Vessel Lot CC07

Paste:

Temper: This vessel was tempered with pieces of clay that ranged in size from 0.5-8.0 mm. These comprised 5% of the paste and ranged in color from rust brown (5YR 5/6 yellowish red) to red (2.5YR 4/8 red). In addition, this vessel was heavily tempered with grit and unsorted sand which contained numerous pebbles up to 3.0 mm in length. This sand comprised another 10% of the paste.

Texture: This vessel was extremely rough texturally, because of the heavy sand/grit tempering. Some of the larger pebble inclusions even protruded sharply on the interior surface.

Thin-sectioning: Sample 2129-1 exhibited a cryptocrystalline matrix tempered with a minor quantity (12%) of ceramic sherd fragments (grog) (Figure I.99). The cryptocrystalline matrix was indicative of a higher firing temperature such that the lattices of the clay minerals in the matrix were fused and the original structure was destroyed. The grog temper was sub-rounded in shape and ranged in size from 0.5-1.2 mm (average grain size was 1.0 mm). Natural inclusions (14.9%) were poorly sorted and consisted of quartz, feldspar, carbonate rock fragments, and iron oxide. Voids (13.5%) included small rounded pores and larger tears, and numerous irregular voids where minerals had been plucked or leached from the matrix. A small percentage of these latter voids had been partially filled by alteration products and/or carbonate cement. Fabric orientation was random.

Figure I.99 Thin Section (2129-1)

Color:

Exterior: 2.5YR 6/6 light red

Interior: 7.5YR 6/6 reddish yellow to 7.5YR 5/2 brown.

Core: 7.5YR 3/2 dark brown on the interior, blending to 7.5YR 6/6 reddish yellow on the exterior.

Surface Treatment:

Exterior: The exterior was impressed with cordage that was formed with a final S-twist. It ranged in size from narrow, fine cordage to medium width, about 2.0 mm wide.

Interior: The interior was rough and uneven. Different portions of the vessel exhibited different treatments. They were impressed with cordage, smoothed, or scraped with a tool that left a pattern of narrow parallel lines (Figure I.100).

Figure I.100 Vessel Lot CC07 Interior Surface Treatment

***Decoration*:**

None:

Form:

Lip: No data.
Rim: No data.
Base/Body: No information on vessel shape or size. Sherd thickness was 10.0-12.0 mm.

Sample Size:

Total: 1
Rims: 0
Base/Body: 1

Mends:

None (Figure I.101).

***Discussion*:**

Large pieces of clay were evident in the paste of this vessel lot. The large amount of sand also included in the paste distinguished Vessel Lot CC07 as one of the sandier examples within the clay-tempered wares. The exterior surface treatment of Vessel Lot CC07 was similar to the cord-markings evident on Vessel Lot HCC4. However, the interior of this vessel lot (CC07) is rougher and more uneven due to the scraping and lack of smoothing. This interior surface treatment resembled Vessel Lot CC01. The large sherd that comprised this vessel lot was darker on one edge, possibly being smudged. Since this darkening was also evident along the core, it was unclear if it is superficial or indicative of some post-depositional staining.

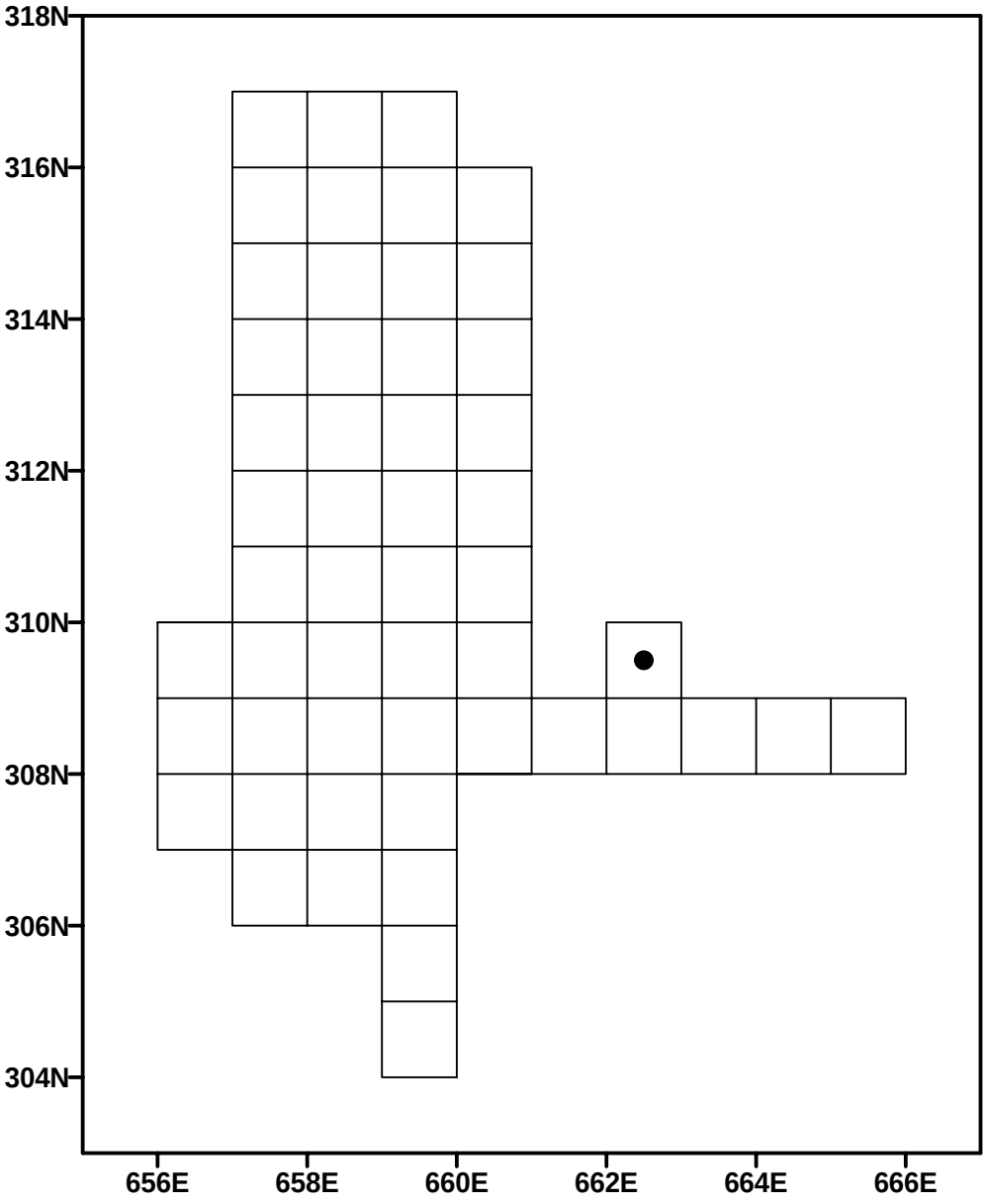

Figure I.101 Sherd Location of Vessel Lot CC07 (Locus A)

Vessel Lot CC08

Paste:

Temper: Vessel Lot CC08 contained numerous small clay fragments (10R 4/8 to 10R 5/8 red). These clay fragments were extremely fine, less than 1.0 mm wide. As a result, this vessel appeared nearly untempered. The concentration of sand inclusions was low, and amounted to less than 5% of the paste.

Texture: This vessel had an extremely smooth, pasty feel. There was also a low luster or sheen to the vessel surfaces. The clay was not compacted or well-mixed and numerous air holes were present.

Color:

Exterior: 5YR 5/4 reddish brown to 2.5YR 5/4 reddish brown

Interior: 5YR 5/6 yellowish red to 2.5YR 5/4 reddish brown

Core: 5YR 5/6 for 80% of the body with a very thin layer of 5YR 4/1 dark gray on the exterior surface (15%) followed by a fine layer of the exterior 5YR 5/4 reddish brown

Surface Treatment:

Exterior: The exterior was marked with cordage formed with an S-twist. The size of the cords ranged in thickness, 0.5-1.5 mm wide. Untwisted, open flat fibers were also visible and were part of the cordage (Figure I.102).

Figure I.102 Vessel Lot CC08 Exterior Surface Showing Open, Flat Untwisted Fibers in Cordage

Interior: The interior was scraped with a tool that left a pattern of narrow parallel lines (Figure I.103). This was done in short strokes and an irregular criss-cross pattern. The surface was uneven with small depressions left between the strokes. Some tempering protruded from the body of the sherd and small cracks were visible from the protrusion.

Figure I.103 Vessel Lot CC08 Interior Surface

***Decoration*:**

None.

Form:

Lip: No data.
Rim: No data.
Base/Body: No information on body shape or form. Coil breaks were present. Sherd thickness ranged from 9.0-10.0 mm.

Sample Size:

Total: 2
Rims: 0
Base/Body: 2

Mends:

None (Figure I.104).

***Discussion*:**

Vessel Lot CC08 belonged to a sub-group within the clay-tempered vessel lots, which were characterized as pasty in texture. These vessel lots had small clay inclusions, very little sand content, a slight sheen to the surface, and were cord-marked. Overall, they appeared minimally tempered and the small size of the clay inclusions suggested that they were possibly unblended components of the paste and not intentional additives.

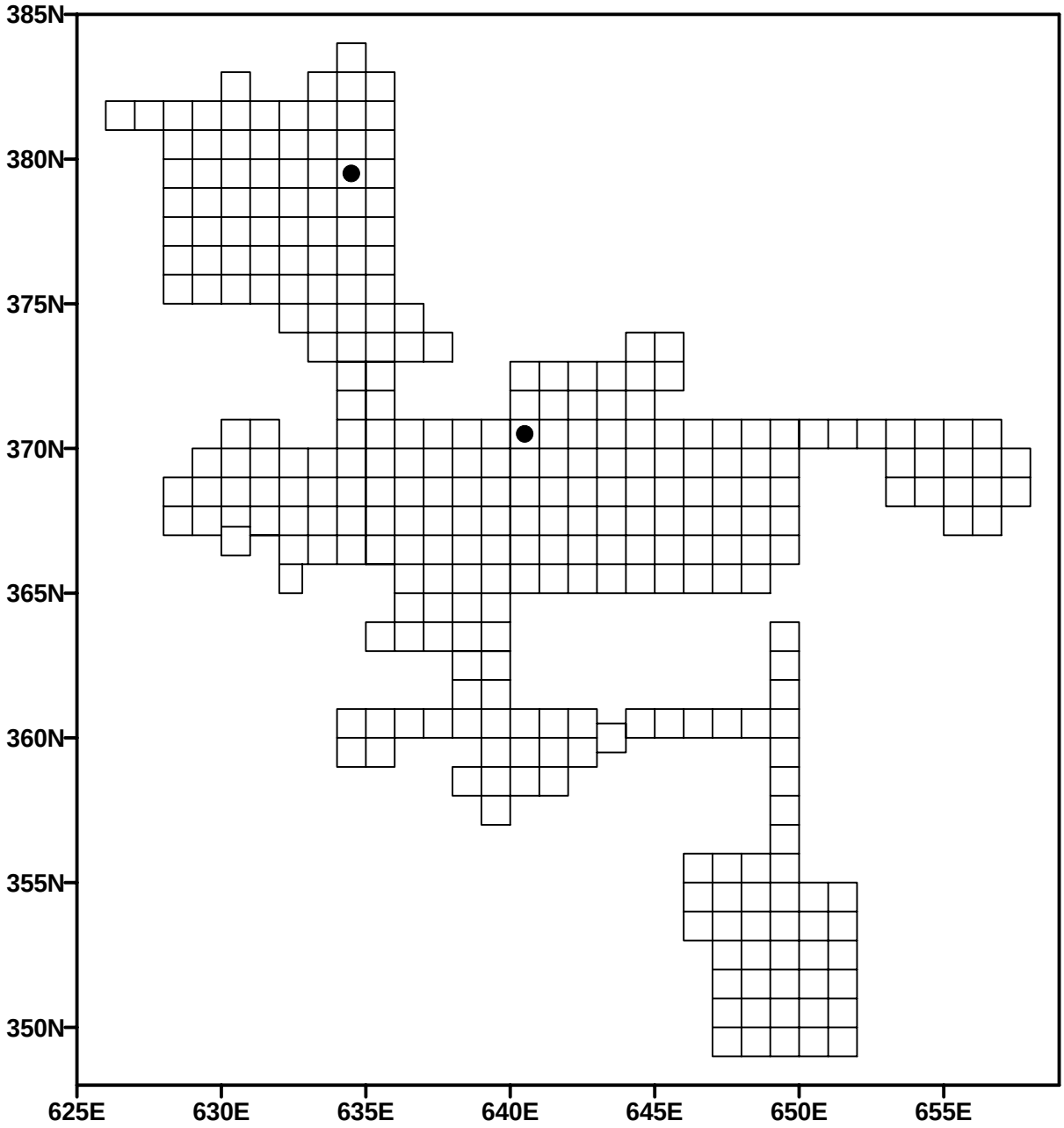

Figure I.104 Sherd Locations of Vessel Lot CC08 (Northwest Main Block)

Vessel Lot CC09

Paste:

Temper: Vessel Lot CC09 was tempered with small fragments of clay of varying in color (7.5YR 5/8 strong brown to 2.5YR 6/8 light red). These ranged in size from 1.0-4.0 mm. A minimal amount of sand, 1-2%, also was present. A single pebble of red chert 10.0 mm in length also was present.

Texture: These sherds were smooth and pasty to the touch (Figure I.105).

Figure I.105 Vessel Lot CC09 Interior Surface

Color:

Exterior: 7.5YR 6/6 reddish yellow to 5YR 6/6 reddish yellow

Interior: 7.5YR 7/4 pink to 5YR 6/4 light reddish brown

Core: 5YR 6/6 reddish yellow or mottled 7.5YR 5/6 strong brown with 7.5YR 4/2 brown

Surface Treatment:

Exterior: The exterior was impressed with cordage formed with a final S-twist.

Interior: The interior is deeply impressed with netting comprised of widely spaced, large knots. These impressions were slightly smoothed on some sherds.

***Decoration*:**

None.

Form:

Lip: No data.
Rim: No data.

Base/Body: No information on vessel form or shape. The breaks were irregular, and not found along coils. Sherd thickness ranged from 11.0-12.5 mm.

Sample Size:

Total: 6
Rims: 0
Base/Body: 6

Mends:

Vessel lot CC09 was represented by 6 sherds. The vessel lot included three sherds from two different test units that mended into one group (Figure I.106). In addition, the vessel lot included three sherds that were similar in all attributes but did not mend to other sherds in the vessel lot.

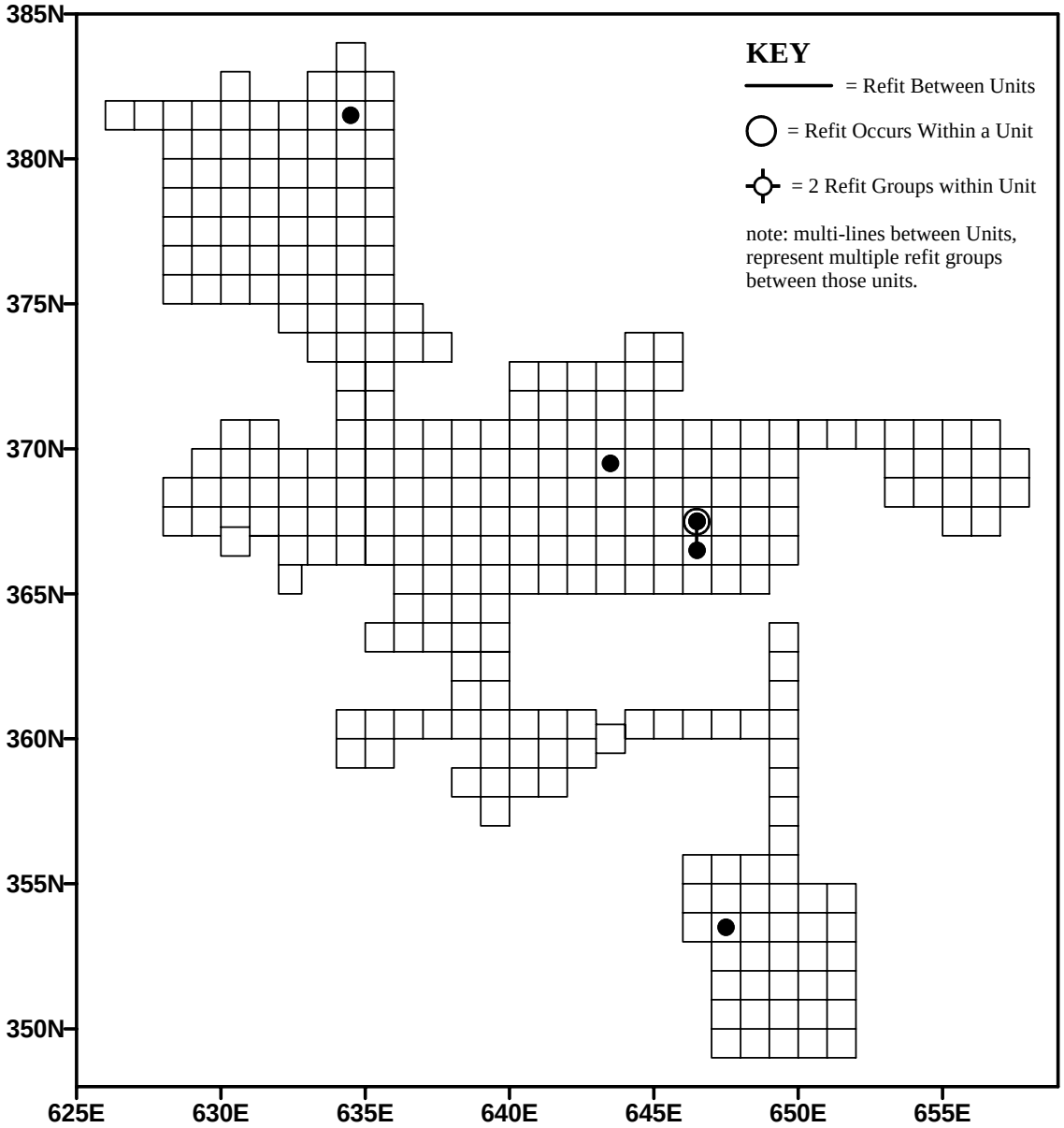

Figure I.106 Sherd Locations with Refits of Vessel Lot CC09 (Northwest Main Block)

***Discussion*:**

Vessel Lot CC09 was characterized by its minimal sand content, which gave this clay-tempered vessel a smooth and pasty texture. It was similar to other clay-tempered vessel lots that had a low sand content, such as Vessel Lot CC02. The exterior surface was impressed with cordage that may have been cross-twined (Figure I.107). Although a definitive determination of this cross-twining was not possible due to the low relief of the impression, it was different enough to distinguish this vessel lot from the other clay-tempered vessel lots that did not have this cordage characteristic.

Figure I.107 Vessel Lot CC09 Exterior Surface

Vessel Lot CC10

Paste:

Temper: Vessel Lot CC10 was tempered with small pieces of clay and/or grog (7.5YR 7/6 reddish yellow). Some of the smaller fragments (7.5YR 5/6 strong brown) are probably natural inclusions in the source clay. A minor amount of sand 1-2% also was included.

Texture: This vessel was smooth and pasty to the touch because of the lack of sand/grit. Also, the paste appeared to have a slight sheen. The paste was not well-mixed and highly convoluted. The mottled colors of the core seemed to reflect different paste elements within the body.

Color:

Exterior: 7.5YR 6/4 light brown to 7.5YR 4/1 dark gray

Interior: 5YR 5/4 reddish brown

Core: 7.5YR 5/6 strong brown mottled with 7.5YR 3/1 very dark gray

Surface Treatment:

Exterior: The exterior was lightly impressed with cordage that was formed with a final S-twist (Figure I.108). These impressions had been partially smoothed over. Cordage of varying widths (0.5-1.5 mm) was utilized and had been twined into a loose fabric.

Figure I.108 Vessel Lot CC10 Exterior Surface

Figure I.109 Vessel Lot CC10 Interior Surface, Gouged and Uneven

Interior: The interior was deeply gouged with parallel strokes. The implement used was approximately 8.0 mm wide. The gouges were irregular and left a build-up of clay along the outer edge of the strokes (Figure I.109). This build-up made the interior surface uneven.

***Decoration*:**

None.

Form:

Lip: No data.
Rim: No data.
Base/Body: No information on vessel shape or form. The sherd breaks were irregular but coil formation could be seen in one edge. This sherd was 13.0 mm thick.

Sample Size:

Total: 1
Rims: 0
Base/Body: 1

Mends:

None (Figure I.110).

***Discussion*:**

The texture of Vessel Lot CC10 closely resembled the other clay-tempered vessel lots that contained little sand, such as Vessel Lot CC08. These vessel lots all were smooth and had a slight sheen to the surface of the sherds.

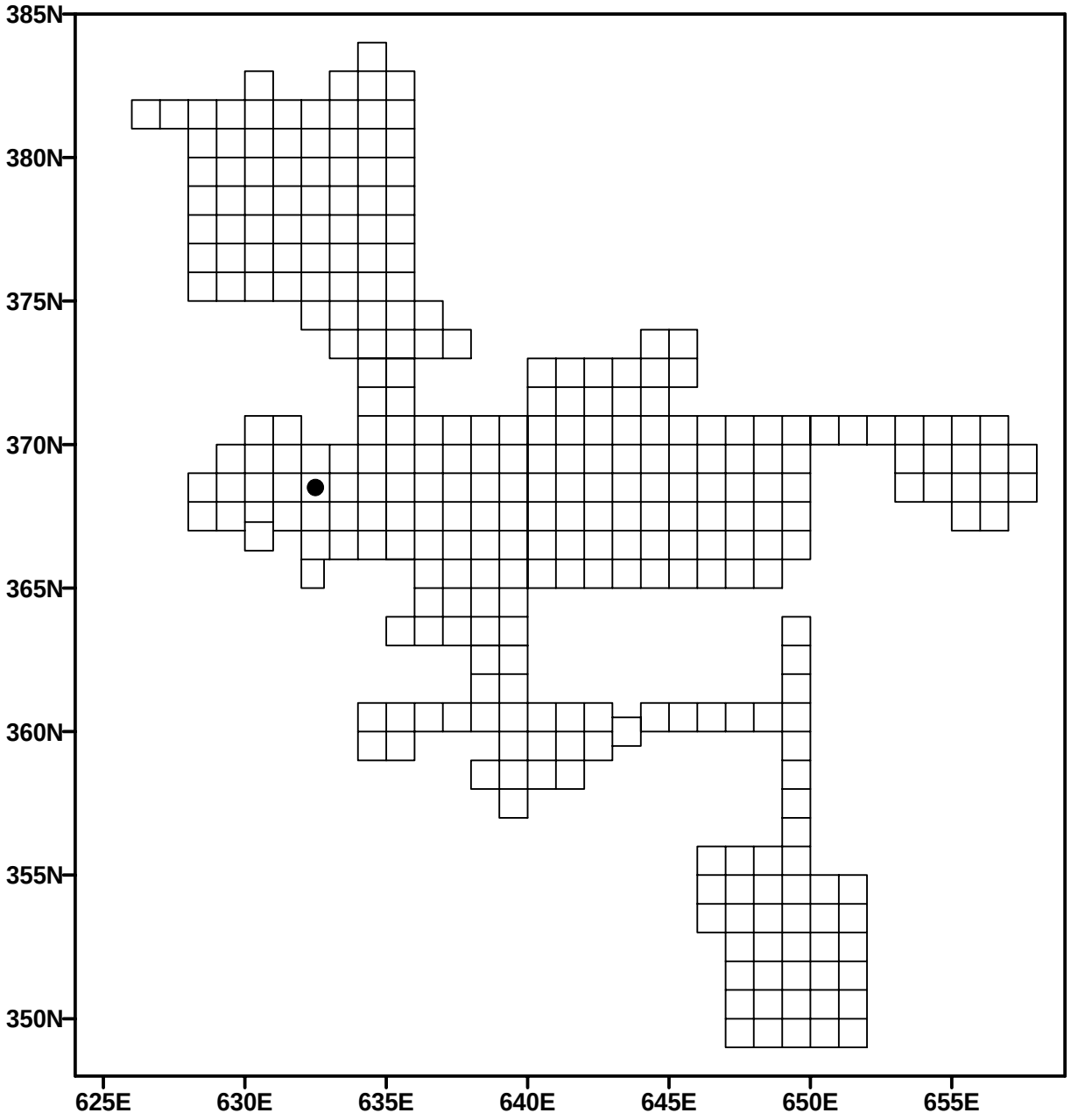

Figure I.110 Sherd Location of Vessel Lot CC10 (Northwest Main Block)

Vessel Lot CC11

Paste:

Temper: Vessel Lot CC11 included a lumpy clay temper and a high content of sand/grit, approximately 20% of the paste. This sand was generally fine (less than 1.0 mm) in size but a random pebble of 3.0 mm was included. Larger pieces of sandstone (6.0-7.0 mm) were included as well. One sherd (264-1) contained numerous, minute pieces of iron oxide (2.5YR 4/8 red) while none were visible in the adjacent mending sherd (3322-1).

