

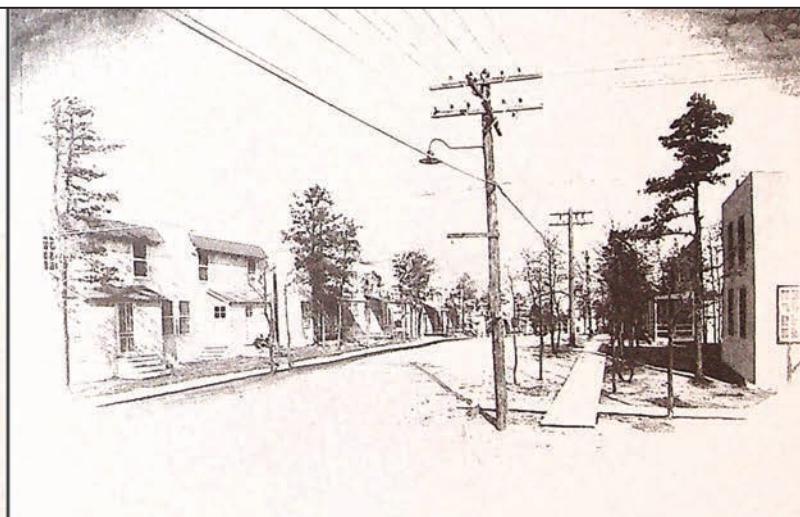
# All Aboard for Amatol, New Jersey

Daniel J. Dinnebeil

**A**s a result of America's entry into World War I, on April 6, 1917, Atlantic County received a great expansion of its industrial economic base. Among the largest result of this expansion was the construction of Amatol, a planned shell-loading munitions plant and workers' village that once occupied a tract of 6,000 acres between East Hammonton and Elwood. Amatol and other World War I inspired construction efforts, such as Camp Dix in Burlington County, are fascinating, in part due to the rapidity of their construction. In just nine months' time, the new town and factory at Amatol were completed and reached a population of 7,000. Today, the Pine Barrens have all but reclaimed the former site of Amatol.

## HISTORY

The history of Amatol began in December 1917 with the incorporation of the Atlantic Loading Company.<sup>1</sup> Acting under the aegis of the United States Government, the Atlantic Loading Company received governmental contracts to construct a large munitions plant and an accompanying town to house workers. In early 1918, the Atlantic Loading Company had initially planned to build the munitions plant and town near Camp Dix, but the war department had concerns over water pollution and the safety of the camp's personnel, and told the contractor to locate elsewhere.<sup>2</sup> In testimony given regarding Amatol, Lieutenant Colonel R. H. Hawkins stated that Camp Dix was not selected "because



THE RESPONSE TO THE CALL FOR SPEED

To the left, a work crew newly arrived in the South Jersey Pine Barrens, March 4, 1918, prepares to commence construction of Amatol, the World War I shell-loading facility and workers' town near Hammonton, New Jersey. The manufacturing plant was first built and loading operations began in July 1918. To the right is completed workers' town built in use nine months later. From Victor F. Hammel, *Construction and Operation of a Shell Loading Plant and the Town of Amatol, New Jersey*, 4.



The 75 mm shell loading plant, Amatol. From Hammel, *Amatol*, 4.

the commanding officer of Camp Dix told us he did not want it near his soldiers.”<sup>3</sup>

Other sites considered included Toms River, Lakehurst, Lacey, and Hammonton.<sup>4</sup> Ultimately, Hammonton was selected. Although no definite source can be cited as to why the Hammonton-Mullica Township site was selected over the other three candidates, major reasons did include the potential quality of town life and the design of a safety zone. Additional testimony from Lieutenant Colonel Hawkins reveals this consideration: “We had to build rather attractive accommodations [at Amatol] . . . to get [people] there. . . . We had to make it just as attractive as we could in order to get people to stay there; particularly in view of the knowledge of most people of the danger.”<sup>5</sup> Being situated between Atlantic City and Philadelphia, Amatol was conveniently located for ease of access to the

Jersey Shore and a great metropolitan city. In addition to town amenities, Lieutenant Colonel Hawkins also explained that the size of Amatol—6,000 acres—was meant as a “substantial safety zone.”<sup>6</sup>

