

**“In Digging My Dry Well”: Examining Early Life on Monticello Mountain**  
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From 1768 until his death in 1826, Thomas Jefferson developed and dwelt on an expansive working plantation on Monticello Mountain. **SLIDE 2** The heart of this thriving community was the mountaintop, which consisted of his mansion, dependencies, and kitchen yard, as well as a street lined with slave workshops and dwellings called Mulberry Row. This plantation core was the focus of the first professional archaeology conducted at Monticello, which began in the late 1970s. Re-analysis of these excavations is part of an on-going project called the Mulberry Row Reassessment, or MRR, which began in 2001 with a re-analysis of several slave quarter sites along Mulberry Row by the Digital Archaeological Archive of Comparative Slavery (DAACS), housed at Monticello. Using the same rigorous classification and measurement protocols developed by DAACS, our department has recently focused on re-analyzing the mountaintop work areas, which include the remainder of Mulberry Row structures and features in the kitchen yard area. Our analysis focuses on one such feature in the kitchen yard called the dry well, which is a cold storage feature constructed during Jefferson’s earliest occupation at Monticello.

Investigation of the dry well at Monticello provides a unique opportunity to examine Jefferson’s early domestic life and his initial manipulation of his plantation landscape. We revisit several basic questions: when was the dry well constructed, used, and abandoned? How does it fit into Jefferson’s vision for the construction of his home, dependencies, and outbuildings? Furthermore, the deposits within the dry well illustrate the complexities of interpreting fill episodes and identifying the sources of secondary deposits. By utilizing research from different sources, including historical documents, archaeological findings, and analytical statistical methods such as correspondence analysis, the following analysis explores these issues and expands our knowledge of life on Jefferson’s burgeoning plantation.

Specific details about the early construction and development of what would become Jefferson’s mountain remain unknown. **SLIDE 3** We do know that Jefferson planned to move from his parents’ home at Shadwell to Monticello mountain in the early 1770s. In 1768 the top of the mountain was leveled and by the end of 1769 a small bachelor home, now known as the

South Pavilion, was complete. **SLIDE 4** By the middle of 1772, construction had begun on the mansion itself. Additional dates for the construction of the first Monticello are unclear, as the completion of the first phase of the house was drawn out by Jefferson's busy civil service schedule, the embargo on British goods, and his desire to avoid going into debt.

The landscape surrounding the house also changed during Jefferson's early occupation of the mountain. His plans for the grounds were amended and redrawn many times in regards to dependencies, store rooms, plantings, and garden structures. **SLIDE 5** One of the areas undergoing change was the west kitchen yard located south of the South Pavilion; the dry well itself is about 62 feet from the basement kitchen. It is possible that this feature is the only in-ground evidence of Jefferson's idea for a second set of dependencies built from the South and North pavilions, respectively.

**SLIDE 6** The only written account of the dry well construction comes from an entry in one of Jefferson's memorandum books, roughly dated to December of 1770. The available architectural plans drawn by Jefferson reveal his initial idea of the dry well as a storage space. **SLIDE 7** A hand drawn plan which most likely dates to early 1771 notes an extension of rooms running west from the South Pavilion. **SLIDE 8** Although much of the plan is missing, the presumably later hardline drawing shows the dry well as a space with a rectangular rather than circular staircase and a proposed depth of 23 feet 4 inches. These additional L-shaped dependencies leading from the pavilions were never realized. **SLIDE 9** The final plan in which the dry well appears is a nearly complete drawing of the basement rooms below Monticello. This plan was clearly amended many times over several years, with elements such as the bows flanking the mansion added as late as 1775. Since this feature was one of the few ideas put into action from these early plans, it is probable that Jefferson realized the necessity of this particular element; it remained in his plans although it was already constructed in its original location in the kitchen yard. Moreover, the tangible presence of the dry well on the early mountaintop represents Jefferson's attempt to carry out his elaborate designs despite his absences during initial construction.

The dry well appears unfinished compared to the original hand drawn and table drawn plans. While the sides were squared off and the subsoil floor was intact, no evidence of stairs or any covering as shown in the drawings was found. **SLIDE 10** The six wine bottles found in situ on the subsoil floor are the only evidence indicating the dry well's use as a large cellar. Five of

the bottles were recorded as “sealed” by the excavators; these bottles contained an unidentified liquid, cork fragments, as well as partial and complete cherries, cranberries, and possibly grapes.

