Chapter 6

MILLS AND WATER POWER ON PIKE CREEK: HISTORY AND ARCHAEOLOGY

A. OVERVIEW

In this chapter the complex landscape history of the mills and waterpower systems on Pike Creek will be disentangled. This is a complicated story, in part because the shared use of water engenders a mix of customary, unwritten behavior and elaborate legal documentation; the latter occurs particularly when things go wrong between the parties using the water. An added complication is the difficulty of recognizing waterpower features and mill sites on the ground as archaeological relict landscape features. Despite the fact that these mill buildings and the long raceways with their associated spillways, flumes, spillways and other features are major engineering features, they have often blended back into the landscape. Their superstructures have been removed or decayed, and the channels and deeper foundations have been deeply buried by river siltation or changes in roads and bridges adjacent to the mill seats.

In addition to good water systems, inland mill seats also generally required road access for supply and distribution. Like many others, Pike Creek's mills were not located on any of the trunk roads that carried grain down from Chester County, Pennsylvania, nor did the mills enjoy a direct water route to a distribution point. Before the milling era, communication through this neighborhood was afforded by a "great" road that was roughly equivalent to the modern Kirkwood Highway to the south, but this was of little utility for shipping the products of the merchant mills on the Creek until there were better local roads.

The road now known as Henderson, Old Coach, or Pike Creek Road (Road 316) was opened in 1789 and modified to its present course in 1801 (Road Papers, Delaware Archives). The north south road along the creek, also called Pike Creek Road or Upper Pike Creek Road, began in 1825 as a private service road serving four mills that occupied a half mile stretch of creek.

Historical and archaeological research for this project has shown that there were at least seven mills on the stretch of Pike Creek north and south of Henderson Road/Old Coach Road in the late 18th and 19th centuries. These mills have been given names that seem to best reflect the importance of their various owners and builders. The locations of these sites are shown on Figure 6.1 and, more schematically, on Figure 6.2. These maps show very clearly how the Woodward/Trump/Broadbent/Taylor Textile Mill was part of a complex of waterpower systems and facilities on this part of the creek. The aerial photographs reproduced as Plates 6.1 and 6.2 also provide locational information related to the early and mid-20th century landscape. These mill complexes will be described from north to south down the creek.

B. THE MCDANIELS MILLS (FIGURE 6.1)

The McDaniels Mills stood above the current project area, near where Paper Mill Road now crosses the creek. When the road along Pike Creek (Road 295) was laid out in 1825, the survey showed a lone sawmill in the property of the heirs of Thomas McDaniel near the fork of Pike Creek. The proper-

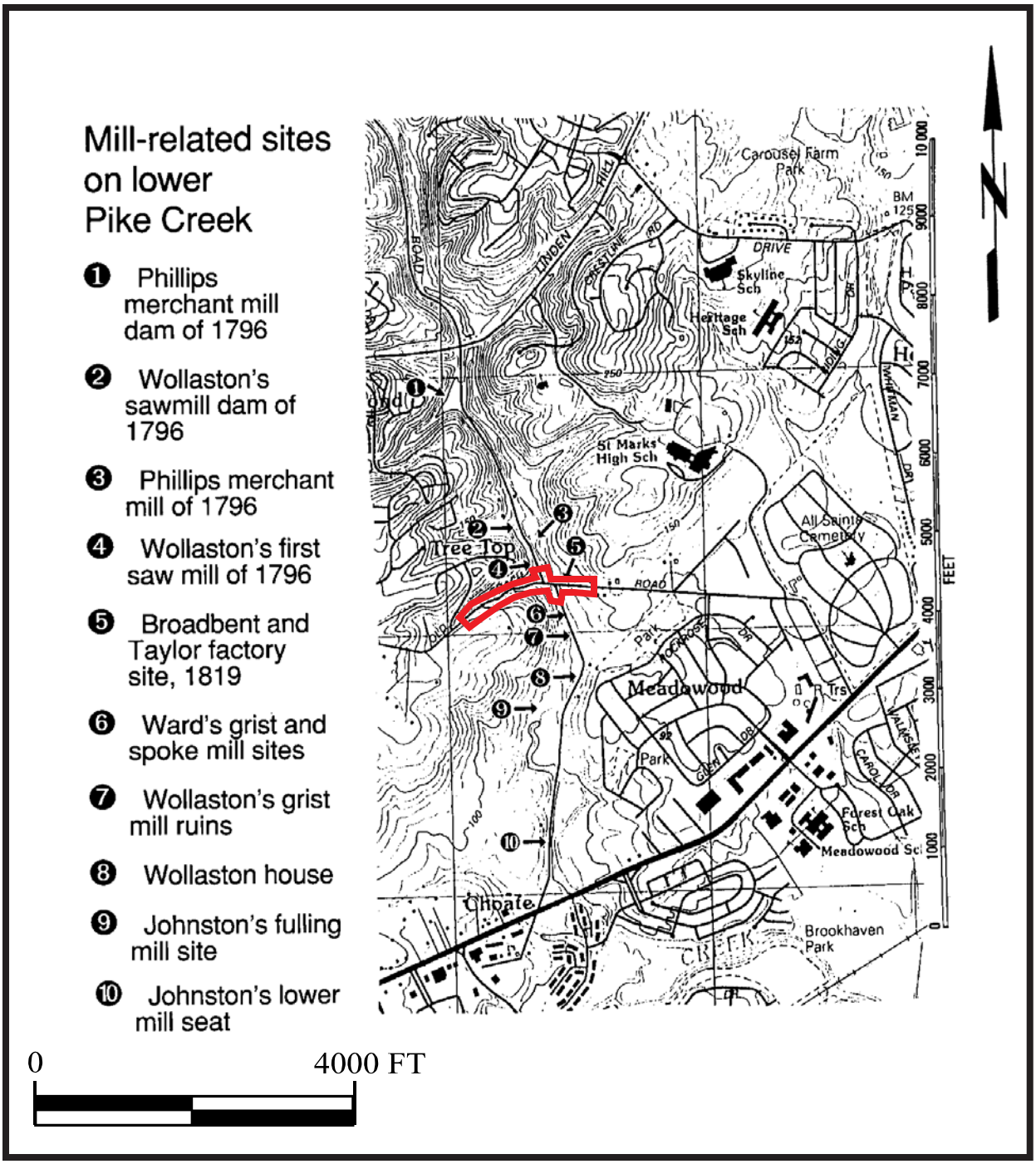
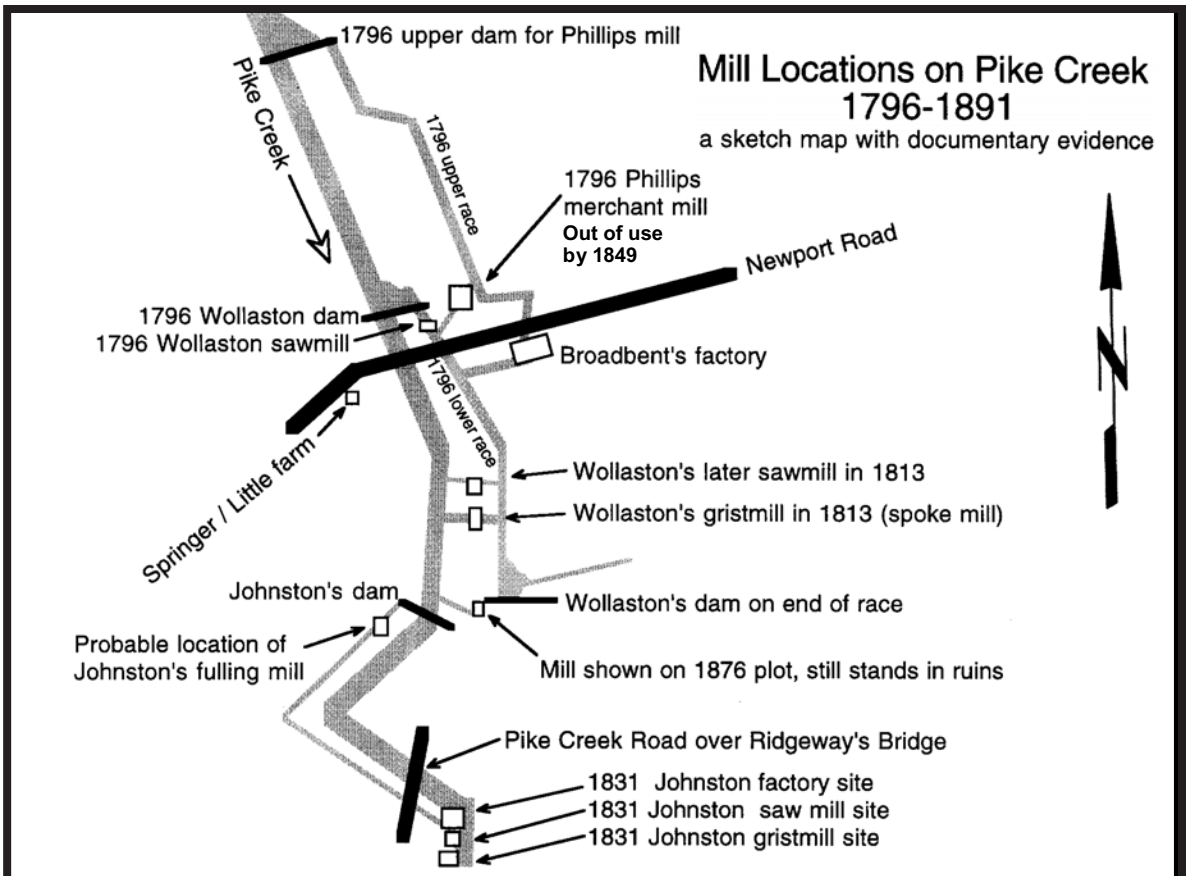


Figure 6.1. Mills and Mill-related sites on the portion of Pike Creek on either side of Henderson Road/Old Coach Road. Limits of construction shown in red. The McDaniel Mill and the Abel Jeanes limestone quarries lie off the map to the north. The Woodward/Trump/Broadbent/Taylor Textile Mill site (5) was part of a complex of waterpower systems in this area.



Explanation of mill locations:

1796 upper dam: Scaled from the 1876 Welsh estate map, this dam stood about 2600 feet above the road.