Texture: The surface was gritty due to the large amount of sand present in this vessel lot. The paste was only moderately compacted.

Color:

Exterior: 7.5YR 6/6 reddish yellow to 5YR 6/4 light reddish brown to 2.5YR 5/6 red

Interior: 7.5YR 6/6 reddish yellow to 7.5YR 5/3 brown

Core: Core color varied. Some sherds had a solid core color 7.5YR 6/6 reddish yellow or 7.5YR 6/4 light brown. Others were darkened on the interior half, to three fourths of the core body 7.5YR 2.5/1 black. These in turn blended into the exterior surface colors.

Surface Treatment:

Exterior: The exterior was impressed with very fine cordage that was formed with a final S-twist (Figure I.111).

Figure I.111 Vessel Lot CC11 Exterior Surface

Interior: The interior was cord-impressed. These impressions were pressed deeper than those found on the exterior surface. Some finger-swipes ran over the markings, generally perpendicular to the cords. This produced an undulating surface on the interior.

***Decoration*:**

None.

Form:

Lip: No data.
Rim: No data.
Base/Body: No information available on vessel shape or size. There were some breaks along the coil lines. Sherd thickness ranged from 8.0-10.5 mm.

Sample Size:

Total: 5
Rims: 0
Base/Body: 5

Mends:

Vessel lot CC11 was represented by 5 sherds. The vessel lot included four sherds from three different test units that mended into two groups (Figure I.112). In addition, the vessel lot included one sherd that were similar in all attributes but did not mend to other sherds in the vessel lot.

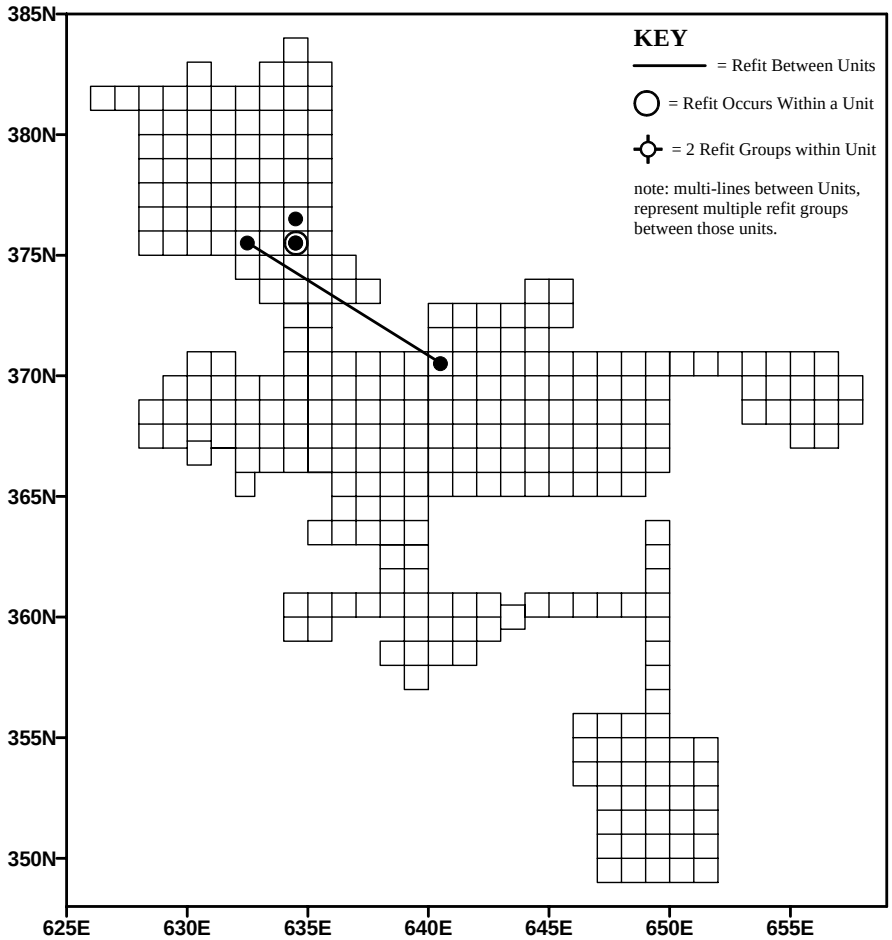

Figure I.112 Sherd Locations with Refits of Vessel Lot CC11 (Northwest Main Block)

***Discussion*:**

This vessel lot exhibited probable post-depositional effects on the sherds. One cross-mend (264-1 with 3322-1) occurred between two sherds with very different coloration: 5YR 6/4 light reddish brown to 7.5YR 6/6 reddish yellow, respectively (Figure I.113). Differences in the amount of iron oxide included in the paste were also noted between these two sherds. The placement of this vessel lot into a ware group was difficult, as it showed characteristics of more than one ware. The paste exhibited a general lumpiness which may be due to larger pieces of unblended clay that matched the matrix clay.

These clay lumps were characteristic of several other clay-tempered vessel lots. On the other hand, Vessel Lot CC11 was also heavily tempered with unsorted sand -- more than was typical for the clay-tempered vessel lots -- and included large pieces of sandstone as well. The interior surface treatments were similar to the interior cord-markings and finger smoothing observed on the Wolfe Neck vessel lots. This vessel lot may represent a transitional or experimental vessel that blended attributes of two dominant wares.

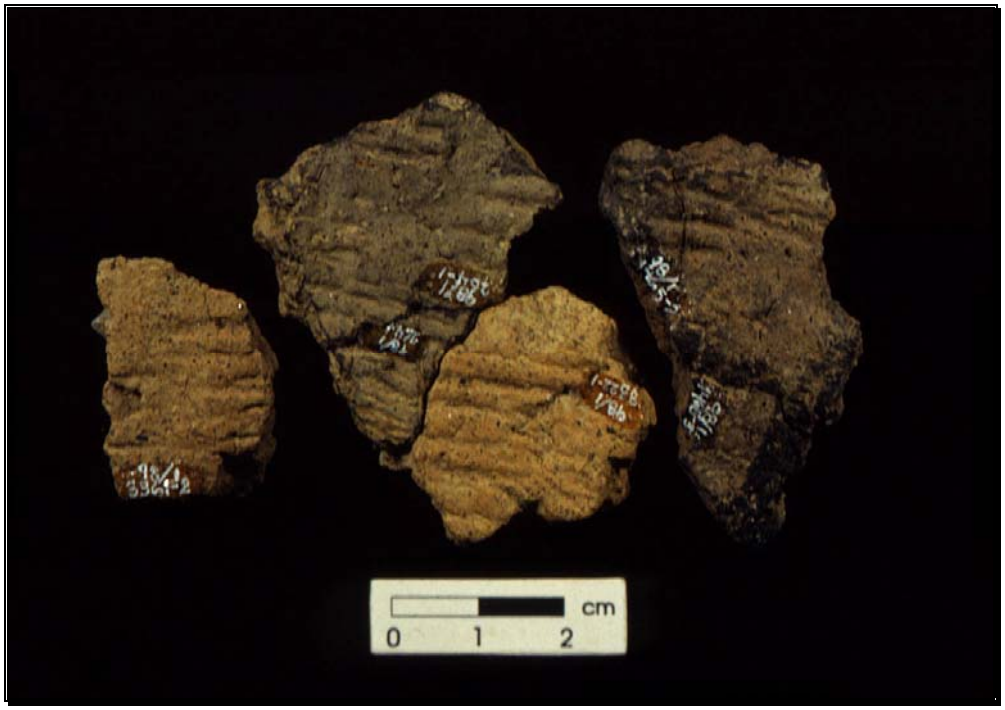

Figure I.113 Vessel Lot CC11 Interior Surface Detail of Cross-Mends with Differently Colored Sherds Showing Variability

Vessel Lot CC12

Paste:

Temper: Under visual inspection this vessel appeared to be almost without temper. There were occasional small, 0.5-1.0 mm pieces of clay (10R 5/4 weak red). In addition, there was a small quantity of fine sand/grit included, that comprised less than 5% of the paste.

Texture: The lack of a tempering agent made these sherds seem extremely pasty and smooth. The paste was highly compacted and hard.

Thin-sectioning: Sample 4042-3 exhibited a cryptocrystalline matrix that appeared to have been tempered with shell fragments (11.5%) (Figure I.114). Due to leaching and soil acidity, the evidence of shell temper was restricted to curvilinear voids throughout the matrix. The cryptocrystalline matrix was indicative of a higher firing temperature such that the lattices of the clay minerals in the matrix were fused and the original structure was destroyed. Average length of the curvilinear voids was 4.0 mm, and leached shell fragments ranged in size from 1.5-5.0 mm. Natural inclusions (11.4%) were poorly sorted and consisted of weathered quartz, feldspar, and hematite. Voids (3.6%), apart from those left by leached shell, were restricted to small rounded pores and irregular tears. Fabric orientation was generally parallel to the long axis, but spiraled around large minerals and temper.

Figure I.114 Thin Section (4042-3)

Color:

Exterior: Ranged from 7.5R 6/6 light red, to 2.5YR 6/6 light red, to 10R 4/1 dark reddish gray. This latter darkened area appeared to be smudged prior to deposition because it was present only on the exterior surface (Figure I.115).

Interior: Ranged from 2.5YR 7/4 light reddish brown to 5YR 5/3 reddish brown

Core: The core color was usually a gradual blending from the interior color to the exterior color. The core color was a strong pink color that ranged between 7.5R 7/6 light red and 7.5R 6/6 light red.

Surface Treatment:

Exterior: The exterior was deeply impressed with cordage that exhibited a Z-twist. It may have been woven into a loose net/fabric, but due to the small size of the sherds, a final determination was not possible. The cordage ranged in size from very thin to moderate thickness (0.5-2.5 mm). The surface treatment came extended up to the rim edge (Figure I.116).

Figure I.115 Vessel Lot CC12 Exterior Surface Exhibiting Smudging and Z-Twist Cordage

Figure I.116 Vessel Lot CC12 Detail of Coil Joints and Air Holes in Paste

Interior: The interior of this vessel was smoothed plain. Occasionally there were very thin, light striation marks that suggested the vessel interior had been wiped or smoothed with an item or tool. The finished surface was somewhat irregular with slight pitting or unevenness in some areas.

***Decoration*:**

None.

Form:

Lip: The lip was rounded and smoothed plain. It was slightly lower on the front edge.

Rim: The vessel walls slightly tapered and rose straight to the lip. The rim thickness was 4.0-6.0 mm.

Base/Body: No data on vessel shape. Breaks were primarily along the coil lines. Coil joints were definitely visible in the core of some edges. There were sometimes a few air holes around those joints (Figure I.116). These coils were narrow, 6.0-15.0 mm wide with many at the smaller end of the range. The sherds ranged in thickness from 6.0-7.5 mm.

Sample Size:

Total: 8
Rims: 1
Base/Body: 7

Mends:

None (Figure I.117).

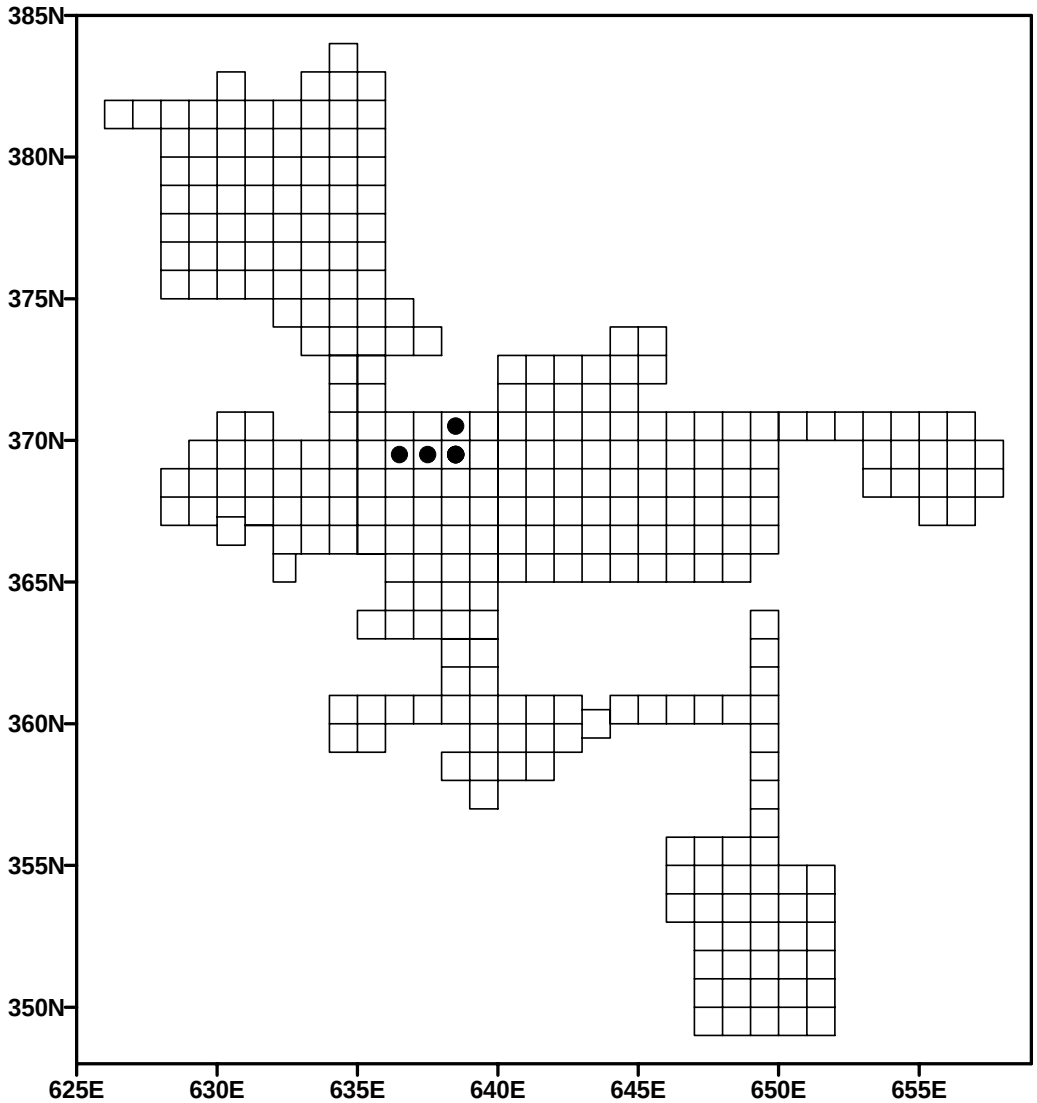

Figure I.117 Sherd Locations of Vessel Lot CC12 (Northwest Main Block)

***Discussion*:**

The paste of Vessel Lot CC12 was distinct because of the strong pink color of the body and the appearance of lacking a tempering agent in the well-compacted paste. The narrow and thin coils with which the vessel was constructed implied a very thin vessel and careful manufacture. Also, the final Z-twist of the cordage impressed on this vessel placed it in the minority, as most of the vessel lots from Hickory Bluff were impressed with a final S-twist, when the twist could be determined. Finally, a darkening or smudging on one of the vessel sherds (4042-2) suggested that this vessel had been heated, likely related to its function and not as a post depositional effect.

Vessel Lot CC13

Paste:

Temper: Vessel Lot CC13 was tempered with dark pieces of clay/grog (7.5YR 2.5/1 black). Sand comprised 5% of the paste. The rim sherd was equally as sandy as the body sherd. Two smoothed, large pits in the rim sherd suggested that pebbles as large as 5.5 mm had eroded out of the sherd.

Texture: The vessel texture was slightly gritty. The paste was loosely compacted and was convoluted with numerous air holes.

Color:

Exterior: 5YR 6/6 yellowish red

Interior: 7.5YR 6/4 light brown

Core: Mottled 7.5YR 6/6 reddish yellow with 7.5YR 6/3 light brown and 7.5YR 2.5/1 black

Surface Treatment:

Exterior: The exterior was cord-impressed. These impressions were less distinct toward the rim edge but continued vertically to this edge. The cordage had a final S-twist.

Interior: The interior was cord-marked. These cords were placed parallel to the rim edge in a horizontal position (Figure I.118).

Figure I.118 Vessel Lot CC13 Interior Surface Exhibiting Cord Marks Placed Parallel to the Rim

***Decoration*:**

None.

Form:

Lip: The lip was rounded and smoothed, but still remained uneven. It was 4.0-5.5 mm thick.

Rim: No data. The rim was too small and the edge too uneven to determine rim form.

Base/Body: No information on vessel size or shape. Sherd thickness was 12.5 mm.

Sample Size:

Total: 2
Rims: 1
Base/Body: 1

Mends:

None (Figure I.119).

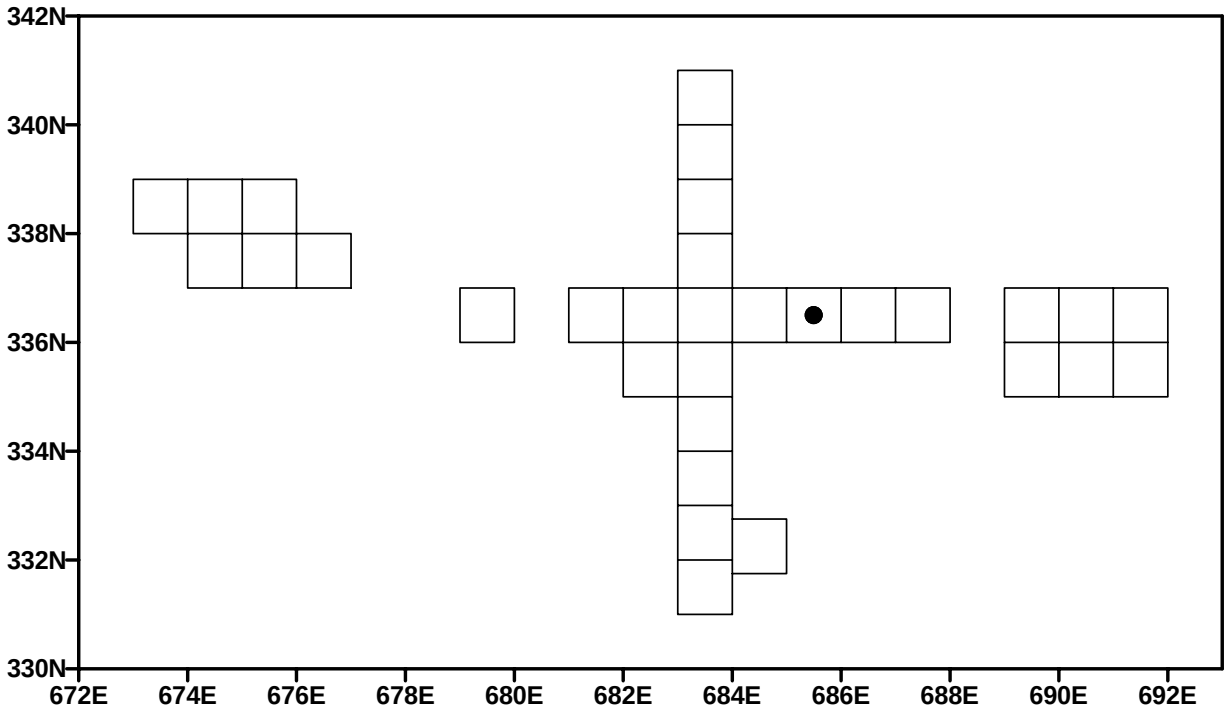

Figure I.119 Sherd Location of Vessel Lot CC13 (Locus D)

***Discussion*:**

In many aspects, Vessel Lot CC13 was similar to Vessel Lot CC01. The exterior and interior surface treatments of both vessels were cord-marked and formed of similar S-twist cordage. The large, unsorted sand and pebble inclusions were also similar. The breakage patterns exhibited by both were similar to each other while distinct from the rest of the assemblage, and had wide-angled (versus right-angled), overlapping coil joints (Figure I.120).

Conversely, the darkly colored and large pieces of clay/grog temper included in Vessel Lot CC13 were not present in Vessel Lot CC01.

Figure I.120 Vessel Lot CC13 Detail of Wide-Angled, Overlapping Coil Joints

Vessel Lot HCC1

Paste:

Temper: Vessel Lot HCC1 was tempered with pieces of clay (5YR 7/4 pink). These comprised 5-10% of the paste and were 1.0-4.0 mm in size. A small quantity of fine sand/grit was included (1-2%). Pieces of iron oxide (10R 4/8 red) were present as well. These ranged in size from 0.5-2.5 mm, but the majority consisted of the smallest size. These were distributed throughout the paste and comprised approximately 5% of the paste.

Texture: This vessel lot was basically pasty in texture although there was a slight, irregular roughness to the surfaces because of the small quantity of sand included. The paste was convoluted and contained small air holes.

Color:

Exterior: 5YR 6/6 reddish yellow

Interior: 5YR 6/3 light reddish brown to 5YR 4/2 dark reddish gray

Core: 5YR 3/1 very dark gray on the interior half with 7.5YR 6/6 reddish yellow on the exterior half.

