



PRELIMINARY INFORMATION FORM (PIF) for INDIVIDUAL PROPERTIES

Note: PIFs are prepared by applicants and evaluated by DHR staff and the State Review Board based on information known at the time of preparation. Recommendations concerning PIFs are subject to change if new information becomes available.

DHR No. (to be completed by DHR staff) 081-5810

1. General Property Information

Property name: Victoria Furnace Site

Property address: Maury River Road (Route 39)

City or Town: Goshen

Zip code: 24439

Name of the Independent City or County where the property is located: Rockbridge County

Category of Property (choose only one of the following):

Building ☐ Site ☒ Structure ☐ Object ☐

2. Physical Aspects

Acreage: 69.149

Setting (choose only one of the following):

Urban ☐ Suburban ☐ Town ☒ Village ☐ Hamlet ☐ Rural ☐

Briefly describe the property's overall location and setting, including any notable landscape features:

The Victoria Iron Furnace Site covers a large area that includes a few structures, ponds, ditches, and earthen features situated between an active rail line to the west and Maury River Road to the northwest, Sulphur Springs Branch to the south and southwest, and the Calfpasture River to the southeast. The center locus of the Town of Goshen is less than one mile to the north and northeast. Furnace slag covers the ground in some areas of the site, even though most of the slag, deposited in huge piles where open fields are now, north of the furnace, was hauled away and used mainly for road construction fill years ago. A former RR siding, with still-extant stone walls, was located between the furnace stacks and the still-active RR line bounding the site to the west. Also extant are the concrete bases of a RR trestle running roughly north-south through the midsection of the site. The site boundary conforms to that of 69-acre tax parcel 12-5-4.

3. Architectural Description

Architectural Style(s): n/a

If the property was designed by an architect, landscape architect, engineer, or other professional, please list here: Unknown

If the builder is known, please list here: _____

Date of construction (can be approximate): c. 1882

Narrative Description (Please do not exceed one page in describing the property):

Briefly describe the property's general characteristics, such as its current use (and historic use if different), as well as the primary building or structure on the property (such as a house, store, mill, factory, depot, bridge, etc.). Include the materials and method(s) of construction, physical appearance and condition (exterior and interior), and any additions or other major alterations.

There are only two standing structures--the deteriorated brick stoves (furnace stacks), and no extant buildings associated with the furnace operation. However, there are numerous ruins of buildings including foundations, stone and brick walls, and intact tunnels throughout the site. Most impressive are a number of intact brick arches/vaults with the former basement of a building, located just east of the stoves. The stoves stand a few feet apart near the center of the site. They are 3-4 stories tall and perhaps 20 feet in diameter, made from thousands of furnace bricks, with a veneer of ordinary brick on the exterior. The interior bricks are built into a honeycomb-like pattern of numerous narrow, vertical hollow flues. The two stove structures are gradually failing and shedding bricks. Clearly, it would be hazardous to approach too close to them. The furnace casting house's stone foundation, located in front (west) of the stoves, has been excavated and is now visible. Piles of architectural debris lay throughout the site.

Please list any outbuildings or secondary resources or major landscape features (such as barns, sheds, dam and mill pond, storage tanks, scales, railroad spurs, etc.), including their condition and their estimated construction dates.

See setting description on page 1.

4. Property's History and Significance (Please do not exceed one page)

Briefly explain the property's historic importance, such as significant events, persons, and/or families associated with the property. If the property is important for its architecture, engineering, landscape architecture, or other aspects of design, please include a brief explanation of this aspect.

The site of Victoria Iron Furnace complex and its railroad siding remain undeveloped, with numerous features and sites undisturbed, but aside from two towers, there are no standing buildings or structures. The towers, made primarily of furnace bricks, are referred to as stoves, which heated the air used in the hot-blast smelting process as a reducing agent to extract iron from iron ore. A sprawling industrial site of immense economic importance in late 19th- and early 20th-century western Virginia, the grounds are privately owned by an avid history enthusiast and therefore currently protected. Plans are being made to develop a tourist attraction that would continue to protect and also interpret the property to the general public along with a railroad theme. Railroad history is a crucial part of retelling the story of Goshen and Victoria Furnace.

The following paragraphs summarize several pages devoted to Victoria Furnace in Alfred L. Kresse's book, *Alleghany Iron*, published by the Chesapeake & Ohio Historical Society (2012: 43-47).

Jed Hotchkiss' industry periodical "The Virginias" (November 1883) notes that the new Victoria Furnace, owned by the iron and Steel Works Association of Virginia, Ltd., had a single stack and a daily output of 120-150 tons of pig iron. The owners were British capitalists, based in London, who spent more than one million dollars "in its purchasing and developing iron ore, limestone, and furnace site lands. This included constructing railways, dwellings, shops, and housing." In the first year of operation, it produced 25,000 tons of pig iron. By July of 1884 it was producing 1,000 tons of iron per week. It was served by three 60 x 25-foot Siemens-Cowper-Cochrane firebrick hot blast stoves, three Mackintosh, Hemphill and Company's patented cut-off blowing machines with 84 x 48-inch air cylinders, and 49 x 36-inch steam cylinders.

The furnace was about one mile from the C&O Railroad's Goshen Depot and used coke made from Kanawha Middle measures coal in Soldenhoff-Coppee coke ovens at Hawks Nest, West Virginia, which was located along the C&O line, 116 miles away. Regarding the furnace's use of limestone, entirely supplied by a quarry near Bell's Valley Station (also on the C&O rail line) just north of Goshen, the article stated that the furnace used 130 tons of limestone in a 24-hour period. With 89 percent carbonate of lime, the quarry's limestone was of excellent quality for reducing iron ore, which was quarried near the furnace site in Goshen.

