HUARACANE SOCIAL ORGANIZATION: CHANGE OVER TIME AT THE PREHISPANIC COMMUNITY OF YAHUAY ALTA, PERÚ

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This dissertation reports on the nature of social differentiation in the prehispanic Huaracane population of the Moquegua Valley, Perú. Prior to this research, the topic of Huaracane social organization had received little attention, although evidence from mortuary contexts suggested the development of social inequalities and wealth accumulation later in the Huaracane sequence. In order to develop a better understanding of Huaracane social organization, systematic surface collections and large-scale horizontal excavations were undertaken at the potential chiefly center of Yahuay Alta. The results of this investigation revealed the site to be multicomponent: inhabited during two distinct phases. The first occupation took place during the 2nd century AD and possibly extended into the 3rd century AD, towards the later end of the previously known Huaracane sequence. The second occupation continued into the 8th century AD, during the Middle Horizon Period, proving that the Huaracane population continued in the Moquegua region long after the establishment of the well-known imperial Wari and Tiwanaku colonies. The study of inter-household variability in status and wealth during these two phases of occupation indicated: 1) no domestic parallels with the wealth accumulation and exotic materials found in burial treatments; 2) only limited household wealth/status differences during the early occupation of this settlement, represented by differential consumption of chert and fineware serving vessels; and 3) that serving/feasting activities increased in scale and shifted from domestic to public contexts during the later occupation of this settlement. The research revealed a subsistence pattern based on resources other than maize, and that although this Huaracane community was in close proximity to many Wari and Tiwanaku colonial settlements, it maintained traditional material patterns, adapting no stylistically Wari or Tiwanaku material culture.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

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1.0 INTRODUCTION: INVESTIGATING HUARACANE SOCIAL ORGANIZATION

Although in recent years there has been an increase in the number and variety of archaeological investigations throughout the Andes, in many ways Andean archaeology continues to generate prehistories that revolve around the archaeology of expansive states and empires. Currently, this orientation has been rejuvenated by new bioarchaeological research making it possible to trace the movements of people (not just goods) across the prehistoric Andean landscape. By identifying an individual's place of biological origin, these studies have also rejuvenated a concern with ethnicity: the circumstances of its construction and display, and its relationship with patterns of social difference and with regional interaction. From this perspective, the Moquegua Valley of southern Perú is once again emerging as an important area of studying state expansion, verticality, frontier relationships, and the nature of ethnicity (Blom 1999, 2005; Blom, et al. 1998; Knudson 2008).

Long of interest to prehistorians as the only known location where direct interaction between the Wari and Tiwanaku polities took place (e.g., Goldstein 1993a, b; Moseley, et al. 1991; Williams and Nash 2002), the Moquegua Valley has now become the setting for developing "diaspora" models in Andean archaeology; models weaving ethnic identity into the dynamics of understanding prehispanic regional settlement dynamics (Goldstein 2000a, 2005; Owen 2005). These new models display one of the same failings exhibited by earlier constructs of imperialism in the Moquegua Valley: a capital-centric perspective that ignores the necessity of understanding indigenous processes in the region. This particular flaw is especially important in this case because the Moquegua Valley was not empty when the Wari and Tiwanaku colonists arrived; the middle Moquegua Valley was inhabited by a village based agrarian society known as the Huaracane (Goldstein 2000b, 2005). The nature of Huaracane society is worthy of investigation in its own right, as a case study of an initial village level society in the prehispanic Andes. In addition, an understanding of Huaracane social organization and external ties has become particularly important in light of the new “diaspora” models developed to explain the extensive Tiwanaku presence in the region (Goldstein 2000a, 2005; Owen 2005). This is because diaspora models stress the importance of understanding the colonist-indigenous relationship to truly understand diaspora communities (Goldstein 2005: 34). The discovery of a well-preserve Huaracane residential site – Yahuay Alta – containing the earliest public architecture known for this region thus provided an excellent opportunity for the first systematic study of Huaracane sociopolitical organization. This investigation not only provided important information for further refining the cultural history of the Moquegua Valley, it also demonstrates the importance of understanding the social organization of indigenous cultures of regions into which state-level societies expanded. In the Andes, investigations of expansive polities would be greatly improved through research focused upon the social organization of indigenous cultures prior to the expansion of such polities. It is hoped that the research conducted at Yahuay Alta can serve as a general model for the type of investigations that need to be done in peripheral regions throughout the Andes in order to truly understand the social dynamics of the territorially expansive polities that existed at various times throughout prehistory.

Little is currently known about the social organization of the Huaracane inhabitants of the middle Moquegua Valley, although Goldstein (2005: 179) believes there was a “nascent social hierarchy” with “petty local chiefs” later in the Huaracane sequence (Goldstein 2005: 311). What is known about Huaracane social organization is derived primarily from mortuary contexts and settlement surveys; before the completion of my project none of the numerous Huaracane habitation sites in the valley had seen household or community focused excavation (Goldstein 2000b, 2005). In fact, it was not clear how or even *if* Tiwanaku communities interacted with the Huaracane populations. According to Goldstein (2005: 132), “The reaction of Moquegua’s indigenous peoples to the Tiwanaku colonization is not yet understood.” and consequently, “further study directed to dating and understanding the late Huaracane sites is the route to confirming exactly how long this remarkable multiethnic coexistence between colonists and natives survived.” (Goldstein 2005: 317). In order to remedy this situation, I wanted to investigate Huaracane social organization, focusing specifically upon the nature and extent of social differentiation at the household and community levels.

The site of Yahuay Alta, located in the middle Moquegua Valley (Figure 1.1), was an ideal location for this study because it is unique among known Huaracane sites; it contains both well-preserved residential clusters and significant public architecture. Therefore, if there was significant social differentiation in Huaracane society, we would predict the site of Yahuay Alta to have been the likely residential site of an elite or higher status stratum. The goals of the research project conducted at Yahuay Alta were to: (1) document patterns of Huaracane residential life at the household and community levels; (2) investigate the economic, social, and ideological bases for social differentiation in Huaracane society; (3) explore changes through time in this community. By identifying economic, social, and ceremonial activities associated with Huaracane social differentiation, this research provided data pertinent to addressing current explanatory models of sociopolitical hierarchy in pre-state societies in the Andes and elsewhere. In addition, this research should allow researchers develop a better understanding of the later, intrusive highland occupations of the region.

Fieldwork consisted of intensive surface collections and systematic excavations at Yahuay Alta. A systematic surface collection was made over the entire settlement to assess intra-site variability in wealth/status. Subsequently, broad, horizontal excavations were conducted at eight locations in five separate sectors of the site. Seven domestic terraces of different sizes and shapes were targeted for these excavations in order to better understand differences observed from surface features. The final excavation unit was located in one of the small, contiguous structures adjacent to the site's platform mound (in Sector B) in order to determine the function of these architectural features. These excavations revealed that there were two phases of occupation at Yahuay Alta: the first phase dated to the 2nd century AD and possibly extended into the 3rd century AD (at the 2 sigma range between cal AD 79 – cal AD 373) which corresponds to the later portion of the previously established Huaracane sequence (see Goldstein 2000b, 2005) and the second phase dated to the 8th century AD (at the 2 sigma range between cal AD 676 – cal AD 885) which corresponds to the first half of the Middle Horizon. See Chapter 3 for a more in depth discussion of these dates.

1.1 FOUNDATIONS OF SOCIAL INEQUALITY IN EARLY ANDEAN AGRICULTURAL VILLAGE POPULATIONS

In investigating the nature of social differentiation and social leadership in Huaracane society, this research focused upon five domains (staple resource production, long distance exchange, craft production, ritual and ceremony, and feasting/reciprocity), often identified by prehistorians as underwriting or associated with social leadership and elite status in pre-state societies. Even in societies without significant social differences or an established elite stratum, control over any of these five domains can be important in social leadership strategies. Control over each of these domains have been identified as important factors in the emergence of institutionalized social inequalities and/or leadership in prehispanic, south central Andean populations. The goal of this investigation was not to determine whether the Huaracane could be classified as a chiefdom or not, but to identify the activities through which higher status residents were distinguished from the rest of the Huaracane population, and explore how these activities interrelated.

1.1.1 Staple resource production in the prehispanic Andes

Resource control models for the development of social inequality stress the importance of elite accumulation of wealth through control of prime agricultural land or intensified economic production (D'Altroy and Earle 1985; Earle 1987, 1991b, 1997; Hastorf 1993). Households that utilize the control of staple resources as a basis for social power are generally located strategically to control prime agricultural lands and often have a larger household storage capacity than typical households within their community. A monopoly over the production of staple resources can be utilized by those in power to support a wide range of activities, such as warfare, corporate labor projects, community ritual events, feasting, and craft activities and therefore easily translates into control over other fields of social power (D'Altroy and Earle 1985; Earle 1997: 203). Control over staple resources is not limited to agricultural goods; in the Andes control over camelids can be an important source of power as well. In general, large herds and prized animals can be considered reproductive wealth objects that add to the prestige and economic status of their owners (Flores-Ochoa 1979; Orlove 1977: 44). Control of camelid herds was an especially effective basis for social differentiation because camelids provided wool for the production of cloth, an important Andean wealth item (Costin 1993), and meat, important in the Andes as a luxury food (Hastorf 2003a). In transegalitarian societies, control over the production and distribution of staple resources may also have been key to produce surpluses for feasting activities (Hayden 2001b: 263). In this manner social power is based upon the production of surplus staple resources that can be used to generate more power, which could be parlayed into greater control of staple resources thus creating a positive feedback cycle (Hayden 2001b).

An Andean example of staple resource control may be found in the northern Titicaca Basin where, during the Late Sillumocco Period, the emergence of the first markedly ranked societies in the region coincides with the movement of almost 70% of the population into areas directly adjacent to raised field agricultural systems (Stanish 1994: 321). The location of settlements close to the raised fields during this time period represents a strategy of emerging elites to maximize the production of staple agricultural resources in the raised fields (Stanish 1994: 329). Although the settlement pattern data from the Late Sillumocco Period suggests elite control over agricultural labor rather than land per se, this control was intended to extract surpluses of staple agricultural resources in the most effective means possible. Thus the development of social ranking observed in this region may have been associated with the mobilization of surpluses generated in the raised field systems (Stanish 1994: 329).

1.1.2 Long distance exchange in the prehispanic Andes

Long distance exchange, particularly of the inter-zonal and "vertical" kind, is suggested to have played an important role in stimulating the emergence of complex societies in the Andean highlands and elsewhere (Bandy 2005; Burger and Mendieta 2002; Goldstein 2000b). In these constructs the domination of external contacts is an important strategy in establishing and maintaining wealth/status differences. A household's or lineage's ability to establish and maintain foreign ties, especially with more complex societies, can provide a distinct advantage in the competition for prestige over other households or lineages and such ties even had the potential to sanctify or legitimize their elite status (Friedman 1979; Helms 1979, 1993, 1994; Junker 2001: 296).

In the case of the Huaracane, Goldstein (2000b: 355; 2005: 132) believes that the primary source of social power for an emerging elevated status or elite class was the monopolization of the exchange of high-value exotic objects, such as Pukara style pottery. The Pukara polity was centered at a large urban site, also known as Pukara, that contained monumental architecture and was the first markedly ranked society to emerge in the northwestern Titicaca Basin (Klarich 2005; Stanish 2003). At its maximum, the Pukara culture appears to have lasted from 500 BC until AD 300, however this polity was at its height from 200 BC until AD 200 (Klarich 2005; Mujica 1988; Stanish 2003: 140). Pukara was the source for a distinctive iconographic style, known primarily from polychrome ceramics and stone sculptures, that circulated widely throughout the highlands of the south central Andes especially within the northwestern Titicaca Basin (Chávez 1976, 1981, 1992; Conklin 1983; Goldstein 2005; Klarich 2005; Stanish 2003). Given the powerful nature of this distant highland polity, Pukara style clothing, jewelry, and/or pottery could have serves as important symbols of social power for aspiring elite individuals within Huaracane society (Goldstein 2000b: 356).

In a second compelling example from the south central Andes, Bandy (2005: 93) argues that trade was the primary source of social power in the Middle Formative of the southern Titicaca Basin. This interpretation is based upon evidence demonstrating that an influx of exotic goods, especially olivine basalt hoes, coincided with the amplification of public ceremonialism, monumental architecture, and wealth at the Taraco Peninsula site of Chiripa, after 400 B.C. (Bandy 2005: 104). Current evidence tentatively suggests that the olivine basalt hoes came from a source near the prehistoric site of Incatunahuiri, just south of the modern city of Puno, in the northwestern Titicaca Basin (Bandy 2005: 96). These hoes are one of the few surviving material indicators of an elaborate long distance exchange network that linked the western Titicaca Basin with the warm middle-elevation valleys, the *yungas*, and the lowland rainforest, the *selva*, east of the Titicaca Basin; most other traded items, especially those originating in the *yungas* and *selva* were not preserved in the Titicaca Basin's environment. The trade route passing from the lowlands to the western Titicaca Basin had to pass around the southern most extension of Lake Titicaca, known as Lake Wiñaymarka (Bandy 2005). Around 450 BC there was a significant drop in the level of Lake Titicaca, virtually eliminating Lake Wiñaymarka, and creating a substantially shorter trade route between the warm lowlands and the northwestern Titicaca Basin. This new trade route would have crossed the Taraco Peninsula close to the important site of Chiripa (Bandy 2001, 2005). According to Bandy (2005: 100), during this time period certain individuals or lineages at Chiripa or other large settlements on the Taraco Peninsula may have been able to extract "tolls" from trade caravans passing on this new shorter trade route and thus were able to accumulate greater wealth. This wealth could then be converted into prestige or symbolic capital through its calculated distribution, possibly at sponsored feasts. This newly acquired prestige in turn further enhanced leaders' abilities to extract tolls from passing caravans creating a positive feedback cycle generating further wealth and prestige (Bandy 2005: 100). Essentially, Bandy (2005: 107-108) argues that wealth and prestige derived from controlling long distance exchange routes via the extraction of caravan tolls played a critical role in the development of social and political power in the southern Titicaca Basin.

1.1.3 Craft Production

Elite domination of craft production has long been recognized as an important source of social power (Brumfiel and Earle 1987). Although elite domination of craft production is often associated with the production of prestige goods important in wealth finance systems (e.g., D'Altroy and Earle 1985), specialized craft production in a more general sense involves the production of more mundane items, such as lithic tools or utilitarian ceramic vessels (Costin 1991; Earle 2002; Haines, et al. 2004; Shafer and Hester 1983). The high skill level involved in the efficient production of ceramic vessels or lithic blades encourages the development of craft specialization (Earle 2002). Elite domination of craft production may result in workshops, dumps, and production byproducts being physically associated with the residential loci of those possessing political authority (attached specialization) (Earle 2002; Pebbles and Kus 1977; Wright 1984). Of course even when there is elite domination of craft production, the consumption of the finished products, even prestige goods, is not necessarily confined to elite households (Bayman 2002; LeCount 1999; Vaughn 2004, 2005). Therefore, it is important to document community and household patterns of craft production and consumption in stone tools, textiles, and ceramics, by looking at the distribution of discarded finished products as well as production debris.

In the Nasca Basin, to the north of the Moquegua Valley, recent investigations of Early Nasca period (AD 1 – 450) style polychrome ceramics suggest that monopolization of the manufacture and distribution of this particular craft good was an important factor in the development of social power and leadership (Vaughn 2004, 2005). This case study is especially pertinent for comparison with the Huaracane because it is roughly contemporaneous with the later half of the previously established Huaracane sequence. Evidence in this case suggests that Nasca polychrome pottery was centrally produced either by or under the control of elites at Cahuachi, the primary Nasca ceremonial and political center (Vaughn 2004, 2005). These polychrome vessels were then widely distributed by elites to virtually all Nasca commoners. Excavations at various Early Nasca period domestic sites have found that Nasca polychrome vessels, especially bowls and vases, were utilized in virtually every household regardless of other status markers. The distribution of only specific vessels, such as polychrome headjars, was restricted to higher status domestic contexts (Vaughn 2004, 2005). Vaughn (2005) argues that control over the production and distribution of Nasca polychromes served to establish and legitimize the social power and authority of Nasca elites.

1.1.4 Ritual and Ceremony

One of the most important bases for social differentiation is the domination or control of ritual knowledge and practice (Aldenderfer 1993; Burns and Laughlin 1979; Potter 2000b; Potter and Perry 2000; Schachner 2001). In many complex societies, an important foundation of elite status or political leadership is differential involvement in ceremony (Earle 1991a). Ritual practices communicate the ideological structure of a society, and therefore are one of the most important means of social reproduction providing both the potential for stability and the means to create and legitimize social change (Aldenderfer 1993; Giddens 1984; Rappaport 1979; Schachner 2001: 170). As a result, individuals or lineages able to monopolize control over ritual practice, and manipulate it to their advantage can effectively communicate and justify transformation of societal power relations (Aldenderfer 1993; Schachner 2001). For ritual to become a source of social power access or control over ritual practice simply must be limited to certain actors (ritual specialists) and other community members must have a need or demand for this ritual. This need will persist as long as the participants believe that they can and will obtain the appropriate benefits from ritual practice (Aldenderfer 1993: 8; Burns and Laughlin 1979: 271).

Ritual is a form of communication that disseminates both canonical and indexical messages (Rappaport 1979). Canonical messages are those embedded within the liturgical order of ritual performance and are generally rather invariable from performance to performance. These messages express tradition and the enduring aspects of cosmic and social order. It is the static nature of canonical messages and their repetitive use of symbols that imbue ritual practices with authority (Rappaport 1979). Indexical messages communicate what a ritual performer wants to project and rely upon the few places within the liturgical order that allow for variation (Rappaport 1979). Indexical messages allow ritual performers to socially distinguish themselves by emphasizing their strength and power. By using both canonical and indexical messages those in control of ritual can produce social distinctions and at the same time legitimize these with an authority that is not easily challenged (Potter 2000b: 298).

It is through the use of indexical messages that those in control of ritual can transform it to enhance their social power. However, it is essential to maintain traditional canonical messages within newly transformed ritual or it is likely to alienate the followers upon whom all ritual practice is dependant (Aldenderfer 1993; Pauketat 2000; Schachner 2001; Walker and Lucero 2000). Based upon these factors, Aldenderfer (1993: 33) believes that individuals or lineages controlling ritual practice are the ones most likely to extend this control over other sequential hierarchies; these individuals or lineages in effect have a “competitive advantage” in the process of developing and legitimizing social power. However, it is important to remember that those able to obtain control over ritual do not always necessarily coerce their followers; rather these people often must be convinced that the changes to their social order will benefit them (Aldenderfer 1993; Dillehay 2004; Schachner 2001).

At two sites located relatively close to the middle Moquegua Valley investigators have emphasized the role of ritual practice in the development and legitimization of social leadership. The first example comes from the site of Asana, which is a small Preceramic period settlement located in the upper Osmore drainage (or upper Moquegua Valley) at an elevation of 3435 masl (Aldenderfer 1991, 1998, 2005). During the first half of the Late Preceramic period, known as the Qhuna phase (3800 BC – 3000 BC), the site became a relatively permanent settlement for a small group of foragers who's subsistence was based upon hunting camelids and taruca (a small species of deer) and the intensive collection of a wild variety of *Chenopodium* (Aldenderfer 1991, 1998, 2005). Throughout this time period a series of small ritual or ceremonial structures were constructed at Asana in close proximity to domestic structures. The construction of these successive ritual structures took place over a time period that spanned at a maximum 500 years (3550 cal BC – 3020 cal BC) (Aldenderfer 1991: 231).

The early ritual structures at Asana were small and relatively open in nature; they consisted primarily of a prepared clay floor bordered by haphazardly placed posts that created a bounded space that was visible to those outside of the structures. One possible interpretation of these early structures was that they served as a kind of dance floor used for communal rituals during seasons of aggregation (Aldenderfer 1991, 1998, 2005). Over time the ritual structures at Asana became more complex, including an addition of a small clay platform, and activities taking place within the structures became closed from public view. Thus only certain individuals within the Asana community were able to participate in the rituals taking place within the later ritual structures (Aldenderfer 1991, 1998, 2005). Aldenderfer (1993, 1998: 307, 2005: 22) believes this suggests that certain individuals within this community were attempting to control ritual practice at Asana in an attempt to establish and/or legitimize social power and social leadership positions. In sum, at Asana there was a shift from the use of relatively open/public ritual structures to the use of closed ritual structures with limited public access, which appears to represent an attempt by some community members to control ritual for their own personal gain (Aldenderfer 1991, 1998, 2005). The attempts at Asana to establish persistent social leadership eventually failed as the ritual structures were not built or utilized in the second half of the Late Preceramic period after 3000 BC (Aldenderfer 1991, 1998, 2005).

The second example comes from the Formative Period (1500 BC – 250 BC) site of Chiripa in the southern Titicaca Basin where extensive excavations at the site have uncovered a detailed sequence of Formative Period corporate ritual architecture (Beck 2004; Chávez 1988; Hastorf 1999, 2003b). Initial public architecture at this site consisted of large sunken courts; the ceremonies in these would have been relatively open to public view (Beck 2004; Hastorf 2003b). Feasting, including the consumption of *chicha*, appears to have been an important part of the ceremonies that took place in these open sunken courts, reinforcing social relations and promoting lineage and community identity (Hastorf 2003b).

Over time as the public architecture at Chiripa increased in scale and formality both physical and visual accessibility to public architecture and the rituals taking place with in this architecture decreased (Beck 2004). This development entailed the construction of small, above ground structures surrounding an open sunken court within which rituals took place. These small structures were associated with the first noticeably wealthy burials at Chiripa, suggesting that involvement in the restricted rituals may have legitimized increasing social and wealth differences (Bandy 2001; Beck 2004; Hastorf 2003b). Although later architectural developments, specifically the small, above ground structures, strongly suggest the emergence of some form of ritual hierarchy, the perseverance of large sunken courts designed for more communal ritual implies the need to maintain a strong community identity, even as certain individuals or lineages were developing more prestige or power. According to Hastorf (2003b: 326), this pattern "…displayed both the ideal of *communitas* but also a sense of stratification." This is an excellent example of how certain ambitious individuals or lineages can manipulate the use of ritual to their advantage, but at the same time need to maintain traditional elements (in this case communal ceremonies in sunken courts) within these rituals in order to not alienate their followers.

1.1.5 Social Relations: Reciprocity and Feasting

One of the most important arenas for the development of differentiating social leadership is through feasting in context of ritual or traditional practice. The inherent political nature of communally consuming food and/or drink provides an effective opportunity for the negotiation of social status and the initiation of social change (Clark and Blake 1994; Dietler 1990, 1996, 2001; Dietler and Hayden 2001; Hayden 1996, 2001a; Junker 2001; Lau 2002; Potter 2000a). Feasts not only help to establish social status and/ or power, they serve as important arenas for the establishment of social relationships and reciprocal obligations between hosts and guests (Dietler 1996, 2001; Hayden 1996, 2001a; Lau 2002). An important aspect of feasting is the need to mobilize both the material resources needed for a feast and the labor needed to prepare a feast. In actuality it is often a lack of adequate labor and not resources that prevents many households or lineages from hosting large status building feasts (Dietler and Herbich 2001; Jennings 2005).

In the Andes it is the reciprocal nature of feasting activities that come to the fore because reciprocity has been seen as central to traditional and prehispanic Andean economies (Allen 1988: 91; Isbell 1978:167; Jennings 2005: 242; Mayer 2002). Numerous studies have demonstrated widespread importance of feasting, especially involving *chicha*, throughout the prehispanic Andes dating back to the Early Horizon (Burger and Van der Merwe 1990; Gero 1992; Goldstein, et al. 2009; Hastorf and Johannessen 1993; Lau 2002; Moore 1989; Morris 1979). Reciprocity in the Andes generally takes place in form of reciprocal labor exchanges where the food and drink, especially *chicha* (maize beer), is provided to laborers. In situations of political dominance, or on large communal projects, the host of an event has no reciprocal labor obligation, but the host must pay the labors with a work feast (Allen 1988; Isbell 1978; Jennings 2005: 243; Mayer 2002). As a result, prehispanic leaders were often differentially involved in hosting feasting activities. Andean feasting was not necessarily a direct pathway to social power, but it was absolutely essential for consolidating and maintaining power (Jennings 2005).

Although the social and political importance of feasting activities for elites in the Andes has been well established, we must be cautions in making sweeping generalizations about a social practice that has primarily been connected to the political fortunes of the Andean elite via ethnohistoric accounts (e.g., Cobo 1976; Guaman Poma de Ayala 1936). There is convincing archaeological evidence to suggest that feasting was a politically important activity for both Inca and Wari elites (e.g., Cook and Glowacki 2003; Goldstein, et al. 2009; Morris 1979) however, it is important not to simply pigeonhole feasting as a strategy for developing and/or legitimizing social power. This is because feasting activities can also serve socially integrative purposes promoting community integration and solidarity, rather than promoting the social power of an individual or lineage (Adams 2003; Hayden 2001a; Potter 2000a). Keeping this caution in mind, it is nonetheless reasonable to hypothesize that feasting activities may have been an important leadership strategy or practice for emerging Huaracane elites. Thus, at Yahuay Alta it was essential to not only identify evidence indicative of feasting activities, but also to carefully determine the nature of these activities.

A highly relevant example of feasting and social differentiation comes from the Omo style Tiwanaku site of Omo M12, in the Moquegua Valley, where Goldstein (1993a: 36) found clear evidence that specific households within this large community were differentially involved in the production and distribution of *chicha*. At least one household complex in each plaza-centered residential group at the site contained many large plainware vessels set into the floor that were used for the storage and/or brewing of *chicha* (Goldstein 1993a, 2003). These large plainware vessels each held up to 90 liters of chicha. Considering that some household complexes had as many as four of these vessels, this represents a capacity for *chicha* storage that far exceeded the needs of a single household (Goldstein 1993a: 36). In addition, these household complexes also contained matching sets of exceptionally fancy drinking *keros*; one such household contained twelve polished blackware portrait vessels (Goldstein 1993a: 36, 2003). Since there were no public or administrative buildings in this colonial community, Goldstein (1993a: 36) argues that these household complexes, or *chicherias*, may have been the residences of early Tiwanaku state authorities.

1.2 SUMMARY

The processes described above are not mutually exclusive and of course multiple bases for social differentiation characterize many societies. Although elites in many times and places often have more (and fancier) possessions, marked wealth or consumption differences were not part of Huaracane social differentiation (e.g., Drennan 1995; Lesure and Blake 2002). This illustrates the importance of decoupling the concepts of political hierarchy and wealth inequality, because social and political inequalities do not always coincide with economic inequalities (Hastorf 1990). As a result, my research sought to carefully evaluate the different dimensions of intra-site economic or status differentiation within a Huaracane community. Another important goal of this research was to identify how this differentiation was expressed in residential patterns at both household and residential sector levels. Specifically I wanted to determine if higher status households existed within sectors (intra-sector), or if differences lay among sectors at the inter-sector level. In summary, my research focused upon identifying the nature of Huaracane social differentiation in domestic contexts and identifying the social and economic processes that were most important in underwriting the development of status differentiation and social leadership.

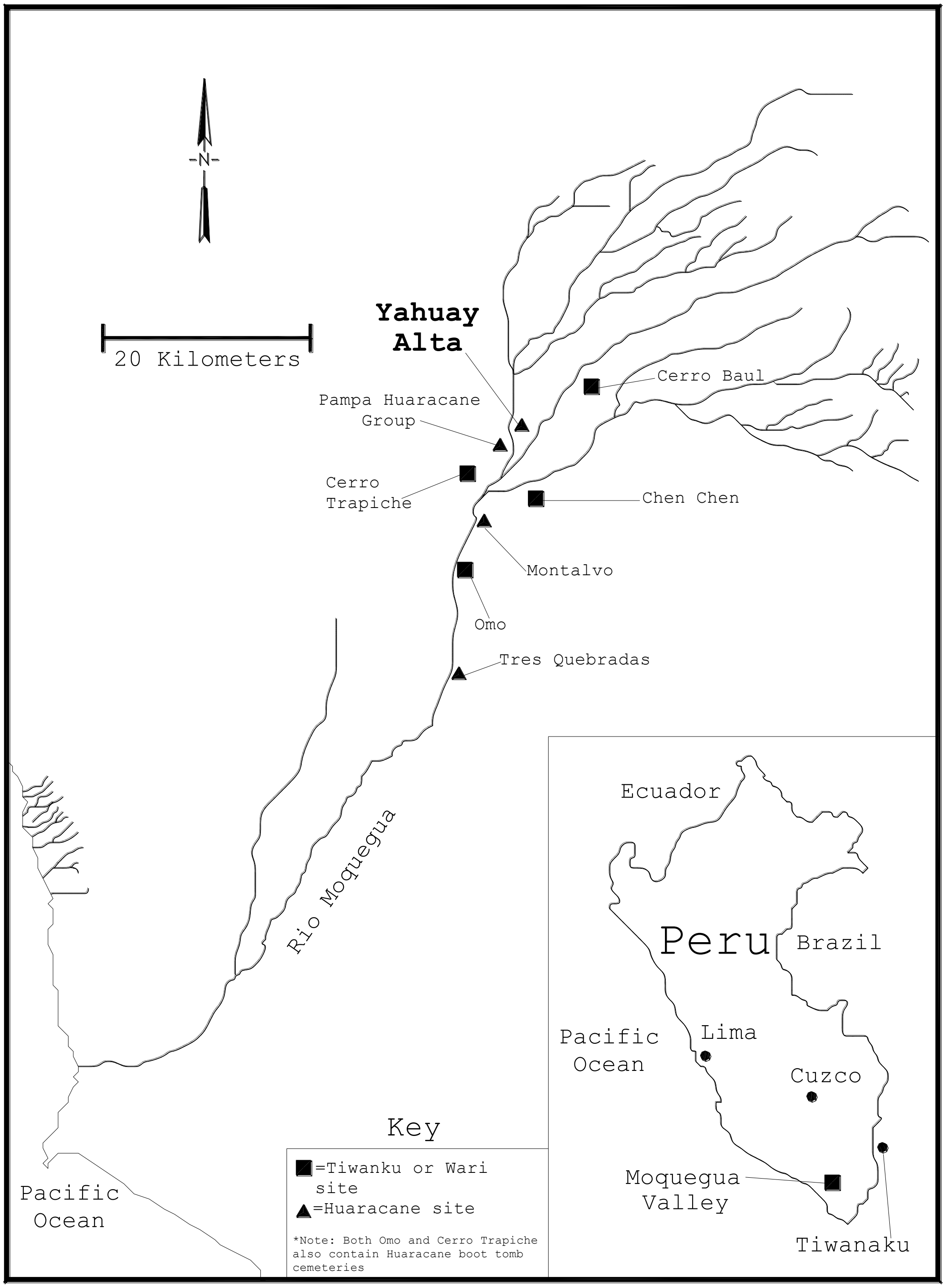

Figure 1.1. Map of the Moquegua Valley showing location of Yahuay Alta in relation to other important sites in the region.

2.0 THE HUARACANE TRADITION OF THE MIDDLE MOQUEGUA VALLEY

2.1 THE PHYSICAL SETTING: THE MIDDLE MOQUEGUA VALLEY

A riverine desert oasis with exceptional agricultural potential, the middle Moquegua Valley is one of four distinct sections of the Pacific river system known as the Osmore drainage (Figure 2.1). Following the typical pattern exhibited by Andean Pacific drainages, the Osmore drainage system originates in the snow-capped peaks of the Andean Western Cordillera at over 5100 meters above sea level (masl) and flows west through a primarily hyper-arid landscape. During a typical year in the Osmore drainage, precipitation only falls at elevations above 1500 masl (Williams 1997: 45). As a result, the majority of this 139 km drainage system is considered to be a "dry" river basin; only above the elevation of 3900 masl, in the "wet" basin, does surface runoff contribute to the Osmore river system (Rice 1989: 20). At elevations below 1500 masl this drainage system flows through one of the driest deserts in the world, one that rarely receives any precipitation at all. For example at the coastal city of Ilo, the estimated annual precipitation is approximately 5.3 mm (Rice 1989: 20). The only exception to this pattern is during El Niño events when substantial precipitation can fall at lower elevations causing flooding; these events occur on average every seven years (Magilligan and Goldstein 2001; Williams 1997).

The upper section of the Osmore drainage, sometimes referred to as the upper Moquegua Valley, is comprised of the Rio Huaracane, Rio Torata, and Rio Tumilaca; all of which are tributary rivers to the Rio Moquegua (Goldstein 2005; Rice 1989). This section of the drainage extends from the headwaters in the Western Cordillera to approximately the elevation of 1600 masl just upstream of the confluence of these three tributaries and the modern city of Moquegua (Goldstein 2005; Owen 2005). Much of the upper valley, especially where most of the prehistoric settlements in this section of the drainage were situated, is quite arid; only above 3900 masl does the annual precipitation exceed 150 mm (Rice 1989: 20).

The upper valley is the most vertically variable section of the Osmore drainage; as the elevation increases there is a general increase in the amount of annual precipitation and a general decrease in average annual temperature (Rice 1989). The natural vegetation and the agricultural potential of the upper valley is heavily dependant upon these two factors. The lower portions of the upper valley are extremely arid and the natural vegetation is made up almost exclusively of a single cactus genus (*Cephalocerus*), however some *Schinus molle* trees can be found in the beds of *quebradas* (Rice 1989: 26). With increasing elevation the natural vegetation in the upper valley zone becomes more variable, including numerous varieties of cacti, spiny shrubs, low woody shrubs, and seasonal grasses and herbs that sprout during the summer rains (Rice 1989: 26-27). Nevertheless, even in the wetter high elevation portions of the upper valley the high permeability of the soil leads to a desert-like appearance especially during the dry season (Rice 1989: 27). The agricultural potential of the upper valley is extremely dependent upon temperature and above 3000 masl only cold resistant species, such as potatoes and quinoa, could be grown (Rice 1989; Williams 1997). Agriculture in the upper valley was also limited by the topography as the tributary rivers in this section of the drainage created very steep and narrow valleys. As a result, successful agriculture in the upper Moquegua Valley required extensive terracing of the valley sides (Goldstein 2005; Williams 1997, 2002). This upper valley section of the Osmore drainage contained no large permanent settlements until the arrival of Wari colonists early in the Middle Horizon (Owen 2005; Williams 1997, 2002; Williams and Nash 2002).

The middle valley section of the Osmore drainage, or the middle Moquegua Valley, extends for 26 km from approximately 1600 masl just up stream from where the upper valley tributaries join to form the Rio Moquegua to approximately 900 masl where this river disappears into a dry rocky gorge (Goldstein 2005; Owen 2005). In comparison to the upper valley section of the drainage the middle valley is broad and flat with an easily irrigable floodplain that is approximately 8 km wide at the confluence of the upper valley tributaries and 3 to 4 km wide along the Rio Moquegua (Goldstein 2005: 115). The middle Moquegua Valley is technically situated in the "dry" basin section of the drainage system and it receives less annual precipitation than the coastal section of the drainage (Goldstein 2005: 115).

Due to the extreme aridity of the middle valley, the sparse natural vegetation in this section of the drainage is confined primarily to the riverbed. Although there is relatively good soil on the flat pampas located above the riverbed, such as the Pampa Huaracane, a lack of moisture leaves the pamaps virtually devoid of natural vegetation (Rice 1989; Williams 1997). Despite the aridity of the middle valley, the flat topography of the floodplain allows for simple canal irrigation without the construction of complex terrace systems giving this section of the Osmore drainage great agricultural potential (Goldstein 2005). It is because of this easily irrigable floodplain that the middle Moquegua Valley has been the most agriculturally important and productive section of the Osmore drainage in modern, colonial, and prehistoric times. With irrigation, the year round cultivation of a wide variety of lowland temperate crops, such as maize, peppers, and cotton, is possible in middle valley (Goldstein 2005). According to colonial Spanish accounts, the middle Moquegua Valley was a virtual agricultural paradise where an astonishing variety of indigenous and later introduced European crops were cultivated (Goldstein 2005: 117). Due to its excellent agricultural potential when irrigated, the middle Moquegua Valley has also long been the most heavily populated section of the drainage. In fact, the middle valley appears to have been heavily populated by indigenous Huaracane small-scale agriculturalists well before the arrival of colonists from the Ayacucho and Titicaca Basins during the Middle Horizon (Goldstein 2000b, 2005).

The middle valley section of the drainage ends at an elevation of approximately 900 masl where the Rio Moquegua disappears into a deeply incised dry rock gorge. This dry gorge extends for 31 km isolating the middle valley oasis from the coastal section of the drainage (Owen 2005; Goldstein 2005). The dry gorge section of the Osmore drainage consists of a desolate expanse of hyper-arid desert where no substantial permanent settlements were ever established. However, llama caravans routinely traversed the dry gorge bringing coastal resources, such as shellfish and seabird guano, to the *altiplano* via the middle Moquegua Valley, where these resources were also utilized. In fact, the dry gorge is sometimes referred to by the name of Quebrada de los Guaneros, in reference to the caravans transporting seabird guano (Goldstein 2005: 118).

At an elevation of approximately 325 masl the Rio Moquegua emerges from the dry gorge, at this point it is referred to as the coastal Osmore River or occasionally as the Rio Ilo, and flows for 25 km until it reaches the Pacific Ocean (Owen 2005; Rice 1989). The coastal valley, generally referred to as the costal Osmore Valley, is a small desert oasis with a narrow irrigable valley floor. This coastal valley is relatively deep and narrow with a floor averaging in width only 115 m for the upper 10 km of the valley; it widens to approximately 300 m in width for the last 15 km until it reaches the ocean (Owen 2005: 51). The natural vegetation in the coastal valley is very similar to the middle valley. For the most part sparse vegetation is confined to the narrow valley floor and the surrounding hillsides and pampas are barren desert (Owen 2005; Rice 1989). In addition to the valley floor, on some hills near the coast there are patches of seasonal vegetation, known as *lomas*, that survive by capturing moisture from the heavy coastal fog that persists from June through October (Rice 1989). The vegetation in the *lomas*, although seasonal, can be relatively variable and quite dense, but outside the *lomas* the vegetation becomes less varied consisting primarily of bromeliads, cacti, and fleshy leaved herbaceous species (Rice 1989: 25). The *lomas* can potentially be used to pasture camelids, but they are an unpredictable resource, subject to substantial annual variation (Rice 1989). Irrigation agriculture was possible on the narrow coastal valley bottom, however its agricultural potential was not as great as the floodplain in the middle valley due to soil with relatively poor drainage and high levels of salinity (Williams 1997). The first permanent agricultural settlements in the coastal Osmore Valley date to the Early Intermediate Period and are associated with the Algodonal Early Ceramic culture, which appears to have been very similar to the Huaracane culture of the middle Moquegua Valley (Owen 1993, 2005). This coastal Osmore Valley was later settled more heavily during the Late Intermediate Period by various post-Tiwanaku cultures including the Chiribaya and the Ilo-Tumilaca/Cabuza (Owen 1993, 2005).

2.2 THE PREHISTORY OF THE MIDDLE MOQUEGUA VALLEY

2.2.1 The Preceramic period in the middle Moquegua Valley

Although settlements dating back to as early as 12,000 BP have been documented in the Osmore drainage, very little is known about the Preceramic occupations in the middle Moquegua Valley. A small number of Preceramic sites have been identified in this section of the drainage, but there is insufficient data to reconstruct the settlement patterns for this time period (Aldenderfer 1989a: 115). This situation contrast with both the upper Moquegua Valley and the coastal Osmore Valley for which Preceramic settlement patterns and subsistence strategies have been well documented (Aldenderfer 1989a, b, 1998; de France, et al. 2001; Kunzar 1989; Sandweiss, et al. 1989; Wise 1989, 2001). This lack of Preceramic occupation is not necessarily surprising, given the fact that the middle Moquegua Valley was an extremely harsh environment for Preceramic foraging groups. As discussed above, the middle valley only becomes truly productive with the help of irrigation. For foraging populations the upper Moquegua Valley, especially elevations above 4000 masl, and the coastal Osmore Valley, especially along the Pacific Coast, were substantially more productive environments and were thus more heavily populated during the Preceramic period (Aldenderfer 1989a: 109). In sum, the middle Moquegua Valley was only sparsely and most likely only sporadically populated during the Preceramic period.

2.2.2 The Huaracane Tradition

The Huaracane Tradition refers to the earliest known permanent agricultural settlements and the earliest ceramic using occupations identified in the Osmore drainage. First identified at a group of sites located on the Pampa Huaracane just across the valley from the modern city of

Moquegua, small settlements associated with Huaracane style ceramics are now known from throughout the entire middle Moquegua Valley (Feldman 1989; Goldstein 2000b, 2005).

2.2.2.1 The Huaracane settlement system Huaracane settlement patterns suggest a decentralized village society reliant upon simple, valley bottom agriculture. Settlements of small villages are thickly distributed along the margins of the floodplain in the middle Moquegua Valley (Goldstein 2000b, 2005). Between 1993 and 1996 the Moquegua Archaeological Survey, directed by Paul Goldstein, conducted a full coverage pedestrian survey of the middle valley and found 169 Huaracane habitation sites totaling 73.5 hectares (Goldstein 2000b: 343; 2005: 123). These sites are very regularly spaced and found on nearly every single hilltop along the rim of the middle valley at an average distance of only 421 meters from the Rio Moquegua and only on average 48 meters above the riverbed (Goldstein 2000b: 343, 2005: 123). The regular spacing of these settlements is remarkably consistent; even relatively inaccessible locations were settled by the Huaracane if they fit into the regular spatial patterning of the Huaracane settlement system (Bandy 1995). The close relationship of Huaracane settlements to the Rio Moquegua flood plain suggest that the Huaracane relied upon simple valley-edge canals in order to irrigate their agricultural fields and that these fields probably did not extend beyond the natural limits of the floodplain. This strategy contrasts sharply with the later irrigation strategies of the Middle Horizon Tiwanaku inhabitants of the middle Moquegua Valley that involved labor-intensive canal systems and/or accessing subterranean water sources to irrigate vast desert pampas far from the floodplain (Goldstein 2000b). The relatively simple nature of Huaracane floodplain irrigation did not require complex corporate organization or regulation, indicating that the Huaracane probably felt little need to produce large agricultural surpluses (Goldstein 2000b).

Huaracane settlements are uniformly small in size, with domestic components averaging 0.44 hectare; in fact only 5 settlements exceeded two hectares in size (Goldstein 2000b: 343, 2005: 124). Huaracane settlements are generally undefended, although some are situated in relatively inaccessible locations. Only a few provide any evidence for public architecture. Despite the presence of a few marginally larger sites, a rank-size analysis of all 169 Huaracane settlements demonstrates a distinctly convex relationship of settlement size to rank (see Goldstein 2000b: Figure 5, 2005: Figure 5.5). This pattern shows that there was no single primate Huaracane center and that there was little to no political and/or economic integration within this settlement system. Based on this settlement typology, we can hypothesize that there was no paramount Huaracane chiefdom that controlled the entire middle Moquegua Valley; rather each Huaracane settlement was probably a relatively autonomous farming community (Goldstein 2000b, 2005).

Common Huaracane settlements, such as Tres Quebradas (Figure 2.2), were constructed on semicircular, informally arranged residential terraces that generally lack stone facing (Goldstein 2000b, 2005). These terraces are generally small in size, averaging less than 10 m in length (Bandy 1995: 2). Upon the terrace surfaces simple structures of perishable materials were constructed (Goldstein 2000b, 2005). The exact nature of the construction techniques and house plans for typical Huaracane structures are presently not well understood. Dwellings were constructed primarily of organic material and probably consisted of wooden posts with woven reed or even *quincha* walls (Bandy 1995). The profile of a modern road cut that runs through a Huaracane settlement on the Pampa Huaracane reveals a preserved woven reed roof or wall giving a glimpse of the nature of at least some Huaracane domestic construction techniques (Figure 2.3). Modern damage caused by a bulldozer to the site of Tres Quebradas revealed the plan of one small domestic structure that was circular in shape with a concave floor dug into a domestic terrace (Bandy 1995: 3). We can infer that typical Huaracane domestic structures were relatively small circular structures constructed of entirely of organic materials.

A few Huaracane sites, such as Montalvo and Yahuay Alta (see Figure 2.2), stand out as larger than average, and displaying the remains of stone construction, which may have been elaborate residential structures (Goldstein 2000b, 2005). Montalvo is the only known Huaracane site to be surrounded by a perimeter wall and trench. This surface of this site is also covered by the remains of residential structures constructed of stone (Goldstein 2000b). Yahuay Alta is the only known Huaracane site with noteworthy public architecture, consisting of raised platforms, artificially leveled plazas, and a stone faced platform mound. This site also contains the remains of several residential structures that appear to have been at least partially constructed from stone. It is worth noting that the majority of structures at these two sites are typical Huaracane structures constructed from organic materials. In addition to these obvious architectural differences from other Huaracane sites, Montalvo and Yahuay Alta also exhibit substantially higher percentages of *Huaracane Fino* bowl sherds upon their surfaces in comparison to the typical Huaracane settlement (Goldstein 2000b). Although as mentioned above, there are no indications of a single paramount Huaracane center in the middle Moquegua Valley, the presence of these atypical sites within the Huaracane settlement system has led Goldstein (2000b: 344) to suggest that possibly, later in the Huaracane sequence, there may have been several competing centers or Huaracane elite sites in the region.

2.2.2.2 Huaracane ceramics The Huaracane Tradition ceramic assemblage is relatively simple, comprised primarily of neckless or short-necked plainware *ollas* and fineware serving bowls (Feldman 1989; Goldstein 1989, 2000b, 2005). Huaracane plainware *ollas* are round vessels that often exhibit heavily burnt exteriors. They are generally not well fired, have poorly oxidized cores, and their exteriors, although sometimes smoothed, are never polished or burnished (Feldman 1989; Goldstein 1989). These *ollas* were made from two different kinds of pastes. *Huaracane Arena* vessels were made from a paste that utilized a sand temper that varies considerably in coarseness, and often have short necks (Goldstein 2000b). *Huaracane Vegetal* vessels are made with a paste that utilized a grass-like fiber temper, and are generally but not always neckless (Goldstein 2000b). In addition, vessels made with this paste tend to be larger, thicker, and to exhibit more exterior burning than *Huaracane Arena* vessels. Huaracane plainware *ollas* were clearly utilitarian vessels that appear to have been utilized for both the storage and preparation of food. Plant fiber temper was originally though to be a one of the primary diagnostic characteristics of Huaracane plainware ollas (Feldman 1989). However, it has now been shown that *Huaracane Vegetal* sherds generally make up fewer than 20% of the *olla* sherds at Huaracane sites with *Huaracane Arena* sherds making up the majority (Goldstein 2000b).

Huaracane fineware bowls are known as *Huaracane Fino* and are constructed of a very hard, well-fired paste suggesting they were part of a separate and more sophisticated manufacturing process than the rest of the Huaracane ceramic tradition. Although always found in association with *Huaracane Arena* and *Huaracane Vegetal* sherds, the percentage of *Huaracane Fino* sherds varies considerably from site to site throughout the middle Moquegua Valley (Goldstein 2000b). The majority of *Huaracane Fino* vessels are shallow rounded bowls averaging between 15 and 20 cm in rim diameter (Feldman 1989; Goldstein 1989, 2000b). These bowls are typically both slipped and burnished on both their interiors and exteriors, although the interior is often more highly polished than the exterior (Feldman 1989). There are two variants of *Huaracane Fino* bowls, reflecting different firing atmospheres. The oxidized variety, known as *Huaracane Fino rojo*, is the more common of these variants. These bowls have a reddish-yellow slip and the paste is generally red to pink in color (Feldman 1989). The reduced variant, known as *Huaracane Fino negro*, are much less common and generally have a light brownish grey slip and a light grey paste (Feldman 1989). Goldstein (2000b) interpreted these fineware bowls as high value serving vessels used principally by elites (Goldstein 2000b).

Some aspects of the Huaracane ceramic assemblage, especially the use of vegetable fiber temper in plainware *ollas*, are similar to some early ceramic styles from the *altiplano*. As a result, Feldman (1989) originally believed that the Huaracane Tradition might have been an early *altiplano* colonization of the middle Moquegua Valley. However, the resemblances with *altiplano* ceramics now appear to be no more than superficial; the neckless *olla* was a common plainware form throughout the entire southern Peruvian coast as well as in the *altiplano*. Thus the use of vegetable fiber temper in a minority of Huaracane plainware vessels is not sufficient proof to identify Huaracane ceramics as an *altiplano* related tradition (Bandy 1995; Cohen, et al. 1995; Goldstein 2000b, 2005). In addition, *Huaracane Fino* fineware bowls are unique to the middle Moquegua Valley; they simply do not closely resemble any fineware ceramic styles from either the southern Peruvian coast or the *altiplano* (Goldstein 2000b: 341). In sum, the Huaracane ceramic assemblage is comprised of utilitarian *ollas* that bear superficial resemblances to plainware styles from both the southern coast and the *altiplano* and fineware bowls that are unique to the region. Consequently, despite some resemblances to ceramic styles from neighboring regions, the Huaracane ceramic tradition can be considered to be indigenous to the middle Moquegua Valley (Goldstein 2000b: 341, 2005).

2.2.2.3 Huaracane subsistence Preliminary evidence suggests that the Huaracane subsistence system was highly diversified and placed surprisingly little emphasis upon the production of maize (Goldstein 2000b, 2003). Carbon nitrogen isotopic research comparing bones samples taken from the Huaracane boot tomb cemetery at Omo and Algodonal Early Ceramic burials from the coastal Osmore Valley to bone samples taken from the Tiwanaku cemetery at Omo revealed that the Huaracane diet was substantially different from the diet of Tiwanaku colonists that inhabited the middle Moquegua Valley during the Middle Horizon (Goldstein 2000b, 2003; Sandness 1992). This study demonstrated that the Huaracane diet relied heavily upon C3 plant resources (approximately 50%) and marine resources (between 23% and 50%). In contrast, maize and C4 plants comprised only between 3% and 18% of the Huaracane diet (Goldstein 2000b: 324, 2003: 163; Sandness 1992: 49). Although separated from them by the 31 km dry gorge, the Huaracane diet actually much more closely resembled the diet of contemporary Algodonal Early Ceramic populations in the coastal Osmore Valley than the diet of Tiwanaku colonists in the middle Moquegua valley. Maize and C4 plants comprised between 46% and 76% of the Tiwanaku colonists' diet (Goldstein 2003: 164; Sandness 1992: 49).

In addition to this isotopic data, artifactual evidence from Huaracane sites also suggests the Huaracane had a diversified diet not heavily reliant upon maize. Huaracane settlements throughout the middle Moquegua Valley display few of the large ground stone seed processing tools, such as *batanes* and *manos*. These types of are very common at Tiwanaku sites in the region and were presumably used to grind maize into some type of porridge (Goldstein 2003). Furthermore, the Huaracane ceramic assemblage lacks utilitarian vessels specifically designed for the fermentation, transport, or storage of liquids, and *Huaracane Fino* bowls are not ideal vessels for drinking liquids (Goldstein 2003: 156-157). This is important because the consumption of fermented maize *chicha* was a central aspect of Tiwanaku ritual and political life. As a result, the Tiwanaku ceramic assemblage from the middle Moquegua valley was dominated by vessels designed for the production, storage, and service of *chicha* (Goldstein 2003). In contrast, the large globular neckless *ollas* that dominate the Huaracane ceramic assemblage, and that often exhibit heavy burning on their exteriors, are well suited for the cooking of stews. Goldstein (2003: 163) believes that the Huaracane cuisine was dominated by diversified one-pot stews that only occasionally included maize. In sum, both isotopic and artifactual evidence suggest that the Huaracane had a generally non-maize based subsistence pattern (Goldstein 2000b).

2.2.2.4 The Huaracane mortuary tradition The majority of Huaracane investigation has been of mortuary contexts. Thus, much of what is known about Huaracane social organization comes from treatment of the dead. The Huaracane mortuary tradition was comprised of various forms of burial. The simplest Huaracane burial type consists of isolated individual and/or multiple internments found within domestic settlements. These individuals were always placed in the flexed position in simple pits or cylindrical cist-tombs. Tubular and disc-shaped bone and shell beads are the only type of grave offerings found in these simple burials. The general simplicity of this type of burial has been interpreted as indicating it was likely reserved for lower status individuals (Goldstein 2000b: 348).

Most Huaracane burials took place within distinct cemeteries, separate from the actual domestic sectors of Huaracane settlements. In addition to the known 169 domestic settlements, the Moquegua Archaeological Survey identified 70 Huaracane cemetery sites that covered a total of 20.2 hectares (Goldstein 2000b: 343, 2005: 125). Some of these sites were directly associated with Huaracane habitation sites, but others were individual sites isolated from any settlements. Within cemeteries, the most common Huaracane burial type are known as *túmulos* or mound burials. A total of 44 *túmulo* cemeteries have been found in the Moquegua Valley most of which were located directly adjacent to terraced domestic settlements (Goldstein 2000b: 348). *Túmulos* in Moquegua occur in clusters and consist of circular or irregular mounds of alternating layers of clean sand or gravel fill and vegetal matter. These mounds rang from 2 to 7 m in diameter and could reach up to 3 m in height (Goldstein 2000b, 2005). *Túmulos* very rarely contain ceramics, but textile offerings are commonly found within these mounds. Many of these textiles were made using a distinctive non-loomed technique suggesting a relatively early date for these offerings. In addition, several *túmulos* have yielded loom-made textile offerings, suggesting a later date for these mounds (Goldstein 2000b: 349).

The layered nature of *túmulos* suggests that they were built up over time through the sequential addition of internments, some of which were secondary in nature. As some *túmulos* contain multiple burials, Goldstein (2000b: 349) believes they may have been collective family or lineage burial mounds. However, M. Barrionuevo Alba argues that *túmulos* were created during a single burial event because the stratigraphic profiles of excavated *túmulos* are continuous and do not show the type of disturbances that should be expected if individual internments were added to these mounds at different times. In addition, most of the internments within *túmulos* are secondary in nature suggesting that *túmulos* may have been constructed during special communal events when the remains of multiple individuals were removed possibly from simple in site burials and placed within a newly constructed *túmulo* (M. Barrionuevo Alba, personal communication, 2008).

Túmulo type burials have also been found at several sites in the coastal Osmore Valley (Owen 1993) and are very similar to burial mounds of the Alto Ramírez tradition of Chile's

Azapa Valley (Goldstein 2000b, 2005; Muñoz Ovalle 1987). The current data suggests that Huaracane *túmulos* were constructed in the middle Moquegua Valley from approximately 400 cal BC to cal AD 1 (Goldstein 2000b: 349, 2005: 127). These dates demonstrate that the Huaracane *túmulos* were roughly contemporaneous with *túmulo* mortuary traditions in both the coastal Osmore Valley and the Azapa Valley, although *túmulo* construction in these regions extended well into the first century AD (Goldstein 2000b, 2005; Muñoz Ovalle 1987; Owen 1993). It thus appears that the *túmulo* mortuary tradition was wide spread throughout the coastal valleys of far southern Perú and northern Chile.

Unlike *túmulos* the second major Huaracane burial type, known as a boot tomb, is unique to the middle Moquegua Valley and thus constitutes a completely indigenous mortuary tradition (Goldstein 2000b: 351). In comparison to *túmulo* cemeteries, boot tomb cemeteries are quite rare; only eight have been identified in the middle Moquegua valley. All of the boot tomb cemeteries are spatially isolated from Huaracane habitation sites and are generally located on high bluffs overlooking the valley (Goldstein 2000b). Boot tombs are marked on the surface by large circular stone rings that are up to 4 m in diameter. Organic debris including wattle and daub fragments found in association with these stone circles, suggests that these tombs may have had been sealed or capped with roofs made from organic materials, or possibly even had wattle and daub superstructures (Goldstein 2000b: 350; 2005: 127). The boot tombs themselves display a boot-shaped profile consisting of vertical shafts up to 3.5 m in depth with rounded chambers off to one side where internments were placed (see Goldstein 2000b: Figure 12). These tombs accommodated multiple internments of both adults and juveniles suggesting that each tomb may have been dug for individual family groups (Goldstein 2005). The easily removable organic roof covering of boot tombs suggests that they may have been frequently accessed by living family members. In addition, the possible superstructures over the tombs could have served as charnel houses for pre-burial rituals, family mortuary shrines, or simply as the antechambers to family tombs (Goldstein 2000b: 351).

Huaracane boot tombs have been dated to between 170 cal BC and cal AD 340 (Goldstein 2000b: 351). This tomb style emerged toward the end of the Huaracane *túmulo* tradition and appears to eventually have replaced it. Given the facts that boot tomb cemeteries are rare and only appear towards the end of the known Huaracane sequence, Goldstein (2000b: 351) believes that these tombs represented a novel mortuary tradition that developed in association with the emergence of a hereditary elite stratum, one that used mortuary display to distinguish themselves within their communities. This interpretation is further supported by the large amount and wide variety of both local and exotic offerings that have been found in Huaracane boot tombs.

In comparison to the Huaracane *túmulo* tradition, boot tombs contained both more and a greater range of offerings. Locally made goods found within these tombs included *Huaracane Fino* ceramics, multicolored basketry, textiles, and carved wooden objects such as lime dippers and spoons. In addition to these large items, boot tomb offerings also included large quantities of beads made from a wide variety of materials such as bone, shell, wood, copper, green stone, and blue stone (Goldstein 2000b: 351). Both the large quantity and wide variety of these finely made goods found in boot tombs suggests that they represent an elite mortuary practice.

In addition to these local items, boot tombs also generally contained a small amount of grave goods of exotic origins. The most common of these items in boot tombs are zone incised, polychrome Pukara-style ceramics (Figure 2.4); at least three boot tomb cemeteries contained ceramics of this style (Goldstein 2000b).[1] Originally zone incised Pukara-sytle ceramics in Moquegua were interpreted to represent a local phase or occupation designated as the Trapiche Phase (Feldman 1989: 213). It was originally believed that Trapiche Phase ceramics were locally made variants of Pukara-style ceramics and represented a possible post-Huaracane *altiplano* colonization of the region (Feldman 1989). It is now widely thought, however, that all Pukara-style ceramics found in the middle Moquegua Valley represent pottery obtained through long distance exchange networks (Bandy 1995; Cohen, et al. 1995; Goldstein 2000b, 2005). In addition to the Pukara-style ceramics, a few examples of finely made and very colorful Paracas-Nasca and Pukara textiles have been found in boot tombs as well. These exotic textiles would also have been obtained through long distance exchange networks (Goldstein 2000b). The presence of these exotic goods within boot tombs strengthens the interpretation of boot tombs as an elite mortuary practice. In fact, Goldstein (2000b: 355) has used this evidence from the Huaracane boot tombs to argue that Huaracane elites were distinguished by greater access to

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[1] According to Goldstein (2000b) Pukara-style sherds have been found at three boot tomb cemeteries, however, other than Cerro Trapiche, the cemeteries where these sherds were found are not identified by name. In 2004 I encountered Pukara-style sherds upon the surface of the boot tomb cemetery located on the Pampa Yahuay bringing the possible total of boot tomb cemeteries with Pukara-style ceramics up to four.

high value, long distance exchange goods, such as Pukara-sytle ceramics, generally and he posits that the exchange and display of these goods may have lain at the genesis of chiefly power.

It is evident that there was a major shift in Huaracane mortuary practice as the boot tomb eventually replaced the *túmulo* in the middle Moquegua Valley. Especially if Barrionuevo Alba's (personal communication, 2008) interpretation for *túmulos* is correct, then this shift in mortuary tradition accompanied major social changes within Huaracane society. Communal secondary mortuary rituals, like those that possible took place during the creation of *túmulos*, have the potential to encourage community integration and possibly even minimize differences between households within a community (Kuijt 1996, 2000, 2001). The lack of elaborate grave offerings in *túmulos* (Goldstein 2000b, 2005) might also be interpreted as supporting the hypothesis that the *túmulo* tradition emphasized community integration, rather than the promotion of individual or lineage status. In stark contrast, the boot tomb tradition would have served as an important mechanism for Huaracane individuals or lineages to promote or even establish prestige within a Huaracane community. The relatively rare nature of boot tombs and the high labor investment involved in their construction are excellent indicators that these were tombs designated for prestigious or elite individuals or lineages. The relative abundance of finely made offerings of both local and exotic origin in boot tombs is further evidence that those interred within these tombs were elite or wealthy individuals receiving special mortuary treatment. The rare exotic items may even have been symbols of power and/or authority for an emerging Huaracane elite class (Goldstein 2000b). Overall, the mortuary studies point to increasing social inequality with an elite and/or wealthy class developing towards the end of the Huaracane sequence.

It is, however, important to reiterate that this conclusion is based predominantly upon mortuary data. As we know, assessments about social organization based primarily upon mortuary data can be problematic, because by their nature, burials are not representative of everyday activities and do not simply reflect social status (Stanish 1989, 1992). Wealth items can be over represented in burials, exaggerating the apparent level of social and/or wealth differentiation that existed within a society. It was for precisely this reason that one of the primary goals of the research I conducted at the Huaracane site of Yahuay Alta in 2006 was to determine whether or not the material wealth differences observed in late Huaracane mortuary contexts were paralleled by differences in Huaracane household life.

2.2.2.5 Dating of the Huaracane Tradition Prior to my research at Yahuay Alta, the five published radiocarbon dates for the Huaracane Tradition fell between 385 cal BC and cal AD 340 at the 2 sigma range (Goldstein 2000b: Table 3, 2005: Table 5.2). Because all of the dates (before my research) were of tomb materials, the chronological change in Huaracane mortuary patterns described above was one of the better understood aspects of the Huaracane sequence. The most intriguing fact about the Huaracane sequence based upon these five dates was none of the Huaracane dates fell into the Middle Horizon and it was not clear exactly when this tradition ended or when the many Huaracane settlements in the middle Moquegua Valley were abandoned. Before my research, a salient question was whether or not Huaracane settlements within the middle valley were inhabited when Middle Horizon colonists settled in the region? As Goldstein (2005: 132) had observed, "No Huaracane site in the middle Moquegua Valley has yet produced dates that overlap with the Tiwanaku occupation, and the issue of late Huaracane contemporaneity with Tiwanaku has not been resolved". Owen (2005: 51) however believed that the presence of a few Wari sherds found at several Huaracane sites indicated that the indigenous inhabitants of the region shared the Moquegua Valley with Tiwanaku and Wari colonists "…for at least part of the Middle Horizon".

My research at Yahuay Alta unequivocally resolved this issue of contemporaneity with the Wari and Tiwanaku colonies in the Moquegua region. Five of the radiocarbon dates taken during excavations at Yahuay Alta demonstrate that the second phase of occupation at this Huaracane site fell between cal AD 676 and cal AD 885 at the 2 sigma range, although according to the median dates this occupation of the site likely occurred primarily during the 7^{th} century AD (see Chapter 3 for a more in depth discussion of the radiocarbon dates from Yahuay Alta). This time range corresponds to the first half Middle Horizon, when the Wari and Tiwanaku colonies were establishing themselves in the valley. The dating of Yahuay Alta to this time period raises intriguing new questions about Huaracane interaction with the neighboring Wari and Tiwanaku colonies, and about the nature of Huaracane ethnic identity in this newly multicultural environment.

2.2.3 Middle Horizon Wari and Tiwanaku occupations in the Osmore Drainage

The most intensively investigated time period in the Osmore drainage is the Middle Horizon (approximately AD 550 – 1000) when both the Wari and Tiwanaku polities established major colonies in the region. As discussed above, prior to my research it, was not clear whether or not the Huaracane settlements in the middle Moquegua Valley were still occupied when these polities entered the region. Given that we now know the Huaracane at least had the opportunity to interact with Wari and Tiwanaku colonists it is important to understand the nature of these two colonizations. As a result, the following discussion will briefly review what is currently known about Wari and Tiwanaku settlement in the Moquegua region.

2.2.3.1 The Wari occupation Wari expansion in to the Osmore drainage occurred circa AD 550 during the first major period of Wari imperial expansion, known as the Middle Horizon Epoch 1 (Williams 2001; Williams and Nash 2002). When the Wari entered the region, they chose to settle in the sparsely inhabited upper Moquegua Valley rather than compete with the indigenous Huaracane farmers and Tiwanaku colonists in the more heavily populated middle Moquegua Valley. Expansion into the virtually uninhabited high sierra suggests that the Wari were settling the region for political or defensive purposes and that the integration of local populations into the empire was not the motive for the establishment of this colony (Moseley, et al. 1991; Williams 1997, 2002; Williams and Nash 2002).

This Wari colony was centered on three mountains that divided the Tumilaca and Torata tributaries to the Rio Moquegua. It consisted primarily of six major sites that were all connected by an extensive canal system that watered the many terraced fields located below and around these settlements (Williams 1997; 2002; Williams and Nash 2002). The capital of the colony was the site of Cerro Baúl, which is located on the summit of an impressive high mesa with sheer sided cliffs. This mesa is the most dominant landmark in the upper valley and can be seen from great distances. Cerro Baúl appears to have been chosen as the location for the Wari colonial capital because of its obvious defensive potential and perhaps because it was even then a sacred landmark; to this day the site is considered to be an important shrine and ritual center (Moseley, et al. 1991; Williams and Nash 2002). The majority of the structures on Cerro Baúl were constructed of double-faced stone masonry and the core of this regional capital consisted of mostly administrative and ceremonial compounds. However, there is evidence to suggest that both elite individuals and artisans were living at this site (Nash 2002; Williams and Nash 2002). Secondary Wari sites in the valley, such as Cerro Mejia, display some the same types of structures found on Cerro Baúl, but they are generally smaller in scale and of lower architectural quality (Nash 2002; Williams and Nash 2002). Although the majority of Wari settlements, such as the examples discussed above, were located in the upper Moquegua Valley, it is important to note that one important Wari settlement, Cerro Trapiche, was located in the middle Moquegua Valley in what was clearly Huaracane and Tiwanaku territory. Recent evidence from Cerro Trapiche suggests that both Wari and Huaracane populations may have been co-residents in this settlement, which is located adjacent to a Huaracane boot tomb cemetery (Green 2008).

Current data suggests that there were two major phases to the Wari occupation in the Osmore drainage. The initial phase of occupation appears to have dated to between approximately AD 550 and AD 800 (Williams and Nash 2002). During this time period there was little or no interaction between Wari and Tiwanaku colonies in the region, which could possibly have been related to tensions over the use of water during a relatively dry climatic phase (Williams 1997, 2002; Williams and Nash 2002). The second phase of Wari occupation lasted from approximately AD 800 until possibly as late as the early 13th century AD (Williams and Nash 2002). The evidence suggests that there were several major changes during this time period. First, it appears that the Wari center at Cerro Mejia was abandoned by approximately AD 800, as part of a reorganization of the Wari settlement pattern (Nash 2002; Williams and Nash 2002). Second, there was a complete reconstruction of the monumental and classically Wari architecture on Cerro Baúl between approximately AD 800 and AD 900. This reorganization of the colonial capital coincides in time with major reorganization that took place throughout the Wari empire, including the at the imperial capital in Ayacucho (Moseley, et al. 2005; Williams 2001; Williams and Nash 2002). Finally, during the second phase of Wari occupation in the Osmore drainage there is evidence for interaction between Wari and Tiwanaku colonists and several small Tiwanaku settlements were established in the upper Moquegua Valley during this time period (Williams and Nash 2002). The abandonment of Cerro Baúl and the Moquegua Wari colony took place around AD 1200 and involved the systematic burning of several monumental summit structures on Cerro Baúl (Moseley, et al. 2005; Williams and Nash 2002).

2.2.3.2 The Tiwanaku occupation Initial Tiwanaku expansion from the *altiplano* into the Osmore drainage occurred as early as cal AD 550 during the early/middle part of Tiwanaku Phase IV (Goldstein 2005: 152). In general the Tiwanaku occupation in the Osmore drainage was concentrated in large settlements located primarily in the middle Moquegua Valley. Although Tiwanaku settlements were located in the same section of the Osmore drainage as the vast majority of Huaracane settlements, the Tiwanaku settlement pattern was "fundamentally different" from the Huaracane settlement pattern (Goldstein 2005: 134). In contrast to the Huaracane pattern of evenly spaced small villages located close to the river margins on both sides of the river, Tiwanaku settlements were large densely populated centers situated at considerable distances from the river margins, primarily on dry pampas, and (in most cases) on the eastern side of the river. These settlements were all situated in locations that were not previously occupied by the Huaracane (Goldstein 2005).

The Tiwanaku occupation in the middle Moquegua Valley has traditionally been broken down into three separate phases; the Omo and Chen Chen phases are associated with settlements from *altiplano* Tiwanaku populations and the later Tumilaca phase refers to politically fragmented Tiwanaku-derived local traditions that emerged after the collapse of the official Tiwanaku colonies (Goldstein 1989, 1993a, b, 2000a, 2005; Owen 2005). This discussion will concentrate primarily upon the Omo and Chen Chen phases as they were the true colonial Tiwanaku populations that originated in the *altiplano*. Recent evidence has demonstrated that there is considerable chronological overlap between Omo and Chen Chen style material culture. This suggests that these phases are actually better referred to as styles that appear to correspond to two distinct ethnic groups or *ayllus* from the Tiwanaku heartland in the *altiplano* (Goldstein 2005).

The first Tiwanaku occupations in the middle Moquegua Valley all used Omo style ceramics and sites associated with this style are currently dated to between approximately cal AD 530 and cal AD 1050 at the 1 sigma range (Goldstein 2005: 152). Omo style occupation was concentrated at three large residential sites, the largest of which was Omo, that all were located on the eastern side of the Rio Moquegua (Goldstein 2005). Omo style sites consisted of primarily of tent-like residential structures, contained no formal storage features, and were located away from the riverbed near natural springs and caravan routes to the *altiplano*. All of this evidence seems to suggest that the populations using Omo style ceramics were a pastoralist ethnic group or *ayllu* that specialized in camelid herding (Goldstein 2005).

Tiwanaku colonists that utilized Chen Chen style ceramics did not enter the middle Moquegua Valley until over 200 years after the initial Tiwanaku occupation of the region. Settlements with Chen Chen style ceramics currently date to between approximately cal AD 750 and cal AD 1000; revealing there was considerable overlap with Omo style occupations (Goldstein 2005: 158). Chen Chen style occupation was concentrated at four large settlements, the largest of which was Chen Chen; three of these settlements were located on the eastern side of the Rio Moquegua. These settlements represented a major increase in the colonial Tiwanaku population in the middle Moquegua Valley (Goldstein 2005). With the introduction of the Chen Chen population into the region, Tiwanaku colonists developed considerably more infrastructure indicative of surplus agricultural production. Chen Chen style sites show markedly more stone hoes and large rocker *batanes,* found in association with stone-lined storage cists (Goldstein 2000a, 2005). In addition, all four of the major Chen Chen style sites were associated with artificially irrigated pampas or productive natural springs (Goldstein 2005; Williams 1997, 2002). This evidence suggests that the populations using Chen Chen style ceramics were an agricultural ethnic group or *ayllu* that specialized in the surplus production of maize for export to the *altiplano* (Goldstein 2005). The population increase associated with the arrival of Chen Chen style populations coincided with the construction of the large *altiplano* Tiwanaku style temple at the Omo M10 site. The construction of this large temple, at what probably served as a ritual and administrative center, suggests that the Moquegua Tiwanaku colony was now officially affiliated with or endorsed by the Tiwanaku state in the *altiplano* (Goldstein 1993b, 2005).

A notable aspect of the colonial Tiwanaku occupation of the middle Moquegua Valley is that both Omo style and Chen Chen style populations coexisted in the valley. In fact, Omo and Chen Chen style populations even lived together within three of the large Tiwanaku settlements. However, these settlements were formed of distinct neighborhoods that housed Omo or Chen Chen populations (Goldstein 2005). In all of these settlements the Omo style neighborhoods were located in the northwest and the Chen Chen style neighborhoods were located to the southwest. This persistent pattern can be seen as further evidence that the Omo and Chen Chen style populations were distinct ethnic groups or *ayllus* that originated in the Tiwanaku homeland (Goldstein 2005: 163). Although the vast majority of Tiwanaku settlements in the Osmore Drainage were situated in the middle Moquegua Valley, after approximately AD 800 a few small Tiwanaku settlements, of both Omo and Chen Chen style, were founded in the upper Moquegua Valley near the Wari colonial capital of Cerro Baúl (Goldstein 2005; Williams and Nash 2002). Upon their abandonment circa AD 1000, the majority of Chen Chen style domestic settlements were systematically destroyed leaving a distinctive and perplexing phenomenon known as “rockpiling”. It is not currently clear whether or not the occupants of these settlements did this themselves when the settlements were abandoned or if the sites were destroyed by outsiders, such as the Wari (Goldstein 2005).

2.3 RESEARCH QUESTIONS

To test the hypotheses delineated in Chapter 1, fieldwork at the Huaracane site of Yahuay Alta pursued three basic research questions:

(1) *Did the major status and/or wealth differences detected in the Huaracane mortuary record extend into domestic contexts within the Huaracane community at Yahuay Alta?*

If the type of social differentiation observed in Huaracane boot tombs (see Goldstein 2000b, 2005) existed within Huaracane communities, then only certain households would have had access to high-value exotic goods. Thus if the community at Yahuay Alta was to follow this pattern, high-value exotic goods would be found only in a small number of contexts and these contexts would probably also have other indicators of higher status, such as stone architecture and/or high proportions of fineware serving vessels.

In exploring the economic basis of status/wealth differentiation, my research also investigated inter-household (intra-sector) and inter-sector differences in staple production/storage, craft production, participation in public and domestic ritual, and reciprocity/feasting practices. Surface collection and excavation of domestic assemblages allowed for the assessment of the extent and nature of status and wealth differences at the Yahuay Alta site.

(2) *Were higher status households spatially associated with public architecture?*

If certain households or lineages were controlling public ritual at Yahuay Alta, then I expected higher status households to be spatially associated with the platform mound and/or the raised platforms (in Sectors B and F), even in a way that households could easily control access to the platforms (DeMarrais, et al. 1996; Earle 1997; Nielsen 1995; Schachner 2001). In contrast to the later Tiwanaku and Wari populations in the valley, nothing was known of Huaracane ceremonial practice, so answering this question would be potentially an important step forward in developing a better understanding of Huaracane communal ritual activities.

(3) *What was the nature of the interaction between the Huaracane community at Yahuay Alta and the Wari and Tiwanaku colonial populations in the Moquegua Valley?*

As discussed above, prior to conducting my research at Yahuay Alta it was not known how or even if Huaracane communities interacted with the Wari and Tiwanaku colonies in the region. This question is particularly intriguing given the fact that although *the majority of both Huaracane and Tiwanaku settlements were located in the middle valley region, not one Huaracane style artifact has even been found in Tiwanaku contexts, nor have any Tiwanaku artifacts yet been found in Huaracane contexts* (Goldstein 2005). The site of Yahuay Alta is situated on the boundary between the upper and middle sections of the Moquegua Valley and is thus located in close proximity to the major Wari and Tiwanaku sites in the region (Table 2.1).

Table 2.1. Approximate distances of major Wari and Tiwanaku colonial sites from Yahuay Alta[2]

Wari or Tiwanaku Site	Approximate Distance
Cerro Baúl $_{(W)}$	8.1 km
Cerro Mejia $_{(W)}$	9.9 km
Cerro Trapiche $_{(W)}$	7.1 km
Chen Chen $_{(T)}$	5.6 km
Omo $_{(T)}$	11.7 km

In fact, there is a clear view of Yahuay Alta from the Tiwanaku site of Chen Chen. Given that Yahuay Alta was located in such close proximity to Middle Horizon colonial settlements, there is little doubt that some type of interaction took place between the Huaracane residents of Yahuay Alta and at least some Middle Horizon colonial communities.

However, Goldstein (2005: 132-133) contends that the lack of current evidence for Huaracane-Tiwanaku interaction suggests that the Tiwanaku colonial populations may have actually intentionally avoided interaction with the Huaracane. Such a pattern of non-interaction fits with Murra's (Murra 1972, 1985) vertical archipelago model and can be explained by the possibility that the earliest Omo style Tiwanaku colonists were pastoralists that led a distinctly different lifestyle than the Huaracane agriculturalists (Goldstein 2005).

Both Tiwanaku and Wari colonists settled in the Moquegua Valley as early as AD 550 (Goldstein 2005; Williams 2001) and it is now clear that the Huaracane inhabited at least parts of the middle valley well into the 8th century AD. Especially in light of the current diaspora models used to describe the Tiwanaku presence in the region (Goldstein 2000a, 2005; Owen 2005), it is crucial to determine the nature of the interaction that Huaracane populations had with the Wari and Tiwanaku colonial communities in the region.

[2] W = Wari; T = Tiwanaku.

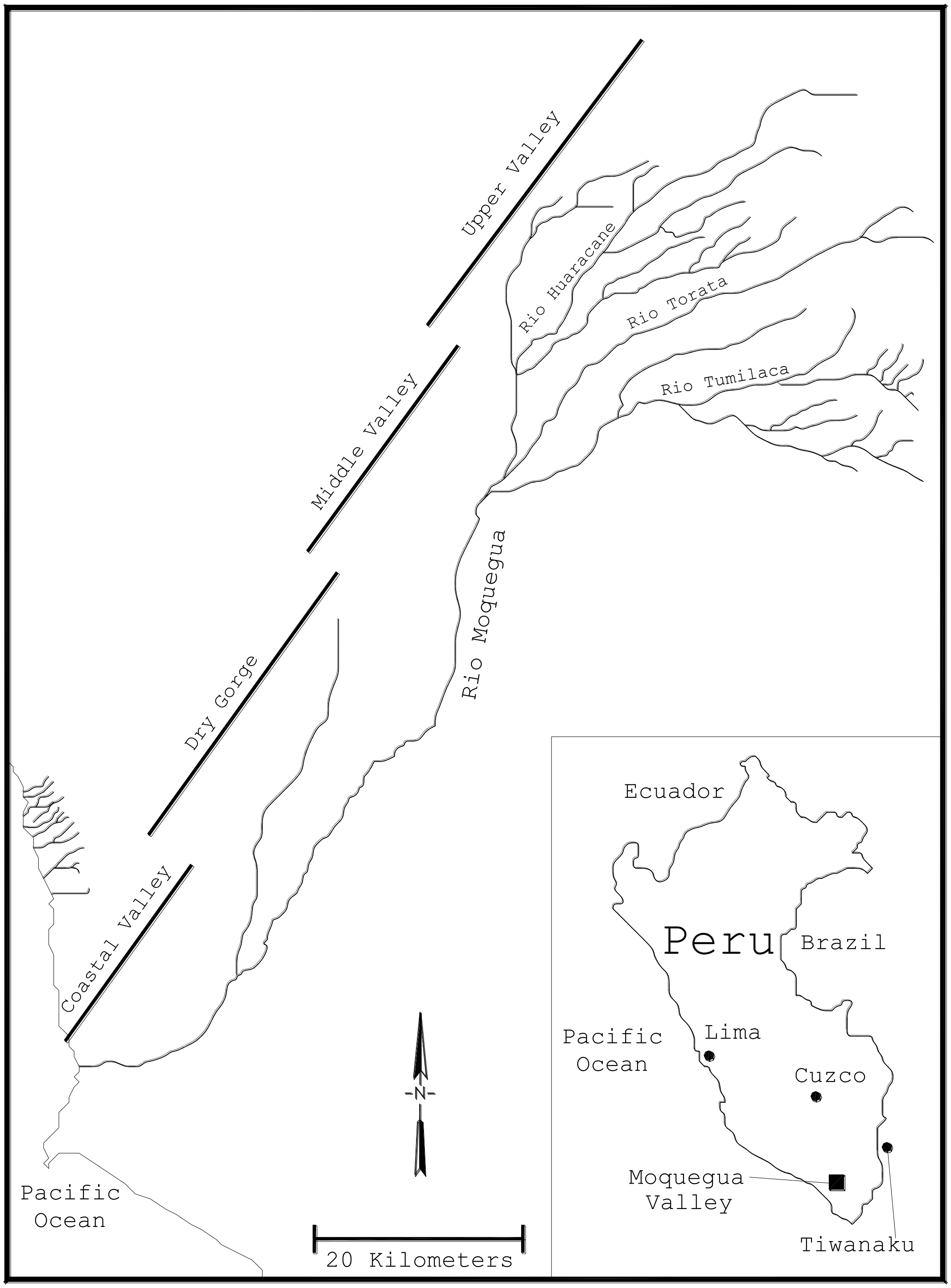

Figure 2.1. Map of Osmore drainage showing four valley sections.

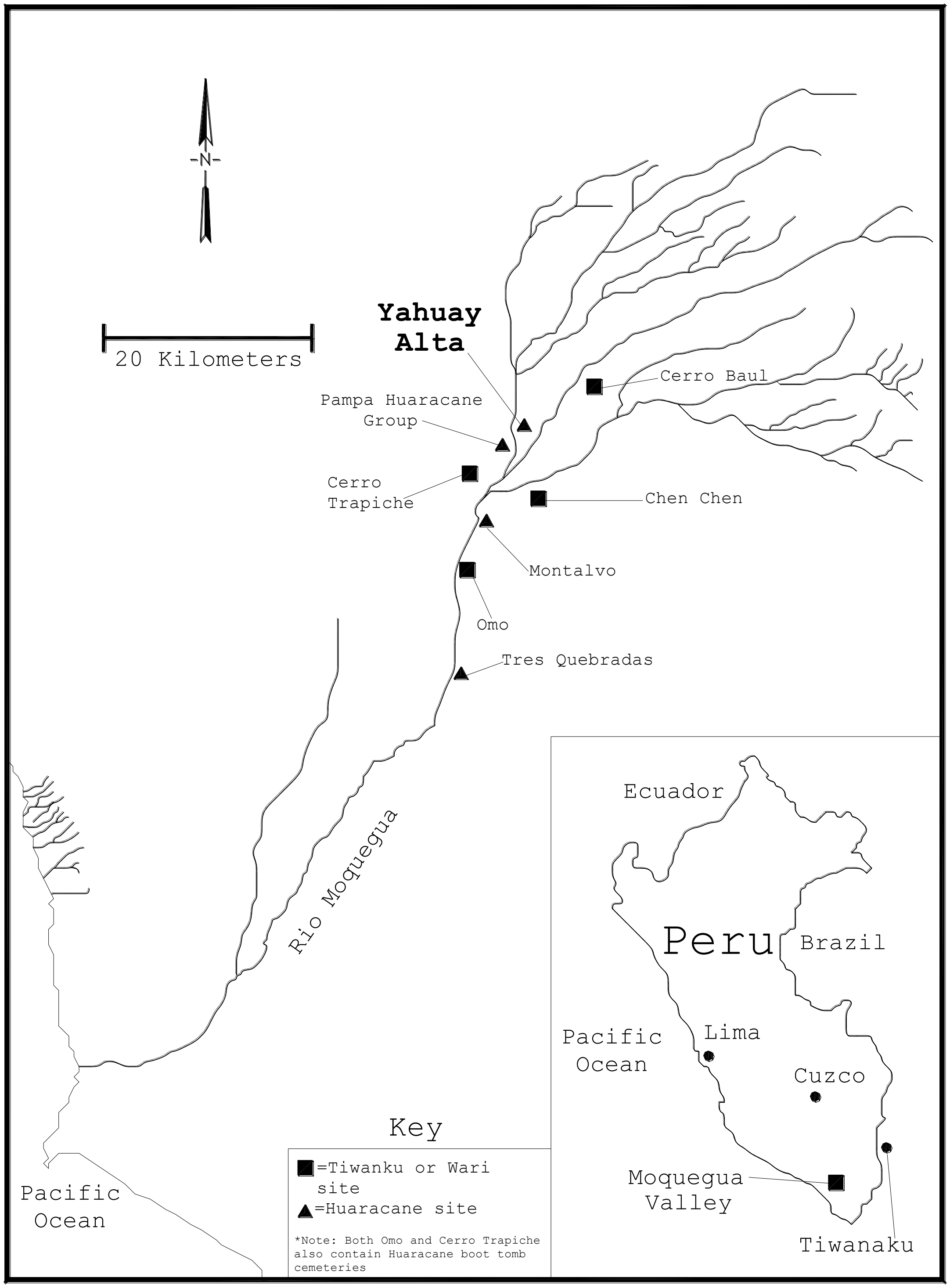

Figure 2.2. Map of the Moquegua Valley showing location of Yahuay Alta in relation to other important sites in the region.

Figure 2.3. Preserved woven reed wall or roof in a road cut profile on the Pampa Huaracane.

Figure 2.4. Zone incised Pukara-style ceramic sherds found on the surface of the Pampa Yahuay boot tomb cemetery.

3.0 YAHUAY ALTA: A HUARACANE COMMUNITY

3.1 SITE LOCATION

Yahuay Alta is situated high upon the southwestern flanks of Cerro Estuquiña, one of the mountains that marks the boundary between the upper and middle valley sections of the Moquegua Valley (Figure 3.1).[3] This mountain is located just across the Rio Huaracane from the Pampa Huaracane (Figure 3.2). Yahuay Alta is the northernmost of the 169 Huaracane habitation sites identified by the Moquegua Archaeological Survey, and therefore is on the northern edge of what can be considered Huaracane territory (Goldstein 2000b, 2005). With this geographic location and its relatively high elevation (in comparison to typical Huaracane settlements) Yahuay Alta is situated just outside the hyper-arid zone of the middle Moquegua Valley where archaeological sites exhibit truly exceptional organic preservation. Although still quite arid overall, it occasionally rains at Yahuay Alta, and during La Niña years the site can receive heavy precipitation which accounts for the erosional damage to many of the terraces at the site. As a result, organic preservation at Yahuay Alta is more akin to those sites located in the upper Moquegua Valley, such as Cerro Baúl, than the typical Huaracane sites located at lower elevations in the middle Moquegua Valley proper. Organic preservation at Yahuay Alta was good but not exceptional; seeds and carbonized wood were the only botanical material recovered in substantial quantities at this site (Goldstein and Muñoz Rojas 2008). None of the more fragile organic materials, such as woven textiles or basketry, found at other Huaracane sites

[3] This site was originally termed simply as Yahuay (or Yaway) by Feldman (1989) and given the site number M35. I have elected to term the sections of the site located up on the slopes of Cerro Estuquiña as Yahuay Alta in order to distinguish this settlement from the residential and cemetery sites located upon the Pampa Yahuay below.

at lower elevations in the middle valley (see Goldstein 2000b) were recovered during excavations at Yahuay Alta.

Topographic position is one of the ways in which Yahuay Alta is atypical. Generally, Huaracane settlements throughout the middle Moquegua Valley were situated upon hilltops that were on average only 48 m in elevation above the Rio Moquegua (Goldstein 2000b: 343, 2005: 123). With an average elevation of approximately 1600 masl, the settlement at Yahuay Alta is some 140 m above the Rio Huaracane, nearly three times the average elevation above the riverbed for Huaracane settlements. As a result of being located high above the river, there are no natural sources of water at the site of Yahuay Alta. Residents at this settlement would have had to carry all water needed for daily activities up from the Rio Huaracane.

In addition, the settlement at Yahuay Alta was not easily accessible. There are two identifiable access routes and a third possible route to the settlement of Yahuay Alta, none of which involve simple walks from the river or the adjacent agricultural fields (Figure 3.3). The most direct route (1 in Figure 3.3) involves hiking up a very steep, winding path that scales the nearly vertical southern slope of the site's westernmost ridge and enters the settlement in the southern most section of Sector A. The less direct route (2 in Figure 3.3) to the better preserved sectors at Yahuay Alta where the public architecture is located involves moving up from the river across the broad sloping Pampa Yahuay, where a Huaracane boot tomb cemetery is located, to the slopes of Cerro Estuquiña. From that point it is necessary to traverse several ridges and deep *quebradas* to enters the settlement near the northeastern corner of Sector F. A third possible access route to the site (3 in Figure 3.3) involves moving up a deeply entrenched *quebrada* that curves around below the northern edge of Sector C accessing the site near the most northeastern architecture in this sector. This final route is made more difficult by the unstable slopes in this *quebrada*, and probably was not a primary access route to the site. Although no defensive works have been found associated with Yahuay Alta, the site not easily reached and is situated in an easily defendable location.

3.2 THE SETTLEMENT AT YAHUAY ALTA

The entire settlement at Yahuay Alta covers approximately 4 ha and is spread over a series of six narrow ridges that were terraced for habitation, and are separated from one another by deep *quebradas* (Figure 3.4). From the top of these ridges one commands an excellent view of the middle Moquegua Valley floodplain (Figure 3.5), where the majority of Huaracane agricultural fields would have been located (Goldstein 2000b). The terraces on the four easternmost ridges were relatively small, generally not very well preserved, and the surface artifact density was relatively low. In contrast, the preservation of the terraces on the two westernmost ridges was substantially better and the surface artifact density on these terraces was substantially higher than on the eastern ridges. In addition, all evidence for public architecture was located on these two westernmost ridges. Consequently, this research project focused only upon the two westernmost ridges at this site where the preservation was better, the surface artifact density was higher, and there was both residential and public architecture. All subsequent discussions of Yahuay Alta will be referring to only the two westernmost ridges at the site.

The residential occupation on the two westernmost ridges at Yahuay Alta consists of five sectors (totaling approximately 2.3 ha) of house remains situated upon terraces, separated from one another by steep sided *quebradas* and other natural topographic features (Figure 3.6). In total, 105 residential terraces were identified at the site during the surface collection phase of this research project. These residential terraces are not uniform in shape or size; some are relatively small and circular and others are relatively large and rectangular. Terraces ranged in size from 4 m^2 up to 135 m^2, with a median size of 18.7 m^2. Over 50% of these terraces were between 10 m^2 and 25 m^2. In general, the domestic architecture is readily visible upon the surface. Stone foundations and walls are preserved up to roughly a meter in height in various structures and terraces. Some houses were constructed with stone foundations and walls, while others were constructed of organic materials that are not preserved on the surface. The following sections will describe each of the sectors I defined at Yahuay Alta.

It has been noted by Goldstein (2005: 121) that most sites in the Moquegua region lack substantial stratigraphy. This is because the loose sandy soils in this desert environment are often blown away exposing architectural features and artifact scatters: a process known as wind deflation. Yahuay Alta's location upon high ridges left this site particularly exposed to wind and as a result, a relatively large amount of artifacts were present on its surface. There is a danger in assuming that the many artifacts upon the surface of the site are *in situ* or de facto refuse; that is that they represent the exact location of where certain activities took place (Schiffer 1985). The artifacts on the surface of Yahuay Alta have certainly been moved around since their deposition and at best probably represent general patterns of refuse disposal. Thus artifacts found in certain contexts on the surface of the site may not all be related to activities in that exact location. However, refuse found upon a certain residential terrace more likely came from the residents of that terrace than from the residents of another terrace at the site. This assumption was used when making interpretations of patterns of artifacts found upon the surface of Yahuay Alta.

3.2.1 Sector A

Sector A is the southern most sector at Yahuay Alta, and is located on the southern tip of the westernmost ridge at the site (Figure 3.7). It consists of a rounded hill with a relatively flat summit area. As mentioned earlier, the most direct access route to the site leads up a very steep slope to the southern edge of this sector. Eleven roughly rectilinear residential terraces were located in Sector A covering a total area of approximately 200 m^2. All of these terraces were located on the northern slope of this sector facing the rest of Yahuay Alta. The residents of these terraces would have commanded an excellent view of the site's public ceremonial sector. There were no terraces constructed on the southern slope of Sector A, which faced out to the middle valley. Directly behind and above of the majority of the terraces in Sector A is the large flat summit of the hill. This open area consists of a flat, possibly artificially leveled, expanse and two slightly lower irregularly shaped terraces, and covers approximately 240 m^2. There is no surface evidence to suggest any kind of structures were constructed in this open area, however the surface did have a high artifact density. Sector A is connected to the rest of the site, specifically to Sector B, by a narrow ridge with steep sloping sides that extends from its northern slope. At its narrowest point this ridge is only approximately 2.5 m wide (Figure 3.8).

3.2.2 Sector B

Sector B is the public ceremonial sector of Yahuay Alta, which consists primarily of a large open plaza in the south and an artificial platform mound in the north (Figure 3.9). Sector B is the only sector at Yahuay Alta with no clearly identifiable residential terraces: all of the architectural features in this sector appear to be part of a public ceremonial complex. A large artificial platform mound that is approximately 730 m^2 at its base dominates this ceremonial complex (Figures 3.10 & 3.11). This mound appears to have been a natural hill that has been extensively modified. It has a narrow terrace halfway up its western side that overlooks three contiguous stone structures that are situated directly at the western base of the mound.[4] There is a second narrow terrace on the southern side of this mound that overlooks the plaza. The summit of the platform mound is heavily damaged, but it is clear that it was originally a large flat area. This mound was originally faced with roughly cut stone blocks that are geologically distinct from the immediately local bedrock. The very steep slope just to the east of the platform mound is strewn with a large amount of these cut stone blocks that have fallen off the mound. Directly to the north of the platform mound there is a small, 19.6 m^2, terrace with a low stone retaining wall. There is no evidence that a structure with substantial stone walls similar to the contiguous structures mentioned above was built upon this terrace.

Directly to the south of the platform mound is a large flat plaza area that covers approximately 930 m^2 (Figure 3.12). This plaza is bounded on its eastern and western edges by steep, nearly vertical slopes. Located in the south eastern half of the plaza are the remains of a approximately 8.5 m long stone wall; the plaza to the south of this wall is approximately 50 cm higher than the plaza to the north of the wall. There is also a large amount of stone wall fall on the steep slopes immediately below the eastern edge of the plaza, which seems to have come from the stone retaining wall along this edge of the plaza. Several holes dug by looters in the southwestern portion of the plaza reveal that substantial efforts were undertaken to create the level plaza surface. There is no evidence upon the surface that any kind of structures were constructed in the plaza, however there were relatively high ceramic and lithic densities on the plaza surface.

3.2.3 Sector C

Sector C is located just north of Sector B and is the northernmost sector on the western most ridge at the site (Figure 3.13). This sector extends further west than any other sector at Yahuay Alta. Sector C consists of a low lying area, directly to north of the platform mound and a large round terraced hill just to the west of this area. A total of 36 domestic terraces have been

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[4] On the surface there appeared to be four contiguous structures along the western base of the platform mound. For this reason four structures were drawn into the official site map (Figure 6), each of which were treated as a individual surface collection unit. Eventual excavations in this context after the creation of the site map revealed that there were only three structures in this location.

identified in this sector covering an area of approximately 770 m^2. The majority of these terraces are rectilinear in shape, although there are a few circular examples. The low lying area directly north of the platform mound contains several terraces on its eastern and western sides, however, the center of this area is relatively free of architecture and is heavily damaged by water erosion. The third possible access route to the settlement leads up to the northern and lowest end of this low lying area. The vast majority of the terraces on the large hill to the west of the low lying area are on its southeastern slope facing the rest of the site. Only a few isolated terraces are located on the summit and eastern slope of this hill and out of view of the rest of the site. In addition to the domestic terraces, there was also one other large terrace located in Sector C. This abnormally large terrace is similar to several other large terraces at the site in having carefully constructed stone retaining walls, and a location near the edge of steep slopes or cliffs. I have chosen to term these terraces as "lookout terraces" because one can look out over the edge of the site when standing on them. This particular lookout terrace is located at the base of the northeastern corner of the large hill in Sector C and covers approximately 82 m^2 (Figure 3.14). It overlooks the back or northern boundary of the site and is situated directly over the third possible access route to the settlement described above.

3.2.4 Sector D

Sector D is the smallest sector at Yahuay Alta and is located just to the northeast of Sector C and just to the northwest of Sector E (Figure 3.15). Most of the terraces in this sector had heavy erosional damage to their front retaining walls, and in general were badly preserved. This may have had to do with the fact that Sector D has the steepest terraced slopes at the site. In total 14 domestic terraces have been identified in this sector covering an approximate area of 240 m^2. The majority of the terraces in this sector are roughly rectilinear in shape. The steepness of the slopes in Sector D meant the domestic terraces here were to only level surfaces in this sector. In addition to the domestic terraces there is also one larger lookout terrace located in the southwest corner of this sector. This roughly keyhole-shaped lookout terrace covers approximately 30 m^2 and overlooks the third possible access route to the site (Figure 3.16).

3.2.5 Sector E

Sector E is located roughly in the center of Yahuay Alta to the east of Sector C, the southeast of Sector D, and the northwest of Sector F (Figure 3.17). In total, 28 domestic terraces have been identified in this sector covering an approximate area of 760 m^2. Although the majority of the terraces in Sector E are rectilinear in shape there are several roughly circular terraces as well. There is a high concentration of terraces along the top, and on the northern and southern slopes, of a narrow ridge that runs east to west in the center of this sector. Many of the terraces in this part of the sector, especially those on the northern slope of the ridge, were relatively small. On top of the western end of the ridge was a relatively open area below which many of the terraces were located. This open area covered some 42 m^2, and was possibly a communal area rather than domestic space. In the more eastern part of Sector E, there were several larger terraces including two that supported large structures with well preserved stone walls.

In addition to the domestic terraces, Sector E exhibits two lookout terraces and one open plaza-like area. The plaza-like area is located directly behind, above, and to the north of the large stone walled structure in the southeastern corner of the sector (Figure 3.18). This large flat area covers approximately 200 m^2, appears to have been artificially leveled, and had a stone retaining wall along its northern and eastern edges. Along the northern edge of this probable plaza there were several shallow circular depressions.[5] One of the lookout terraces was located in the southwestern section of Sector E. This terrace was approximately 70 m^2 and looked out to the south across a deep and wide *quebrada* at Sector A (Figure 3.19). From this terrace one would also have an excellent view of the platform mound and its plaza, which were just to the southwest. The second lookout terrace in Sector E was located on the summit of a high ridge just east of the center point of the sector (Figure 3.20). At an elevation of 1640 masl, this lookout terrace is this highest architectural point at Yahuay Alta. This particular terrace also has the least substantial stone retaining wall of any of the lookout terraces at the site despite is size of approximately 100 m^2. This lookout terrace commanded an excellent view of nearly the entire

[5] Excavations in this context revealed that these depressions were in fact two small circular residential structures. Since these structures were not clearly visible on the surface of the site they were not included in the original site map.

site and one standing upon it could have observed activities taking place in most locations at the site.

3.2.6 Sector F

Sector F is the only sector of the site that contains both public and domestic architectural features and is located just to the southeast of Sector E (Figure 3.21). The public architecture in this sector consists primarily of two flat elevated platforms and their associated plazas. The southern platform (P1) is located just north of the southeastern tip of the site and covers an area of approximately 270 m^2 (Figure 3.22). This platform is raised up approximately one meter above a flat plaza-like area to its north and west, which covers an area of approximately 470 m^2. The second and less direct access route to the settlement, described above, leads up to the northeastern corner of this plaza-like area. The southern platform appears to originally have had a stone retaining wall around its base, but this is heavily deteriorated and the platform edges now slope directly down onto the plaza level. This platform's southern edge is right above a steep cliff, and standing on the platform, one commands and excellent view of the middle valley. Just south and approximately five meters below the southern platform is a small domestic terrace that has the remains of two small circular structures upon its surface.

The open plaza area is located at the base of a natural hill ringed by domestic terraces. The summit of this hill appears to have been artificially flattened to form the northern elevated platform (P2) of Sector F (Figure 3.23). This platform is approximately 280 m^2 and stands approximately two meters above the large crescent shaped terrace directly to its south. It is difficult to tell how much of this platform is part of the natural hill and how much is artificial. The back or northern end of the platform does appear to be unmodified, while the front or southern end appears to be artificial as it has a large curving retaining wall. Standing on the northern platform one commands an excellent view of Sector F and of the middle valley as well.

A total of 16 domestic terraces covering an approximate area of 560 m^2 were identified in Sector F. Thirteen of these terraces were located on or just at the base of the terraced natural hill in between the northern and southern elevated platforms. These terraces were quite variable in both shape and size. In addition to these domestic terraces there was one large lookout terrace located in the southwestern corner of Sector F (Figure 3.24). This large, very flat terrace covered approximately 120 m^2 and had a very well made stone retaining wall constructed of carefully cut stone blocks (Figure 3.25). Just to the northwest and below this lookout terrace is a long narrow domestic terrace with a well made, but partially deteriorating, stone retaining wall.

3.3 ASSESSING HUARACANE INTER-HOUSEHOLD DIFFERENCES AT YAHUAY ALTA

The identification of household wealth/status differences is a complicated process and it is essential to rely on multiple lines of evidence when investigating this problem (Hirth 1993). In this study, house size, quality of architecture, and domestic assemblages differences in imported materials, high-value pottery and craft-goods (particularly Pukara or Paracas-Nasca items), and proportions of serving vessels were used as measures of household status/wealth.

A household's residential architecture, especially in agrarian societies, is generally a robust indicator of wealth or status (Smith 1987). Higher status families often reside in residential structures that are larger, and/or built of more elaborate or durable material than typical residential structures (Hirth 1993; Potter 2000b; Smith 1987). This line of evidence was especially important at Yahuay Alta in determining the locations of excavations, such that a wider range of evidence related to status and/or wealth could be investigated for the various styles of architecture exhibited at the site.

Becuase households are basic units of production and consumption in agrarian societies, the nature of their artifact inventories should reflect the degree of control over resources they command and reflect household consumption patterns (Hirth 1993: 124). Although some artifact classes (such as serving wares) are better predictors of wealth than other artifact classes (such as large grinding stones), no single class of artifact likely to fully reflect all dimensions of wealth or status. As a result, it was important to turn to multi-dimensional analysis of residential assemblages to reconstruct status and/or wealth differences among Huaracane households at Yahuay Alta (Hirth 1993b; Smith 1987).

3.3.1 Staple production and wealth dietary differences

In order to detect differential participation in the production and/or storage of staple goods, agricultural implements and storage facilities served as primary measures. Implements, such as stone hoes or sickle blades, are commonly used in agricultural tasks and it is reasonable to assume that households or sectors of a settlement more heavily involved in agricultural activities would have higher proportions of used or broken agricultural implements (McAnany 1992). My research investigated the spatial patterning of agricultural implements between households, within residential sectors, and between residential sectors at Yahuay Alta to evaluate differential involvement in agricultural production. The presence of storage facilities, either as pits or above ground structures, are good indicators of control over staple goods. Comparisons of the volumes and associations of storage facilities both within and between residential clusters helped in assessing potential inequalities in storage of surplus staple goods (Santley 1993).

This research also utilized botanical and faunal evidence in order to get at potential dietary differences relating to control over staple production. In the prehispanic Andes, certain types of food, especially camelid meat and maize, had high cultural values bestowed upon them (Hastorf 2003a; Hastorf and Johannessen 1993). As I discussed earlier, isotopic research has shown that maize only comprised between 3% and 18% of the Huaracane diet in what has been considered a prime maize-growing zone for *altiplano* colonists (Goldstein 2000b: 220; Sandness 1992: 49). This relatively low maize diet indicates that maize possibly played a similar socioeconomic role to what Burger and Van der Merwe (1990) have suggested for the Chavín culture, where maize was important ritually but not used as a primary staple. Distributions of camelid or maize remains were studied to determine if certain households or suprahousehold groupings were controlling the production of or access to, these highly valued staple goods.

3.3.2 Long distance exchange

Evidence for differential involvement in long distance exchange should be indicated in the distribution of exotic goods. Differential association of exotic prestige goods, including Pukara pottery and Paracas-Nasca textiles, with certain households would suggest domination of exotic exchange; a process Goldstein (2000b: 355) sees as integral to the development of Huaracane chiefly power. In addition, it was equally as important to investigate the distribution of more mundane trade items, such as imported lithic materials (basalt or obsidian) or semi-precious stones used in bead making (sodalite or lapis lazuli). In addition, given the importance of maritime resources in the Huaracane diet (Goldstein 2000b; Sandness 1992), the distribution of marine shell also was investigated at Yahuay Alta. Comparisons of assemblages of exotic materials were compared at the household level within residential sectors and among residential sectors at the site to test for significant differences in access to exotic goods. This analysis designed to test Goldstein's (2000b) hypothesis by revealing whether long distance exchange was dominated by individual households, by larger social groups or lineages represented by residential sectors, or if exotic materials were relatively evenly distributed throughout the community at Yahuay Alta.

3.3.3 Specialized craft production

Craft specialization can be defined as a "…situation in which a large portion of the total production of a given item or class of items is generated by a small segment of the population." (Cross 1993: 65). The archaeological detection of craft production is indicated primarily by the presence of production tools and/or debris (e.g., spindle whorls, lithic débitage, or waster sherds). For example, concentration of ceramic waster sherds are a good indicator of specialization in ceramic manufacturing, as waster sherds are not exchanged and have little intrinsic value (Costin 1991, 2001; Earle 2002). Following the definition above, proportional differences in the distribution of production tools and/or debris were treated as good indicators of household specialization, while an even distribution was evidence for relatively self sufficient households (Costin 1991, 2001; Earle 2002; Haines, et al. 2004). Specialization in the production of lithic tools was approached by looking for concentrations of unmodified perform bifaces or blades, substandard bifaces or blades not suitable for exchange, or blade cores in certain contexts compared to more widely distributed modified or heavily worn bifaces or blades (Cross 1993; Earle 2002). Of course, an important aspect of this investigation entailed exploring the relationship between high status and craft production among households. Thus it was important to determine whether or not evidence for craft specialization occurred in households with material indicators of high status.

3.3.4 Ritual and ceremony

I distinguished differential household participation in ceremonial practice by: (1) spatial proximity to public structures; and (2) indications of more intensive performance of household ritual activities or of a wider range of ritual practices. The spatial association of high status households with public ritual facilities so that access to these facilities could be easily controlled is a strong indicator that certain households or lineages were attempting to dominate or control public ritual (DeMarrais, et al. 1996; Earle 1997; Nielsen 1995; Schachner 2001). If certain households or lineages were controlling public ritual at Yahuay Alta then I expected higher status households to be spatially associated with the platform mound and/or the raised platforms in a way that they could easily control access to them.

The degree of participation in domestic ritual can be indicated by the proportions of ritual paraphernalia found associated with individual households (Flannery 1976; Joyce 2000; Marcus and Flannery 1996). At Yahuay Alta, I expected this paraphernalia to include items such as: items associated with the ingestion of hallucinogenic substances (carved wooden lime dippers, spoons, or snuff tablets), ceramic figurines, incense burners, or ritually important exotic materials (*Spondylus* shell) (Goldstein 2000b). In addition, the presence of faunal remains from ritually important animals (condors, pumas, toads, or sharks) or plants (coca) could also be evidence of differential participation in domestic ritual (Moseley, et al. 2005). Prior to conducing my research at Yahuay Alta very little was known about Huaracane ritual. As a result, the correlates for domestic ritual described above were expectations based upon ritual paraphernalia found in excavated Huaracane boot tombs and in Middle Horizon contexts elsewhere in the Moquegua Valley (Goldstein 2000b; Moseley, et al. 2005).

Ultimately, the excavations at Yahuay Alta failed to find examples of most of these archaeological correlates for domestic ritual. The wide range of (presumably) ritual artifacts found in the Huaracane boot tombs (see Goldstein 2000b) was not deposited in domestic contexts at Yahuay Alta. The only materials possibly relating to ritual activities found at Yahuay Alta were the seeds of a ritually important plant, *Schinus molle* and marine shell and stone beads, which could have been part of ritual costumes.

3.3.5 Feasting activities

There are several useful lines of evidence for assessing household differences in feasting activities. Very large cooking vessels may not be practical for every day cooking and as a result, they are generally used for preparing large volumes of food for large consumption events such as feasts (Clarke 2001: 160). Consequently, households that are heavily involved in feasting activities should be expected to have higher proportions of very large cooking vessel fragments deposited in middens surrounding their house (Clarke 2001: 158). Proportions of serving vessels are also good indicators of feasting activities. Households differentially involved in feasting should be expected to have higher proportions of serving vessels and possibly a higher occurrence of higher quality or even decorated serving vessels (Clarke 2001; Hayden 2001a). Differential participation in feasting can also be detected by the preponderance of certain animal species (camelid and guinea pig), the most desirable cuts of camelid, or preferred plant species (maize or *molle*) in the faunal and botanical assemblages (Costin and Earle 1989; Crabtree 1990; Hastorf 1991, 2003a; Hayden 2001a). Finally, the presence of extra or larger cooking facilities, such as hearths, roasting pits or temporary kitchens added onto households, may be indicators of regular hosting of feasts (Clarke 2001; Hayden 2001a). The indicators for feasting described above only hold true if certain households hosted large feasts for the purpose of promoting and/or enhancing their social status relatively frequently (Adams 2003). If such feast are hosted relatively infrequently or are more often potluck style feasts meant to promote community solidarity, large differences in household ceramic assemblages are unlikely (Adams 2003).

The archaeological correlates of *chicha* production and consumption are relatively similar to those of feasting in general. Although *chicha* can be made in regular sized vessels, the efficient production of large quantities of *chicha* requires large vessels. In addition, *chicha* does not store very well, so the large quantities need for a feast cannot be brewed long in advance (Jennings 2005; Jennings, et al. 2005). As a result, households that regularly hosted feasts involving *chicha* are expected to have higher proportions of large vessels. In addition, as with feasting in general, households differentially involved in feasting with *chicha* are expected to have higher proportions of serving vessels, particularly decorated serving vessels. In the Andes elaborate vessels for drinking *chicha* are often found in matching sets (Goldstein 1993a: 36; Moseley, et al. 2005: 17268). Other important indicators of *chicha* production are extra hearths (possibly set into a row) and higher than typical proportions of grinding stones used for processing maize (Moseley, et al. 2005: 17267). Finally, households differentially involved in the production and serving of *chicha* are expected to have larger than average associated storage facilities, either above ground structures or storage pits, containing high proportions of maize.

3.4 THE YAHUAY ALTA 2006 FIELDWORK

Fieldwork aimed at assessing Huaracane inter-household differences at Yahuay Alta consisted of two phases: a systematic surface collection, followed by horizontal excavations. In order to assess intrasite variability in wealth/status, the systematic surface collection involved all five sectors of the site (A, B, C, E, & F) described above, with the many terraces throughout the site serving as individual collection units. Subsequently, excavations were conducted at eight locations in five separate sectors of the site. Seven domestic terraces of different sizes and shapes were targeted for these excavations in order to better understand differences observed from surface features. The eighth excavation unit was located in one of the small, contiguous structures adjacent to the site's platform mound (in Sector B) in order to determine the function of these unique architectural features.

3.4.1 Systematic surface collections at Yahuay Alta

For the systematic surface collection, the collection units were primarily defined by the many terraces constructed upon the various slopes at the site. An individual terrace was treated as one collection unit, and a total of 120 terraces were thus collected. In addition to these terrace collection units, 5 x 5 m or 10 x 10 m collection units were located in large open spaces, plazas, or on large flat platforms. A total of seven 5 x 5 m collection units and ten 10 x 10 m units were collected. All together there were 138 collection units (Figure 3.26). Each collection unit was assigned an arbitrary, consecutive identification number as it was recorded, starting with 1. All but two of the surface collection units (Units 110 & 116) yielded cultural material.

The systematic surface collection was conducted by a crew of six fieldworkers, including myself and the Peruvian co-director of the project, Mónika Barrionuevo Alba. Utilizing a map of the site's terraces created during preliminary investigations at the site in 2004, a preliminary team consisting of two field workers (including myself) marked the limits of each collection unit using pin flags and assigned each unit a collection number on the site map. Each collection unit was then photographed from each of the four cardinal directions. In addition, a GPS point was taken in the northeast corner of each collection unit. A collection team consisting of two fieldworkers followed this preliminary team and proceeded to systematically collect 100% of the cultural material present on the surface of each unit. The members of this team walked across each collection unit in parallel lines approximately two meters apart scanning the ground in front of them for cultural material and making repeated passes until the entire unit was covered. The recovered cultural material was placed into bags according to artifact class (e.g. ceramics, lithics, bone, or shell) and these bags were left on the surface of each collection unit. A final team consisting of two field workers (including the Peruvian co-director) followed the collection team and recorded the material found within each collection unit in order to create a preliminary inventory for the surface collection. The systematic surface collection of Yahuay Alta proceeded very quickly; it took only four and one half workdays in the field to cover the entire site.

3.4.2 Horizontal excavations at Yahuay Alta

Excavations at Yahuay Alta consisted of broad horizontal units designed to expose entire domestic terraces and, when possible, adjacent open patio areas. Ideally this strategy would allow for the excavation of both internal and external spaces and allow the identification of a wide variety of activity areas. Because of limited time, it was only possible to excavate eight contexts at Yahuay Alta and the choice was made to concentrate excavation in relatively well preserved contexts. In total the eight, excavation units at Yahuay Alta exposed an area of 455 m^2 and were excavated over a period of nine weeks working five days a week.

All excavation units were subdivided into 1 x 1 m grids to maintain spatial control of recovered artifacts and followed standard techniques using ¼ inch screen for the recovery of artifacts. Floor contexts and features were fine-screened to facilitate the recovery of small artifacts and ecofacts (such as small beads, obsidian flakes, and seeds). During the excavations the following sampling strategy was undertaken for the recovery of microbotanical remains. One-liter samples of dry sediment were taken from every 1 m^2 of interior space from the layer just above the living surfaces and 2 liter samples (where possible) were taken from every feature context. Each of the eight excavated contexts at Yahuay Alta was chosen for specific reasons (Figure 3.27). See Chapters 5 and 6 for more detailed descriptions of each excavated context.

3.5 RADIOCARBON DATES FROM YAHUAY ALTA

An important goal of the research conducted at Yahuay Alta in 2006 was to determine how the occupation of this site fit into the known Huaracane sequence. To this end, a total of 25 samples for radiocarbon dating were taken from the eight excavation units. With the help of Mark Abbott of the University of Pittsburgh's geology department, eight of these samples, one from each excavation unit, were submitted to the University of California Irvine's Keck laboratory facility for AMS radiocarbon analysis. Following this analysis each date was calibrated using the IntCal04 calibration curve (Reimer, et al. 2004). The results of this analysis resulted in two distinct clusters of dates, which demonstrate that Yahuay Alta was inhabited both during the later part of the known Huaracane sequence and the early part of the Middle Horizon (Table 3.1).

Table 3.1. Radiocarbon dates from Yahuay Alta

Lab	Specimen #	Context	Material	14C Age BP	Error ±	Median Age cal AD	1 Sigma Range	2 Sigma Range
UCI	43615	Unit 1	Carbon	1825	20	184	138-227	131-228
UCI	43616	Unit 2	Carbon	1790	20	234	177-318	137-323
UCI	43617	Unit 3	Carbon	1215	20	813	775-865	719-885
UCI	43618	Unit 4	Carbon	1870	20	130	83-208	79-216
UCI	43707	Unit 5	Carbon	1235	20	772	710-856	690-871
UCI	43619	Unit 6	Carbon	1230	20	788	717-859	693-876
UCI	43708	Unit 7	*Molle*	1230	20	788	717-859	693-876
UCI	43709	Unit 8	Carbon	1260	20	730	693-773	676-802

The earlier cluster consists of three dates from Units 1, 2, & 4, which range between cal AD 79 and cal AD 323 at the 2 sigma range. The median dates place this occupation of Yahuay Alta primarily during the 2nd century and possibly into the 3rd century AD. Thus this occupation fall towards the end of the established Huaracane sequence during the time period when boot tombs were being constructed (Goldstein 2000b, 2005). I have chosen to term this time period at Yahuay Alta as the Late Huaracane phase, because it corresponds with the later part of the previously established Huaracane sequence. All three contexts that date to this time period are located within the eastern half of Yahuay Alta and are relatively distant from the platform mound (Figure 3.28).