Surface Treatment:

Exterior: The exterior was impressed with cordage, which probably formed from a loose-twined fabric (Figure I.121).

Figure I.121 Vessel Lot HCC1 Exterior Surface

This cordage had been made with a final S-twist. Also, this surface had been partially smoothed and scraped. The scraping was done with a tool that left a pattern of narrow parallel lines.

Interior: The interior surface was also impressed with cordage.

***Decoration*:**

None.

Form:

Lip: No data.
Rim: No data.
Base/Body: No information was available about vessel size or shape. This sherd broke along a coil line.

Sample Size:

Total: 1
Rims: 0
Base/Body: 1

Mends:

None (Figure I.122).

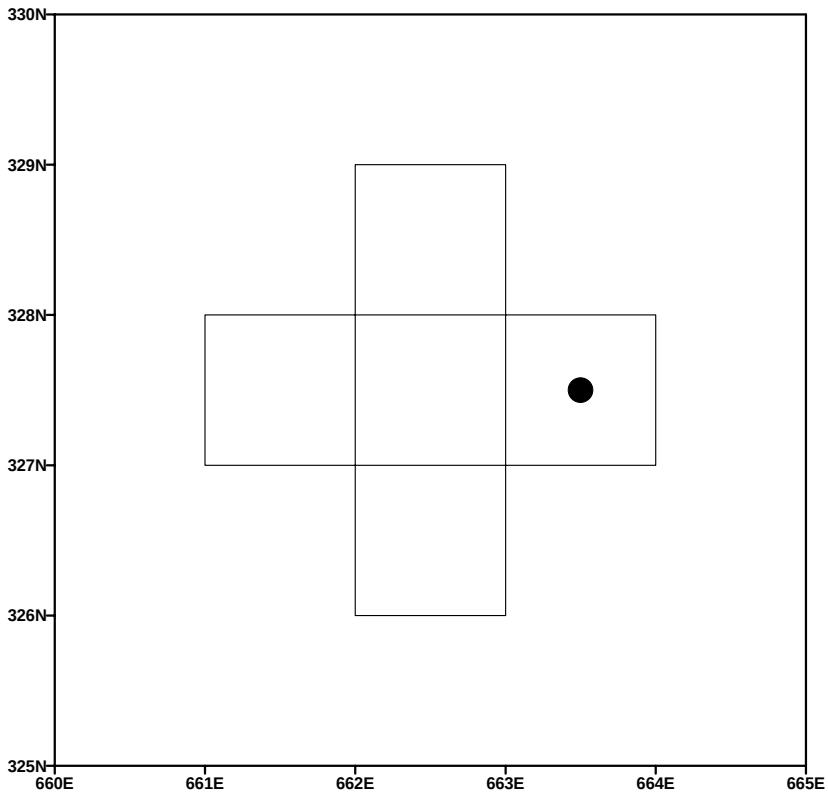

Figure I.122 Sherd Location of Vessel Lot HCC1 (Southwest Quadrant)

***Discussion*:**

The paste of Vessel Lot HCC1 was distinctive because of the large quantity (5%) of iron oxide pieces included. These inclusions made this vessel similar to Vessel Lot HMO01. If the inclusions were natural, it would imply the use of the same or a similar source of clay. The surface treatment of Vessel Lot HCC1 was similar to Vessel Lot CC01, but it was marked with a finer cord. Also, this vessel lot was less sandy and pastier in texture than Vessel Lot CC01.

Vessel Lot HCC2

Paste:

Temper: Vessel Lot HCC2 was tempered with a small quantity of clay pieces (5YR 7/4 pink) and appeared nearly temperless. Fine sand also was included and comprised 1-2% of the paste. An occasional piece of iron oxide (10R 4/8 red) was present.

Texture: Even though there was a small quantity of sand present in the paste, this vessel lot had a smooth, pasty feel. There was almost a sheen to the paste and it was not well-mixed.

Color:

Exterior: 7.5YR 6/4 light brown

Interior: 7.5YR 6/4 light brown

Core: Thin layer 7.5YR 6/4 light brown on the interior, then 7.5YR 4/2 brown, blending to 5YR 6/6 reddish yellow in three fourths of the core body.

Surface Treatment:

Exterior: The exterior was impressed with cordage that was formed with a final S-twist (Figure I.123). This cordage was very thin with a diameter of approximately 0.5 mm.

Figure I.123 Vessel Lot HCC2 Exterior Surface Treatment with Very Fine Cordage

Interior: The interior surface was repeatedly scraped with a tool that left a pattern of narrow parallel lines (Figure I.124). Some groups of lines were deeper and wider than were others, so more than one tool may have been used or else different pressures may have been applied.

Figure I.124 Vessel Lot HCC2 Interior Surface

***Decoration*:**

None.

Form:

Lip: No data.
Rim: No data.
Base/Body: No information about vessel size or shape. This sherd was 12.0 mm thick. The interior was uneven with several depressed areas that might have been created during the forming or coil joining process.

Sample Size:

Total: 1
Rims: 0
Base/Body: 1

Mends:

None (Figure I.125).

***Discussion*:**

The very thin cordage utilized for the surface impressions on the exterior of Vessel Lot HCC2 was distinctive. The vessel was either cross-paddled on the exterior or it may have been impressed with a loosely woven fabric (Figure I.123). It was not possible to make a final determination of the treatment because of the size of the single sherd in the vessel lot.

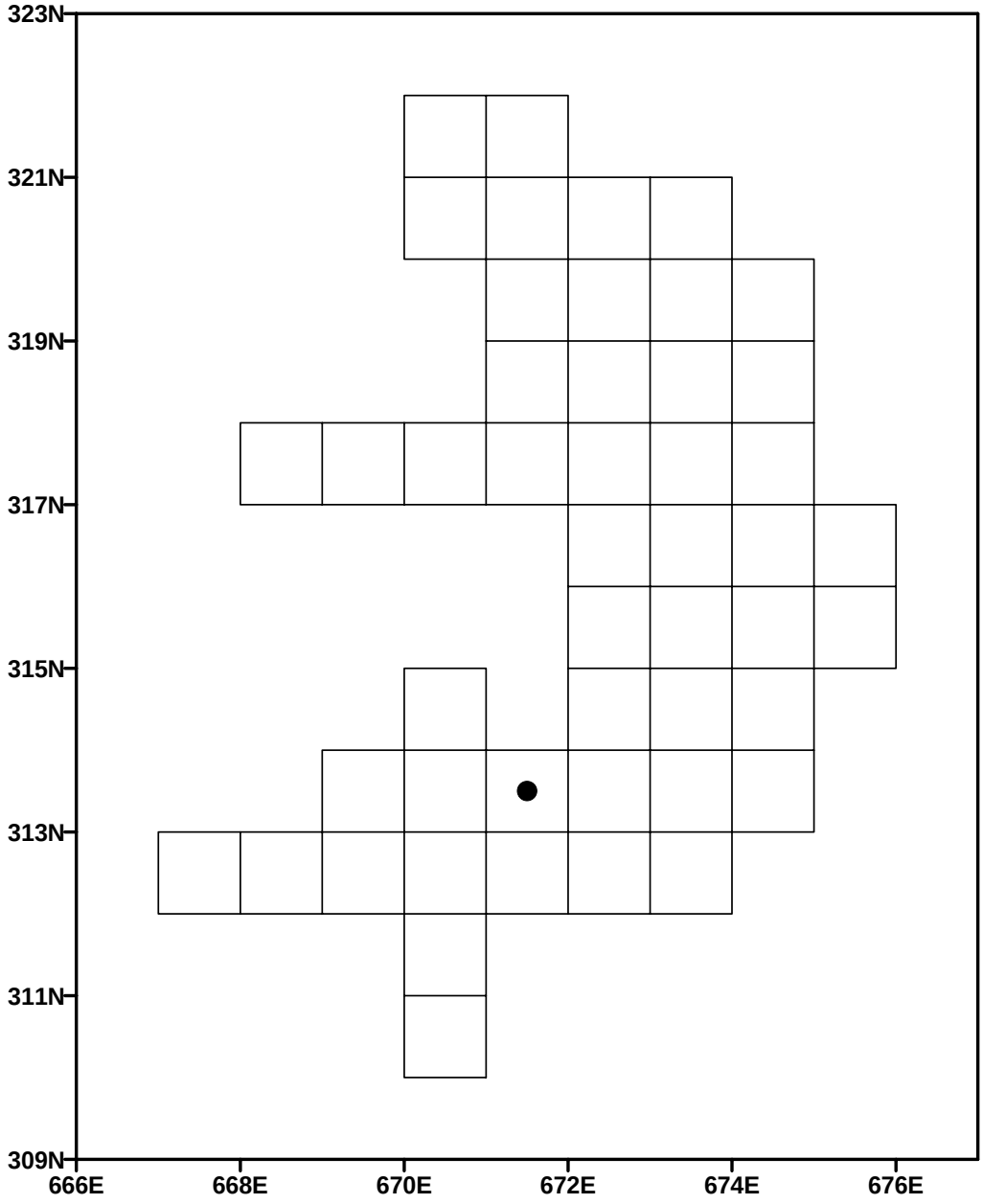

Figure I.125 Sherd Location of Vessel Lot HCC2 (Locus A)

Vessel Lot HCC3

Paste:

Temper: Vessel Lot HCC3 was tempered with fragments of dark grog (7.5YR 2.5/1 black) as well as pieces of clay (7.5YR 6/6 reddish yellow). At least one of the pieces appeared to be a sherd fragment (Figure I.126). These comprised 5-10% of the paste and ranged in size from 1.0-6.0 mm. This vessel lot was also heavily tempered with sand/grit (20% of the paste) which was sorted for a fine size (less than 1.0 mm) and included a random 2.0 mm pebble. Occasional rounded pieces of iron oxide (2.5YR 4/8 red) also were present.

Figure I.126 Vessel Lot HCC3 Detail Showing Sherd Used as Temper

Texture: The large amount of sand tempering gave this vessel a gritty, friable texture. The paste was moderately compacted and convoluted.

Color:

Exterior: 7.5YR 6/4 light brown to 5YR 6/4 light reddish brown with spots of 5YR 2.5/1 black where the grog temper was evident on the surface.

Interior: 7.5YR 6/2 pinkish gray mottled with 7.5YR 6/4 light brown and spots of 5YR 2.5/1 black where the grog temper was evident on the surface.

Core: 7.5YR 4/1 dark gray on the interior, blending to 7.5YR 5/3 brown, then thin layer 7.5YR 6/4 light brown on the exterior surface.

Surface Treatment:

Exterior: The exterior surface was cord-marked with cordage that was formed with a final S-twist. There was a range in thickness of the cordage utilized from very fine (less than 1.0 mm) to 2.0 mm in diameter.

Interior: The interior was scraped with a tool that left a criss-cross pattern of narrow parallel lines. Some of these were partially smoothed over.

***Decoration*:**

None.

Form:

Lip: No data.
Rim: No data.
Base/Body: No information of vessel shape or size. The sherd thickness ranged from 10.0-11.0 mm. Each sherd was broken along a coil line. These coils were respectively 17.0 mm and 27.0 mm wide.

Sample Size:

Total: 2
Rims: 0
Base/Body: 2

Mends:

None (Figure I.127)

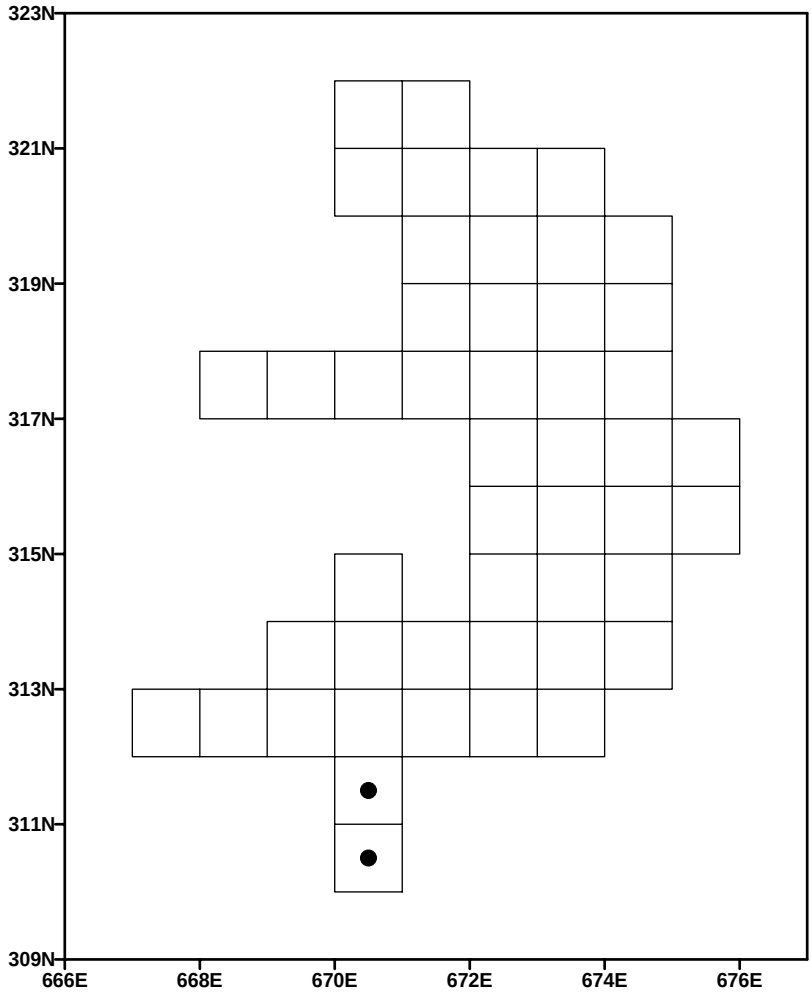

Figure I.127 Sherd Locations of Vessel Lot HCC3 (Locus A)

***Discussion*:**

Vessel Lot HCC3 was distinguished by the large quantity and variety of both temper and inclusions (Figure I.128). It was one of the sandier vessel lots included with the clay-tempered vessels. The surface treatments, which included cord impressions of multiple widths on the exterior and a scraped interior, were typical of the Hickory Bluff clay-tempered vessel lots.

Figure I.128 Vessel Lot HCC3 Exterior Surface Showing Large Temper and Inclusions

Vessel Lot HCC4

Paste:

Temper: Vessel Lot HCC4 was tempered with small fragments of clay. These ranged in color from 7.5YR 7/3 pink to 7.5YR 6/6 reddish yellow. They were small in size, between 1.0-3.0 mm and low in quantity. Sand also was included and comprised 10-15% of the paste. It was primarily sorted for fine size material. Numerous rounded pieces of iron oxide (10R 4/8 red) were included. These ranged in size from less than 1.0-7.0 mm and comprised approximately 1-2% of the paste. Large fibercasts also were present on the interior of the vessel (Figure I.129).

Figure I.129 Vessel Lot HCC4 Interior Surface Showing Large Fibercasts

Texture: The sand content in this vessel lot gave it a rough texture that was gritty to the touch. The paste was not well-mixed and was convoluted.

Thin-sectioning: Sample CX107-N exhibited a cryptocrystalline matrix tempered with a moderate quantity (19.1%) of ceramic sherd fragments (grog) (Figure I.130). The cryptocrystalline matrix was indicative of a higher firing temperature such that the lattices of the clay minerals in the matrix were fused and the original structure was destroyed. The grog temper was sub-angular in shape and ranged in size from 0.5-1.5 mm (average grain size was 1.0 mm). Based on similarities in matrix texture, color, and inclusions, it was likely that the same clay source was used for the grog and for the matrix of sample CX107-N. Natural inclusions (12.6%) were poorly sorted and consisted of chert or carbonate rock fragments, altered quartz, feldspar, and iron oxide. Voids (8.4%) included small rounded pores and larger tears or drying cracks, many encircled the grog. Fabric orientation was random.

Figure I.130 Thin Section (CX107-N)

Color:

Exterior: 2.5YR 6/6 light red to 5YR 5/4 reddish brown

Interior: 2.5YR 6/4 light reddish brown to 2.5YR 3/1 dark reddish gray

Core: Thin layer of 2.5YR 6/4 light reddish brown, then 5YR 2.5/1 black on the interior half blending to 5YR 5/8 yellowish red on the exterior portion.

Surface Treatment:

Exterior: The exterior surface was cord-marked with cordage that was formed with a final S-twist. This treatment extended up to the rim edge. All of the cords were oriented in a vertical direction. Several imprints from the edge of a paddle were present on the body of the vessel (Figure I.131). These could have been used to shape the vessel as well as a by-product of the surface treatment.

Interior: The interior surface was smoothed over previous scraping, which had left low relief ridges on the surface. Portions of the interior were covered with residue remains.

***Decoration*:**

None.

Form:

Lip: The lip was rounded and slightly flattened, smoothing over earlier impressions along the edge. The lip was 3.5-5.0 mm wide at the edge.

Figure I.131 Vessel Lot HCC4 Exterior Surface Treatment Showing All Cords Oriented Vertically

Rim: The wall of the rim rose straight to the edge, becoming thinner at the lip. The rim diameter was measured to be 28 centimeters (Liebeknecht et al. 1997:9-22).

Base/Body: The body shape was categorized as conoidal (Figure I.132) and the vessel volume was calculated as a capacity of 11.7 liters or 3.1 gallons (+/-) based on Mounier's formula of Volume = 0.533 x Diameter3 +/- 27% (Liebeknecht et al. 1997: 9-22). Sherd thickness ranged from 8.0-10.0 mm.

Sample Size:

Total: 34
Rims: 9
Base/Body: 25

Mends:

None (Figure I.133).

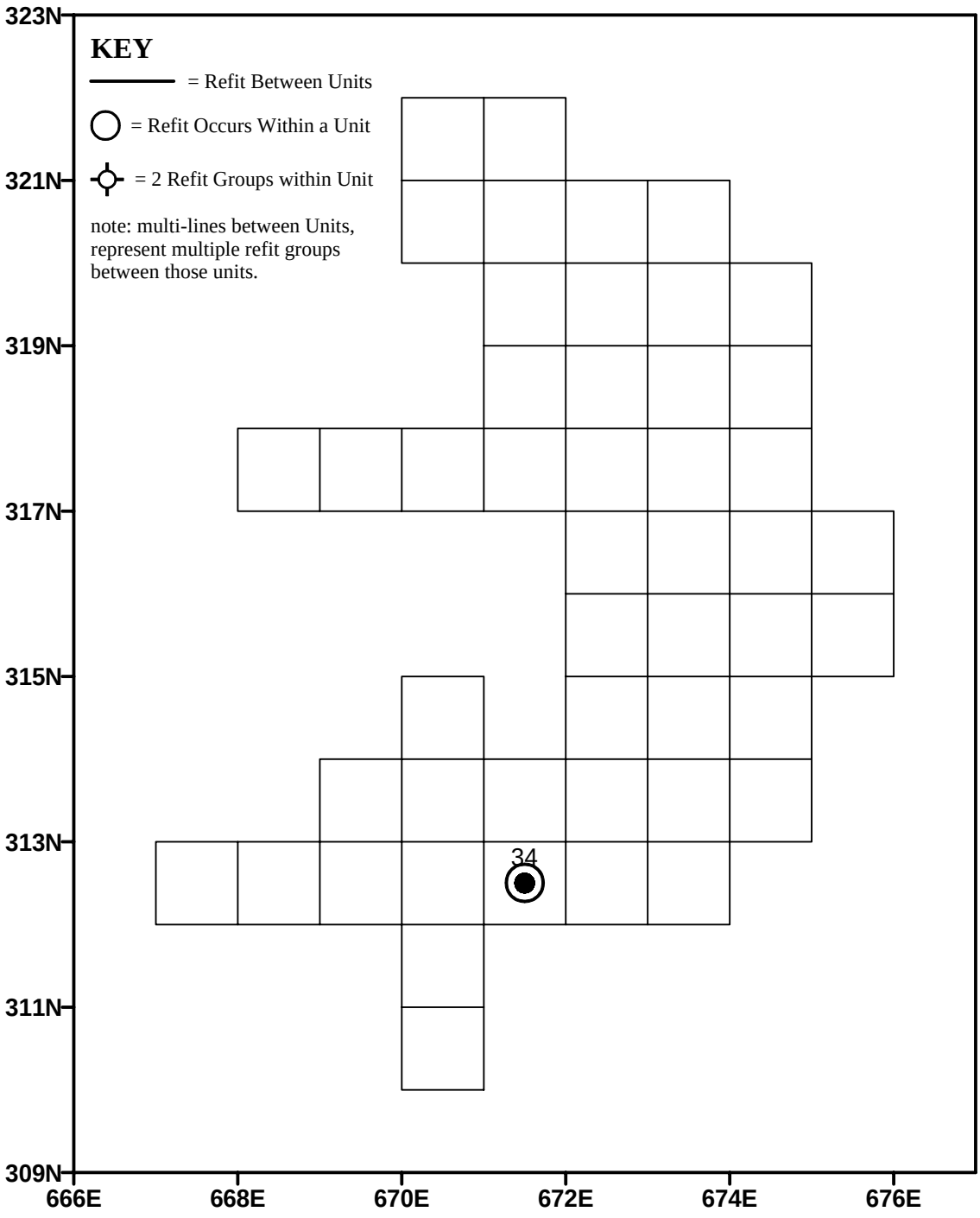

Figure I.132 Sherd Locations with Refits of Vessel Lot HCC4 (Locus A)

***Discussion*:**

The presence of heavy residue remains on the interior of Vessel Lot HCC4 suggested that the vessel was used for cooking purposes. The deep reddish-orange coloration of this vessel could relate to a heating process as well as being a result of the large quantity of iron oxide present in the vessel. The brighter, more orange hues were present toward the base of the vessel, while there was a distinct darkening toward the rim of the vessel.

Vessel Lot HCC4 with its large sand content and rough texture was at the sandy end of the spectrum for the clay-tempered, cord-marked vessel lots. However, it was not as sandy as Vessel Lot HCC3, for example.

Figure I.133 Vessel Lot HCC4 Overall Reconstruction of Vessel

Vessel Lot CN01

Paste:

Temper: This vessel was tempered with large pieces of clay that ranged in size from 1.0-9.5 mm in length, with the majority falling in the 4.0-6.0 mm size range. They comprised approximately 5% of the paste. The clay was unevenly distributed between sherds. This clay was a distinctive bright orange color (2.5YR 6/8 light red). Fine sand/grit also was included, as well as occasional pebbles (2.5 mm). This comprised 10-20% of the paste.

Texture: This vessel had a sandy or gritty feel due to the amount of sand in the paste. This sand also contributed to the over-all weathered appearance of the sherds -- the impressions on the surface were not distinct or sharp-edged. The paste was not compact or well blended. This resulted in air holes in the bodies of the sherds as well as the unequal distribution of the clay tempering (Figure I.134).

