

Hopewell Stone Quarry, Crusher Road (c. 1892)

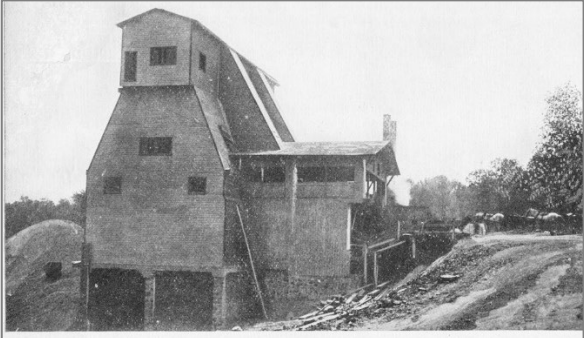
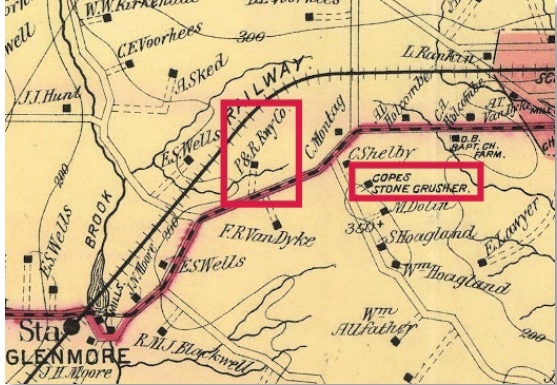
Rev. 9/9/2023 - D. Dixon

The Hopewell Quarry Swimming Club is at 180 Crusher Road at the corner of Pennington-Hopewell Road (Route 654), west of the Hopewell Borough line. It features a 40-some foot deep lake with tall rock walls from a quarry that operated there starting in the 1890s. By the 1920s, the quarrying had ended, the pit had filled in with water, and was beginning to be used as a local swimming hole.

The demand for better roads in the Hopewell Valley in the late 1800s and early 1900s drove the development of these kinds of stone quarries across the area to deliver crushed stone - "trap rock" - in order to construct macadam roads to replace the old dirt roads. The Hopewell Valley had large sources of diabase rock, and associated quarries, to support this demand.

Near the Hopewell Quarry (and later Swim Club) west of Hopewell Borough, there was a second Railroad Quarry across Pennington-Hopewell Road that provided ballast for railroad tracks. There also were three other major quarries in Hopewell Township, one north of Pennington and two north of Titusville.

See the companion brief on the Hopewell Quarry Swim Club for the story of the Hopewell Quarry after 1920, when it began to be used for swimming.

<p>Dirt Roads and Crushed Stone</p>	 <p>BREAKER AT PENNINGTON TRAP ROCK QUARRY, Hopewell, N. J.</p>
<p><u>1890s - Trap rock for Macadam roads</u> Hopewell Valley diabase and quarries</p>	
<p>Hopewell Township Quarries</p>	
<p><u>Moore's Station Quarry - Baldpate Mountain</u> <u>Mercer Co. Workhouse Quarry - Belle Mtn.</u> <u>Pennington Quarry - Pennington Mountain</u></p>	<p>Crusher at Pennington Quarry - c 1930</p>
<p>Hopewell Railroad Quarry</p>	
<p><u>1885 - Philadelphia & Reading Railroad</u> c1885-1901 - Quarry and stone crusher</p>	
<p>Hopewell Quarry</p>	
<p><u>1892 - Cope's Quarry – Joshua S. Cope</u> Crushed stone for local roads <u>1912 - Amos C. Bond's Crushery</u> Stone quarry / crushed stone through 1918 <u>1920s - Swimming Hole</u> By 1922 - Informal use</p>	<p>Two Hopewell area quarries - late 1890s</p>

Contents

Dirt Roads, Crushed Stone, and Quarries	3
The Problem with Dirt Roads	3
Macadam Road Construction.....	4
Trap Rock and Diabase	4
Stone Crusher Equipment	5
Hopewell Valley Quarries.....	6
Hopewell Valley Diabase Formations	6
Hopewell Township Diabase Quarries	7
Hopewell Borough Quarries – Railroad and Joshua Cope	8
Geological Maps - Two Hopewell Borough Quarries	8
Road Maps - Two Hopewell Borough Quarries.....	9
The Railroad Stone Quarry (c.1885-1901)	9
Cope’s Stone Crusher – Joshua S. Cope - 1892-1912.....	11
Cope's Quarry Operation - 1898	13
Bond's Crushery - Amos C. Bond's - 1912-c.1920	15
Amos C. Bond	15
Bond's Quarry Operation	16
Bond's Quarry Development - "Colonial Heights" - 1924	17
Bond Files for Bankruptcy - 1928.....	18
The Hopewell Quarry Swim Club	18
References	19

Dirt Roads, Crushed Stone, and Quarries

The Hopewell Quarry that later evolved into the Swim Club was not unique in the Hopewell Valley. There was a profusion of quarrying activity around the local area in the late 1800s and early 1900s. Some early examples mentioned in the newspapers include quarries in Titusville (1891), Rocky Hill (1895), and Princeton (1898). The town of Lambertville also set up its own quarry operation in 1885. [Lambertville Record, 10/7/1885]

The Problem with Dirt Roads

These quarries were not making decorative stones like flagstone for paths or shaped stones for houses or walls. They were crushing stone to meet the growing demand by taxpayers that local government do something about the horrible dirt roads. In hot weather, dirt roads were dusty and hard, with bone-jarring and wheel-breaking ruts and ridges. In wet weather they became an impassable quagmire of mud pits, bad enough for horse-drawn wagons, but even worse for the new-fangled automobiles. With the expanding economic activity and growing towns spurred by the arrival of the railroads in the 1870s, taxpayers demanded better roads.