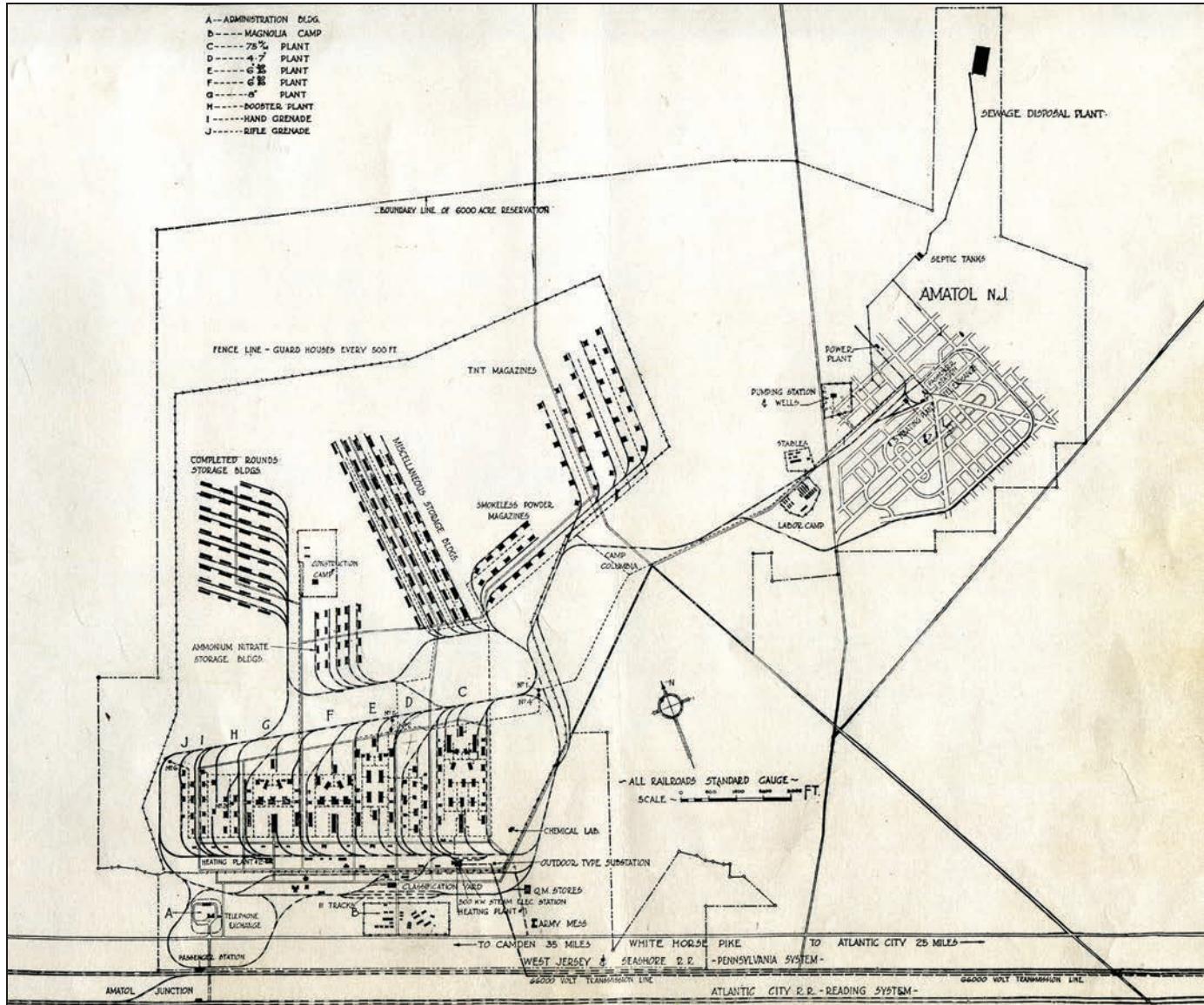
#### CONSTRUCTION AND DEVELOPMENT

After the company made its final site determination, the Atlantic Loading Company immediately went to work, which caught neighboring towns by surprise. *The Tuckerton Beacon* reported that on March 2, 1918, the residents of Elwood and Hammonton went to bed with a quiet night as if it had been any other. To their surprise, they awoke to see a large force of strangers in their midst, a half hundred freight cars bearing the legend “Ordnance Department U.S.A.,” and heavy motor trucks noisily chugging in the streets.<sup>7</sup> The next day, March 4, construction began.



A company street, Amatol. From Hammel, *Amatol*, 293.

## All Aboard for Amatol



The Amatol facility occupied 6,000 acres. Above, the loading plant occupies the lefthand property. The workers' town is located upper right. "The magnitude of the work is indicated by the extent and variety of the utilities; three central steam heating stations, two auxiliary steam-electric generating stations, a 1,750,000 gallon water supply system, a modern sewage disposal system and ultimately 50 miles of standard gauge railroad with 10 locomotives and 30 passenger coaches." Quotation and image from Hammel, *Amatol*, 13.