A majority of the workers at the Victoria Furnace complex, as well as many other Virginia furnaces and quarries, were African American men. Many of those who labored under harsh conditions at Victoria Furnace lived in rows of tiny shanties built by the company to the south and southwest of the furnace along Bratton's Run.

The 1884 issue of the Directory of the Iron and Steel Works of the United States described Victoria Furnace as having a single iron sheathed stack, 80 feet tall and 20 feet in diameter, with a closed top; and was first operated on May 1, 1883. The stack was rebuilt in 1892 and again in 1902. In 1907 the furnace was owned and operated by the Goshen Iron Company and still made about 1,000 tons of pig iron each week, using ore from the Rich Patch mines near Covington. By 1910, however, it was listed as being out of operation, though still thought capable of procuring up to 70,000 tons of iron annually. A 1933 photograph shows the furnace's buildings demolished; however, the trestles, stoves, and the furnace stack remained intact.

Sources of information:

- 1) Kresse, Alfred L. Alleghany Iron. Chesapeake & Ohio Historical Society, 2012: 43-47.
- 2) On-site interviews with current owner of the property, Will Harris, and son Lee Harris, both affiliated with the Virginia Mechanical Preservation Society.
- 3) Scott, Norman A. A River of Iron: The Iron Industry in Alleghany, Augusta, Rockbridge and Botetourt counties of Virginia (2015). Self-published.
- 4) Real estate data, Rockbridge County GIS.

5. Property Ownership (Check as many categories as apply): N/A

Private: ☒ Public\Local ☐ Public\State ☐ Public\Federal ☐

Current Legal Owner(s) of the Property (If the property has more than one owner, please list each below or on an additional sheet.)

name/title: VICTORIA DEVELOPMENT LLC

organization: _____

street & number: 250 NORTH FORK LN

city or town: Goshen state: VA zip code: 24439

e-mail: _____ telephone: _____

Legal Owner's Signature: _____

Date:

• • Signature required for processing all applications for privately-owned properties. • •

In the event of corporate ownership you must provide the name and title of the appropriate contact person.

Contact person: _____

Daytime Telephone: _____

Applicant Information (Individual completing form if other than legal owner of property)

name/title: Mike Pulice, DHR Western Region architectural historian

organization: _____

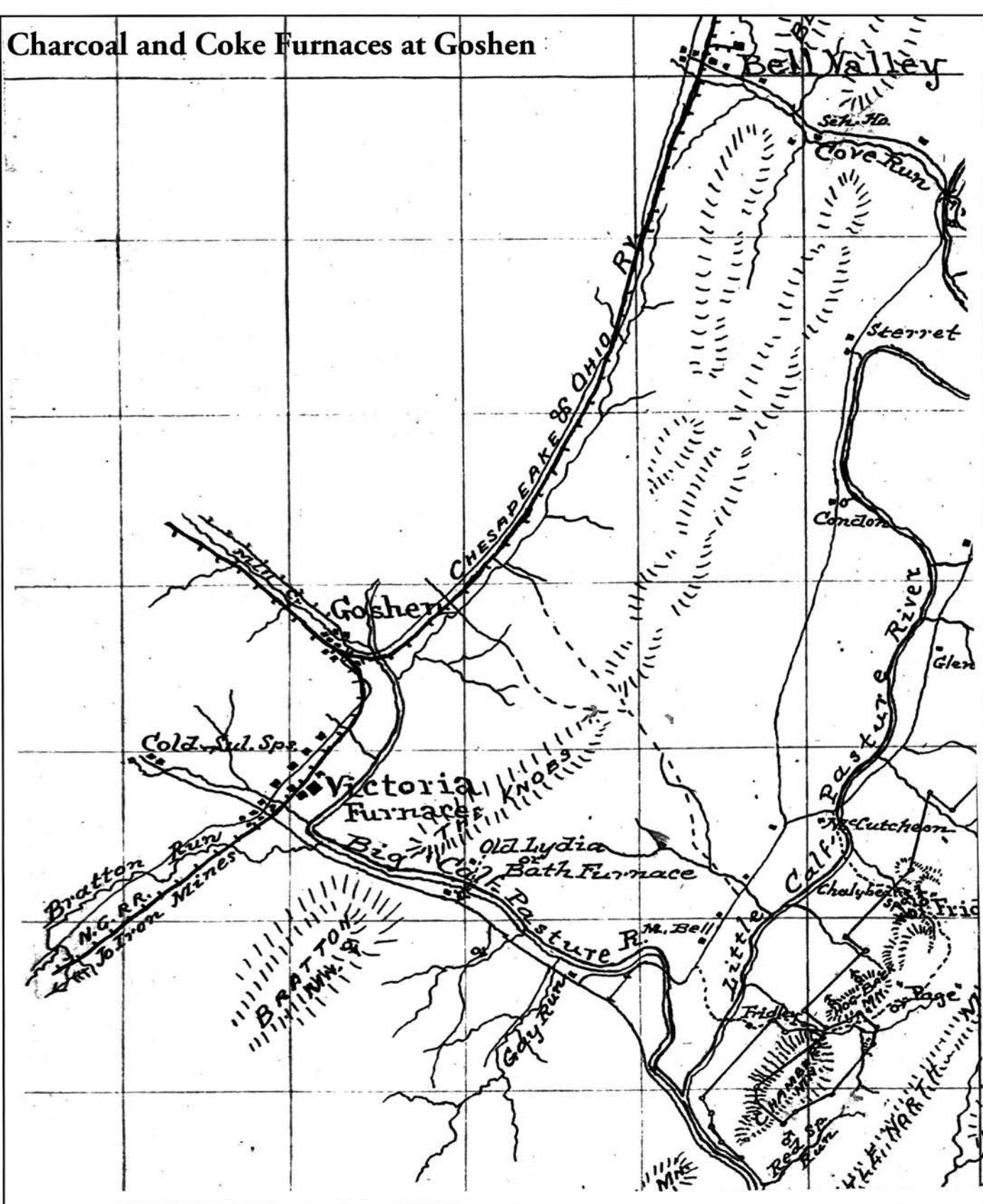
street & number: _____

city or town: Salem state: zip code:

