

NOTES FROM THE FIELD

Reports on Archaeology Projects

Turning Clay into Craft: Field Notes from 2013 Excavations at Pottersville, SC

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On the southeastern fringe of the South Carolina piedmont lies the historic community of Edgefield, renowned for its exemplary production of 19th century alkaline-glazed stoneware. Mass production of these specialized ceramics kept up with demand, in part through a tightly knit network of family-run kilns scattered throughout the region (Horne 1990). In 2011, archaeological investigations were undertaken at the

Carolina). Calfas supervised a team of undergraduate students and volunteers at the Pottersville site, where they succeeded in unearthing and mapping the kiln, which measured an impressive 105 feet in length (Calfas 2012, 2013). The Pottersville kiln was operated by Abner Landrum and began production circa 1815, fueled by the tireless efforts of a number of enslaved African Americans.

During the summer of 2013, new archaeological research was undertaken at the Pottersville and John Landrum sites by collaborating teams supervised by the authors, Fennell, Steen, Taylor, and Christopher Judge (University of South Carolina). While excavations at the John Landrum site focused on residential structures

affiliated with the Rev. John Landrum occupation, researchers at Pottersville turned toward assessing outbuildings associated with stoneware production. Field researchers included several undergraduate students from the University of Illinois and Coastal Carolina University and numerous volunteers organized by local residents Carrie Monday and Rooney Floyd. Over the course of six weeks, students and volunteers gained experience in excavating, mapping and interpreting a site, as well as classifying artifacts.

At the Pottersville site,

field researchers also assisted in conducting a ground penetrating radar survey led by Christopher Thornock, George Wingard, and their colleagues at the Savannah River Archaeological Research Program (SRARP). Students and volunteers at this site also had



Figure 1. Workers digging clay to process in early twentieth century pug mill (seen in background). Adapted from Thornock 2013. Reprinted with permission.

Pottersville (38ED11) and John Landrum (38AK497) sites by collaborating teams led by George Calfas and Chris Fennell (University of Illinois), Carl Steen (Diachronic Research Foundation), Sean Taylor (S.C. Dept. of Natural Resources), and Brooke Kenline (University of South

the opportunity to learn about and conduct a metal detecting survey under the supervision of Patrick Severts and Josh Blackmon of New South Associates. These systematic surveys were carried out in conjunction with shovel test pits in order to identify the most promising loci for excavation. In addition, fieldwork participants and local residents benefitted from a six-week speakers series, entitled "Cultural Creativity, History and Heritage in Edgefield, South Carolina," sponsored by the Edgefield County Historical Society and funded by the South Carolina Humanities Council and the National Endowment for the Humanities.

Archaeology at Pottersville in 2013 focused on obtaining a more detailed understanding of the design and operations of the stoneware manufacturing center. Archival documents related to early 20th century kilns suggest a number of architectural elements necessary for large-scale ceramic production (Calfas 2013; Thornock 2013). These structures include pathways for the movement of raw materials, a large central pug mill for clay processing, turning sheds associated with the formation of vessels, drying sheds for greenware, and possibly separate structures for the addition of slips and glazes for decoration. Historic pug mills typically consisted of large cylindrical drums containing raw

clays, added water and sand that were mixed with robust mechanical paddles affixed to a large crossbeam (Figure 1). This crossbeam, attached to one or more work animals walking in a circular path, churned large volumes of clay (Hebert 1836). Other kiln outbuildings might appear similar to domestic houses or sheds, with a dearth of domestic materials and a proliferation of production-associated artifacts.