In his work, *Construction and Operation of a Shell Loading Plant and the Town of Amatol, New Jersey*, commonly known as the "Amatol book," Victor F. Hammel records a description of the construction. In total, 1,600 acres had to be cleared for the plant, and 38 acres had to be cleared and 255 acres trimmed for the town.<sup>8</sup> This was no easy task. The land was mostly wooded with some acres of swamp and was difficult to clear due to a "dense, tangled nature of growth."<sup>9</sup> The initial workforce included forty men, and, within the first week, the first bunkhouse and mess hall were built.<sup>10</sup>

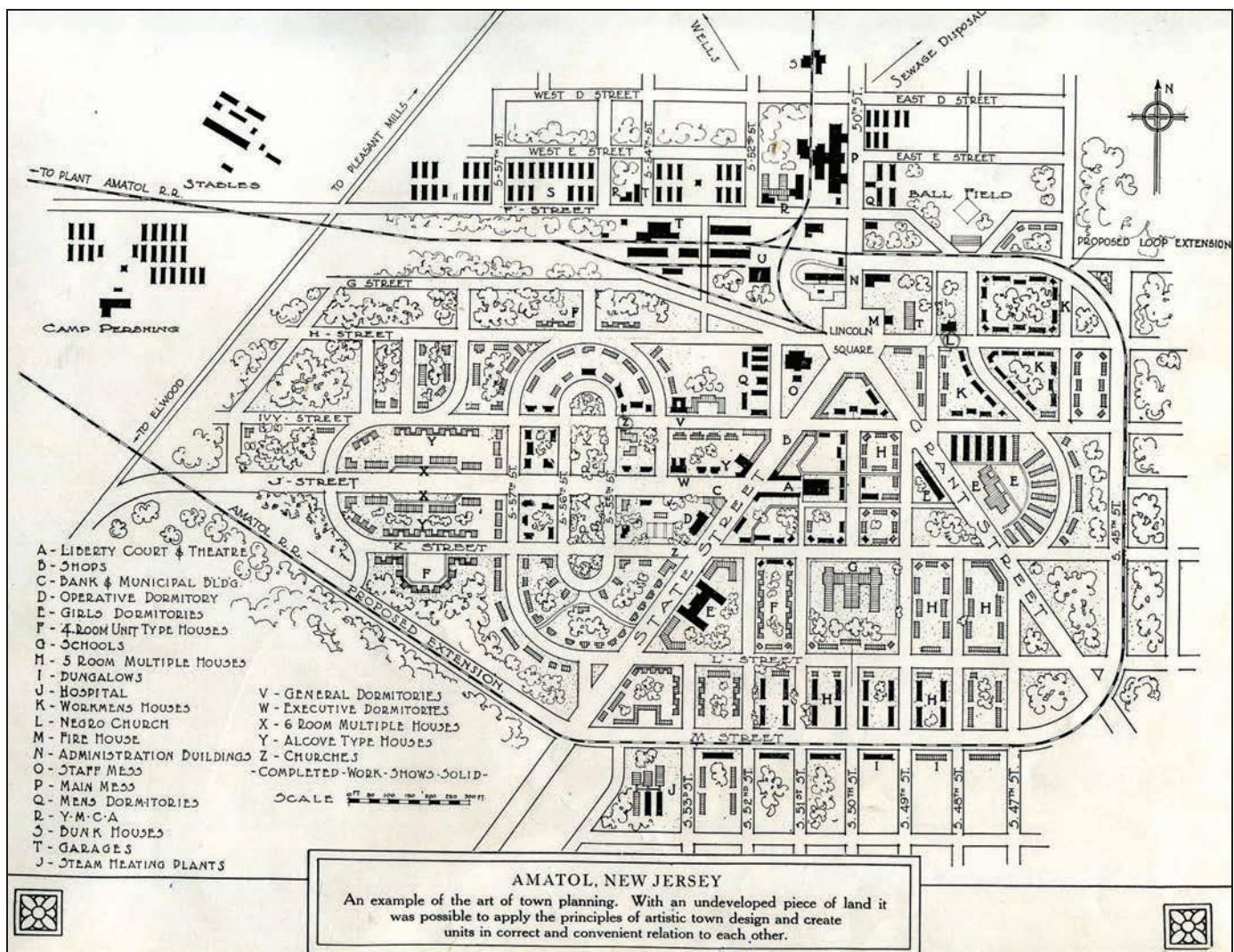
Development was rapid. By June, the population was nearly 2,000, and train service was added.<sup>11</sup> By August, advertisements for Amatol described it as

a city with all modern improvements . . . with electric lights, a fire department, a police department, a modern sewage system, a modern water plant, a theatre, a Y.M.C.A., an auditorium, bowling alleys, and other city amenities.<sup>12</sup>

Amatol also promised many employment opportunities, not just with the munitions plant, but with local businesses, like barbers, tailors, jewelers, watchmakers, and grocers.