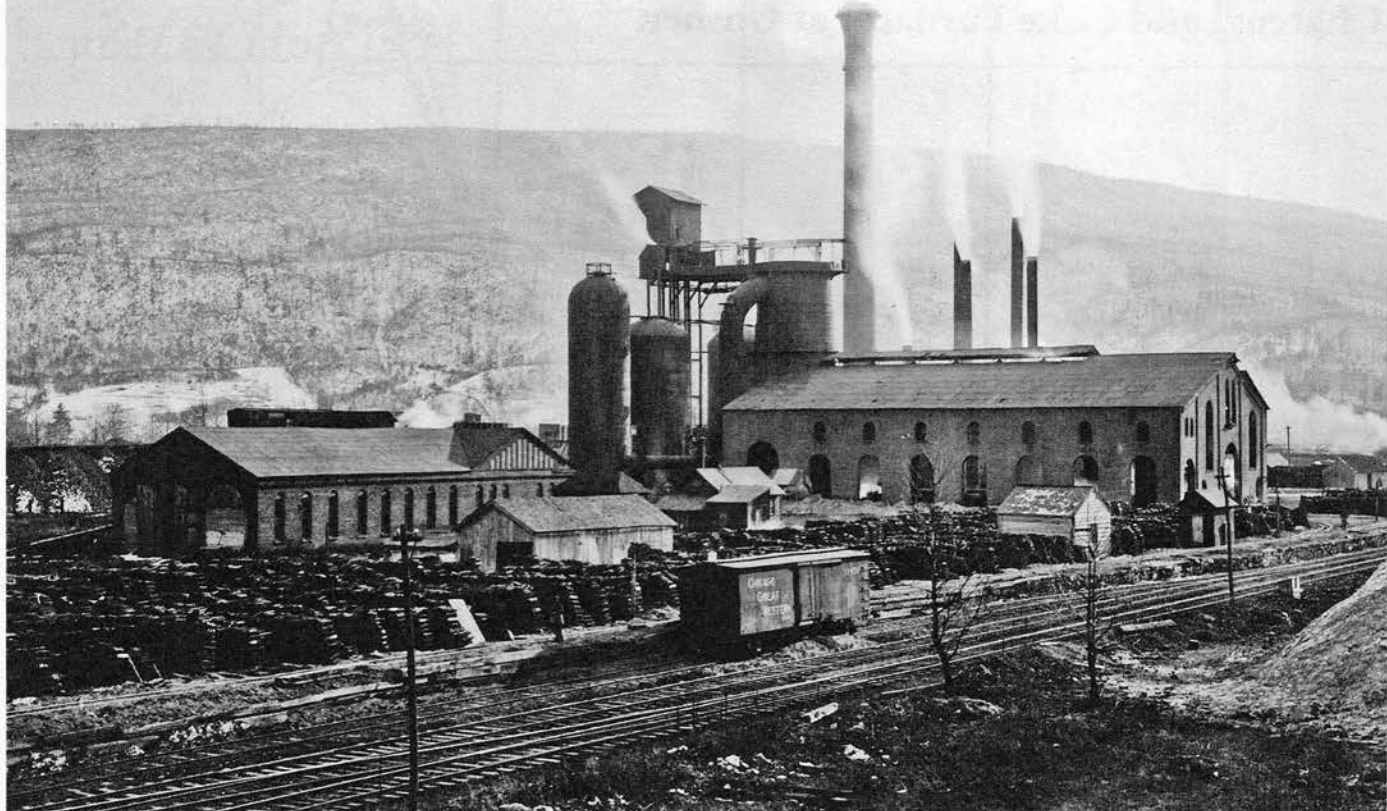
e-mail: michael.pulice@dhr.virginia.gov telephone: 540-387-5443

Date: 11/4/2024

Charcoal and Coke Furnaces at Goshen



A portion of Jed. Hotchkiss' Little North Mountain map of Goshen and Bell Valley along the C&O tracks. The old Lydia or Bath charcoal furnace on the Big Cow Pasture River are just east of the new coke fueled Victoria furnace and narrow railroad tracks running up Bratton Run out to the ore mines at Oreville. Four miles north of the Victoria furnace is Bell or Bells Valley where the blast furnace limestone was quarried. (Library of Congress cwh00243)



Victoria furnace and stacked stores of "pigs" from the C&O standard track side circa 1910. The buildings are from the left: the three stall locomotive house, the stoves and furnace, and the large Gothic Revival brick casting house. The boiler house and engine house with the pumps are hidden but are to the right of the main chimney. (Courtesy the Hagley Museum PS duPont/Longwood collection ID 1969.2_D8B2_083)

Before the Civil War, there were two furnaces and a forge in the Goshen area. Panther Gap Charcoal Furnace was in Rockbridge County, 1.5 miles west of Goshen on the Virginia Central Railroad. It was abandoned in 1853 and was just a heap of ruins in 1859. (Lesley, 204) The Bath Iron Works Furnace, formerly owned by William Weaver of Buffalo Gap, was situated close to Goshen Station on the Virginia Central Railroad. It was built in 1824 or 1825, then rebuilt in 1830. A forge was added in 1827. Both were abandoned in 1850. (Lesley, 205). There were two other charcoal furnaces in Rockbridge County, on Brattons Run; the California Steam and Water Hot-blast near Alum Springs branch, with a 9 x 36 stack built in 1850. It produced (Lesley, 202) 1,076 ½ tons of pig iron in 18 weeks in 1855, and the Mount Hope (Lesley, 203) furnace, a ¼ mile above the California furnace, (later known as Cala), which was abandoned in 1853.