Battling an unseasonably rainy summer, our 2013 field crew sought to recover information related to similar associated structures. Over time, the team effectively isolated a number of structures circling the southern face of a large hill capped by the formerly-excavated Pottersville kiln. Using an arbitrary grid encompassing the pasture surrounding the kiln, our team initially opened a series of systematic shovel tests moving from the southeastern edge of the property northward and westward in 10 m increments. One shovel test pit (STP) yielded a high volume of whole bricks, potentially indicative of an underlying structure. Our team subsequently opened a 2x2 m test unit for further examination (EU25), encompassing the initial STP. With initial excavation underway, ground penetrating radar (GPR) analysis, conducted by Chris Thornock and his colleagues from SRARP, surveyed a large swath of

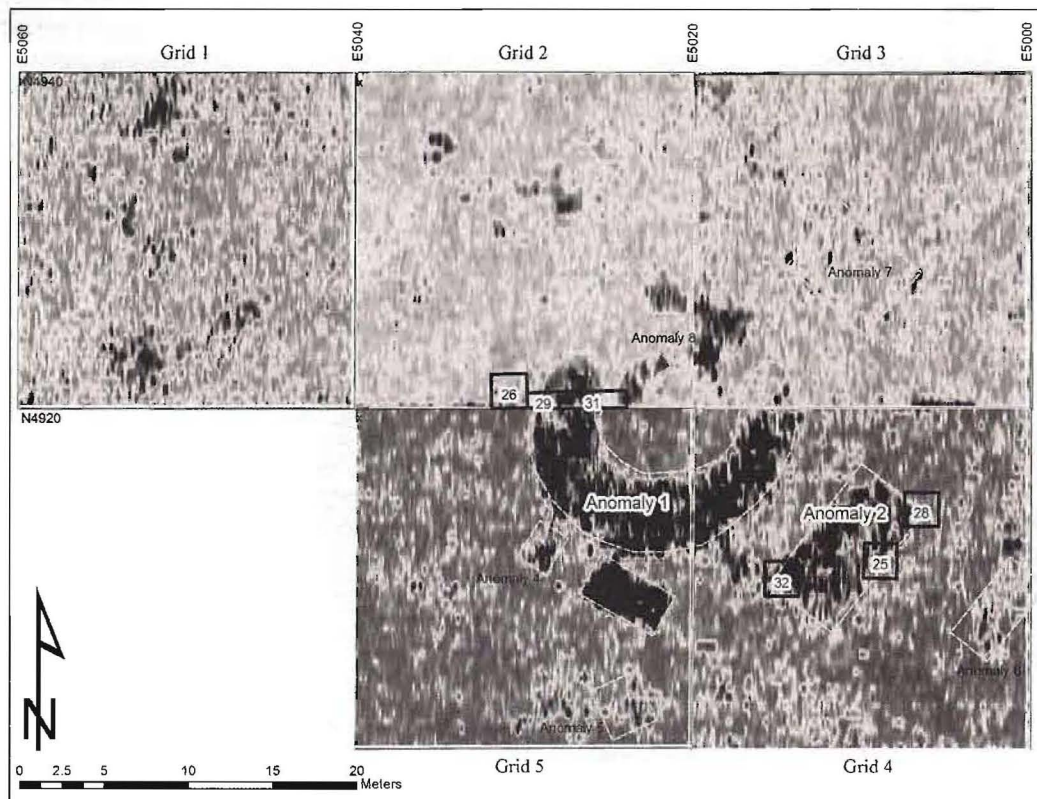


Figure 2. GPR image of Pottersville subsurface anomalies with superimposed delineations of 2013 excavation units. (GPR layer courtesy Christopher Thornock).

pasture south of the Pottersville kiln. A number of possible features, including a large rectangular depression (GPR Anomaly 2) and a semicircular path-like feature (GPR Anomaly 1) confirmed our suspicions of stoneware production-related architecture (Figure 2). The analysis of GPR data initially postulated that Anomaly 1 appeared to exhibit the characteristics of a possible pug mill pathway, while GPR Anomaly 2 seemed ideal for a possible turning shed or drying shed (Thornock 2013). In order to assess the delineation of GPR anomalies, the University of Illinois, Urbana-Champaign (UIUC), field team focused on exposing and documenting these two subsurface features.

