The Alabama Ceramic Assemblage, Construction Materials, and Clay Survey (Operation 8)

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Ceramic Assemblage

The Alabama ceramic assemblage presents a unique opportunity to evaluate an assemblage with respect to both the traditional type:variety classification system used widely in the Maya lowlands, as well as a detailed analysis of paste characteristics based on macroscopic and microscopic assessment in the field and subsequent thin section petrography. This chapter section focuses on in-field analyses conducted in the SCRAP field laboratory facility in Maya Centre during the 2019 field season. It builds on preliminary analyses in 2018, in which ceramics recovered from settlement sites ALA-047B and ALA-043 of Block C1 were grouped primarily according to paste characteristics and, when possible, stylistic and formal characteristics. The previous petrographic analysis (Howie 2018) and macroscopic observations (Howie and Jordan 2018) indicate that the ceramic assemblage includes locally produced pottery and non-local pottery from many locations, including Lamanai/Northern Belize, coastal regions, the Belize River Valley, Southern Belize, and the Maya Mountains (Bladen Volcanic Member, Hummingbird Batholith, Santa Rosa Group). Analysis of the Alabama assemblage is complicated by the highly eroded and fragmented nature of the ceramics that render it difficult, if not impossible, to evaluate chronology and provenance for all contexts. In many cases, the only sherds recovered are small body pieces with no surface treatment.

The goals of the 2019 season were to (1) identify and characterize different paste wares representing local and non-local pottery, and (2) analyze all sherds (diagnostic and body) from surface collections and existing type collection to assign them to a paste ware group or previously defined ceramic type. Paste ware descriptions build on previous analysis of ceramics recovered from settlement excavations (Howie and Jordan 2018; Koster and Peuramaki-Brown 2016 [Operation 4]; Morton et al. 2016 [Operation 2]; Pennanen and Peuramaki-Brown 2016 [Operation 3]) and incorporate data on ceramics from surface collection across the Alabama settlement zone ([Operation 1] Peuramaki-Brown et al. 2014, 2015). A summary of the surface collection analysis is included in this report (Table 6.4, 6.5). Ceramics exported for thin section petrography were sampled from surface collection (examined in 2019) and excavations (examined in 2018).

Ceramics were assigned to a paste ware group based on macroscopic and microscopic (using a Dino-Lite USB microscope) analysis of body sherds and diagnostic rim sherds. The paste wares described below (except for Paste Wares 2, 3, and 9) build on the results of Howie's (2018) petrographic analysis to define macroscopic paste categories to facilitate future analyses. The parent sherds were returned to the Maya Centre laboratory, facilitating direct comparison with the previously analyzed sherds. Many of the pastes are composed of sand and crushed rock derived

from a granitic parent material, but some of the distinguishing characteristics in thin section (e.g., the presence/absence of particular minerals) were difficult to assess using only a Dino-Lite. The abundance of sandy paste sherds in the Alabama assemblage is unique in the Maya region, where calcium carbonate (e.g. limestone) dominates; however, the varying compositions representing both locally produced and non-local vessels often look very similar.

Samples of the primary paste wares were exported for petrographic analyses; the provenance and descriptive data for each sample is presented in Table 6.1. Samples selected for petrography will work toward further defining the ceramic typology to determine provenance, resource acquisition, and technological variability in locally produced pottery, and to clarify/modify ware and typological designations. Only rims exported for petrography were drawn and included in this report (Figure 6.21). Additional rim profiles will be drawn once the ceramic typology is better defined. All ware groups were described following the format used by Graham (1994) for the Stann Creek Project. The goal is not only to evaluate microscopic characteristics indicative of provenance or technological difference but to create a ceramic typology that can be used by all members of the SCRAP project.

Paste Ware 1

Basis of Division
This ware is characterized by a relatively hard brown paste with distinct and abundant iron (Fe) nodules. The more eroded sherds, which are frequent, are more friable and have a gritty feel. When viewed microscopically with a Dino-Lite, the paste contains abundant laths of biotite. A sherd from this group (SCP 3) was analyzed petrographically by Howie (2018), and was consistent with the local geology. The abundance of Paste Ware 1 in the Alabama assemblage further suggests that this fabric group was locally produced. This group can be identified based on the gritty, brown to reddish-brown micaceous paste, abundant iron nodules, and biotite.

Five additional Paste Ware 1 samples were exported for petrographic analysis in 2019:

- SCRAP-21 (Block D, ALA-040, Op 1 Surface Coll. GPS 075)
- SCRAP-22 (Block B, ALA-086B, Op 1 Surface Coll. GPS 168)
- SCRAP-23 (Block D, ALA-039, Op 1 Surface Coll. GPS 068)
- SCRAP-24 (Block C1, ALA-045A, Op 3, Subop F, Lot "Surface," Cat. #10437-T002)
- SCRAP-26 (Block 1, Scatter 024, Op 1 Surface Coll. GPS 235).

Dating
Late to Terminal Classic, possibly Early Classic.

Paste and Firing
The paste is a brown (7.5YR 5/4; 7.5YR 5/6; 10YR 6/4) to reddish brown (5YR 5/4; 5YR 5/6), sometimes with a grey to black core. The core varies from a thin strip in the middle of the fabric to a thick horizon that occupies most of the fabric in cross-section. Fire clouding is present but rare. The paste contains abundant, rounded, circular to ovoid iron (Fe) nodules. The fabric is moderately sorted and inclusions (primarily quartz with some potassium feldspar [K spar]) are subrounded to angular. The biotite appears as black, elongated, lath-like inclusions. The size distribution is unimodal with occasional larger inclusions interspersed throughout (Figure 6.1).

Forms and Dimensions

The majority of the sherds are body sherds, but the few rim sherds indicate that this ceramic type consists of both jars (evidenced by neck fragments) and incurving bowls. Many of the rim forms do not contain enough of the remaining body so it is difficult to determine if they belong to jars or bowls. Body thickness is variable and ranges from thin (5.4mm) to medium (9.7mm) thickness. Ring bases are also present.

Surface Finish and Decoration

When present, the slip is red (2.5YR 4/6; 2.5YR 5/6). The smoothed surface on all sherds, regardless of form, suggests that they were all slipped but the slip is no longer present. One thin body sherd contains fingernail impressions (Figure 6.2).

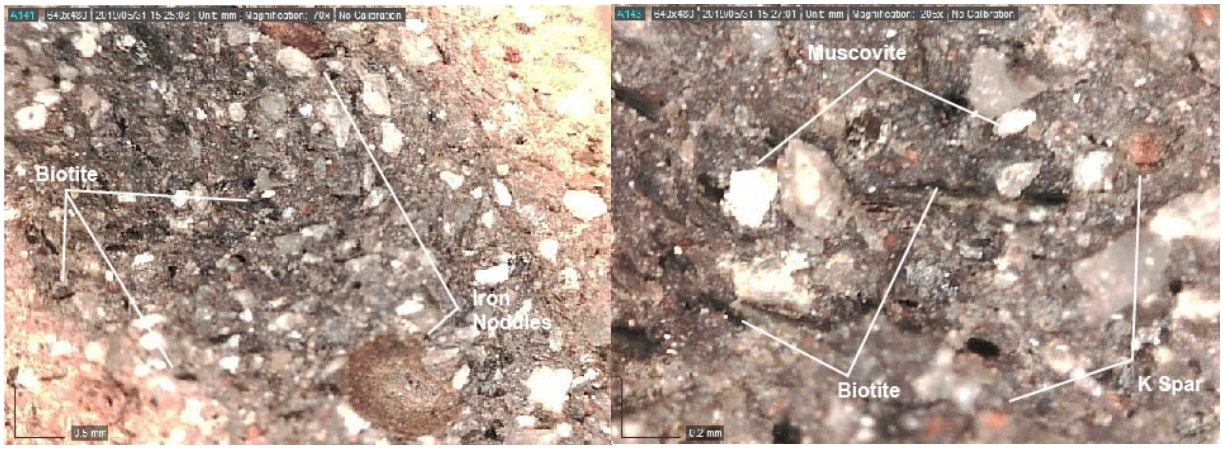

Figure 6.1: Paste Ware 1 at 70x magnification (left, 0.5mm scale) and 205x magnification (right, 0.2mm scale).

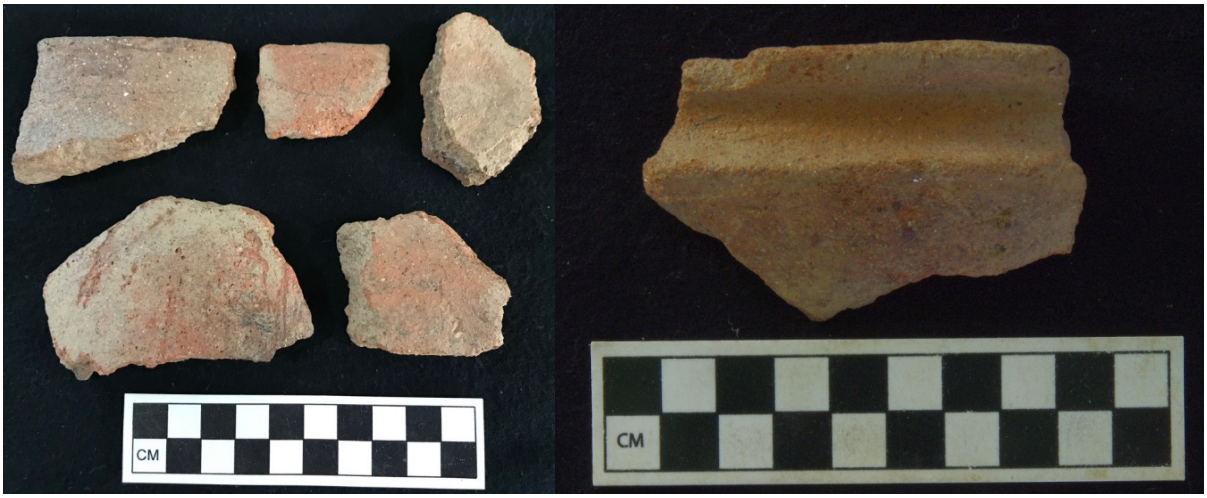

Figure 6.2: Paste Ware 1, assortment of sherds from various contexts (left) and SCRAP-24/Cat. #10437-T002 (right).

Paste Ware 2, Groups 1 and 2

Basis of Division
This ware is characterized by a brown to reddish-brown, sandy, micaceous paste with a red slip. This paste ware is abundant and appears to be the predominant fabric for moderately coarse textured, red-slipped vessels at Alabama (compare to Ware 1). This paste ware is tentatively divided into two groups, pending petrographic analysis: one with angular rock temper (Group 1) and one with sand temper (Group 2). Two additional groups are described separately below. The paste for Group 3 is much coarser and contains more unslipped vessels. The paste for Group 4 contains abundant, elongated brown minerals (possibly biotite) potentially indicative of a provenance distinction.

Paste Ware 2 was not included in previous petrographic analysis. Five samples were exported for petrographic analysis in 2019:

Ware 2 (Unknown Group)

- SCRAP-25 (Block E, Scatter 032, Op 1 Surface Coll. GPS 252, Cat. #10361-T009).
- SCRAP-32 (Block C1, ALA-047C, Op 1 Surface Coll. GPS 136).
- SCRAP-35 (Block C1, ALA-045A, Op 3, Subop C/E, Lot 1, Cat. #10385-T026): possibly a fine paste variant. It was originally categorized as a possible Southern Belize (Toledo District) sherd because of its fine, sandy paste.

Ware 2 (Group 1)

- SCRAP-30 (Block C1, ALA-047B, Op 2, Subop B, Lot 1).

Ware 2 (Group 2)

- SCRAP-28 (Block C1, ALA-047B, Op 2, Subop B, Lot 2).

Dating
Late to Terminal Classic, possibly Postclassic (similar to the undefined ware sampled for petrography).

Paste and Firing
The paste is a brown (7.5YR 4/4; 7.5YR 5/4) to reddish-brown (2.5YR 4/6; 2.5YR 5/6) colour, sometimes with a grey to black core. The reddish-brown colour is much more common. The core varies from a thin strip in the middle of the fabric to a thick horizon that occupies the majority of the fabric in cross-section. Some are half black, with the black colour primarily on the interior of the vessels. Many of the sherds exhibit evidence of fire clouding. The fabric would be considered coarse in other regions of the Maya lowlands but is moderately coarse in the Alabama ceramic assemblage. The clay is micaceous (primarily muscovite with some biotite) and sandy. The sand is composed primarily of quartz and a pinkish mineral that is possibly potassium feldspar due to its distinctive light pink colour. Microcline, a type of potassium feldspar, is common in some of the natural clay samples analyzed petrographically by Howie (2018). The pinkish inclusions could also be iron rich quartz or some other mineral. Some of the rounded to subrounded sand is composed of rock (possibly granite [rocks with different compositions denoted by colour differences, e.g., clear to grey quartz + dark biotite] and quartzite [rocks composed of multiple clear to grey quartz grains]). Some of the sherds also contain dark-red, rounded inclusions of unknown composition (they are possibly iron-coated quartz grains or a completely different

rock/mineral). The paste (both colour and composition) is variable across the group but there are two distinct paste subgroups: one appears to be tempered with crushed rock and the other is tempered with rounded to subrounded sand. The temper designation is based on the fact that the inclusions are bimodally distributed.
Group 1: The fabric tempered with rock is more abundant in the sample. The rock temper fabric is moderately to poorly sorted with large, unevenly distributed, subangular to angular inclusions of rock (granite and possibly quartzite). The naturally occurring sand in the clay is rounded to subrounded (Figures 6.3 and 6.4).

Group 2: The sand tempered fabric is moderately to poorly sorted with large, unevenly distributed, rounded to subrounded inclusions composed primarily of quartz and occasionally granitic sand and other rocks and minerals (possibly K-spar). The naturally occurring sand in the clay is rounded to subrounded.

Forms and Dimensions
Nearly all of the sherds in this group are body sherds. One rim sherd is an incurving bowl with a direct rim and beveled-in lip. All of the sherds are slipped on both the interior and exterior, suggesting that this group is composed of serving wares (bowls/dishes). Body thickness is variable and ranges from thin (6.4mm) to medium (8.55mm) thickness (Figure 6.5).

Surface Finish and Decoration
A red slip (2.5YR 5/4; 2.5YR 5/6) is present on both the exterior and interior of all the sherds. When a slip is not present, due to post-depositional processes or burning, the surface is smooth, suggesting that it had a slip. One body sherd has fingernail impressions above a faint incised line.

Figure 6.3: Paste Ware 2, Group 1 at 50x magnification (left, 0.5mm scale) and Group 2 at 50x magnification (right, 0.5mm scale).

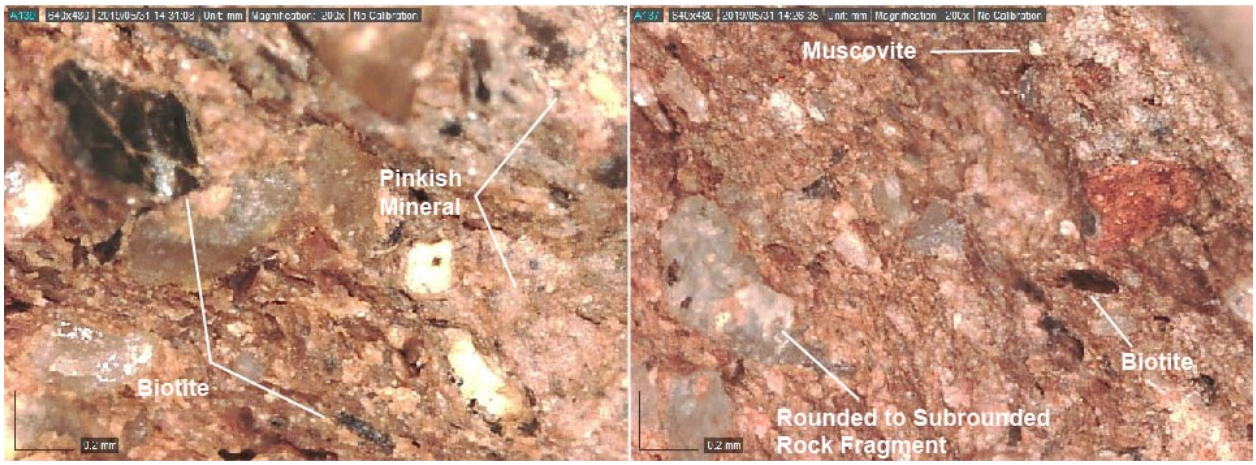

Figure 6.4: Paste Ware 2, Group 1 at 200x magnification (left, 0.2mm scale), and Group 2 at 200x magnification (right, 0.2mm scale).

Figure 6.5: Paste Ware 2, Group 1 (top row) and Group 2 (bottom row).

Paste Ware 2, Group 3

Basis of Division

This ware group can be characterized as a very coarse paste, often thick-bodied, with slightly smoothed surfaces and what appears to be a wash or eroded slip (or a mixture of both within the group) applied to both the interior and exterior surfaces. This group is similar to Group 2 but with a coarser textured paste. This paste ware group contains more unslipped and coarse vessels and was described separately.

As mentioned above, Paste Ware 2 was not included in previous petrographic analysis. One sample of Group 3 was exported for petrographic analysis in 2019:

- SCRAP-29 (Block C1, ALA-047B, Op 2, Subop B, Lot 2).

Dating
Late to Terminal Classic.

Paste and Firing
The paste is brown (7.5YR 4/4; 7.5YR 5/4) to reddish-brown (2.5YR 4/6; 2.5YR 5/6; 5YR 5/4) in colour, sometimes with a grey to black core. The reddish-brown colour is much more common. This fabric group does not have a core but the interior portion of the paste, ranging from a thin strip to most of the cross-section, is often a grey to black colour. There is some evidence of fire clouding. The clay is micaceous (primarily muscovite with some biotite) and sandy. The rounded to subrounded sand consists primarily of quartz and a pinkish mineral that is possibly potassium feldspar due to its distinctive light pink colour. Microcline, a type of potassium feldspar, is common in some of the natural clay samples analyzed petrographically by Howie (2018). The pinkish inclusions could also be iron-rich quartz or some other mineral. Some of the rounded to subrounded inclusions are composed of rock. The fabric appears to be tempered based on the uneven and bimodal distribution of larger inclusions. The larger inclusions are often subangular to angular and have a variable composition including quartz and rock fragments (possibly granite [rocks with different compositions denoted by colour differences, e.g., clear to grey quartz + dark biotite] and quartzite [rocks composed of multiple clear to grey quartz grains]). Some of the sherds also contain dark-red, rounded inclusions of unknown composition (possibly iron-coated quartz grains or a completely different rock/mineral). The fabric is very poorly sorted (Figure 6.6).