By the signing of the armistice, plant and town structures included 122 loading buildings, 159 storage buildings and magazines, 4 administration buildings, 6 office buildings, 22 industrial buildings, 7 hospitals,

## SoJourn



Amatol, New Jersey. "An example of the art of town planning. With an undeveloped piece of land it was possible to apply the principles of artistic town design and create units in correct and convenient relation to each other." Quotation and illustration from Hammel, *Amatol*, 179.



East K Street from Fiftieth Street, Amatol. Postcard courtesy of the Paul W. Schopp collection.

## *All Aboard for Amatol*

16 recreation centres, 1 theatre, 18 mess halls, 4 garages, 15 warehouses, 21 railroad structures, 12 stables, 130 guardhouses, sentry boxes, searchlights, etc., 21 commercial stores, 98 male dormitories and bunkhouses, 21 female dormitories, 140 miscellaneous buildings, 24 Army barracks, 4 Y.M.C.A.s, 11 individual residences, 33 multiple houses, 227 workmen's houses, 1 post office, 1 school house, 2 fire houses, 444 tent tops, 96 two-roomed family apartments, 179 four-roomed family apartments, and 23 three-roomed family apartments.<sup>13</sup> On average, there were four buildings built per day, which was a remarkable speed.<sup>14</sup> The final workforce included over 5,000 construction workers.<sup>15</sup>

The town reached a peak population of 7,000,<sup>16</sup> had the capacity to house over 10,000,<sup>17</sup> and was planned to accommodate a possible population of 25,000.<sup>18</sup>

### AMATOL PLANT

Loading operations at the Amatol plant began on July 31, 1918, and, on August 3, the first shell was loaded.<sup>19</sup> The plant was capable of loading

60,000 shells of all sizes, 50,000 boosters, 50,000 hand grenades, and 20,000 rifle grenades per day, as well as components. To accomplish this work there were 15 smokeless-powder magazines, 33 T.N.T. magazines, 49 miscellaneous storage buildings, 642 plant structures in all.<sup>20</sup>

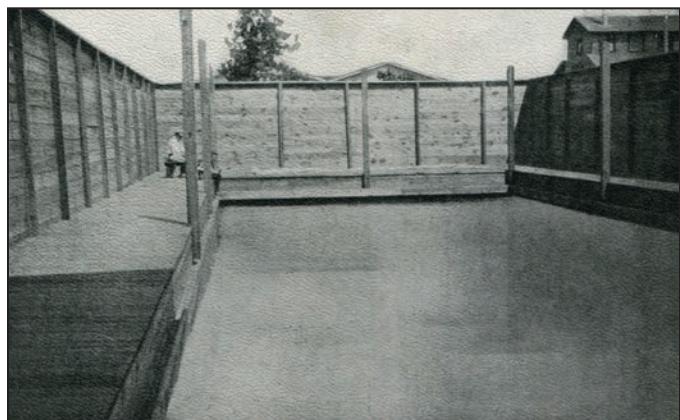
The plant, during its operational lifespan, loaded over 9,000,000 rounds of ammunition of various types and sizes.<sup>21</sup>

Although T.N.T. was preferred and used when available, amatol, a mixture of T.N.T. and ammonium nitrate, was used as an alternative due to the shortage of T.N.T. Amatol was "the main charge pressed into the shell (unless straight T.N.T. or a 50/50 mix was used), [and] contains 80 percent of ammonium nitrate and 20 percent of T.N.T."<sup>22</sup> The one disadvantage of amatol was that ammonium nitrate absorbs moisture rapidly, and, in time, deteriorates. The life of a shell loaded with amatol was uncertain after five years while the life of a shell loaded with T.N.T. was indefinite, and certainly at least 25 years.<sup>23</sup>

The Army's Ordnance Department took over the plant in February 1919 and denominated it Amatol Arsenal.<sup>24</sup> By 1923, Amatol Arsenal ceased operations.

