

## Pottersville: Site Interpretation and Early Artifact Analysis

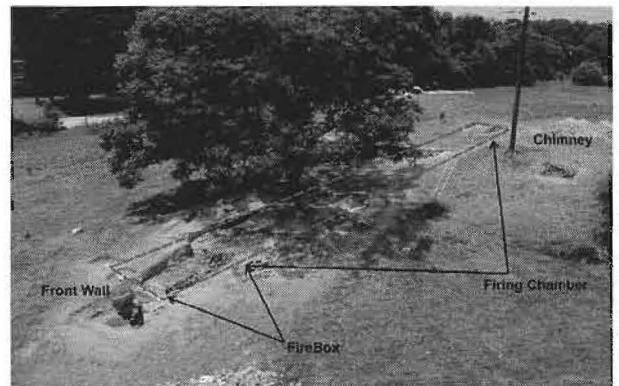
George Calfas, University of Illinois, Urbana-Champaign

Archaeological investigations took place from May 23 through July 1, 2011. Research was led by the University of Illinois at Urbana-Champaign (UIUC), which hosted a summer field school for undergraduate and graduate students. UIUC collaborated with Diachronic Research, the South Carolina Department of Natural Resources, and the University of South Carolina in conducting this archaeological field school. Advice and guidance on methods for investigating kiln remains were also provided by Timothy Scarlett, J.W. Joseph, Linda Carnes-McNaughten, and Christopher Espenshade.

Learning objectives for the field school included the historical background of the Edgefield District, discussion of the Pottersville landscape, and an overview of kiln technology. Specific goals of the project were to locate and identify several key kiln architectural features:

- Ware chamber: the linear space within the kiln where objects are situated during the firing process;
- Firebox: the entry into the kiln and location where the firing process is initiated;
- Chimney: the rear of the kiln where heat and smoke are expelled from the kiln;
- Bagwall: the connection point between the firebox and ware chamber; protects the first vessels from flames in the firebox; and
- Exterior walls: the perimeter of the kiln.

**Feature 1: Pottersville Kiln.** Feature 1 is an analytic label employed to describe the exposed outlines of the entire Pottersville kiln. During the course of excavation, the field crew uncovered architectural elements which display the important hallmarks of kiln technology which has allowed for a better understanding of architectural elements utilized in early 19th century Edgefield kiln technology. Feature 1 was identified during the excavations and encompasses the front wall, flue, fire box, ware chamber, and chimney. The Pottersville Kiln, Feature 1, is 105 feet long and 12 feet wide. The ware chamber was identified through the examination of 19 excavation units and measured 90 feet in length. The fire box is situated at the base of a hillside and the chimney is located 100 feet away on the uphill slope. Feature 1 lowest floor elevation is located in the fire box at 137.3544m amsl (above mean sea level) and the highest floor elevation is 141.2544m amsl or a difference of 3.9m, making the slope of the floor of the Pottersville kiln is 8.21 degrees. Feature 1 is constructed with 1ft x 1ft x 4in refractory bricks. Refractory bricks are a mix of kaolin clay



and sand. Approximately 7,500 refractory bricks went into the construction of the Pottersville kiln.

**Stoneware Artifact Analysis.** During the 2011 field season at the Pottersville kiln site, 13,090 stoneware sherds were recovered. Due to site formation processes only a portion of these 4,377 stoneware fragments situated in the firebox were deemed mendable. Vessels failure during firing is a common event at any kiln site and these broken vessels are most often discarded in the waster pile. The waster pile is often located an undetermined distance from the kiln site. This ensures that the area of operation around the kiln can be kept accessible. Failed vessels are loaded into a wheel barrow or some other apparatus and relocated at the waster pile. By the fact that sherds were recovered from the space around the kiln, it is assumed that not every broken object made it to the waster pile. Small objects most likely either fell from the wheel barrow or were tossed alongside the kiln during clean up operations. Of the 8,713 sherds not located within the firebox, approximately 90 percent or more are 10cm in diameter or smaller. These 8,713 sherds have a wide range in color and vessel typology and led to zero mends during the laboratory process.