The later cluster of radiocarbon dates consists of five dates from Units 3, 5, 6, 7, and 8, which range between cal AD 676 and cal AD 885 at the 2 sigma range. The median dates indicate that this occupation of Yahuay Alta occurred primarily during the 8th century AD. This cluster of dates falls well outside the established Huaracane sequence and places a portion of the occupation of Yahuay Alta squarely in the Middle Horizon. As discussed in Chapter 2, these are the first dates from a confirmed Huaracane context that demonstrate contemporaneity with the Wari and Tiwanaku colonies in the valley. There is overlap with occupations at the Wari sites of Cerro Baúl and Cerro Mejia and with occupations at the Tiwanaku sites of Omo and Chen Chen (Goldstein 2005: Table 5.2; Moseley, et al. 2005: Table 1; Williams 2001: Table 1). Although these are the first confirmed Middle Horizon Huaracane dates, it is of note that recent research in the middle Moquegua Valley, especially at Cerro Trapiche (see Figure 3.1), has also found preliminary evidence demonstrating Huaracane presence in the region during the Middle Horizon (P. S. Goldstein, personal communication, 2008; Green 2008). I have chosen to term this time period at Yahuay Alta as the Terminal Huaracane phase, because it likely represents the final time period when the distinctive Huaracane material culture was used in the Moquegua Valley. All of the contexts that date to this time period, with the exception of Unit 3, are located in the western half of Yahuay Alta relatively close to the platform mound (see Figure 3.28).

The radiocarbon dates discussed above demonstrate that Yahuay Alta was a multi-component site inhabited during two distinct time periods. Interestingly this site exhibits horizontal rather than vertical stratification. In all but one excavated context, Unit 6, at Yahuay Alta there are superimposed occupations. Unfortunately, in Unit 6 no appropriate samples for radiocarbon dating were obtained from the lower occupation layer. Thus the apparently earlier occupation in this context has not been securely dated. Nevertheless, it appears that the eastern half of Yahuay Alta was primarily inhabited during the Late Huaracane phase and the western half of the site was primarily inhabited during the Terminal Huaracane phase (see Figure 3.28). This pattern is further exhibited by the differential distribution of utilitarian ceramic wares across the site (see Chapter 4 for more in depth discussion of this distribution). As the presence of Unit 3, a Terminal Huaracane context, in the eastern half of Yahuay Alta suggests, the horizontal stratification of this site was not absolute. However, each half of the site does appear to correspond primarily to a single phase of occupation.

3.6 THE ABANDONMENT OF YAHUAY ALTA

Another important goal of obtaining these radiocarbon dates from Yahuay Alta was to determine when this Huaracane settlement was abandoned. Based upon the results of the radiocarbon dates taken from the site discussed above, it is possible to answer this question with a relatively high degree of certainty. However, it is still not clear exactly how or why this abandonment occurred, but given the timing of the event some probable explanations can be proposed.

Based upon the five radiocarbon samples from Yahuay Alta that date to the Terminal Huaracane phase, it is clear that this settlement was abandoned no later than cal AD 885 (see Table 3.1). Given that this date is at the later end of a 2 sigma error range, this abandonment likely occurred even earlier. The latest median age for a radiocarbon sample taken from Yahuay Alta is cal AD 813. Of course these dates are not dating the actual abandonment of the settlement, rather they give a reasonable estimate of the last time the settlement was occupied. I am confident that the final abandonment of Yahuay Alta took place some time soon after AD 800 and that the site was not reinhabited or resettled at a later date.

There is absolutely no evidence for any post-Terminal Huaracane occupation at Yahuay Alta. The majority of the diagnostic ceramics at the site are stylistically Huaracane, strongly suggesting that no later groups of different cultural traditions, such at the Tumilaca or the Estuquiña, resettled this relatively inaccessible site. I am confident in this assessment because there is a Tumilaca site located on the relatively easily assessable lower southeastern flanks of Cerro Estuquiña only 0.7 km from the core of Yahuay Alta. The many terraces on this site have Tumilaca style ceramics, including some sherds from decorated vessels, upon their surfaces (see Goldstein 2005: 175 for examples of Tumilaca style ceramics). Since this Tumilaca site had a large amount of diagnostically Tumilaca ceramics upon its surface, it is reasonable to assume that if a Tumilaca population resettled Yahuay Alta then at least some Tumilaca style ceramics would be found upon the surface of the site. Not one sherd that could be identified as Tumilaca in style was found at Yahuay Alta. Thus, I am very confident that Yahuay Alta was abandoned by its Terminal Huaracane population sometime after AD 800 and was not resettled at a later date by any later cultural group.

A second reason why I am confident that Yahuay Alta was abandoned no later than cal AD 885 is that this date fits quite well into the local chronology of the region. As discussed in Chapter 2, circa AD 800 the Moquegua region went through a period of reorganization. The secondary Wari center of Cerro Mejia, the second largest Wari colonial settlement in the Osmore drainage, was abandoned circa AD 800 at a roughly similar time that Yahuay Alta was abandoned (Nash 2002; Williams and Nash 2002). Also, sometime between AD 800 and AD 900 the Wari center of Cerro Baúl was completely reorganized and much of its monumental architecture was rebuilt (Williams 2001; Williams and Nash 2002). Finally, after AD 800 several small Tiwanaku settlements were established in the upper valley near Cerro Baúl; this was the first time the Tiwanaku settled outside of the middle valley (Goldstein 2005; Williams and Nash 2002). This evidence convincingly suggests that major changes were taking place in the Moquegua region during the 9^{th} century AD, thus it is possible that this reorganization could have involved the abandonment of Yahuay Alta. This evidence not only helps to support the timing of the abandonment of Yahuay Alta but also helps to explain why this settlement may have been abandoned.

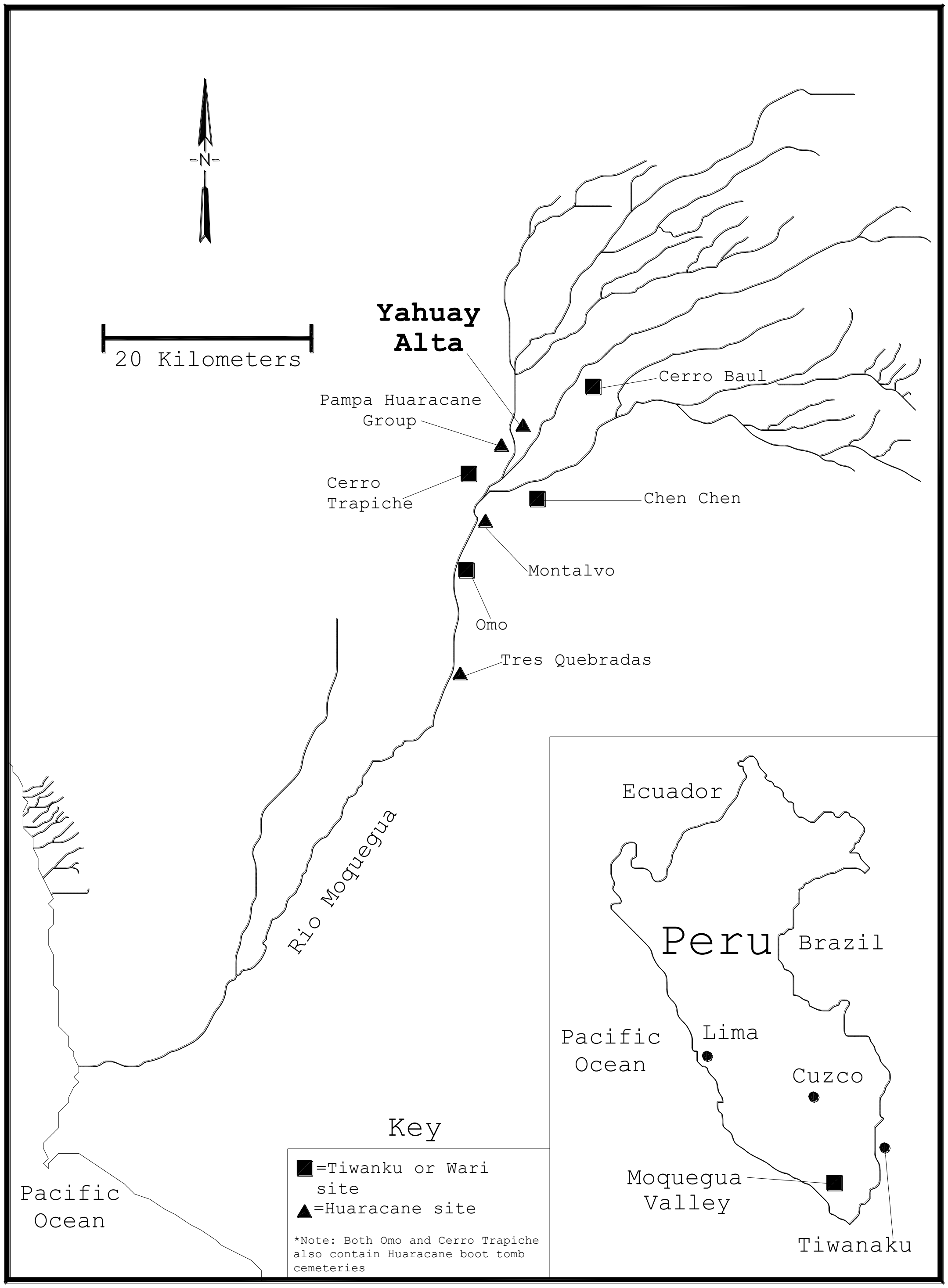


Figure 3.1. Map of Moquegua Valley showing location of Yahuay Alta in relation to other important sites in the region.

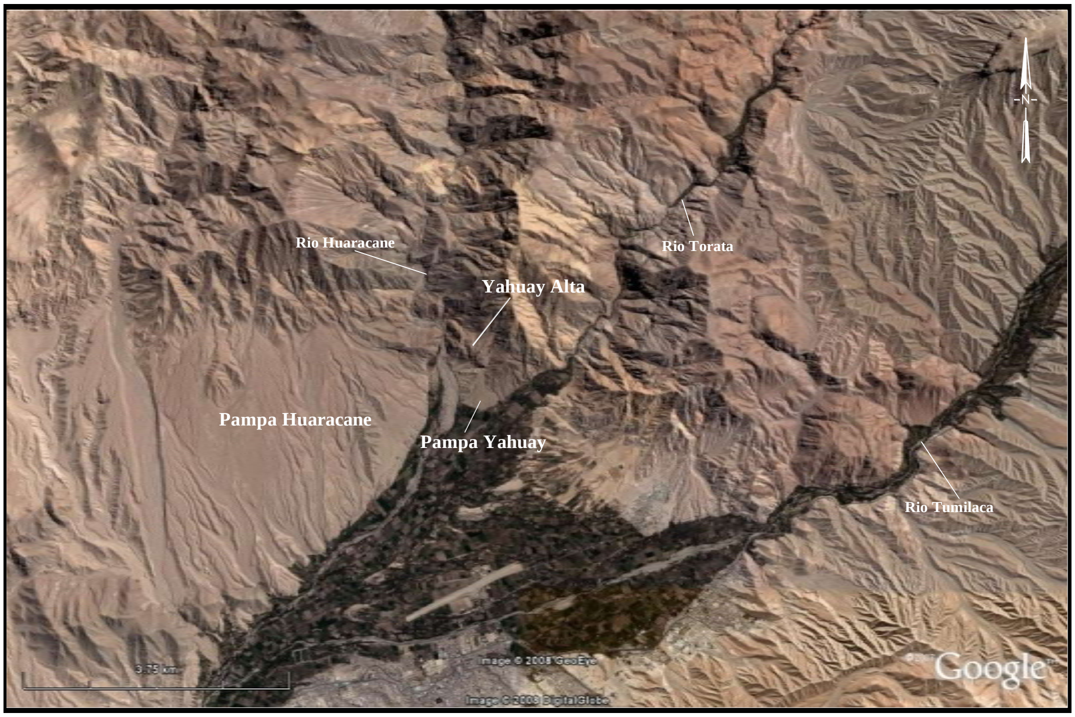


Figure 3.2. *Google Earth*™ image of Moquegua Valley showing location of Yahuay Alta and other important landmarks.

Figure 3.3. *Google Earth*™ image of Yahuay Alta and the Pampa Yahuay with access routes highlighted.

Figure 3.4. *Google Earth*™ image of Yahuay Alta with the sectors investigated labeled.

Figure 3.5. View of middle Moquegua Valley flood plain from Yahuay Alta, Sector A.

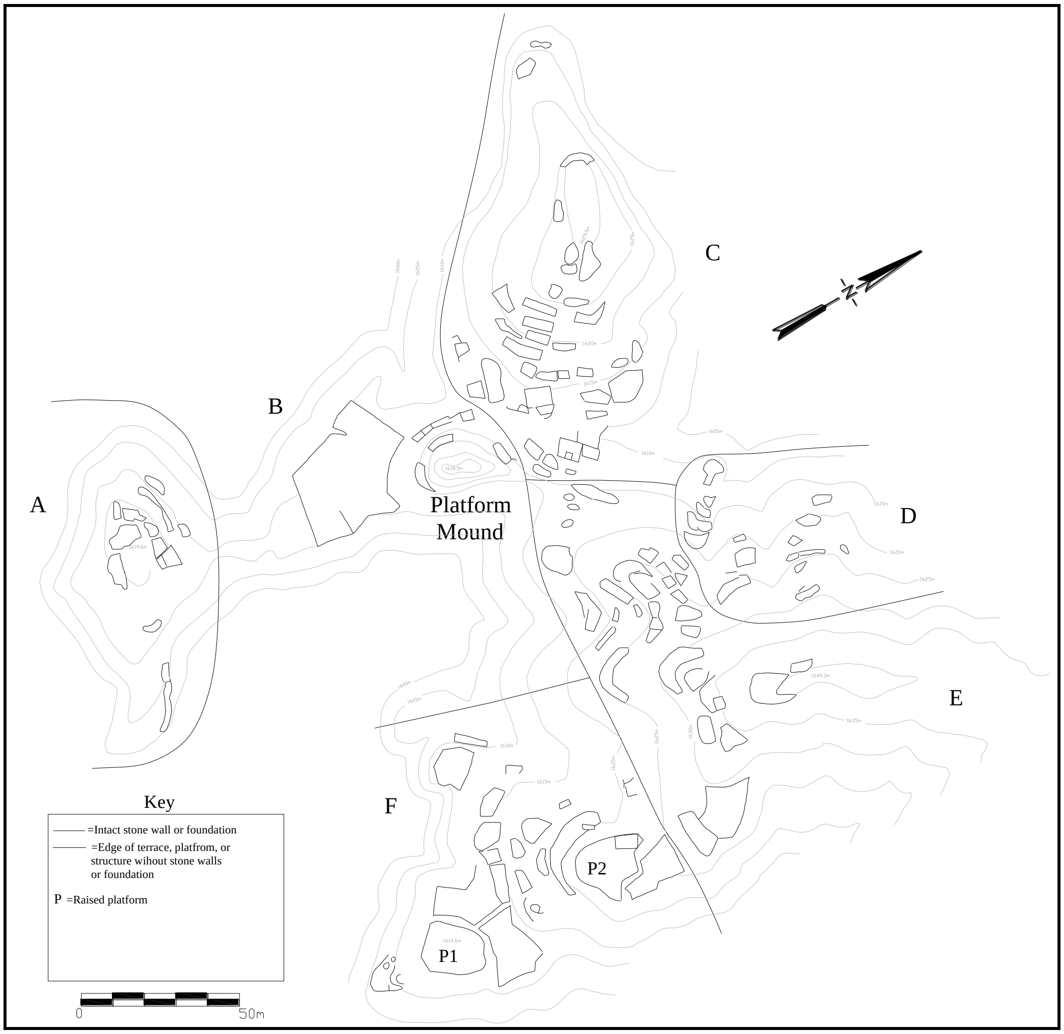


Figure 3.6. Sector divisions at Yahuay Alta.[6]

[6] The elevation contour lines and the locations of many of the terraces on this map of Yahuay Alta, and all subsequent maps of Yahuay Alta in this dissertation, were obtained with permission from an unpublished map of the site produced in 1983 by Robert A. Feldman.

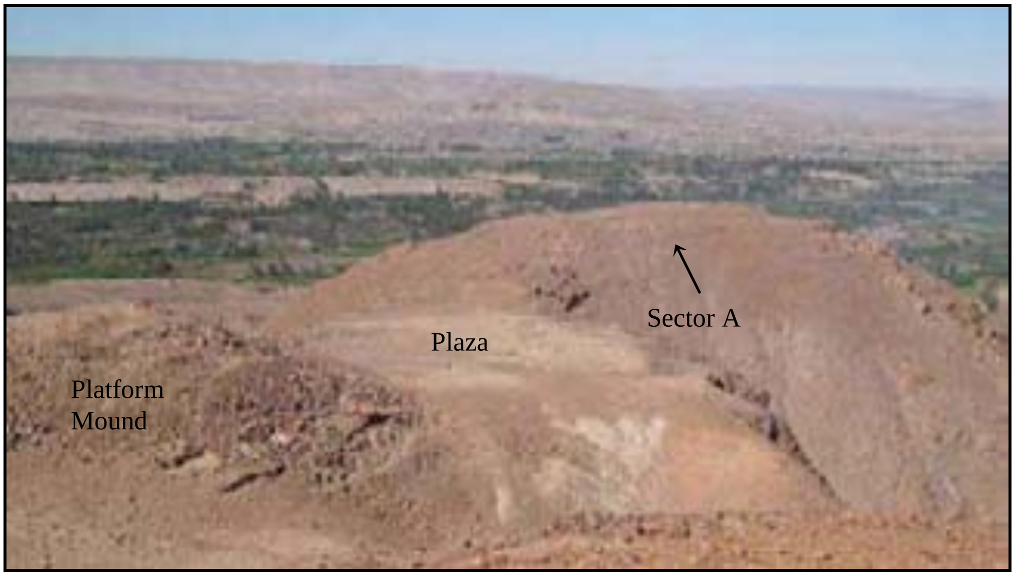


Figure 3.7. Sector A, looking south from summit of terraced hill in Sector C, main plaza in Sector B in foreground.

Figure 3.8. Path leading from Sector B to Sector A, looking south from main plaza in Sector B.

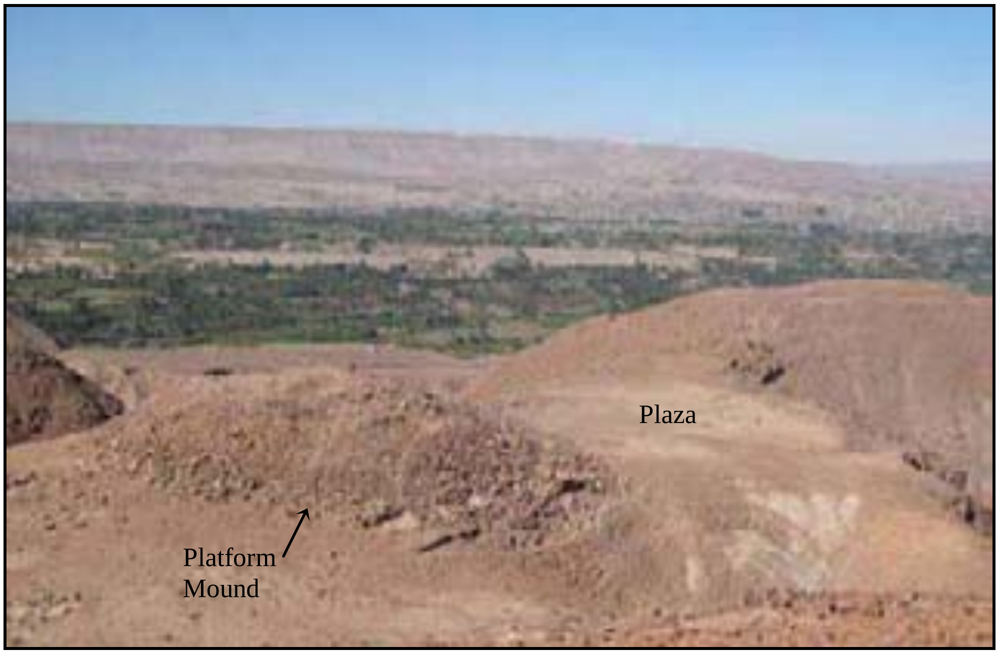


Figure 3.9. Sector B looking south from summit of terraced hill in Sector C.

Figure 3.10. Platform mound, looking north from the main plaza in Sector B.

Figure 3.11. Platform mound, looking south from Sector C.

Figure 3.12. Main plaza in Sector B, looking south from summit of platform mound.

Figure 3.13. Sector C, looking west from Sector E.

Figure 3.14. Lookout terrace in Sector C

Figure 3.15. Sector D, looking east from Sector C.

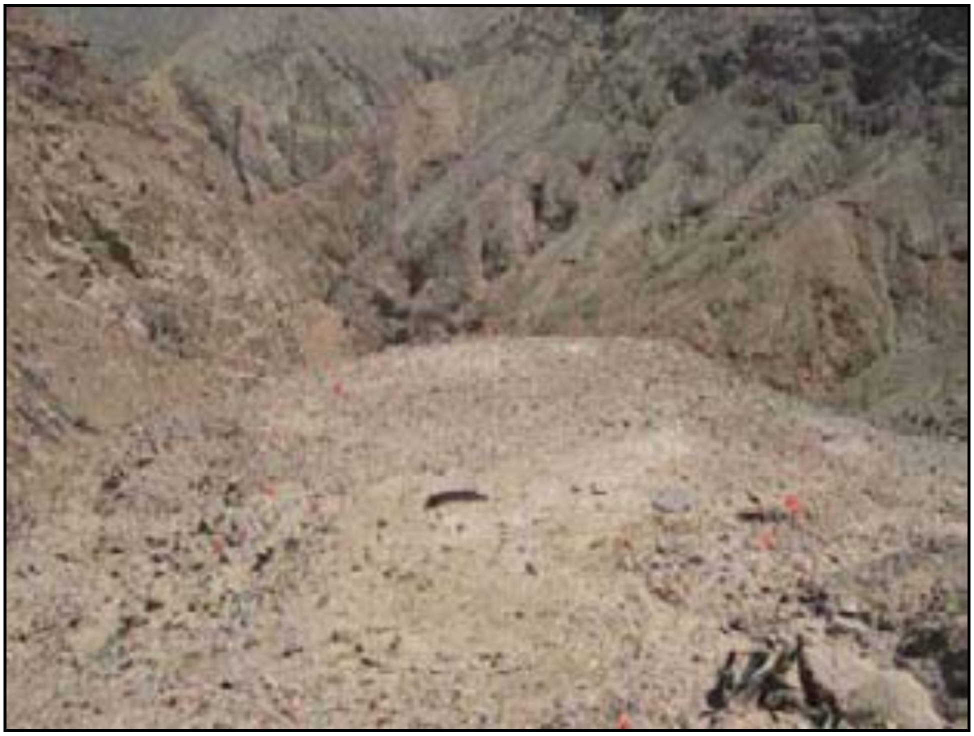


Figure 3.16. Lookout terrace in Sector D.

Figure 3.17. Sector E in left half of photo, looking northeast from Sector A.

Figure 3.18. Plaza-like area in Sector E, looking southeast.

Figure 3.19. Lookout platform in southwestern section of Sector E, looking west.

Figure 3.20. Lookout terrace in central section of Sector E the highest architectural point on site, looking south.

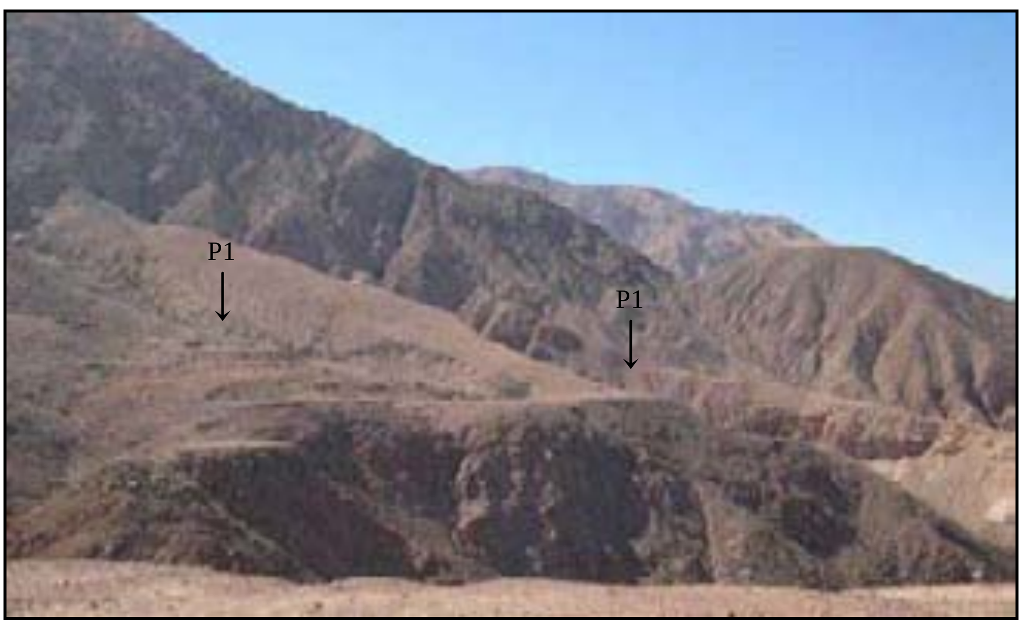


Figure 3.21. Sector F with raised platforms labeled, looking northeast from Sector A.

Figure 3.22. Southern elevated platform (P1) in Sector F, looking southwest from surface of P2.

Figure 3.23. Northern elevated platform (P2) in Sector F, view of southern retaining wall looking northeast from below.

Figure 3.24. Lookout terrace in southwestern corner of Sector F, looking southwest.

Figure 3.25. Western retaining wall of lookout terrace in Sector F, looking east.

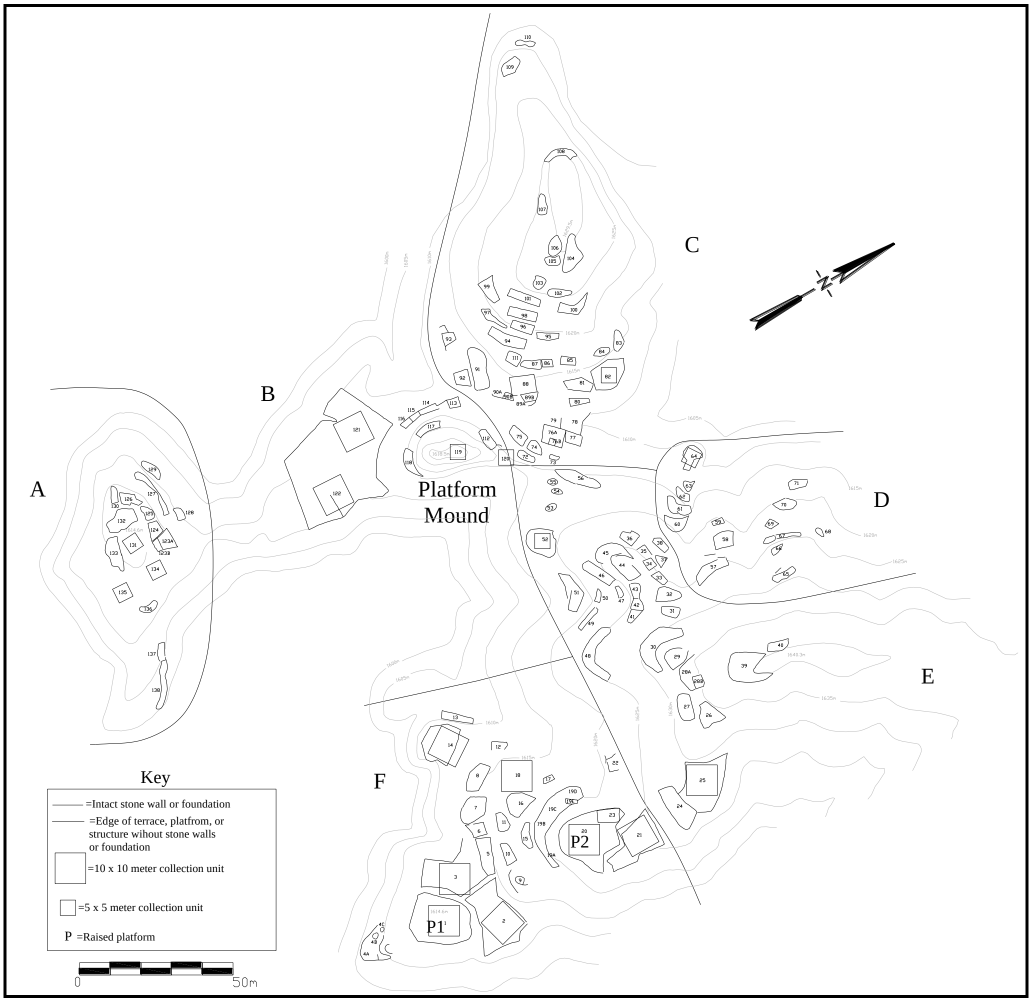


Figure 3.26. Map of Yahuay Alta showing the location of surface collection units.

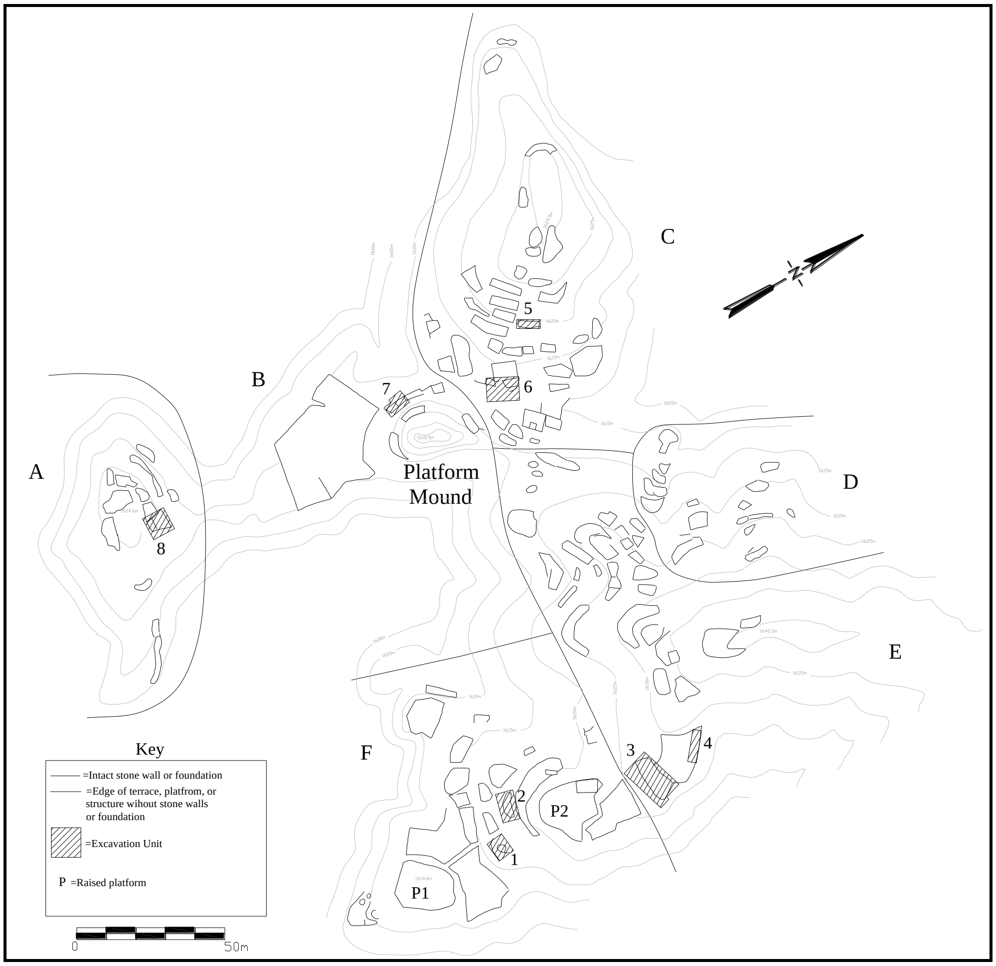


Figure 3.27. Map of Yahuay Alta showing the location of excavation units.

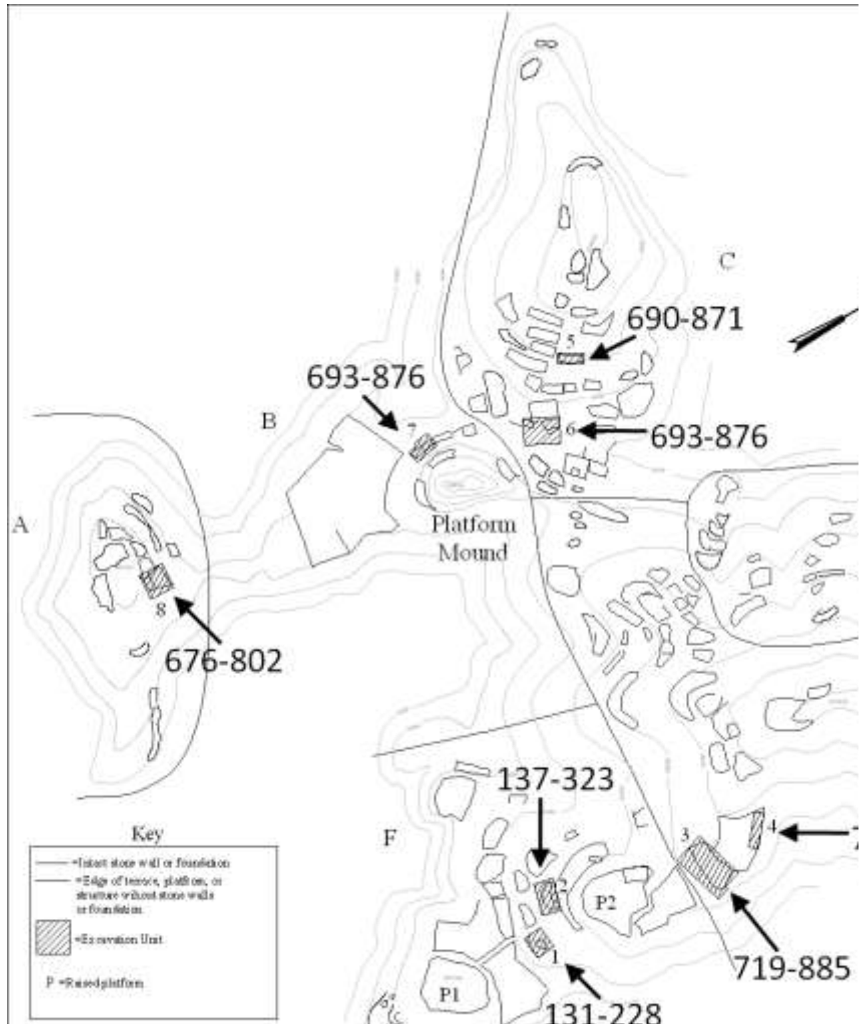


Figure 3.28. Map showing radiocarbon dates from each excavation unit, all dates are calibrated AD and are at the 2 sigma range.

4.0 THE ANALYSIS OF SURFACE COLLECTION MATERIAL: INTER-SECTOR AND INTRA-SECTOR APPROACHES TO SURFACE ARTIFACT DISTRIBUTIONS AT YAHUAY ALTA

4.1 INTRODUCTION

When this research project began it was suspected that there might have been zonal differences in status and/or wealth at Yahuay Alta. The natural topography of the site divides it into neighborhood-like zones or sectors and I originally believed that there might have been social differences among these sectors. Thus, the analysis of surface collection material proceeded in two phases: 1) an inter-sector analysis to determine whether or not there were significant assemblage and architectural differences between sectors at the site; 2) an intra-sector analysis to determine whether or not there was significant social differentiation within each sector of the site.

4.2 THE INTRA-SECTOR DISTRIBUTION OF *HUARACANE VEGETAL* & *HUARACANE ARENA* CERAMIC WARES AND THE HORIZONTAL STRATIFICATION OF YAHUAY ALTA

The intra-sector distribution of ceramic wares was particularly important to the analysis of surface collection materials as a whole because the distribution of two of these wares, *Huaracane Vegetal* and *Huaracane Arena*, helped to shape the way in which both phases of the surface collection analysis were conducted. *Huaracane Vegetal* is a ceramic ware with grassy fiber inclusions (Goldstein 2000b: 341). This ware was typically used to make relatively thick walled neckless and short-necked *ollas* that often exhibit heavy burning on their exteriors. *Huaracane Arena* is a ceramic ware that is tempered with sand that varies considerably in coarseness. This ware was typically used to make thinner walled neckless *ollas* and occasionally some longer necked jars, all of which often exhibit heavy burning on their exteriors. Although only three identifiable bottle sherds were found during the surface collection of Yahuay Alta, each of these specimens were made with *Huaracane Arena* paste. As is the case at most documented Huaracane sites (see Goldstein 2000b: Table 4.2), this was the most abundant ceramic ware on the surface of the site making up 53.2% of all ceramic sherds recovered during the surface collection.

Contour maps for the intra-sector distribution of *Huaracane Vegetal* and *Huaracane Arena* were generated highlighting locations at Yahuay Alta with surface sherd percentages of 40% and 50% or higher respectively for these wares (Figures 4.1 & 4.2). A look at these distributions (see Figures 4.1 & 4.2) demonstrates that where there are high *Huaracane Vegetal* percentages there are lower *Huaracane Arena* percentages and vice versa.

Huaracane Vegetal percentages are high primarily in the westerly sections of the site, Sectors A, B, and C (Figure 4.1). There are very high percentages for this ware on the terraced hill in Sector C, on and around the platform mound in Sector B, and in the eastern section of Sector A. *Huaracane Arena* percentages are high primarily in the easterly sections of the site, Sectors D, E, and F (Figure 4.2). The highest percentages for this ware are in the central section of Sector F, and the more northern part of Sectors D and E. It is worth noting that these distributions do not conform exactly to the site's sectors. There are moderately high percentages of *Huaracane Vegetal* in the southwestern section of Sector E especially around surface collection Unit 52 (see Figure 3.26 for surface collection numbers). In addition, there are moderately high percentages of *Huaracane Arena* in Sector C at the base of the terrace hill especially around surface collection Units 76 and 79.

The best explanation for the contrasting distributions of these different plainware ceramics could be changes in plainware preferences over time. The radiocarbon dates taken from samples recovered during the excavation phase of this project lend support to this temporal explanation (see Figure 3.28 & Table 3.1). The three dates from the Late Huaracane phase (2nd

century AD) come from the eastern half of the site where there are high percentages of *Huaracane Arena*. While 4 of the 5 dates from the Terminal Huaracane phase (8^{th} century AD) come from the western half of the site where there are high percentages of *Huaracane Vegetal*.

This suggests that preferences in the ceramic ware used to construct utilitarian ceramics shifted over time from *Huaracane Arena* to *Huaracane Vegetal*. It is important to note that although certain utilitarian wares may have been preferred during specific time periods, both of these wares were utilized to a considerable extent throughout the entire occupation of this site. The reason for this shift in preference is unknown, however, it supports the interpretation of Yahuay Alta as a multicomponent site. The eastern section (Sectors D, E, & F) were occupied primarily during the Late Huaracane phase and the western section (Sectors A, B, & C) were occupied primarily during the Terminal Huaracane phase. As discussed in Chapter 3, this distribution does not suggest that either side of the site was completely unoccupied during these time periods, just that each side of the site was the focus of one phase of occupation.

Based upon the distribution of these plainware ceramic wares both the inter-sector and intra-sector analyses were conducted in two parts. Each side (east and west) of Yahuay Alta was analyzed in isolation, following the assumption that they were primarily inhabited during different phases of occupation. Sectors D, E, and F were included in the eastern side of the site, which corresponded to the Late Huaracane phase. Sectors A, B, and C were included in the western side of the site, which corresponded to the Terminal Huaracane phase. Because there is some overlap in the intra-sector distribution of higher *Huaracane Vegetal* and *Huaracane Arena* percentages along the boundary of Sectors C and E, this seemed to be the most logical choice for a dividing line to separate the eastern and western sections of the site (see Sector division in Figure 4.3). The highest percentages of these two different plainwares are each clearly on either side of this dividing line.

4.3 THE ANALYSIS OF SURFACE COLLECTION MATERIAL

4.3.1 Methodology for the inter-sector analysis

To compare the Late Huaracane and Terminal Huaracane communities at Yahuay Alta, I will begin with an inter-sector analysis of the surface collection material in terms of proportions of different artifact types within four primary artifact classes (ceramic wares, ceramic vessel forms, lithic materials, and lithic implement types). The goal of this analysis was to determine whether or not the distribution of certain artifacts varied from sector to sector during each time period. This broader look at the surface collection data has the potential to give further insight into how the Huaracane community at this site was organized during different time periods. The proportions utilized for comparisons in this analysis were obtained by dividing the total number of specimens of a specific artifact type within a general artifact class recovered from all surface collection units in a sector by the total number of artifacts from a general artifact class recovered from all surface collection units in a sector. So for example, to obtain the percentage of a specific ceramic ware (such as *Huaracane Fino*) in a sector I would divide the total number of *Huaracane Fino* sherds recovered from that sector by the total number of ceramic sherds recovered from that sector.

4.3.2 Methodology for the intra-sector analysis

The second step in the analysis of cultural material recovered during the surface collection was to conduct an intra-sector analysis of artifact proportions. For this analysis the sector divisions at the site, discussed in Chapter 3, were ignored in order to locate any distinct localities with high percentages of certain artifacts. Using the Surfer program, contour maps based upon artifact percentages were generated utilizing data from surface collection units. This analysis was conducted utilizing artifact percentages of different artifact types within three primary artifact classes (ceramic wares, lithic materials, and lithic implement types). Unfortunately, surface collection unit sample sizes for diagnostic ceramic sherds were too small to provide accurate results at this scale of analysis and as a result, it was not possible to investigate the intra-sector distribution of ceramic vessel types. The goal of this analysis was to reveal any important differences within sectors at the site. Through the detection of distinct localities with high percentages of certain artifacts, this intra-sector analysis has the potential to identify distinct groups of terraces or even individual households that could be designated as having distinct consumption patterns in comparison to others at the site.

Because of differences in sample sizes, the intra-sector analysis of ceramic and lithic materials had to be approached in slightly different manners. For ceramic materials, in order to assure that sherd percentages were calculated from units with an appropriate sample size, this analysis only included surface collection units that contained 20 or more ceramic sherds. Of the 138 surface collection units at the site 82, or approximately 59%, were utilized in this analysis (see Table B.2 for list of surface collection units used in this analysis). Percentages used to create the artifact contour maps used in the intra-sector ceramic ware analysis were obtained by dividing the total number of sherds of a particular ware in a surface collection unit by the total number of sherds recovered from said unit.

Individual surface collection unit sample sizes of lithic fragments were generally substantially smaller than they were for ceramic sherds and as a result, few individual collection units had sufficient sample sizes for the calculation of meaningful percentages. In order to solve this problem, when necessary, lithic samples from collection units within close proximity to each other were combined to create larger more meaningful samples. The 138 surface collection units at Yahuay Alta were placed into 55 different groups for this analysis (see Table B.3 for list of which surface collection units were grouped together). The consequence of combining lithic fragments from various collection units into one group was that Surfer generated artifact percentage contour peaks that were generally much broader for lithics than they were for ceramics. The percentages used to create the artifact contour maps used in the lithic analyses were obtained by dividing the total number of fragments of a particular lithic material or lithic implement in a group of surface collection units by the total number of lithic specimens recovered from that group.

The intra-sector analysis of surface artifacts was conducted for the Late and Terminal Huaracane occupations separately to explore how surface artifact distributions changed over time. Separate Surfer artifact percentage contour maps were created for the eastern and western sides of the site for all artifact categories. The changes in the distribution of artifacts could reflect changes social organization and social differentiation. The primary goal of this analysis was to determine if the nature and degree of social differentiation in Huaracane society changed over time.

4.4 THE LATE HUARACANE OCCUPATION AT YAHUAY ALTA: SURFACE PATTERNS

The analysis of Late Huaracane surface collection material consisted of material recovered from the eastern half of Yahuay Alta; Sectors D, E, and F. The southeastern portion of this half of the site contains public architecture in the form of two raised platforms (P1 & P2) and many relatively large residential terraces. In contrast, the northwestern portion of this half of Yahuay Alta mostly contains densely packed, relatively smaller residential terraces.

4.4.1 Inter-sector artifact distributions in Sectors D, E, & F

4.4.1.1 Ceramic wares The most important line of evidence obtained during the surface collections pertaining to the identification of high status and/or wealthy localities at Yahuay Alta was *Huaracane Fino* bowl sherd percentages. Goldstein (2000b: 346) hypothesized that *Huaracane Fino* bowls were an elite serving wear and that "…their distribution may correlate with elite residences." This is a very compelling and clearly logical hypothesis because *Huaracane Fino* bowls are well made and have such a striking appearance in comparison with typical Huaracane ceramics. It is well documented that higher proportions of serving vessels, especially decorated serving vessels, are a good indicator of high status or wealthy households (Hirth 1993: 124). In addition, high proportions of serving vessels are also excellent indicators that certain areas within a site may be differently involved in feasting activities (Clarke 2001; Hayden 2001). Since hosting feasts is an important social mechanism for establishing prestige in many societies, including the prehispanic Andes, high proportions of *Huaracane Fino* bowl sherds can logically be interpreted as a good indicator for elite and possibly wealthy households

(Clark and Blake 1994; Dietler 1996, 2001; Dietler and Hayden 2001; Hayden 1996, 2001; Lau 2002; Potter 2000). As a result, for this project *Huaracane Fino* bowls sherds were interpreted as one of the primary indicators of social status and/or wealth at Yahuay Alta.

At the start of my research I had hypothesized that those sectors most closely associated with the public architectural features at Yahuay Alta would display higher proportions of *Huaracane Fino* bowl sherds in comparison to those sectors located further from this architecture. So it was expected that Sector F would have the highest proportions of *Huaracane Fino* bowl sherds. However, the results of the inter-sector analysis of surface collection material did not support this hypothesis.

There were significant differences in *Huaracane Fino* bowl sherd percentages among the Late Huaracane sectors at Yahuay Alta (Figures 4.4 & 4.5). Sectors E and F had *Huaracane Fino* bowl sherd percentages of 12.3% and 9.5% respectively. Even though we can be 99% confident that these percentages are significantly different from each other, the strength of this difference is not particularly compelling (see Figure 4.5). However, it is of note that the lowest percentage of *Huaracane Fino* bowl sherds among these sectors was found in the Sector F where there are public architectural features. The highest percentage of *Huaracane Fino* bowl sherds found in Late Huaracane sectors came from Sector D where 28.3% of the ceramics recovered from the surface where *Huaracane Fino*. We can be much more than 99% confident that the difference observed in *Huaracane Fino* bowl sherd percentages between Sector D and sectors E and F is not due simply to the vagaries of sampling (see Figure 4.5).

It might appear that Sector D as a whole had significantly more *Huaracane Fino* bowl sherds and that it may have been an elite sector with residents that were heavily involved in hosting feasting or consumption events. However, the intra-sector analysis (see below) reveals that a single residential terrace (surface collection Unit 57) in Sector D had a *Huaracane Fino* bowl sherd percentage of over 40% (see Table 4.1 & Figure 4.33). The ceramic assemblage of this particular residential terrace is what makes Sector D stand out in this analysis. This finding suggests that one household, rather than the entire sector, would have been relatively heavily involved in feasting or consumption activities utilizing *Huaracane Fino* bowls.

As a whole, the distribution of *Huaracane Fino* bowl sherds in Late Huaracane contexts suggests that Huaracane fineware bowls were more common in domestic contexts than public contexts. Both Sectors D and E are comprised nearly entirely of domestic terraces and contained significantly higher percentages of *Huaracane Fino* bowl sherds than Sector F, which is comprised of domestic terraces and public architecture in the form of raised platforms. These results agree well with the results of the intra-sector analysis of Late Huaracane contests, which found distinct peaks in *Huaracane Fino* bowl sherd proportions in primarily domestic locations. This pattern suggests that during the Late Huaracane phase the use of fineware bowls was taking place primarily in domestic contexts, indicating that any feasting or consumption events utilizing these ceramics probably were relatively small in scale.

The two other ceramic wares that will be discussed here are the typical Huaracane utilitarian ceramic wares described above in detail that were used primarily for cooking and storage. The inter-sector distribution of *Huaracane Vegetal* sherds was very uneven for the Late Huaracane phase occupation (Figure 4.6). Sector D had the highest percentage of *Huaracane Vegetal* sherds, 31.7%; and we can be much more than 99% confident that the percentage of *Huaracane Vegetal* sherds in this sector is significantly higher than the percentages in sectors D and F (Figure 4.7). Sector E had the substantially lower percentage of *Huaracane Vegetal* sherds at 16.8%, however, we can still be more than 99% confident that this percentage is significantly higher than the percentage in Sector F. Finally, Sector F had the lowest percentage of *Huaracane Vegetal* sherds, 5.9%. The exact reason for this inter-sector distribution of *Huaracane Vegetal* sherds is unknown, although it is clear that there were some substantial differences in preferences for utilitarian wares during the Late Huaracane phase.

The inter-sector distribution of *Huaracane Arena* sherds, not surprisingly, was almost the opposite to that of *Huaracane Vegetal* (Figure 4.8). Sector F by far had the highest percentage of *Huaracane Arena* sherds, 79.2%, and we can be much more than 99% confident that this significantly higher percentage is not due to the vagaries of sampling (Figure 4.9). Sector F exhibited the lowest percentage of *Huaracane Vegetal*, so it is logical that it has a *Huaracane Arena* percentage much higher than all other Late Huaracane sectors.

Sector E had the second highest percentage of *Huaracane Arena* sherds, 57.9%, and this percentage is significantly higher than the percentage in Sector D (see Figure 4.9). As with Sector F, this is not an unexpected result because Sector E had a relatively low percentage of *Huaracane Vegetal*. Sector D had the lowest percentage of *Huaracane Arena* sherds, 37.9%, and we can be more than 99% confident that this percentage is significantly lower than all other Late Huaracane sectors (see Figure 4.9). The inter-sector comparison of *Huaracane Arena* sherds demonstrates that there were substantial differences in preferences for utilitarian wares across the site during the Late Huaracane phase.

4.4.1.2 Vessel forms The percentages for this analysis were obtained by dividing the total number of diagnostic sherds of a specific vessel type that occurred in one sector by the total number of diagnostic sherds recovered from that sector. Although the surface collection yielded 3532 ceramic sherds only 330 (9.3%) of these were diagnostic. As a result, error ranges for the percentage of vessel types in each sector were larger. In fact, Sector D yielded insufficient diagnostic ceramic sherds (13) to be included in this analysis, because with a sample size that low the error rages were too large to yield statistically significant differences from any other sectors.

Overall at the site, the most common type of Late Huaracane diagnostic sherds came from bowls, with bowl sherds made up 53.6% of the diagnostic sherds recovered during the surface collection. This is interesting in that the *Huaracane Fino* ware, from which 97.7% of all diagnostic bowl sherds were made, only comprised 10.6% of the sherds recovered during the surface collection. This discrepancy can be explained by the fact that by their nature, because bowls have proportionally more rim, bowls produce a large amount of diagnostic sherds when they break. Larger plainware vessels produce many more non-diagnostic body sherds; this is why significantly more plainware sherds were found in the surface collection. A final note about bowl sherds: because they overwhelmingly represent *Huaracane Fino* ware, bowl sherds may be considered as possible indicators of social status and/or wealth.

The Late Huaracane inter-sector distribution of bowl sherds was relatively even. There was not a significant difference between the percentages of bowl sherds found in Sectors E and F, 56.9% and 49.3% respectively (Figures 4.10 & 4.11). This similarity suggests that even though Sector E was comprised primarily of domestic terraces while Sector F included public architecture and space, there was not a significant difference in bowl proportions. These results contrast with the results for the inter-sector distribution of *Huaracane Fino* bowl sherds discussed earlier, which indicated there were some significant differences in the distribution of this ware.

For the three primary plainware vessel forms used in Yahuay Alta's Late Huaracane occupations there were only small and slightly significant inter-sector differences. Neckless *ollas*, or *ollas sin cuellos,* are a distinctive Huaracane vessel and were the second most common type of diagnostic sherd found during the surface collections comprising 30.0% of all diagnostic sherds recovered at the entire site. These plainware *ollas* were made of both *Huaracane Vegetal* and *Huaracane Arena* wares. *Ollas sin cuellos* have a globular pumpkin-like shape and often exhibit heavy burning on their exteriors suggesting they were primarily used as cooking vessels (Goldstein 1989, 2003). In the Late Huaracane sectors there was not a large amount of inter-sector variation in the percentage of *olla sin cuello* sherds; 28.4% of the diagnostic ceramic sherds in Sector E and 37.7% of the diagnostic ceramic sherds in Sector F were from this vessel type (Figure 4.12). We can be only 80% - 95% confident that these percentages are significantly different (Figure 4.13).

All large plainware ceramics with necks shorter than 4 cm were designated as *ollas* with necks for this analysis. These vessels were similar to *ollas sin cuellos* in all ways other than the fact that they had short necks. These necks were generally irregular in shape, varying considerably in curve and thickness around the vessel (Feldman 1989: 209). *Ollas* with necks were probably used primarily for cooking but may have served as storage vessels as well. This vessel form comprised 10.3% of the diagnostic sherds recovered during the surface collection. There was a small, slightly significant difference in the inter-sector distribution of *olla* with neck sherds between sectors E and F. In Sector E 10.2% of the diagnostic sherds were from this vessel type, in comparison to 2.9% in Sector F (Figure 4.14). We can be 95% - 99% confident that these percentages are significantly different (Figure 4.15).

All large plainware ceramics with necks taller than 4 cm were designated as jars for this analysis. These vessels were most likely used primarily for storage, although some could have been used for cooking as some fragments did exhibit burning on their exteriors. The longer neck of jars made these vessels better suited for the storage of liquids in comparison to *ollas* with necks. This form was most commonly made with the *Huaracane Arena* and *Pasta Biotite* wares, however some were made with the *Huaracane Vegetal* ware as well. Jars were relatively rare at the site comprising only 4.2% of the diagnostic sherds recovered during the surface collection. There was a small difference between the percentage of jar sherds in Sector E, 1.1%, and Sector F, 7.3%, however we can only be 80% - 95% confident that the difference between this percentage is significant (Figures 4.16 & 4.17). These results suggest that in Sector F jars were preferred over *ollas* with necks for storage and the reverse was the case for Sector E. The differences here are not remarkably large or very significant, however they could indicate that the storage of liquids was slightly more important in Sector F than Sector E.

A final category of ceramic vessel that is not included in this analysis was the bottle. All plainware ceramics with necks taller than 4 cm and rim diameters of 4 cm or less were classified as bottles. Only three examples of this vessel type were recovered during the surface collection, two in Sector E and one in Sector F. All three of these examples were made with the *Huaracane Arena* ware. Since this vessel type was so rare it was not possible to make meaningful comparisons of inter-sector percentages for bottles.

Overall there were only a few small differences in the inter-sector distribution of ceramic forms during the Late Huaracane phase. Sector E had slightly more bowls than cooking/storage vessels and Sector F had even proportions of bowls and utilitarian vessels.

4.4.1.3 Lithic materials During the lithic analysis of surface collection materials 19 different categories of lithic materials were identified. However, many of these, such as obsidian and andesite, occurred far too rarely to include them within this inter-sector analysis of surface collection material. For this analysis only the distribution of the four most common lithic materials will be discussed.

The most important material type for the identification of possible high status or wealthy localities is chert. During the lithic analysis seven categories of cryptocrystalline silicates were defined based primarily upon color, the most common of these were a pinkish-red chert and a white opaque chert. All of these materials were fine-grained and ideal for the production of high quality flaked tools. Since there appeared to be no functional differences between these categories, they were combined into a single chert category for this analysis. This category is considered to be a high quality lithic material, second in quality only to obsidian. No readily apparent outcrops or sources of any chert have to date been identified at the site of Yahuay Alta, although some small unworked nodules of the pinkish-red chert have been found at the site. All other forms of chert appear at Yahuay Alta only as débitage or completed tools, suggesting the sources for the majority of chert recovered from Yahuay Alta are not located within the immediate vicinity of the site. Higher percentages of chert in certain localities could be indicative of domination of the procurement network for this highly desirable material, which can, in turn, be interpreted as a possible source of status or wealth. Vining (2005) has demonstrated that at the nearby Middle Horizon Wari site of Cerro Baúl, elite contexts located near the site's core had more access to higher quality lithic material procured at a distance from the site, while lower class contexts located towards the site's periphery tended to have lithic assemblages comprised primarily of lower quality and immediately available raw materials. Although the Wari were clearly a more strictly stratified society than the relatively simple Huaracane, I believe that this pattern is still applicable at Yahuay Alta. Consequently, higher percentages of not immediately available raw lithic materials, such as chert, should be treated as a good indicator of status and/or wealth at Yahuay Alta.

This said, I found no significant differences in the chert proportions between sectors D, E, and F, at 40.3%, 39.6%, and 38.4% respectively (Figures 4.18 & 4.19). Although no single sector made greater use of this high quality lithic material during the Late Huaracane phase, the intra-sector analysis of the surface collection material (see the discussion below) indicates that there were certain households with more access to chert than others within some sectors. In general chert was relatively common at Yahuay Alta during the Late Huaracane phase, recovered in both domestic and public contexts.

Dacite is an igneous, volcanic rock with high iron content, locally available in the many volcanic deposits throughout the Moquegua Valley. It is commonly found on and around Yahuay Alta, especially in the form of large cobbles found in the Rio Huaracane, which flows directly by the base of the ridges on which the site is located. Dacite can thus be considered an immediately available lithic material. The dacite found at Yahuay Alta is a dark variety that generally ranges from dark grey to black in color. Although dacite is fine-grained enough to produce adequate flaked lithic tools, it is not as fine-grained as the cherts discussed above and is therefore considered to be a lower quality lithic raw material.

There are some slightly significant differences in dacite proportions between the Late Huaracane sectors, with proportions of 8.9%, 12.4%, and 15.9% for Sectors D, E, and F respectively (Figures 4.20 & 4.21). These differences are not sufficiently strong to suggest any major differences in dacite usage between sectors during this time period. Dacite was a locally available raw material and the differences in percentages here probably have more to do with the immediate availability of sources than preferences for this lower quality lithic material. It is however, interesting that the highest proportion of dacite is found in Sector F, where there was both public and domestic space, while there were slightly lower percentages of this in the purely domestic Sectors D and E.

Rhyolite is a volcanic rock with a high silica content and is very common within the Moquegua Valley. It is readily found at and around Yahuay Alta and like dacite can be considered an immediately available lithic material. The majority of rhyolite in the region has a pale reddish color. Rhyolite can have quite variable textures, however, the majority of rhyolite in the Moquegua Valley is coarser grained than chert and is therefore considered to be a lower quality lithic material. There is also a very fine-grained variety of rhyolite that is found at Yahuay Alta, but it was relatively rare, comprising only 3.9% of the lithic material recovered during the surface collection.

Although the percentages of rhyolite found in Late Huaracane sectors were relatively low, 3.2% and 15.9% for Sectors E and F respectively, there were some significant differences in these percentages (Figure 4.22). We can be more than 99% confident that the rhyolite percentage in Sector F was significantly higher than the percentage in Sector E (Figure 4.23). No rhyolite was found during the surface collection of Sector D. The inter-sector distribution of rhyolite demonstrates that this locally available lower quality material was more important in Sector F in comparison to the two other Late Huaracane sectors.

4.4.1.4 Quartz Relatively common at Yahuay Alta, quartz comprised 38.1% of the lithic material recovered during the surface collection. This locally available material was a difficult material to classify for this analysis. The problem here is that unlike chert or rhyolite, quartz is not used to make either flaked or ground stone tools. In fact, it really is not clear what this material was used for at all.

Possibly quartz crystals were used to make ornaments, but there is not evidence at Yahuay Alta to suggest this. Quartz is a very hard material and can be used to polish or smooth surfaces and some quartz crystals at Yahuay Alta are heavily worn down on one or two sides (Figure 4.24). However, even it quartz crystals were used to polish or smooth surfaces at Yahuay Alta, it is not clear what was being polished or smoothed. Consequently, even though it was a common material at Yahuay Alta the exact function for quartz is currently unknown.

For Late Huaracane occupations there were some significant differences in the inter-sector distribution of quartz. There was no significant difference between the quartz percentages in Sectors D and E, which had quartz percentages of 25.4% and 24.4% respectively (Figures 4.25 & 4.26). However, we can be more than 99% confident that these percentages are significantly higher than the quartz percentage, 10.1%, for Sector F (see Figure 4.26). Because we do not know how quartz was used it is difficult to interpret this inter-sector variability. What is clear is that quartz occurred to a significantly higher degree in purely domestic sectors of D and E than in Sector F where there is public architecture and space.

4.4.1.5 Lithic types During the lithic analysis of surface collection materials, 14 different implement types were identified. However, most of these types, such as expedient tools, hoes, and projectile points, occurred too rarely to make useful comparative interpretations. As a result, only the three most common types will be discussed in detail. The most common type of lithic implement recovered during the surface collection was flakes; comprising 39.6% of all lithic implements recovered from the surface of the site. For this analysis, any unmodified lithic flakes or débitage produced during the reduction of flaked stone tools were classified as flakes.

There were significant differences in flake percentages between each of the Late Huaracane sectors. Sector D had the lowest flake percentage, 34.3%, but we can only be 80% - 95% confident that this percentage is significantly lower than the flake percentage in Sector E, 44.1% (Figures 4.27 & 4.28). We can be more than 99% confident that the flake percentage in Sector F, 54.2%, is significantly higher than sectors D and E (see Figure 4.28). These results indicate that the discard of lithic débitage may have taken place more frequently in the open and possibly public part of the site, Sector F, than in the purely domestic sectors. This finding is not inconsistent with expectations for the deposition of lithic débitage, which is not a type of refuse that is typically allowed to accumulate in domestic contexts (Hayden and Cannon 1983; Moholy-Nagy 1990).

Lithic nodules, or unmodified raw lithic material, was another common category in the lithic implement analysis comprising 12.5% of the identified lithic implements recovered from the surface of Yahuay Alta. All unmodified lithic material used to make lithic tools were classified as nodules. These nodules were usually dacite or rhyolite brought up to the site from the Rio Huaracane, however, occasional examples of pinkish-red chert and fine-grained rhyolite were found as well. Higher nodule percentages are much more likely to be associated with actual lithic production locales than flakes because raw materials would be kept where production took place.

Sectors D, E, and F had nodule percentages of 24.5%, 24.2%, and 20.9% respectively. There were no significant differences between these figures, indicating that during the Late Huaracane phase there was an equal intensity of initial tool production in each sector (Figures 4.29 & 4.30). This is not surprising given the finding of relatively equal inter-sector distribution of lithic materials during this time period.

Manos, or hand held grinding stones, were relatively rare at Yahuay Alta comprising only 1.6% of identified lithic implements recovered during the surface collection. This is consistent with Goldstein's (2003: 156) observation that most Huaracane sites exhibit few large grinding implements. Despite the fact that *manos* are rare, their distribution can be important for identifying possible locations where more intense food processing activities (such as for the preparation of feasting events) took place.

There is only one small and slightly significant difference in the inter-sector distribution of *manos* at the entire site of Yahuay Alta and it occurred during the Late Huaracane phase. Sector D had the highest *mano* percentage during this time period, 7.1%, in comparison to *mano* percentages of 1.2% and 0.9% for Sectors E and F respectively (Figure 4.31). However we can only be 80% - 95% confident that this proportion is significantly higher than the proportion in Sector E, and 95% - 99% confident that it is higher than the percentage in Sector F (Figure 4.32). It is therefore possible that grinding took place in Sector D than the other Late Huaracane sectors. However, this argument has to be tempered by the lower level of significance attached to the *mano* percentage in Sector D.

4.4.1.6 Discussion Although the preceding discussion has delineated some inter-sector variability at Yahuay Alta during the Late Huaracane phase, in general the sectors from this time period were relatively similar to each other. The largest amount of variability during this time period was in ceramic preferences and there was little observed variability in the distribution of most lithic materials and types. The next step in the analysis of Late Huaracane phase surface materials was to look for patterns of variability within sectors to determine whether or not those patterns support the more general variability observed in this analysis.

4.4.2 Intra-sector artifact distributions in Sectors D, E, & F

4.4.2.1 Ceramic wares As with the inter-sector analysis, the most important ceramic indicator for discerning social differentiation was *Huaracane Fino* bowls. There are three distinct artifact contour peaks in *Huaracane Fino* bowl sherd percentages that show up in this analysis and they are all within 30 meters of one another (Figure 4.33). These three peaks are the only three locations in this half of the site where *Huaracane Fino* bowl sherds made up more than 24% of the ceramic sherds recovered from surface collection units. These three clustered peaks represent a unique concentration of *Huaracane Fino* bowl sherds, and could indicate differential involvement in serving activities by certain households. Or, in addition these peaks could be indicative of households with higher value domestic ceramic assemblages. Whether this three peak cluster of high *Huaracane Fino* bowl sherd percentages is indicative of serving and/or feasting activities or simply higher quality household ceramic assemblages, these peaks represent an area at Yahuay Alta where substantially higher than average quantities of high quality fineware ceramics were deposited.

The highest peak (#1 in Figure 4.33) derives from surface collection Unit 57. This was a larger than average residential terrace at 38.0m^2, which had a *Huaracane Fino* bowl sherd percentage of over 43%. It was the ceramic assemblage of this particular residential terrace, and not the ceramics of Sector D as a whole that made Sector D stand out in the inter-sector analysis. This concentration suggests, that one household, rather than the entire sector, may have been relatively heavily involved in serving or feasting activities utilizing *Huaracane Fino* bowls. This could possibly have been the location of a high status or elite household. The lowest of these peaks (#3 in Figure 4.33) is also centered upon a large residential terrace, which was surface collection Unit 30. At 89.5m^2 this was a very large residential terrace that had a *Huaracane Fino* bowl sherd percentage of over 37%. This terrace could also have been the location of another high status or elite household.

So the question is then, do these two peaks in *Huaracane Fino* bowl sherd percentage represent differential involvement of serving activities, high value domestic ceramic assemblages, or both of these possibilities? In order to answer this question it is important to take a look at the actual *Huaracane Fino* bowl sherd percentages from the collection unit each of these peaks is centered upon in comparison to the overall percentage of *Huaracane Fino* recovered from the surface of this half of the site (Table 4.1). This comparison demonstrates that the *Huaracane Fino* percentages in peaks 1 and 3 were significantly higher than the overall *Huaracane Fino* percentage for all Late Huaracane contexts. In addition, if the *Huaracane Fino* percentages from peaks 1 and 3 (see Table 4.1) are compared to the average *Huaracane Fino* percentage from all 36 of the Late Huaracane surface collection units with 20 or more ceramic sherds (12.9% ± 3.2% at the 95% confidence level), the percentages from peaks 1 and 3 are significantly higher than the Late Huaracane average. Since virtually all bowls at Yahuay Alta were made with the *Huaracane Fino* ware, these results demonstrate that the households represented by peaks 1 and 3 not only had relatively higher quality ceramic assemblages, but also that they may have been differentially involved in serving or feasting activities that utilized *Huaracane Fino* bowls.

Table 4.1. *Huaracane Fino* (*H.F.)* %'s in Late Huaracane contexts[7]

Context	Total # of Sherds	# of *H.F.* Sherds	% *H.F.* Sherds
Surface Collection Unit 57 Peak # 1 in Figure 4.33	39	17	43.6% ± 16.1%
Surface Collection Unit 44 Peak # 2 in Figure 4.33	21	9	42.9% ± 22.5%
Surface Collection Unit 30 Peak # 3 in Figure 4.33	81	30	37.0% ± 10.7%
All Ceramics Collected From Sectors D, E, & F	2925	342	11.7% ± 1.2%

[7] All error ranges in this table are at the 95% confidence level.

The final contour peak for of *Huaracane Fino* (# 2 in Figure 4.33) was centered upon surface collection Unit 44, which had a *Huaracane Fino* bowl sherd percentage of over 42% (see Table 4.1). Unlike peaks 1 and 3, this peak was not situated on a residential terrace. Instead peak 2 seems to be a modestly sized, flat, relatively open area on top of a ridge surrounded by smaller residential terraces. Possibly peak 2 represents a more communal open area where small-scale feasting or consumption activities took place. This is a logical location for such an area because it would better allow for the congregation of groups, especially in comparison to the primarily narrow terraces at Yahuay Alta. Peak 2 could represent a small communal area where the high status households denoted by peaks 1 and 3 may have hosted small serving or feasting events, or on the other hand, it could represent a location where communal and possibly integrative serving or feasting events took place.

There is also the possibility that peak 2 represents the dumping of household refuse and thus is not indicative of any kind of serving or feasting activities in this location. Domestic refuse is often moved out of domestic contexts and deposited in conveniently located provisional dumps before being moved to permanent dumps in more distant out of the way locations (Hayden and Cannon 1983). However, I do not believe this was the case for peak 2 for several reasons. First, peak 2 is located on a flat open area that is situated uphill from many surrounding domestic terraces and the discard of domestic refuse preferable takes place downhill from domestic residences (Hayden and Cannon 1983). Second, domestic refuse is preferably disposed of in out of the way places such as streams or ravines that are located not too far from domestic references (Hayden and Cannon 1983). At Yahuay Alta, no domestic terrace was located more than a one or two minute walk from deep, steep sided *quebradas* where refuse could have easily been disposed of permanently. As a result, a flat area situated uphill from domestic residences would have been a much less desirable location for refuse disposal than the nearby *quebradas.* Finally, if peak 2 does represent a provisional dumping area for domestic refuse, there should be a relatively high density of surface artifacts located in this area. However, this location's surface artifact density of 0.63 artifacts per m^2 is lower than both the mean surface artifact density (1.33 artifacts per m^2) and median surface artifact density (0.85 artifacts per m^2) for Late Huaracane contexts.[8] Given this evidence it does not appear that peak 2 in *Huaracane Fino* was the result of this location being a provisional dump for domestic refuse, thus the high percentage of *Huaracane Fino* could indicate that serving activities may have taken place here. Even if the artifacts in this location were the result of the discard of domestic refuse, the proportions of items in the refuse should reflect the proportions of items used in the nearby domestic contexts. Thus the high percentages of *Huaracane Fino* would indicate that nearby terraces had higher than average percentages of these fineware serving bowls. In the end, this does not change the interpretation of this peak substantially as it still suggests that serving or feasting activities may have been taking place in the domestic contexts near peak 2.

4.4.2.2 Lithic materials The intra-sector distribution of chert in the Late Huaracane component of Yahuay Alta is very interesting especially in relation to the intra-sector distribution of *Huaracane Fino* described above. There were three broad areas with particularly high percentages of chert: one in the extreme east (#1 in Figure 4.34), one in the extreme southwest (#2 Figure 4.34), and one in the extreme northwestern part (#3 Figure 4.34) of this half of the site. These are the only three areas in the eastern half of the site where chert fragments comprised more than 40% of the lithic fragments recovered from surface collection units. The most interesting peaks in chert percentages are peaks 2 and 3 because of how they relate to the peaks of *Huaracane Fino*. Peak 2 is just to the south of and directly down slope of *Huaracane Fino* peaks 2 and 3 (see Figure 4.33 for *Huaracane Fino* peaks). Peak 3 is just to the west of and directly down slope of *Huaracane Fino* peak 1. There is even a small amount of overlap between peak 3 and *Huaracane Fino* peak 1. This pattern shows that the terraces just down slope of the three *Huaracane Fino* peaks all had high percentages of chert on their surfaces. A potential interpretation for this observed pattern could be that high status and/or wealthy households in the terraces directly associated with the *Huaracane Fino* peaks controlled the local procurement networks for chert. The reason that chert and *Huaracane Fino* peaks do not directly overlap may relate to the possibility that individual domestic terraces at the site did not completely correspond to complete household units (e.g., Flannery 1983) (See Chapters 5 & 6

[8] Surface artifact densities were calculated by taking the total number of ceramic and lithic artifacts found in a surface collection unit and dividing by the area of said unit. Since both bone and shell were relatively rare and extremely fragmented on the surface of Yahuay Alta these materials were not included in this density measure.

for a more in depth discussion of this issue). Household units at Yahuay Alta may have consisted of multiple domestic terraces that served different functions. Some terraces may have been the locus of lithic production and others of serving activities.

Another plausible interpretation could be that due to natural erosional processes at the site chert fragments moved downhill over time from the terraces where the more high status households were located. However, this does not appear to be the case because terraces located at the bottom of the slopes did not consistently have higher surface artifact densities than those located at the top of slopes (see Table B.4). In fact, the terraces with the highest surface artifact densities in this section of Yahuay Alta (surface collection Units 41 & 43) are located at the top of a ridge.

The high percentages of chert at peak 1 are not as easy to interpret as peaks 2 and 3 because this peak is not located as close to or down slope from *Huaracane Fino* peaks. This broad peak stretches over much of the far eastern margin of this half of the site and includes some of the public architectural areas as well as residential terraces. This peak shows that high percentages of chert are not always associated with high percentages of *Huaracane Fino*. Possibly households associated with this peak had access to chert sources but for some reason did not have access to *Huaracane Fino* bowls or did not have the resources to host feasting events utilizing *Huaracane Fino* bowls.

The percentages of dacite in the Late Huaracane half of the site were nowhere near as high as the percentages for chert. There were four moderately high peaks in the percentages of dacite, none of which exceeded 32% (Figure 4.35). However, these peaks represented the only locations in this half of the site where dacite comprised more than 24% of the lithic fragments recovered from a surface collection unit. The peak located furthest to the east, on the northern raised platform (P2), overlaps with a small portion of chert peak 1. This suggests that even in areas with access to high quality lithic materials low quality lithic materials were used as well. Overall, during the Late Huaracane phase dacite does not appear to have been all that important as a lithic material, although it was used to a slightly higher than average degree in several distinct locations.

There was only one peak in the Late Huaracane component where rhyolite comprised more than 25% of the lithic fragments recovered from surface collection units (Figure 4.36). This peak is located directly in the gap between chert peaks 1 and 2 with no overlap at all. One interpretation for this pattern is that residents associated with this peak of rhyolite did not have as much access to chert in comparison to their neighboring terraces. As a result, residences of these terraces had to utilize a lower quality local material that was readily available to them at the site. As with dacite, rhyolite does not appear to have been a particularly important lithic material during the Late Huaracane phase and it was probably primarily utilized by those residents of the site with direct access to this material.

There are two relatively rare lithic materials found at Yahuay Alta that deserve brief mention. They are both intermediate quality materials that were higher in quality than dacite or rhyolite but lower in quality than chert. The first of these is the fine-grained variety of rhyolite mentioned above, which is almost always a dark burgundy-red in color and has a substantially finer grain than the typical rhyolite found on the site. In Late Huaracane contexts this material never makes up more than 26% of the lithic fragments recovered from surface collection units and only exceeded 20% in two locations (Figure 4.37). There is one small peak in fine-grained rhyolite percentage located in part of chert peak 2 and one broader peak that overlaps slightly with chert peak 1. These overlaps demonstrates that even where there was access to chert in some sections of the site other lithic materials of slightly lower quality were utilized as well. The highest peak of fine-grained rhyolite is centered on the highest terrace in the eastern half of the site, surface collection Unit 39. This terrace was not associated with any other high percentages of other lithic materials.

The second rare intermediate quality lithic material was a fine-grained sandstone that is a light tan in color. This material was even more rare than fine-grained rhyolite and only occurred in the Late Huaracane component of Yahuay Alta. This material never comprised more than 36% of the lithic fragments recovered from surface collection units, and only exceeded 24% in one location at the site (Figure 4.38). This one relatively high peak of fine-grained sandstone overlaps with chert peak 1 in the open area just above the northern raised platform (P2).

The intra-sector distributions of lithic materials clearly demonstrate the use of a wide variety of lithic materials during the Late Huaracane phase. The most important finding of this particular analysis was that the use of high quality chert was not equal across the site, as the inter-sector analysis suggested. In areas of lower chert usage, more readily available but lower quality lithic materials, such as rhyolite, were utilized. However, even locations showing the greatest use of chert were not limited to the use of this lithic material.

4.4.2.3 Quartz The intra-sector distribution of quartz in Late Huaracane context at Yahuay Alta is difficult to interpret (Figure 4.39). There are two main peaks in this half of the site where quartz comprises more than 35% of the lithic fragments recovered from surface collection units. Overall, quartz does not appear to have been heavily utilized. Whatever activities involved the use of this material appear to have only been important at two specific locations within the Late Huaracane community at Yahuay Alta.

4.4.2.4 Lithic types Flakes, not surprisingly, were the only type of lithic implement to surpass more than 50% of lithic specimens recovered from surface collection units in the Late Huaracane component of Yahuay Alta. There was one broad contour peak with two separate high points in the southern portion of this half of the site, primarily Sector F (Figure 4.40). This is the only area on this half of the site where flakes comprised more than 50% of the lithic specimens recovered from surface collection units. This broad peak encompasses all of the public architectural spaces, both raised platforms and open plazas, in the eastern half of Yahuay Alta. The domestic terraces in this half of the site are relatively spaced out especially in comparison to the more closely spaced domestic terraces in Sectors E and D where the flake percentages are all below 50%. Lithic débitage is not necessarily a direct indicator of production locales. In fact, Moholy-Nagy (1990) suggests that concentrations of débitage actually represent "workshop dumps" where production debris was deposited. If this is taken into account, the pattern described above could suggest that the dumping of lithic débitage took place in open discard areas of the site during the Late Huaracane phase. Looking closely at the artifact contour map for flakes (see Figure 4.40) it is clear that the majority of the higher percentage contours are located away from domestic terraces. This fits well with expectations for the disposal of lithic débitage, which can become a hindrance in domestic contexts (Hayden and Cannon 1983; Moholy-Nagy 1990).

In the Late Huaracane component of Yahuay Alta there were two high peaks in nodule percentages in the western section of this half of the site and one moderately high peak in the eastern sector of this half of the site near the northern raised platform (P2) (Figure 4.41). These three peaks were the only locations in Late Huaracane contexts where nodule comprised more than 30% of the lithic specimens recovered from surface collection units. The distribution for nodules is interesting because it closely mirrors the distribution for chert in this half of the site;

although the peaks for nodules are not as broad as the chert peaks. The two highest peaks in nodule percentages were both located in domestic contexts, thus it appears that lithic production may have been taking place in the more residential section of the Late Huaracane component at Yahuay Alta. This makes sense especially, when compared to the flakes percentage contours (see Figure 4.40); production was taking place primarily in domestic contexts and the production debris was deposited in the more open, presumably discard areas of the site. It is also of note that these two possible lithic production locales are located in very close proximity to the peaks for *Huaracane Fino*.

For the most part, *manos* at Yahuay Alta were found in isolation, that is rarely was more than one *mano* found in a surface collection unit. Thus in no place in the Late Huaracane context at Yahuay Alta did *manos* comprise more than 10.5% of the lithic specimens recovered from surface collection units. There is one small peak in *mano* percentage in the far northwest corner of this half of the site that was the only location where *mano* percentages exceeded 8% of the recovered lithic specimens (Figure 4.42). However, the significance of this peak is negligible because it is created by only five *manos* found on three separate terraces.[9] This peak for manos encompassed several small terraces to the north and down slope of *Huaracane Fino* peak 1 possibly suggesting that food processing activities for serving or feasting events hosted by the household located upon the terrace associated with *Huaracane Fino* peak 1 took place on these other smaller nearby terraces. The *mano* peak does represents a unique concentration of *manos* in Late Huaracane contexts, however, it is difficult to argue that five *manos* indicate that substantially more intense food processing activities took place in this location. What is clear from this distribution is that the majority of *manos* recovered from Late Huaracane contexts were found in the more residential or domestic sections of the site suggesting that food processing was an activity that took place in domestic contexts.

4.4.2.5 Discussion The intra-sector analysis of surface materials in the Late Huaracane half of Yahuay Alta shows an uneven distribution of both *Huaracane Fino* bowl sherds and chert. This distribution allows for the identification of two distinct localities where relatively higher status and/or wealthy households were located. These locations are the terraces associated with

[9] 1 *mano* found on surface collection Unit 60; 1 *mano* found on surface collection Unit 64; and 3 *manos* found on surface collection Unit 65.

Huaracane Fino peaks 1 and 3 (which were surface collection Units 57 and 30 respectively; see Figure 4.33 and Figure 3.26). *Huaracane Fino* peak 2 was in an open, small area on top of a ridge where modestly sized serving or feasting events may have been hosted.

These two locations are also directly associated with two of the peaks for chert, which are located just down slope from these terraces (see Figure 4.34). This suggests that the households associated with *Huaracane Fino* peaks 1 and 3 had differential involvement in the local chert procurement networks. In addition, the two primary peaks for nodules are also located just down slope of *Huaracane Fino* peaks 1 and 3 (see Figure 4.33) suggesting that these higher status households were also differential involved in the acquisition of raw materials and/or the production of lithic implements.

The peak in *mano* percentages in this half of the site (see Figure 4.42) may also support the identification of the terrace associated with *Huaracane Fino* peak 1 as the location of an economically distinct household. The high *mano* percentage here possibly suggest that in comparison to the rest of the site more intensive food production activities took place in this residential cluster associated with *Huaracane Fino* peak 1 in order to prepare food for serving or feasting events. However, given that this peak was created by only five *manos*, this interpretation must be taken with extreme caution. It is more likely that the Late Huaracane surface distribution of *manos* simply demonstrates that food processing activities took place primarily in domestic contexts.

While these higher status/wealthier households differed in artifact assemblage from other locations at the site, architectural evidence on the surface of the site indicates that the residents of these households resided in residential structures that were similar to households with lower percentages of fineware ceramics and chert. Surface collections indicated some status/wealth differences with the Late Huaracane community at Yahuay Alta, but there was no surface evidence indicating marked differentiation in the consumption of exotic goods. None of the material wealth items observed in Huaracane boot tombs, such as elaborate, exotic pottery (e.g. Goldstein 2000b, 2005), were exhibited by the presumably higher status households in the eastern half of Yahuay Alta. Social differentiation at Yahuay Alta during the Late Huaracane phase simply did not involve use of these high value goods in everyday domestic life. Material correlates for status and/or wealth during this time period seems to have been based much more upon differential access to and possibly the control over the distribution of high quality goods that were used in everyday domestic life, such as serving bowls or chert tools. In addition some status and/or wealth may have been obtained and maintained through the hosting of relatively small scale serving or feasting events.

None of the locations identified as potentially high status households were associated with the public architecture and open plaza space in the Late Huaracane component of Yahuay Alta. The public architectural sectors in this half of the site displayed relatively high percentages of flakes of both high and low quality lithic material (see Figures 4.34 – 4.36). This evidence suggests that the deposition of debris from lithic production may have taken place in these open public sectors, suggesting that these were not necessarily kept clean as dedicated ceremonial spaces. Perhaps the Late Huaracane public sectors at Yahuay Alta were only occasionally utilized for community rituals or ceremonies and were thus convenient places to dispose of production debris. However, it is also possible that this debris accumulated in these public spaces towards the end of the occupation of the settlement when regular maintenance of public space was discontinued due to the imminent abandonment of the settlement (e.g., Schiffer 1985: 25).

4.5 TERMINAL HUARACANE OCCUPATIONS AT YAHUAY ALTA: SURFACE PATTERNS

The intra-sector analysis of the Terminal Huaracane occupation involved Sectors A, B, and C. In the center of this western half of the site is the artificial platform mound and the site's largest open plaza. The northern and southern parts of this half of the site mostly contain domestic terraces, although there is some open space in the southern half of Sector A.

4.5.1 Inter-sector artifact distributions in Sectors A, B, & C

4.5.1.1 Ceramic wares As with the Late Huaracane occupation, it was originally hypothesized that the terraces spatially close to the public architectural features would be more likely to have held higher status residents, and thus would display higher proportions of *Huaracane Fino* bowl sherds. If this hypothesis were to hold, I expected that Sector C overall would have the highest percentages of *Huaracane Fino* bowl sherds. However the surface sample revealed that the *Huaracane Fino* bowl sherd percentage in Sector C (7.6%) was significantly lower than the other Terminal Huaracane sectors. We can be more than 99% confident that this proportion is significantly lower than the *Huaracane Fino* percentages in Sectors A and B (Figures 4.43 & 4.44). There were, however, no significant differences between Sectors A and B, which had *Huaracane Fino* bowl sherd percentages of 13.5% and 14.3% respectively. Thus, the residential sector closest to the Terminal Huaracane public/ceremonial complex had a relatively low proportion of *Huaracane Fino*, but the sector containing the public/ceremonial complex itself had a relatively high proportion of this fineware even though the evidence suggests Sector B was entirely non-residential. I believe this indicates that serving activities utilizing *Huaracane Fino* bowls were part of the ceremonies or rituals that took place in this public/ceremonial complex.

The inter-sector distribution of *Huaracane Vegetal* sherds was very uneven; no two sectors from the Terminal Huaracane had similar sherd percentages of this utilitarian ware (Figure 4.45). Sector B had the highest percentage of *Huaracane Vegetal* sherds, 55.9%, and we can be more than 99% confident that this percentage is significantly higher than Sectors A and C (Figure 4.46). The high percentage of thick-walled utilitarian ware ceramics here suggests that some food storage and/or preparation may have been important activities in this public sector, which is consistent with the interpretation of the wide variety of botanical evidence found in excavation Unit 7.

Sector C had the second highest percentages of *Huaracane Vegetal* sherds, 42.6%, and we can be much more than 99% confident that this percentage is significantly higher than the percentage in Sector A (see Figure 4.46). The greater variability of activities taking place in Sector C, including typical domestic tasks, in comparison to Sector B may help to explain why Sector C displays a lower percentage of this particular ceramic ware than Sector B. Sector A was the Terminal Huaracane context with the lowest percentage of *Huaracane Vegetal* sherds at 34.2%, and we can be more than 99% confident that this percentage is significantly lower than the *Huaracane Vegetal* percentages of the other Terminal Huaracane sectors.

There are no significant differences between the proportions of *Huaracane Arena* sherds found in Sectors A and C, at 43.0% and 43.2% respectively, however, we can be more than 99%

confident that these percentages are significantly higher than the *Huaracane Arena* sherd percentage for Sector B, at only 25.00% (Figures 4.47 & 4.48). It is axiomatic that Sector B had such a low percentage of *Huaracane Arena* sherds because it had a very high percentage of *Huaracane Vegetal* sherds. This was the only sector at the site dating to either time period where the percentage of *Huaracane Vegetal* sherds exceeded the percentage of *Huaracane Arena* sherds. This pattern departs from the typical trend observed on the surface of Huaracane sites (Goldstein 2000b: 346). The reason for this result may be that Sector B is the only sector at the site that consisted entirely of public architecture and had no evidence of domestic habitation. The higher percentages of *Huaracane Arena* sherds in Sectors A and C again suggest that a greater diversity of activities probably took place in these sectors in comparison to Sector B.

4.5.1.2 Ceramic forms Diagnostic sherds comprised only 9.3% of the ceramic sherds recovered during the surface collection. Thus, the error ranges for the percentage of vessel types in each sector were large and there are fewer, significant inter-sector differences. Sector B yielded insufficient diagnostic ceramic sherds (15) to be included in this analysis, because with a sample size that small, the error rages were too large to yield statistically significant differences from any other sectors. Therefore, I will only discuss Sectors A and C.

There is a very significant difference between Sectors A and C in proportion of bowl sherds. With a bowl percentage of 68.9% Sector A had the highest percentage of this vessel form and we can be more than 99% confident that this percentage is significantly different from the bowl sherd percentage of 44.0% of Sector C (Figures 4.49 & 4.50). Since the vast majority of diagnostic bowl sherds (97.7%) were made from the *Huaracane Fino* ware, these results indicate that *Huaracane Fino* bowls were utilized to a greater extent in Sector A in comparison to Sector C. Thus Sector A not only had a relatively high proportion of the only Huaracane fineware ceramic, a good indicator of wealth and/or status, but also had the highest proportion of bowls documented at Yahuay Alta, indicating differential involvement in serving activities. This suggests that the residents of Sector A did not simply possess *Huaracane Fino* bowls as high value versions of household vessels, but that these bowls were also likely utilized in more frequent serving activities that could have helped to enhance and/or maintain their social status within the Yahuay Alta community.

The surface collection also revealed significant inter-sector variation in the distribution of *olla sin cuello* sherds. Sector C had the highest percentage of this vessel type, 34.0%, and we can be more than 99% confident that this percentage is significantly higher than the percentage of *olla sin cuello* sherds in Sector A, 17.8% (Figures 4.51 & 4.52). Given the inter-sector variability in bowl proportions, this result is not surprising. Serving vessels were more important in Sector A than in Sector C and utilitarian cooking/storage vessels were more important in Sector C than in Sector A. This trend continues for *ollas* with necks although the differences are not as great or significant. Sector A had an *olla* with neck sherd percentage of 17.0% and we can only be 80% - 95% confident that this percentage is significantly higher than the percentage in Sector A, 8.9% (Figures 4.53 & 4.54).

As was true for the entire site, in Terminal Huaracane contexts jar percentages were relatively low. Sectors A and C had jar sherd percentages of 4.4% and 4.0% respectively (Figures 4.55 & 4.56). Overall the most important inter-sector variability in vessel forms was that there was a significantly higher proportions of serving vessels (specifically bowls) in Sector A.

4.5.1.3 Lithic materials There were small but significant differences in the Terminal Huaracane inter-sector distribution of chert. Sector A had the highest chert percentage from this time period, 18.5%, and we can be more than 99% confident that this percentage is significantly higher than the percentage in Sector B, 6.3% (Figures 4.57 & 4.58). However, we can only be between 80% - 95% confident that the chert percentage in Sector A is higher than the chert percentage of Sector C, 11.5% (see Figure 4.58). Chert was not heavily represented in Sector B, the public-ceremonial sector of the site. The observed difference between Sectors A and C suggests that households within Sector A had greater access to this desirable raw material.

Correspondingly, there were large and extremely significant inter-sector differences in the distribution of dacite. Sector B has, by far, the highest percentage of dacite, 54.4%, and we can be more than 99% confident that this percentage is higher than all other Terminal Huaracane sectors (Figures 4.59 & 4.60). Sector A had the second highest percentage of dacite, 26.2%, and we can be more than 99% confident that this percentage is significantly higher than the dacite percentage in Sector C, 10.8% (see Figure 4.60). It is of note that Sector C has relatively low percentages of both chert and dacite, suggesting that some other lithic material was more important in this residential sector.

The inter-sector distribution of rhyolite nearly mirrors that of dacite even though the percentages of rhyolite in each sector are lower than those of dacite. Sector B has the highest percentage of rhyolite, 20.3%, and we can be more than 99% confident that this percentage is significantly higher than all other Terminal Huaracane sectors (Figures 4.61 & 4.62). This result is further evidence that lower quality lithic materials were predominant in the public-ceremonial sector lithic assemblage. Sector A had a rhyolite percentage of 9.7% and we can be 95% - 99% confident that this percentage is significantly higher than the rhyolite percentage in Sector C of 2.3% (see Figure 4.62).

4.5.1.4 Quartz There are very large and significant inter-sector differences in the Terminal Huaracane distribution of quartz. By far, Sector C had the highest quartz percentage at 67.7%, and we can be substantially more than 99% confident that this percentage is higher than the quartz percentages in all other Terminal Huaracane sectors (Figures 4.63 & 4.64). This high quartz percentage helps to explain why Sector C had relatively low percentages of all the other common lithic materials discussed above. Sector A had the second highest quartz percentage, 26.2%, and we can be more than 99% confident that this percentage is higher than the quartz percentage in Sector B, 8.9% (see Figure 4.64). This variability in quartz is perplexing because it is not know how this material was utilized. What is clear is that quartz was a very important material in Sector C especially in comparison to the other Terminal Huaracane sectors.

4.5.1.5 Lithic types There were substantial inter-sector differences in the Terminal Huaracane distribution of flakes. Sector B had the highest flake percentage at 65.4%, and we can be 95% - 99% confident that this percentage is higher than the flake percentage in Sector A at 52.8% (Figures 4.65 & 4.66). We can be much more than 99% confident that the flake percentages for these two sectors are significantly higher than the flake percentage for Sector C, 22.0% (see Figure 4.66). These results indicate that even though Sector B was a public/ceremonial sector, lithic débitage was commonly discarded in this sector's open spaces. This pattern of deposition is similar to the findings from the Late Huaracane phase and is confirmed by the intra-sector analysis (see below). As mentioned above, this sector's lithic assemblage was dominated by lower quality, readily available lithic materials like dacite and rhyolite.

For Terminal Huaracane contexts the inter-sector distribution of nodules was uniformly low; Sectors A, B, and C had nodule percentages of 5.7%, 4.9%, and 5.8% respectively. These relatively equal proportions for raw lithic nodules indicate that there was relatively equal involvement at the sector level in the initial stages of lithic tool production. The inter-sector distribution of *manos* was relatively similar for this time period. *Mano* percentages were very low in all Terminal Huaracane sectors, with Sectors A, B, and C having *mano* percentages of 1.9%, 3.1%, and 0.9% respectively. There are no significant differences between these percentages.

4.5.1.6 Lajas A final lithic type that was relatively rare at Yahuay Alta is *lajas*; these were only found on the surface in Terminal Huaracane contexts. *Lajas* are large flat slabs of stone made of rhyolite or andesite that are usually between 2 and 4 centimeters thick. They can be used to pave stone floors and benches of elite houses. Stone slabs similar to the ones found at Yahuay Alta were used to pave some benches and platforms in the elite palace complex on the summit of Cerro Baúl (Moseley, et al. 2005). During the surface collection *lajas* were only found in Sector B where they comprised 10.5% of the lithic assemblage. All of the *lajas* found in Sector B were broken, which is further evidence indicating that production byproducts were disposed of in the open spaces of Sector B.

4.5.1.7 Discussion Overall, the inter-sector analysis of surface collection material from Terminal Huaracane contexts at Yahuay Alta revealed that there were some significant differences between sectors from this time period. Sector A had relatively high percentages of *Huaracane Fino* and chert while Sector C had relatively low percentages of these artifact categories. Given that *Huaracane Fino* bowls and chert are two of the best artifactual indicators of wealth recovered from the surface of Yahuay Alta, this indicates that there were some distinguishable wealth differences between the residents of Sector A and Sector C, or at least between some households in these sectors. The non-residential Sector B had relatively high percentages of *Huaracane Fino* and relatively low percentages of chert. Because most of the material recovered from Sector B was probably refuse from residential areas, the low proportions of chert in this sector suggest the refuse originated from lower status residents. However, the *Huaracane Fino* in Sector B I interpret not to be secondary refuse, but evidence that serving activities may have been part of the ceremonies or rituals that took place in this public/ceremonial sector.

4.5.2 Intra-sector artifact distributions in Sectors A, B, & C

4.5.2.1 Ceramic wares There are two distinct contour peaks in *Huaracane Fino* bowl sherd percentage in the Terminal Huaracane component of the site (Figure 4.67). These two peaks are the only locations in the western half of Yahuay Alta where *Huaracane Fino* bowl sherds comprise more than 24% of the ceramic sherds recovered from surface collection units. Peak 1 is located in the southern half of the large flat plaza that is situated in front of the platform mound and is centered upon surface collection Unit 122. This peak is in the site's main public space, suggesting that some type of feasting or consumption utilizing *Huaracane Fino* bowls may have been a part of the public and/or ritual activities that took place in this large plaza. Peak 2 is located adjacent to the southernmost residential cluster at Yahuay Alta (Sector A). The peak is situated in a large, relatively flat open area that has many residential terraces just to its north and is centered upon surface collection Units 131 & 134. Both of the Terminal Huaracane peaks in *Huaracane Fino* bowl sherd percentages are located in open areas that cannot be directly associated with any single residential terrace. Both of these locations would have been ideal for the hosting of sizeable feasting events, as they were large open spaces that could easily accommodate many people.

It is therefore important to determine whether or not these peaks in *Huaracane Fino* percentages are actually indicative of significant differences in serving or feasting activities. In order to accomplish this, the actual *Huaracane Fino* bowl sherd percentages from the collection units for each of these peaks can be compared to the overall percentage of *Huaracane Fino* recovered from the surface of this half of the site (Table 4.2). This comparison demonstrates that the *Huaracane Fino* percentages in peaks 1 and 2 were both significantly higher than the overall *Huaracane Fino* percentage for all Terminal Huaracane contexts. In addition, if the *Huaracane Fino* percentages from peaks 1 and 2 (see Table 4.2) are compared to the average *Huaracane*

Fino percentage from all 46 of the Terminal Huaracane surface collection units with 20 or more ceramic sherds (11.4% ± 2.6% at the 95% confidence level), the percentages from peaks 1 and 2 are significantly higher than the Terminal Huaracane average. Since neither of these peaks is located in domestic contexts they obviously do not simply represent high quality domestic refuse; instead these peaks suggest that serving or feasting events may have taken place within these two open areas during the Terminal Huaracane phase.

Table 4.2. *Huaracane Fino* (*H.F.)* %'s in Terminal Huaracane contexts[10]

Context	Total # of Sherds	# of *H.F.* Sherds	% *H.F.* Sherds
Surface Collection Unit 122 Peak # 1 in Figure 4.67	57	17	29.8% ± 12.1%
Surface Collection Unit 131 Peak # 2 in Figure 4.67	57	20	35.1% ± 12.6%
Surface Collection Unit 134 Peak # 2 in Figure 4.67	49	14	28.6% ± 13.0%
All Ceramics Collected From Sectors D, E, & F	3717	362	9.7% ± 1.0%

There are additional arguments that the Terminal Huaracane peaks for *Huaracane Fino* are not just the result of dumping or disposal activities. Peak 1 is located in a formal public space that was constructed by the residents of the site; thus it seems unlikely that this area would have been utilized as a provisional dump for domestic refuse. Given the fact that both the eastern and western edges of the plaza where this peak is located are on the edge of steep, high cliffs, it is much more likely that refuse would have been thrown off the cliffs because it would have required little additional effort to permanently dispose of the refuse. Additionally, comparison of the surface artifact density at peak 1 (1.48 artifacts per m^2) to the mean surface artifact density (3.11 artifacts per m^2) and median surface artifact density (2.61 artifacts per m^2) for Terminal Huaracane contexts demonstrates that there was not a particular dense concentration of surface artifact in this location. However, the surface distribution of Terminal Huaracane lithic remains, which are discussed below in more detail, strongly suggest that the deposition of at least lithic refuse took place in this plaza. In fact, ceramics make up only 44.2%

[10] All error ranges in this table are at the 95% confidence level.

of the surface artifacts recovered from surface collection Unit 122 which is substantially lower than the than the mean percentage of ceramics recovered from all Terminal Huaracane surface collection units with more than 20 artifacts, 90.3%.[11] This indicates that this location was probably utilized specifically as a disposal location for lithic production debris. Thus the high percentage of *Huaracane Fino* could be taken as showing that serving or feasting events utilizing these fineware bowls took place in this plaza.

Peak 2 is located in an open, and presumably public space, however this space is less formal than the plaza discussed above. This area is simply a large open space located behind a concentration of domestic terraces; thus it would make a likely area for the provisional dumping of domestic refuse (Hayden and Cannon 1983; Moholy-Nagy 1990). However, one would only have to walk at most only 30 extra meters to toss refuse of the edge of a steep cliff, expending only slightly more effort to permanently dispose of the refuse. The surface artifact densities for the two surface collection units of peak 2 are 2.35 artifacts per m^2 and 2.24 artifacts per m^2 for Units 131 and 134 respectively. Both of these densities are lower that the mean artifact density (3.11 artifacts per m^2) and median surface artifact density (2.61 artifacts per m^2) for Terminal Huaracane contexts. However, ceramics make up 94.9% and 88.9% of the surface artifacts in surface collection Units 131 and 134 respectively. These percentages are very close to the 90.3% mean for ceramics recovered from all Terminal Huaracane surface collection units with more than 20 artifacts suggesting that this peak could very well be the result of the disposal of domestic refuse in this area. Nevertheless, a significantly high percentage of *Huaracane Fino* sherds was found in this location (see Table 4.2). As a result, even if this peak was the result of dumping activities, it would suggest that the nearby domestic terraces had higher than average percentages of this high quality serving ware and thus may have been differentially involved in serving or feasting activities.

The other ceramic ware that was investigated in this analysis is not a typical Huaracane ware identified by Feldman (1989) or Goldstein (1989; 2000b). This is a ware that I have termed *Pasta Biotite* because it is tempered with a large amount of biotite, a dark colored mica mineral. This ware is nearly identical in color and texture to a biotite tempered ceramic ware found in Middle Horizon Wari contexts at Cerro Baúl and Cerro Mejia (Nash 2002). In Wari contexts,

[11] Total artifact percentages were calculated by adding up the number of ceramics and lithic artifacts recovered from the surface of a collection unit and dividing a particular artifact class, such as ceramics, by this total.

the biotite tempered ware was used almost exclusively in utilitarian cooking and storage vessels. At Yahuay Alta *Pasta Biotite* was a plainware pottery consisting of large vessels, primarily *ollas* and jars. These vessels were Huaracane in style and only resembled Wari ceramics in that they were constructed with a paste that was tempered with biotite. Although some *Pasta Biotite* sherds at Yahuay Alta exhibit burning on their exteriors, it was not as common as on *Huaracane Vegetal* and *Huaracane Arena* sherds. This paste only made up 5.3% of the sherds recovered during the surface collection of Yahuay Alta.

During excavations *Pasta Biotite* was only found in contexts that dated to the Terminal Huaracane phase (see Figure 4.3), suggesting it was a ceramic ware adopted late in the Huaracane sequence. *Pasta Biotite* was relatively rare on the surface throughout the majority of Terminal Huaracane contexts at Yahuay Alta. The distribution for *Pasta Biotite* percentages in the western half of the site shows only one contour peak (#1 in Figure 4.68) where this ware comprised more than 24% of the sherds recovered from surface collection units. This peak is located on top of the large terraced hill in the extreme western section of the site. This is one of the more isolated locations on the entire site.

An even higher contour peak of *Pasta Biotite* sherd percentage was actually found in the eastern half of Yahuay Alta associated with excavation Unit 3, which dated to the Terminal Huaracane phase (#2 in Figure 4.68). This peak is the only location on the site where *Pasta Biotite* comprised more than 32% of the sherds recovered from a surface collection unit. Because this high peak was associated with a structure dated to this later time period, and this particular ware seems to be associated with this later time period as well, this peak likely represents a restricted and isolated locus of Terminal Huaracane occupation in the eastern half of Yahuay Alta. As *Pasta Biotite* is a utilitarian ware, its distributions are hard to link directly to social differentiation at Yahuay Alta. What is clear is that the intra-sector distribution of this ware was not even across the entire site; it was utilized to a higher degree in only two isolated locations within this settlement. *Pasta Biotite* is very similar to a common utilitarian ware tempered with biotite used at the nearby Wari sites of Cerro Baúl and Cerro Mejia (Nash 2002), and perhaps the practice of using biotite as a temper was learned from Wari colonists.

4.5.2.2 Lithic materials Chert was a relatively rare lithic material in the western half of Yahuay Alta; there are only two small contour peaks in this half of the site where chert comprises more than 30% of the lithic fragments recovered from surface collection units (Figure 4.69). Both of these small contours are located around the base of the large terraced hill in Sector C. Neither of these peaks are located near the *Huaracane Fino* contour peaks for the western half of the site. The large and more northern peak (#1 in Figure 4.69) is located primarily on a steep slope below several terraces. This would have been an ideal location for the disposal of domestic refuse, suggesting that this peak may represent the dumping of production debris by the residents of the nearby terraces. The smaller peak (# 2 in Figure 4.69) is located directly over surface collection Unit 111, a small residential terrace. This peak most likely represents a locus of production because only chert débitage and no tools were found on this terrace. The débitage found in this location ranged widely in size suggesting that all stages of production took place here.

Chert does not appear to have been a very commonly used lithic material in the western half of the site during the Terminal Huaracane phase. One possible reason for this could be that the residents of the site had access to obsidian, an even higher quality lithic material, during this time period. Although only a small number of isolated specimens of obsidian were recovered from the surface of Terminal Huaracane contests, this material was recovered from all excavated contexts that dated to this time period, suggesting that it was fairly common (see Chapter 6 for a detailed discussion of obsidian).

While chert was not all that common in the western half of Yahuay Alta, a very high peak, where chert comprised more than 70% of the lithic fragments recovered from surface collection was represented by Unit 24 (see peak # 1 in Figure 4.34). This peak is located in the eastern half of Yahuay Alta and directly associated with what became excavation Unit 3, an excavation unit dating to the Terminal Huaracane phase. This distribution suggests that the inhabitants of this large structure had differential access to chert during the Terminal Huaracane phase at Yahuay Alta. This peak appears to represent a locus of production because all of the chert found here was débitage. The majority of the flakes found here were relatively small, less than 2 cm long, suggesting that the later stages of lithic reduction were taking place in this location (Ahler 1989).

Dacite was the most common lithic material utilized for making flaked stone tools recovered from the surface of the Terminal Huaracane contexts at Yahuay Alta. There are two large contour peaks in which dacite comprises more than 30% of the lithic fragments recovered from surface collection units (Figure 4.70). The highest of these peaks is centered directly upon the large open plaza in front of the platform mound. The second peak is located in the eastern section of the southern most part of the site. This peak is centered upon a more open area where there is only one residential terrace. Each of these contour peaks in dacite percentages are in relatively open areas away from concentrations of domestic terraces, suggesting that these peaks may have been "workshop dumps" for lithic production debris (e.g., Moholy-Nagy 1990).

Rhyolite was a relatively rare lithic material in Terminal Huaracane contexts; there is only one distinct peak where rhyolite comprises more than 18% of the lithic fragments recovered from surface collection units in the western half of the site (Figure 4.71). This peak was centered directly upon the large open plaza in front of the platform mound, thus it also suggests that this open plaza may have been used as a "workshop dump" for lithic production debris.

Fine-grained rhyolite was relatively rare in the Terminal Huaracane component of Yahuay Alta with only one small distinct peak where fine-grained rhyolite comprised more than 20% of the lithic fragments recovered from surface collection units located in this half of the site (Figure 4.72). This peak was centered directly over one of the larger domestic terraces, surface collection Unit 123, in the southern most part of the site. Since this peak is directly associated with a domestic terrace it suggests that the residents of this terrace may have been producing lithic implements with this material in this location. The fact that a large nodule of fine-grained rhyolite was recovered from the surface of Unit 123 further supports this interpretation. This peak does not overlap with the large peak in dacite percentage that dominates most of this section of the site, suggesting the residents of this terrace had differential access to this lithic material.

The intra-sector analysis of lithic materials in the Terminal Huaracane component of Yahuay Alta demonstrates that high quality and intermediate quality materials were not evenly distributed across the site during the Terminal Huaracane phase. Certain households appear to have had differential access to particular lithic materials, and access to the more desirable materials, such as chert and fine-grained rhyolite, appears to have been restricted to only a few households within the settlement.

4.5.2.3 Quartz The most common lithic material found on the surface of the western half of Yahuay Alta was quartz, in some locations it comprised as much as 100% of the lithic assemblage on the surface. The distribution for quartz clearly demonstrates two distinct peaks for quartz percentages, in each quartz comprises more than 40% of the lithic fragments recovered from surface collection units (Figure 4.73). The largest of these peaks shows that quartz was most common on the terraced hill located in the western part of Sector C. The percentage of quartz rises as one move up this hill, exceeding 90% by the summit. This large contour peak for quartz is located in an area of the site that contains many narrow rectangular domestic terraces. The second peak in quartz percentage is in the most eastern part of the most southern part of the site. This peak is centered upon two relatively isolated narrow rectangular terraces. Although it is not known what quartz was used for at Yahuay Alta, these peaks clearly demonstrate that some residents within this settlement were differentially involved in the activities that utilized quartz.

4.5.2.4 Lithic types Flakes were relatively common in the western half of Yahuay Alta; surface percentages exceeded 70% of the lithic fragments recovered from the surface in several locations. There were two major contour peaks where flakes comprised more than 55% of the lithic specimens recovered from surface collection units and three other minor peaks, which had percentages of just over 50% (Figure 4.74). The highest peak had a flake percentage of over 80% and was centered on the flat area south of the southern most residential cluster at the site in Sector A. The second highest peak in flake percentage is centered upon the large open plaza in front of the platform mound. These two high peaks are both located in the most open areas of the site and thus are not directly associated with many domestic terraces. Since lithic débitage is often deposited in areas of settlements away from domestic contexts, the Terminal Huaracane distribution for flakes appears to indicate that these open areas of the site were utilized as "workshop dumps" for lithic production debris (e.g., Moholy-Nagy 1990).

The three smaller and lower peaks in flake percentages in Terminal Huaracane contexts are all directly associated with domestic terraces located at the base of the terraced hill in the far western section of the site (see Figure 4.74). Since these peaks are associated directly with domestic contexts they may indicate the location of several lithic production locales in this section of the site. All three of these locations are situated within very easy walking distance of the large plaza where it appears most lithic débitage was deposited. Thus the Terminal Huaracane distribution of flakes allows for the identification of both production and deposition locales within this settlement.

Overall, nodules were relatively rare in Terminal Huaracane contexts, never comprising more than 19% of the lithic specimens recovered from surface collection units. There were only two peaks in nodules percentages and these were the only locations where nodules comprised more than 10% of the lithic specimens recovered from the surface collection units (Figure 4.75). The central section of the largest and highest peak in nodule percentage encompassed several domestic terraces near the base of the platform mound and the terraced hill in Sector C. This distribution suggests that lithic production was taking place in these locations. Although not overlapping perfectly, this peak corresponds well to the small isolated peaks for flakes discussed above (see Figure 4.74), reinforcing the interpretation that lithic production was taking place in the low lying section of the Terminal Huaracane settlement at the base of the terraced hill. The second and smaller peak is located in the southern residential cluster and centered upon a residential terrace that was surface collection Units 123 A and B. This distribution corresponds well with the distribution for fine-grained rhyolite (see Figure 4.72) and suggests that lithic production may have taken place on the domestic terraces in this section of the site as well.

Manos were relatively rare in the western half of Yahuay Alta, as they were everywhere on the site, and generally occurred in isolation with one *mano* to a terrace. However, there was one very distinct peak in *mano* percentages directly associated with the platform mound (Figure 4.76). In this peak *manos* comprise 21% of the lithic specimens recovered from the surface of the surface collection units surrounding the platform mound; it is the only location in this half of the site with a *mano* percentage that exceeds 10%. The location of this peak is very interesting because it is directly associated with the major public architectural feature at the site. This distribution suggests that food processing, probably for feasting events, took place on and/or around the platform mound. However, the significance of this peak in *mano* percentage is questionable because a total of only four *manos* from three separate collection units create this peak.[12] Thus although this peak does represent a singular concentration of *manos* on the surface of the Terminal Huaracane component of Yahuay Alta, it is difficult to argue that four *manos*

[12] 1 *mano* found on surface collection Unit 112; 2 *manos* found on surface collection Unit 118; and 1 *mano* found on surface collection Unit 119.

represent more intensive food processing in this location. The most important information obtained from this distribution is that during the Terminal Huaracane phase, food processing activities took place both in domestic and public contexts. Although this peak in *mano* percentage does not appear to be very significant, excavations in Unit 7, one of the small structures just to the west of the platform mound, seem to lend weight to the tenuous interpretation that food processing for feasting events took place on and around the platform mound. The evidence from these excavations will be discussed in further detail in Chapter 6.

4.5.2.5 Lajas These flat stone slabs were only found in the large plaza in front of the platform mound located in Sector B (surface collection Units 121 & 122). Because this was the only location where *lajas* were found on the site during the surface collection, a contour map for their distribution was not created. All of the *lajas* found in the plaza were either partially made or broken during manufacturing, thus lending further credence to the interpretation that the plaza may have been used as a "workshop dump" for production debris.

4.5.2.6 Discussion The intra-sector analysis of surface materials in the western half of Yahuay Alta shows a heterogeneous distribution of most of the types of materials used in this analysis. The distribution patterns make it difficult pinpoint the specific localities where higher status and/or wealthier households may have been located. This is because the majority of artifact types that are likely associated with status and/or wealth are either concentrated in public and/or communal areas, or are relatively rare in the Terminal Huaracane component of the site. The two high contour peaks for *Huaracane Fino* bowl percentages in this half of the site are located in open areas that are not associated with any specific residential terraces (see Figure 4.67). The single high contour peak for *mano* percentages was directly associated with the platform mound (see Figure 4.76). Finally, chert was rare in the Terminal Huaracane component at Yahuay Alta with only two artifact contour peaks (see Figure 4.69).

The overall surface distribution of artifacts in Terminal Huaracane contexts suggests that production activities, especially lithic production, took place in domestic contexts, while the deposition of domestic refuse took place in open spaces, including the large public plaza. It is surprising that the deposition of domestic refuse took place in this plaza because it represents the primary public, and presumably ceremonial, complex at the site. Perhaps much of the refuse on the surface here accumulated near the end of the occupation of the settlement as regular maintenance and/or cleaning of this public space no longer took place due to the imminent abandonment of the site (e.g., Schiffer 1985: 25).

Countering the possibility that the two high peaks in *Huaracane Fino* bowl sherd percentage located in public space may have been the result of the deposition of domestic refuse, is that the only two high peaks of *Huaracane Fino* were located in these open spaces. The *Huaracane Fino* percentages in these open areas were significantly different than *Huaracane Fino* percentages in all of the Terminal Huaracane domestic contexts (see Table 4.2). If these peaks were the result of refuse dumping, then they likely were produced by households that had high percentages of *Huaracane Fino* in their domestic ceramic assemblages and that were thus differentially involved in serving or feasting activities. In addition, these depositions were probably made by households located on terraces that were relatively close to the open spaces because people do not typically like to travel far to dispose of their refuse (Hayden and Cannon 1983). Given the locations of the two *Huaracane Fino* peaks it is possible that some households located in the southernmost residential cluster (Sector A) may have been differentially involved in serving or feasting activities. Thus, even if some of the artifacts on the surface in the open areas were the result of dumping activities, it is plausible that serving or feasting events utilizing *Huaracane Fino* bowls took place in these areas as well. This argument is supported by the small concentration of *manos* found on and around the platform mound. Even though this concentration is only comprised of four *manos* and does not represent statistically significant different percentages in *manos* from other Terminal Huaracane contexts, the mere presence of these *manos* in this location suggests that food processing activities took place on and/or around this public/ceremonial facility. These activities were clearly not for domestic purposes and suggest that the serving of food and/or drink likely took place in the ceremonies or events that took place on the platform mound and in the adjacent plaza.

Since the important indicators for status and/or wealth are primarily concentrated in more open public areas, it is difficult to identify any specific particularly high status or wealthy residential locations in this half of the site. However, as mentioned above, it is reasonable to suggest that one or two of the terraces in the southern most residential cluster (Sector A) could have been higher status. This small residential cluster is directly associated with the large open area where *Huaracane Fino* peak 2 was located and is relatively close to the large plaza where peak 1 was located. In addition, during the inter-sector analysis this sector was identified as having the highest percentage of bowls at the entire site (see Figures 4.49 & 4.50). Unfortunately, it is difficult to be more specific and identify a particular terrace in this residential cluster as higher status and/or more wealthy than the others. None of the terraces here, or anywhere else in the western half of Yahuay Alta, have any surface evidence to denote them as especially high status and/or wealthy.

Excavation Unit 3, is located in the eastern half of Yahuay Alta but dating to the Terminal Huaracane, was associated with a very high peak in chert percentage (see peak #1 in Figure 4.34). This large, well-built, stone structure appears to been the location of a household with differential access to chert during this time period as it was the only Terminal Huaracane context where a substantial amount of chert was recovered from the surface. This structure was also associated with a high peak of *Pasta Biotite* (see Figure 4.68), which is a paste that may have been adopted after contact with Wari colonists. These two factors, in addition to the fact that this evidence is associated with a large stone walled structure, suggest that the members of this household may have had high status within this Terminal Huaracane community. This structure is not associated with high percentages of *Huaracane Fino* bowl sherds, which is unlike the Late Huaracane phase where peaks of *Huaracane Fino* and chert percentages tended to overlap.

The intra-sector analysis of the western half of Yahuay Alta showed that there were no overt displays of material wealth in this Huaracane community that are comparable to the evidence from Huaracane boot tombs (Goldstein 2000b, 2005). The archaeological indicators for higher status and/or wealth were generally concentrated in more open, communal areas during this time period. No exotic materials other than a few specimens of obsidian and marine shell were recovered from the surface of Terminal Huaracane contexts. This evidence suggests that during the Terminal Huaracane phase the material displays of wealth exhibited by the Huaracane boot tombs were reserved for funerary contexts and were perhaps socially inappropriate within Huaracane communities.

