Bellona Gunpowder Works Once a Booming Industry

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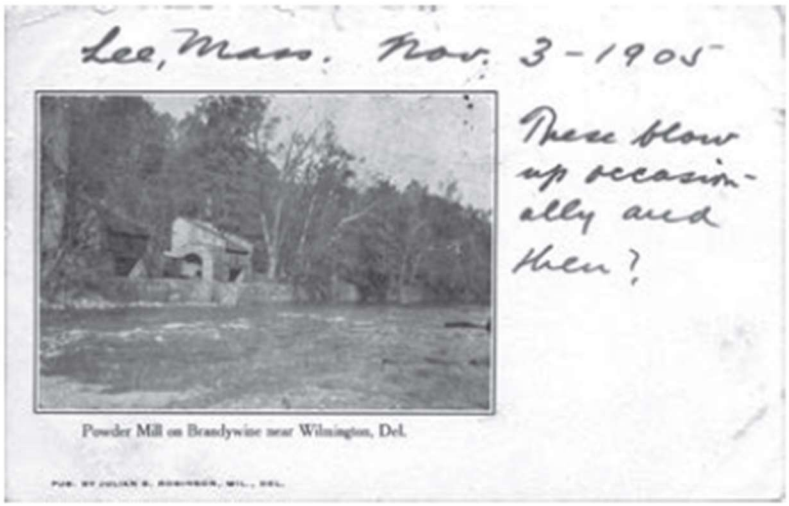
For more than half of the nineteenth century the Bellona Gunpowder Company of Maryland was a nationally recognized leader in gunpowder manufacture.

Competing with the likes of the E. I. du Pont de Nemours Company, the company was among the first to develop that industry on a large scale in a young America. Although nearly all traces of that early explosive venture are long submerged beneath the water and silt of Lake Roland, let's re-examine this early local industry and its place in history.

Although there had been crude attempts by early colonists to make small quantities of low-grade gunpowder as far back as the mid-1600s, the American Revolution was the catalyst for powder manufacturing in the U.S. During the early years of the war nearly all of the colonists' gunpowder needs were met with imports, an obvious and serious liability. In response to this precarious situation, "liberal proposals" were solicited by the Council of Safety to Marylanders as early as 1775 to build gunpowder mills in the state. That same year, the Baltimore Committee of Observation acknowledged the importance of gunpowder self-sufficiency for Baltimore and suggested the construction of a gunpowder mill "not more than fourteen nor less than six miles from the city" for that purpose. It also recommended the mill be sited north of the city in the belief that any attack would likely come from the south.



Example of gunpowder mill buildings
From University of Delaware postcard collection.

Over the next 20 years, six mills were constructed near Baltimore. One mill, built in 1791 on the banks of the Gwynns Falls, met with such success it was requisitioned to fill orders for the government.

Unfortunately, a September 1812 accident caused the powder in the Gwynns Falls mill to explode in a fire that ultimately destroyed most of the buildings but spared the lives of its workers. With a loss of $20,000, the owners decided not to rebuild. Such a scenario was typical of this combustible industry.

Our local gunpowder mill, named for Bellona, the Roman Goddess of War, was built in 1801. Its location, a remote seven miles north of Baltimore yet accessible from Falls Road, was ideal. Waterpower was plentiful as it sat at the confluence of the Jones Falls and Roland Run. By 1810, the powder works were capable of manufacturing 32 barrels of gunpowder per day.

Under the ownership of U.S. Naval Agent James Beatty, it achieved national prominence and at its zenith employed nearly 50 workers and encompassed an area of 360 acres on the land parcel formerly known as Hector's Hopyard.

The Bellona mills were typical for their time. The powder yard encompassed several mills and outbuildings– one map shows four mills – that ground the ingredients together with rollers and then compacted and granulated them. The constructed millrace, a fast-moving stream of water diverted from the Jones Falls, powered the mill wheels before rejoining the river downstream. Powder mill construction was unique. Usually, one mill wall was built to be weaker than the others or sometimes the fourth wall was missing entirely.

Continued on page 2

That side was always oriented away from other structures so that, in the (likely) case of an explosion, damage might be controlled or at least directed. Other buildings were used to dry and package the powder, refine saltpeter* or house the mill manager. The finished product was stored in magazines.

Within fifteen years The Bellona Gunpowder Company was the leading producer of gunpowder in Maryland which, in turn, manufactured one-third of the nation's powder. Its success did not escape the attention of E. I. du Pont. His enterprise, which began its manufacture of gunpowder on the banks of Brandywine Creek in Delaware in 1802 (see postcard on page 1 for example of buildings), went on to become the vast chemical company we know today. In 1815, du Pont stated that "one of our principal motives is to strive against the competition of the Baltimore factories."