**SLIDE 11** Given that the initial chemical analysis of the contents confirmed that the bottles contained no alcohol, the fruits may have been partially cooked or blanched prior to bottling.

This practice of preserving fruit in wine bottles or other containers was common during the 17<sup>th</sup> and 18<sup>th</sup> centuries. **SLIDE 12** For instance, at least 36 buried wine bottles filled with cherries were found buried beneath the kitchen and in the yard of the Wetherburn’s Tavern in Williamsburg. It is unclear why the dry well bottles were left in situ; perhaps their contents had spoiled and thus they were not retrieved prior to filling. Overall, the presence of the intact bottles in the dry well indicates the use of this feature for storage.

**SLIDE 13** The dry well is the largest feature unearthed at Monticello to date. **SLIDE 14** At the end of excavation, **SLIDE 15** it measured almost 19 feet in the center and was 18.5 by 17 feet at its widest points. It was excavated from 1980 through 1982 by the Monticello Department of Archaeology, then under the direction of William Kelso, using the Wheeler-Box method. **SLIDE 16** Each of the units seen here was ten feet by ten feet, including balks. Feature deposits were divided into contexts within four test units and four balks. Artifact recovery methods did not include the use of screens; however, documents from the original excavations indicate that some samples, not identified as of yet, were floated or water screened. In addition, although several soil and organic samples were externally analyzed, only some of those results were available for review.

Before detailing our analysis of the fill, a comparison of the dry well to contemporary deposits on the mountaintop is necessary to determine if the deposits were from Jefferson’s household or from other sources. Correspondence analysis is the most useful method to answer this question because it can reveal patterns in data based on multiple variables. A CA of ceramic ware types and decorative techniques recovered from Monticello slave sites and the dry well indicates that this assemblage is one of the earliest, if not the earliest, at Monticello. **SLIDE 17** Theoretically, assemblages with similar artifact compositions should group together on a CA output graph. As shown here, the dry well groups with the earliest catalogued sites including Phase 1 of Mulberry Row Buildings O and L and plowed slave quarter sites 7 and 8, shown here as orange triangles.

In terms of particular ceramic assemblage attributes, the dry well is similar to the contemporary slave sites in ceramic ware types, forms and percentage of decorated ceramics. Discernible differences appear in a comparison of decoration genres by ware type. **SLIDE 18** For instance, in terms of creamware, the dry well contains more feather edge and other molded decorations than contemporary assemblages. It is also lacking in Queen's and Royal patterns, suggesting its earlier date. **SLIDE 19** For Chinese porcelain, the dry well includes proportionately more overglaze sherds and less underglaze sherds. Overall, these ceramic patterns demonstrate that, while the dry well is generally similar to the other sites, it differs in key decorative styles. Given its proximity to the house, documentary evidence, and artifact assemblage, the dry well is treated as a principally Jefferson household deposit with a mixture of refuse from non-elite areas.

Within the dry well strata, stratigraphic groups, or SGs, were assigned to contexts that were excavated separately but correlate with one another as part of a larger deposit. **SLIDE 20** The SGs were derived from soil descriptions and other notes recorded by the original excavators and a Harris Matrix was created to demonstrate the stratigraphic relationship between the deposits. The fill was highly variable and included deposits of ash, subsoil-like clay, and various clay and loam mixtures. Nine distinct SGs were identified, as well as four contexts that remained as unique strata.

Overall, the dry well fill contained approximately 8300 artifacts. **SLIDE 21** This includes 4450 general artifacts such as nails, window glass and charcoal; 1879 ceramic sherds; 1854 glass artifacts including wine bottle glass and stemware; seven utensils, nine buckle fragments and seven buttons. **SLIDE 22** The initial patterns that can be gleaned from our tables are the predominance of creamware, Chinese porcelain and white salt glaze stoneware, suggesting that the dry well deposits date to the mid to late 18<sup>th</sup> century. **SLIDE 23** Furthermore, with the exception of small, unidentifiable sherds, these types were almost exclusively in the form of table and teawares. Given its location close to the South Pavilion kitchen, there are relatively few utilitarian wares and forms. In addition, a large quantity of faunal specimens were recovered, although we currently do not have any faunal data available other than original species and part representation counts analyzed by Diana Crader in 1984. Reanalysis of all faunal specimens is currently underway by Joanne Bowen at Colonial Williamsburg.