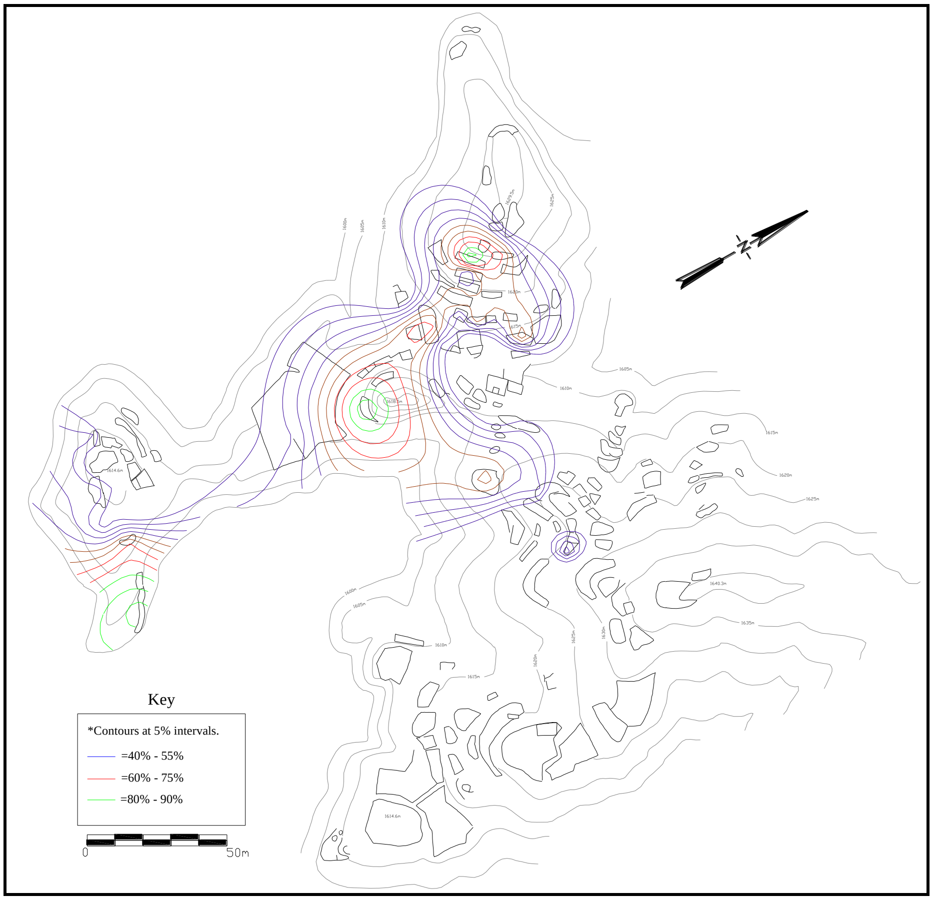


Figure 4.1. Contour map showing the percentages of *Huaracane Vegetal* sherds on the surface of Yahuay Alta.

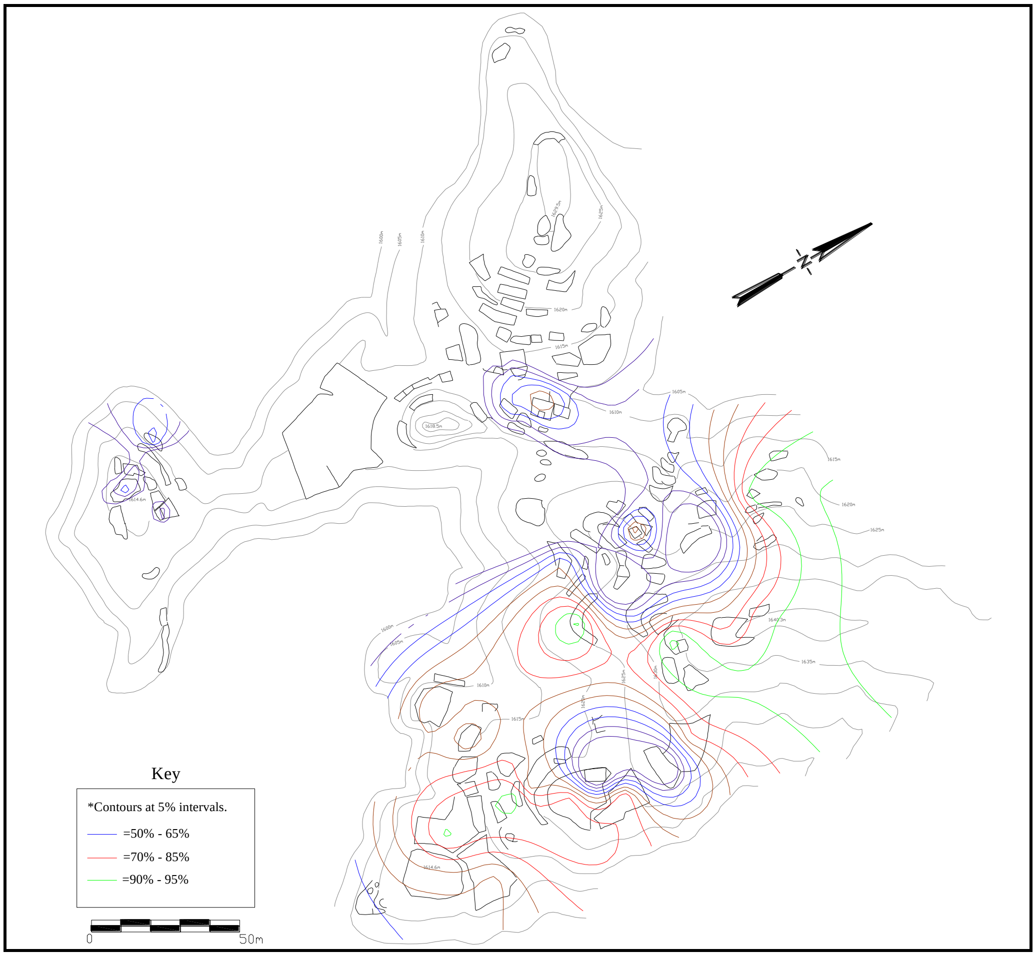


Figure 4.2. Contour map showing the percentages of *Huaracane Arena* sherds on the surface of Yahuay Alta.

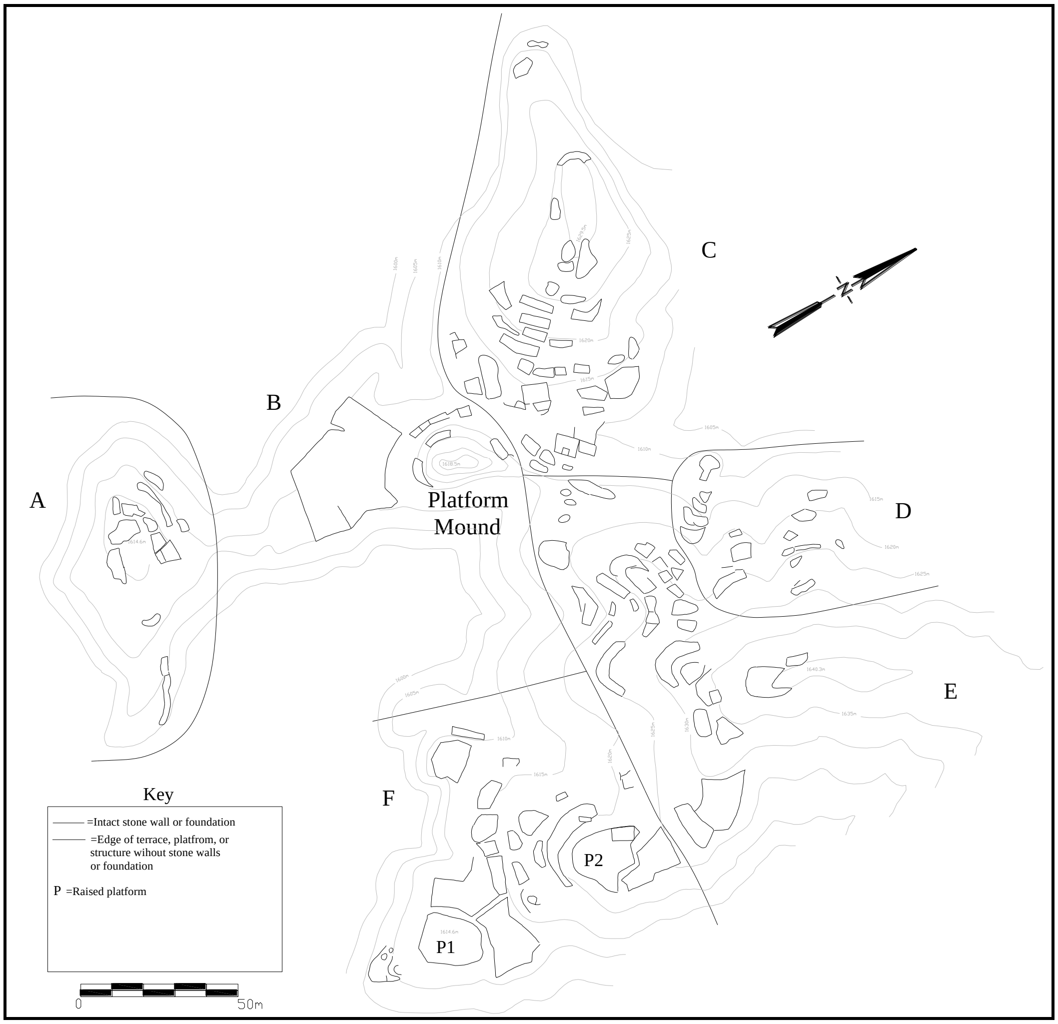


Figure 4.3. Sector divisions at Yahuay Alta

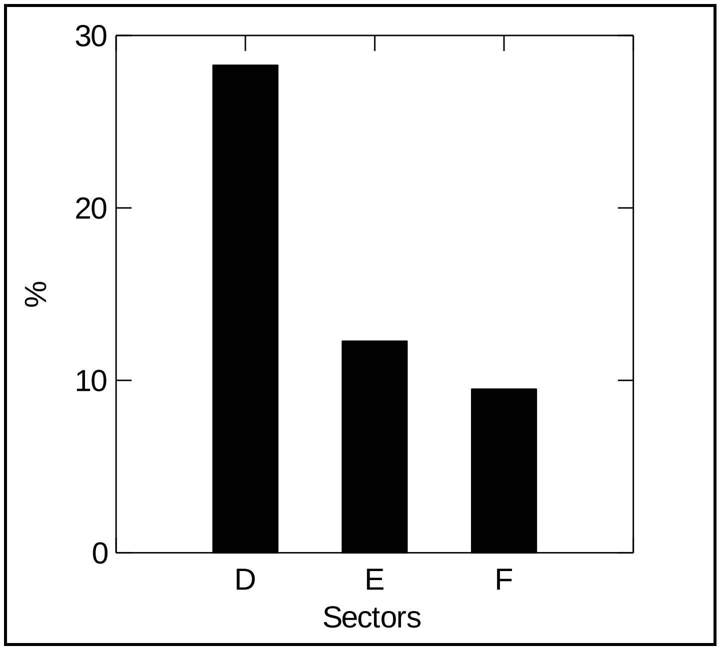


Figure 4.4. Bar graph of Late Huaracane Phase *Huaracane Fino* sherd percentages by sector.

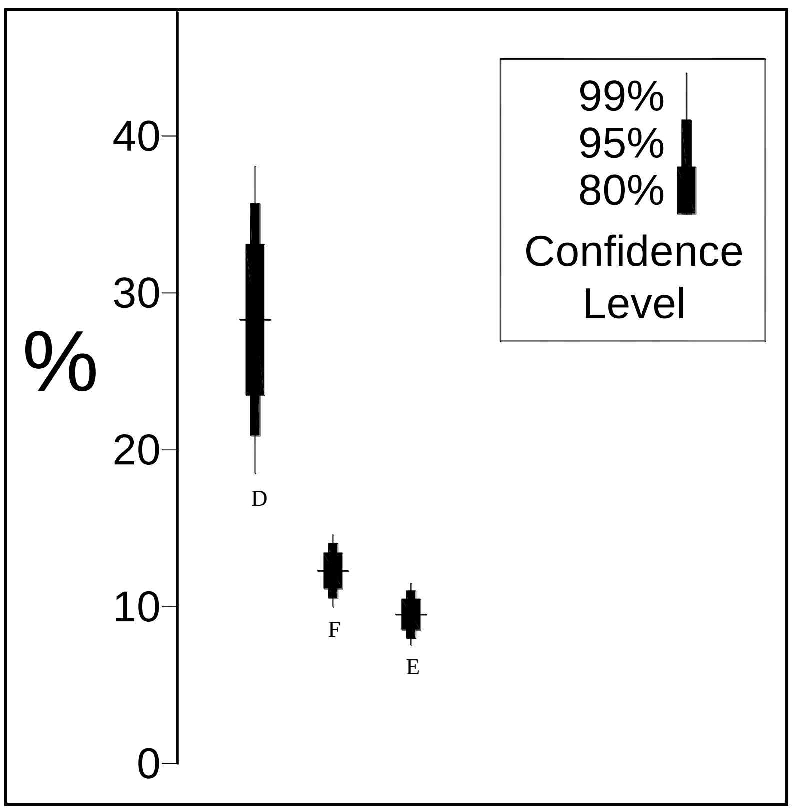


Figure 4.5. Bullet graph showing error ranges for Late Huaracane Phase *Huaracane Fino* sherd percentages by sector.

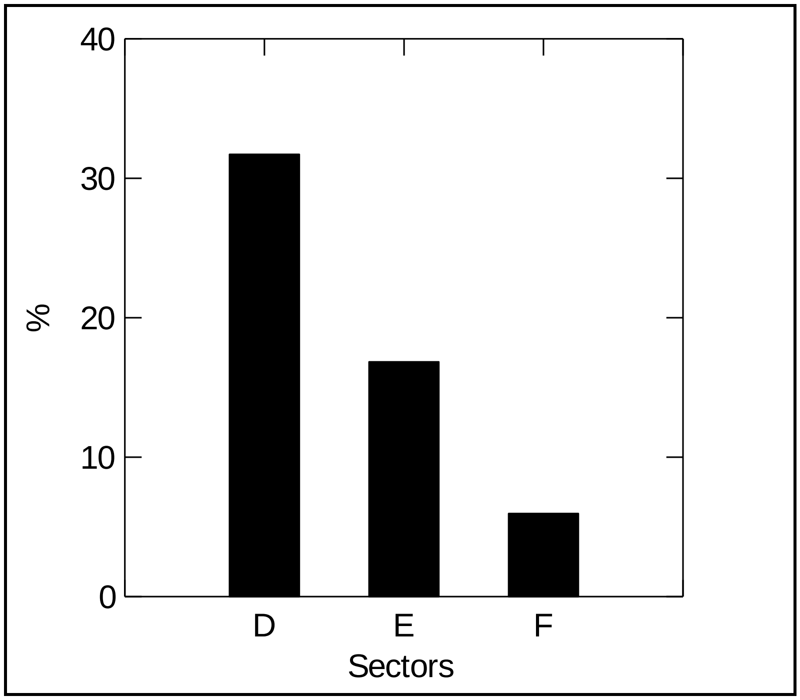


Figure 4.6. Bar graph of Late Huaracane Phase *Huaracane Vegetal* sherd percentages by sector.

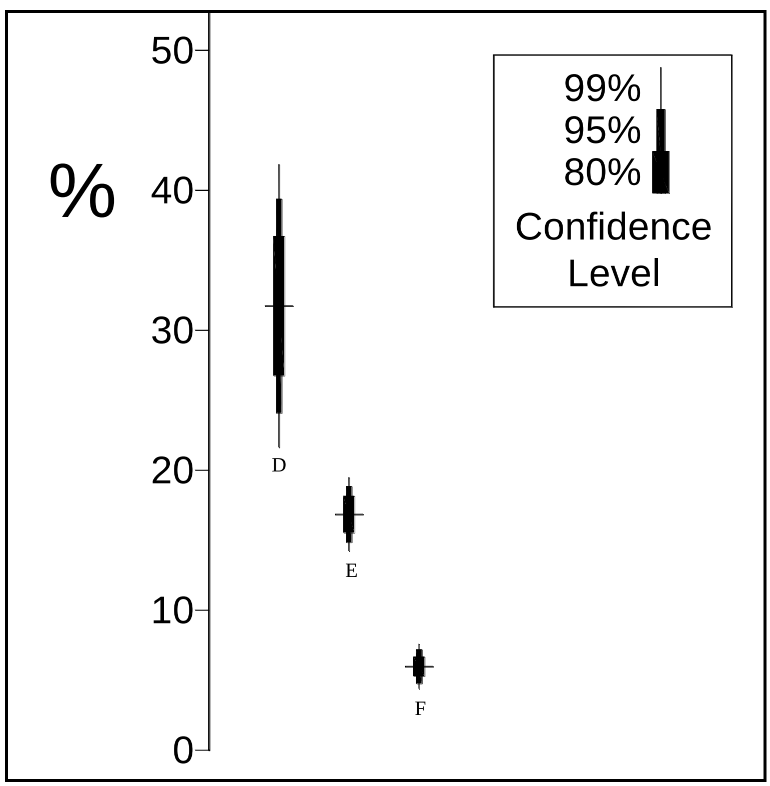


Figure 4.7. Bullet graph showing error ranges of Late Huaracane Phase Huaracane Vegetal sherd percentages by sector.

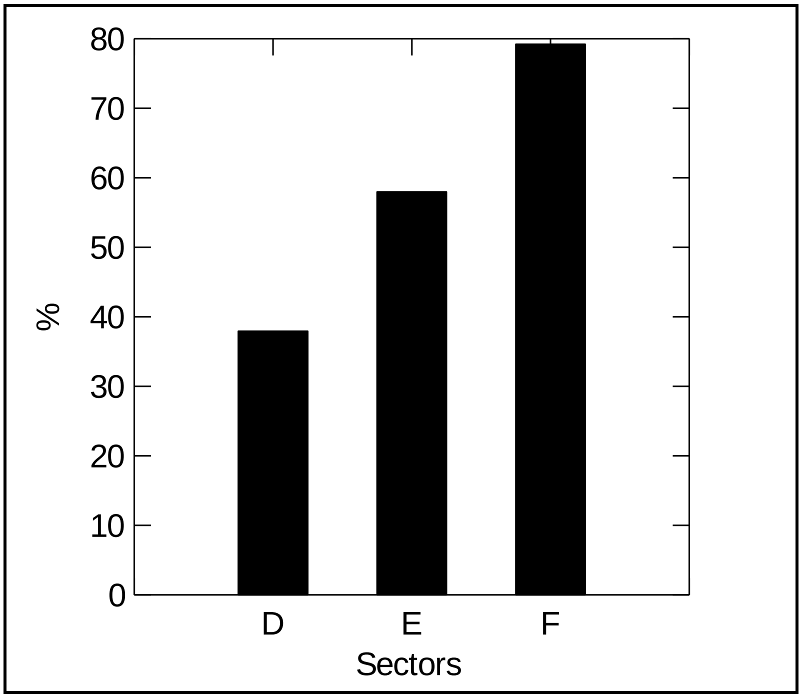


Figure 4.8. Bar graph of Late Huaracane Phase Huaracane Arena sherd percentages by sector.

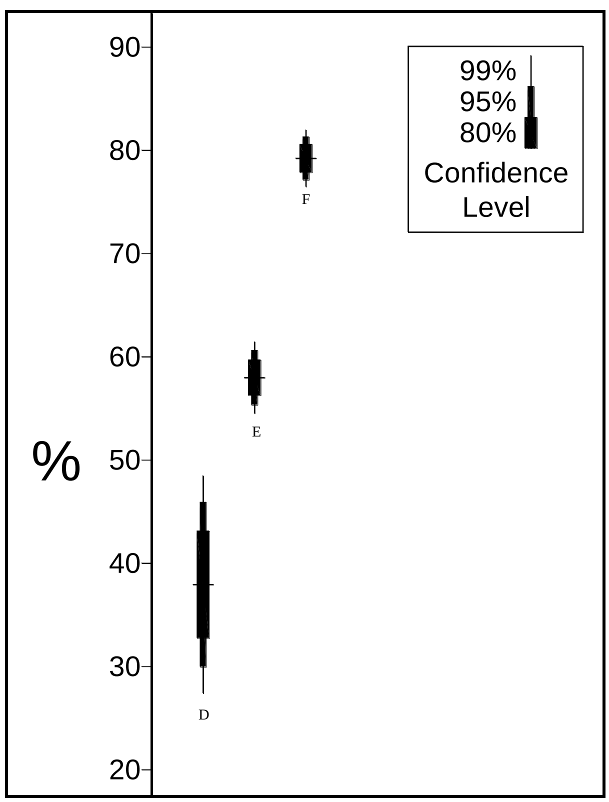


Figure 4.9. Bullet graph showing error ranges for Late Huaracane Phase Huaracane Arena sherd percentages by sector.

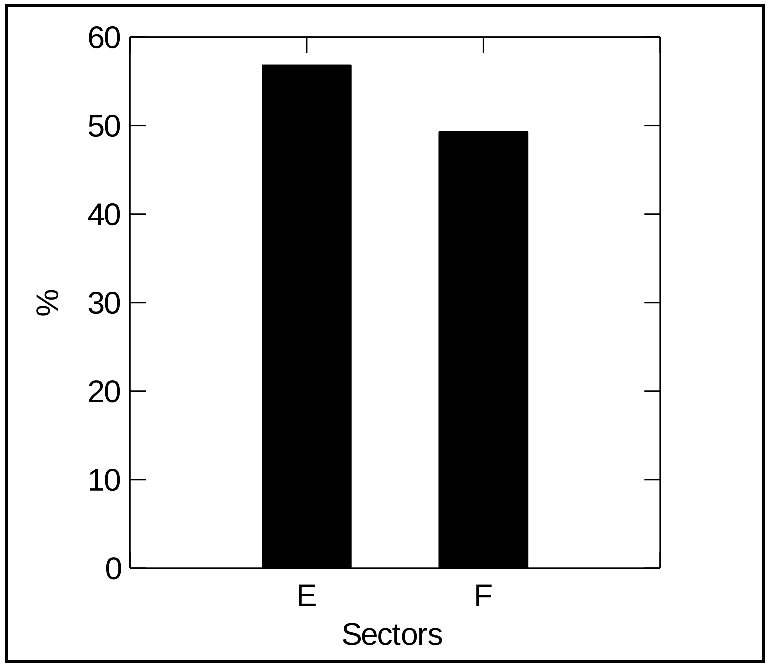


Figure 4.10. Bar graph of Late Huaracane Phase bowl sherd percentages by sector.

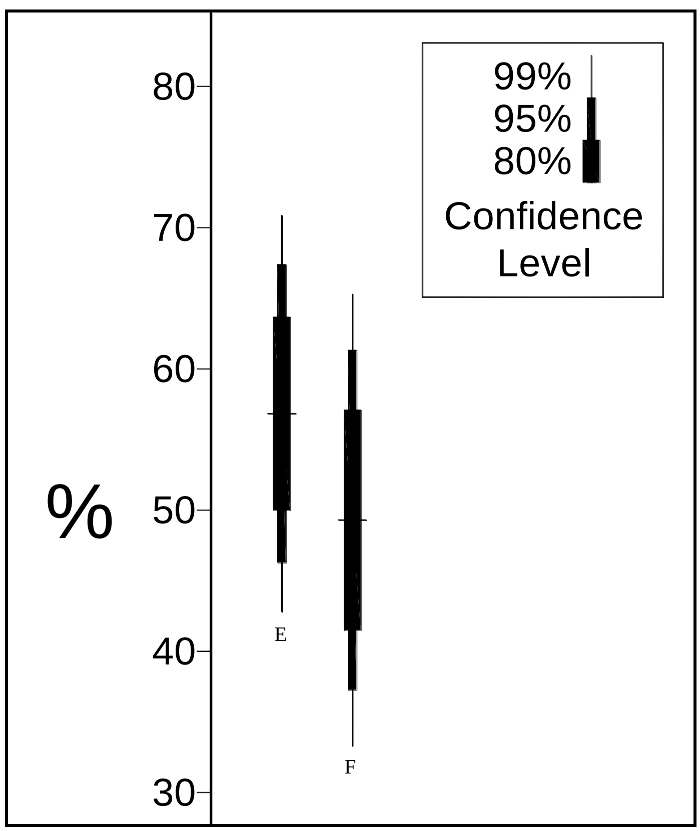


Figure 4.11. Bullet graph showing error ranges for Late Huaracane Phase bowl sherd percentages by sector.

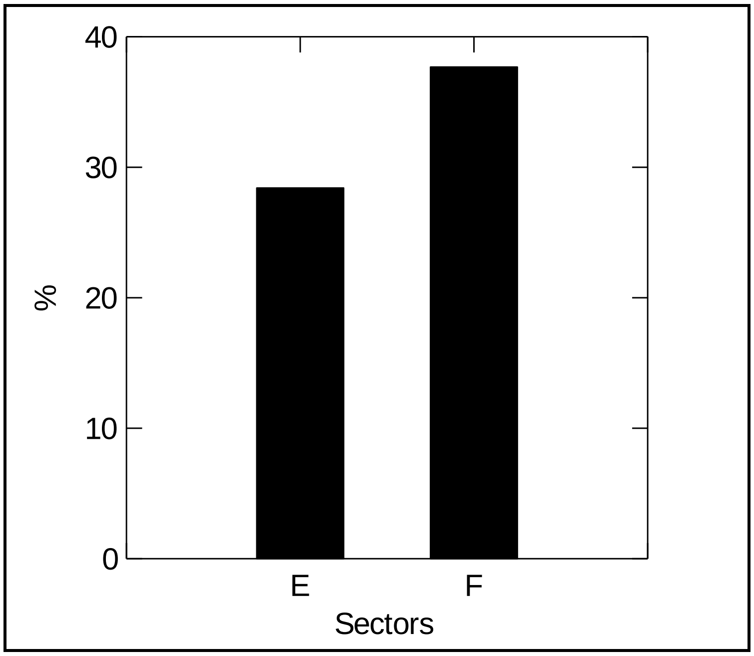


Figure 4.12. Bar graph of Late Huaracane Phase olla sin cuello sherd percentages by sector.

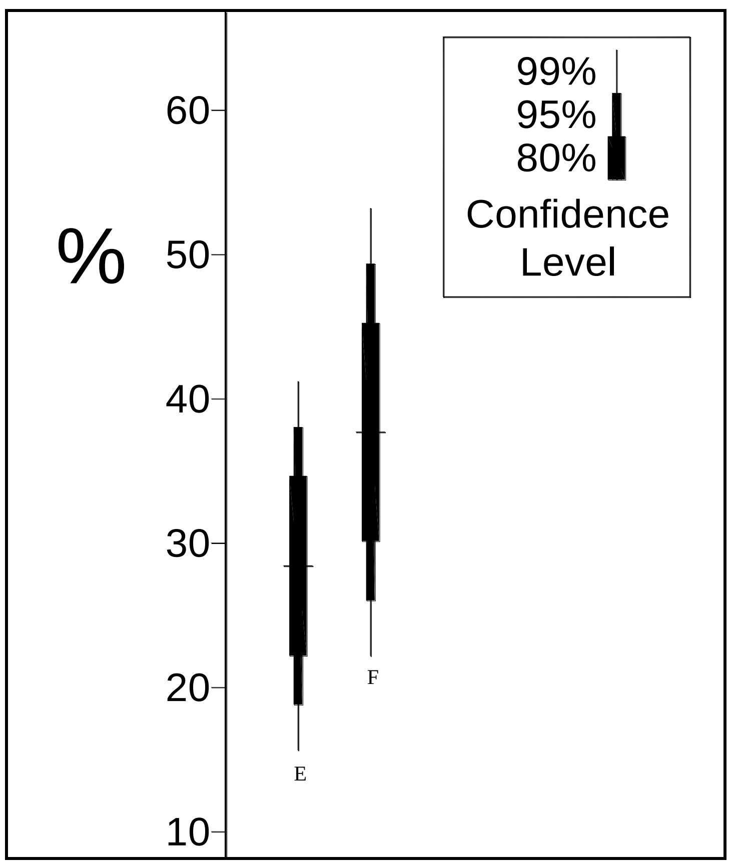


Figure 4.13. Bullet graph showing error ranges for Late Huaracane Phase olla sin cuello sherds by sector.

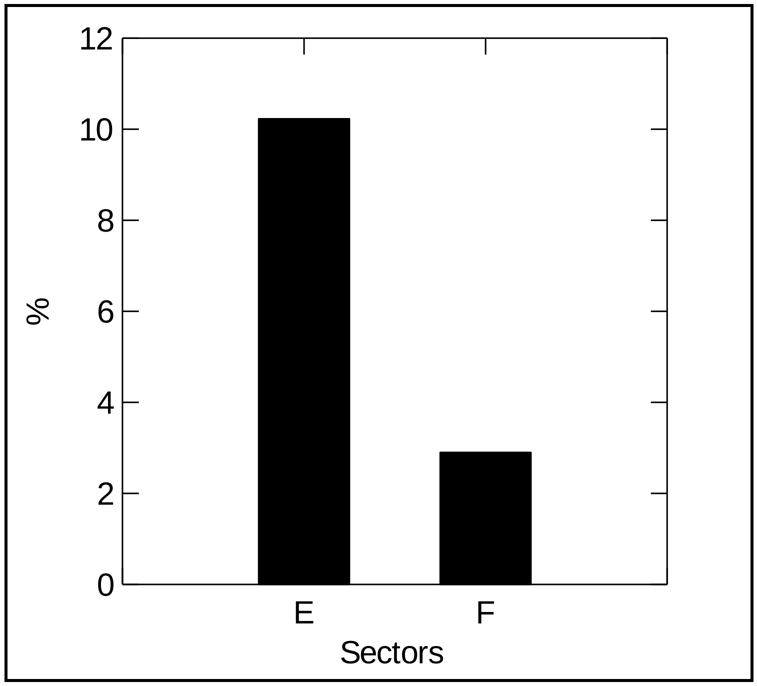


Figure 4.14. Bar graph of Late Huaracane Phase olla with neck sherd percentages by sector.

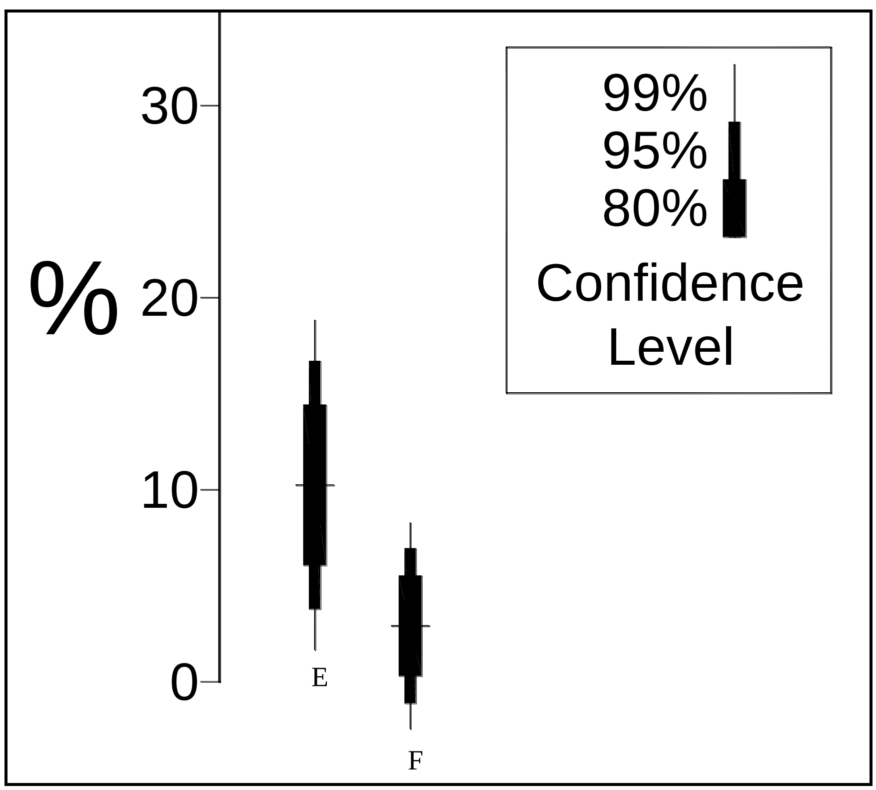


Figure 4.15. Bullet graph showing error ranges for Late Huaracane Phase olla with neck sherd percentages by sector.

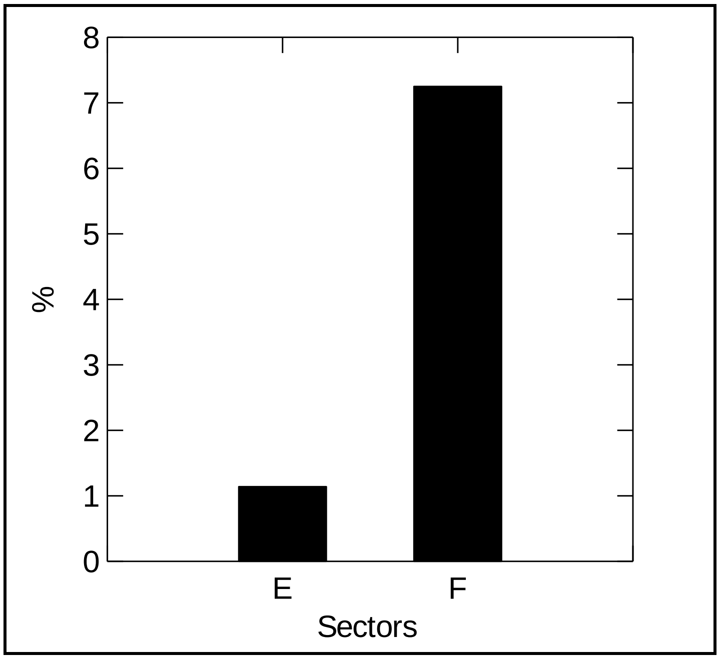


Figure 4.16. Bar graph of Late Huaracane Phase jar sherd percentages by sector.

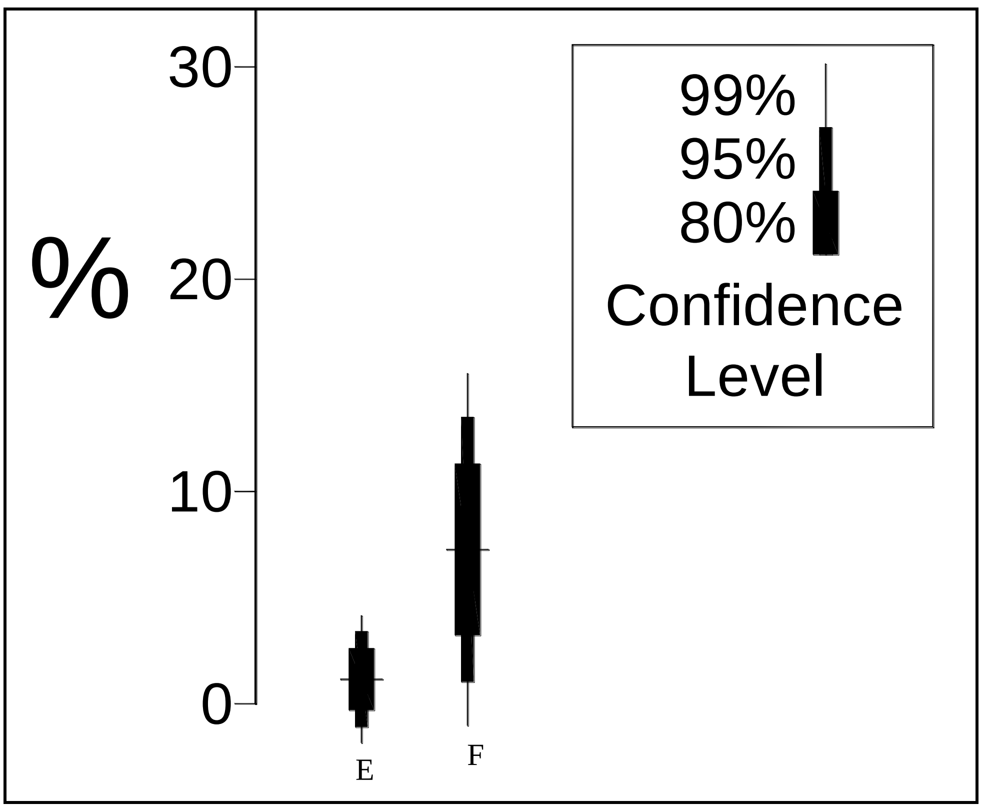


Figure 4.17. Bullet graph showing error ranges for Late Huaracane Phase jar sherd percentages by sector.

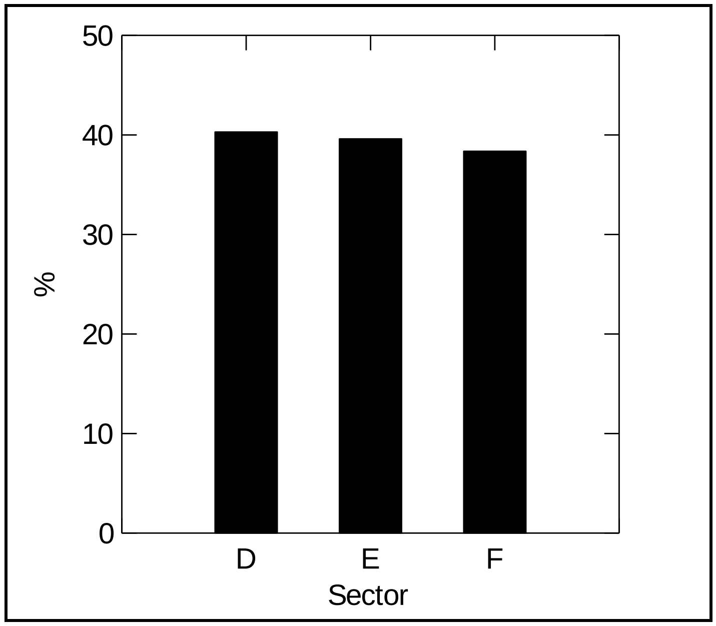


Figure 4.18. Bar graph of Late Huaracane chert percentages by sector.

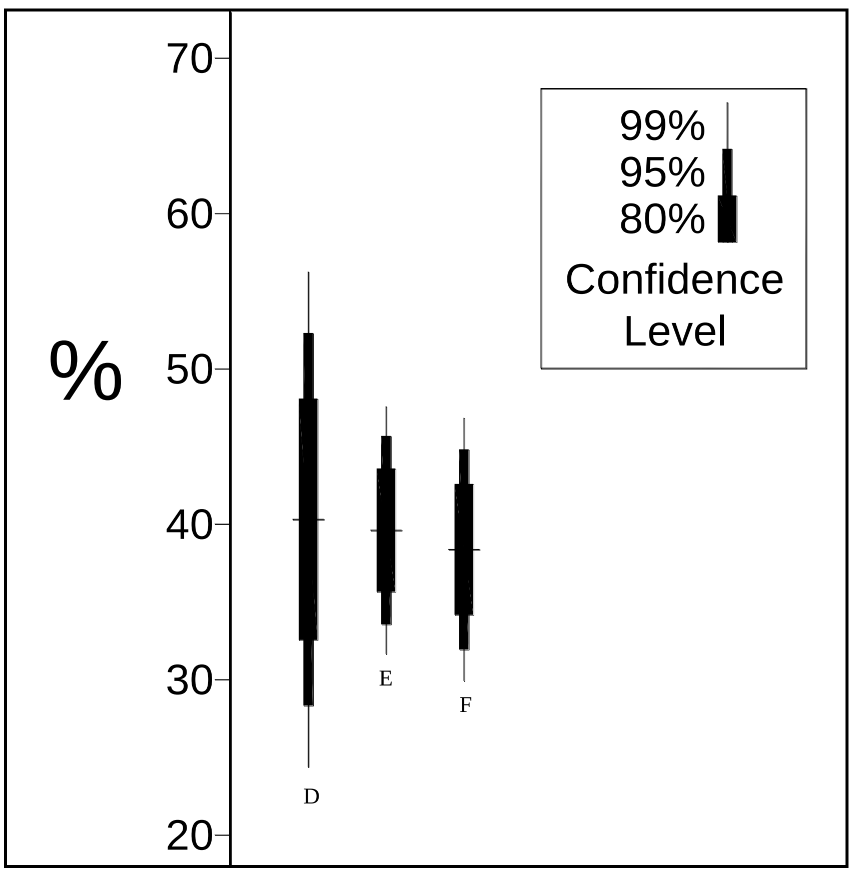


Figure 4.19. Bullet graph showing error ranges for Late Huaracane Phase chert percentages by sector.

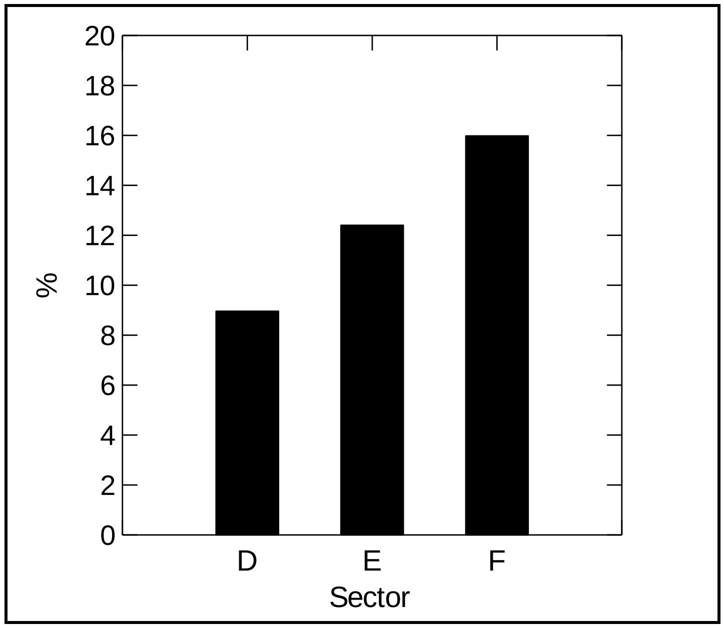


Figure 4.20. Bar graph of Late Huaracane Phase dacite percentages by sector.

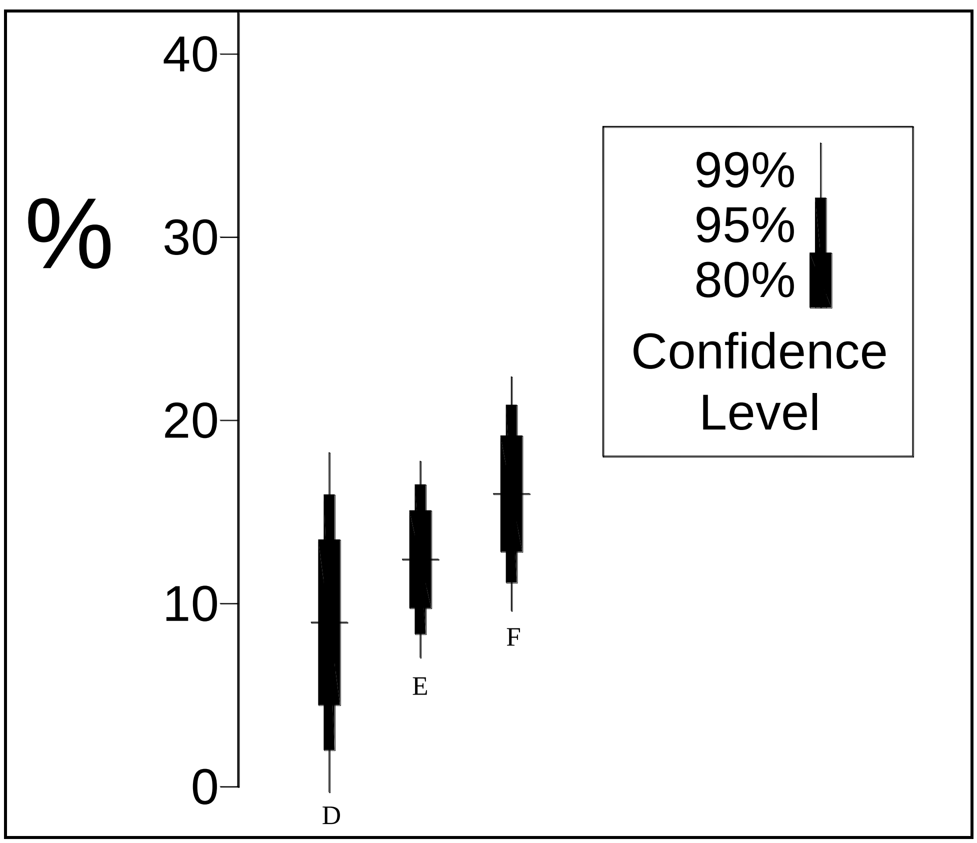


Figure 4.21. Bullet graph showing error ranges for Late Huaracane Phase dacite percentages by sector.

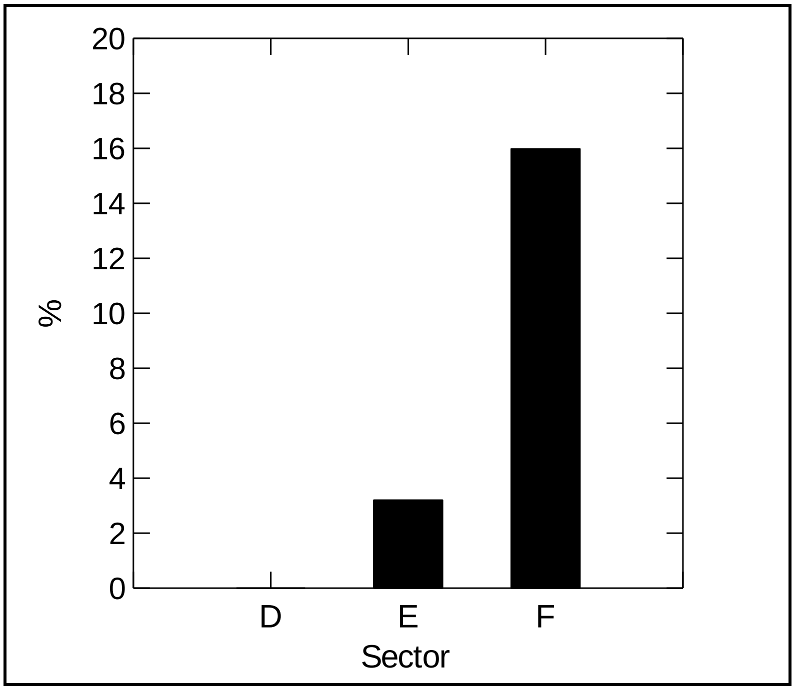


Figure 4.22. Bar graph of Late Huaracane Phase rhyolite percentages by sector.

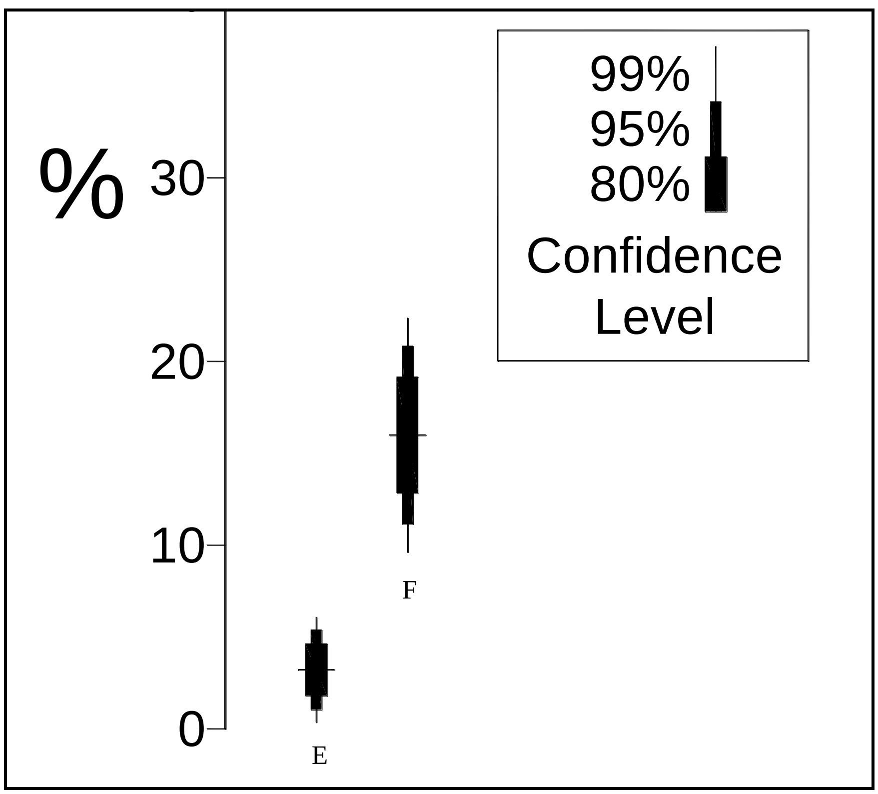


Figure 4.23. Bullet graph showing error ranges for Late Huaracane Phase rhyolite percentages by sector.

Figure 4.24. Quartz crystal from Yahuay Alta exhibiting heavy wear one side, possibly used a polishing or smoothing tool.

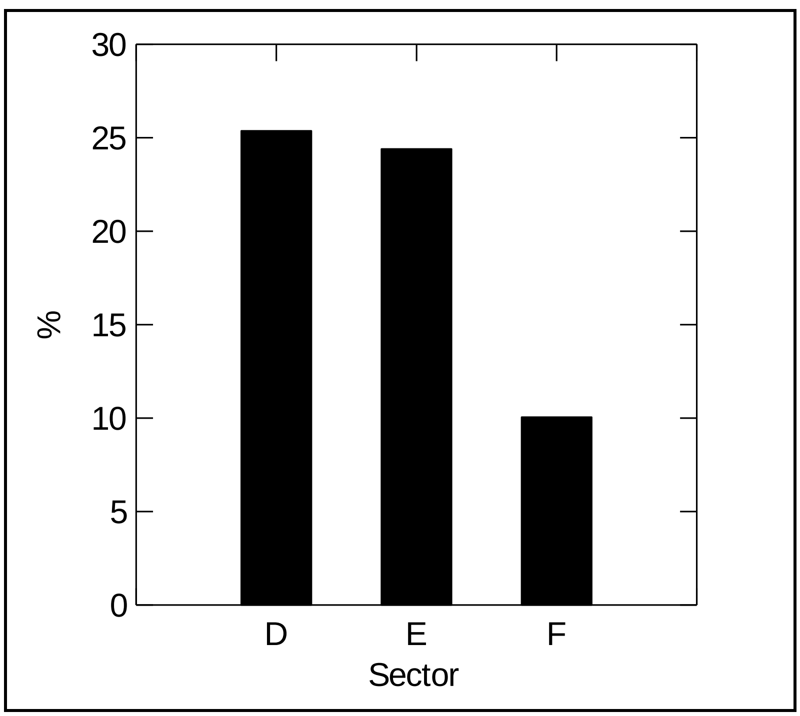


Figure 4.25. Bar graph of Late Huaracane Phase quartz percentages by sector.

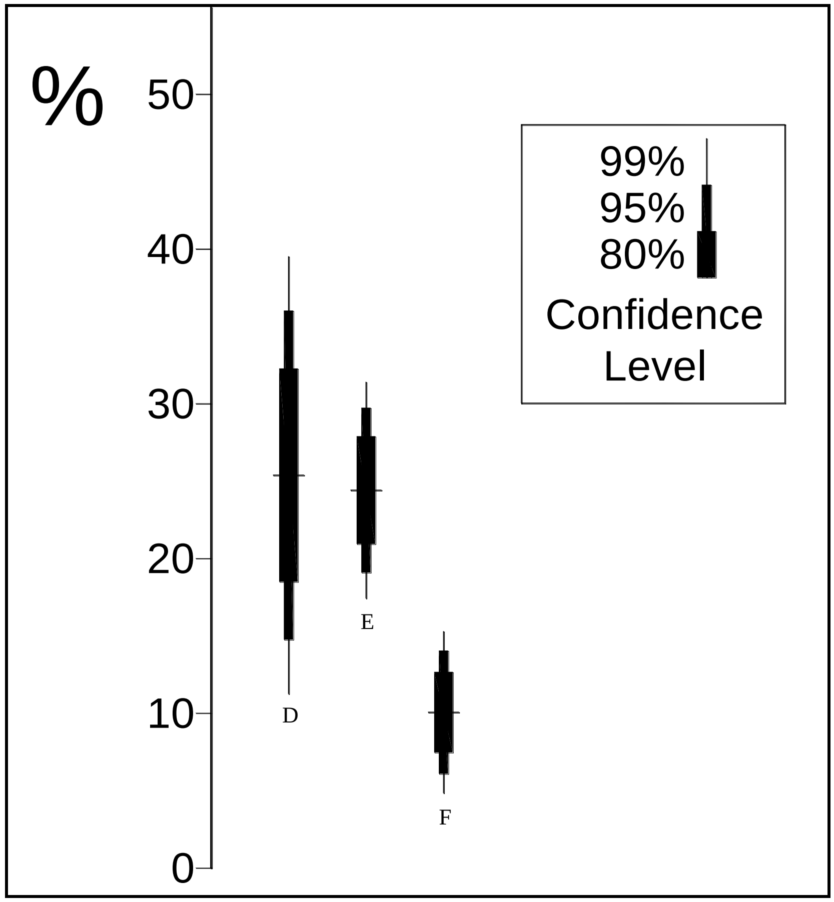


Figure 4.26. Bullet graph showing error ranges for Late Huaracane Phase quartz percentages by sector.

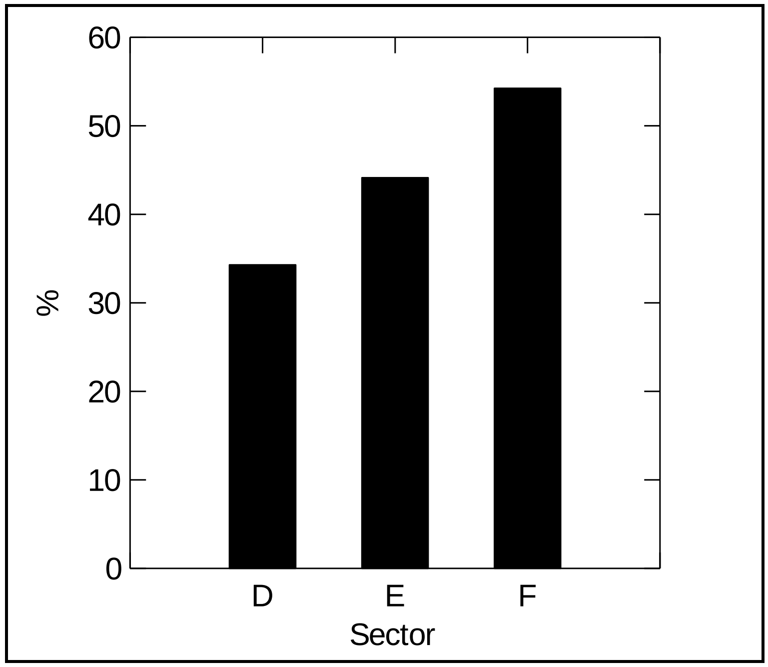


Figure 4.27. Bar graph of Late Huaracane Phase flake percentages by sector.

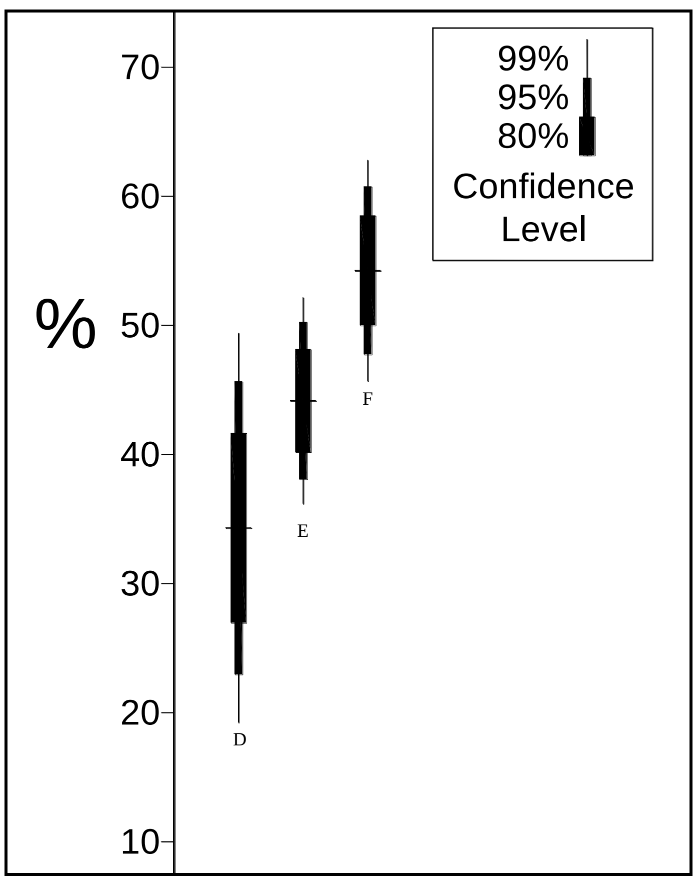


Figure 4.28. Bullet graph showing error ranges for Late Huaracane Phase flake percentages by sector.

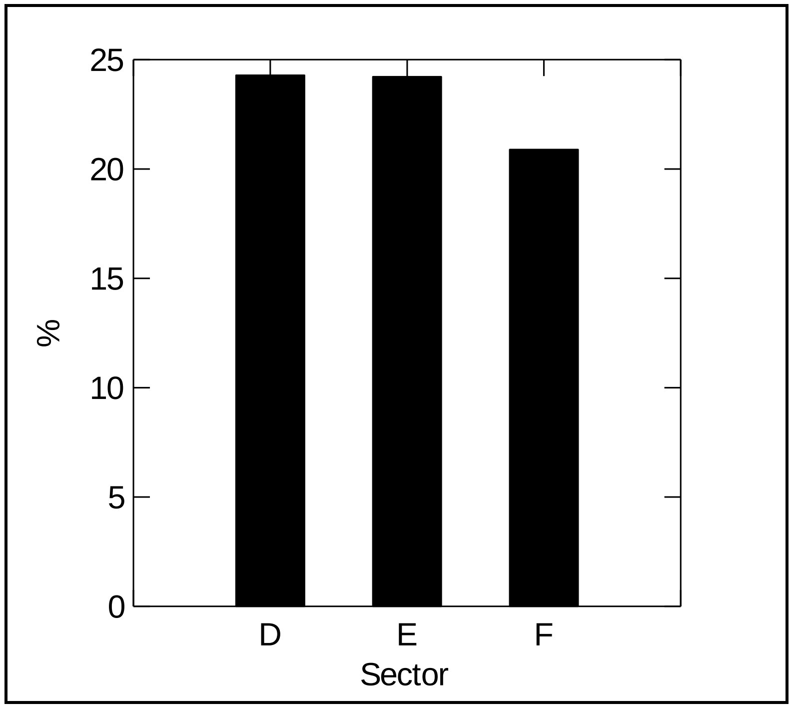


Figure 4.29. Bar graph of Late Huaracane Phase lithic nodule percentages by sector.

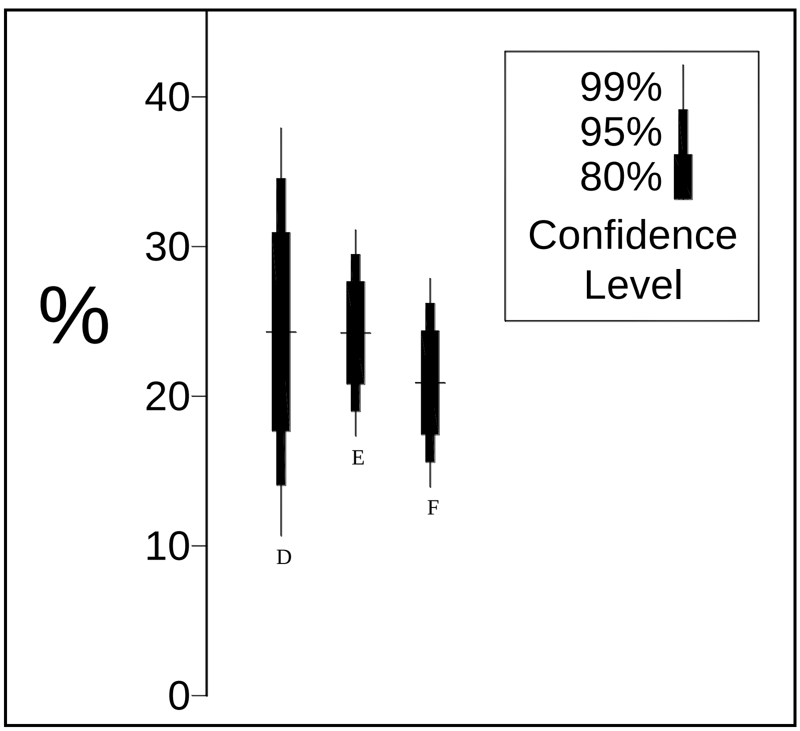


Figure 4.30. Bullet graph showing error ranges for Late Huaracane Phase lithic nodule percentages by sector.

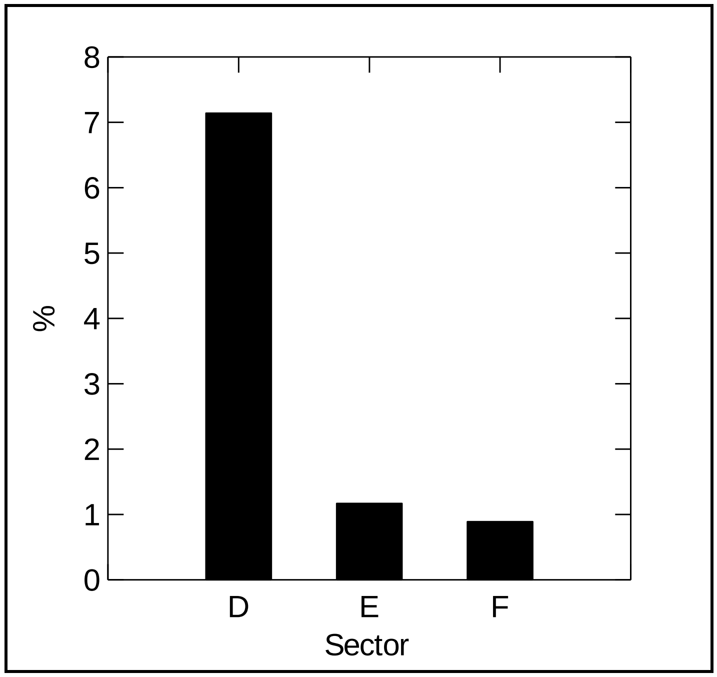


Figure 4.31. Bar graph of Late Huaracane Phase mano percentages by sector.

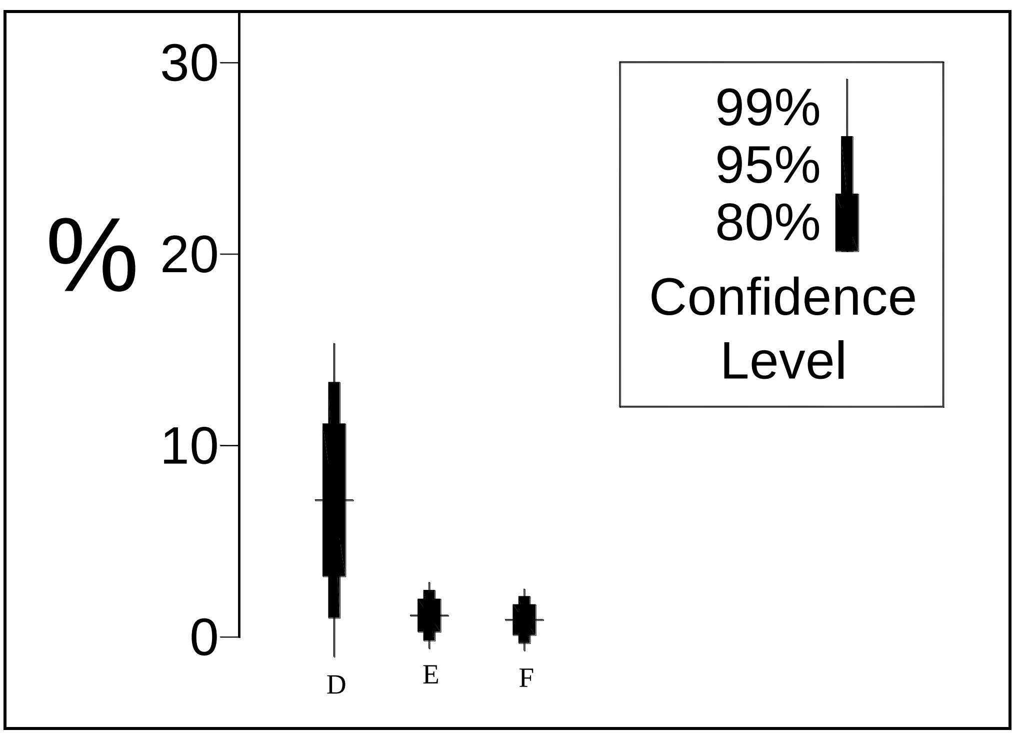


Figure 4.32. Bullet graph showing error ranges for Late Huaracane Phase mano percentages by sector.

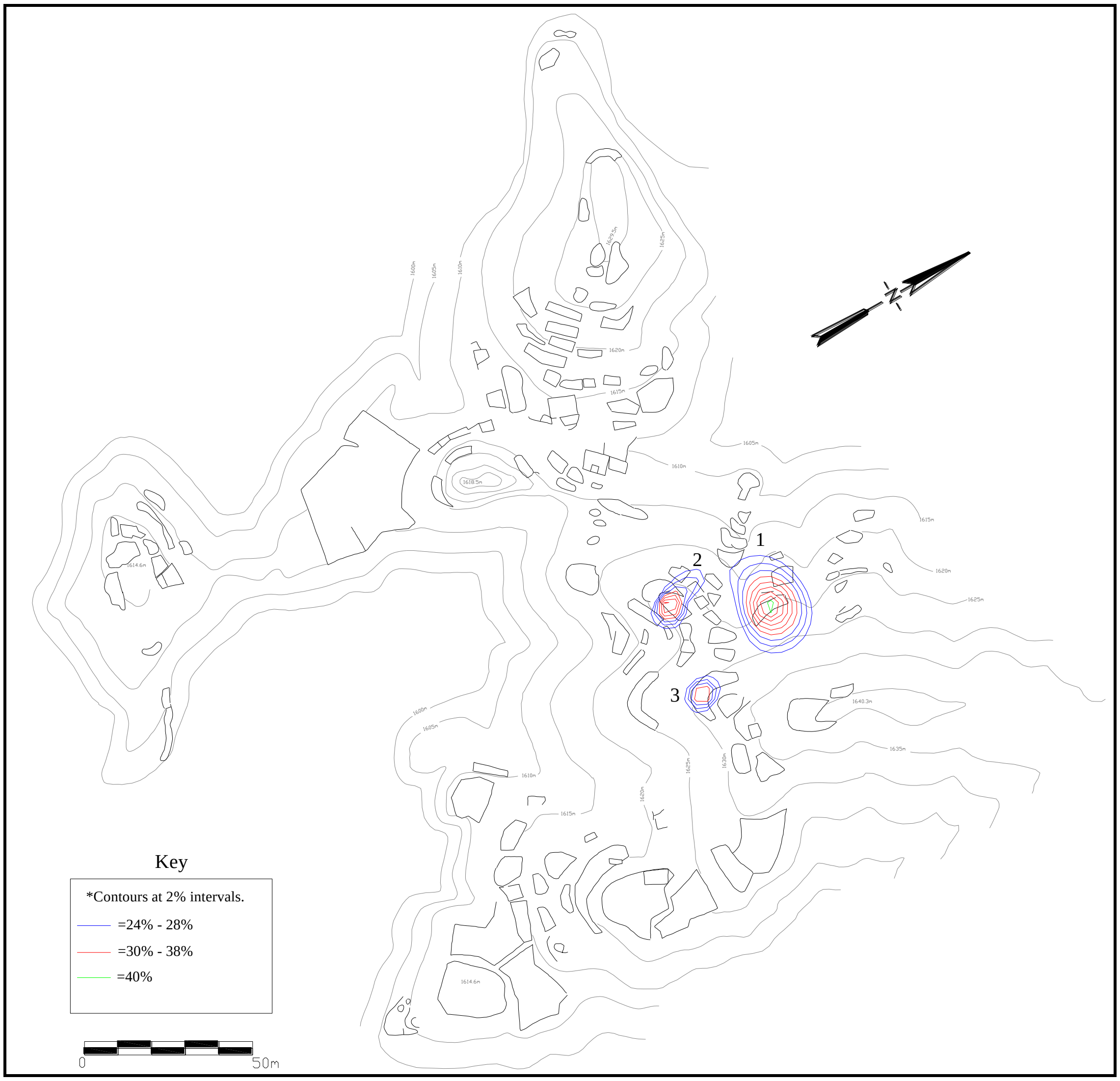


Figure 4.33. Contour map showing percentages of Huaracane Fino sherds on the surface of the Late Huaracane Phase components of Yahuay Alta.

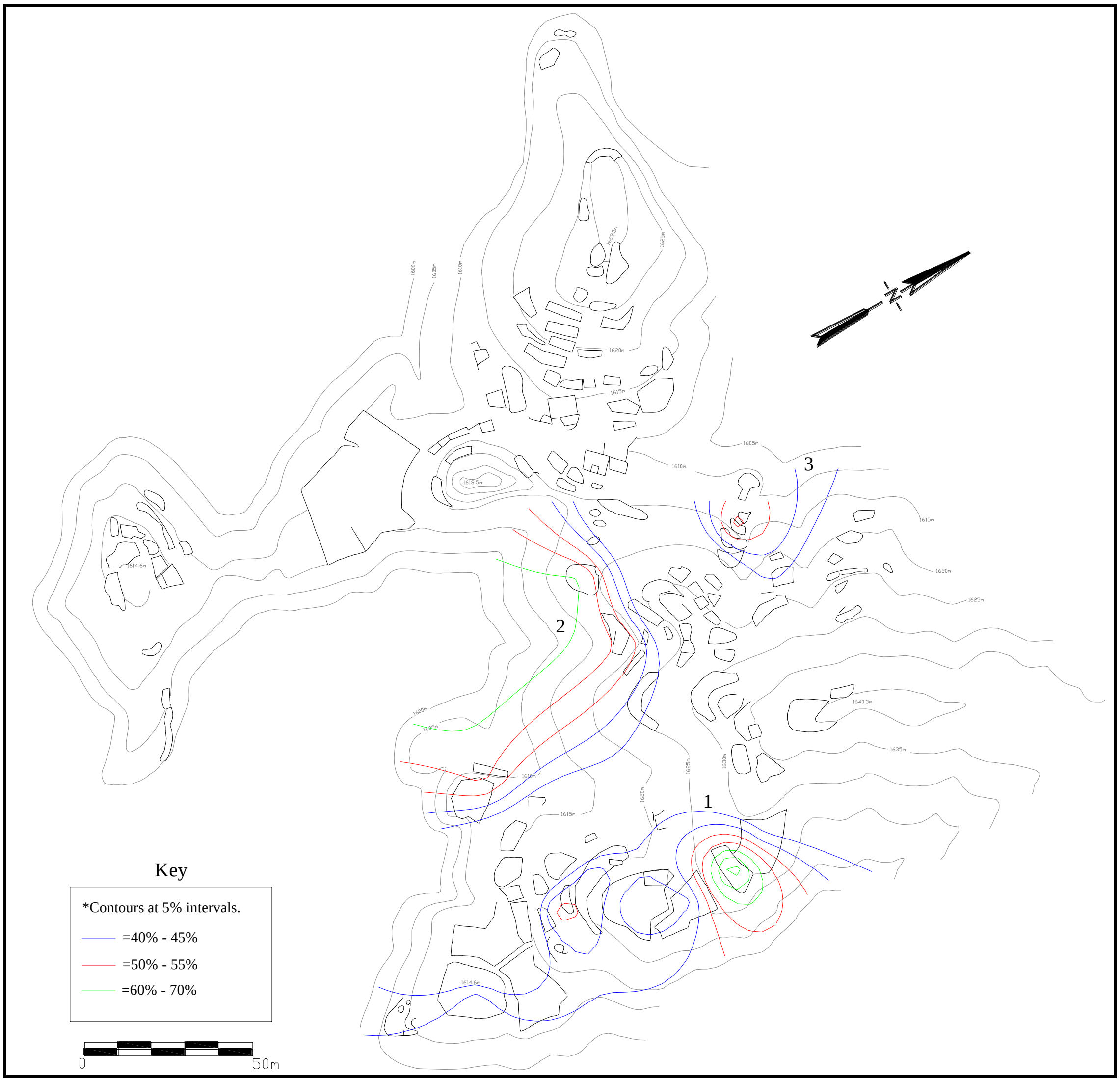


Figure 4.34. Contour map showing percentages of chert on the surface of the Late Huaracane Phase components of Yahuay Alta.

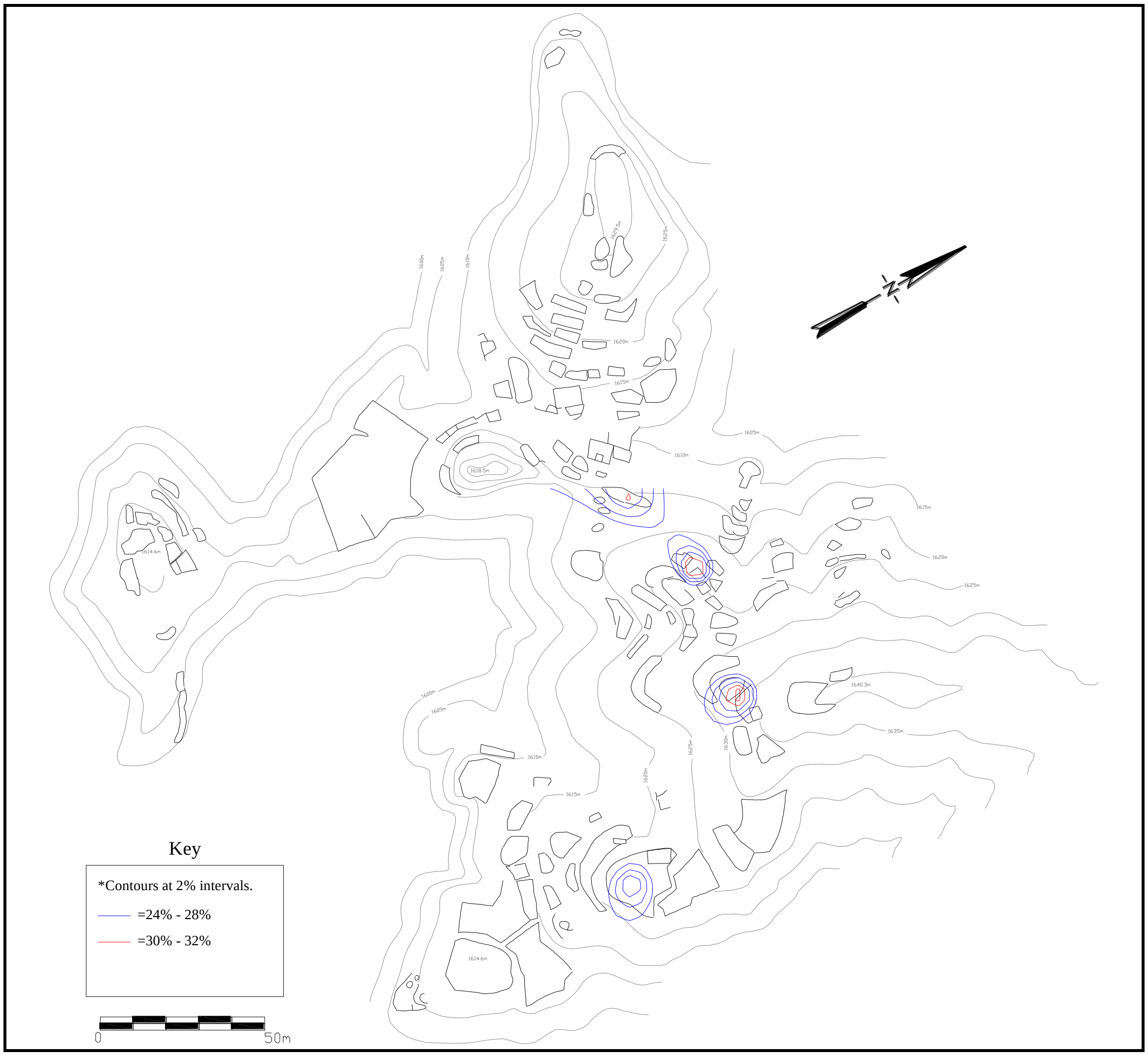


Figure 4.35. Contour map showing percentages of dacite on the surface of the Late Huaracane Phase components of Yahuay Alta.

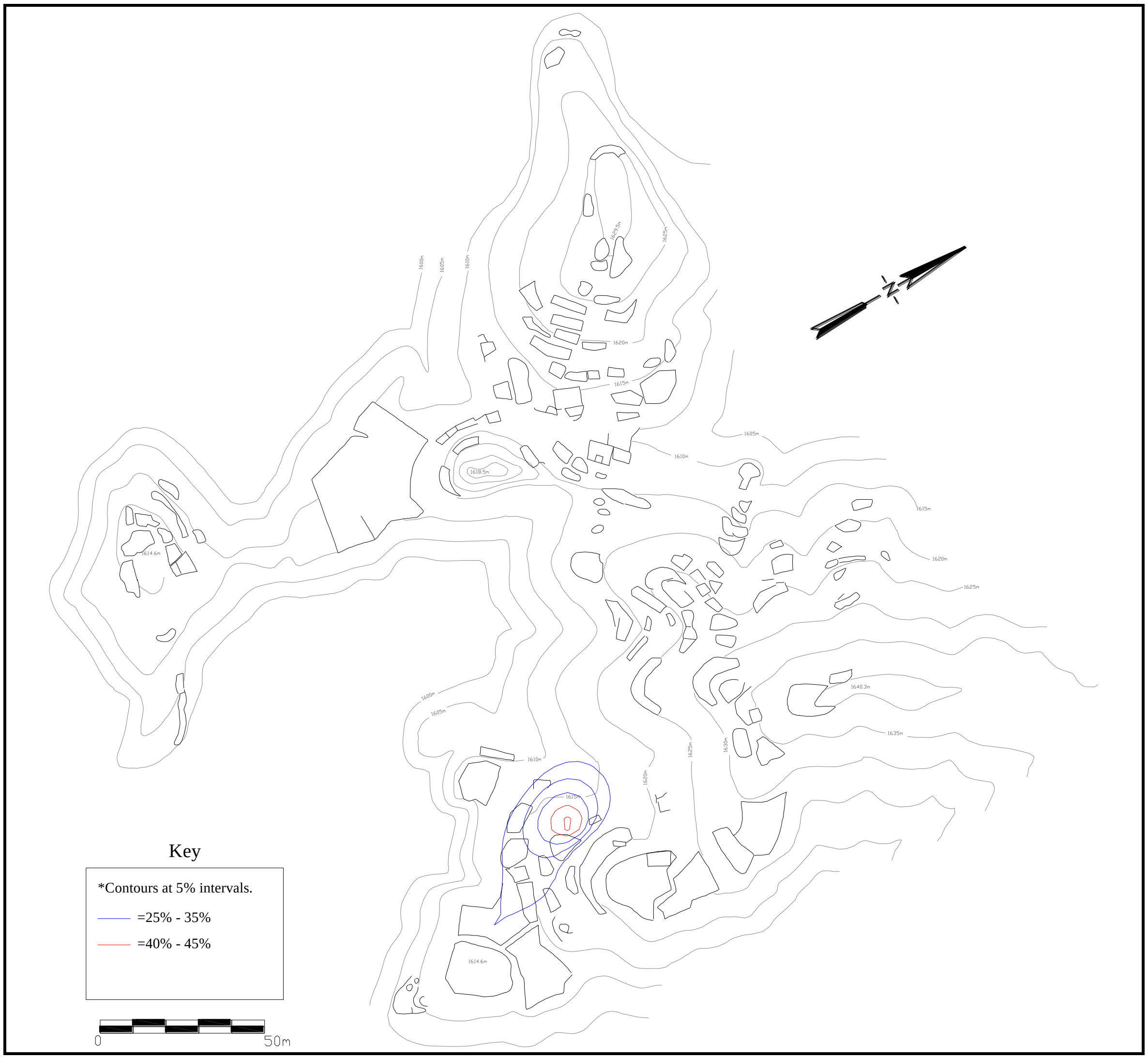


Figure 4.36. Contour map showing percentages of rhyolite on the surface of the Late Huaracane Phase components of Yahuay Alta.

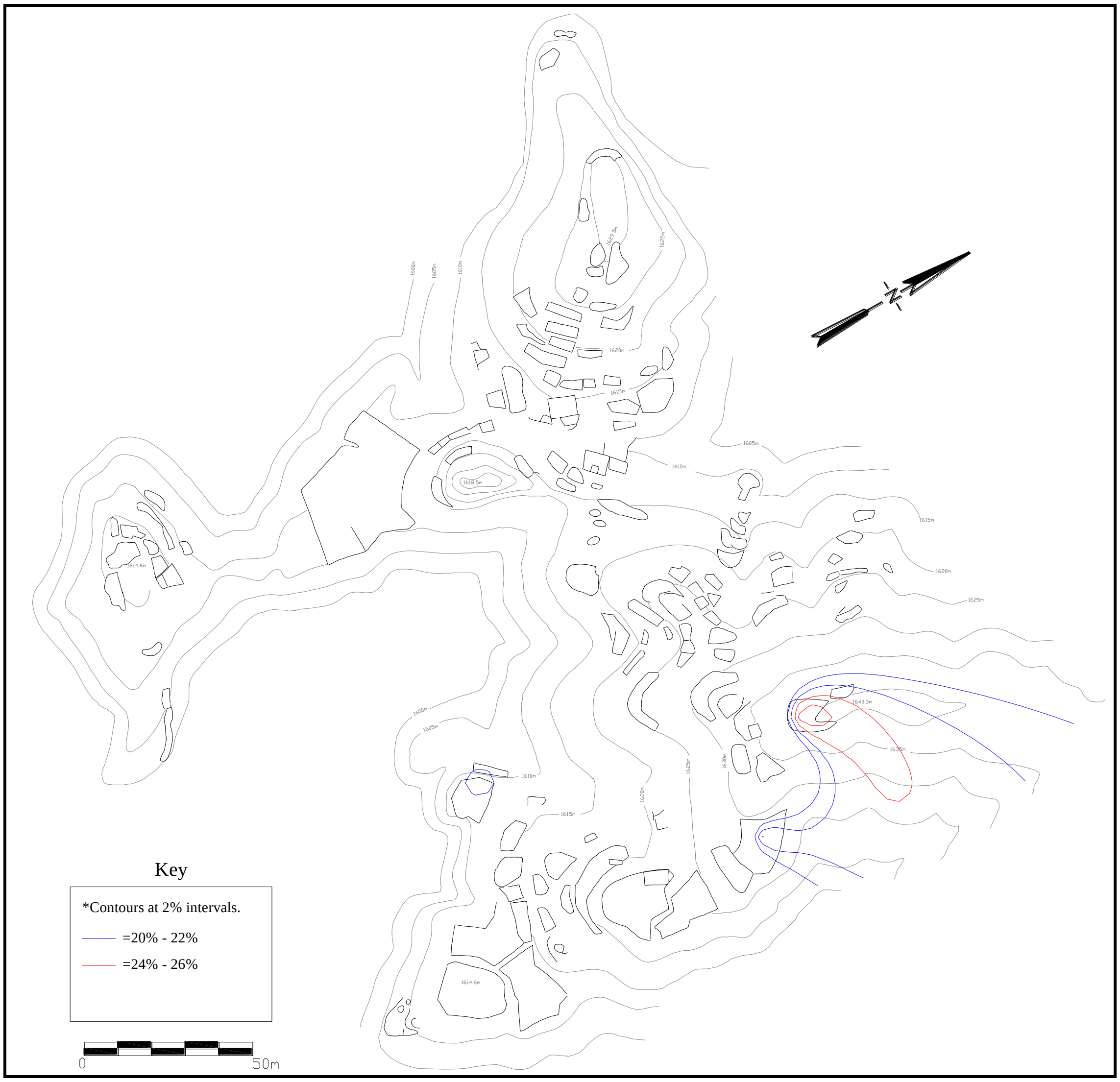


Figure 4.37. Contour map showing percentages of fine-grained rhyolite on the surface of the Late Huaracane Phase components of Yahuay Alta.

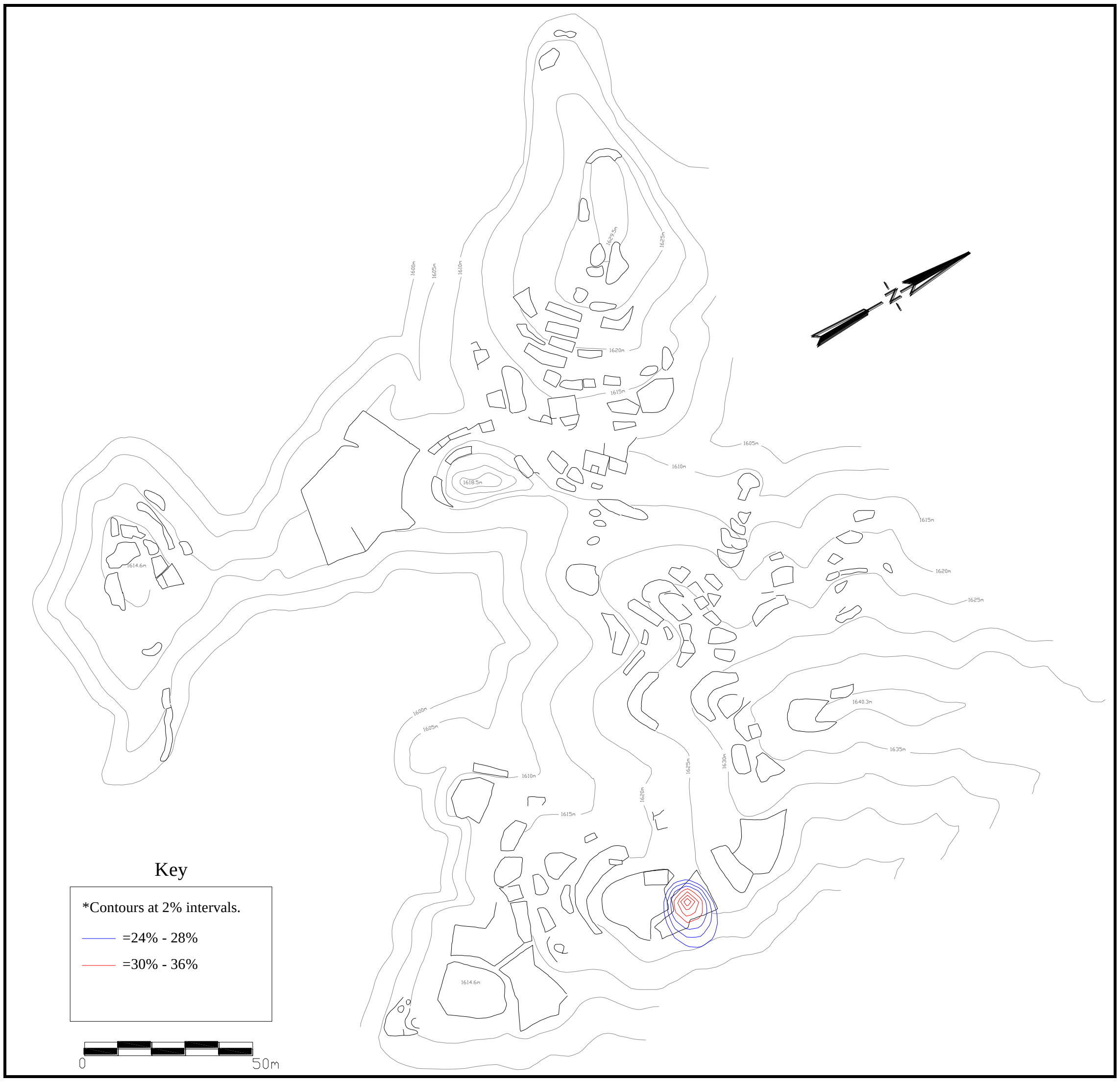


Figure 4.38. Contour map showing percentages of fine-grained sandstone on the surface of the Late Huaracane Phase components of Yahuay Alta.

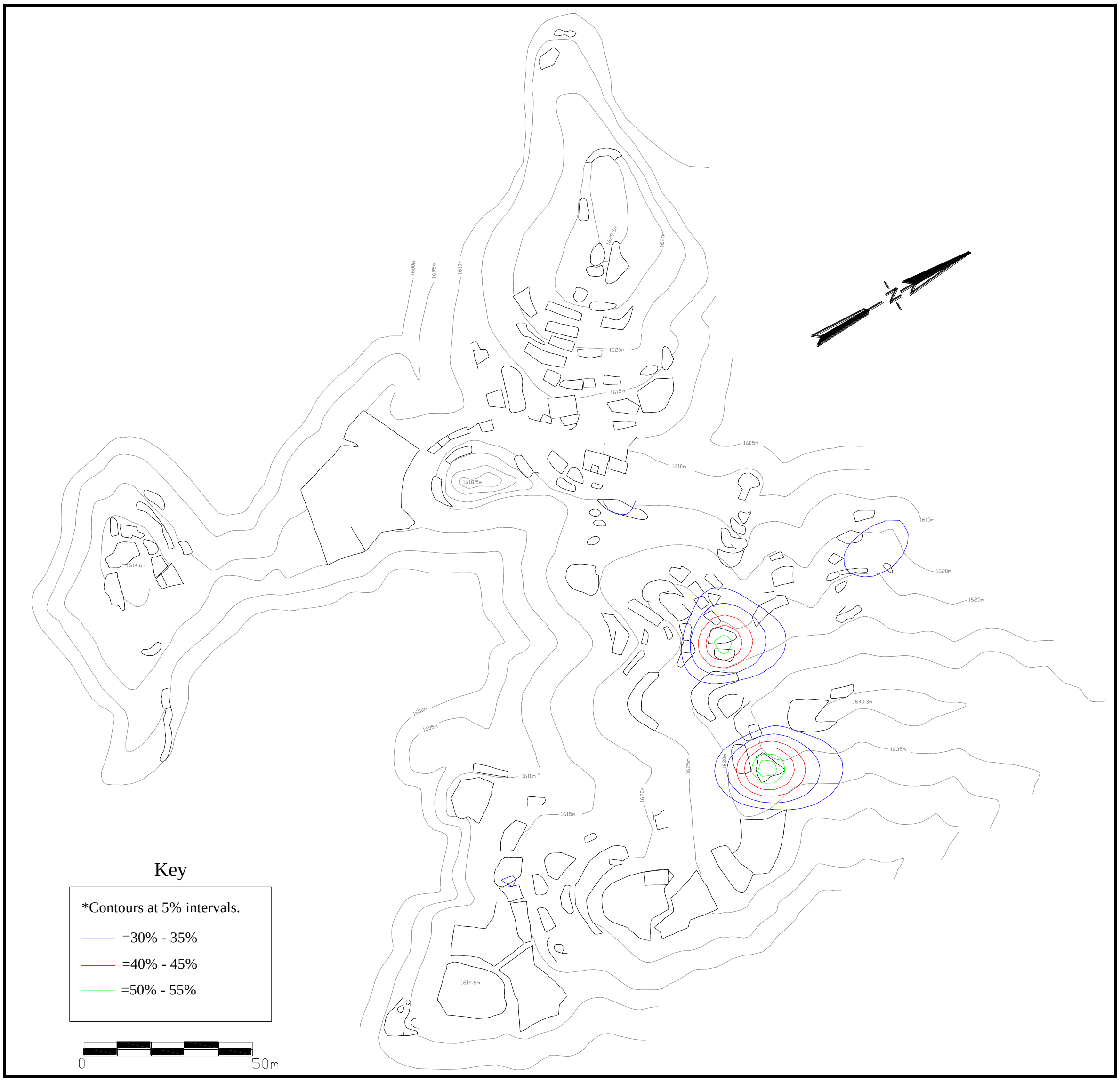


Figure 4.39. Contour map showing percentages of quartz on the surface of the Late Huaracane Phase components of Yahuay Alta.

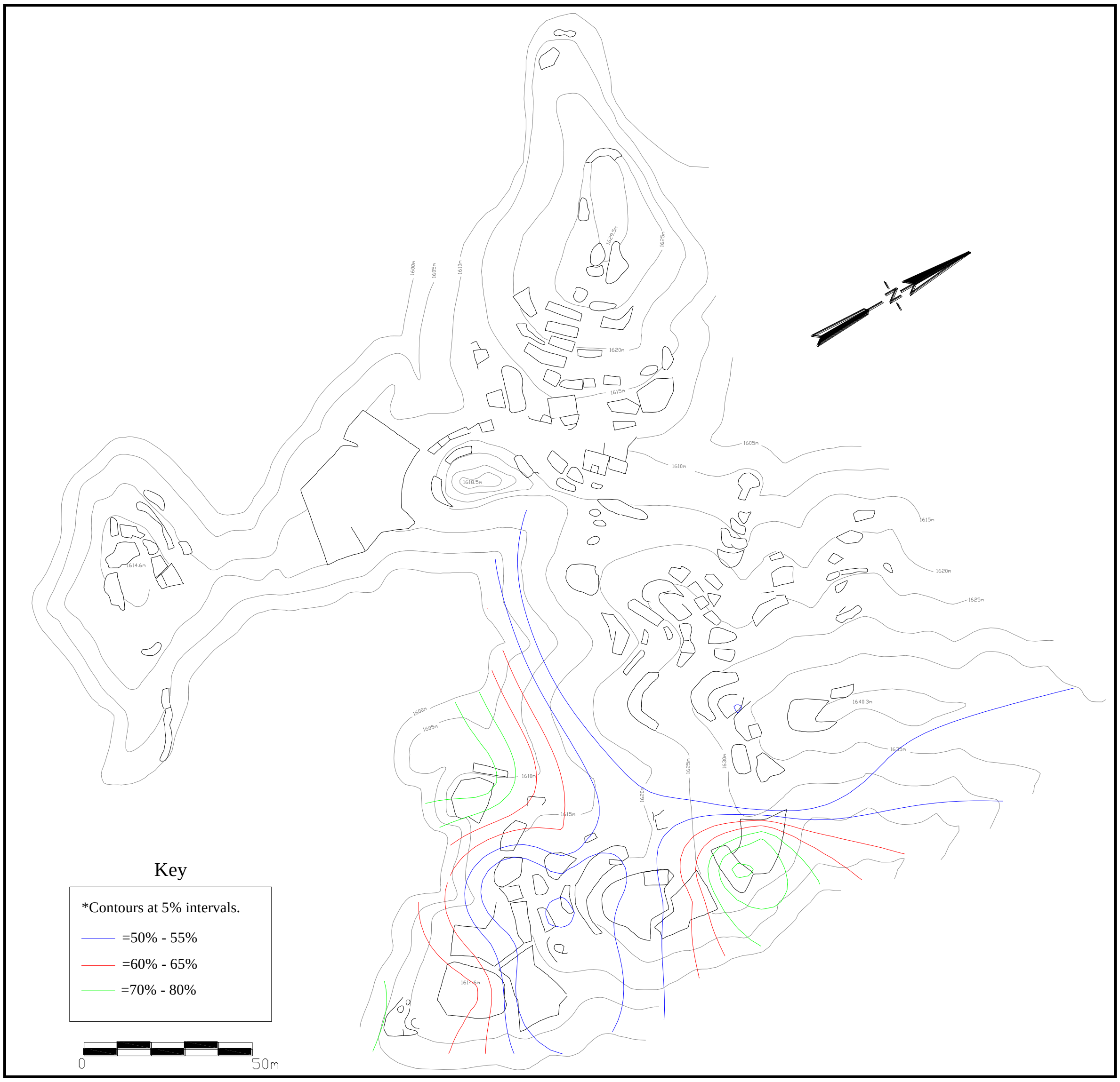


Figure 4.40. Contour map showing percentages of flakes on the surface of the Late Huaracane Phase components of Yahuay Alta.

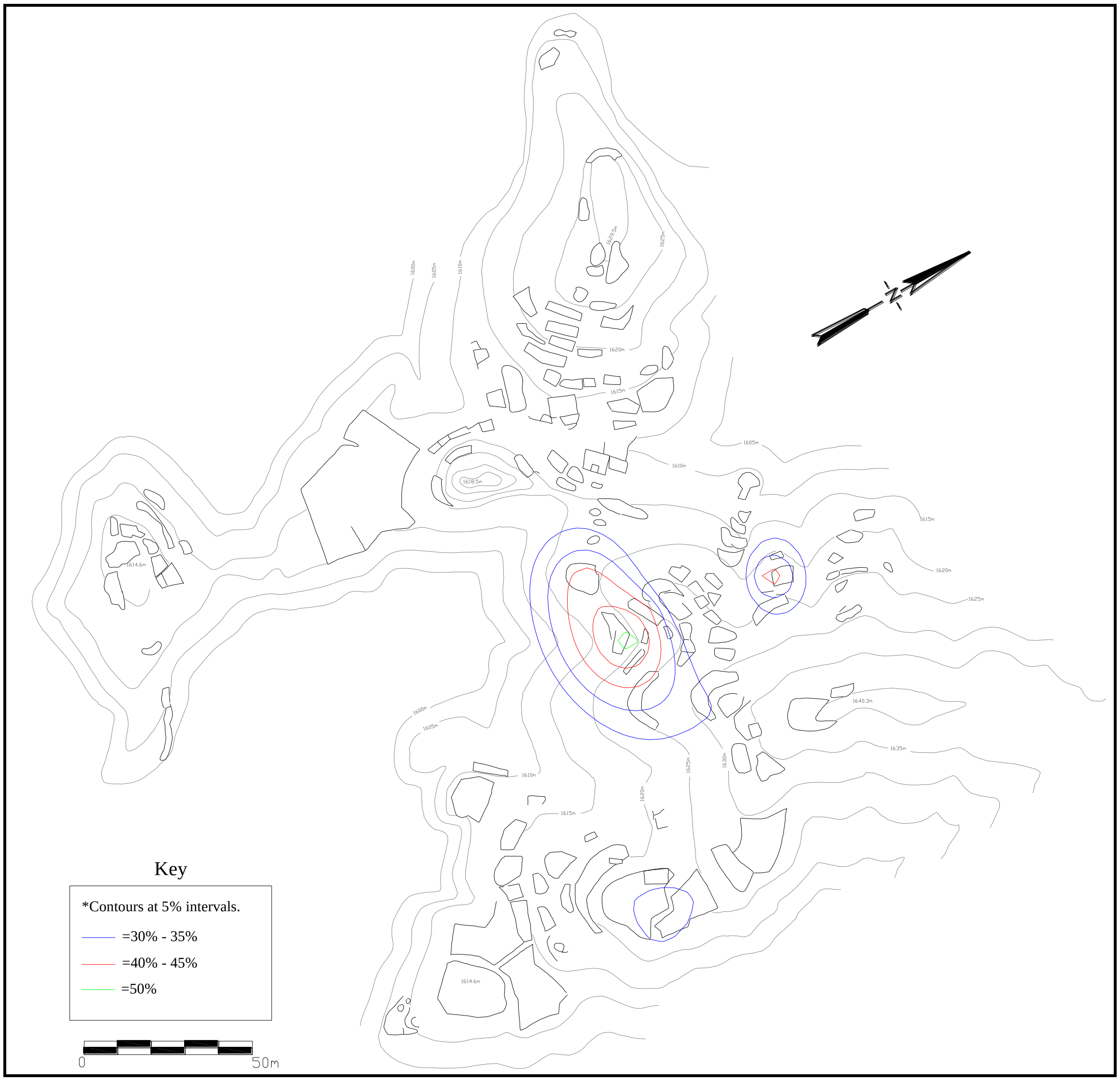


Figure 4.41. Contour map showing percentages of lithic nodules on the surface of the Late Huaracane Phase components of Yahuay Alta.

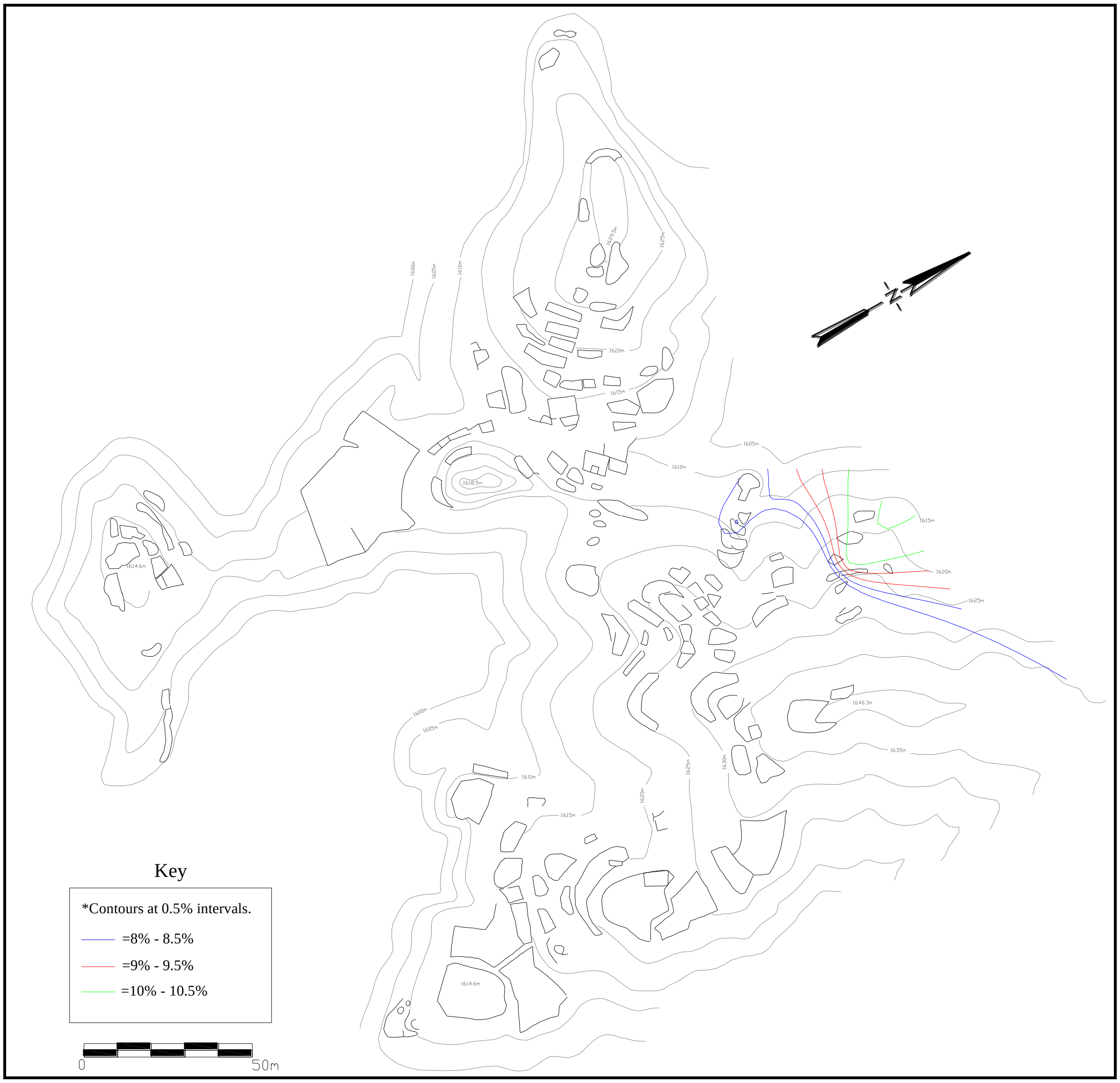


Figure 4.42. Contour map showing percentages of manos on the surface of the Late Huaracane Phase components of Yahuay Alta.

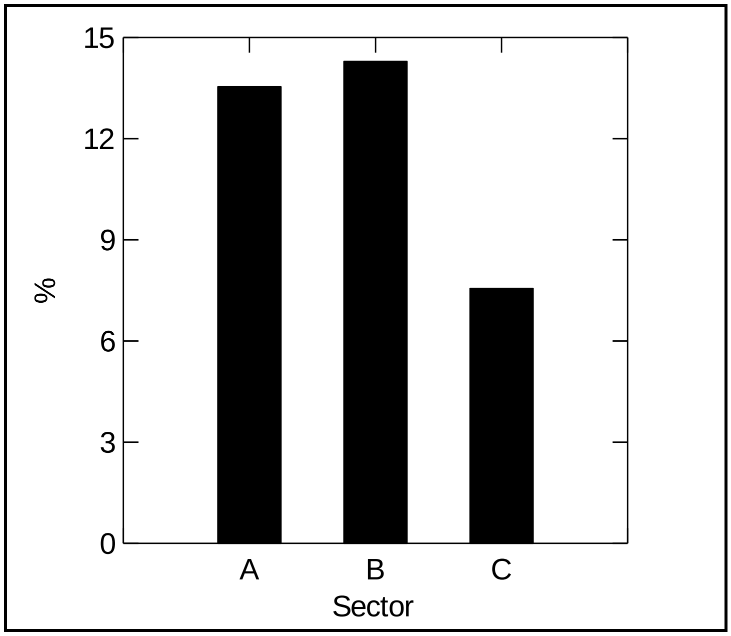


Figure 4.43. Bar graph of Terminal Huaracane Phase Huaracane Fino sherd percentages by sector.

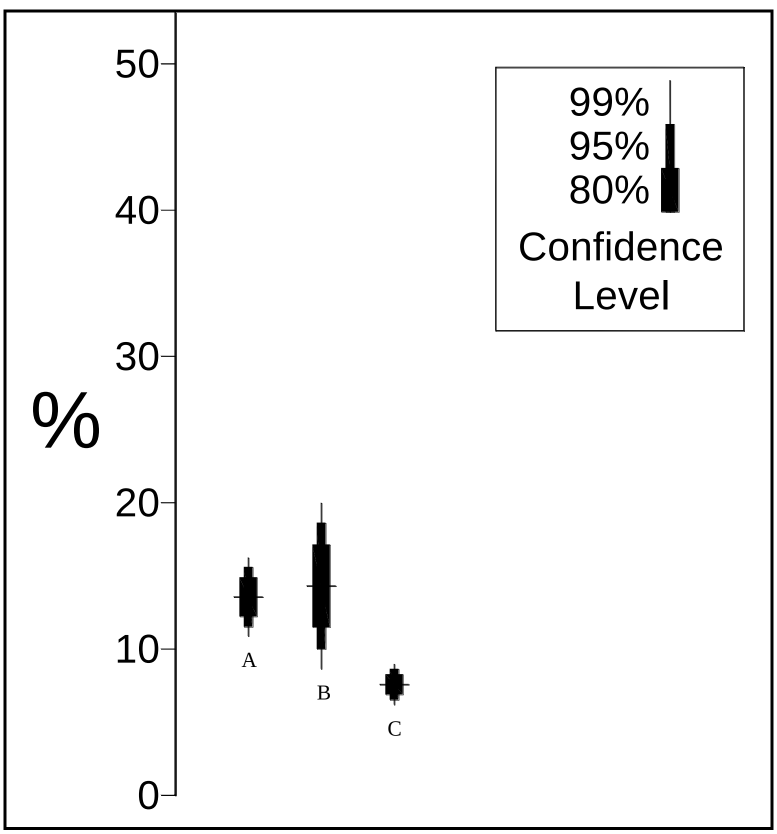


Figure 4.44. Bullet graph showing error ranges for Terminal Huaracane Phase Huaracane Fino sherd percentages by sector.

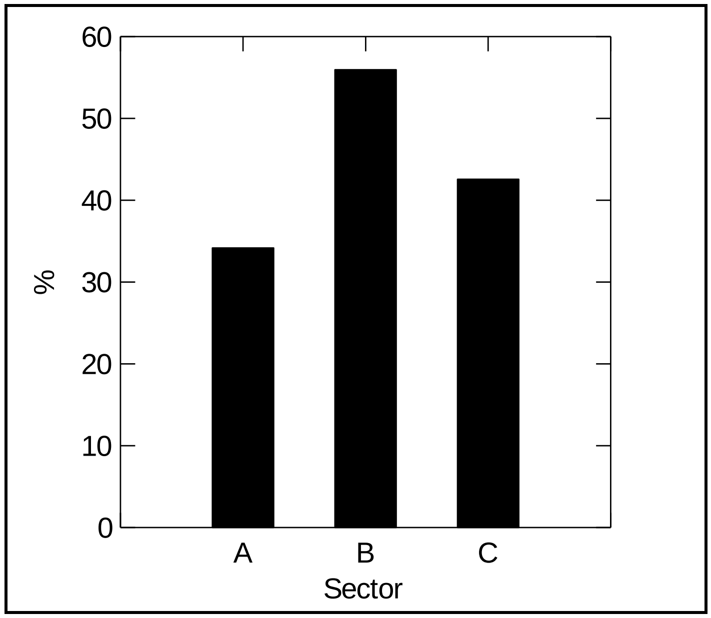


Figure 4.45. Bar graph of Terminal Huaracane Phase Huaracane Vegetal sherd percentages by sector.

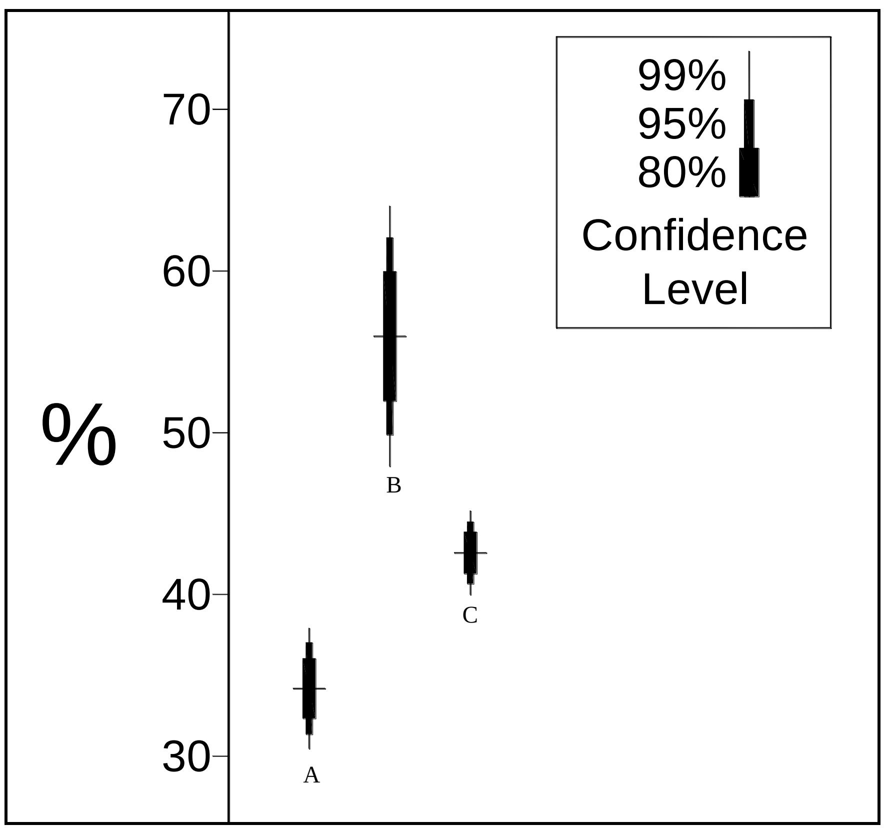


Figure 4.46. Bullet graph showing error ranges for Terminal Huaracane Phase Huaracane Vegetal sherd percentages by sector.

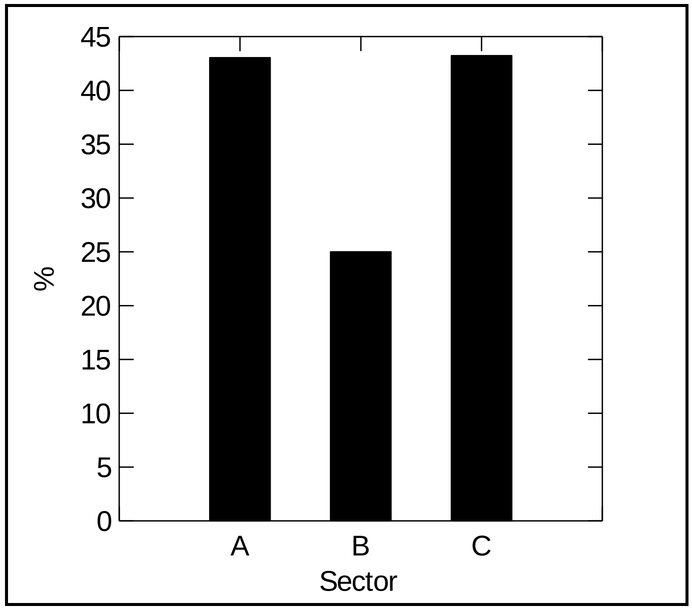


Figure 4.47. Bar graph of Terminal Huaracane Phase Huaracane Arena sherd percentages by sector.

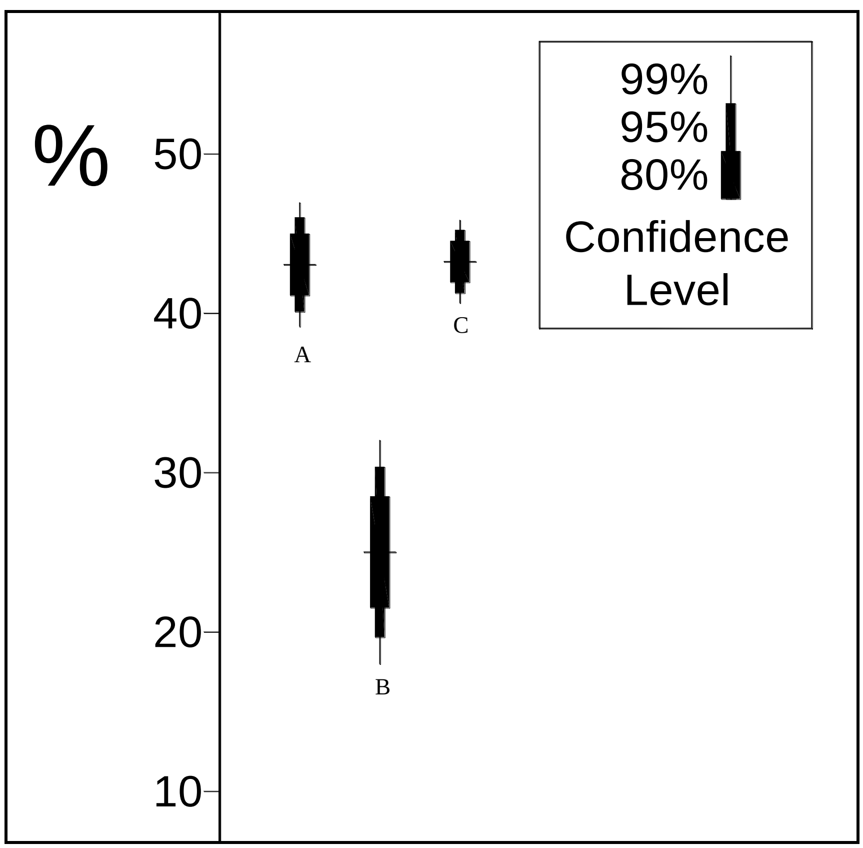


Figure 4.48. Bullet graph showing error ranges for Terminal Huaracane Phase *Huaracane Arena* sherd percentages by sector.