Dirt road and trolley tracks - c. 1909
East Broad facing Greenwood, Hopewell
[postmark 1909, Steven Cohen]



School Wagon on dirt road - c. 1912
Model Ave. School, Hopewell
[Eleanora Kolbert]

For example, in 1882 the Fetter Sawmill (at the end of Model Ave. at Louellen St. in Hopewell) would perform road maintenance by hooking up its mule team to a large scraper to smooth down the surface of the roads: "A.G. Fetter keeps Mercer St. well leveled down with the scraper. With eight mules and a big scraper good work can be done." [HH 4/19/1882]

In 1895, the road from Pennington to Hopewell was described as "that horrible road - a road that would be put to shame in place alongside of a log-hut line in the Sourland mountains - a road that has been the disgrace of this township for years, and a drawback to the prosperity and booming of Hopewell." [HH 9/3/1895]

Decades later, in 1919, Pennington mail carrier Oscar Van Dyke still decried the state of the roads along his rural route. In a letter to the editor, he especially empathized with the plight of school children who rode the township's horse-drawn school wagons, bumping slowly and carefully over the dirt roads: "With improved roads it would mean an hour a day gained by the school wagons. Children would not be compelled to get out and wade through mire holes, and wagons would have no trouble to reach school in good time." [HH 1/29/1919]

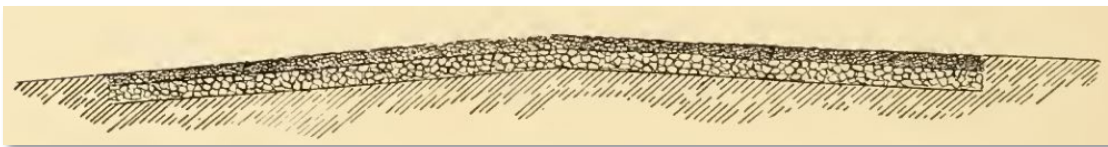
Macadam Road Construction

By the end of the 1800s, the invention of macadam road construction provided a popular solution for improving local roads. "Macadamizing" roads used a fairly simple process requiring only crushed stone, a material that often could be available locally.

Pioneered by Scottish engineer John Loudon McAdam around 1820, macadam roads were built using small stones of various sizes. For example, a road could have an 8-inch base layer with no larger than 3" stones, and a 2-inch top layer with no larger than 3/4" stones. The stones needed to be small, and broken angularly with rough edges (i.e., not smooth pebbles), so when they were compacted during construction and by the road traffic they would interlock across the different angles and merge into a solid surface that would withstand traffic and weather.



John L. McAdam
[National Gallery,
London]



Macadam Road [*City roads and pavements*, 1902]

Trap Rock and Diabase

"Trap rock" is the general term for dark-colored fine-grained igneous rock, including diabase, basalt, peridotite, and gabbro. Igneous rock (from the Latin word for fire) forms when hot, molten rock cools and crystallizes and solidifies from magma (underground) or from lava (on the surface).

The erosion of trap rock created by the stacking of successive lava flows often created a distinct staircase landscape; the term trap then was derived from the Swedish word trappa, which means "stairway."



Diabase crushed rocks

Trap rock is particularly hard and durable, and breaks with angular edges. Important uses include as crushed stone for roads, as ballast for railroad track beds, and as larger "rip-rap" blocks for breakwaters to protect coastlines.

Diabase is the form of trap rock found in large formations in the Hopewell Valley. It is a dark-colored igneous rock with a fine to medium grain texture, often mottled black and white, since it is composed mostly of the minerals feldspar (white) and pyroxene (dark).

Stone Crusher Equipment

The operation of a quarry first needs to break apart rock cliffs or pits into chunks of rock (using dynamite), and then use stone crusher equipment to reduce the rock chunks down into the various sizes of smaller stones as needed by the customers (e.g., 1-inch and 3-inch stones for macadam roads).

The stone crushers used at the Hopewell Quarry were most likely the Blake Jaw Crusher design.

Blake Jaw Crusher / Single Toggle Crusher

Various designs for stone crusher equipment were patented in the 1830s and 1840s, but the first successful mechanical rock breaker, the Blake jaw crusher, was patented in 1858 by Eli Whitney Blake (nephew of Eli Whitney, the inventor of the cotton gin). Blake was supervising the macadamizing of city streets, and saw the need for machinery for breaking stone. His invention was simple and effective, and led to his entry into the National Inventors Hall of Fame.



Rock hopper and jaws crushing stone
[2011 demo of Blake Stone Breaker -
<https://youtu.be/ho5vcrAkhwg>]

The Blake Jaw Crusher consists of a pair of upright metal plates (the jaws) in a rock hopper. The plates make a V shape, with one fixed (one side of the hopper), and the other pivoting to continually open wider and then close against the fixed side (the single toggle design). When a rock is dropped in the hopper between the jaws it falls until stopped by its size, is crushed into smaller pieces by the cycle of the jaws, and then the resulting pieces fall further and the cycle is repeated until the pieces are small enough to fall out the bottom between the two jaws.

The engine uses a toggle linkage that converts the rotation of a flywheel into the back-and-forth motion of the movable jaw using an eccentric shaft that moves in an elliptical orbit.

From the Blake patent:

My stone breaker, so far as respects its principle, or its essential characteristics, consists of a pair of jaws, one fixed and the other movable, between which the stones are to be broken, having their acting faces nearly in an upright position, and convergent downward one toward the other in such manner that while the space between them at the top is such as to receive the stones that are to be broken, that at the bottom is only sufficient to allow the fragments to pass when broken to the required size; and giving to the movable jaw a short and powerful vibration through a small space, say one fourth of an inch, more or less. By means of this form and arrangement of the jaws, and this motion of the movable jaw, when a stone is dropped into the space between them, it falls down until its further descent is arrested between their convergent faces; the movable jaw, advancing, crushes it, then receding, liberates the fragments and they again descend, and if too large, are again crushed, and so on until all the fragments, having been sufficiently reduced, have passed out through the narrower space at the bottom.