In Jed Hotchkiss' November 1883 issue of *The Virginias*, his valued correspondent on blast furnaces making pig iron with coke, notes on the new Victoria Furnace that it had a single stack, was owned by the Iron and Steel Works Association of Virginia, Ltd., and had a daily capacity of 120-150 tons of pig iron. It was located one mile from the Chesapeake & Ohio Railway's Goshen station in Rockbridge County, which connected with standard and 36-inch narrow gauge railway tracks. It used coke made from Kanawha Middle measures coal, in Soldenhoff-Coppee coke ovens, at Hawks Nest, on the C&O in West Virginia.

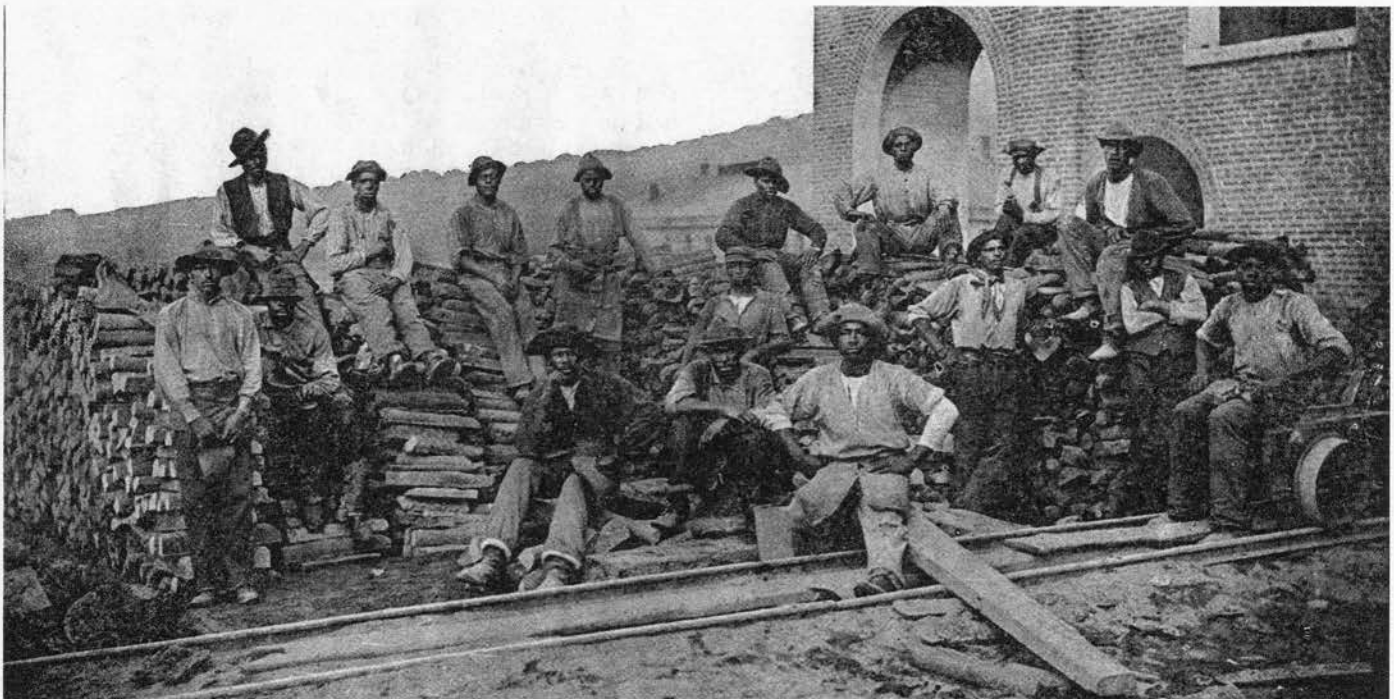
The November 1883 issue also included a *Lexington Gazette* account of the Victoria Furnace limestone quarry (edited and paraphrased). "Lime is one of the commonest of minerals and of the widest distribution which is found over continuous stretches of country for hundreds of miles in Virginia and other states. One of the most important uses, nowadays, is in the manufacture of iron. The Victoria furnace, near Goshen, makes use of about 130 tons of limestone in 24 hours. Its entire supply comes from a quarry near Bells Valley Station of the Chesapeake & Ohio Railway. The stone from this quarry is considered especially valuable in reducing ore; its analysis is showing 89 percent of carbonate of lime. The quarry is a short distance south of the railroad, which is connected by a branch track 1,100 feet long. Eight gondola cars, capable of carrying 20 tons each, were daily loaded and sent to the furnace. A reserve is kept for when severe weather suspends operations in the quarry. About 25 blasts are made daily. Forty men are employed in the quarry. Capable drillers and sledgers received \$1.15 a day. The cost of blasting powder to remove a solid yard of quarry rock is \$0.15."

