

Iron Mining in Rockaway Township

Iron Producing Furnaces

The Hibernia Furnace

The Hibernia Furnace was known for its production of Pig Iron. The Hibernia Furnace had a high reputation and supplied many of the forges in Morris county. The Washington Headquarters in Morristown had one of these "pig" forges.

The Hibernia Mine comprised the Lower Wood, Glendon, Scott, DeCamp, Upper Wood, Willis and Wharton mines of the early New Jersey Geological Survey reports, all of which operated on the Hibernia deposit. The ore body extended from the Beach mine, near New Road, northeast under the Hibernia Brook into the hill on the east.

In 1763 or 1764 Samuel Ford built Hibernia Iron Works on the Whippany River, "about four miles north of Rockaway," in the hills of northern Morris County. The furnace was secluded and protected, but not far away were to be found a number of competing works, including those at Burnt Meadow, Pompton, and White Meadow. The one asset of Hibernia was its rich vein of iron ore, which was favored over near-by competitors. Hibernia's early history shows that the ore could not by itself render the works a profitable investment. The uncertain future of the works may or may not explain why Hibernia's builder quickly decided to sell two equal parts of Hibernia, while retaining only a third of the shares, but if we can believe Ford himself, the financial burden of the works does explain his early flirtation with the art of counterfeiting. In any case, Samuel Ford in 1767 sold his share of Hibernia to William Alexander, Lord Stirling, thereby making James Anderson, Benjamin Cooper, and Lord Stirling equal co-owners, while giving Ford the capital he needed to visit Ireland, there to perfect his counterfeiting skills.

(from... "Hibernia Furnace During the Revolution, p. 1; R974.974 HIB)

Around 1890 Joseph Wharton began a program of consolidation and in 1901 secured control of the entire Hibernia mines which resulted in one of the most important magnetite ore properties in the state. The property was passed on to Warren Foundry & Pipe Corp. and the Shamoon Industries. In the 1970's Shire National (successor to Shamoon Industries) sold the northeast section of the deposit. The mine has yielded more than 5,000,000 tones of ore to rank as the fourth largest producer in the state. The ore was Bessemer grade and the mine operated until 1913 when the operation was abandoned.

In 1873, a tunnel was driven for 2,500 feet along the ore shoot to drain the upper workings. The entrance to the tunnel still existed until 1987 and was covered by a steel plate. The portal was located across the valley behind the old Hibernia store. The tunnel is approximately 10 feet high by 15 feet wide and about 2,500 feet long and connects with the old stopes and shafts in some places.

The deposit was worked to the surface up the hill over the tunnel, the remains still visible in the spring of 1987 in the form of a collapsed trench. The deposit occurred in several steep stringers close together,

the width near the surface averaging 10 feet and increasing to 20 feet wide at greater depths.

Prior to 1972, the workings on top of the hill at the southeast end were mostly open, hundreds of feet deep. The Glendon shaft was approximately 900 feet deep and connected with the Hibernia tunnel. The no. 5 shaft also connected with the tunnel about 250 foot depth. The nos. 6, 7 and 8 shafts were reported to be 1,600 feet deep and also connected with the tunnel at the 250 foot depth. The no. 10 shaft was reportedly 1,100 feet deep. In 1972 the openings (shafts 4-8) were blasted shut and dozed in.

It was reported that ore was mined from the Hibernia deposit as early as 1722. In 1765 the "Adventure Furnace", later known as the Hibernia Furnace was built at Hibernia and supplied shot and ordnance for the Continentals during the Revolutionary War. In 1850 some ore was mined to supply the furnaces at Powerville and Beach Glen; the Hibernia furnace at that time being in ruins.

(information from... "Abandoned Iron Mines of Jefferson & Rockaway Township Morris County New Jersey 1992, p. 34-35. R974.9 She)

Mount Hope Furnace

The Mount Hope Furnace produced shot, shells and cannon for the Continental Army in the American Revolution. John Jacob Faesch was one of the most prominent men of Morristown and leading ironmaster of his day. He erected the Mount Hope Furnace in 1772. Washington's Headquarters in Morristown has preserved one of the cannon ball molds.