[E. W. Blake, Machine for Crushing Stone, U.S. Patent 20542, 6/15/1858]



Blake Stone Breaker,
W H Baxter, Leeds England (c. 1890s)

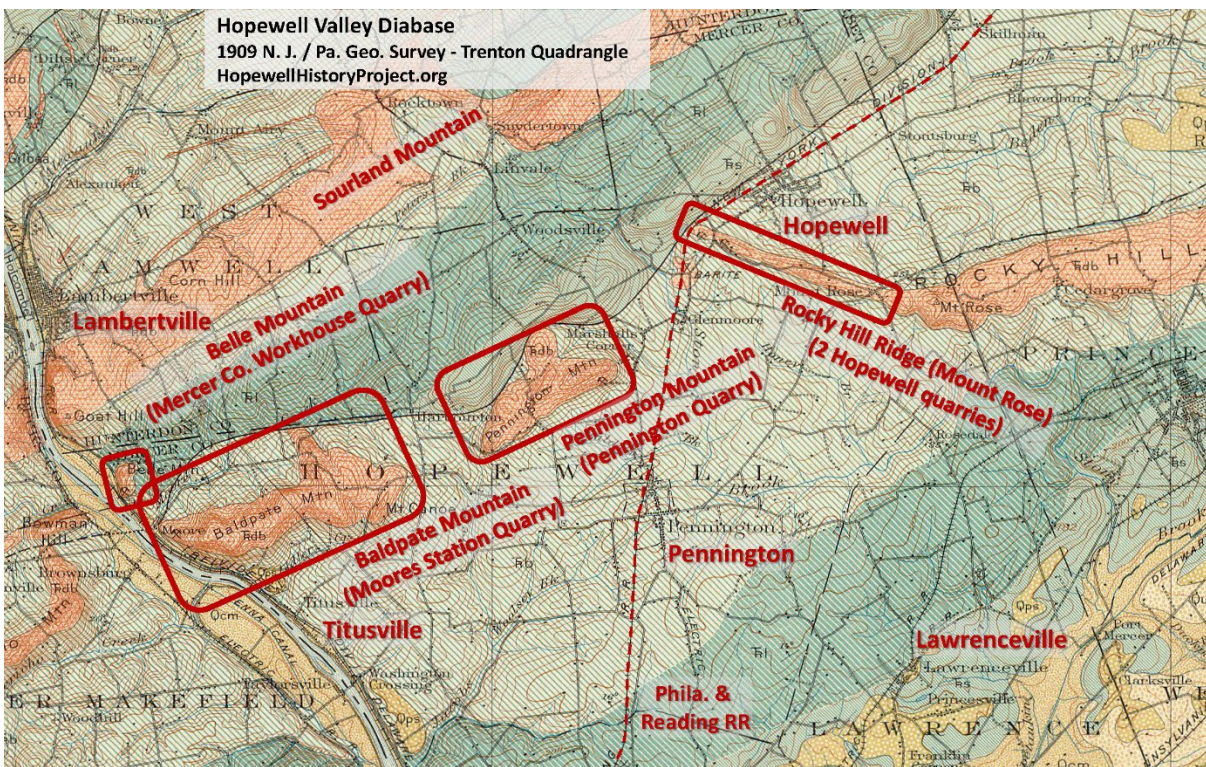
Hopewell Valley Quarries

Moving tons of crushed stone for road construction was difficult in the days of horse-drawn wagons, so it was helpful to have access to local deposits of trap rock material - which also offered opportunities for local entrepreneurs. Conveniently, the Hopewell Valley area had significant deposits of good rock for this purpose.

Hopewell Valley Diabase Formations

This 1909 Geological Survey map shows major formations of diabase rocks in the Hopewell Valley - along the Delaware River between Lambertville and Titusville (Baldpate Mountain and Belle Mountain), above Pennington (Pennington Mountain), and in an extension of the Rocky Hill Ridge from Mount Rose towards Hopewell. These all were quarried for crushed stone for use on local roads.

The diabase ridge from Lambertville runs along the Sourland Mountain up into Hillsborough Township.



From 1909 N.J. / Pa. Geological Survey - Trenton Quadrangle, Surveyed 1885-88, Revised 1905-05

Hopewell Township Diabase Quarries

In addition to two Hopewell Borough quarries, there are three quarries associated with the major diabase formations in Hopewell Township that are still visible in the local landscape - at Baldpate Mountain and Belle Mountain near Titusville, and at Pennington Mountain. Each also has remnants of sidings from the local railroad lines. [HAHG 1992, mindat.org]

The photos show multi-level gravity-assisted crusher facilities, to feed rocks into the upper level, crush them, screen the crushed stone by size, and then drop the stone into wagons or trains from hoppers or chutes raised above ground level.

Moore Station Quarry - Baldpate Mountain

This large quarry is north of Titusville along Route 29 at Pleasant Valley Road. It was abandoned in 1932, and then reactivated by Trap Rock Industries in 1982.

The surrounding area was acquired by Mercer County in 1998 along with more than 1,000 acres of land to create the county park at Baldpate Mountain, which now includes the quarry.



Moore Station Quarry [Mercer Co.]

Mercer County Workhouse Quarry - Belle Mountain

This quarry is on Route 29 north of Titusville, past Pleasant Valley Road. It was part of the Workhouse farm complex established by the county in 1892. It provided employment for inmates who operated the farm and ran the quarry to generate crushed stone for county roads. The Mercer County Correctional Center is still located there.

The stone crusher building, built around 1915 and abandoned in 1975, is still visible along the road - albeit heavily overgrown.



Workhouse Stone Crusher
[1985 HwTwp Cultural Survey]

Pennington Quarry - Pennington Mountain

This quarry is on the west side of Route 31, north of Pennington and just south of the turn-off for Pennington-Hopewell Road (Route 654). There is an old metal bridge overpass still standing there over Route 31 that was a spur from the Reading Railroad.

The Pennington Trap Rock Company was chartered in 1910, and in 1940 began leasing the property to the current owner, Trap Rock Industries. It is still in operation. [TET 12/28/1910, HH 3/19/1947]



Crusher at Pennington Trap Rock Quarry
[Irene Wildgrube - postmark 1931]

Hopewell Borough Quarries – Railroad and Joshua Cope

The Hopewell Quarry Swimming Club is west of Hopewell Borough at 180 Crusher Road near the intersection with Pennington-Hopewell Road (Route 654). The original Hopewell Quarry (then Cope's Quarry) began operations there in 1892. There also was a second quarry near by, across Pennington-Hopewell Road and along the railroad tracks, which was operated in the 1880s through the early 1900s by the Philadelphia & Reading Railroad.

Geological Maps - Two Hopewell Borough Quarries

The first clue to these Hopewell Borough quarries comes from geological / topographical maps of the period, which show two quarries in this area (marked with crossed pick axe symbols), and with the Railroad Quarry predating the Hopewell Quarry - appearing first in the earlier maps.