Phillips merchant mill: The 1809 road survey states that the merchant mill was 90.75 feet (5.5 perches) from the road.

1796 Wollaston dam (middle dam): Jeremiah Wollaston's estate survey shows this dam 569 feet (34.5 perches) above the road.

1796 Wollaston sawmill: The 1796 deed to Phillips identifies a point on the race a half perch east of the sawmill race. This appears to refer to an early, possibly temporary, mill near the dam.

Broadbent's factory: The known site was excavated by Hunter Research, Inc.

1796 lower race: Still open and visible below Old Stage Road, appears as property boundary

Ward's mill: The 1888 road survey shows Ward's tail race 540 feet downstream from the road. The 1876 Welsh survey shows the Ward mill opposite the factory property corner 310 feet below the road.

Wollaston's sawmill in 1813: The Wollaston estate survey shows the gristmill and sawmill standing adjacent to one another.

Wollaston's gristmill: The current property boundary (deed book B-117, page 221) shows the mill property 766 feet below the road.

Wollaston's dam: The Jeremiah Wollaston 1813 survey shows this dam 981.75 feet (59.5 perches) below the road.

Mill shown on 1876 plot: A mill appears to have stood on the William Wollaston tract, at the bottom of the Wollaston dam.

Johnston's dam: This location on the creek was the line between the Springer/Little 25 acres and the Johnston tract (deed book S-2, p.207) when Johnston acquired it in 1798, but no dam is mentioned. The dam appears in the 1883 deed to Little.

Johnston's fulling mill: Joshua Johnston bought this tract in 1798 from Springer before his father died, and is described as a fuller

1831 Johnston factory, sawmill, and gristmill: The Orphans Court division of the Joshua Johnston estate shows these mills.

Figure 6.2. Explanatory sketch map which identifies all the mills and races in the project vicinity, and the site of the Springer/Little Farm.

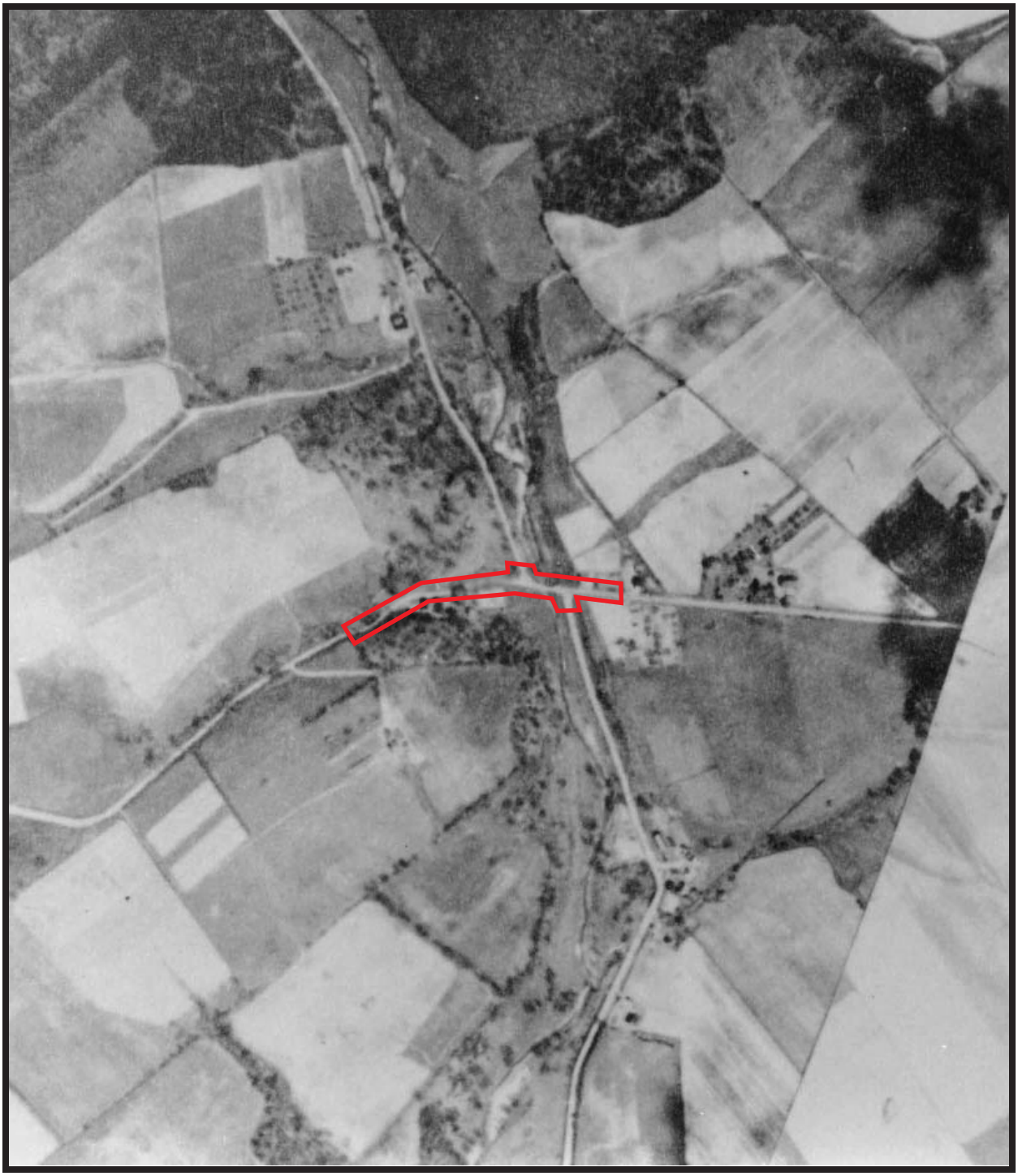


Plate 6.1. Aerial photograph of the project area in 1926, from an original in the Hagley Library, part of a larger statewide mosaic prepared by the Army for state officials. Source: Hagley Museum and Library. Limits of construction shown in red.

Plate 6.2. Aerial photograph of the project area in 1954, from an original in the Hagley Library, part of a larger statewide mosaic prepared by the Army for state officials. Source: Hagley Museum and Library. Limits of construction shown in red.

ty lay just above the Abel Jeanes limestone quarry (Road papers, Delaware Archives). They are included here because some confusion exists as to the relationship between these mills and the Phillips property to the south. The 1804 assessment shows Thomas McDaniel with just a sawmill on Pike Creek (Table 5.1). According to Amos Brinton's 1891 notebook account, the John McDaniel mill was originally the John Phillips mill (see below). This clearly was not the case, and the account is garbled. Brinton states that the Phillips mill on Pike Creek was built by Oliver Evans, which is probably correct (Brinton notebook D, HSD). McDaniel heirs are not shown with both a saw and a grist mill until the 1868 Beers map, which suggests that the mill could not have been built by Oliver Evans earlier in the 19th century, as Brinton thought.

C. THE PHILLIPS MILL SEAT AND THE WOODWARD/ TRUMP/BROADBENT /TAYLOR TEXTILE MILL (FIGURES 6.2 - 6.8)

The history of the Phillips mill and the textile mill are intertwined (Table 6.1). When Jeremiah Ball died in July 1734, he left about 400 acres to his sons Jeremiah and William as tenants in common. They divided the property, and in 1748 Jeremiah conveyed his 200 acres to Thomas Reece (or Rice), who died intestate. In 1789, the Orphans Court ordered a division, but commissioners determined that the Thomas Rice land could not be divided and still remain a profitable tract. In 1790, the court set a value on the land and Joseph Reece (Rice) received the land after his elder brothers declined to accept it.

Joseph Reece (Rice) assumed that his father's title to the property had been in good standing and proceeded with developing the powerful mill seat potential of Pike Creek. In August 1795, he agreed to sell a part of the seat to John Phillips, a member of a prominent local milling family (New Castle Deed Book R 2, page 370; Chancery case P#17). This sale is mapped on Figure 6.3.

The part Phillips bought was bounded in part by Pike Creek, but its eastern (uphill) boundary followed a contour line, indicating that a mill race was either proposed or already built as the inland boundary of the property.

Samuel and Rachel Barker had other ideas. Rachel Barker was a daughter of Jeremiah Ball, the elder, and insisted on her share of her brothers' holdings. The Barkers' first petition for relief was rejected by the courts, but they did not give up their claim. This was to bring disaster to John Phillips.

Phillips obtained additional water impoundment rights from an upstream neighbor. In a deed dated January 2, 1796, Robert Crawford granted Phillips the right to raise a dam four feet high across Pike Creek at a narrow point in the valley, nearly a half mile above the present bridge site (see Figure 6.2; New Castle Deed Book P 2, page 403).

Construction of the mill involved considerable expense, including stone foundations, huge timber components, and at least one run of stones, although two were more common. Rice did most of the hauling for the project, and supplied some of the materials. Among the goods Rice hauled was a quantity of plaster of paris, which was used to assemble millstones that had been made in pieces. According to Amos Brinton, writing a century later, the Phillips mill was designed by Oliver Evans and incorporated all of his innovations. Brinton's account is somewhat garbled by confusion with McDaniel's later mill, upstream. Brinton refers to Phillips' mill as "The Pioneer Mill", meaning presumably that it was one of the first of Oliver Evans' new constructions.