Forms and Dimensions
Most of the sherds are thick, ranging from 6.9mm to 14mm. The body sherds appear to have a wash or slip on interior surfaces, suggesting that this group is composed of large, open bowls or jars. A rim sherd with an outflaring everted rim, exterior folded rim, and square lip but without much of a body—making it difficult to assess form—is either for a large bowl or jar. Another rim with an outflared everted rim and rounded lip is also a large bowl or jar. Jars with outcurved rims and rounded lips.

Surface Finish and Decoration
The surface of this ceramic group is smoothed but in many cases inclusions (particularly muscovite and quartz) are clearly visible on the surface (Figure 6.7). Most appear to have a wash that is a similar colour to the clay, but some samples have a thin, red slip (2.5YR 4/4).

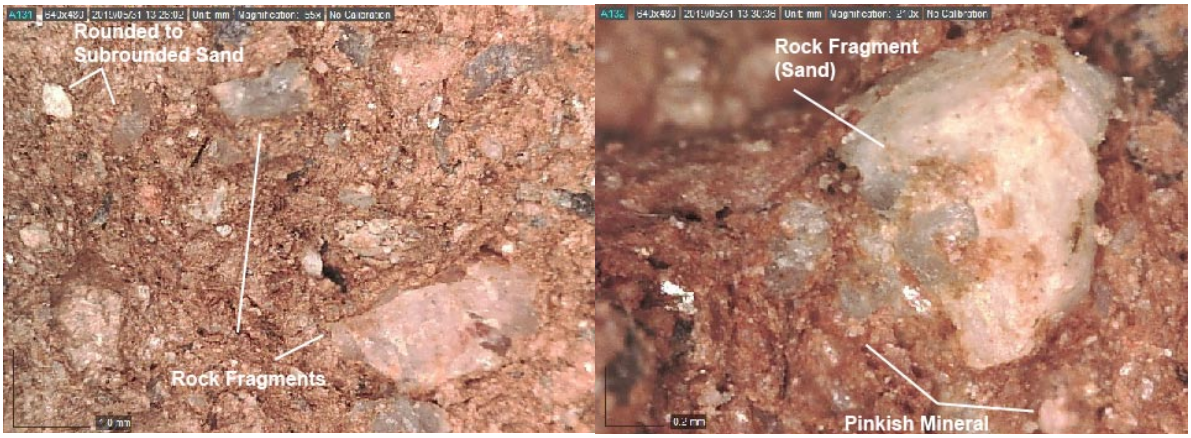

Figure 6.6: Paste Ware 2, Group 3 at 55x magnification (left, 1mm scale) and 210x magnification (right, 0.2mm scale).

Figure 6.7: Paste Ware 2, Group 3.

<u>Paste Ware 2, Group 4</u>

Basis of Division
This ware group is very similar to Group 2 with the addition of rounded and elongated reddish-brown inclusions of unknown composition.

As mentioned above, Paste Ware 2 was not included in previous petrographic analysis. One sample of Group 4 was exported for petrographic analysis in 2019:

- SCRAP-48 (Block D, ALA-039, Op 1 Surface Coll. GPS 068).

Dating
Late to Terminal Classic.

Paste and Firing
The paste is a reddish-brown colour (2.5YR 5/6; 2.5YR 4/6), with a medium-coarse texture that is oxidized throughout. The fabric would be considered coarse in other regions of the Maya lowlands but is moderately coarse in the Alabama ceramic assemblage. The clay is micaceous (primarily muscovite with some biotite) and sandy. The sand is composed primarily of quartz and a pinkish mineral that is possibly potassium feldspar due to its distinctive light pink colour. Microcline, a type of potassium feldspar, is common in some of the natural clay samples analyzed petrographically by Howie (2018). The pinkish inclusions could also be iron-rich quartz or some other mineral. This group is very similar to Groups 1 and 2 but includes elongated and rounded, reddish-brown inclusions of unknown composition. It is moderately to poorly sorted and includes large, rounded inclusions that are likely rock (possibly granite or quartzite) (Figure 6.8).

Forms and Dimensions
All body sherds appear to be slipped on both the exterior and interior, suggesting an open serving ware form.

Surface Finish and Decoration
Red slip (10R 5/4) on exterior surface. The interior surfaces are either smoothed and unslipped or have a thin wash.

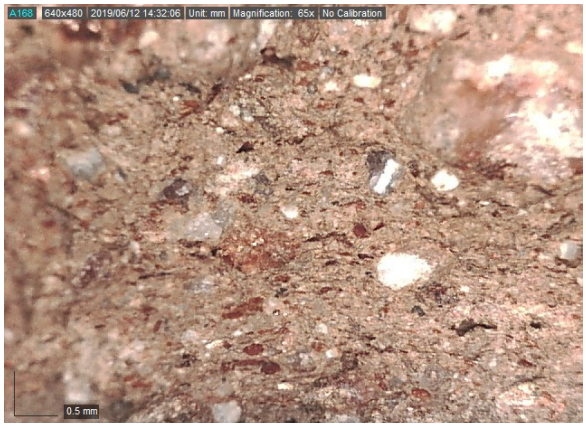

Figure 6.8: Paste Ware 2, Group 4 at 65x magnification (0.5mm scale). Note the elongated and rounded reddish-brown inclusions.

Paste Ware 3

Basis of Division
Coarse, red paste often with a blackened interior. There is a red slip on the exterior of the better-preserved sherds. When poorly preserved, which is most often the case, the exterior surface is rough and inclusions are visible on the surface. Many show evidence of burning on interior surfaces. This paste ware was defined based on samples from ALA-047B (Block C1) but it is not abundant across the site. It is possible that this ware is just a variation of Paste Ware 2. No samples of Paste Ware 3 were exported for petrography because this ware is only represented by body sherds.

Dating
Late to Terminal Classic (?)

Paste and Firing
The fabric is red (10YR 5/8; 10YR 4/8; 2.5YR 5/8) to reddish brown with a black core or completely black interior surface that extends into the fabric. Occasional tan colour (10YR 7/4) on the interior with the distinctive, red exterior colour. The clay is micaceous and sandy. The naturally occurring inclusions are rounded to subangular and appear to be primarily composed of quartz. The fabric is moderately to poorly sorted with larger, subrounded to angular inclusions (primarily quartz). These larger inclusions suggest that the fabric was tempered with sand and/or crushed rock but could also be a poorly sorted natural clay. This ware undoubtedly subsumes variation (both provenance and technological) but it is difficult to subdivide this group macroscopically.

Forms and Dimensions
The ware is represented by body sherds. One is likely a neck to a jar or open bowl. All of the sherds are slipped on the exterior and most show evidence of slip, either in colour or a smoothed burned surface, on the interior surface, suggesting the form was an open bowl or jar. Body sherds range in thickness from 5.8mm to 8.75mm (Figure 6.9).

Surface Finish and Decoration
Red (10YR 5/8) to reddish-brown (2.5YR 4/4) slip on all exterior surfaces and most interior surfaces. The slip is generally very poorly preserved, although in places it is thick enough to completely cover the inclusions, suggesting that these sherds were not coated in a thin wash.

Figure 6.9: Paste Ware 3

Paste Ware 4

Basis of Division
This ware was defined on the basis of only a few sherds and comparison to a well-preserved sample (SCP 5) that was petrographically analyzed by Howie (2018). There are sherds that appear to be similar but are much more friable, and it is unclear if these sherds are technologically similar based

on in-field analysis. To complicate matters, this ware group is macroscopically similar to Paste Ware 8 (SCP 6) but they were likely produced in different locations based on petrographic data. Both wares are sandy, yellowish-brown, relatively hard pastes. Howie (2018) suggested that SCP 5 may have been produced near the Hummingbird Batholith based on its alkali igneous rock parentage, abundance of muscovite mica, and rarity of biotite mica, while SCP 6 is consistent with local production. It is difficult to make these mineralogical distinctions using only a Dino-Lite. Samples assigned to Paste Ware 4 have a pink to light reddish-brown slip, although it is unclear at this time if this distinction is due to taphonomy. A more detailed description will be included in future reports when this paste ware can be more confidently defined macroscopically.

Four samples were exported for petrographic analysis in 2019:

- SCRAP-44 (Block 2, ALA-126, Op 1 Surface Coll. GPS 272).
- SCRAP-45 (Block C1, ALA-081, Op 1 Surface Coll. GPS 137, Cat. #10361-T001).
- SCRAP-46 (Block C1, ALA-047B, Op 2, Subop B, Lot 14).
- SCRAP-47 (Block C1, ALA-047B, Op 2, Subop B, Lot 3).

Dating
Late to Terminal Classic

Paste and Firing
This ware consists of a hard, light yellowish-brown (10YR 6/4) to yellowish-brown (10YR 5/4) sandy and micaceous paste. Dark cores are rare but when present they are grey (10YR 5/1) to black. The fabric is poorly sorted and inclusions (primarily quartz and rock [granite]) are rounded to subrounded. The distribution is unimodal with a few larger inclusions, so it is unclear if this fabric was tempered or was produced using a naturally sandy clay. Howie's (2018) analysis indicated that this fabric group was not tempered (Figure 6.10).

Forms and Dimensions
Jars.

Surface Finish and Decoration
Smoothed surface with a pink (5YR 7/3) to light reddish-brown (5YR 6/4) slip. The slip is often eroded, revealing the light brown paste beneath. When present, the slip is often cracked (Figure 6.11).

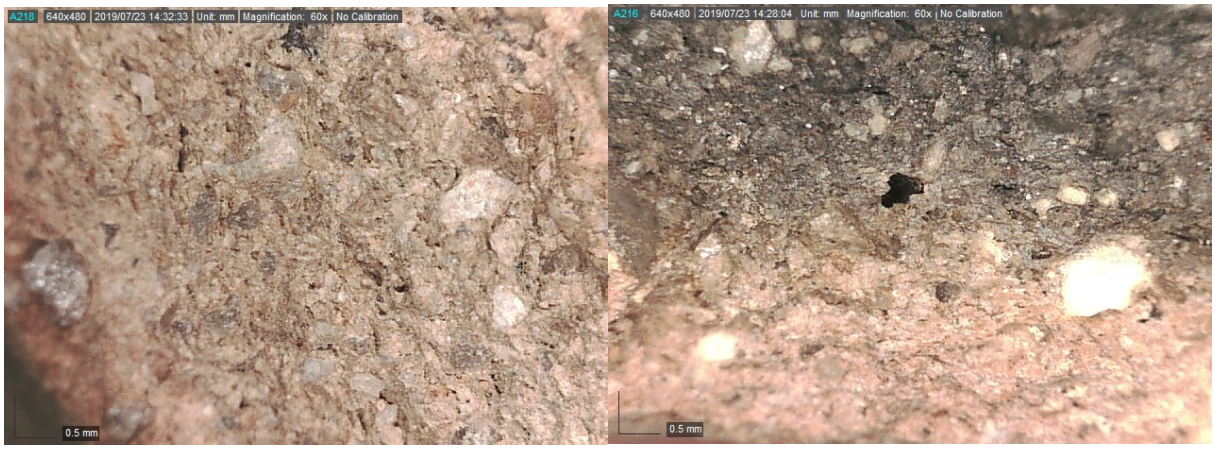

Figure 6.10: Paste Ware 4, SCRAP-47 at 60x magnification (left, 0.5mm scale) and SCRAP-45/Cat. #10361-T001 at 60x magnification (right, 0.5mm scale).

Figure 6.11: Paste Ware 4, Cat. #10361-C005 (left, analyzed by Howie, SCP 5) and Cat. #10361-T001(exported in 2019).

<u>Paste Ware 5</u>

Basis of Division

This ware has a hard, brown, sandy, and micaceous (muscovite and biotite) paste. Surfaces are smoothed and are either unslipped or have a pink to red wash. Larger inclusions in the paste are clearly visible on the surface, particularly for more poorly preserved sherds. This fabric was difficult to identify macroscopically because it is a sandy, micaceous fabric, particularly when the sherds have a thick, black core. A sherd from this group (SCP 1)was analyzed petrographically by Howie (2018). This ware group is macroscopically similar to Paste Ware 6 (SCP 7) but they were likely produced in different locations based on petrographic data. Howie (2018) suggested that SCP 7 may have been produced near the Bladen Volcanic Member based on the presence of devitrified volcanic rock, while SCP 1 is consistent with the local geology

Two samples were exported for petrographic analysis in 2019:

- SCRAP-31 (Block D, ALA-048, Op 1 Surface Coll. GPS 119, Cat. #10361-T018).
- SCRAP-33 (Block C1, ALA-082, Op 1 Surface Coll. GPS 142).

Dating
Late to Terminal Classic, possibly Early Postclassic (bowls with filleting).

Paste and Firing
Pale brown (10YR 6/3), to light brown (7.5YR 6/4), to very pale brown (10YR 7/3), to dark grayish brown (10YR 4/2). The paste is poorly sorted and inclusions are subrounded to subangular. The size distribution is bimodal. Quartz and granite rock inclusions are larger and angular with rounded granitic sand (quartz most visible with some potassium feldspar and polycrystalline quartz and/or quartzite). Muscovite and biotite are clearly visible with the Dino-Lite. Some of the samples appear to have been tempered with sand. There is a bimodal size distribution but, instead of larger angular rock fragments, the larger inclusions are composed of subrounded inclusions, primarily quartz. It is possible that these sand-tempered sherds were misidentified as Paste Ware 5 (instead of Paste Ware 6, which is sand tempered). This could be the important difference to distinguish the two paste wares using a Dino-Lite even though they are very similar macroscopically (Figure 6.12).

Forms and Dimensions
Bowls with filleting and jars (Figure 6.13). The jars are primarily represented by necks.

Surface Finish and Decoration
Smoothed but unslipped. Some samples appear to have a very eroded, pink (5YR 7/3) to light reddish-brown (5YR 6/3) wash applied to exterior surfaces.

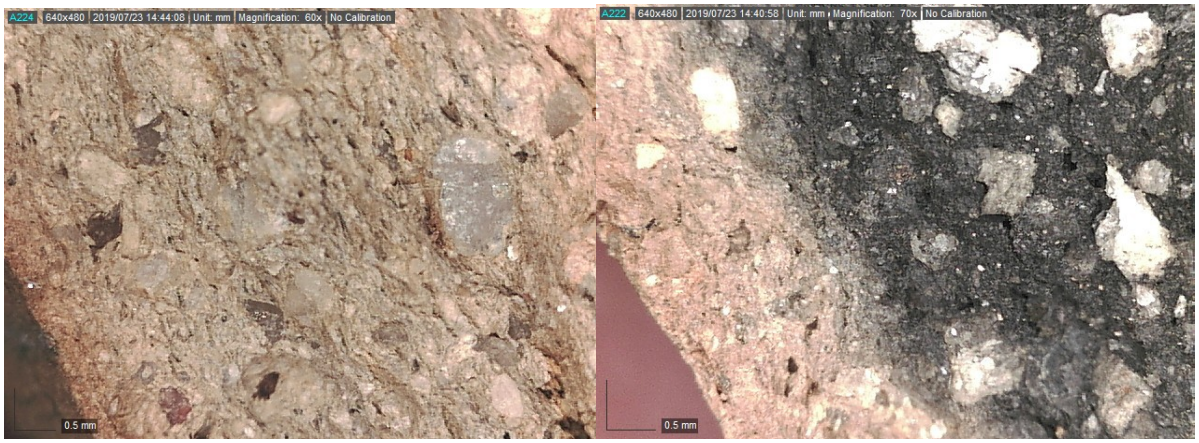

Figure 6.12: Paste Ware 5, SCRAP-31/Cat. #10361-T018 at 60x magnification (left, 0.5mm scale) and SCRAP-33 at 60x magnification (right, 0.5mm scale).

Figure 6.13: Paste Ware 5, SCRAP-31/Cat. #10361-T018.

Paste Ware 6

Basis of Division
This ware has a hard, brown, sandy, and micaceous (muscovite and biotite) paste. The surfaces are smoothed and are either unslipped or have a pink to red wash. Larger inclusions are clearly visible on the surface. A sherd from this ware (SCP 7) was analyzed petrographically by Howie (2018). It is very difficult to identify macroscopically and is particularly difficult to distinguish from Paste Ware 5, which also has a sandy, micaceous fabric.

One sample was exported for petrographic analysis in 2019:

- SCRAP-43 (Block 2, ALA-119, Op 1 Surface Coll. GPS 254).

Dating
Late to Terminal Classic.

Paste and Firing
The paste is greyish brown (10YR 5/2) to yellowish brown (10YR 5/4), hard, micaceous, and sandy. It is poorly sorted and has a bimodal size distribution. The fabric appears to be tempered with granitic sand. The larger inclusions are rounded to subrounded and composed of granitic sand (quartz and rock fragments are most clearly identifiable). The smaller inclusions are also rounded to subrounded granitic sand with abundant biotite and some muscovite (Figure 6.14).

Forms and Dimensions
Bowls and Jars.

Surface Finish and Decoration
Smoothed but unslipped. Some samples appear to have a very eroded, pink (5YR 7/3) to light reddish-brown (5YR 6/3) wash applied to exterior surfaces.

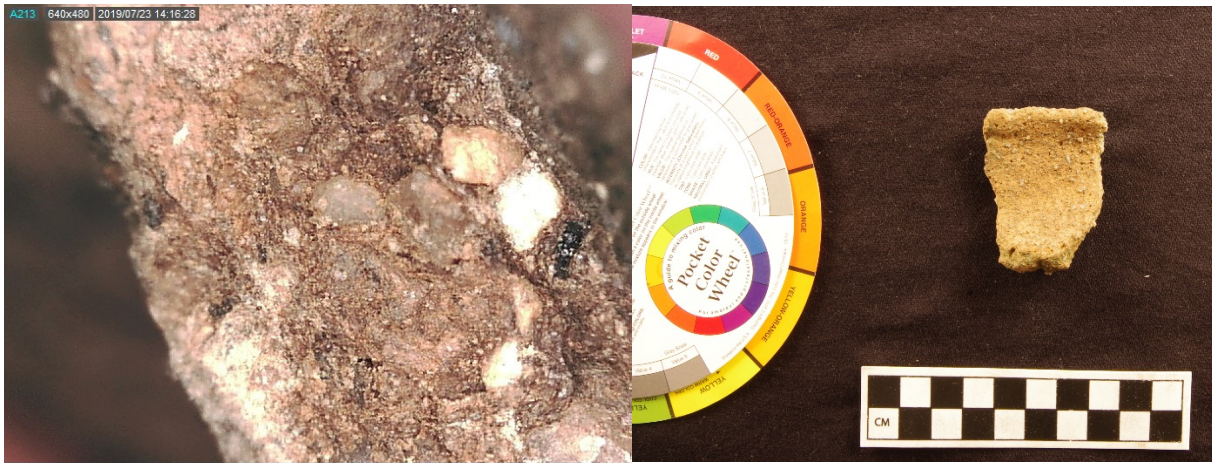

Figure 6.14: Paste Ware 6, SCRAP-43 at 60x magnification (left), and Cat. #10361-C007 (SCP 7) analyzed by Howie (right).

