

Burning the Midnight Lime

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As many may already know, the state of Indiana is largely composed of limestone. This limestone was formed some 300 to 400 million years ago from shallow oceans teeming with marine life that once covered the surface. As time passed and these shallow oceans disappeared, beds of limestone formed from the calcium carbonate in the remains of the marine corals and creatures that thrived. Thanks to this process, we have deposits of limestone left behind.

The use of lime has been in place for thousands of years. The first evidence of lime kilns dates to the Kebaran Culture of the upper paleolithic era in Israel from Lagama North VIII in the Sinai Peninsula. (Friesem, DE, et al. 2019) Early lime kilns were often fashioned from limestone laid over wood or coal, then alternating layers would be stacked on top of one another into a large pile that would burn for ten or more days. These stacks would reach temperatures around 1,500 degrees, reducing the pile into ash and quicklime. This final product would be collected and used for fertilizer, whitewash protective coatings, mortar, concrete, and more. This “log heap” method, although effective, was a time-consuming process and quicker methods of production soon followed.

The “log heap” method of producing lime was used in Indiana during early settlement, but by the 1830s, newer and more effective ways became more popular. One of these methods was using “Pot” kilns. These kilns were a square or cylindrical-shaped chamber dug out of the side of a hill and lined with stone. Limestone would be placed above, and a fire would be kept ablaze within the arch below for three to four days until the lime was produced. Pot kilns were soon followed by continuous kilns which stood forty to fifty feet tall and were loaded in by layers of the fuel source and limestone from the top and lime collected from the bottom. This allowed for continuous collection of lime product which sped up the process significantly.

The lime industry in Indiana was once a booming business, producing quality limestone for construction as well as farming and other uses. By the 1950s, there were at least forty counties in Indiana that had operational lime kilns. A large concentration of lime kiln operations took place in Clark County in the southeastern portion of the state. Lime production began in this area as early as 1818. (Utica Lime, IN.gov) The largest portion of the lime produced here was used in farming and agriculture, which comes as no surprise given the large amount of farmland in the area.



Photos from SHAARD

Remnants of many of these lime kilns are still visible throughout the state. Visible on Lidar scans, they and their accompanying quarries can be found and studied. With the use GIS software, it is possible to locate old kilns and pinpoint on old property maps who they may have belonged to, giving the kilns a history and backstory attached to the families that may have operated them. Many hard-working Hoosiers earned their living in the lime business and the study of these kilns can help tell those stories and bring the past back to life.