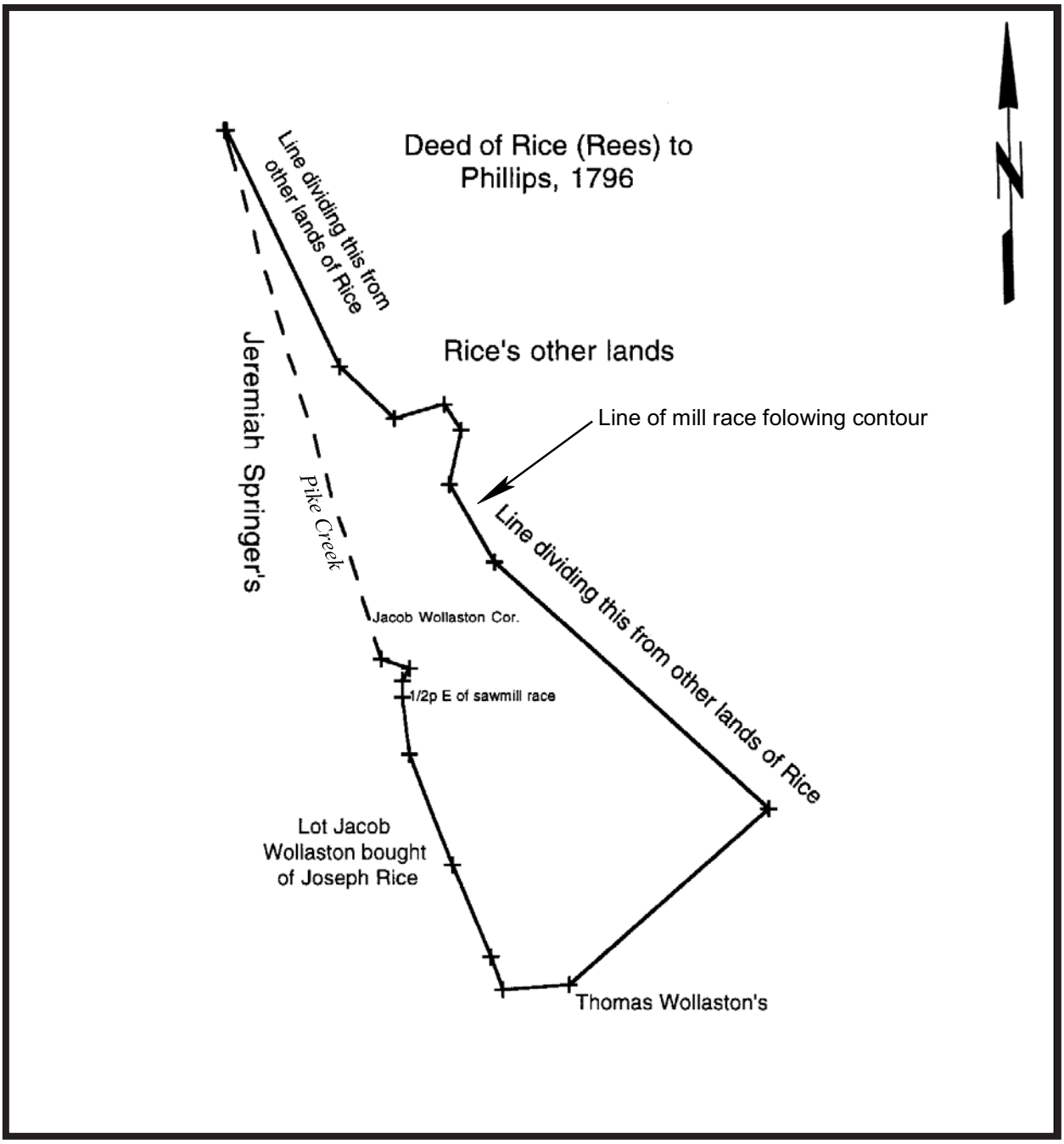


Figure 6.3. The boundaries of the property sold by Joseph Reece (Rice) to John Phillips in 1795. The map indicates the course of the proposed mill race (on the east side of the property) and the approximate location of Wollaston's sawmill just upstream from the modern bridge on the east side of Pike Creek. The dashed line represents the area where Pike Creek is the west boundary of the property. Source: New Castle Deed Book R-2, page 370; chancery Case P#17.

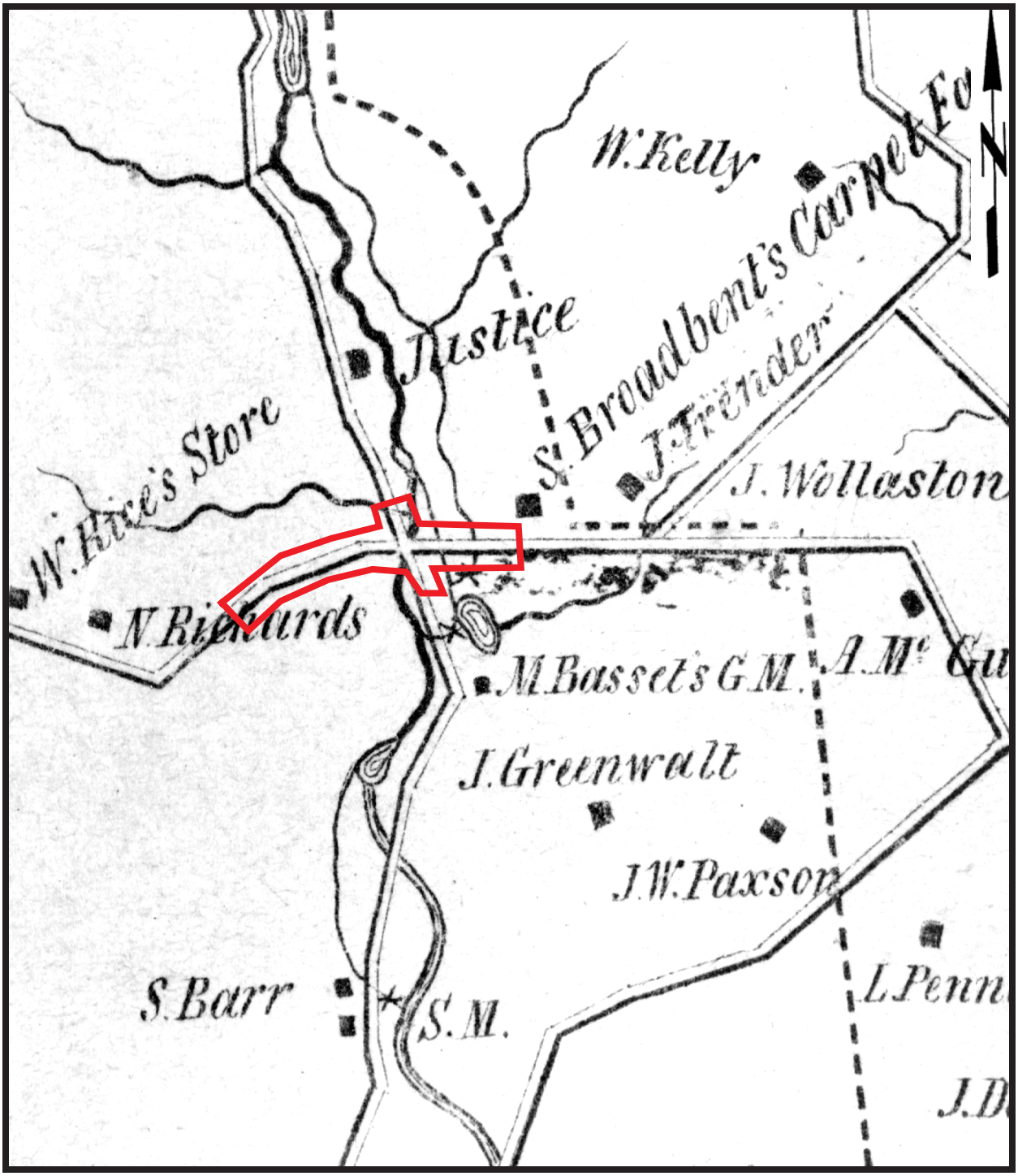


Figure 6.4. Rea and Price. *Map of New Castle County, Delaware*. 1849. This map shows the overlapping mill race system on Pike Creek and the Broadbent carpet factory, powered by the 1796 upper dam. The sawmill at the bottom, opposite the "S. Barr" label is the old Johnson saw and grist mill seat. Mark Bassett is shown as the operator of the old Wollaston mill, which he did not actually buy until a few years later.