Paste Ware 7

Basis of Division
This is a distinctive, fine, light-brown paste with very smooth surface. It is rare at Alabama. A sherd from this group (SCP 4) was analyzed petrographically by Howie (2018). This group is tempered with grog, which was clear in petrographic analysis but difficult to identify in the field.

One sample was exported for petrographic analysis in 2019:

- SCRAP-42 (Block C1, ALA-084, Op 1 Surface Coll. GPS 145).

Dating
Late to Terminal Classic.

Paste and Firing
The paste is pale brown (10YR 6/3) with a dark-gray (10YR 4/1) core. The paste is well sorted and the distribution is bimodal with large brown and black inclusions. Petrographic analysis revealed these inclusions to be grog. The fine inclusions visible with the Dino-Lite include quartz and muscovite. Petrographic analysis indicate that this fabric once contained carbonate but the voids are not clearly visible with the Dino-Lite (Figure 6.15).

Forms and Dimensions
Jars

Surface Finish and Decoration
The surface is very smooth. The vessels could have been slipped but none remains.

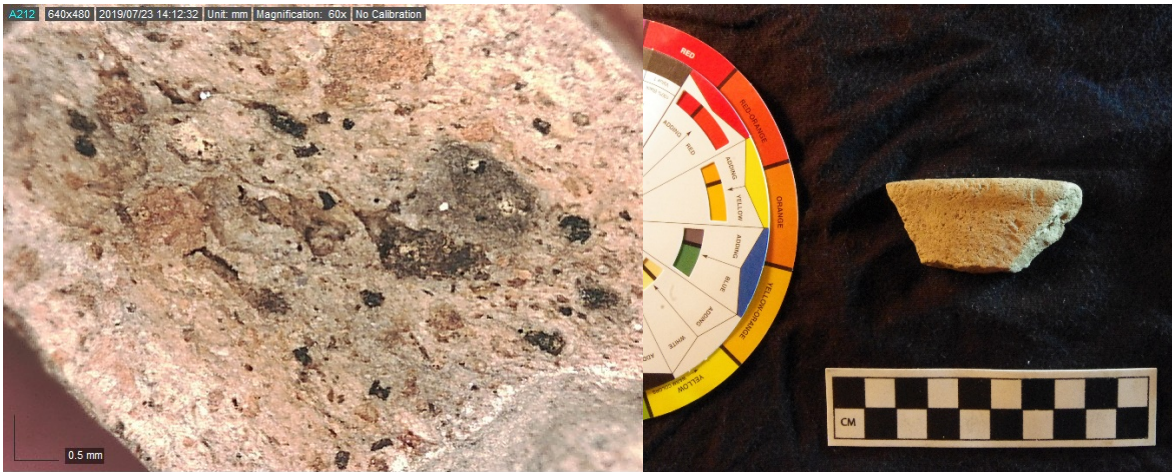

Figure 6.15: Paste Ware 7, SCRAP-42 at 60x magnification (left, 0.5mm scale) and Cat. #10361-C004 (SCP 4) analyzed by Howie (right).

Paste Ware 8

Basis of Division
This is sandy and micaceous ware. Vessels are primarily thin walled. This ware was difficult to identify in the field because it is very similar to Paste Ware 4. Vessels assigned to Paste Ware 8 (versus Paste Ware 4) are generally thinner-walled vessels but it is unclear if this is accurate or not. A sherd from this group (SCP 6) was analyzed petrographically by Howie (2018).

Dating
Late to Terminal Classic.

Paste and Firing
The paste is light brown (7.5YR 6/3), hard, sandy, and micaceous fabric. The fabric is moderately to poorly sorted with a bimodal size distribution. It appears to be tempered with granitic sand using macroscopic observations. Petrographic descriptions indicate that this fabric is tempered with crushed rock. The angularity of the crushed rock temper is not as easy to distinguish using a Dino-Lite and it may have been tempered with both crushed rock and granitic sand. The larger inclusions that can be identified with the Dino-Lite include quartz and granite rock fragments. The naturally occurring sand consists of rounded quartz inclusions and muscovite. No photo currently available.

Forms and Dimensions
Thin-walled jars with uneven interior surfaces.

Surface Finish and Decoration
Unslipped and relatively rough surfaces compared to other sandy fabrics.

Paste Ware 9

Basis of Division
This paste ware is distinguished by its white to light-grey to pink colour with densely packed, abundant, rounded to subrounded sand inclusions.

Four samples were exported for petrographic analysis in 2019:

- SCRAP-38 (Block D, ALA-063, Op 1 Surface Coll. GPS 101).
- SCRAP-39 (Block C2, ALA-009A, Op 1 Surface Coll. GPS 036, Cat. #10361-T011).
- SCRAP-40 (Block C1, ALA-084, Op 1 Surface Coll. GPS 145).
- SCRAP-41 (Block D, ALA-065, Op 1 Surface Coll. GPS 111).

Dating
Late to Terminal Classic.

Paste and Firing
The paste ranges in colour from white, to light grey (2.5YR 7/2), to pink (2.5YR 6/4; 2.5YR 7/4). The fabric is well sorted with rounded to subrounded inclusions of equant to elongated sand. The size distribution is unimodal. The fabric is so densely packed that it appears to contain more rock and mineral inclusions than clay. The unimodal size distribution suggests that this fabric was not tempered but, rather, was a well-sorted sandy clay. The most abundant inclusion in most of the pottery is quartz; however, the composition is not the same across the group and they occasionally contain feldspar, mafic minerals, and/or granitic rock (Figure 6.16).

Forms and Dimensions
Jars and bowls (Figure 6.17).

Surface Finish and Decoration
Most of the sherds assigned to this group are unslipped; however, some have a pink wash (2.5YR 7/4).

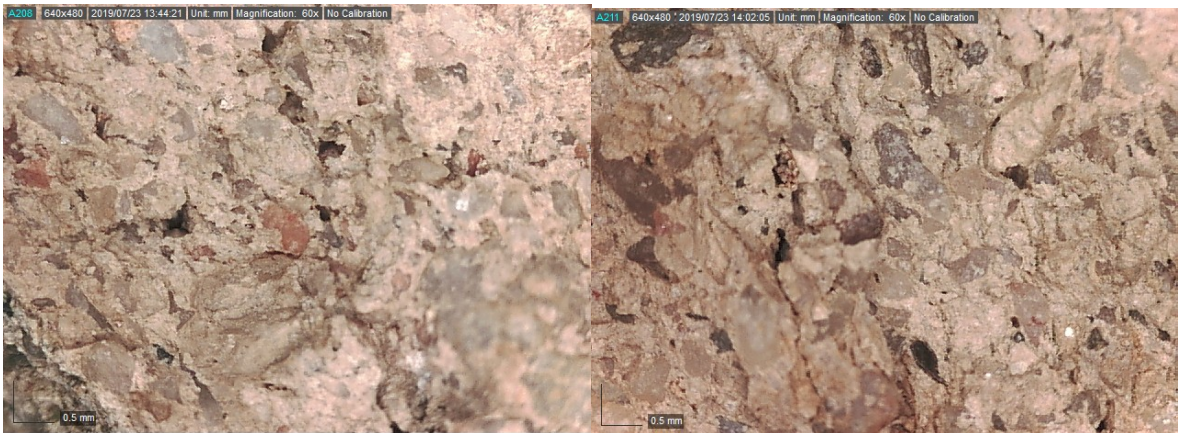

Figure 6.16: Paste Ware 9, SCRAP-38 at 50x magnification (left, 0.5mm scale), and SCRAP-40 at 60x magnification (left, 0.5mm scale). Note the different composition of the inclusions.

Figure 6.17: Paste Ware 9, SCRAP-39/Cat. #10361-T011.

Paste Ware 10

Basis of Division
Thick-walled, tan fabric with thick black core that occupies most of the fabric in cross-section, primarily quartz inclusions. This fabric is rare at Alabama but is of interest because the vessels have a similar form to unslipped jars of the Cayo Unslipped ceramic group from the Belize River Valley, but the inclusions are not composed of calcium carbonate.

Two samples were exported for petrographic analysis in 2019:

- SCRAP-36 (Block C1, ALA-047B, Op 2, Subop B, Lot 2B-11).
- SCRAP-37 (Block C1, ALA-047A, Op 2, Subop G, Lot 4, Cat. #10385-T020).

Dating
Late to Terminal Classic.

Paste and Firing
The paste colour is very pale brown (10YR 7/3) with a thick black core. The fabric is moderately sorted, and inclusions are rounded to subrounded, and equant to elongated. The size distribution is bimodal. The paste appears to be a sandy clay tempered with sand. The inclusions are primarily quartz with some potassium feldspar inclusions (Figure 6.18).

Forms and Dimensions
This fabric group is relatively rare. The forms identified thus far are large jars with outflared rims reminiscent of the Cayo Group in the Belize Valley (Figure 6.19).

Surface Finish and Decoration
Unslipped.

Figure 6.18: Paste Ware 10, SCRAP-36 at 50x magnification (left, 1.0mm scale), and SCRAP-37/Cat. #10385-T020 at 70x magnification (right, 0.5mm scale).

Figure 6.19: Paste Ware 10, SCRAP-37/Cat. #10385-T020.

Undefined Paste Ware

This ware group was first noted in analysis of Op 1 surface collection materials during the 2019 field season. It was originally assumed to be a very poorly sorted paste variant of Paste Ware 2. The paste is similar to Paste Ware 2 but is much coarser and contains abundant iron nodules. The similarity to Paste 2 suggests a local provenance (Figure 6.20). The vessels were crudely fashioned and often have uneven rims and unsmoothed surfaces in both serving vessel and jar forms. Preliminary ceramic analysis at the end of the season indicated that this paste ware was abundant in sherds from above the terminal occupation levels at mound ALA-002B in Block C2 (2019 excavations, see Chapter 3 of this volume), separated from the terminal surface by a layer of soil.

Two samples were exported for petrographic analysis in 2019, in case this paste ware represents a temporal marker for Alabama (e.g., Postclassic or at least post-abandonment):

- SCRAP-27 (Block E, Scatter 031, Op 1 Surface Coll. GPS 251).
- SCRAP-34 (Block E, Scatter 031, Op 1 Surface Coll. GPS 251).

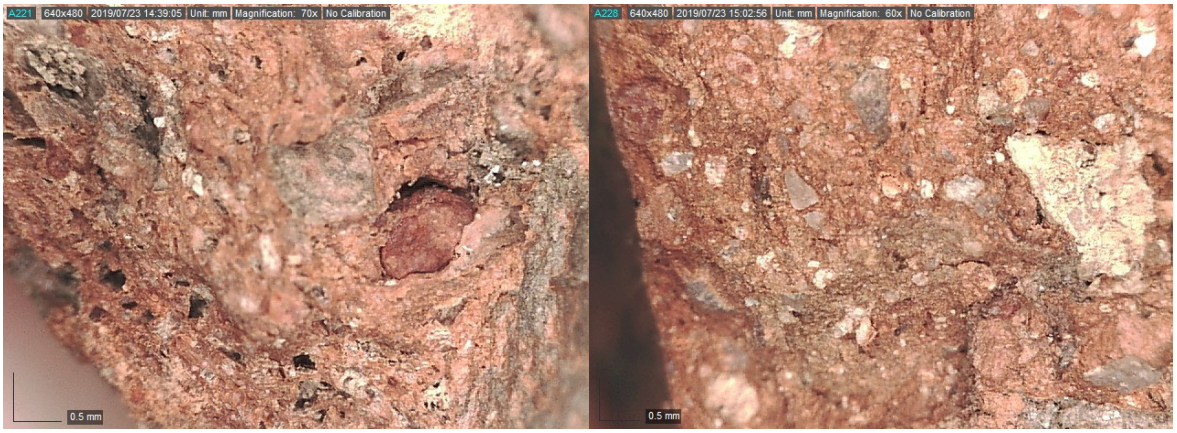

Figure 6.20: Undefined Ware, SCRAP-27 at 70x magnification (left, 0.5mm scale), and SCRAP-34 at 70x magnification (right, 0.5mm scale).

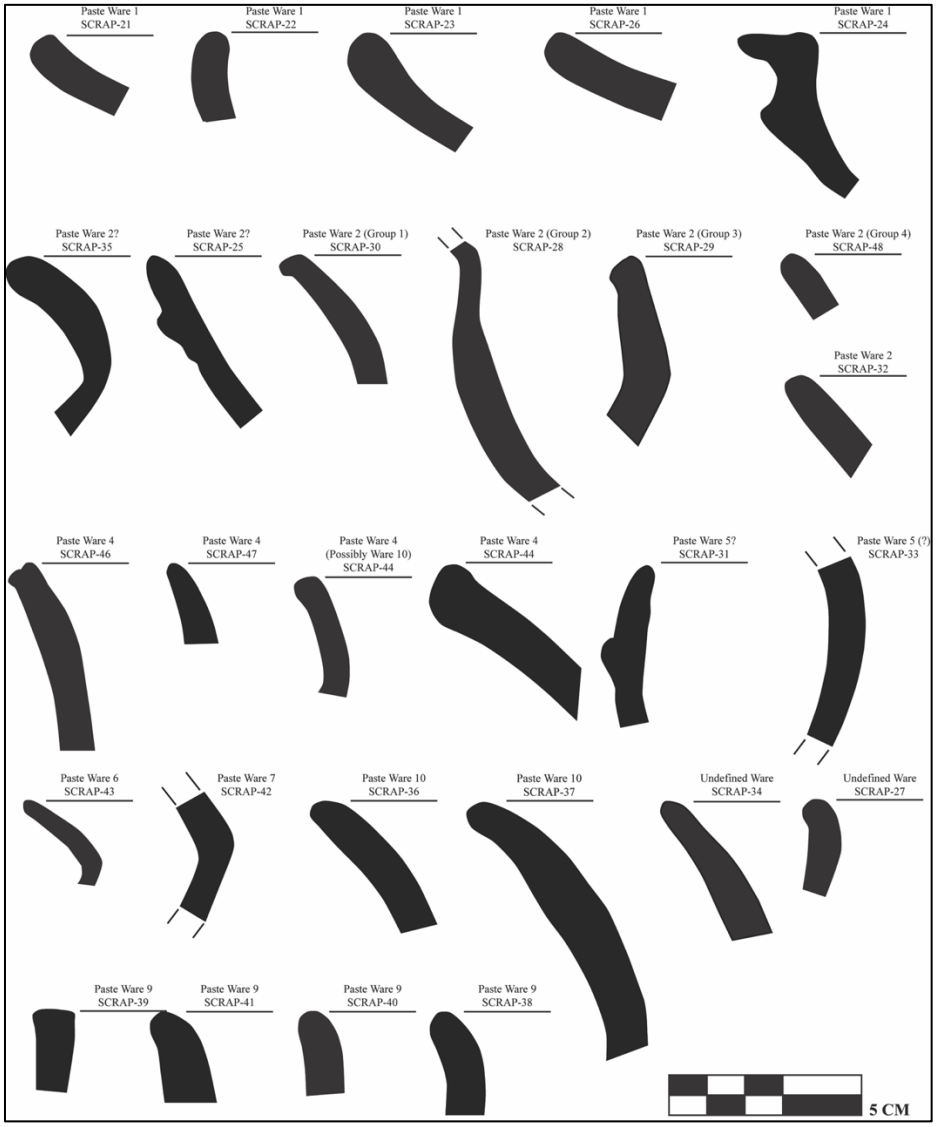

Figure 6.21: Rim profiles of exported pottery.

Table 6.1: Context and descriptive data for exported pottery samples subject to petrographic analysis.