Mean Ceramic Dates, or MCDs, were calculated for all contexts and SGs in the dry well and were derived from mean dates for ware type, decoration techniques, and TPQs (*terminus post quem*) related to non-ceramic artifacts. To correct for the presence of intrusive artifacts and sample size variations, contexts from SG3 were removed, since it represents a deposit that includes intrusive artifacts deposited from plowing, utility line work, and postholes. In addition, contexts with a sample size of less than 30 ceramics, which includes all of SG5, were removed. The resulting data **SLIDE 24** is shown here, organized by contexts and SGs. The contexts span a date range of 1768 to 1786, while the SGs span a shorter date range of 1771 to 1780. Using the same criteria, an MCD of 1783 was calculated for the dry well in its entirety. Finally, the “BLUE,” or Best Linear Unbiased Estimator, MCD for the feature is 1786. Therefore, taking these MCDs with a grain of salt, we conclude that the dry well was in use and/or open from approximately 1771 to 1783, while the deposits themselves date between approximately 1768 and 1783.

In addition, this chart **SLIDE 25** demonstrates that the chronological order of both the contexts and SGs do not correspond to stratigraphic ordering and relationships. This information suggests that, while the dry well may have been filled relatively quickly, the deposits are jumbled assemblages from a variety of sources that vary over time. Further analysis supports this theory that the fill in the dry well represents secondary deposits from sources created over a 15 year time period.

The TPQ dates for various artifact classes correspond with the MCDs. **SLIDE 26** First, the tobacco pipe mean date for the feature calculated from 64<sup>th</sup> bore diameters using Harrington’s formula is 1775.48, based on 69 available pipe stem fragments. Second, leaded glass decorations have date ranges that also correspond to the MCDs. **SLIDE 27** These include a Madeira wine bottle decanter, which has a date range of 1760 to 1775 given its acid etched and copper wheel engraved designs. **SLIDE 28** Other identifiable decorations occurring on leaded stemware include air twist stems dating from 1740 to 1770, while the enamel twist stem was manufactured from 1750-1780. Although the sample sizes of the tobacco pipe stems and leaded glass tablewares are small, their TPQs continue to suggest a fill date of the mid 1770’s to early 1780’s.

Our initial analysis indicates that the dry well was filled with highly variable deposits after its construction and use. To test this hypothesis, we used a series of correspondence

analyses to search for patterns in the data. **SLIDE 29** Using the previous stratigraphic group assignments, we ran a correspondence analysis of the ceramic ware types present in each assemblage. With the exception of SGs 6 and 8, which appear to be significantly similar, an observation that will be revisited below, no clear patterns or relationships between deposits emerged. Several other iterations of CA were generated using various data sets, such as comparing contexts to one another instead of SGs, all of which demonstrated that the assemblages were highly variable. **SLIDE 30** This data manipulation correlates with the MCD analysis to demonstrate that the depositional order of the contexts is not organized temporally. Therefore, we conclude that the dry well strata represent secondary deposits that have temporally and spatially variant origins.

The next step in our investigation was to determine the sources of the diverse dry well fill layers. Since there are no gaps in our MCDs between contexts, it appears that the fill in the dry well is from various deposits that formed over time and were later re-deposited in the dry well. Based on soil descriptions, MCDs, documentary evidence, and artifact assemblages, we grouped the potential sources for the dry well deposits into three categories: household, kitchen, and construction.

Household or domestic artifacts account for almost half of the dry well assemblage and include elite items such as highly decorated ceramics, leaded table glass, decorated stemwares, cufflinks, and buttons. **SLIDE 31** As previously discussed, entertaining and dining related artifacts such as tablewares and teawares compose the overwhelming majority of the ceramics recovered. In addition, these household artifacts are distributed consistently throughout all of the deposits, with deviations in the deposit assemblages more visible in the variable quantities of kitchen and construction related artifacts. This high quantity of elite household items indicates that the fill in the dry well is representative of a time of entertaining and affluence in the Jefferson household.