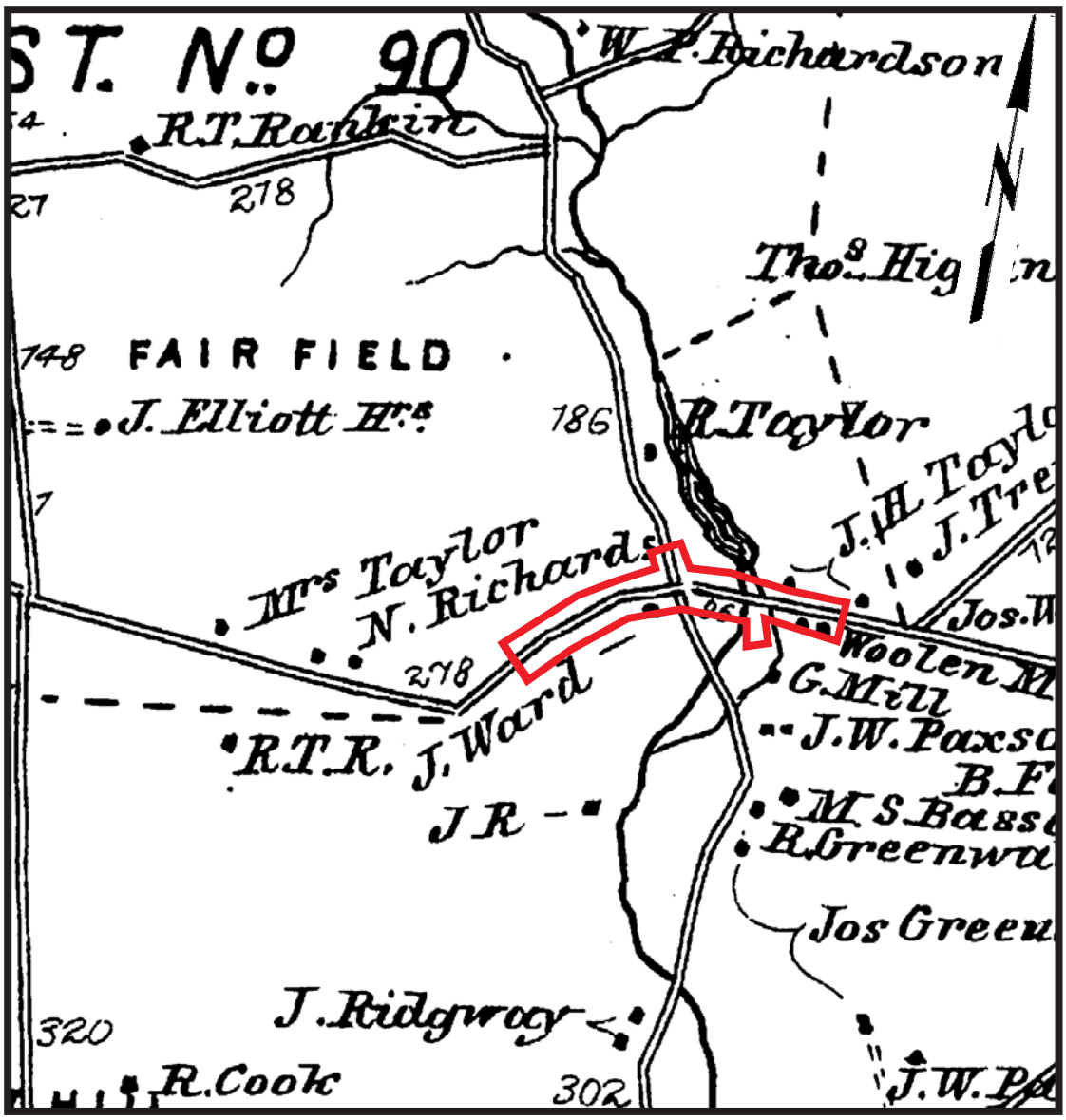


Figure 6.5. Beers, 1868. This much enlarged detail of the 1868 Beers Atlas map shows the original course of the north south Pike Creek road, crossing the creek and the race below the project area. No race or dam is shown serving the Taylor woolen factory, which may indicate that the power source has been changed from the upper dam to steam power. The sawmill below Ridgeway's Bridge appears to be gone as well, and the Johnson property is owned by J. Ridg[e]way. The Ward residence is shown, apparently, close to the road at the bridge.

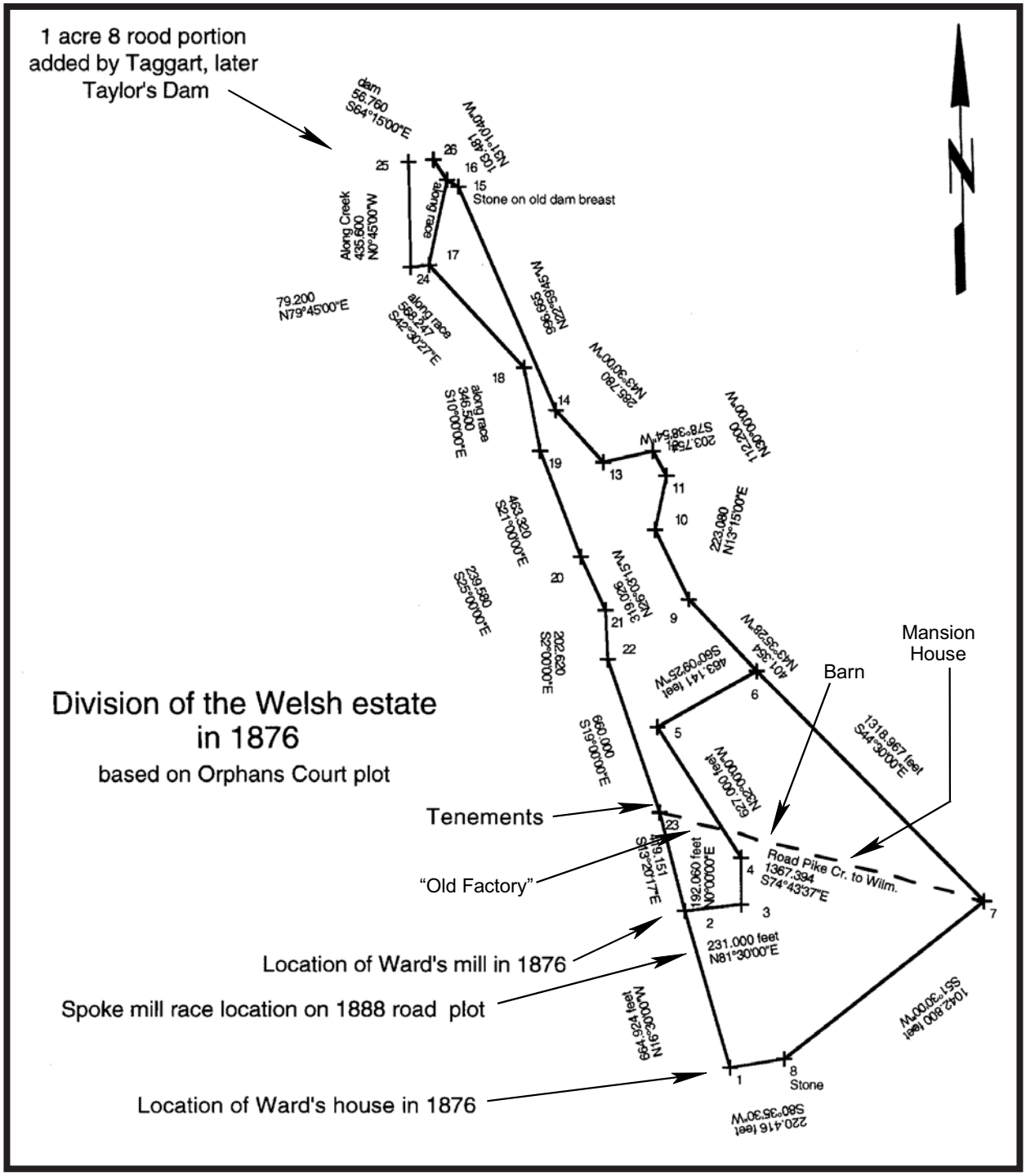
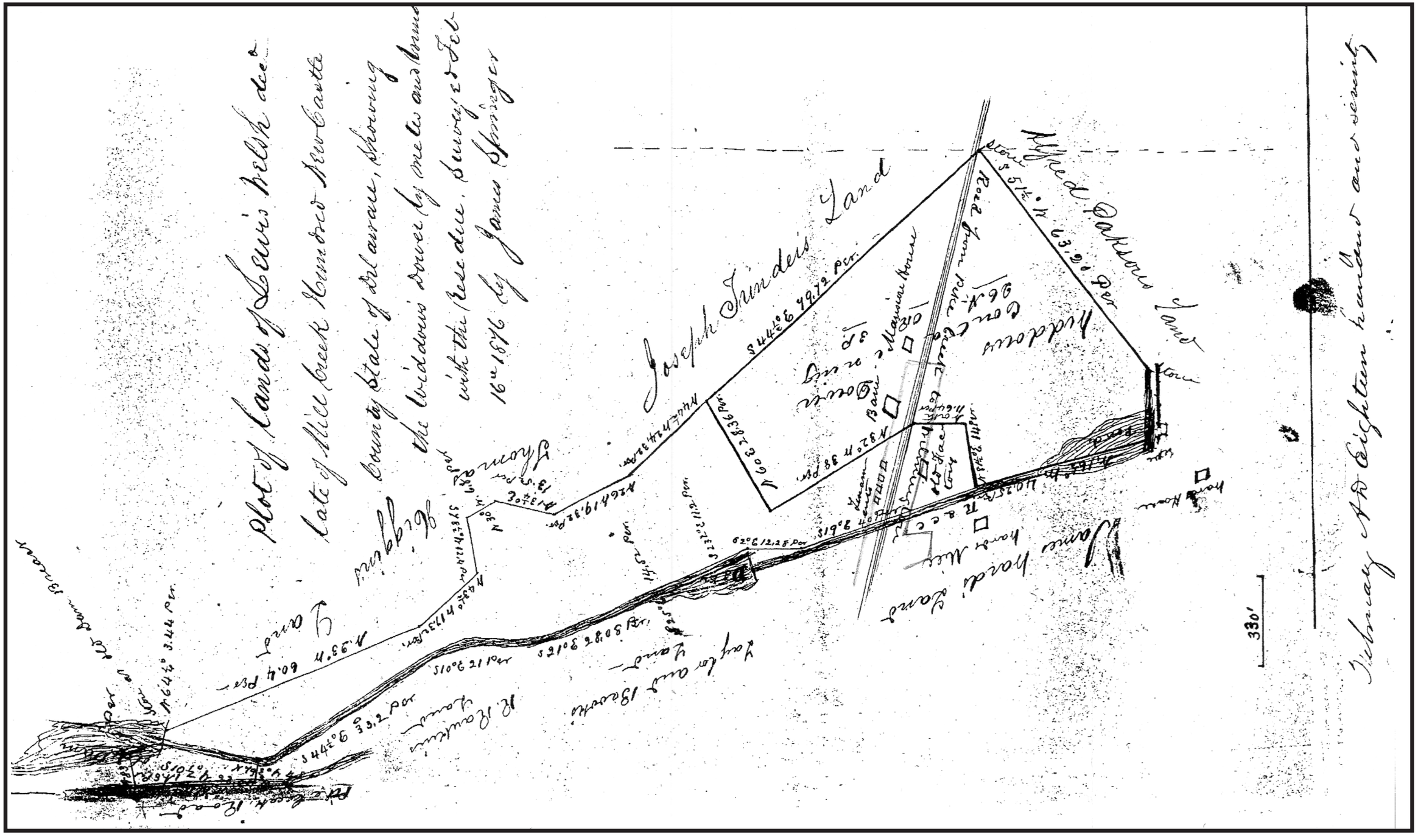


Figure 6.7. Redraft of the 1876 Orphans Court Map with Commentary.


