

## The Glenmary Coke Ovens

By MAGGIE BARGER

Coke, not for quenching thirst or getting high on, but as a byproduct of coal production. With the coming of the railroad the abundant coal deposits in the area were ready for development. Several profitable deposits were found near the railroad at Helenwood, the Paint Rock valley east of Oneida, and Robbins, but the first to be opened was located in the southern part of the county near the Glenmary Station.

An Ohio businessman, J. S. Crooke, found a promising vein of coal about two to four feet in thickness some two miles east of the Glenmary depot on land owned by Andy Young. He bought the mountain spur and surrounding land for \$500. Then he began the development of the Coal Hill community by organizing the Crooke Coal Company on June 26, 1880, with the help of some friends.

Since there were no experienced miners in the area, the company brought in skilled immigrants who had worked the mines of Wales and England. (The names of some of these early miners can be seen today listed among the tombstones of the Coal Hill Cemetery.) Some African Americans came from the railroad construction camp to work in the mines and later in the coke ovens. After the mine operation became a booming business, many people came from Pickett County (“down under the mountain”) to work where they could get wages paid in money. My father was one of these.

Crooke negotiated with the Cincinnati and Southern Railroad for the construction of a branch line for his property. The agreement called for a switch to be south of the Glenmary depot and running east along Davis Creek for a mile to the site selected for the tipple. The tipple was a large wooden tower like structure where coal was brought from the

mines to be graded and loaded into cars for

shipment. The coal that didn't make the grade was used to make coke. The first string of cars



Figure 1 These ovens were last used a century ago, yet they still stand, a testament to the craftsmanship of the early masons.

loaded with coal finally came over the branch line on July 20, 1881, to the Cincinnati and Southern Railroad.

In 1884, Crooke sold his operation to a group of businessmen from Lexington, Kentucky. This group formed the Glenmary Coal and Coke Company. It was this new company that began the operation at the coke ovens.

In her article to the Scott County News published on June 16, 1957, Mrs. Emma Lewallen wrote about Coal Hill. She stated: "There were also several coke ovens down below the tipple but I don't know much about them since they had quit using them before I came in 1907."

Less was known about the brick making in that area than about the coke.

After I wrote *Remembering Coal Hill* in 1986, I had an opportunity to talk to Lee Haynes and he told me his father, Walford Haynes, who worked at the pump house for the Cincinnati Southern Railroad, told him they made the brick just below the tipple or near where the coke ovens now stand. They had to have brick to make the ovens and they had a good seam of clay underneath the coal. Kilns for brick are either the periodic or continuous type. The type used here was the periodic. They are round and have a domed top. They're refilled, fired and then emptied. The simplest kind of periodic kiln is made with unburned bricks, stacked so that tunnels or firing holes run through the bottom of the piles. The fires pass up through the brick and out the top. The outside wall is sealed by plastering with mud made from clay. Bricks are cooked gradually with low temperatures for several days to prevent cracking. The temperature is increased slowly until it reaches 1800 to 2000 degrees F, then held at this temperature for a few hours to get them thoroughly burned. Vitrified brick are so well burned that they will not take up water when they are soaked.

The brick made here were stamped with a circle which contained these words: "Glenmary Vitrified Brick Co." This stamp was on the regular size brick; however, there were odd-shaped brick to fit in around the opening in the top of the ovens and on the side openings. Some of these were found in chimneys or flues of buildings and in the community wells. A lot of stone was used in and around the ends and in the walls and ditches.

A lot of brick stamped "Reynold Block" are to be found in use at the coke ovens. These were probably brought by rail from Alabama. This brick was made at Robbins later. The first brick at Robbins was done under the supervision of Adam Ott in 1889, for Tennessee Paving and Brick Co. Then in 1902, it became Southern Clay Manufacturing Co. and equipment was brought in from plants in Alabama where brick by this same name was made.

The design of the coke ovens used at Glenmary was basically identical to the type used in England in the 1600s. Each domed-shape oven measured five and one-half feet high and 11 feet across, with a 24-inch opening at the top and a side door. The space between the ovens was filled with dirt and loose rock and often encased with blocks of mountain stone for better heat insulation. A "charging car," loaded with crushed coal, ran along tracks on top of the ovens

where workmen shoveled four to six tons of crushed coal down into each oven through the top vent hole.

