicine and surgery, but his love of things geological soon overcame his work in medicine. The publication of his large work (272 pages), *Geology and Mineralogy of Nova Scotia* in 1836, led to his appointment in 1838 as provincial geologist for New Brunswick, a sister colony, and he held this position until 1843. With his appointment, he moved to St. John and established the Gesner Museum which was later purchased by the National History Society of New Brunswick. He published five reports on the New Brunswick geology, and as was the fashion of that day, the work he was doing was focused upon the economic aspects of the geology, especially coal, which was to play an important role in his life later. In the final report, Gesner greatly overestimated the amount of coal in New Brunswick which prompted many wild mining ventures, most of which did nothing more than lose money. Although not the only cause, certainly this played a role in bringing the New Brunswick survey work to a close in 1843.

He returned to Nova Scotia in 1843 and continued his work in science. One outcome of Gesner's work on the coal fields was his speculation as to the origin of coal, which included volcanic heat and uplift. He felt that the volcanic heat changed the organic matter into coal, and this led him to a series of experiments with distillation to see if he could reverse the process. He first used some oil shales and then coal. With the application of heat to these substances, Gesner produced an liquid organic material, what was called "coal oil." This new substance provided a marvelous boost for the illumination industry because it was less expensive to produce than whale oil, and it burned much cleaner than coal or crude petroleum. For this new product he coined the word *kerosene*; *keros*, Greek for wax, and *ene* because the liquid was volatile and resembled a popular illuminant of the time called *camphene*. In 1850, he received a United States patent for the process and set up manufacturing plants around the New York City region.

After many years living in Brooklyn, he returned to Nova Scotia in 1863 and died in Halifax April 19, 1864. He had been a physician, a geologist, a petroleum chemist, and a businessman, but he is most remembered for his contributions to the early petroleum industry and for his creation of kerosene.