

# *Lime Industry at High Cliff*

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The old stone, brick and metal structures found above the northeast shoreline of High Cliff State Park are all that remains of a once prosperous lime kiln industry that operated here from 1855 to 1956.



The kilns resemble tall stone ovens, and were used to “cook” limestone rocks from the sedimentary layers of limestone ledge known as the Niagara Escarpment. Chemically, limestone is largely calcium carbonate and lime is calcium oxide. Crushed limestone was heated to break down the calcium carbonate, leaving lime as the end product.

The operation began with quarrying the stone, and you can see the abandoned pits of the old quarries in several places in the park. To loosen the stone, workers drilled vertical holes and filled them with dynamite. Using air drills and sledge hammers, the large pieces of stone blasted off the cliff were then broken down to chunks about a foot on a side. Blasting was done on a strict schedule – 11:45 a.m. and 3:45 p.m. – and in early days the quarry workers would shout warnings to farmers who might be working nearby. The warning would give farmers time to steady their teams of horses, which might have otherwise bolted when they heard the roar of dynamite and falling rock.

The best quality limestone was in an upper layer about 23 feet thick. Lime made from this stone was sent throughout the Midwest for use in plaster and cement. Much of it was also applied to farm fields to reduce the acidity of the soil. Below the top quality stone was a layer of “blue stone” which was used to make brick mortar. Still farther down, the limestone contained many fossils, and could not be used for lime. This stone was crushed into gravel.

Horse-drawn dump wagons were used to move the broken limestone from the quarries to an area above the kiln. Two carts on a pulley system carried the stone down the cliff to the kilns, with the weight of the descending loaded cart used to pull the empty cart back up the hill. Horses were the only source of “horsepower” for moving the stone until 1946, when they were replaced by a dump truck.

To start heating or cooking the limestone, the inside of a kiln was filled with wood and lighted. After about two days, the inside of the kiln would reach 2,200 degrees Fahrenheit, and the lime-making could begin.

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Limestone was continually added to the top of the kiln, while lime was removed at the bottom, and wood was stoked from the sides to keep the fire going.

When the process was in full swing, a single kiln would turn out 1,000 pounds of lime per hour, and would stay in continuous operation for six months to a year until it had to be cleaned out and lined with fire-brick.

As many as 40 men were employed at the operation, including drillers, a blasting specialist, stone crushers, teamsters, barrel makers, general laborers, and a blacksmith who shod the horses and made barrel hoops. Many of the workers were immigrants of Hungarian origin, who stayed long enough to earn a “stake” and then left to find jobs in Milwaukee or Chicago.

The amount of wood consumed by the lime organization was amazing. There is no way to estimate the thousands of cords cut from the ledge and used as fuel each year, It is a fact that the lime company cleared the trees from most of the ledge and farms in the area. The quantity of hardwood that went into the making of barrels for the lime also must have been enormous. In the early years, all the lime made was packed in 200 pound barrels, and at full blast, the kilns at High Cliff could have filled close to 500 barrels a day. The company employed four coopers (barrel makers) and although the used barrels were eventually returned for repair and refilling, these men were kept very busy. The company switched from wood fuel to coal in 1924 and from barrels to bags in 1916.



In its heyday, the lime industry at High Cliff supported a small “company town” consisting of 16 company-owned houses for workers, a company store, and a company tavern. All that remains today is the company store, now a museum, in which you can find a collection of amazing local history.