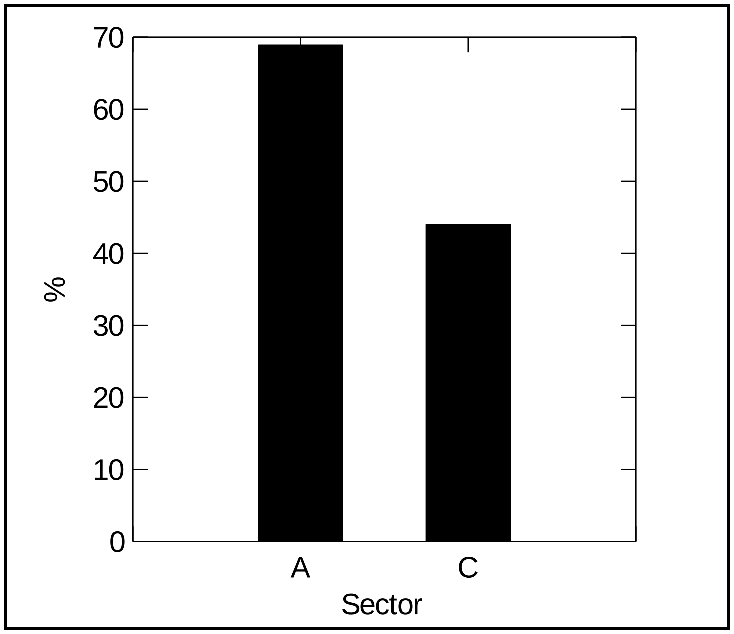


Figure 4.49. Bar graph of Terminal Huaracane Phase bowl sherd percentages by sector.

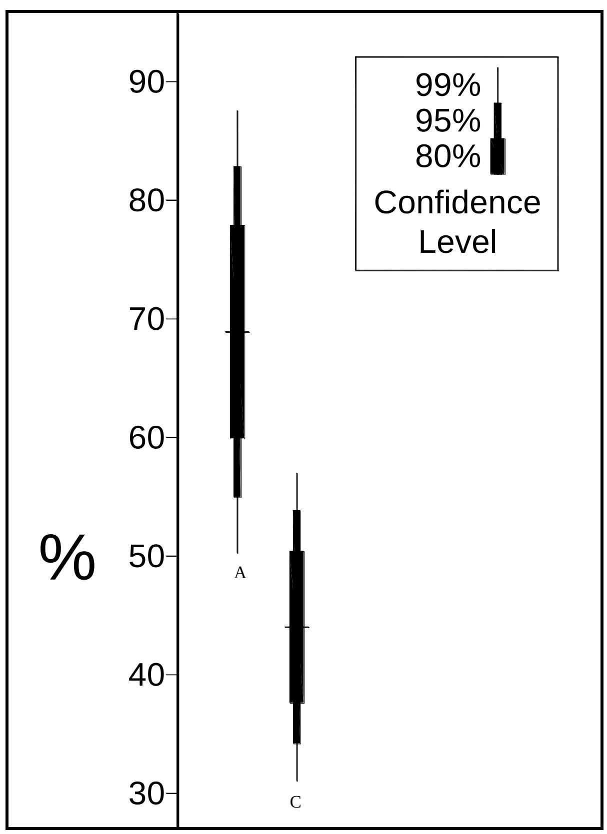


Figure 4.50. Bullet graph showing error ranges for Terminal Huaracane Phase bowl sherd percentages by sector.

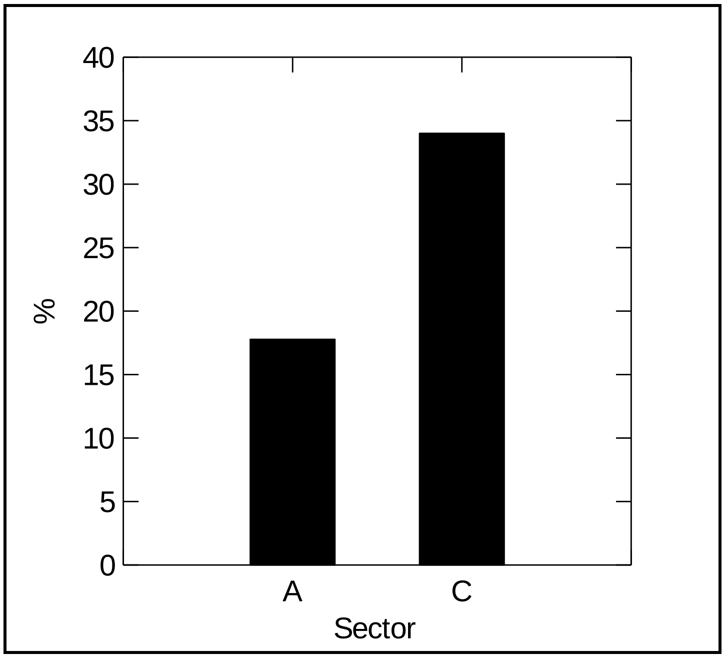


Figure 4.51. Bar graph of Terminal Huaracane Phase olla sin cuello sherds by sector.

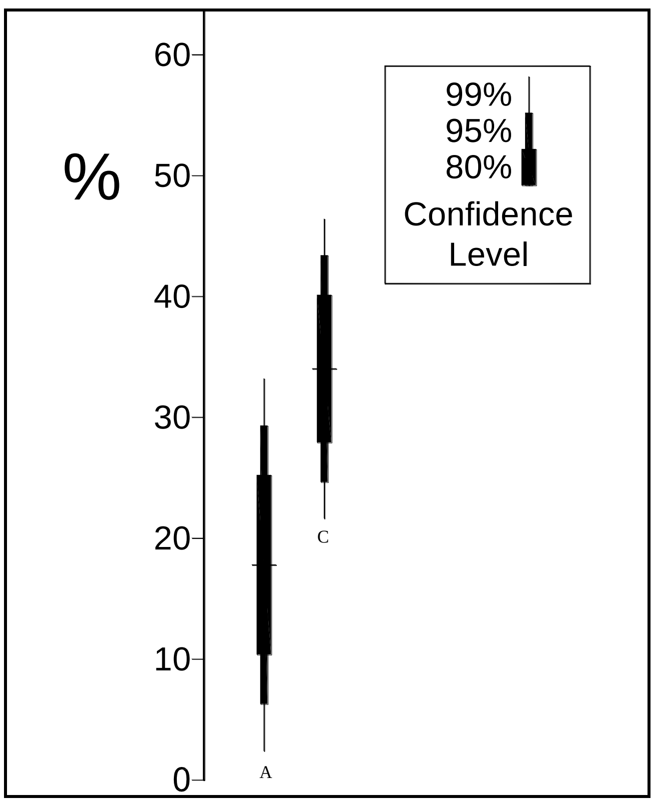


Figure 4.52. Bullet graph showing error ranges for Terminal Huaracane Phase olla sin cuello sherd percentages by sector.

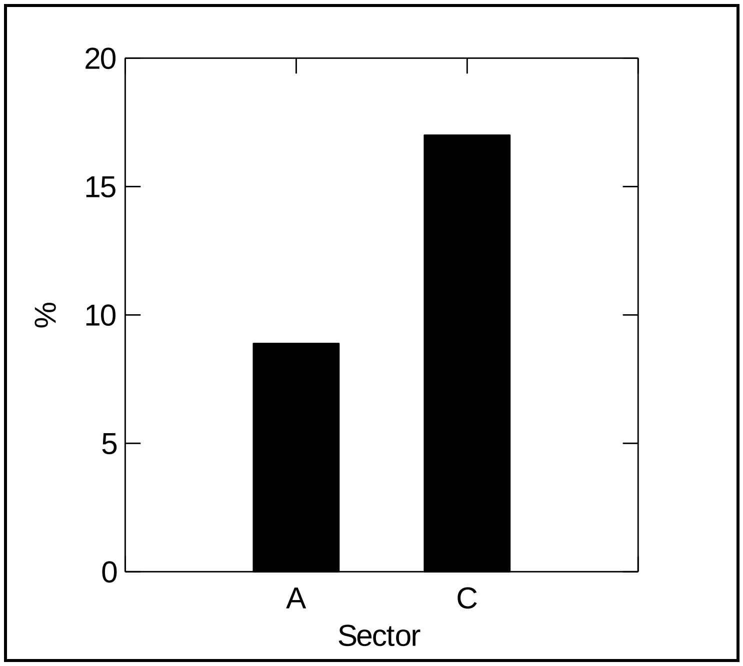


Figure 4.53. Bar graph of Terminal Huaracane Phase olla with neck sherd percentages by sector.

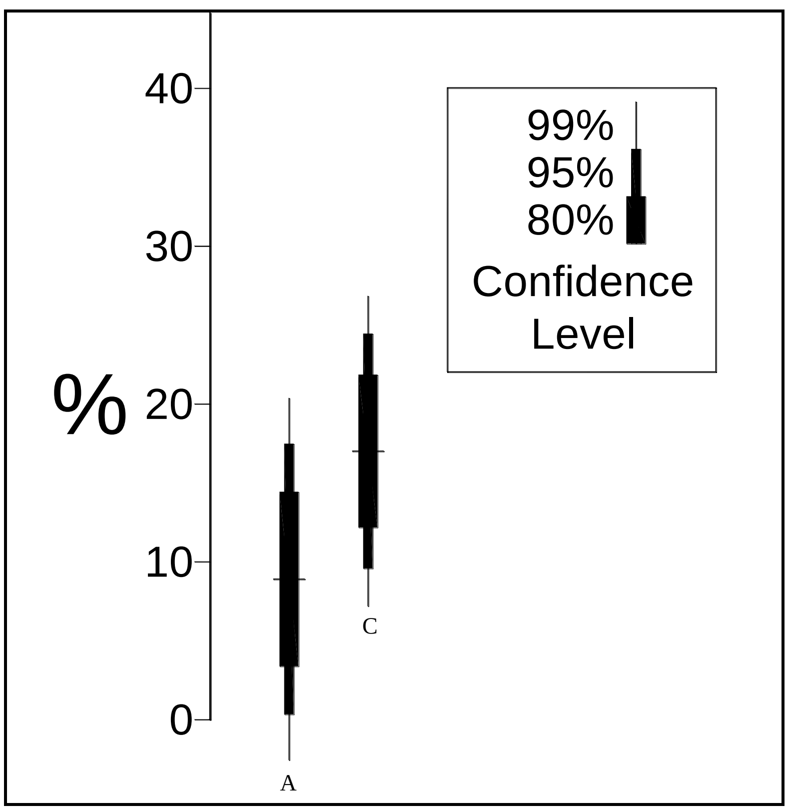


Figure 4.54. Bullet graph showing error ranges for Terminal Huaracane Phase olla with neck sherd percentages by sector.

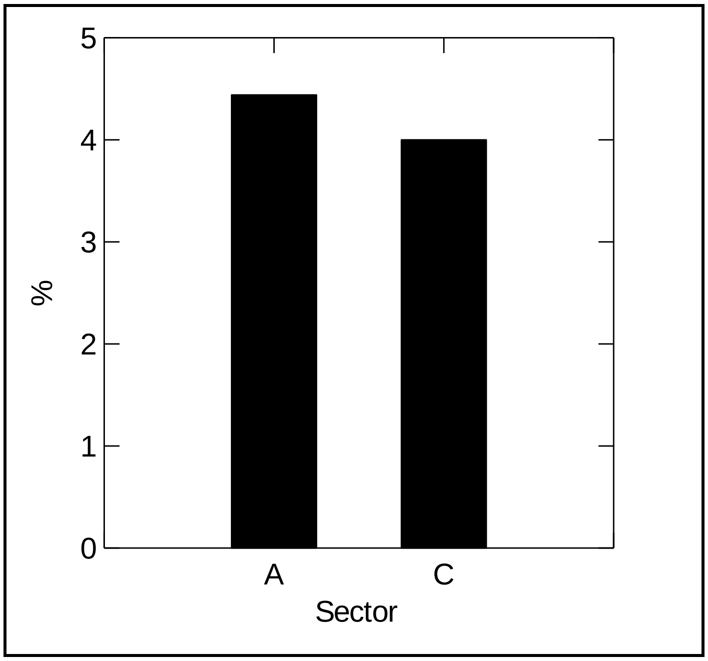


Figure 4.55. Bar graph of Terminal Huaracane Phase jar sherd percentages by sector.

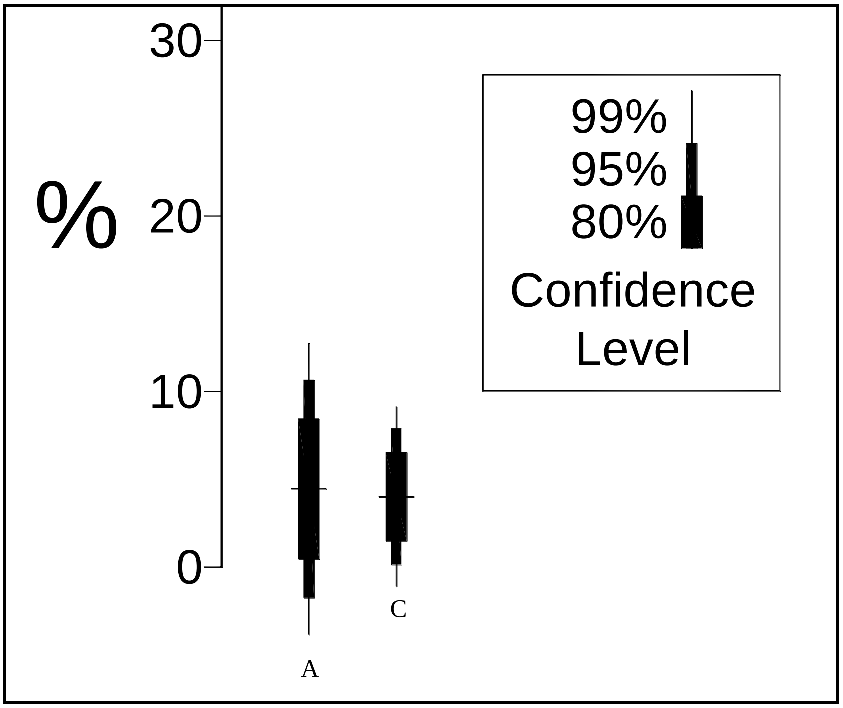


Figure 4.56. Bullet graph showing error ranges for Terminal Huaracane Phase jar sherd percentages by sector.

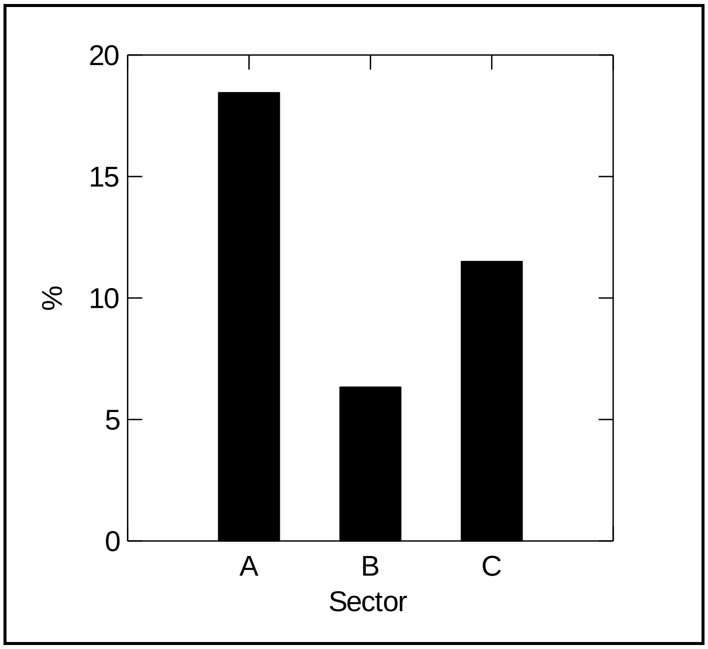


Figure 4.57. Bar graph of Terminal Huaracane Phase chert percentages by sector.

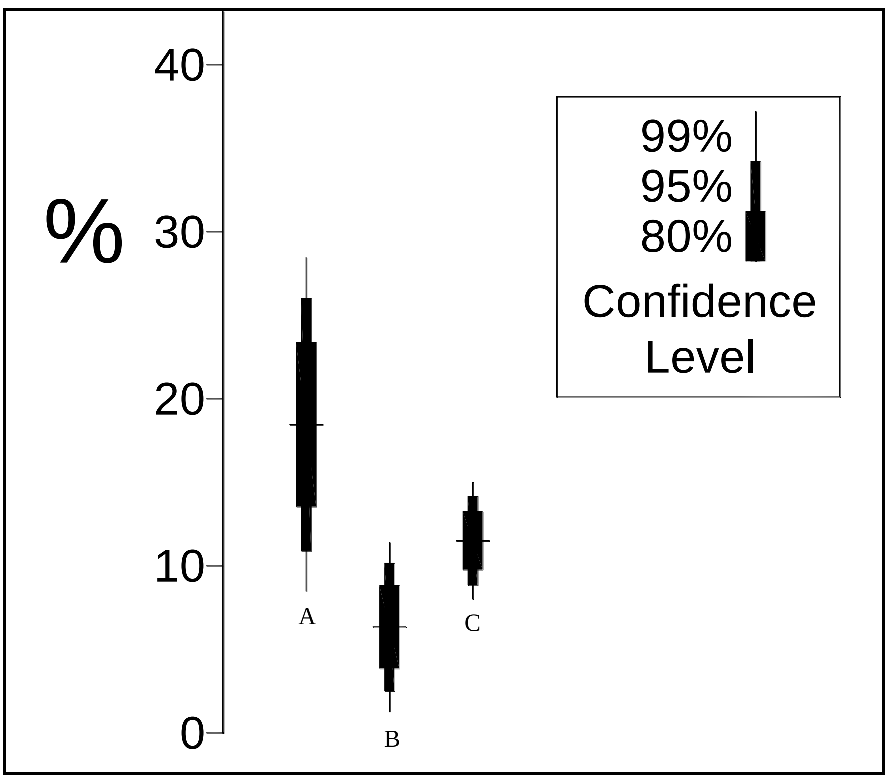


Figure 4.58. Bullet graph showing error ranges for Terminal Huaracane Phase chert percentages by sector.

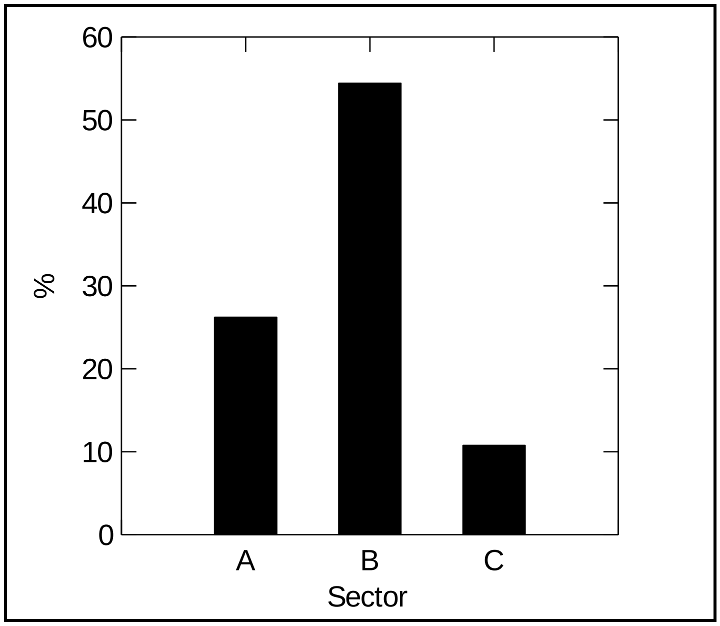


Figure 4.59. Bar graph of Terminal Huaracane Phase dacite percentages by sector.

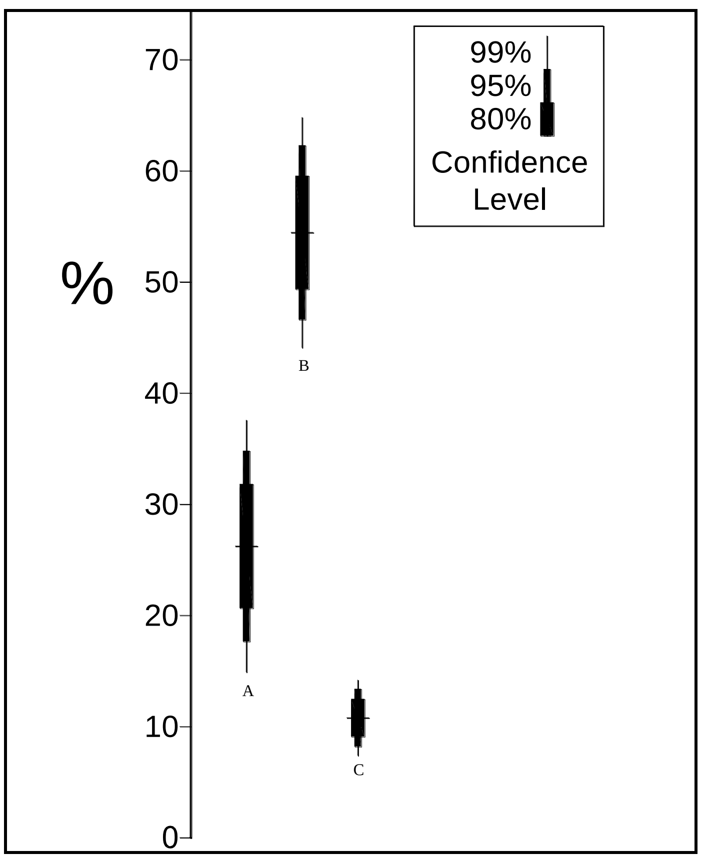


Figure 4.60. Bullet graph showing error ranges for Terminal Huaracane Phase dacite percentages by sector.

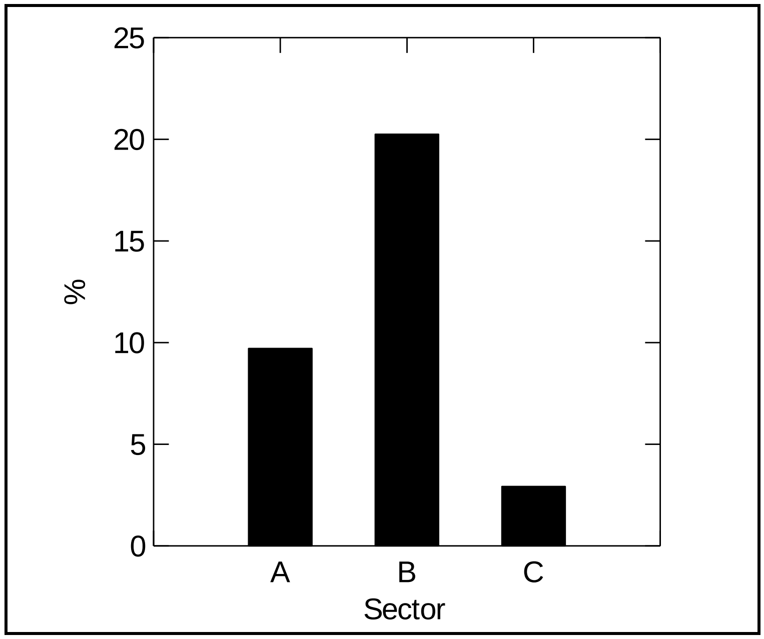


Figure 4.61. Bar graph of Terminal Huaracane Phase rhyolite percentages by sector.

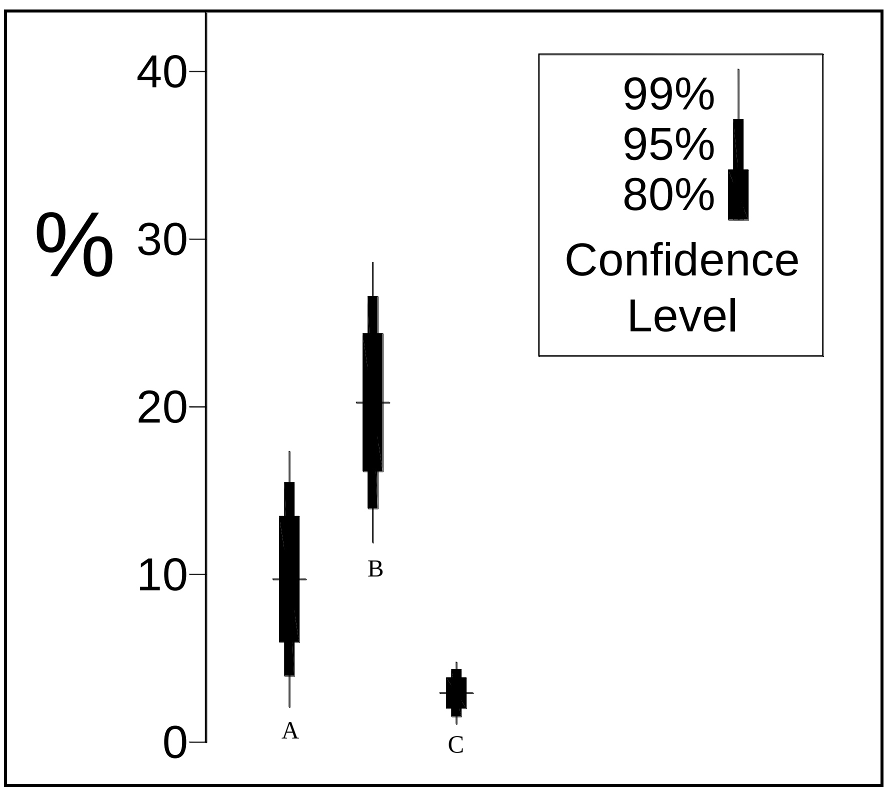


Figure 4.62. Bullet graph showing error ranges for Terminal Huaracane Phase rhyolite percentages by sector.

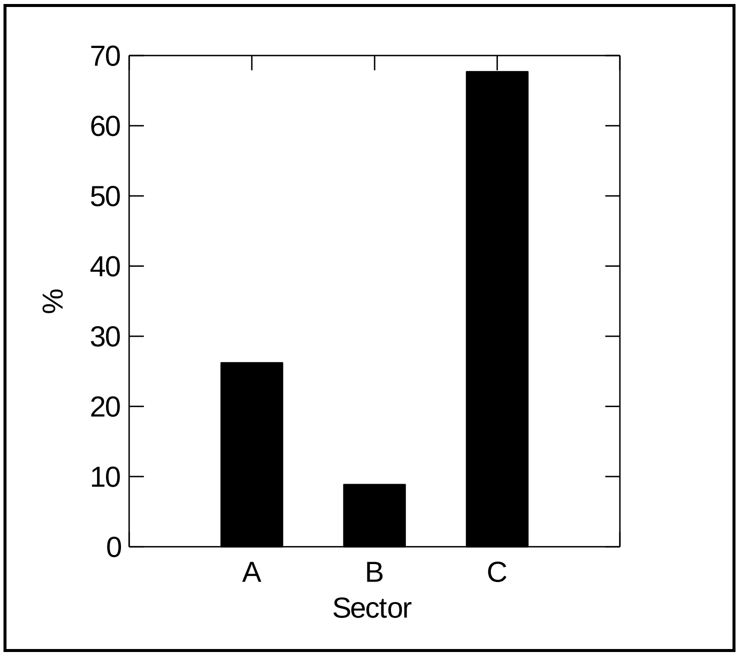


Figure 4.63. Bar graph of Terminal Huaracane Phase quartz percentages by sector.

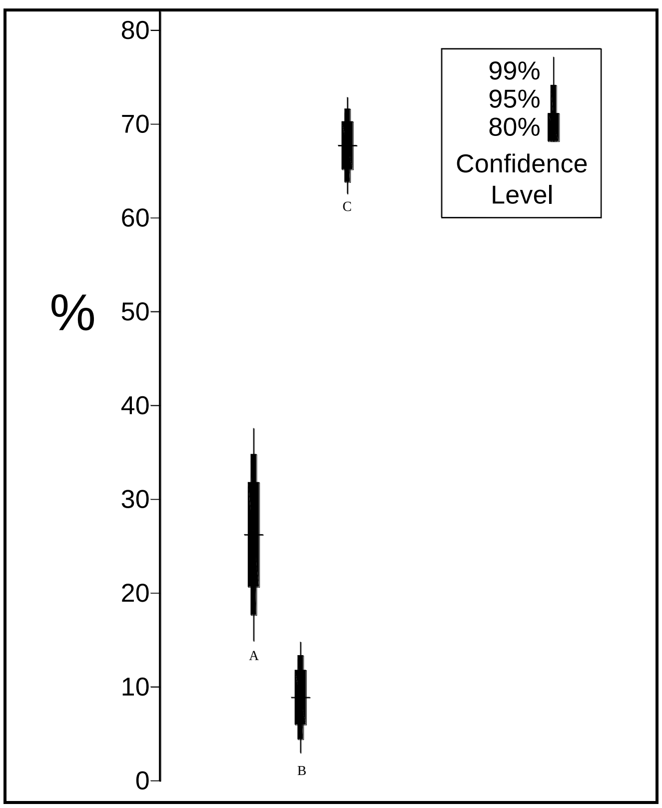


Figure 4.64. Bullet graph showing error ranges for Terminal Huaracane Phase quartz percentages by sector.

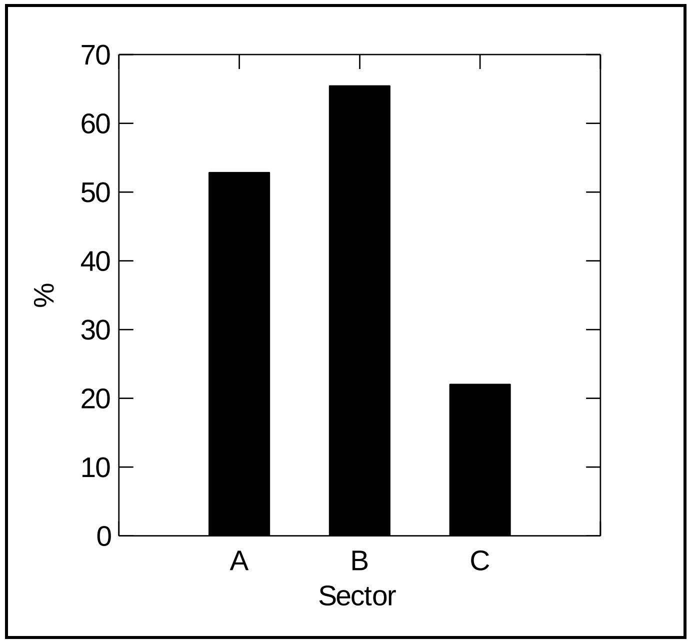


Figure 4.65. Bar graph of Terminal Huaracane Phase flake percentages by sector.

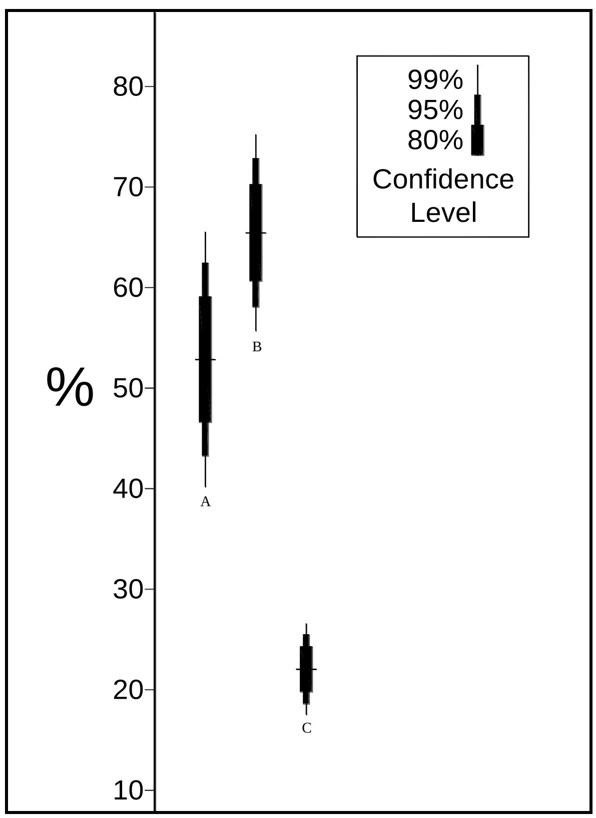


Figure 4.66. Bullet graph showing error ranges for Terminal Huaracane Phase flake percentages by sector.

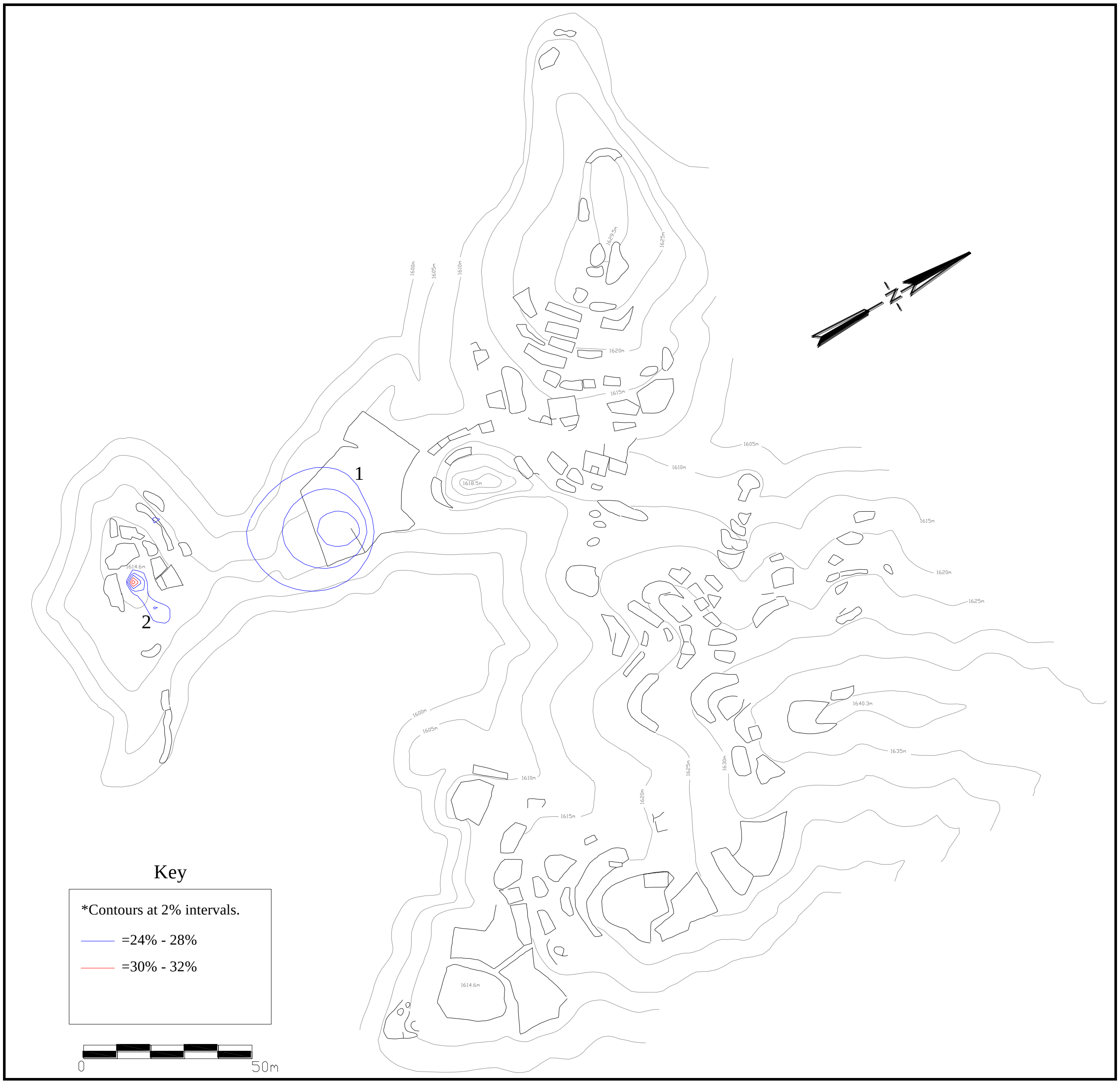


Figure 4.67. Contour map showing percentages of Huaracane Fino sherds on the surface of the Terminal Huaracane Phase components of Yahuay Alta.

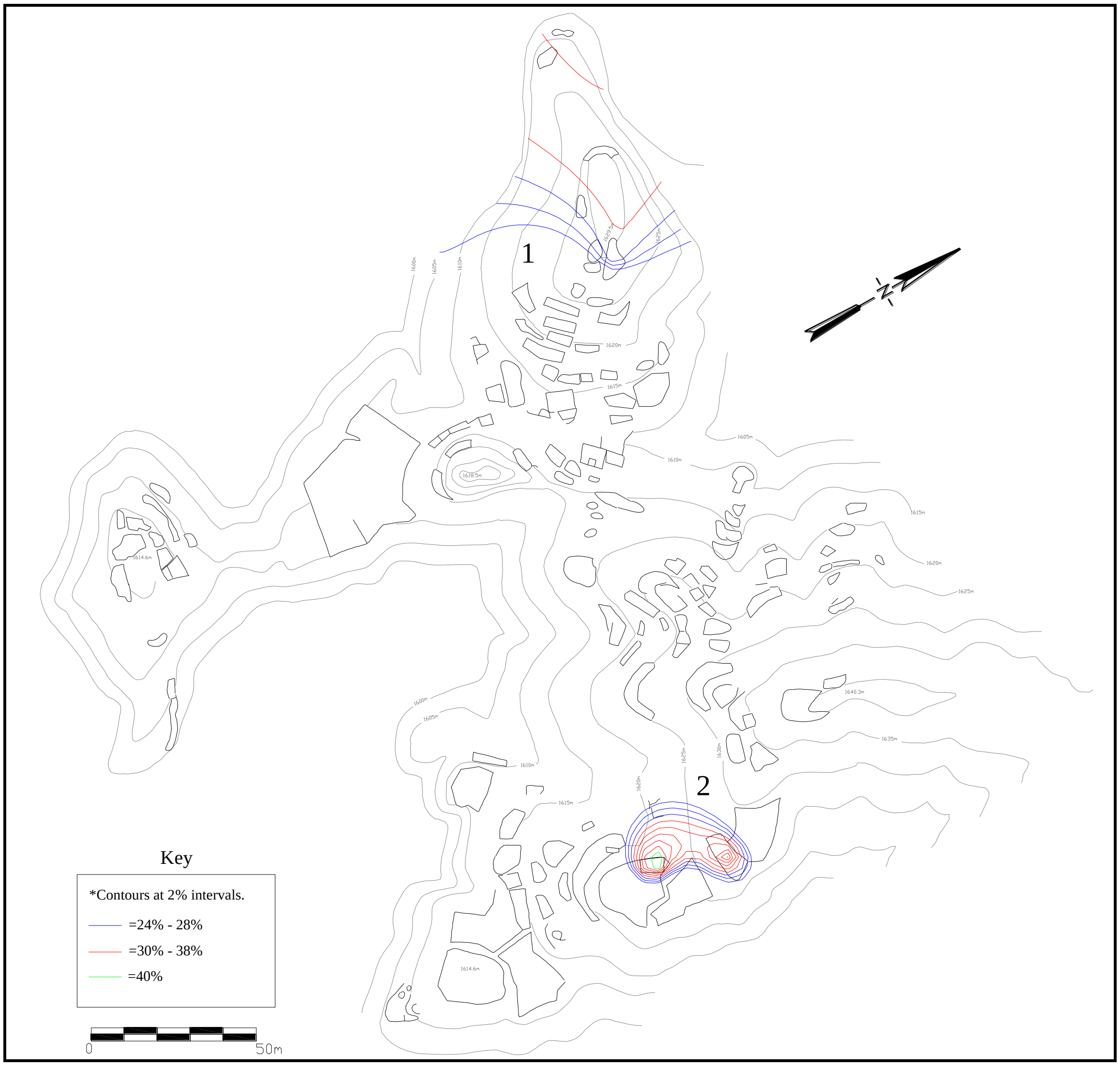


Figure 4.68. Contour map showing percentages of Pasta Biotite sherds on the surface of of Yahuay Alta.

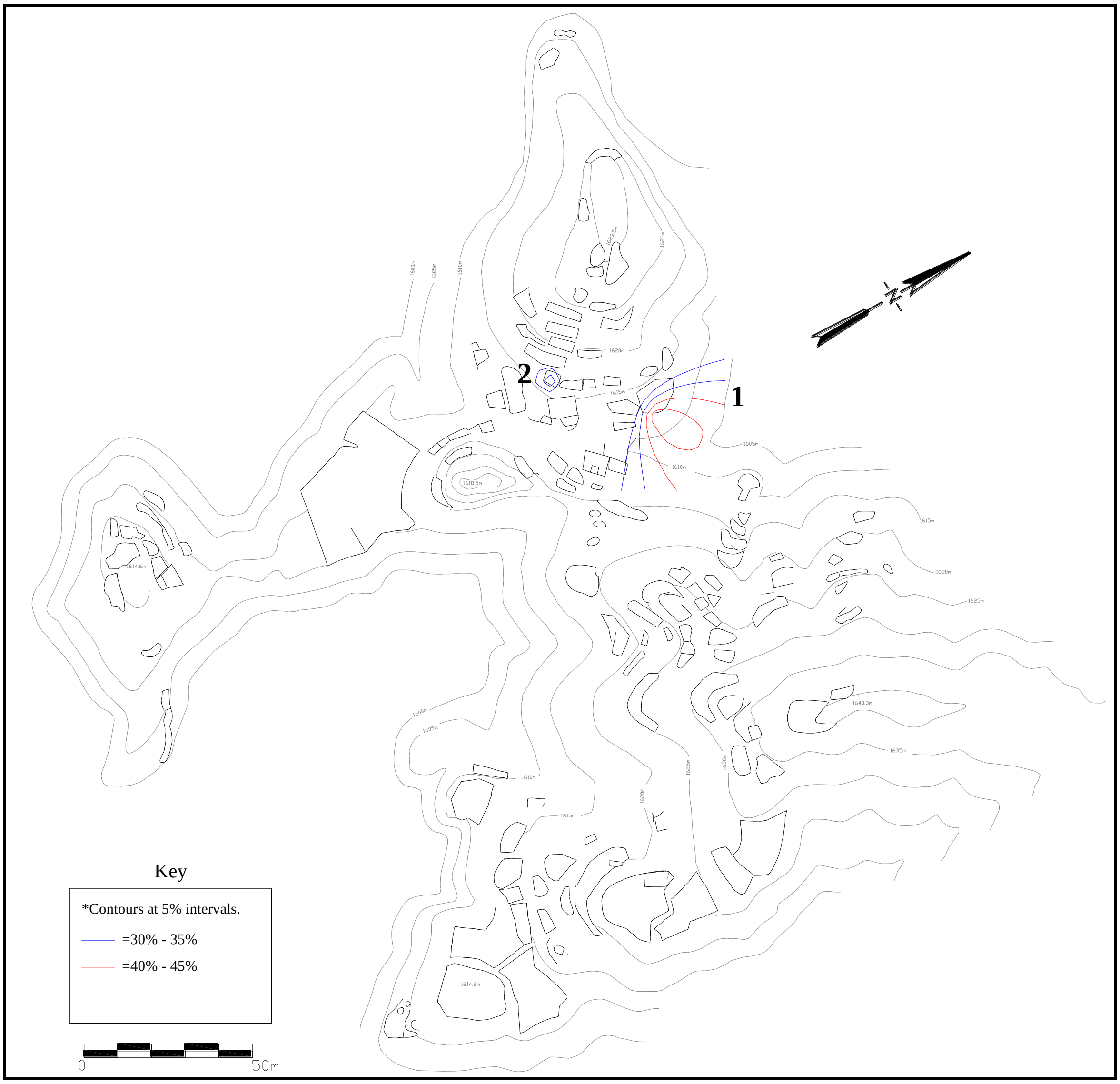


Figure 4.69. Contour map showing percentages of chert on the surface of the Terminal Huaracane Phase components of Yahuay Alta.

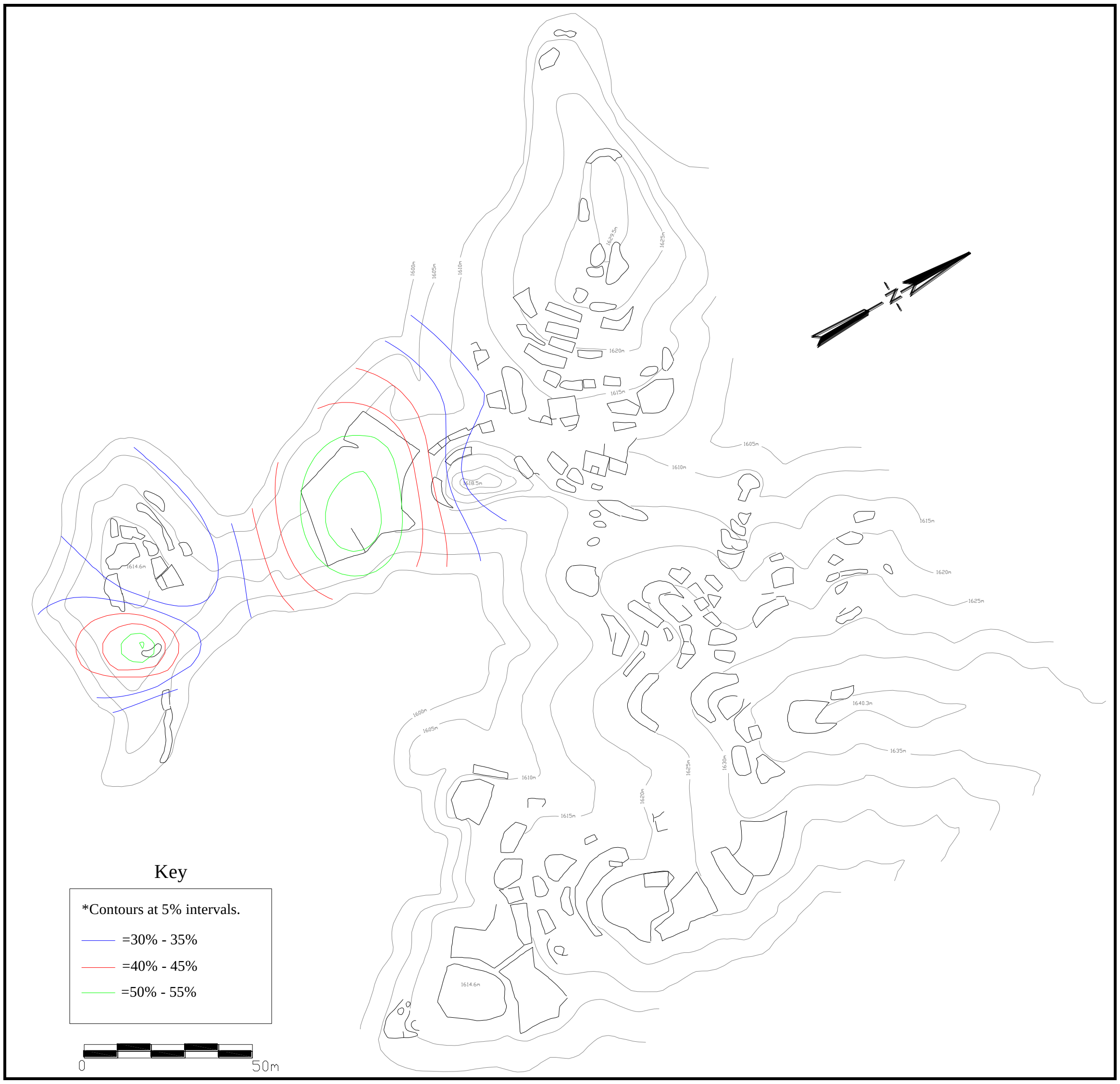


Figure 4.70. Contour map showing percentages of dacite on the surface of the Terminal Huaracane Phase components of Yahuay Alta.

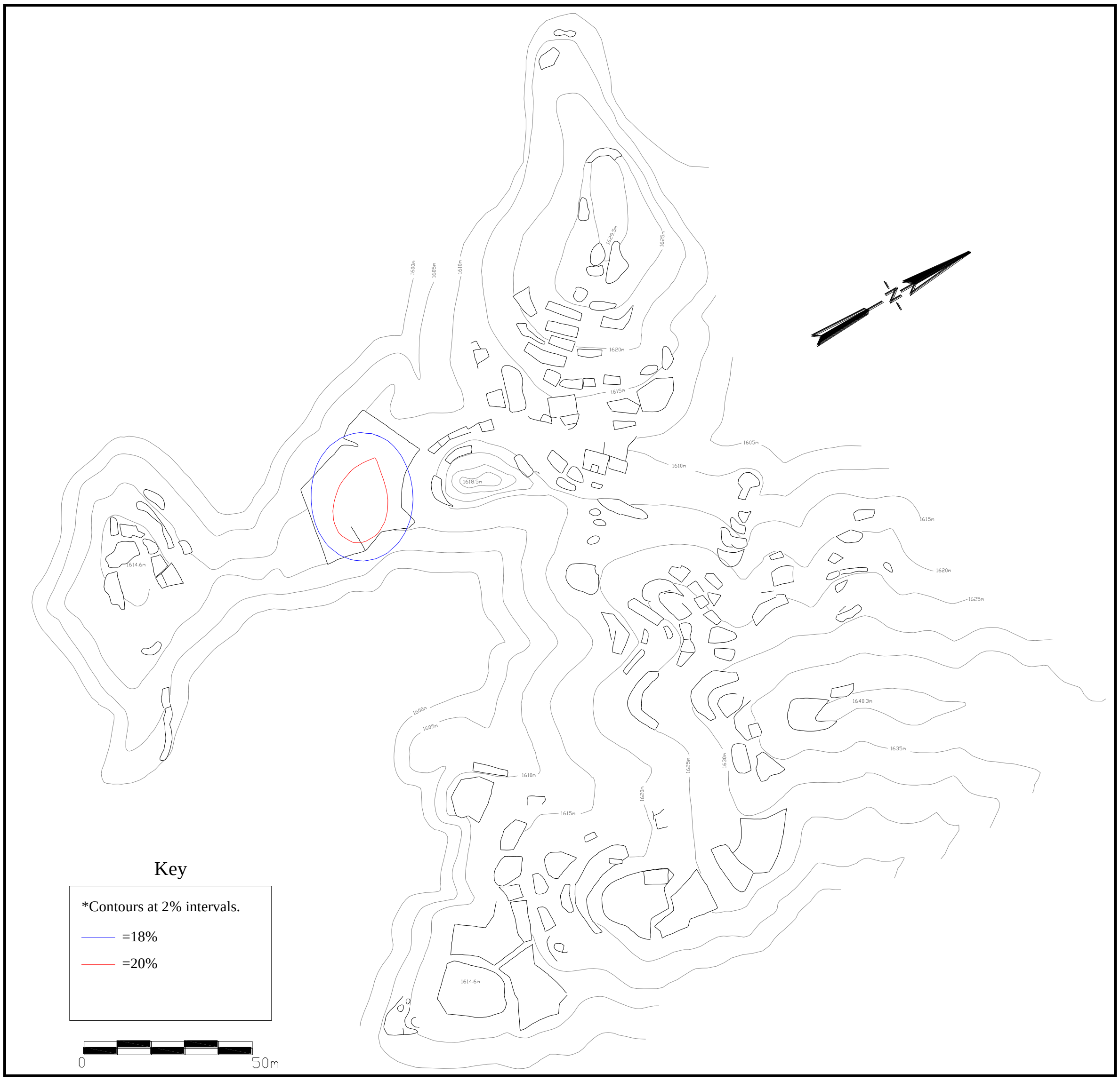


Figure 4.71. Contour map showing percentages of rhyolite on the surface of the Terminal Huaracane Phase components of Yahuay Alta.

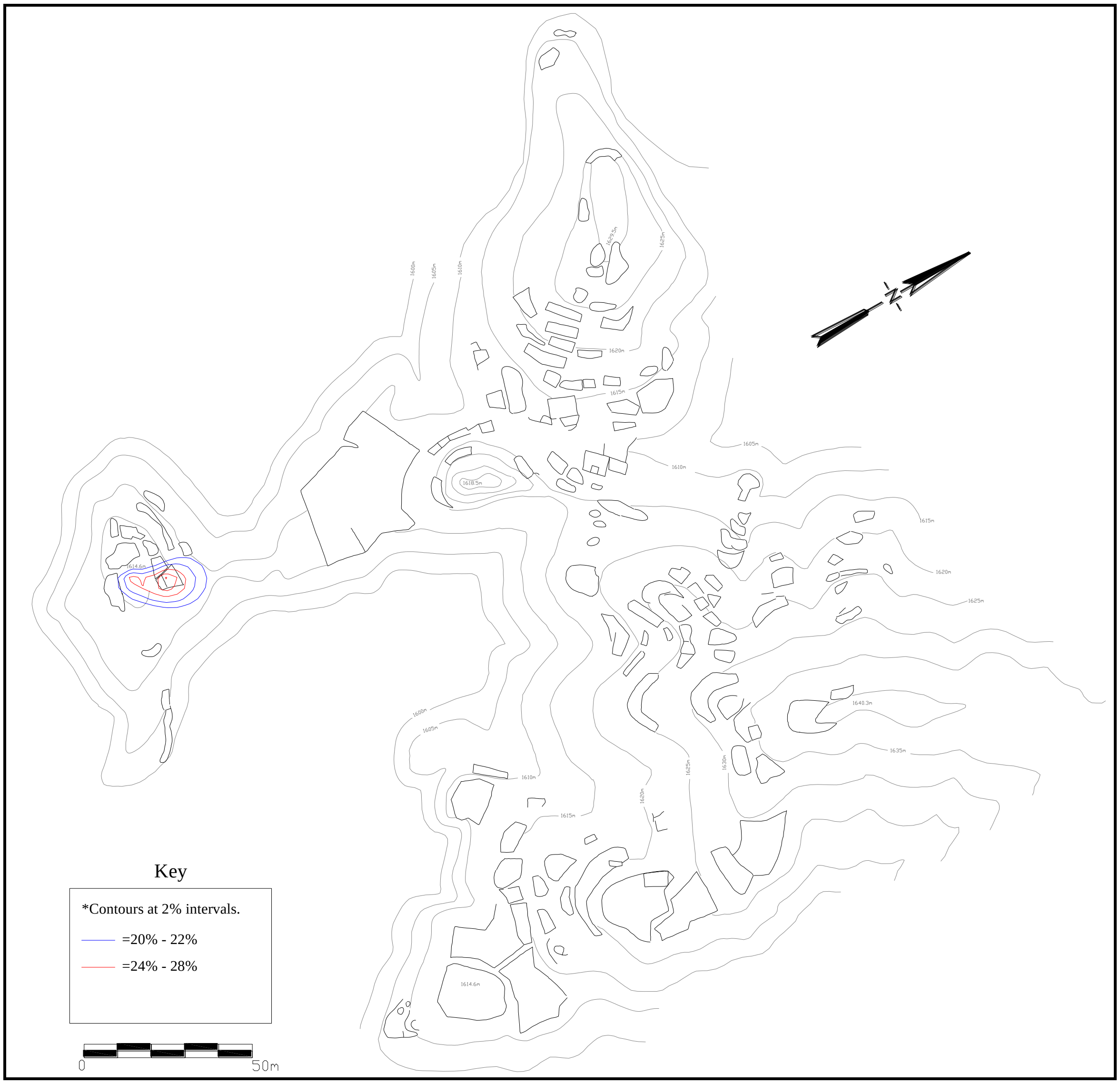


Figure 4.72. Contour map showing percentages of fine-grained rhyolite on the surface of the Terminal Huaracane Phase components of Yahuay Alta.

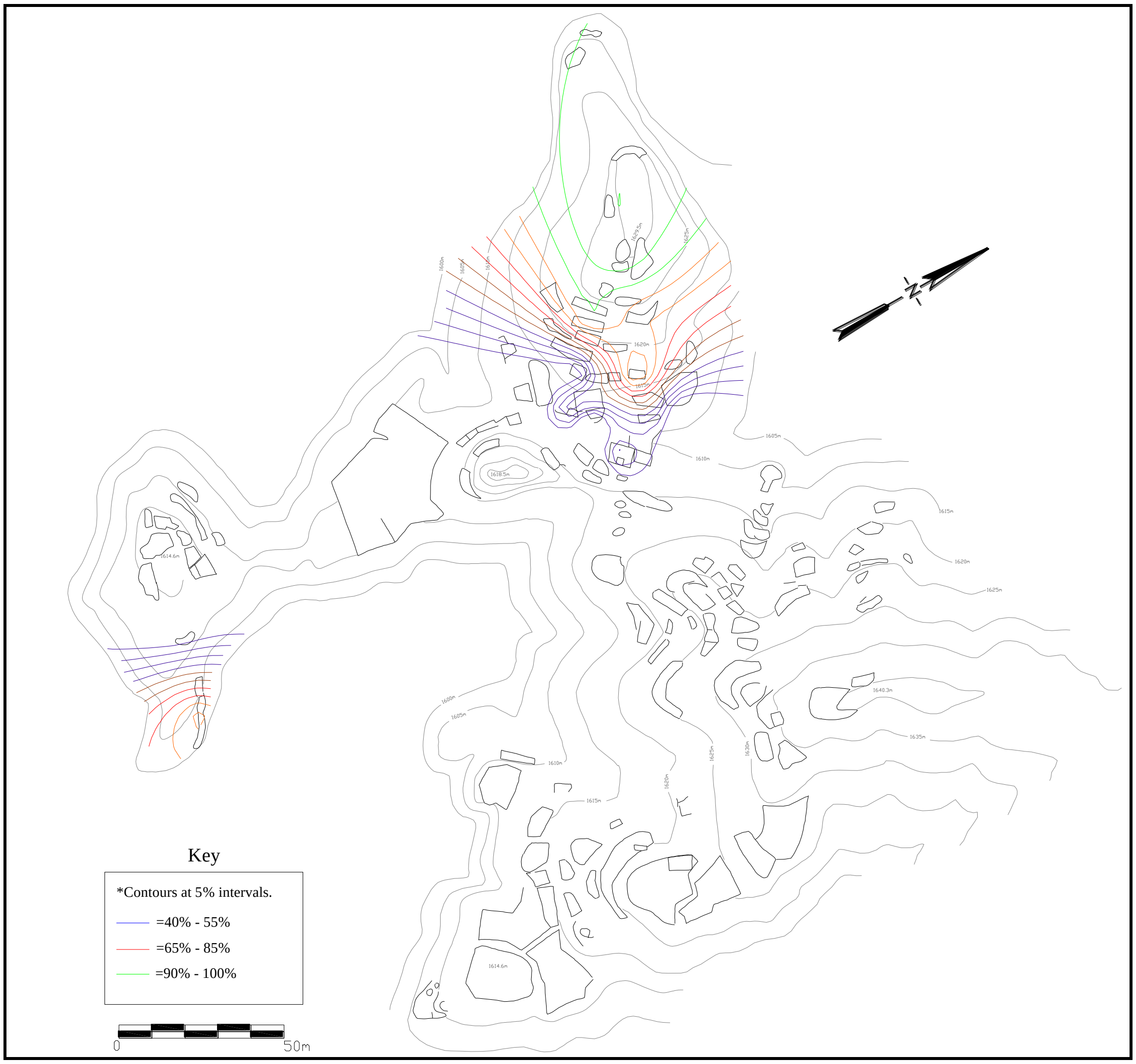


Figure 4.73. Contour map showing percentages of quartz on the surface of the Terminal Huaracane Phase components of Yahuay Alta.

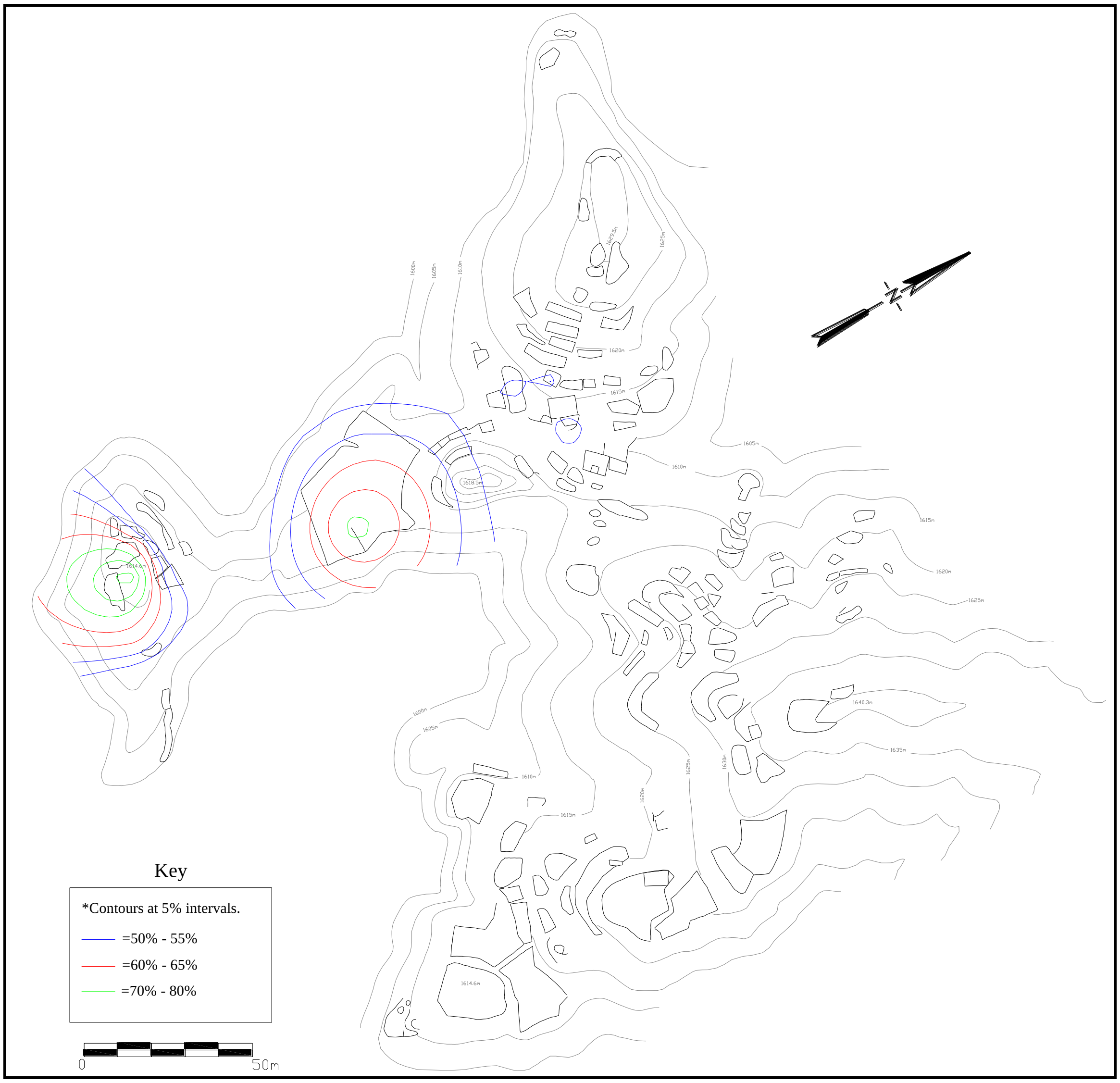


Figure 4.74. Contour map showing percentages of flakes on the surface of the Terminal Huaracane Phase components of Yahuay Alta.

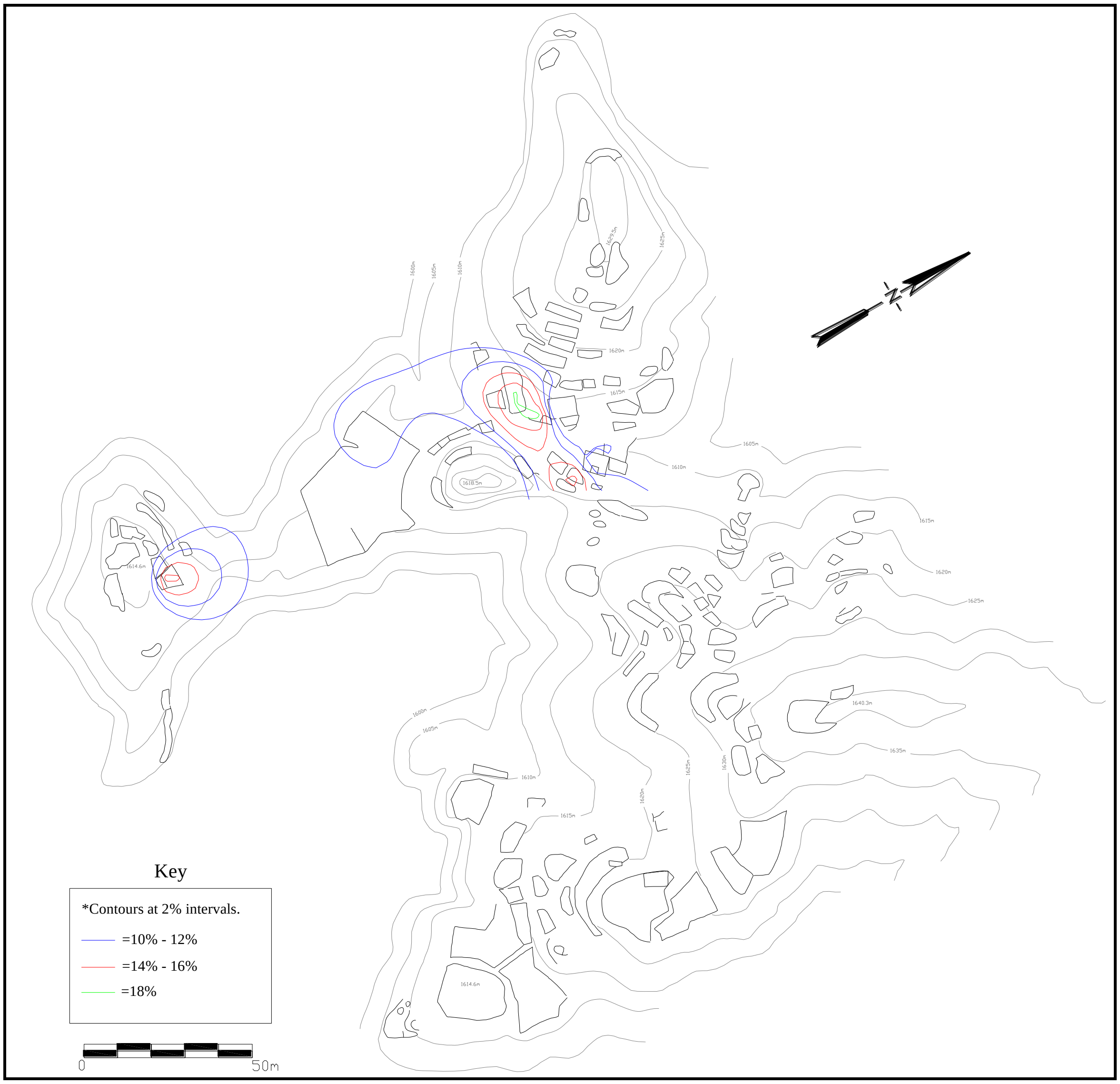


Figure 4.75. Contour map showing percentages of lithic nodules on the surface of the Terminal Huaracane Phase components of Yahuay Alta.

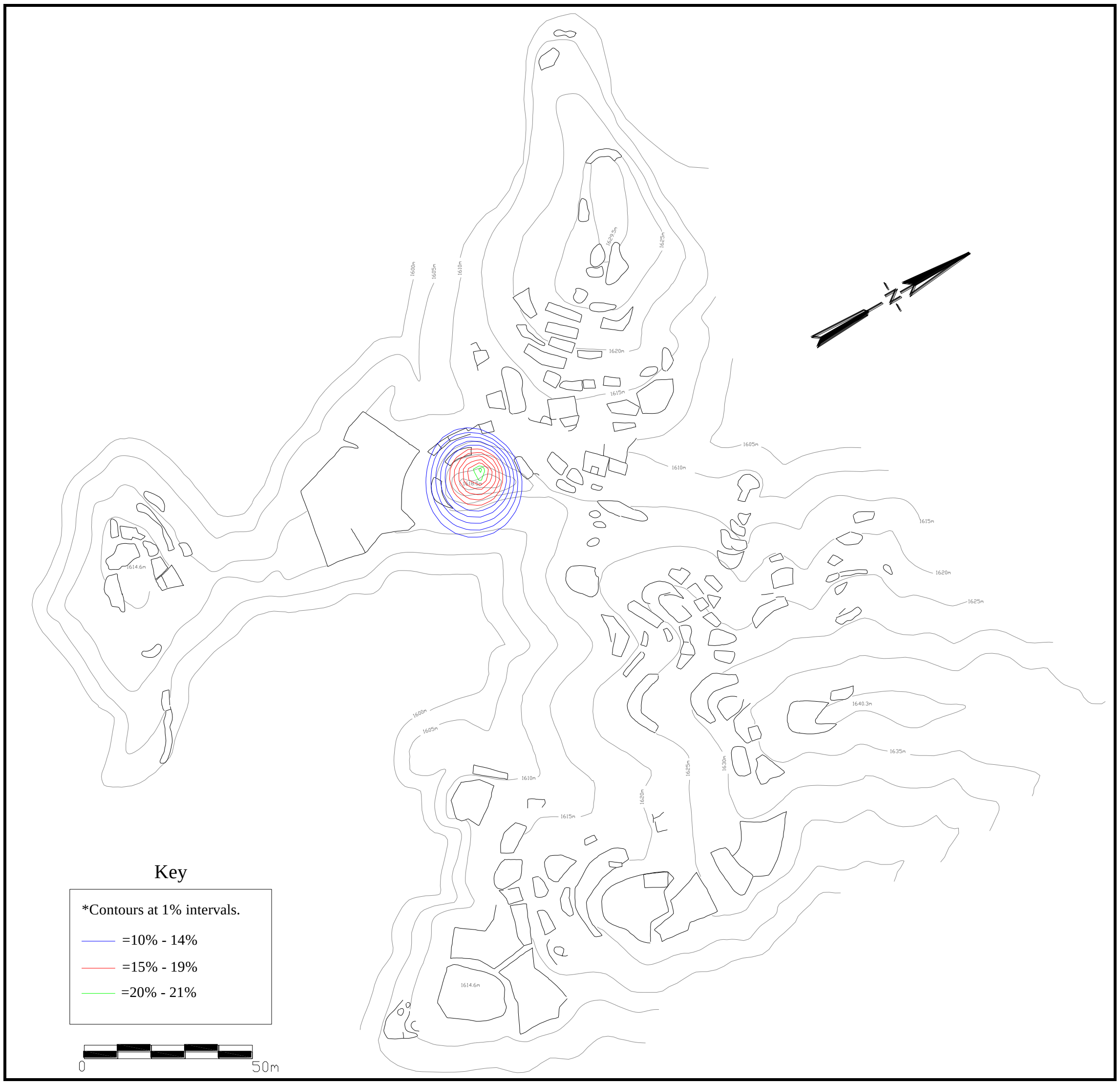


Figure 4.76. Contour map showing percentages of manos on the surface of the Terminal Huaracane Phase components of Yahuay Alta.

5.0 LATE HUARACANE HOUSEHOLDS

5.1 INTRODUCTION

The results from the excavation phase of my project will be split up into two separate chapters. This chapter will focus upon the Late Huaracane phase (2nd century AD), while the following chapter will focus upon the Terminal Huaracane phase (8th century AD). Three excavation units (1, 2, & 4) located in the eastern half of Yahuay Alta exposed Late Huaracane phase occupation (Figure 5.1 & Table 5.1). These three excavation units exposed four structures and a fifth, possible, structure. All of these structures appear to have been simple habitations similar to typical Huaracane domestic architecture identified throughout the middle Moquegua Valley (Bandy 1995; Goldstein 2000b).

Table 5.1. Radiocarbon dates for Late Huaracane Phase

Lab	Specimen #	Context	Material	14C Age BP	Error ±	Median Age cal AD	1 Sigma Range	2 Sigma Range
UCI	43615	Unit 1	Carbon	1825	20	184	138-227	131-228
UCI	43616	Unit 2	Carbon	1790	20	234	177-318	137-323
UCI	43618	Unit 4	Carbon	1870	20	130	83-208	79-216

Unit 1 excavated a terrace with traces of a small relatively circular structure (Figures 5.2 & 5.3). This unit consisted of a 7 x 6 m rectangular excavation grid covering a total of 42 m^2, which encompassed both interior and exterior space. Unit 1 was chosen for excavation because it was one of the clearest examples (based upon surface evidence) of a circular structure at the site.

Unit 2 excavated a rectangular terrace located on the second level of terracing on the hill to the north of the southern elevated platform in Sector F (P1) and only approximately 9 m to the northwest of Unit 1 (Figures 5.4 & 5.5). This unit consisted of a 10 x 6 m rectangular excavation grid. The exact limits of this terrace were not clear on the surface, and as a result the excavation grid included some space outside the terrace itself. Unit 2 was chosen for excavation to serve as an example of a rectangular terrace located in Sector F to compare with the circular terrace excavated in Unit 1. Unit 2 was chosen over other rectangular terraces in this sector because of the relatively high density of artifacts recovered from its surface.

On the surface Unit 4 lay over a row of three or four small, shallow, and poorly defined depressions along the northeastern edge of the large, flat, plaza-like area behind and to the north of Excavation Unit 3 (Figures 5.6 & 5.7). This excavation unit consisted of a 3 x 11 m grid that encompassed both interior and exterior space. Unit 4 was chosen for excavation because the shallow surface depressions in this context were very similar to contexts investigated at the middle valley Huaracane site of Montalvo (M. Barrionuevo Alba, personal communication, 2006). This site is one of the few Huaracane sites identified by Goldstein (2000b: 346) as having substantial stone architecture. The comparative nature of this context to the important site of Montalvo made Unit 4 an intriguing location for an excavation unit.

5.2 EXCAVATIONS AND GENERAL STRATIGRAPHY

Generally, the strata of Late Huaracane contexts at Yahuay Alta were relatively shallow. Living surfaces on flat terraces, such as in Unit 2, were only 7 to 10 cm below the surface of the site. In contrast, in shallow depressions more protected from the wind, such as Unit 1, living surfaces were found up to 35 cm below the surface of the site. Excavations were conducted in natural layers. The surface layer, designated as Layer S, consisted of an active layer of rocks and loose surface soil mixed with small pebbles. This layer was generally 1 – 10 cm thick; deposits were always thicker in lower lying areas that were protected from the wind.

The second layer, designated as Layer A, generally consisted of a loose rocky soil mixed with wall-fall debris and was generally located just above the living floor surface. The upper section of this layer often was mixed with a fine white volcanic ash from the AD 1600 eruption of Huaynaputina (see de Silva, et al. 2000). Especially in flat and open areas, exposed to the wind, only a small amount of this volcanic ash was found in excavation units dating to the Late Huaracane phase. The major exception to this was in Unit 1, which consisted of a small circular depression protected from the wind (see Figure 5.3). A distinct 2 – 3 cm thick layer of Huaynaputina ash was found in the upper portion of Layer A in this depression (Figure 5.8). The fact that this volcanic ash from a well-dated eruption event is found in the upper portion of Layer A in all of these units well above the living surface (more than 15 cm above the living surface in Unit 1) indicates that these structures were abandoned well before the deposition of the ash. As with other layers, Layer A was substantially thinner in exposed areas, 3 – 10 cm thick in Unit 2, in comparison to more protected areas, 10 – 30 cm thick in the interior spaces of Units 1 and 4.

The surface of the third layer, designated as Layer B, was generally a living surface or floor zone. These surfaces were in most cases not prepared floors; they simply appeared to be compacted strata formed by activities that took place on the terraces. Thus, in Late Huaracane contexts, the occupation was generally on top of this layer. Layer B itself typically consisted of a hard, compact, often-granular soil underneath the living surfaces. This layer was often a relatively clean construction fill (containing few artifacts) used to level the terraces. Layer B terminated either at bedrock or very hard packed soil that was the pre-occupational surface of the site. In Units 1 and 2, this fill consisted of a hard packed soil with some rock inclusions that contained very little cultural material, but in Unit 4 Layer B consisted of a very rocky construction fill that contained a substantial amount of ceramics and faunal material. The thickness of this layer varied, ranging from as thin as 5 cm to over 50 cm thick, because its thickness depended upon how much construction fill was used to provide a level living surface.

Unit 2 was the only Late Huaracane context that substantially deviated from the general stratigraphy described above. This is because in Unit 2 (see Figure 5.4) there were two superimposed living surfaces or floors. The upper floor was at the surface of Layer B, this floor was relatively smooth but was only preserved in a few patches in the middle of the terrace. Between 1 and 5 cm below this upper floor a second living surface was uncovered and designated as the surface of Layer C. This floor was better preserved but not as smooth as the upper floor and had many small rocks imbedded in its surface. In Unit 2 Layer C was essentially the equivalent of Layer B in Units 1 and 4 as it consisted of a clean, hard packed construction fill that extended to bedrock. These two superimposed floors do not necessarily represent a reoccupation after a hiatus; possibly the terraces was resurfaced at some point during its occupation.

5.3 LATE HUARACANE DOMESTIC STRUCTURES

In general Late Huaracane domestic structures were small and roughly circular in shape with living floors that had approximate maximum diameters of 1.8 – 3 meters. Each of the structures excavated were relatively simple, and constructed nearly entirely of organic materials such as wooden posts with reed or *quincha* walls. None of the structures exposed in Late Huaracane contexts had stone in their walls, but some of the terraces they were constructed upon had stone in their retaining walls. Most of the Late Huaracane terraces supported no more than two small structures and many smaller terraces only supported one structure, as was the case in Unit 1. The living floors of these structures were relatively clean, although some had slightly higher artifact densities than others. There was no evidence for permanent hearths or other domestic features within these structures, although there were an interior ash deposits in Unit 2 and an external ash deposit in Unit 4. This evidence points to the domestic structures from this time period as structures used primarily for sleeping. These structures would have at most only been able to adequately accommodate small nuclear families, and may only represent a portion of a larger household unit (e.g., Flannery 1983: 45) consisting of more than one of these small structures. However, this supposition is based solely upon the generally small size of the Late Huaracane structures, as no clearly definable multi-structure compounds were found in Late Huaracane contexts.

5.3.1 Household variability

Although the structures exposed during the excavation of Late Huaracane contexts were greatly similar, there were some noteworthy differences between structures, especially in their construction techniques. The structure exposed during the excavations in Unit 1 had a very circular and level living surface approximately 2.1 meters in diameter (see Figures 5.2 & 5.3). The back or north wall of this structure was carved or chipped out of the bedrock. The rubble from this activity was used as construction fill for the small terrace and its slightly curving retaining wall, which is between 1 and 1.5 meters south of the structure itself. On the surface the front wall of this structure appeared to have a curving stonewall foundation. However, excavations revealed that this curving line of stones bordering the structure was not a substantial structural foundation; it was simply a line of stones. The interpretation for this line of stones is that it was used to support a lightweight reed or *quincha* wall. No postholes were discovered during the excavation of Unit 1, suggesting that no large wooden posts were used in the construction of this structure's walls. Although the living surface of this structure was no more than 2.1 meters in diameter, the curving line of rocks that possibly supported a lightweight wall had an approximate diameter of 5.2 meters. This wall enclosed not only the living surface but also a possible storage feature, which will be described below in more detail.

The excavation of Unit 4 exposed two badly preserved small circular structures (see Figures 5.6 & 5.7). They are located along the northeastern edge of a large artificially leveled plaza-like open area that is located directly behind excavation Unit 3, which dated to the Terminal Huaracane phase (see Figure 5.1). The construction activities associated with the leveling of this plaza damaged the older structures excavated in Unit 4. Both of the structures exposed in Unit 4 resemble the structure in Unit 1. They both are circular depressions that were excavated into the terrace they were built upon. The northern structure had a living floor with an approximate maximum diameter of 3.1 meters, while only a small portion, with a diameter of 1.8 meters, of the southern structure's floor was preserved. Unfortunately, because of the damage to these structures by the later construction activities, it is difficult to tell exactly how the walls of these structures were constructed and whether or not the walls enclosed a space larger than the actual living floor, as appears to have been the case with the structure in Unit 1. No postholes were discovered during the excavation of these structures suggesting that these structures may have had simple reed or *quincha* walls supported in a similar way to the walls of the structure in Unit 1. One of the unique features of the structures in Unit 4 was that the northern half of the northern structure had a prepared clay floor. This was the only prepared living floor surface found in Late Huaracane contexts.

The excavation of Unit 2 revealed one structure and a possible second structure (see Figures 5.4 & 5.5), with the first structure being very different than the structures exposed in Units 1 and 4 described above. Unit 2 consisted of a large, flat, and roughly rectangular terrace with a very low, badly preserved, front retaining wall. In the southwestern part of the terrace, there is a curvilinear line of five postholes averaging approximately 15 cm in diameter (see Figure 5.4, Rasgos 1, 2, 3, 5, & 6). These features suggest a structure approximately 3 meters in diameter with walls supported by sturdy wooden posts in this section of the terrace. There is no evidence that this structure was completely circular, suggesting the posts may have supported a simple windbreak or possibly even a simple lean-to like structure. This wall is positioned perfectly to block the wind gusts that typically blow from the south. To the east of this line of postholes there are three more postholes (see Figure 5.4, Rasgos 4, 7, & 8) that are more widely spaced. These could possibly have been postholes for another simple windbreak or lean-to for which some of the postholes were not preserved. It is possible that on this particular terrace half circular lean-tos or windbreaks were built instead of circular structures partially dug into the surface of the site.

Despite the variability in the structures described above, overall excavation revealed no substantial differences in Late Huaracane house size or shape. In addition, all of the Late Huaracane structures were constructed of lightweight organic materials. The only difference revealed in this small sample of excavated structures was how they were constructed. Some structures consisted of small hollowed out depressions, presumably surrounded by lightweight reed or *quincha* walls; the living surfaces of these structures were below the surface level of the site. Other structures consisted of lightweight walls supported by sturdy wooden posts; the living surfaces of these structures were level with the surface of the site. In the end, this difference is probably not all that meaningful as both styles of structures were similar in shape, size, building material, and labor and there was no evidence indicating any functional differences between these types.

5.3.2 Other features

Two possible storage features were discovered during the excavation of Late Huaracane contexts. Excavations in Unit 1 revealed a rectangular basin, approximately 120 x 70 cm, just to the west of the living floor of the structure in this Unit (see Figure 5.2, Rasgo 2). The reed or *quincha* walls of this structure appear to have enclosed the basin within the structure. This basin had three, well-made stone walls, 35 – 50 cm high, and a well-prepared hard clay floor (Figures 5.9 & 5.10). This basin was full of a loose clean soil and 19 polished rhyolite *lajas* (flat stone slabs) were recovered from it. This small basin was obviously not capable of storing large quantities of goods, but it was very well made.

The second possible storage feature was exposed during the excavation of Unit 4, was located just south of the northern structure in this excavation unit (see Figure 5.6, Rasgo 2). The exact location of the walls of this structure are uncertain so it is not possible to determine whether or not this storage pit was enclosed within this structure's walls. This feature was directly associated with the northern structure in Unit 4. This features was a large, roughly circular, stone lined pit with a stone ring marking its opening (Figure 5.11). This pit was 67 cm deep, and had a roughly circular opening measuring 50 x 60 cm. It had a profile similar to a boot tomb, as its base was much wider than its opening measuring 95 x 80 cm. Although similar in shape to a boot tomb this pit is substantially smaller in scale than typical Huaracane boot tombs found in cemeteries throughout the middle Moquegua Valley (Goldstein 2000b). This pit was full of a loose refuse laden fill that included many ceramic and bone fragments. Huaynaputina volcanic ash was also found in the top layers of this fill suggesting this pit was disturbed in antiquity, possibly by the construction activities that destroyed the structures excavated in Unit 4. Because the original contents of this pit were not recovered it cannot be known if it was used as a tomb or for storage. This large pit could have stored a large amount of material and was directly associated with one of the small circular structures uncovered in Unit 4.

Excavations in Late Huaracane contexts revealed only two storage features making it difficult to generalize about storage at Yahuay Alta during this time period. No obvious communal or suprahousehold storage features were exposed in this limited sample.

5.3.3 Artifact assemblages

There were some differences between artifact assemblages of the three excavated Late Huaracane contexts, but their ceramic assemblages were very similar (Table 5.2). The only major difference seems to have been from Unit 1, however only a total of 16 ceramic sherds were recovered during the excavation of this unit. The resulting error ranges for ceramic ware percentages from Unit 1 are therefore far too large to suggest any significant differences in the utilization of ceramic wares in this location. It is nevertheless important that so few ceramics were found during the excavations of Unit 1, because this suggests that very little domestic refuse was deposited in this context.

Table 5.2. Ceramic ware %'s for Late Huaracane phase excavation units

Ceramic Ware	Unit 1	Unit 2	Unit 4
H. Arena	87.5%	87.6%	85.1%
H. Vegetal	12.5%	6.2%	6.2%
H. Fino	0.0%	6.2%	7.7%

Overall, the ceramic findings from Late Huaracane contexts are not that surprising because the assemblages consist only of what are considered to be classic Huaracane wares that make up the majority of ceramic assemblages at other Huaracane sites throughout the middle Moquegua Valley (Feldman 1989; Goldstein 1989, 2000b). None of the less common or nontraditional Huaracane ceramic wares present at Yahuay Alta, such as *Pasta Biotite*, were found in the three excavation units that dated to the Late Huaracane phase.

In comparison to the ceramic assemblages discussed above, there were more differences between the lithic assemblages of Units 1, 2, and 4 (Table 5.3). The most obvious differences were in the percentages of types of lithic materials utilized in each location. On the whole the total number of lithic specimens recovered from all levels of each Late Huaracane excavation unit was small (45, 27, & 35, from Units 1, 2, & 4 respectively). As a result, the error ranges for these percentages were relatively large, however there were some statistically significant inter-unit differences among contexts.

Table 5.3. Lithic material %'s for Late Huaracane phase excavation units

Lithic Material	Unit 1	Unit 2	Unit 4
Dacite	0.0%	3.7%	20.0%
Rhyolite	55.6%	14.8%	5.7%
Andesite	6.7%	0.0%	0.0%
Fine-grained Rhyolite	2.2%	3.7%	2.9%
Copper Mineral	2.2%	22.2%	0.0%
Quartz	4.4%	33.3%	20.0%
River Pebble	0.0%	3.7%	0.0%
Chert	28.9%	18.5%	51.4%

We can be more than 99% confident that the chert percentage in Unit 4 was significantly higher than the percentage in Unit 2. In addition, we can be between 95% and 99% confident that the chert percentage in Unit 4 was significantly higher than the percentage in Unit 1 (Figure 5.12). These differences are important because chert was the only high quality lithic material utilized during the Late Huaracane phase (no obsidian was recovered from contexts dating to this time period). These results suggest that some households may have had differential access to this high quality lithic material, which was not local to the site. This variability is paralleled by the surface collection results that indicated differential access to chert during this time period (see Chapter 4).

There are also some significant differences in the percentages of rhyolite found in these Late Huaracane contexts. We can be more than 99% confident that Unit 1 had a significantly higher percentage of rhyolite than Units 2 and 4 (Figure 5.13). This is undoubtedly due to the fact that the majority of lithic implements, 55.6%, found in Unit 1 were rhyolite *lajas*. Unit 1 was the only context where *lajas* were uncovered; a finding that will be explored below in more detail. There were some other significant differences in the percentages of lithic materials, such as quartz, however it is more difficult to interpret exactly what these differences mean because it is not know exactly how these materials were utilized.

As mentioned above, 25 large fragments of broken *lajas* were uncovered in Unit 1 making up 55.6% of its lithic assemblage. These *laja* fragments were quite variable in thickness, ranging from 7 mm to 19 mm thick, and were up to 25 cm in length. All of these *lajas* were made of a polished or smoothed rhyolite. A total of 19 large *laja* fragments were found in the clay lined basin discussed above.

Lajas were relatively rare at Yahuay Alta and were only found in Unit 1 during excavations. During the surface collection phase of this the research, *lajas* were only found in one location on the site, the large artificially leveled plaza south of the platform mound (see Chapter 4 for a more detailed discussion). The rarity of *lajas* on the site and the fact that many of them were found in Unit 1 could suggest that the residents of this terrace may have specialized in the production of these flat stone slabs. However, no specialized tools associated with the production of *lajas*, such as polishing stones, or production related debris, such as large rhyolite flakes, were fount in this context. Thus, it is difficult to argue that Unit 1 was a production site for *lajas*, because only broken versions of the finished product were found in this context.

Only two ornamental artifacts were found during the excavation of Late Huaracane contexts. In Unit 2 a small, circular green stone bead was uncovered. This bead weighed less than 0.1 g, had an approximate maximum diameter of 4.4 mm, and an approximate maximum thickness of 1.8 mm (Figure 5.14). This bead was made of a green stone other than chrysacolla. Although shell beads similar to this bead were relatively common at Yahuay Alta, this was one of only three examples of green stone beads found at the site. In Unit 4, a small copper alloy metal tube was uncovered (Figure 5.15). This tube was made by a thin sheet of copper alloy rolled to form a small cylinder. This object weighed 1.2 g, was 12.5 mm long, and had a maximum diameter of approximately 7.7 mm. The copper alloy sheet itself was 0.89 mm thick. This was the only metal artifact found in Late Huaracane contexts.

Overall the artifact assemblages from the three Late Huaracane contexts excavated at Yahuay Alta provides little indication of household variability during this time period. The majority of the variability observed probably had more to do with the vagaries of sampling than differences in status and/or wealth. The only context that can be identified as having a relatively wealthy artifact assemblage is Unit 4, because this context had a significantly higher percentage of chert in comparison to Units 1 and 2. Differential access to this higher quality lithic material could indicate that this household was relatively wealthier than the households excavated in Units 1 and 2. However, the observed differences do not indicate that the residents of the household in Unit 4 were true political elites that dominated this community nor are they indicative of marked social differentiation. None of the excavated Late Huaracane contexts had what could be called "wealthy" artifact assemblages in terms of the types of items used as grave goods in Huaracane boot tombs dating to this time period (see Goldstein 2000b, 2005). No examples of the high value items or preciosities found in these tombs, such as polychrome Pukara pottery or finely woven textiles, were found in Late Huaracane contexts at Yahuay Alta. Thus, excavation provided evidence for only limited material differentiation between households within the Late Huaracane community at Yahuay Alta. The only wealth difference revealed by the excavation was the differential access to higher quality lithic materials, but this difference was not accompanied by other differences in artifact assemblages.

5.4 DOMESTIC ACTIVITIES

The excavations of Late Huaracane contexts certainly did not reveal the entire range of domestic activities that took place during this time period. For example, no true hearths were uncovered during these excavations. Shallow (2 – 3 cm deep) ash deposits were found in Units 2 and 4 (see Figure 5.4, Rasgo 9 & Figure 5.6, Rasgo 1), but these did not appear to be hearths as the soils around these deposits were not fire hardened. Cooking was obviously an important domestic activity, bit the excavations reveal few details about this activity other than a small number of sherds from cooking pots with heavily burned exteriors.

One activity that appears to have taken place in all three excavated Late Huaracane contexts was the production and/or maintenance of lithic implements. Flakes (flakes and/or débitage) made up a substantial percentage of the lithic assemblage of each excavated context (20.0%, 35.7%, & 51.4% for Units 1, 2, & 4 respectively). There are some significant differences in flake percentages, specifically that there is more than 99% confidence that Unit 4 had a significantly higher percentage of flakes than Unit 1 (Figure 5.16). This difference is not as important as the fact that all of the contexts had relatively high percentages of flakes, suggesting that households probably produced and maintained their own lithic implements. That nodules or unmodified lithic material also make up substantial percentages of the lithic assemblages in each of these contexts (17.8%, 21.4%, & 28.6% for Units 1, 2 & 4 respectively) helps to strengthen this argument. There would be no reason to find raw nodules of lithic material in each domestic context unless households in each context were producing their own lithic tools.

In addition, a wide range of flake sizes was found in each Late Huaracane context. The total count for flakes in each context was relatively low (8, 11, & 18 for Units 1, 2 & 4 respectively) and as a result the error ranges for size category percentages were relatively large (Table 5.4).

Table 5.4. Flake size category %'s for Late Huaracane phase excavation units

Flake Size Category	Unit 1	Unit 2	Unit 3
< 2cm	37.5%	63.6%	16.7%
2cm – 4cm	12.5%	9.1%	50.0%
4cm – 6cm	37.5%	18.2%	22.2%
6cm – 8cm	12.5%	9.1%	11.1%

The fact that a wide range of flake size categories was found in each context suggests that similar stages of lithic production/refurbishing took place in individual domestic contexts. Overall the sample of excavated Late Huaracane domestic contexts provided no indication of specialization in the production of lithic implements, although Unit 4 may possibly have been somewhat more heavily involved in lithic production (see Figure 5.16).

Other than the production of lithic implements and the processing, cooking, and/or consumption of meat (which will be discussed below in more detail in the section focusing upon subsistence) excavation provided no evidence for differential participation in other domestic activates, such as weaving or ceramic production. However, the patterns of total artifact distribution in each excavated contests can help in understanding the important domestic activity of refuse disposal. To this end, using the program Surfer total artifact contour maps were generated for each excavated Late Huaracane context. Excavation units were subdivided into 1 x 1 meter grids facilitating the easy conversion of artifact counts into contour maps. These contour maps represent the combined total number of artifacts from all layers per square meter in each excavated contexts.

The overall artifact densities for Unit 1 were very low (Figure 5.17). In fact, Unit 1 had the lowest total artifact count of any excavated context at Yahuay Alta, with only 80 artifacts. In Unit 1 there was only one location, centered on Quad 16, where the artifact density exceeded 10 artifacts per m^2. In the rest of the unit the artifact density rarely exceed 2 artifacts per m^2. The high concentration of artifacts is centered directly upon the well-made storage basin described above (see Figure 5.2, Rasgo 2). The rest of this excavation unit, including the living floor was kept extremely clean. Clearly, those living here made sure refuse did not accumulate on the living floor and disposed of their refuse elsewhere at the site. Only in the storage basin were artifacts allowed to accumulate and in this case these artifacts consisted primarily of large broken *lajas.* The large size of these *laja* fragments suggests that they were deposited in this basin when this residential terrace was abandoned and did not simply accumulate in the basin when the terraces was inhabited.

The patterns of artifact density in Unit 2 were quite different from Unit 1 (Figure 5.18). In this unit, artifact density exceeds 20 artifacts per m^2 in two areas, both of which are associated with the lower preserved living floor (described above) that was situated on the surface of Layer C. In addition, each of these two areas with high artifact densities were located behind a row of preserved postholes, suggesting these areas may have been interior space. The smaller peak in artifact density, centered on Quads 21 and 22, is located directly behind the well-defined line of postholes that clearly represents a curving wall. The larger peak in artifact density, centered on Quads 19, 28, & 37, is associated with a poorly defined row of postholes, however only part of this peak is directly behind this possible wall.

This evidence suggests that in Unit 2 not as much effort was expended keeping the living surface clear of refuse in comparison to Unit 1. Areas where the living surface was preserved artifact densities were higher than areas where the living surface was not preserved. Most of the artifacts recovered from this context were relatively small in size and no clearly identifiable midden deposits were found in this context, suggesting that most refuse was disposed of elsewhere at the site while smaller refuse items do seem to have been left behind on the living surface. These concentrations could possibly represent harder to clean areas such as along walls, in corners, or under beds or other types of furniture (e.g., Hayden and Cannon 1983). Or it is possible that when this terrace was abandoned the inhabitants were not as careful about taking all of their possessions with them in comparison to the residents of the terrace associated with Unit 1. It is also possible that some of the artifact densities are associated with post-abandonment process, such as artifacts washing down from uphill terraces. However, the fact that the peaks in artifact density are associated with the preserved living surface and lines of postholes are good arguments against this possibility.

The of artifact density patterns for Unit 4 are the most complicated for the Late Huaracane phase (Figure 5.19). In this context there are four primary peaks in artifact density that exceed 40 artifacts per m^2, one is directly associated with a living surface and three are not. The peak with the highest density, centered on Quad 20, is directly associated with the living surface of the southern structure that was excavated in this context. The second highest peak, centered on Quad 12, is directly associated with the circular stone lined pit located just south of the northern structure in this unit (see Figure 5.6, Rasgo 2). The other two peaks in artifact densities are located in exterior spaces. The more northern peak, centered on Quad 4, is located just behind and to the west of the northern structure in this unit. The more southerly peak, centered on Quad 32, is located in the open area in the southern section of this unit.

This pattern demonstrates that some disposal of refuse, which in this contexts consisted primarily of highly fragmented bone, took place in areas immediately outside of domestic structures. This interpretation is strengthened by the fact that the southernmost peak in artifact density was associated with a deposit of ash that could have been from the cleaning of an undiscovered cooking hearth (see Figure 5.6, Rasgo 1). The high density of artifacts associated with the stone lined pit in this unit may be a result of later disturbances, as this pit was full of a loose fill mixed with domestic refuse. I do not believe that this pit was simply a refuse pit, the accumulation of refuse in this cist most likely happened during or after the original abandonment of this context.

Overall, the excavations in Late Huaracane contexts did not reveal much detailed information about the spatial organization or inter-household variability in domestic activities during this time period. Nevertheless, excavation results suggest that lithic production was a common activity in all domestic contexts. Because no clear middens were found, it is likely that most refuse was disposed of off of residential terraces. However, the case of Unit 4 shows that some refuse disposal did take place relatively close to domestic structures in certain contexts.

5.5 SUBSISTENCE

Excavations in Late Huaracane contexts did not produce the evidence necessary to develop a detailed reconstruction of Late Huaracane subsistence patterns. With the data that were available, I attempt to determine whether or not there were any inter-household dietary differences.

In general, faunal remains were not very well preserved at Yahuay Alta; animal bones were almost always highly fragmented and very brittle. As a result, it was usually not possible for me to identify specific skeletal elements to make interpretations based on utility indexes for different butchery packets (e.g., Aldenderfer 1998: 103-106). In order to deal with this problem, faunal remains were classified into two simple categories: large mammals and small mammals. The large mammal category represents camelids (mostly) with potentially some deer, while the small mammal category represents rodents. The vast majority of the bones in the small mammal category were too small to have belonged to guinea pigs, and probably represent mice. Because mice are often present at human settlements without being part of the diet, these small mammal bones were not informative for reconstructing the Late Huaracane diet. As a result, only the large mammal category was utilized in the following analyses of the Late Huaracane faunal material.

In order to quantify the processing /cooking/consumption of meat during the Late Huaracane phase, the densities of the number of large mammal bone fragments and the weight of large mammal bone fragments were calculated for each excavated context. There were some very clear differences in these densities (Table 5.5).

Table 5.5. Bone density for Late Huaracane phase excavation units

Density	Unit 1	Unit 2	Unit 4
Number of large mammal bone fragments per m^2	0.12	1.42	11.36
Weight (g) of large mammal bone fragments per m^2	0.01	0.31	5.67

A quick glance at these bone densities shows that Unit 4 has a higher density of bone than the residents of Units 1 or 2. However, there is a possibility that the higher density of bone in Unit 4 is a result of higher densities of domestic refuse in this context. If this were the case, it would indicate that more refuse was disposed of in Unit 4, not that that the residents of Unit 4 were heavily involved in the processing and/or consumption of meat. In order test this possibility, bone fragment to ceramic sherd ratios were calculated for each excavated Late Huaracane contexts (Table 5.6). This ratio was calculated by dividing the total number large mammal bone fragments recovered from all levels by the total number of ceramic sherds recovered from all levels in each excavation unit. If the high bone density in Unit 4 was simply a result of more domestic refuse being deposited in this context, then the bone to ceramic ratio should be similar to those of Units 1 and 2. However, if the residents of Unit 4 were more heavily involved in the processing and/or consumption of meat, then the bone to ceramic ratio for this context should be relatively higher than those from Units 1 and 2.

Table 5.6. Bone to ceramic ratios for Late Huaracane phase excavation units

	Unit 1	Unit 2	Unit 4
Total # of large mammal bone fragments	5	85	375
Total # of ceramic sherds	16	209	194
Large mammal bone fragment/ceramic sherd ratio	0.3	0.4	1.9

The results of this analysis demonstrate that a substantially higher proportion of large mammal bone fragments were in Unit 4 (see Table 5.6). Thus it can be stated with confidence that relatively more processing and/or consumption of meat, probably from camelids, took place in or near this context. The difference in densities and bone/ceramic ratios could suggest that the residents of Unit 4 had greater access to camelids, either by owning them, or indirectly through trade networks. The difference could also suggest that the residents of Unit 4 hosted more feasting events where meat was served (Costin and Earle 1989; Crabtree 1990; Hayden 2001a). Yet, Unit 4 did not have a significantly higher percentage of *Huaracane Fino* serving bowls, something that would be expected for a household that hosted many feasting events (Clarke 2001; Hayden 2001a). In fact, at 7.7% Unit 4's percentage of *Huaracane Fino* bowl sherds was substantially lower than several localities sampled during the surface collection (see Chapter 4). Nor were large scale hearths found during the excavation of Unit 4. Given that extra hearths or cooking facilities are another good indicator for locations that regularly host feasting activities (Clark 2001; Hayden 2001a), the higher bone density and ratio cannot be associated with regularly hosting feasts. It seems more probable that the residents of Unit 4 simply ate more meat than the residents of Units 1 and 2.

Another meat in the Late Huaracane diet came from an immediately available location: freshwater shrimp that could have been obtained in the Rio Huaracane just below the site. These shrimp are collected even today from this and other local rivers for use in local cuisine. Three small claw shell fragments of the fresh water shrimp species known by the Spanish name of

Camarón tenaza, and tentatively identified by the scientific name of *Cryphiops caementarius* (M. Barrionuevo Alba, personal communication, 2008), were found in Unit 4. One small freshwater shrimp shell fragment was also found during the microbotanical analysis of soil samples from Unit 1 (Goldstein and Muñoz Rojas 2008) (see Table 5.7). Shrimp shell fragments are extremely fragile, so these few specimens may be under representing the role that this resource played in the Late Huaracane diet. No fish bones or eggshell fragments were recovered during the excavations of Late Huaracane contexts or during the microbotanical analysis of soil samples from these contexts.

Unfortunately none of the Late Huaracane contexts yielded sizeable amounts of botanical materials. The microbotanical analysis of soil samples from these contexts, with a few exceptions, found only fragments of wood and carbonized wood (Goldstein and Muñoz Rojas 2008) (Table 5.7).

In Unit 1 the microbotanical remains consisted largely of fragments of unburned wood; most of which represented intrusive roots (Goldstein and Muñoz Rojas 2008). In Units 2 and 4, the microbotanical remains consisted mostly of carbonized wood fragments. In Unit 2 where there is a mix of 2 mm and 4 mm sized fragments, these fragments reflect controlled burning, probably from hearths (Goldstein and Muñoz Rojas 2008). Because neither hearth features nor debris of foodstuff related cooking were found in these contexts, the carbonized wood fragments likely indicate that dumping from hearths took place in these locations. Finally, few examples of weedy plant taxa were recovered in Late Huaracane phase contexts; this is in stark contrast to most Terminal Huaracane phase contexts (Goldstein and Muñoz Rojas 2008), as will be discussed at great length in the following chapter.

Table 5.7. Results of the microbotanical analysis of Late Huaracane contexts (raw count data)[13]

Family	Determination	Struct.	Unit 1 (10 L)[14]	Unit 2 (3 L)	Unit 4 (10 L)	Total (23 L)
Zygophyllaceae	Fagonia chilensis	Seed	0	0	1	1
Palaemonidae	*Cryphiops caementarius*	Exoskeleton	1	0	0	1
Mammal	cf. mammal	Bone	0	0	10	10
Non-identifiable	2 mm Carbon	Stem	32	96	239	367
	4 mm Carbon	Stem	0	27	0	27
	4 mm Wood	Stem	185	0	17	202
	Non-identifiable	Root	173	0	0	173
	Ceramics		1	0	1	2
	Clay		0	2	0	2

5.6 EXTERNAL TIES

The only evidence recovered from Late Huaracane contexts for exchange beyond the Moquegua Valley are a few small fragments of marine shell. As Yahuay Alta is located approximately 75 km from the Pacific Ocean, marine shell was clearly not a locally available commodity. Three specimens were found in Unit 2 and one was found in Unit 4. These specimens were all from species that were exploited for their decorative shells instead of their nutritional value (M. Barrionuevo Alba, personal communication, 2008). This is logical, because if shellfish were exploited for their meat, the shells would probably not have been transported inland along with the meat in order to save weight. In fact, in Unit 4 a small marine snail shell, *Oliva peruviana*, was found with a hole drilled into its end making it into a bead or pendant.

An item indicating sub-regional, or at least non-local, ties during the Late Huaracane phase is chrysacolla. This green copper based mineral was sometimes used to make decorative beads. Only two small fragments of chrysacolla were found in Late Huaracane contests; one

[13] All data in this table is from Goldstein and Muñoz Rojas (2008).

[14] Liters of soil from each context examined during the microbotanical analysis.

fragment was recovered from Unit 1 and other from Unit 2. This mineral although found in the Moquegua Valley, is found primarily in copper rich deposits near the modern copper mine of Caujone, in the upper sections of the valley. Although chrysacolla is not technically an exotic material in the Moquegua region, its presence at Yahuay Alta demonstrates that residents at the site were utilizing materials that were not immediately available in the middle valley.

Overall, only a minute fraction of the material recovered from Late Huaracane contexts came from recognizably non-local sources. External ties during this time period do not seem to have been an essential part of every day life. There is no evidence that everyday items such as lithic tools and ceramic vessels were made from exotic or even regionally distant materials during this time period.

5.7 INTRA-SITE VARIABILITY

Taken as a whole the variability among the excavated contexts at Yahuay Alta that dated to the Late Huaracane phase can be described as minor. There were some differences among the three contexts excavated during this phase, but in general the contexts had more in common than not. Each of the exposed structures were quite small and circular, or at least half circular, in shape. Despite small differences in construction technique and construction materials, all of the exposed Late Huaracane domestic structures were very simple and were probably designed to shelter residents while sleeping or from the wind. In fact, the structures in Unit 2 seem to have been nothing more than half circular windbreaks or simple lean-tos. Given the small size of all exposed structures in Late Huaracane contexts, there is little doubt that the majority of domestic activities took place in exterior spaces.

Despite the differences in the construction of the two storage features found in Late Huaracane contexts, the nature of these facilities was actually quite similar. Both of these storage features were directly associated with individual structures and possibly may have even been located within the walls of these structures. This location suggests that storage of surplus goods during this time period was taking place at the household level. We did not find any communal storage features.

There was very little variability in Late Huaracane artifact assemblages; no single excavated context stood out as the location of a particularly wealthy or high status household. The most notable differences were in chert percentages; Unit 4 had a significantly higher chert percentage than the other excavated contexts, suggesting differential access to this high quality material during this time period (as the surface collection results also suggested). Unit 4 also had a substantially higher bone density and ratio than the other excavated Late Huaracane contexts. These data suggest that the residents of this context may have consumed proportionally more camelid meat. Finally, the only metal object dating to the Late Huaracane phase came from Unit 4 and could be another indicator that the residents of Unit 4 may have been slightly wealthier than the residents of Units 1 and 2.

5.8 THE LATE HUARACANE COMMUNITY

This investigation provided the first detailed insights into the nature of Huaracane domestic and community organization. During the Late Huaracane phase the Huaracane were constructing boot tombs for important individuals, suggesting the development of a wealthy Huaracane elite (Goldstein 2000b, 2005). The excavations of Late Huaracane contexts at Yahuay Alta therefore were an important first step in developing an understanding of how this putative social differentiation was expressed in everyday domestic life.

Only three contexts excavated at Yahuay Alta dated to the Late Huaracane phase, we obviously have not elucidated every aspect of domestic life in this community. That no true hearths or middens were discovered during the excavation of these contexts underscores this point. It is interesting that the excavations of Late Huaracane contexts at Yahuay Alta revealed no evidence for some domestic tasks that are considered to be important in the Andes. For example, no evidence for spinning or weaving (such as spindle whorls, cactus spine needles, or *wichunas*) was found at Yahuay Alta. It is also interesting that no grinding implements for food processing (such as *manos*) were found in the excavation of Late Huaracane contexts. *Manos* were recovered from Late Huaracane contexts during the surface collection (see Chapter 4) indicating that they were utilized in this community during this time period.

All of this evidence indicates that even though the excavations uncovered entire domestic terraces, they may not have uncovered entire household units. Flannery (1983: 45) developed a definition for an archaeological household unit, which includes the structures and features resulting from typical households. One would expect cooking to be a typical household activity. Logically, the lack of hearths in the Late Huaracane contexts suggests that entire household units were probably not revealed in the excavated sample. Therefore the household unit in the Late Huaracane phase may have included numerous small structures located upon several adjacent domestic terraces, with possibly only one structure per household unit containing a cooking hearth.

Most residents at the site lived in very small circular structures that served as simple sleeping shelters that could accommodate no more than small nuclear families. The evidence suggests that households were probably relatively self-sufficient. Households likely produced and maintained their own lithic implements for use in domestic tasks. There is also evidence for the preparation and/or consumption of food, especially camelid meat, in domestic contexts as well. Finally, it appears that storage may have taken place on the household level in private storage features.

As discussed in Chapter 4, the analysis of surface collection material of the eastern half of Yahuay Alta (Late Huaracane phase) revealed differential proportions of *Huaracane Fino* bowl sherds and chert suggesting the location of relatively higher status households. During the excavation of Late Huaracane contexts we found no contexts with high percentages of *Huaracane Fino* sherds. However, Unit 4 had a significantly higher percentage of chert in its lithic assemblage in comparison to Units 1 and 2.

The Late Huaracane phase was the time period when Huaracane boot tombs were being constructed. The individuals buried in these tombs were accompanied by many high quality items of both local and exotic origin; including finely woven Paracas-Nasca textiles and polychrome Pucara ceramic vessels (Goldstein 2000b, 2005). Although such high quality and/or exotic items were common in Huaracane mortuary contexts, none of these items were found during the excavation of Late Huaracane contexts or in the surface collection of residential and public areas dating to this time period. Quite possibly overt displays of wealth and/or social power were only appropriate in funerary contexts in Late Huaracane society (e.g., Drennan 1995). Goldstein (2000b: 355) argues that the exchange and display of exotic prestige goods may have lain at the genesis of chiefly power among the Huaracane. However, the lack of these exotic goods in domestic contexts undercuts this hypothesis.

Chert, which was the highest quality lithic material used during this time period, while not immediately available at Yahuay Alta, could be obtained from sources throughout the valley. Household variability in proportions of chert suggests that some households were differentially involved in the local procurement networks for chert. Camelids, although probably locally available throughout the Moquegua Valley, could not be herded directly at the site of Yahuay Alta because of its location on the side of a desert mountain with no immediately available source of water. Differential access to meat could suggest the ownership of herds that were pastured elsewhere in the valley, perhaps a substantial source of wealth and status to a household (Forres-Ochoa 1979; Orlove 1977). Theoretically, differential involvement local exchange networks for the procurement of chert and camelid meat could have been an important mechanism for gaining wealth and/or social status within the Late Huaracane community at Yahuay Alta. Greater access to these exchange networks may have helped to establish status; nevertheless this status did not translate into extravagant wealth accumulation or marked household consumption differences.

The limited evidence from the excavations of Late Huaracane contexts suggests that the settlement at Yahuay Alta during this time period had a relatively simple community organization. Excavations yielded no hints that any single household or group dominated or controlled the community. Even if some households were differentially involved in regional and possibly even exotic trade and procurement networks, this differential involvement did not create major social differences within this community. Overall, the picture generated is consistent with a community where ambitious individuals or households may have been in the early stages of trying to distinguish themselves and/or legitimize minor social differences within a relatively egalitarian community.

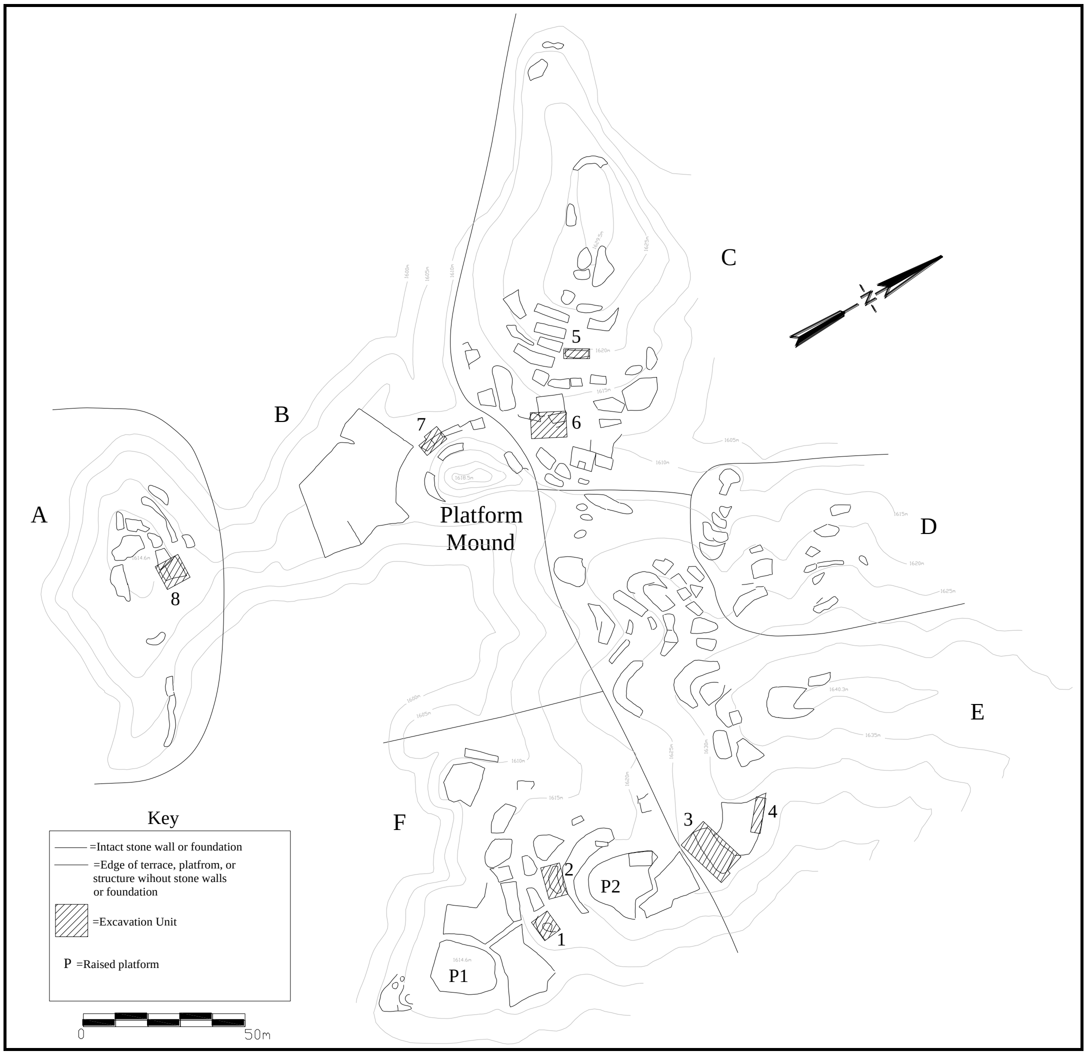
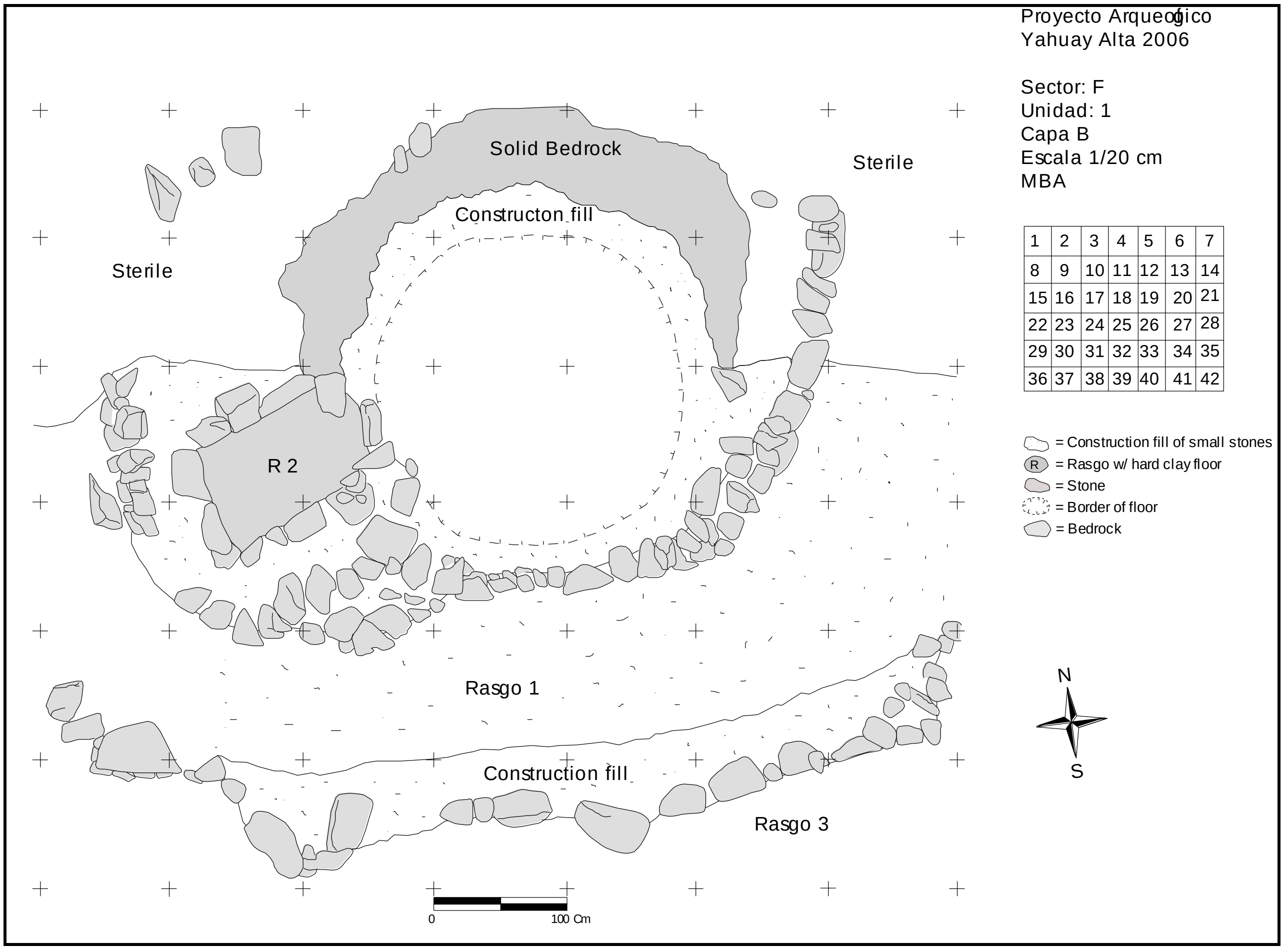


Figure 5.1. Location of excavation units at Yahuay Alta.