Sample #	Paste Ware	Context	Paste Color	Paste Munsell	Core Color	Core Munsell	Slip Color	Slip Munsell	Form	Hypothesized Provenance
SCRAP-21	1	Block D, ALA-040, Op 1 GPS 075	Brown	7.5YR 5/4	Black	7.5YR 2/1			Bowl/Dish	Local
SCRAP-22	1	Block B, ALA-086B, Op 1 GPS 168	Brown	7.5YR 5/4	Grey	7.5YR 3/1			Bowl/Dish	Local
SCRAP-23	1	Block D, ALA-039, Op 1 GPS 068	Yellowish Brown	10YR 5/4	Very Dark Grey	10YR 3/1			Bowl/Dish	Local
SCRAP-24	1	Block C1, ALA-045A, Lot 3F-surface (Cat. #10437-T002)	Yellowish Red	5YR 5/6	Grey	5YR 4/1			Bowl	Local
SCRAP-25	2?	Block E, S032, Op 1 GPS 252 (Cat. #10361-T009)	Dark Reddish Brown	5YR 3/3	Black	7.5YR 2/1			Bowl	Local
SCRAP-26	1	Block 1, S024, Op 1 GPS 235	Reddish Brown	5YR 5/3	Dark Grey	5YR 4/1			Bowl/Dish	Local
SCRAP-27	Undefined	Block E, S031, Op 1 GPS 251	Reddish Brown	5YR 5/4	None				Jar?	Local
SCRAP-28	2 (Gr. 2)	Block C1, ALA-047B, Lot 2B-2	Red	2.5YR 4/6	Black	2.5YR 3/1			Bowl	Local
SCRAP-29	2 (Gr. 3)	Block C1, ALA-047B, Lot 2B-2	Reddish Brown	5YR 5/4	None				Jar	Local
SCRAP-30	2 (Gr. 1)	Block C1, ALA-047B, Lot 2B-1	Light Reddish Brown	5YR 6/4	Black	7.5YR 2/1			Jar?	Local
SCRAP-31	5?	Block D, ALA-048, Op 1 GPS 119 (Cat. #10361-T018)	Very Pale Brown	10YR 7/3	Light Yellowish Brown	2.5YR 6/3			Bowl	Local
SCRAP-32	2?	Block C1, ALA-047C, Op 1 GPS 136	Reddish Brown	5YR 5/4	Grey	5YR 4/1			Bowl/Dish	Local

Sample #	Paste Ware	Context	Paste Color	Paste Munsell	Core Color	Core Munsell	Slip Color	Slip Munsell	Form	Hypothesized Provenance
SCRAP-33	5?	Block C1, ALA-082, Op 1 Surface Coll. GPS 142	Light Brown	7.5YR 6/3	Black	7.5YR 2/1			Jar?	Local
SCRAP-34	Undefined	Block E, S031, Op 1 GPS 251	Yellowish Red	5YR 5/6	None				Bowl?	Local
SCRAP-35	2?	Block C1, ALA-045A, Lot 3C/E-1 (Cat. #10385-T026).	Yellowish Red	5YR 4/6	None				Jar	Local
SCRAP-36	10	Block C1, ALA-047B, Op 2, Subop B, Lot 2B-11	Very Pale Brown	10YR 7/3	Black	7.5YR 2/1			Jar	Non-Local
SCRAP-37	10	Block C1, ALA-047A, Lot 2G-4 (Cat. #10385-T020)	Very Pale Brown	10Y -7/3	Black	7.5YR 2/1			Jar	Non-Local
SCRAP-38	9	Block D, ALA-063, Op 1 GPS 101	Pale Brown	10YR 6/3	None				Jar?	Non-Local
SCRAP-39	9	Block C2, ALA-009A, Op 1 GPS 036 (Cat. #10361-T011)	Very Pale Brown	10YR 7/3	None				Bowl	Non-Local
SCRAP-40	9	Block C1, ALA-084, Op 1 GPS 145	Very Pale Brown	10YR 7/3	None				Jar?	Non-Local
SCRAP-41	9	Block D, ALA-065, Op 1 GPS 111	Pink	5YR 7/3	None				Jar?	Non-Local
SCRAP-42	7	Block C1, ALA-084, Op 1 GPS 145	Light Yellowish Brown	10YR 6/4	None				Jar	Non-Local
SCRAP-43	6	Block 2, ALA-119, Op 1 GPS 254	Brown	7.5YR 5/3	None				Jar	Non-Local

Sample #	Paste Ware	Context	Paste Color	Paste Munsell	Core Color	Core Munsell	Slip Color	Slip Munsell	Form	Hypothesized Provenance
SCRAP-44	4	Block 2, ALA-126, Op 1 GPS 272	Yellowish Brown	10YR 5/4	Black	7.5YR 2/1			Jar	Non-Local
SCRAP-45	4	Block C1, ALA-081, Op 1 GPS 137 (Cat. #10361-T001)	Yellowish Brown	10YR 5/4	Black	7.5YR 2/1			Jar	Non-Local
SCRAP-46	4	Block C1, ALA-047B, Lot 2B-14	Very Pale Brown	10YR 7/4	Light Greyish Brown	2.5Y 6/2	Red	2.5YR 5/6	Jar	Non-Local
SCRAP-47	4	Block C1, ALA-047B, Lot 2B-3	Very Pale Brown	10YR 7/4	Light Greyish Brown	2.5Y 6/2	Red	2.5YR 5/6	Jar?	Non-Local
SCRAP-48	2 (Gr. 4)	Block D, ALA-039, Op 1 GPS 068	Reddish Brown	5YR 4/4	Black	7.5YR 2/1			Bowl?	Local

Hondo Red Ceramic Group

Basis of Division
Distinctive, thin-walled, orange to yellow tan paste with very fine inclusions. When present, the slip is a bright red colour.

Named Parallel(s)
Hondo Red at Lubaantun (Hammond 1975), Nim Li Punit (Fauvelle 2012), and Uxbenká (Jordan 2019). The type was originally defined by Hammond (1975) at Lubaantun based on a sample of 14 sherds. More recent analyses (Irish 2015) confirm the limited quantities of Hondo Red at Lubaantun. This ceramic group similarly represents a small proportion of the total ceramic assemblage at Uxbenká. The Hondo Red ceramic group represents 12% of the ceramic assemblage at Nim Li Punit and it is posited to have been produced there based on abundance compared to other sites in Southern Belize (Fauvelle 2012). Fauvelle (2012) identified three types within the Hondo Red Group that all share similar orange to yellow to tan pastes: Hondo Red, Sunset Red, and Armadillo Red. Hondo Red has not been identified outside of Southern Belize prior to this study. Both Hondo Red and Sunset Red are present at Alabama (Figure 6.22). Together, as part of the Hondo Red Ceramic Group, they account for 13.8% of the non-diagnostic surface collection materials (see Table 6.5). The Sunset Red type is more abundant (10.2%) than the Hondo Red type (3.6%). The Hondo Red group accounts for 7.9% of the diagnostic sherds from surface collection that could be assigned to a ware group or ceramic type.

Dating
Late to Terminal Classic.

Hondo Red Type

Hondo Red has a medium texture (coarser than Sunset Red), a distinct angular break when broken, and a distinct orange paste with a glossy red slip (when present). The surfaces are often pock marked with very small, circular voids.

Paste and Firing
The paste is relatively fine textured (particularly compared to the Sunset Red type), primarily orange (2.5YR 5/8; 5YR 5/8) with no dark core. Occasionally, the orange colour fades to a yellowish tan (7.5YR 7/6), primarily on the exterior surface. The paste is moderately sorted to well sorted and consists of rounded to subrounded sand composed of quartz, carbonate (no longer present but identified based on the rounded voids), and possibly rocks. The inclusions are very small and difficult to identify with a Dino-Lite but the prevalence of rounded voids suggests that carbonate sand was the primary inclusion. A Hondo Red sample from Uxbenká was analyzed petrographically and is composed primarily of carbonate sand with some quartz, quartzite, and muscovite (Carbonate Sand B Fabric Group; Jordan 2019: 414-415). The size distribution is unimodal, suggesting the use of a sandy clay that was not tempered (Figure 6.23).

Forms and Dimensions
Hondo Red is primarily represented by body sherds that range in thickness from 2.9mm to 5mm. Fauvelle (2012: 52) notes that the thickness can reach 1cm or more at the rim and base. The form

for Hondo Red at Nim Li Punit is primarily an outleaning, round-bottom bowl with shoulder breaks and circular basal stands, with a less common jar with slightly outleaning, straight-sided neck and an everted rim.

Surface Finish and Decoration
When present, the slip is glossy and red (2.5YR 5/6; 2.5YR 4/8). Hondo Red at Alabama rarely has a preserved slip but the smoothed surfaces on both the interior and exterior surfaces suggests that they were slipped.

Sunset Red Type

The Sunset Red type is more abundant at Alabama, at least at this phase of analysis. It has very smooth surfaces, rounded edges, and often feels ashy although it is unclear if they contain volcanic ash (the complete lack of carbonate can create a similar feel in fine paste pottery). The surfaces are often pock marked with very small, circular voids.

Paste and Firing
The paste is orange (2.5YR 5/8; 2.5YR 6/8) to pale brown (10YR 7/4) to yellow (10YR 7/6; 10YR 6/6), often co-occurring on the same vessel, likely due to firing. Many of the interior surfaces are grey (10YR 5/2) to black. The paste is well sorted and consists of rounded to subrounded sand likely composed of quartz, carbonate, and possibly rock fragments. In general, the inclusions are smaller and the paste is better sorted than the Hondo Red type. The inclusions are very small and difficult to identify with a Dino-Lite but the prevalence of rounded voids suggests that carbonate sand was the primary inclusion. The size distribution is bimodal, suggesting Sunset Red was produced using a sandy clay that was not tempered.

Forms and Dimensions
Thin-walled bowls and jars.

Surface Finish and Decoration
Both the interior and exterior surfaces are very smooth, suggesting they were both slipped but the slip is rarely preserved. When present, the slip is glossy and red (2.5YR 5/6; 2.5YR 4/8; 10YR 4/6) like Hondo Red. A body sherd is incised with geometric lines. The incision appears to be a post-slip incision but it is difficult to be sure because of poor preservation.

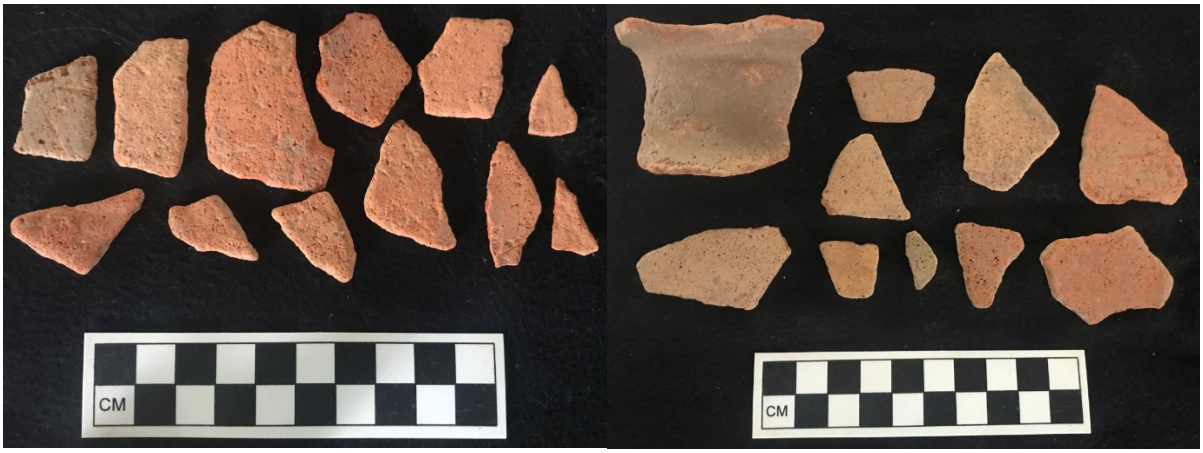

Figure 6.22: Hondo Red (left) and Sunset Red (right).

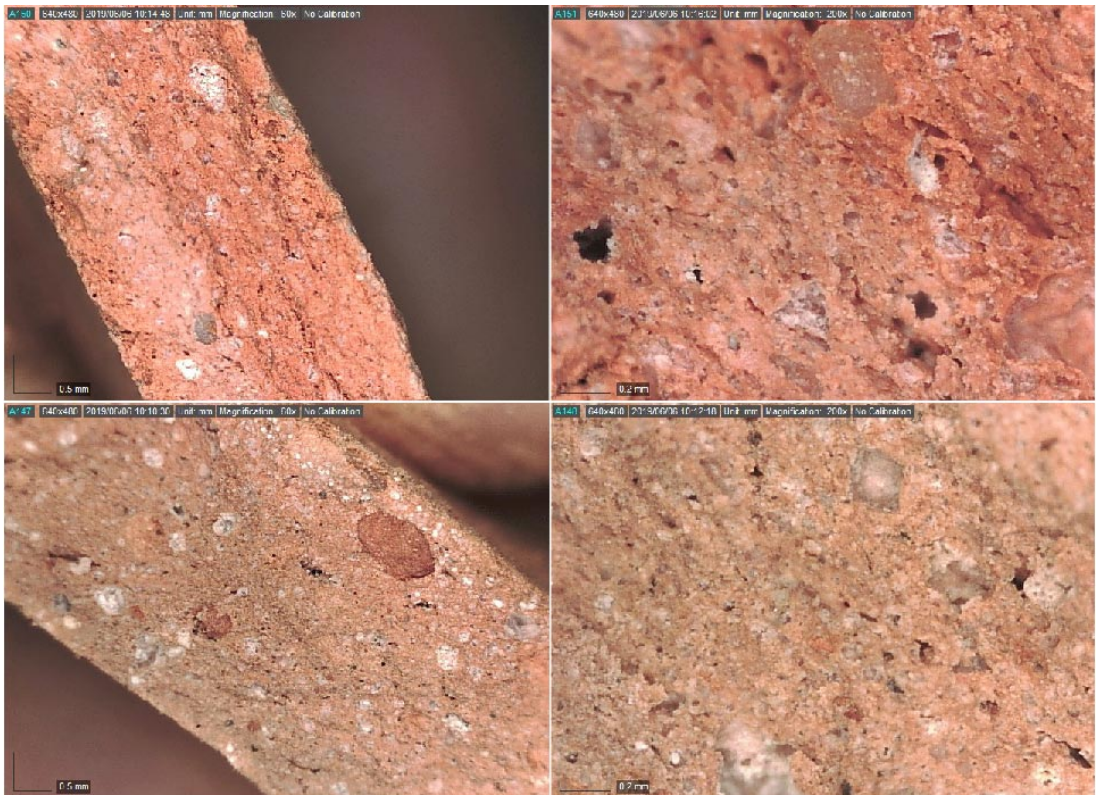

Figure 6.23: Hondo Red at 60x magnification (upper left, 0.5mm scale), Hondo Red at 200x magnification (upper right, 0.2mm scale), Sunset Red at 60x magnification (lower left, 0.5mm scale), and Sunset Red at 60x magnification (lower right, 0.2mm scale).

Chacluum Black

Basis of Division
Thin-walled sherds with thin, glossy black slip.

Named Parallel(s)
Chacluum Black at Lubaantun (Hammond 1975) and Uxbenká (Jordan 2019); called Ekluum Black at Nim Li Punit (Fauvelle 2012). There are two paste variants at Uxbenká: a yellow-to-tan paste and a dark-red paste. Fauvelle (2012:35-36) identified a soft yellow paste variant and a hard brown paste variant at Nim Li Punit. Both of the paste variants at Nim Li Punit are likely subsumed into the yellow to tan variant at Uxbenká. This type has not been previously identified outside of Southern Belize, with some evidence of Chacluum at Pacbitun (Jordan 2018). There are only two body sherds of Chacluum Black in the surface collection ceramics from Alabama, representing 0.0007% of the assemblage.

Dating
Late to Terminal Classic.

Paste and Firing
The paste is tan (10YR 5/4; 10YR 6/4) and does not have a dark core. The fabric is fine and well sorted and is composed of rounded to subrounded sand. The distribution is unimodal, suggesting that this fabric was not tempered. The sand is composed primarily of quartz, although polycrystalline quartz and/or rock fragments, muscovite, and unknown black inclusions are also present (Figure 6.24).

Forms and Dimensions
Chacluum Black at Alabama, as at most other sites, is represented primarily by thin body sherds ranging in thickness (5mm to 7.5mm). Elsewhere, Chacluum Black is primarily represented by bowl forms, although jar forms have also been documented.

Surface Finish and Decoration
Thin, glossy, black slip on both interior and exterior surfaces. The slips are very eroded at Alabama but when better preserved they are often crazed.

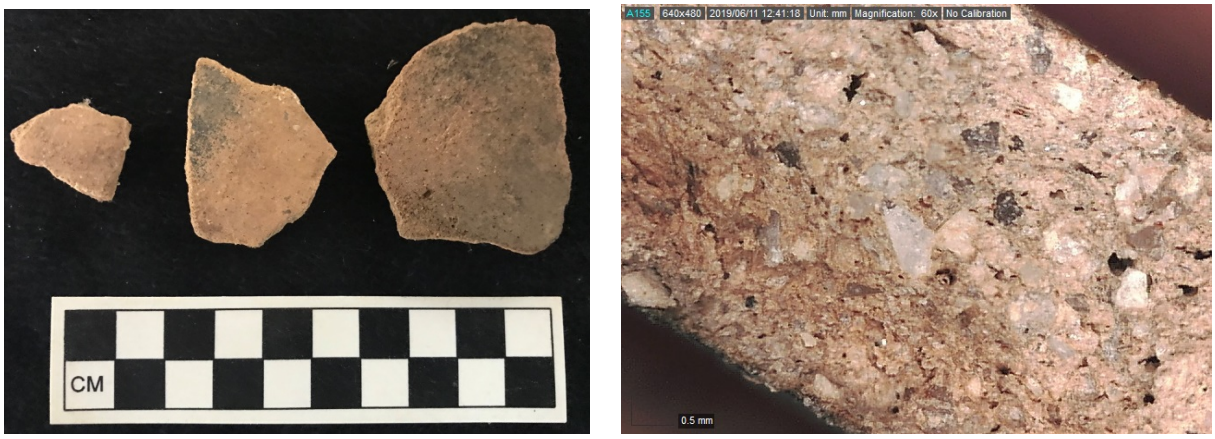

Figure 6.24: Chacluum Black (left), and at 60x magnification (right, 0.5mm scale).

Southern Belize (Toledo-Beds-Derived Clays)

Basis of Division
Ceramics that may have a provenance in Southern Belize have a deep-red to reddish-brown paste that consists of moderately to well-sorted sandy clay with sandy temper. These sherds are sandy but much better sorted than those that were likely produced in the Stann Creek District.

Named Parallel(s)
Remate Red and Turneffe Unslipped at Lubaantun (Hammond 1975), Nim Li Punit (Fauvelle 2012), and Uxbenká (Jordan 2019).

Dating
Late to Terminal Classic.

Paste and Firing
The paste is reddish brown (2.5YR 4/6; 2.5YR 5/6; 5YR 4/6), occasionally with a dark grey to black core. The fabric is moderately sorted to well sorted and consists of rounded to subangular sand composed primarily of quartz. A lack of larger, angular, bimodally distributed inclusions indicate that this fabric was not tempered. There is variation within this group but the red, well-sorted, sandy clays suggest that they derive from clay atop the Toledo Beds. Occasional iron nodules (rounded, equant to elongated) (Figure 6.25).

Figure 6.25: Possible Southern Belize pottery. Images at 50x magnification (1.0mm scale).

Analysis of Operation 1 Surface Collection Ceramics

All surface collected diagnostic rim sherds (n=225) and body sherds (n=2696) from the Alabama settlement area (outside of the monumental core) were analyzed and assigned to different categories to facilitate spatial comparisons. The analysis included all ceramics collected as part of Operation 1, which consists of 9 'blocks' of settlement that included 157 mounds and 41 artifact scatters (Peuramaki-Brown et al. 2014, 2015). The data (Table 6.2) are organized according to settlement block. The process was tedious but necessary to identify differences because diagnostic rim sherds are rare. The first sort of a lot included separating sherds (both diagnostic and body sherds) into two groups: 1) carbonate removed and, 2) non-carbonate and non-carbonate + carbonate-removed inclusions.

Table 6.2: Sandy, carbonate, and ash body sherds organized by settlement block.