For example, the 1909 N.J. / Pa. Geological Survey map below shows both quarries at the western end of an extension of the Rocky Hill Ridge, along today's Crusher Road (from Mount Rose towards Hopewell).

The quarry on the east side of Pennington-Hopewell Road is Cope's (now Hopewell) Quarry. The quarry on the west, across the road and near the train tracks, is the Railroad Quarry.



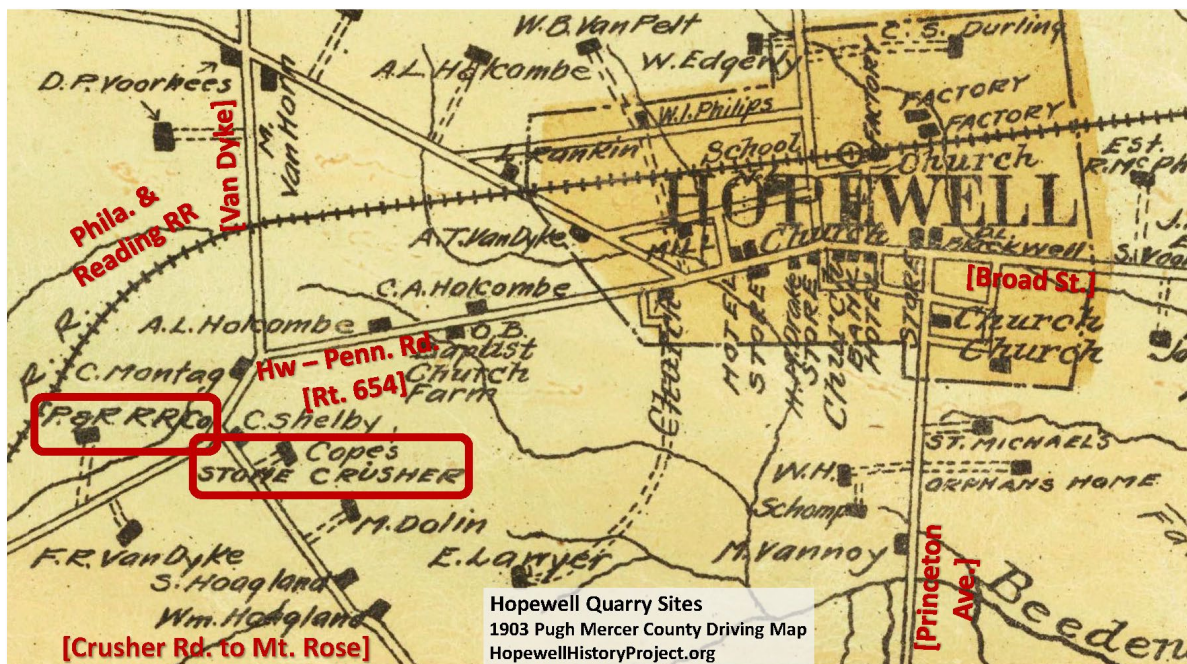
From 1909 N.J. / Pa. Geological Survey - Trenton Quadrangle, Surveyed 1885-88, Revised 1905-05

Road Maps - Two Hopewell Borough Quarries

The next clue about these Hopewell Borough quarries comes from early 1900s road and driving maps that have descriptive annotations for major features including farms, residences, stores, and schools.

Both of these sites are shown on the 1903 Pugh map of Mercer County and the 1905 Mueller Mercer County Driving Map - marked as "Cope's Stone Crusher" on what is now Crusher Road off Pennington-Hopewell Road, and with a "P&R RR Co." railroad facility by the Philadelphia & Reading Railroad tracks to the west of Crusher Road.

Note that the geographical maps show the Railroad Quarry as located approximately in line with the path of Crusher Road (and the ridge of diabase) near the bend in the tracks. The road maps instead show a separate railroad building slightly further west, possibly the stone crusher facility.



1905 Mueller Mercer County Driving Map, west of Hopewell Borough, showing "P&R RR Co." and "Cope's Stone Crusher" sites on Pennington-Hopewell Road

The Railroad Stone Quarry (c.1885-1901)

The Philadelphia & Reading Railroad Quarry was apparently a large operation that ran for some 15 years, from around 1886 to 1901, until it shut down because "the stone on the railroad land is about all quarried out." [TET 6/11/1901]

Like the other quarries, the Railroad quarry created crushed stone, including some for roads, but its primary use was for railroad trackbeds: "The crusher is used by the railroad company to prepare road [track] ballast, and is situated on a hill directly overlooking the company's tracks." [TET 3/6/1892] The crushed stone supported the railroad track, and was packed between, under, and around the ties and rails.

The railroad stone quarry, just west of the borough, which has been in operation for the past fifteen years or more, has been shut down, as the stone on the railroad land is about all quarried out. The machinery has been removed.

[TET 6/11/1901]

Not much is known of this Railroad Quarry operation, but we have some clues from the newspapers and other sources.

From brief mentions in the newspapers, the Hopewell site was operated for the railroad by Joseph B. Edge (by 1891), Jackson Englebright & James P. McQuade (by 1895), and McQuade alone (c1897). Work seemed to be somewhat intermittent during each year, for example opening in February 1890, closing in September 1893 due to "the late business depression" (the Depression of 1893), closing in June 1895, and opening in June 1900 and closing in October 1900.

The 1893 state tax property assessment for the Delaware & Round Brook Railroad (owned by the P&R), documents a "Hopewell quarry" facility (and siding), listed between Hopewell and Moore's (Glenmore) passenger stations, plus a "Stone-breaker building" presumably associated with it. [State Board Of Assessors Of New Jersey, 1894]

Taxing District of Hopewell Township, County of Mercer.	
DESCRIPTION OF PROPERTY.	
Land outside main stem, Hopewell depot, 8.24 acres.....	\$1,500
Land outside main stem, Hopewell quarry, 4.07 acres	\$407
Land outside main stem, Moore's depot, 1.84 acres	\$92
Land outside main stem, south of Moore's depot, .61 acre.....	\$61
Land outside main stem, Pennington depot, 7 acres	\$1,050
Freight depot, Pennington.....	\$350
Stone-breaker building	\$1000
Freight depot, Hopewell	\$400
Milk platform, Hopewell	\$30

[From 1893 State Tax Property Assessment, Delaware & Round Brook Railroad]

This was a large operation by 1897: "Englebright & McQuade have superb facilities for supplying crushed stone, and have had a large experience in macadamizing roads. At present they are running three plants and employing about two hundred men." [HHH 1897]

The 1901 Industrial Directory of New Jersey lists the Hopewell operation of "J. P. McQuade, quarrying and crushing stone," and reports that it employed 60 persons.