Plot of Lands of Lewis Welsh dec.
late of Mill Creek Hundred New Castle
County State of Delaware, Showing
the Widows Dower by me laid out
with the Rec. dec. Surveyor Feb
16th 1876 by James Spencer
Joseph Sinclair's Land
Alfred Parsons Land
Haddaway
Gen. Geo. Cline
Road from Pike Creek
Mill Race
Dam
Stone House
Stone Barn
Stone Bridge
Stone Dam
Stone Road
Stone Fence
Stone Wall
Stone Barn
Stone House
Stone Mill
Stone Bridge
Stone Road
Stone Dam

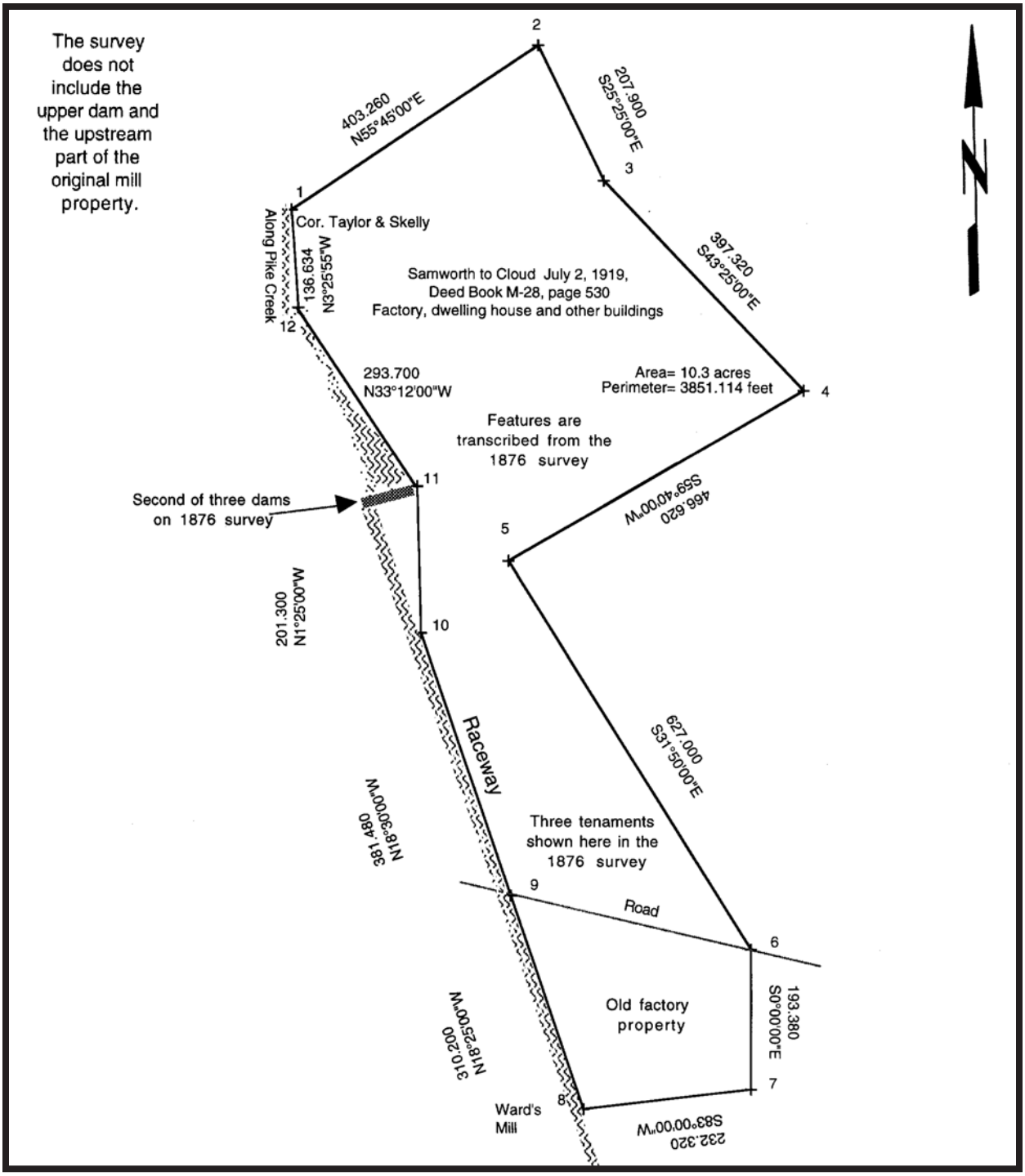


Figure 6.8. In this redraft of a 1919 survey it is clear that the water power from the upper dam is not a factor in the property's value, because it was no longer part of the property.

The Mill Creek Hundred 1804 assessment (Table 5.1) credits John Phillips with 40 acres, a log house, and a merchant mill (ms. assessment, Delaware Archives). The merchant mill apparently stood on the east bank of Pike Creek, about 90 feet north of the present bridge. An 1811 order for opening a road between Phillips' house and Limestone Road indicates that Phillips lived on the north side of the modern Old Coach Road (New Castle County Road Papers).

The race for this new merchant mill (the upper race on Figure 6.2) must have been about 2,000 feet long. With a very high fall, possibly as much as 20 feet, it could have used a very powerful overshot wheel. Developing technology might have required this much power to run the complex machinery of a large scale Evans mill. Phillips' purchase of a tree by the race from Rice indicates that the race had been dug along the property line.

Rice's hauling accounts indicate that construction took place mostly in 1796. Clay was pulled out of the "mill pit" in April. In August, he hauled the mill beam, and in October 1796, Rice hauled "100 perches of building stone for the mill," and a few months later he hauled wheat to Solomon Hersey's mill on Red Clay (now Marshallton). Work on the dam was then ongoing; clay was hauled to the dam in November.

During 1797, Rice was hauling gravel to the dam, and by the 1798 milling season, flour was being hauled. Pike Creek Mills was in business, but the disputed sale from the Balls to Reece was coming back to haunt Phillips. After Phillips had built his mill and log house, at a cost of more than ,2,000, the Barkers sued for ejectment, which of course would have given them title to an expensive piece of industrial property for little more than legal fees and court costs. Rice and Phillips defended the suit, but Rice ran out of money and Phillips found himself bearing the whole cost. Mrs. Barker's counsel insisted that her brothers had had only a life estate, and therefore could not have sold the property to Thomas Reece (Rice) many years earlier. Joseph Rice then made a settlement with the Barkers and subsequently sued Phillips for the costs of the litigation. Between 1798 and 1807, there were 12 judgments against John Phillips in Common Pleas Court. Between 1803 and 1815, the Delaware Supreme Court entered 20.

While the courts considered, Phillips incurred debts he could not repay, many of them within the merchant milling community. In 1815, Joseph Hill and Solomon Hersey sued him for payment on a large amount of grain he had bought. These two millers sought $800 in damages. Thomas Phillips (John's brother) sued him for another $6,210 in 1816, and Isaac Hersey sued him later that year for $3,653 (New Castle Common Pleas December Term 1815, May Term 1816). Another creditor was Jesse Tyson, whose mill on White Clay Creek stood on the site later occupied by the Dean woolen mill in Newark. All of these debts appear to have developed from grain trading transactions among Quaker millers.

While he was trying to sort out the apparent defects in his title, Phillips lived at the Pike Creek Mills and attempted to develop his merchant milling business. Surviving accounts describe wheat hauled from Christiana Bridge, New Castle, and from other mills in the area. Some of the grain came from as far away as The Trap, near Odessa, Delaware. Flour went to Wilmington as well as to other destinations. Barrels were carted from Wilmington (New Castle Chancery Case P#17).

The Court of General Sessions ordered creation of a private road to the mill in 1809 and 1810. The return of this road provides the precise location of the Phillips mill. The beginning point of this road was on the present Old Coach Road, five-and-a-half

perches (about 90 feet) downstream from the northwest corner of the mill. From the beginning point, the road was to extend 65 perches (1072.5 feet) to a point near Jacob Wollaston's merchant mill, part of which is still standing. The road also passed through the Johnston mill property farther down the creek, and finally to the main road that was the predecessor of the modern Kirkwood Highway (New Castle County Road Book 2:44).

John did his banking in Elkton, Maryland, where he drew from an apparent line of credit even as his fortunes declined. He died March 25, 1817, a few days after the sheriff sold his personal property to satisfy creditors. In a vain effort to recover his finances, on his death bed, John Phillips allegedly asked his neighbor Joseph Wollaston to buy back a crop of ripening grain still on the field. His widow, Mary, and his daughter, Mary Ann, were destitute (New Castle Chancery, Joseph Wollaston v. Thomas Phillips et al 1819 1825). The mill property was sold by the sheriff in 1819 to pay Phillips' debts; his brother Thomas lost his grist and saw mills in White Clay Creek Hundred in 1824. Thomas was already gone from the scene; witnesses testified that he absconded in 1823.

George Woodward, an innkeeper, bought the 60-acre Phillips property, described as including a merchant mill on Pike Creek, at a sheriff's sale on November 13, 1819. He immediately conveyed it to Jesse Trump, Jr., by a deed dated two days later. The purchase price was stated as $4,350 (New Castle Deed Book W 3:141). Woodward took back a mortgage (New Castle Deed Book V 3, page 531).

In 1821, Trump and his wife Maria mortgaged the property to Mary Close of Philadelphia for $4,637, which was considerably more than they had paid for it (Archives Deeds T3#46). The Trumps were evidently building a new factory. After Jesse Trump died, Maria Trump married Samuel Laird. Again, the sheriff sold the property, pursuant to the original purchase money mortgage of Woodward (New Castle Deed Book V 3, page 531). The tract was still described as containing a merchant mill in the sheriff's deed to Calvin Taggart of Wilmington in 1841 (New Castle Deed Book H 5, page 487).

1. Broadbent's Textile Factory

During his two-year tenure, Taggart obtained title to the site containing the four foot dam upstream. He sold the property, together with the enlarged dam site, to Stephen Broadbent, who was described in the deed as a manufacturer. His was probably the structure that was uncovered archeologically, and its walls were still visible in living memory.

Broadbent moved his carpet making operation from Brandywine Hundred into the property, occupying a factory building along the south side of the present Old Coach Road, then described as leading from Milford Crossroads to Newport. Broadbent is listed in the 1852 assessment with 61 acres, a stone house, a factory, and tenements. There is no mention of a merchant mill, so presumably it had ceased to operate sometime between 1841 and 1849, although it is mentioned in later deeds. The 1849 map (Figure 6.4) shows a water wheel symbol south of the road along the old upper race, in the general factory area.

Two of Broadbent's employees would later figure prominently in the history of local textile mills. The Pillings, who had moved with Broadbent about 1842 from his old plant in Brandywine Hundred, would prosper as partners in a woolen mill at Newark.