	Sandy	Carbonate	Ash	Total
Block 1				
Count	122	24	0	146
Percent	83.5	16.5	0	
Block C1				
Count	205	195	10	410
Percent	50.0	47.6	2.4	
Block C2				
Count	238	203	3	444
Percent	53.6	45.7	0.7	
Block D				
Count	731	437	14	1182
Percent	61.8	37.0	1.2	
Block 2				
Count	96	35	6	137
Percent	70.1	25.5	4.4	
Block E				
Count	70	46	0	116
Percent	60.3	39.7	0	
Block B				
Count	172	69	11	252
Percent	68.3	27.3	4.4	
Block A2				
Count	5	4	0	9
Percent	55.5	44.5	0	
TOTAL				**2696**

Sherds with carbonate removed due to post-depositional leaching are identified based on their extremely light weight (some float in water), abundant pock marks on the surface, and voids in cross-section where carbonate inclusions were located prior to their removal. There is no known

limestone outcrop in the vicinity of Alabama and much of the Stann Creek District in general, so these sherds are assumed to be non-local to the site at this time. Rounded, limestone fragments have been recovered from some excavation units at Alabama, suggesting that they were recovered from one of the drainages in the area; however, even if the inhabitants had access to carbonate cobbles it is unlikely that they were using them as a primary source of temper for pottery production, as they are uncommon in the area. Carbonate inclusions are abundant and varied in pottery produced in many locations in the Maya lowlands so provenance is impossible to determine unless rim sherds can be typed and assigned provenance based on form and/or surface treatment. However, raw counts may be important to determine if there are spatial and/or temporal differences in pottery consumption at Alabama.

Table 6.3: Sandy, carbonate, and ash sherds organized by settlement site type.

	Sandy	**Carbonate**	**Ash**	**Total**
Type 1				
Count	1061	691	30	1782
Percent	59.5	38.8	1.7	
Type 2				
Count	234	132	9	375
Percent	62.4	35.2	2.4	
Type 3				
Count	103	70	2	175
Percent	58.9	40	1.1	
Type 6				
Count	52	42	3	97
Percent	53.6	43.3	3.1	
TOTAL				**2429**

Some of the carbonate wares that have been assigned to a specific ceramic group and/or type include Mount Maloney Black, Garbutt Creek Red, and Dolphin Head Read from the Belize River Valley, and Hondo Red from Southern Belize. In most cases, carbonate sherds were sorted into slipped and unslipped body sherd categories and rim sherds were assigned to a general carbonate category. Slipped sherds are underrepresented due to the acidic soils in the area. Non-carbonate sherds (e.g. sandy wares) were assigned to one of the paste wares defined in the previous section or categorized as unknown. Volcanic ash sherds were also documented. The analyses were designed to facilitate different kinds of comparison (e.g., sandy vs. carbonate, abundance of particular paste wares between settlement groups and blocks). The 225 diagnostic rims were analyzed more completely and assigned to a paste ware, or known ceramic type, when possible. The number of sherds with carbonate was surprising given that they were produced outside of the Stann Creek District. The surface collected material from Block C1 contained almost half carbonate sherds (47.6%). Block C2 (45.7% carbonate), Block E (39.7% carbonate), and Block D (37.0% carbonate) also have significant quantities of carbonate sherds. Blocks with less carbonate sherds contained the most ash wares (Block 2 and Block B, both have 4.4.% ash wares). These data indicate that a significant portion the pottery from some contexts at Alabama was of non-local origin, which is striking given that households normally provision themselves with locally acquired ceramics. There is not an appreciable difference in the types of pottery when the data are

considered with reference to settlement site type (Table 6.3). Type 6 mounds have more carbonate sherds (43.3%) than other types but Type 1 mounds also have abundant carbonate sherds (38.8%). These preliminary data suggest that households, regardless of size and architectural elaboration, had access to non-local pottery in significant quantities.

Table 6.4: Analysis of diagnostic, surface-collected ceramics (Operation 1 at Alabama).

Scatter (S) or Mound (ALA)	GPS #	Type/Ware	Fragment Type	Form	Form	Rim Form	Lip Form	Rim Diameter	Fireclouding
Block 1									
ALA-112	233	Unknown	Neck	Jar					
S024	235	Ware 1	Rim	Bowl	Incurving	Direct	Rounded	25	No
S024	235	Unknown	Rim	Dish/Bowl	Incurving	Direct	Rounded		Rounded
S027	239	Unknown	Neck	Jar					
ALA-113	240	Ware 1	Rim	Dish/Bowl	Incurving	Direct	Beveled Out		No
ALA-114	241	Unknown	Rim	Dish/Bowl		Direct	Beveled In		Yes
S028	242	Unknown	Neck	Jar					
S028	242	Ware 1	Rim	Incurving Bowl	Incurving	Direct	Beveled In		No
S028	242	Ware 1	Rim	Bowl/Dish	Flared Sides	Exterior Thickened	Beveled In	35	
S028	242	Unknown	Base?	Flat					
Block C1									
ALA-079	131	Ware 2	Neck	Jar	Outcurved Neck				
ALA-047B	134	Ware 9	Rim	Jar	Outcurved Neck	Direct	Rounded		No
ALA-047B	134	Hondo	Rim	Jar	Outcurved Neck	Direct	Squared		No
ALA-047B	134	Unknown	Neck	Jar	Outcurved Neck				No
ALA-047B	134	Toledo?	Rim	Bowl	Incurving Sides	Beveled In	Rounded		Yes
ALA-047B	134	Unknown	Neck	Jar	Outcurved Neck				No
ALA-047A	135	Carbonate	Rim	Bowl	Slightly Incurved Sides	Direct	Rounded		No
ALA-047C	136	Ware 2?	Rim	Bowl/Dish	Flared Sides				
ALA-047C	136	Ware 2, Type 3?	Rim	Unknown		Exterior Thickened	Rounded		No
ALA-081	137	Ware 9	Rim	Bowl	Outcurved Sides	Direct	Exterior Thickened		No
ALA-081	137	Ware 9	Rim	Bowl?	Straight Sides	Direct	Rounded		No
ALA-044	138	Ware 1	Neck	Jar	Outcurved Neck				No
ALA-045A	140	Ware 1	Rim	Bowl?	Flared Sides	Outflared Everterted with Groove Incision	Rounded		No
ALA-082	142	Ware 5	Neck	Jar	Outcurved Neck				
ALA-082	142	Ware 5?	Rim	Jar	Outcurved Neck	Exterior Thickened	Rounded		
ALA-083	143	Ware 1	Rim	Bowl	Slightly Incurved Sides	Direct	Rounded		No

Scatter (S) or Mound (ALA)	GPS #	Type/Ware	Fragment Type	Form	Form	Rim Form	Lip Form	Rim Diameter	Fireclouding
ALA-083	143	Ware 1	Rim	Bowl	Slightly Incurved Sides	Direct	Rounded		No
ALA-084	145	Ware 9	Rim	Bowl	Vertical Sides	Direct	Rounded	20	No
ALA-084	145	Ware 9	Rim	Bowl	Vertical Sides	Exterior Folded	Rounded	20	No
ALA-084	145	Ware 9	Rim	Bowl	Vertical Sides	Direct	Rounded		No
ALA-084	145	Unknown	Rim	Jar	Outcurved Neck	Outflared Everted	Rounded		No
ALA-084	145	Ware 2, Type 3?	Neck	Jar					Burned
ALA-084	145	Ware 2	Rim	Jar	Outcurved Neck	Direct	Rounded		No
ALA-084	145	Ware 7	Neck	Jar	Outcurved Neck				No
ALA-084	145	Hondo	Neck	Jar	Outcurved Neck				No
ALA-084	145	Unknown	Rim	Plate/Dish	Flared Sides	Direct	Rounded		No
ALA-084	145	Carbonate	Rim	Jar	Outcurved Neck	Direct	Rounded		No
ALA-084	145	Carbonate	Neck	Jar	Outcurved Neck				No
ALA-084	145	Carbonate	Rim	Jar?	Outcurved Neck	Direct	Squared		No
ALA-084	145	Carbonate	Rim	Jar?	Outcurved Neck	Direct	Rounded		No
ALA-084	145	Carbonate	Rim	Jar?	Outcurved Neck	Direct	Rounded		No
ALA-084	145	Carbonate	Rim	Jar?	Outcurved Neck	Direct	Rounded		No
ALA-084	145	Carbonate	Rim	Jar?	Outcurved Neck	Direct	Rounded		No
ALA-084	145	Carbonate	Rim	Bowl	Incurved Sides with Outflared Neck	Direct	Rounded		No
ALA-085	146	Carbonate	Rim	Jar	Outcurved Neck	Direct	Rounded	20	Burned
ALA-085	146	Unknown	Rim	Jar	Outcurved Neck	Direct	Rounded		
S009	147	Toledo	Rim	Unknown	Outcurved Neck	Direct	Rounded		No
S009	147	Toledo	Body	Unknown					No
Block C2									
ALA-003	29	Carbonate	Appendage	Foot	Solid Oven Foot				
ALA-003	29	Ash	Body	Incised					
ALA-004B	31	Hondo	Rim	Bowl	Incurved Sides		Rounded		No
ALA-004B	31	Ware 2	Neck	Jar	Outcurved Neck				No
ALA-007	34	Ware 2	Neck	Jar	Outcurved Neck				No
ALA-008	35	Ware 1	Rim	Jar?	Outcurved Neck	Direct	Rounded		Yes
ALA-008	35	Ware 1	Rim	Jar?	Outcurved Neck	Direct	Rounded		Yes
ALA-008	35	Ware 1	Rim	Unknown			Rounded		No

Scatter (S) or Mound (ALA)	GPS #	Type/Ware	Fragment Type	Form	Form	Rim Form	Lip Form	Rim Diameter	Fireclouding
ALA-008	35	Carbonate	Rim	Jar	Outcurved Neck	Direct	Rounded		No
ALA-009A	36	Ware 1	Rim	Unknown			Rounded		No
ALA-009B	37	Dolphin Head	Rim	Bowl/Dish	Flared Sides	Direct	Rounded	25	No
ALA-009B	37	Dolphin Head	Rim	Bowl/Dish	Flared Sides	Direct	Rounded		No
ALA-016	44	Hondo (Sunset	Neck	Jar					No
ALA-016	44	Ware 9	Rim	Unknown			Rounded		No
ALA-016	44	Ware 2	Rim	Bowl/Dish	Flared Sides	Direct	Rounded		No
ALA-016	44	Ware	Neck	Jar					Yes
ALA-016	44	Unknown	Neck	Jar					No
ALA-016	44	Ware 4	Rim	Bowl?	Flared Sides	Direct	Exterior Thickened		Yes
ALA-017	45	Toledo?	Rim	Bowl?	Unknown	Outflared Everted	Rounded	35	Yes
ALA-018	46	Ware 2	Rim	Unknown			Rounded		No
ALA-018	46	Ware 9	Rim	Unknown			Rounded		No
ALA-020A	48	Ware 1	Rim	Bowl	Incurved Sides with Outflared Neck	Direct	Rounded		No
ALA-020A	48	Ware 1	Rim	Unknown			Rounded		No
ALA-020B	49	Ware 1	Rim	Unknown			Rounded		No
ALA-021	50	Ware 4	Neck	Jar	Outcurved Neck				No
ALA-021	50	Ware 5	Rim	Bowl	Incurved Sides	Direct	Interior Thickened		No
ALA-021	50	Ware 5	Rim	Jar?	Outcurved Neck	Direct	Rounded		No
ALA-021	50	Ware 9	Rim	Unknown			Rounded		No
ALA-022	51	Hondo	Rim	Jar	Vertical Neck	Direct	Rounded		No
Block D									
ALA-024	54	Ash	Rim	Bowl	Incurving Sides	Direct	Rounded		No
ALA-024	54	Carbonate	Vase?						
ALA-025	55	Ware 1	Rim	Jar	Outcurved Neck	Direct	Rounded		No
ALA-025	55	Ware 2	Rim				Rounded		No
ALA-026	56	Ware 1	Appendage						No
ALA-027	57	Ware 2	Rim	Plate/Dish	Outflared Sides	Direct	Rounded		No
ALA-027	57	Ware 9	Rim	Bowl	Straight Sides	Direct	Rounded		No
ALA-029A	58	Unknown	Neck	Jar	Outcurved				No

Scatter (S) or Mound (ALA)	GPS #	Type/Ware	Fragment Type	Form	Form	Rim Form	Lip Form	Rim Diameter	Fireclouding
ALA-033	63	Ware 9	Rim	Bowl		Direct	Rounded		No
ALA-034A	64	Ware 1	Rim	Dish	Outflared Sides	Direct	Rounded	34	No
ALA-039	68	Ware 1	Rim	Bowl	Incurved Sides	Interior Thickened	Rounded		No
ALA-039	68	Ware 1	Rim	Jar?					No
ALA-039	68	Unknown	Neck	Jar?	Outcurved Neck				
ALA-039	68	Ware 2	Rim				Rounded		No
ALA-038B	69	Ash	Rim	Dish	Flared Sides	Everted	Rounded		No
ALA-036	71	Ware 2	Rim	Jar	Outcurved Neck	Direct	Rounded		Yes
ALA-051	83	Ware 1	Rim	Jar?	Outcurved Neck	Direct	Rounded		No
ALA-051	83	Ware 1	Rim	Jar?	Outcurved Neck	Direct	Rounded		No
ALA-051	83	Ware 1	Rim	Jar?	Outcurved Neck	Direct	Rounded		No
ALA-051	83	Ware 1	Rim	Jar?	Outcurved Neck	Direct	Rounded		No
ALA-051	83	Ware 9	Rim	Jar?	Outcurved Neck	Direct	Rounded		No
ALA-056A	88	Ware 1	Rim	Jar?	Outcurved	Direct	Rounded		No
ALA-056A	88	Unknown	Rim	Dish	Flared Sides	Direct	Rounded		No
ALA-056A	88	Ware 9	Rim	Unknown			Rounded		No
ALA-056A	88	Ware 2	Body	Fingernail Impressions					No
ALA-056A	88	Unknown	RIm	Jar	Outcurved Neck	Direct	Rounded	5	Yes
ALA-056A	88	Carbonate	Rim	Jar	Outcurved Neck	Direct	Rounded		Yes
ALA-057A	90	Unknown	RIm	Bowl/Dish	Flared Sides	Direct	Rounded		No
ALA-056B	94	Ware 1	Rim	Jar?	Outcurved Neck	Direct	Rounded		No
ALA-056B	94	Ware 9	Rim	Jar?	Outcurved Neck	Direct	Rounded		No
ALA-056B	94	Hondo	Body	Molded					No
ALA-059	97	Ash	Rim	Plate/Dish	Flared Sides	Beveled In	Rounded		No
ALA-059	97	Carbonate	Rim	Jar?	Outcurved Neck	Direct	Squared		No
ALA-059	97	Ware 1	Rim	Unknown		Direct	Rounded		No
ALA-059	97	Ware 2	Rim	Jar	Outcurved Neck	Direct	Rounded		No
ALA-059	97	Ware 2	Neck	Jar	Outcurved Neck				
ALA-059	97	Carbonate	Rim	Jar?	Outcurved Neck	Direct	Rounded		No
ALA-059	97	Carbonate	Rim	Unknown		Direct	Rounded		No
ALA-060	98	Ware 9	Rim	Bowl?	Straight Sides	Exterior Thickened	Beveled In		No
ALA-060	99	Ware 9	Rim	Unknown	Unknown	Exterior Thickened	Beveled In		No

Scatter (S) or Mound (ALA)	GPS #	Type/Ware	Fragment Type	Form	Form	Rim Form	Lip Form	Rim Diameter	Fireclouding
ALA-060	99	Carbonate	Rim	Jar?	Outcurved Neck	Direct	Rounded		No
ALA-062	100	Carbonate	Rim	Unknown			Rounded		No
ALA-062	100	Ware 2	Rim	Dish	Flared Sides	Direct	Rounded	20	No
ALA-062	100	Carbonate	Neck	Jar	Outcurved Neck				No
ALA-062	100	Ware 4	Rim	Jar	Outcurved Neck	Direct	Rounded	20	
ALA-062	100	Hondo (Sunset)	Rim	Jar	Outcurved Neck	Direct	Rounded	10	
ALA-062	100	Hondo (Sunset)	Rim	Bowl	Incurved Sides	Direct	Rounded		No
ALA-062	100	Carbonate	Rim	Bowl	Incurved Sides	Direct	Rounded		No
ALA-062	100	Carbonate	Rim	Bowl	Incurved Sides	Direct	Rounded		No
ALA-062	100	Hondo (Sunset)	Base	Flat					No
ALA-062	100	Unknown	Pot lid?						
ALA-063	101	Ware 9	Rim	Jar	Outcurved Neck	Direct	Rounded		No
ALA-063	101	Ware 9	Rim	Bowl?	Incurved Sides	Direct	Rounded		No
ALA-063	101	Ware 9	Rim	Bowl	Flared Sides	Direct	Beveled In		No
ALA-063	101	Carbonate	Rim	Jar?		Direct	Rounded		No
ALA-064	102	Ware 4	Rim	Jar	Outcurved Neck	Direct	Squared		No
ALA-065	111	Ware 9	Neck	Jar?					No
ALA-067	113	Ash	Rim	Dish/Plaste	Flared Sides	Direct	Rounded		No
ALA-067	113	Unknown	Unknown				Rounded		No
ALA-069	116	Ware 9	Rim	Jar?	Outcurved Neck	Direct	Squared		No
ALA-069	116	Carbonate	Rim	Jar	Outcurved Neck	Direct	Rounded		No
ALA-048	119	Carbonate	Ring Base						
ALA-048	119	Hondo (Sunset)	Ring Base						
ALA-048	119	Ware 10?	Rim	Jar	Outflared Everted	Direct	Rounded		Yes
ALA-048	119	Unknown	Rim	Jar	Outcurved Neck	Direct	Rounded		No
ALA-070	120	Ware 2	Rim	Jar	Outcurved Neck	Direct	Rounded		No
ALA-073	124	Ware 9	Rim	Unknown			Rounded		No
ALA-074	126	Hondo (Sunset)	Rim	Jar	Outcurved Neck	Direct	Rounded		No
ALA-074	126	Hondo (Sunset)	Appendage	Foot	Hollow Oven				No
ALA-074	126	Ware 1	Rim	Jar?	Outcurved Neck	Direct	Rounded		No