The Mount Hope Mine is located in Mount Hope, three miles north of Dover. The mine included the workings on nine ore bodies of which four were on Mount Hope Hill, three on Hickory Hill and two on Mount Teabo Hill. The principal shafts included the Spencer, Fowler, Brown, Elizabeth, Carlton, Leonard and New Leonard. The New Leonard shaft was the main operating shaft from 1944 until the Mount Hope operation was permanently closed.

The New Leonard was a three compartment shaft 2,694 feet deep and connected with the 1,000, 1,700, 2,100, 2,300 and 2,500 levels.

The Mount Hope Mine ranks as the largest producer of iron ore in New Jersey, yielding close to 6,000,000 tons since its beginning. The Mount Hope production during the first and second World wars and subsequent to World War II was responsible for its exceeding the Hibernia and Richard Mine outputs. It is said to be, along with the Dickerson Mine of Mine Hill, the oldest iron mine in the United States, dating back to at least 1710.

By 1868, the Mount Hope Mining Company was operating nine different mines on separate ore bodies with an annual production of about 72,000 tons.

The oldest operations were the open workings on the Jugular vein located on the northeast side of Mount Hope. Entrance to the workings were by means of two 25 degree inclines that descended to a depth of 100 feet.

The ore was worked down from the surface producing a great open pit known as the "Open Workings" which to the northeast went underground. About 1868, a crosscut edit known as the Big Tunnel was completed by the Scranton Iron Ore Company and intersected five different deposits that are now known as the Brennan, Leonard, Finley, Hawkins and Taylor. In addition to these deposits which were mined by means of the side hill edit, the Elizabeth Deposit, on the northeast slope of Mount Teabo was opened prior to 1868. It was mined from an edit at the base of the hill that was driven southwest along the strike; the ore above the edit level was mined from three shafts, the largest of which was the Painter shaft. A third group of deposits; the Spencer and Gold Diggings which cropped out on Hickory Hill were also actively mined prior to 1868. These deposits were separated from those on Mount Hope by the Mount Hope Fault.

(information from... "Abandoned Mines of Jefferson and Rockaway Townships, p. 41-42)

Middle Forge Furnace

The Middle or Aetna Forge was located on land that is now Picatinny Arsenal. This forge was built in 1749 on the Burnt Meadow Branch of the Rockaway River. It used water power from the fall midway between Denmark and Mount Pleasant. The Federal Government bought the Aetna Forge in 1880, along with 1,866 acres and used it as the site of a powder magazine. In 1907, the first powder factory at the Arsenal opened and pioneered new types of armaments which were used in two world wars.

Richard - Allen - Teabo Mines

The Richard Mine property immediately southwest of the Mount Hope Mine and northeast of the Baker Mine, was first worked by three independent mine companies; known as the Teabo, Allen, and Richard Mines. In 1792, the property was acquired by Jacob Faesch and in 1803, the year that ore was found on the property, Jacob Faesch gave 28 acres of land in the tract to his son Richard. The property thereafter became known as the Richard Mine and was operated by the son, Richard, until 1809, at which time it was sold.

In later years, the properties were consolidated and operations continued under the Richard Mine designation by the Colorado Fuel & Iron Corporation.

The mine was operated nearly continuously from 1856 up to the 1950's, during which time the operation yielded approximately 5,700,000 tons of ore. The production had come from two ore bodies; the Mount Pleasant or North Vein and the Richard or South Vein, the Richard Vein supplying about three-fourths of the total tonnage.

The Allen Mine, immediately to the northeast of the Richard no. 3 shaft was worked between 1855 and 1884 as the Allen operation. The workings consisted of several shallow shafts and an edit 630 feet long that was driven to the Allen deposit. At the surface, the Allen deposit was separated from the Richard deposit by the Allen fault, and was situated between the Richard and Teabo ore bodies.

The Teabo mine was northeast of the Allen Mine and worked under that name until 1907. It subsequently was worked by the Richard Mine operators. The Teabo Mine worked the Teabo ore body through several shafts, the deepest of which was the Teabo No. 5 shaft located at the extreme northeast of the property.