The fires were kindled at the top and side opening; the latter was sealed with mud (wet clay). Successive firing did not have to be started, since the coal would be ignited from the heat of the oven wall. It required 48 to 72 hours for coke to cook. The goal was to admit only enough air into each oven to allow the burning coal to cook but not burn up entirely. The experienced hand could judge the progress of the run by watching the top vent hole: a high flame coming out meant too much air was getting in, while little or no flame was a sign of too little to do the job well. When the process was completed the side door was broken open and the red-hot coke was raked out and doused with water to cool it. Later it would be loaded into railroad cars for shipment. All of the coke produced here was used in the mills at Rockwood and Chattanooga.

Firing the 70 ovens, which are in two parallel rows, back to back, was an extremely hot, backbreaking job. The important jobs were the filling of the oven from the “charging car” with crushed coal, then removing the coke when it was completed. This was usually done by African Americans with white supervisors; the firing of the ovens were usually done by experienced whites. I was told this by a grandson of one supervisor, a Taubert of German descent, who was a stone mason who kept the drain ditches in working order. I recently heard from a Charles Henry in Knoxville who called me to tell me of Harvey Kosier, also of German descent, who worked at the coke ovens as a stone cutter. In one of the early census records, Ed Crawford (who was the African American who stayed in the area until he died and is buried in what was known as the “colored cemetery”) had a son who was a “coke puller” at the ovens.

Coke, a grayish-black porous fuel, was brittle, hard and produced intense heat without smoke and was much in demand for steel making. The Coal Hill production grew with the output of coal from the mines from 5,750 tons in 1885 to a peak total of 18,543 tons in 1890. During the 1890s, production dropped greatly, varying from 7,000 to 14,000 tons annually; in



Figure 2 The Forest has moved back in on the 70 cokes ovens at Glenmary

some years only half the ovens were fired. A major problem was lack of an abundant water supply. Production was halted when the nearby creek dried up during some of the especially dry

years of the late 1890s. Eventually a partial solution was found by damming the creek near the coke ovens. This “Blue Pond” outlived the Glenmary Coal and Coke Company; it was destroyed by the Great Flood of 1929. Although the Glenmary coke was of high quality the amount produced was small in comparison to some of the larger coke works in the region, making it not profitable to continue production. In 1904, the last year the coke ovens were in blast, only 1,070 tons were produced. It took about 30 men to carry on the work here. There were about 10 whites and 20 African Americans. After 1904, many of the workers of the ovens went to the brick plant at Robbins, which seemed to be getting a good start in production.

From a bustling, thriving town of about 2,500 to 3,000 people, of whom between 800 and 1,000 were African American, little remains. All were held together by the manufacturing of products from a natural resource, coal, which could be used up. We are left with only memories of what the area used to be. Yes, Ms. Emma, people still like to come by, to visit and find remains of loved ones and see if someone still remembers what a way of life was like in the years of yesteryear.



Figure 3 Each of the ovens, like this one, measure 5-feet, 6-inches high and have an 11-foot diameter.

At present the new owner of this land, which was purchased from Bowater Corporation, has promised to give land to Scott County for use as a park and outdoor museum; in return, the county, with the help of the community, will develop the land for that purpose and provide the upkeep necessary. When the site is accessible we will be able to give tours, have interpretive information available and the public will be able to reflect upon and appreciate the industrious nature and craftsmanship of people whose tangible legacy has stood this past century.



Figure 4 Americorps Volunteers from across the state cleared brush at the coke ovens on "Make a Difference Day."



Figure 6 The bricks produced at Glenmary were "vitrified," cooked at more than 1800 degrees to make them waterproof



Figure 5 Ditches were dug and lined with hand cut stone for the water that was used to cool the coke after it was raked from the ovens.



Figure 7 This roller was used to crush the coal so it would be suitable for the production of coke in the ovens at Glenmary.