1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31	32	33	34	35
36	37	38	39	40	41	42

Figure 5.2. Plan view drawing of Unit 1 excavated to the surface of occupation.

Figure 5.3. Unit 1 surface of occupation looking south.

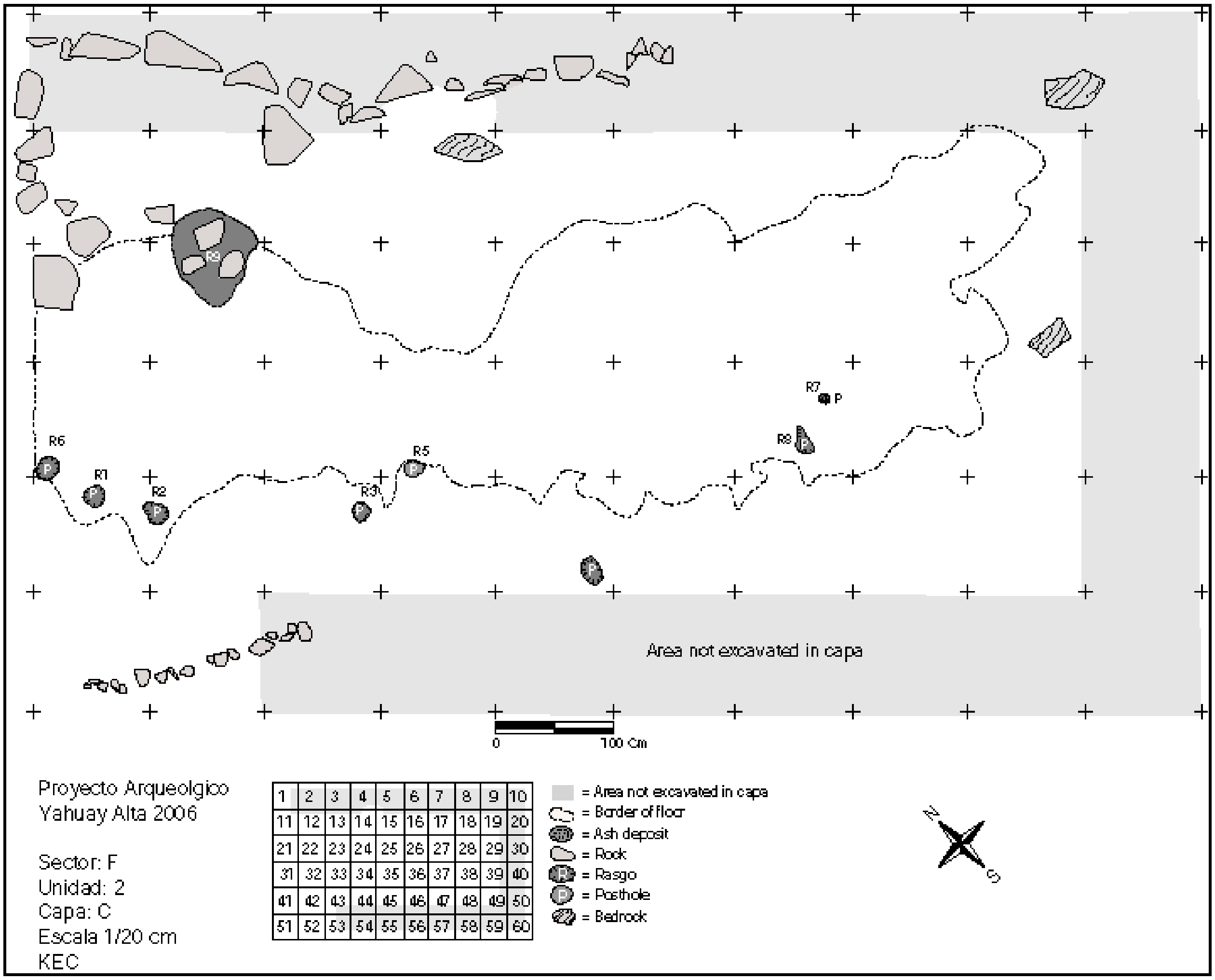


Figure 5.4. Plan view drawing of Unit 2 excavated to the surface of occupation.

Figure 5.5. Unit 2 surface of occupation looking south.

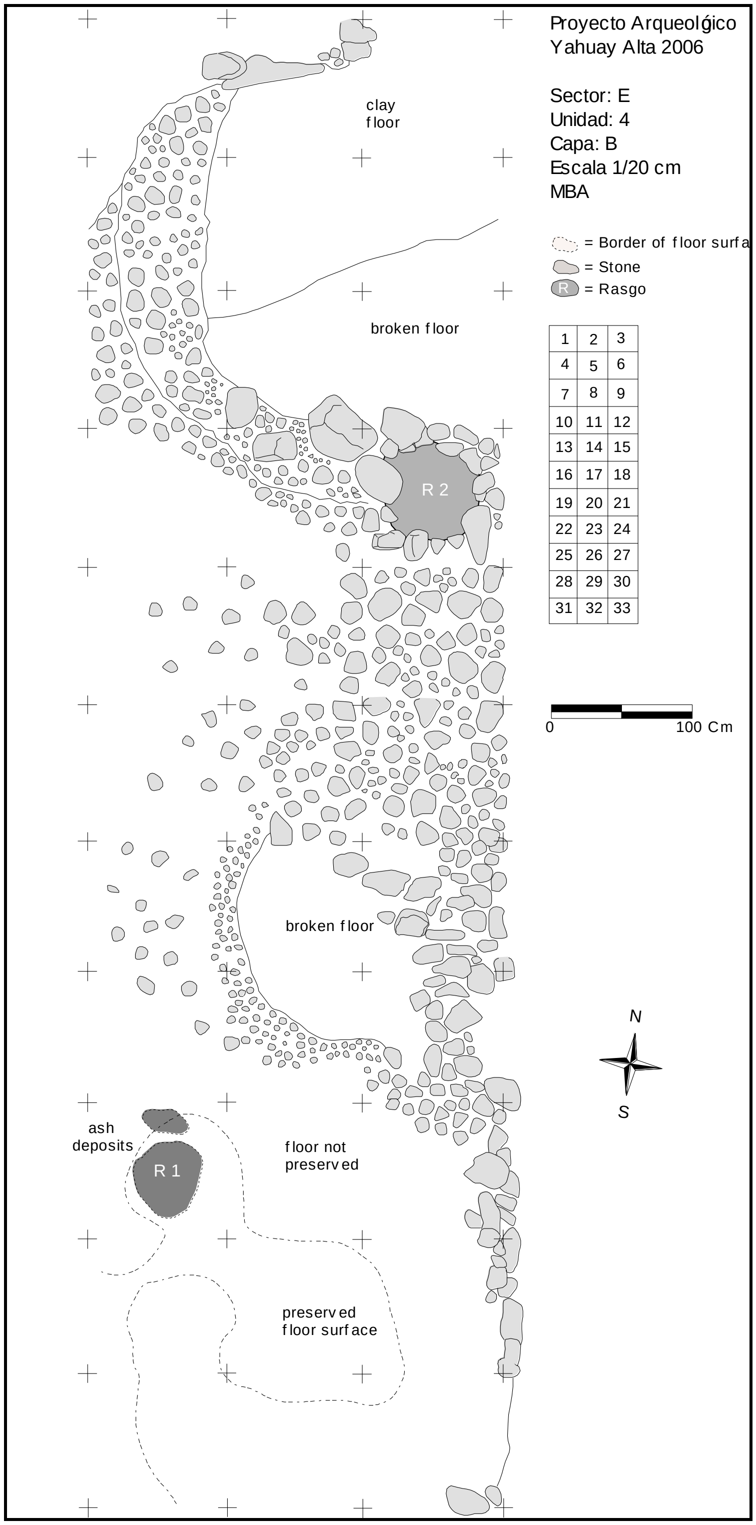


Figure 5.6. Plan view drawing of Unit 4 excavated to the surface of occupation.

Figure 5.7. Unit 4 surface of occupation looking south.

Figure 5.8. Layer of Huaynaputina ash in Unit 1 Capa A; Quad 16 looking east.

Figure 5.9. Unit 1, Rasgo 2: clay-lined basin with stone walls, looking west.

Figure 5.10. Unit 1, Rasgo 2: hard clay floor of clay-lined basin.

Figure 5.11. Unit 4, Rasgo 2: possible storage pit or cist.

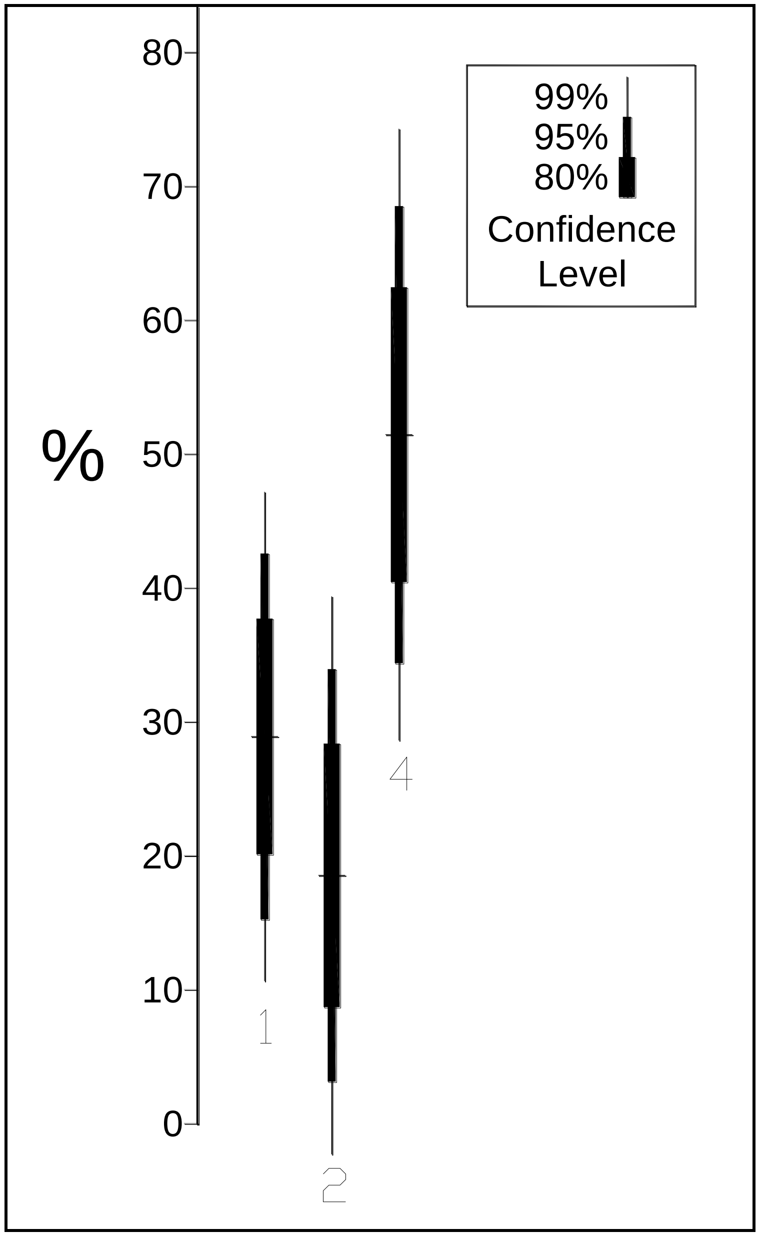


Figure 5.12. Bullet graph showing error rages for chert percentages.

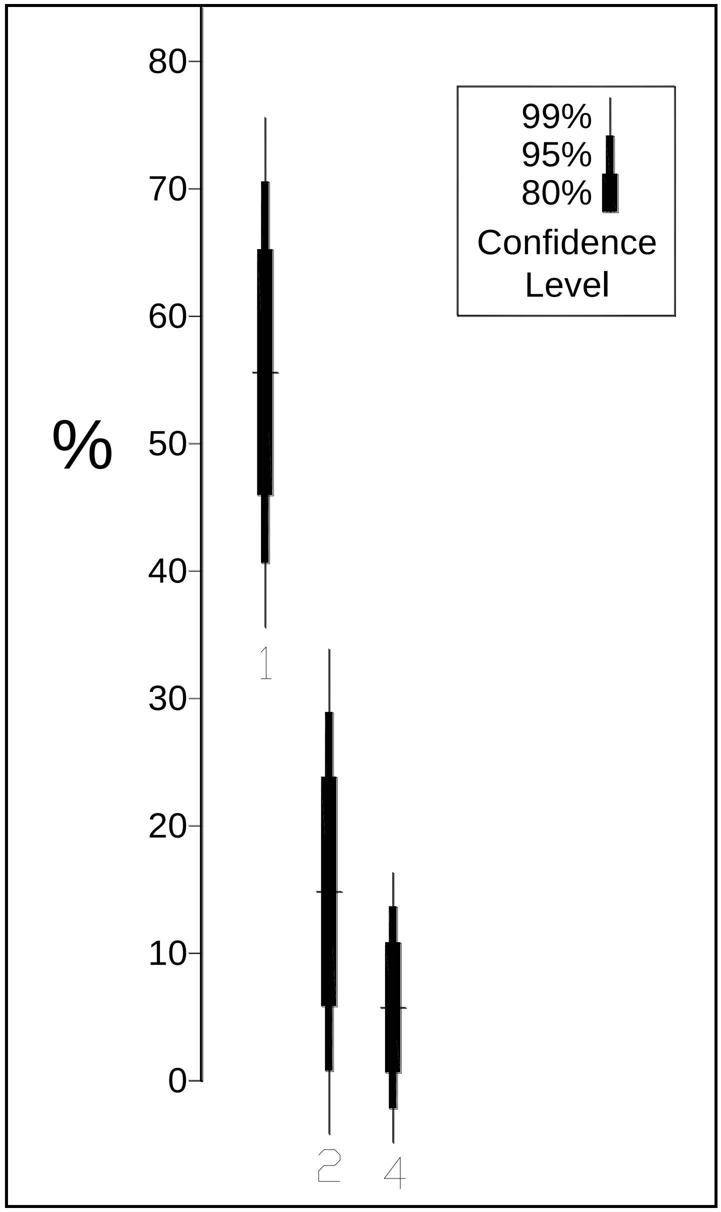


Figure 5.13. Bullet graph showing error ranges for rhyolite percentages.

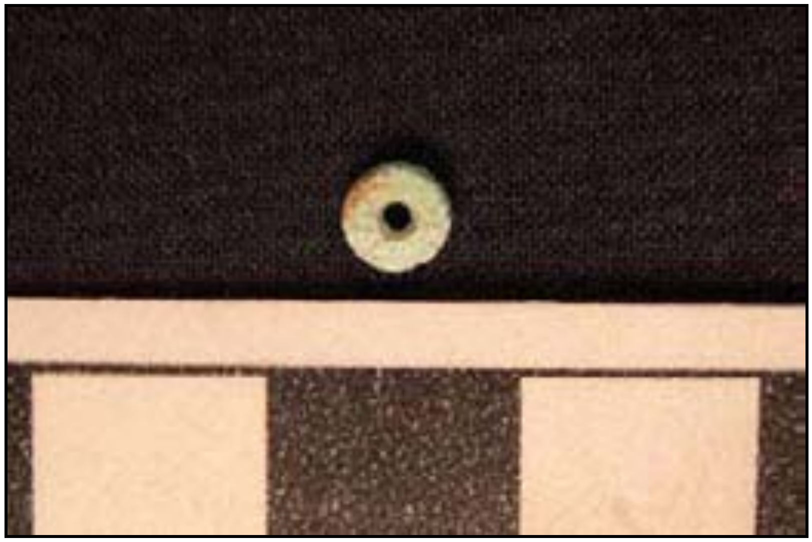


Figure 5.14. Greenstone bead found in Unit 2.

Figure 5.15. Copper alloy tube found in Unit 4.

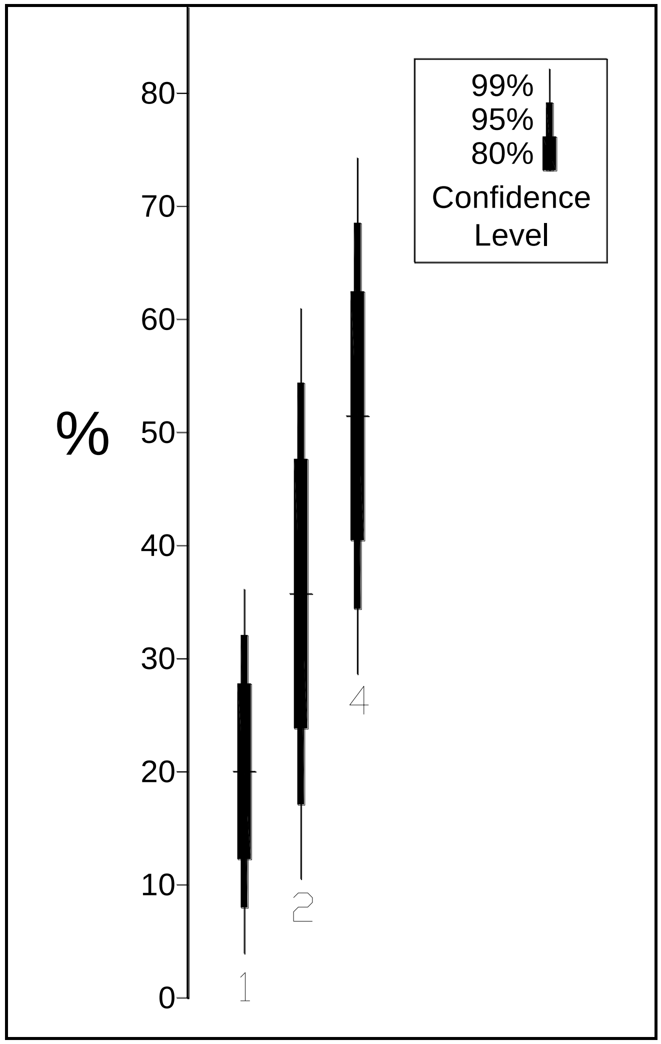


Figure 5.16. Bullet graph showing confidence levels for flake percentages.

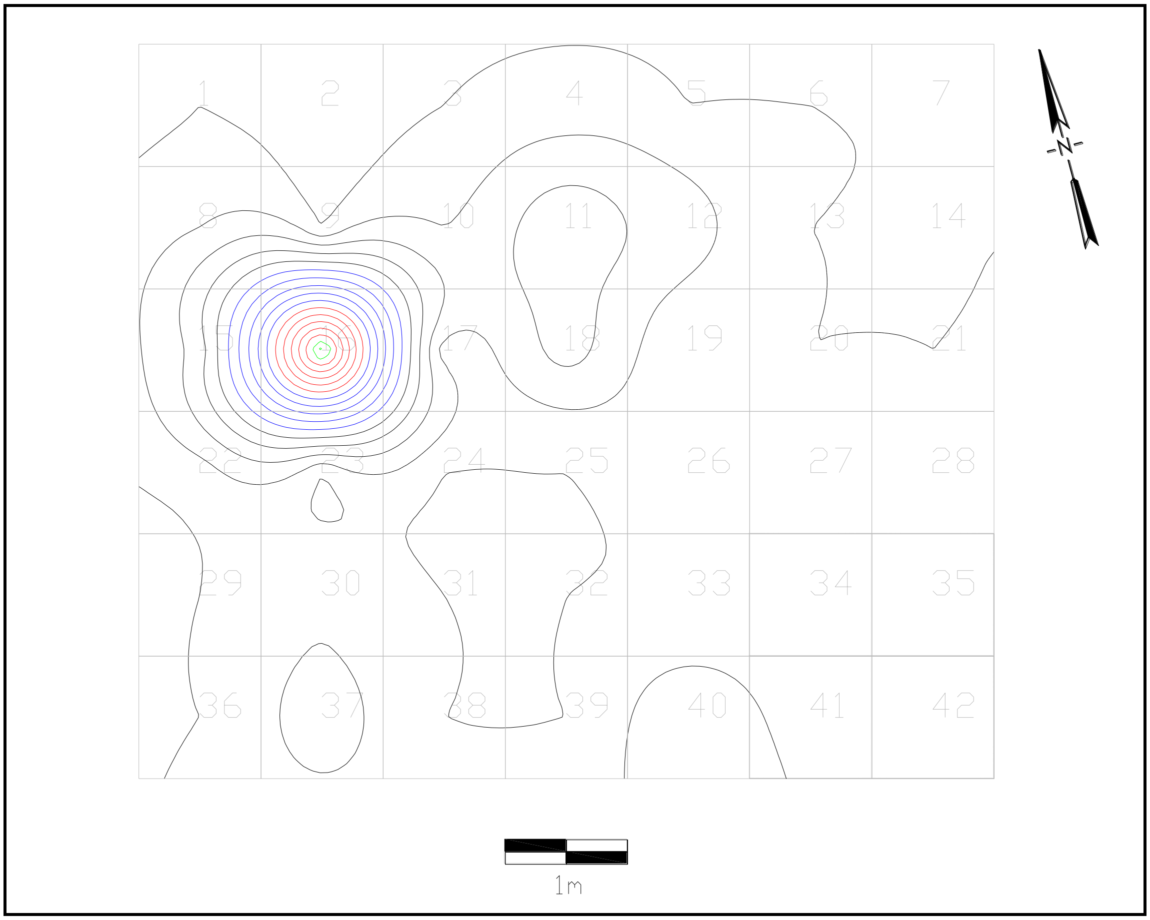


Figure 5.17. Total artifact contour map for Unit 1.

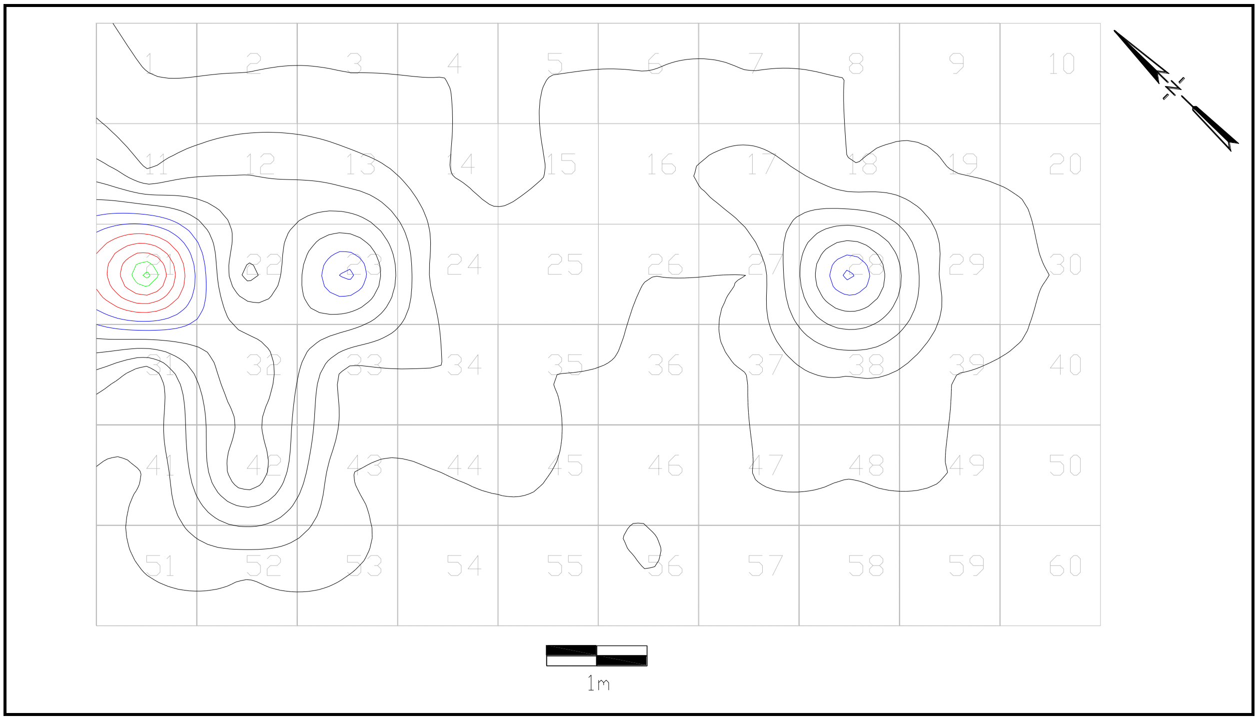


Figure 5.18. Total artifact contour map for Unit 2.

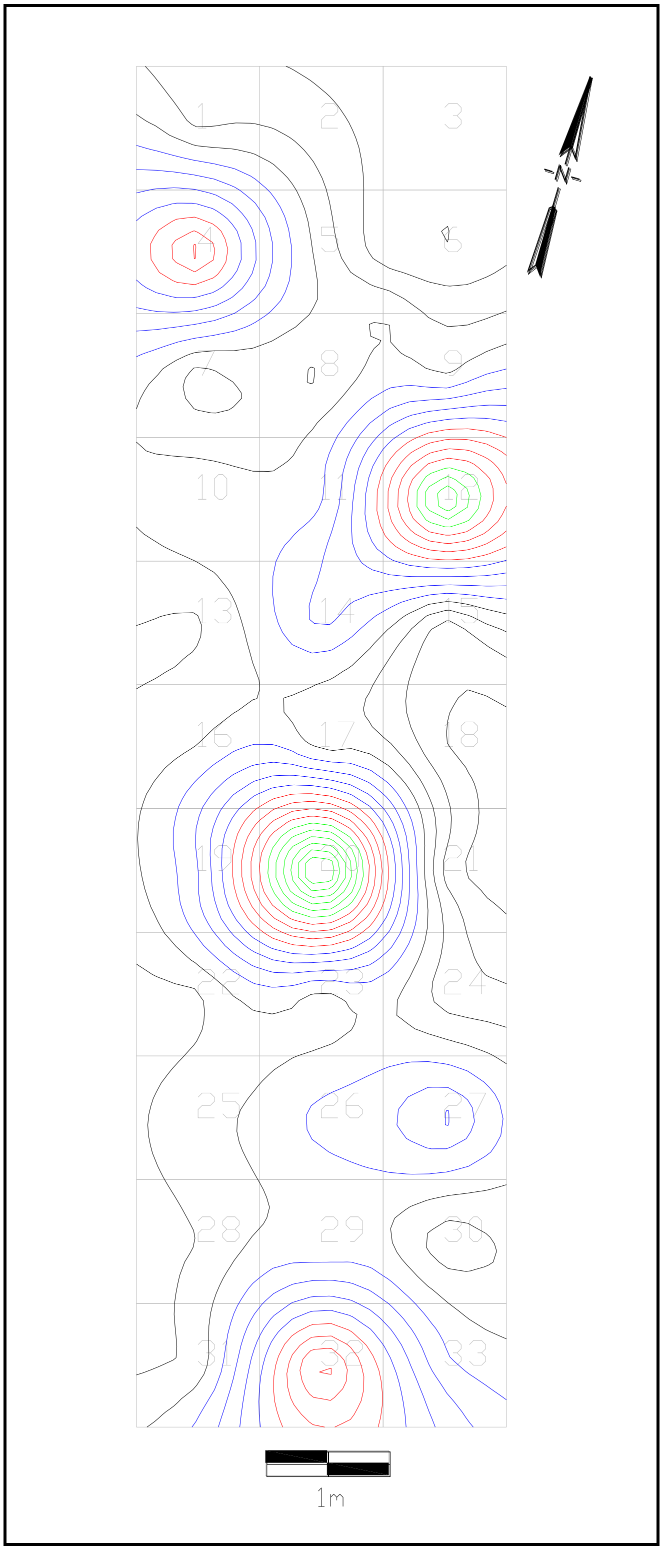


Figure 5.19. Total artifact contour map for Unit 4.

6.0 TERMINAL HUARACANE HOUSEHOLDS

6.1 INTRODUCTION

The current chapter discusses excavation results from the Terminal Huaracane phase (8th century AD). Five excavation units (3, 5, 6, 7, & 8) dated to this time period each of them, except for Unit 3, were located in the western half of Yahuay Alta (Figure 6.1 & Table 6.1). These five excavation units exposed a minimum of five structures as well as many internal and external domestic features. Not all of these structures appear to have been simple habitations used for domestic purposes, one structure, Unit 7, may have played a role in public ceremonial rituals at Yahuay Alta. As will be discussed in further detail below, the exposed structures dating to the Terminal Huaracane phase differed in shape and size from Late Huaracane phase structures at Yahuay Alta as well as from Huaracane domestic architecture that has previously been identified throughout the middle Moquegua Valley (Bandy 1995; Goldstein 2000b).

Table 6.1. Radiocarbon dates for the Terminal Huaracane phase

Lab	Specimen #	Context	Material	14C Age BP	Error +/-	Median Age cal AD	1 Sigma Range	2 Sigma Range
UCI	43617	Unit 3	Carbon	1215	20	813	775-865	719-885
UCI	43707	Unit 5	Carbon	1235	20	772	710-856	690-871
UCI	43619	Unit 6	Carbon	1230	20	788	717-859	693-876
UCI	43708	Unit 7	*S. Molle*	1230	20	788	717-859	693-876
UCI	43709	Unit 8	Carbon	1260	20	730	693-773	676-802

Unit 3 excavated a large rectangular structure with well preserved stone walls located in the southeastern corner of Sector E, just up hill from the northern elevated platform in Sector F (P2) (Figures 6.2, 6.3, & 6.4). This excavation unit consisted of a 16 x 10 m grid with the southern four rows being 17 m in length; this resulted in a unit covering 164 m^2. However, many of the 1 x 1 m sections in this unit were not excavated because they were located on a steep slope far from the actual structure. A total of 119 m^2, including both interior and exterior space, was actually excavated. Unit 3 was chosen for excavation because it was both the largest and best preserved structure at Yahuay Alta. In addition, a high density of artifacts was recovered from the surface of this location, and many of the sherds recovered from its surface were from a ware not typically found in Huaracane contexts.

Unit 5 excavated a narrow roughly rectangular terrace with a slightly out curving front stone wall foundation located on the second level of terracing the large hill located in the western section of Sector C (Figures 6.5 & 6.6). This excavation unit consisted of a 3 x 8 m grid with covering a total of 24 m^2 and encompassing primarily interior space on the terrace itself. Unit 5 was chosen for excavation as a representative example of one of the many long narrow terraces situated upon the large terraced hill in this sector. This particular terrace did not have a large amount of surface damage in comparison to some of the other terraces on this hill. In addition, there were traces of a rectangular storage-type unit on one end of this terrace.

Unit 6 was the most complex context chosen for excavation at Yahuay Alta. This unit was located at the base of the large terraced hill in Sector C near the southern boundary between Sectors C and B just south of the Platform Mound (see Figure 6.1). Surface evidence suggested this context consisted of a large rectangular structure in the northern section of the unit, and a smaller circular structure in southern section of the unit that shared a common patio area (Figures 6.7 & 6.8). Unit 6 was chosen for excavation because it was an excellent context to explore the difference between interior and exterior space. In this context there was clear evidence for two structures and an adjoining open patio-like area. This was the only context on the site where rectangular and circular structure were linked together in a single architectural context. Thus, this was an excellent location to investigate functional differences between rectangular and circular structures at this site. This excavation unit consisted of an 8 x 11 m grid, however, several 1 x 1 m quads along the far eastern edge of the unit and in the southeastern corner of the unit were not excavated during the excavation of Unit 6 because they appeared to be located off of the patio area. In total, 76 m^2 were excavated in Unit 6; these excavations encompassed both interior space and external space within the open patio area.

Unit 7 consisted a narrow rectangular structure with well preserved stone walls and incorporated one of three contiguous structures that are directly adjacent to western base of the Platform Mound in Sector B (Figures 6.9 & 6.10). This excavation unit consisted of a 5 x 5 m grid with a 4 x 3 m grid attached to its southern end. As a result, this unit covered 37 m^2, which encompassed primarily interior space but also some exterior space in front of the structure as well. Unit 7 was excavated as a representative example of one of the contiguous stone walled structures adjacent to the platform mound. I had hoped that determining the nature of these structures would aid in developing a better understanding of the public ceremonial complex at Yahuay Alta. This particular structure was chosen for excavation because it had an extremely large amount of stone wall fall on its interior surface, and I thought that therefore the interior surface of this structure was more protected from the elements than the other two structures in this location.

Unit 8 consisted of a large square terrace located in the northern half of Sector A at the eastern end of the largest group of terraces in this sector (Figures 6.11 & 6.12). On this terrace were traces of a small narrow rectangular structure and an adjoining open patio area. This excavation unit consisted of an 8 x 8 m grid that encompassed both interior space and exterior patio space. Unit 8 was chosen because it had the best preserved foundation in Sector A. In addition, this context had clearly defined open patio area allowing for further investigation of the difference between interior and exterior space at Yahuay Alta.

6.2 EXCAVATIONS AND GENERAL STRATIGRAPHY

The general stratigraphy of Terminal Huaracane contexts was relatively shallow. In contexts exposed to the wind, such as Unit 8, living surfaces were discovered as little as 5 cm below the surface of the site. In more protected contexts, such as Unit 7 which was covered by many large rocks, the living surfaces were as much as 35 cm below the surface of the site. Terminal Huaracane contexts were excavated in natural layers and followed the same basic stratigraphic pattern described in the previous chapter. The one major deviation was that the surface layer (Layer S) was often very thin and often contained some of the white volcanic ash from the AD

1600 eruption of Huaynaputina (de Silva, et al. 2000). Although the general stratigraphy of Terminal Huaracane contexts is relatively similar to Late Huaracane contexts, there was much more stratigraphic variation among Terminal Huaracane contexts than Late Huaracane contexts. In order to clarify these differences the following discussion will briefly describe the stratigraphy from each Terminal Huaracane context individually.

The surface of Unit 3 was covered with many large rocks that were derived from the stone walls of the structure exposed in this unit. Layer S in this context was 5 – 10 cm thick. In general this active layer was closer to 5 cm thick and consisted of loose soil mixed with a small amount of Huaynaputina ash. Layer A in Unit 3 was 2 – 10 cm thick, and contained a large amount of charcoal and artifacts. This layer was stratigraphically situated just above the living surface or floor in the interior of the structure in this unit. This was not a prepared living surface; it was simply compact soil and was situated 2 – 15 cm below the surface of the site. This living surface was considered to be the surface of Layer B, which was a layer of relatively clean construction fill used to level the terrace. As a result, depending upon the natural slope of the hill and how much fill was needed to level the terrace, this layer ranged in thickness from approximately 5 cm to over 50 cm. Artifacts from this layer were recovered primarily from sub-floor features that were dug into the fill and even into the bedrock in some locations. In Unit 3, Layer B was only exposed in five 1 x 1 m test quads and where sub-floor features were detected.

Unit 5 was located upon a terrace situated halfway up the large terraced hill in Sector C. The surface of this unit was covered in many small to medium sized rocks, most of which probably had been washed down from more uphill terraces. Layer S in Unit 5 was very thin on the flat terrace surface ranging from only 1 – 5 cm thick. However, it was over 30 cm thick in several places to the side of, or in front of, the residential terrace. Layer A was between 3 – 10 cm thick, but averaged 7 cm thick. This layer was situated directly above a badly preserved living surface, and contained small isolated pockets of Huaynaputina ash. The floor surface in this context was between approximately 5 – 16 cm below the surface of the site and was best preserved in a small patch near the center of the terrace. This living surface was considered to be the surface of Layer B, which consisted of a layer of sterile construction fill. Layer B was only excavated where sub-floor features were detected, and extended down 70 cm before bedrock was encountered.

Unit 6 was the Terminal Huaracane context with the most complicated stratigraphy because it had two intact superimposed living surfaces. Layer S in this context was relatively thin ranging from 2 – 5 cm thick. Nevertheless, this layer contained a large amount of cultural material. Layer A in Unit 6 was approximately 5 – 10 cm thick and was situated just above a living surface made of compacted soil. Layer A also contained a large amount of cultural material. Very little Huaynaputina ash was found in either Layer S or Layer A in this context. The living surface or floor, which was intact in a rectangular structure and associated open patio area, was approximately 7 – 12 cm below the surface of the site and appears to date to the Terminal Huaracane Phase. This living surface was considered to be the surface of Layer B, which was a relatively clean layer of fill situated 5 – 12 cm above a lower living surface. The eastern and southern walls of the rectangular structure in this context appears to have been associated with this upper living surface as their foundations did not extend deeply into Layer B. The second living surface, considered the surface of Layer C, was also only found in the rectangular structure and its associated open area and was situated approximately 12 – 24 cm below the surface of the site. Excavations into Layer C were only conducted in one 1 x 1 m test pit and three sub-floor features. These excavations revealed Layer C to consist of a sterile construction fill. The second or lower living surface in Unit 6 was an earlier occupation that possibly dated to the Late Huaracane phase, unfortunately no radiocarbon samples were obtained from this layer to confirm this possibility. The stratigraphy of the interior of the circular structure in Unit 6, where a human burial was discovered, differed from that in the rest of the unit. This specific context in Unit 6 will be discussed later in this chapter in detail.

Unit 7 was the only clearly non-domestic context excavated at Yahuay Alta during this project. The surface of Unit 7 was covered by a great deal of large rocks; wall fall from the structure and the adjacent platform mound. Before the rocks were cleared away it was difficult to see the surface of the site in Unit 7. Layer S below these rocks varied in thickness from 5 – 30 cm. However, this layer was generally not more than 10 cm thick, except along the back or more eastern wall of the structure built in this context. This layer was mixed with many large rocks and a large amount of Huaynaputina ash, which was concentrated in very dense pockets below large rocks. Layer A in Unit 7 was also variable in thickness, ranging between 1 – 13 cm thick. Layer A was mixed with many large rocks, some Huaynaputina ash, and contained many fragments of land snail shell. Stratigraphically, Layer A was situated just above a living surface or floor, which was preserved primarily in a strip down the center of the structure. This living surface was situated between 5 – 35 cm below the surface of the site, but generally was between 15 – 25 cm below the surface. This living surface was considered the surface of Layer B, which was a hard packed layer of relatively clean fill that was deeper toward the front or western walls of the structure. Below this floor surface many sub-floor features were discovered. The depth of these features ranged from 6 to 46 cm.

Unit 8 was probably the Terminal Huaracane context most exposed to the elements, and as a result it had relatively shallow stratigraphy that contained almost no Huaynaputina ash. Layer S in this context included many small pebbles and was 1 – 5 cm thick, but was rarely more than 3 cm thick. Layer A in Unit 8 was 1 – 9 cm thick, but was rarely more than 4 cm thick. Layer A contained many small artifacts, such as lithic flakes and shell beads, and was situated above a badly preserved living surface. This living surface was located 3 – 10 cm below the surface of the site and was considered to be the surface of Layer B. This layer consisted of a construction fill mixed with a relatively large amount of cultural material and ranged in thickness from 5 – 55 cm. The construction fill in Layer B was especially thick in the northern section of Unit 8 where the terrace had to be leveled due to the natural slope of the site. Many sub-floor features were discovered in Layer B. These features extended through the construction fill and in some cases even into the bedrock. The depth of these sub-floor pits ranged from 10 – 55 cm.

6.3 TERMINAL HUARACANE DOMESTIC STRUCTURES

Terminal Huaracane domestic structures were roughly rectilinear in shape and appear to have been quite variable in size. Most of the structures studied had stone foundations and some even had stone walls. However, there is evidence that there were perishable components to most of these structures as well. Many, but not all, of the domestic structures from this time period also were associated with flat, open, patio-like areas. The living floors of Terminal Huaracane domestic structures had high densities of artifacts and bone fragments. With one possible exception, in Unit 6, no permanent hearths were discovered in Terminal Huaracane contexts either within the domestic structures or in the more open patio areas. The large size of the domestic structures and their attached open areas, and the high density of artifacts found in the excavated contexts, indicates that many domestic activities may have taken place within and around these structures. The lack of true hearth features in Terminal Huaracane contexts is curious, and likely indicates that the excavations of these contexts did not expose a complete household unit.

6.3.1 Household variability

Although all of the structures exposed during the excavation of Terminal Huaracane contexts had roughly similar rectilinear shapes, there were also some distinct differences between structures. The structure excavated in Unit 3 had a very well defined stone wall foundation that was clearly visible from the surface of the site. This structure was the largest structure at Yahuay Alta (other than the platform mound and the raised platforms) identified during the surface collection of the site. The well-preserved nature of this structure's foundation and its exceptionally large size were the primary reasons why this context was chosen for excavation. The stone wall foundation of the structure in Unit 3 is roughly rectangular in shape and encloses an area approximately 14 x 7 m (see Figures 6.2, 6.3, & 6.4). For most of this structure, only the wall foundation was preserved, but in places the back, or more northern, wall was preserved to a height of approximately 1.5 m. The surface of the structure's interior and the slope in front (south) of the structure was covered with stone wall fall suggesting this structure had walls made at least partially from stone. The eastern sidewall of this structure was built along the edge of a cliff overlooking a steep *quebrada*. The stone wall foundation in this location is very well constructed and preserved to a height of over 1.5 m even though it does not extend more than a few centimeters above the surface of the structure's interior (Figure 6.13). There was a small (approximately 2 meters long) badly preserved terrace located just in front of this structure. Finally, there was an approximately 1 m high and 70 cm wide bench along the eastern half of the back, or northern, wall of the structure in Unit 3 (Figure 6.14).

The structure in Unit 3 was very large by Huaracane standards. Nevertheless, the entire area enclosed by the stone wall foundation was probably not a large single room roofed structure. The interior of this structure may have been subdivided into rooms or areas by perishable walls;

some of these areas may have been roofed and others were probably not. A concentration of three well-preserved postholes in the northwestern corner of the structure could indicate that the area towards the back of the structure was roofed (see Figure 6.2, Rasgos 4, 5, & 6). There also was a small room with woven reed or *quincha* walls near the center of the structure. In this area, three narrow trenches had been dug into the floor enclosing a small area (see Figure 6.2, Rasgos 8, 13, & 14). These trenches could easily have supported lightweight woven reed walls. Just to the east and south of this small room was a concentration of sub-floor pits that will be described below in more detail.

The structure in Unit 5 was constructed on a long narrow terrace halfway up the terraced hill in Sector C. This structure was approximately 8 x 2.5 m and had a curving, partially preserved stone front wall foundation (see Figures 6.5 & 6.6). It is difficult to determine the exact nature of the structure built on this terrace, because no postholes or other structural features were preserved. However, the surface of the terrace did have a badly preserved living surface upon which some domestic refuse was recovered, suggesting that a structure was constructed upon this terrace. This terrace also contained a well made stone-walled square basin and two large sub-floor pits that will be described below in more detail. There is no evidence that the terrace in Unit 5 was subdivided into areas or rooms; it appears that one probably simple structure was constructed in this location.

Unit 6 held multiple structures, one of which included a human burial. The northwestern section of this context included a structure with a roughly rectangular stone wall foundation that was approximately 5 x 4.5 m at its maximum (Figures 6.7 & 6.8). To the south and east of this structure was an open patio area where some patches of a preserved, compacted soil, living surface were found. The back (west) wall of this rectangular structure extended beyond this structure connecting it to a structure with a roughly oval stone wall foundation with a maximum diameter of approximately 3 m. This was a semi-subterranean structure with a well prepared hardened clay floor upon which the remains of an adult human were discovered. The details of this burial will be discussed later in this chapter. There was an open patio area in front (to the east) of the oval structure. This open patio area was approximately between 5 cm and 10 cm above the level of the patio area described earlier and a poorly preserved curving line of stones helped to separate these two open patio areas.

Only one posthole was preserved in the rectangular structure in Unit 6, nevertheless this suggests that at least part of this structure was roofed using perishable materials (see Figure 6.7, Rasgo 14). Because there was only one posthole in this structure, it is difficult to tell if it was internally subdivided or if the entire structure was roofed. There are no postholes in the interior of the oval semi-subterranean structure so it is difficult to determine if it was roofed. However, its oval stone foundation could have easily supported a light weight woven reed wall. On the other hand, this structure may not have had walls at all; it may have been covered with a simple, lean-to like roof supported by a post located just to the northeast of the structure (see Figure 6.7, Rasgo 10). There is a group of five irregularly spaced postholes in the open patio area to the east of the oval structure in the southeast corner of Unit 6 (see Figure 6.7, Rasgos 3, 5, 6, 7, & 8). This suggests that there may have been a simple structure constructed of perishable materials located in this patio. This may have been a structure designed simply to provide shade for individuals working in the patio area where there is some evidence for craft production.

Unit 8 consisted of two areas or sections. There was a small rectangular structure defined by a 5.5 x 2.5 m low stone wall foundation in the southern section of the unit and a large, 6 x 4.5 m, open patio area with a front stone retaining wall in the northern section of the unit (Figures 6.11 & 6.12). The open patio area was artificially leveled using a rocky construction fill that was over 50 cm deep in some location. The smaller rectangular structure was elevated approximately 10 – 20 cm above the level of the patio and was separated from this open area by a shared stone retaining wall. Nine well-preserved postholes, and three possible postholes, were found in Unit 8 demonstrating that the walls of the structure in this context were most likely constructed from perishable materials (see Figure 6.11, Rasgos labeled P). Four of these postholes were located in the patio area suggesting that at least the back portion of this open area closest to the small rectangular structure may have been roofed. It appears that only the eastern half of the small rectangular structure was roofed, as there are no postholes in the western half of this structure. Many sub-floor pits were found in the small rectangular structure and in the patio along the wall that separates it from the rectangular structure. A well made clay basin with a hard clay floor was situated in the southwestern corner of the patio area. These possible storage features will be discussed below in more detail.

Although Unit 7 was not a dwelling, the description of the structure in this context is important because it helps to demonstrate the full range of architectural variability present at

Yahuay Alta during the Terminal Huaracane phase. The roughly rectangular structure in Unit 7 was, at its maximum, approximately 7 x 3 m and wider in its northern end than its southern end (Figures 6.9 & 6.10). This structure had well-preserved stone wall foundations, although part of the front (or west) wall was badly destroyed in a section that possibly was an entrance. As mentioned above, this structure was surrounded and filled by a very large amount of stone wall fall, suggesting that this structure had relatively high stone walls. In places where the walls were well preserved (such as the southeastern corner) it is clear that the walls were well built with smooth faced stones (Figure 6.15). It appears that at least the southern and narrower half of this structure was roofed using perishable materials as three well-preserved postholes were found in this half of the structure (see Figure 6.9, Rasgos 8, 9, & 11). It is not clear whether or not the northern half of the structure was roofed, as only one very small posthole was found in this context. Several sub-floor pits were found in this structure; these will be discussed in more detail below. In sum, there was substantial architectural variability during the Terminal Huaracane phase in structure, size, and materials.

6.3.2 Storage facilities

There was a relatively large degree of similarity in storage facilities among the different excavated Terminal Huaracane contexts. All but one context, Unit 6, had sub-floor pits that appear to have been used for some kind of storage. In Unit 3 nine sub-floor storage pits of varying sizes were discovered (see Figure 6.2, Rasgos labeled with an S). These pits ranged in depth from 14 – 47 cm below the level of the living surface and in diameter from 34 – 100 cm. However, the pits with the largest diameters, Rasgos 25 & 26, were damaged by looting activities, which possibly enlarged their diameters. The undamaged large pits, such as Rasgo 27 averaged around 70 cm in diameter. Two basic types of sub-floor pits were discovered in Unit 3: flat bottomed pits and rounded bottomed pits. Flat bottom pits, such as Rasgos 17 & 27, were very circular in shape and had level, flat bases. This type of pit appears to have been utilized for simple storage, where goods were placed directly in the pits. The rounded bottom pits were more common and often had a more irregular form than the flat bottomed pits. These pits had either rounded or funnel shaped bases and were shaped perfectly to support the large round bottomed ceramic vessels that dominated Huaracane ceramic assemblages (Feldman 1989; Goldstein 1989, 2000b). The shape and size of the rounded bottomed pits suggests they were designed to hold large rounded *ollas*, which could not simply be set upon the ground without some kind of support. However, no large pots were found *in situ* in these sub-floor pits. The sub-floor pits in Unit 3 were all concentrated towards the center of the large structure that was excavated in this context (Figure 6.16). All of the pits were located to the east and south of a small internal room that probably had *quincha* walls. Each of the Unit 3 sub-floor pits were located within the structure.

Each of the sub-floor pits discovered in Unit 3 was full of loose soil mixed with varying amounts of domestic refuse, primarily ceramic sherds, burnt bone, and charcoal. Some seeds and small bones, from both mammals and fish, were also recovered during the analysis of soil samples taken from these sub-floor pits. None of the sub-floor pits in Unit 3 excavated contained their original contents, as no distinct deposits of items, such as seeds or raw lithic materials, were found. These pits also do not seem to have been filled completely with domestic refuse. Although some refuse was found, in no context was this refuse as densely packed as would be expected in a sub-floor refuse pit. Instead, the pits appear to have been filled either during or after the abandonment of the structure, suggesting they were filled with post-occupational refuse.

Two different types of storage facilities were discovered during the excavations of Unit 5. Two circular pits very similar to the pits in Unit 3 were found towards the center of the terrace (see Figure 6.5, Rasgos 3 & 4). These pits both had rounded bottoms that extended 30 – 40 cm below the living surface and were the perfect size and shape to have held large rounded *ollas*. Both pits were full of loose fill mixed with a small amount of domestic refuse including a wide variety of seeds. These pits were not full of dense deposits of goods or trash, suggesting they were used to hold *ollas* while the context was occupied, and as the structure was abandoned the *ollas* were removed and the pits filled with a loose soil. The second type of storage feature discovered in Unit 5 was a rectangular bin or basin with stone walls (see Figure 6.5, Rasgo 1 & Figure 6.17). This bin was 120 x 60 cm and extended 70 cm below the surface of the terrace. Its walls and floor were damaged by rubble washed down uphill from the terrace. This bin appeared to have had a well-prepared floor but it was preserved only in small patches in its corners. This feature was very similar to the rectangular basin found in Unit 1 (see previous Chapter).

Unfortunately this stone storage bin was looted prior to its excavation so its original contents are unknown, although two projectile points were found in its fill. All of the storage features in Unit 5 were found on the terrace surface in what appears to have been internal space.

No clearly definable storage features, either above ground or sub-floor, were discovered in Unit 6. The storage of goods, either in interior space or in patio areas was not an important activity in this context.

Two types of storage features were discovered in Unit 8. The most common feature in this context was the sub-floor storage pit (see Figure 6.11). Ten of these pits were relatively typical sub-floor pits 20 – 40 cm deep. Most of these pits were not perfectly round and they appear to have been simple storage pits for the direct storage of items. Two of the pits, Rasgos 1 and 28, were large rounded bottom pits for the holding of large rounded *ollas*. Two of the sub-floor pits in Unit 8, Rasgos 15 and 16, were circular and very shallow, only 10 cm deep. Both of these were well constructed, circular pits, but they obviously could not have stored a substantial amount of material. Finally, one large, approximately 130 x 70 cm, roughly oval shaped sub-floor pit was found in Unit 8. This pit was approximately 55 cm deep, and contained many small fragments of domestic refuse in its fill; this feature appears simply to have been a very large sub-floor storage pit. Although all of the sub-floor pits in Unit 8 had domestic refuse in them, the deposits were not particularly dense, suggesting these pits were all storage features that were filled in after or during the abandonment of the structure. Each of these sub-floor storage features were either located in the small rectangular structure in the south of this unit or in the patio area but along the wall that separated the rectangular structure from the patio. This southern part of the patio appears as it may have been roofed along with the rectangular structure. No sub-floor storage features were found in the more northern and presumably more open section of the patio area.

The second type of storage feature in Unit 8 was a well-made, rectangular, clay lined basin located in the southwestern corner of the patio area (see Figure 6.11, Rasgo 10 & Figure 6.18). This basin was 106 x 86 cm and 25 cm deep. This basin had carefully cut stones at its northeastern and northwestern corners that created an opening along its northern edge. The southern wall of this basin is part of the stone wall that separates the small rectangular structure in Unit 8 from the open patio area. The sidewalls of the basin were carved out of the hard white bedrock of the hill this structure was built upon. Finally, the floor of this basin was made from a well-prepared, hard clay surface. This basin was full of a loose fill from which many camelid bone and tooth fragments were recovered. It appears that this basin was a special kind of storage feature or possibly even a basin for water or another type of liquid. This basin, like all of the other storage features in Unit 8, was located in an area that was probably roofed over and not in a more open area of the patio.

All of the storage facilities discovered in Unit 7 were circular sub-floor pits (see Figure 6.9). These pits were 19 – 32 cm deep and 32 – 82 cm in diameter. One of these pits, Rasgo 3A, was a large, rounded bottom pit that was shaped to have held a large rounded *olla*. All of these storage pits were located in the interior of the structure exposed in Unit 7, and four of the five pits were located in the southern section of this structure that appears to have been roofed.

The unique aspect of the sub-floor features in Unit 7 was that three of them had not been cleaned out when the structure was abandoned. They still contained large amounts of the material that was originally stored in these pits. Rasgos 2, 6, and 3B were each filled almost completely with large amounts of *Schinus molle* seeds (see Table 6.2).

Table 6.2. S. Molle seeds in Unit 7 sub-floor storage pits

Rasgo	Estimated Number of Seeds[15]	Weight (g)
2	156437	3107
3B	35712	1018
6	5619	151

These *S. molle* seed pits each consisted of two distinct layers. There was an upper layer of loose soil mixed with botanical remains, such as peanut husks, and charcoal that averaged approximately 10 cm thick. Below this was a thick layer that consisted almost entirely of *S. molle* seeds that extended to the base of the pit (Figures 6.19 & 6.20).

For the most part below ground storage facilities in the Terminal Huaracane phase were relatively similar regardless of context. Sub-floor pits were common, indicating that this was a widespread type of domestic storage during this time period. In addition, the rectangular basins or bins found in Units 5 and 7 suggest that storage facilities designed for special purposes were

[15] From Goldstein and Muñoz Rojas (2008)

relatively similar as well. Although, it is not clear what these rectangular features were used for; it is possible they were used for processing of some kind rather than storage. Overall, every possible storage feature found in Terminal Huaracane contexts was found in what could be considered interior or private space that was not readily visible or accessible to the general population of the site.

6.3.3 Artifact assemblages

There were significant differences in the artifact assemblages from different Terminal Huaracane contexts. One difference between assemblages was in ceramic ware percentages (Table 6.3). The ceramic assemblages from Terminal Huaracane contexts were in most cases comprised primarily of the typical Huaracane ceramic wares that were originally identified by Feldman (1989) and Goldstein (1989, 2000b). However, some atypical Huaracane wares were found in these contexts as well. One atypical Huaracane ceramic ware at Yahuay Alta was *Pasta Biotite* which, (as mentioned in Chapter 4) is a utilitarian ware that was tempered with a large amount of the micaceous mineral biotite. This ware is similar to a common utilitarian ceramic ware tempered with biotite found in Middle Horizon Wari contexts at Cerro Baúl and Cerro Mejia (Nash 2002). This similarity to the Wari utilitarian ware related only to the paste; specifically both the *Pasta Biotite* and the Wari ware contained large amounts of biotite temper. At Yahuay Alta, *Pasta Biotite* was used only to make Huaracane style utilitarian vessels. The other two, less common, atypical Huaracane ceramic wares found in Terminal Huaracane contexts are *Pasta Naranja* and *Pasta Centro Rosada*. The *Pasta Naranja* paste was only found in sizeable percentages in Unit 3. This was a well-fired ceramic that had a bright orange color and fine-grained sand temper that was used only to make large vessels. The *Pasta Centro Rosada* ware was more common than the *Pasta Naranja* as it was found in all Terminal Huaracane contexts except for Unit 7. This ware was essentially a well-fired version of *Huaracane Arena*. It resembled this typical Huaracane ware in most ways; sand temper of varying size and sherds with brownish interior and exterior surfaces. The major difference was that *Pasta Centro Rosada* sherds had a pink or sometimes even a reddish core suggesting they were more completely fired than typical *Huaracane Arena* sherds. This ware was only used to make large utilitarian vessels such as *ollas* or jars.

Table 6.3. Ceramic ware %'s for Terminal Huaracane phase excavation units

Ceramic Ware	Unit 3	Unit 5	Unit 6	Unit 7	Unit 8
H. Arena	33.9%	22.6%	43.0%	75.9%	62.2%
H. Vegetal	3.0%	63.4%	29.4%	1.5%	11.2%
H. Fino	7.5%	5.4%	13.8%	5.4%	11.5%
Pasta Biotite	42.0%	1.1%	1.1%	17.2%	12.4%
Pasta Naranja	5.0%	0.0%	0.0%	0.0%	0.1%
Pasta Centro Rosada	9.2%	7.5%	5.4%	0.0%	2.6%

The most obvious inter-unit difference in ceramic assemblages during the Terminal Huaracane phase was in the percentages of utilitarian wares. *Huaracane Arena* appears in moderate to high percentages in all excavated contexts from this time period; nevertheless there were some clear differences in its usage. In fact we can be more than 99% confident that the *Huaracane Arena* percentages from each context are significantly different from all other contexts (Figure 6.21). *Huaracane Vegetal* was more heavily utilized in Unit 5 than it was in all other contexts; this ware hardly appears all in Units 3 and 7. We can be more than 99% confident that the *Huaracane Vegetal* percentages in Units 5, 6, and 8 were significantly different than all other contexts (Figure 6.22). Finally, *Pasta Biotite* is better represented in Unit 3 than it is in all other contexts and it hardly appears at all in Units 5 and 6. We can be more than 99% confident that the *Pasta Biotite* percentage in Unit 3 was significantly higher than all other contexts and that the percentage of this ware in Unit 7 and 8 was significantly higher than the percentage in Units 5 and 6 (Figure 6.23). These results suggest that different activities requiring utilitarian vessels with different properties were taking place in each context.

There were some small but significant differences in the percentages of *Huaracane Fino* sherds found in each Terminal Huaracane context. In no excavation context from this time period were *Huaracane Fino* percentages as high as they were some surface collection units (see Chapter 4). However, we can be more than 99% confident that Units 6 and 8 have significantly higher *Huaracane Fino* percentages than the other three contexts from this time period (Figure 6.24). This could suggest that the residents of these contexts were more heavily involved in feasting/consumption activities, or that the residents of these contexts possessed proportionally more high quality serving vessels than the residents of other contexts at the site.

There were also some significant differences among the percentages of diagnostic sherds of different vessel types in three of the Terminal Huaracane contests (Table 6.4). Unfortunately, only three and eight diagnostic ceramic sherds were found in Units 5 and 7 respectively. Because of these very small samples sizes and their accompanying large error ranges these contexts could not be included in this particular analysis.

Table 6.4. Diagnostic ceramic sherd %'s for Terminal Huaracane phase excavation units

Vessel Type	Unit 3	Unit 6	Unit 8
Bowl	42.6%	47.7%	67.3%
Olla sin Culleo	14.8%	26.6%	14.6%
Olla w/ neck	11.1%	19.3%	10.9%
Jar	20.4%	3.7%	1.8%
Bottle	1.9%	1.8%	0.0%
Artifact	9.3%	0.9%	5.5%

There were significant inter-unit differences between Units 3, 6, and 8 in the percentage of bowl sherds, with Unit 8 displaying a higher percentage. We can be more than 99% confident that the percentage of bowl sherd in Unit 8 was significantly higher than the percentages in Units 3 and 6 (Figure 6.25). Thus, Unit 8 had significantly higher percentages of both diagnostic bowl sherds and *Huaracane Fino* sherds.

Another important difference was that Unit 3 had a substantially higher percentage of jar sherds and we can be more than 99% confidence that this percentage is significantly higher than the jar sherd percentages in Units 6 and 8 (Figure 6.26). As mentioned in Chapter 4, jars were defined as all large plainware ceramic vessels with necks taller than 4 cm. This vessel type, which is suited nicely for the storage, fermentation, and/or transportation of liquids, is rare in typical Huaracane ceramic assemblages (Goldstein 2003). Jars sherds made up a substantial percentage, just over 20%, of Unit 3's diagnostic sherd assemblage suggesting they were important to the residents of this context. Unit 3 had significantly higher percentages of both diagnostic jar sherds and *Pasta Biotite* sherds, both of which were not typical in Huaracane ceramic assemblages.

There were several significant inter-unit differences in Terminal Huaracane contexts in the types of lithic materials utilized (Table 6.5). One of the most striking features in the excavated lithic assemblage is that none of the Terminal Huaracane assemblages included much of the more readily available lithic materials, such as dacite or rhyolite. These lower quality materials only made up more than 5% of a lithic assemblage in Unit 6 and even in this unit, dacite and rhyolite each only comprised 6.8% of that particular lithic assemblage.

Table 6.5. Lithic material %'s for Terminal Huaracane phase excavation units

Lithic Material	Unit 3	Unit 5	Unit 6	Unit 7	Unit 8
Obsidian	1.5%	5.2%	1.1%	14.6%	21.0%
Dacite	1.8%	0.0%	6.8%	2.3%	0.7%
Rhyolite	4.4%	0.0%	6.8%	2.3%	1.2%
Andesite	0.0%	0.0%	1.3%	0.0%	0.0%
Fine-grained Rhyolite	4.0%	0.0%	3.7%	0.0%	2.4%
Chrysacolla	9.6%	3.5%	2.1%	24.7%	35.2%
Quartz	4.8%	87.9%	24.0%	16.9%	15.8%
Fine-grained Sandstone	4.4%	0.0%	0.0%	0.0%	0.0%
River Cobble	0.7%	0.0%	0.5%	1.1%	0.4%
River Pebble	1.5%	0.0%	0.0%	1.1%	0.0%
Turquoise	0.0%	0.0%	6.0%	0.0%	0.0%
Tiza (Chalk)	14.7%	0.0%	0.0%	28.1%	0.4%
Mica	1.1%	0.0%	0.3%	0.0%	0.0%
Lapis Lazuli	0.0%	0.0%	0.0%	4.5%	0.0%
Chert	51.5%	3.5%	47.6%	4.5%	22.9%

There are several significant differences among the lithic assemblages of different Terminal Huaracane contests. One of the more obvious is in chert percentages. Chert was clearly a very important lithic material to the residents of Unit 3 and 6, while it was not utilized to a great degree by the residents of Units 5 and 7. Chert appears to have been a material of moderate importance in Unit 8. We can be more than 99% confident that the chert percentages in Units 3 and 6 are significantly higher than all other Terminal Huaracane contexts and that the chert percentage in Unit 8 is significantly higher than the chert percentages in Units 5 and 7 (Figure 6.27). These results could suggest that the residents of Units 3 and 6 were differentially involved in the procurement and/or distribution of chert, the only locally available high quality lithic material.

There were also some significant differences in quartz percentages found in different contexts during this time period. Unit 5 clearly had a substantially higher percentage of quartz than any other context, and we can be more than 99% confident that this percentage is significantly higher than the quartz percentages in all other Terminal Huaracane contexts (Figure 6.28). It is not known exactly how quartz was utilized by the residents of Yahuay Alta, but it is clear that this was a very important lithic material for the residents of Unit 5.

Obsidian was the highest quality lithic material utilized by the residents of Yahuay Alta. This material has no source in the Moquegua valley so regional level trade would have been necessary to obtain this material. There were clear differences in obsidian percentages in Terminal Huaracane contexts, with Units 7 and 8 displaying higher percentages of this exotic high quality material. We can be more than 99% confident that the obsidian proportions of Units 7 and 8 are significantly higher than the proportions of the other Terminal Huaracane contexts (Figure 6.29). This pattern could indicate that the residents of these contexts were more heavily involved in (or even controlled) the exchange network for this material. This issue will be explored in more detail below in the section focusing specifically upon external ties.

The final major lithic material where there were significant differences is chrysacolla. As mentioned in the previous chapter, this copper based mineral that is used exclusively for decorative purposes is found in the Moquegua Valley but its sources are primarily located up valley from Yahuay Alta. Units 7 and 8 both had substantially higher percentages of chrysacolla than the other Terminal Huaracane contexts and we can be more than 99% confident that the chrysacolla percentages in Units 7 and 8 are significantly higher than the chrysacolla percentages in Units 3, 5, and 6 (Figure 6.30). These higher percentages could suggest that the residents of Units 7 and 8 were more involved in the local procurement networks for this mineral.

Yet for both obsidian and chrysacolla the majority of recovered specimens were exceptionally small; many of them weighed less than 0.1 g. The method by which the percentages of lithic materials were calculated involved dividing the number of fragments of a specific lithic material found in a context by the total number of lithic fragments found in that context. Since both obsidian and chrysacolla specimens were generally very small, this method could skew our perception of the importance of these materials in tool production. As a result, the total weights of both of these materials in each Terminal Huaracane context were calculated to compare these totals with the percentages described above (Table 6.6). Error ranges and significances cannot be determined for weights but used in conjunction with the above percentages, these data can be very useful.

Table 6.6. Total weights for obsidian and chrysacolla for Terminal Huaracane phase excavation units

	Unit 3	Unit 5	Unit 6	Unit 7	Unit 8
Total Weight for Obsidian (g)	19.38	2.90	6.40	10.34	21.78
Total Weight for Chrysacolla (g)	3.26	0.08	1.24	6.98	11.66

It is clear that, with one exception, the contexts with significantly higher obsidian and chrysacolla percentages, Units 7 and 8, also had the highest total weights for obsidian and chrysacolla. This suggests that even though the fragments of these materials were small, the percentages of these materials in each unit still reflected its relative importance in comparison to other units. The one major exception to this is the high obsidian weight obtained for Unit 3. Obsidian only made up 1.47% of the lithic materials in this context, but it had the second highest weight for this material. The reason why obsidian made up such a low percentage of Unit 3's lithic assemblage but still had a high weight was that a single large obsidian tool was found in this unit. This single tool weight 19.0 g itself (see Figure 6.31), driving the total obsidian weight for this context up without giving the unit a high percentage. Thus overall, it appears that in general the contexts with the highest percentage of both obsidian and chrysacolla also had the most amounts of these materials.

There were some other lithic materials that were more common in some Terminal Huaracane contexts than other materials. *Tiza* or chalk was relatively common in Units 3 and 7 but rare in all of the other contexts from this time period. This material is very fragile and generally found as many very small fragments. In fact only 2.1 g and 3.3 g of *tiza* were found in Units 3 and 7 respectfully. This is not a substantial amount of material and given that it is currently not known what this material was used for, its presence in these contexts is not very meaningful.

Lapis lazuli was a lithic material that was only found in Unit 7, where only four very small fragments of this dark blue stone were recovered. This material, highly prized for making jewelry, has no known local sources. Turquoise was another lithic material that was found in only one context, Unit 6. Twenty-two small fragments of this material, which was also highly prized for making jewelry, were found in this unit. It is possible that this turquoise may actually be a high quality blue variant of chrysacolla. This should not affect my analysis because the specimens found in Unit 6 were all of a higher quality and were much different in color than the typical chrysacolla found at the site.

Various unique artifacts found in Terminal Huaracane contexts merit short description. Among the artifacts found in Unit 3 were three metal items made from a copper alloy. The first of these items was a small, 1.0 g, flat piece that appears to have been the rounded corner of the flat section of a *tupu* pin (Figure 6.32). The second item was a long thin bent pin that was probably part of a *tupu* pin. This pin had a dull point and was bent in several places and was approximately 115 mm long and weighed 5.2 g (Figure 6.33). The third item was a long thin tool. This 136.5 mm long item weighed 13.9 g, had one pointed end, and the other end had a broad rounded edge shaped like a small spatula. This tool's shaft was rectangular in profile except at its pointed end where the profile changed to circular (Figure 6.34).

In addition several bone and antler artifacts were recovered in Unit 3. The most interesting bone items were 10 poorly preserved fragments of a hollow bone with engraved decorations. This hollow bone possibly may have been a decorated bone flute or a snuff tube engraved with crossing hatch marks forming a diamond like pattern (Figure 6.35). Two fragments of a polished bone tool and three burnt fragments of a smoothed antler tool were also found in Unit 3. Finally, two small circular white marine shell beads and seven small complete marine shells with holes drilled in them were found in Unit 3 as well.

In Unit 6 the most interesting unique artifact was a small, Pukara-style, incised ceramic sherd, with four vertical bars or rays engraved upon its interior surface (Figure 6.36). Many marine shell beads were also discovered in Unit 6. In total, 19 circular white marine shell beads were found and several of these appear as if they were not completed. In addition, two small complete marine shells with holes drilled in them were also found. In Unit 7, one small circular white marine shell bead was found; this was the only unique artifact found in this context other than the four fragments of lapis lazuli described above.

Unit 8 contained many uncommon artifacts. One of the most interesting was a small, 0.1 g, fragment of gold foil that was 0.16 mm thick and had a small hole punched in it. This fragment was bright yellow in color, suggesting it was made from relatively pure gold (Figure 6.37). A small, 0.2 g, fragment of copper alloy metal was also found in Unit 8. This fragment was a thin sheet, possibly a fragment of the flat section of a *tupu* pin, however it was only 0.47 mm thick (Figure 6.38).

Several kinds of marine shell artifacts were found in Unit 8 as well. The most interesting of these were two small fragments of *spondylus* shell spines (Figure 6.39). The closest source for *spondylus* shell is in the warm waters of the coast of modern day Ecuador. Four circular white marine shell beads, two circular purple marine shell beads, and six small complete marine shells with holes drilled in them were also found in Unit 8 along with one, broken, circular light green stone bead (Figure 6.40).

Overall the artifact assemblages from Terminal Huaracane contexts reveal several aspects of domestic variability during this time period. Residents in different parts of the site may have used slightly different utilitarian cooking and/or storage type vessels, which could suggest different pottery sources or that slightly different domestic activities were taking place in different parts of the site. The artifact assemblages from this period also hint at some possible status/wealth differences. Differential access to materials such as metal, obsidian, marine shell, and even chert could express such differences. This issue will be explored in more detail below in the discussion focusing upon site variability and the Terminal Huaracane community.

6.4 DOMESTIC ACTIVITIES

As was the case with Late Huaracane contexts, the excavations of Terminal Huaracane contexts would not have revealed the entire range of domestic activities that took place during this time period. No clearly identifiable true hearths were discovered during the excavations of these contexts. In all of the Terminal Huaracane contexts, shallow ash deposits were found both above and below the living surfaces. However, none of these features appeared to be true hearths. Instead they were deposits of loose soil mixed with ash and larger fragments of charcoal. The only possible exception to this is Rasgo 15 in Unit 6, which is located in the northwestern corner of the rectangular structure in this context (see Figures 6.7 & 6.41). This feature was a very large irregularly shaped ash deposit that was at its maximum approximately 140 x 100 cm and 9 cm deep. This feature was different from other ash deposits at the site because the soil under the deposit was hardened by fire. From the deposit itself, 18 burned, large mammal bone fragments were recovered and during the microbotanical analysis of soil samples taken from this feature, burnt mammal bone and freshwater shrimp shell fragments were recovered. The irregular shape of the feature makes it difficult to interpret this as a formal hearth, but the burnt soil suggests at least one burning event took place in this location. Also the burnt bone and freshwater shrimp shell fragments in this deposit suggest that if this feature was not a hearth it was at least filled with refuse from a cooking fire of some sort. However, the discovery of Rasgo 15 in Unit 6 indicates that at least some cooking activities may have taken place within more private domestic space.

The production and/or maintenance of lithic implements was a domestic activity that varied in intensity in my sample. There were significant differences between Terminal Huaracane contexts in the proportions of flakes in the lithic assemblages (Table 6.7).

Table 6.7. % of Flakes in lithic implement assemblages for Terminal Huaracane phase excavation units

	Unit 3	Unit 5	Unit 6	Unit 7	Unit 8
Flake %	59.27%	3.45%	64.34%	11.96%	42.64%

We can be more than 99% confident that the flake percentages in Units 3 and 6 are significantly higher than all other contexts and be more than 99% confident that the flake percentage in Unit 8 is significantly higher than that in Units 5 and 7 (Figure 6.42). Significantly higher proportions of flakes and lithic débitage were found in Units 3, 6, and 8 than in Units 5 and 7, suggesting that the production and/or maintenance of lithic implements was substantially more important in some context than others during the Terminal Huaracane phase at Yahuay Alta. Possibly the residents of contexts like Unit 5 were obtaining their lithic implements already made from other residents at the site.

Although the production and/or maintenance of lithic tools apparently was an important activity in some Terminal Huaracane contexts, raw nodules of lithic materials make up a very small percentages of lithic implement assemblages in all excavated contexts. In no Terminal Huaracane context do nodules make up more than 3.5% of a context's lithic implement assemblage. This pattern could suggest that the maintenance rather than the actual production of lithic implements was the more common domestic activity during this time period.

A look at the flake size categories for the three contexts with the highest flake percentages, Units 3, 6, and 8, also indicates that the maintenance of lithic implements was an important domestic activity in these contexts. There are significant differences in percentages of flake size categories in these three units (Table 6.8). However, in all three units, over 85% of the flakes and débitage recovered was smaller than 4 cm. This suggests that most of the lithic reduction that took place in these contexts involved secondary reduction, such as furbishing already made implements (Ahler 1989). This pattern supports the notion that in Terminal Huaracane contexts, maintenance, rather than the actual production of lithic implements was an important domestic activity. This argument is strengthened by the low representation of raw lithic materials in any excavated Terminal Huaracane context.

Table 6.8. Flake size category %'s for Terminal Huaracane phase excavation units

Flake Size Category	Unit 3	Unit 6	Unit 8
< 2cm	65.7%	56.7%	79.5%
2cm – 4cm	26.0%	30.4%	17.0%
4cm – 6cm	6.5%	9.6%	2.7%
6cm – 8cm	1.7%	2.5%	0.0%
> 8cm	0.0%	0.8%	0.9%

In order to understand the domestic activities of refuse disposal during the Terminal Huaracane phase, total artifact contour maps were created for each excavated context using the program Surfer. As with the contour maps for the Late Huaracane phase contexts, the contour maps represent the combined total number of artifacts from all layers per square meter in each excavated contexts. Calculating the artifact counts involved adding together the total number of fragments of ceramics, lithics, bone, shell, and metal for each square meter in each excavated context.

In general, Unit 3 had a relatively high density of artifacts; even exceeding 300 artifacts per m^2 in some locations (Figure 6.43). However, these very high densities were created mostly by high concentrations of small bone fragments, which exceeded 240 fragments per m^2 in some locations. Concentrations of over 20 artifacts per m^2 are primarily located on the interior living surface of the structure in this unit, and the areas with highest artifact densities were situated towards the center of this unit. There are only two peaks in artifact density of over 100 artifacts per m^2 in Unit 3; centered upon Quads 54 and 59. These high peaks in artifact density are located on either side of a possible small internal room perhaps formed by lightweight *quincha* walls. The highest artifact density peak in Unit 3, centered upon Quad 59, was located in an area of the structure that had many sub-floor pits. Although the artifact density patterns for this context suggest that the living floor was not kept particularly clean, there is no indication that refuse was deposited in exterior spaces directly in front of this structure. This large structure is built right on the edge of a cliff overlooking a steep *quebrada*. Refuse could easily have been thrown over the eastern wall of the structure down this cliff and it would have been effectively and permanently removed from the living area. This could explain why no refuse pits were found in the context. Nevertheless, a relatively large amount of domestic refuse was found on the surface of the structure in Unit 3.

The overall artifact density for Unit 5 was very low; not exceeding 17 artifacts per m^2 in any location in this context (Figure 6.44). Two of the three highest artifact densities in this context are located in what could be considered interior space on the living floor of the terrace. However both of these peaks in artifact density, centered on Quads 11 and 17, are directly associated with sub-floor features. The third peak in artifact density, centered on Quad 2, is located just off the edge of the terrace, possibly representing an area of refuse disposal. However, this peak only represents a density of 13 artifacts per m^2, and cannot be considered a true midden. Overall, the surface of the terrace in Unit 5 seems to have been kept relatively clean of artifacts especially in comparison to the living surface in Unit 3.

Unit 6 had relatively high artifact densities and a very clear distribution pattern (Figure 6.45). The largest and highest peak in artifact density, centered on Quad 47, was in the open patio area just to the south and east of the rectangular structure in this context. In parts of this patio there is an artifact density of up to 130 artifacts per m^2. The second highest density of artifacts, centered on Quad 13, was located near the northeast corner of the rectangular structure in what would be considered internal space. There were also smaller artifact density peaks in Quad 60 just to the northeast of the oval structure, and in Quads 74 and 75 in the center of the oval structure. This last peak was located in the oval structure and did not have to do with domestic activities because the artifacts in this location (mostly ceramic sherds) were grave goods found with the burial that was discovered in this context. The artifact density pattern for Unit 6 suggests that the residents of the rectangular structure kept their internal living space relatively clean. However, not as much effort was expended keeping the more open patio area in front of this structure clean.

The artifact density pattern in Unit 8 has two areas where artifact densities reached over 100 artifacts per m^2 (Figure 6.46). The largest concentration of artifact density is somewhat L-shaped, and is an area of this unit where some of the largest sub-floor features were located (see Figure 6.11). This peak is situated along the wall that separates the small rectangular structure in this unit from the more open patio area and can be considered primarily internal, or at least roofed, space. The second peak in artifact density in Unit 8 is located in the far northeastern corner of the unit. The high part of this peak, in Quad 16, is on the terrace holding the structure and patio, but it also includes some space, in Quad 7, that is in front of and below this terrace. This entire peak could be considered to be located in external space away from the primary living area in this context. The section of this peak in Quad 7 is where Rasgo 5 was located. This feature was the only midden like area discovered on the site. This feature was an area of loose rocky soil where a large amount of artifacts were found. Since this area was outside of the residential terrace it would have been a logical place for the deposition of refuse. The artifact density pattern in Unit 8 suggests that many of the domestic activities that took place in this context occurred in the boundary area separating the rectangular structure and the open patio area. The pattern also might suggest that a large amount of domestic refuse ended up in the sub-floor pits during and/or after the abandonment of the site. Alternatively, the residents of this site swept or dumped some of the refuse in an out of the way corner of the patio or even in front of the terrace.

Although Unit 7 was not a domestic context, and its artifact density pattern does not reflect domestic activities, the artifact concentrations may denote where activities within this special structure took place. The artifact density pattern for this context was relatively simple (Figure 6.47), with artifact concentration found primarily in the center of the structure where the living floor was preserved. The peak in artifact density, centered on Quad 19, lay in the slightly more northern open area of this structure that may not have been roofed. There were lower artifact densities in the presumably roofed southern part of the structure even though there were more sub-floor pits in this area (see Figure 6.13). It appears the more confined roofed area of this structure was kept relatively clean and more refuse was present on the surface of the more open unroofed area. This could also suggest that more activities were taking place in the more open area than in the more confined southern half of the structure.

On the whole, the excavations of Terminal Huaracane contexts revealed some information about domestic activities at Yahuay Alta during this time period. The maintenance, as opposed to the production, of lithic implements was a common domestic activity during this time period, but not of equal importance important in every unit. The artifact density patterns suggest that in some contexts domestic activities may have been concentrated in interior areas, while in other areas more activities were taking place in open, patio-like areas. Overall, while refuse disposal not surprisingly took place outside of domestic contexts, in at least one case refuse was disposed of closer to domestic contexts, an area that was outside of a domestic terrace.

6.5 CRAFT PRODUCTION

My sample of Terminal Huaracane contexts did not provide much evidence for specialized craft production. I found no evidence for the specialized production of everyday items, such as pottery, in the excavated contexts. There was some evidence that some residents were involved in the production of lithics. Unit 3, 6, and 8, had high percentages of flakes and lithic production debris, while other contexts had very low percentages. This difference could indicate that some residents at Yahuay Alta were more involved in the production of lithic implements. However, I found no concentrations of preform or substandard bifaces or blades, which is one of the best indicators for specialization in the production of these implements (Cross 1993; Earle 2002). Thus, the lithic evidence from Terminal Huaracane contexts at Yahuay Alta suggests that some contexts may have been more heavily involved in the maintenance or retouching of lithic implements. One possible case of specialization could have taken place in Unit 5. In this unit over 87% of the lithic material recovered was quartz (see Table 6.5).

The strongest evidence for household craft production comes from Unit 6, residents of this locus may have been producing circular marine shell beads. The most important line of evidence that supports this interpretation is that many of the beads found in this context appear to have been unfinished. Of the 19 beads found in Unit 6, eight were finished, ten were unfinished, and one was broken (see Figures 6.48 and 6.49 for a comparison of finished and unfinished shell beads). Only one other unfinished bead was found at Yahuay Alta in Unit 7. The presence of unfinished, or possibly even discarded beads, in Unit 6 is strong evidence that this context was the site of shell bead working because broken beads can be considered production debris. Unfinished beads, like other types of production debris, probably had little exchange value (Costin 1991, 2001; Earle 2002). No production tools, such as drills, were found in Unit 6. Production of circular marine shell beads would not have been a full time specialization for this household.

A look at the percentages of circular shell beads found in each context may help to distinguish production from consumption of shell beads at Yahuay Alta. Shell bead percentages were obtained by dividing the total number of shell beads found in an excavation unit by the total number of shell specimens, which included shell beads, found in said unit (Table 6.9).

Table 6.9. Marine shell specimens & marine shell beads in Terminal Huaracane excavation units

	Unit 3	Unit 5	Unit 6	Unit 7	Unit 8
Marine shell specimens	66	0	78	40	86
Marine shell beads	2	0	19	1	6
% marine shell beads	3.0%	0.0%	24.4%	2.5%	7.0%

Although Unit 6 did not have the highest count or highest density of raw marine shell fragments at the site, it had by far the highest count and highest percentages of circular shell beads and we can be more than 99% confident that the shell bead percentage in Unit 6 is significantly higher than all other contexts at the Yahuay Alta (Figure 6.50). This pattern indicates that where shell bead production was taking place significantly higher proportions of shell beads were found, while the consumption of shell beads resulted in relatively low percentages of beads.

6.6 SUBSISTENCE

There is more information relating to subsistence from Terminal Huaracane contexts than from Late Huaracane contexts, because there was more domestic refuse present on the later living surfaces in comparison with the earlier time period. In addition, the storage pits present in the majority of Terminal Huaracane contest yielded a wealth of microbotanical remains that were not as common in Late Huaracane features. As a result, it was possible to develop a more complete picture of Terminal Huaracane subsistence. This information has even allowed for the identification of contexts that may have been producing a special fermented beverage for important public and/or ceremonial events.

6.6.1 Faunal remains

As with the earlier time period, faunal remains were the most common type of domestic refuse related to subsistence in Terminal Huaracane contexts. Preservation was poor, and the majority of faunal remains from Terminal Huaracane contexts were highly fragmented and very brittle. As for the earlier time period, faunal remains were classified into two basic categories: large mammals and small mammals. In Terminal Huaracane period the large mammal category comprised at least 97.2% of the faunal assemblage in every single excavated context. As with the Late Huaracane phase, the small mammal bones in Terminal Huaracane faunal assemblages likely represented mice and thus were not considered informative for reconstructing the Terminal Huaracane diet. As a result, only the large mammal category was utilized in the following analyses of the Terminal Huaracane faunal material.

Faunal remains were very common in all contexts from this time period, with the exception of Unit 5. As in the previous chapter, in order to quantify the processing /cooking/consumption of meat during the Terminal Huaracane phase, the densities of the number of large mammal bone fragments and the weight of large mammal bone fragments were calculated for each excavated context. There were some very clear inter-unit differences in these densities (Table 6.10).

Table 6.10. Bone density for Terminal Huaracane phase excavation units

Density	Unit 3	Unit 5	Unit 6	Unit 7	Unit 8
Number of large mammal bone fragments per m^2	19.22	0.54	11.22	9.81	32.56
Weight (g) of large mammal bone fragments per m^2	5.96	0.14	5.95	3.25	7.58

It is evident from these bone densities that the residents of Unit 8 may have been more involved in the processing/consumption of meat and/or simply had better access to meat than the rest of the site. However, as discussed in the previous chapter, there is a possibility that the higher density of bone densities could be the result of higher densities of domestic refuse. If this were the case it would indicate that more refuse was disposed of in a context, such as Unit 8, but not necessarily that that the residents of this were heavily involved in the processing and/or consumption of meat. In order to make sure this was not the case, bone fragment to ceramic sherd ratios were calculated for each excavated Late Huaracane contexts (Table 6.11). This ratio was calculated by dividing the total number large mammal bone fragments recovered from all levels by the total number of ceramic sherds recovered from all levels in each excavation unit. If the high bone density in Unit 8 was simply a result of more domestic refuse being deposited in this context then the bone to ceramic ratio should be relatively the same as those from other Terminal Huaracane contexts. However, if the residents of Unit 8 were more heavily involved in the processing and/or consumption of meat then the bone to ceramic ratio for this context should be relatively higher.

Table 6.11. Bone to ceramic ratios for Terminal Huaracane phase excavation units

	Unit 3	Unit 5	Unit 6	Unit 7	Unit 8
Total # of large mammal bone fragments	2287	13	853	363	2084
Total # of ceramic sherds	1061	93	1381	203	812
Large mammal bone fragment/ceramic sherd ratio	2.2	0.1	0.6	1.8	2.6

The results of this analysis demonstrate that not only did Unit 8 have a higher density of bone than other excavated Terminal Huaracane contexts, but also a higher proportion of large mammal bone fragments (see Table 6.11). Thus it can be stated with confidence that relatively more processing and/or consumption of meat, probably from camelids, took place in or near this context. Although Unit 8 had a higher bone ceramic ratio than Units 3 and 7, the difference was not all that great, especially between Units 8 and 3. Thus, these results demonstrate that the processing and/or consumption of meat was an important activity in Units 3, 7 and 8, albeit slightly more important in Unit 8. In addition, this analysis also demonstrated that the relatively high density of bones recovered in Unit 6 was likely related to the amount of refuse deposited in this context, rather than the processing/consumption of meat. These bone/ceramic ratios clearly indicate that the processing and/or consumption of meat were relatively less important and/or common activities in Units 5 and 6.

Overall meat consumption was a relatively regular domestic activity at Yahuay Alta, in fact there is even evidence it took place in non-domestic contexts, such as Unit 7. Nevertheless, access to meat was not equal within the community. These results could also be interpreted as showing that the residents of Unit 8, and possibly Unit 3, hosted more feasting events where meat was served (Costin and Earle 1989; Crabtree 1990; Hayden 2001a). Remember that Unit 8 also had significantly higher percentages of *Huaracane Fino* and bowl sherds than most other contests at the site. This significantly higher percentage of serving ware is something that would be expected for households that host many feasting events (Clarke 2001; Hayden 2001a). These higher bone densities could also, as mentioned above, simply suggest that the residents of Units 8 and 3 had more access to meat than the average household at Yahuay Alta, which in the Andes in an excellent indicator of higher wealth/status (Hastorf 2003a). These possibilities will be explored below in the discussions focusing upon site variability and the Terminal Huaracane community.

An interesting aspect of the faunal assemblages from this time period was the numbers of compete camelid phalanges (specifically the third phalange) and/or camelid tooth fragments. For example, in Unit 3 a total of 24 camelid phalanges and 26 camelid tooth fragments were recovered and in Unit 8 a total of 4 camelid phalanges and 35 camelid tooth fragments were recovered. The fact that these particular skeletal elements were present in some Terminal Huaracane contexts suggests that what Burger (1992: 167) terms the "*ch'arki* effect" was not taking place during this time period. The "*ch'arki* effect" refers to the fact that camelid feet and heads are not considered suitable elements to make the freeze dried meat known as *ch'arki*. As a result, valley bottom agricultural communities that obtain their meat by trading for ch'arki with highland herding communities tend to have faunal assemblages lacking feet and cranial elements (Burger 1992: 167). This evidence indicates that the residents at Yahuay Alta were not trading for *ch'arki* with highland communities; they had access to entire animals. Residents either owned their own local camelid herds or they were obtaining the occasional animal via direct exchange relationships with herders/traders that passed through the region with llama caravans.

There were some sources of protein other than camelids for the Terminal Huaracane residents of Yahuay Alta. As in the Late Huaracane phase, residents exploited the immediately available fresh water shrimp (*Cryphiops caementarius*) that live in the Rio Huaracane, which flows just below the site. Four freshwater shrimp shell fragments were found in Unit 6, and 14 of these freshwater shrimp shell fragments were found in Unit 8. In addition, during the microbotanical analysis of soil samples from Terminal Huaracane contexts freshwater shrimp shell fragments were found in samples from Unit 3, 6, and 7 (Goldstein and Muñoz Rojas 2008). Thus, at least one small freshwater shrimp shell fragment was found in every Terminal Huaracane context except for Unit 5. As mentioned in the previous chapter, shrimp shell fragments are extremely fragile so freshwater shrimp are likely underrepresented in the Terminal Huaracane subsistence pattern.

Another protein resource for the residents of Yahuay Alta could have been fish, but no fish bones were found during the excavations of Terminal Huaracane contexts. However, during the microbotanical analysis of soil samples from Terminal Huaracane contexts two small fish vertebrae were found in soil samples from Unit 3, one fish otolith was found in the soil samples from Unit 7, and six small fish bones, including five vertebrae, were found in soil samples from Unit 8 (Goldstein and Muñoz Rojas 2008). These small remains seem to primarily be from small anchovy-like species from the Pacific Ocean or small freshwater fish from the Huaracane River, but the otolith could be from a larger marine species. Given that the regular consumption of fish, even in small quantities, leaves a large amount of bones because fish have many bones, the small amount of fish bones recovered at Yahuay Alta indicates that fish were not an important resource for this community.

6.6.2 Botanical remains

The botanical remains found in Terminal Huaracane contexts reveal some substantial differences in the utilization of plant resources among different households at Yahuay Alta. Some units had very little in the way of plant food remains but had evidence for the collection and storage of fuel. Other units had a wide range of plant food remains, and even evidence for the preparation of feasting events (Goldstein and Muñoz Rojas 2008). The most surprising result of the botanical analysis from Yahuay Alta is the lack of evidence for the use of domesticated staple crops that were and are still commonly used in the Andes. No remains of maize, quinoa, potatoes of any variety, or even aji peppers were found at Yahuay Alta (Goldstein and Muñoz Rojas 2008).

The only domesticated staple crop that appear in our samples, which were taken primarily from sub-floor features, was the Andean root crop arracacha (*Arracacia sp.*) (Goldstein and Muñoz Rojas 2008) (see Table 6.12). If this truly was the primary staple crop at Yahuay Alta it would mean that the residents at this site were supported by a unique agricultural subsistence system. These results are particularly surprising in light of the fact that the Tiwanaku colonies in the middle Moquegua Valley that were contemporaneous with the Terminal Huaracane occupation at Yahuay Alta had a subsistence system built upon maize (Goldstein 2003, 2005). There is no doubt that the Huaracane inhabitants of Yahuay Alta would have been familiar with maize, but for some reason they chose not to utilize this resource. As discussed in Chapter 2, both artifact evidence and bone chemistry analyses has previously suggested that the Huaracane subsistence system was not heavily reliant upon maize agriculture (Goldstein 2000b, 2003; Sandness 1992). This claim, although based upon the available evidence, seemed questionable (at least in my eyes) because no results from excavated domestic Huaracane contexts had been published. However, the results of the botanical analysis from the excavated contexts at Yahuay Alta go even further than Goldstein's (2000b, 2003) claim that maize played a minimal role in the Huaracane diet. The evidence from Yahuay Alta suggests that at least the Terminal Huaracane residents of this site utilized neither maize nor any the major Andean staple crops for their subsistence needs.

Table 6.12. Results of the microbotanical analysis of Terminal Huaracane contexts (raw count data)[16]

Family	Determination	Struct.	Unit 3 (20 L)	Unit 5 (8 L)	Unit 6 (19 L)	Unit 7 (8 L)	Unit 8 (15 L)	Total (70 L)
Anacardiaceae	*Schinus molle*	Fruit	0	0	0	327	3	330
		Seed	256	1	0	197717	24	197998
Annonaceae	*Anona sp.*	Seed	0	0	0	1	0	1
Apiaceae	*Arracacia sp.*	Seed	0	11	0	0	0	11
Cactaceae	*Echinopsis sp.*	Seed	0	2	0	9	0	11
Chenopodiaceae	*Chenopodium sp.*	Seed	2	36	3	8	1	50
	Suaeda sp.	Seed	0	0	0	2	0	2
Cucurbitaceae	*Cucurbita maxima*	Seed	0	0	0	60	0	60
	Cucurbita sp.	Seed	0	0	0	219	0	219
	Lagenaria sp.	Fruit	0	0	0	37	0	37
		Seed	0	0	0	138	0	138
Cyperaceae	*Cyperus sp.*	Stem	0	0	0	1	0	1
Fabaceae	*Arachis sp.*	Fruit	0	0	0	160	0	160
	Cassia sp.	Seed	0	13	0	0	0	13
	Prosopis sp.	Fruit	0	0	0	0	2	2
Malvaceae	*Gossypium sp.*	Seed	4	0	0	0	0	4
	Malva sp.	Seed	0	13	0	3	0	16
	UKN 009	Fruit	0	396	0	0	0	396
Nyctaginaceae	*Boerhavia sp.*	Seed	0	0	0	1	0	1
Poaceae	*Bromus sp.*	Seed	0	8	1	0	0	9
	cf. Poaceae	Fruit	0	11	0	0	0	11
Portulacaceae	*Portulaca sp.*	Seed	0	20	0	9	0	29
Salicaceae	*Salix sp.*	Seed	0	0	2	0	0	2
Sapotaceae/ Sapindaceae	UNK 003	Flower	0	1	0	0	0	1
Solanaceae	UNK 002	Fruit	1	0	0	0	0	1
Verbenaceae	*Verbena sp.*	Seed	0	0	1	1	0	2
Zygophyllaceae	*Fagonia chilensis*	Seed	0	45	0	1	0	46
Palaemonidae	*Cryphiops caementarius*	Exoskeleton	2	0	1	15	0	18
Gastropod	cf. Gastropod	Shell	1	0	0	0	0	1
Insect	cf. Insect	Exoskeleton	3	0	0	0	0	3
Mammal	cf. Mammal	Excrement	0	0	0	3	0	3
		Bone	137	0	32	19	36	224
	cf. Rodent	Excrement	0	4	1	1	0	6
		Bone	2	2	7	4	13	28
Mollusk	cf. Mollusk	Shell	3	0	6	0	1	10
Fish	cf. Fish	Bone	2	0	0	1	6	9
Non-identifiable	2 mm Carbon	Stem	2187	257	887	612	204	4147
	4 mm Carbon	Stem	151	22	39	2944	1	3157
	4 mm Wood	Stem	7	0	0	515	0	522
	Non-identifiable	Fruit	0	0	0	1	0	1
	Ceramics		14	0	3	4	2	23
	Chrysacolla		0	0	1	4	0	5
	Malachite		2	0	0	0	0	0

[16] All data in this table is from Goldstein and Muñoz Rojas (2008).

The botanical evidence from Yahuay Alta reveals interesting patterns at the site, including one suggesting that site residents was utilized at least two distinctly different plant communities (Goldstein and Muñoz Rojas 2008). Before expanding upon this particular hypothesis, the botanical evidence from each Terminal Huaracane context will be reviewed in detail.

The microbotanical analysis of soil samples from Unit 3 did not reveal a large amount of identifiable botanical remains; animal remains and wood charcoal dominated this assemblage (Goldstein and Muñoz Rojas 2008) (see Table 6.12). Although no formal hearths were found in this large structure, cooking of meat might have been an important activity in this context. This finding also corresponds with the high bone/ceramic ratio found in this unit discussed above; Unit 3 had the second highest bone/ceramic ratio density of any of the excavated Terminal Huaracane contexts (see Table 6.11). The few botanical remains found in Unit 3 were, however, very informative. Small quantities of *Schinus molle* seeds were found throughout the unit, although one deposit of over 200 seeds was found in Rasgo 17 (see Figure 6.2), a storage pit (Goldstein and Muñoz Rojas 2008). The exact significance of the distribution of *S. molle* seed in this context will be discussed in more detail below. Four cotton (*Gossypium sp.*) seeds were also found in Unit 3. The presence of these seeds reflect that the residents of this structure cleaning cotton while waiting for food to cook, a common activity in the Andean world (Goldstein and Muñoz Rojas 2008: 11). Finally, the presence of a few *Chenopodium sp.* seeds in Unit 3 suggests that the residents of this structure were tied into the same ecological and economic complex as the other Terminal Huaracane residents at the site because these types of seeds were found in every other excavated Terminal Huaracane context (Goldstein and Muñoz Rojas 2008). The evidence from Unit 3 suggests that the residents here were involved in cooking activities and possibly the small-scale production of a *S. molle* beverage that will be discussed in more detail below.

The microbotanical analysis of soil samples from Unit 5 yielded a relatively diverse assemblage, including weedy grass species especially from the families Malvacea, Poaceae, and Zygophyllaceae, and *Chenopodium sp.* as well (Goldstein and Muñoz Rojas 2008) (see Table 6.12). Many of the grass species found in Unit 5 differ from the many grass species abundant in Unit 7; the significance of this difference will be discussed in detail below. Most of these grasses were probably brought up to the site with other agricultural products, as they are common in areas regularly cleared by human activities. However, the leaves of these grasses could be eaten as greens and the whole plants could be used to make teas (D. J. Goldstein, personal communication, 2008). Arracacha seeds were also found in Unit 5 (Goldstein and Muñoz Rojas 2008). Other than arracacha, the only other known edible plants represented in Unit 5 were seeds from the fruit of a wild cactus, *Echinopsis sp.*, which is currently called by some local residents the "viracocha" cactus (Goldstein and Muñoz Rojas 2008). Finally, only one *S. molle* seed was found during the microbotanical analysis of soil samples from Unit 5 (Goldstein and Muñoz Rojas 2008). Unit 5 was the smallest Terminal Huaracane terrace excavated and may be representative of many of the smaller domestic terraces throughout the western half of Yahuay Alta. Thus, the botanical remains recovered from Unit 5 are possibly representative of the plant community exploited by the majority of Terminal Huaracane residents at Yahuay Alta.

Although located relatively close to Unit 5, the soil samples from Unit 6 yielded an assemblage with few botanical remains. Faunal remains and small fragments of wood charcoal dominated the assemblage in this context (Goldstein and Muñoz Rojas 2008) (see Table 6.12). The heavy presence of wood charcoal (primarily from the small 2 mm size category) suggests that low level fuel use that was probably not directly related to food production unless it was for foods that were not associated with any type of debris (Goldstein and Muñoz Rojas 2008). Given that Unit 6 is located in very close proximity to the platform mound and the public ceremonial sector at Yahuay Alta, it is possible that this was not a domestic context. The microbotanical assemblage for Unit 6 could be indicative of fuel being burned for purposes other than cooking (Goldstein and Muñoz Rojas 2008). These results correspond well with the low bone/ceramic ratio found in Unit 6, that suggested that the processing and/or cooking of meat was not an important activity in this location (see Table 6.11).

The soil samples from Unit 8 came primarily from sub-floor pits. These pits yielded a small amount of botanical remains, a mix of bones from small mammal, rodents, and fish, and small fragments of wood charcoal suggesting that these pits were filled with domestic refuse (Goldstein and Muñoz Rojas 2008). *Chenopodium sp.* grass seeds and fruits from the algarrobo tree (*Prosopis sp.*) were both found in Unit 8 (see Table 6.12). Either of these plants could have been brought up to the site as fuel, suggesting that this context could have been a location where gathered fuel was stored (Goldstein and Muñoz Rojas 2008). This makes sense given the fact that Unit 8 is located near the shortest access route to the settlement. In addition to these possible fuel species, small amounts of *S. molle* seeds and fruit parts were found throughout this context but never in concentrations of greater than 10 specimens. The presence of fruit parts in this contexts suggest this was a location where newly collected *S. molle* fruits were kept and possibly even cleaned before they were brought to a central location for processing (Goldstein and Muñoz Rojas 2008). Overall, the microbotanical analysis of Unit 8 did not yield a wide variety of botanical remains. The mix of a variety of small faunal remains with small wood charcoal fragments in the sub-floor pits suggests that this may have been a domestic context that was cleaned regularly.

The microbotanical analysis of soil samples from the non-domestic structure in Unit 7 yielded the most diverse botanical assemblage at Yahuay Alta. This assemblage represented 11 different plant families and includes both seeds and fruits (Goldstein and Muñoz Rojas 2008) (see Table 6.12). Notable is the representation of seeds or fruit parts from both wild and domesticated edible varieties. Seeds from the fruit of a wild cactus *Echinopsis sp.*, seeds from a very large variety of edible squash known locally as zapallo (*Cucubita maxima)*, and fruit parts of peanuts (*Arachis sp.*) were all found in Unit 7. The presence of these plants is an indicator that this context was either directly or indirectly involved in food storage, processing and/or consumption (Goldstein and Muñoz Rojas 2008). The heavy presences of fragments of wood charcoal in the 4 mm size category in Unit 7 indicate that controlled burning was taken place in this location, which lends strong support to the interpretation that food production and consumption were taking place in this structure (Goldstein and Muñoz Rojas 2008). In addition to these comestible plant products, seeds from many weedy grasses were found in Unit 7 as well. The presence of these weedy grasses in this context suggests a direct link between the agricultural fields and this contexts as these species would have been brought up to the site with agricultural goods (Goldstein and Muñoz Rojas 2008). In addition to the common *Chenopodium sp.*, which was nearly ubiquitous at Yahuay Alta, many of the weedy grass specimens found in Unit 7 were from genera (*Verbena*, *Portulaca*, *Suaeda*) not found elsewhere at the site. The presence of these different weedy grass genera in this context suggest that the agricultural products found in Unit 7 were obtained from a plant community that was not utilized by residents living in other sectors at Yahuay Alta (Goldstein and Muñoz Rojas 2008). Despite the diversity of the botanical remains found in Unit 7 all of the identified specimens were from locally available species (Goldstein and Muñoz Rojas 2008).

By far the most common botanical remains in Unit 7 were the seeds and fruit parts (stems and thin, papery shells) of *S. molle*; an estimated total of over 198,000 specimens of this species were found in this context (Goldstein and Muñoz Rojas 2008). These specimens were found throughout the unit, but the majority of them came from three large deposits found in sub-floor pits. These remains are very strong evidence that there was intensive production of a *S. molle* beverage in Unit 7, because these features are very similar to large deposits of *S. molle* found on the Wari site of Cerro Baúl, where the production of this beverage has been well documented (Goldstein and Coleman 2004; Goldstein, et al. 2009; Moseley, et al. 2005). In addition, the fact that both seeds and fruit parts were found indicates that all stages of the production process took place in this context, which suggests that the gathering of *S. molle* fruits may have been a centrally organized activity (Goldstein and Muñoz Rojas 2008). In addition to *S. molle*, both the seeds and fruit parts of *Lagenaria sp.*, a hard shelled gourd that could have been used to make drinking vessels or bowls, were recovered (Goldstein and Muñoz Rojas 2008). Gourd vessels could have been used in feasting events and may have provided the vessels for consuming liquids, as Goldstein (2003: 157) has noted that comparable drinking vessels are absent from the Huaracane ceramic assemblage. These presence of both seeds and fruit parts of this gourd species is an additional line of evidence that preparations for feasting activities took place in Unit 7 (Goldstein and Muñoz Rojas 2008).

Overall, the botanical evidence from Unit 7 suggests that this was a context where various types of food were prepared and consumed in feasting events. The great diversity of plant products found in Unit 7 also may suggest that the preparation and consumption for such feasts was a communally based activity. Given that Unit 7 was part of a public ceremonial complex that could not have easily been controlled by a single household, supra-household groups, such as kin groups or *ayllus*, may have pooled their resources together in this relatively central location in order to hold communal feasting ceremonies.

The most important information obtained from the microbotanical analysis of soil samples from Yahuay Alta was that residents of this settlement utilized resources from two distinct plant communities (Goldstein and Muñoz Rojas 2008). The agricultural products utilized in Unit 7, such as zapallo, peanuts, and gourds, were foods/products that in my sample, were only found in non-domestic contexts. In contrast, typical residents at Yahuay Alta, as exemplified by Unit 5, appear to have exploited a different plant community for the production of staples. The evidence from Unit 5 suggests that arracacha may have been a staple crop that was utilized in the everyday domestic cuisine at Yahuay Alta.

Given the small sample sizes used in this analysis, it is difficult to determine exactly where the different plant communities existed. Possibly the agricultural products used for feasting and found in non-domestic contexts were grown in one part of the valley and staple crops were grown elsewhere in the valley. There is evidence to suggest that the plant community represented by the grass assemblage in Unit 5 may have come from the upper sections of the Moquegua Valley because the grass species *Fagonia chilensis* grows best above 1500 masl (Goldstein and Muñoz Rojas 2008). However, there is nothing to suggest that the plant community represented by the grass assemblage in Unit 7 did not come from the upper sections of the Moquegua Valley as well. In fact, it is very likely that these two plant communities were contiguous with each other and were simply located in different micro agroecological niches where different types of crops were grown and a different assemblage of grassy weed species thrived (D. J. Goldstein, personal communication, 2008). The most important thing to take from this analysis is that distinctly different types of agricultural products were found in domestic and non-domestic contexts at Yahuay Alta. In addition, the evidence from the weedy grass assemblages suggests the utilization of different plots of land where different agroecological strategies may have been implemented in order to grow different types of crops.

6.6.2.1 The use of *Schinus molle* at Yahuay Alta As described above, there is evidence that during the Terminal Huaracane period the residents of Yahuay Alta were brewing and consuming an alcoholic beverage: *chicha de molle*, which is made from *Schinus molle* seeds. *Chicha de molle* is a fermented beverage that is still produced in some modern Andean communities. After cleaning off their papery outer coating, ripe *S. molle* fruits can be boiled to remove the resin that coats the pitted seeds in order to produce a sugary mash for fermentation (Goldstein and Coleman 2004; Goldstein, et al. 2009). Recent ethnographic research conducted by Goldstein and Coleman (2004) focusing upon the production of *chicha de molle* has helped in positively identifying archaeological evidence for its prehistoric production at the imperial Wari center of Cerro Baúl, which is located just approximately 8.1 km up valley from Yahuay Alta (Goldstein, et al. 2009; Moseley, et al. 2005).

At Cerro Baúl, *S. molle* seeds were among the most prevalent plant remains, found in nearly every single context examined (Goldstein, et al. 2009). *S. molle* seeds are typically found in four different modalities in archaeological contexts. The first of these are pit features that contain over 1,000 seeds (often containing well over 10,000 seeds) deposited in single episodes. These features represent the disposal of the dregs, or boiled seeds, from the large-scale production of *chicha de molle* (Goldstein and Coleman 2004; Goldstein, et al. 2009). In this case, larger deposits represent events where larger amounts of *chicha de molle* was brewed. Very large deposits of *S. molle* seeds were found in several contexts at Cerro Baúl, including below floor pits full of seeds found in the Monumental Brewery and Palace Structure 24. These deposits have been interpreted as the dregs from the production of large quantities of *chicha de molle* (Goldstein, et al. 2009; Moseley, et al. 2005).

The second modality for the deposition of *S. molle* consists of single deposits containing 200 – 500 seeds (Goldstein, et al. 2009). These deposits likely represent the dregs from the small-scale production of *chicha de molle.* This scale of production was probably associated with individual households, and not necessarily related to feasting activities. Evidence from Cerro Baúl suggests that this level of production is associated with elite households and ceremonial structures (Goldstein, et al. 2009).

The third modality for the deposition of *S. molle* consists of deposits of less than 300 seeds. This modality does not include discrete below floor deposits; instead it consists of general garbage or midden deposits that are typically found in abandoned rooms at Cerro Baúl (Goldstein, et a. 2009). The final and fourth modality in which *S. molle* seeds occur is low-density distributions on living surfaces or in general midden features. This modality consists of concentrations of less than 100 seeds, but deposits of less than ten seeds are not uncommon. This type of distribution likely represents household level collection of seeds for communal *chicha* production, the collection of other parts of the *S. molle* tree for other purposes, such as fire wood, and/or even the consumption of the peppery seeds as a condiment (Goldstein and Coleman 2004; Goldstein, et al. 2009).

At Wari contexts in the Moquegua Valley large quantities of *S. molle* seed are only found in what are considered to be elite contexts on the summit of Cerro Baúl. Thus although these seeds were found in small quantities in most Wari contexts regardless of status or location, Goldstein, et al. (2009) believe that the large-scale production of *chicha de molle* was only practiced by the Wari elite. In other words it appears that Wari commoners were not producing this *chicha* for domestic consumption.

At Yahuay Alta during the Terminal Huaracane phase, which coincides with the Middle Horizon and the Wari occupation of the upper Moquegua Valley, *chicha de molle* was also being produced. As at Cerro Baúl, *S. molle* is the plant most represented in Yahuay Alta samples. An estimated total of 198,328 specimens of *S. molle* were found at the site, and at least one specimen was found in every Terminal Huaracane excavation unit other than Unit 6. However, the vast majority of *S. molle* remains were found in three large deposits in Unit 7 (Goldstein and Muñoz Rojas 2008).

Three of the four modalities described above for *S. molle* are represented at Yahuay Alta. The first modality was found in Unit 7 where three large sub-floor pits containing hundreds of thousands of *S. molle* seed were found, an estimated total of 197,768 seeds were found in these deposits (see Table 6.2 and Figure 6.9) (Goldstein and Muñoz Rojas 2008). These deposits are very similar to the sub-floor pits full of *S. molle* seeds found on Cerro Baúl that have been interpreted as the dregs from *chicha de molle* production (Goldstein, et al. 2009; Goldstein and Muñoz Rojas 2008; Moseley, et al. 2005). In addition, the seeds in these the pits in Unit 7 look similar to the seeds found on Cerro Baúl; that is the seeds look as if they have been through the process of boiling to remove their resin (D. J. Goldstein, personal communication, 2008). Given that it takes approximately 4,000 *S. molle* seeds to produce 20 liters of *chicha de molle* (Goldstein and Coleman 2004; Goldstein, et al. 2009), over 980 liters of this beverage could have been produced from the *S. molle* seeds deposited in these sub-floor pits. Thus, we can conclude that the dregs from an event or events involving the large-scale production of *chicha de molle* were deposited within the walls of the structure in Unit 7.

The largest of the *S. molle* deposits in Unit 7 (Rasgo 2) contained both seeds and fruit parts, indicating that at least some, and possibly all, of the *S. molle* seeds were brought directly to the structure in Unit 7 for processing (Goldstein and Muñoz 2008). Goldstein and Coleman (2004) believe that one of the most effective ways to gather *S. molle* seeds is to divide the labor of collection between many individuals and bring the seeds to a central place for processing. In the case of Yahuay Alta, Unit 7 appears to have been such a central processing location.

In addition to these large deposits, *S. molle* seeds were found in both the second and forth modalities described above. In Unit 3 there was a sub-floor pit, Rasgo 17, which contained just over 200 seeds. This smaller scale deposit is consistent with patterns from Cerro Baúl of production of *chicha de molle* for elite Wari household consumption (Goldstein and Muñoz Rojas 2008). Given that Unit 3 consists of an exceptionally large stone structure, it is entirely possible that it was inhabited by a higher status or wealthier household.

The low density (fourth modality) for *S. molle* seeds was represented in all excavated Terminal Huaracane contexts except for Unit 6, although only one seed was found in Unit 5 (Goldstein and Muñoz Rojas 2008). These low densities indicate that even though the production of *chicha de molle* was not taking place in every context, most residents were at least involved in the collection of these seeds. In addition, the residents at Yahuay Alta could also have been using *S. molle* seeds for other purposes that did not require large quantities of seeds, for example as a condiment or for medicinal purposes (Goldstein and Coleman 2004; Goldstein and Muñoz Rojas 2008).

The possible cultural implications for the use of *S. molle* and the production of *chicha de molle* at Yahuay Alta will be discussed in more detail below in the section focusing upon the Terminal Huaracane community. Finally, it is of note that the radiocarbon date from Unit 7 was obtained directly from a *S. molle* seed taken from Rasgo 2, one of the large sub-floor deposits. The date obtained from this sample places the formation of this deposit (and presumably the brewing of *chicha de molle*) within the Middle Horizon when Wari colonists inhabited the upper Moquegua Valley (see Table 6.1).

6.7 EXTERNAL TIES

Terminal Huaracane phase residents at Yahuay Alta had access to some exotic materials from various regions in the Andes. Marine shell was the most common exotic item found during this time period, occurring in varying quantities in all Terminal Huaracane contexts except for Unit 5 (see Table 6.9). As in the Late Huaracane, all of the marine shell found in Terminal Huaracane context was from species exploited for their decorative shells rather than nutritional value.

Examples of how shell was used for decorative purposes included small circular beads, which were described above, and complete small marine snail shells, mostly the species *Oliva peruviana*, with holes drilled into their ends to make them into beads or pendants.

In order to make the quantities of marine shell found in each context comparable to each other, a marine shell to ceramic sherd ratio was calculated by dividing the total number of marine shell specimens found in each context by the total number of ceramic sherds found in each context (Table 6.13). The results of this analysis demonstrate that Units 7 and 8 had relatively higher proportions of this exotic material. These results are somewhat surprising given that Unit 6 was the only context with any type of evidence for the production of marine shell beads.