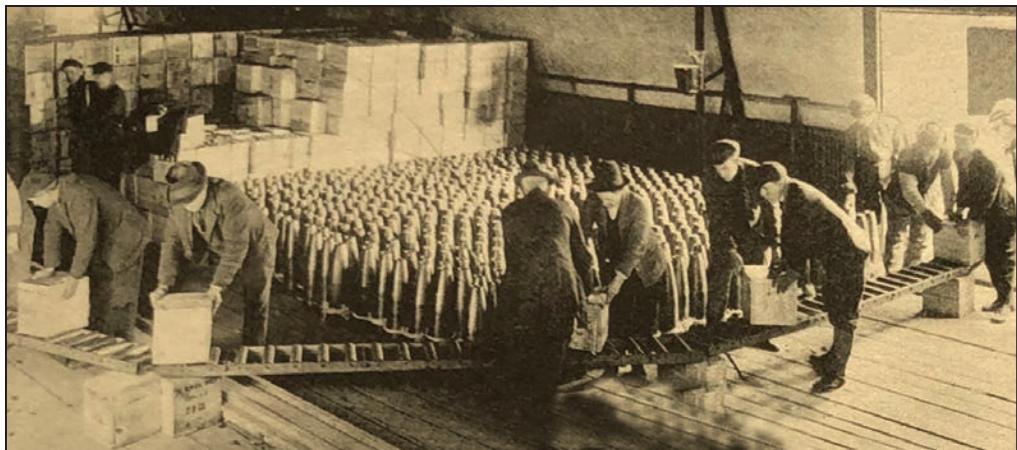
### CAMP AMATOL

In October 1918, 2,400 troops arrived at Amatol to assist in operations there.<sup>25</sup> Their job was to bring the

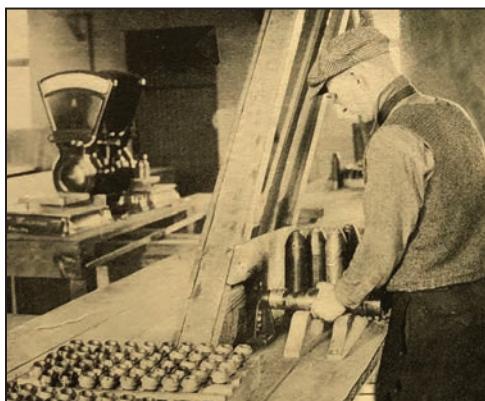


(Top to bottom) General Dormitory; Interior Swimming Pool; Main Mess Hall; Bank Building and Post Office, Amatol. Postcards courtesy of the Paul W. Schopp collection.

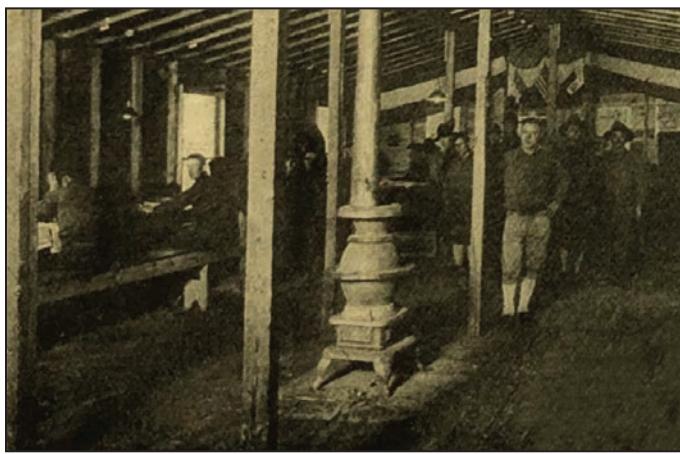
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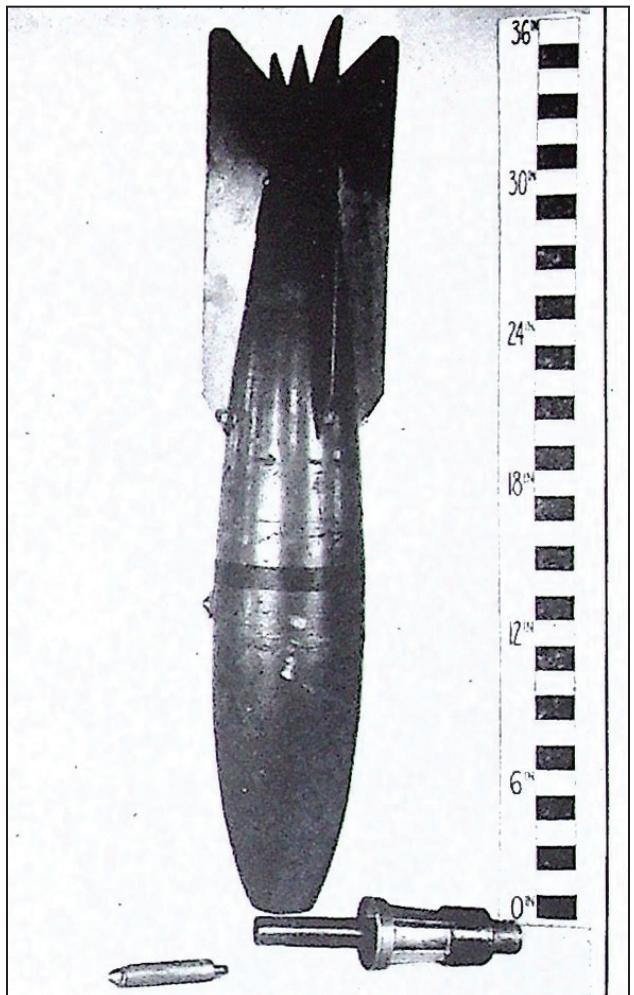
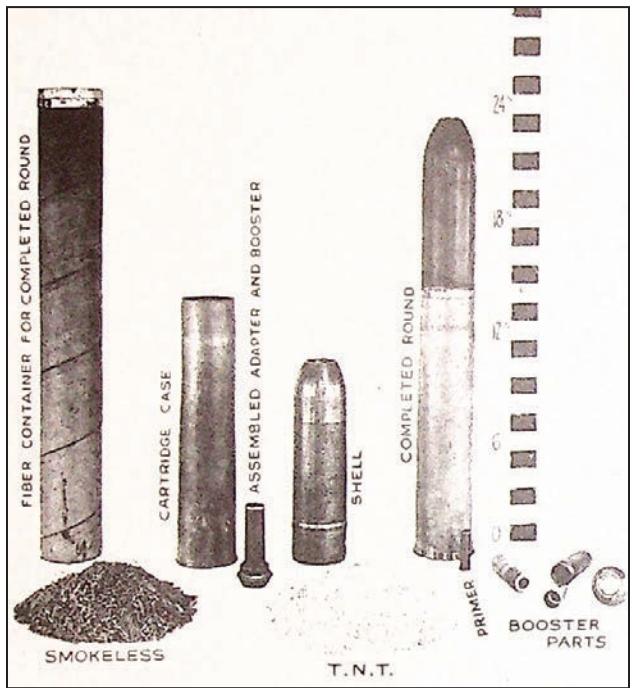
(Top to bottom) Receiving empty shell for loading; the delicate process of pouring T.N.T. into shells; inserting boosters in 75 mm shells; (bottom left) painting completed rounds; (bottom right) placing completed shells in fibre containers in preparation for shipping. Photographs from Hammel, *Amatol*.