The May 1884 issue of *The Virginias* had a feature article on the Victoria Furnace. The furnace was located right along the Chesapeake & Ohio Railway near Goshen Station in the valley of the Calf Pasture River by a team of English capitalists. This party of Englishmen spent "over a million dollars in its purchasing and developing iron ore, limestone, and furnace site lands. This included constructing railways, dwell-

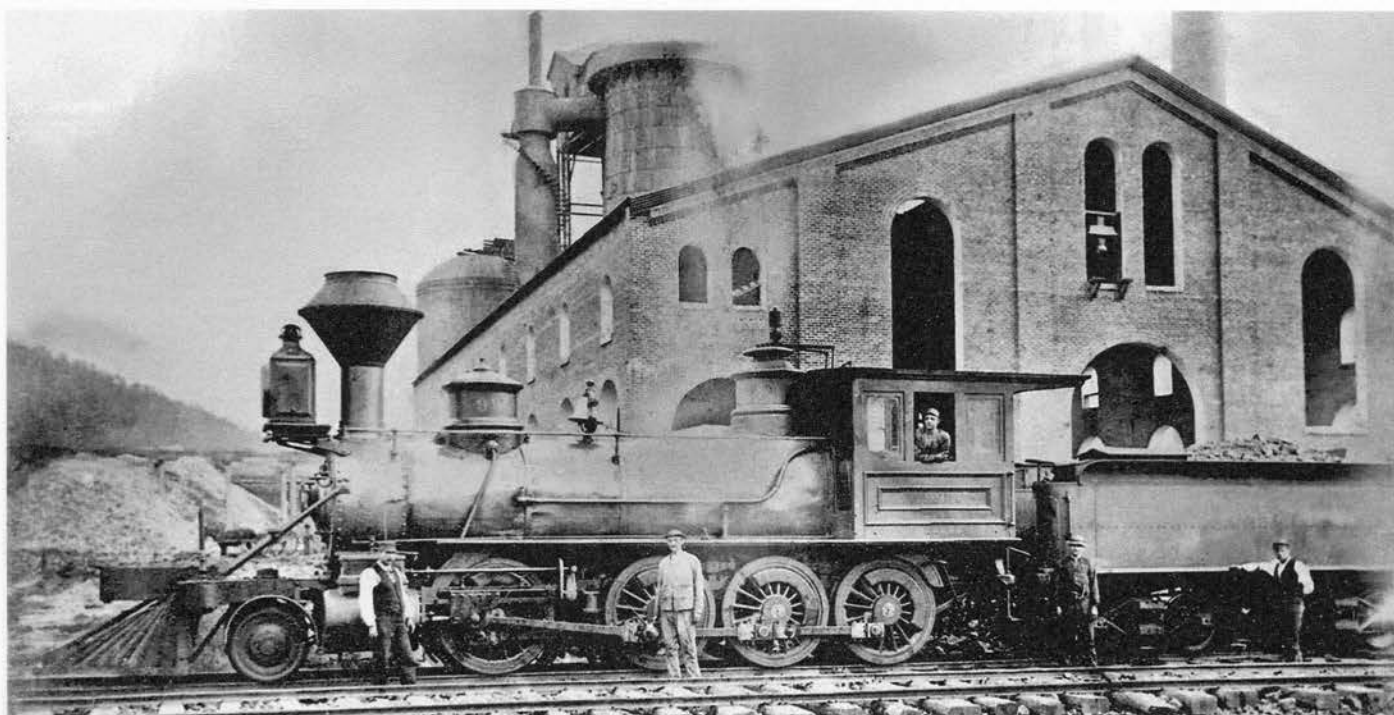


Life Living And Working At A Furnace

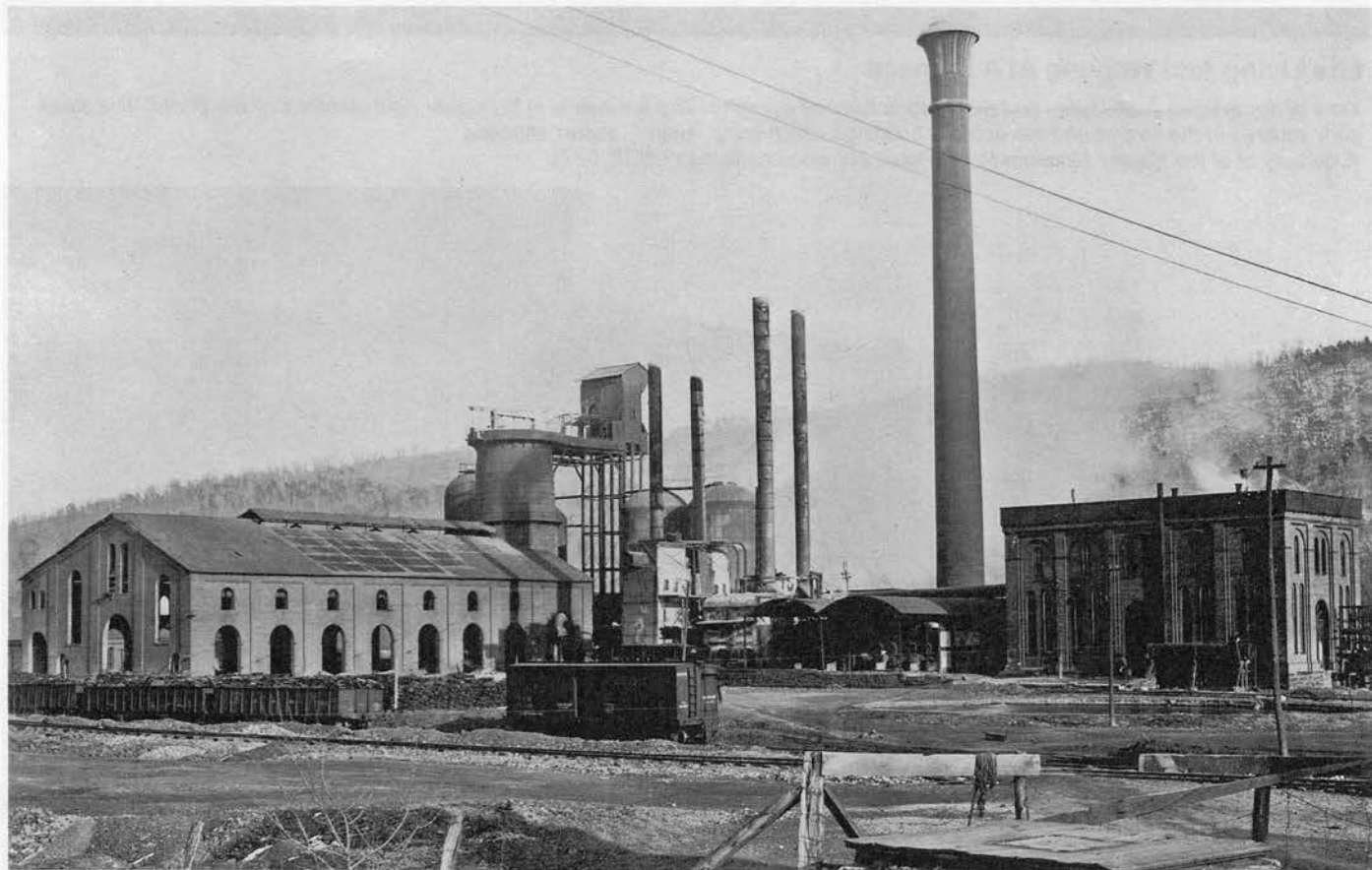
View of the Shenandoah Valley and the Victoria furnace complex. The furnace is in the upper right quadrant of the photo. The small dark squares in the foreground are actually buildings which were "negro" laborer shanties.
(Courtesy of the Hagley Museum PS duPont/Longwood collection D8B2_077)