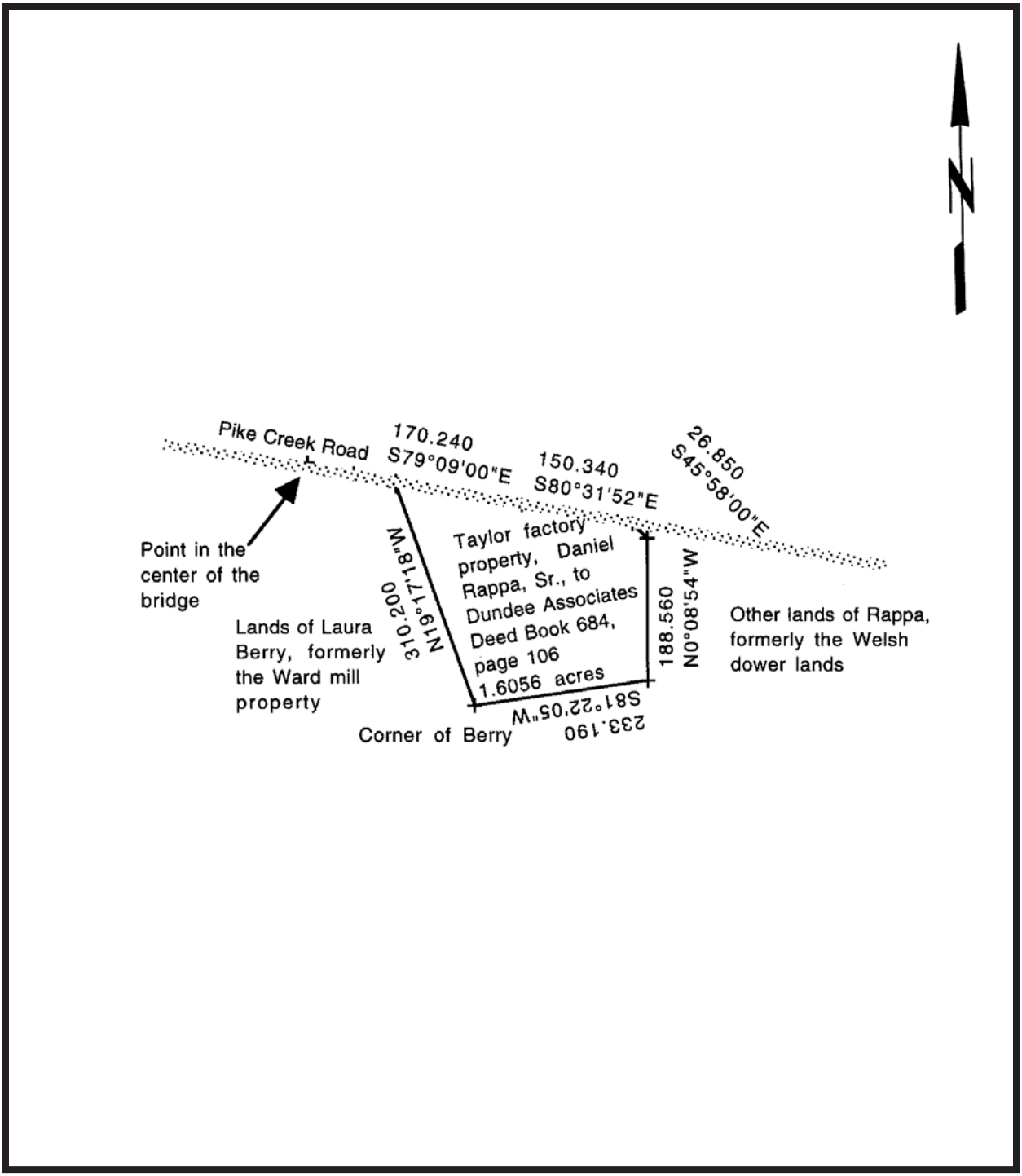


Figure 6.9. The factory property as a separate parcel. When the factory site became a separate parcel after 1876, the old Ward race remained its western boundary.

Table 6.1.
The Woodward/Trump/Broadbent/Taylor
Textile Mill Site: Sequence of Ownership

Owner	Date	Reference
Jeremiah Ball	Before 1734	
Jeremiah Ball (jr) and William Ball	1734	Tenants in common
Thomas Reece (Rice)	1748	
Joseph Reece	1790	
John Phillips	1796	New Castle Deed Book R-2, page 370, chancery Cast P#17
George Woodward	1819	from Sherrif John Moody
Jesse Trump	1819	Mortgage to Woodward: New Castle County Deeds V-3, page 532
Calvin Taggart	1841	Sherrif Sale New Castle County Deeds H-5, page 487
Stephen Broadbent	1843	New Castle County Deeds L-5, page 32
Yeaman Gillingham	1853	Sherriff Sale New Castle County Deeds N-6, page 27
James H. Taylor	1868	Sheeriff Sale New Castle County Deeds U-8, page 322
Wilson Welsh	1869	New Castle County Deeds A-9, page 273
Lewis Welsh	1873	New Castle County Deeds E-10, page 388
Sarah Welsh	1877	New Castle County Deeds V-10, page 73
James Skelly	1879	New Castle County Deeds H-11, page 516
Florence Little	1906	New Castle County Deeds B-21, page 140
Thomas G. Samworth	1917	New Castle County Deeds C-27, page 339
Luther A. Cloud	1919	New Castle County Deeds M-28, page 530

2. Two James Taylors

After Broadbent had owned the site for 10 years, the sheriff sold his property to Yeaman Gillingham of Philadelphia, who promptly conveyed it to fellow Philadelphian James Taylor, on July 16, 1853. The deed referred to a dam and a factory (New Castle Deed Book L 5, page 32). After Taylor died in 1868, his creditors obtained an order for a sheriff's sale. The property was then conveyed to James H. Taylor, who had been the administrator of the estate. The sheriff's deed clearly describes both a merchant mill and a factory. The atlas map of the same year illustrates neither the merchant mill nor the upper dam that would have powered it, although it does show two buildings on the south side of Henderson Road in the area of the textile mill (Figure 6.5; New Castle Deed Book U 8, page 322).

James H. Taylor also was in the textile business. He had opened a mill at Stanton about 1858 (Gibson 1966:51). The Stanton mill was powered by a race that fell into White Clay Creek, which may have been a more efficient power source. At the beginning of the Civil War, Taylor had 70 looms making kersey for the federal government. According to a note on the census return for 1870, Taylor's mill failed in that year, during the postwar slump.

3. Later History of the Factory Property

After the Civil War, the textile industry in Mill Creek Hundred quickly faded away. The merchant mill of 1796 may still have been standing upstream from the factory, but the owners did not call themselves millers and the upper race appears to have fallen into disuse. The lower race continued to drive a spoke mill.

In 1869, James H. Taylor conveyed the property, still described as containing a factory and a merchant mill, to Wilson Welsh, also a Philadelphian (New Castle Deed Book A 9, page 273, U 8, page 322). He, in turn, conveyed it to Lewis Welsh in 1873 (New Castle Deed Book E 10, page 388). After the death of Lewis Welsh, his holdings were partitioned by the Orphans Court in 1876 (Figure 6.6). His widow Susan Welsh received the house, barn and 26 acres along the road to Wilmington. She occupied the dower, about 26 acres, until her death in 1897. The industrial property was ordered sold (Figure 6.9; Orphans Court, Lewis Welsh case, 1876).

In order to settle his estate, Susan Welsh, in her role as administratrix of Lewis Welsh, in 1877 conveyed to Sarah Welsh, wife of Wilson, a tract described as containing the factory and merchant mills, excepting her dower. The description probably does not refer to current conditions, because it appears to have been copied verbatim from earlier deeds, complete with deceased adjoiners.

The industrial property was augmented by another parcel south of Pike Creek that Welsh had purchased from Robert Taylor. In March 1879, Wilson Welsh of Philadelphia conveyed the factory tract to James Skelley, also of Philadelphia. Skelly retained the upper dam portion of the property long after he had disposed of the factory. According to Amos Brinton's 1891 notebook, the Broadbent factory burned down in August 1891 (Brinton Notebook D, HSD).

Joseph Mitchell in 1906 conveyed two parcels to Florence Little, widowed daughter in law of the adjoining farmer. The premises were described as containing a factory, dwelling houses, and other buildings. The first parcel was 11 acres on the Pike Creek Road, including the factory site but not the upper portion that had contained the merchant mill

and the upper dam. If the upper dam had powered the textile factory, it was no longer connected. The water power era was drawing to a close in any case. A 1919 deed still described the factory as being on the property (Figures 6.6, 6.7; New Castle Deed Book M 28, page 530).

4. The Archaeological Evidence

The archaeological investigations at the textile mill, detailed in Appendix B, were restricted in scope by the area of direct effect of the roadway project and the presence of private fenced property immediately to the south. The northern portion and portions of the western and southern walls of a rectangular building 68 feet long were located. The evidence suggests that this wall was a rebuild of an earlier structure, and may not itself be structural. Its general location, however, strongly suggests that it is at the site of the textile mill, started possibly as early as the 1820's and certainly in use by 1849. The fill in the limited area of the interior that was sampled suggests that the building was a ruin by the late 19th century, which is consistent with the documentary evidence.

To the east of these foundations was a complex area of foundations, probably related to the waterpower system bringing water from the upper race to the textile factory. A substantial schist wall was traced for 33 feet from a position on the south side of Henderson Road opposite a culvert on the north side, which lies at the approximate location of the upper race. Drain features and an attached brick foundation suggest that this complex was a second building east of the first. Stone piers found immediately to the east of this second structure may have been supports for an elevated flume or raceway at this point.

D. THE WOLLASTON/WARD MILLS

Sometime before 1796 Jacob Wollaston purchased a lot on the bank of Pike Creek, where he built a sawmill a short distance below the Phillips merchant mill, upstream from the present bridge. This lot, calculated at a little more than four acres, contained at least two mill seats during his lifetime. There is reference to the sawmill near the dam, and a gristmill apparently stood on the other side of the creek downstream, about 1,000 feet south of Henderson Road.

The 1804 assessment credits Wollaston with 96 acres, a brick house, a frame barn, a grist mill and a saw mill. According to Scharf (1888:924), the mill owned by Jacob Wollaston in 1804 later became Ward's spoke mill. The property documents indicate, however, that Ward operated a grist mill about 200 feet from his spoke mill, closer to Old Stage Road (Henderson Road).