Table 6.13. Marine shell to ceramic ratios for Terminal Huaracane phase excavation units

	Unit 3	Unit 5	Unit 6	Unit 7	Unit 8
Total # of marine shell fragments	66	0	78	40	86
Total # of ceramic sherds	1061	93	1381	203	812
Large mammal bone fragment/ceramic sherd ratio	0.062	0.000	0.056	0.197	0.106

As mentioned in the previous chapter, most marine shell had to be brought up valley approximately 75 km from the Pacific Ocean. The majority of the marine shell specimens recovered from Terminal Huaracane contexts could have been obtained from the cold waters at the relatively near coast, but there were two exceptions to this: two specimens of *spondylus* shell spines were found in a sub-floor storage pit in Unit 8 (see Figure 6.39). *Spondylus* is a species that only lives in warm ocean waters and the nearest source for *spondylus* shell was off the coast of modern day Ecuador, some 1700 km to the north.

Another exotic material that was found in many Terminal Huaracane contexts was obsidian, which occurred in varying quantities in all excavated contexts from this time period (see Table 6.5). There is no known local source for obsidian in the Moquegua Valley and the characteristics of the obsidian assemblage at Yahuay Alta conform to the expectations for indirectly procured lithic materials. Lithic assemblages composed of indirectly procured materials are expected to be dominated by artifacts with complex and late-stage technological attributes, with initial stages of reduction either absent or underrepresented. An assemblage of this type should consist primarily of finished artifacts accompanied by small-sized débitage, which is indicative of the final stages of reduction, such as edge retouching and the recycling of broken artifacts (McAnany 1989: 333; Vining 2005: 34). In other words, indirectly procured lithic assemblages should not include high proportions of raw nodules of material or large flakes from the early stages of lithic reduction.

No raw nodules or flakes with cortex were found in the Yahuay Alta obsidian assemblage, which was comprised entirely of finished tools, primarily projectile points, and small débitage. Most of the obsidian débitage at Yahuay Alta was very small, of the 57 obsidian flakes found at the site 91.2% of them were under 2 cm at their maximum dimension. In contrast, only 60.6% of the 472 flakes made from locally available lithic materials found during excavations were under 2 cm at their maximum dimension. We can be more than 99% confident that the difference between these two percentages is not simply due to the vagaries of sampling (Figure 6.51). This aspect of the obsidian assemblage at Yahuay Alta seems reasonably similar to the obsidian assemblage from excavations at the Wari site of Cerro Baúl, where 83% of obsidian débitage fell into the 2 cm or under size category (Vining 2005: 35).

In addition, at Yahuay Alta obsidian implements substantially out weighed obsidian débitage. Obsidian implements at Yahuay Alta had a 5% trimmed mean weight of 1.23 g ± .47 g at the 95% confidence level, while obsidian débitage had an approximate mean weight of 0.27 g ± 0.196 g at the 95% confidence level. [17] This observation not only indicates that this débitage was in general very small, but also suggests that obsidian artifacts at Yahuay Alta were not produced from primary flakes (Vining 2005: 36). If primary reduction took place at Yahuay Alta, it would be expected that there would be flakes or débitage within the weight range of completed implements. This is because implements are made from larger flakes that served as blanks or performs and during the process of production some large flakes are always rejected as unsuitable for further reduction (Vining 2005: 36). The lack of larger obsidian flakes is further evidence that only the late stages of lithic reduction of this material were taking place at Yahuay Alta. All these patterns fit well with the expectations for indirectly procured lithic materials described above. The implement weight to débitage weight ratio at Yahuay Alta is almost exactly the same as the ratio at Cerro Baúl where the mean obsidian implement weight was 1.2 g

[17] A 5% trimmed mean was necessary for the implements in this case because of an extreme outlier, a 19.0 g implement found in Unit 3. The mean weight for débitage is approximate because many débitage fragments weighted less than 0.1 g, which exceeded the accuracy of the scale used in this analysis. All fragments weighing less than 0.1g were given an arbitrary weight of 0.04 g.

and the mean obsidian débitage weight was 0.4 g (Vining 2005: 35). The similarity between the obsidian assemblages at Yahuay Alta and Cerro Baúl is compelling evidence that the obsidian at Yahuay Alta was an indirectly procured material because Vining (2005) has convincingly demonstrated that the obsidian at Cerro Baúl was indirectly procured.

Obsidian can be accurately sourced because each geological obsidian source has its own unique geochemical signature. Research on geochemically sourcing archaeological obsidian has been taking place in South America since the 1970s and the obsidian exchange network for the Middle Horizon in the south-central Andes is now relatively well understood (Burger, et al. 2000).

During the Middle Horizon there were two primary obsidian sources utilized in the south-central Andes: the Alca source was located in the Cotahuasi Valley in the central part of the Department of Arequipa; and the Chivay source located in the Colca Valley in the eastern part of the Department of Arequipa (Burger, et al. 2000) (Figure 6.52). During this time period, the Alca source appears to have been controlled by the Wari state and supplied the majority of the obsidian to Wari colonies, such as Pikillaqta, in the Cuzco region. Alca obsidian is not found at any Middle Horizon sites in the Titicaca Basin. This source also supplied some obsidian to the Wari capital of Huari in Ayacucho. However, the majority of obsidian at Huari was obtained from the Quispisisa source, which is also located in the Ayacucho region (Burger, et al. 2000). Although the Chivay source appears technically to be within the territory controlled by the Wari state, the Chivay source supplied the majority of the obsidian used in the Titicaca Basin, which at this time was dominated by the Tiwanaku state. During this time period, Chivay obsidian was not utilized in Wari dominated territory to the north of this source (Burger, et al. 2000). At the site of Tiwanaku itself, as much as 90% of the obsidian came from the Chivay source (Giesso 2000: 204). Although it is arguable whether or not obsidian sources, which may be quite spatially expansive, can be effectively monopolized by a state (Jennings and Glascock 2002: 115; Vining 2005: 34), it appears that the Alca and Chivay sources were controlled by the Wari and Tiwanaku states, respectively, during the Middle Horizon (Burger, et al. 2000).

During the Middle Horizon the Moquegua Valley was the only known region in the Andes with permanent settlements of both the Wari and Tiwanaku states (Goldstein 1993b; Moseley, et al. 1991; Williams 2001; Williams and Nash 2002). For the residents of the Moquegua region we would expect that the Chivay source would be the most utilized, because at a distance of approximately 180 km from the region Chivay was the closest source of high quality obsidian. However, geochemical sourcing of obsidian found at Middle Horizon sites in the Moquegua Valley has shown that Chivay obsidian is relatively rare and Alca obsidian is the most common type in the region (Burger, et al. 2000). This is surprising because the Alca source is approximately 300 km from the Moquegua Valley. Burger, et al. (2000) conducted geochemical sourcing tests on 89 specimens of obsidian found on the surface of Cerro Baúl and found that 79% of this sample came from the Alca source. In addition, 8% came from the Quispisisa source, 8% came from the Andahuaylas A Type, which is probably from a yet unidentified source in the Department of Apurimac, and only 3% came from the Chivay source (Burger, et al. 2000: Table 6). The Alca, Quispisisa, and Andahuaylas sources were all within the sphere of the Wari state, so it is not necessarily surprising that they were the most common types found at the Wari center of Cerro Baúl. However, it is of note that the Quispisisa source is approximately 630 km from the Moquegua Valley and the probable Andahuaylas source is at least 470 km distant. The obsidian presumably had to travel even further over trade routes, probably at least 800 km from Quispisisa, to get to the Moquegua region (Burger, et al. 2000). More recent geochemical sourcing of obsidian from excavated contexts at Cerro Baúl has generated similar results, with the Alca source dominating the assemblage and Quispisisa obsidian making up a small but noteworthy percentage of the assemblage as well (P. R. Williams, personal communication, 2008). These data demonstrate that the Wari residents in Moquegua were obtaining obsidian through previously established procurement and exchange networks, rather than attempting to develop the closest source. It is possible that the Wari did not have any access to the closer Chivay source because of Tiwanaku dominance of this source (Burger, et al. 2000: 336).

The most surprising geochemical sourcing results from this region come from the well-documented Tiwanaku site of Omo (Goldstein 1989, 1993b). Obsidian was relatively rare at Omo site, and only eight specimens from the site were tested. The results showed that the obsidian at this site came from a variety of sources: 2 from Alca; 3 from Andahuaylas; 1 from Quispisisa, and only 2 from Chivay (Burger, et al. 2000; Table 6.6). Thus even at a clearly Tiwanaku affiliated site most of the obsidian came from Wari controlled sources. This finding suggests that the Wari polity dominated the obsidian exchange networks in the Moquegua Valley and even residents at Omo were not obtaining the majority of their obsidian from Tiwanaku itself or through Tiwanaku controlled exchange networks (Burger, et al. 2000).

Given these data and the fact that obsidian was found in Terminal Huaracane contexts at Yahuay Alta, it is important to make an attempt to understand how the residents at Yahuay Alta participated in the long-distance obsidian exchange system. To this end, twenty-four specimens of obsidian from Yahuay Alta were geochemically sourced by P. R. Williams using a nondestructive X-ray florescence (XRF) technique.[18] This analysis included obsidian collected during both surface collection and excavation. Because obsidian was only found in excavated contexts dating to the Terminal Huaracane phase it is believed that the majority of the obsidian on the surface dates to this time period as well. In addition, four of the six surface collection samples were found in the western half of the site, which was primarily occupied during the Terminal Huaracane phase. This sample of 24 specimens represents 28.9% of the obsidian specimens recovered from Yahuay Alta, and 63.9%, of the 36 contexts from which obsidian was recovered at the site. This sample was comprised of 22 projectile points and two tools (no specimens of débitage were included). The results of this analysis showed a very similar pattern to the one found at Cerro Baúl (Table 6.14).

[18] Patrick Ryan Williams of the Elemental Analysis Facility at the Field Museum conducted the geochemical sourcing of the obsidian from Yahuay Alta as part of a larger geochemical sourcing project involving obsidian samples from various sites throughout the Moquegua Valley. The analysis was conducted utilizing a portable XRF machine in the facilities of the Museo Contisuyo in the city of Moquegua, Peru.

Table 6.14. Geochemical sources for obsidian from Yahuay Alta

Recovery Method	Specimen Number	Context	Obsidian Source
Surface Collection	YA06-1-019-005	Unit 19	Chivay
Surface Collection	YA06-1-039-003	Unit 39	Alca
Surface Collection	YA06-1-072-003	Unit 72	Chivay
Surface Collection	YA06-1-079-003	Unit 79	Alca
Surface Collection	YA06-1-084-002	Unit 84	Alca
Surface Collection	YA06-1-134-003	Unit 134	Alca
Excavation	YA06-2-03-058-012	Unit 3	Alca
Excavation	YA06-2-03-072-009	Unit 3	Alca
Excavation	YA06-2-05-004-004	Unit 5	Quispisisa
Excavation	YA06-2-05-005-005	Unit 5	Alca
Excavation	YA06-2-05-007-002	Unit 5	Alca
Excavation	YA06-2-06-017-005-a	Unit 6	Alca
Excavation	YA06-2-06-017-005-b	Unit 6	Alca
Excavation	YA06-2-06-019-005	Unit 6	Quispisisa
Excavation	YA06-2-07-023-016	Unit 7	Alca
Excavation	YA06-2-07-031-023	Unit 7	Quispisisa
Excavation	YA06-2-07-033-002	Unit 7	Alca
Excavation	YA06-2-07-037-002	Unit 7	Alca
Excavation	YA06-2-08-034-014	Unit 8	Alca
Excavation	YA06-2-08-036-004	Unit 8	Alca
Excavation	YA06-2-08-041-005	Unit 8	Alca
Excavation	YA06-2-08-042-013	Unit 8	Alca
Excavation	YA06-2-08-045-011	Unit 8	Alca
Excavation	YA06-2-08-053-007	Unit 8	Alca

At Yahuay Alta 19 of the 24 obsidian specimens in the sample or 79.2% ± 17.2% at the 95% confidence level were derived from the Alca source. This percentage is the same as Burger, et al. (2000: Table 6.6) found in their sample of obsidian from the surface of Cerro Baúl. At Yahuay Alta Quispisisa obsidian comprised 12.5% ± 14.0% at the 95% confidence level of the sample; taken in combination with the Alca obsidian at the site 91.7% ± 11.7% at the 95% confidence level of the obsidian at Yahuay Alta came from sources known to have been controlled by the Wari state. In addition, these Wari controlled sources were substantially further from Yahuay Alta than the Chivay source from which only 8.3% ± 11.7% at the 95% confidence level of the obsidian sample from Yahuay Alta was obtained. These data demonstrate that the Terminal Huaracane inhabitants of Yahuay Alta were obtaining their obsidian primarily from Wari controlled sources, suggesting that the Wari controlled the flow of obsidian into the

Moquegua region during the Middle Horizon. The heavy representation of Wari obsidian at Yahuay Alta, especially the specimens from the distant Quispisisa source, demonstrates that the residents at Yahuay Alta were tied into an obsidian exchange network that encompassed most of the central Andes.

Even though a small proportion of the obsidian from Yahuay Alta came from the Tiwanaku controlled source of Chivay, at Yahuay Alta the Wari still probably controlled the flow of obsidian into this community. This is because a small proportion of the obsidian found at Cerro Baúl was Chivay obsidian. Thus, given that the vast majority of obsidian, 91.7%, from Yahuay Alta came from Wari controlled sources, the Chivay obsidian at Yahuay Alta likely was obtained via Wari traders from Cerro Baúl.

An exotic material found at Yahuay Alta in very small quantities was lapis lazuli; only four small fragments, each weighing less than 0.1 g were found in Unit 7. This dark blue stone, which was used to make decorative beads, has no known local source and the closest known source of true lapis lazuli is in the central part of modern day Chile. The presence of this material at the site, even in such small quantities, suggests Yahuay Alta residents participated in or had access to exchange networks that extended into the regions south of Moquegua, which were considered to be part of Tiwanaku controlled and/or influenced territory during this time period.

One of the few exotic items found in Terminal Huaracane contexts at Yahuay Alta was a Pukara-style incised ceramic sherd found in Unit 6 (see Figure 6.36). The presence of Pukara ceramics and textiles at Huaracane sites, primarily in boot tomb cemeteries, has been well documented by Goldstein (2000b, 2005). Pukara-style artifacts typically are found at Huaracane sites in Late Huaracane phase contexts (Goldstein 2000b, 2005). This is not surprising because the Pukara polity, located in the northern Titicaca Basin, is believed to have collapsed circa A.D. 300 (Klarich 2005; Mujica 1988; Stanish 2003). However, the only Pukara-style ceramic sherd at Yahuay Alta was found in a context that dates to the Terminal Huaracane or Middle Horizon. There are two possible explanations for this anomaly. First, Unit 6 is the only excavated context that had two superimposed occupations. Possibly this sherd, although found in the upper layer of the unit, was deposited by earlier inhabitants of this context and got mixed in with the construction fill when this context was reorganized during the Terminal Huaracane phase. Second and less likely, Pukara-style ceramics were rare in Huaracane contexts and were presumably high status items and symbols of social power (Goldstein 2000b). As such they may have been curated by high status individuals and passed down to subsequent generations. However, this does seem quite unlikely in this case given that only one small sherd was found, and the current evidence suggests there was a hiatus in occupation at Yahuay Alta between the Late and Terminal Huaracane phases.

Finally, chrysacolla was a relatively common material in many Terminal Huaracane contexts. Although not a truly exotic material, chrysacolla was obtained from sources located primarily in the upper section of the Moquegua Valley. Its presence at the site demonstrates that the residents of this site were involved in the procurement of and/or exchange of a regional exchange material, which was utilized primarily for decorative rather than practical purposes.

The majority of material recovered during Terminal Huaracane contexts was obtained from local sources, however a variety of regional and long-distance goods were found as well. These goods came from a variety of sources, demonstrating that the residents of this site were involved in or at least had access to exchange networks that extended throughout the Andes both to the north and south of the Moquegua Valley.

6.8 FUNERARY CONTEXTS

During the excavations of Unit 6 an intact adult human burial was discovered on the floor of the semi-subterranean oval structure in the southwestern section of this unit. This oval structure had a maximum diameter of approximately 3 meters on the surface and its floor had a maximum diameter of approximately 2.25 meters. The floor of this structure was located approximately 65 cm below the surface of the site and made of a prepared, smoothed, hardened clay. The floor was broken in several places, especially in the more western section of the structure. This floor was originally subdivided into three sections or compartments by low clay walls or barriers that ran roughly from north to south (Figures 6.53 & 6.54). These barriers rose 4 – 10 cm above the floor surface and were approximately 6 cm wide (Figure 6.55). Very little of the more western barrier in Quad 74 was preserved and nearly one meter of the more eastern barrier in Quad 75 was preserved. The exact purpose of the low barriers or this structure as a whole is unknown; nothing similar to this structure has been reported in any Huaracane context.

The stratigraphy of this oval structure was different than that in the remainder of Unit 6, with the exception of Layer S, which was a 2 – 3 cm thick layer of loose soil and rocks. However, unlike the rest of the unit, few artifacts were recovered from this top layer in the oval structure. Layer A in this structure was subdivided into two separate levels; a thicker upper level, A-1, was the level of fill above the burnt offering and the human remains. This level was 20 – 27 cm thick, except in the most western end of the structure where a looter's pit extended through the level. The upper section of this level consisted of a mix of soil and Huaynaputina ash. Under this, the soil was compacted into thin layers that formed during different episodes of heavy rain, which occur at this site during La Niña years. Few artifacts were found in A-1, it was nearly clean of cultural material. At the surface of the second level in Layer A, A-2, there was what may be a burning feature associated with the burial in Quads 59 and 60 and 67 and 68 that was called Rasgo 1. This feature consisted of a large circular stain of loose, dark soil heavily mixed with black ash that was above and around several large flat stones (Figures 6.56 and 6.57). The radiocarbon date for Unit 6 was taken from a piece of carbon found in this feature, dating it to between cal AD 693 and cal AD 876 at the two sigma range (see Table 6.1). This feature was 10 – 15 cm deep.

Directly below the burned feature, the skeleton of a single adult human was found. The skeletal remains were very poorly preserved and extremely brittle. The bones were found mixed with, but generally below, many large fragments of a least two very large ceramic vessels (Figures 6.58, 6.59, & 6.60). One of these vessels was an *olla sin cuello* and the second was an *olla* with a short, 2 cm high, neck with at least one handle. Both of these vessels were made with *Huaracane Vegetal* paste and had very thick walls. These two vessels were likely intentionally broken over the human remains as an offering at the time of burial. The burial itself was in a semi-flexed position. The preserved limb bones of the individual in this burial were relatively large, suggesting that this individual was a male, however this has not been confirmed. The cranium of this individual was not well preserved, but exhibited an artificial deformation in the fronto-occipital style that is known to have been common among the Huaracane (Figure 6.61) (Blom 2005; Blom, et al. 1998). The upper part of the skeletal remains of this burial were 10 –

15 cm above the floor of the oval structure, but many of the bones, including the cranium, were directly on the floor surface.

I believe that this burial was placed in the oval structure as a type of closing or abandonment ceremony for this structure. This ceremony may have happened at the end of the first occupation in the context at Unit 6. The burning above the burial, which dates to the Terminal Huaracane phase, could be a later offering activity. As the context around Unit 6 was reorganized, creating the upper floor level found in this unit the burial was accidentally disturbed, and the burnt offering was made after the burial had been covered up with large flat rocks, perhaps to ritually reseal the burial. No samples appropriate for radiocarbon dating were obtained from among the bones themselves, so the lower layer of the burial feature has not been securely dated to confirm this interpretation of the context.

6.9 SUMMARY: EXCAVATION EVIDENCE FOR INTRA-SITE VARIABILITY IN THE TERMINAL HUARACANE

There was significant variability between the five excavated contexts of the Terminal Huaracane phase. To begin, a look at the structures from this time period demonstrates some general similarities together with a range of architectural variability. Each of the exposed Terminal Huaracane structures were roughly rectilinear in shape and were constructed using both stone and organic materials. Structures themselves varied widely in size. Unit 3's stone foundations enclosed approximately 84 m^2. In contrast, the presumed living surface of the domestic terrace in Unit 5 covered approximately 15 m^2. Some of the size differences between Terminal Huaracane structures could reflect the natural topography at Yahuay Alta. The terrace in Unit 5 was built upon a steep hill and could not have easily been made much larger. Nevertheless, the size differences in structures would have affected the range of activities that took place within each context.

Despite the wide variability is size of structures in Terminal Huaracane contexts, I found very little variability in storage facilities in the sampled contexts. Every sampled context from this time period, except for Unit 6, which had no identifiable storage facilities, displayed large sub-floor storage pits. Some of these pits seemed built simply to hold goods, while others were designed to hold large rounded *ollas*. These sub-floor pits were all found either in internal space or patio areas that were roofed. The majority of these pits did not hold their original contents. However, as discussed above, in Unit 7 three sub-floor pits did contain their original contents, large quantities of *S. molle* seeds.

Two examples of special storage features were also found in Terminal Huaracane contexts; these were the rectilinear bins or basins found in Units 5 and 8. In all cases storage during the Terminal Huaracane phase took place in internal areas not accessible to the general population at the site. However, considering that Unit 7 was in the public ceremonial sector of the site, the storage that took place in this structure could have been in theory for a supra-household group or possibly even the entire community. Yet, the storage pits in Unit 7 were all located in the interior space of a structure that once had high stone walls, thus these features were likely only accessible to a select group of individuals.

There was significant variability in Terminal Huaracane artifact assemblages. While no single context stood out as "wealthy" in all respects, contexts displaying higher value pottery were indicative of more involvement in the hosting of feasting or consumption activities. There was wide variation in the composition of ceramic ware assemblages among units, with different proportions of various utilitarian wares. All units utilized the *Huaracane Area* ware, and this ware was especially important in Units 6, 7, and 8 (see Table 6.3). This was clearly the preferred utilitarian ware in these contexts. *Huaracane Arena* vessels, although they can be relatively large, generally have the thinnest walls of all the utilitarian ware vessels.

In addition to the utilitarian wares there were also some differences in percentages of the fineware serving vessels found in each Terminal Huaracane contest. Both Unit 6 and 8 had slightly but significantly higher percentages of *Huaracane Fino* bowl sherds than the other contexts. As mentioned above, this could suggest that the residents of these contexts were hosting more feasting or consumption events. This would make sense because both of these units included structures directly associated with open patio areas and it might be expected that feasts or consumption events would typically take place in more open areas. In addition to this evidence, Unit 8 also had a significantly higher percentage of bowl sherds in its diagnostic assemblage.

There was also substantial variability in the lithic assemblages from Terminal Huaracane contexts. Significantly higher percentages of chert were found in Units 3 and 6, suggesting the residents of these contexts had more access to this locally available but high quality material (see Table 6.5). Significantly higher percentages of obsidian were found in Units 7 and 8 than all other contexts at Yahuay Alta. This could suggest that the residents of these contexts had more contact with the Wari colonists in the region, who as mentioned above controlled the procurement exchange networks for this exotic volcanic glass. Unit 5 had a percentage of quartz (87.9%) that was significantly higher than all other contexts from this time period, but it is currently not clear exactly what quartz was used for at Yahuay Alta.

Our samples also revealed variability in intensity of stone tool manufacture/maintenance. The maintenance of lithic implements, indicated by the presence of flakes, was an important activity in Units 3, 6, and 8, but in Units 5 and 7 it was not important at all (see Table 6.7). This pattern suggests that maintenance of lithic tools was not an equally important domestic activity in all contexts at the site

I also found evidence for the specialized production of marine shell beads may have taken place in Unit 6. As discussed in more detail above, there are several lines of evidence suggesting that circular marine shell beads were being produced probably on a part-time basis in the patio area of Unit 6. The area where these beads were being produced is approximately 11 meters from the back (or more northern) side of the platform mound. The close proximity to the platform mound could indicate that the specialized production of these beads may have been related to the public or ceremonial activities that took place on and/or around the platform mound.

The processing, cooking, and/or consumption of meat, indicated by bone fragment density and bone/ceramic ratios, was a domestic activity that took place in varying intensities in most Terminal Huaracane contexts except for Unit 5 where very little bone was recovered (see Tables 10 & 11). The bone/ceramic ratio in Unit 8 was higher than in other contexts from this time period indicating that the processing of meat was more common in this context and/or the residents in this context had more access to meat. The bone/ceramic ratios were also relatively high in Units 3 and 7, suggesting the processing/consumption of meat in these contexts was important as well.

There was also a substantial amount of variability in the botanical assemblages from Terminal Huaracane phase contexts. Units 3, 6, and 8 did not have very diverse botanical assemblages, while Units 5 and 7 had very diverse, but very different, botanical assemblages (Goldstein and Muñoz Rojas 2008). The most important information obtained from the Terminal Huaracane botanical data is that the assemblage recovered from Unit 7, which represents the public ceremonial sector of Yahuay Alta, reflects the utilization of a distinct or more diverse plant community than more domestic sectors of the site (Goldstein and Muñoz Rojas 2008). This difference could be indicative of the different types of activities taking place in these different contexts. For example the *S. molle*, zapallo, peanuts, and gourds (used to make drinking vessels or bowls) found in Unit 7 may have played an important role in feasting events that took place in the public ceremonial sector of the site. In contrast, the arracacha found in Unit 5 may represent the staple crop consumed by typical households at Yahuay Alta.

One of the more interesting aspects of the variability between contexts from the Terminal Huaracane phase was in the number of unique artifacts found. In both Units 3 and 8, various unique artifacts, primarily made from metal, were discovered. In Unit 3, three copper alloy items and several fragments of a decorated hollow bone were found. In Unit 8, one fragment of copper alloy, one fragment of gold foil, and two fragments of *spondylus* shell were found. The fact that these rare items were found in these two contexts could suggest that the residents of these contexts possessed slightly more wealth than other residents at the site. Other than these few examples of unique artifacts the only other clear evidence that any Terminal Huaracane context at the site was particularly wealthy comes from Unit 3. The structure in this context was exceptionally large and constructed with a substantial stone wall foundation. Given that the quality of a household's residential architecture is generally considered one of the best indicators of wealth and or status in agrarian societies (Hirth 1993; Potter 2000b; Smith 1987), the structure in Unit 3 can reasonably be considered a structure associated with a wealthier or higher status household. In addition, the small-scale production of *chicha de molle* in this context also suggests the inhabitants of this structure were a high status household. Nevertheless, we found no displays of material wealth differences in domestic contexts comparable to those seen in Huaracane boot tombs (e.g., Goldstein 2000b).

6.10 THE TERMINAL HUARACANE COMMUNITY

During the time period that I have termed the Terminal Huaracane phase, the indigenous Huaracane inhabitants of the middle Moquegua Valley were coexisting in the region with intrusive colonial Wari and Tiwanaku populations. As discussed in Chapter 2, the nature of these intrusive colonial communities is relatively well understood (e.g., Goldstein 1993a, 2000a, 2005; Williams 2001; Williams and Nash 2002), however little is known about how Huaracane communities were organized during this time period. In fact, the contexts at Yahuay Alta dating to the Terminal Huaracane phase are the first contexts that are securely dated within the Middle Horizon. This investigation at Yahuay Alta has thus provided the first detailed data on the organization of a Huaracane community during this time period and how Huaracane communities interacted with their colonial Wari and Tiwanaku neighbors in the region.

6.10.1 Social differentiation at Yahuay Alta

One of the primary goals of the research at Yahuay Alta (as stated in Chapter 2) was to develop an understanding of the nature of social differentiation within this Huaracane community. Specifically, my first research question was to determine whether or not the major status and/or wealth differences detected in the Huaracane mortuary record extended into domestic contexts at Yahuay Alta. The simple answer to this question is that during the Terminal Huaracane phase, no displays of material wealth and/or social power comparable to those exhibited in the Huaracane boot tombs (see Goldstein 2000b, 2005) were found in domestic life at Yahuay Alta. Answering this question was relatively straightforward, however the goal of this research was not simply to investigate this single aspect of Huaracane social differentiation. Rather, I wanted to look beyond this specific issue and develop a general understanding of how Huaracane social differentiation was manifested in domestic contexts.

The wealth of data generated during the excavation of Terminal Huaracane contexts at Yahuay Alta brought to light many important aspects of social differentiation within this community. First, the excavated sample indicated that there were some relatively minor inter-household wealth and presumably status differences within the Terminal Huaracane community at Yahuay Alta that did not involve extravagant accumulation of material wealth items. With the excavation data it was possible to identify two contexts, Units 3 and 8, where possible wealthier and/or higher status households resided. In addition, Unit 7 also displayed some indicators of higher wealth and status, but this was not a domestic context. Although there were some similarities, the indicators of wealth and status in these contexts were slightly different suggesting different axes and/or levels of wealth/status differentiation existed within this community.

Given its large size and substantial stone walls, prior to excavation it was predicted that Unit 3 was likely the residence of a relatively high status household. In addition, this structure had an architectural feature, a stone bench (see Figures 6.2 & 6.14), that was unique at the site, suggesting the special nature of this context. The following evidence from the excavations in this contexts provided further evidence that this contexts was likely the residence of a high status household:

- Significantly higher percentage of chert (see Table 6.5 & Figure 6.27).
- High bone/ceramic ratio (see Table 6.11).
- Small number of unique, presumably high status, items including 3 alloyed copper artifacts and fragments of a carved bone artifact (see Figures 6.32 – 6.35).
- Small scale production of *chicha de molle*.

This final line of evidence in Unit 3 suggests that in this context *chicha de molle* was produced for household consumption rather than for large supra-household feasting events. In Wari contexts at Cerro Baúl this level of production was found only in high status or what could even be considered elite domestic contexts (Goldstein and Coleman 2004; Goldstein, et al. 2009). Thus, the production of this beverage in Unit 3 indicates that the residents of this context were likely high status members of this community.

In the case of Unit 8 the surface evidence was not particularly indicative of a high status residence since the structure here did not have substantial stone walls or a large amount of internal space. However the following evidence recovered during the excavation of this context suggests that this was likely the residence of a relatively wealthier and/or higher status household:

- Highest bone density and bone/ceramic ratio (see Tables 10 & 11).
- Significantly higher percentage of obsidian (see Table 6.5 & Figure 6.29)

- Significantly higher percentages of *Huaracane Fino* sherds (see Table 6.3 & Figure 6.24)
- Significantly higher percentages of diagnostic bowl sherds (see Table 6.4 & Figure 6.25)
- Small number of unique, presumably high status, items including a fragment of gold foil, a fragment of alloyed copper, and two fragments of *spondylus* shell (Figures 6.37 – 6.39).

The most compelling indicators of wealth/status in Unit 8 are the combined evidence from the bone and the fineware bowls. Taken together these lines of evidence indicate that the residents of this context may have hosted serving or feasting events.

With this admittedly small sample, it is possible to address what role, if any, the five economic and social domains that commonly underwrite social power played in the social differentiation at Yahuay Alta (see Chapter 1). Evidence from the excavated Terminal Huaracane contexts did not indicate that any single household dominated the production or distribution of agricultural staple resources. Units 3 and 8 did not have disproportionably large storage facilities nor did agricultural implements make up significantly large percentages of the tool assemblages from these contexts. In addition, botanical evidence did not indicate that the residents of Units 3 or 8 had diets consisting of higher quality agricultural products.

Although there is no convincing evidence to suggest that the two identified higher status Terminal Huaracane households controlled the production and/or distribution of staple agricultural resources, there is evidence indicating the residents of Units 3 and 8 may have had greater access to camelid meat. As discussed in Chapter 1, in the Andes control over staple resources in not limited to agricultural products as control over camelid herds can be an important source of social power (Forres-Ochoa 1979; Orlove 1977). Both Units 3 and 8 had high densities of large mammal, presumably camelid, bone and high bone/ceramic ratios in comparison to the other examined Terminal Huaracane contexts. It is clear that the residents of these contexts processed and presumably consumed relatively more meat than other residents in the community. Thus control over the access to camelids, whether it was direct or indirect, was a possible foundation of wealth for certain households at Yahuay Alta.

There is some evidence in Unit 8 suggesting that the differential involvement in long distance exchange was associated with higher status, however evidence for involvement in long distance exchange in Unit 3 was not as compelling. Unit 8 had a significantly higher percentage of obsidian than all other Terminal Huaracane contexts (see Table 6.5 & Figure 6.29), suggesting a differential involvement in the Wari trade network for obtaining this desirable exotic resource. Because this obsidian was obtained via interactions with local Wari colonists, obsidian was technically obtained through regional rather than long distance exchange networks. Nevertheless, the evidence does suggest that the residents of Unit 8 were differentially involved in obtaining this exotic material. In addition, Unit 8 had the highest marine shell/ceramic ratio (see Table 6.13) of any of the excavated Terminal Huaracane contexts including a small quantity of exotic *spondylus* shell. In contrast, Unit 3 had a relatively low percentage of obsidian and a relatively average marine shell/ceramic ratio. Thus, differential involvement in exchange networks was no likely to have been an important aspect of social inequality or a source of social power for the residents of Unit 3.

There is no evidence from either Unit 3 or Unit 8 suggesting that these households controlled or were differentially involved in any type of specialized craft production. As a result, control over such production activities was not a source of social power for these the higher status households in my sample.

It was difficult to determine the role that ritual played in the establishment and/or legitimization of the relatively high social status of the households in Units 3 and 8. This issue relates directly to my second research question stated in Chapter 2, which investigated the relationship between status and a household's location in relation to public/ceremonial architecture. The straightforward answer to this question is that the majority of the evidence from the excavated sample suggests that social status was not related to a household's relative proximity to public/ceremonial architecture. It is clear that the residents of Unit 3 would not have been able to control access to the Terminal Huaracane public/ceremonial complex in Sector B. In fact, of all the excavated Terminal Huaracane contexts, Unit 3 was located the furthest from the public/ceremonial complex. It may have been possible for the residents of Unit 8 to dominate access to the public/ceremonial complex from Sector A because this structure was located directly next to the narrow ridge that connects Sector A to Sector B (see Figure 6.1). However, the residents of Unit 8 could not have maintained a monopoly over the access to the public/ceremonial complex, as this complex was easily accessed from Sector C as well. Thus, the social power derived by the residents of Unit 8 from controlling this access route was likely minimal at best. In general, both physical and visual access of the Terminal Huaracane public/ceremonial complex at Yahuay Alta was not restricted or easily controllable and as a result I can be relatively certain that the higher social status detected in Units 3 and 8 was not obtained and/or legitimized by controlling access to the activities or rituals that took place in this complex.

It was more difficult to clearly determine whether or not the residents of Units 3 and 8 were differentially involved in domestic rituals. As mentioned briefly in Chapter 3, the wide range of ritual artifacts found in the Huaracane boot tombs (Goldstein 2000b) was not found at Yahuay Alta. However, Units 3 and 8 each had several unique artifacts that may have been associated with domestic rituals. In Unit 3 there were two fragments of a metal pin that may have been part of a ritual costume and several fragments of a carved hollow bone that may have been a decorated snuff tube or possibly even a flute. The small scale production of *chicha de molle* in this contexts may have also been for use in domestic rituals. In Unit 8 the fragment of gold foil with a hole punched could have been sewn onto a ritual costume and the fragment of metal may have been part of a pin used in a ritual costume as well. In addition, the two fragments of *spondylus* shell found in Unit 8 were likely utilized as some type of ritual offering. However, most of this evidence might also be interpreted as wealth items that could have symbolized higher status and that were not necessarily utilized in domestic rituals. Thus it is difficult to claim that differential participation in domestic ritual was a primary or essential source of social power for these higher status households.

The final possible correlate of social prestige discussed previously was feasting activities. There are several lines of evidence indicating that the residents of Unit 8 were differentially involved in hosting feasting activities, while the evidence from Unit 3 suggests its residents did not regularly host feasts. Although there was not a great deal of evidence for the preparation of feasting events in Unit 8, such as extra hearths or many grinding stones, the ceramic evidence from this context suggests its residents were differentially involved in serving activities. This data taken in conjunction with the fact that the residents of Unit 8 were differentially involved in the processing of meat indicates that the hosting of feasts may have been an important source of social leadership for this household. In contrast, although Unit 3 had a relatively high bone/ceramic ratio, there was no indication that serving activities were common in this context. The processing of meat in this context must have been for household consumption rather than the hosting of supra-household feasts. As discussed above, there is a wealth of botanical evidence from Unit 7 suggesting that preparations for large feasting events took place in this context. Since this was a public context not directly associated with any specific households, it is difficult to determine whether or not the feasting events that were prepared for in this context helped to enhance and/or legitimize the social status of any household or lineages within the community.

Both Units 3 and 8 displayed evidence suggesting that the households located in these contexts were relatively wealthier and/or had higher status than the other excavated Terminal Huaracane contexts. However, material aspects of higher status and/or wealth for each of these households were clearly not the same. The only real similarities between these contexts were that both were differentially involved in the processing and/or consumption of meat, presumably from camelids, and both contexts had relatively tenuous evidence for differential involvement in domestic ritual. So the control of, or at least the differential access to, camelids was an important source of social power that was shared among high status members of the community. The practice of domestic rituals and the display of the materials associated with these rituals may have also been an important source of social power for higher status households. However, as mentioned above, it is also just as likely that the items identified as related to domestic ritual may have simply been wealth items designed to modestly display the status of a household.

There were two domains of social inequality that were important in the development and/or maintenance of social status in Unit 8 that were not as important in Unit 3; these were differential involvement in exchange networks to obtain exotic material and in serving/feasting activities. These findings were surprising because they suggest that the residents of an architecturally modest domestic context were more heavily involved in activities that could enhance and/or legitimize their social status than the residents of the most substantial domestic structure at Yahuay Alta. Overall, these distinctions suggest that the nature of social differentiation within this community was not simply a dichotomy between higher and lower status. There may have been various means for households within this community to obtain higher status and accumulate more wealth. Thus, my sample reveled that there were multiple axes of social differentiation within this community (e.g, Drennan and Peterson 2006), some of which may have corresponded to prestige related to occupational emphases, rather than to status and/or wealth associated with the domination of the local economy.

6.10.2 Interaction and non-interaction with Wari and Tiwanaku colonial populations

The third and final research question, which investigated the nature of interaction between the Huaracane community at Yahuay Alta and the Wari and Tiwanaku populations in the region (see Chapter 2), was answered primarily with data derived from the excavation of Terminal Huaracane contexts. The answer to this question ended up being quite complex surprising. There was no material evidence that the Huaracane residents of Yahuay Alta had any type of interaction with the Tiwanaku colonies in the middle valley, no Tiwanaku-style materials whatsoever were found at Yahuay Alta. This finding helps support Goldstein's (2005: 132-133) hypothesis that Tiwanaku and Huaracane populations, which both inhabited the middle Moquegua Valley, intentionally avoided interaction with each other. Further, the complete absence of maize at Yahuay Alta is such a stark contrast to the Tiwanaku settlements in the valley, which were heavily reliant upon this staple crop (Goldstein 2003, 2005), it suggests that the residents of Yahuay Alta pursued a subsistence pattern that never incorporated maize, even when it was being grown extensively in the vicinity. The maintenance of a more traditional diet not based upon maize may have allowed the Terminal Huaracane community at Yahuay Alta to remain more inconspicuous on the landscape by not needing as much land for their agricultural products or by using different cultivation zones than those exploited by the maize reliant Tiwanaku colonists. Overall, at Yahuay Alta, I found no evidence for acculturation or borrowing form the Tiwanaku colonists stylistically, or in activities.

Interaction between the Huaracane residents at Yahuay Alta and the Wari colonists in the Moquegua region was nearly as limited, no Wari-style materials what so ever were found at Yahuay Alta. Nearly the only evidence for any kind of interaction comes from the geochemical sourcing of the obsidian found at Yahuay Alta, which demonstrated that the obsidian found at Yahuay Alta came primarily from Wari controlled geological sources that were located hundreds of kilometers from the Moquegua Valley (see Table 6.14 & Figure 6.52). This evidence suggests that the obsidian at Yahuay Alta was obtained through some type of interaction with Wari colonists in the region. Overall this evidence suggests that the residents of Yahuay Alta interacted with the Wari on their own terms. They obtained desirable raw materials, such as obsidian, from the Wari that they could not readily acquire in the region, but at the same time chose not to obtain Wari material culture.

Probably the most intriguing evidence that Wari colonial populations had contacts with the Terminal Huaracane community at Yahuay Alta comes from from botanical remains; the *S. molle* pits found in Unit 7. As discussed above in more detail, the evidence from Unit 7 and to a lesser extent from Unit 3 indicates that *chicha de molle* was produced at Yahuay Alta. The evidence indicates that *chicha de molle* was primarily produced in a non-domestic structure that was part of the site's primary public/ceremonial complex, which was dominated by a large platform mound and a large artificially leveled plaza. This suggests that *chicha de molle* was incorporated into at least some of the events that took place in this architectural complex. Presumably this fermented beverage was consumed on and/or around the platform mound and perhaps even in the large plaza itself. A relatively high percentage of the ceramic sherds found in this plaza were *Huaracane Fino* bowl sherds; the only suitable ceramic serving vessels found at Yahuay Alta (see Chapter 4). In addition, botanical evidence from Unit 7 suggests that gourds also may have been used as serving vessels in the public/ceremonial complex (Goldstein and Muñoz Rojas 2008). The main plaza in the public/ceremonial complex could hold approximately 259 people (using Moore's (1996: 147) estimate from Ollantaytambo of 3.6 m^2 per person in public plazas) easily the majority of the adult population of Yahuay Alta. This suggests that much, if not all, of the Huaracane community at Yahuay Alta participated in consumption events involving *chicha de molle*. In addition to this large scale production, there is also evidence from Unit 3 that *chicha de molle* was produced at a smaller scale for household level consumption in higher status households.

What makes the production of *chicha de molle* at Yahuay Alta informative of interaction with the Wari colonists is that this beverage is generally associated with the Wari culture. In fact, Goldstein, et al. (2009) have argued convincingly that *chicha de molle* symbolized Wari ethnicity and played an important role in elite political activities in much the same way that *chicha* made from maize was an integral aspect of Inca politics (e.g., Morris 1979). *Chicha de molle* may have helped Wari elites distinguish themselves from local populations and maintain their traditional Wari identities when they were residing in regions outside their homeland in

Ayacucho (Goldstein, et al. 2009). Thus, the Terminal Huaracane residents at Yahuay Alta were not simply copying a beverage; they may have adopted some Wari "elite behaviors".

Although the Terminal Huaracane community at Yahuay Alta consumed what can be considered an ethnically Wari beverage, no Wari-style decorated ceramics or even Huaracane-style ceramics with Wari iconography were found at the site. No characteristic Wari-style drinking vessels such as *keros* and cups (e.g., Moseley, et al. 2005: 17267) were found at Yahuay Alta. If the residents of Yahuay Alta were trying to emulate or identify with Wari colonists, one would expect to find Wari-style ceramics, especially *keros* for drinking, at least in small quantities. Instead, by producing/consuming this Wari beverage on their own terms with Huaracane-style ceramics the Terminal Huaracane residents of Yahuay Alta were distinguishing themselves from the Wari.

As discussed in Chapter 4, there is evidence to suggest that small scale feasting may have taken place at Yahuay Alta during the Late Huaracane phase. The production and consumption of *chicha de molle* fit in with the local tradition of feasting and may have even allowed for the expansion of the practice (e.g., Dietler 1990, 1997, 1998). This may explain how the practice of feasting changed from a relatively small scale activity that took place primarily in domestic contexts during the Late Huaracane phase to a large scale activity that took place in large public areas during the Terminal Huaracane phase.

In summary, the degree of autonomy maintained by the Terminal Huaracane community at Yahuay Alta in the face of Tiwanaku and Wari colonialism was quite striking. This site was located within very close proximity to the majority of Tiwanaku and Wari colonial settlements (see Table 2.1) and even in sight of some of them. Nevertheless, the excavated sample of Terminal Huaracane contexts revealed no evidence for interaction with Tiwanaku colonists and only minimal interaction with Wari colonists.

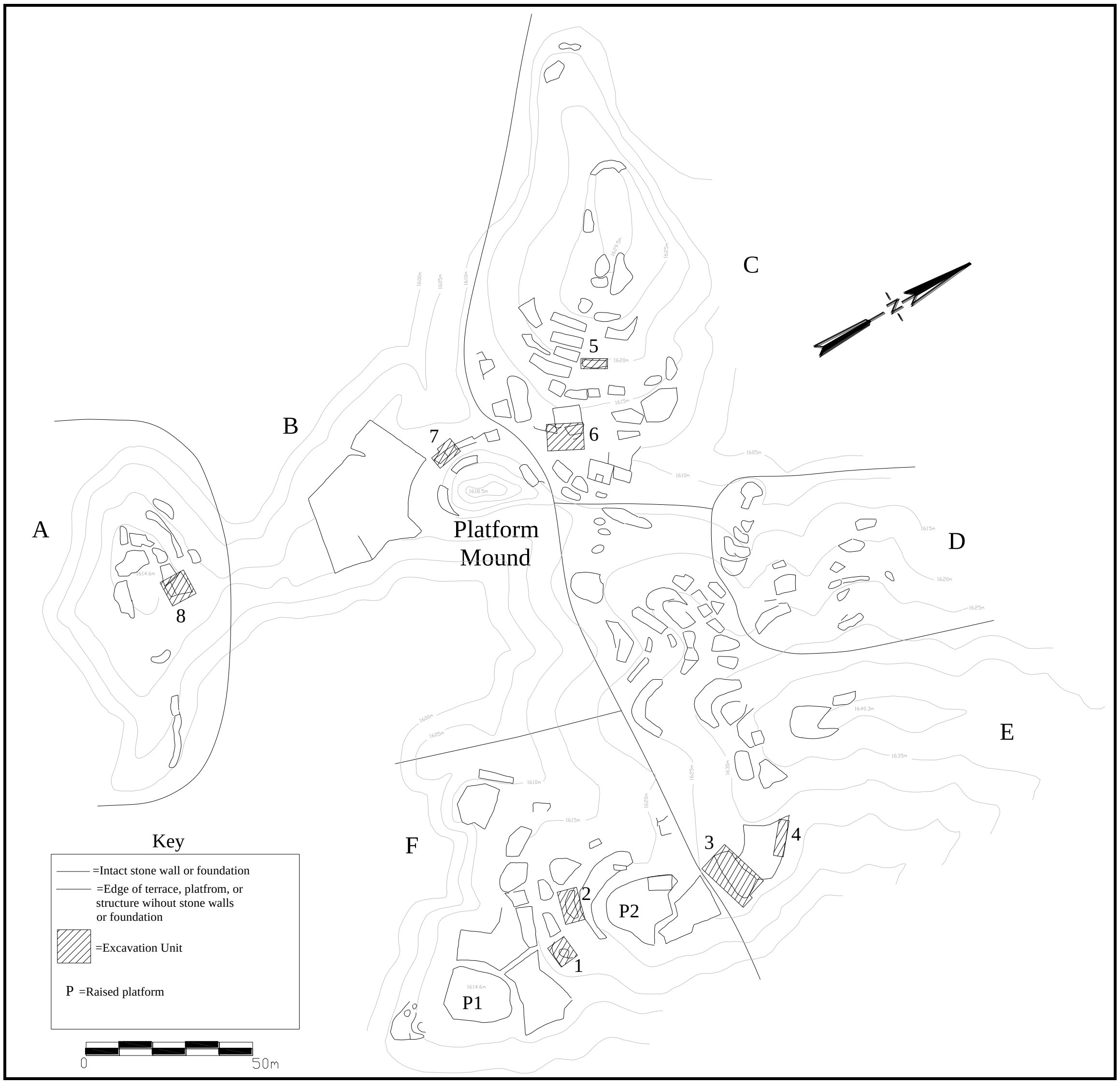


Figure 6.1. Locations of excavation units at Yahuay Alta.

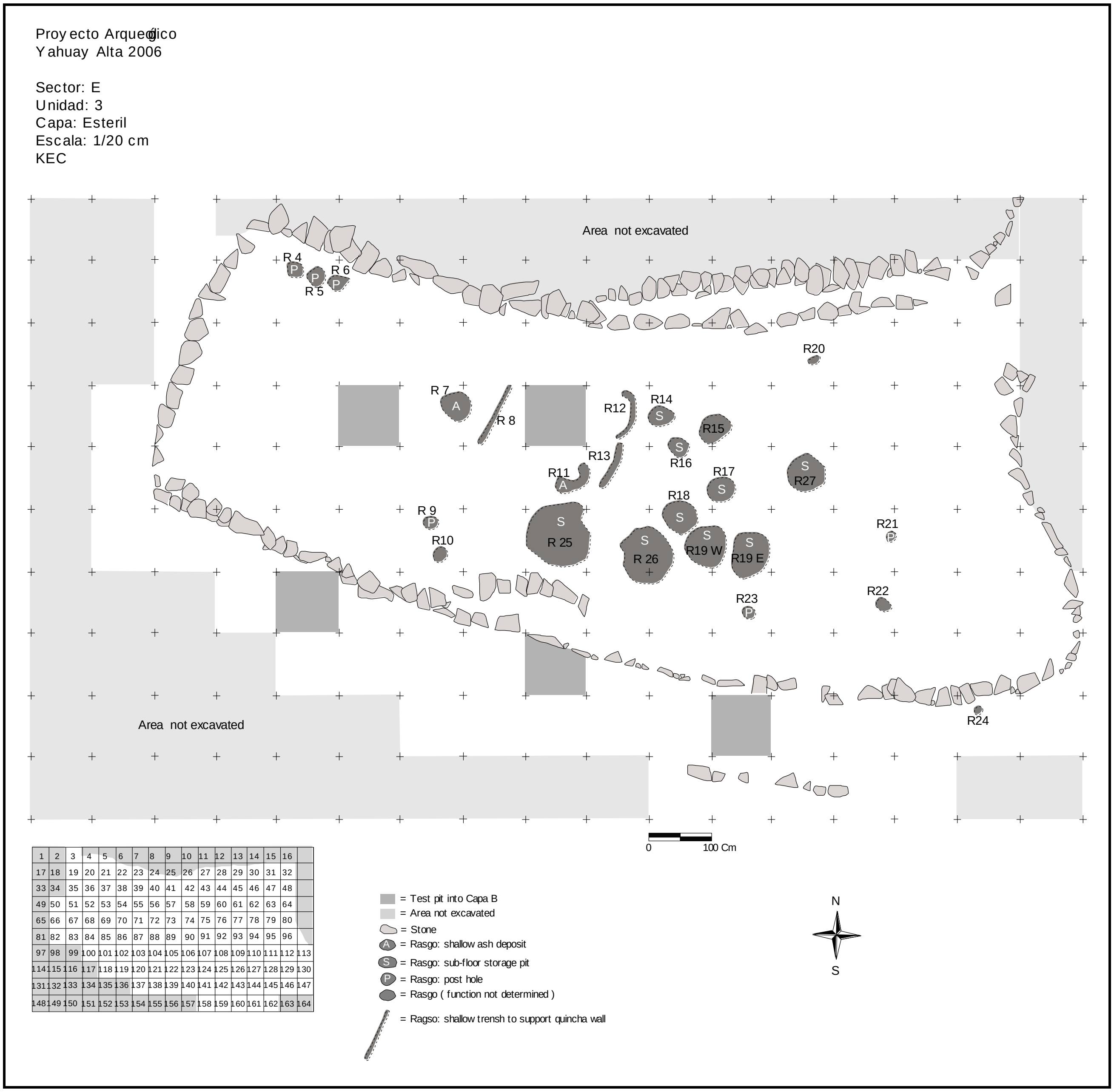


Figure 6.2. Plan view drawing of Unit 3 excavated to the surface of occupation.

Figure 6.3. Surface of occupation of Unit 3 looking southeast from above.

Figure 6.4. Surface of occupation of Unit 3 looking southeast.

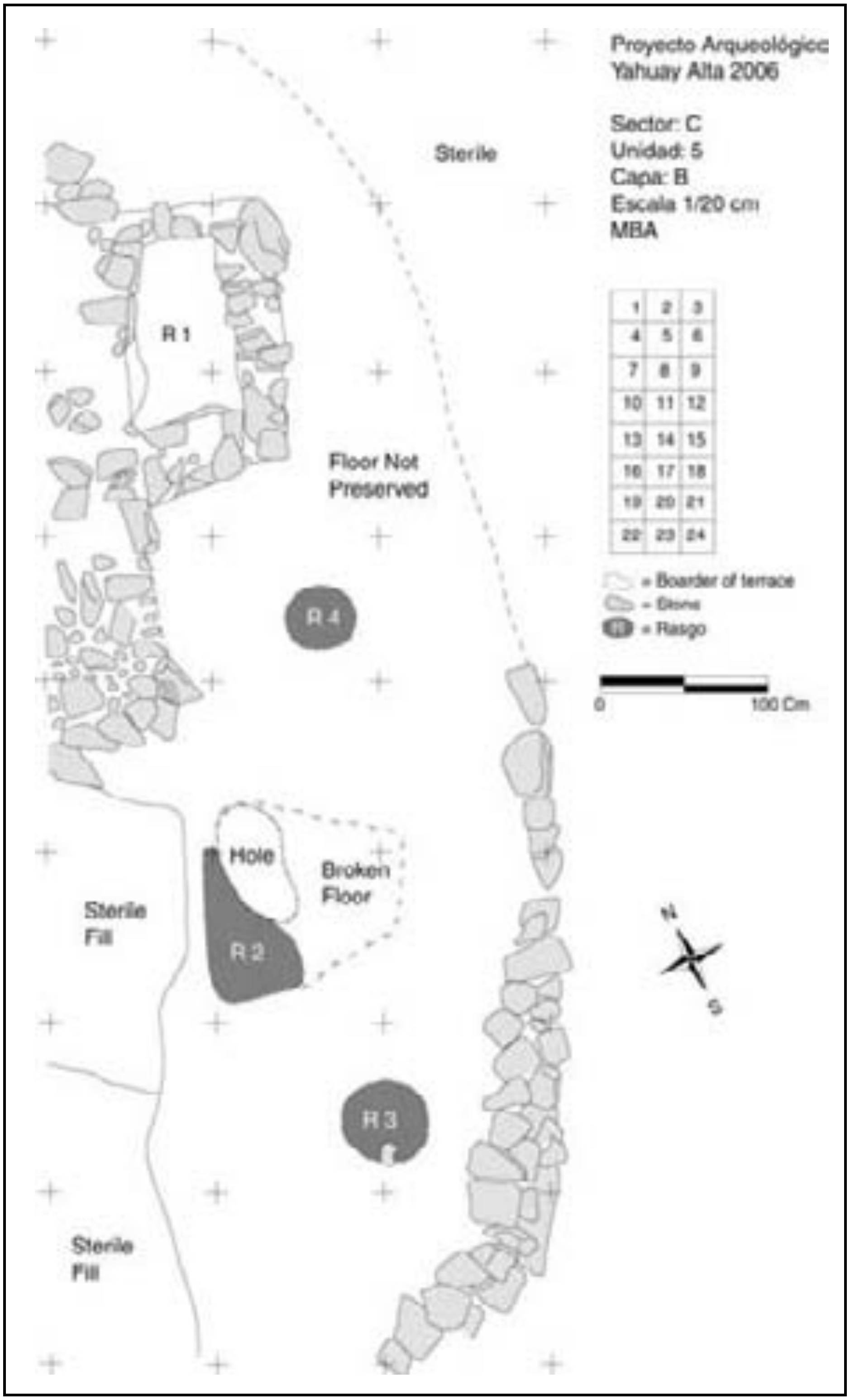


Figure 6.5. Plan view drawing of Unit 5 excavated to surface of occupation.

Figure 6.6. Surface of occupation of Unit 5 looking northeast.

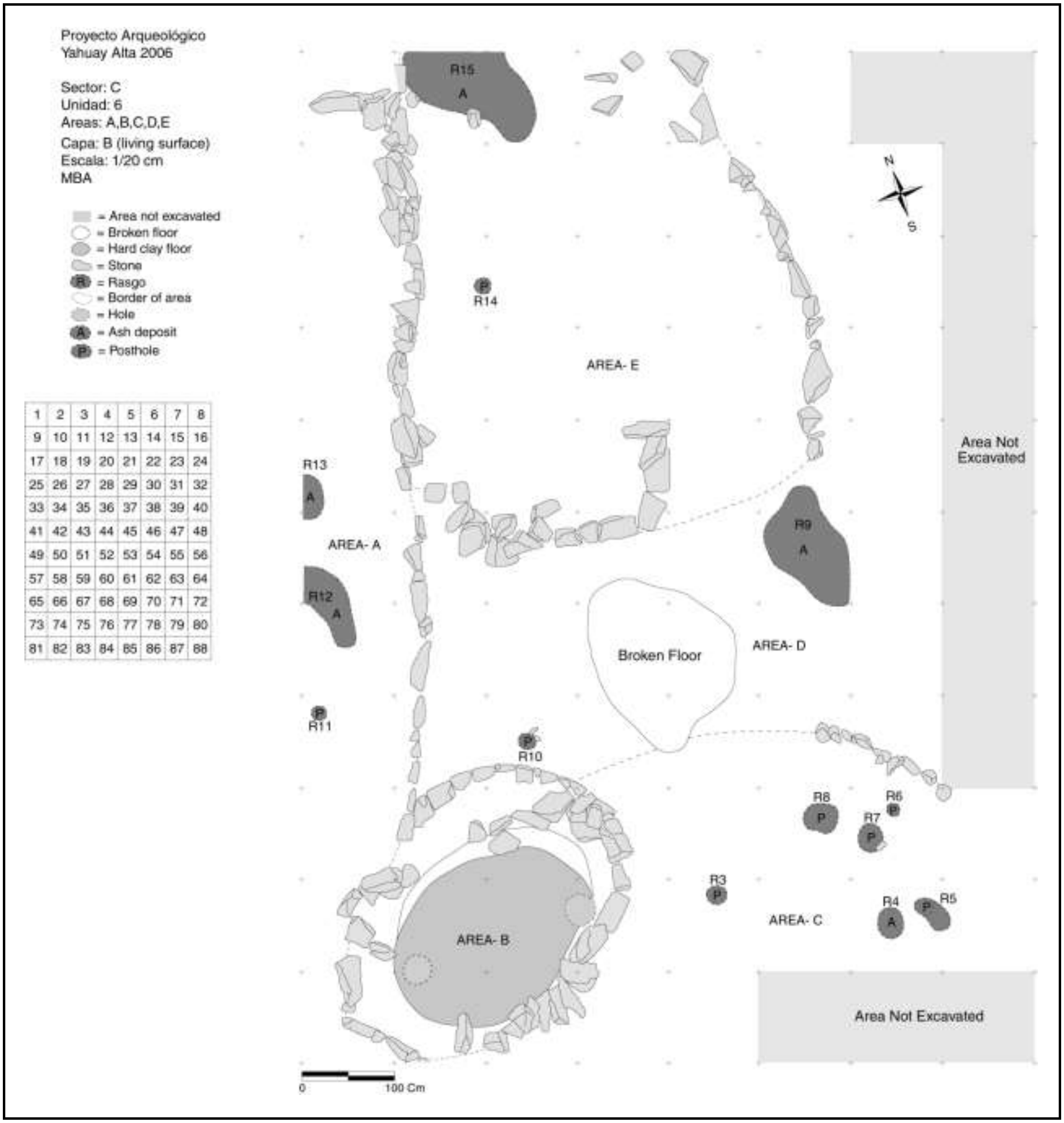


Figure 6.7. Plan view of Unit 6 excavated to the surface of occupation.

Figure 6.8. Surface of occupation of Unit 6 looking northwest.

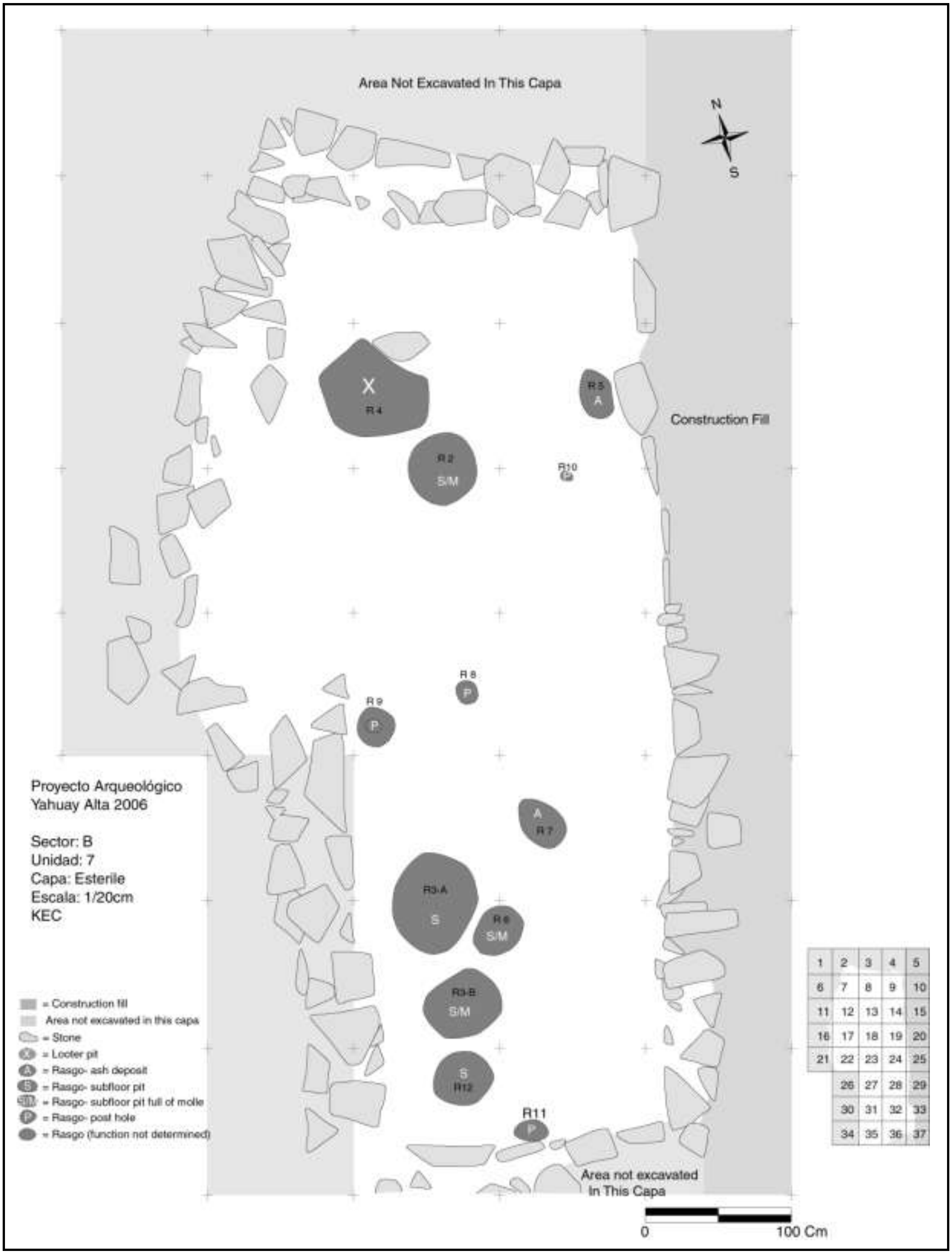


Figure 6.9. Plan view drawing of Unit 7 excavated to the surface of occupation.

Figure 6.10. Surface of occupation of Unit 7 looking south.

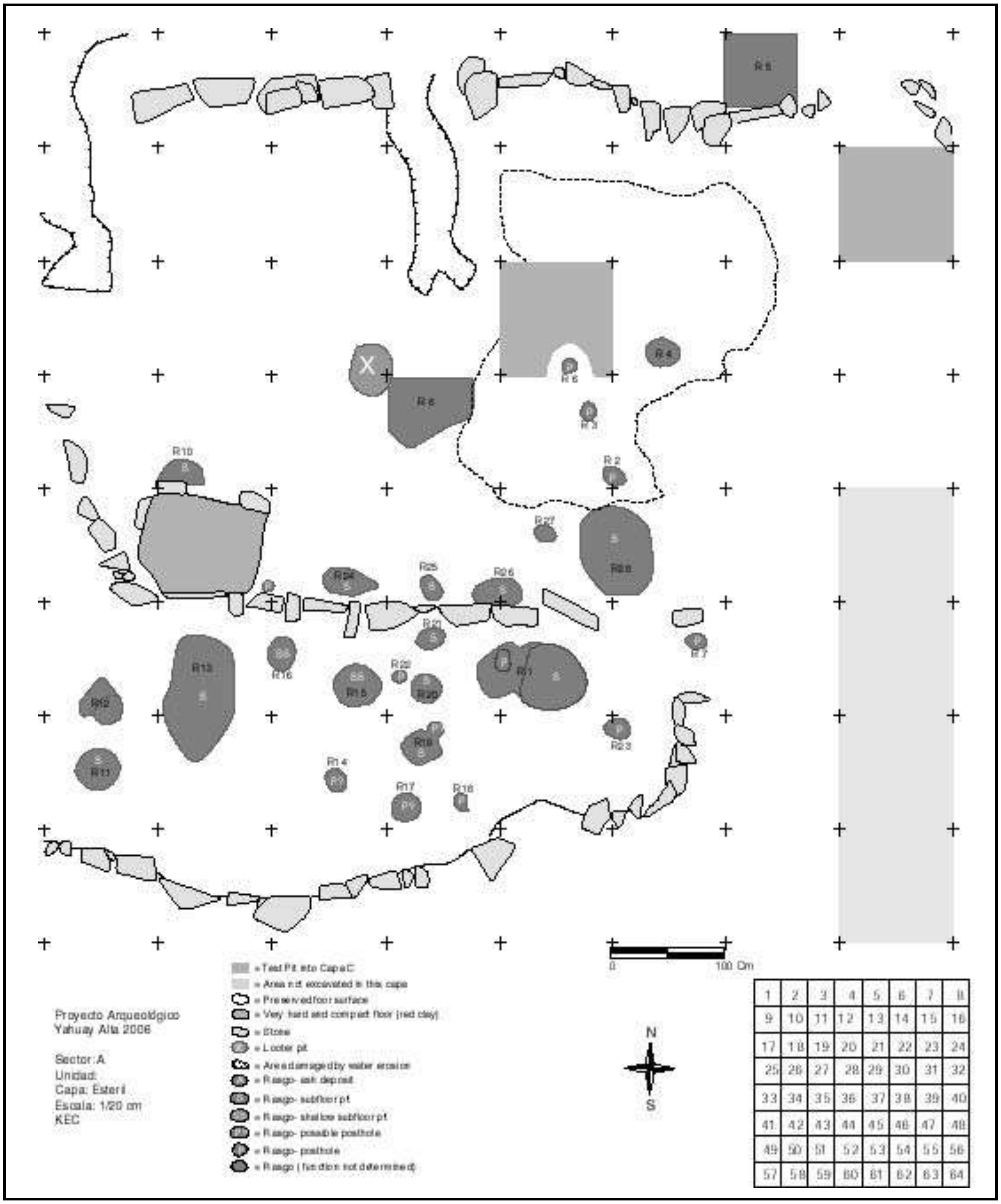


Figure 6.11. Plan view map of Unit 8 excavated to the surface of occupation.

Figure 6.12. Surface of occupation of Unit 8 looking east.

Figure 6.13. Eastern wall foundation of Unit 3 looking west from below.

Figure 6.14. Bench along back wall in Unit 3 looking west.

Figure 6.15. Smooth faced stone walls in southeastern corner of Unit 7.

Figure 6.16. Sub-floor storage pit cluster in Unit 3 looking west.

Figure 6.17. Rasgo 1 in Unit 5, rectangular stone walled storage bin.

Figure 6.18. Rasgo 10 in Unit 8, square basin with hard clay floor.

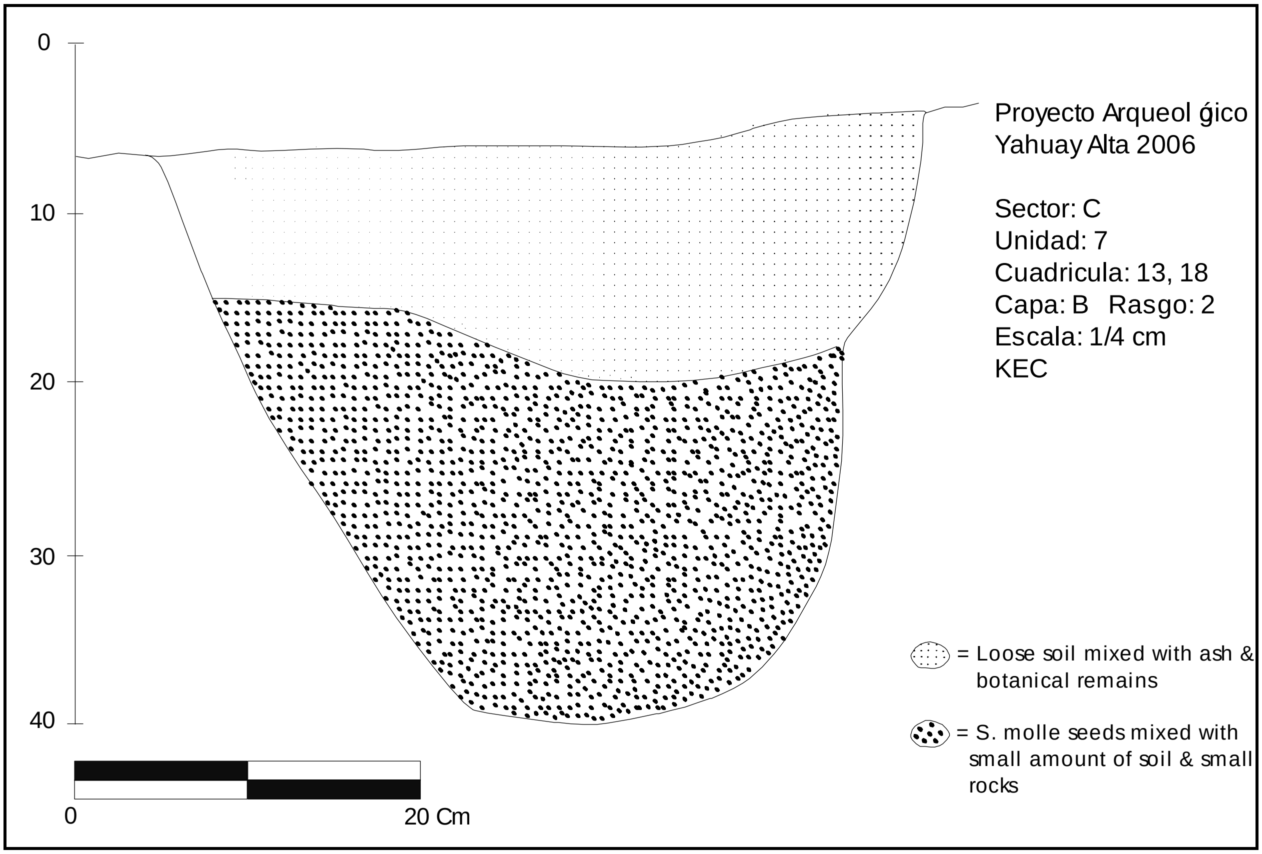


Figure 6.19. Profile of Rasgo 2 in Unit 7. S. molle pit.

Figure 6.20. Profile of Rasgo 2 in Unit 7 looking north, S. molle pit.

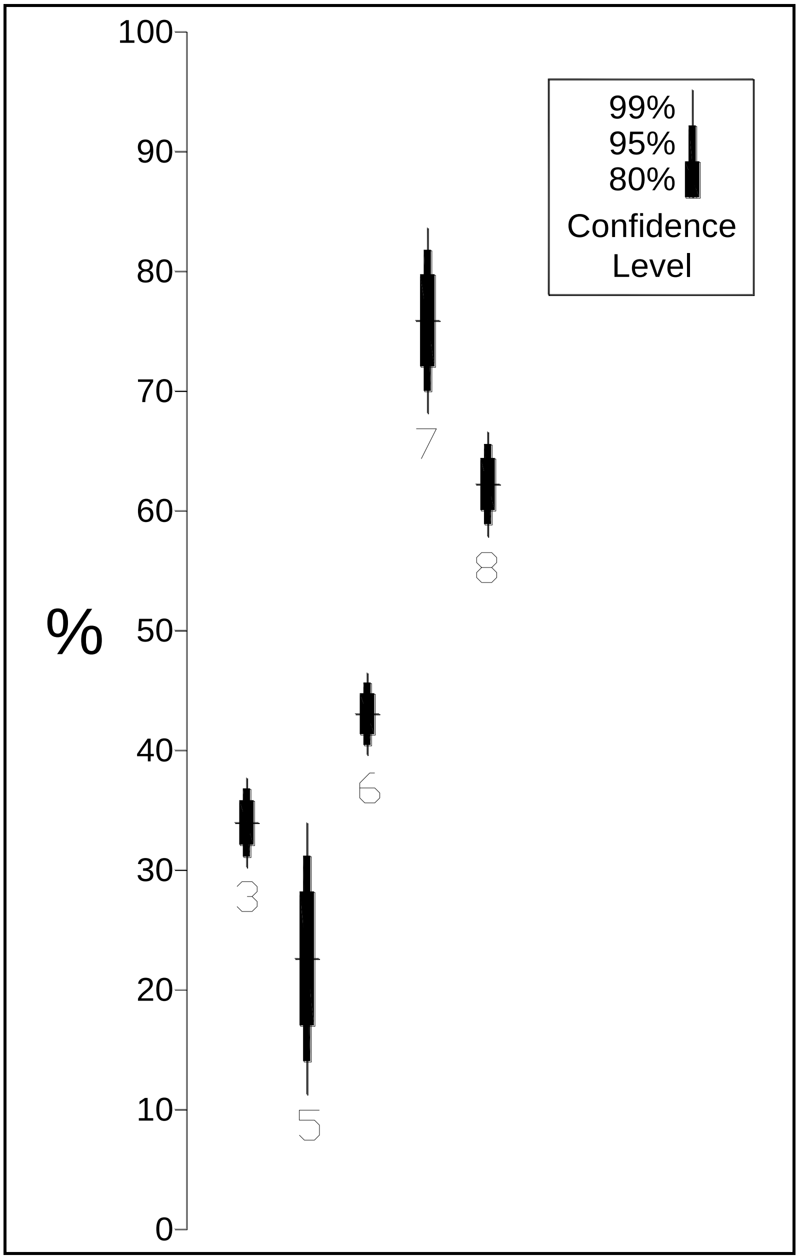


Figure 6.21. Bullet graph showing confidence levels for Huaracane Arena percentages.

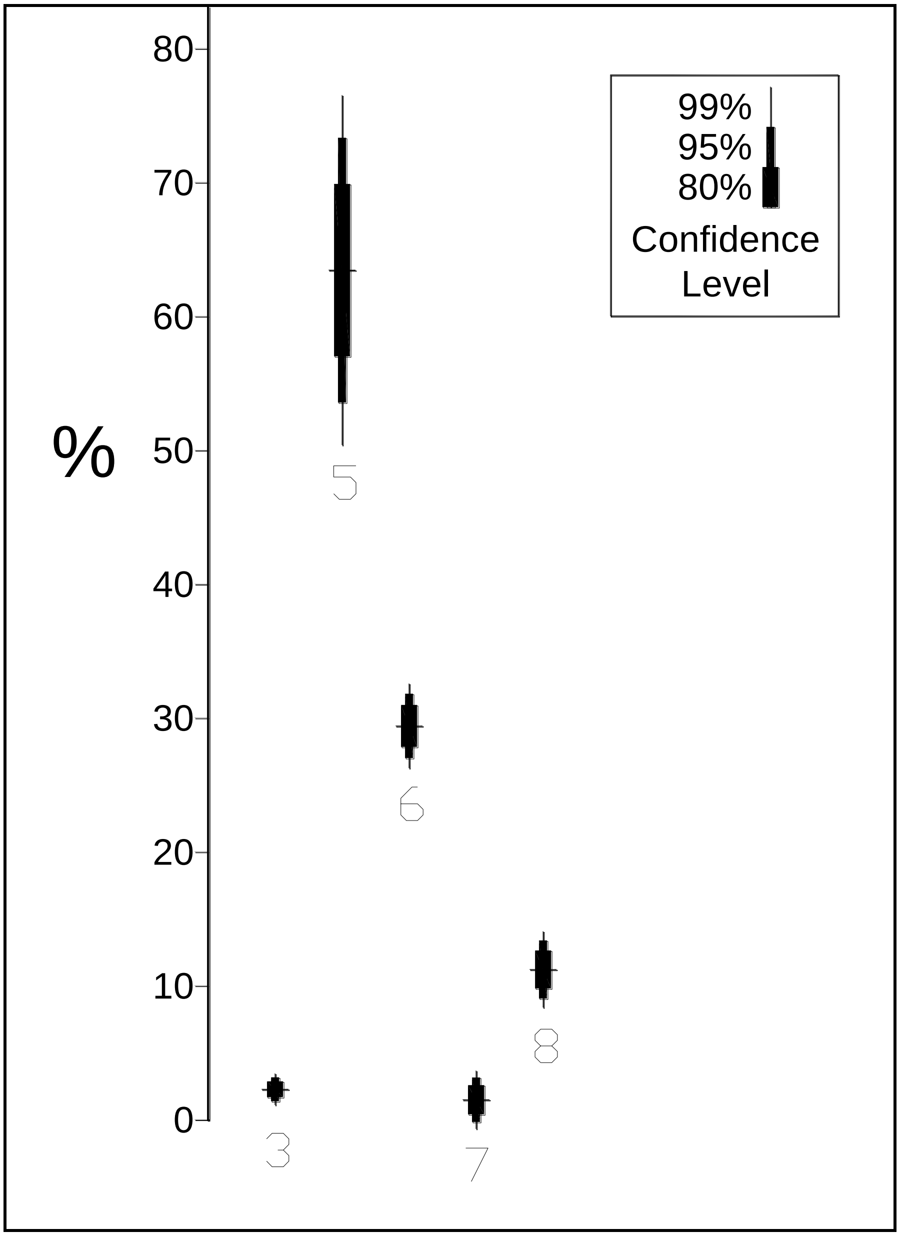


Figure 6.22. Bullet graph showing confidence levels for Huaracane Vegetal percentages**.**

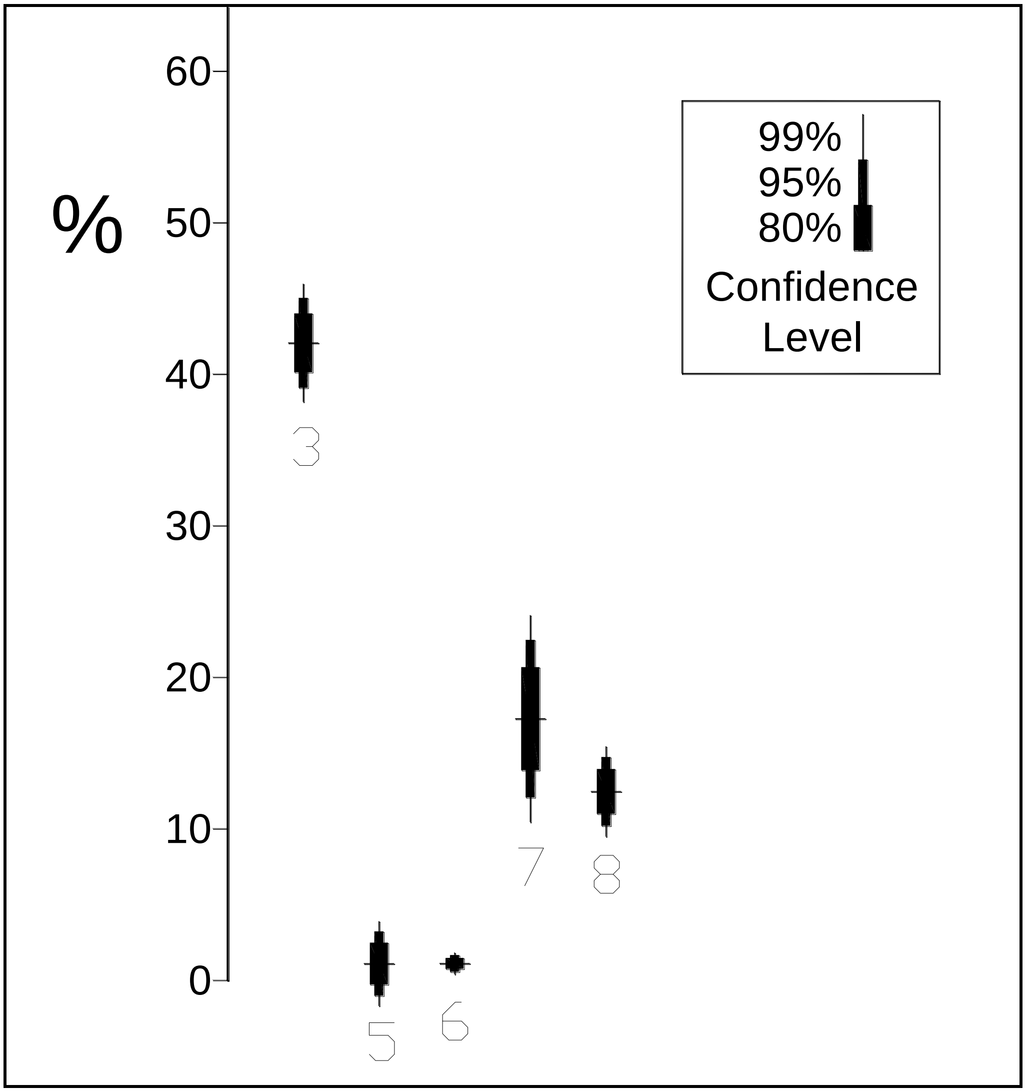


Figure 6.23. Bullet graph showing confidence levels for Pasta Biotite percentages.

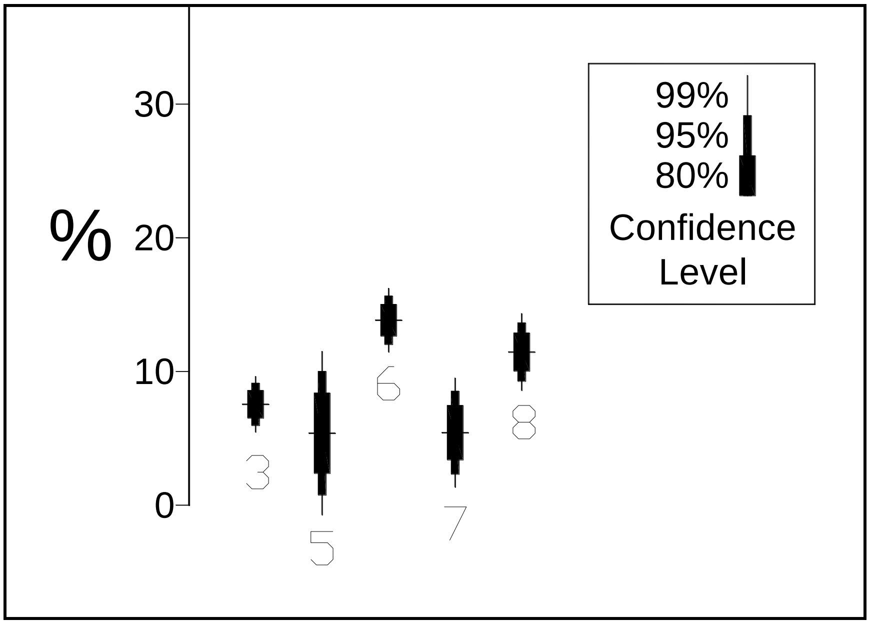


Figure 6.24. Bullet graph showing confidence levels for Huaracane Fino percentages.

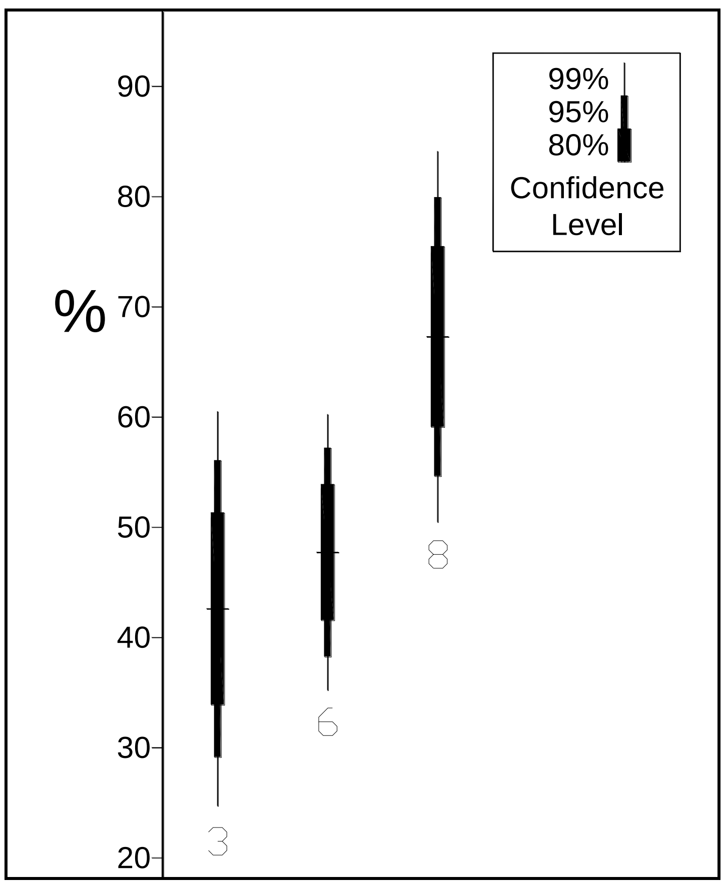


Figure 6.25. Bullet graph showing confidence levels for bowl sherd percentages**.**

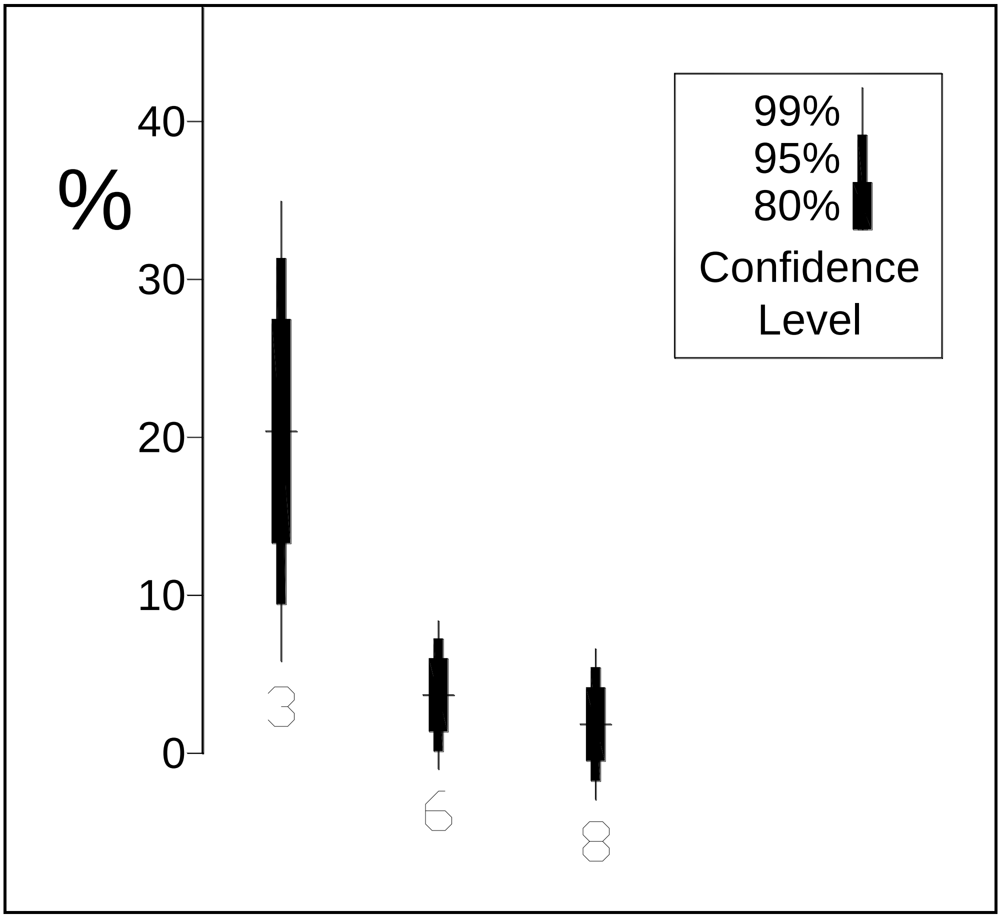


Figure 6.26. Bullet graph showing confidence levels for jar sherd percentages.

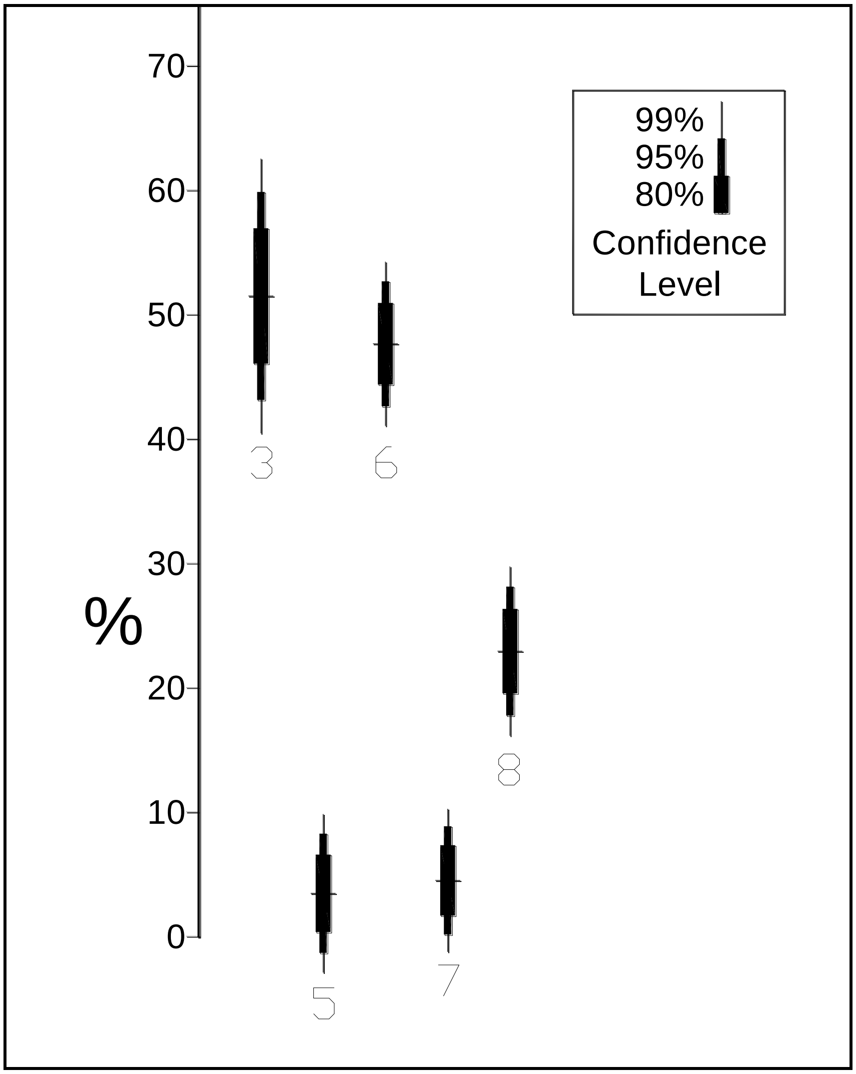


Figure 6.27. Bullet graph showing confidence levels for chert percentages.

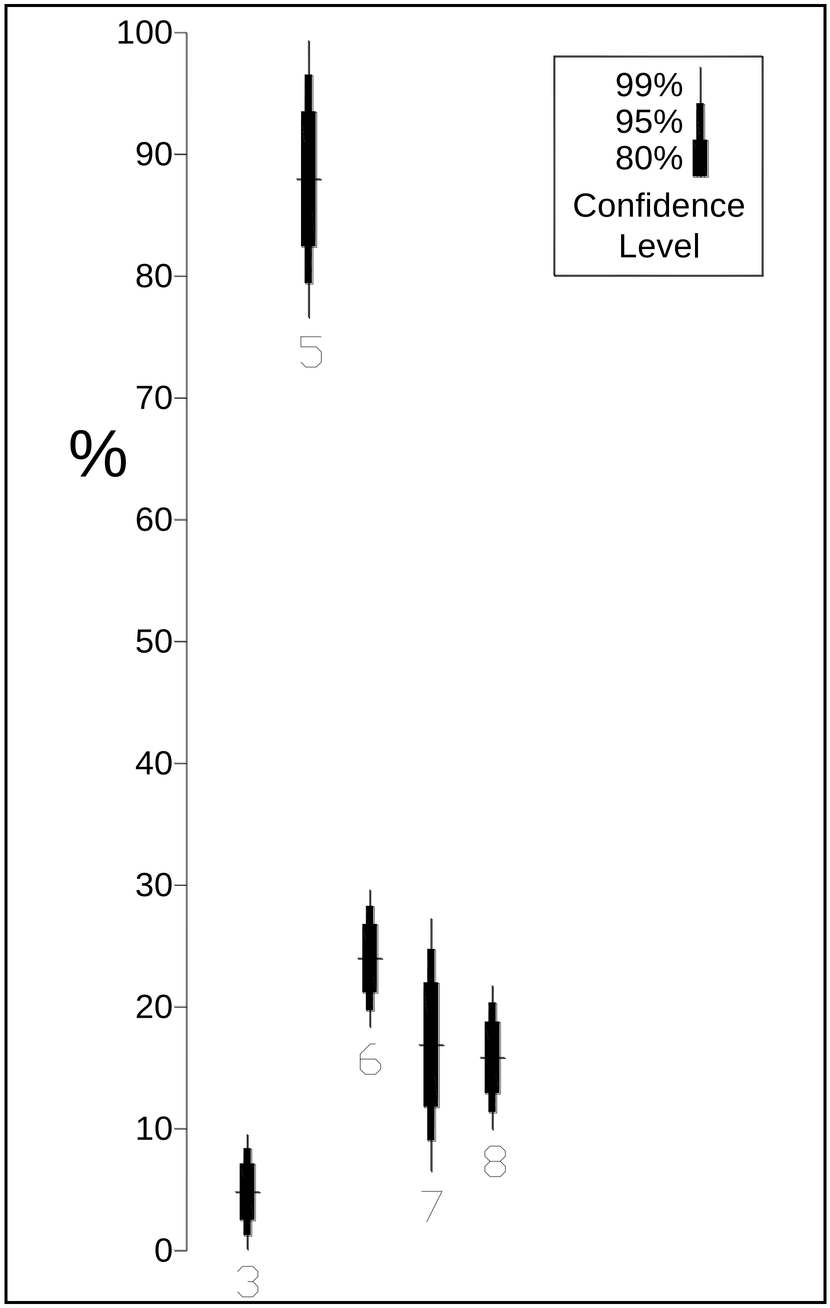


Figure 6.28. Bullet graph showing confidence levels for quartz percentages.

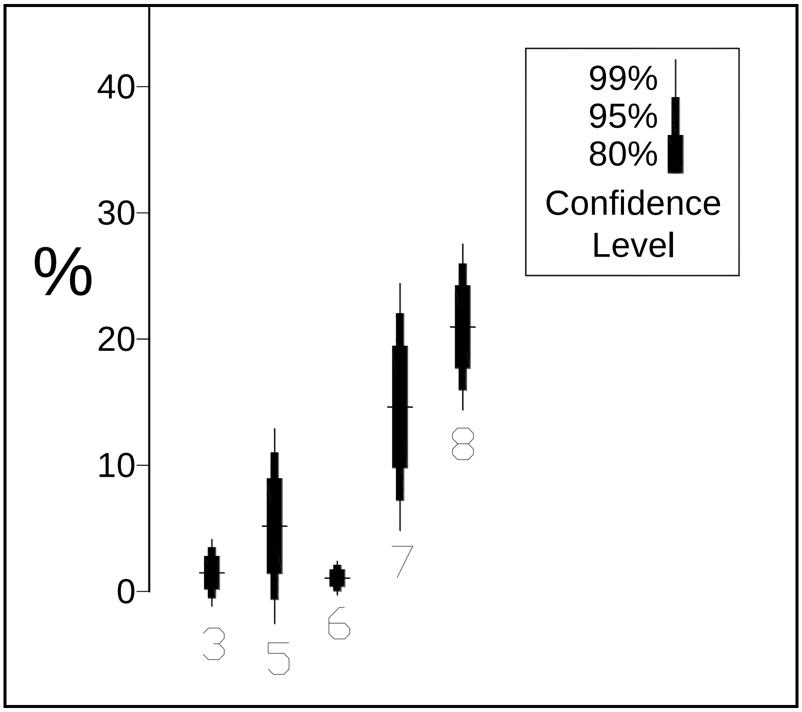


Figure 6.29. Bullet graph showing confidence levels for obsidian percentages.

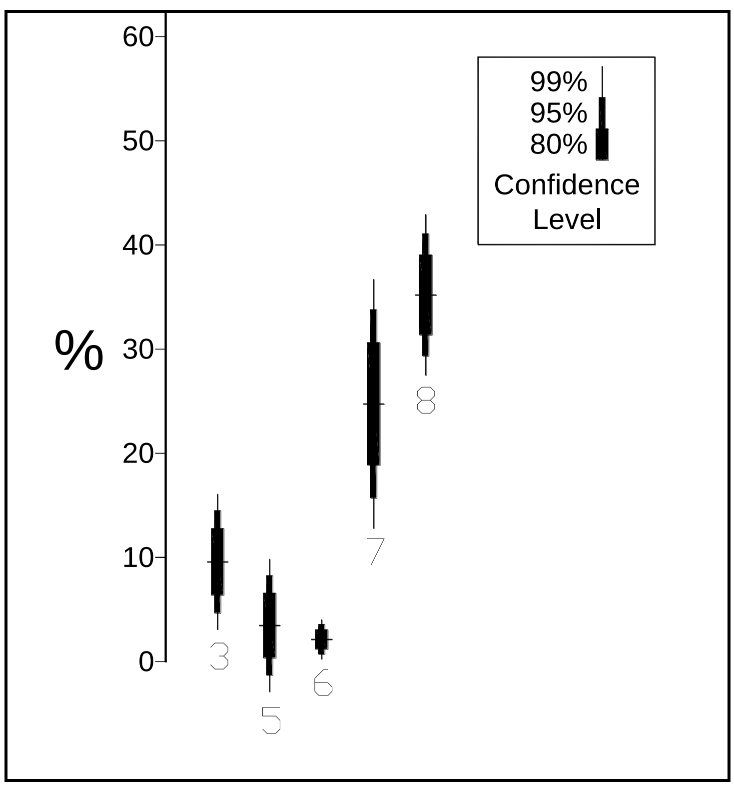


Figure 6.30. Bullet graph showing confidence levels for chrysacolla percentages.

Figure 6.31. Large obsidian implement found in Unit 3.

Figure 6.32. Copper alloy fragment (possible tupu fragment) found in Unit 3.

Figure 6.33. Copper alloy pin (possible tupu) found in Unit 3.

Figure 6.34. Copper alloy tool found in Unit 3.

Figure 6.35. Fragments of a hollow bone with engraved decoration found in Unit 3.

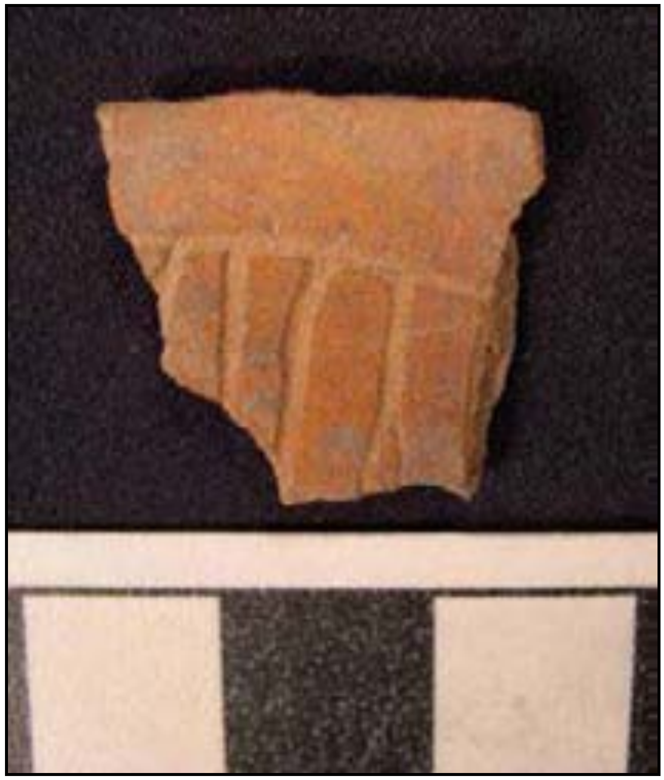


Figure 6.36. Pukara-style incised ceramic sherd found in Unit 6.

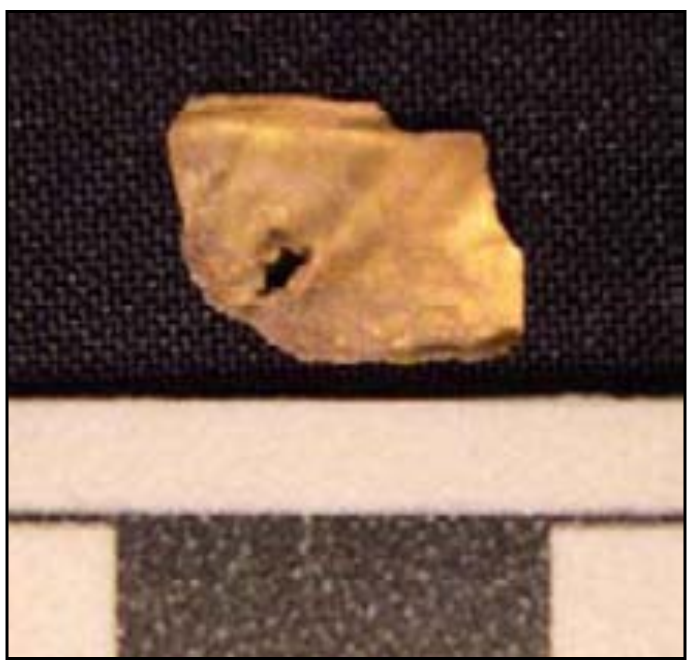


Figure 6.37. Gold foil fragment found in Unit 8.

Figure 6.38. Copper alloy fragment found in Unit 8.

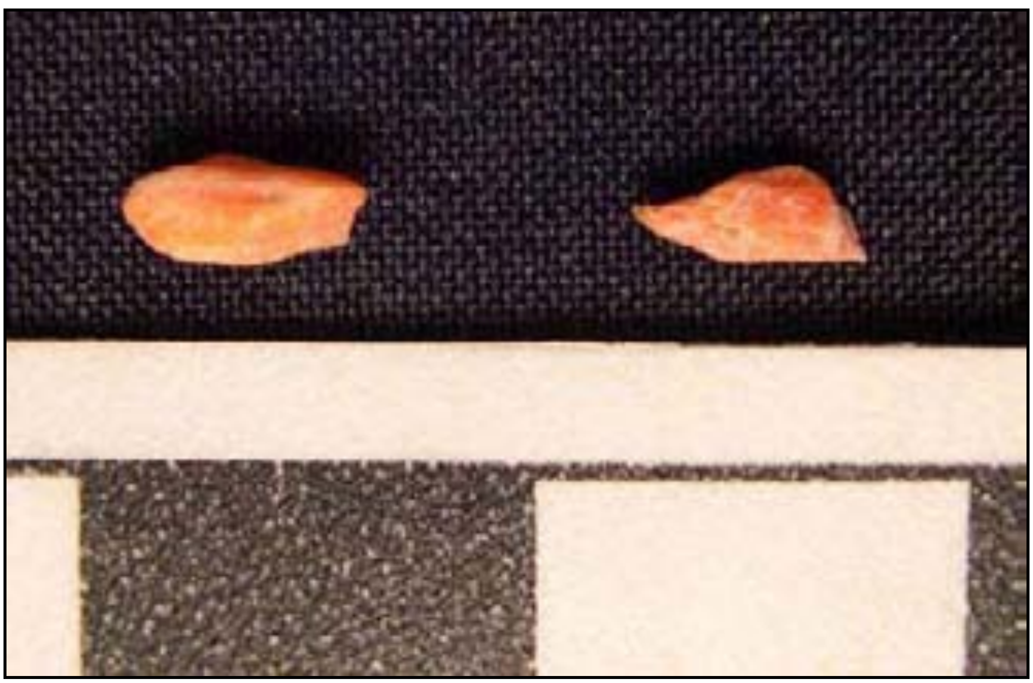


Figure 6.39. Spondylus shell spine fragments found in Unit 8.

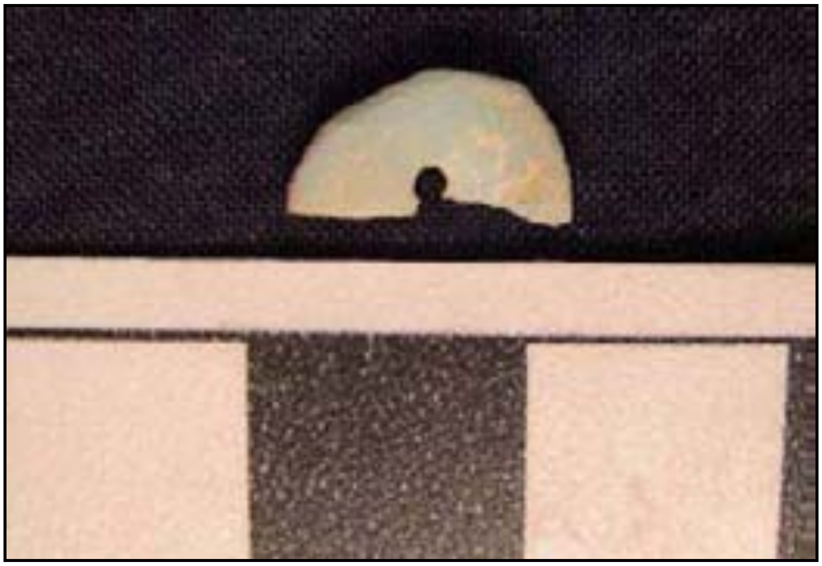


Figure 6.40. Green stone bead found in Unit 8.

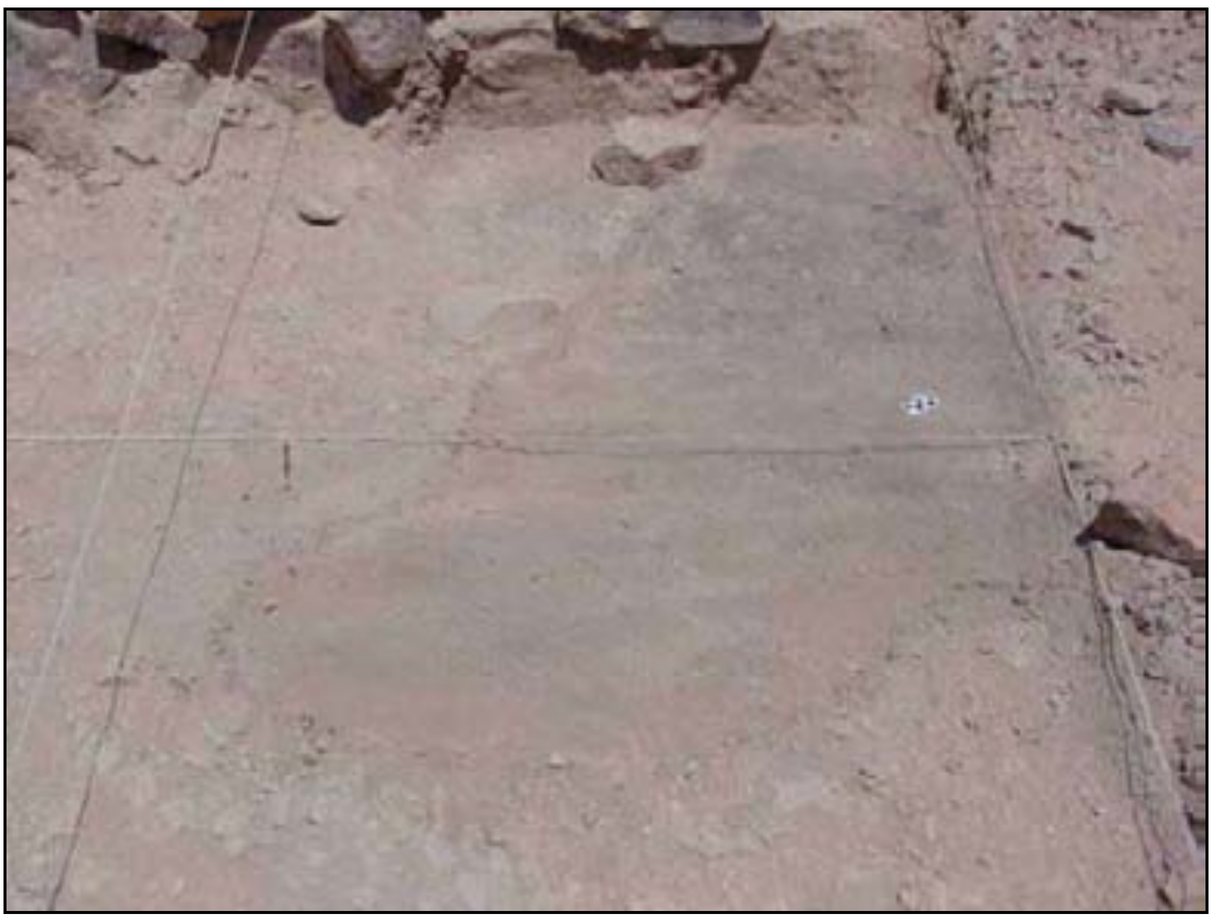


Figure 6.41. Rasgo 15 in Unit 6, possible hearth.

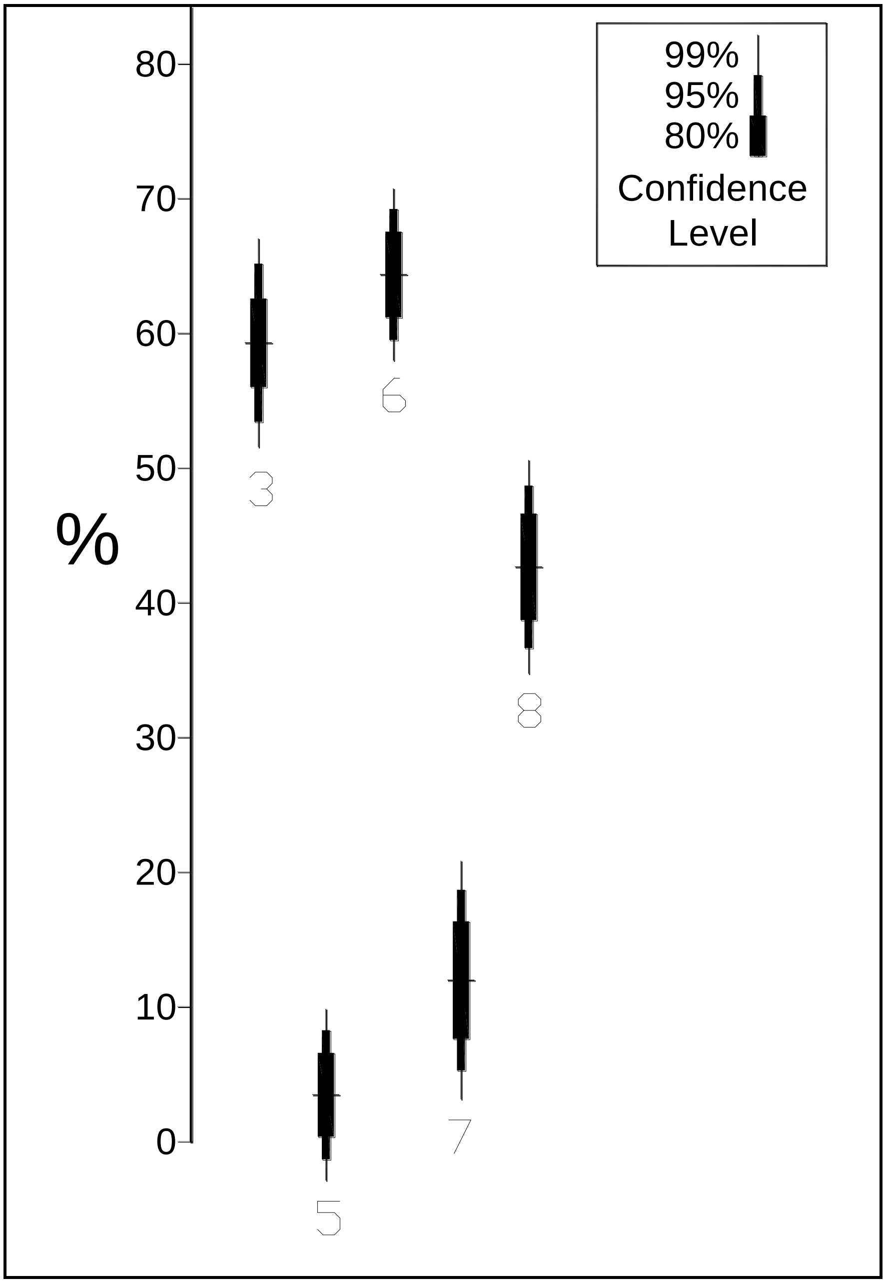


Figure 6.42. Bullet graph showing confidence levels for flake percentages.

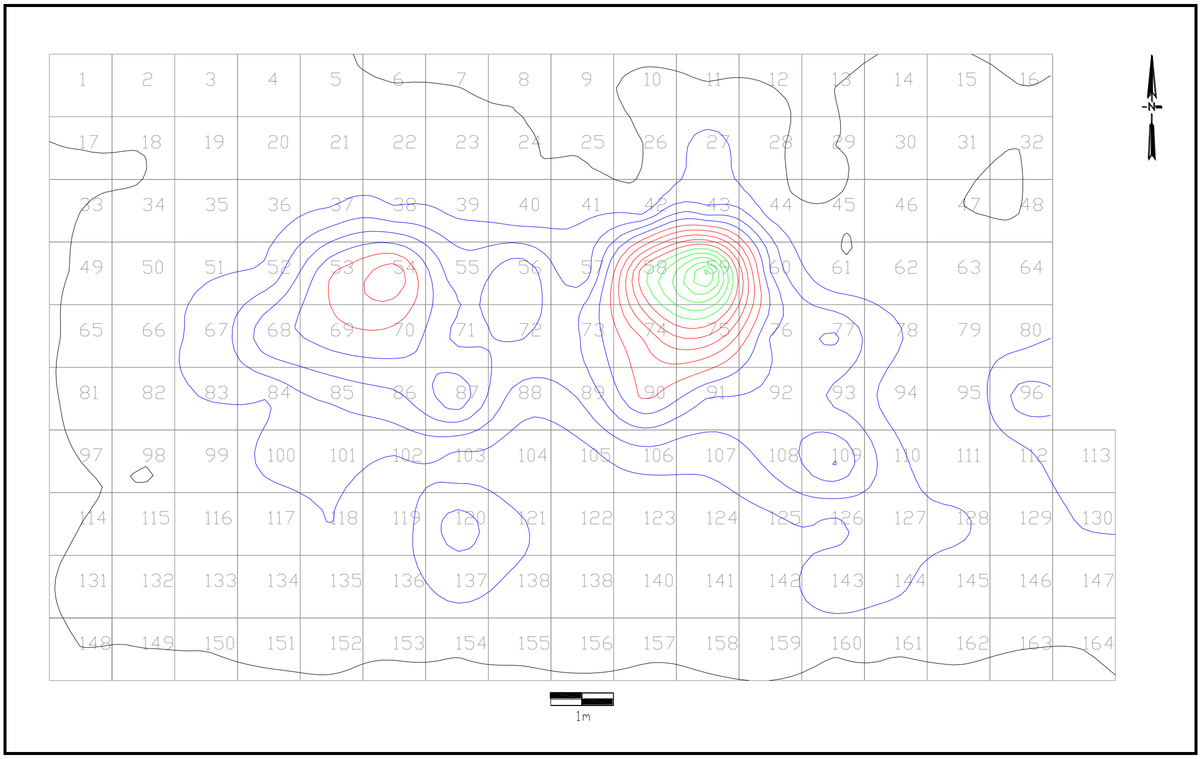


Figure 6.43. Total artifact contour map for Unit 3.