With a combination of trusted field methodology and a bit of luck, the location of EU 25 appeared to spatially straddle the southeastern edge of GPR Anomaly 2. In our very first excavation unit, traditional dirt archaeology and state-of-the-art imaging coalesced, revealing a brick wall below the plow zone (Figure 3). Over the next few weeks of excavation, a section of the southern wall and the northeast corner of Anomaly 2 slowly emerged. These brick foundation walls, seeping with a locally-made clay mortar composite, measured approximately 10x5 m in diameter and teemed with waster sherds and large

possible pug mill and the ample space would have been ideal for multiple turning wheels and a seemingly endless supply of processed clay. Furthermore, large glazed vessels, like ones discovered in the southeastern corner of Anomaly 2, would be necessary to store water, raw materials, and recycling containers kept close to the potter's hand during the process of turning.

Several units were also opened to the northwest of EU 25 in an attempt to ground truth GPR Anomaly 1. The team began by excavating a 2x2 m unit (EU26) at the western edge of the semicircular anomaly. The past ground surface encompassing this possible pug mill, churned under the hooves of draft animals, was likely disturbed or eroded when the production area was converted into agricultural fields in the late 19th century. Beneath this residual plow zone, we postulated that the soil would be detectibly more compact along the pug mill pathway due to the constant movement of mules or other domesticated work animals. We also expected that constant fill layers and lenses would appear given the need to combat dredging and erosion along the path.

Beneath the current plow zone, the soil did indeed become denser and more clay-rich with few domestic artifacts. Over the next few weeks, our team excavated

several more units to the east of EU 26 in an attempt to unearth a linear sample through the center of GPR Anomaly 1 (EU 29, EU 31). Further excavation revealed a much larger deposit consisting of charcoal, mortar, and stoneware that extended through EU 29 and part of EU 31, with jumbled ash and fill layers appearing throughout. The profusion of small sherds, burned nails, and assorted detritus indicate a possible demolition event, which may have occurred

after the end of ceramic

production at Pottersville. Due to the unseasonably rainy summer, our team did not have the opportunity to fully excavate EU 31. Based on the GPR image, this unit likely aligned with the central architecture of the pug mill. The trench excavated across GPR Anomaly 1 begins to give



Figure 3. EU 28 at 50 cmbd (Level B2) facing West depicting the northeast corner of possible turning shed (Anomaly 2 as seen in Figure 2). 2013. Reprinted with permission.

segments of alkaline-glazed utilitarian vessels. A dearth of domestic artifacts and the structure's comparably large size suggests that it may have functioned as a turning shed. While no vestiges of turning wheels or machinery remained in situ, the proximity of the structure to a

us an idea of the sheer volume of clay processed to support ceramic mass production at Pottersville.

The results of the UIUC 2013 field season indicate the striking immensity of Pottersville's ceramic production. While most historically documented pug mills depicted in photographs utilize a single work animal and a smaller diameter pathway, the Pottersville pug mill measures an astounding 16 m (just over 50 ft.) in diameter, with its track measuring approximately 5 m (roughly 16 ft.) in width. This size indicates the possible employment of more than one work animal. Furthermore, the presence of at least six other associated rectangular structures, including the 10x5 m turning shed, indicates a vast and complex production center. These structures each contributed a unique function to the broader kiln complex, within which enslaved laborers designed hundreds of thousands of ceramics that would eventually make their way into homes across the southeastern United States. These vessels would come to define a tradition and an artistic craft prized for generations.

References Cited

Calfas, George

2012 Pottersville Site Interpretation and Early Artifact Analysis. *South Carolina Antiquities* 44:102-103.

2013 Nineteenth Century Stoneware Manufacturing at Pottersville, South Carolina: The Discovery of a Dragon Kiln and the Reinterpretation of a Southern Pottery Tradition. Unpublished PhD Dissertation, Department of Anthropology, University of Illinois, Urbana Champaign.

Hebert, Luke

1836 *The Engineers and Mechanics Encyclopedia*. London: Thomas Kelly.

Horne, Catherine Wilson.

1990 *Crossroads of Clay: The Southern Alkaline Glazed Stoneware Tradition*. Columbia: University of South Carolina, McKissick Museum.

Thornock, Christopher L.

2013 Ground Penetrating Radar Work, Pottersville, South Carolina. Report prepared for the Savannah River Archaeological Research Program, Columbia, SC.



Figure 4. Field action shot of crew members excavating EU 28 (northeastern corner of possible turning shed). Used with permission.