Figure I.134 Vessel Lot CN01 Exterior Surface Showing Numerous Airholes in Paste

Thin-sectioning: Sample 4415-1 exhibited a fine-grained matrix tempered with a minor quantity (4.1%) of ceramic sherd fragments (grog) (Figure I.135). The grog temper was sub-angular to sub-rounded in shape and ranged in size from 0.75-1.0 mm (average grain size was 0.8 mm). Because the grog temper exhibited a cryptocrystalline matrix with few natural inclusions, it was likely that the grog and matrix of Sample 4415-1 derived from separate sources. Natural inclusions (16.3%) were moderately well-sorted and consisted of chert or carbonate rock fragments, altered quartz, feldspar, and iron oxide. Voids (10.4%) included small rounded pores and larger tears or drying cracks. Fabric orientation was generally parallel to the long axis, but spiraled around large minerals and temper.

Figure I.135 Thin Section (4415-1)

Color:

Exterior: Ranged from 7.5YR 6/4 light brown to 5YR 6/6 reddish yellow to 7.5YR 5/1 gray. Most of the exterior was in the former range and a small portion of the exterior was darkened or smudged.

Interior: Ranged from 7.5YR 6/3 light brown to 2.5 YR 6/6 light red to 7.5YR 6/2 pinkish gray to 7.5Y3/1 very dark gray. The interior was generally darker than the exterior and a greater portion was deeply darkened. Some residue was left on the interior (Figure I.136).

Core: 7.5YR 4/1 dark gray on the interior, blending to 7.5YR 6/6 reddish yellow; or, 7.5YR 2.5/1 black in most of the core with a thin layer of 7.5YR 6/4 light brown on the exterior surface.

Surface Treatment:

Exterior: The exterior surface was deeply net impressed. Overlapping impressions, as well as multiple layering of the netting, left a net-roughened surface in some areas. The impressions extended to the lip edge of the vessel. The net fabric itself was tightly arranged with knots generally 2.0-4.0 mm apart. The cordage was formed with a final S-twist. The cordage elements were generally from fine single strands. The net-roughening of the surface created an intricate pattern (Figure I.134). Some areas, however, had been smoothed so this pattern was not discernible. One sherd also exhibited a light scraping with tools that left parallel lines or a gouge mark.

Interior: The interior was net impressed and then lightly smoothed, leaving the impressions intact in most places. Some sherd surfaces were scraped with a tool that left a narrow parallel line pattern.

Figure I.136 Vessel Lot CN01 Detail of Sherds Exhibiting Residue or Smudging on Interior Surfaces

***Decoration*:**

None.

Form:

Lip: The lip edge was flattened and smoothed, but showed the remnants of former impressions. The lip edges were 4.5-5.0 mm thick.

Rim: The vessel body tapered to the lip edge. The vessel wall rose straight to the edge. The rim sherds were too small to determine the vessel diameter.

Base/Body: No information available for vessel size or shape. The sherd thickness ranged from 8.0-11.5 mm.

***Sample Size*:**

Total: 77
Rims: 5
Base/Body: 72

Mends:

Vessel lot CN01 was represented by 77 sherds. The vessel lot included fifteen sherds from four different test units that mended into seven groups (Figure I.137). In addition, the vessel lot included sixty-two sherds that were similar in all attributes but did not mend to other sherds in the vessel lot.

***Discussion*:**

Vessel Lot CN01 was distinct because of the inclusion of pieces of clay temper, which were noticeably larger than typically encountered on the clay-tempered wares. The vessel also contained fine sand/grit, which gave a faint sparkle to its surface. The presence of smudging was noted on some sherds and helped to separate this vessel lot. This smudging ranged from light to heavy and was found primarily on the interior surfaces, but also on the exterior in some cases. This deep smudging suggested the direct cooking or heating of this vessel.

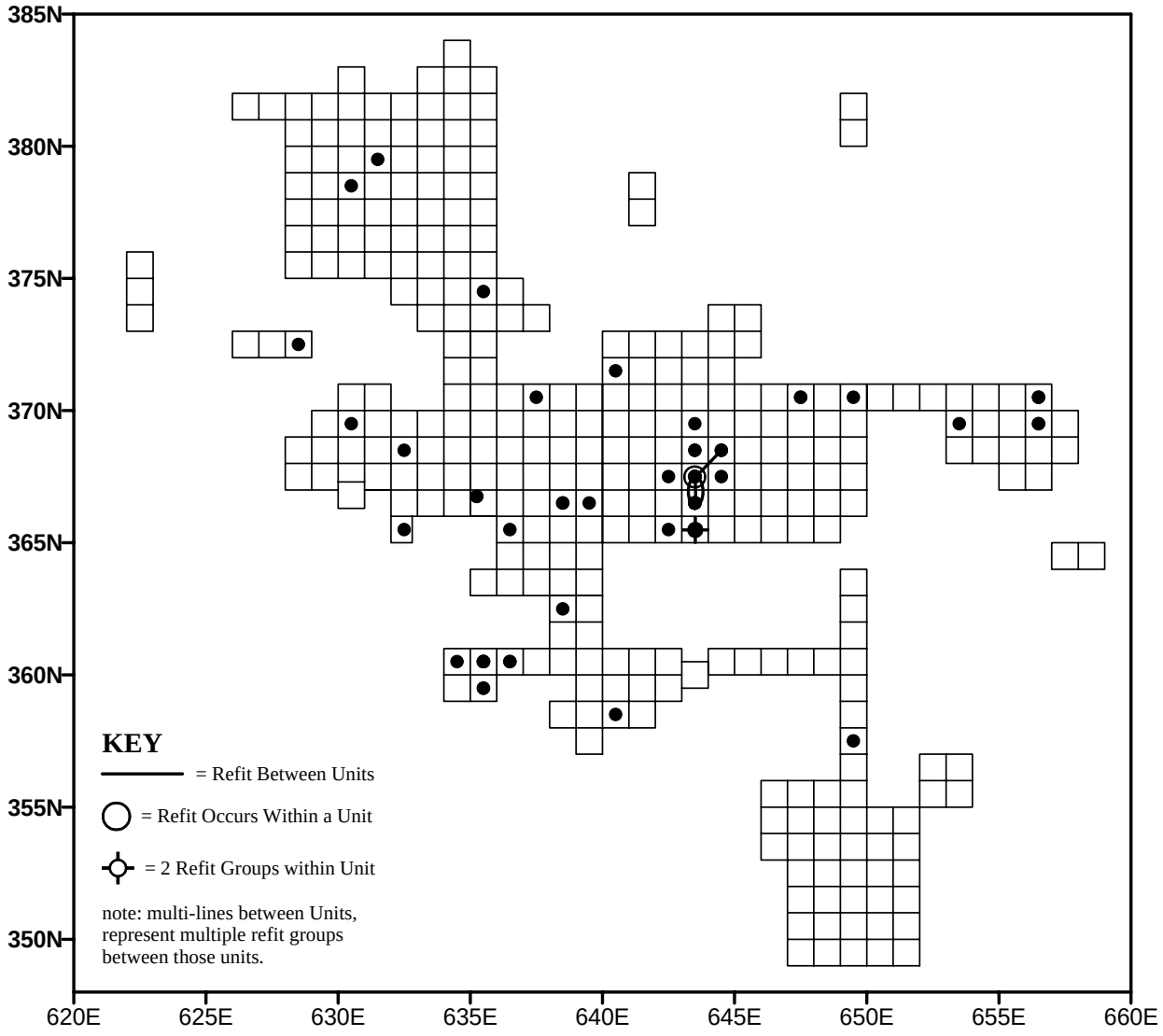

Figure I.137 Sherd Locations with Refits of Vessel Lot CN01 (Northwest Main Block)

Vessel Lot CN02

Paste:

Temper: CN02 was tempered with rounded clay pieces that ranged from 1.5-6.0 mm in size. These comprised less than 5% of the paste and were unevenly distributed throughout the paste, varying in concentration between sherds. Their bright color (2.5YR 5/8 red) stood out against the grayer core matrix. Based on thin section analysis, the similarity of texture, color, and inclusions in the fragments of clay compared to the matrix, it was likely that they derived from the same clay source. A small amount (5%) of fine sand/grit also was included, as well as a few random pebbles (2.0-3.0 mm).

Texture: Due to the low concentration of temper in this vessel, the texture was pasty and smooth. Since the temper was unevenly distributed, a few sherds had a subtle grittiness to them while others had none. Those, in fact, had a pasty, clayey sheen to their surfaces. Despite the uneven concentrations, the paste was highly compacted and solid.

Thin-sectioning: Sample 262-1 exhibited a fine-grained matrix that included a small number (5%) of rounded to sub-rounded ceramic fragments (Figure I.138). The ceramic fragments did not appear to represent "grog" in the sense of being fragments of previously manufactured vessels; rather, they appeared to be pieces of unfired clay that were not well incorporated into the overall matrix. Based on the similarity of texture, color, and inclusions of the fragments, compared to the matrix of Sample 262-1, it was likely that the fragments derived from the same clay source. The average size of the clay fragments was 1.5 mm, and individual fragments ranged from 0.5-2.0 mm in size. Natural inclusions (12%) within the matrix and clay fragments were poorly sorted and included quartz, feldspar, muscovite, and iron oxide. Voids (10.6%) consisted primarily of drying cracks oriented parallel to the long axis of the sherd. Fabric orientation was random in the sherd and in the clay fragments.

Figure I.138 Thin Section (262-1)

Color:

Exterior: Ranged from 2.5YR 6/6 light red to 2.5YR 5/3 reddish brown. There was darkening evident at the rim.

Interior: Ranged from 7.5YR 6/4 light brown to 2.5YR 6/6 light red to 5YR 4/1 dark gray to 5YR 2.5/1 black. The interior was extremely mottled with heavy darkening near the rim.

Core: Thin layer of 5YR 2.5/1 black on the interior, blending to 5YR 5/2 reddish gray in most of the core, blending to 5YR 6/4 light reddish brown on the exterior.

Surface Treatment:

Exterior: The exterior was a net roughened surface; it was either impressed multiple times with a single layered implement or a single time with a multiple layered net covered implement (Figure I.139). The net utilized had fine cordage that was formed with a final S-twist. Some cordage elements were thicker than others and ranged from 0.5-1.0 mm. The net was widely spaced with knots approximately 6.0 mm apart. The net impressions covered the body surface up to the rim lip. The entire exterior surface was faintly smoothed so that the netting pattern was not distinct.

Figure I.139 Vessel Lot CN02 Exterior Surface Showing Smoothed Over Net Impressions

Interior: The interior of this vessel was net-impressed and subsequently smoothed so that the net impressions were almost obliterated. The interior was scraped with an implement that left parallel narrow line markings. The interior

was uneven and rough, especially when compared to the exterior, which had a fairly uniform surface pattern across the vessel (Figure I.140).

Figure I.140 Vessel Lot CN02 Interior Surface Showing Darkening at Rim and Reddening at Base

***Decoration*:**

None.

Form:

Lip: The lip edge had been smoothed and was flat or slightly rounded. The lip edge was from 4.5-6.5 mm thick.

Rim: The thick vessel walls tapered toward the rim edge. The rim was generally straight to the edge, as the walls thinned.

Base/Body: No data on vessel size or shape. Body sherds ranged in thickness from 11.0-17.0 mm.

Sample Size:

Total: 33
Rims: 3
Base/Body: 30

Mends:

Vessel lot CN02 was represented by 33 sherds. The vessel lot included sixteen sherds from eleven different test units that mended into six groups (Figure I.141). In addition, the vessel lot included seventeen sherds that were similar in all attributes but did not mend to other sherds in the vessel lot.

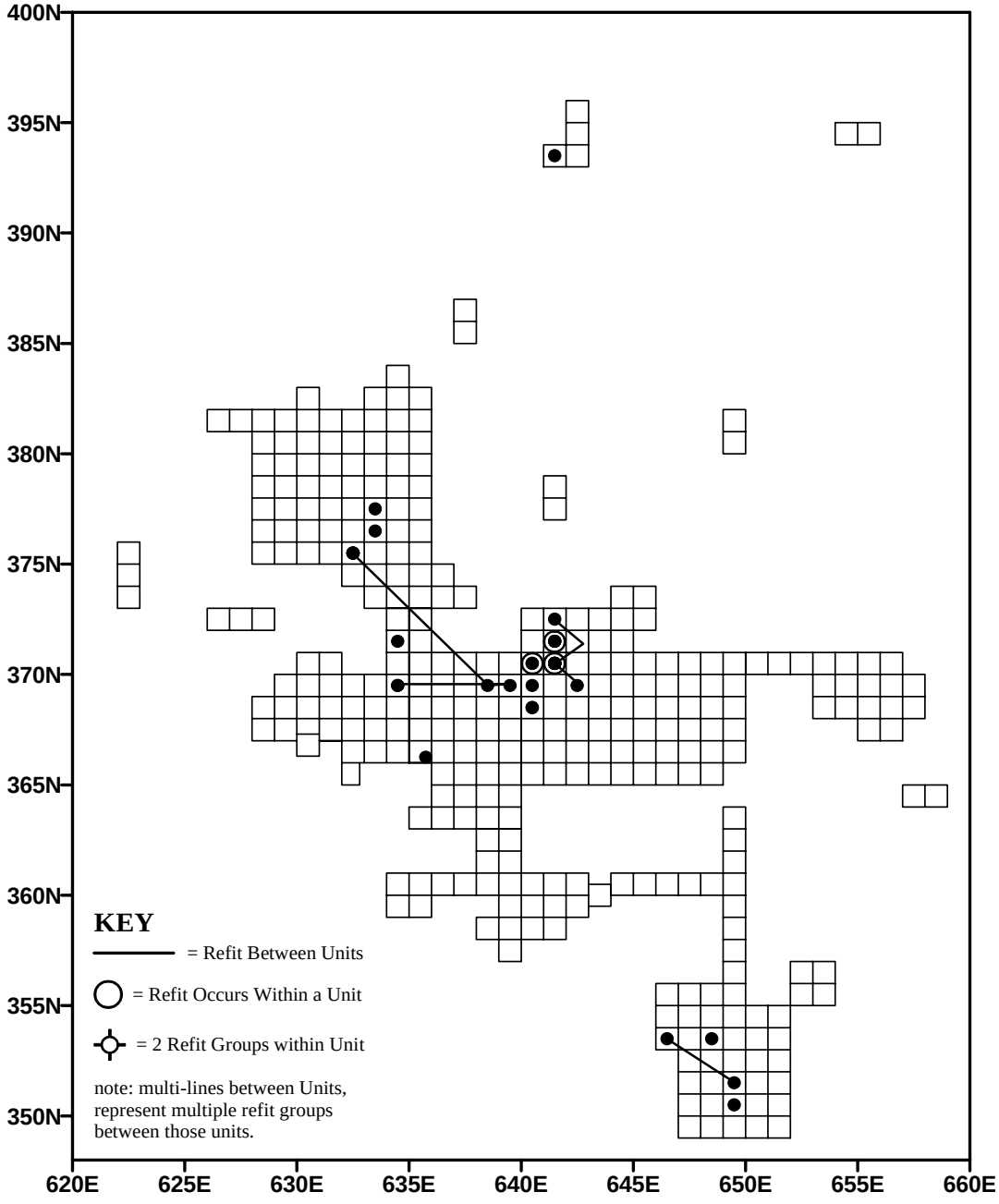

Figure I.141 Sherd Locations with Refits of Vessel Lot CN02 (Northwest Main Block)

***Discussion*:**

Vessel Lot CN02 was a very thick and heavy vessel, noticeably thicker than any of the other clay-tempered vessel lots (Figure I.142).

The vessel had the appearance of being carefully made with a well-blended compact paste. Despite the somewhat uneven distribution of temper, the material used was well-sorted for size. The exterior surface treatment was an even pattern of net impressions that may have been layered several times, suggested attention to detail. Darkening at the rim and reddening toward the base of the vessel suggested exposure to heat, perhaps as a cooking vessel (Figure I.140). On the other hand, its thick walls and size would suggest function as a storage vessel.

Figure I.142 Vessel Lot CN02 Detail Showing Thick Vessel Body

Vessel Lot CN03

Paste:

Temper: Vessel Lot CN03 was tempered with clay (2.5YR 6/6 light red). A piece of sherd also was included as temper and was visible in the body of this vessel. The interior of this temper sherd had been scraped with a tool that left a narrow, parallel line pattern similar to those found on other clay-tempered vessels. A small amount (5%) of fine sand/grit was included in the paste. Small pieces of iron oxide (2.5YR 4/8 red) also were present, but were probably natural inclusions in the source clay.

Texture: The small amount of fine sand/grit gave the sherds a slightly gritty texture. The paste was moderately compacted but was somewhat convoluted with small air holes present.

Color:

Exterior: 5YR 5/4 reddish brown

Interior: 7.5YR 5/4 reddish brown mottled with 5YR 6/6 reddish yellow

Core: Thin layer 7.5YR 5/4 reddish brown on the interior of the core, then 7.5YR 2.5/1 black composed two thirds of the core body, then a final layer of 7.5 YR 5/4 reddish brown

Surface Treatment:

Exterior: The exterior surface of this vessel was partially smoothed, which precluded a final determination of the surface treatment. The vessel was deeply impressed with widely spaced elements, which were either cord-wrapped cord, stick impressions, or stiff elements worked into a netting (Figure I.143).

Figure I.143 Vessel Lot CN03 with Detail of Exterior Surface Treatment

Interior: The interior was incompletely smoothed and underlying impressions were still visible. This made the interior uneven.

***Decoration*:**

None.

***Form*:**

Lip: No data.
Rim: No data.
Base/Body: No information on vessel shape or size. Breaks along coil lines were present but the surfaces of these were somewhat uneven or lumpy. Sherd thickness ranged from 8.5-10.0 mm.

***Sample Size*:**

Total: 5
Rims: 0
Base/Body: 5

Mends:

Vessel lot CN03 was represented by 5 sherds. The vessel lot included five sherds from two different test units that mended into one group (Figure I.144).

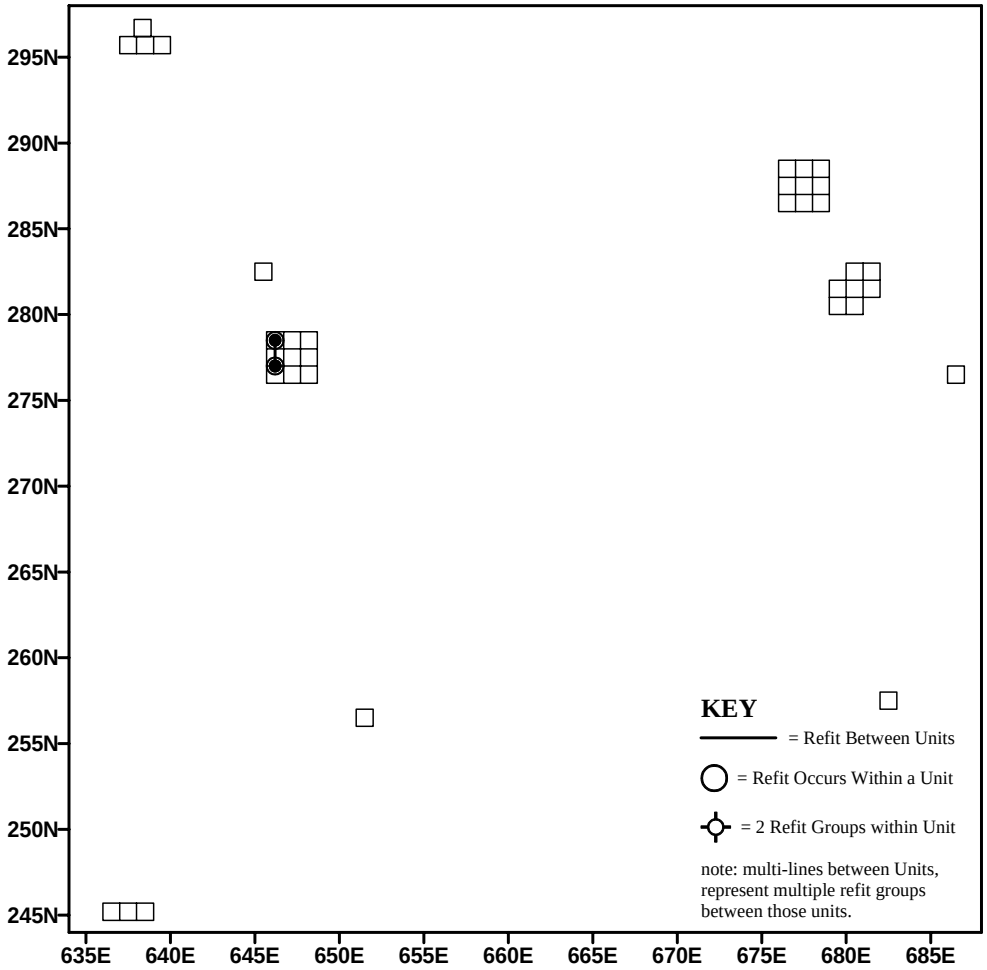

Figure I.144 Sherd Locations with Refits of Vessel Lot CN03 (Southwest Quadrant)

***Discussion*:**

All of the sherds that comprised Vessel Lot CN03 mended together and formed a portion of the vessel body (Figure I.145). The surface treatment of deep impressions formed with an unidentifiable stiff element was unique for the Hickory Bluff collection of ceramics, which typically displayed more simple net or fabric impressions. The inclusion of such a large ceramic sherd in this vessel's paste, although not unique, was uncommon; especially since it was large enough to identify its own surface treatment.

Figure I.145 Vessel Lot CN03 Exterior Surface of Reconstruction

Vessel Lot CN04

Paste:

Temper: Vessel Lot CN04 was tempered with pieces of clay (5YR 6/4 light reddish brown to 5YR 4/6 yellowish red). A small amount of sand/grit comprised about 5% of the paste as well. It was very fine with only a few pieces large enough for visible inspection. There also were small red inclusions (2.5YR 3/6 dark red) that probably were natural in the clay.

Texture: The surfaces were slightly rough and gritty due to the small amount of sand in the vessel body. All the edges were somewhat rounded and weathered. A few voids were present that seemed to be indicative of air pockets, rather than holes from leached out shell. The mottling in the body suggested that the paste was not well-mixed (Figure I.146).

Figure I.146 Vessel Lot CN04 Exterior Surface Showing Mottled Body and Airholes on Poor Blending

Color:

Exterior: 5YR 7/6 reddish yellow to a darker toned 5YR 6/6 reddish yellow

Interior: 5YR 6/6 reddish yellow to 5YR 6/4 light reddish brown. The darker tone was on the upper body sherd.

Core: 5YR 5/6 yellowish red mottled with 5YR 6/6 reddish yellow. The dark tones were toward the interior.

Surface Treatment:

Exterior: The exterior was impressed with netting comprised of open, widely spaced knots. The cordage in this net was formed with a final S-twist. All of the surfaces were slightly smoothed. The knots of the netting were so large, or deeply impressed, that their depressions were evident even in the areas that were more heavily smoothed.

Interior: The interior was impressed with the same netting. It was distinct on the upper body sherds but had been somewhat smoothed over on the lower body sherds.

***Decoration*:**

None.

Form:

Lip: No data.
Rim: No data.
Base/Body: No information on vessel shape or size. Coil breaks were present but most of the breaks were irregular (Figure I.147). Sherd thickness ranged from 12.0-16.0 mm.