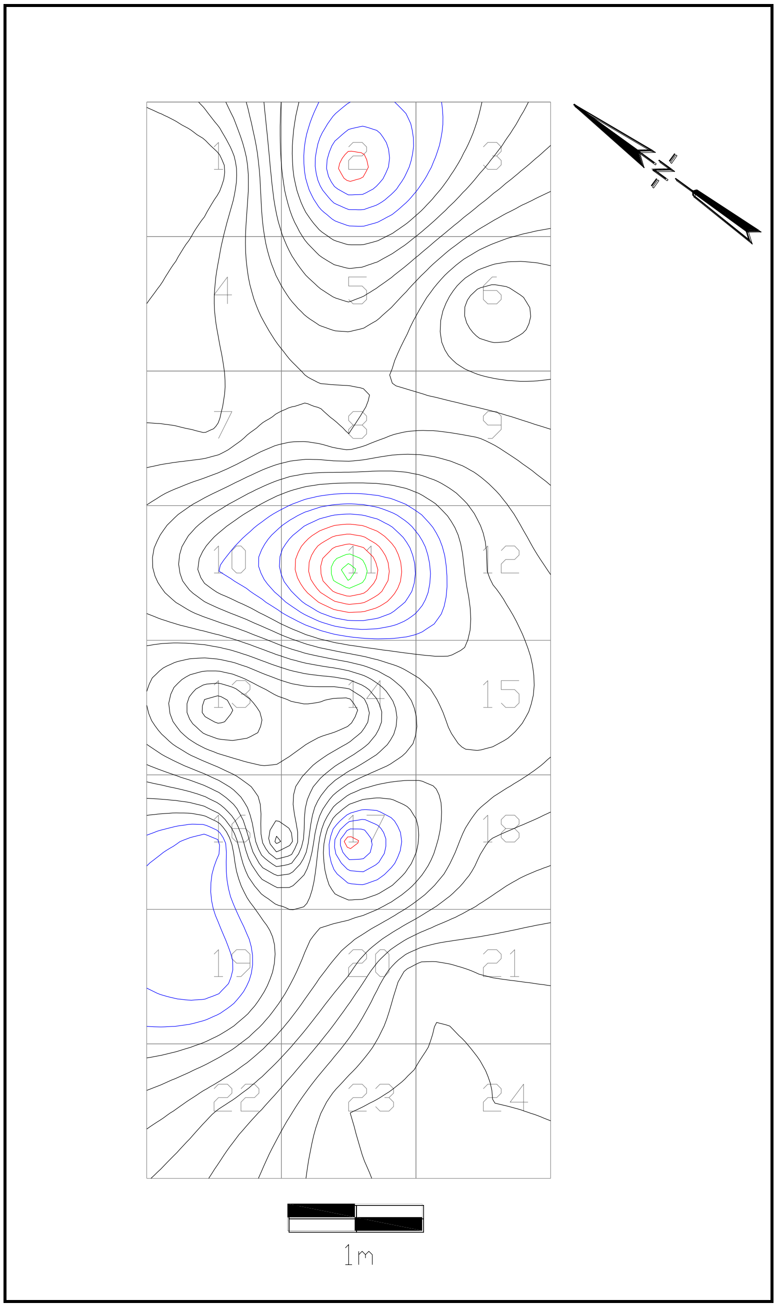


Figure 6.44. Total artifact contour map for Unit 5.

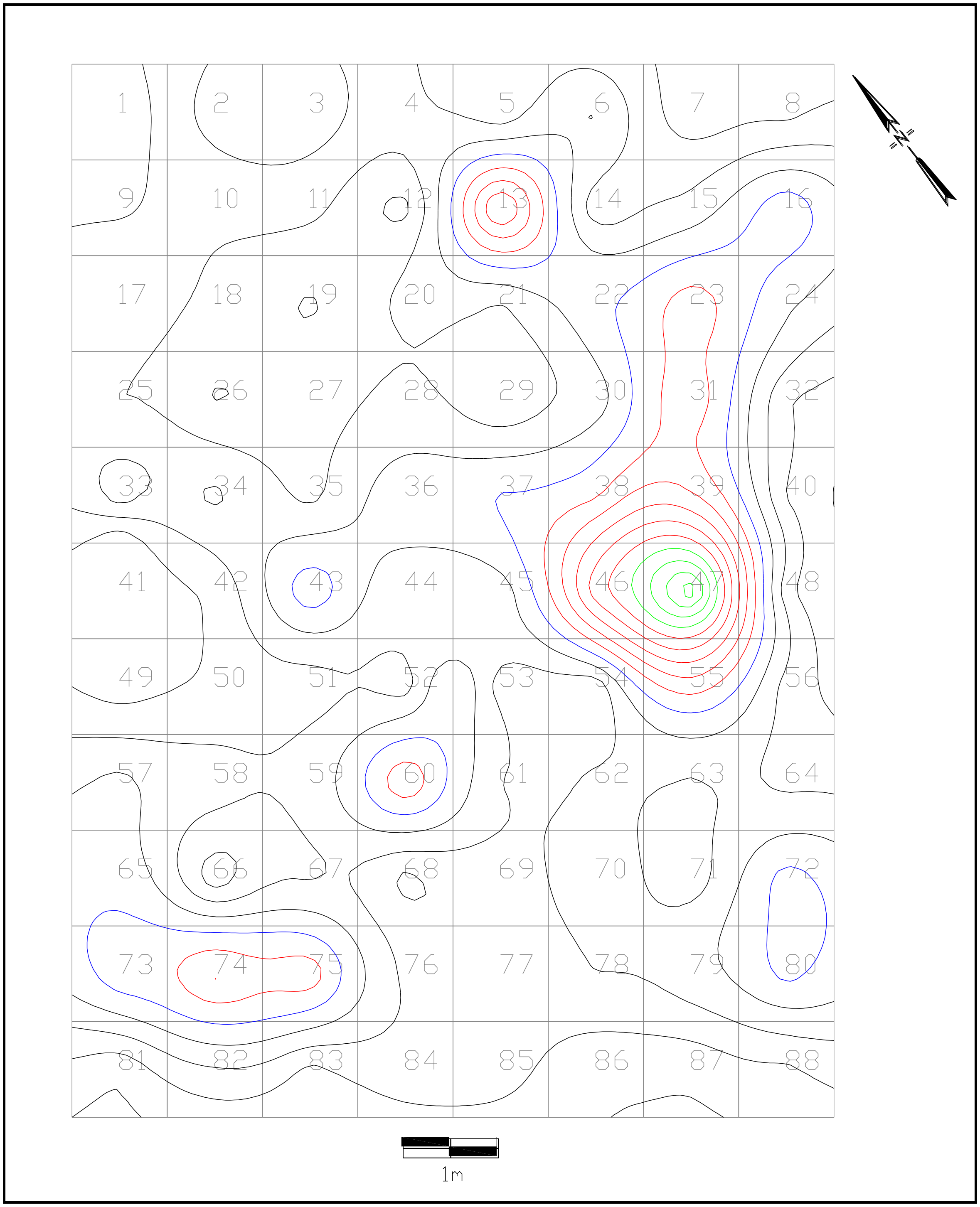


Figure 6.45. Total artifact contour map for Unit 6.

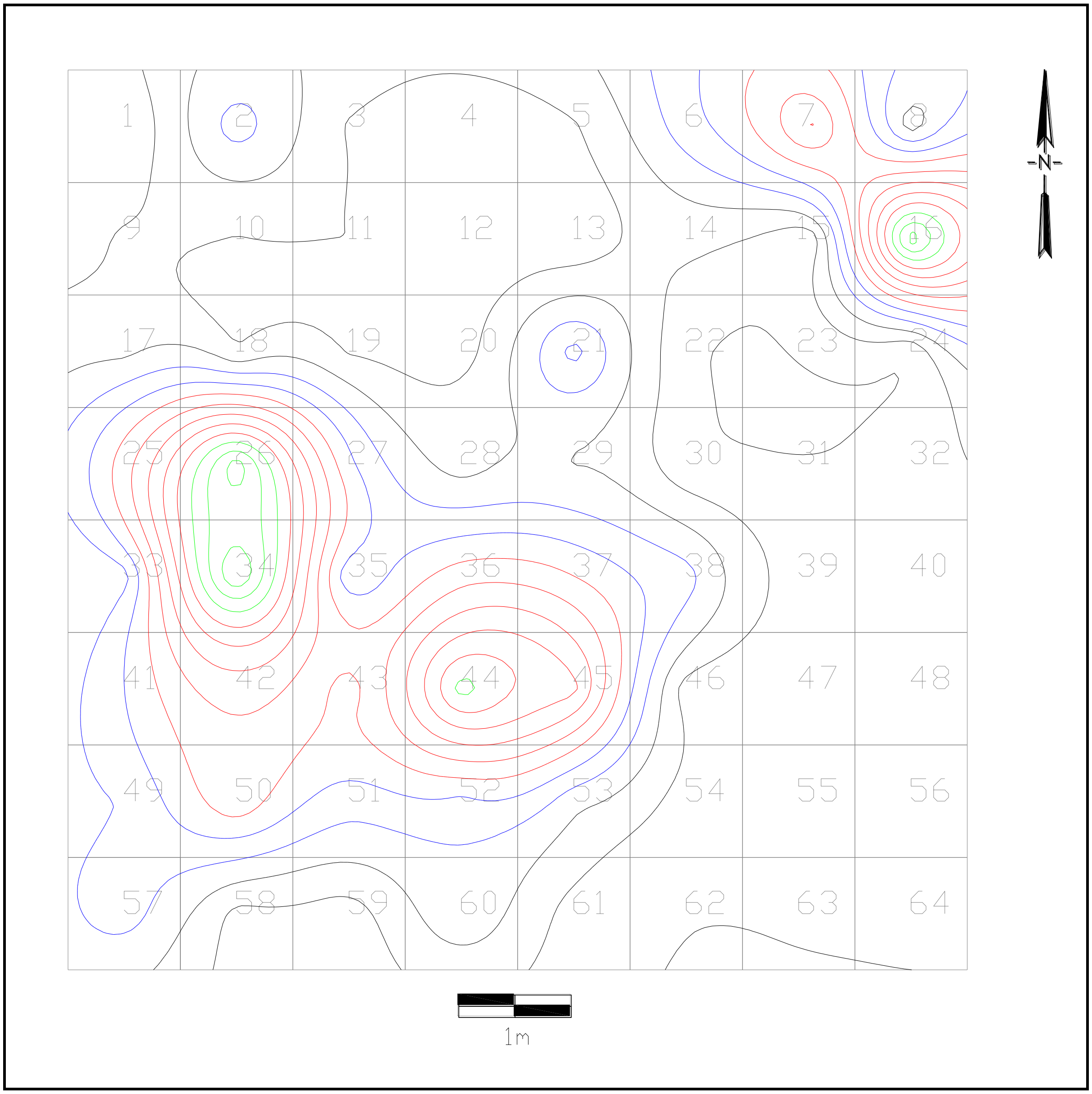


Figure 6.46. Total artifact contour map for Unit 8.

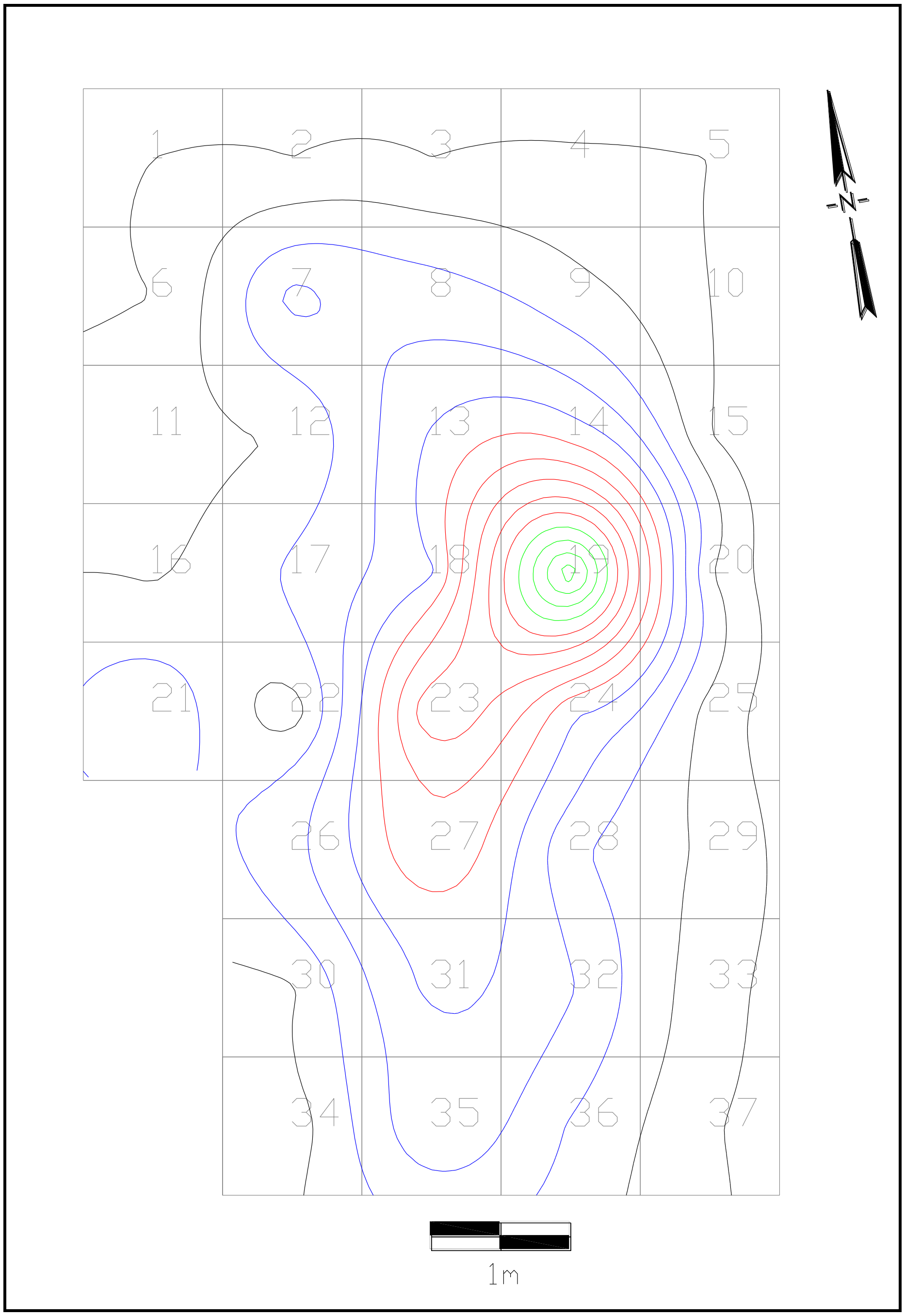


Figure 6.47. Total artifact contour map for Unit 7.

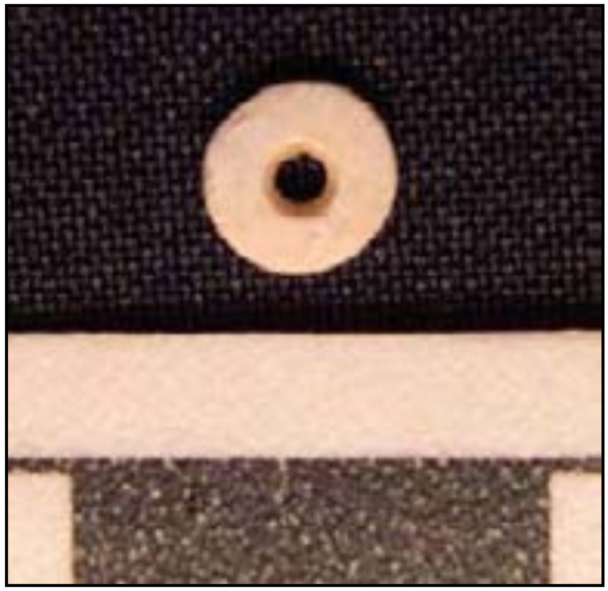


Figure 6.48. Finished marine shell bead from Unit 6.

Figure 6.49. Unfinished shell beads from Unit 6.

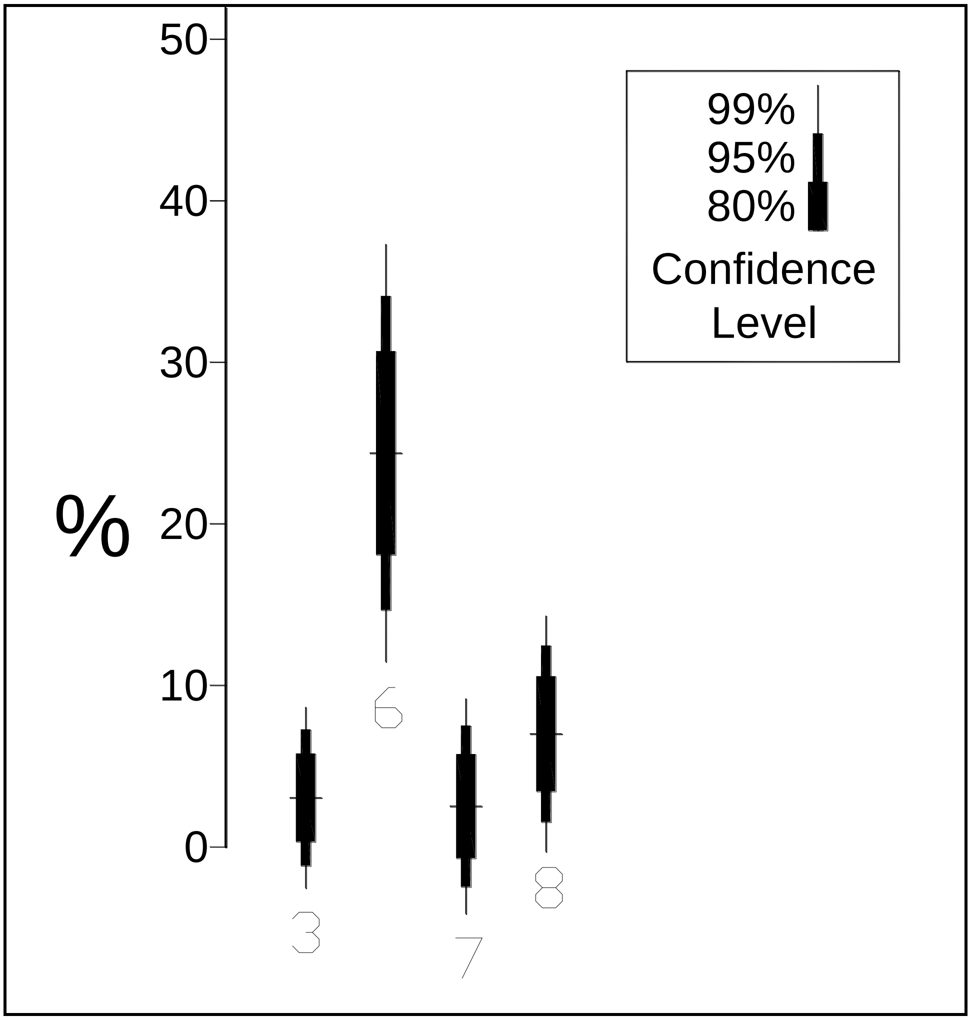


Figure 6.50. Bullet graph showing error ranges for percentages of marine shell beads.

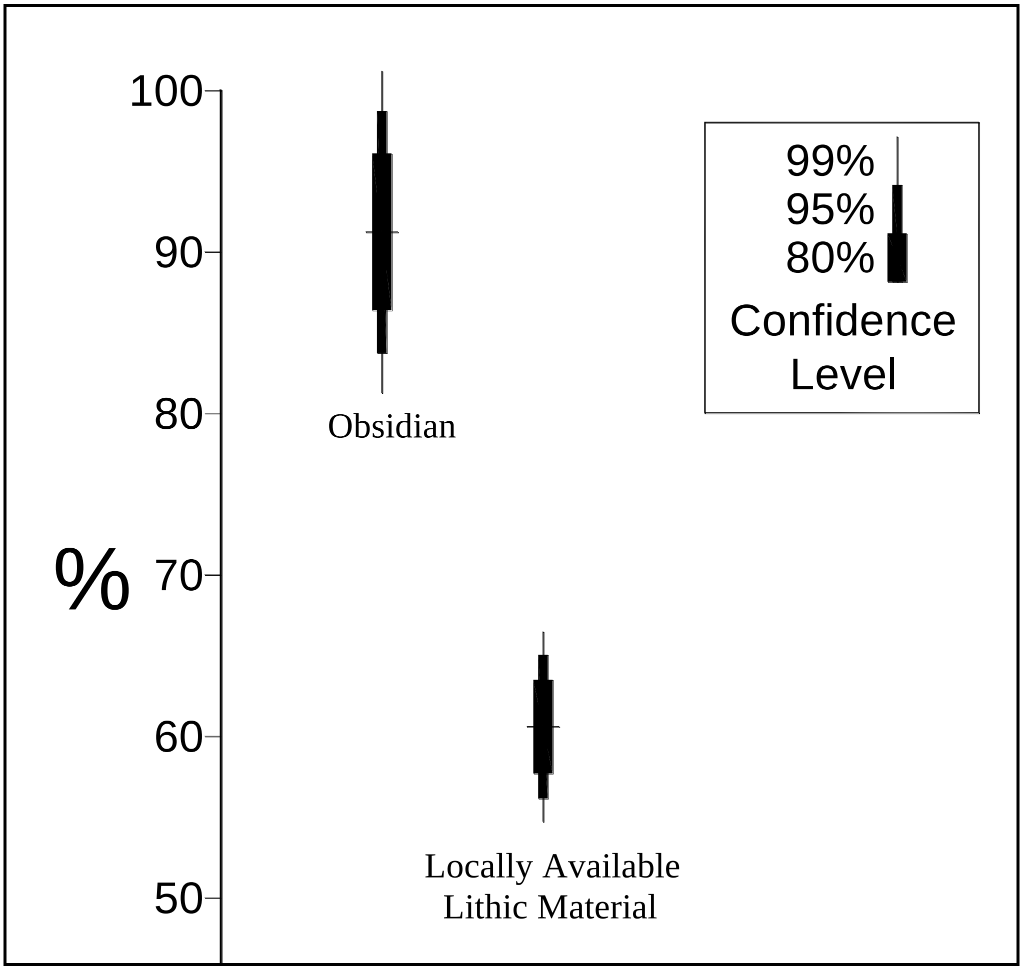


Figure 6.51. Bullet graph showing error ranges for percentages of flakes smaller than 2 cm.

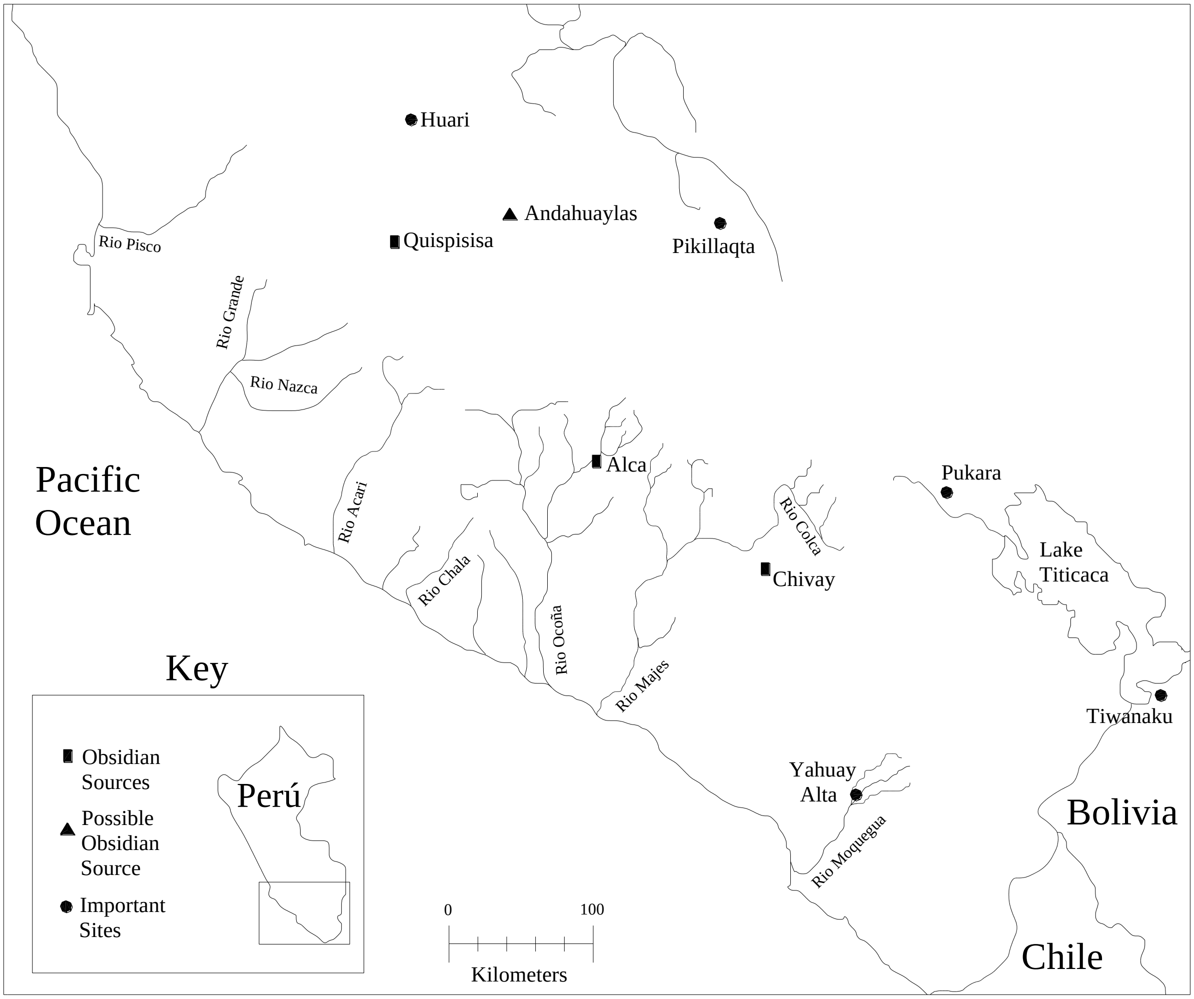


Figure 6.52. Primary geological sources for Obsidian in the south-central Andes (Redrawn from Burger, et al. 2001: Figure 2)

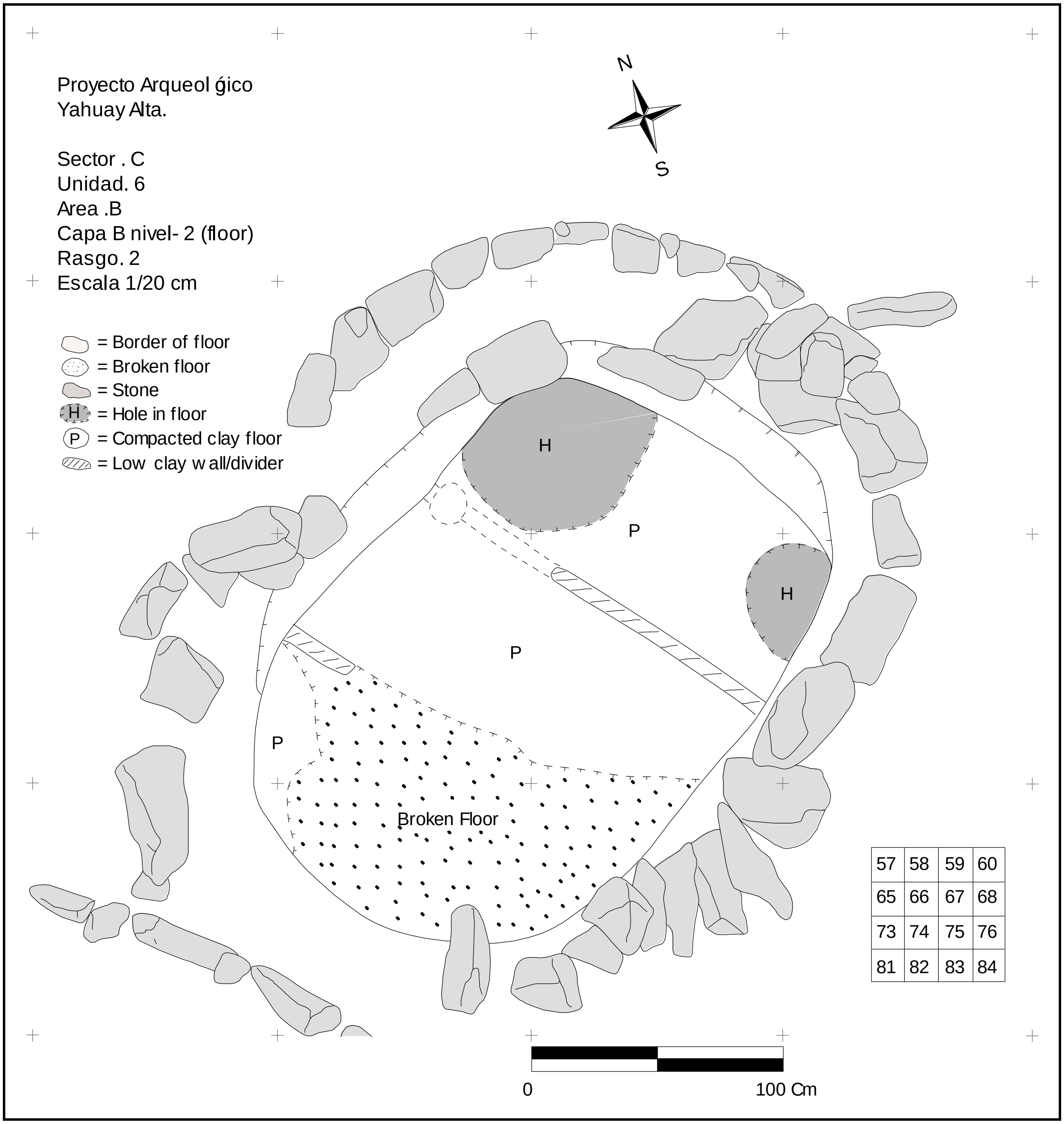


Figure 6.53. Plan view drawing of tomb floor in Unit 6.

Figure 6.54. Tomb floor in Unit 6 looking northeast.

Figure 6.55. Close up photo of raised hard clay divider on floor of tomb in Unit 6 looking west.

Figure 6.56. Surface of Rasgo 1 in Unit 6, burnt offering above tomb.

Figure 6.57. Base of Rasgo 1 in Unit 6, burnt offering above tomb.

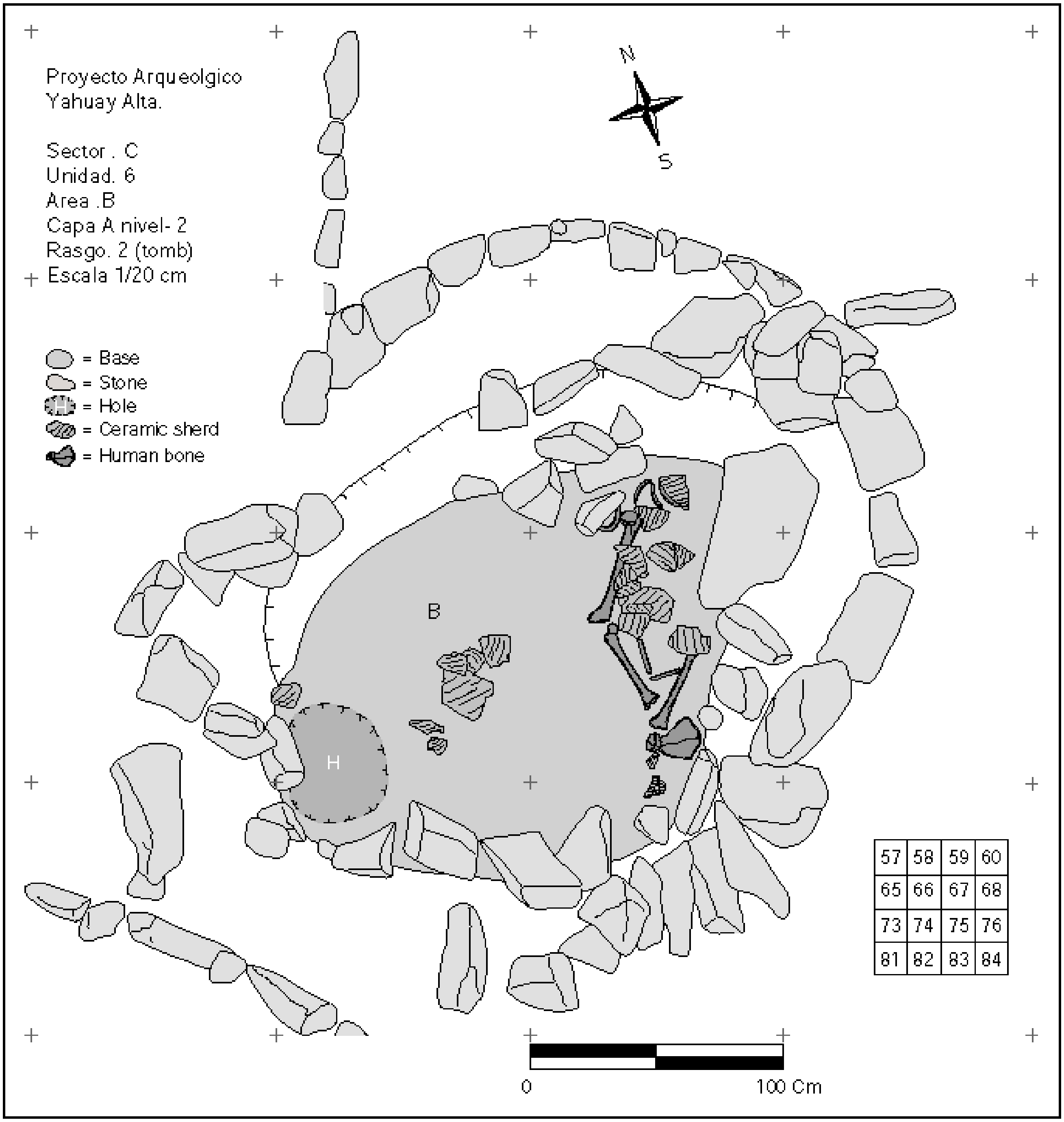


Figure 6.58. Plan view drawing of tomb in Unit 6 showing position of bones and ceramics.

Figure 6.59. Tomb in Unit 6 showing position of bones and ceramics, looking northeast.

Figure 6.60. Tomb in Unit 6, close up of bones and ceramics.

Figure 6.61. Cranium found in tomb in Unit 6.

7.0 SURFACE COLLECTION MATERIAL: A COMPARISON OF LATE HUARACANE AND TERMINAL HUARACANE COMMUNITIES

7.1 COMPARISON OF INTER-SECTOR SURFACE ARTIFACT DISTRIBUTIONS FOR THE LATE HUARACANE AND TERMINAL HUARACANE PHASES

7.1.1 Ceramic wares

Differences between the inter-sector distributions *Huaracane Fino* bowl sherd percentages for the Late Huaracane and Terminal Huaracane phases suggest a change in the nature of feasting activities at Yahuay Alta over time. During the Late Huaracane phase there were significant differences in *Huaracane Fino* percentages between sectors; this fineware was utilized significantly more in the purely domestic Sectors D and E than Sector F, which contained public architecture and space. During the Terminal Huaracane phase the differences among sectors were not as great and activities in the sectors containing large amounts of public space, A and B, utilized more *Huaracane Fino* bowls than Sector C, which consisted primarily of domestic terraces (Figures 7.1 & 7.2).

This change marks a shift in the way that *Huaracane Fino* bowls were utilized between the Late Huaracane phase and Terminal Huaracane phase. During the Late Huaracane phase *Huaracane Fino* bowls were used for small scale serving/feasting activities by households in domestic contexts. In contrast, during the Terminal Huaracane phase the highest *Huaracane Fino* bowl sherd percentages were found in sectors that had large open (and presumably public) areas, suggesting large scale feasting or consumption events took place in these open areas. So overall, I argue that activities utilizing Huaracane fineware ceramics shifted substantially from domestic contexts during the Late Huaracane phase to more public contexts during the Terminal Huaracane phase.

Although there were some major shifts over time in the inter-sector distributions of the utilitarian ceramic wares it is more difficult to interpret the meanings of these changes. A comparison of the Late Huaracane and Terminal Huaracane distributions of *Huaracane Vegetal* sherds shows that in general Terminal Huaracane sectors had significantly higher percentages of this ware (Figures 7.3 & 7.4). *Huaracane Vegetal* was more popular during the Terminal Huaracane phase than during the Late Huaracane phase. Another interesting pattern in the inter-sector distribution of this ware is that Sector B had the highest percentage of *Huaracane Vegetal* sherds at the site and Sector F had the lowest percentage. Both of these sectors appear to have been the primary public-ceremonial sectors at the site during their respective time periods. This pattern possibly indicates that different activities were taking place on and around the public architectural facilities during these two time periods.

A comparison of the Late Huaracane and Terminal Huaracane inter-sector distributions of *Huaracane Arena* sherds shows a general pattern that is nearly opposite from inter-sector distributions of *Huaracane Vegetal* sherds. With the exception of Sector D, Late Huaracane contexts had significantly higher percentages of *Huaracane Arena* sherds in comparison to Terminal Huaracane contexts (Figures 7.5 & 7.6). Thus, *Huaracane Arena* was more popular utilitarian ware at Yahuay Alta during the Late Huaracane phase. In addition, the overall distribution patterns for *Huaracane Arena* during each time period are quite different from each other. In Late Huaracane contexts there was a very uneven distribution of *Huaracane Arena* and it was utilized to a greater extent in the public Sector F in comparison to the more domestic Sectors D and E. However, in Terminal Huaracane contexts there was a relatively even distribution of *Huaracane Area* in the domestic Sectors A and C, but there were substantially lower percentages of this ware in the public/ceremonial Sector B.

The important question here is whether or not the apparent change in preference between the Late Huaracane and Terminal Huaracane phases for utilitarian ceramic wares outlined above suggests a change in domestic practices involving ceramics at Yahuay Alta. One way to approach this question is to look at the properties of these two Huaracane utilitarian wares. *Huaracane Arena* vessels generally had thinner walls than *Huaracane Vegetal*. Given that thinner walled ceramic vessels are more capable of withstanding the thermal stresses of heating and cooling associated with cooking (Rice 1987), *Huaracane Arena* may have been used primarily for cooking vessels. Thus, cooking may have been a more important activity in the Late Huaracane public sector than in the Terminal Huaracane public sector. Conversely, given that *Huaracane Vegetal* vessels generally had thicker walls that were more suited for storage vessels (Rice 1987), then the storage of goods may have been a relatively important activity in the Terminal Huaracane public sector. However, no additional evidence supporting these possibilities was detected on the surface of either public sector at Yahuay Alta.

A second approach for determining if there were changes in domestic practices involving ceramics at Yahuay Alta over time is to look at what type of utilitarian ceramic vessels were made during each time period with both of these utilitarian wares (Table 7.1). For example, if proportionally more *ollas* with necks and jars were made during one time period this would indicate that the storage of goods may have been more important during that time period.

Table 7.1. Overall percentages of utilitarian vessel types by time period.[19]

Time Period	*Ollas sin Cuellos*	*Ollas* w/ necks	Jars	Bowls	Bottles
Late Huaracane	68.0% ± 10.8%	16.0% ± 8.5%	9.3% ± 6.7%	2.7% ± 3.7 %	4.0 % ± 4.5 %
Terminal Huaracane	68.8% ± 11.6%	28.1% ± 11.2%	3.1% ± 4.3%	0.0%	0.0%

The results of this analysis demonstrated that there were not any major statistically significant differences in the types of vessels that were constructed with utilitarian wares. The *olla sin cuello* percentages from each time period were almost exactly the same (see Table 7.1). There were some small observable differences between *olla* with neck and jar percentages, however when these percentages are combined there were no major differences in vessels that were presumably use for storage. Thus although there were some statistically significant differences between the Late Huaracane and Terminal Huaracane phases in terms of utilitarian ware usage, the same types of vessels were made during each time period in relatively similar proportions. This suggests that even though the preference for utilitarian ceramic wares may have changed, the activities for which utilitarian ceramics were utilized probably did not change all that much between these two time periods.

[19] All error ranges in this table are at the 95% confidence level.

7.1.2 Vessel forms

There was a major change in the inter-sector distribution of diagnostic bowl sherds over time at Yahuay Alta. During the Late Huaracane phase there were no significant inter-sector differences in the percentages of bowl sherds. In units from both the more domestic Sector E and the more public Sector F, bowls occur in the same proportions. During the Terminal Huaracane phase there were significant inter-sector differences in the percentages of diagnostic bowl sherds. Units in Sector A had a significantly higher bowl proportion in comparison to units in Sector C (Figures 7.7 & 7.8). Sector A was a domestic sector that contained a large amount of open (and presumably public) space in its northern end, while Sector C was a domestic sector with little open space. Thus there was likely greater inter-sector variability in serving activities during the Terminal Huaracane in comparison to the Late Huaracane phase.

These results highlight an important question about Terminal Huaracane contexts: why did Sectors A and C have different percentages of bowl sherds even though they were both primarily domestic sectors? The most important difference between Sectors A and C was that Sector A consisted of both domestic terraces and a substantial amount of open, public space. In contrast, Sector C consisted almost entirely of closely spaced domestic terraces with little open space. The open, and presumably public, space in Sector A could have been used to host relatively large feasting events. In addition, during the intra-sector analysis (see below) one of the Terminal Huaracane peaks in *Huaracane Fino* percentages was centered in this open space. As a result, the Terminal Huaracane inter-sector distribution of bowl sherd percentages suggests households close to open, public spaces were differentially involved in serving activities. This evidence supports the interpretations for the changes observed in both the inter-sector and intra-sector distributions of *Huaracane Fino* bowls sherds. As discussed above, the distributions of *Huaracane Fino* sherds (which were all from bowls) indicate that over time at Yahuay Alta, serving activities using fineware bowls shifted from domestic contexts to more open, public spaces.

The change over time between Late Huaracane and Terminal Huaracane inter-sector distributions of specific utilitarian vessel forms is not particularly informative for interpreting diachronic changes in the degree of status or wealth differences at the site. To address this problem I decided to look at utilitarian ceramic vessels in a broader way by combining all utilitarian vessel forms into one general utilitarian vessel category. This general category included all ceramic vessel forms except for bowls, which were almost always fineware serving vessels. I then compared the percentage of diagnostic utilitarian vessel sherds to the percentage of diagnostic bowl sherds in each sector and this relationship was in turn compared at an inter-sector level (Table 7.2). In this way it was possible to detect a change between Late Huaracane and Terminal Huaracane phases. This change supports interpretations for the inter-sector distributions of both *Huaracane Fino* sherds and diagnostic bowl sherds discussed above.

Table 7.2. Vessel type percentages by sector.[20]

	Late Huaracane		Terminal Huaracane	
Vessel Type	Sector E	Sector F	Sector A	Sector C
Bowl	56.8%	49.3%	68.9%	44.0%
Utilitarian	43.2%	50.7%	31.1%	56.0%

During the Late Huaracane phase in Sector E, diagnostic bowl sherds were more common than diagnostic sherds from utilitarian vessels and we can be 95% - 99% confident that this difference was statistically significant (see Table 7.2 & Figure 7.9). In contrast in Sector F, the percentages of diagnostic bowls sherds and diagnostic utilitarian vessel sherds were statistically equivalent (see Table 7.2 & Figure 7.9). This pattern demonstrates that bowls were slightly more prevalent than utilitarian vessels in the purely domestic Sector E, while bowls and utilitarian vessels were equally prevalent in the more public Sector F. This suggests that during the Late Huaracane phase feasting or consumption activities using fineware bowls were more common in domestic sectors of the site. In addition, even though serving or consumption activities likely took place in the more public areas of the site, these areas were not the primary and/or desired locations for such activities during the Late Huaracane phase. This pattern differs from the Late Huaracane inter-sector comparison of bowl sherd percentages because the percentages of bowl sherds in Sectors E and F were not significantly different from each other. However, when the

[20] Sectors B and D had to few diagnostic sherds to make statistically significant comparisons with other sectors at the site.

relationship of bowls to utilitarian vessels in these sectors are compared to each other, it was possible to determine that bowls were more heavily utilized in Sector E than in Sector F.

During the Terminal Huaracane phase, Sector A displays a substantially higher percentage of diagnostic bowl sherds than diagnostic utilitarian vessel sherds, and we can be more than 99% confident that the difference between these two percentages was statistically significant (see Table 7.2 & Figure 7.9). In contrast, in Sector C diagnostic utilitarian vessel sherds were more common than diagnostic bowl sherds and we can be 95% - 99% confidence that this difference was statistically significant (see Table 7.2 & Figure 7.9). Overall, during the Terminal Huaracane phase bowls were more common than utilitarian vessels in Sector A, which has a large amount of public space, in comparison to Sector C. These correspondences underscore the relationship I see in the Terminal Huaracane between proportion of fineware bowls and public space. Thus, I conclude that during this time period feasting or consumption activities that utilized fineware bowls to serve guests were taking place more frequently in sectors containing large amounts of public space.

7.1.3 Lithic Materials

There were some changes over time in the inter-sector distribution of lithic materials while other comparisons show continuity in lithic consumption. The changes between the Late Huaracane and Terminal Huaracane distribution of chert can be generalized as this: Late Huaracane sectors had significantly higher percentages of this material than Terminal Huaracane sectors (Figure 7.10). In fact we can be more than 99% confident that the Late Huaracane chert percentages were significantly higher than the Terminal Huaracane chert percentages (Figure 7.11). The fact that chert was more common in the Late Huaracane phase may relate to the fact that during the Terminal Huaracane phase the residents of Yahuay Alta had better access to obsidian, a higher quality lithic material.

There was also a change over time in the inter-sector distribution of chert. During the Late Huaracane phase chert was distributed relatively evenly across the site sector by sector; no single sector had a significantly different percentage of this material (see Figure 7.10). During the Terminal Huaracane phase chert was not evenly distributed across the site from sector to sector, and there were significant differences in chert percentages between sectors (see Figure 7.11). This pattern suggests that during the Late Huaracane phase, no single sector of the site monopolized the procurement of chert, while during the Terminal Huaracane phase the residents of Sector A had greater access to chert than other residents at the site during this time period. While this differential inter-sector distribution of chert during the Terminal Huaracane phase may have been paralleled by the access the residents in each sector had to obsidian, the latter was too rare on the surface to make any meaningful inter-sector comparisons of its distribution.

There were some major changes in the inter-sector distribution of dacite between the Late Huaracane and Terminal Huaracane periods (Figure 7.12). During the Late Huaracane period there were some small but slightly significant differences in dacite percentages between sectors (Figure 7.13). The most open/public sector, F, had the highest dacite percentage, although this was still lower than 20%. During the Terminal Huaracane phase there were some very large and very significant differences in dacite percentages among sectors (see Figure 7.13). The Terminal Huaracane sector with the highest dacite percentage was Sector B, the public/ceremonial sector. Thus, the highest dacite percentage from each sector came from each time period's most open, and presumably public, sector.

There were no major changes in the inter-sector distribution of rhyolite at Yahuay Alta over time and, as mentioned above, throughout the entire occupation of the site rhyolite percentages in every sector remained relatively low, below 20% (Figure 7.14). During both the Late Huaracane phase and the Terminal Huaracane phase the distribution of rhyolite was relatively uneven and there were significant differences in rhyolite percentages among sectors (Figure 7.15). In addition, for each time period the sector with the highest percentages of rhyolite was the most open/public sector. The high percentages of both of the most commonly used low quality lithic materials were from the site's public sectors suggests that the open spaces in these sectors may have been used to dispose of refuse from lithic tool production activities. Thus, during both time periods at Yahuay Alta open spaces at the site may have been used as "workshop dumps" (e.g., Moholy-Nagy 1990), an interpretation that is reinforced by both the inter-sector and intra-sector distributions of flakes.

There were some differences and similarities in the Late Huaracane and Terminal Huaracane inter-sector distributions of quartz. During both time periods there were some significant inter-sector differences in quartz percentages, however the differences were substantially larger during the Terminal Huaracane phase (Figures 7.16 & 7.17). During both time periods, the sectors with the lowest quartz percentages were the public sectors. During the Late Huaracane, phase both purely domestic sectors had very similar quartz percentages, however during the Terminal Huaracane phase the two domestic sectors had drastically different percentages (see Figure 7.16). This difference may be because Sector A consisted of both domestic terraces and open public space while Sector C consisted almost entirely of domestic terraces. These results suggest that over time quartz was utilized more intensely in domestic contexts at Yahuay Alta and during the Terminal Huaracane phase quartz was very intensively used in Sector C. There may have even been specialization in the activities that required the use of quartz in Sector C during this time period. There is no indication that this type of specialization was taking place in any sector during the Late Huaracane phase.

Overall it appears that in comparison to Late Huaracane patterns the inter-sector distribution of lithic materials was much less homogeneous during the Terminal Huaracane phase. During this later time period different sectors at the site had very high percentages of a single lithic material. For example Sector B had very high percentages of dacite and Sector C had very high percentages of quartz. This change in patterns possibly could indicate some additional degree of specialization in lithic production at Yahuay Alta during the Terminal Huaracane phase.

7.1.4 Lithic types

Although there was not a large amount of change over time in the inter-sector distribution of lithic implement types, there was a change in the intensity (volume) of lithic production from the Late Huaracane to the Terminal Huaracane. In order to obtain a general measure of the intensity of lithic production during each time period I utilized two ratio measures: a flake/ceramic ratio and a lithic nodule/ceramic ratio (Table 7.3). The flake/ceramic ratio was calculated by dividing the total number of flakes found on the surface of Late Huaracane contexts, for example, and dividing this by the total number of ceramic sherds found in these contexts. This ratio was a good general measure of the intensity of lithic production at the site. The lithic nodule/ceramic ratio was calculated in the same way except that the number of lithic nodules was divided by the number of ceramic sherds. This ratio was a good measure of the intensity of the early stages of lithic production because nodules are unmodified raw material.

Table 7.3. Flake/ceramic and lithic nodule/ceramic ratios for surface collection material.

	Late Huaracane	Terminal Huaracane
Total # of flakes	259	284
Total # of lithic nodules	126	46
Total # of ceramic sherds	2625	3717
Flakes/ceramic sherds ratio	0.099	0.076
Lithic nodules/ceramic sherd ratio	0.048	0.012

Both the flake/ceramic ratio and the lithic nodule/ceramic ratio were higher in Late Huaracane contexts (see Table 7.3). This suggests that the intensity or volume of lithic tool production and/or maintenance was higher during the Late Huaracane phase in comparison to the Terminal Huaracane phase.

There were not a lot of major changes over time in the inter-sector distribution of lithic implements. For example, during both the Late Huaracane and Terminal Huaracane phases there was an uneven inter-sector distribution of flakes and there were significant differences between the flake percentages in each sector (Figures 7.18 and 7.19). An important similarity between the Late Huaracane and Terminal Huaracane distribution of flakes was that samples of both time periods displayed higher percentages of flakes were found in the more open public sectors and lower percentages were found in the more domestic sectors. These patterns indicate that during both time periods at Yahuay Alta, the deposition of lithic débitage more often than not took place in open, non-domestic spaces at the site. This pattern fits the expectations for the deposition of lithic débitage, which can be a hindrance if it accumulates in domestic settings (Hayden and Cannon 1983; Moholy-Nagy 1990).

There were no major changes over time in the inter-sector distribution of lithic nodules at Yahuay Alta. During both time periods there were no significant inter-sector differences nodule percentages (Figure 7.20). However, in general the Late Huaracane nodule percentages were significantly higher than the nodule percentages from Terminal Huaracane sectors (Figures 7.20 & 7.21). This pattern is not unexpected because the Late Huaracane lithic nodule/ceramic ratio was higher than lithic nodule/ceramic ratio for the Terminal Huaracane phase. This difference indicates that the Late Huaracane residents of Yahuay Alta were relatively more intensely involved in the early stages of lithic tool production in comparison to the Terminal Huaracane residents.

7.2 COMPARISON OF INTRA-SECTOR SURFACE ARTIFACT DISTRIBUTIONS FOR THE LATE HUARACANE AND TERMINAL HUARACANE PHASES

There were several important differences and similarities between the intra-sector surface artifact distributions for the Late Huaracane and Terminal Huaracane phases. The major difference between the two time periods during which Yahuay Alta was inhabited was that, based on intra-sector surface artifact distributions, we can identify likely higher status households in the Late Huaracane, and while inter-household differences in the Terminal Huaracane were not as clear cut, revealing households that were higher status or wealthier in differing ways. The Late Huaracane saw an association of serving/feasting events utilizing *Huaracane Fino* bowls and the differential use of chert with the same households. This association did not hold during the Terminal Huaracane phase. During the Late Huaracane phase, *Huaracane Fino* bowl sherd percentage peaks were associated with two specific residential terraces and one close by open area. During the Terminal Huaracane phase the only two *Huaracane Fino* bowl sherd percentage peaks were both located in open plaza areas not associated with any single residential terraces.

A second interesting difference between these two time periods is the type of artifacts that were found upon the surfaces of open spaces. During both the Late Huaracane and the Terminal Huaracane phases domestic refuse, especially lithic débitage, was discarded in open or public spaces at Yahuay Alta. During the Late Huaracane phase this refuse consisted mostly of plainware ceramic sherds and lithic débitage, with relatively low percentages of *Huaracane Fino* bowl sherds. The only open area with a high *Huaracane Fino* percentage (peak #2 in Figure 7.22) that dated to this time period was relatively small and not part of the primary public sector in the Late Huaracane half of the site. This small open area was actually located in a primarily residential area of the site and completely surrounded by residential terraces. During the

Terminal Huaracane phase the refuse on the surface of the open, and presumably public, areas contained relatively high percentages of *Huaracane Fino*, which I interpret as indicating that serving or feasting activities that utilized *Huaracane Fino* bowls took place in these open areas during the Terminal Huaracane phase. However, we cannon entirely rule out that these high percentages could also be the result of the discard of domestic refuse in this non-domestic space. Given that people do not generally like to travel far to dispose of their household refuse (Hayden and Cannon 1983), the artifacts found on the surface of the open spaces at Yahuay Alta likely derived from adjacent residential terraces. Thus, during the Late Huaracane phase the hosting of serving or feasting events utilizing *Huaracane Fino* bowls appears to have taken place entirely in domestic contexts that were far removed from public space. While during the Terminal Huaracane phase these types of events appear to have taken place either in domestic contexts adjacent to public space thus likely utilizing these spaces to some degree or actually in the public spaces themselves.

A look at the sizes of the three open areas associated with Huaracane Fino peaks demonstrates that these areas were substantially larger during Terminal Huaracane phase (Table 7.4). To put the size differences of these open plaza-like areas into a human scale a value derived by Moore (1996: 147) to estimate the capacity of plaza areas will be used. This value was derived from the investigation of public plaza area and colonial census records from the Inca town of Ollantaytambo and suggests that there should be about 3.6 m^2 of open space per person in public plazas (Moore 1996: 147). It is important to keep in mind that this ratio is only a crude approximation. The number of people that were actually in plazas is highly dependent upon what types of activities took place in them. This measurement is not utilized here to get exact results; it is just a rough method for converting area into a human scale. It is very clear from a look at the size and capacity of each plaza that there likely were major differences between Late Huaracane and Terminal Huaracane feasting events that took place in or near open areas (Table 7.4).

Table 7.4. Yahuay Alta plaza sizes.

Location	Size	Estimated Capacity of Plaza (at $3.6m^2$ per person)[21]
Late Huaracane *H.F.*[22] Peak 2 (Figure 22)	42 m^2	11.7
Terminal Huaracane *H.F.* Peak 1 (Figure 23)	933 m^2	259.2
Terminal Huaracane *H.F.* Peak 2 (Figure 23)	238 m^2	66.2

During the Late Huaracane the open area associated with a high contour peak of *Huaracane Fino* bowl sherd percentages was relatively small at approximately 42 m^2. According to Moore's (1996: 147) estimations this area only had a capacity for about 11 or 12 people. Community-wide feasting events were clearly not taking place in this open area.

In the Terminal Huaracane phase both of the open plaza-like areas were clearly large enough to hold sizeable serving or feasting events. The plaza associated with *Huaracane Fino* peak 1 for this phase (Figure 7.23) had an estimated capacity of approximately 259 people and clearly could accommodate community-wide feasting events and/or other types of public ceremonies. The open plaza-like area associated with *Huaracane Fino* peak 2 (Figure 7.23) had an estimated capacity of approximately 66 people, suggesting it could accommodate relatively large feasting events or gatherings. This evidence suggests that during the Terminal Huaracane phase feasting or consumption events utilizing *Huaracane Fino* bowls occurred on a much larger scale in comparison to the Late Huaracane phase.

In addition, the Terminal Huaracane distribution of *manos* suggests that some preparation, presumably for feasting events, took place in public space on and/or around the platform mound (Figure 7.24). This is in contrast to the domestic distribution of *manos* during the Late Huaracane (Figure 7.25). Taken in combination, the Terminal Huaracane distributions for *Huaracane Fino* and *manos* suggest that there was a greater emphasis on public serving or feasting activities during the Terminal Huaracane phase. While feasting events during the Late Huaracane phase were likely hosted by individual households, in the Terminal Huaracane phase feasting events appear to have been related to communal public activities and/or public ritual.

[21] Estimated from Ollantaytambo Data (Moore 1996: 147).

[22] *H.F.* = *Huaracane Fino*.

The change in patterns from the Late Huaracane phase to the Terminal Huaracane phase appears to be related to the way in which higher status individuals were hosting feasts. During the Late Huaracane phase the evidence suggests that individual households, or possibly larger lineages, hosted modestly sized serving or feasting events in domestic contexts. These events were likely hosted in an attempt to establish and/or maintain their status within the community. During the Terminal Huaracane phase it appears that serving or feasting events were much larger in scale and possibly even community wide events. Perhaps higher status households during this time period shifted their focus from simply hosting small serving events to organizing large-scale communal actives within the public/ceremonial sectors at Yahuay Alta. Even though these events may have been communal in nature and possibly served to integrate the community, the organization of such events could have greatly enhanced the status of a household or lineage without necessarily increasing its material wealth.

7.3 DISCUSSION

One of the most important aspects to take away from these two analyses of surface collection material is that despite evidence for status and wealth differences during both phases, there was no use made of the major material symbols of wealth and/or power deposited in Huaracane boot tombs at Yahuay Alta. The boot tombs were filled with many finely made items of both local and exotic origin that displayed the wealth and power of the individuals interred within them (Goldstein 2000b, 2005). Virtually none of the polychrome Pukara-style ceramics found in the boot tombs were found in either Late Huaracane or Terminal Huaracane contexts at Yahuay Alta. This evidence suggests that the type of overt displays of wealth and power exhibited in the boot tombs were only socially appropriate in funerary contexts (e.g., Drennan 1995) within both the Late Huaracane and Terminal Huaracane communities. Instead, social differences at Yahuay Alta were much more visible in the quality of a household's construction materials and ceramic and lithic assemblages. These findings fit well with the results of the excavation of both Late Huaracane and Terminal Huaracane contexts as no marked degrees of wealth accumulation were found at Yahuay Alta during this phase of research either.

Overall, the analysis of surface collection material detected some important changes that took place at Yahuay Alta from the Late Huaracane phase to the Terminal Huaracane phase as well as some social practices that remained relatively the same despite an apparent hiatus in occupation at the site that lasted a minimum of 350 years. The most noticeable changes that took place at Yahuay Alta from Late Huaracane to Terminal Huaracane times:

- Both the inter-sector and intra-sector distributions of *Huaracane Fino* bowl sherds indicate that this fineware was more heavily utilized in purely domestic sectors during the Late Huaracane phase and in sectors containing substantial amounts of open and/or public space during the Terminal Huaracane phase.

- The inter-sector distribution of diagnostic bowl sherds, especially in comparison to diagnostic utilitarian vessel sherds (see Table 7.2), indicate bowls were used to a relatively greater extent in comparison to utilitarian vessels in purely domestic sectors during the Late Huaracane phase and in sectors containing substantial amounts of open and/or public space during the Terminal Huaracane phase.

- The intra-sector distribution of *manos* indicated that during the Late Huaracane phase food processing activities using *manos* occurred primarily in domestic contexts, while during the Terminal Huaracane phase food processing using these grinding implements took place in both public and domestic contexts. However, in Terminal Huaracane contexts the only identified concentration of *manos* was in site's public/ceremonial complex.

- There was a decline in the use of chert from the Late Huaracane phase to the Terminal Huaracane phase. Chert comprised 39.2% ± 4.1% at the 95% confidence level of the lithic material on the surface during the Late Huaracane phase and 11.4% ± 2.2% at the 95% confidence level of the lithic material during the Terminal Huaracane phase.

- Both the flake/ceramic and lithic nodule/ceramic ratios declined from the Late Huaracane phase to the Terminal Huaracane phase indicting in the intensity of the production and/or maintenance of lithic tools declined over time (see Table 7.3).

- There was a shift in utilitarian ware preferences from the Late Huaracane phase where *Huaracane Arena* was more prevalent to the Terminal Huaracane phase where *Huaracane Vegetal* was relatively more prevalent.

As mentioned above, there is also evidence indicating that several social practices remained the same between the Late Huaracane and Terminal Huaracane phases even though Yahuay Alta was probably not inhabited in the time between these two time periods:

- Both the inter-sector and the intra-sector distributions of flakes indicate that during both time periods the deposition of lithic débitage took place to a relatively higher degree in sectors with substantial amounts of open space even though some of these spaces appear to have been public/ceremonial precincts.

- Despite the fact that there were changes in the preferences for utilitarian ceramic wares, relatively the same proportions of utilitarian cooking (*ollas sin cuellos*) and storage (*ollas* with necks and jars) vessels were constructed during each time period (see Table 7.1).

The most important change that took place at Yahuay Alta was related to the nature of serving or feasting activities. Multiple lines of evidence outlined above suggest that during the Late Huaracane phase relatively small scale serving or feasting events took place primarily in domestic contexts. However, during the Terminal Huaracane phase serving or feasting events, which were probably relatively larger in scale, took place primarily in, or at least adjacent to, large, open, and presumably public spaces. Thus overtime feasting shifted from the domestic to the public sphere within this community. The social implications of this change will be discussed in more detail in the following chapter.

The other changes that took place at Yahuay Alta do not have as many wide reaching social implications in comparison to the change in feasting activities. For example, the decline in the use of chert may have been related to the increased availability of obsidian during the Terminal Huaracane phase. The decline in intensity of lithic tool production/maintenance suggests that there may have been more specialization in lithic tool production during the Terminal Huaracane phase. As mentioned above, this interpretation is supported by evidence from the excavation phase of this project. Finally, it is not very clear what the shift in utilitarian ceramic ware percentages indicates.

The fact that some social practices that stayed the same over time at Yahuay Alta suggest that the more mundane or everyday aspects of Huaracane life stayed relatively the same despite the changes that were taking place in this community and in the region as a whole during the Terminal Huaracane phase. Thus, daily life at Yahuay Alta probably remained pretty much the same as it had been during the Late Huaracane phase even though certain aspects of community organization, such as feasting activities, had changed considerably.

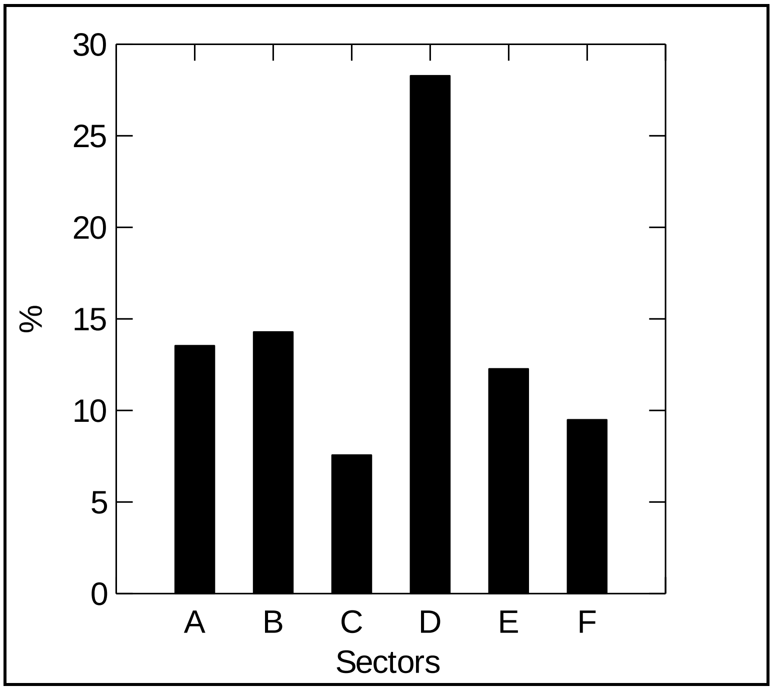


Figure 7.1. Bar graph of Huaracane Fino sherd percentages by sector.

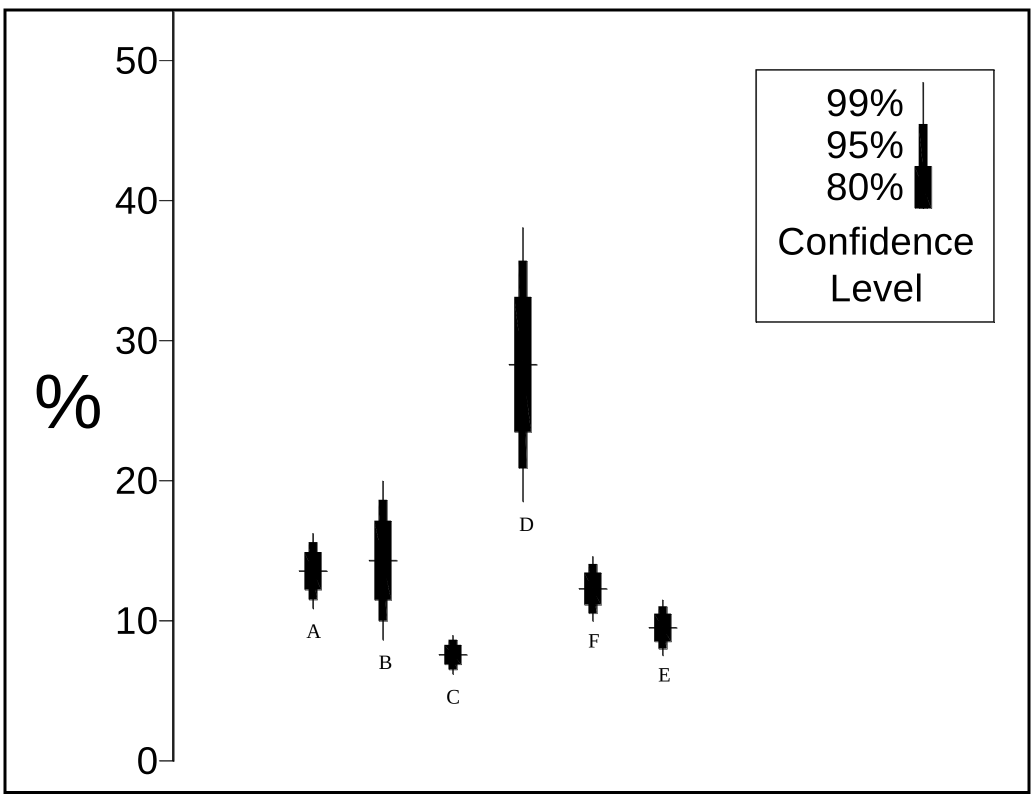


Figure 7.2. Bullet graph showing error ranges for Huaracane Fino sherd percentages by sector.

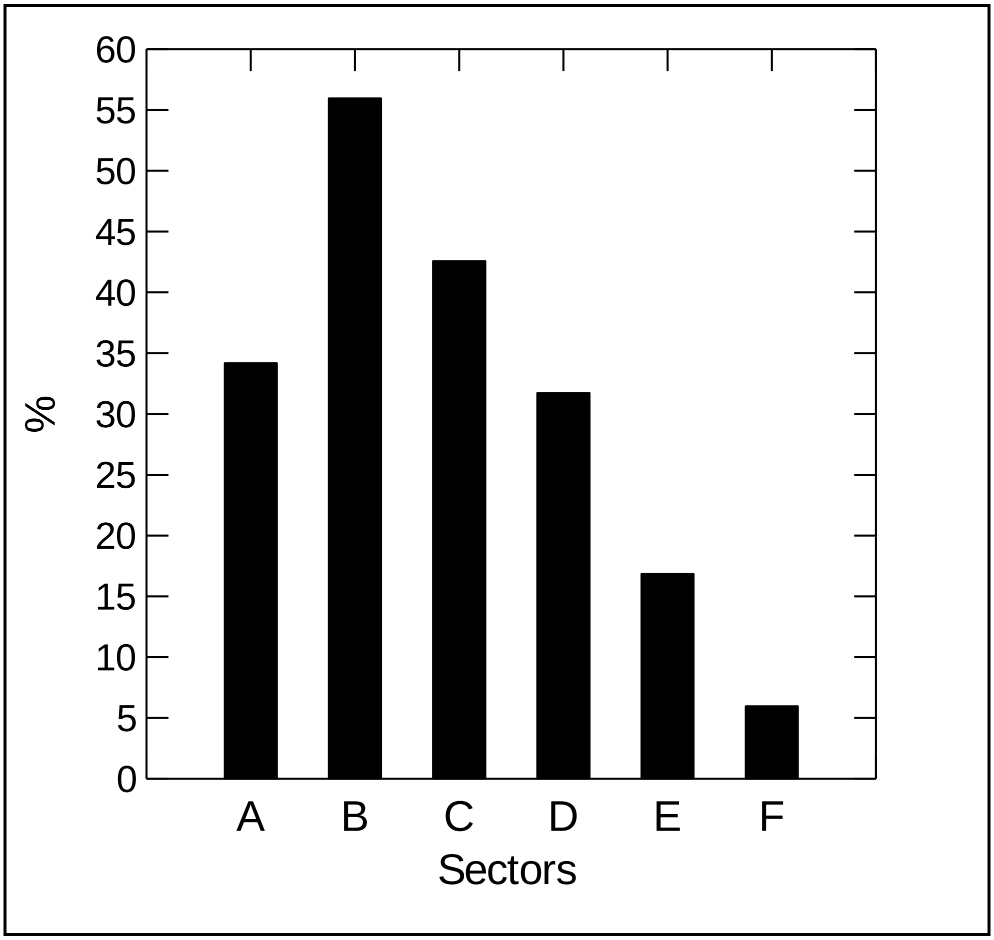


Figure 7.3. Bar graph of Huaracane Vegital sherd percentages by sector.

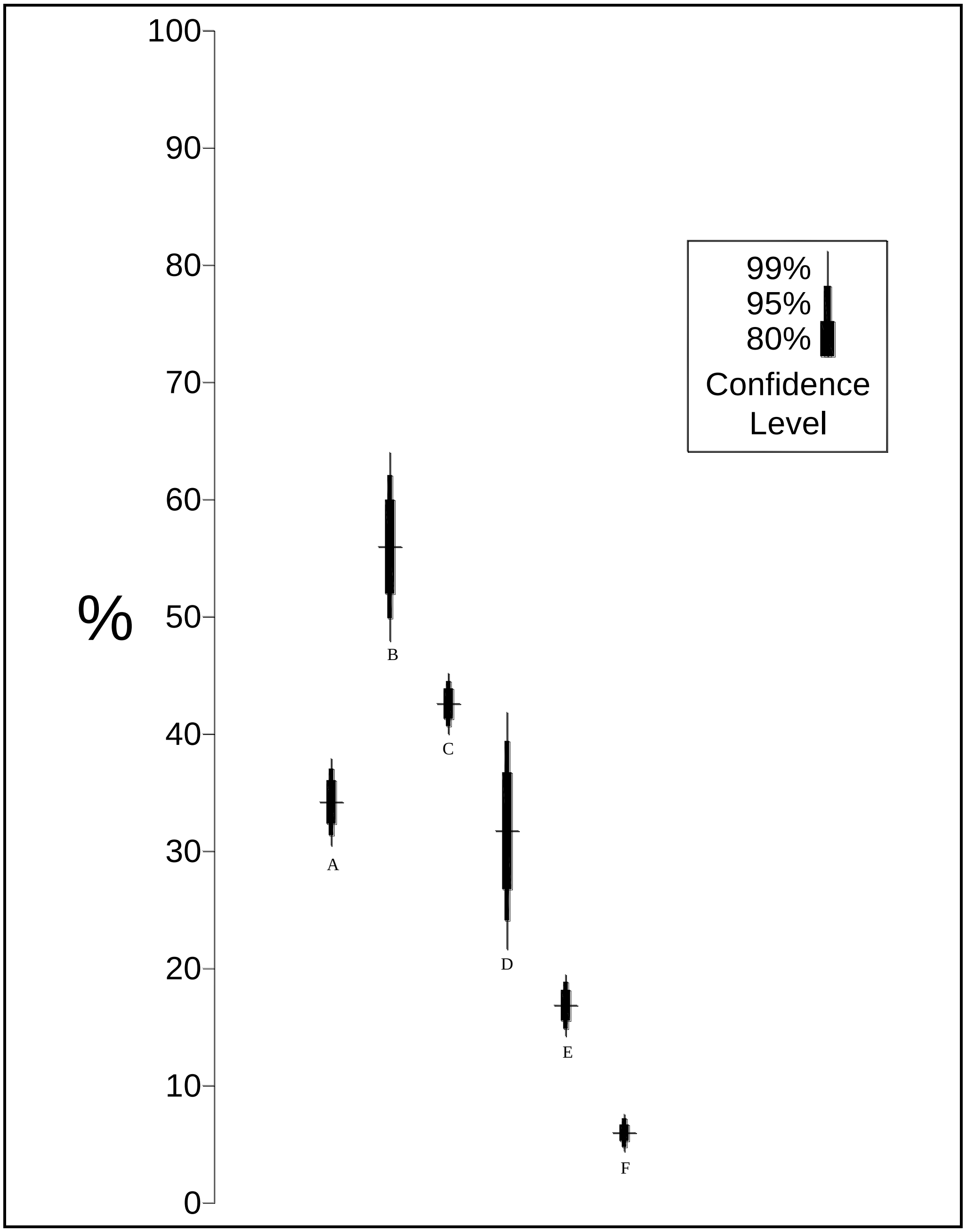


Figure 7.4. Bullet graph showing error ranges for Huaracane Vegital sherd percentages by sector.

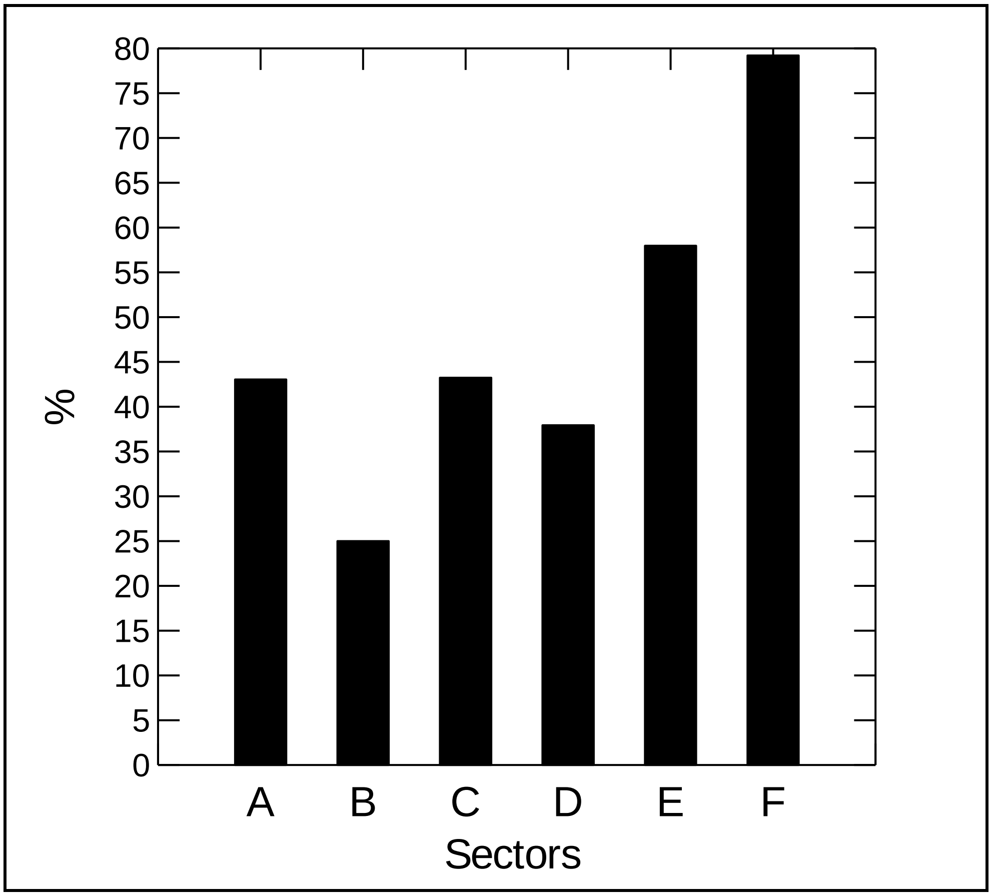


Figure 7.5. Bar graph of Huaracane Arena sherd percentages by sector.

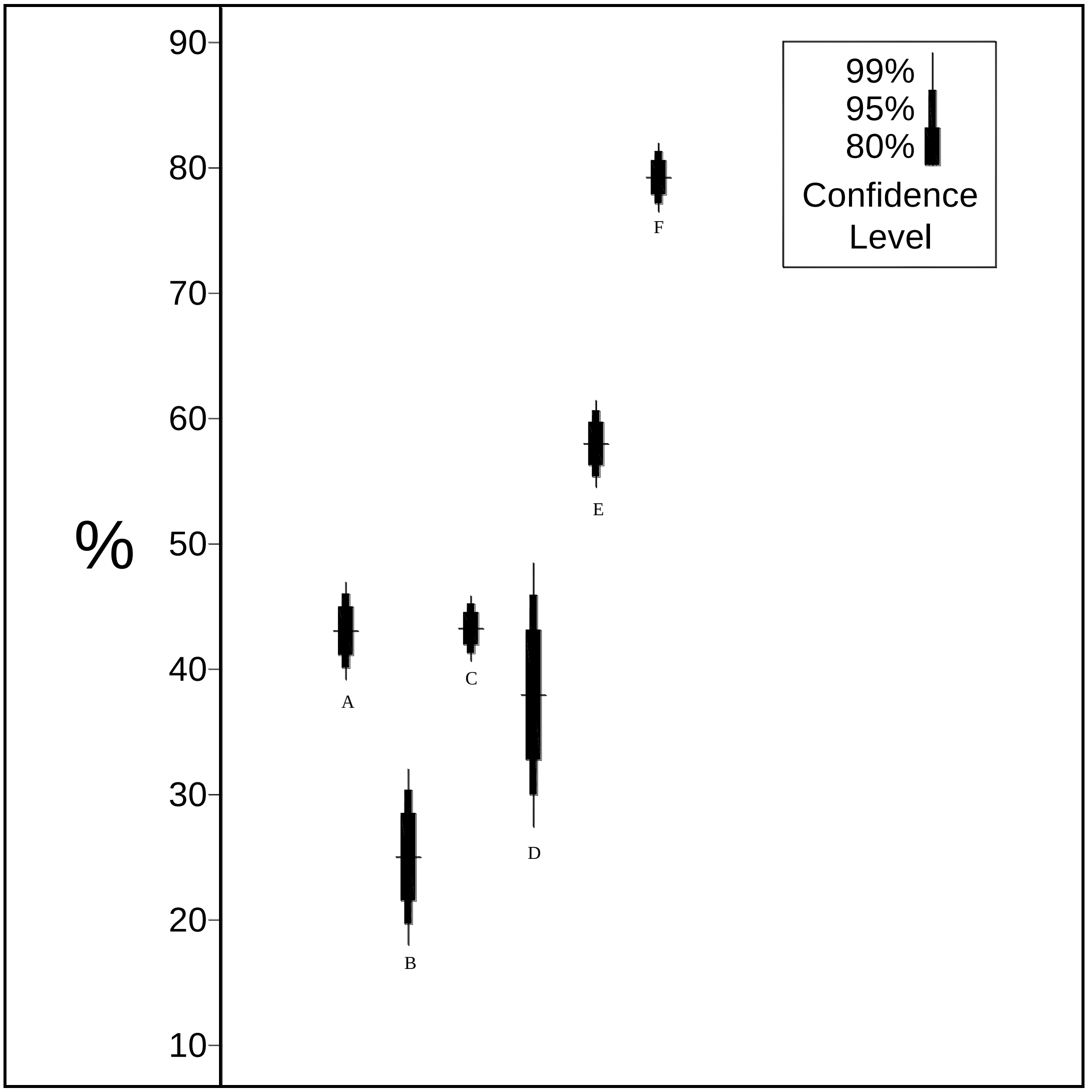


Figure 7.6. Bullet graph showing error ranges for Huaracane Arena sherd percentages by sector.

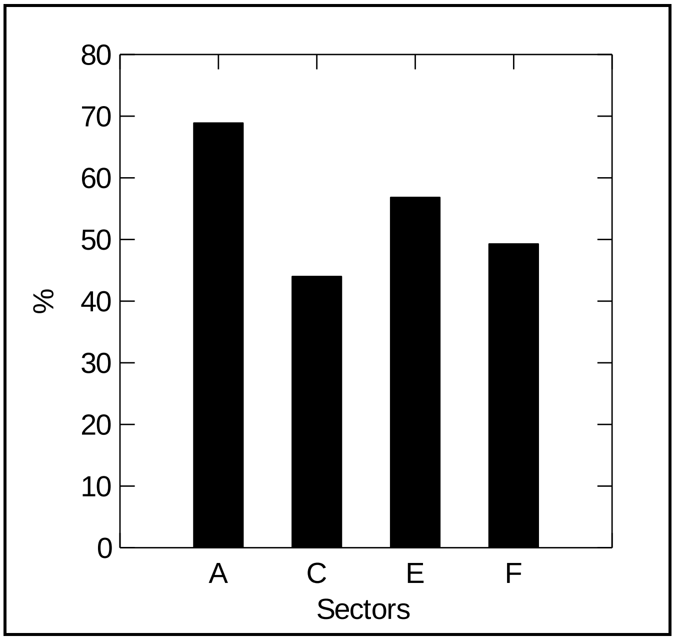


Figure 7.7

Figure 7.8. Bar graph of bowl sherd percentages by sector.

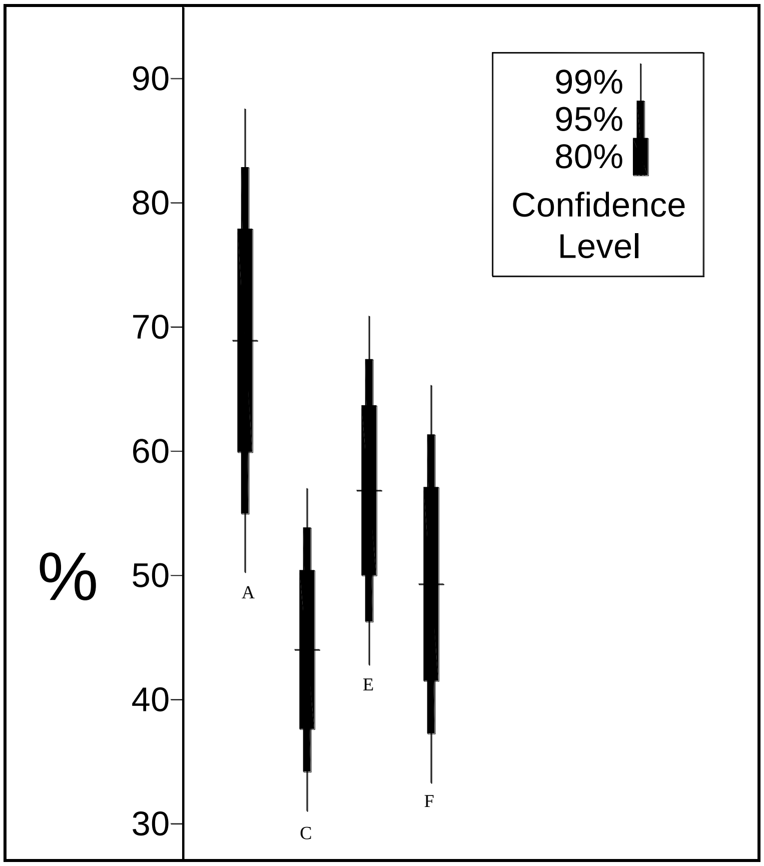


Figure 7.9. Bullet graph showing error ranges for bowl sherd percentages by sector.

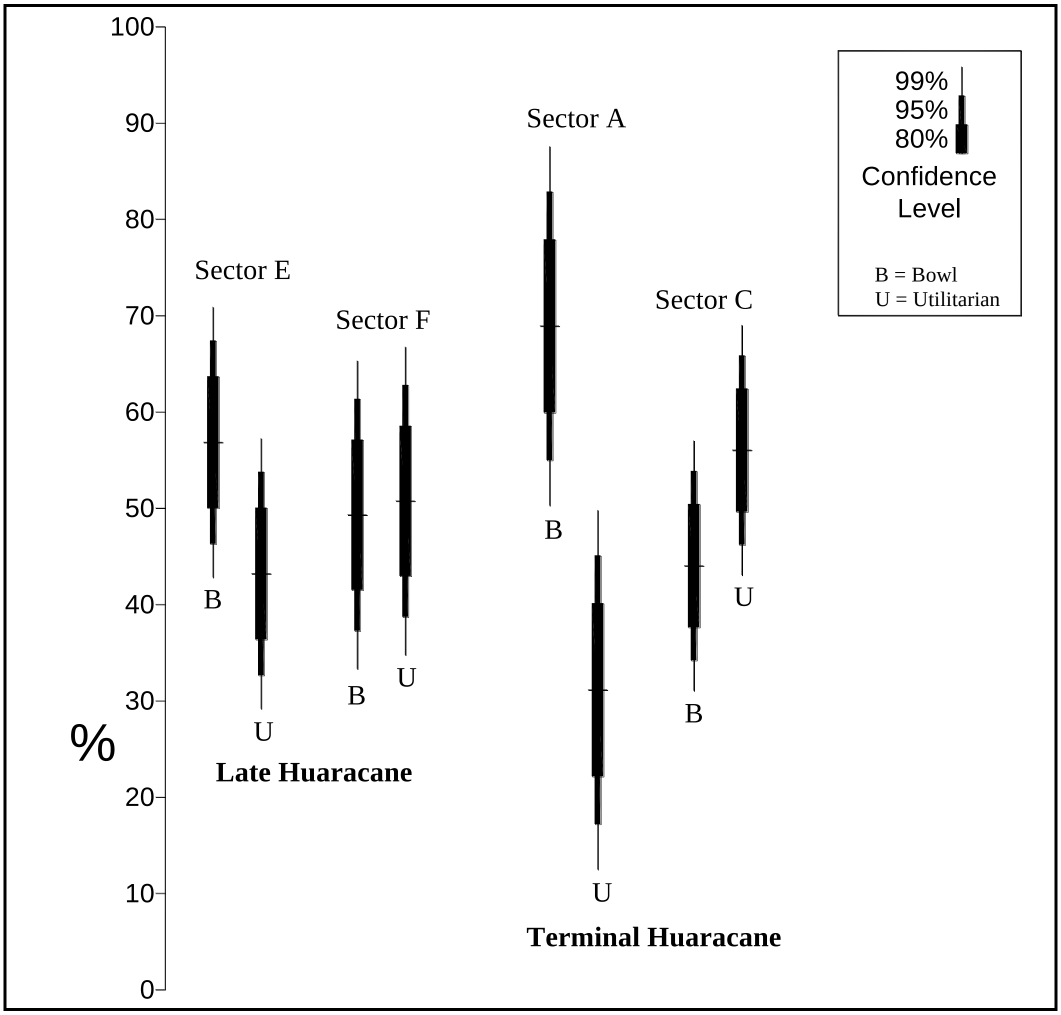


Figure 7.10. Bullet graph comparing the error ranges for bowl and utilitarian vessel sherd percentages by sector.

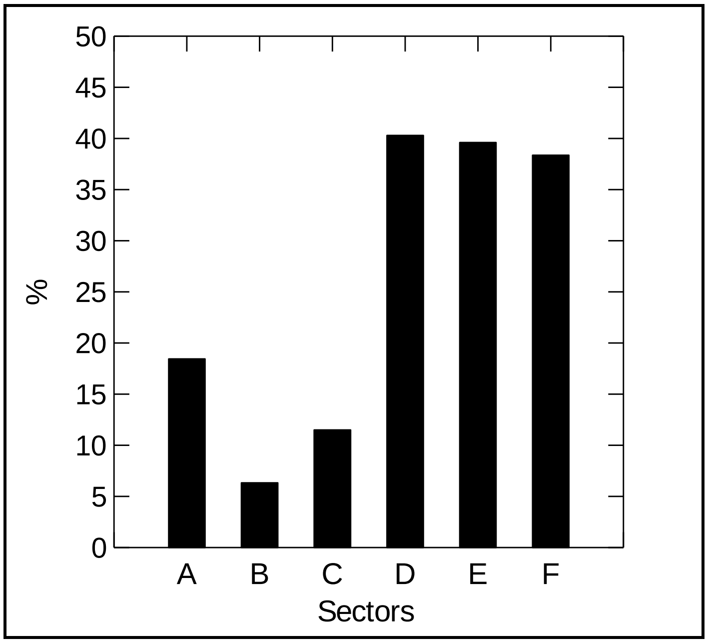


Figure 7.11. Bar graph of chert percentages by sector.

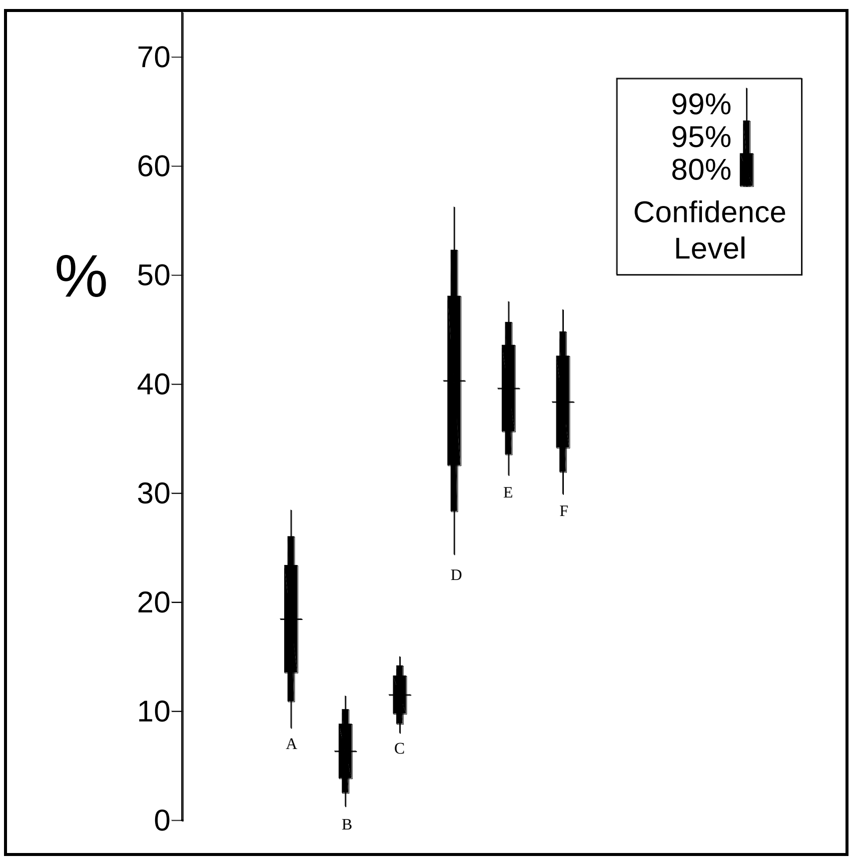


Figure 7.12. Bullet graph showing error ranges for chert percentages by sector.

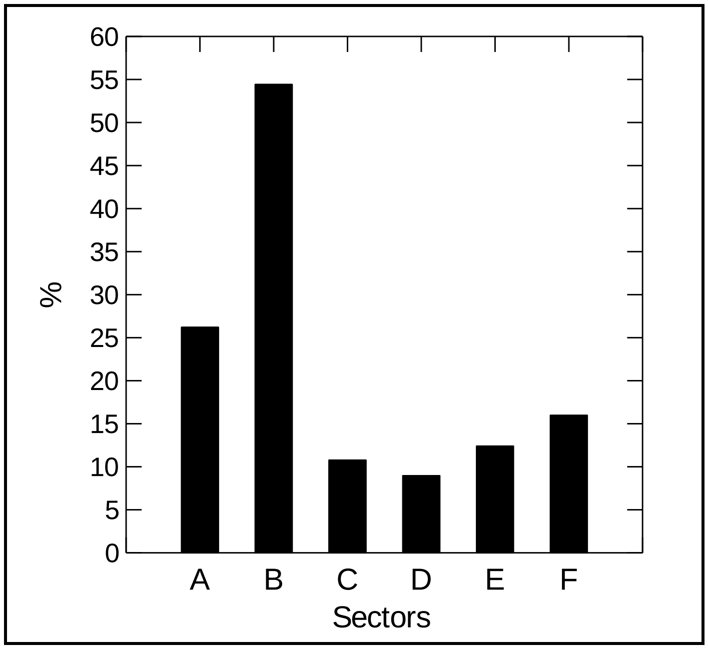


Figure 7.13. Bar graph of dacite percentages by sector.

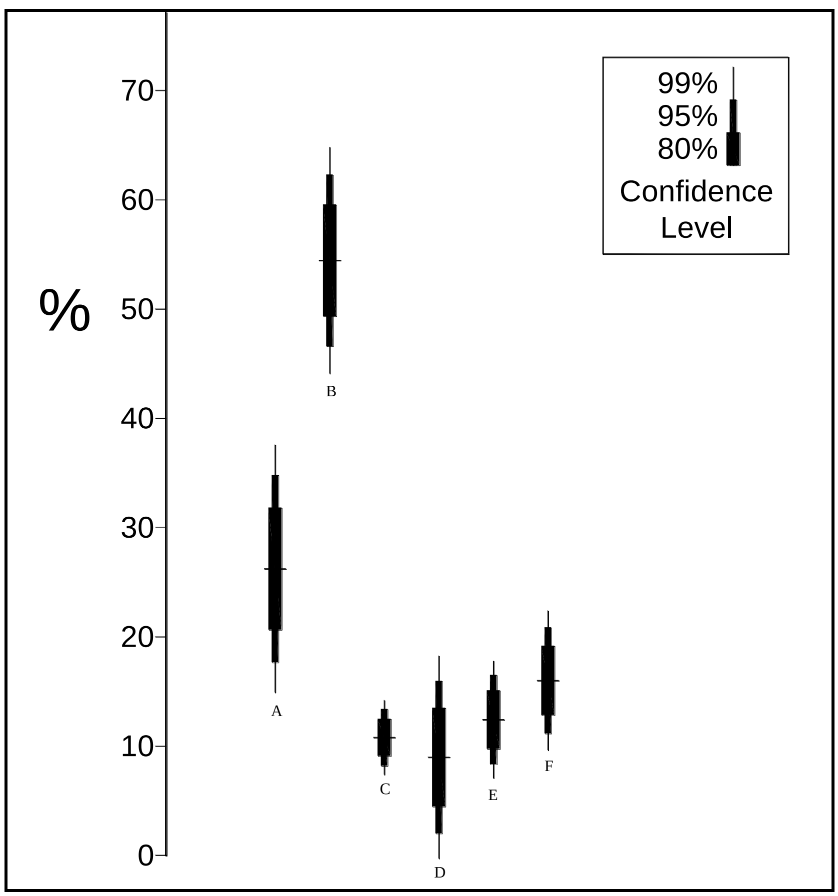


Figure 7.14. Bullet graph showing error ranges for dacite percentages by sector.

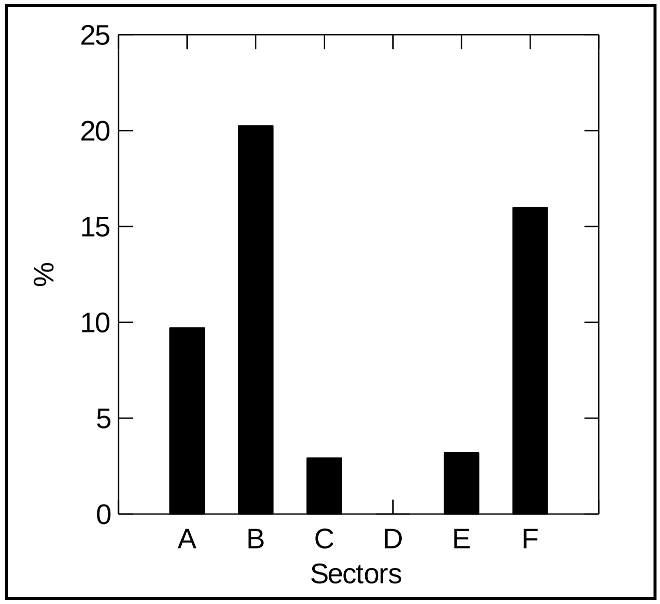


Figure 7.15. Bar graph of rhyolite percentages by sector.

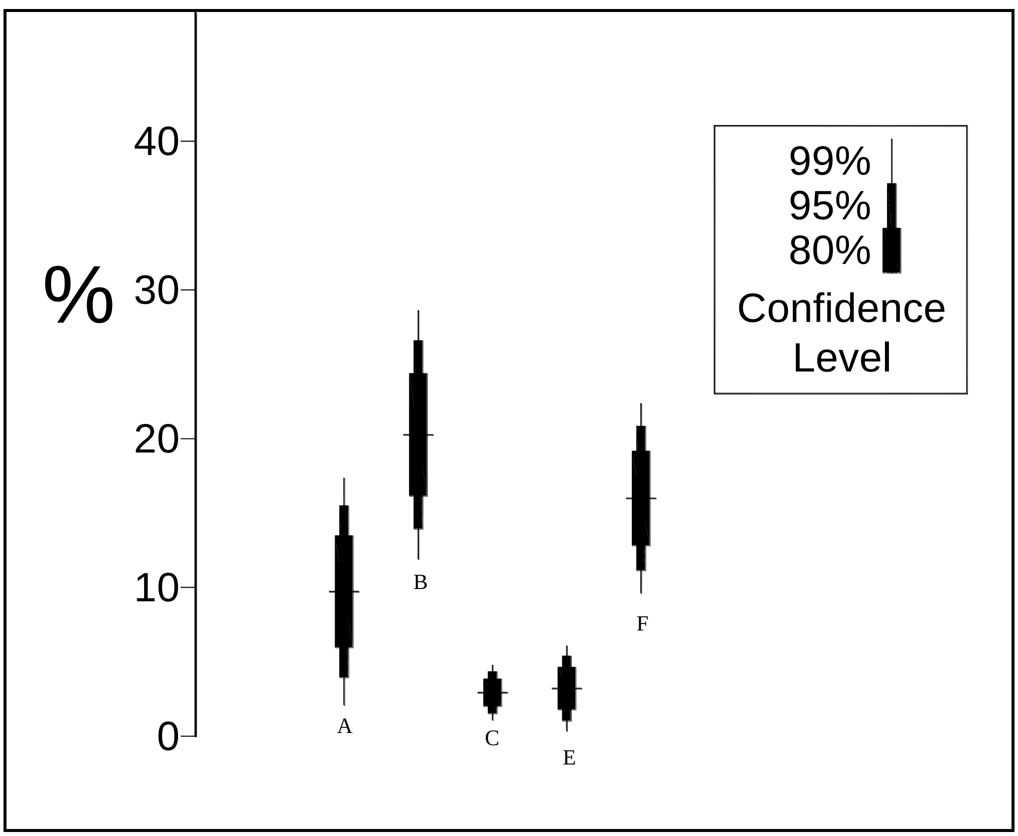


Figure 7.16. Bullet graph showing error ranges for rhyolite percentages by sector.

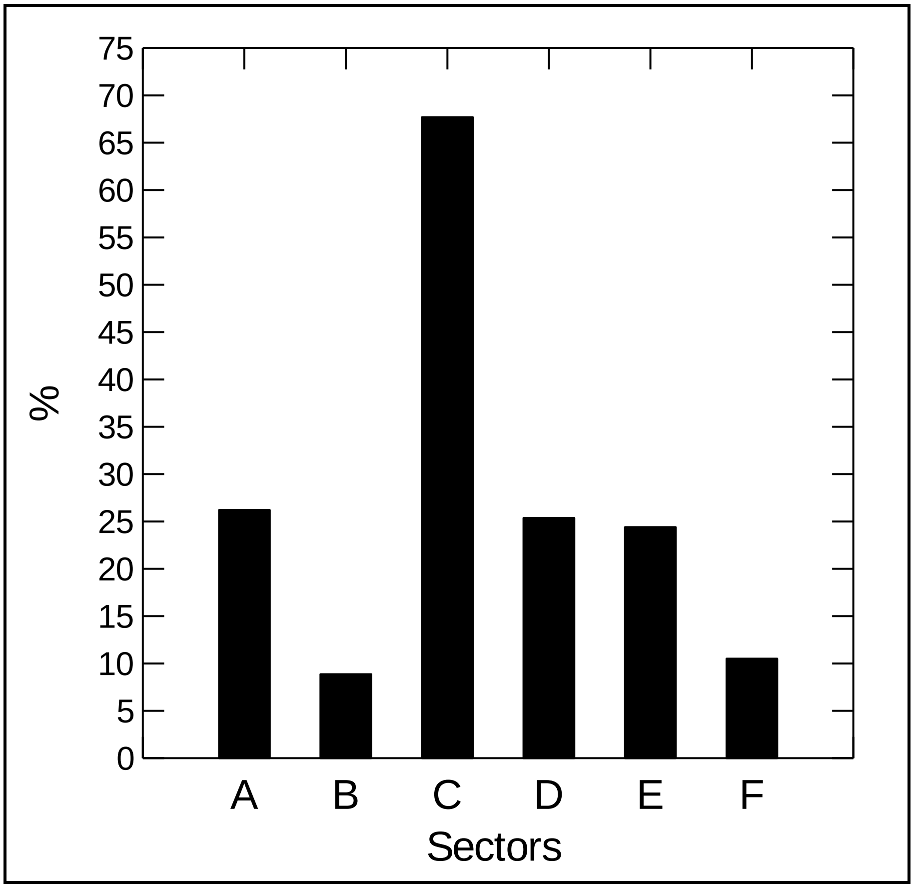


Figure 7.17. Bar graph of quartz percentages by sector.

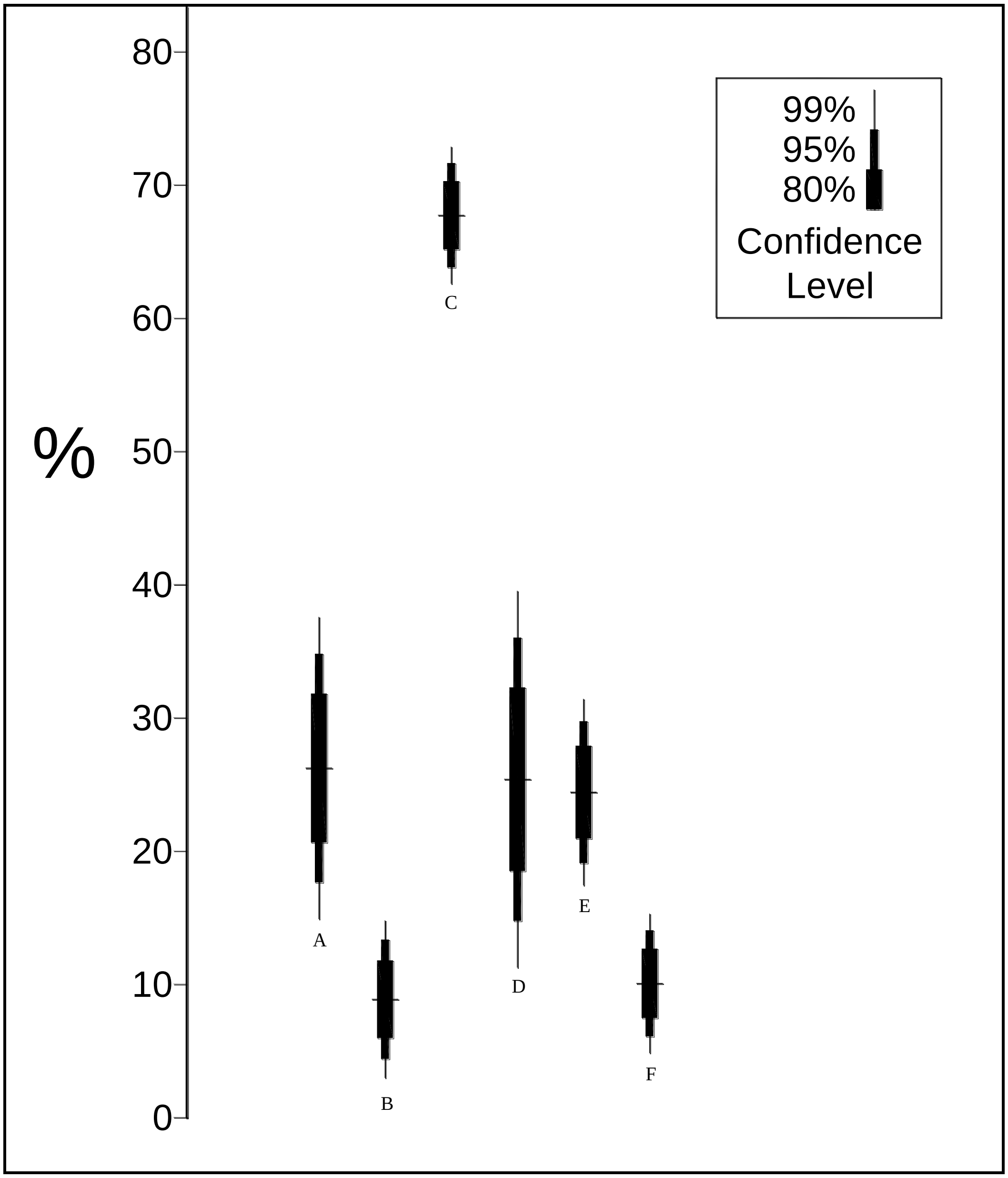


Figure 7.18. Bullet graph showing error ranges for quartz percentages by sector.

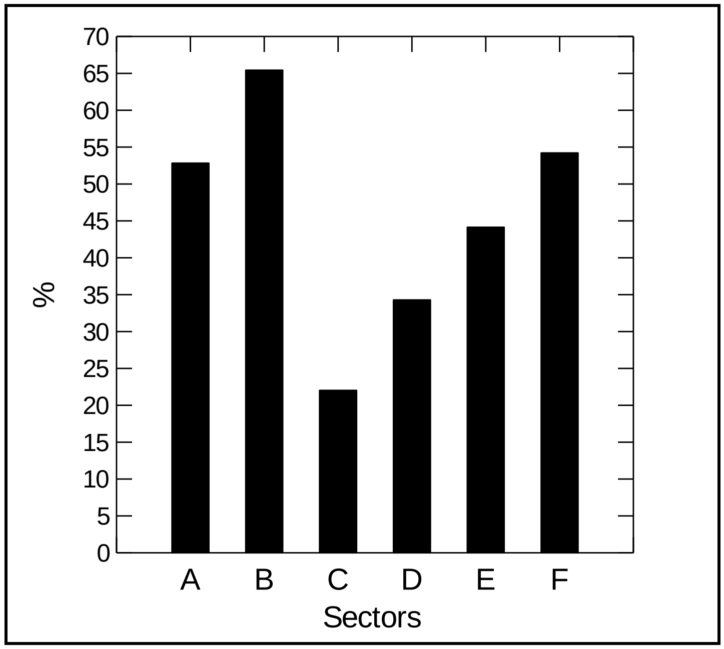


Figure 7.19. Bar graph of flake percentages by sector.

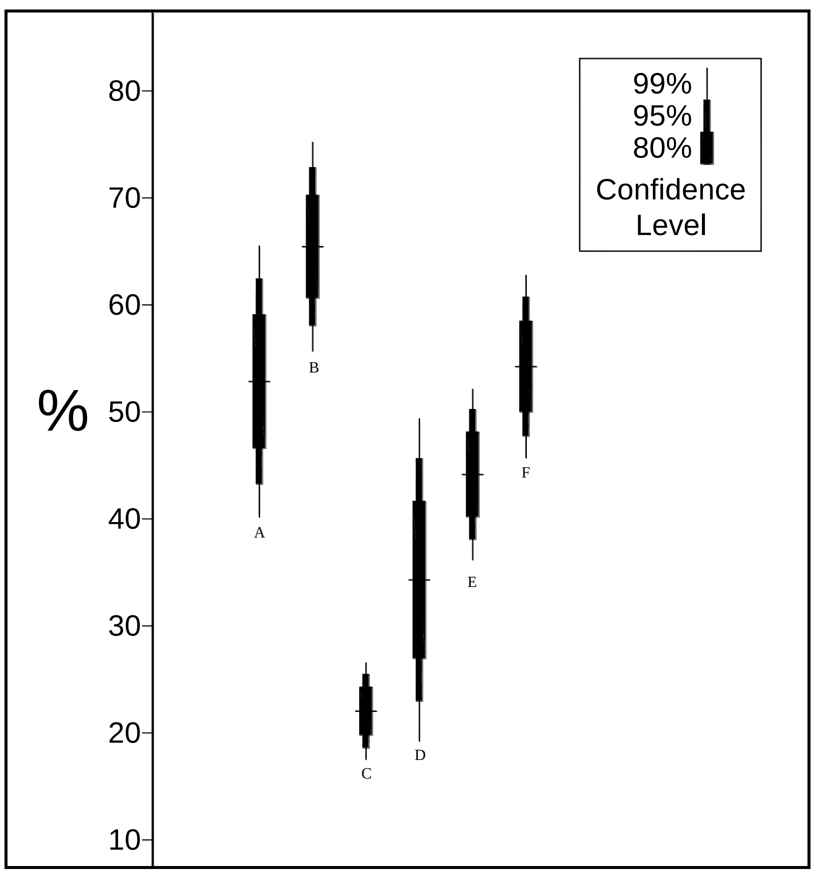


Figure 7.20. Bullet graph showing error ranges for flake percentages by sector.

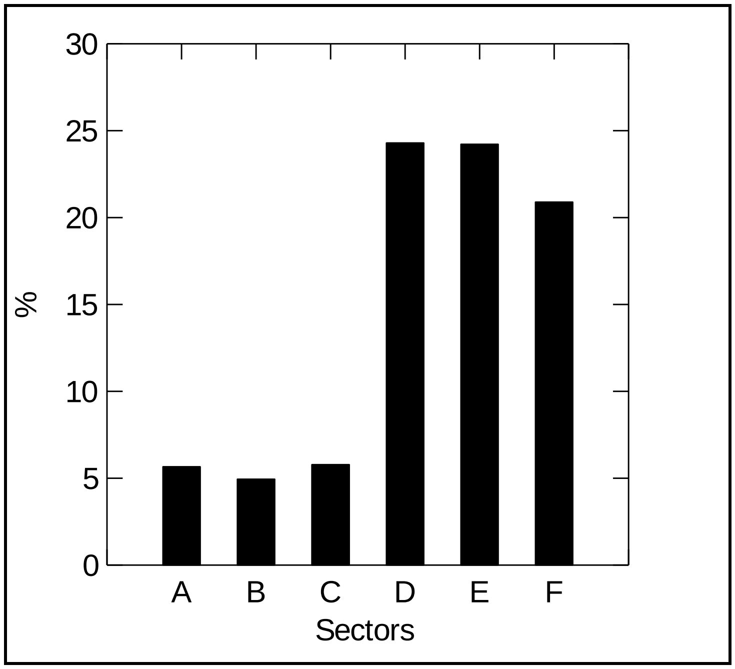


Figure 7.21. Bar graph of lithic nodule percentages by sector.

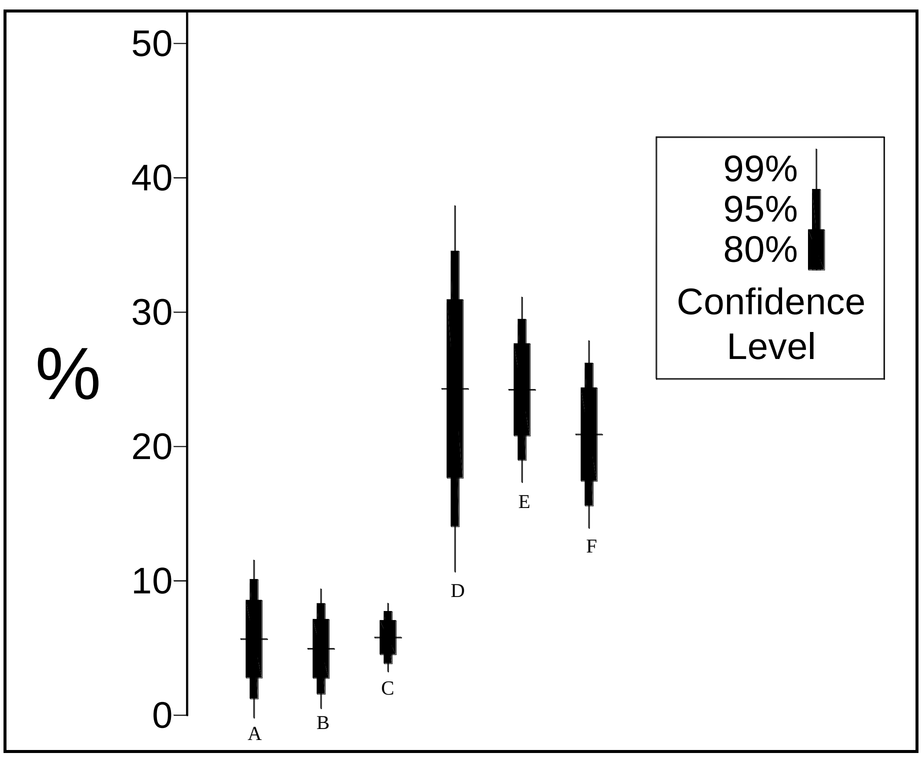


Figure 7.22. Bullet graph showing error ranges for lithic nodule percentages by sector.