*All Aboard for Amatol*



(Top left) Guard train enroute to T.N.T. section; (top right) Battalion Roll Call; (middle) African American Road-Working Detachment; (bottom left) Canteen; (bottom right) Enlisted Men's Barracks. Photographs from *Construction and Operation of a Shell Loading Plant and the Town of Amatol, New Jersey*.



(Top) 75 mm shell component parts; (bottom) Mark III Drop Bomb. Both munitions were loaded at Amatol. Photographs from *Construction and Operation of a Shell Loading Plant and the Town of Amatol, New Jersey*.

output to full loading capacity and, when necessary, perform civilian tasks. *The Philadelphia Inquirer* reported that in mid October, many of these soldiers decided to take French leave—an unauthorized departure—by traveling to Atlantic City. A few of the soldiers were jailed when they were unable to show “leave of absence.”<sup>26</sup> By the time of the armistice, there were 3,800 officers and enlisted men at Camp Amatol, as it became known.<sup>27</sup>

There were also Camp Amatol sports teams. Basketball was a popular sport played amongst soldiers, including officers. A December 6, 1918, news article records, “the Hammonton five defeated the U.S. Ordnance quintet from Camp Amatol by the score of 19 to 10.”<sup>28</sup> A December 13, 1918, article describes the U.S. Ordnance Officers team defeating the Amatol team in basketball by the score of 25 to 10.<sup>29</sup>

#### CONCLUSION

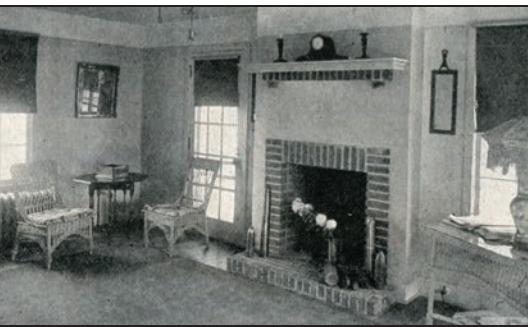
In just a matter of months after signing the Armistice, the population of Amatol had virtually vanished, with only a few hundred remaining. The former munitions complex experienced a brief resurgence in 1926 after an investor backed the construction of the Atlantic City Speedway there. The revival was short-lived as interest quickly waned among the visiting public and other investors.