A print showing "negro" or African-American laborers staged sitting on a stock pile of cast "pigs". Taken from the 1883 *The Virginias* journal. Similar, but taken slightly later, photos of furnace casting house crews at other furnaces show mixed-race crews.
(Thomas Dixon collection)



C&O 2-8-0 Class G-1 locomotive Number 99 in front of the Victoria Furnace open-windowed casting house at Goshen. Notice the down-comer -separator pipe on the left side of the furnace stack. From their attire there appears to be two different classifications of work, one of which allowed for white shirts. This picture was noted as taken circa 1890. The C&O maintained standard gauge tracks from Goshen down to each side of the furnace, but not out to the slag dumps or local mines. (C&O HS collection, COHS 5363)



Panning out and viewing more from the right from the above image, you can see the output side of the furnace with the casting house on the left. Standard gauge 50-ton steel gondola cars are on the left and a wooden box car is centered on the same track. The chimney and boiler/engine house are to the right. (Courtesy of the Hagley Museum, PS duPont/Longwood collection ID 1968.2_D8B2_082)

ings, shops, and housing. During its first year of operation, it produced 25,000 tons of pig iron. In April 1884, it went out of blast for needed repairs to the lining and changes to improve efficiency. By July, it was up in blast and producing 1,000 tons of pig iron a week. It was designed to add a second stack if needed.

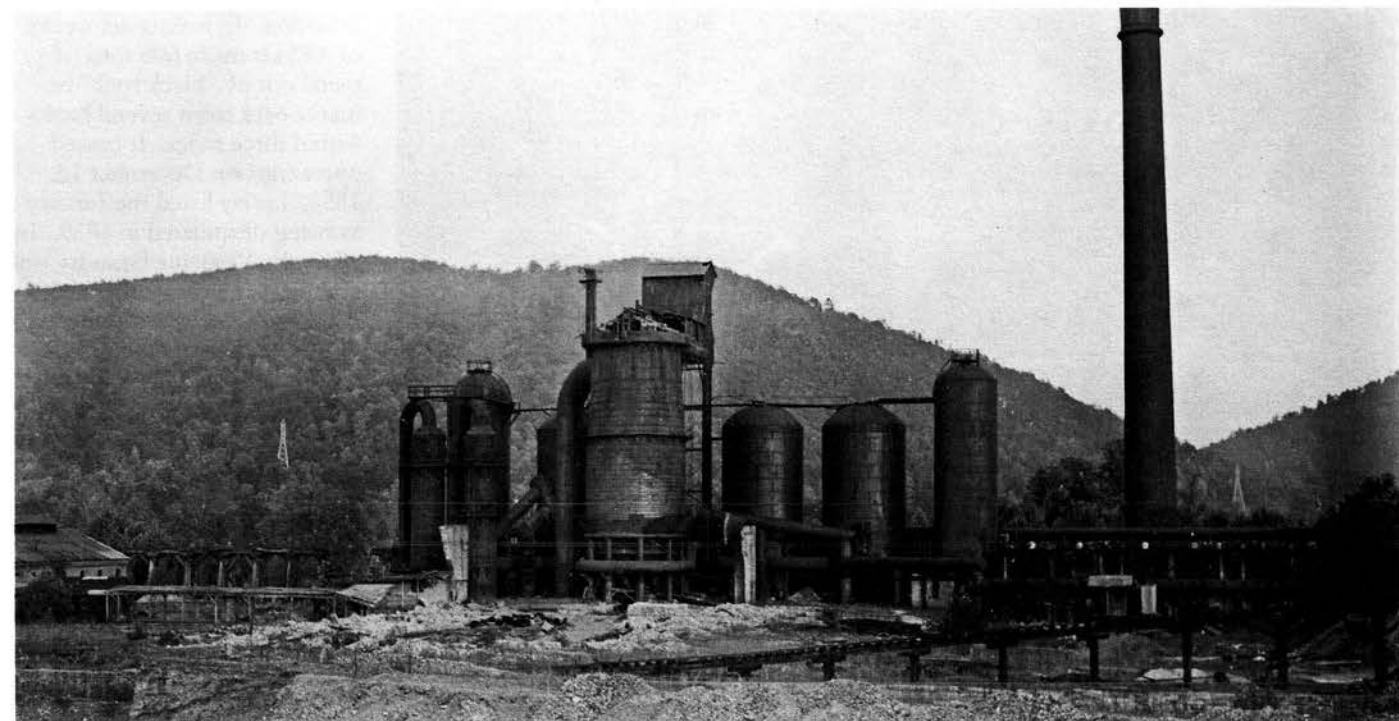
It had on-site iron ore deposits, in stratified beds, from which high-grade ore was easily quarried and mined in open cuts above water level. Its own 36-inch narrow gauge railway transported the ore from the mines to the furnace. Its limestone was equally accessible. The C&O brought its New River furnace-coke fuel from 116 miles away. Besides abundant and cheap raw materials, accessibility to the markets, a favorable year-round climate, the quantity, and the cost of labor, were all important. According to Jed Hotchkiss "Fortunately for the Virginias, they had a very large body of strong, hearty, active, docile, and easily contented negro laborers" to draw on. There was a legacy of black slave laborers and skilled trades persons from the antebellum furnace industry to draw on. A majority of the Victoria Furnace complex employees were men of that race. This was typical of other furnace operations in the Virginia Valley, as well.