**SLIDE 32** In addition to house deposits, some of the fill in the dry well possibly came from kitchen areas. The proximity of the dry well to Jefferson's first kitchen in the first floor of the South Pavilion may explain the ash and charcoal deposits between the orange clay and greenstone layers. Although we do not yet have access to a complete faunal analysis, the three SGs described as ash deposits may provide a clue into the origin of these layers. One of the deepest deposits, SG 10, contains the highest percentage of burned ceramics of the stratigraphic

groups – nearly 37% of the ceramics in this context were burned. Since most of these ceramics were burned on the interior and the exterior, it is likely that they burned after use. In addition, numerous burned organic materials, including peach pits, corn cobs, and grain seeds were found in the deepest sections of the dry well. Given the presence of these items, it is possible that ash, charcoal, and burned artifacts were being cleared from kitchen fires and deposited in the dry well.

**SLIDE 33** Numerous brick fragments, brick bats, and specialty bricks recovered from the dry well indicate that the construction phases on the mountain during the 1770s contributed to the feature fill. Furthermore, the specialty bricks recovered match those used exclusively on the exterior of the South Pavilion and the original house chimneys at Monticello. The presence of these bricks, most likely generated before 1778, coincides with the MCD data. In addition, the dry well fill may include soil displaced during the construction of first the cellars in 1771 and later during the addition of bows to the house in 1775 or 1776. **SLIDE 34** Stratigraphic groups 6, 8, and 9 contained over 70 percent of the identified specialty bricks and were composed of either orange-red or yellow-green clays mixed with greenstone. These soil descriptions match those of the sub-soil in the dry well area as well as the subsoil seen during excavations in the wine cellar under the house. Given the estimated date of the specialty bricks and the MCDs for these SGs, it is highly likely that SGs 6, 8, and 9 were generated between 1775 and 1778, during the finishing stages of household construction.

**SLIDE 35** The results of this analysis indicate that the dry well served its original purpose as a cold storage feature and, upon abandonment, was filled with temporally and spatially variant deposits. **SLIDE 36** The recycled wine bottles suggest its usefulness to Jefferson's establishment of his home on the mountain; however, the reason for abandonment remains unclear. **SLIDE 37** There are some excavator's soil descriptions noting the presence of wash lenses or erosion near the subsoil floor, suggesting that the dry well was not immediately filled upon its disuse as a storage location. It may have been abandoned due to its large size, lack of drainage or the completion of the cellars under Monticello.

**SLIDE 38** Given Jefferson's tendency to redesign and formalize the area surrounding the mansion, the filling of the dry well may be explained by the desire to condense old middens, clear architectural debris and dispose of unwanted household and kitchen items. Its location near the

construction of the mansion and the South Pavilion kitchen made the dry well a convenient location for deposition of artifacts and sediments from a range of sources.

**SLIDE 39** On a broader scale, the deposits in the dry well provide valuable information about Thomas Jefferson and his early life on Monticello in several ways. First, the dry well illustrates Jefferson's fickleness in regards to the construction of his home; it is the only evidence that his early plans were partially executed before they were changed into what we see today. Secondly, the dry well is an example of the larger process of landscape manipulation carried out by Jefferson. We know from historical documents and archaeological excavations on the mountaintop that Jefferson was constantly re-arranging his home, nearby structures, and the surrounding landscape as his needs and tastes dictated. The presence of the dry well, as well as the fill within it, is an early example of these manipulations. In addition, the question still remains why Jefferson did not construct a dry well in the final dependencies as planned. Further research of the kitchen yard area may provide an answer to this question.

Finally, this feature serves as a record of the lifestyle of an elite planter just beginning to establish his plantation and his public career. The artifacts recovered from the dry well represent a time period when Jefferson was transitioning from bachelor and lawyer to husband, father, and statesman. This change is marked by the high quantity of fine dining and entertaining artifacts dating to the time when Monticello transitioned from a small, one-person house to a family home and large working plantation. It is our hope that the information presented here will broaden the interpretation of Jefferson's early life at Monticello as it is presented to scholars and visitors.

This analysis is also an example of the benefits of utilizing the DAACS database to query entered data about sites, excavated contexts and artifacts. Further comparisons of the dry well with Monticello slave site assemblages as well as contemporary elite household assemblages will shed light on the extent to which these deposits reflect socioeconomic and regional differences. Statistical analysis of queried data enhances interpretations of deposits by illustrating patterns in excavated contexts and artifact classes. Given the small number of available historic documents, quantitative investigation of the dry well deposits bolsters our understanding of the early period of Jefferson's mountaintop. **SLIDE 40**



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