Figure I.147 Vessel Lot CN04 Detail of Breakage Pattern

***Sample Size*:**

Total: 6
Rims: 0
Base/Body: 6

Mends:

Vessel Lot CN04 was represented by 6 sherds. The vessel lot included two sherds from one test unit that mended (Figure I.148). In addition, the vessel lot included four sherds that were similar in all attributes but did not mend to other sherds in the vessel lot.

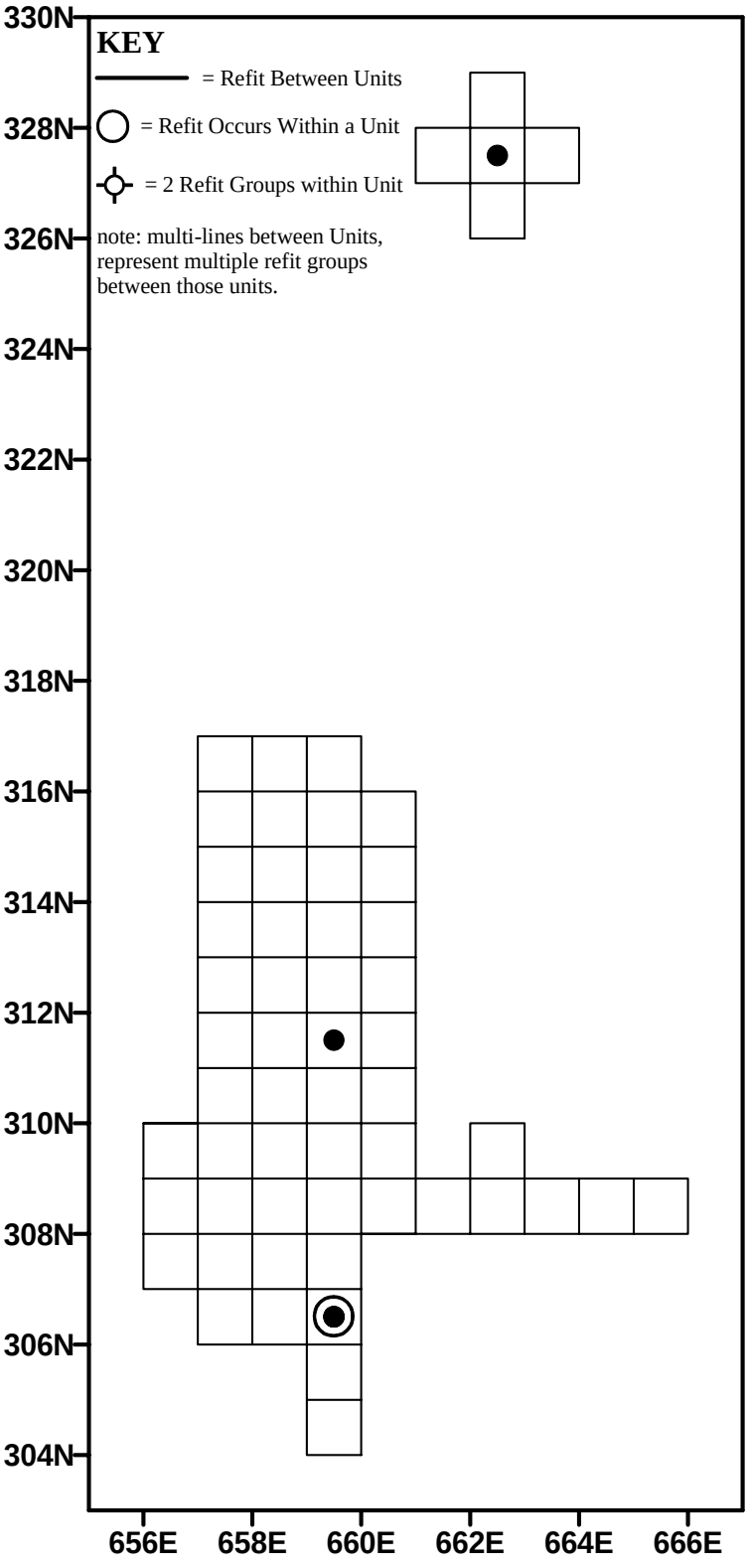

Figure I.148 Sherd Locations with Refits of Vessel Lot CN04 (Locus A)

***Discussion*:**

The netting used for the surface treatments of this vessel was distinctive, especially when viewed on the interior surfaces. It appeared as possibly formed by knots joining double cords (Figure I.149). In terms of paste, Vessel Lot CN04 contained a moderate amount of sand/grit and small fragments of clay for tempering and was within the range displayed by the clay-tempered wares. In terms of thickness of body, this vessel resembled Vessel Lot CN02, a thick-bodied, pasty-textured vessel.

Figure I.149 Vessel Lot CN04 Detail and Impression of Netting, Unique Knots From Joining Double Cords

Vessel Lot CN05

Paste:

Temper: Vessel Lot CN05 was tempered with large pieces of clay 1.0-5.0 mm in size. These were obvious on all surfaces of the vessel (Figure I.150). There was some variations in color from pale (5YR 7/6 reddish yellow) to darker (5YR 5/8 yellowish red). Some sherds contained clay fragments of three different color tones. This clay comprised approximately 5-10% of the paste. Less than 5% fine sand/grit was included.

Figure I.150 Vessel Lot CN05 Exterior Surface Showing Large Pieces of Clay Tempering

Texture: This vessel had a smooth and pasty feel. The paste was loosely compacted and lightly mixed. The paste was highly convoluted. Some sherds were more weathered or eroded than were others.

Thin-sectioning: Sample 2255-1 exhibited a cryptocrystalline matrix with no added temper (Figure I.151). The cryptocrystalline matrix was indicative of a higher firing temperature such that the lattices of the clay minerals in the matrix were fused and the original structure was destroyed. Natural inclusions (11%) were poorly sorted and consisted of chert fragments, quartz, feldspar, and iron oxide. It was likely that the chert fragments served as natural temper. Voids (12.3%) included small rounded pores and larger tears. Fabric orientation was generally parallel to the long axis, but spiraled around large minerals and temper.

Color:

Exterior: 7.5YR 6/4 light brown to 7.5YR 5/1 gray

Interior: 7.5YR 6/6 to 7.5YR 6/6 mottled with 7.5YR 5/1 gray and 7.5YR 3/1 very dark gray

Core: 7.5YR 3/2 dark brown on the interior portion blending to 7.5YR 7/6 reddish yellow

Figure I.151 Thin Section (2255-1)

Surface Treatment:

Exterior: The exterior was deeply impressed with a net, perhaps also net roughened in some areas. In other areas it had been flattened or lightly smoothed.

Interior: The interior was smoothed but somewhat uneven. There were cracks on some of the surfaces. Many of these cracks radiated outward from the temper inclusions. There also was scraping evident on some interiors. This was done with a tool that left a pattern of narrow parallel lines on the surface.

***Decoration*:**

None.

Form:

Lip: No data.
Rim: No data.
Base/Body: No information available on vessel shape or form. Sherd thickness ranged from 9.0-12.5 mm.

Sample Size:

Total: 11
Rims: 0
Base/Body: 11

Mends:

None (Figure I.152).

***Discussion*:**

This vessel represented one end of the continuum in clay-tempered vessels. The continuum ranged from the nearly untempered paste to a paste tempered heavily with large clay fragments perhaps of varying color. This vessel represents the latter end. The deeply net-impressed surface treatment was typical of clay-tempered wares.

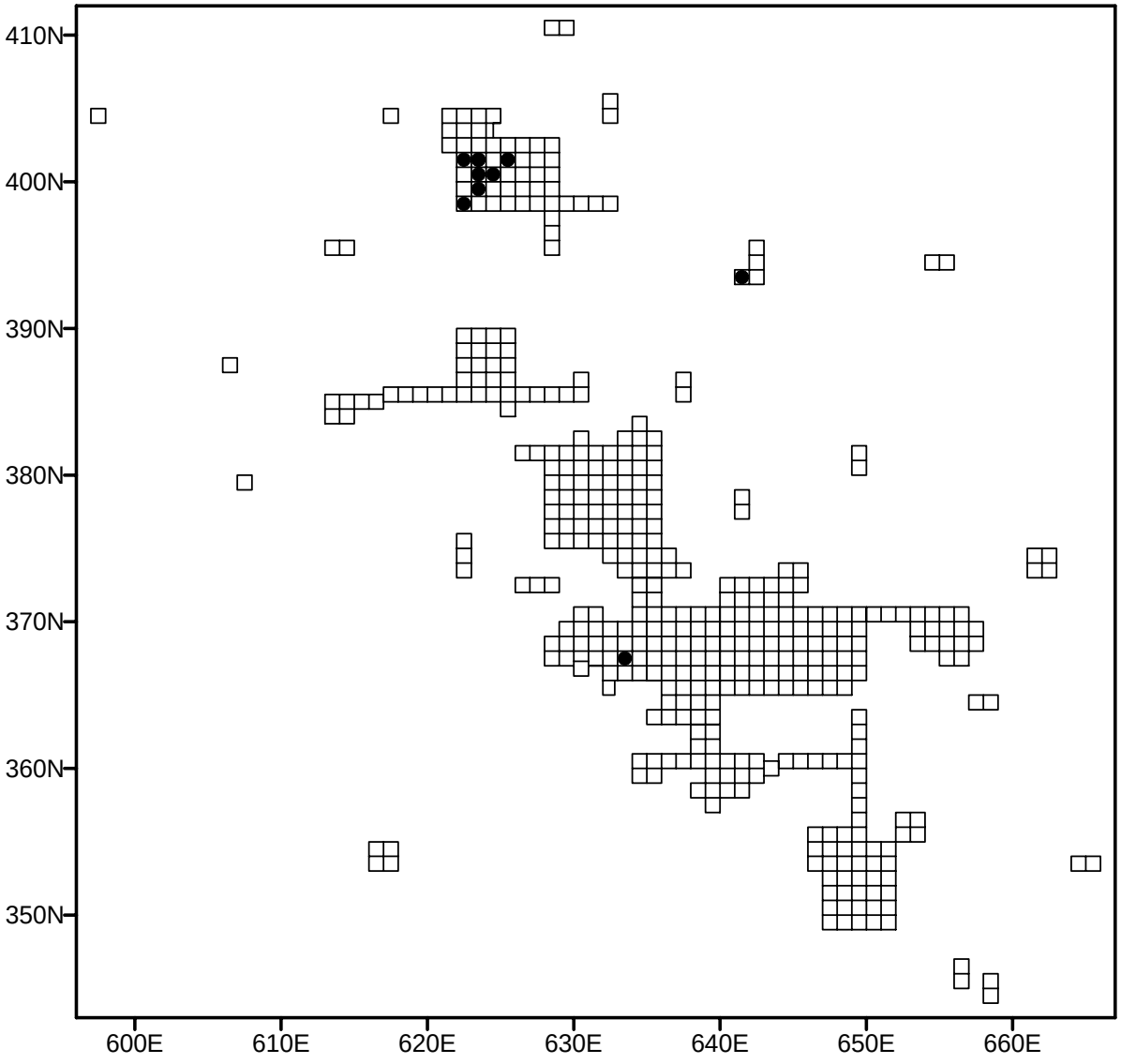

Figure I.152 Sherd Locations of Vessel Lot CN05 (Locus I and Northwest Main Block)

Vessel Lot CN06

Paste:

Temper: Vessel Lot CN06 was tempered with clay fragments (5YR 5/6 yellowish red). These were low in concentration accounting for less than 1% of the paste. These clay fragments were also small in size ranging from 1.0-2.0 mm. Sand also was included comprising 5% of the paste. Most of the grains were fine in size, but did range up to 1.5 mm in size.

Texture: This paste had a slight unevenness or grittiness because of the sand included, but the general texture was smooth and pasty. The paste was compacted and well-mixed.

Thin-sectioning: Sample 4344-1 exhibited a fine-grained matrix tempered with a minor quantity of sand (9.3%) (Figure I.153). The sand included sub-rounded quartz and calcite grains that ranged in size from 0.1-0.5 mm (average grain size was 0.25 mm). Natural inclusions (7%) were moderately well-sorted and consisted of feldspar and hematite; it was possible that many of the quartz and calcite grains noted during the point count were natural rather than cultural inclusions, due to their small size. Voids (11.6%) included small rounded pores and larger tears. Fabric orientation was strongly parallel to the long axis of the sherd.

Figure I.153 Thin Section (4344-1)

Color:

Exterior: 5YR 6/6 reddish yellow

Interior: 5YR 6/6 reddish yellow

Core: 5YR 5/8 yellowish red

Surface Treatment:

Exterior: The exterior surface was net-roughened with a fine net having closely-spaced knots. This net was composed of narrow cordage, which had been formed with a final S-twist. The repeated impressions had the effect of creating a fine, low-relief patterning on the surface (Figure I.154). The exterior surface treatment covered up to the lip edge.

Figure I.154 Vessel Lot CN06 Exterior Surface Showing Low Relief Net Pattern

Interior: The interior was smoothed. This was, however, incomplete and faint remnants of earlier impressions still remained.

***Decoration*:**

None.

Form:

Lip: The lip edge had been impressed, pinched, and then incised with a tool at an angle across the edge, to form a row of scallops across the rim edge (155). The single intact scallop was 18.0 mm long. The lip was 3.0-5.0 mm thick, with the variation caused by the pinching.

Rim: The rim body tapered straight to the rim edge. The sherd was 8.0 mm at its thickest point.

Base/Body: No information available about the vessel shape or size.

Sample Size:

Total: 1
Rims: 1
Base/Body: 0

Figure I.155 Vessel Lot CN06 Detail of Lip Edge, Pinched and Scalloped

Mends:

None (Figure I.156).

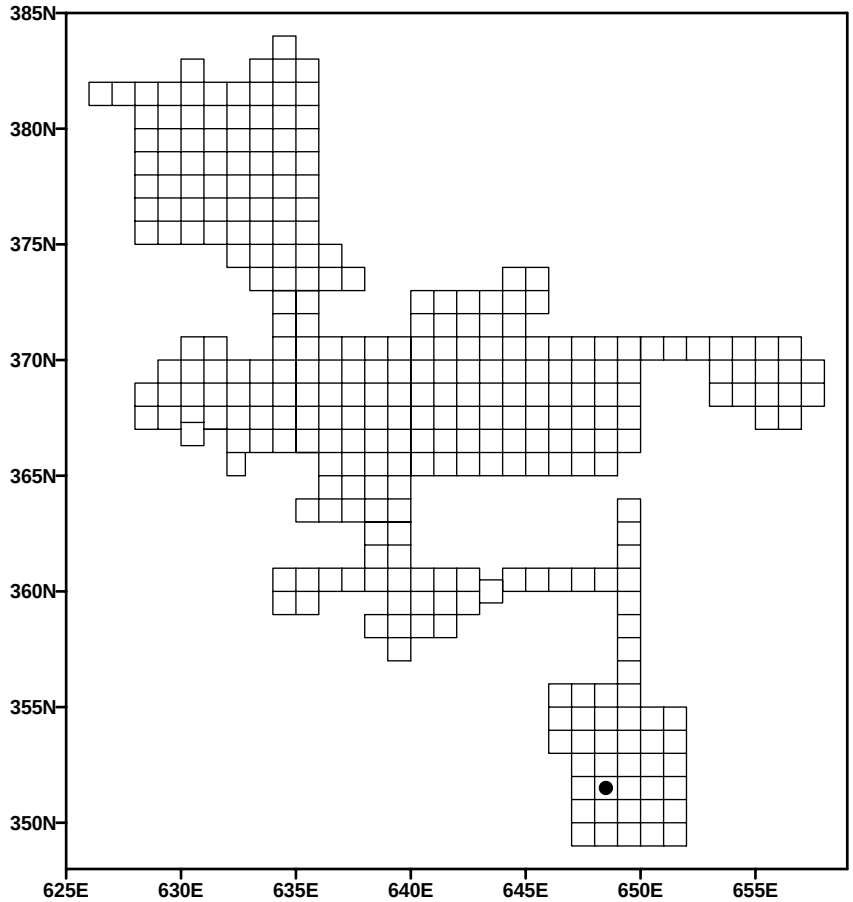

Figure I.156 Sherd Location of Vessel Lot CN06 (Northwest Main Block)

***Discussion*:**

The incised scalloped rim edge of Vessel Lot CN06 was similar to Vessel HUT01, the only other vessel lot in the assemblage that had an incised scalloped rim edge. This was, however, the primary similarity between Vessel Lots CN06 and HUT01. Vessel Lot CN06 was more sandy, did not have the small and numerous red iron oxide inclusions found in Vessel Lot HUT01. These two vessel lots also differed in terms of sherd thickness, width and spacing of scallops, surface treatments, and final cordage twist.

Vessel Lot CN07

Paste:

Temper: Vessel Lot CN07 was tempered with small fragments of iron-rich clay that ranged in size from 0.5-3.0 mm. They were deep red in color (2.5YR 4/8) and were unevenly distributed through the paste. They comprised less than 5% of the paste. Vessel Lot CN07 also was tempered with heavy amounts of sand/grit which comprised another 10-15% of the paste. This was unsorted in size. Most was of a smaller size, less than 1.0 mm, although larger pebbles were included. Most of these were quartz but a gray chert pebble 8.0 mm long was present. Moreover, rounded pits in the core of several sherds indicated that pebbles had eroded out.

Texture: The texture of this vessel was gritty to the touch because of the smaller sand/grit.

Thin-sectioning: Sample 4277-1 exhibited a cryptocrystalline matrix that appeared to have been tempered with shell fragments (10.2%) (Figure I.157). Due to leaching and soil acidity, the evidence of shell temper was restricted to curvilinear voids throughout the matrix. The cryptocrystalline matrix was indicative of a higher firing temperature such that the lattices of the clay minerals in the matrix were fused and the original structure was destroyed. Average length of the curvilinear voids was 1.0 mm, while leached shell fragments ranged in size from 0.5-2.0 mm. Natural inclusions (9.7%) were poorly sorted and consisted of muscovite, weathered quartz, feldspar, and hematite. Voids (9.7%), apart from those left by leached shell, were restricted to small, rounded pores and irregular tears. Fabric orientation was generally parallel to the long axis, but spiraled around large minerals and temper.

Figure I.157 Thin Section (4277-1)

Color:

Exterior: Ranged from 7.5YR 6/4 light brown to 2.5YR 6/6 light red

Interior: Ranged from 7.5YR 6/6 reddish yellow to 2.5YR 6/6 light red to 7.5YR 5/2 brown. The interior was markedly darker than the exterior on most of the sherds.

Core: Thin layer of 7.5YR 3/1 very dark gray on the interior, then 7.5YR 4/2 brown, then 7.5YR 6/6 reddish yellow forming the exterior surface of the core.

Surface Treatment:

Exterior: The exterior surface was deeply impressed with a net composed of tightly spaced, large knots in a close linear arrangement. This created a highly textured surface (Figure I.158). The cordage was formed with a final S-twist (Figure I.159). The exterior was partially smoothed on some sherds. Scraping with a tool left narrow parallel line marks.

Figure I.158 Vessel Lot CN07 Detail of Exterior Surfaces Showing Linear Arrangement

Interior: The interior was net impressed, smoothed, and scraped with a tool that left narrow parallel lines on the surface. There appeared to be more smoothing and scraping on the interior, but the underlying net impressions still were evident.

***Decoration*:**

None.

Form:

Lip: The lip edge was flattened but still showed the faint impressions of a wrapped paddle. These had been partially smoothed over. The lip was 7.0-8.0 mm thick.

Rim: The rim sherds were too short to determine the angle of the walls. Each rim sherd slightly tapered to the edge. One sherd was slightly pushed outward at the lip. A smoothing indentation on the interior of this edge may have forced the lip outward creating an inconsistency in form along the rim edge (Figure I.160).

Base/Body: No information on the shape or size of this vessel. Numerous breaks along the coil lines were present. The sherds ranged in thickness from 9.0-13.0 mm.

Figure I.159 Vessel Lot CN07 Exterior Surface

Figure I.160 Vessel Lot CN07 Detail Showing Rim Inconsistency Along Edge

Sample Size:

Total: 70
Rims: 3
Base/Body: 67

Mends:

Vessel lot CN07 was represented by 70 sherds. The vessel lot included twenty-seven sherds from fourteen different test units that mended into three groups (Figure I.161). In addition, the vessel lot included forty-three sherds that were similar in all attributes but did not mend to other sherds in the vessel lot.

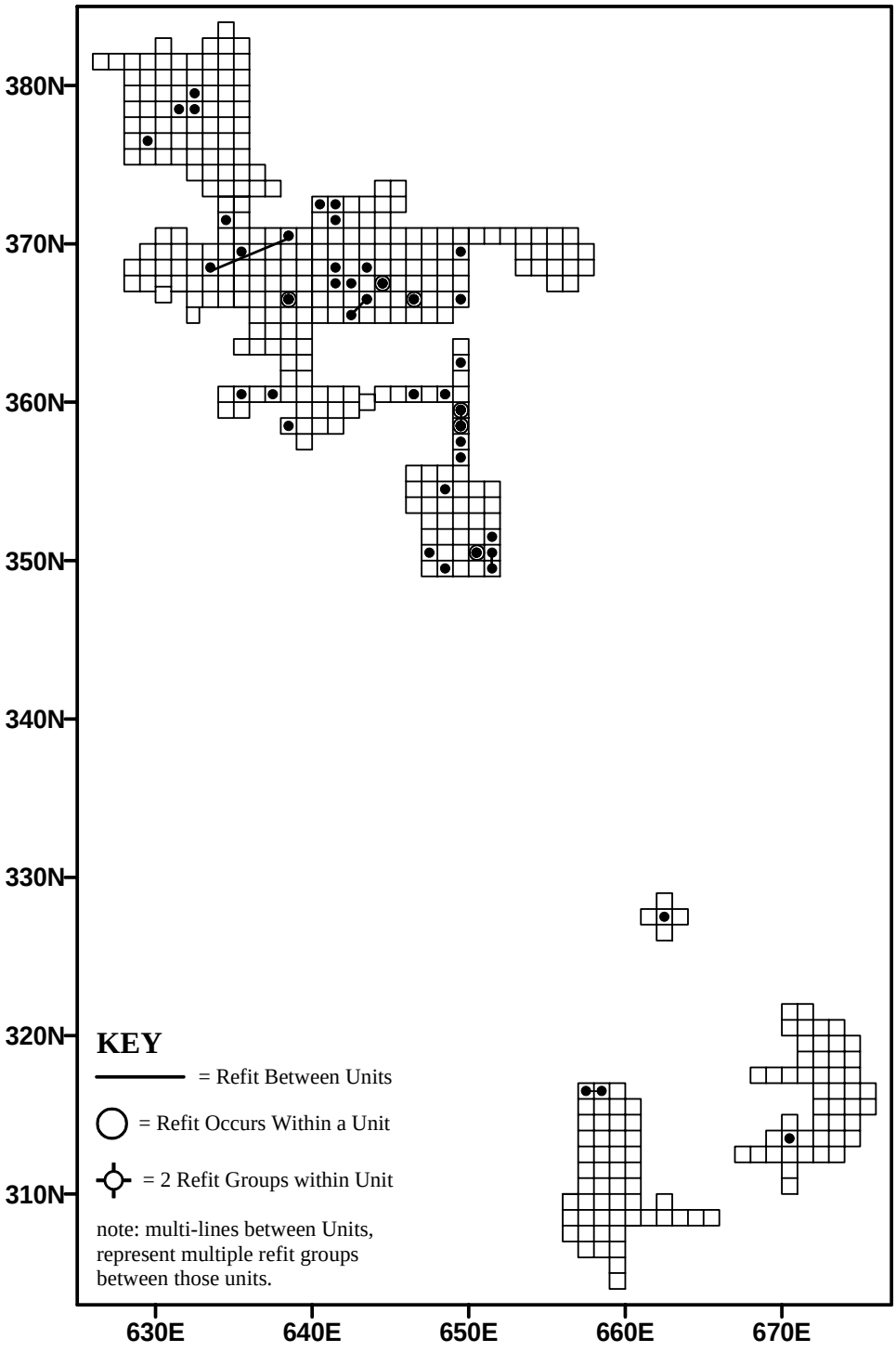

Figure I.161 Sherd Locations with Refits of Vessel Lot CN07 (Northwest Main Block and Locus A)

***Discussion*:**

The deep impressions of narrowly spaced net knots on both the interior and exterior surfaces gave a distinctive appearance to Vessel Lot CN07. The vessel lot was even more distinguished when these impressions were combined with the external scraping marks that were evident. The higher sand content placed this vessel at the sandier end of the spectrum, and the inclusion of larger pebbles was atypical of the other clay-tempered vessel lots. The sherds of this vessel lot were darker on the interior than the exterior. At least eight of them showed evidence of a deep darkening or smudging on the interior surface. This suggested that this vessel had been used for cooking. The diversity evident within the rim sherd forms suggested a range of treatment within one vessel.