The 1884 issue of *Directory of the Iron and Steel Works of the United States*, published by American Iron and Steel Institute (AISI), states that the Victoria Furnace was owned by The Iron and Steel Works Association of Virginia, Ltd., at Goshen Bridge in Rockbridge County, with its main office in London, England. Built in 1882-1883, it had a single iron-sheathed stack that was 85 feet tall x 20 feet in diameter, and put into blast on May 1, 1883. It was equipped with three 60 x 25-foot Siemens-Cowper-Cochrane firebrick hot blast stoves, three Mackintosh, Hemphill and Company's patented cut-off blowing engines, with air cylinders being 84 inches x

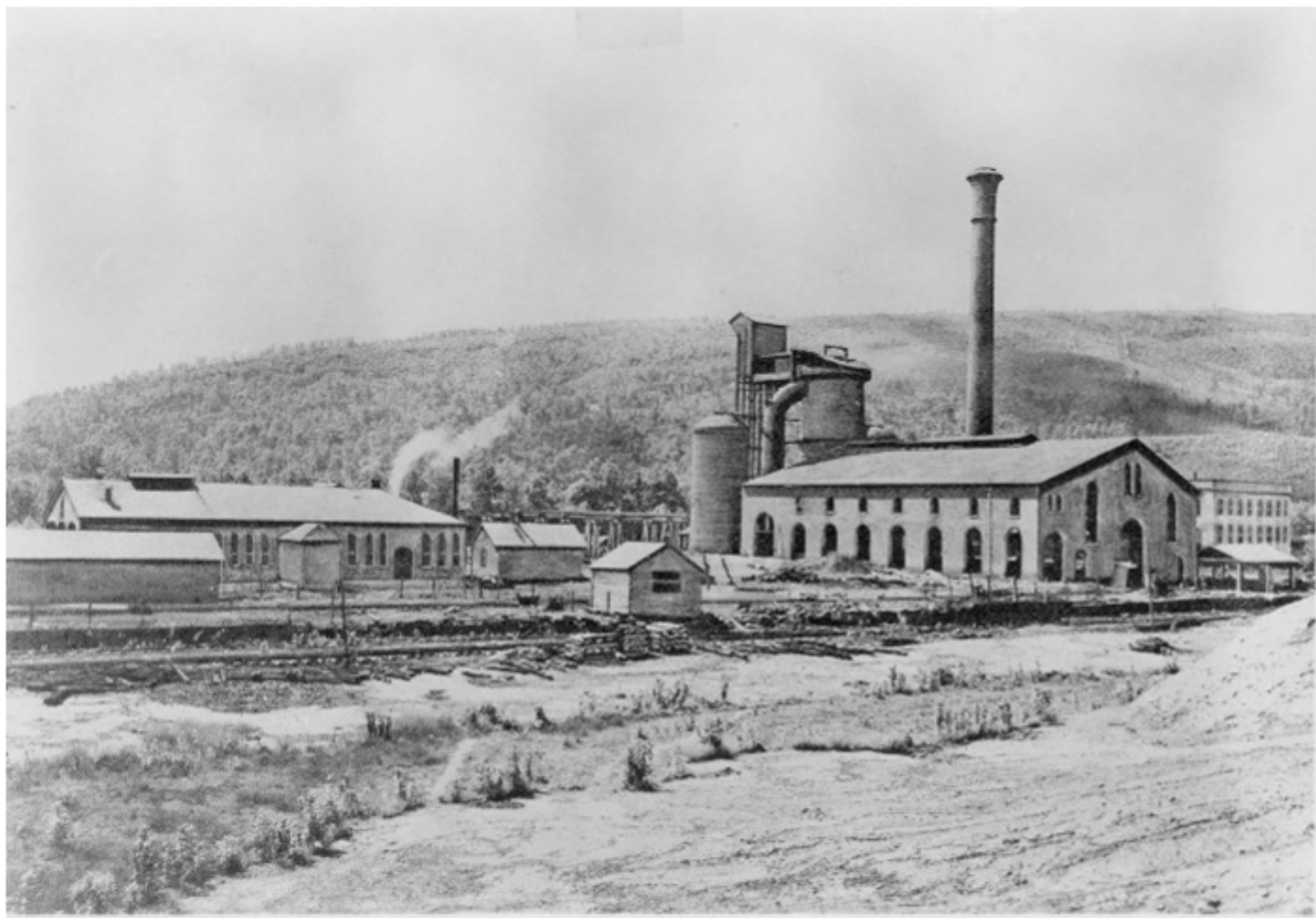
48 inches, and steam cylinders being 49-inches x 36-inches. The stack had a closed top. It was rebuilt in 1892 and 1902. It continued to use New River and West Virginia coke, as well as the original limonite ore mined near the furnace. Its product was neutral foundry and forge pig iron. Its annual capacity was designed to be 50,000 tons a year. An agent in Cincinnati, Ohio sold the "Victoria" and "Goshen" brands.