The 1903 and 1905 driving maps still show the P&R RR Co. site after the railroad's crusher operation closed in 1901, next to the railroad tracks and with a driveway from Pennington-Hopewell Road further west from the present-day Crusher Road.

In his 1908 book, *Pioneers Of Old Hopewell*, Ralph Ege also discusses the "railroad quarry farm," west of the borough, and south of the lands of D. P. Voorhees (up Van Dyke Road). [Ege 1908]

The 1898 and 1900 articles (below) report that Cope's quarry "shipped to all parts of New Jersey and Pennsylvania," and that the stone delivered locally was "a very small amount compared with what he has shipped to different places by rail." Cope was most likely using the P&R Railroad Quarry siding, and continued to use it after the railroad's quarry closed in 1901, as the facility still appears in the 1903 and 1905 maps.

Cope's Stone Crusher – Joshua S. Cope - 1892-1912

The story of the Hopewell Quarry starts around 1892 with the quarry business of Joshua S. Cope, located on what is now Crusher Road just off Pennington-Hopewell Road (Route 654).

Joshua S. Cope (1843-1916) married Anna Spencer in 1866 at around age 23. [Quaker Meeting Minutes, Buck County, Pa., Primitive sect] By the 1880 U.S. Census, he was age 37 and listed as a farmer in Montgomery County, Pa.

By the 1900 U.S. Census, however, Cope was age 57 and listed as a "Capitalist," and living in Falls County, Pa. in a house that he owned and had no mortgage. In the 1910 U.S. Census he was explicitly listed as a "Quarry-Man," and was living in Fallsington, an unincorporated community in Falls Township, Bucks County, Pa., which is a couple miles southwest of Trenton off Route 1.

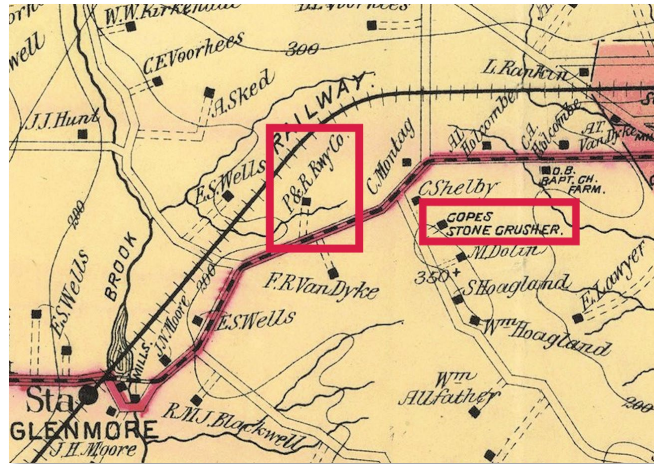
Somehow Cope had become involved in the quarrying business, and in Hopewell. By 1891, at around age 48, he purchased property on the Pennington-Hopewell Road in the vicinity of the present-day Hopewell Quarry. [DB 199-358 11/3/1893] In 1891, the Hopewell Herald reported that Cope was in town "looking after his stone crusher," and that "work will commence on the plant soon." [HH 11/1/1891]

In April 1892, Cope was "getting his stone crusher ready for business" (apparently to start operations). [HH 4/13/1892]

Crushed stone was already popular in the area in 1892, as the newspaper reported that "The advantage of having a stone crusher is shown by the fact that crushed stone walks are creeping all about town." [HH 8/10/1892]

Then in 1895 the newspaper reported that Cope had purchased the lot of Moses True, and "will remove his stone crusher there." The facility also was to be enlarged, and the "latest improved machinery" installed. [HH 2/21/1895, DB 204-611 5/31/1895] This lot was part of the current Quarry property, so 1895 actually may be the beginning of mining at the current quarry location.

By 1897 the operation was apparently thriving: "Mr. J. S. Cope has also a well-equipped plant, and has won a reputation in the stone business." [HHH 1897] According to various reports, Cope employed 30 people in 1898, and 20, 8, and 18 in 1901, 1909, and 1912 respectively. [HH 1/15/1898, Industrial Dir. of N.J.]

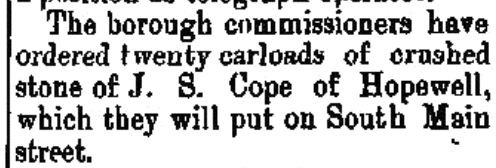


Cope's Stone Crusher [1905 Mueller Mercer Co.]

J. S. Cope is getting his stone crusher ready for business. This enterprise will be an important addition to the business of the town.

[HH 4/13/1892]

In addition to stone shipped by railroad, Cope's quarry delivered large amounts of crushed stone to build and improve the local roads. The papers from at least 1895 through 1910 include many mentions of contracts with municipalities including Hopewell and Pennington boroughs and Mercer County.



The borough commissioners have ordered twenty carloads of crushed stone of J. S. Cope of Hopewell, which they will put on South Main street.

Pennington news [HH 5/2/1895]

In 1908, a lawsuit for payment due to Cope from a contractor for work on the Hopewell and Stoutsburg macadam roads listed a debt of over \$5200 to Cope. [TSA 10/18/1908]

The 1900 Souvenir Edition of the Hopewell Herald profiled Cope and his business:

Joshua S. Cope, Stone Quarryman

An enterprise that has materially assisted in extending Hopewell's reputation as a source of supply is the large stone quarries of Joshua S. Cope. A force of men are kept steadily at work getting out material for walks, drives, stone roads, etc. A great deal of trap rock and screenings are shipped to all parts of New Jersey and Pennsylvania.