Vessel Lot CN08

Paste:

Temper: Vessel Lot CN08 was tempered with fragments of clay which ranged in size from 1.0-5.0 mm. These ranged in color from 5YR 6/6 reddish yellow to 5YR 5/6 yellowish red. They comprised up to 5% of the paste. There was some variation in the clay content between sherds. Also, fine sand was included. This was mainly small grained and comprised about 10% of the paste. There were also other random large pebbles, up to 4.0 mm in length present in the paste.

Texture: The sand content made this paste slightly gritty.

Thin-sectioning: Sample 978-1 exhibited a cryptocrystalline matrix tempered with minor quantities (11.5%) of ceramic sherd fragments (grog) and sand (Figure I.162). The cryptocrystalline matrix was indicative of a higher firing temperature such that the lattices of the clay minerals in the matrix were fused and the original structure was destroyed. The sand grains were small (<0.5 mm) and moderately well sorted, with the presence of heavily altered quartz that suggested an exposed or shallow source. The grog ranged from 0.25-2.0 mm in size; based on the identification of only five fragments within the sample, the average size calculations were meaningless. The matrix observed in the grog fragments was cryptocrystalline and included a small amount of quartz that suggested the clay source of the grog was different from that used to manufacture Sample 978-1. Natural inclusions (3.2%) within the matrix of Sample 978-1 were restricted to potassium feldspar and iron oxide. Voids (9%) included small rounded pores and rare large cracks or tears. Fabric orientation was random.

Figure I.162 Thin Section (978-1)

Color:

Exterior: 5YR 6/6 reddish yellow to 5YR 5/6 yellowish red to 5YT 5/4 reddish brown

Interior: 5YR 6/6 reddish yellow to 5YR 4/2 dark reddish gray to 5YR 4/1 to 10YR 2/1 black

Core: The core color was either 5YR 2.5/1 black with a thin layer of the interior and exterior color on either surface. Or, the interior two thirds of the core was dark (5YR 2.5/1 black) and the remaining one third was the color of the exterior surface.

Surface Treatment:

Exterior: The exterior surface was deeply impressed and net-roughened. It was then partially smoothed.

Interior: The interior of this vessel was smoothed. However, irregular scrape marks and a gouge mark were made with tools after the initial smoothing. Most of these marks were a single line. Strokes were made with a tool approximately 3.0 mm wide which left a pattern of fine parallel lines (Figure I.163).

***Decoration*:**

None.

Form:

Lip: No data.
Rim: No data.
Base/Body: No information on vessel shape or size. Breaks along the coils predominated and were very distinctive in appearance. The thick bodies left deep channels and large protrusions of paste along the coil lines (Figure I.163). One sherd had been impressed with a paddle along the top of the coil, during manufacture of the vessel. Sherd thickness ranged from 10.5-12.0 mm.

Figure I.163 Vessel Lot CN08 Interior Surface Showing Gouges and Scrapes after Smoothing

Sample Size:

Total: 12
Rims: 2
Base/Body: 10

Mends:

Vessel lot CN08 was represented by 12 sherds. The vessel lot included eleven sherds from six different test units that mended into three groups (Figure I.164). In addition, the vessel lot included one sherd that were similar in all attributes but did not mend to other sherds in the vessel lot.

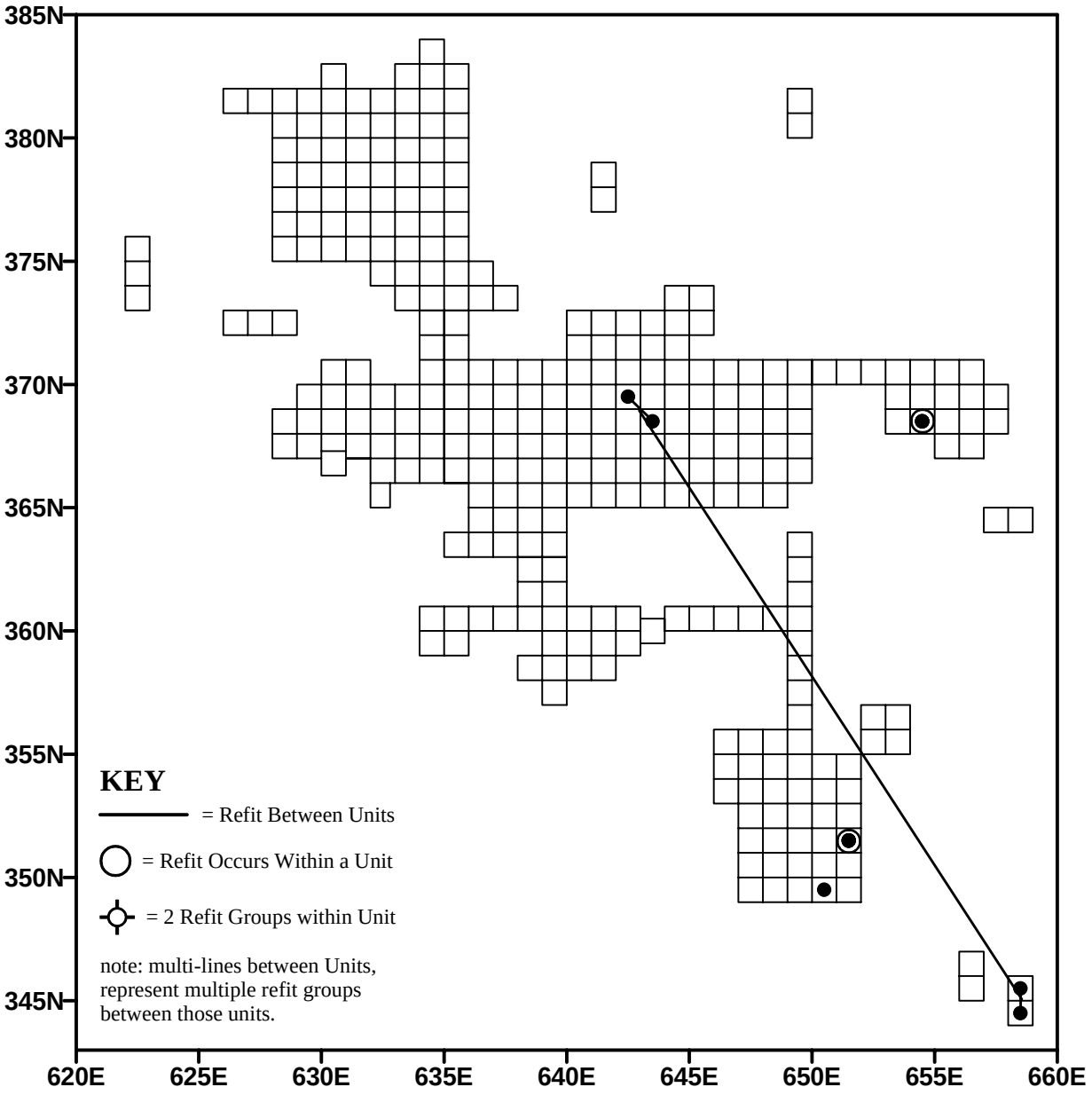

Figure I.164 Sherd Locations with Refits of Vessel Lot CN08 (Northwest Main Block)

***Discussion*:**

Vessel Lot CN08 was especially noteworthy because of the cross-mend which was obtained for four sherds which formed two groups. These groups were different not only in their coloration, but also in their paste (Figure I.165). Sherds 978-1 and 1142-1 were very dark brown in coloration and gritty in texture. Sherds 116-1 and 4452-1, on the other hand, were a lighter yellowish red color and were more pasty or smooth, especially on the interior. This group was also blackened with a burned area. This suggested that these differences were the result of a firing mishap, and that the bleached, burned sherds were firing wasters (Figure I.165). The differences could have been created by breakage during firing or the relative position of these sherds in the actual firing process.

Figure I.165 Vessel Lot CN08 Exterior Surface Cross-Mends Show Variety of Sherd Color

Vessel Lot CN09

Paste:

Temper: Vessel Lot CN09 was tempered with pieces of clay (5YR 6/8 reddish yellow to 7.5YR 4/6 strong brown) which comprised 5% of the paste. These ranged in size from 2.0-6.5 mm (Figure I.166). Fine sand comprised another 10% of the paste.

Texture: The content of fine sand gave this vessel slightly rough feel.

Figure I.166 Vessel Lot CN09 Detail Showing Intentional Use of Clay Temper

Color:

Exterior: 10YR 7/4 very pale brown

Interior: 7.5YR 6/4 light brown

Core: 10YR 5/1 gray in the interior half blending into 10YR 7/3 very pale brown in the exterior portion

Surface Treatment:

Exterior: The exterior was deeply net-impressed and these impressions had indistinct, flattened edges. The paste had extruded through this net to such an extent that suggested the paste was very moist at the time of manufacture (Figure I.167).

Interior: The interior was smoothed but the prior impressions on this surface were still vaguely visible.

***Decoration*:**

None

Figure I.167 Vessel Lot CN09 Exterior Surface Showing Indistinct Impressions

Form:

Lip: No data.
Rim: No data.
Base/Body: No information about vessel size or shape. Breaks along the coils were present. Sherd thickness ranged from 9.5-14.0 mm.

Sample Size:

Total: 3
Rims: 0
Base/Body: 3

Mends:

None (Figure I.168).

***Discussion*:**

Vessel Lot CN09 shared similarities with Vessel Lot CN05. Both exhibited deeply net-impressed surface treatments, large pieces of clay temper, and a light to moderate inclusion of sand within the paste. Vessel Lot CN09, however, had a more compact paste and lacked the mottled and darkly colored interior that was present on Vessel Lot CN05. These lots represented examples of the clear use of clay as tempering and not as an incidental or unblended element of the paste.

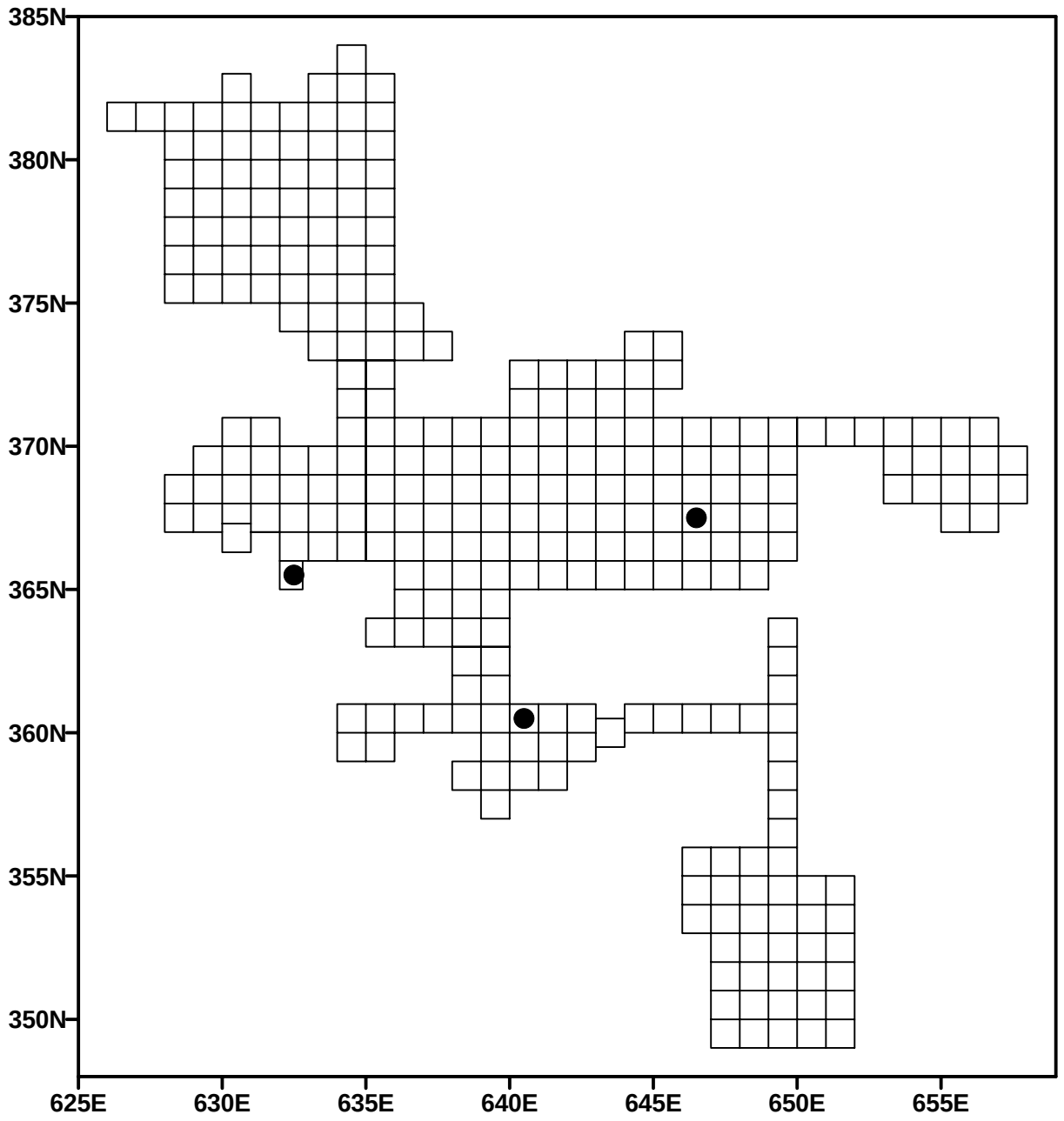

Figure I.168 Sherd Locations of Vessel Lot CN09 (Northwest Main Block)

Vessel Lot CN10

Paste:

Temper: Vessel Lot CN10 was tempered with pieces of clay (7.5YR 6/8 reddish yellow to 5YR 6/4 light reddish brown) which ranged in size from 2.0-4.5 mm. These comprised approximately 5% or less of the paste and were unevenly distributed throughout this paste. Also included was a well-sorted sample of fine sand/grit, which was 1.0 mm or less in size. This comprised 10% of the paste. Two smooth, rounded voids were evident along the edges of one sherd. These were 7.0-8.0 mm long and may have held large pebbles. No actual pebbles, however, were noted on the surfaces of any of the sherds.

Texture: The inclusions of fine sand gave this vessel a slightly gritty texture. The paste was moderately compacted but small air holes were present in the core.

Thin-sectioning: Sample 2378-3 exhibited a cryptocrystalline matrix tempered with a minor quantity (6.8%) of ceramic sherd fragments (grog) (Figure I.169). The cryptocrystalline matrix was indicative of a higher firing temperature such that the lattices of the clay minerals in the matrix were fused and the original structure was destroyed. The grog temper was sub-rounded in shape and ranged in size from 0.5-2.0 mm (average grain size was 1.5 mm). Natural inclusions (13.1%) were moderately well-sorted and consisted of muscovite, altered quartz, feldspar, carbonate rock fragments, and iron oxide. Voids (11.1%) included small rounded pores and larger tears, as well as irregular voids where minerals had been plucked from the matrix. Fabric orientation was generally parallel to the long axis, but spiraled around large minerals and temper.

Figure I.169 Thin Section (2378-3)

Color:

Exterior: 5YR 6/6 reddish yellow to 5YR 4/3 reddish brown (10YR 2/1 black, residue on exterior)

Interior: 7.5YR 6/4 light brown to 7.5YR 5/2 brown to 7.5YR 3/1 very dark gray

Core: 7.5YR 2.5/1 black on the interior quarter, blending to 7.5YR 6/6 reddish yellow in the remaining three fourths of the core body.

Surface Treatment:

Exterior: The exterior surface was impressed with netting, which was made of cordage formed with a final S-twist. This netting was layered on a paddle leaving a complex impression pattern on the vessel surface (Figure I.170).

Figure I.170 Vessel Lot CN10 Exterior Surface Showing Complex Netting

Interior: The interior surface was smoothed. Portions had been scraped with a tool leaving channel or gouge marks and some fine striation marks. Finger-grooves were present extending from the lip vertically down the vessel body (Figure I.171).

***Decoration*:**

None.

Form:

Lip: The vessel lip was flattened, but remained uneven. Earlier impressions had been incompletely smoothed over. Slight pinch marks were present at the lip causing a variation in the thickness of the lip, 4.5-6.0 mm.

Rim: Depressions made from fingers were evident along the interior rim edge and continued vertically down the vessel body. The vessel body in the rim area tapered straight to the lip.

Base/Body: The portion of the vessel body recovered, suggested that this vessel was wider at the rim than at the base and that the body expanded slightly outward from the bottom to the top. Breaks along the coil lines were present, but most of the breaks were irregular.

Figure I.171 Vessel Lot CN10 Interior Surface Showing Finger Grooves Vertically Down Body

Sample Size:

Total: 10
Rims: 1
Base/Body: 9

Mends:

Vessel lot CN10 was represented by 10 sherds. The vessel lot included eight sherds that mended into two groups (Figure I.172). In addition, the vessel lot included two sherds that were similar in all attributes but did not mend to other sherds in the vessel lot.

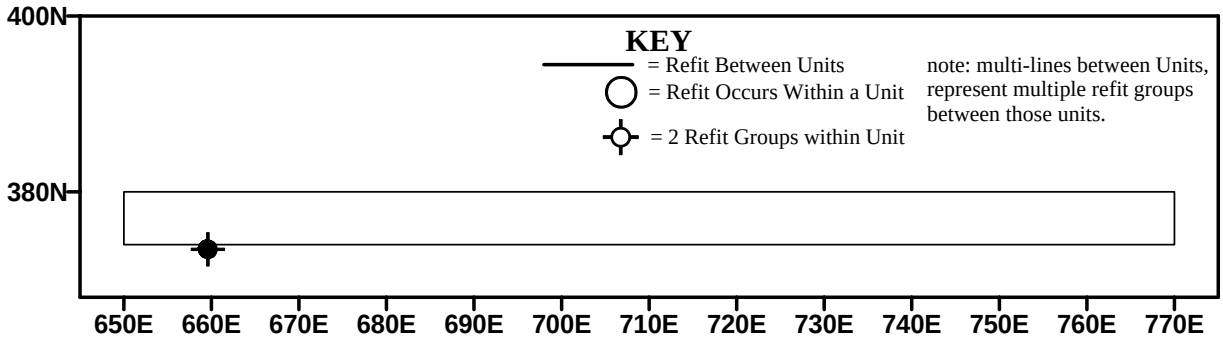

Figure I.172 Sherd Locations with Refits of Vessel Lot CN10 (Backhoe Scrape)

***Discussion*:**

Vessel Lot CN10 was generally darkened in color at the rim on both the interior and the exterior. This darkening appeared as a light smudging of this area (Figure I.171). Also, a thick build-up or residue was present on the exterior of the vessel near the rim and slightly lower on the body. This vessel lot was recovered from Feature 202, a small, shallow basin feature.

Vessel Lot CN11

Paste:

Temper: Vessel Lot CN11 was tempered with fragments of clay (7.5YR 7/6 reddish yellow to 7.5YR 5/8 strong brown). These ranged in size from 1.0-6.0 mm with the majority at the smaller end of the range. Fine sand was included and accounted for approximately 10% of the paste. A few random pebbles (2.0 mm) and a minute portion of sand/grit also were present in the paste.

Texture: The inclusion of fine sand prevented the texture from feeling smooth, but it was not as gritty as some of the vessels with a greater percentage of, or coarser grained, sand temper.

Color:

Exterior: 7.5YR 6/4 light brown to 7.5YR 4/1 dark gray

Interior: 7.5YR 6/6 reddish yellow to 7.5YR 6/4 light brown

Core: Thin layer of 7.5YR 6/4 light brown on interior, then one third of core distinct layer of 7.5YR 2.5/1 black, then 7.5YR 6/6 reddish yellow

Surface Treatment:

Exterior: The exterior was net roughened with deep impressions creating a highly textured surface (Figure I.173).

Figure I.173 Vessel Lot CN11 Exterior Surface

Interior: The interior was impressed and then smoothed. Some portions were scraped with a tool that left narrow parallel lines in an irregular criss-cross pattern. Some of these scrapes were short strokes, almost gouges. The overall effect was that the interior surface was uneven. Mounding of the clay, as well as small depressions or pits, was present (Figure I.174).

Figure I.174 Vessel Lot CN11 Interior Surface Showing Variability and Mounding of Paste and Pits

***Decoration*:**

None.

Form:

Lip: No data.
Rim: No data.
Base/Body: No information on vessel shape or size. The upper edge was a long coil break that had been impressed with a paddle before it was joined. Other edges broke irregularly. Sherd thickness ranged from 10.5-11.0 mm.

Sample Size:

Total: 5
Rims: 0
Base/Body: 5

Mends:

Vessel lot CN11 was represented by 5 sherds. The vessel lot included four sherds from four different test units that mended (Figure I.175). In addition, the vessel lot included one sherd that were similar in all attributes but did not mend to other sherds in the vessel lot.