Of the 13,090 stoneware objects, 4,377 were situated within the kiln's firebox, Feature 4. Failed vessels discovered in Feature 4 enable an understanding of the Pottersville kiln's final firing and vessels forms being created. The firebox became an impromptu waster pile due to the hypothesized catastrophic collapse of a portion of the kiln. Laboratory work yielded the profile of two storage vessels, two storage jugs, and 10 bowls; additional vessels were also reconstructed but none that included a full profile.

The storage vessels recovered are approximately 50cm in height and 25cm in diameter. The vessel bodies are 2cm thick at the base and .5cm thick at the shoulder. The base diameter is 25cm in diameter and the rim opening is 13cm. The vessels have two 10cm wide lug handles located 2cm beneath the top of the rim. These storage vessels are not what are thought to be the typical vessel form of the

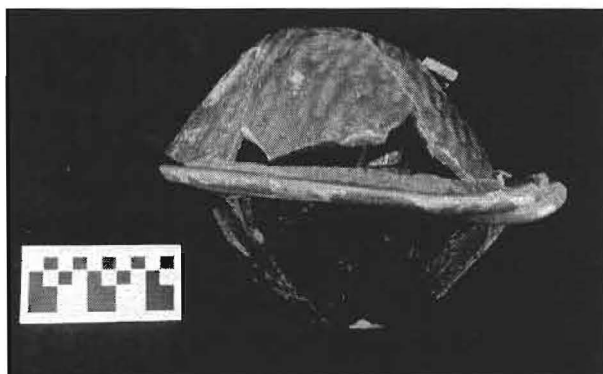
period. Edgefield storage vessels are most commonly discovered with bodies which curve outward and the vessels within Feature 4 are straight walled in form. The shift in design could be based upon market needs or potter aesthetics; both of which can not be determined from the available material.



Conversely, the storage jugs within Feature 4 do resemble a typical regional form with the widest part of the body curving outward from the base and back inward near the shoulder. Storage jugs are approximately 20cm wide at the base, 25cm wide and the widest point in the body, 20cm wide at the shoulder, and a 3cm wide spout opening. The spout is a double collar and the vessel has one strap handle which is connected on the shoulder 2cm beneath the spout. The double collar spout was thought to be a common design of the Pottersville kiln however during laboratory work single collar spouts ( $n=7$ ) were discovered.



Stoneware bowls situated within Feature 4 provide insight on how vessels were being stacked within the kiln ware chamber. Alkaline glaze adheres to all surfaces which it comes into contact. During laboratory work 10 bowl profiles were able to be mended. The bowls are approximately 15cm wide at the base and 30cm wide at the rim. Rims of the bowls remained unglazed which allowed vessels to be stacked mouth to mouth and then base to base. Two pairs of vessels were mended in which the one, or both, of the vessels failed during firing causing the top bowl to slump inside of the bottom bowl fusing them together.



My dissertation planned for May 2013 and additional writings to follow discuss Edgefield kiln technology and the inferred connections to Asia and Europe. From what I have discovered, I interpret that the Pottersville kiln may have been inspired by Asian designs but built with European construction techniques. The visual similarities between Pottersville and Asian Dragon kilns, which utilized alkaline glaze, are striking. For Abner Landrum's, founder of Pottersville, stoneware kiln plans to be effective it would have been advantageous to construct a kiln which was known to be effective in producing pottery utilizing such alkaline glazing techniques. At this point, we are still searching for evidence which links Abner and Asia. It might be a text, a person with Dragon kiln technical knowledge residing in 19th century South Carolina, or some other informant which has gone undiscovered.

Special thanks to my wife Bridget for supporting me through this research; Carl Steen for being a terrific mentor; Chris Fennell for the Pottersville kiln sized dissertation edits, and the Field and Laboratory Students. Please view our South Carolina Humanities Council funded documentary at <http://vimeopro.com/storylinemedia/pottersvilledoc>

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