The first Wollaston sawmill stood on the east bank of Pike Creek near the middle dam (Figure 6.2), but eventually the property was developed with a long race along the east bank. His estate survey less than a decade later shows a fully-developed power system with multiple users (Figures 6.10, 6.11). A race, which still exists in part on the east side of Pike Creek Road, ran from the middle dam about 1,500 feet to another dam across the race on the line between Jacob Wollaston's mill lot and Thomas Wollaston's home lot.

Charles Kellum bought the property from Mark Bassett and his wife Margery in 1850, and then conveyed it for $820 in trust to Ellis Sanders of Wilmington. It was subject to two mortgages, one held by J. Wollaston and the other by Ann Bassett. The trust was for the benefit of Hannah, wife of Hugh Kirkpatrick (New Castle Deeds D 6, page 373).

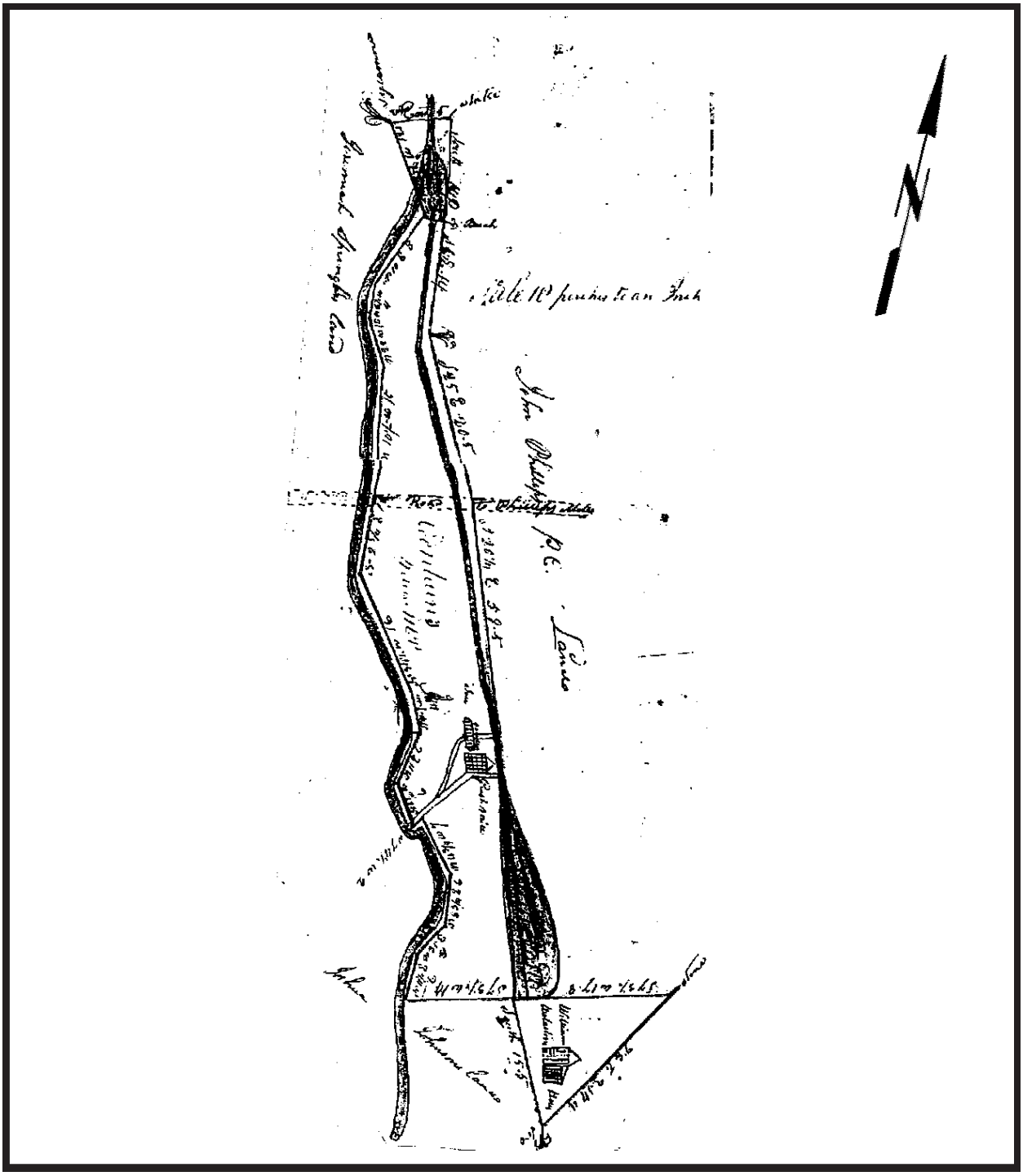


Figure 6.10. The Wollaston Orphans Court Map 1813-1814.

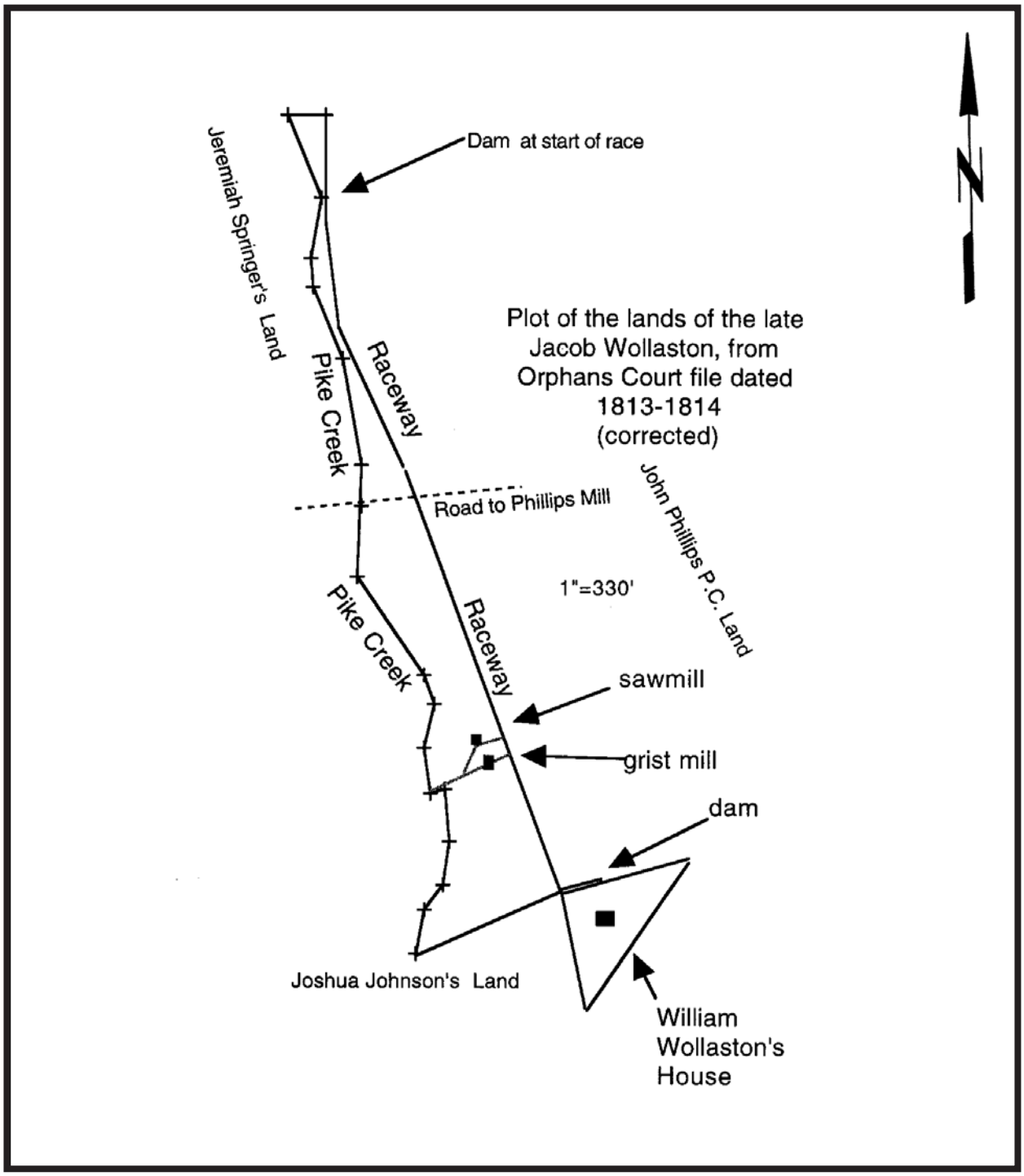


Figure 6.11. This plot is a redraft of the Wollaston estate survey of 1813-1814. The two mills were already in place on the new lower race.

Between 1852 and 1854, the Wollaston mill property was owned by Elijah Tyson. The 1852 assessment states that the property contained seven acres, with a brick house and a frame grist mill.

Mark Bassett and his wife again sold the mill seat in 1858 to William Evans of Mill Creek Hundred for $3,700 (New Castle Deeds F 7, page 266, S 6, page 109). When Evans defaulted in 1863, Bassett bought the property back yet again at a sheriff's sale (New Castle Deeds S 7, page 231). Five years later, on March 11, 1868, Mark Bassett and his wife conveyed the tract to James Ward for $2,750. By now, the Bassetts were living in Atlantic County, New Jersey. Their attempts to get rid of the mill seat finally bore fruit, after 18 years of trying to find a solvent buyer.

Ward, a young Irish immigrant, had occupied the farm across the creek. He opened a spoke mill in the old Wollaston merchant mill, according to Scharf (1888) but later records show his spoke mill was located farther upstream (Figure 6.12). Wooden spoked wheels were a major product in the Wilmington market, where carriage makers were numerous. The Greenbank mill, a short distance away on Red Clay Creek, also made spokes.

The Ward property occupied the floodplain of Pike Creek, with its mill race along the northeast boundary. The race, being the eastern property boundary, abutted the Broadbent textile factory property. Jane Morrison obtained the Ward property by sheriff's deed October 7, 1890, and sold it in 1893 to Isaac Steele (New Castle Deeds B 15, page 552). Steele and his wife, in turn, sold a small part of it to James Skelley, owner of the factory tract (New Castle Deeds W 17, page 147).