Scatter (S) or Mound (ALA)	GPS #	Type/Ware	Fragment Type	Form	Form	Rim Form	Lip Form	Rim Diameter	Fireclouding
ALA-074	126	Ware 1	Rim	Jar?	Outcurved Neck	Direct	Rounded		No
ALA-074	126	Toledo	Rim	Jar?	Outcurved Neck	Direct	Rounded		No
ALA-074	126	Ware 2	Rim	Jar?	Outcurved Neck	Direct	Rounded		No
ALA-074	126	Ware 2	Rim	Jar?	Outcurved Neck	Direct	Rounded		No
ALA-075	127	Toledo Beds?	Rim	Bowl/Dish	Flared Sides	Direct	Squared		No
ALA-075	127	Ware 2	Rim	Bowl/Dish	Flared Sides	Direct	Beveled In		No
ALA-075	127	Unknown	Rim	Bowl/Dish	Flared Sides	Direct	Beveled In		No
ALA-078	130	Carbonate	Rim	Jar?	Outcurved Neck	Direct	Rounded		Yes
ALA-031A/B	73/76	Ware 1	Rim	Bowl/Dish	Flared Sides	Exterior Thickened	Rounded		No
Block 2									
ALA-119	254	Ware 6	Rim	Jar	Outcurved Neck	Direct	Rounded	15	No
ALA-119	254	Ware 6	Neck						
ALA-121	259	Ware 4	Neck	Jar	Outcurved Neck				No
ALA-121	259	Ware 1	Rim	Jar?	Outcurved Neck	Direct	Rounded	15	No
ALA-122A	263	Unknown	Neck	Jar	Outcurved				No
ALA-122A	263	Unknown	Rim	Bowl	Incurved Sides	Direct	Rounded		No
ALA-122A	263	Carbonate	Rim	Bowl	Incurved Sides	Direct	Beveled In		No
ALA-122A	263	Unknown	Base		Flat				
ALA-122B	264	Unknown	Rim	Bowl?		Direct	Rounded		No
ALA-122B	264	Hondo?	Foot		Solid Slab Foot				No
ALA-125	268	Ware 8	Neck	Jar	Outcurved Neck				No
ALA-126	272	Ware 1	Rim	Bowl	Incurved Sides	Direct	Rounded		No
ALA-126	272	Carbonate	Neck	Jar?	Outcurved Neck				No
ALA-126	272	Ware 4	Rim	Jar?	Outcurved Neck	Outflared Everted	Rounded		No
ALA-121	259	Ware 1	Neck	Jar	Outcurved Neck				No
ALA-121	259	Carbonate	Rim	Unknown			Rounded		No
Block E									
ALA-117	248	Unknown	Rim	Jar	Outcurved Neck	Direct	Rounded		No
S031	251	Carbonate	Rim	Jar	Outcurved Neck	Direct	Rounded		No
S031	251	Carbonate	Rim	Dish/Plate	Flared Sides	Outflared Everted	Beveled In		No
S031	251	Ware 1	Rim	Jar	Outcurved Neck	Direct	Rounded	15	No
S031	251	Ware 1	Rim	Jar	Outcurved Neck	Direct	Rounded		No

Scatter (S) or Mound (ALA)	GPS #	Type/Ware	Fragment Type	Form	Form	Rim Form	Lip Form	Rim Diameter	Fireclouding
S031	251	Ware 4	Rim	Bowl/Dish?	Flared Sides	Direct	Rounded	40	Yes
S031	251	Hondo (Sunset)	Rim	Jar	Outcurved Neck	Direct	Rounded	25	No
S031	251	Hondo (Sunset)	Neck	Jar	Outcurved Neck				No
S031	251	Hondo (Sunset)	Appendage	Foot	Hollow				No
S031	251	Hondo (Sunset)	Appendage	Foot	Hollow				No
S031	251	Hondo (Sunset)	Appendage	Foot?	Hollow Slab				No
S031	251	Ware 10	Appendage	Foot	Hollow Oven				
S031	251	Carbonate	Rim	Bowl	Incurved Sides	Interior Thickened	Rounded		Burned
S031	251	Unknown	Rim	Bowl	Incurved Sides	Direct	Rounded	25	
S031	251	Unknown	Rim	Jar	Outcurved Neck	Exterior Thickened	Rounded	15	
S031	251	Unknown	Neck	Jar	Outcurved Neck				
S031	251	Unknown	Rim	Jar?		Direct	Rounded		
S033	253	Ware 2	Rim	Bowl	Incurved Sides	Interior Thickened	Beveled In		No
Block B									
ALA-097B	191	Ware 1	Rim	Bowl	Incurved Sides	Direct	Rounded		No
ALA-097B	191	Carbonate	Rim	Jar?		Direct	Rounded		No
ALA-097B	191	Northern	Rim	Jar?		Outflared Everted	Rounded		No
ALA-086B	168	Ware 1	Rim	Jar	Outcurved Neck	Direct	Rounded		No
ALA-086B	168	Ware 1	Rim	Bowl?	Incurved Sides	Direct	Rounded		No
ALA-086B	168	Ware 1	Rim	Jar	Outcurved Neck	Direct	Rounded		No
ALA-087	169	Ware 9	Rim	Unknown			Rounded		No
ALA-088	170	Ware 1	Rim	Unknown			Rounded		No
ALA-089	171	Ware 1	Neck	Jar	Outcurved Neck				No
ALA-089	171	Ware 1	Rim	Bowl	Incurved Sides	Direct	Rounded		No
S011	173	Ware 1	Rim	Bowl	Incurved Sides	Direct	Rounded		No
S011	173	Ware 1	Rim	Bowl	Incurved Sides	Direct	Rounded		No
S011	173	Ware 1	Rim	Bowl	Incurved Sides	Direct	Rounded		No
S011	173	Ware 1	Rim	Bowl?		Direct	Rounded	40	No
S011	173	Ware 9	Rim	Jar	Outcurved Neck	Direct	Rounded		No
S011	173	Unknown	Rim	Bowl	Incurved Sides	Direct	Rounded		No

Scatter (S) or Mound (ALA)	GPS #	Type/Ware	Fragment Type	Form	Form	Rim Form	Lip Form	Rim Diameter	Fireclouding
ALA-091	177	Unknown	Base?						
ALA-094C	186	Ware 1	Rim	Unknown		Outcurved	Rounded		No
ALA-094C	186	Ware 9	Rim	Unknown		Direct	Rounded		No
ALA-095	188	Ware 9	Neck	Jar	Outcurved Neck				No
ALA-095	188	Coastal?	Base	Flat					
ALA-097A	190	Ware 1	Rim	Bowl/Dish?	Flared Sides	Exterior Thickened	Rounded		No
ALA-097A	190	Ware 1	Rim	Unknown			Rounded		No
ALA-098	194	Ware 1	Rim	Bowl	Incurved Sides	Direct	Rounded		No
ALA-100B	200	Ware 9	Rim	Bowl	Incurved Sides	Beveled In	Rounded		No
ALA-104B	210	Ware 1	Rim	Unknown		Direct	Rounded		No
ALA-104B	210								
ALA-106	212	Ware 2	Rim	Jar?	Outcurved Neck	Direct	Rounded		Yes
ALA-092/S016	180/181	Northern	Rim	Jar	Outcurved Neck	Direct	Rounded		No
ALA-094A/B	184/185	Coastal?	Rim	Dish/Plate	Flared Sides	Direct	Rounded		No
ALA-094A/B	184/185	Ware 1	Rim	Bowl?		Direct	Rounded		No
ALA-094A/B	184/185	Ware 1	Rim	Bowl	Incurved Sides	Interior Thickened	Rounded		No
ALA-094A/B	184/185	Unknown	Rim	Bowl?		Interior Thickened	Rounded		No
ALA-094A/B	184/185	Unknown	Neck	Jar					

Table 6.5: Counts of non-diagnostic, surface-collected ceramics by type (Operation 1 at Alabama).

GPS #	Scatter (S) or Mound (ALA)	Total Sherds	Diagnostic (Total)	Non-Diagnostic (Total)	Slipped Sandy Body	Unslipped Sandy Body	Total Sandy	Ware 1	Ware 2 (Type 1 and 2)	Ware 2 (Type 3)	Ware 3	Ware 4	Ware 5	Ware 6	Ware 7	Ware 8	Ware 9	Toledo Beds	Ware 10	Unknown	Slipped Carbonate Body	Unslipped Carbonate Body	Total Carbonate	Hondo Red	Sunset Red	Unknown	Chachuum	Northern	Ash
Block 1																													
233	ALA-112	28	1	27	3	21	24	4	0	0	0	0	0	0	0	0	0	0	0	20	1	2	3	0	0	3	0	0	0
235	S024	10	2	8	2	5	7	2	0	0	0	0	0	0	0	0	0	0	0	5	1	0	1	0	1	0	0	0	0
237	S026	21	0	21	1	20	21	4	0	0	0	0	0	0	0	0	0	0	0	17	0	0	0	0	0	0	0	0	0
239	S027	17	1	16	4	6	10	1	0	0	0	0	0	0	0	0	0	1	0	8	6	0	6	0	3	3	0	0	0
240	ALA-113	14	1	13	4	5	9	0	3	0	0	0	0	0	0	0	2	0	0	4	2	2	4	0	2	2	0	0	0
241	ALA-114	10	1	9	0	5	5	0	0	0	0	0	0	0	0	0	2	0	0	3	3	1	4	0	0	4	0	0	0
242	S028	40	5	35	6	27	33	20	0	0	0	0	0	0	0	0	0	0	0	13	2	0	2	0	0	2	0	0	0
245	S029	5	0	5	0	5	5	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
243/244	ALA-115	12	0	12	0	8	8	1	0	0	0	0	0	0	0	0	0	0	0	7	2	2	4	0	0	4	0	0	0
Block C1																													
131	ALA-079	69	1	69	11	22	33	4	5	0	5	0	3	0	0	1	1	1	0	13	21	14	35	8	9	18	0	0	1
132	ALA-080	28	0	28	2	11	13	0	3	0	0	0	0	0	0	0	1	0	0	9	1	13	14	0	0	14	0	0	1
133	S008	4	0	4	0	2	2	0	1	0	0	0	0	0	0	0	0	0	0	1	0	2	2	0	0	2	0	0	0
134	ALA-047B	52	5	47	10	17	27	0	0	0	0	5	5	0	0	0	4	0	0	13	9	9	18	3	0	15	0	0	2
135	ALA-047A	8	2	7	0	6	6	1	0	3	0	0	0	1	0	0	0	0	0	1	0	1	1	0	0	1	0	0	0
136	ALA-047C	33	2	31	3	14	17	2	0	7	0	0	1	2	0	0	0	0	0	5	7	6	13	1	2	10	0	0	1
137	ALA-081	16	2	14	4	4	8	0	0	0	1	0	0	0	0	0	0	0	0	7	0	4	4	0	0	4	0	0	2
138	ALA-044	8	1	8	0	4	4	0	0	0	0	0	0	0	0	1	0	0	0	3	3	1	4	0	3	1	0	0	0
139	ALA-045B	7	0	7	2	1	3	1	0	0	0	0	0	0	0	0	0	0	0	2	1	3	4	0	1	3	0	0	0
140	ALA-045A	13	1	12	0	8	8	1	0	0	0	0	1	0	0	0	1	0	0	5	2	2	4	2	0	2	0	0	0
141	ALA-045C	1	0	1	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
142	ALA-082	3	1	1	0	1	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
143	ALA-083	13	2	11	0	6	6	1	0	0	0	0	2	1	0	0	0	0	0	2	2	3	5	2	0	3	0	0	0
144	ALA-043	19	0	19	2	12	14	3	0	0	0	1	0	0	0	0	0	2	0	8	3	1	4	2	1	1	0	0	1
145	ALA-084		17	98	14	19	33	0	5	0	0	0	0	0	0	0	0	3	0	25	47	16	63	5	9	49	0	0	2

GPS #	Scatter (S) or Mound (ALA)	Total Sherds	Diagnostic (Total)	Non-Diagnostic (Total)	Slipped Sandy Body	Unslipped Sandy Body	Total Sandy	Ware 1	Ware 2 (Type 1 and 2)	Ware 2 (Type 3)	Ware 3	Ware 4	Ware 5	Ware 6	Ware 7	Ware 8	Ware 9	Toledo Beds	Ware 10	Unknown	Slipped Carbonate Body	Unslipped Carbonate Body	Total Carbonate	Hondo Red	Sunset Red	Unknown	Chacluum	Northern	Ash
146	ALA-085	22	2	20	3	9	12	2	1	0	0	2	0	0	0	0	0	0	0	7	3	5	8	0	3	5	0	0	0
147	S009	28	2	25	6	8	14	0	0	0	0	0	3	0	0	0	0	3	0	8	5	6	11	0	4	7	0	0	0
148	ALA-046	8	0	8	1	2	3	0	0	0	0	0	0	0	0	0	0	0	0	3	3	2	5	1	0	4	0	0	0
Block C2																													
25	ALA-002A	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0	0	2	0	0	0
29	ALA-003	29	2	27	1	5	6	0	1	0	0	0	0	0	0	0	0	0	0	5	0	21	21	0	3	18	0	0	0
30	ALA-004A	16	0	16	1	6	7	3	1	0	0	0	0	0	0	0	1	0	0	2	0	9	9	0	5	4	0	0	0
31	ALA-004B	26	2	24	2	6	8	2	2	0	1	0	0	0	0	0	1	0	0	2	0	16	16	0	2	14	0	0	0
32	ALA-005	6	0	6	0	5	5	2	0	1	0	0	0	0	0	0	0	0	0	2	0	1	1	0	1	0	0	0	0
33	ALA-006	8	0	8	0	6	6	2	0	0	0	0	0	0	0	0	0	0	0	4	0	2	2	0	0	2	0	0	0
34	ALA-007	36	1	35	9	20	29	8	9	2	0	0	0	0	0	0	0	0	0	10	0	5	5	1	0	4	0	0	1
35	ALA-008	41	4	38	8	20	28	10	8	0	0	0	0	0	0	0	1	0	0	9	0	10	10	3	2	5	0	0	0
36	ALA-009A	27	1	26	0	10	10	3	0	0	0	0	0	1	0	0	1	0	0	5	8	8	16	0	3	12	0	1	0
37	ALA-009B	15	2	13	0	7	7	1	3	0	0	0	0	0	0	0	0	1	0	2	3	3	6	0	2	4	0	0	0
38	ALA-010	14	0	14	1	5	6	0	0	0	0	0	0	0	0	0	2	0	0	4	0	8	8	0	5	3	0	0	0
39	ALA-011	13	0	14	0	11	11	3	5	0	1	0	0	0	0	0	0	0	0	2	0	3	3	0	0	3	0	0	0
40	ALA-012	45	0	45	5	18	23	3	5	0	0	0	0	0	0	0	0	0	0	15	0	22	22	0	9	13	0	0	0
44	ALA-016	75	6	69	13	20	33	2	9	2	2	0	0	0	0	0	5	0	0	13	10	26	36	6	9	20	0	1	0
45	ALA-017	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
46	ALA-018	28	2	26	4	14	18	0	6	0	3	0	0	0	0	0	2	0	0	7	5	3	8	0	4	4	0	0	0
47	ALA-019	10	0	10	0	4	4	0	0	0	0	0	0	0	0	0	1	0	0	3	0	6	6	1	1	4	0	0	0
48	ALA-020A	17	2	15	4	6	10	2	0	4	0	0	0	0	0	0	0	0	0	4	1	4	5	0	0	5	0	0	0
49	ALA-020B	23	1	31	5	5	10	2	5	0	0	0	0	0	0	0	1	0	0	2	5	14	19	0	4	15	0	0	2
50	ALA-021	25	4	21	7	8	15	0	7	0	0	0	0	1	0	0	0	0	0	7	0	6	6	3	3	0	0	0	0
51	ALA-022	5	1	4	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	2	0	1	1	0	0	0
Block D																													
23	ALA-001	9	0	9	0	4	4	1	3	0	0	0	0	0	0	0	0	0	0	0	5	0	5	0	5	0	0	0	0
52	ALA-023A	10	0	9	0	7	7	0	0	0	0	0	0	1	0	0	0	0	0	6	1	1	2	0	1	1	0	0	0

GPS #	Scatter (S) or Mound (ALA)	Total Sherds	Diagnostic (Total)	Non-Diagnostic (Total)	Slipped Sandy Body	Unslipped Sandy Body	Total Sandy	Ware 1	Ware 2 (Type 1 and 2)	Ware 2 (Type 3)	Ware 3	Ware 4	Ware 5	Ware 6	Ware 7	Ware 8	Ware 9	Toledo Beds	Ware 10	Unknown	Slipped Carbonate Body	Unslipped Carbonate Body	Total Carbonate	Hondo Red	Sunset Red	Unknown	Chachuum	Northern	Ash
53	ALA-023B	12	1	12	0	5	5	0	1	0	0	0	0	0	0	0	1	0	0	3	2	5	7	0	1	6	0	0	0
54	ALA-024	28	2	26	1	18	19	6	0	5	0	0	3	1	0	0	0	0	0	4	0	7	7	0	3	4	0	0	0
55	ALA-025	44	2	42	2	34	36	27	0	4	0	1	0	0	0	0	0	0	0	4	0	6	6	0	6	0	0	0	0
56	ALA-026	22	1	21	0	17	17	12	0	0	0	0	0	0	0	0	0	0	0	5	0	2	2	0	0	2	0	0	2
57	ALA-027	25	1	24	0	12	12	6	0	0	0	0	0	0	0	0	2	0	0	4	8	4	12	1	7	4	0	0	0
58	ALA-029A	9	1	8	0	6	6	0	3	0	0	0	0	0	0	2	1	0	0	0	2	0	2	0	0	2	0	0	0
59	ALA-028	9	0	9	0	7	7	5	0	0	0	0	0	0	0	0	0	0	0	2	0	2	2	0	0	2	0	0	0
60	ALA-029B	8	0	8	2	4	6	0	2	0	0	0	0	0	0	0	0	0	0	4	2	0	2	0	2	0	0	0	0
63	ALA-033	9	0	9	0	8	8	2	0	0	0	0	0	0	0	0	2	0	0	4	0	1	1	0	0	1	0	0	0
64	ALA-034A	8	1	7	0	6	6	6	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	1	0	0	0
65	ALA-034B	4	0	4	0	4	4	2	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0
66	ALA-037	2	0	2	0	1	1	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	1	0	1	0	0	0	0
67	ALA-038A	36	0	36	0	33	33	25	6	0	0	0	0	0	0	0	0	0	0	2	1	1	2	0	1	1	0	0	1
68	ALA-039	84	4	81	15	40	55	26	8	0	6	0	5	0	0	5	1	0	0	4	18	8	26	2	12	12	0	0	0
69	ALA-038B	19	1	18	0	9	9	6	0	0	0	0	0	0	0	0	1	0	0	2	6	3	9	0	5	4	0	0	0
71	ALA-036	8	1	7	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	6	6	0	6	0	0	0	0
72	ALA-035	11	0	12	1	5	6	0	1	0	0	0	0	0	0	0	1	0	0	4	1	4	5	0	0	5	0	0	1
73/76	ALA-031A/B	11	1	10	0	10	10	7	1	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0
74	ALA-032	3	0	3	0	3	3	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0
75	ALA-040	10	0	10	0	4	4	3	0	1	0	0	0	0	0	0	0	0	0	0	6	0	6	0	6	0	0	0	0
77	ALA-041	8	0	8	0	7	7	0	0	0	0	0	0	0	0	0	1	0	0	6	1	0	1	0	0	1	0	0	0
78	ALA-030	3	0	3	2	0	2	0	0	0	0	0	0	0	0	1	1	0	0	0	1	0	1	1	0	0	0	0	0
79	ALA-042	8	0	8	0	8	8	2	0	0	0	0	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0	0	0
83	ALA-051	37	5	32	4	18	22	9	3	2	0	0	0	0	0	0	0	0	0	8	8	2	10	0	6	4	0	0	0
84	ALA-052	12	0	12	0	11	11	6	0	0	1	0	0	0	0	0	0	0	0	4	1	0	1	0	1	0	0	0	0
85	ALA-053	19	0	19	0	13	13	4	0	0	0	0	0	0	0	0	0	2	0	7	2	4	6	0	1	5	0	0	0
86	ALA-054	8	0	8	0	7	7	3	0	0	0	0	0	0	0	0	0	1	0	3	0	1	1	0	0	1	0	0	0
87	ALA-055	11	0	11	1	4	5	1	0	0	0	0	0	0	0	0	0	0	0	4	6	0	6	2	3	1	0	0	0
88	ALA-056A	67	6	61	5	24	29	9	3	6	1	4	0	0	0	0	1	0	0	5	0	31	31	1	6	24	0	0	1