Mr. Cope secured the contract for furnishing the stone for the Hopewell and Pennington road, the Pennington and Trenton road and the new Trenton reservoir. The quarries were first started about nine years ago, and all the development has been by its present owner.

[Hopewell Herald Souvenir Edition, 9/19/1900]

In 1912, Cope retired at around age 70 and sold the quarry and property to Amos C. Bond. The success of his venture, and of local crushed stone roads, was demonstrated that year when the newspaper reported that Mr. & Mrs. Cope had motored on a day trip from Fallsington to Hopewell and Lambertville (a round trip of some 50 miles). [Bristol Pa. Daily Courier 11/26/1912] It also had been news when Cope purchased a Ford automobile the previous year. [Bucks County Gazette 10/13/1911]

But that trip paled in comparison to the Cope's auto trip earlier that October "to the New England states," during which they traveled "over seven hundred miles with few mishaps." (That's roughly a round trip between Fallsington Pa. and Nashua, N. H. via the present-day I-95.) [Bucks County Gazette 11/1/1912]

Cope died in 1916 at age 73. His obituary reports that he was "one of the best-known residents of Fallsington," and that he had "retired from active [stone crusher] business a few years ago." [Bristol Daily Courier 12/21/1916]

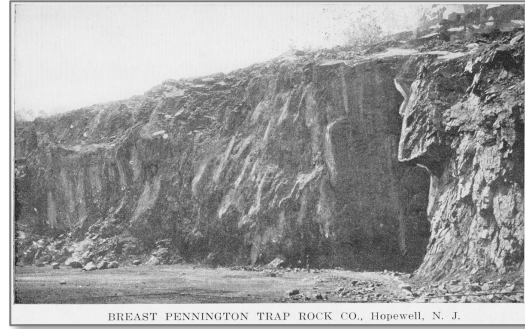
His name still lived on for decades, however, as what is now Crusher Road was still described in the newspapers in 1919 as the "Mount Rose and Cope's Quarry Road," and in 1938 as the "Cope's to Mt. Rose" road.

Cope's Quarry Operation - 1898

Another article from 1898 described the operation of the quarry in detail, based on a tour by the reporter. The site had 30 employees, but the article highlights the individuals operating the machinery.

There seems to have been a significant amount of manual labor using "carts" to carry rocks from one step to the next, presumably with horse or mule "teams."

Unlike other crusher buildings, where all the processing proceeded top-down from the crushers at the top level, Cope's stone crushing seems to have been done at ground level; an elevator then lifted the crushed stone pieces up to the gravity-assisted sorting bins. This process took place in three phases:



Example quarry rock face
at Pennington Trap Rock Quarry
[Irene Wildgrube, postmark 1931]

The Cut (Rock Face)

First, at the "cut," the rock face is broken into chunks by blasting with dynamite.

- Drill holes with steam drills to depth of 16 feet, fill with dynamite, set off with electric battery
- Steam drills run by two boilers, 10 and 15-horse power, on the hill at the top of the cut
- Two single carts carry rocks from the cut to the crushers

The Stone Crushers

The stone crusher machines then break the rock down into the small pieces need for road construction.

- Feed rock to two crusher machines, side by side
- Break 225 tons of rock a day (equivalent to 2-3 current railroad boxcars)
- Elevator carries the stone from the crushers to the bins
- Crusher run by 80-horse power boiler and 25 horse power engine
- Elevator run by 10-horse power engine

The Sorting Bins

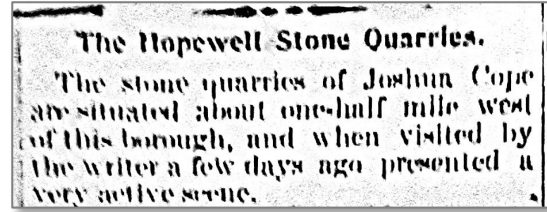
Finally, the crushed stone is sorted by size by passing it over screens with different size holes, so that gravity will separate the smaller and then larger sizes. The sorted stone can then be transported to customers.

- Crushed rock carried by 15-inch rubber belt to a large screen to drop into bins below
- Screen sorts by size with three different sized holes
- Four teams cart the crushed stone from the bin to the railway siding, a short distance away

The full description of this process is reproduced below:

The Hopewell Stone Quarries

The stone quarries of Joshua Cope are situated about one-half mile west of this borough, and when visited by this writer a few days ago presented a very active scene.



[HH 6/15/1898]

Mr. Cope has about 30 men employed, under the able supervision of Alonzo Fesmire, of this place, and they are kept busy, when the weather will permit, filling the large number of orders now on hand and coming in all the time. Even while the writer was present an order was received for several carloads of crushed stone.

The large number of orders received by Mr. Cope may be attributed to the fact that the rock quarried by him is the best trap rock to be found anywhere, and makes the best roads, drives and walks to be had. Also, his promptness in filling orders and the gentlemanly and businesslike manner in which he uses his customers, as well as cheapness in price, are other features.

The rock is crushed by two crushers, side by side, and about 225 tons are broken in a day, which are carried from the crushers on a 15-inch rubber belt to a large screen filled with three different holes, through which the stones drop into the bin below, each size in its respective place.

The power to run the crusher is gotten from an 80-horse power boiler and 25 horse power engine, and a 10-horse power engine runs the elevator which carries the stone from the crushers to the bin. These engines and boiler are in charge of Augustus Weart and kept in first-class shape.

On the hill at the top of the cut are two boilers, one a 10 and the other a 15-horse power, in charge of John Fesmire, which are used to run the steam drills. These drills are run by J. Wesley Hoagland and holes for blasting out rock for the crushers are drilled down to a depth of sixteen feet, filled with dynamite and set off by an electric battery.

Besides the 30 men employed are four teams and two single carts. The former are used for carting the crushed stone from the bin to the railway siding, a short distance away, and the latter for carting rocks from the cut to the crushers.

Mr. Cope's crushers furnished all the crushed stone and screenings for the Pennington-Hopewell macadam road, and nearly all the stone used on the streets, walks and drives in Hopewell, which is a very small amount compared with what he has shipped to different places by rail.