Little remains of Amatol today. After a hike through the Pine Barrens, remnants of the munitions plant, town, and racetrack can be found at the former site of Amatol. Of the many buildings and homes constructed, only two still remain: the now-abandoned State Police barracks outside of Hammonton and one house, which was moved to the White Horse Pike, where it is still occupied.<sup>30</sup> During the 1980s, the Amatol site was considered for use as a landfill, but the proposal was rejected due to environmental concerns and opposition by local residents.<sup>31</sup> Recently, in 2017, more than 500 acres of Amatol (now the Pine Barrens) were preserved.<sup>32</sup>

Amatol was not the only planned community that South Jersey saw built during World War I. Belcoville, Atlantic County, was also built as a munitions plant and village. Yorkship Village (now Fairview), Camden County, was built to house shipyard workers and their families. In addition, America also saw many new military bases built, which included Camp Dix (now Fort Dix), Burlington County.

What was the overall impact of Amatol on the surrounding area? There is no reliable and readily-available information to answer this question. Where did the residents of Amatol go once operations ceased? According

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(Left to right) Attractive worker's home with enclosed porch and sun parlor; Corner of a typical living room; Four-room two-family cottage. Photographs from *Construction and Operation of a Shell Loading Plant and the Town of Amatol, New Jersey*, 189, 195.

to the *Press of Atlantic City*, “Many of Amatol’s laborers, predominantly Irish and Polish from Philadelphia, stayed in the area and started families.”<sup>33</sup>

As the centennial of America’s participation in the First World War draws to a close, it is good to take a moment to remember a significant town, built in a forest in New Jersey, which helped with the war effort and provided employment for thousands of American workers.

### ABOUT THE AUTHOR

Daniel J. Dinnebeil completed his Master of Arts in American Studies at Stockton University in Fall 2018. He also received his BA in Economics from Stockton in 2015. Having served in the United States Coast Guard as an Electronics Technician, Daniel has an abiding interest in military history.