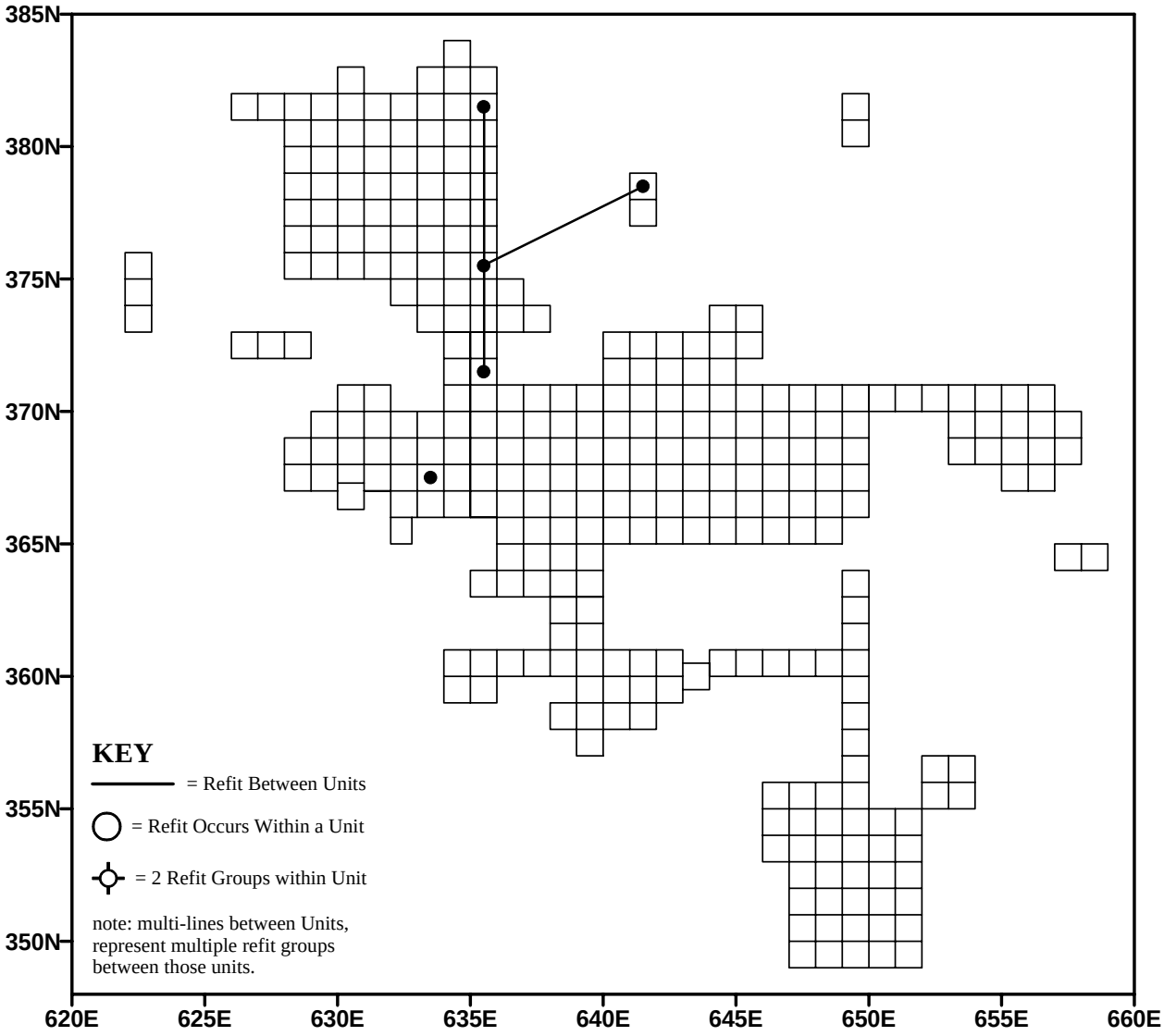

Figure I.175 Sherd Locations with Refits of Vessel Lot CN11 (Northwest Main Block)

***Discussion*:**

The highly textured exterior surface treatments, as well as the rough, uneven interior, were distinct for this vessel. Four sherds in this vessel lot cross-mended, and the reconstructed portion was quite heavy (Figure I.174). The paste of Vessel Lot CN11 was similar to Vessel Lot CN18. Each vessel lot had a significant content of fine sand/grit, which gave these vessels a heavier feel when compared to other more pasty and less compacted clay-tempered vessel lots.

Vessel Lot CN12

Paste:

Temper: Vessel Lot CN12 was tempered with large pieces of clay/grog measuring up to 8.0 mm in length and comprising less than 5% of the paste. These were primarily 7.5YR 6/4 light brown in color but also included darker, grog-like pieces (7.5YR 3/1 very dark gray to 7.5YR 2.5/1 black). Vessel Lot CN12 also included very distinctive, bright orange red iron oxide fragments, which ranged in color from 10R 6/8 light red to 10R 5/8 red. These comprised 5-10% of the paste (Figure I.176). Sand was included as well and accounted for 5.0-10.0% of the paste. The grains were mostly under 1.0 mm in size, but occasional pebbles ranged up to 4.5 mm.

Figure I.176 Vessel Lot CN12 Detail Showing Large Clay/Grog and Bright Orange/Red Iron Oxide Inclusions

Texture: The texture was slightly gritty. The paste was moderately compacted and mixed.

Color:

Exterior: 7.5YR 6/4 light brown

Interior: 7.5YR 6/4 light brown

Core: Interior layer of 7.5YR light brown, then main core of 5YR 6/6 reddish yellow, then 7.5 YR 6/4 light brown on the surface.

Surface Treatment:

Exterior: The exterior was impressed with a net. This netting had large knots that were widely spaced, 6.0-8.0 mm apart. It was made of cordage that was formed with a final S-twist. One sherd was somewhat smoothed and may have been impressed more than once with the netting (Figure I.177).

Interior: The interior was smoothed. This was incomplete and in some areas evidence of earlier net impressions remained. The knots of this netting were also widely spaced.

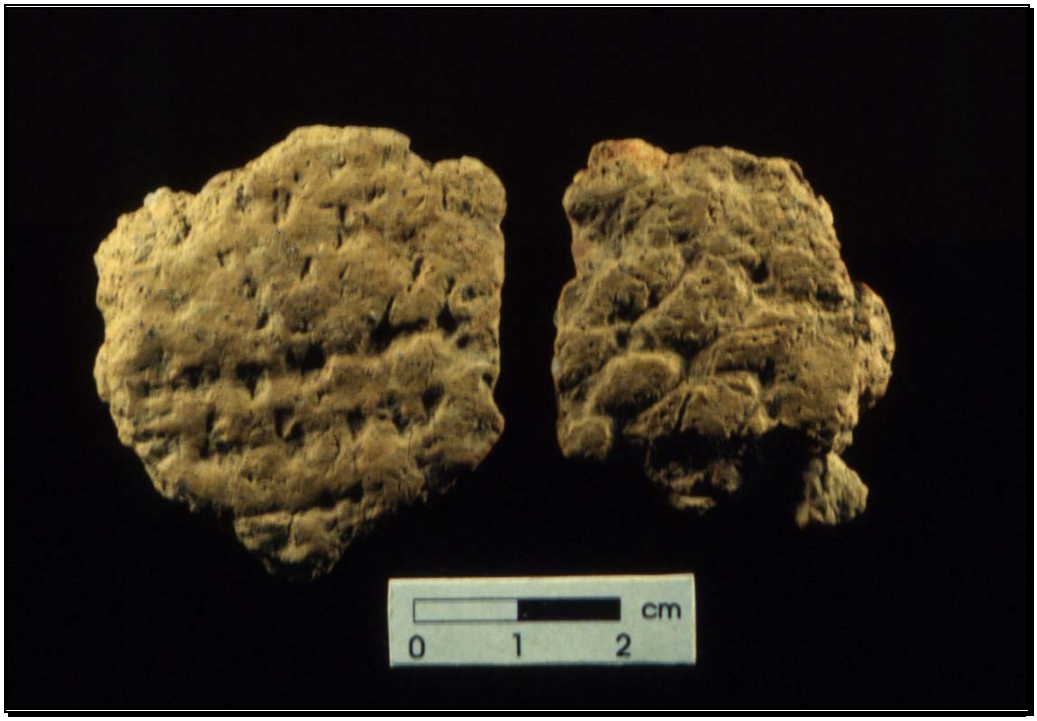

Figure I.177 Vessel Lot CN12 Exterior Surface Showing Variation

***Decoration*:**

None.

Form:

Lip: No data.
Rim: No data.
Base/Body: No information about vessel form or shape. The sherds were 9.0-10.5 mm thick. The coil breaks on each sherd had the same overlapping extension, or obtuse angle.

Sample Size:

Total: 2
Rims: 0
Base/Body: 2

Mends:

None (Figure I.178).

Discussion: The large pieces of clay/grog tempering included in Vessel Lot CN12 were noteworthy for their diverse coloration that ranged from light brown to black. The bright orange/red color of the red iron oxide inclusions and the orange colored body core made this vessel lot unique and easily distinguished from the other vessel lots. There was a slight dissimilarity between the two sherds that comprised this vessel lot in terms of exterior surface treatment. The netting on one of the sherds (3003-1) may have been formed with wider set knots. The smoothing on the other sherd (EU122/98/A) obscured the surface and made it impossible to determine whether it was net-roughened or had slightly closer set knots. The strong similarities in paste, distinctive tempering, and inclusions suggested that these sherds were from the same vessel as the slight variation in surface treatment is within the range exhibited by other vessel lots.

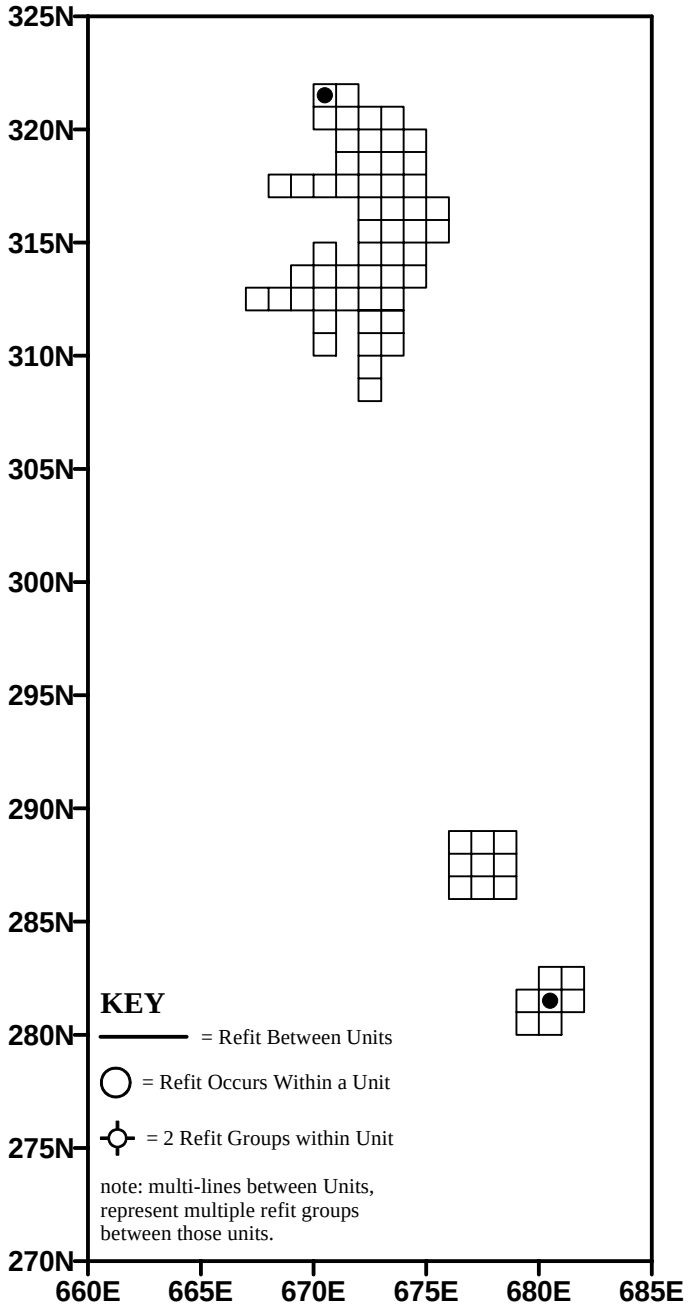

Figure I.178 Sherd Locations of Vessel Lot CN12 (Locus A and Southwest Quadrant)

Vessel Lot CN13

Paste:

Temper: Vessel Lot CN13 was tempered with pieces of clay and clay/grog that ranged in size from 1.0-4.0 mm. These comprised 5% of the paste. They differed in coloration ranging from 5YR 5/8 yellowish red to 5R 4/4 reddish brown. Fine sand/grit also was included and accounted for 5-10% of the paste. Small iron oxide fragments (2.5YR 4/8 red) were present as well.

Texture: The sand/grit content gave this paste a fine, gritty texture. The paste was not highly compacted. Air holes were visible in the body and spalling was present.

Color:

Exterior: 5YR 6/6 reddish yellow to 5YR 5/6 yellowish red

Interior: 5YR 6/4 light reddish brown to 7.5YR 5/1 gray

Core: 5YR 6/6 reddish yellow mottled with 5YR 5/4 reddish brown; or, very thin layer 5YR 6/4 light reddish brown, then core of 7.5YR 3/1 very dark gray mottled with 7.5YR 4/2 brown, then very thin layer 5YR 6/6 reddish yellow

Surface Treatment:

Exterior: The exterior surface was impressed with netting. These impressions were deep, especially on one sherd, which exhibited that the cordage was formed with a final S-twist. The knots on this widely spaced net sample were 3.5-5.5 mm apart. The surface treatment was not as clear on other sherds within the vessel lot, which were spalled (Figure I.179).

Interior: The interior surface was scraped.

Figure I.179 Vessel Lot CN13 Exterior Surface Treatment of Widely Spaced Netting and Weathered Surfaces

***Decoration*:**

None.

***Form**:*

Lip: No data.
Rim: No data.
Base/Body: No information available about vessel shape or form. The sherd thickness ranged from 12.0-12.5 mm. Some sherds were spalled.

Sample Size:

Total: 4
Rims: 0
Base/Body: 4

Mends:

Vessel Lot CN13 was represented by 4 sherds. The vessel lot included three sherds from one test unit that mended (Figure I.180). In addition, the vessel lot included one sherd that were similar in all attributes but did not mend to other sherds in the vessel lot.

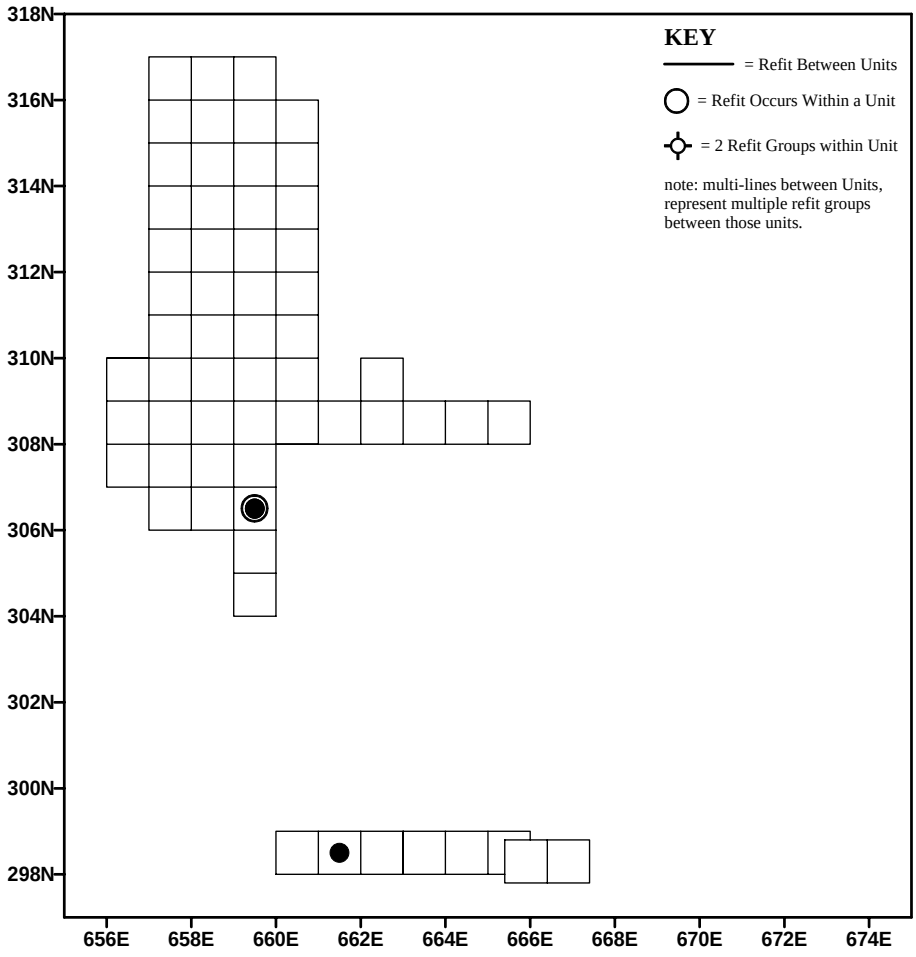

Figure I.180 Sherd Locations with Refits of Vessel Lot CN13 (Locus A)

***Discussion*:**

This vessel lot could represent two vessels, because of the slight differences in coloration and exterior surface treatment. Vessel Lot CN13 was similar to Vessel Lot CN12 in terms of the clay/grog pieces and the sand tempering. However, Vessel Lot CN13 did not contain the numerous larger bright orange/red iron oxide pieces that were a distinctive part of Vessel Lot CN12.

Vessel Lot CN14

Paste:

Temper: Vessel Lot CN14 was tempered with small fragments of clay (7.5YR 5/8 strong brown to 5YR 5/8 yellowish red) that averaged 2.0 mm in size. A small amount of very fine sand comprised 1-2% of the paste. Occasional small, soft, black inclusions also were present (Figure I.181).

Figure I.181 Vessel Lot CN14 Exterior Surface Showing Black Inclusions in Paste

Texture: The texture of this vessel was very smooth and pasty. The paste was well-mixed, but was flaky along fresh breaks.

Color:

Exterior: 7.5YR 6/4 light brown

Interior: 7.5YR 6/4 light brown to 7.5YR 5/1 gray

Core: 7.5YR 6/4 light brown

Surface Treatment:

Exterior: This surface was repeatedly net-impressed (net roughened). The impressions were distinct on one sherd and had been slightly pressed or flattened in the other sherd (Figure I.182). This surface appeared highly textured because of this treatment.

Interior: The interior was scraped with a tool that left a distinctive criss-cross pattern of fine parallel lines.

***Decoration*:**

None.

Figure I.182 Vessel Lot CN14 Detail of Exterior Surface Impression

Form:

Lip: No data.
Rim: No data.
Base/Body: No information on vessel shape or size. Each sherd had broken along the coil line. A coil joint could be felt on the interior of one sherd and this area was slightly raised on the interior. The joining edge of the sherds had a deep channel formed (Figure I.183). This was smoothed on one sherd and appeared similar to the shape of the smaller coils of Vessel CC12. The sherd thickness of Vessel Lot CN14 was 7.5 mm.

Figure I.183 Vessel Lot CN14 Interior Surface Showing Joining Edge

Sample Size:

Total: 2
Rims: 0
Base/Body: 2

Mends:

None (Figure I.184).

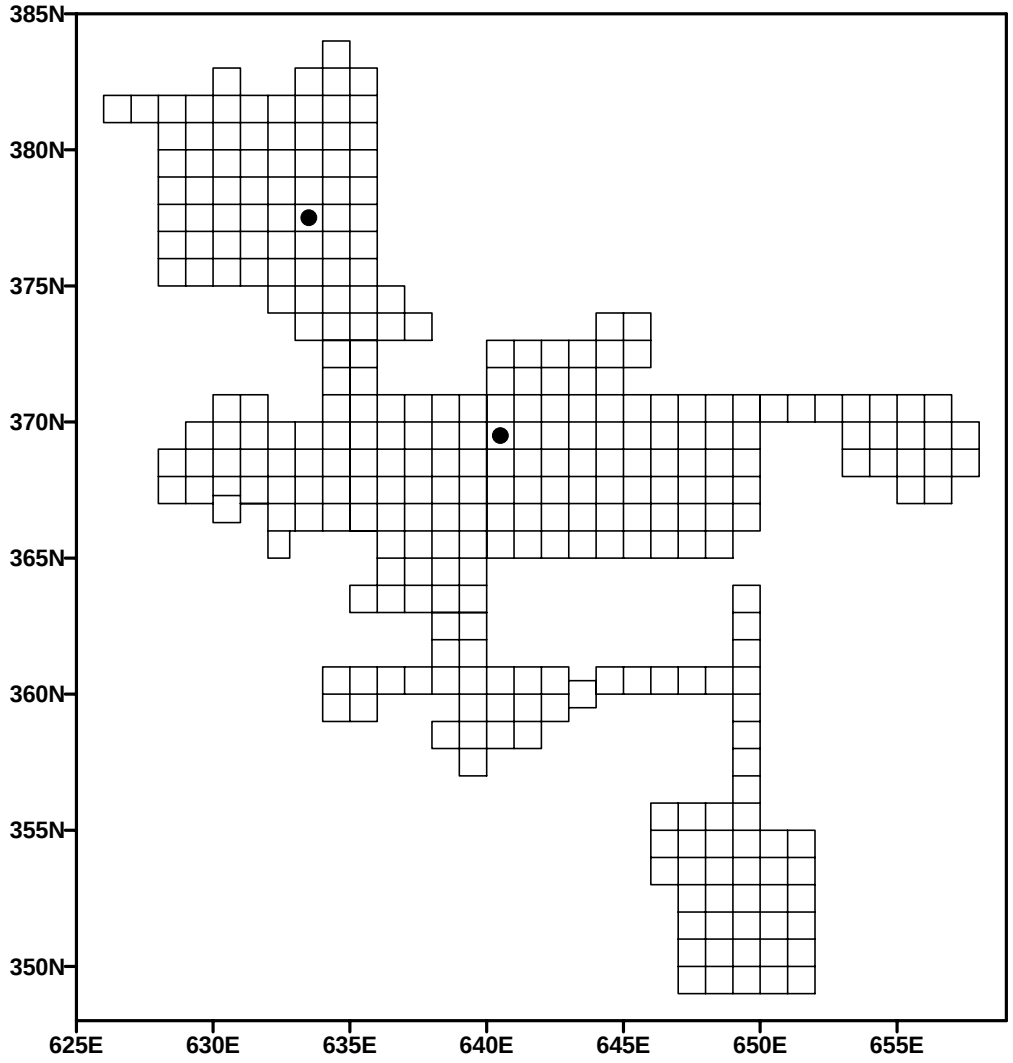

Figure I.184 Sherd Locations of Vessel Lot CN14 (Northwest Main Block)

***Discussion*:**

Vessel Lot CN14 had a slight sheen to its surface. Its paste attributers were similar to Vessel Lot CC02, as each vessel displayed this smooth, pasty quality and had little sand content. The interior surface of each vessel was scraped in a similar manner by a tool that left a criss-cross pattern of narrow parallel lines. The sherds recovered for each of these vessels also were in the same thickness range (8.0 mm versus 8.0-9.0 mm). Vessel Lot CN14, however, contained small, black inclusions which were not evident in Vessel Lot CC02. These inclusions and the net-impressed exterior surface treatment separated these otherwise similar vessel lots.