(from... "Abandoned Mines of Jefferson... p. 49-50)

Swedes Mine

Swedes Mine was one of the more important mines of 1850, located off Swedes Mine Road. Up to 1855, the ore had been removed along a distance of 860 feet and to a depth of 175 feet. Operations continued uninterruptedly until 1875 at which time the mine was 220 feet deep, 1,300 feet long and was entered by two shafts and two edits.

(from... "Abandoned Mines of Jefferson... p. 57)

Cobb Mine (Splitt Rock Mine)

The Cobb Mine, also known as the Split Rock Mine, consisted of a series of openings located about 1,500 feet east of Split Rock Road. It was worked down to the water level, and for a horizontal distance of 1,700 feet. The surface workings extend from the edge of the valley on the south slope and northeast over the crest of the hill. The mine opened sometime before 1868. The workings at that time were at two places; the largest near the foot of the hill, the other near its summit. The mine was inactive in 1873. It reopened in 1878, producing at a rate of 35 to 400 tons per month. It operated until 1881 when it was abandoned.

During its last year of operation it produced 1,300 tones of ore, about half of the material raised was rock. The ore was reportedly roasted and crushed before going to the forge. It is reported to have reached a depth of 120 feet.

(from... "Abandoned Mines of Jefferson... p. 24)

Morris Canal - Early Transportation

Iron became an important factor in the Revolutionary War, the War of 1812 and the Civil War. Between wars, there was a decline in the iron industry. After the War of 1812, rising transportation and dwindling timber supplies jeopardized the area's iron industry. It was the Morris Canal, one of the great engineering designs of the age, that brought renewed life to the iron industry. The Morris Canal began operating from Dover to Newark in 1831. By 1832, the canal linked Newark to Easton, Pennsylvania. Anthracite coal from the Lehigh Valley flowed in to replace the timber in the forge fires. Rockaway Township and surrounding areas were brought to life again. Rockaway Village was considerably larger than Dover, and was an important loading and unloading junction for iron and coal.

Shortly after the Canal was opened, it was widened and deepened to handle 70-ton barges to replace the former built of the 25-ton size. This and the fact that sections of Pequannock and Hanover Township were split off to form Rockaway Township in 1844 (just twelve years after the Canal was opened) is evidence of the development of settlement and

industry at the time.

Railroads - Mid-Century Transportation

By using the Morris Canal, the trip from Easton to Newark took five days. When the railroad came, the trip took only eight hours. Also, railroads could operate all winter. The growth of many small railroads took away the profitable traffic in iron ore, iron and other freight from the Morris Canal.

The Hibernia Railroad, built during the Civil War period, linked the Morris Canal at Rockaway Village with the mines at Hibernia. The Mount Hope Railway, built after the Civil War, carried an immense ore freight. In addition, there was also a Green Pond Railway from Charlotteburgh to Green Pond.

In the early 1900s, when there was an Upper Hibernia and a Lower Hibernia, Joseph Wharton, almost singlehandedly, built the Wharton and Northern Railroad, which included a branch from Lake Denmark into Upper Hibernia. The Borough of Wharton was named for Joseph Wharton.

Decline of the Iron Industry

In 1876, vast deposits of cheap surface iron ore were discovered in the Mesabi region near Lake Superior. In Morris County, a combination of factors caused the decline of the iron industry:

1. Extracting the now deep veins of the high-grade ore was becoming increasingly more expensive.
2. Technological advances in the production of wrought iron and steel made the old forges obsolete.
3. Production became more expensive as anthracite coal needed to be brought from Pennsylvania to replace the diminishing charcoal supplies in the blast furnaces.

In 1913, the last ore was mined at the Hibernia Mine. Local legend credits the Hibernia Mine closing in part to a disaster in which thirteen miners were killed in a flood caused by drilling in some old workings in Upper Hibernia. The general decline of the mining industry affected the Township severely. Mining land was sold to local residents and summer visitors.

In 1946, the Mount Hope Mine was reopened with Hungarian workers. It was one of only three mines in the country producing iron ore. By 1955, the amount of ore extracted from mines in the Mount Hope and Mine Hill areas was 650,000 tons. By 1959, both the Richard and Mt. Hope mines were closed. It is estimated that there are still 600 million tons of ore remaining under the surface.