[Hopewell Herald, 1/15/1898]

Bond's Crushery - Amos C. Bond's - 1912-c.1920

In 1912, Amos C. Bond purchased the quarry property from Joshua S. & Catharine Cope. [DB 350-383, 1912-09-23 and DB 349-587, 1912-10-01] Bond was reported as having bought the "old stone quarry," which was described as being west of Hopewell, on the Pennington road, and on the road to Mount Rose. [HH 6/28/1916]

By 1920 the quarrying operation had ended, the quarry pit had filled in, and was being used informally as a local swimming hole. In 1924, Bond filed a plan for the residential development of the Pennington-Hopewell Road side of the quarry property as "Colonial Heights."

However, this venture was not successful, and in 1928, Bond filed for bankruptcy, and his quarry property was sold by the bankruptcy trustee to his brother, William S. Bond. [DB 643-570, 1928-12-29]

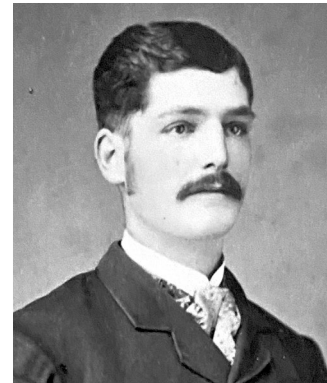
In the 1930 U.S. Census, Bond at age 68 was living in his own house on Pennington-Hopewell Road, and working as a school bus driver.

Amos C. Bond

Amos C. Bond (1860-1942) was born in Ringoes and later lived in West Amwell.

In 1892, Bond partnered with Abram S. Golden to develop the Golden & Bond lumberyard on Model Avenue (later Van Dorens). They sold lumber, coal, fertilizers, and building materials, and were also dealers in "hay, grain, straw, bran, sprouts, cotton seed meal, and the best family flour." [HH 8/14/1893]

After dissolving the partnership with Golden in 1894, Bond owned farms and was known as a dealer in farm machinery and in horses [U.S. Census 1900, 1910, 1920]. He was a member of the Hopewell Borough council, a justice of the peace, and a director of the Hopewell National Bank and the Hopewell Valley Canning Company. [HH Progress 5/1914]



Amos C. Bond
[Lowe Family]

In 1900, Bond sold his farm to St. Michael's Orphanage and built a home on West Broad Street (97 West Broad, at Lanning). [HH 12/23/1942] By 1907, he had his own horse stables where he held sales of Virginia horses (25 head in one month). [TET 2/22/1907] In 1909, Bond listed his business as "First-class livery and exchange stables; Dealer in gasoline engines and farm implements." [Hw 1909]

Amos C. Bond, Agricultural Implements, Stock Dealer, &c. - Seminary Ave.

Among the leading business men and most reputable citizens of Hopewell is Mr. Amos C. Bond, who conducts an implement business in the Bond Building, on Seminary avenue. Mr. Bond handles all kinds of farming machinery, windmills and gasoline engines, and his facilities enable him to offer these goods at prices which should attract the current of patronage in his direction. During the winter season he also deals in horses. Mr. Bond is regarded in commercial circles as one of our most substantial business men. Beside a handsome residence here, he owns several fine farms in the immediate vicinity, and is identified with numerous other interests.

[Hopewell Herald Souvenir Edition, 9/19/1900]

Bond's Quarry Operation

There are a few mentions of Amos C. Bond's "crushery" in operation in local newspapers. [TET 11/25/1914]

In 1916 Bond won the contract to deliver 500 tons of crushed stone for Hopewell streets. [TET 7/16/1916]

Cope's quarry employed 8 to 20 people from 1901 to 1912, and Bond employed 15 people in 1918. [Indust Dir NJ 1901-1918]

Later sources report that the quarry ceased operation in 1916 and that the mining company filed for bankruptcy.

No record of this ending has been found. (Bond did later file for bankruptcy, but in 1928.) The mid-1910s was a difficult time economically - World War I started in 1914, the U.S. entered in 1917, and the conflict ended in 1918.

Another possible explanation was that the amount of water coming into the quarry pit became too difficult to manage: "The 55-foot-deep quarry was a working rock quarry into the early 1900's. But pumping out the water from underground springs made quarrying increasingly difficult, and in 1916, the quarry closed." [Comm News, 2/1/2018] The Gyptons reported in 1988 that the mining pump was still used to draw water from the quarry into the adjacent kiddie pool. [Central NJ News, 7/15/1988]

There are no direct reports of these issues or the formal closing of the quarry. Articles from both later 1916 and early 1917 report that the Bond crusher "was not in operation," but do not say the business was closed - they noted that the business had no stone in hand at that time, so apparently was assumed to be still ongoing.

[TET 10/22/1916, HH 3/14/1917]

Articles from 1918 and 1920 also still reference "Bond's crusher," again without suggesting that it was closed.

[HH 3/27/1918, 2/18/1920] And it was still listed in the 1918 N.J. Industrial directory as employing 15 people. [Indust Dir NJ 1918]

The next clear references are in 1922, when the quarry pit definitely had been filled in and being used for swimming, now referred to as the "swimming pool at Bond's quarry." [HH 8/2/1922]

CRUSHED STONE FOR HOPEWELL STREETS

HOPEWELL, July 15.—Work will soon be started on the improvements to the borough streets which will consist of a new surface of crushed stone. A contract has just been made with Amos C. Bond for 500 tons of this stone to complete the proposed improvements.

Street Commissioner Clarence Hogeland will be in charge of the work.

[TET 7/16/1916]

Another phase of the matter was the present difficulty in getting stone. Inasmuch as the local quarry, owned by A. C. Bond, was not in operation and he had none on hand. If they were purchased from the Pennington Trap Rock Company it was stated that the cost would be higher than usual because of the longer haul.