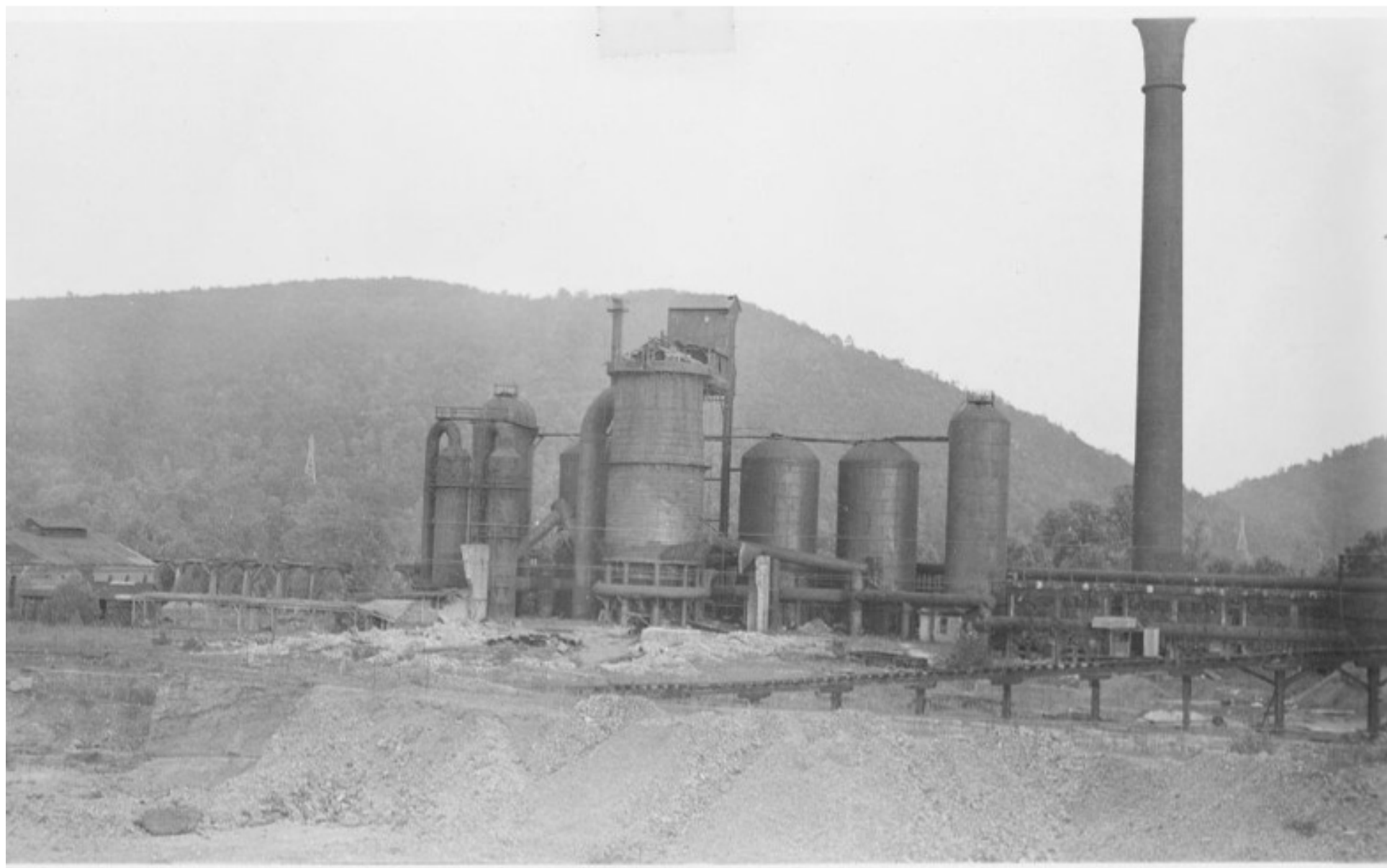
The furnace was served by the standard gauge C&O and the 36-inch gauge Victoria and Western railroads. This required some dual-gauge, three-rail tracks, with switches in the yard, and a 36-inch gauge Porter 2-6-0 light locomotive to work the stock house high-track. The narrow gauge railroad had 18 miles of tracks that ran down to Oreville, just north of the Longdale mines tracks on Simpson's Creek. It rented ten miles of trackage rights to the Rockbridge Alum and Goshen Railroads that ran seasonal passenger service to the Rockbridge Alum Springs Grand Hotel.

Thomas Leonard Watson's *Mineral Resources of Virginia*, published in 1907, listed The Goshen Iron Company's Victoria Furnace (also called the Rockbridge and Goshen Furnace) as having an annual capacity of 50,000 tons of pig iron and that it was using Oriskany-type ore from the Rich Patch mines. The DuPont Corporation leased it in 1908. The 1916 issue of *Directory of the Iron and Steel Works of the United States and Canada* listed the Goshen Iron Company's Goshen furnace as being out of blast since 1910. However, if re-blown, it could produce foundry, basic and forge quality pig iron. The 1926 *Directory* still lists it as being capable of producing 70,000 tons a year. A 1933 photograph shows the buildings demolished, but the trestles and the exposed iron-sheathed stack and stoves left intact. Today, the former site of the furnace and housing complex on Brattons Run is called Little California.



Ruins of the Goshen furnace waiting for a salvage team to recover the scrap metal as seen by Albert Keller in September 1933. (Courtesy of the Hagley Museum and Library, AISI photographic collection, negative 1968268_0317)





PIF AERIAL-VICINITY MAP

Victoria Furnace
Rockbridge County, VA
DHR ID# 081-5810

 Proposed Boundary

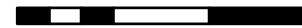
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PIF BOUNDARY MAP

Victoria Furnace
Rockbridge County, VA
DHR ID# 081-5810

 Proposed Boundary

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