GPS #	Scatter (S) or Mound (ALA)	Total Sherds	Diagnostic (Total)	Non-Diagnostic (Total)	Slipped Sandy Body	Unslipped Sandy Body	Total Sandy	Ware 1	Ware 2 (Type 1 and 2)	Ware 2 (Type 3)	Ware 3	Ware 4	Ware 5	Ware 6	Ware 7	Ware 8	Ware 9	Toledo Beds	Ware 10	Unknown	Slipped Carbonate Body	Unslipped Carbonate Body	Total Carbonate	Hondo Red	Sunset Red	Unknown	Chacluum	Northern	Ash
90	ALA-057A	18	1	17	7	4	11	2	4	0	0	0	0	0	0	0	1	0	0	4	2	3	5	1	2	2	0	0	1
91	ALA-057B	9	0	9	0	6	6	1	2	0	0	0	0	0	0	0	0	0	0	3	1	2	3	0	0	3	0	0	0
92	ALA-058	5	0	5	0	4	4	0	1	0	0	0	0	0	0	0	0	0	0	3	1	0	1	1	0	0	0	0	0
93	ALA-057C	12	0	12	1	3	4	0	1	0	0	0	0	0	0	0	0	0	0	3	7	1	8	1	1	4	1	1	0
94	ALA-056B	23	3	20	0	13	13	3	2	1	0	0	0	4	0	0	1	0	0	2	0	7	7	1	4	2	0	0	0
95	S002	5	0	5	0	5	5	3	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0
96	ALA-057D	5	0	5	0	4	4	1	0	0	0	0	0	0	0	0	0	0	0	3	1	0	1	0	1	0	0	0	0
97	ALA-059	29	7	20	0	13	13	0	0	0	0	2	0	0	0	2	6	0	0	3	2	5	7	0	0	7	0	0	0
98	ALA-060	24	1	23	1	15	16	1	0	0	0	0	0	0	0	0	9	1	0	5	3	4	7	0	1	6	0	0	0
99	ALA-061	26	2	24	1	7	8	3	0	0	0	0	0	0	0	0	2	2	0	1	4	12	16	2	2	12	0	0	0
100	ALA-062	92	10	82	10	21	31	0	8	0	1	0	0	0	0	0	5	0	0	17	20	30	50	12	14	24	0	0	1
101	ALA-063	61	4	57	6	21	27	0	12	0	0	0	0	3	0	0	12	0	0	0	10	20	30	0	5	25	0	0	0
102	ALA-064	16	1	14	0	2	2	2	0	0	0	0	0	0	0	0	0	0	0	0	3	8	11	0	2	9	0	0	1
103	S003	9	0	8	0	4	4	1	1	1	0	0	0	0	0	0	0	0	0	1	1	3	4	0	1	3	0	0	0
111	ALA-065	22	1	21	2	2	4	0	0	0	0	0	0	0	0	0	3	0	0	1	10	7	17	3	5	9	0	0	0
112	ALA-066	19	0	18	0	12	12	9	2	0	0	0	0	0	0	0	1	0	0	0	1	5	6	0	2	4	0	0	0
113	ALA-067	17	2	15	9	2	11	2	2	0	0	0	0	0	0	0	2	0	1	4	0	4	4	0	0	4	0	0	0
115	ALA-068	7	0	7	0	7	7	0	0	0	0	0	0	0	0	0	0	0	0	7	0	0	0	0	0	0	0	0	0
116	ALA-069	19	2	17	0	5	5	1	0	0	0	0	0	0	0	0	2	0	0	2	6	6	12	0	5	5	0	2	0
119	ALA-048	62	4	58	13	28	41	4	9	4	0	3	0	4	0	0	5	0	0	12	8	9	17	0	6	11	0	0	0
120	ALA-070	33	1	32	0	17	17	2	0	6	0	2	0	2	0	0	1	0	0	4	5	6	11	1	2	8	0	0	4
122	ALA-071	2	0	2	0	2	2	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
123	ALA-072	7	0	7	0	7	7	1	2	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0
124	ALA-073	15	1	14	1	9	10	4	1	0	0	0	1	0	0	0	3	0	0	1	0	3	3	0	0	3	0	0	1
126	ALA-074	87	7	80	19	24	43	14	16	3	0	1	6	0	0	0	1	0	0	2	14	23	37	2	12	23	0	0	0
127	ALA-075	64	3	62	9	40	49	9	7	0	0	0	0	0	0	0	8	0	0	25	10	2	12	2	6	4	0	0	1
129	ALA-077	11	0	11	0	11	11	6	0	0	0	0	0	0	0	1	0	0	0	4	0	0	0	0	0	0	0	0	0
130	ALA-078	9	1	8	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	7	7	0	1	6	0	0	0
Block 2																													
223	ALA-111	4	0	4	0	4	4	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0

GPS #	Scatter (S) or Mound (ALA)	Total Sherds	Diagnostic (Total)	Non-Diagnostic (Total)	Slipped Sandy Body	Unslipped Sandy Body	Total Sandy	Ware 1	Ware 2 (Type 1 and 2)	Ware 2 (Type 3)	Ware 3	Ware 4	Ware 5	Ware 6	Ware 7	Ware 8	Ware 9	Toledo Beds	Ware 10	Unknown	Slipped Carbonate Body	Unslipped Carbonate Body	Total Carbonate	Hondo Red	Sunset Red	Unknown	Chacluum	Northern	Ash
254	ALA-119	11	2	11	3	6	9	0	0	0	0	0	0	0	0	3	0	2	0	4	2	0	2	2	0	0	0	0	0
256	ALA-120	16	0	16	2	6	8	1	2	0	0	0	0	0	0	0	0	0	0	5	4	1	5	2	0	3	0	0	3
259	ALA-121	27	2	25	0	10	10	2	3	0	0	0	0	0	1	0	1	0	0	3	4	10	14	3	5	6	0	0	1
263	ALA-122A	22	4	18	0	16	16	3	0	0	0	0	0	2	0	0	0	0	0	11	0	2	2	0	0	2	0	0	0
264	ALA-122B	2	22	22	2	15	17	7	1	0	1	0	0	0	2	0	0	0	0	6	1	2	3	1	0	2	0	0	2
265	ALA-123	4	0	4	0	3	3	0	0	0	0	0	0	0	3	0	0	0	0	0	1	0	1	0	1	0	0	0	0
267	ALA-124	7	0	7	0	4	4	1	0	0	0	0	0	0	0	0	1	0	0	2	0	3	3	1	0	2	0	0	0
268	ALA-125	17	1	16	1	10	11	6	2	0	0	0	0	0	0	0	0	1	0	2	3	2	5	3	2	0	0	0	0
270	S038	8	2	6	1	5	6	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0
272	ALA-126	17	4	8	4	4	8	0	3	0	0	0	0	0	2	0	0	3	0	0	0	0	0	0	0	0	0	0	0
Block E																													
248	ALA-117	11	1	10	0	10	10	5	4	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
251	S031	104	103	89	2	45	47	8	6	8	0	0	2	3	1	2	0	2	0	15	10	32	42	1	12	25	0	4	0
252	S032	13	0	13	2	9	11	1	5	0	0	0	0	0	0	0	0	0	0	5	2	0	2	0	0	2	0	0	0
253	S033	5	1	4	1	1	2	0	0	0	0	0	0	0	0	1	0	0	0	1	2	0	2	1	0	0	1	0	0
Block B																													
167	ALA-086A	8	0	8	0	7	7	3	0	0	0	0	0	0	0	0	0	0	0	4	1	0	1	0	1	0	0	0	0
168	ALA-086B	17	3	14	0	13	13	7	0	0	0	0	0	0	0	0	0	0	0	6	0	1	1	0	0	1	0	0	0
169	ALA-087	14	1	13	2	5	7	1	0	0	0	0	2	0	0	0	2	0	0	2	0	6	6	0	0	6	0	0	0
170	ALA-088	4	1	3	1	2	3	1	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0
171	ALA-089	10	2	8	0	7	7	5	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	1
173	S011	21	6	15	4	9	13	9	0	0	0	0	0	0	0	0	0	2	0	2	0	2	2	0	0	0	0	2	0
174	ALA-090	6	0	6	0	3	3	1	0	0	0	0	0	0	0	0	1	0	0	1	0	3	3	1	0	2	0	0	0
177	ALA-091	4	1	3	0	3	3	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0
179	S015	2	0	2	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	1	0	1	0	0	0	0
180/181	ALA-092/S016	16	1	15	1	8	9	4	0	0	0	0	2	0	0	0	0	0	0	3	4	2	6	0	4	1	0	1	0
182	S017	3	0	3	0	3	3	1	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0

GPS #	Scatter (S) or Mound (ALA)	Total Sherds	Diagnostic (Total)	Non-Diagnostic (Total)	Slipped Sandy Body	Unslipped Sandy Body	Total Sandy	Ware 1	Ware 2 (Type 1 and 2)	Ware 2 (Type 3)	Ware 3	Ware 4	Ware 5	Ware 6	Ware 7	Ware 8	Ware 9	Toledo Beds	Ware 10	Unknown	Slipped Carbonate Body	Unslipped Carbonate Body	Total Carbonate	Hondo Red	Sunset Red	Unknown	Chacluum	Northern	Ash
183	ALA-093	7	0	7	0	5	5	0	0	0	0	0	0	0	0	0	1	0	0	4	0	1	1	0	0	1	0	0	1
184/185	ALA-094A/B	21	5	16	0	14	14	5	0	0	0	0	0	0	0	0	1	0	0	8	0	2	2	1	1	0	0	0	0
186	ALA-094C	7	2	5	1	4	5	3	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
188	ALA-095	13	2	11	2	6	8	5	3	0	0	0	0	0	0	0	0	0	0	0	2	0	2	0	0	2	0	0	1
189	ALA-096	6	0	6	0	3	3	2	0	0	0	0	0	0	0	0	1	0	0	0	2	0	2	0	2	0	0	0	1
190	ALA-097A	8	2	6	0	6	6	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
191	ALA-097B	18	3	15	3	7	10	2	0	0	0	0	0	0	1	0	1	2	0	4	5	0	5	3	1	1	0	0	0
194	ALA-098	4	1	3	0	3	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
196	ALA-099	4	0	5	0	3	3	0	0	0	0	1	0	0	0	0	1	0	0	1	0	2	2	0	0	1	0	1	0
199	ALA-100A	2	0	2	0	1	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1	0	0	1	0	0	0
200	ALA-100B	14	1	14	3	3	6	1	2	0	0	0	0	0	0	0	1	0	0	2	6	2	8	0	3	5	0	0	0
205/206	S021/ALA-101	10	0	11	3	6	9	2	2	0	0	0	0	0	0	0	2	0	0	3	2	0	2	0	0	2	0	0	0
207	ALA-102	2	0	2	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0
208	ALA-103	6	0	5	2	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	2	1	3	1	1	1	0	0	0
209	ALA-104A	24	0	24	3	3	6	0	2	0	0	1	0	0	0	0	1	0	1	1	7	7	14	6	1	7	0	0	4
210	ALA-104B	14	2	12	5	6	11	4	0	0	0	3	0	0	0	0	0	0	0	4	0	1	1	0	1	0	0	0	0
211	ALA-105	3	0	3	2	1	3	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
212	ALA-106	1	14	14	3	3	6	0	2	0	0	0	0	0	0	0	2	0	0	2	2	3	5	0	1	4	0	0	3
214	ALA-107B	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	0	0	0	0	0
Block A2																													
261	S037	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	1	0	0	0
273	ALA-127	8	0	8	0	5	5	4	0	0	0	0	0	0	0	0	0	0	0	1	0	3	3	0	1	2	0	0	0
TOTAL		2761	346	2696	303	1336	1639	435	228	60	23	26	36	26	11	19	122	30	2	618	401	612	1013	98	275	625	2	13	44

Construction Materials

The platform construction materials used in the Alabama monumental core (epicentre) differ from other sites in the Maya lowlands due to the lack of limestone in the area. Facing/dressing stones and stones of core faces are composed of granite, and mortar is often (though not always) applied between these stones, composed of aggregate and what appears to be sandy clay. White floors/surfaces were mentioned in previous reports from the 1980s—though likely incorrectly identified as plaster—and have now been identified in SCRAP excavations; however, these are composed of materials that are not limestone-derived. A penultimate level of the East Plaza was investigated as part of 2019 excavations at Structure 1-2, and the surfacing material was found to consist of a white material alongside (vs. vertically stratified) ballast material composed of white stones, or at least stones that are white on the surface, to achieve a white coloured surface. These ballast stones are also not composed of carbonate because they did not react when exposed to hydrochloric acid in the lab. This discovery led SCRAP to initiate a preliminary study of construction materials. The macroscopic observations of construction materials and raw materials collected from various locations were analyzed in the SCRAP field laboratory facility in Maya Centre prior to export for thin sectioning and additional microscopic analysis—these observations are described below. Additionally, we engaged in preliminary experimental studies in 2019, shaping granite blocks (see Chapter 7 of this volume), which will continue in coming years. We will also be engaging in future study of daub materials from the site, along with possibly earthen floor materials first recovered in the 2018 field season (see Peuramaki-Brown et al. 2018:50).

Mortar

A sample of mortar (SCRAP-3/Cat. #10465-MM011) was first identified between granite boulders of a core face of Structure 1-2 in the monumental core and collected by S. Morton during 2019 excavations (see Chapter 2, this volume), and subsequently identified in architectural faces of the settlement at ALA-002A and B (see Chapter 3, this volume). Morton and Peuramaki-Brown noted the angularity of the aggregate, and additional analysis was conducted in the laboratory to determine the composition of the aggregate and to collect descriptive data on the sample prior to microscopic analysis and exporting for petrographic analysis. A small sample was dissolved in water and the aggregate was analyzed with a Dino-Lite to determine its composition and angularity (Figure 6.26). The dirt surrounding the aggregate is fine and pale brown (2.5Y 7/3). The aggregate is angular and is comprised of many different grain sizes (up to approximately 12.3mm or "pebble sized"). The inclusions are composed of quartz, muscovite, biotite, and feldspar (likely potassium feldspar and plagioclase). The grains often contain more than one mineral, inconsistent with a natural sand. The angularity and composition indicate that the mortar is composed of crushed granite. The composition will be compared to granite samples collected by Potter (2018) using thin section petrography to determine their origin. It is possible that the mortar is the by-product of shaping granite blocks for facing stones (as noted during experimental studies); however, they could be composed of different granite that was selected purposefully for aggregate due to properties that would make it more suitable for aggregate.

Mortar samples were recovered from both monumental and settlement architecture, and exported for petrographic analysis in 2019:

- SCRAP-2 (Block C2, ALA-002B, Op 9, Subop E, Lot 4, step riser mortar, Cat. #10465-MM013).
- SCRAP-3 (Monumental Core, Str 1-2, Op 6, Subop A, Lot 19, core face mortar, Cat. #10465-MM011).
- SCRAP-7 (Monumental Core, Str 10, Op 5, core face mortar, Cat. #10465-MM014).

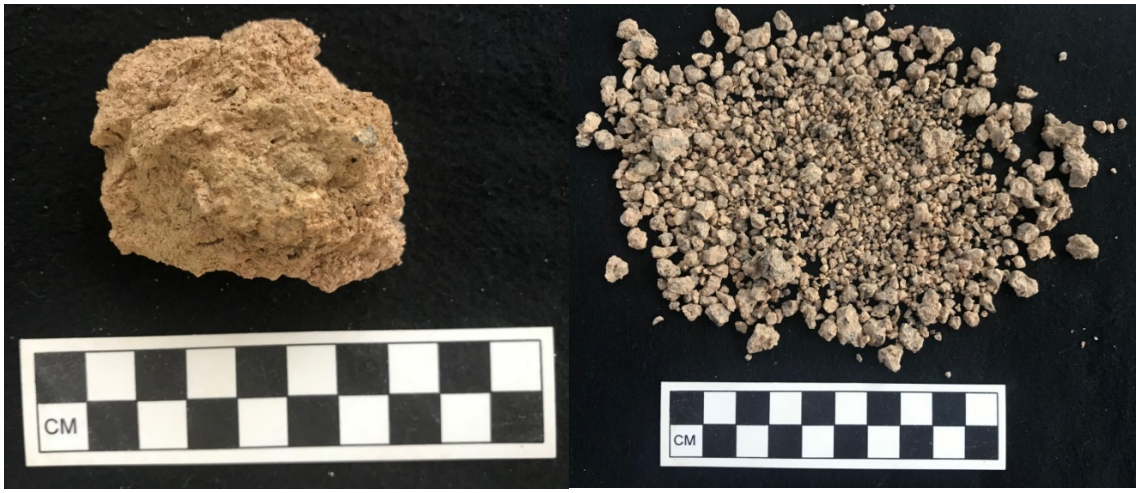

Figure 6.26: SCRAP-3/Cat. #10465-MM011, mortar sample (left) and associated aggregate (right).

Plaza Surface

A penultimate plaza surface sample (SCRAP-4/Cat. #10465-MM010) was recovered from Str 1-2/East Plaza excavations in the monumental core (see Chapter 2, this volume) and ranged in colour from 2.5Y 8/1 (white) to 2.5Y 8/2 (pale brown). The portions that can be removed as large pieces are very hard. The sample does not react to hydrochloric acid, indicating that it is not composed of limestone. The surface appears to be composed of very fine quartz sand, muscovite, biotite, and possible rock fragments in some kind of white matrix, possibly clay (Figure 6.28). The composition suggests that the raw materials are derived from a granite source location consistent with the area around Alabama. A piece of the plaza surface sample was fired by Ms. Aurora Saqui in her kitchen hearth in Maya Centre. The outside of the sample, which was in contact with direct flame and ash, turned a dark-grey (5YR 4/1) to yellowish-red (5YR 4/6) colour while the inside remained white (2.5Y 8/1) (Figure 6.27).