A ruined mill still stands on the former Ward property, formerly powered through a sheet iron flume from the race. The notoriously unreliable Beers Atlas shows the race downhill from the grist mill, which is physically impossible. At the south end of the Ward property, the original Pike Creek Road crossed the stream. Nineteenth century deeds describe a garden fence at this point, indicating that this may have been a domestic site.

E. JOSHUA JOHNSTON'S MILLS (FIGURE 6.13)

The next neighbor downstream was the Johnson, or Johnston, family, who operated a fulling mill, a gristmill, and a saw mill in addition to farming (Figure 6.13) (Gibson 1966:27). Joshua Johnston's property included a dam across Pike Creek at the upstream end of his property, adjoining the lower Wollaston mill race dam.

In the 1804 assessment (Table 5.1), Joshua Johnston is credited with 27 acres on which stood a fulling mill and a stone house. His father, Robert, died in 1809 and left him a grist mill and a saw mill. The 1816 assessment shows Joshua Johnston with 127 acres containing a grist mill, saw mill, a stone house, a brick house, and fulling mill. The 100 acres had
been the property described in 1804 as belonging to Robert Johnston with a grist mill and saw mill. Both apparently were powered by the dam at the top of the property.

Joshua Johnston's fulling mill accounts for 1818 1825, now among his papers at the Historical Society of Delaware, includes a settlement with John Reese (Rice), millwright, in 1819. Among the activities reflected by the accounts are fulling, carding, and weaving.

Part of the Johnston property was later added to the Little farmstead upstream. Joshua's son Samuel eventually became a merchant and left the family mill seat to keep store in Newport.

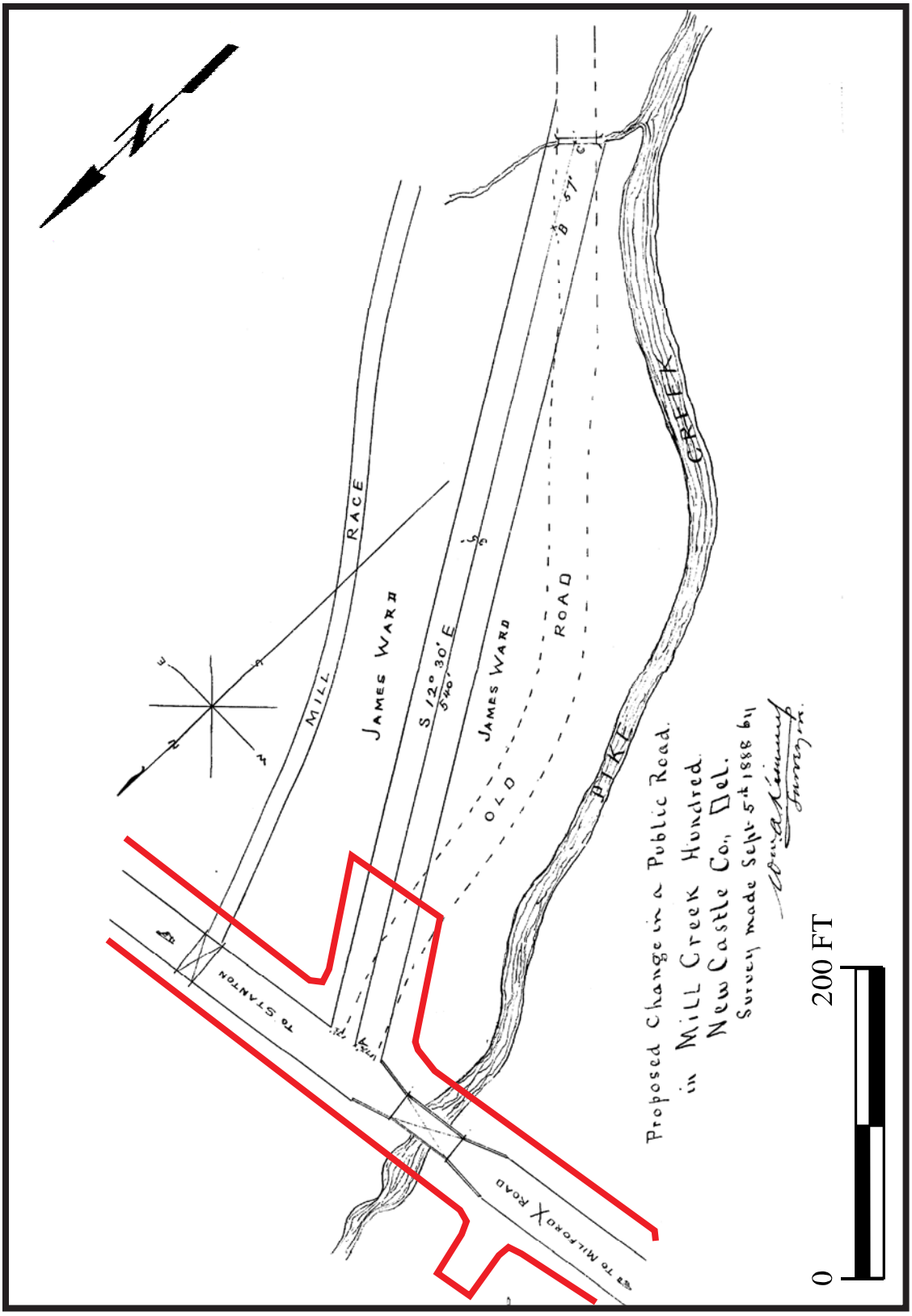


Figure 6.12. This survey from the New Castle road papers shows the location of the spoke mill race, on the right, 540 feet from today's "Old Coach" road, and about halfway to Wollaston's mill. The road still follows this altered course, and the walls of the Wollaston mill are still standing, farther downstream. The 1868 Beers map (Figure 6.5) appears to show the spoke mill in the Wollaston mill building, and Scharf's 1888 history repeats the same statement. Limits of construction shown in red.

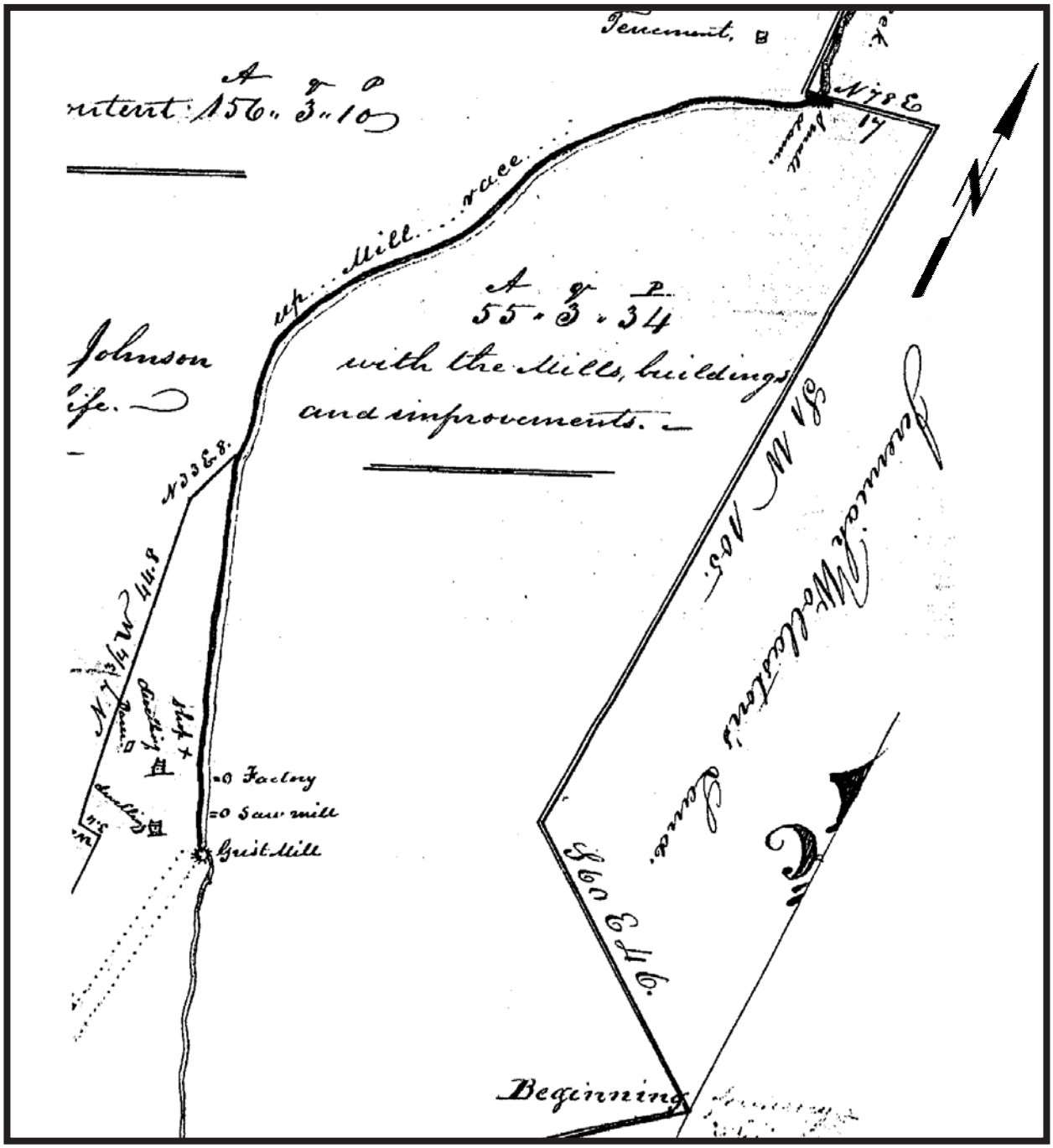


Figure 6.13. When fuller and miller Joshua Johnson died, the Orphans Court divided his property between his son Samuel and his widow. Samuel's property, shown in this segment of the 1831 survey, included the sawmill, gristmill and woolen factory. The lane at lower left is on the approximate course of the road along Pike Creek today. The next property north belonged then to Christopher Springer, and later became the first component of Little's farm. Little later obtained the upper part of this tract, including the dam site.