By December 1814, our local mill had incorporated and its name was changed to The Baltimore Gunpowder Company of Maryland, with James Beatty becoming the sole proprietor. By then, it had already played a role in the defense of Baltimore three months earlier.

The War of 1812 against Britain was initially fought on the seas and along the Canadian border. With the end of the Napoleonic Wars in 1814, though, Britain directed more military resources toward the U.S. conflict, blockading parts of the East Coast with their Navy and attacking on land with British troops and hired mercenaries. The wisdom of maintaining a local source of gunpowder for Baltimore's self-defense became readily apparent. In a letter dated June 12, 1814, the chief ordnance officer of the U.S. War Department ordered two hundred barrels of Bellona gunpowder to supply the Fort McHenry magazines. Scarcely three months later that supply was put to good use in the defense of Baltimore when British ships sailed up the Chesapeake in an effort to take our city from the south. As all good Marylanders know, the fort and city were bombarded for two days, but the enemy was successfully prevented from entering Baltimore's harbor. (As an aside, a cannonball did penetrate the fort's magazine during the bombardment but, by some fluke, did not explode thereby avoiding enormous destruction.) Things might have turned out differently, one might surmise, had the British advanced from the north and destroyed the powder mills on their march south to Baltimore.

All you have to do is look at the thick walls of the magazine at Fort McHenry to understand the volatility of gunpowder. Although the combination process for the three central ingredients – charcoal, saltpeter and sulfur – is the most dangerous of the steps in gunpowder production, there are so many ways to ignite the product (carelessness, sparks, faulty machinery, lightning) that powder mill owners often found they no sooner began production than the whole enterprise would be blown sky high – literally. Sadly, the Bellona company was no exception.

The first accident occurred in 1801 when one of the stone mills exploded, fortunately without loss of life. In 1812, a saltpeter shed caught fire and four other buildings were destroyed by the ensuing explosions. Both times, Beatty rebuilt. But by far the worst accident occurred on August 29, 1820, when two explosions, reported to have been heard as far away as Washington and Chestertown, instantly killed at least three men and severely injured several others. The August 30 *Federal Gazette* described "a scene of awful and utter desolation," with the loss or damage of four buildings. Tenacious Beatty rebuilt his business while his profits fell to a mere 3%. E. I. du Pont was quoted as saying that even a gunpowder business owner making 10% profit would eventually fail due to the explosive nature of the business and how much capital was needed for cyclical replacement of damaged buildings.

Adding insult to injury, Beatty had to fight the Baltimore and Susquehanna Railroad over the proposed construction through his property of a Greenspring branch to Westminster. The original proposal would have hugged the western side of the Jones Falls and would skirt the powder works at a safe enough distance. But at the last minute plans changed and the route chosen came perilously close to the powder works, endangering all. Early trains were known to spew ash and sparks and were rarely welcomed by the owners of the property they traversed. One could hardly blame Beatty, already beset with mill problems, for vigorously fighting the proposal. In the end, Beatty won his case. He was awarded $1,200 for the taking of his 7.5 acres and the Railroad agreed to abide by the original proposal.

But while Beatty was still in the process of repairing the mills, tragedy struck yet again on October 15, 1821, when four people, including the manager, were killed and two others injured. Nine years later, a minor explosion killed yet another person.

Continued on page 3

Bellona Gunpowder Works Once a Booming Industry - *continued*

Still, the business remained competitive enough to worry Mr. du Pont, who mused in 1831, "Nevertheless we should not like to give up altogether the Baltimore market on account of the competition of Mr. Beaty (sic)." Explosions continued to be the price of doing business.

By the time of his death in October 1851, James Beatty's stressful business had been passed to his son, Charles, who continued to operate the company until 1856. Perhaps it was with a sigh of relief that he closed the mill and sold portions of the property for $17,500 to the City of Baltimore for its proposed waterworks, now Lake Roland (see "The Dam History" in the Winter 2009-10 issue of ***Neighborhood NEWS***).

By July 1861, when water from the Jones Falls first crested the top of the Robert E. Lee Park dam, most traces of the old Bellona powder works were forever submerged. Perhaps those driving the road bearing the mill's name will sometimes give pause to consider the forgotten history of the Bellona powder works and its many ghosts. Indeed, during the anniversary festivities for the Battle of Baltimore, when we think of the many who lost lives in the war, we should also pay homage to those who died in service to the soldiers' needs. All of them contributed to this special place we still call the land of the free and the home of the brave.

**Saltpeter is a naturally-occurring mineral containing potassium nitrate one of the main ingredients in gunpowder.*

*Note: Information for this article was gleaned from the following sources: "Gunpowder Production in Post-Revolutionary Maryland" by Arlan K. Gilbert, Maryland Historical Magazine, September 1957; "Middling Planters of Ruxton" by Joseph M. Coale; and Historical Society of Baltimore County (**www.hsobc.org**).*