

MINING FOR OIL AN HISTORICAL PERSPECTIVE

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Prior to the drilling of early oil wells such as the Drake well in Titusville, Pennsylvania or the Petrolia well in Humboldt County, California, oil was mined from seeps in many parts of United States, as well as the rest of the world. In fact, the use of bitumen derived from oil seeps has been dated back to well over 7,000 years ago, when it was used as an adhesive and a waterproofing. The widespread use of oil as a lubricant and fuel in the United States dates back to the 1850's and 1860's when oil from seeps started to see uses such as a lubricant for wagon wheel axles. Kit Carson's parties and the early Mormon migrants have been documented as using oil from seeps in Colorado and Utah. The native peoples in California used petroleum from tar pits to glue arrowheads onto their arrows. Early commercial extraction of petroleum by settlers in California included that from mines dug into seeps in the Central Coast region of California. That oil was transported to San Francisco for use in making products such as lamp oil. Oil mining declined with the advent of wide-spread drilling, since the deposits amenable to mining generally contained heavy oil which was of a lower quality and more expensive to extract than that derived by drilling. However, with the advent of the "energy crisis" in the 1970's, a new emphasis was placed on utilizing previously marginal resources. The various energy shortages have resulted in the resurgence in "oil mining", whether the mining be for shale oil as in the Rifle area of Colorado; heavy oil sands such as those in Alberta, Canada; or the use of mines as large-bore wells for recovery of heavy oil from depleted reservoirs such as is being permitted in Texas.

VIEW FROM A HONEYMOON COTTAGE

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What an ideal view from the kitchen window of a cute little house owned by a couple of newly wedded petroleum geologists: a hillside hosting three antique steel derricks peeking over the treetops! Still enchanted by the trio more than 20 years later, we revisited the wells on several occasions to document the sites with photographs while the derricks were still standing. Now the remains of the Bellevue-

Avalon oil and gas field have all but disappeared. Along the eastern shore of the Ohio River and about nine miles north of downtown Pittsburgh, the Hammerschmit Pool, discovered in 1886, found oil in three pay streaks in the Hundred-Foot Sandstone. The tiny pool consisted of two farms. It was the earliest portion of the Bellevue-Avalon field to be drilled, and was short-lived due to significant quantities of salt water produced together with the small amount of oil. In 1888, the discovery well of the Bellevue section of the field was drilled. Harvey #1 initially flowed 700 barrels of oil per day, also from Hundred-Foot. Because records for individual wells were kept poorly if at all, much of the history of the field is unknown, including the early developments in Avalon. Eventually, the Bellevue-Avalon field included more than 75 wells and encompassed 1000 acres. Multiple pay zones at depths between about 1,500 and 1,800 feet were encountered by the drill bit. Many of the wells produced enough natural gas to fuel the engines that powered the walking beams and pumped the oil from the wells. Unfortunately, the water to oil ratio, calculated at six to one, hastened the decline and abandonment of the field.

Researching the history of the land where the three wells once stood took me back to the earliest days of modern settlements along the Ohio River. The courthouse records for the land begin with August 30, 1799, the patent date for land known as Sandy Bottom and Sidney, the neighboring tracts that became portions of the Bellevue-Avalon field. As time progressed and the lands were divided and settled, various tracts changed ownership several times and both my research and the territory narrowed to the specific tracts upon which the three wells were drilled. Perhaps a reflection of the economy, the land was sold at sheriff sales at least twice, and one of these events resulted in purchase by James McLaughlin in 1888. In June 1891, McLaughlin granted a lease to the trustees of McLaughlin Oil Company, which was formed in May of 1892 for the specific purpose of "...mining, drilling and operating for petroleum oil with the right of acquiring and holding property necessary for the business of the corporation." Granted 11 months prior to the formation of the company, the lease carried a requirement that one well be completed by December 22, 1891 and an additional well was to be drilled within each six-month time period thereafter. By May 1892, the three wells had been drilled, providing us with an estimated completion date between mid-1891 and mid-1892. Again, the property changed hands several times until September 1921, when the land and the wells were purchased by Walter Logue. Perhaps the reason that the derricks were standing until they were removed in 2003 is that Logue climbed to the top each year to coat them with tar to keep them from rusting. Logue lived in a shack a few hundred feet from one of the wells and operated them until his death in 1957. Relics of the drilling and production activity remained at the wells for more than