Vessel Lot CN15

Paste:

Temper: Vessel Lot CN15 was tempered with small, distinctive pieces of clay (7.5YR 6/8 reddish yellow to 7.5YR 5/8 strong brown) (Figure I.185). These ranged in size from 1.0-5.0 mm and comprised approximately 5-10% of the paste. Also present were numerous fragments of iron oxide which were 1.0-2.0 mm in size and were 7.5YR 4/6 strong brown in color. A small quantity (less than 5%) of fine grained sand also was included. One angular pebble, 2.0 mm in length, was noted.

Figure I.185 Vessel Lot CN15 Distinctive Clay Temper Visible on All Surfaces

Texture: This vessel was basically smooth to the touch but the low sand content did provide a slight roughness to the surface. The paste was only lightly mixed and only loosely compacted and thus appears easily broken.

Color:

Exterior: 7.5YR 6/4 light brown to 7.5YR 6/2 pinkish gray

Interior: 7.5YR pinkish gray mottled with 7.5YR 3/1 very dark gray

Core: 7.5YR 3/1 very dark gray on the interior half quickly blending into 7.5YR 6/4 light brown on the exterior half.

Surface Treatment:

Exterior: The exterior surface was deeply impressed with netting formed by widely spaced elements. These were slightly smoothed in some areas.

Interior: The interior surface also was deeply impressed with netting formed with cordage having a final S-twist. Some sherds displayed a net-roughened interior as well. The interior was uneven due to the deep impressions. No smoothing was evident on these sherds.

***Decoration*:**

None.

Form:

Lip: No data.
Rim: No data.
Base/Body: No information on vessel shape or form. The sherd thickness was 12.0 mm. Most of the sherds were broken along coil lines. The coil joint had a sharp, almost 90-degree angle on one sherd, but had been worked into a broad, overlapping edge on the other sherds.

Sample Size:

Total: 4
Rims: 0
Base/Body: 4

Mends:

None (Figure I.186).

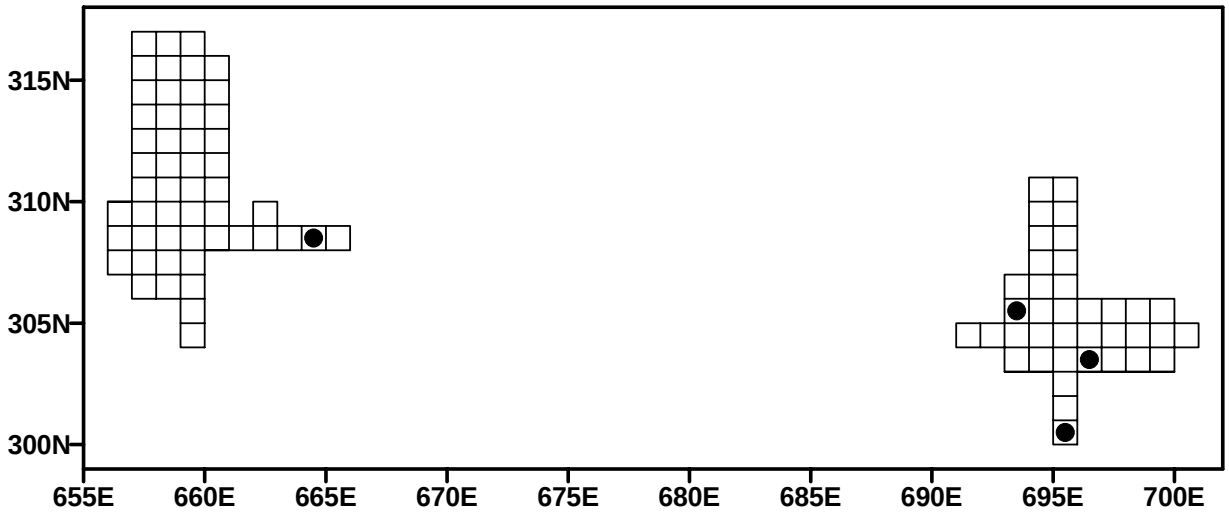

Figure I.186 Sherd Locations of Vessel Lot CN15 (Locus A and Locus B)

***Discussion*:**

This vessel lot was similar to Vessel Lot CN05. The pastes in both were mixed in a similar light manner. They resembled each other in terms of the tempering, having clay inclusions of varying sizes visible on all surfaces and a small quantity of sand tempering. The netting also was similarly deeply impressed in both vessels. The interior scraping, however, was not present on Vessel Lot CN15.

Vessel Lot CN16

Paste:

Temper: Vessel Lot CN16 was tempered with clay pieces (7.5YR 4/6 strong brown to 5YR 5/8 yellowish red). These ranged in size from 2.0-4.0 mm. The pieces comprised approximately 5% of the paste and were somewhat unevenly distributed. One sherd (1634-1) contained a piece of another ceramic sherd in its paste (Figure I.187). In addition, sand was included that was 1.0 mm or less in size and comprised 10% of the paste.

Figure I.187 Vessel Lot CN16 Detail Showing Ceramic Sherd Inclusion

Texture: This vessel had a subtle, slightly gritty texture due to the quantity and fine size of the sand inclusions. The paste was moderately compacted. The mottled body color near the base suggested that the paste was unevenly blended.

Color:

Exterior: 10YR 7/4 very pale brown to 7.5YR 6/4 light brown to 7.5YR 6/6 reddish yellow

Interior: 10YR 7/4 very pale brown to 10YR 6/3 to 7.5YR 6/6 reddish yellow

Core: A thin layer of 10YR 6/4 on the interior, then 10YR 4/1 dark gray in the core then thin layer of 7.5YR 6/4 light brown on the exterior of the core. The center core of the lower portion of the body was not darkened. It was mottled 7.5YR 6/6 reddish yellow with 10YR 7/4 very pale brown.

Surface Treatment:

Exterior: The exterior was impressed with netting. This surface was more distinct on some sherds where net-roughening (repeated impressions of the paddle) and/or multiple wrappings of the paddle with the netting were present (Figure I.188). The large lower body/basal sherd (520-1) was flattened and less distinct.

Figure I.188 Vessel Lot CN16 Exterior Surface

Interior: The interior was plain near the base. The rest of the interior was scraped with a tool that left a pattern of narrow parallel lines (a comb-like tool) applied in a criss-cross pattern.

***Decoration*:**

None.

Form:

Lip: No data.
Rim: No data.
Base/Body: No information on vessel size or shape. Sherds ranged in size from 9.0-11.5 mm. Coil and irregular breaks were present. Finger indentations were made in the thicker sherd, probably to help shape the base area. The end of a paddle (or a wide cord-wrapped cord) was impressed on one sherd causing a parallel bulge on the interior of the sherd. This may have been to shape or form that portion of the body (Figure I.189).

Sample Size:

Total: 8
Rims: 0
Base/Body: 8

Mends:

None (Figure I.190).

Figure I.189 Vessel Lot CN16 Interior Surface Showing Finger and Paddle Impressions for Forming the Base

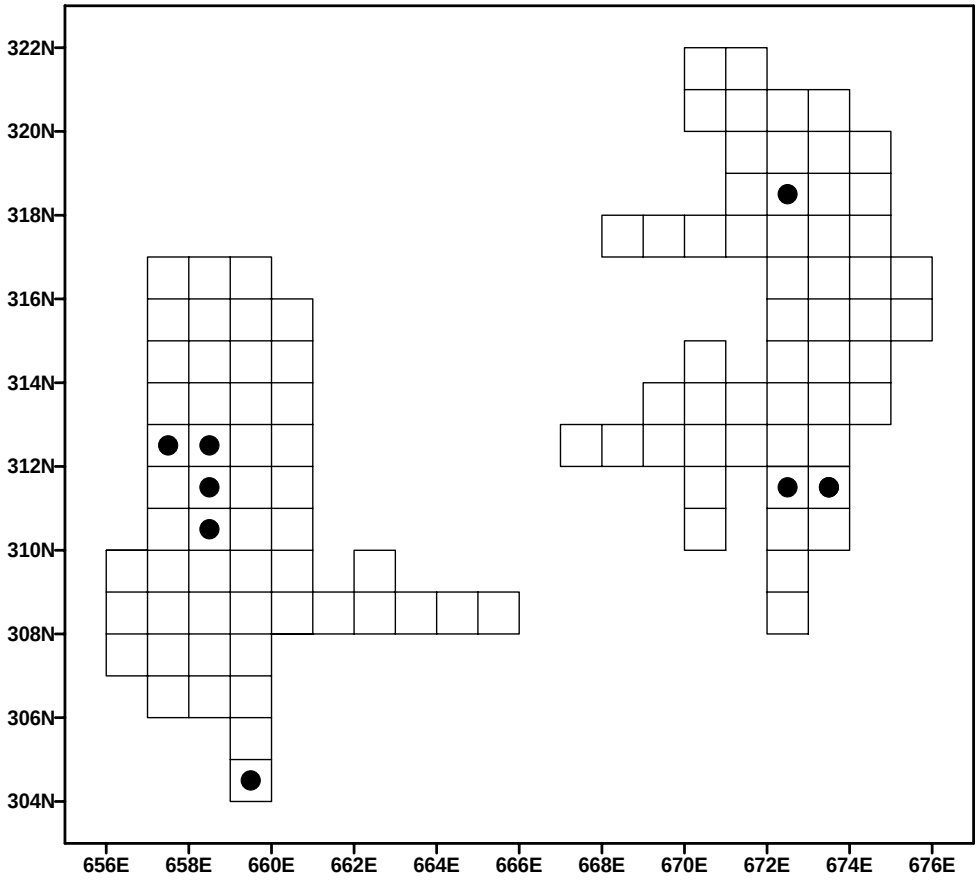

Figure I.190 Sherd Locations of Vessel Lot CN16 (Locus A)

***Discussion*:**

Vessel Lot CN16 was noted as a clear example of a vessel that contained another ceramic sherd fragment as a temper agent within its paste. This vessel lot exhibited some variation in the surface treatment, texture, and degree of paste blending.

The uneven distribution of inclusions resulted in the minor texture differences noted, as some sherds felt smoother than others. The uneven blending of the paste resulted in a mottled color of the vessel body evident near the base of the vessel. These variations were within the range possible for a single vessel, as evident from other vessels within the collection.

Vessel Lot CN17

Paste:

Temper: Vessel Lot CN17 was tempered with fragments of clay (2.5YR 4/8 red) which varied in size from 1.0-3.0 mm. These comprised less than 5% of the paste. The paste also was speckled with numerous small (less than 1mm) pieces of iron oxide which probably were natural inclusions in the clay source. A small amount of sand was included in the paste and accounted for less than 5% of its composition.

Texture: The low quantity of sand within the paste of this vessel lot provided a smooth and pasty texture. The paste was compact, but in cross-section displayed convolutions and some extremely small air holes in the paste.

Color:

Exterior: 5YR 6/6 reddish yellow to 2.5YR 6/6 light red to 2.5YR 5/4 reddish brown

Interior: 5YR 6/6 reddish yellow to 2.5YR 6/6 light red to 2.5YR 3/1 dark reddish gray

Core: 2.5YR 4/3 reddish brown on the interior quarter of the core, then blending to 2.5YR 2.5/1 reddish black for two quarters, then blending to 2.5YR 5/6 for the exterior quarter of the core.

Surface Treatment:

Exterior: The exterior surface was moderately impressed with a net/fabric of closely spaced elements, which left a subtle continuous low-relief patterning over this surface. The surface impressions extended to the lip edge (Figure I.191).

Figure I.191 Vessel Lot CN17 Exterior Surface with Distinct Treatment of Closely Spaced Elements

Interior: The interior surface was smoothed. It also had undulations remaining from earlier scrape marks, which were visible in some areas that had been incompletely smoothed over.

***Decoration*:**

None.

Form:

Lip: The vessel lip was rounded and was 2.0-3.0 mm thick at the edge.

Rim: The rim piece recovered was small. But it probably rose straight to the lip edge. It was 6.5 mm at its thickest point.

Base/Body: No information was available about the vessel shape or form. The sherds ranged in thickness from 9.0-11.5 mm. Most of the breaks were along the coil lines.

***Sample Size*:**

Total: 9
Rims: 1
Base/Body: 8

Mends:

Vessel lot CN17 was represented by 9 sherds. The vessel lot included two sherds from one test unit that mended (Figure I.192). In addition, the vessel lot included seven sherds that were similar in all attributes but did not mend to other sherds in the vessel lot.

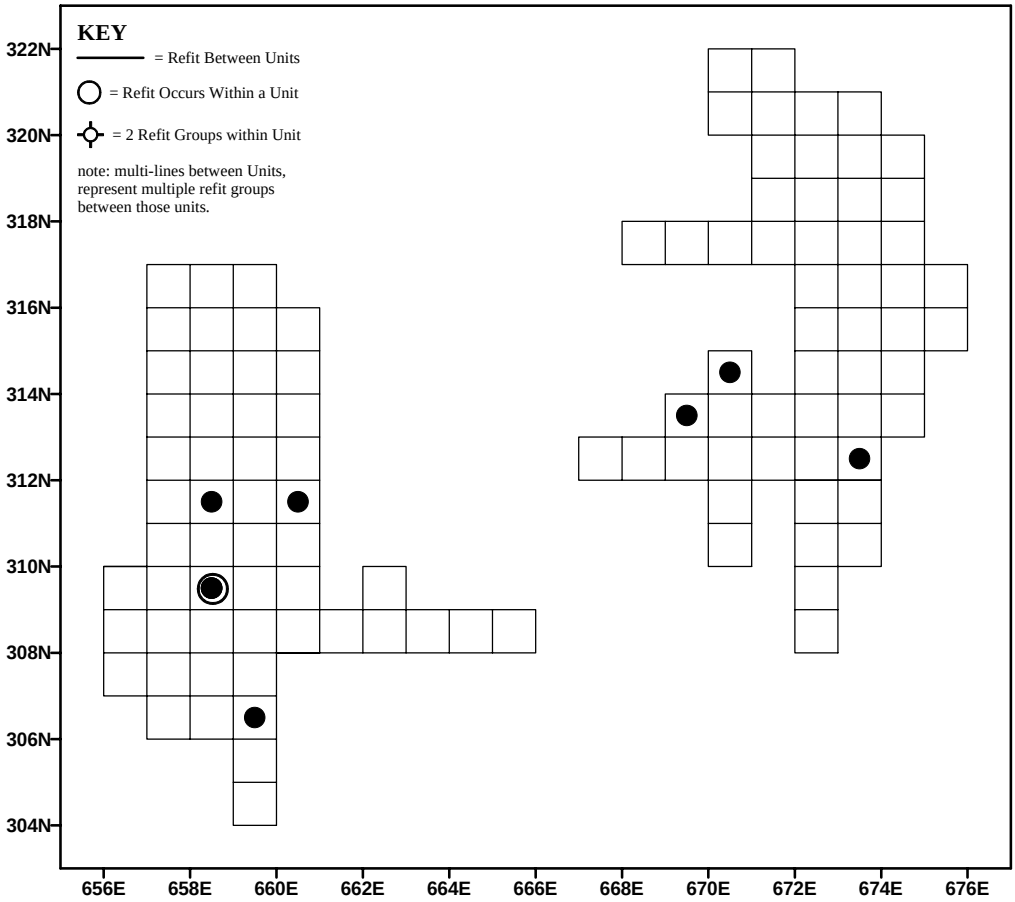

Figure I.192 Sherd Locations with Refits of Vessel Lot CN17 (Locus A)

***Discussion*:**

The surface treatment of Vessel Lot CN17 was distinctive and easily recognized. The small red iron oxide inclusions in the paste further facilitated this recognition. Its smooth and pasty texture made it similar to the subset of other minimally clay-tempered vessels.

Vessel Lot CN18

Paste:

Temper: Vessel Lot CN18 was tempered with pieces of clay (7.5YR 5/8 strong brown). These ranged from 1.0-3.0 mm in size and comprised 5% of the paste. Very fine sand also was included and comprised approximately 20% of the paste. It was well sorted and the grain size was uniformly small.

Texture: The heavy inclusion of fine sand gave these sherds a sandy or gritty texture, which was not as rough or coarse, as it would have been had the grains been larger. While the paste seemed heavy and compact, numerous air spaces were visible in the cross-section of the body.

Thin-sectioning: Sample 688-1 exhibited a fine-grained matrix and a small amount (7.8%) of sub-angular ceramic fragments (grog) as a tempering agent (Figure I.193). The grog temper was slightly finer grained and lighter in color than Sample 688-1, but contained a similar assemblage and density of natural inclusions that suggested it may have been manufactured from the same clay source. The average size of the grog temper was 1.0 mm, and individual fragments ranged from 0.4-1.5 mm in size. Natural inclusions (14.2%) were poorly sorted and consisted of quartz, feldspar, and iron oxide. Voids (10.6%) included small rounded pores and large tears. These tears occurred perpendicular to the long axis of the sherd. The fabric of the sherd was oriented at a 30-degree angle (northwest-southeast) from the long axis.

Figure I.193 Thin Section (688-1)

Color:

Exterior: 10YR 7/3 very pale brown to 7.5YR 6/4 light brown

Interior: 7.5YR 6/4 light brown to 7.5YR 6/3 light brown

Core: 10YR 7/3 very pale brown throughout the core body. In thicker areas, however, there were pockets of 10YR 2/1 black in the center of the core.

Surface Treatment:

Exterior: The exterior surface was deeply impressed with netting. These impressions continued up to and over the vessel lip edge (Figure I.194). The cordage for the netting was formed of a final S-twist.

Figure I.194 Vessel Lot CN18 Exterior Surface

Interior: The interior surfaces were smoothed, although it was incomplete and previous net impressions were still visible in some areas (Figure I.195).

Figure I.195 Vessel Lot CN18 Interior Surface

***Decoration*:**

None.

Form:

Lip: The lip edge was impressed with a paddle in a motion that probably continued from impressing the exterior surface. This edge was then flattened and the impressions smoothed over. It was incomplete in some areas and the knots and cords of the netting remained distinct. The lip edge was 5.5-8.0 mm thick.

Rim: The rim body tapered straight to the lip edge. It was 12.0 mm at the thickest point. Deep finger grooves were made and ran vertically from the rim edge down the body of the vessel.

Base/Body: No information available about vessel size or shape. The sherd ranged from 7.5-12.0 mm thick. One break was along the coil line, but the remainder were irregular breaks.

Sample Size:
Total: 3
Rims: 2
Base/Body: 1

Mends:

Vessel lot CN18 was represented by 3 sherds. The vessel lot included two sherds from two different test units that mended (Figure I.196). In addition, the vessel lot included one sherd that were similar in all attributes but did not mend to other sherds in the vessel lot.

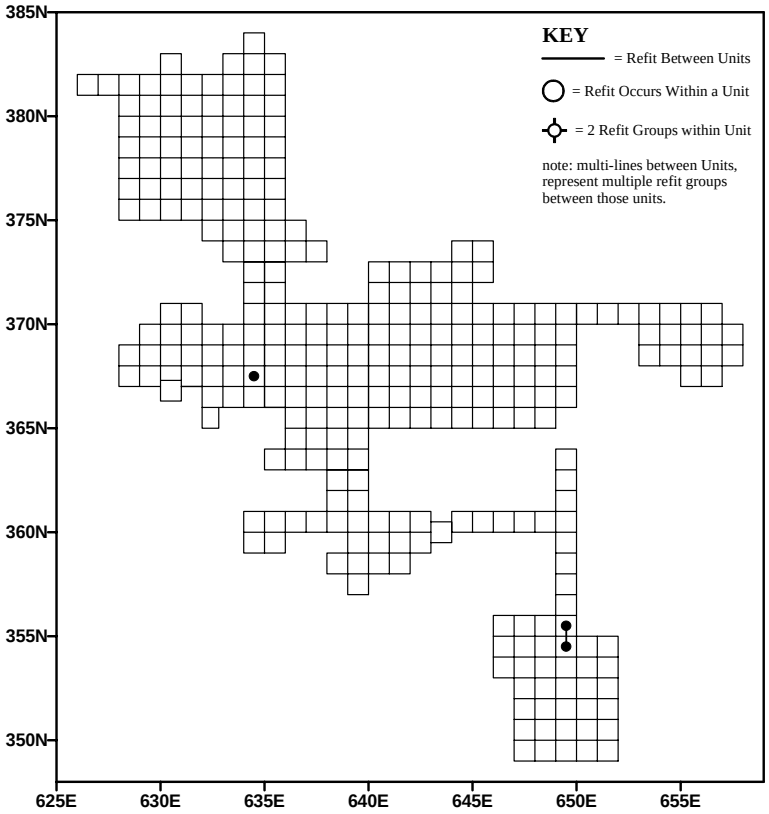

Figure I.196 Sherd Locations with Refits of Vessel Lot CN18 (Northwest Main Block)

***Discussion*:**

This vessel lot may represent two different vessels since there are slight differences between the two rim sherds. One sherd was more weathered than the other, and also seems to have a slightly heavier amount of tempering. Since the sherds were similar in all other respects, especially in regard to surface treatment and thickness, they would be within the range of possibility for a single vessel (Figure I.194 and Figure I.195).

As a clay-tempered vessel, Vessel Lot CN18 is typical of the more sandy examples. It resembles Vessel Lot CN01, in terms of the sandy texture, similar pieces of clay tempering, and similar exterior surface treatments.

Vessel Lot CN19

Paste:

Temper: Vessel Lot CN19 was tempered with pieces of clay which were 1.0-2.0 mm in size. These were 5YR 5/6 yellowish red in color and were included infrequently, approximately 1% of the paste. Also present were small, grog-like, dark inclusions (5YR 3/1 very dark gray). Fine sand/grit was included and accounted for 5% or less of the paste. Some sherds were sandier than were others. Small, occasional fragments of iron oxide were present.

Texture: There was a range in textures: the sandier sherds being slightly gritty, while the less sandy sherds were smoother and pastier to the touch. The general effect, however, was one of a smooth paste. This paste was not highly compacted. The body was convoluted in cross-section with numerous air pockets.

Color:

Exterior: 5YR 6/6 reddish yellow to 2.5YR 6/6 light red to 2.5YR 5/4 reddish brown

Interior: 7.5YR 6/4 light brown to 7.5YR 6/4 light brown mottled with 7.5YR 2.5/1 black

Core: 7.5YR 2.5/1 black on the interior, blending to 7.5YR 4/2 brown, blending to 5YR 5/6 yellowish red on the exterior portion

Surface Treatment:

Exterior: The exterior surface treatment extended up to the rim edge. This surface was deeply and repeatedly impressed with netting that was distinct on some sherds, but was slightly smoothed on others. This netting was made of cordage formed with a final S-twist.

Interior: The interior surface was also net-impressed. In some areas, the netting pattern of knots and cords was distinct, but other areas had been smoothed over (Figure I.197).

Figure I.197 Vessel Lot CN19 Interior Surface Knots and Cords are Distinct