### ENDNOTES

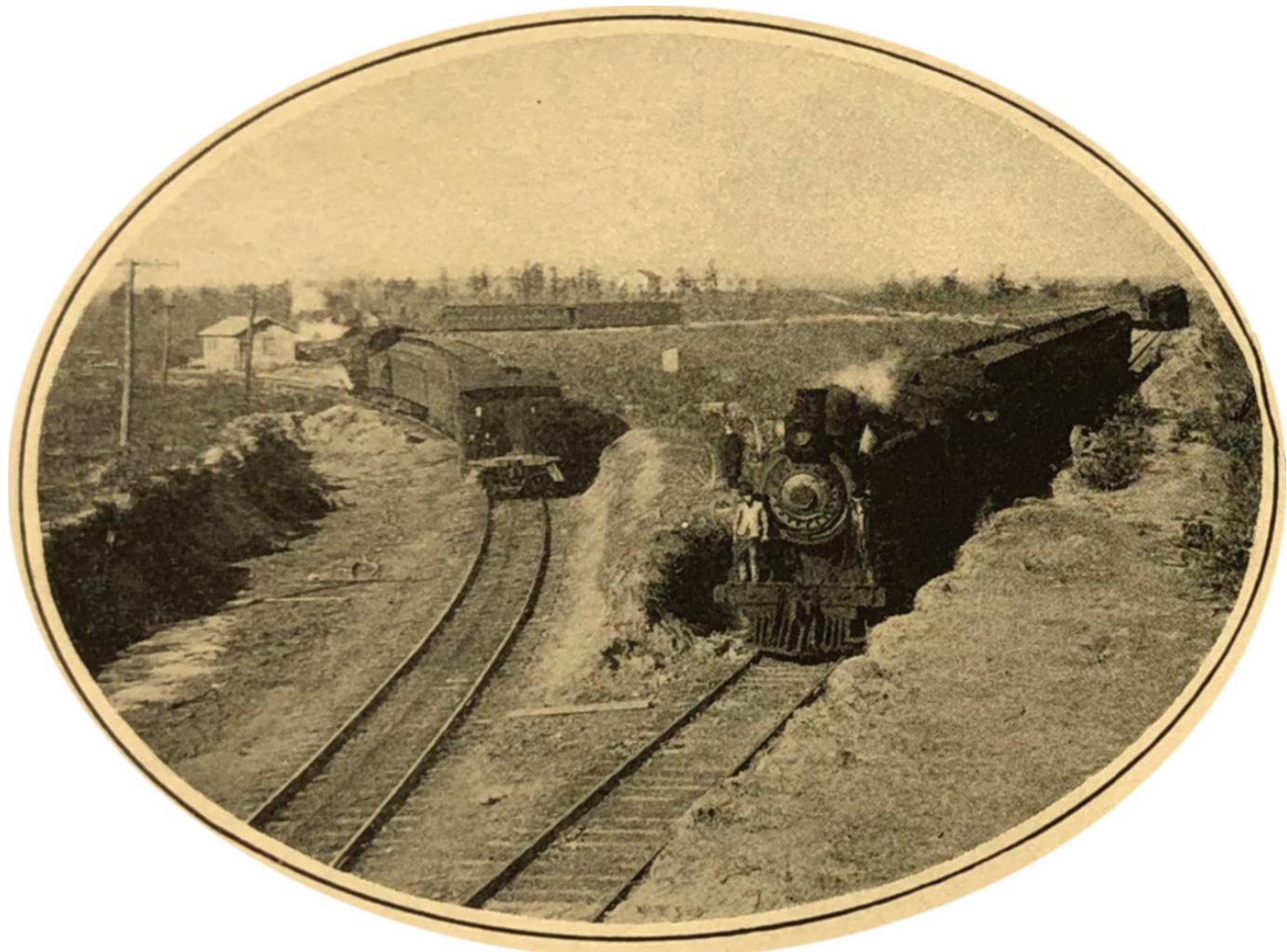


Postcard photograph of private Joseph Straley, Military Police, Amatol, New Jersey. Courtesy of the Paul W. Schopp collection.

- 1 Victor F. Hammel, *Construction and Operation of a Shell-Loading Plant and the Town of Amatol, New Jersey: For the United States Government Ordnance Department, U.S. Army* (New York: Atlantic Loading Company, 1918), 14.
- 2 “Locate War Plant at Toms River,” *Asbury Park Press*, February 21, 1918.
- 3 *War Expenditures: Hearings Before Subcommittee No. 5 (Ordnance) of the Select Committee on Expenditures in the War Department, House of Representatives, Sixty-sixth Congress on War Expenditures*, vol. 1 (Washington: Government Printing Office, 1919), 491.
- 4 “Locate War Plant at Toms River,” *Asbury Park Press*, February 21, 1918.
- 5 *War Expenditures*, 511.
- 6 *War Expenditures*, 493.
- 7 “People Arise to Discover Evidence of Government’s War Activities,” *Tuckerton Beacon*, March 7, 1918.
- 8 Hammel, *Construction and Operation*, 16.
- 9 Ibid.
- 10 Ibid.
- 11 “Accommodations for Loaders,” *Philadelphia Inquirer*, June 5, 1918.
- 12 “Amatol [Advertisement],” *Philadelphia Inquirer*, August 25, 1918.
- 13 Hammel, *Construction and Operation*, 17–18.
- 14 Ibid., 18.
- 15 Ibid., 25.
- 16 *Forty-Third Annual Report of the Department of Health of the State of New Jersey* (Trenton: MacCrellish & Quigley, 1912) 175.
- 17 Hammel, *Construction and Operation*, 16
- 18 Ibid., 181.
- 19 Ibid., 16.

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- 20 *The Ordnance Districts, 1918–1919* (Washington: Government Printing Office, 1920), 110.
- 21 Hammel, *Construction and Operation*, 61.
- 22 *Ibid.*, 135.
- 23 *Ibid.*, 136.
- 24 *War Department, Annual Reports, 1919* (Washington: Government Printing Office, 1920), 3937.
- 25 “Troops Taking Over Loading Plant,” *Philadelphia Inquirer*, October 10, 1918.
- 26 “3000 Soldiers Reach Shell Loading Plants: Scores Take French Leave and Visit Seaside Resort, Housing Problem,” *Philadelphia Inquirer*, October 14, 1918.
- 27 *The Ordnance Districts, 1918–1919* (Washington: Government Printing Office, 1920), 111.
- 28 “Hammonton Defeats Ordnance Five,” *Philadelphia Inquirer*, December 6, 1918.
- 29 *Philadelphia Inquirer*, December 13, 1918.
- 30 Wallace McKelvey, “Mullica Township Ghost Town Amatol was Once Munitions Village,” *Press of Atlantic City*, December 16, 2013.
- 31 McKelvey, “Mullica Township Ghost Town Amatol.”
- 32 Michelle Brunetti, “Mullica’s Amatol Site Part of Recent Preservation in Pinelands,” *Press of Atlantic City*, October 14, 2017.
- 33 McKelvey, “Mullica Township Ghost Town Amatol.”



Junction where Camden, Atlantic City, and Amatol Railroad trains meet. Photographs from Hammel, *Amatol*, 271.