[HH 3/14/1917]

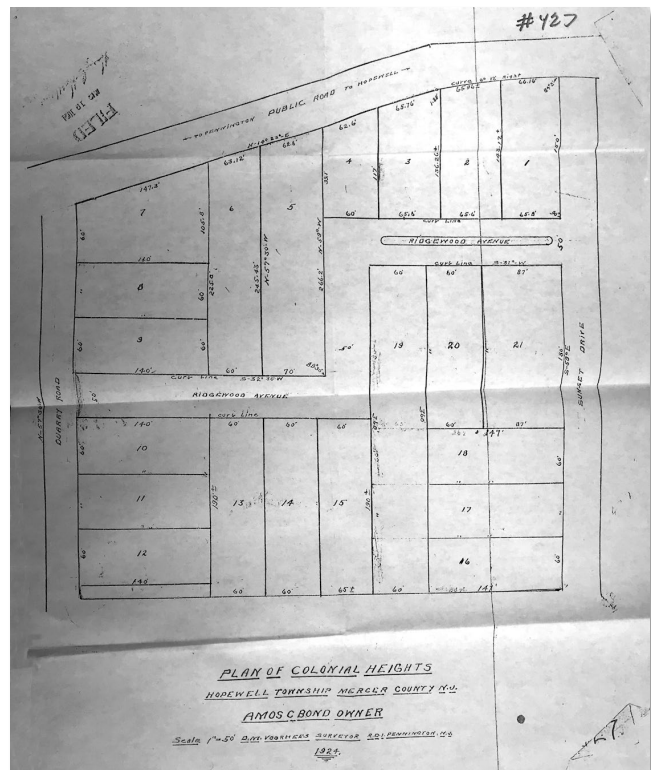
Bond's Quarry Development - "Colonial Heights" - 1924

In 1924, Amos C. Bond filed a plan for the residential development of the Pennington-Hopewell Road side of the quarry property as "Colonial Heights." ["Plan Of Colonial Heights, Hopewell Township, Mercer County, N.J., Amos C Bond Owner," 1924, Mercer County Clerk's Office, 8/19/1924, Map No. 427]

The plan shows Sunset Drive running south from Pennington-Hopewell Road (Route 654) to the area of the quarry lake, and Ridgewood Avenue running the length of the development east from Sunset Drive. It includes total of 21 lots, with 12 lots along Pennington-Hopewell and Crusher Road, and others off Sunset and Ridgewood.

In the area today, the current lots are larger, and Ridgewood is shorter, only connected to Sunset. Instead, the developed section is on the east side, and the Quarry property on the west side runs all the way along Crusher Road up to Pennington-Hopewell Road.

Not many lots seem to have been purchased in the development. In 1925, Armor Fertilizer Works purchased Colonial Heights lots 14 & 15 from Bond. [DB 560-153, 1925-05-01]



"Plan of Colonial Heights," Amos C. Bond
[1924, Map 427]

Bond Files for Bankruptcy - 1928

Amos C. Bond filed for bankruptcy in 1928, heading into the Great Depression. [Bankruptcy petition B11,669, 1928-01-18] The notice in the newspaper lists liabilities of \$31,233 and assets of \$26,073, including real estate worth \$22,700. Bond was described as a farmer in Marshalls Corner. [TET 1/19/1928]

The bankruptcy sale was held on Bond's 88 acre farm, "about one mile west of Hopewell, on the road leading from Hopewell to Pennington" The sale included farm machinery, grain, and animals, plus the farm, house, and outbuildings. [TET 3/21/1928]

There is no mention of the quarry property or Colonial Heights in the newspaper notice. A later deed notes that there is no legal record of the quarry property as part of the bankruptcy:

It appearing that during the bankruptcy of Amos C. Bond, Petition filed January 18, 1928 (B11, 669) this property was never sold or abandoned by Court Order, Granter [Quarry Swim Club] herein has been in adverse, exclusive, continuous, uninterrupted, visible and notorious possession since October 9, 1942. [DB 2042-985, 1977-05-25] [The 1942 date is of the incorporation of the Quarry Swimming Club.]

MARCH 22, 1928—Public sale. The undersigned Trustee in Bankruptcy of the estate of Amos C. Bond, bankrupt, will sell at public auction on the 22d day of March, 1928, at 12 o'clock noon, on the farm, situate about one mile west of Hopewell, on the road leading from Hopewell to Pennington and the road from Hopewell to Woodsville, personal property consisting of farm machinery, corn by the bushel, hay by the ton, two good work horses, four cows, two Chester White hogs, gasoline engine, several riding corn plows, two farm wagons, mowing machine, 10-spring tooth and spike tooth harrows, land roller, lime spreader, hay rake, one spring wagon, several disk harrows, one binder, three grain drills, feed mills, manure carriers, fodder shredder, several other machines and machine parts. A great deal of the machinery is new. At three o'clock the farm containing 88 acres with good house and full equipment of outbuildings will be offered for sale. Terms on personal property, cash. Terms and conditions on real estate will be made known at sale. Charles L. Conard, trustee, Box 467, Trenton, N. J.

[TET 3/21/1928]

Instead, in December 1928, the year of the bankruptcy, the quarry property of Amos C. Bond was sold by the bankruptcy trustee to his brother, William S. Bond. [DB 643-570, 1928-12-28]

The Hopewell Quarry Swim Club

See the companion brief on the Hopewell Quarry Swim Club for the story of the evolution of the Hopewell Quarry as a swimming club, owned and managed until 1977 by the six children of William S. Bond and their heirs.

By the 1920s, after World War I, the quarrying had ended the pit had filled with water, and was beginning to be used as a local swimming hole.

In the 1940s, the Quarry Swimming Club was formally established by the Bond family, with a separate swimming pool. It was then run by several generations of the Bond family before passing out of the family, and then to the current non-profit Friends of Hopewell Quarry.



Hopewell Quarry Swimming Club sign - 2010s [Kennedy]

References

This is one of a pair of briefs on the Hopewell Stone Quarry and on the Hopewell Quarry Swim Club.

Information extracted and summarized from sources including books, reports, maps, deeds, newspapers, and photos. Many of the original materials (i.e., documents, maps, aerials, photos) come from the many contributors to the Hopewell Valley History Project and are shared on the site (HopewellHistoryProject.org) - see the Acknowledgements page.

Comments, additions, and corrections are welcome.

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Lowe family historical information and images - Marcia Lowe & Julie Osborn

[Lowe 1980s] - Quarry timeline prepared by Marcia Lowe in the late 1980s from family information

Owners - Bill James, Nancy & Jim Gypton

Photo collections - Nancy Kennedy, Richard Anderson, Terry Devlin

Information and images - Sal Torre & American Legion Post 339

Geological information - Sandi Milburn

Deed research - Bette M. Epstein

The Hopewell Museum - 1930s image

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