

IRON FURNACES OF THE GHOST TOWN TRAIL

When enough iron had melted, the furnace was tapped and iron ran into channels cut into the sand floor of the casting house in front of the furnace. The main stream of molten iron was called the “sow”, the side channels were called “pigs”, the product produced was called pig iron.

The pig iron had to be further refined before it could be used. Iron bars from the furnaces were hauled by wagon to the PA Canal and then transported to a forge in Pittsburgh. After being forged the iron was turned into products such as utensils, stoves and other useful items.

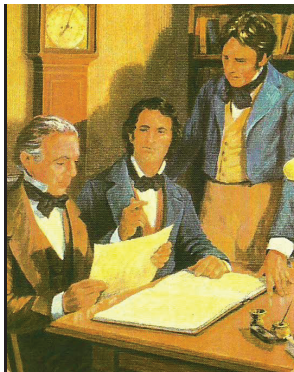
The Iron Workers

Those who lived and worked at the iron furnaces lived hard lives which varied by their skills, responsibilities and social status. Everything the workers needed from their clothes to food to housing was provided by the furnace owner. Workers were paid “in-kind” rather than in cash. Workers at the furnace included fillers, guttermen, moulders, colliers, miners, laborers, teamsters and woodcutters. Their work was supervised by the iron master.

The Iron Master

A good iron master was a capitalist, technician, market analyst, personnel director, bill collector, purchasing agent and transportation expert.

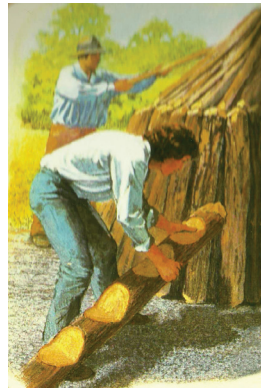
Being a successful ironmaster required a combination of qualities: wealth, respect and pride in producing a good quality product



The Making of Charcoal

One of the earliest industries in PA was the charcoal iron industry. At hundreds of furnaces throughout the state, iron ore was reduced to iron by smelting ore with charcoal as the fuel. Charcoal was used instead of raw wood because it burns hotter.

Producing charcoal required woodchoppers who cleared the surrounding forests. Using axes the woodchoppers cut trees into four foot lengths which were stacked on end in a large circular area called a hearth. To operate a furnace required one acre of forest per day.



In the spring the charcoal burners called “colliers” set off for the woods to prepare the charcoal pits. Tending a charcoal pit required constant attention. It took three to ten days to char an entire pit. The colliers spent long days and nights tending the pits.

For good charcoal a collier was paid 2 cents per bushel. The charcoal was hauled to the furnace in large wagons and stored until ready for use.



Eliza Furnace Buena Vista Furnace

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Before the Furnaces

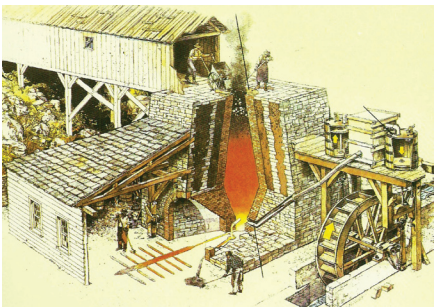
Before the first settlers arrived in the Blacklick Valley the area was a large expanse of forest comprised of hardwoods and hemlock trees.

While early settlers cleared nearby land for farming much of the Blacklick Valley was too steep and rocky to be suitable for farming and remained forested until furnace operations began in the 1840's.

The Furnace Era

Iron making in the Blacklick Valley began in the mid-1840's and lasted until 1856 when the Buena Vista Furnace went 'out of blast'. Three furnaces operated in the Valley: Eliza Furnace, Buena Vista and the Wheatfield Furnace. There are no remains of the Wheatfield Furnace but the furnace "stack" remains at both the Eliza and Buena Vista Furnaces. The iron furnaces pre-date the mining and railroad era. The iron furnaces were the first industries in the Blacklick Valley.

Pig iron produced at the furnaces was hauled by wagon to the PA Canal near Ninevah for shipment to Pittsburgh.



Eliza Furnace

The Eliza Furnace was a hot blast furnace that operated from 1846-1849. At its peak the furnace employed 90 men and boys with 45 mules to produce 1,080 tons of pig iron a year. Besides the furnace stack the property included a bridge house, casting shed, wheel and bellows sheds, two 2-story houses, 21 log cabins, stove house, office, blacksmith shop, log stable and a charcoal storage house. Iron furnaces operated much like a plantation or company town — almost everything the workers needed was provided on site. The furnace was not a financial success and ceased operations in 1849. The Eliza Furnace is one of only a few iron furnaces in the United States which retains its original heat exchanger.



Buena Vista Furnace

This furnace is located in Brush Valley Township, 1/2 mile downstream of the Route 56 bridge. From the Ghost Town Trail Heshbon Access Area (on PA Route 259) travel 3 miles east to the furnace. Built in 1847 by Henry McClelland, Elias McClelland and Stephen Johnston, Buena Vista Furnace was named for the Mexican War battle of February 1847. Furnace operations began in 1848.

The 30-foot cold blast furnace used local iron ore, limestone and charcoal to produce 400 tons of pig iron per year. About 61 men and boys and 30 mules labored at the furnace.

The furnace was sold at a Sheriff's sale in 1850 to Dr. Alexander Johnston and continued production until 1856.

In the 1930's it was rumored that Henry Ford expressed interest in purchasing the furnace to transport by railroad car to Greenfield Village in Michigan.



Iron Making

Before iron making could be started, land had to be prospected for ore, limestone and timber. A stream was needed nearby for power. Once these elements were located the "iron master" went about constructing the furnace and putting it into operation.

Iron furnaces were located near hillsides so that the ore, charcoal and limestone could be dumped into the top of the furnace by workers known as "fillers". A bellows provided the air blast needed to raise the temperature to the point at which smelting occurred.