One surface sample was exported for petrographic analysis in 2019:

- SCRAP-4 (Monumental Core, Str 1-2/East Plaza, Op 6, Subop B, Lot 37, plaza surface, Cat. #10465-MM010).

Figure 6.27: Plaza surface sample (SCRAP-4/Cat. #10465-MM010), original sample (left) and fired sample (right).

Figure 6.28: Dino-Lite image of plaza surface sample (SCRAP-4/Cat. #10465-MM010) at 50x magnification (1.0mm scale).

Road Cut Sample: White sandy soil from Santa Rosa Village (Cat. #10465-MM009)

This sample was collected from an exposed road cut in the village of Santa Rosa (Figure 6.29) because it is a similar colour and composition to the material used to plaster the floors in the Alabama site core. The soil is moderately compact in situ and is covered by what appears to be dark lichen or other plant matter. The horizon is a loamy sand to sandy loam massive and peds are subangular blocky and range in size from medium to large. The peds are friable when moist and hard when dry. Portions of the horizon show red mottling in localized areas. The horizon contains about 60% gravel composed of subrounded to rounded, primarily equant with some elongated grains, composed of quartz with some muscovite, biotite, and possibly rock fragments (Figure 6.30). The fine fraction (>2mm) is of the same composition. The colour is 5Y 8/1 (white) when moist and N/9 (white) when dry. This soil can likely be assigned to the Puletan Soil Suite (King et al. 1989: 37-38; Wright et al. 1959: 94-101). The inclusions in the soil sample are much larger

than the inclusions in the Alabama floor sample; however, the soils could have been processed to remove larger inclusions or a different location where inclusions are smaller may have been used.

Figure 6.29: Road cut in Santa Rosa Village

Figure 6.30: Road cut sample (left) and associated Dino-Lite image (right), from Santa Rosa Village (SCRAP-6/Cat. #10465-MM009).

Road Cut Sample: Sandy soil from Georgetown Village (Cat. #10465-MM012)

This sample was collected from an exposed road cut in the village of Georgetown because it is a similar colour and composition to the material used to plaster the floors in the Alabama site core. This soil sample was collected from the mottled subsoil (the bottom horizon in the photograph; Figure 6.31) and is different from the sample collected in Santa Rosa. This soil is a loamy sand and peds are subangular blocky and range in size from fine to coarse. The horizon is mottled throughout. The horizon contains about 20% gravel composed of subrounded to subangular quartz, primarily equant with some elongated grains, with some muscovite, biotite, and possibly rock fragments. The fine fraction (>2mm) is composed of angular to subangular quartz grains (equant, elongated, and occasional irregular grains) with some muscovite and biotite. The colour is 10YR 5/6 (yellowish brown) when moist and 5Y 7/1(light grey) when dry. This soil can likely be assigned to the Puletan Soil Suite (King et al. 1989: 37-38; Wright et al. 1959: 94-101). The

inclusions in the soil sample are much larger than the inclusions in the Alabama floor sample; however, the soils could have been processed to remove larger inclusions or a different location where inclusions are smaller may have been used.

Figure 6.31: Road cut in Georgetown Village

Operation 8: Clay Survey

Ten clay samples were fashioned into briquettes and fired in Ms. Aurora Saqui's kitchen hearth in Maya Centre (Table 6.6). These samples will be analyzed using thin section petrography and compared to both the pottery and building materials described above. Preliminary analyses using a Dino-Lite suggests that the sandy clays recovered from drainages (SCRAP-11/Fired Clay Tile 1 and SCRAP-12/Fired Clay Tile 2) in the northwest portion of the Alabama settlement area (Figure 6.32) are the most similar to pottery, particularly Paste Ware 2. SCRAP-13/Fired Clay Tile 3, recovered from the stratigraphic Supob 9F placed in ALA-002 plaza (see Chapter 3, this volume), was collected to compare the composition of hypothesized flooding events to the samples recovered from active drainage locations. This plaza unit, excavated by Virginia Chiac, exhibited several discontinuous soil layers of differing textures (e.g., sand, sandy clay) suggestive of natural flooding events below the plaza surface and Late-Terminal Classic occupation horizon. The composition of the SCRAP-13 sample will be compared to the SCRAP-11 and SCRAP-12 samples to determine if the composition of the soil in Subop 9F is similar to the soils collected from active drainages in the Alabama settlement area. All three samples are sandy clay loams.

Two samples from the monumental core—Structure 14 construction core (SCRAP-20/Fired Clay Tile 10) and North Plaza construction core to the front of Str 10 (SCRAP-8)—and four samples from borrow pits around the monumental core (SCRAP-16/Fired Clay Tile 6, SCRAP-17/Fired

Clay Tile 7, SCRAP-18/Fired Clay Tile 8, SCRAP-19/Fired Clay Tile 9) were also sampled to address questions of resource acquisition. A single sample (SCRAP-14/Fired Clay Tile 4) was collected from the foothills located to the north of the Alabama site core to determine if potters were using clays located above granite bedrock for pottery production. This sample was taken from a stratigraphic profile that was documented using standards for in-field soils analysis (Table 6.7 Part 1 & 2; Figure 6.33).

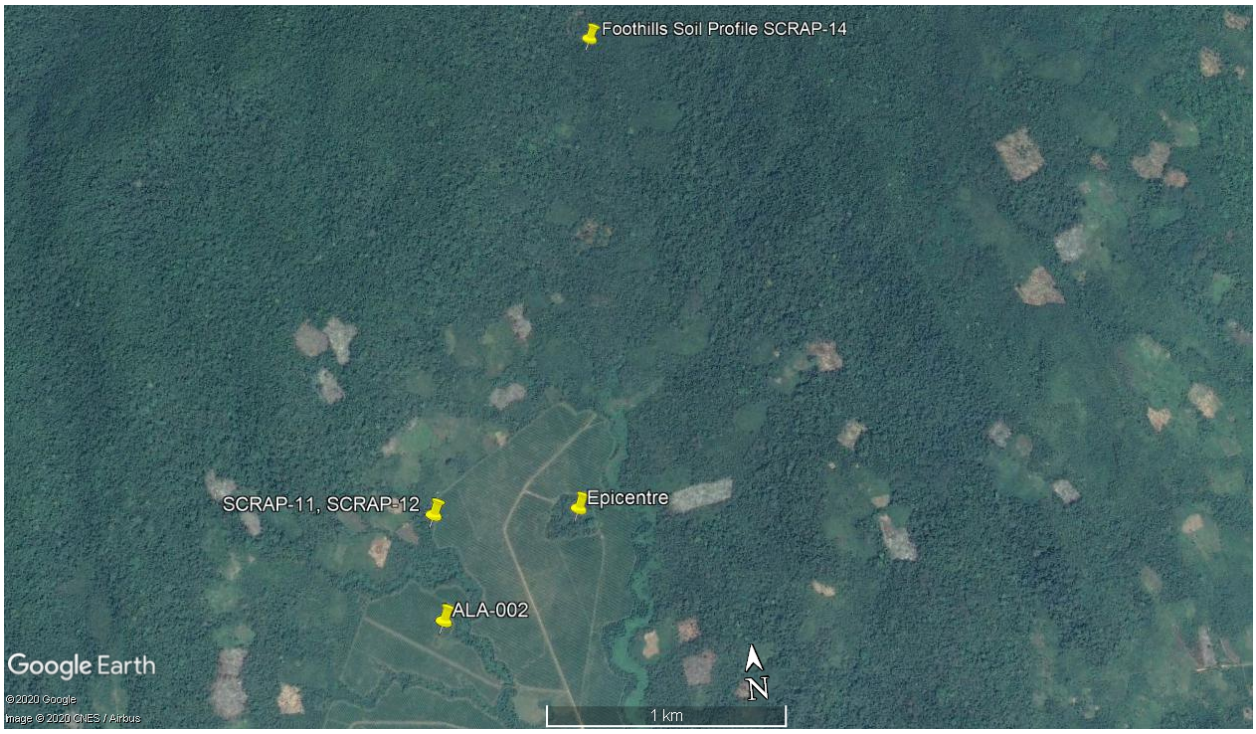

Figure 6.32: Location of clay samples from drainages (SCRAP-11, SCRAP-12), ALA-002 (SCRAP-13), and foothill soil profile (SCRAP-14).

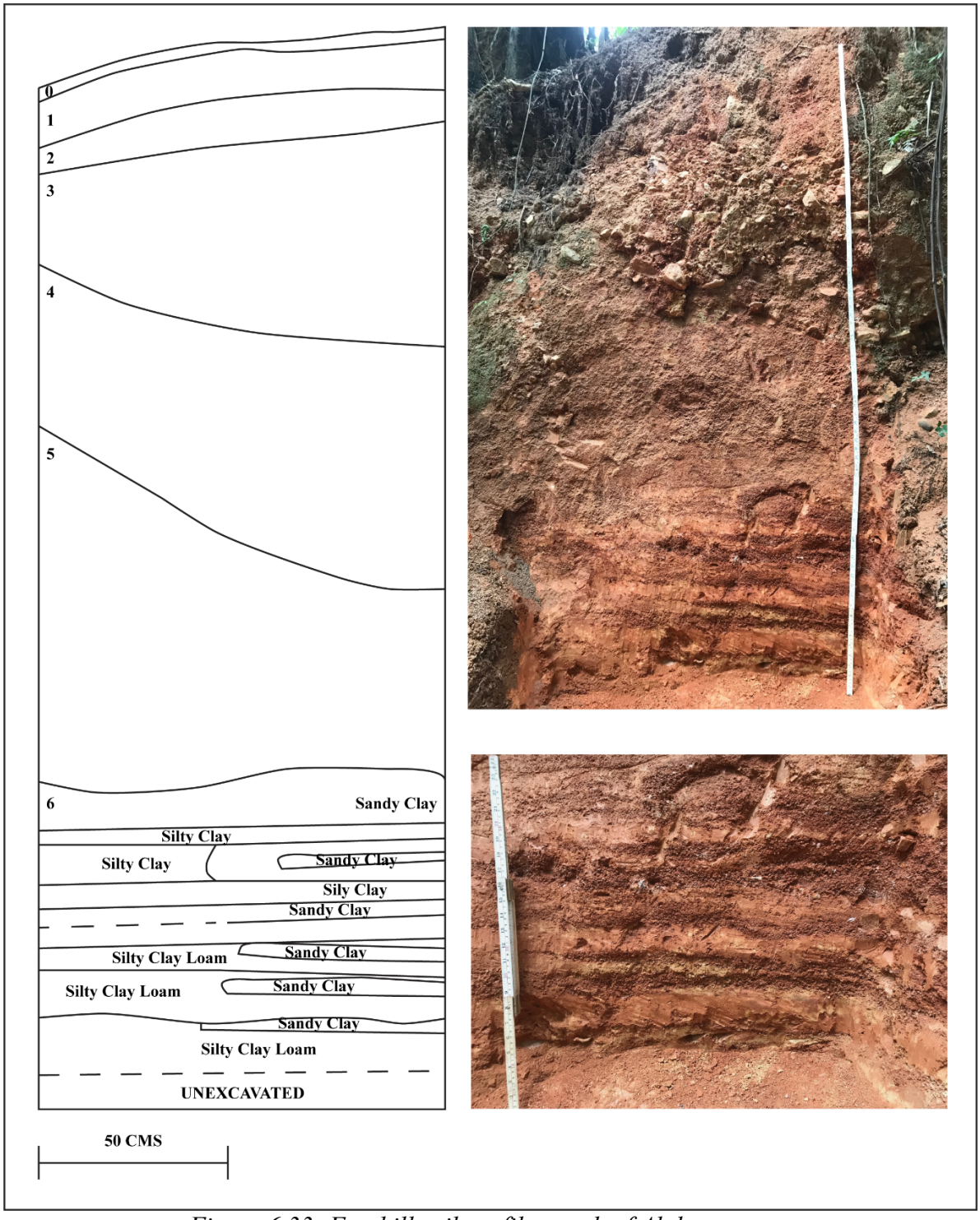

Figure 6.33: Foothill soil profile, north of Alabama.

Table 6.6: Descriptive data for clay samples.

Sample #	Location	Dry Munsell (Before Firing)	Moist Munsell (Before Firing)	Texture	% Pebbles	Munsell Dry Briquette	Munsell Fired Briquette
SCRAP-11	Drainage	No Data	7.5YR-4/4	Sandy clay loam		7.5YR-6/4 (Minor Cracking)	2.5YR-5/8
SCRAP-12	Drainage	No Data	5YR-5/6	Sandy clay loam		7.5YR-7/4 (Minor Cracking)	5Y-7/2; 5YR-7/4 on exterior
SCRAP-13	ALA-002 (Unit 9F, Plaza, IV on map)	No Data	No Data	Sandy clay loam		10YR-7/4 (Minor Cracking and Flaking)	5YR-4/6
SCRAP-14	Foothills	2.5YR-4/8	10YR-5/8	Silty clay	0		5YR-4/6
SCRAP-8	Red Plaza Fill (Str 10)	2.5YR-5/6	2.5YR-4/6	Sandy clay loam	10	5YR-5/6 (Minor Cracking)	5YR-6/6 (Minor Cracking)
SCRAP-16	Borrow Pit B3 (20-30cmbs)	5YR-4/4	2.5YR-3/4	Sandy clay loam	10	5YR-5/4 (No Cracking)	2.5YR-5/8 (Minor Cracking)
SCRAP-17	Borrow Pit B3 (80-90cmbs)	2.5YR-4/6	2.5YR-4/8	Sandy clay loam	10	5YR-5/6 (No Cracking)	2.5YR-5/8 (Minor Crumbling)
SCRAP-18	Borrow Pit B6 (50-60cmbs)	2.5YR-5/6	2.5YR-5/6	Sandy clay loam	5	5YR-7/4 (No Cracking)	10YR-7/1; 2.5YR-5/8 on exterior
SCRAP-19	Borrow Pit B6 (99-100cmbs)	Mottled (10YR-7/3, 2.5YR-5/6)	Mottled (10YR-7/2, 2.5YR-4/6	Sandy clay loam	0	7.5YR-8/3 (Cracking and Flaking)	8/5Y-8/1; 5YR-7/4
SCRAP-20	Str 14 Fill	5YR-5/4	5YR-4/4	Sandy clay loam	20	5YR-6/4 (Some Crumbling)	10YR-7/1; 5YR-7/4 on exterior

Table 6.7 Part 1: Soil profile data for foothills north of Alabama.

Horizon Number		Depth	Dry Munsell	Moist Munsell	Percent Gravel	Structure	Ped Size	Ped Grade	Dry Consistence	Moist Consistence	Stickiness	Plasticity	Texture
0	O	2-0	7.5YR 5/4	7.5YR 3/3	15	Subangular Blocky	Fine to Medium	Weak	Slightly Hard				Sandy Loam
1	A	0-14	7.5YR 5/4	7.5YR 4/3	50	Subangular Blocky	Fine to Medium	Weak	Slightly Hard	Very Friable	Not Sticky	Slightly Plastic	Sandy Loam
2	E	14-25	7.5YR 6/6; 7.5YR 6/4	7.5YR 4/4	20	Subangular Blocky	Fine to Medium		Slightly Hard	Friable	Slightly Sticky	Slightly Plastic	Silty Loam
3	Bx	25-80	2.5YR 6/5	2.5YR 6/5	20	Subangular Blocky	Medium	Massive	Hard	Friable	Slightly Sticky	Plastic	Silty Clay Loam
4	C		2.5YR 5/6	2.5YR 4/8	60	Subangular Blocky	Medium	Massive	Hard				Loamy Sand
5	Bx		10YR 5/6	10YR 4/8	40	Subangular Blocky	Medium		Hard	Friable	Slightly Sticky	Slightly Plastic	Sandy Clay Loam
6	Cu												
	a		2.5YR 7/6	5YR 5/6	0	Weakly Coherent	Very Fine	Massive	Slightly Hard	Very Friable	Sticky	Plastic	Silty Clay Loam
	b		2.5YR 4/8	10YR 5/8	0	Granular	Very Fine	Massive	Slightly Hard	Firm	Sticky	Very Plastic	Silty Clay
	c		10YR 4/6	10YR 4/6	40	Subangular Blocky	Fine to Medium	Massive	Firm	Firm	Slightly Sticky	Slightly Plastic	Sandy Clay

Table 6.7 Part 2: Soil profile data for foothills north of Alabama.

Horizon Number		Depth	Clay Film	Lower Boundary Distinctness	Lower Boundary Topography	Sorting	Soil Angularity	Gravel Angularity	Notes
0	O	2-0	None	Gradual	Straight	Poor			
1	A	0-14	None	Gradual	Wavy	Poor	Subangular to subrounded quartz	Subangular to subrounded quartz	Small roots and organic matter throughout the horizon, mica
2	E	14-25	None	Gradual	Wavy	Poor	Subangular to subrounded quartz	Subangular to subrounded quartz	Micaceous, this horizon appears leached suggesting an E but not a lot of leaching. Perhaps an AE horizon.
3	Bx	25-80	None	Abrupt	Irregular	Poor	Subangular to subrounded quartz	Subangular to subrounded quartz	Micaceous, this horizon is located just above the intrusive channelized quartzite feature, has less gravel than the below layers suggesting this horizon represents channel fill and the soil that formed above it.
4			None	Abrupt	Irregular	Very Poor	Subangular to subrounded quartz	Subangular to subrounded quartz	Channel Fill, Abundant Angular to Subrounded Quartzite pebbles (~10 to 20cm)
	C								Channel
5	Bx		None	Abrupt	Straight	Poor	Subangular to subrounded quartz	Subangular to subrounded quartz	Fragipan with clay coatings, much more mica in this horizon than the above, abrupt boundary to the lower layered horizon
6	Cu								
	a		None	Abrupt	Straight	Well			Micaceous silty clay loam; present as round to irregular lumps within clay layers and also as distinct, non-continuous layers
	b		None	Abrupt	Straight	Well			Micaceous silty loam; present as distinct continuous and non-continuous layers; often contains silty clay loam within the distinct layers
	c		None	Abrupt	Straight	Poor	Subangular to subrounded quartz and other minerals	Subangular to subrounded quartz and other minerals	Micaceous sandy clay; present as layers that are distinct and continuous as well as non-continuous. The composition of this layer differs from above indurated sandy layer (Horizon 5) and contains a dark red mineral (feldspar? metamorphic?) in addition to quartz.

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