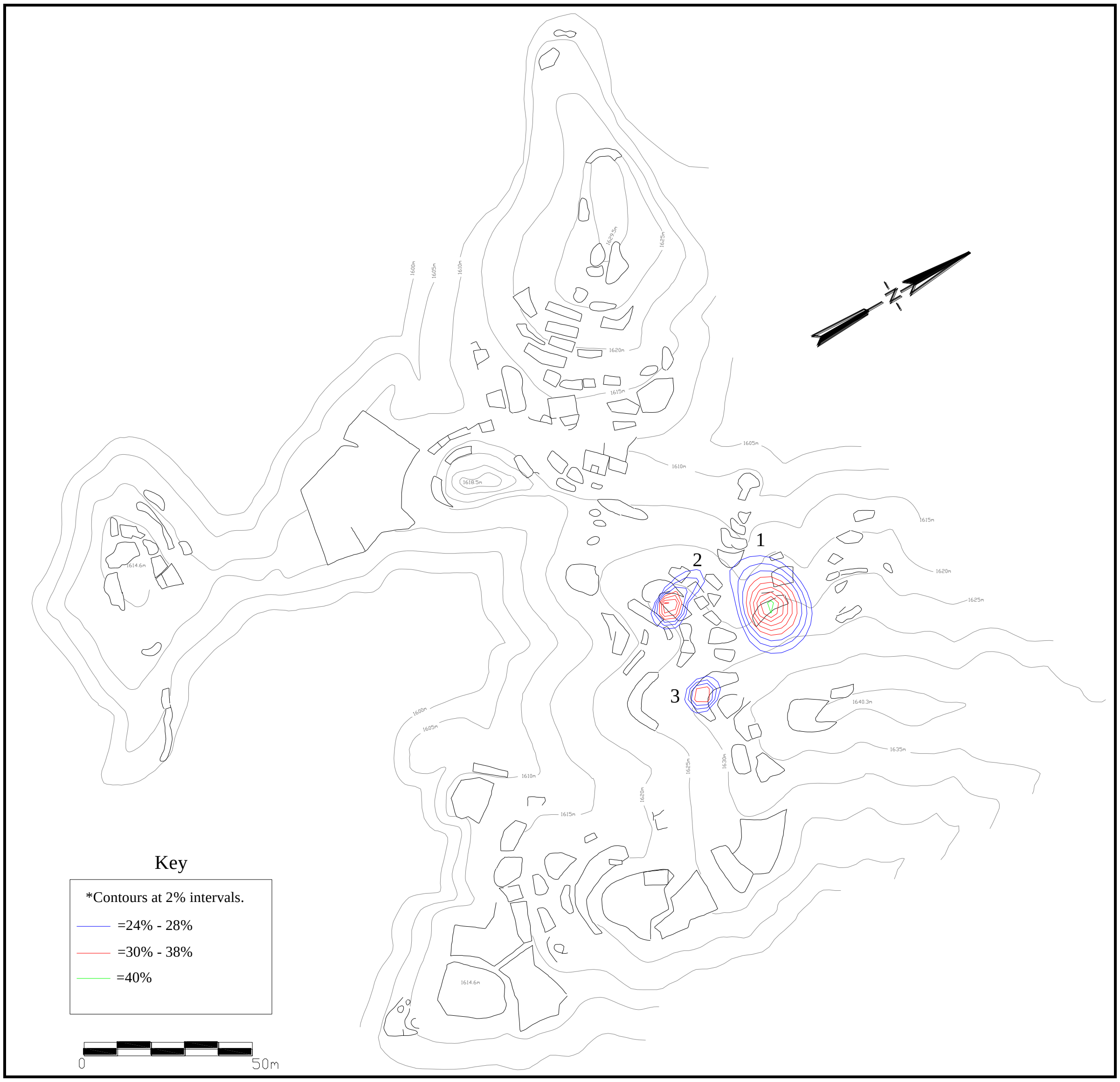


Figure 7.23. Contour map showing percentages of Huaracane Fino sherds on the surface of the Late Huaracane Phase components of Yahuay Alta.

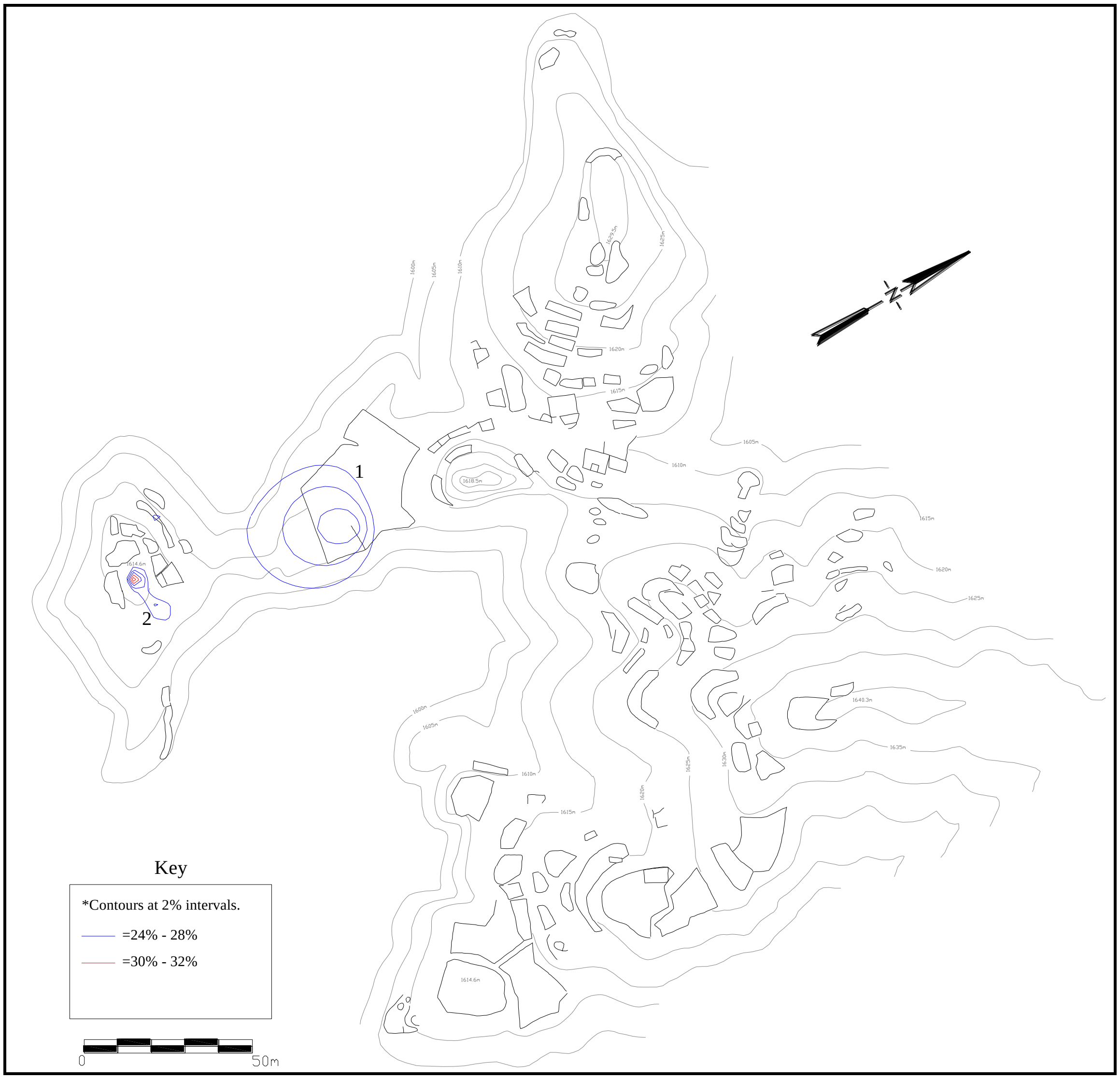


Figure 7.24. Contour map showing percentages of Huaracane Fino sherds on the surface of the Terminal Huaracane Phase components of Yahuay Alta.

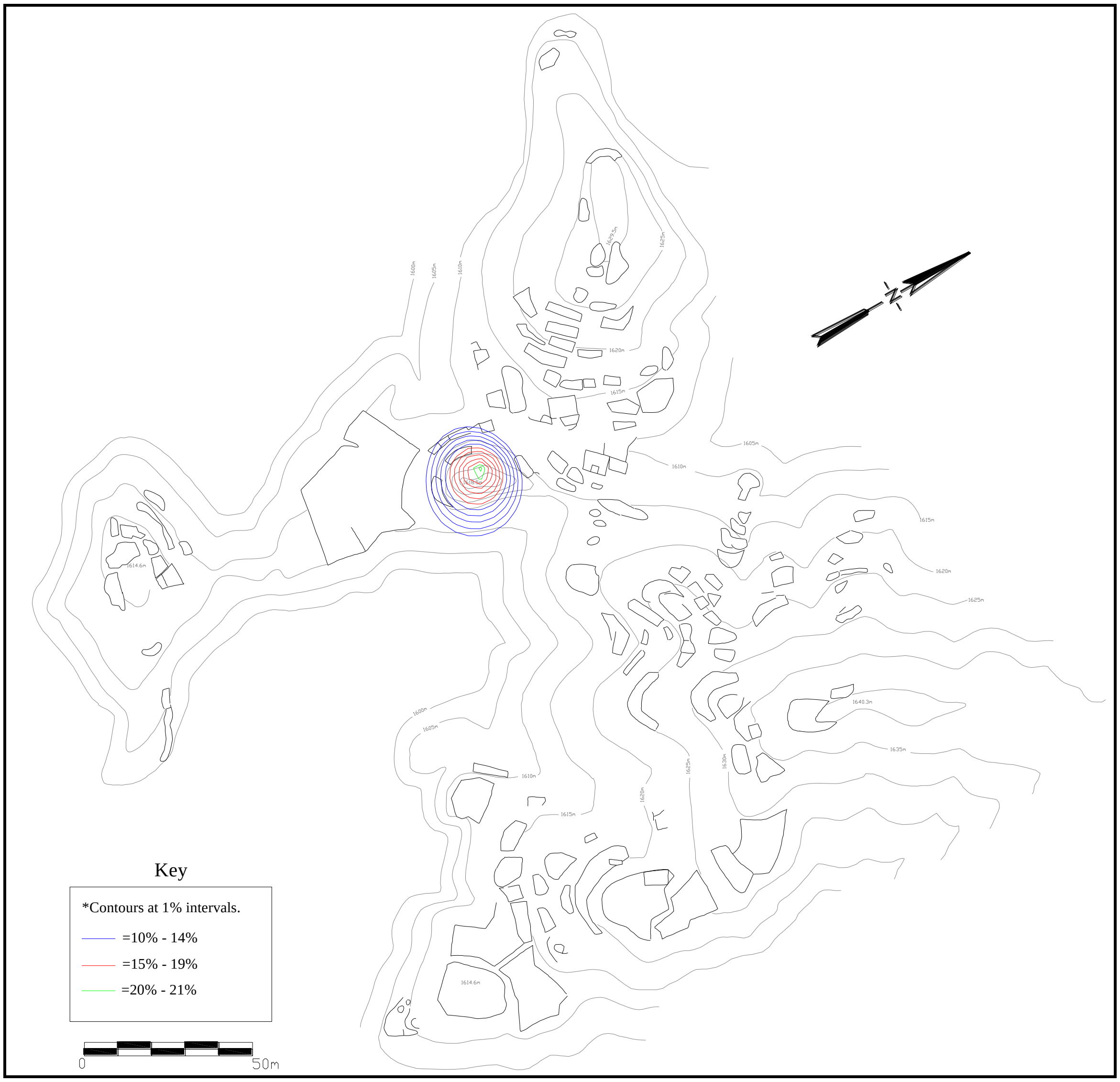


Figure 7.25. Contour map showing percentages of manos on the surface of the Terminal Huaracane Phase components of Yahuay Alta.

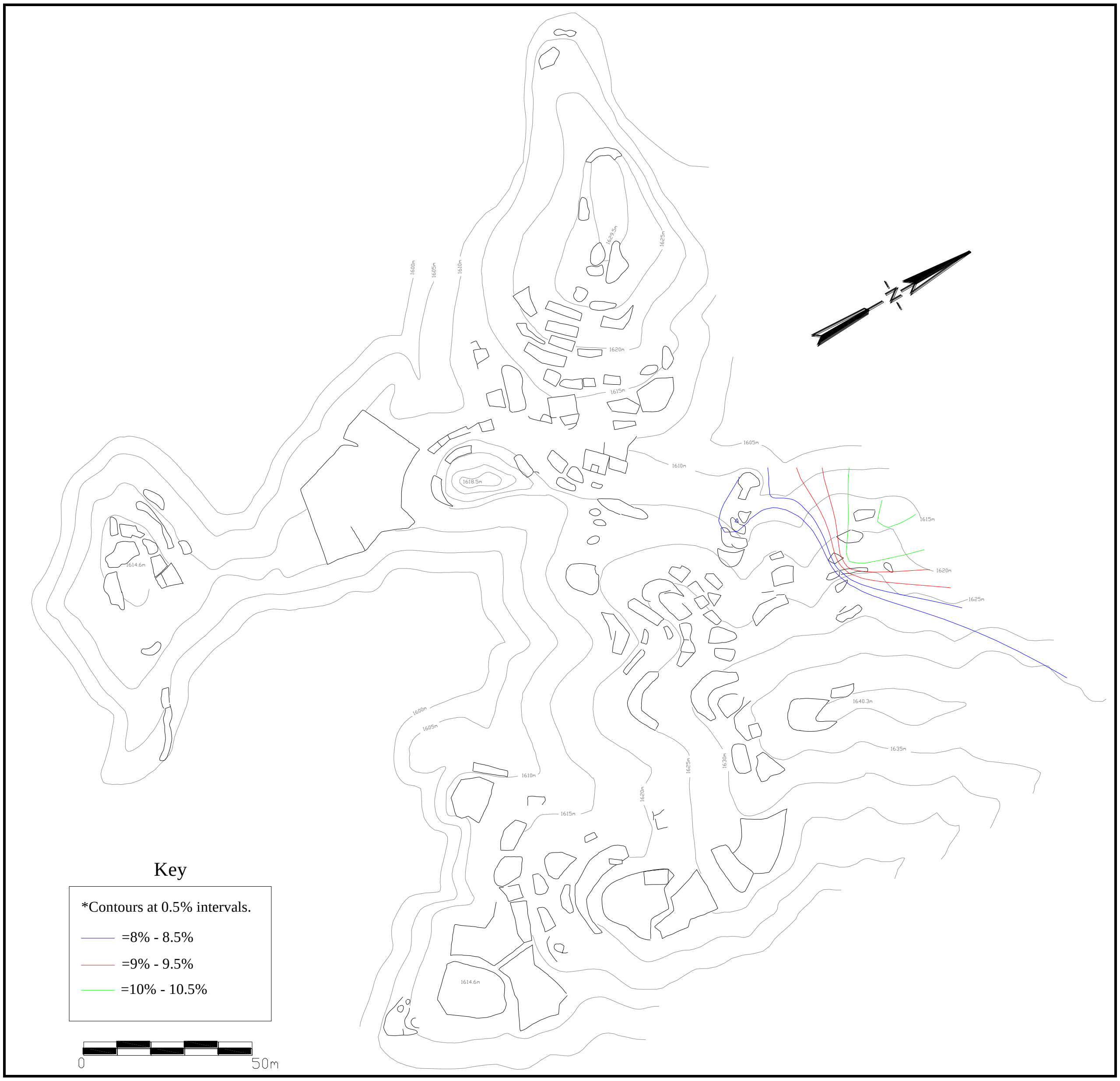


Figure 7.26. Contour map showing percentages of manos on the surface of the Late Huaracane Phase components of Yahuay Alta.

8.0 CONCLUSIONS: YAHUAY ALTA, A CULTURALLY ISOLATED HUARACANE COMMUNITY

This research aimed at identifying the bases for wealth differentiation and social power as seen in household differentiation at Yahuay Alta, a center of the Huaracane archaeological tradition (385 cal BC – cal AD 885) in the Moquegua Valley, Perú. The site was chosen for investigation because of its well-preserved residential areas and platform mound, the first public architecture known for the Moquegua Valley. Until my research, limited investigation of burial patterns had been the basis for a reconstruction of Huaracane social organization as relatively inegalitarian, with an emerging elite status strongly associated with ties to the Pukara polity in the Lake Titicaca Basin and the Nasca culture on the south-central Peruvian coast (Goldstein 2000b). To my surprise, surface collection and radiocarbon dating revealed Yahuay Alta to be a two component site, occupied during the 2nd century and possibly into the 3rd century AD, and then reoccupied during the 8th century AD. This time depth made it possible to look at diachronic changes in residential and socioeconomic organization.

8.1 LATE HUARACANE SOCIAL ORGANIZATION

In general there was not a large amount of inter-household variability in the Late Huaracane community at Yahuay Alta, however some important social differences were detected during both the surface collection and excavation phases of research. The surface collections revealed that some households may have been differentially involved in the hosting of small scale feasting events that utilized *Huaracane Fino* bowls. In addition, these households were also associated with high proportions of chert, the highest quality lithic material found in Late Huaracane contexts. The excavations of Late Huaracane contexts confirmed that some households had significantly higher percentages of chert than other households. Thus, differential access to chert was one of the clearest indicators of wealth during the Late Huaracane phase. Excavations also indicated that some households had differential access to meat and presumably the camelid herds from which this meat was obtained.

The use of both surface collection and excavation data in this research was essential for developing a more complete understanding of Late Huaracane social organization. Without the surface collection data the differential distribution of *Huaracane Fino* bowls would not have been detected. Without the excavation data, differential access to meat/camelid herds would not have been detected. In addition, excavations demonstrated that regardless of terrace size, Late Huaracane domestic structures were relatively the same in size and shape; a fact that was not discernable from surface collection data.

Although this research began on the assumption that the sectors at Yahuay Alta were culturally meaningful spatial units related to the social organization of the community, evidence primarily from the surface collection did not support the hypothesis of zonal status/wealth differences. There were not higher or lower status sectors or neighborhoods at Yahuay Alta, instead evidence for relatively higher or lower ranking households was found within each sector at the site.

8.2 TERMINAL HUARACANE SOCIAL ORGANIZATION

There is relatively more archaeological evidence for inter-household social differentiation from Terminal Huaracane contexts at Yahuay Alta, but again the evidence suggests there was not a clearly definable elite class that accumulated or extravagantly displayed their material wealth. Indicators of wealth and/or status did not neatly co-associate in all higher status contexts. For example, Unit 3 was a very large, architecturally elaborate residential structure with substantial stone walls. The residents of this context had proportionally greater access to chert and this was the only domestic context with evidence for the small scale production of *chicha de molle*. In contrast, although Unit 8 had no evidence for stone walls or any other kind of architectural elaboration, the residents of this context had proportionally greater access to obsidian and were differentially involved in hosting serving or feasting events utilizing *Huaracane Fino* bowls. Thus, during the Terminal Huaracane phase at Yahuay Alta there was not simply a dichotomy of higher and lower status. Instead, there were multiple axes of social differentiation within this community providing various means for households to obtain prestige, higher status and/or accumulate wealth (e.g., Drennan and Peterson 2006).

The majority of wealth and/or status indicators from the Terminal Huaracane phase were only detected during the excavation phase of this project. However, surface collections showed that most feasting activities using *Huaracane Fino* bowls took place in or near open spaces at the site in contrast to the Late Huaracane where feasting/serving activities took place primarily in domestic contexts.

The investigation of Terminal Huaracane phase contexts also began with the assumption that the sectors of the site were culturally meaningful divisions of the community at Yahuay Alta. This assumption was not upheld, as relatively higher or lower ranking households were found in each Terminal Huaracane residential sector. However, the pre-fieldwork hypothesis that Sector B was a public/ceremonial sector without a residential component was upheld.

8.3 CONTINUITY AND CHANGE WITHIN THE HUARACANE COMMUNITY AT YAHUAY ALTA

When comparing the Late Huaracane and Terminal Huaracane communities at Yahuay Alta there were both continuities and changes. When I use the term continuity it is important to keep in mind that the current evidence suggests that there was a hiatus in occupation of perhaps three to five centuries at Yahuay Alta. Thus, social practices did not literally continue unchanged at this site from the Late Huaracane phase to the Terminal Huaracane phase. The most important continuity at Yahuay Alta was that during both time periods the inter-household social differences within both communities were relatively minimal. For neither time period did I find evidence for extraordinarily wealthy or powerful households dominating or controlling the community at Yahuay Alta.

Another important and very interesting continuity at Yahuay Alta was the use of distinctively Huaracane ceramics during both the Late Huaracane and Terminal Huaracane phases. It is not surprising that the Late Huaracane utilized Huaracane ceramics considering this time period at the site fit nicely into the later part of the known traditional Huaracane sequence. However, the persistent use of Huaracane ceramics during the Terminal Huaracane phase after Huaracane communities had presumably been exposed to the more varied and sophisticated Wari and Tiwanaku ceramic assemblages was an extremely interesting phenomena. The persistent use of Huaracane utilitarian ceramics, such as the *olla sin cuello*, for daily tasks during the Terminal Huaracane is not necessarily that surprising. That is because even in pluralistic social environments where there is a large amount of cultural exchange or borrowing there is often little change in objects that are used in daily domestic tasks, such as cooking (Lightfoot, et al. 1998). For example, there is evidence that the Tiwanaku colonists in the Moquegua region insisted upon using *altiplano*-style plainware ceramics for domestic tasks instead of adopting the plainware styles of the local indigenous population (Goldstein 2005).

In contrast, to the utilitarian ceramics, the persistent use of *Huaracane Fino* fineware bowls (as opposed to Wari or Tiwanaku-style vessels) during the Terminal Huaracane phase is more surprising. Although *Huaracane Fino* bowls are very well made, they are relatively simple for fineware ceramics especially in comparison to Wari and Tiwanaku fineware. The collection of polychrome Pukara-style fineware ceramics for display in boot tombs indicates that the Huaracane appreciated highly decorated ceramics and may have utilized them as symbols of prestige and/or power in funerary setting (Goldstein 2000b). Yet the Terminal Huaracane inhabitants of the settlement at Yahuay Alta chose to utilize traditional Huaracane fineware serving vessels and/or non-ceramic gourd vessels in their ceremonies instead of adopting or trading for Wari or Tiwanaku fineware ceramics. The key word here is choice; in this case the members of the Huaracane community at Yahuay Alta appear to have preferred continuity to change when it came to fineware ceramics. Presumably if they so desired, community members could have obtained Wari or Tiwanaku decorated fineware ceramics from local colonists. However, members of this Terminal Huaracane community chose to continue to use their traditional fineware serving bowls; the implications of this intriguing finding will be discussed in further detail below.

One of the most obvious changes that occurred between the Late Huaracane Phase and the Terminal Huaracane phase at Yahuay Alta was the nature of the residential architecture at the site. During the Late Huaracane phase residential architecture conformed very well to the traditional Huaracane architecture known from other sites in the middle Moquegua Valley. In general, Late Huaracane residential structures were circular in shape and very small in size regardless of the size of the terrace they were constructed upon. Due to this small size, it is doubtful that entire households resided in a single Late Huaracane structure. This contrasts considerably with the Terminal Huaracane residential structures at Yahuay Alta, which were rectangular in shape and relatively variable in size. Entire households probably could have resided within the larger Terminal Huaracane residential structures. It is difficult to make the argument that households increased in size over time based upon this change in residential structure size because entire households were probably not residing within single residential structures during the Late Huaracane phase. As a result, it is difficult to judge the actual size of households from this time period in comparison to the Terminal Huaracane phase.

There is one other possible explanation for this change in domestic architecture at Yahuay Alta. Internal storage features were more common in Terminal Huaracane rectangular structures in comparison to Late Huaracane structures suggesting that storage at the household level may have become more important during the later phase. Rectangular structures are better suited for internal or private storage features (Flannery 1972, 2002); thus if storage at the individual household level was more important during the Terminal Huaracane phase then the shift to rectangular residential structures could be a reflection of this increased need for internal storage space.

Another important change that took place between the Late Huaracane and Terminal Huaracane phases at Yahuay Alta was in relative access to long-distance trade materials. At Yahuay Alta very little exotic material was found in Late Huaracane contexts. In fact, the only exotic material found dating to this time period was a very small amount of marine shell and the source of this material, the Pacific Ocean, was only approximately 75 km distant from the site. Evidence from Huaracane boot tombs, which date to this time period, demonstrate that some individuals within Late Huaracane society were involved in exchange systems that extended to relatively distant locations, such as Pukara in the highlands and Nasca on the coast (Goldstein 2000b). Thus, during this time period access to exotic materials may have been important in certain social occasions, however, access to exotic materials was not an essential part of every day life for the average member of Late Huaracane society, nor did material differences in access to exotic goods permeate the Yahuay Alta community.

Evidence from Terminal Huaracane contexts at Yahuay Alta suggests that there was substantially more acquisition of exotic materials and one material in particular, obsidian, appears to have been used to at least some extent in most contexts within this community. Access to exotic materials during the Terminal Huaracane phase extended to sources well beyond the relatively near by Pacific Ocean. Obsidian was found in varying quantities in every excavated context that dated to this time period and as discussed in detail in Chapter 6, the majority of the obsidian found at Yahuay Alta came from Wari controlled sources even though these sources were more distant from the Moquegua Valley than the most important known Tiwanaku obsidian source. This suggests that the some members of the Terminal Huaracane community at Yahuay Alta were interacting with Wari colonists in the region in order to obtain obsidian and possibly other desirable exotic materials. Wari colonists had access to these exotic goods because they were tapped into the Wari Empire's sophisticated and extensive long distance exchange network. Interaction with Wari colonists probably also explains how small amounts of both *spondylus* shell and lapis lazuli, both materials with exceedingly distant sources, made it into Terminal Huaracane contexts at Yahuay Alta.

The increase in access to exotic materials at Yahuay Alta during the Terminal Huaracane phase was doubtlessly related to the presence of Wari colonists in the region. In fact, even though the Terminal Huaracane residents at Yahuay Alta had access to a wide variety of exotic materials, they were obtaining these materials from local colonists and not through long distance exchange networks. As a result, of the exchange relationships, some Terminal Huaracane residents at Yahuay Alta forged with Wari colonists in the region, an exotic material, obsidian, came to play a relatively important role in daily life at Yahuay Alta. This contrasts sharply with the general role that exotic materials played in the Late Huaracane community at Yahuay Alta.

The most interesting change the took place between the Late Huaracane and Terminal Huaracane phases at Yahuay Alta was the nature of feasting activities at the settlement. This change is based primarily upon the analysis of the surface distributions of *Huaracane Fino* bowl sherds where elevated densities of these sherds were interpreted as evidence for feasting or consumption activities (see Chapter 4). During the Late Huaracane phase the evidence suggests that relatively small-scale feasting or consumption events took place primarily within domestic sectors of the site. Individual households probably hosted these small-scale feasts, likely only inviting heads of other households within the community. Thus, these feasting events were in all probability very small-scale promotional or empowering feasts designed to enhance the social prestige of the host (Adams 2003; Dietler 2001; Hayden 2001a; Potter 2000a).

During the Terminal Huaracane phase the evidence suggests that large-scale feasting or consumption events were hosted in relatively public areas of the site. Such events likely took place in the large public plaza associated with the platform mound in Sector B and in the large open area in the southern half of Sector A. Thus, feasting activities shifted from a relatively domestic setting to large, open, and presumably public spaces at Yahuay Alta. Both surface collection evidence and evidence from excavation Unit 7 also indicate that the preparation for feasting or consumption events that took place in the plaza in front of the platform mound occurred within this public sector and not in domestic contexts. This is in contrast to the evidence from Late Huaracane contexts, which suggests preparations for feasting during that time period took place primarily within domestic contexts. The removal of both feasting events and the preparation for these events away from the domestic sphere of the community into the more public sphere of the community indicates that the nature of feasting events within the community may have changed substantially. The moving of feasting events to more public locations within the settlement suggests that they may have been more communal in nature than the Late Huaracane feasts. Possibly Terminal Huaracane feasts were solidarity feasts designed to promote community identity and solidarity (Adams 2003; Hayden 2001a; Potter 2000a). However, the communal nature of such feasts does not preclude the possibility that certain households or lineages organized and thus benefited from these events.

At first look, a shift over time from small-scale promotional feasts to large-scale solidarity feasts seems somewhat counterintuitive. However, there are cross-cultural examples where there is good evidence that this type of shift in the nature of feasting took place. In the North American Southwest prior to approximately AD 1275 the evidence suggests that feasting was a source of social differentiation, however after this date feasting became truly communal and socially integrative (Potter 2000a: 472). In addition, it is important to note that the nature of feasting activities is highly dependent upon both the political and social environment within which the feasting is taking place (Potter 2000a: 472). This appears to be especially important in the case of the Huaracane. During the Late Huaracane phase the Huaracane were the only society residing in the middle Moquegua Valley and there is no evidence to suggest that any foreign political powers, such as Pukara, were attempting to politically influence or control this region (Goldstein 2000b). With no threats to Huaracane social or community identity ambitious individuals were free to utilize feasting to begin the process of establishing and/or legitimizing social power within these predominately egalitarian communities. In contrast, during the Terminal Huaracane phase Huaracane communities were likely threatened socially and politically by the powerful foreign colonies that had been established within their territory. In response, perhaps the residents of the settlement at Yahuay Alta began to hold large-scale community wide feasting events in order to promote community solidarity and maintain their community identity. Community-wide feasting may have served as a way of maintaining a traditional Huaracane identity within a rapidly changing and possibly increasingly hostile social and political environment. This explanatory model for the change in the nature of feasting at Yahuay Alta is at this point only a hypothetical possibility. Further fieldwork at Yahuay Alta focusing specifically upon the more public ceremonial sectors is needed to test whether or not the feasting events that took place within the open public areas at the site were truly communal in nature.

Another possible and not mutually exclusive explanation for the expansion of feasting from small scale domestic events to large scale communal events could have been the introduction of *chicha de molle*. The incorporation of this drink into Huaracane feasting could have lead to the expansion of a culturally acceptable means for status enhancement. The ability to produce large quantities of *chicha de molle* could have allowed certain households or lineages to host large feasting events that involved more of the community. This could have allowed these households or lineages to acquire more social status in a socially acceptable way. In fact, feasting events involving the consumption of alcoholic beverages offer one of the most effective means for subtly enhancing social status in societies where the accumulation of large amounts of material wealth is not socially acceptable (Dietler 1990: 372).

Understanding the differences between Late Huaracane and Terminal Huaracane feasting is crucial for understanding the differences in status and leadership between these two time periods. In both the Late Huaracane and Terminal Huaracane phases higher status households had differential access to meat/camelid herds and high quality raw materials, such as chert or obsidian. The primary difference between these two time periods was that during the Late Huaracane phase households could only mobilize enough resources to effectively host small scale feasts, while during the Terminal Huaracane phase certain households or lineages may have been able to mobilize enough resources to host community wide feasting events, possibly because of the introduction of *chicha de molle*. Thus during the Late Huaracane phase social status obtained from hosting feasts did not extend throughout the entire community because only a limited number of feast guests were put into the social debt of the host household. However, the larger nature of Terminal Huaracane feasts enabled those organizing and hosting such events to more effectively enhance their social status throughout the entire community simply because more of the community participated in these events.

8.4 BOOT TOMBS AND SOCIAL DIFFERENTIATION IN THE HUARACANE TRADITION

As discussed in the introductory chapter, one of the primary research objectives of the investigations that took place at Yahuay Alta was to determine whether or not the major wealth accumulations detected in the Huaracane boot tombs (e.g., Goldstein 2000b, 2005) were paralleled in domestic contexts within Huaracane communities. As discussed in Chapter 2, Huaracane boot tombs were filled with many finely made grave goods of both local and exotic origin. The locally made grave goods included items such as multi-colored woven baskets, carved wooden spoons and lime dippers, and elaborate beads made from various materials (Goldstein 2000b: 351). Exotic items found in boot tombs included decorated Pukara-style fineware pottery and both Nasca and Pukara-style finely woven textiles (Goldstein 2000b). None of these items, even those that were locally made, were found on the surface or during excavations at Yahuay Alta. The single exception to this was one small fragment of a zone incised Pukara-style ceramic vessels found in excavation Unit 6 (see Figure 36 in Chapter 6). The investigation of Late Huaracane and Terminal Huaracane residential contexts at Yahuay Alta revealed that the wealth differences observed in the Huaracane mortuary record did not correspond to household consumption differences.

Although my investigations at Yahuay Alta found evidence that was consistent with a relatively egalitarian society, I am not suggesting that that Huaracane society was egalitarian. Instead, I believe that differences in status and wealth found material expression in ceremonial or mortuary contexts rather than in lifestyles or consumption. Thus, the Huaracane were likely a simple chiefdom where status and leadership was largely based upon prestige, rather than the accumulation of wealth or the domination of economic processes (e.g., Drennan 1995; Lesure and Blake 2002). In Huaracane society the accumulation and display of material wealth was likely culturally inappropriate in everyday contexts, however such display and accumulation was appropriate in funerary contexts, at least after the development of the boot tomb tradition circa 170 cal BC.

The great disparities in regards to wealth or prestige goods, especially those of exotic origin, between Huaracane burials and Huaracane domestic contexts are not necessarily that surprising. In the south central Andes mortuary assemblages almost always contain significantly higher percentages of exotic items (Hyslop 1976; Pollard 1984; Stanish 1989, 1992). Thus investigations of only mortuary contexts can tend to over emphasize the importance of material wealth differences within a society, especially in relation to exotic goods, while investigations of only domestic contexts often underestimate a community's involvement in interregional exchange networks and how this relates to social inequalities (Stanish 1989). In the case of the Huaracane the treatment of the dead indicates the material markings of social differences within this society. However, the nature of the domestic assemblage from Yahuay Alta suggests that in everyday life the advertisement of these social differences through the accumulation or display of material wealth was not socially acceptable.

The findings from Yahuay Alta do not support Goldstein's (2000b) "preciosities" trade construct, which suggests that control over the exchange and display of exotic prestige goods was an important early source of chiefly power among the Huaracane. As originally defined this construct envisioned exotic prestige goods to be "…important as local displays of power…" (Goldstein 2000b: 356). I interpreted this to mean that emerging Huaracane elites dominated or controlled long distance exchange and were thus able to accumulate, display, and traffic in exotic prestige goods, which enabled them to establish social status and power within their communities. However, although exotic items were prevalent in the boot tombs they were not present in exceptionally large quantities and it is unlikely that emerging Huaracane elites could have achieved social power through controlling the exchange of just a handful of exotic precocities. Simply put, exotic items, such as polychrome Pukara vessels, were likely too rare in the Moquegua region to have been a true basis for elite power. The evidence from Yahuay Alta supports this conclusion as it suggests that the exotic prestige goods found in boot tombs were not incorporated into the daily life of Huaracane communities. In fact, at Yahuay Alta not only was there no evidence for the accumulation and/or display of exotic goods, there was no evidence suggesting any kind of connection between status and wealth and obtaining non-local materials. Some households at Yahuay Alta did have higher proportions of a high quality exotic lithic material, obsidian, but this does not qualify as an exotic preciosity to be displayed as a symbol of social power.

8.4.1 Emerging social leadership and mortuary patterns

I believe that later in the Huaracane sequence after the development of the boot tomb mortuary tradition there were substantial social differences related to prestige within Huaracane communities. However these social differences do not appear to have translated into substantial economic advantages in everyday life. Thus, both Late Huaracane and Terminal Huaracane communities probably included prestigious and presumably socially powerful individuals or households that lived in a manner that was not substantially different than the rest of their community members. This situation is not exceptional because in societies with emerging social inequalities the level of social differentiation often far exceeds the level of wealth differentiation (e.g., Drennan 1995; Hastorf 1990; Lesure and Blake 2002). When societies are in the early stages in the development of social inequalities ambitious individuals are much more concerned with the development, legitimization, and maintenance of social power than they are with controlling the economic aspects of society or the accumulation of material wealth (Hastorf 1990).

Strong social sanctions against the accumulation of wealth likely prevented the overt display of material wealth within Huaracane communities (e. g., Wilk 1983, 1990), while such conspicuous display of wealth was apparently socially appropriate in boot tomb cemeteries. The reason for this social discrepancy possibly can be explained by the fact that Huaracane society was going through the initial stages of social differentiation and that the institutionalization of leadership positions was not complete. In such societies tombs designed as permanent reminders of specific past leaders or chiefs are especially important (Drennan 1995: 94). This is because each successive leader or chief needs to prove his worth in order to legitimize his social authority. Emerging chiefdoms are far from stable societies and there is no guarantee that the authority held by a former chief will be passed upon to his successor unless this successor is able to persuade members of his community, of his legitimacy as a leader (Drennan 1995). One of the most effective means of a new leader or chief to legitimize his authority is to establish a direct link between himself and successful leaders from the past (Drennan 1995: 95). The easiest way to achieve this link is the construction of conspicuous mortuary monuments honoring a past leader. The construction of such a grave honors a past chief and reminds a community of his authority in life. At the same time by constructing such a grave a successor establishes a direct connection with this past leader's social power thus legitimizing his authority within the community (Drennan 1995: 95).

There is evidence indicating that Huaracane boot tombs had removable roofs and above ground superstructures made of organic materials (Goldstein 2000b, 2005). This suggests that these graves may have been easily accessible to the descendants and repeated visits to the tomb of a past successful leader allowed a successor to repeatedly remind a community of connection to this leader thus legitimizing his social authority within the community. In this sense, to borrow the term from the Dumbarton Oaks symposium on Andean mortuary practices (Dillehay 1995), Huaracane boot tombs were "Tombs for the Living" in a very literal sense because their construction and repeated visits to them would have been an important strategy for the legitimization of social power in each successive generation. Essentially it appears that boot tombs provided emerging Huaracane social leaders or chiefs with a socially appropriate context for the display of material wealth, especially exotic items, in order to enhance or legitimize social prestige.

Despite the lack of evidence for major economic differences in domestic contexts at Yahuay Alta, the accumulation of wealth in the boot tombs suggests that domination of the production and/or exchange of important resources may have been an important aspect of social power in Huaracane society. Control over the procurement and/or distribution of important resources, such as camelids or chert, may have been very important for the development of leadership within Huaracane society. Unlike Goldstein (2000b), I do not believe that control over long distance exchange was the primary source of power for emerging Huaracane leaders. Instead, differential participation in the regional economy as a whole likely was associated with higher status households within Huaracane communities. Since the accumulation and display of wealth, especially exotic prestige/wealth items, within Huaracane communities was apparently not socially acceptable, the construction of boot tombs outside of Huaracane settlements provided a context were display of material wealth and thus the promotion of social prestige was socially acceptable.

The combined evidence from the Huaracane settlement of Yahuay Alta and the Huaracane boot tombs provide an excellent example of the disparities that often exist between domestic and mortuary contexts. This evidence serves in a way as a cautionary tale of the dangers of making assessments about the nature and social organization of a society solely from domestic or mortuary contexts and emphasizes the importance of striking a balance between domestic and mortuary investigations. A model of Huaracane social organization based solely upon mortuary data would place heavy importance upon the accumulation and display of material wealth, especially exotic items, for the establishment of social prestige. In contrast a model of Huaracane social organization based solely upon evidence from the investigation of domestic contexts at Yahuay Alta would emphasize the relatively egalitarian nature of Huaracane community organization. As the evidence discussed above demonstrates, neither of these models presents a complete picture of Huaracane society. Taking into account both domestic and mortuary data it appears that there were substantial social differences within Huaracane communities that were probably based primarily upon the establishment of social prestige. Especially during the Late Huaracane phase and to a substantial degree during the Terminal Huaracane phase the establishment of social prestige did not translate into substantial material differences within Huaracane settlements.

However, the construct sketched above is currently only applicable to the Late Huaracane phase because no boot tombs have been dated to the Terminal Huaracane phase. It is possible that the practice of using boot tombs to establish, legitimize, and maintain social status did not continue into the Terminal Huaracane phase. This possibility could be related to the expansion of feasting activities during the Terminal Huaracane phase. With the apparent demise of the boot tomb tradition higher status Huaracane individuals or households needed a new strategy for maintaining their social positions within Terminal Huaracane society. Expanding the already existing practice of hosting serving or feasting events would have been a very effective status building strategy because it allowed for the development of status inequalities while maintaining the traditional relatively egalitarian nature of Huaracane communities.

8.5 LOCAL REACTIONS TO COLONIAL POPULATIONS DURING THE TERMINAL HUARACANE PHASE

The results of the radiocarbon analysis of samples taken during the excavations at Yahuay Alta helped to demonstrate that during what I have termed the Terminal Huaracane phase the site was occupied during the 8th century AD (cal AD 676 and cal AD 885 at the 2 sigma range) (see Table 3.1). As discussed in Chapter 3, the current data indicates that Yahuay Alta was likely abandoned soon after AD 800, and there is absolutely no evidence for a post-Terminal Huaracane occupation at the site. This is the first unequivocal evidence demonstrating that the Huaracane occupied a settlement in the middle Moquegua Valley when Wari and Tiwanaku colonists arrived in the region. This discovery is an important step forward in the investigation of the Huaracane culture in and of itself, however the more interesting aspect of this discovery is the Terminal Huaracane contexts at Yahuay Alta provide a great deal of information pertaining to the nature the interaction that took place between this Huaracane community and the colonial populations that inhabited the valley during the Middle Horizon.

The organization of the Terminal Huaracane community at Yahuay Alta provides some very interesting insights about some the strategies employed by Huaracane populations for coping with the presence of colonial settlements within their territory. Evidence from the Terminal Huaracane contexts at Yahuay Alta points to highly circumscribed interaction with the Middle Horizon colonists in the Moquegua Valley. There is evidence that demonstrates that the Terminal Huaracane community at Yahuay Alta had only a minimal amount of interaction with Wari colonists. In contrast, there is no evidence for any interaction at all with Tiwanaku colonists during the Terminal Huaracane phase. This is a very surprising result given that Yahuay Alta is located in close proximity to both Wari and Tiwanaku settlements (see Table 2.1).

There are two primary lines of evidence that suggest that at least some of the residents at Yahuay Alta had developed relationships with Wari colonists. The first is the obsidian evidence discussed in Chapter 6, which demonstrates that the vast majority of the obsidian found at this settlement came from Wari controlled geological sources. The second major indictor for interaction with the Wari colonists is the evidence for the large-scale production of the beverage *chicha de molle* at Yahuay Alta. Even though the *S. molle* tree was locally available in the Moquegua Valley before the arrival of Wari colonists in the region, not one specimen of *S. molle* was found in Late Huaracane contexts at Yahuay Alta. Since the production of *chicha de molle* has clearly been established as a Wari practice (Cook and Glowacki 2003; Goldstein and Coleman 2004; Goldstein, et al. 2009) and there is no evidence for its production at Yahuay Alta prior to the arrival of Wari colonists, it is a relatively safe conjecture that the residents of the settlement at Yahuay Alta came to produce this beverage through their interaction with Wari colonists. The most interesting aspect of the interaction was that even though the residents of Yahuay Alta obtained useful materials, such as obsidian, from the Wari they chose not to utilize any stylistically Wari material goods, such as ceramics.

As mentioned above, there is a complete lack of evidence at Yahuay Alta indicating interaction with Tiwanaku colonists. Not a single fragment of identifiable Tiwanaku-style pottery nor Huaracane pottery with imitation Tiwanaku design motifs was found at Yahuay Alta. In addition, the botanical evidence discussed in Chapter 6 suggests that the residents of Yahuay Alta subsisted on a radically different diet, consisting of little or no maize (Goldstein and Muñoz Rojas 2008), than the maize heavy diet consumed by the Tiwanaku colonists residing in the middle Moquegua Valley (Goldstein 2003, 2005; Sandness 1992).

The lack of interaction with the Moquegua Tiwanaku colonies is consistent with the results of an exhaustive regional survey of the middle Moquegua Valley Goldstein (2000b, 2005) that found no evidence for interaction between Huaracane and Tiwanaku communities. In fact, Huaracane and Tiwanaku settlements were situated in completely different and relatively widely separated locations within the middle valley (Goldstein 2000b, 2005). As discussed in Chapter 2, Goldstein (2005) proposed several explanations for the lack of overlap between Huaracane and Tiwanaku material culture. The possibility that Huaracane sites in the middle Moquegua Valley were abandoned before or shortly after the arrival of Tiwanaku colonists has been refuted by the radiocarbon dates from Yahuay Alta. This leaves the explanation that Tiwanaku colonists intentionally avoided cultural interaction with the agricultural Huaracane communities possibly because colonists were pastoralists that led distinctly different lifestyles (Goldstein 2005: 132-133). Prior to conducting the research at Yahuay Alta, I did not believe that this was a very tenable hypothesis because agricultural and pastoral groups often interact with each other to exchange complementary products. I believed that that the lack of evidence for Huaracane interaction with the Tiwanaku was primarily due to the lack of excavations within Huaracane settlements. However, results of the research conducted at Yahuay Alta found no evidence for interaction between the community at Yahuay Alta and Tiwanaku colonists. This suggests that Goldstein's (2005) non-interaction hypothesis, which is based upon the multiethnic partitioning suggested by Murra (1972; 1985) in his vertical archipelago model, is a very reasonable explanation for the obvious non-interaction between these two different social groups. It is highly doubtful that the Huaracane and Tiwanaku were unaware of each other because their settlements were in relatively close proximity. Thus, intentional social segregation now appears to be one of the few possible explanations for this non-interaction. However, it needs to be kept in mind that it was the Huaracane communities themselves who chose who they interacted with once the colonization of the Moquegua Valley began.

The most intriguing aspects of the Huaracane interaction and non-interaction with the Middle Horizon colonies in the Moquegua region are the decisions made by the community at Yahuay Alta during this time period. These decisions allowed this community to maintain a relatively traditional Huaracane identity within a radically changing and increasingly multicultural environment. It is important to keep in mind that in colonial or culture contact situations that the indigenous groups do not simply adopt the traditions and material culture of the colonizing group. To put it another way the adoption of colonial traditions or material culture should not simply be viewed as assimilation or acculturation (Silliman 2005; van Dommelen 1997, 2005; Wesson 2008). Indigenous groups make strategic decisions about what aspects of colonial culture they will incorporate into their own society and such incorporation generally involves redefining colonial traits in accordance with indigenous traditional views of the world (Dietler 2005: 63; van Dommelen 1997, 1999, 2005; Wesson 2008: 88). In fact, the selective adoption of specific colonial traits and the alteration of some traditional practices by indigenous groups is often a necessary strategy for said groups to maintain their identities within rapidly changing and often contentious colonial environments (Silliman 2005: 66).

As discussed above, there is evidence suggesting that during the Terminal Huaracane phase that some kind of interaction took place between some members of the Huaracane community at Yahuay Alta and the Wari colonists in the region. This interaction benefited the community at Yahuay Alta by providing it with desirable exotic materials such as obsidian. There was absolutely no incorporation of Wari material culture into the Huaracane community at Yahuay Alta. Despite the fact that the traditional Huaracane ceramic assemblage included no vessel types designed specifically for the consumption of liquids, no Wari ceramic styles, even those designed specifically for drinking *chicha*, were adopted by the members of this community. The borrowing of this Wari practice without its associated material culture suggests the residents of Yahuay Alta did not produce *chicha de molle* because it was a Wari beverage or because they wanted to emulate the Wari. Instead, the practice of producing this beverage likely fit into an established Huaracane tradition of hosting feasts, possibly even allowing for the expansion of this tradition.

While the persistent use of traditional Huaracane ceramics could be interpreted as resistance to or rejection of colonial culture, there is no compelling evidence suggesting that either the Wari or the Tiwanaku had any interest in dominating or controlling the indigenous population of the Moquegua region. For example, the majority of the major Wari and Tiwanaku colonial settlements were established in previously unoccupied areas of the Moquegua Valley (Goldstein 2005; Williams 2001; Williams and Nash 2002). Without colonial culture being forced upon them the lack of colonial material culture or even the emulation of this material culture at Yahuay Alta suggests that this community likely wanted to be left alone and essentially keep clear of the increasingly complicated and possibly hostile political environment created by the presence of both Wari and Tiwanaku colonies in the region. Possibly the choice not to use colonial material culture was because community members wanted to remain politically unaffiliated and thus did not want the Tiwanaku to catch them with Wari-style goods or the Wari to catch them with Tiwanaku-style goods. By remaining unaffiliated the Terminal Huaracane community at Yahuay Alta was likely able to remain unthreatening to the colonial powers and thus were able to maintain a relatively traditional Huaracane way of life.

A second possible sign of the Yahuay Alta community's desire to keep to themselves and out of the way of the colonial powers is the kind of food they were consuming, or specifically in this case the food they were not consuming. The complete lack of maize in the examined botanical samples at Yahuay Alta indicates that that the residents at this site had a radically different diet than their Wari and Tiwanaku neighbors (Goldstein and Muñoz Rojas 2008). It is believed that an ideal environment for growing maize was one of the primary reasons that Tiwanaku colonies were established in the middle Moquegua Valley and presumably at the height of these Tiwanaku colonies much of the middle valley was utilized for cultivating maize (Goldstein 2000a, 2003, 2005). The residents at Yahuay Alta would thus have almost certainly have been very familiar with maize and not consuming this agricultural product would have been a conscious choice made by this community. As discussed in Chapter 6, perhaps keeping to a more traditional diet that was not reliant upon maize allowed this community to remain more inconspicuous on the landscape and thus avoid confrontations over agricultural land with

Tiwanaku colonists by not needing as much land for their agricultural products and/or by exploiting different cultivation zones than those used to grow maize.

APPENDIX A

HUARACANE CERAMICS AT YAHUAY ALTA

A.1 CERAMIC PASTES

A.1.1 Huaracane Arena

The most common of the traditional Huaracane pastes is *Huaracane Arena* (Goldstein 2000b). This paste was made with a sand temper that varied widely in coarseness (Goldstein 200b). In most specimens this temper consisted of relatively large grains of sand and even small pebbles (Figure A.1). However, some specimens were tempered with very fine sand that contained no larger inclusions (Figure A.2). *Huaracane Arena* was used to make a variety of utilitarian *ollas* and jars that were likely used for cooking and storage. Many *Huaracane Arena* sherds exhibited a large amount of exterior burning suggesting that this paste was often used to construct cooking *ollas*.

A.1.2 Huaracane Vegetal

Huaracane Vegetal is the second most common traditional Huaracane utilitarian ware. This paste was made with a grass-like fiber temper, which left impression on the surfaces of vessels made with this ware (Goldstein 2000b) (Figure A.3). *Huaracane Vegetal* was used to make a variety of utilitarian vessels, but was used most often for *ollas sin cuellos.* In general this paste was used to construct larger, thicker vessels than those made with *Huaracane Arena*, suggesting that *Huaracane Vegetal* was often used for storage vessels. As a result of being relatively thick, the cores of *Huaracane Vegetal* sherds are generally underfired and thus dark grey in color.

A.1.3 Huaracane Fino

This is the only traditional Huaracane fineware ceramic paste and it was used only to construct shallow serving bowls. *Huaracane Fino* is a very hard, well-fired paste that has a more common oxidized red variety and a less common reduced black variety (Goldstein 2000b). The oxidized paste, known as *Huaracane Fino rojo*, is red to pink in color and generally had a reddish-yellow slip (Feldman 1989) (Figure A.4). The reduced black paste, known as *Huaracane Fino negro*, is light grey in color and generally has a light brownish grey slip (Feldman 1989) (Figure A.5). As mentioned above, both varieties of this paste were used only to construct serving vessels.

A.1.4 Pasta Biotite

Pasta Biotite was the most common of the nontraditional Huaracane pastes found at Yahuay Alta. This paste was tempered with large amounts of biotite, a dark colored mica mineral (Figure A.6). Most specimens made from this paste contain so much biotite temper that they sparkle when held in the light. This paste was used exclusively to construct utilitarian vessels and especially in Unit 3, where this paste was the most common, *Pasta Biotite* was often used to construct longer necked jars. Although *Pasta Biotite* vessels generally were not as thick walled as *Huaracane Vegetal* vessels, the cores of *Pasta Biotite* sherds were also commonly underfired and a dark grey in color. This paste is not traditionally found at Huaracane sites and at Yahuay Alta was found mostly in Terminal Huaracane contexts. It is important to note that a similar biotite-tempered paste used to make utilitarian vessels was very common at the Wari sties of Cerro Baúl and Cerro Mejia (Nash 2002). *Pasta Biotite* is very similar to the paste found in Wari contexts, however at Yahuay Alta *Pasta Biotite* was only used to make Huaracane style utilitarian vessels.

A.1.5 Pasta Centro Rosada

This paste was another nontraditional Huaracane paste found at Yahuay Alta. *Pasta Centro Rosada* was essentially a well-fired version of *Huaracane Arena* (Figure A.7). It resembled this typical Huaracane paste in most ways; it had sand temper of varying coarseness and its sherds had brownish interior and exterior surfaces. However, when looked at in profile *Pasta Centro Rosada* sherds had a pink or sometimes even a reddish core indicating they were more completely fired than typical *Huaracane Arena* sherds, which have dark brown cores. Like *Huaracane Arena* this paste was only used to make large utilitarian vessels such as *ollas* or jars. Sherds similar to Yahuay Alta's *Pasta Centro Rosada* have been found at Cerro Trapiche, which like Yahuay Alta also has some evidence for some type of Huaracane occupation during the Middle Horizon (U. Green, personal communication, 2008).

A.1.6 Pasta Naranja

At Yahuay Alta this was the least common nontraditional Huaracane ceramic paste. It consisted of a well-fired bright orange paste that had a fine-grained sand temper (Figure A.8). *Pasta Naranja* sherds often displayed parallel smoothing lines on their interiors. All specimens of this paste were sherds from large utilitarian vessels.

A.2 CERAMIC VESSELS

A.2.1 Olla sin cuello

Neckless *ollas* or *ollas sin cuellos* were the most common utilitarian vessel at Yahuay Alta. This vessel type is commonly found at all Huaracane settlements (Goldstein 2000b). *Ollas sin cuellos* are very round pumpkin-shaped vessels that were never decorated, polished, or burnished (Feldman 1989; Goldstein 1989) (Figures A.9 – A.14). *Ollas sin cuellos* vary substantially in size and no two vessels are exactly alike. Even on the same vessel there is often a considerable amount of variation in rim and wall thickness. This variability indicates that this vessel type was probably handmade by individual potters and not mass-produced. Most *ollas sin cuellos* exhibit a significant amount of burning on their exterior indicating that these vessels were likely cooking vessels. In fact, Goldstein (2003) believes that the Huaracane cuisine consisted primarily of one-pot stews cooked in *ollas sin cuellos*.

A.2.2 Olla with neck

Ollas with necks were utilitarian vessels that were similar to *ollas sin cuellos* in almost every way other than the fact that they had necks. Any vessel with a neck shorter than 4 cm in height was classified as an *olla* with a neck (Figures A.15 – A.21). Like *ollas sin cuellos* these vessels varied considerably in size. There was an especially large amount of variation in the shape and orientation of necks; some necks were curved outward, some were more vertical, and some were slanted inward. This variability again indicates that Huaracane plainware ceramics were probably handmade by individual potters and not mass-produced. *Ollas* with necks could have been used as either cooking or storage vessels and likely were even used for both purposes.

A.2.3 Jar

Any large utilitarian vessels with necks taller than 4 cm were classified as Jars (Figures A.22 – A.26). These vessels were relatively similar to *ollas sin cuellos* and *ollas* with necks with the exception of their taller necks. Unfortunately no complete, or even reconstructable, jar specimens were found at Yahuay Alta so it is not know for certain if the bodies of these vessels were as rounded as *olla* bodies. Like *ollas* with necks, there was a large amount of variability in the shape and orientation of jar necks. Jars were likely primarily used as storage vessels.

A.2.4 Bottle

The bottle was the least common vessel type found at Yahuay Alta. All vessels with necks taller than 4 cm and rim diameters of 4 cm or less were classified as bottles (Figure A.27). Only neck and rim sherds for bottles have been identified at Yahuay Alta and as a result shape of bottle bodies is not currently known. All identified bottle specimens were made with the *Huaracane Arena*. Given their rarity, these vessels likely were likely used to store special liquids.

A.2.5 Bowl

Huaracane bowls were for the most part relatively small shallow serving vessels averaging between 15 and 20 cm in rim diameter (Figures A.28 – A.34). The vast majority (97.7%) of bowls were made with the *Huaracane Fino* paste and thus were fineware serving vessels. Although they were in general relatively similar there was some variability in bowl shape. Most bowls were relatively shallow and open although some had more vertical walls and were thus deeper vessels. Also some bowls had more rounded bases while other had flatter bases. Even though these were fineware vessels there was often variation in rim and wall thickness within the same vessel. This suggests that these fineware vessels, like the utilitarian vessels, were hand rather than mold-made and that they were not mass-produced. Bowls were typically slipped and burnished on both their interiors and exteriors, although the interiors are often more highly polished than the exterior (Feldman 1989). This is logical because the interiors would have been more visible on these primarily shallow open bowls. Although most of the bowls were not decorated, many did have a thin reddish stripe painted on and sometimes just below their rim (Figures A.35 – A.37. Even more rarely this rim decoration was elaborated with simple, crudely painted designs, such as uneven paired radial lines dropping from the rim toward the bottom of the bowl (Figures A.38 – A.43). These painted lines were more common on the interior of the bowls. The color of these painted decorations was always much stronger on *Huaracane Fino rojo* bowls in comparison to *Huaracane Fino negro* (Feldman 1989; Goldstein 1989). The paint used in the decorations on these bowls generally had a weak color and appears to have been made with a clay based slip-like paint.

Figure A.1. Example of a *Huaracane Arena* sherd with coarse-grained sand temper; this specimen is from the Surface Collection Unit 134 in Sector A and is from a thin walled *olla sin cuello*.

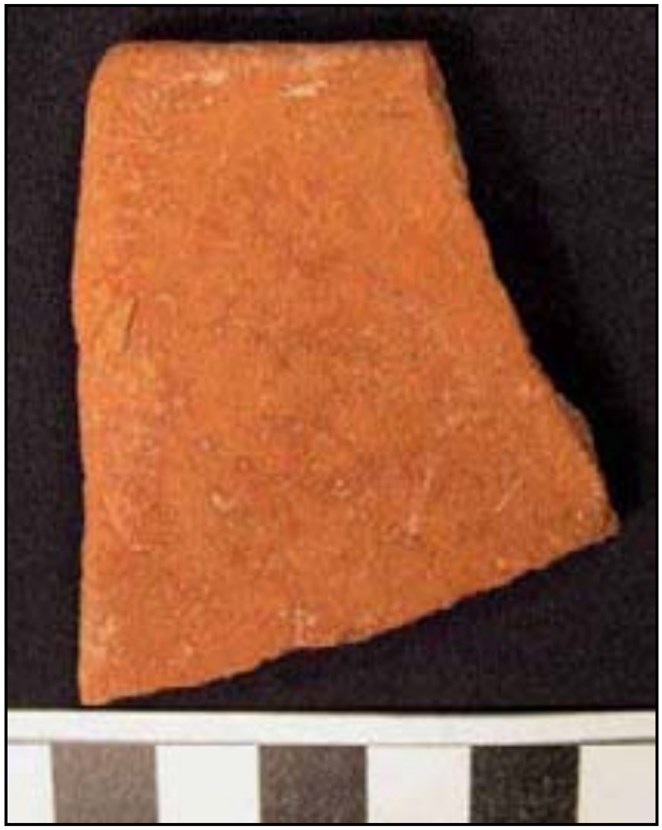


Figure A.2. Example of a Huaracane Arena sherd with fine-grained sand temper; this specimen is from Surface Collection Unit 88 in Sector C and is from a thin walled olla sin cuello.

Figure A.3. Example of a *Huaracane Vegetal* sherd; this specimen is from Surface Collection Unit 99 in Sector C and is from a large, thick walled *olla sin cuello*.

Figure A.4. Example of a *Huaracane Fino rojo* sherd; this specimen is from Excavation Unit 6, Quad 27 and is from a rounded serving bowl that exhibited polishing on both its interior and exterior surfaces.

Figure A.5. Example of a *Huaracane Fino negro* sherd; this specimen is from Surface Collection Unit 42 in Sector E and is from a shallow, rounded serving bowl.

Figure A.6. Example of a *Pasta Biotite* sherd; this specimen is from Excavation Unit, Quad 42 in Sector C and is from a jar with an outward slanting neck.

Figure A.7. Example of a *Pasta Centro Rosada* sherd with a coarse-grained sand temper; this specimen is from Surface Collection Unit 77 in Sector C and is from *olla* with a short neck.

Figure A.8. Example of a *Pasta Naranja* sherd; this specimen is from Surface Collection Unit 56 in Sector E and is a fragment of a handle from a large *olla* or jar.

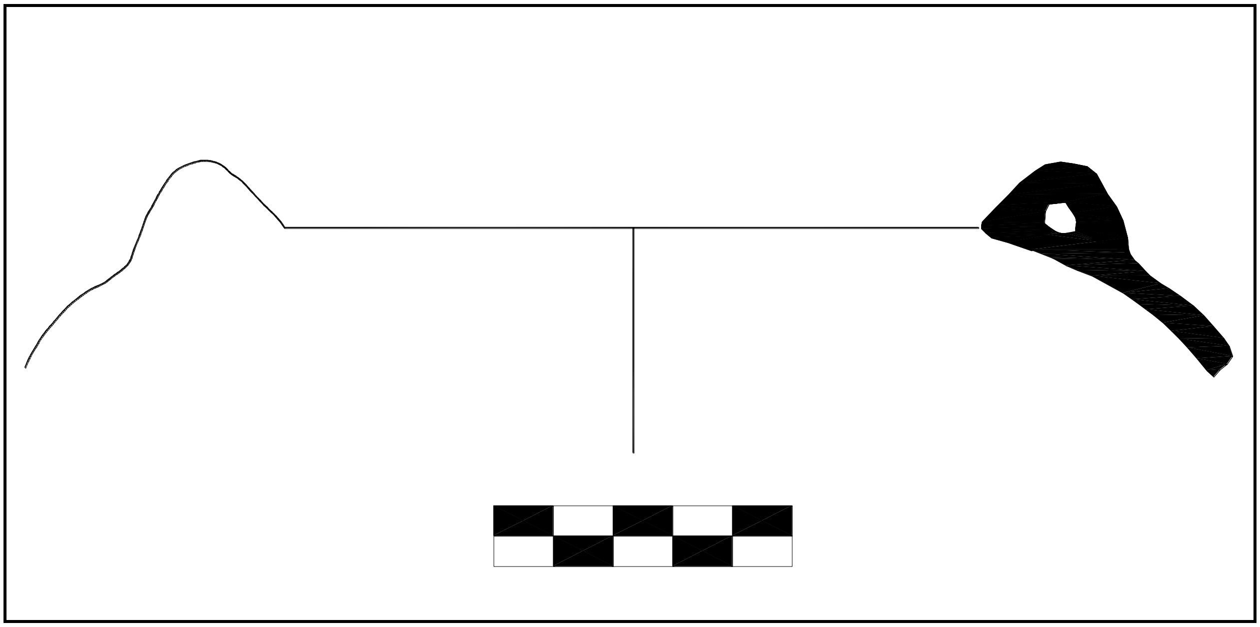


Figure A.9. Example of a small *olla sin cuello* with a small handle located just below the rim; this specimen is from Surface Collection Unit 57 in Sector D and is made from *Huaracane Arena*.

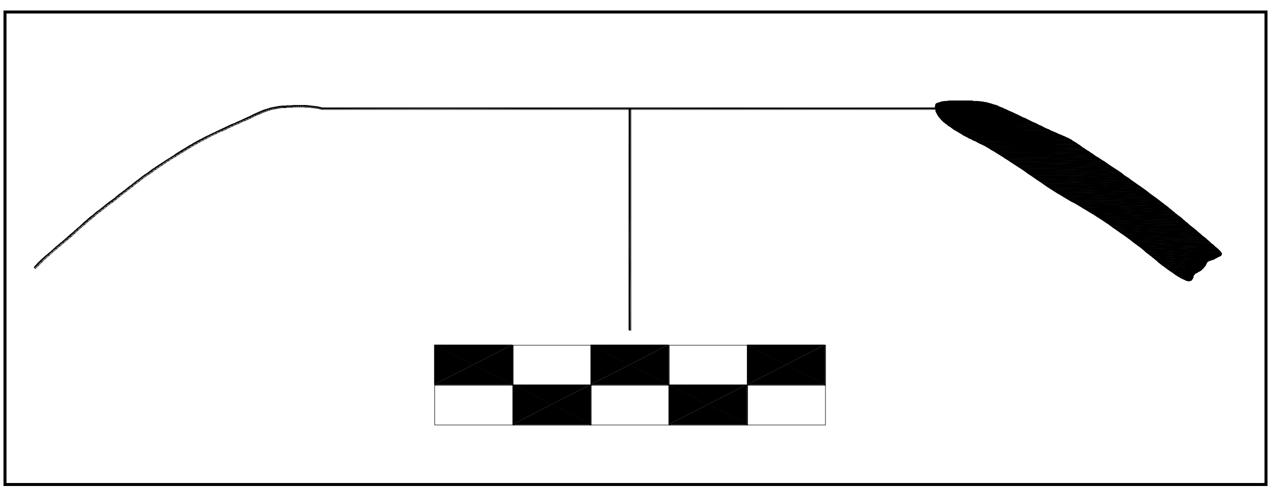


Figure A.10. Example of a small *olla sin cuello*; this specimen is from Surface Collection Unit 91 in Sector C and is made from *Huaracane Vegetal*.

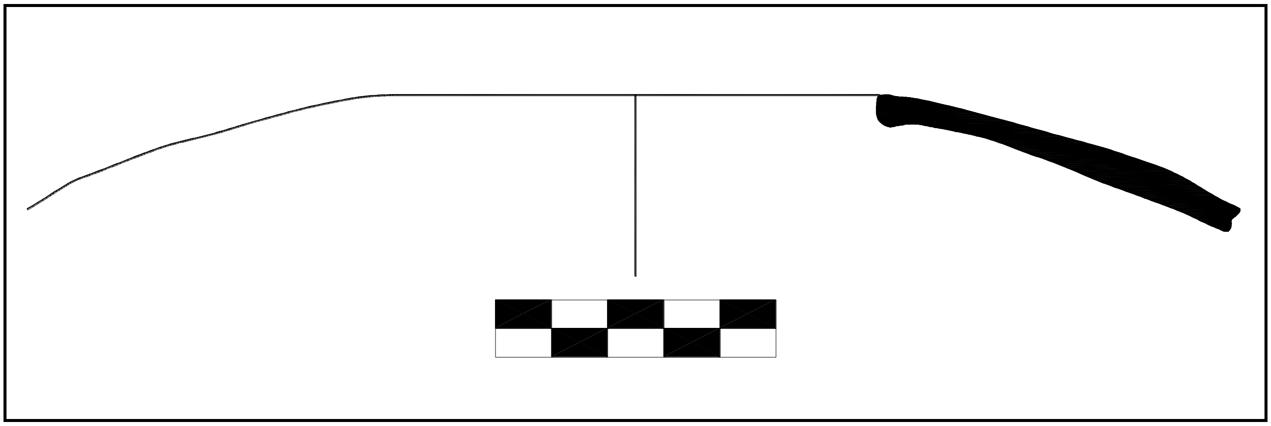


Figure A.11. Example of a small *olla sin cuello*; this specimen is from Surface Collection Unit 123A in Sector A and is made from *Huaracane Arena*.

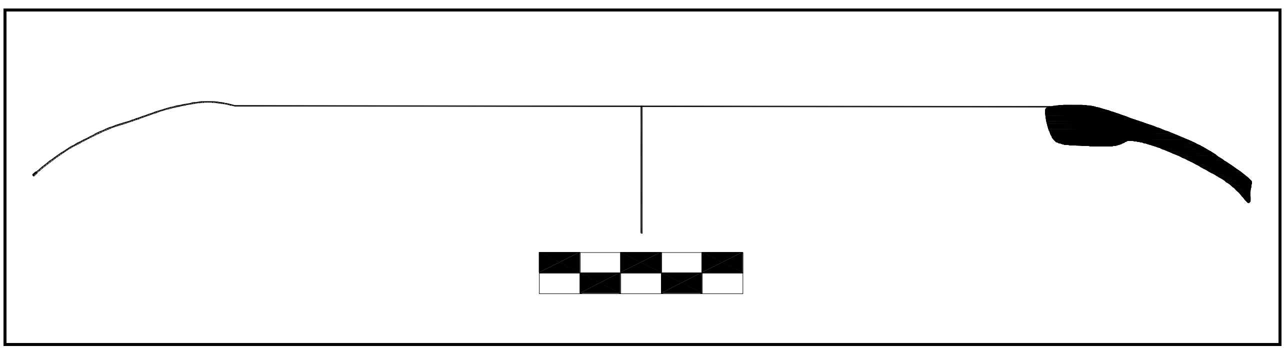


Figure A.12. Example of a large *olla sin cuello* with a thick rim but thin walls; this specimen is from Excavation Unit 2, Quad 18and is made from *Huaracane Arena*.

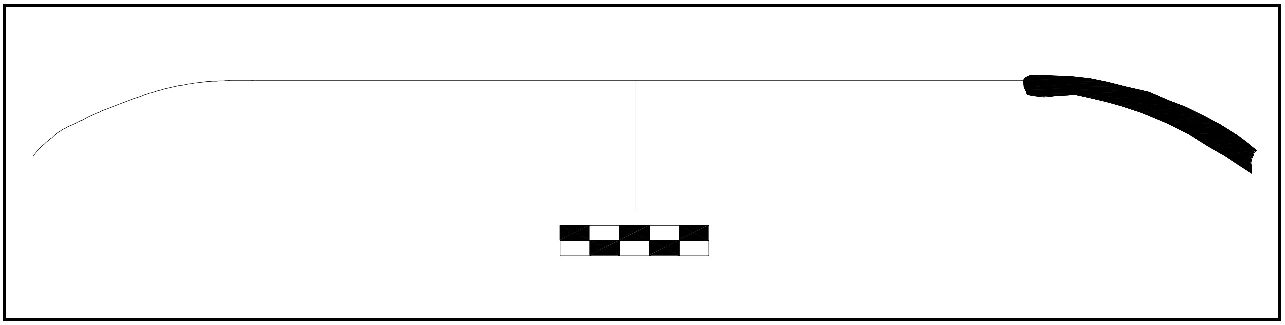


Figure A.13. Example of a large *olla sin cuello*; this specimen is from Excavation Unit 4, Quad 12 and is made from *Huaracane Arena*.

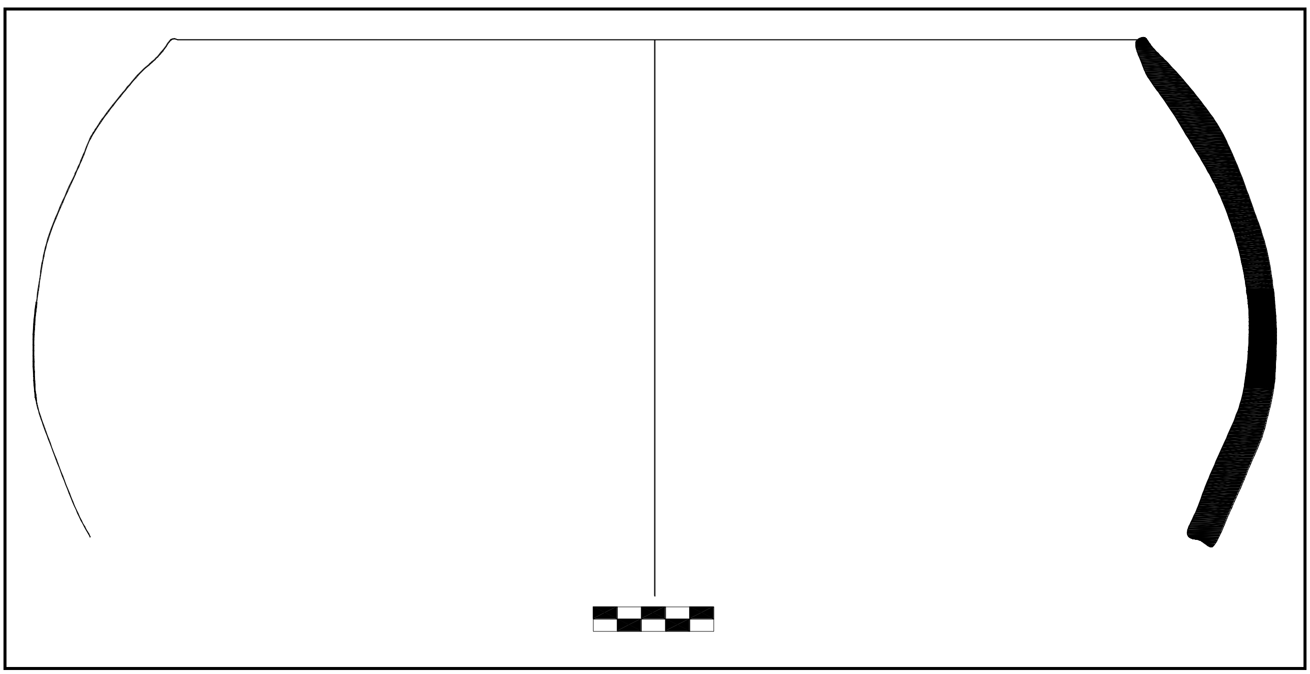


Figure A.14. Example of an exceptionally large *olla sin cuello* with thick walls; this specimen is from Excavation Unit 6, Quad 75 and is made from *Huaracane Vegetal*. This specimen was broken above the human burial found in this context.

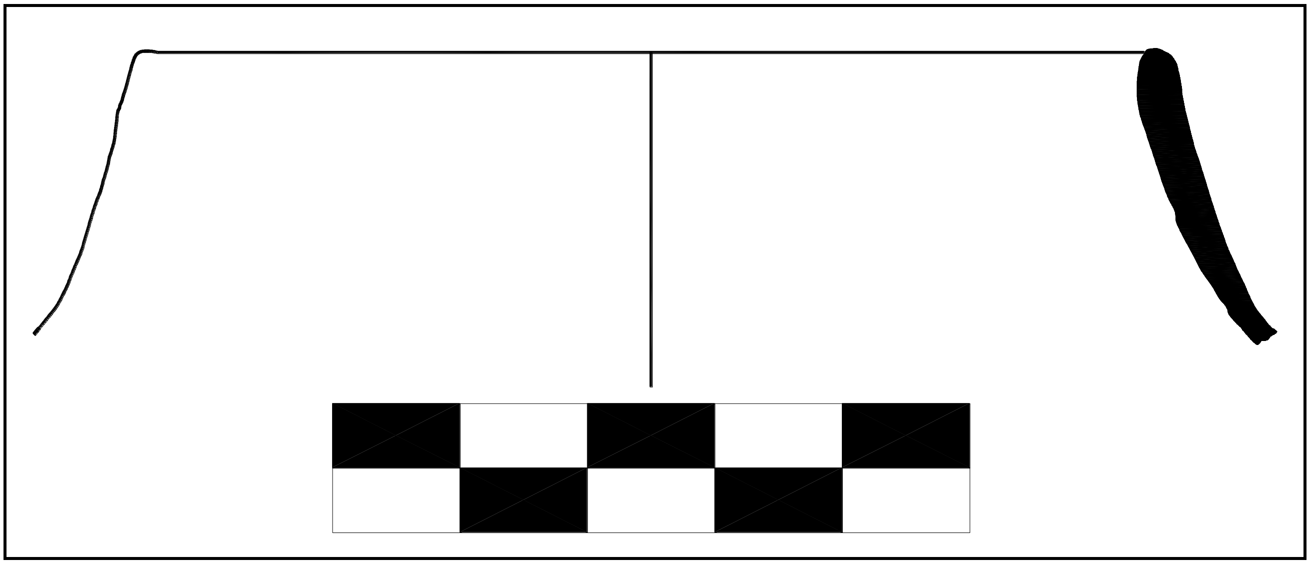


Figure A.15. Example of a small *olla* with an in sloping neck and thin walls; this specimen is from Surface Collection Unit 21 in Sector F and is made from *Huaracane Arena*.

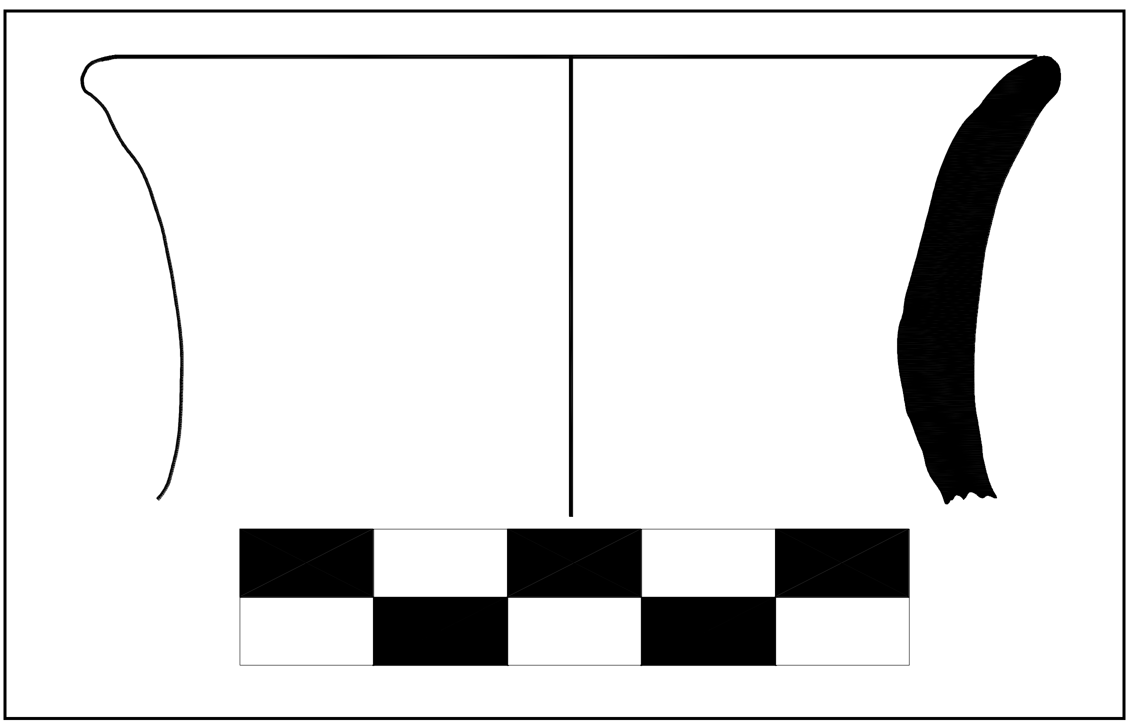


Figure A.16. Example of a small *olla* with an out curving neck; this specimen is from Surface Collection Unit 25 in Sector E and is made from *Huaracane Arena*.

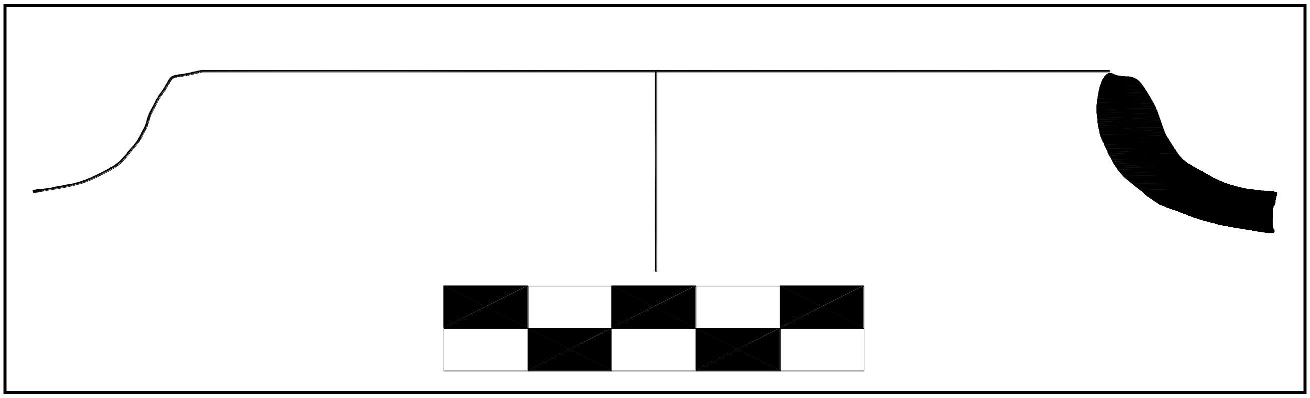


Figure A.17. Example of a small *olla* with a short, in sloping neck; this specimen is from Surface Collection Unit 52 in Sector E and is made from *Huaracane Vegetal*.

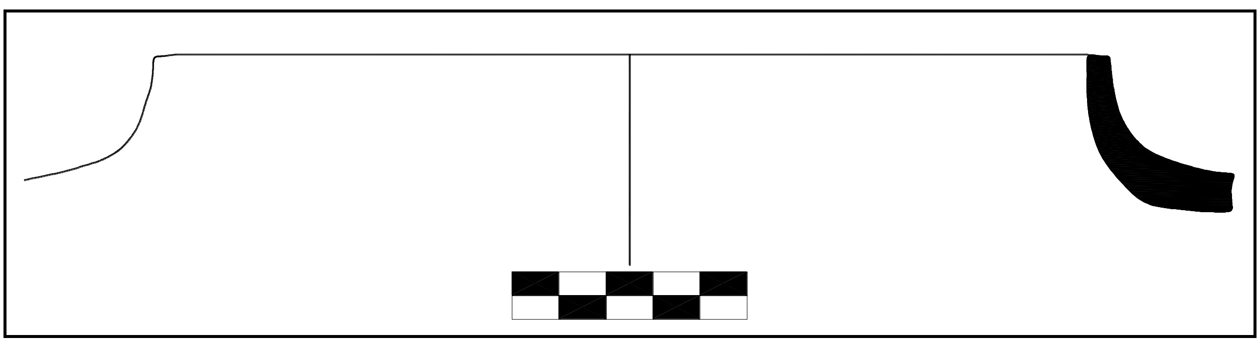


Figure A.18. Example of a large *olla* with a short vertical neck and flat rim; this specimen is from Surface Collection Unit 73 in Sector C and is made from *Pasta Centro Rosada*.

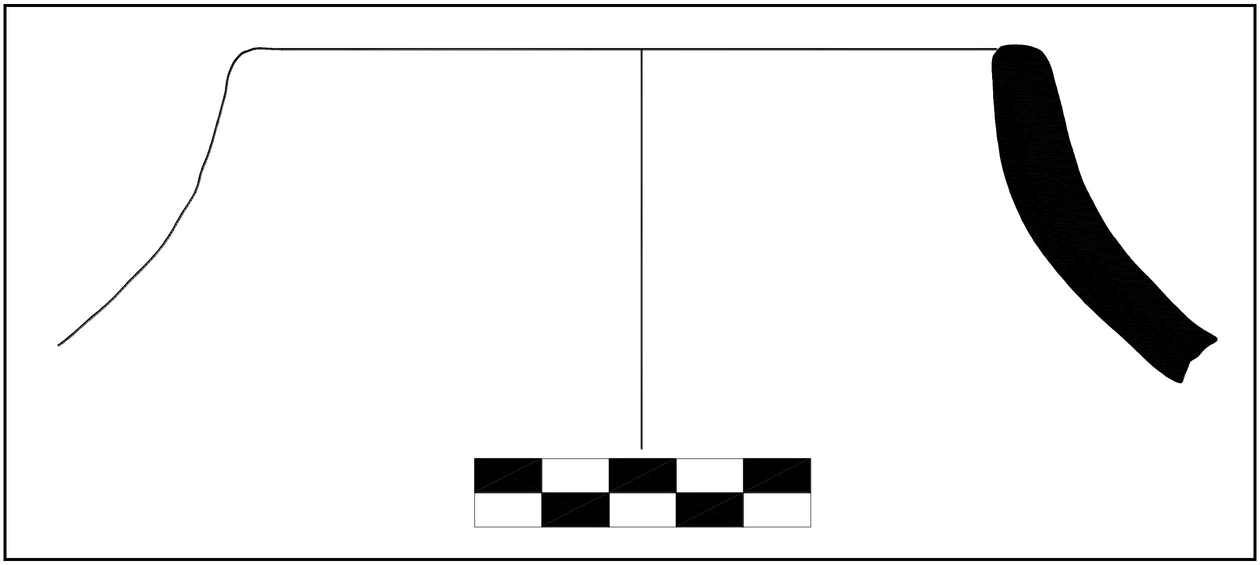


Figure A.19. Example of an *olla* with an in sloping neck and thick walls; this specimen is from Surface Collection Unit 78 in Sector C and is made from *Huaracane Arena*.

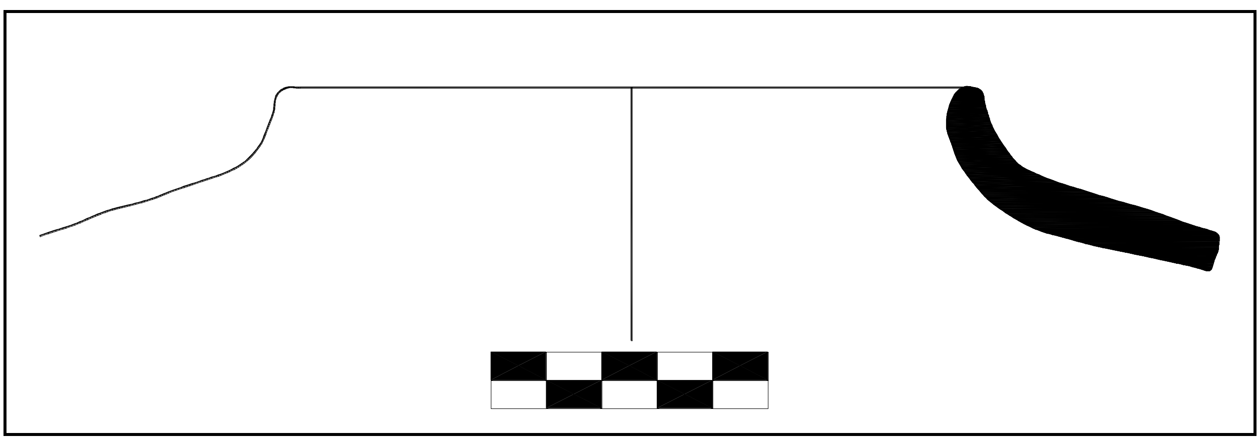


Figure A.20. Example of a small *olla* with a short vertical neck; this specimen is from Excavation Unit 6, Quad 34 and is made from *Huaracane Vegetal*.

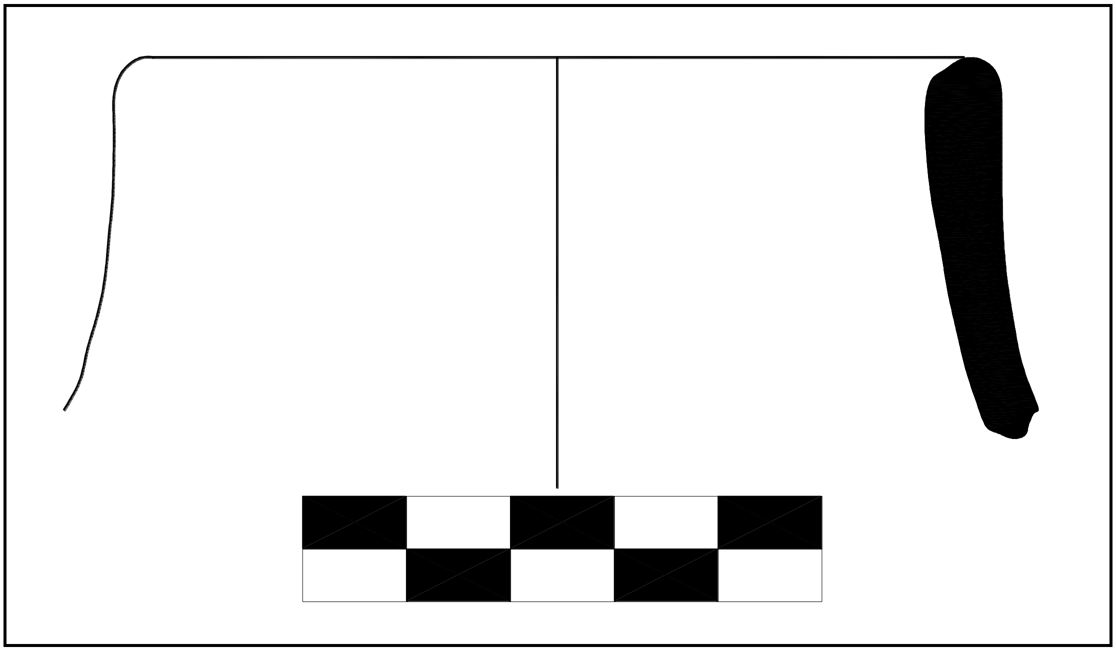


Figure A.21. Example of a small *olla* with a vertical neck and thick, rounded rim; this specimen is from Excavation Unit 7, Quad and is made from *Huaracane Arena*.

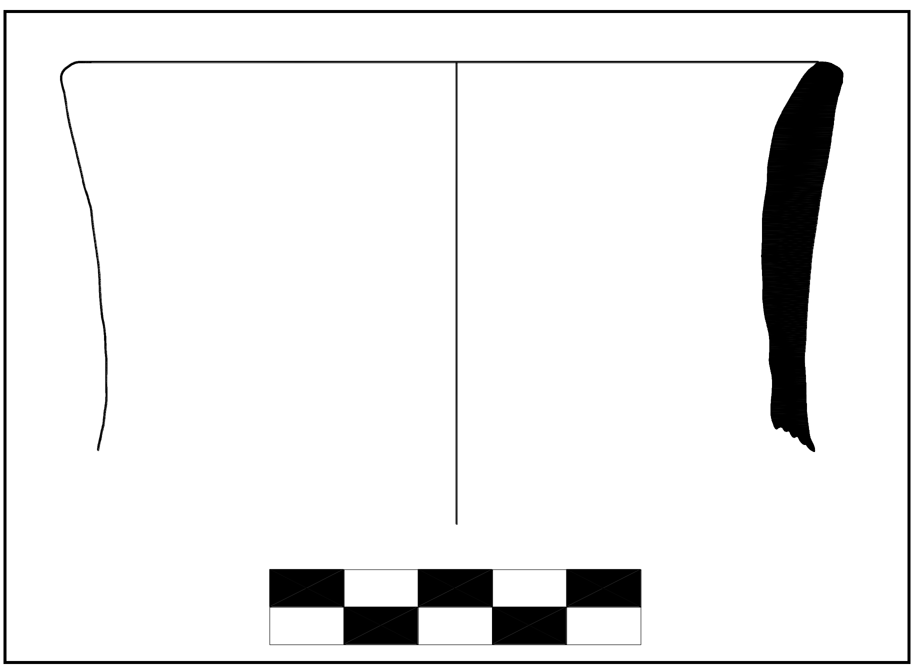


Figure A.22. Example of a jar with a slightly out sloping, nearly vertical neck; this specimen is from Surface Collection Unit 18 in Sector F and is made from *Huaracane Arena*.

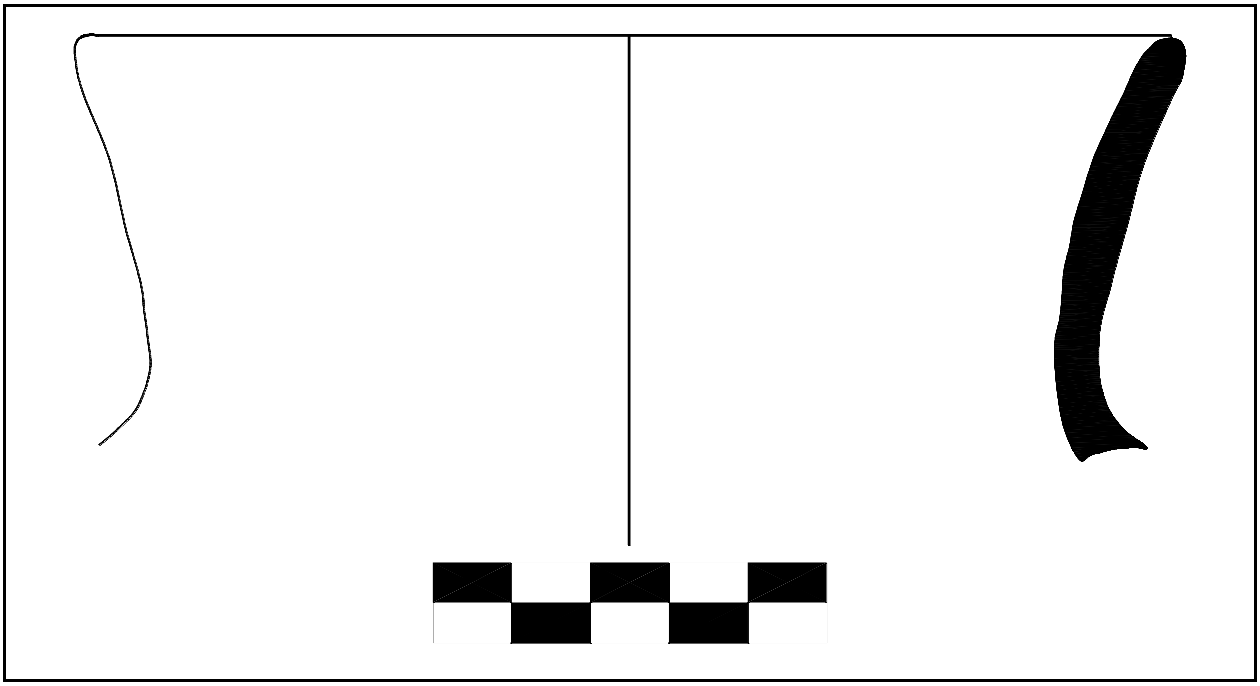


Figure A.23. Example of a large jar with an out sloping neck; this specimen is from Surface Collection Unit 18 in Sector F and is made from *Pasta Biotite*.

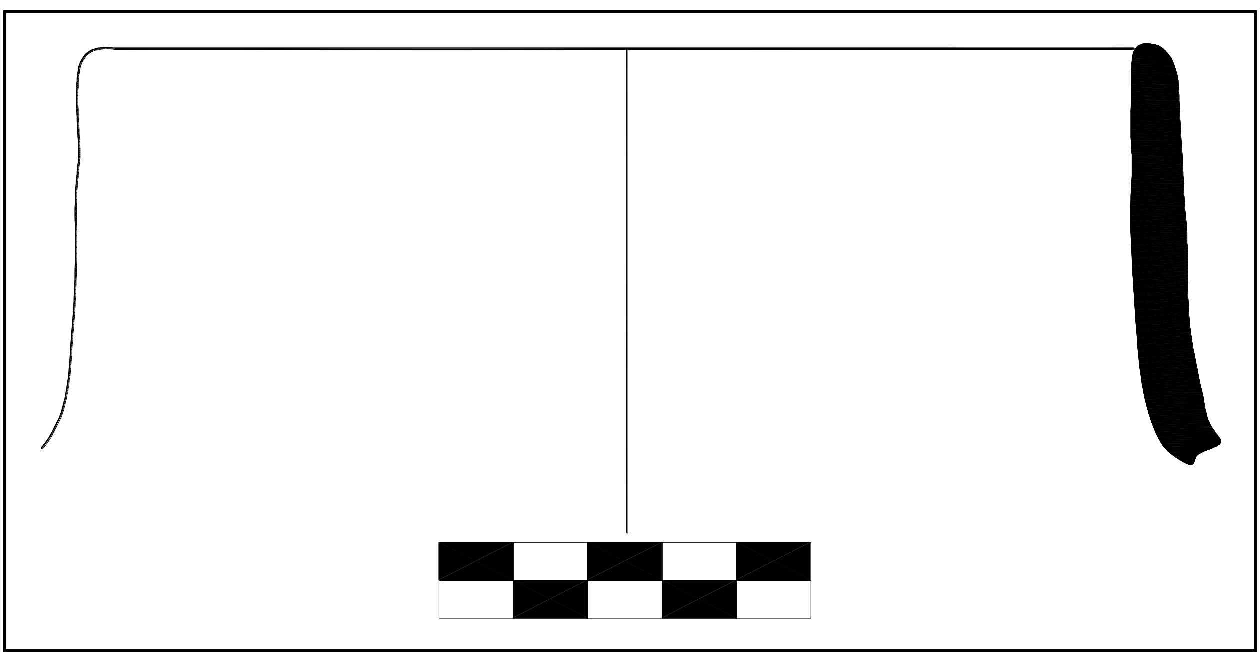


Figure A.24. Example of a large jar with a vertical neck; this specimen is from Surface Collection Unit 128 in Sector A and is made from *Pasta Biotite*.

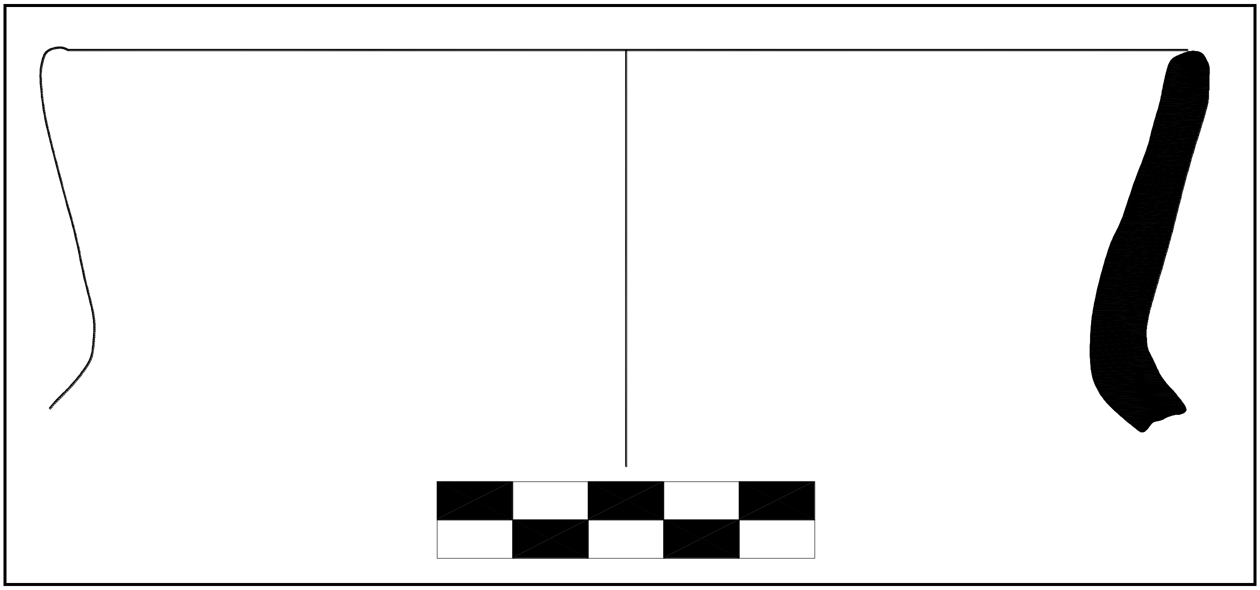


Figure A.25. Example of a large jar with an out sloping neck; this specimen is from Excavation Unit 3, Quad 42 and is made from *Pasta Biotite*.

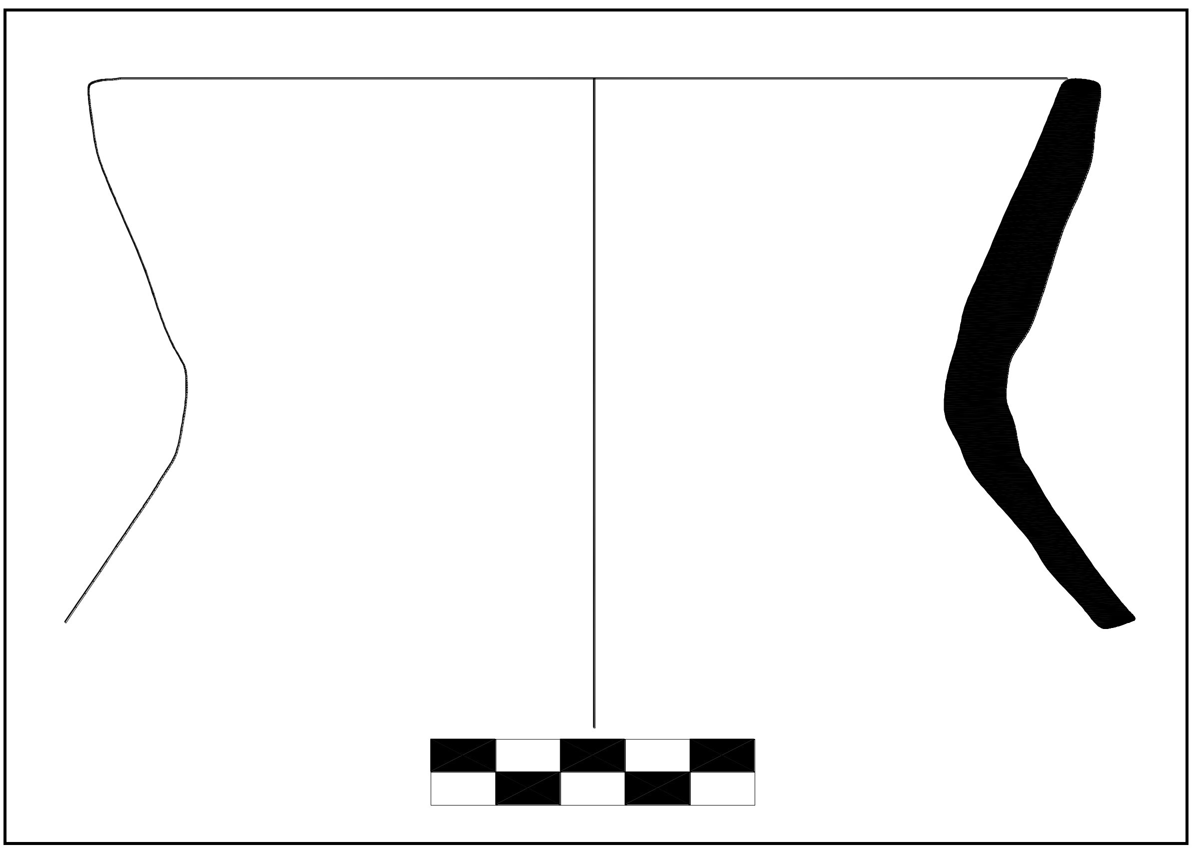


Figure A.26. Example of a large jar with an out curving neck, bowl-like neck; this specimen is from Excavation Unit 3, Quad 77 and is made from *Pasta Centro Rosada*.

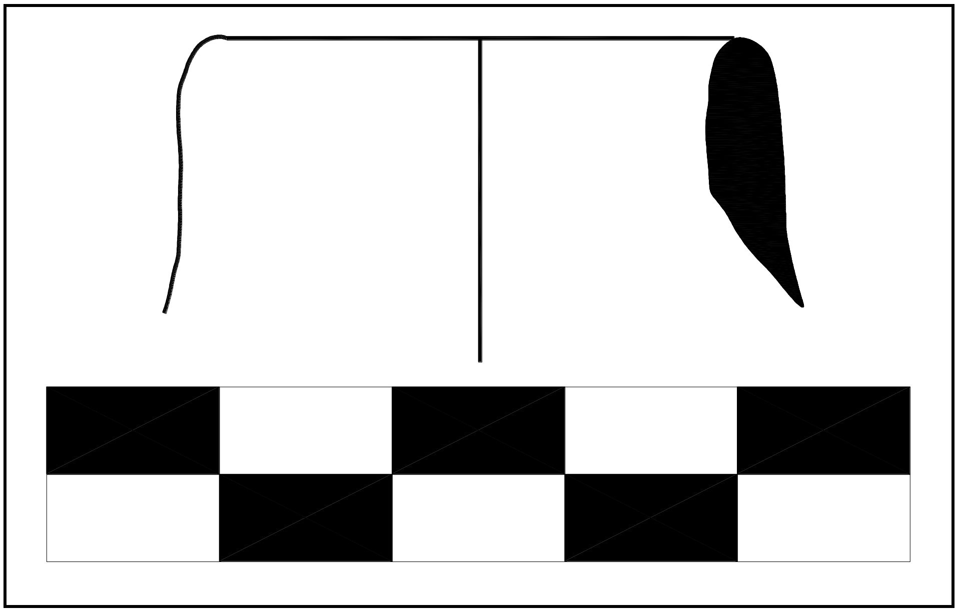


Figure A.27. Example of a small bottle with a vertical neck; this specimen is from Surface Collection Unit 30 in Sector E and is made from *Huaracane Arena*.

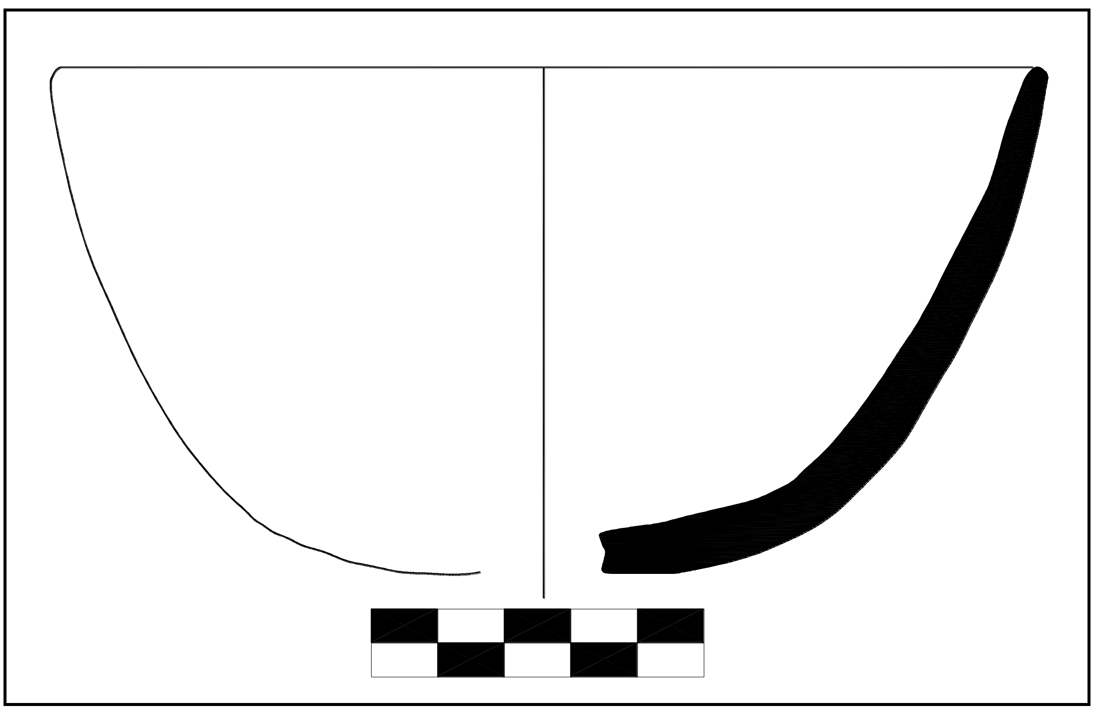


Figure A.28. Example of a deep bowl with a flat base; this specimen is from Surface Collection Unit 80 in Sector C and is made from *Huaracane Fino rojo*.

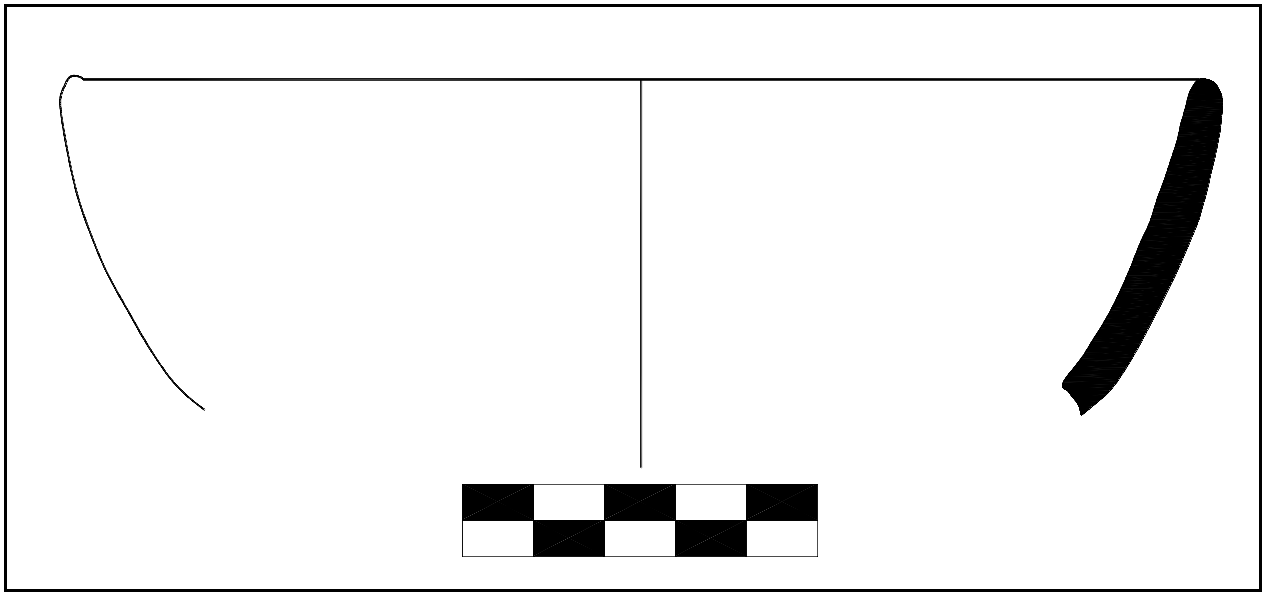


Figure A.29. Example of a bowl with curving walls; this specimen is from Surface Collection Unit 95 in Sector C and is made from *Huaracane Fino negro*.

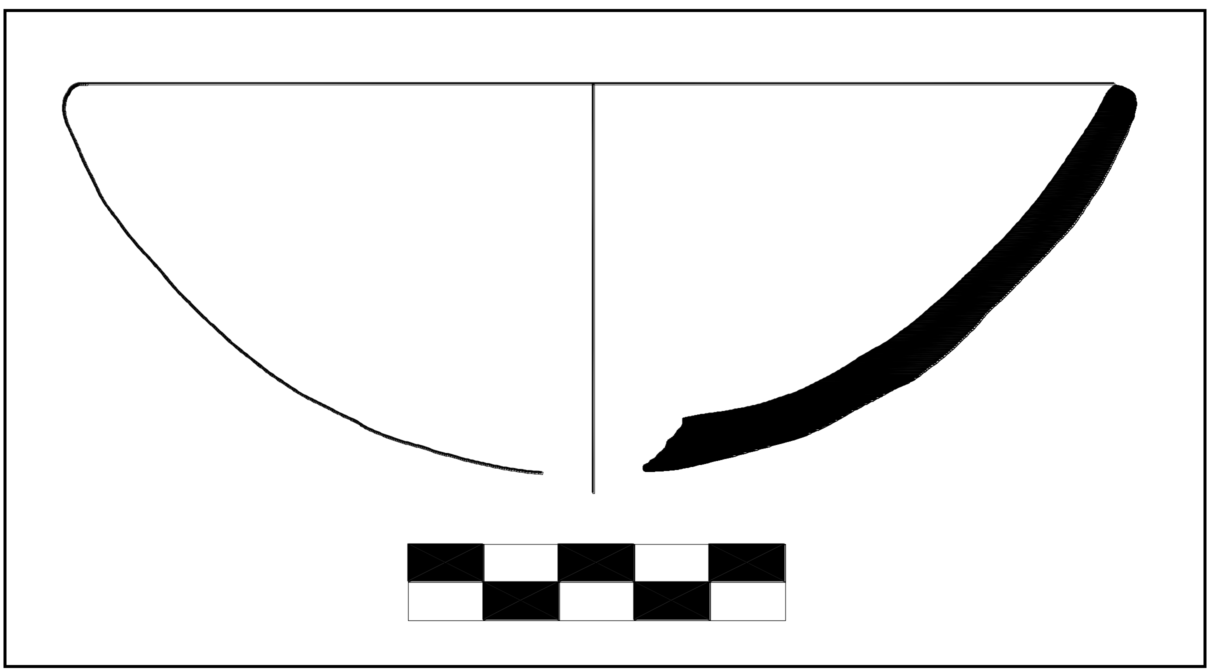


Figure A.30. Example of a small, shallow bowl with a rounded base; this specimen is from Surface Collection Unit 102 in Sector C and is made from *Huaracane Fino rojo*.

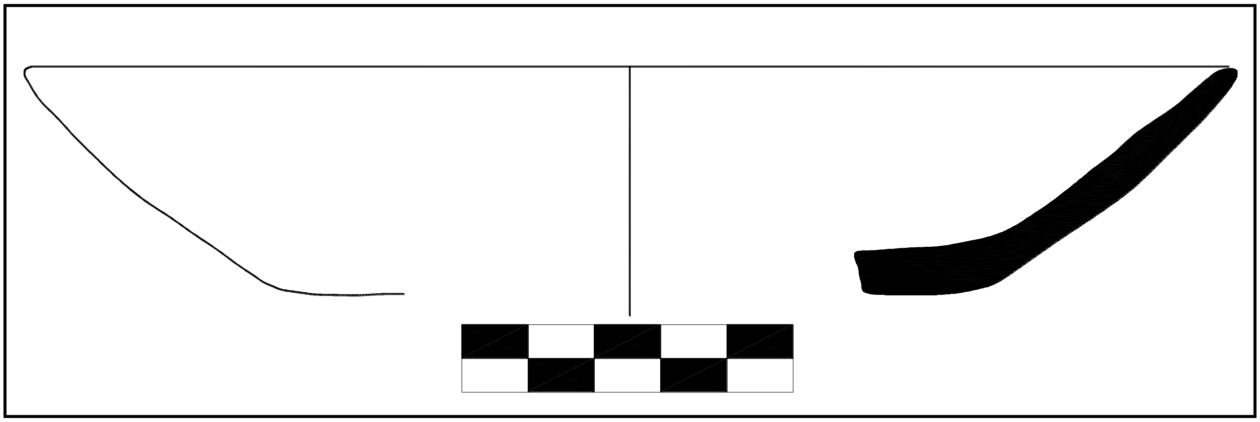


Figure A.31. Example of a large, shallow bowl with a flat base; this specimen is from Excavation Unit 3, Quad 138 and is made from *Huaracane Fino rojo*.

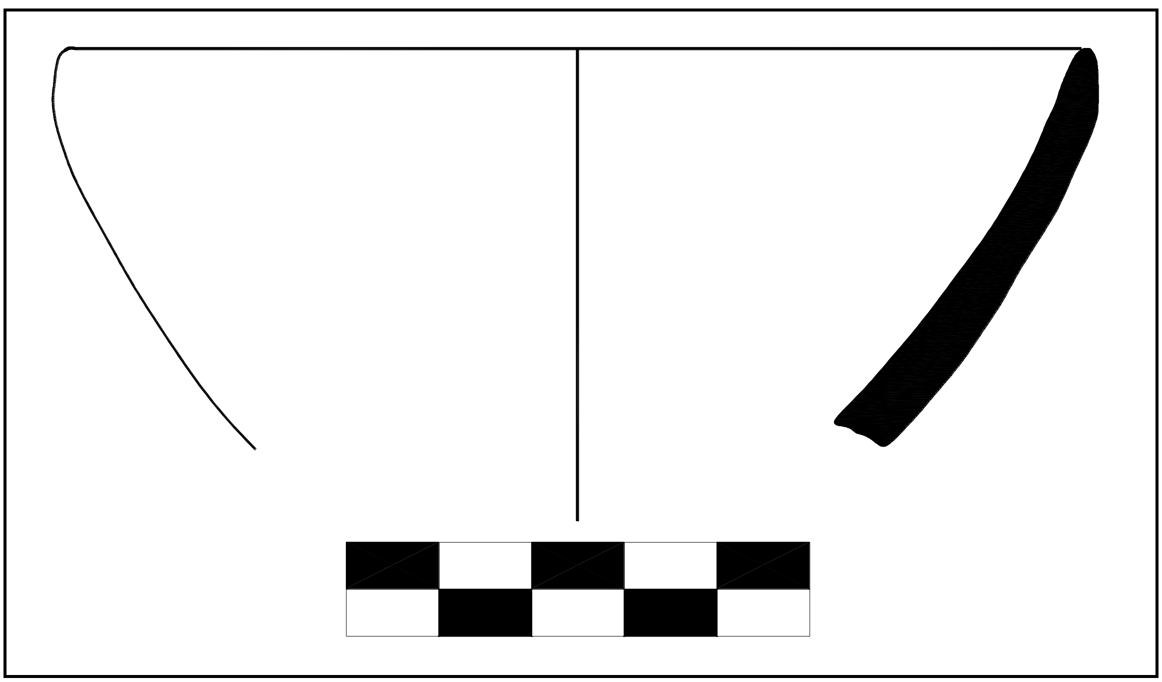


Figure A.32. Example of a small deep bowl with steep curving walls; this specimen is from Excavation Unit 3, Quad 144 and is made from *Huaracane Fino rojo*.

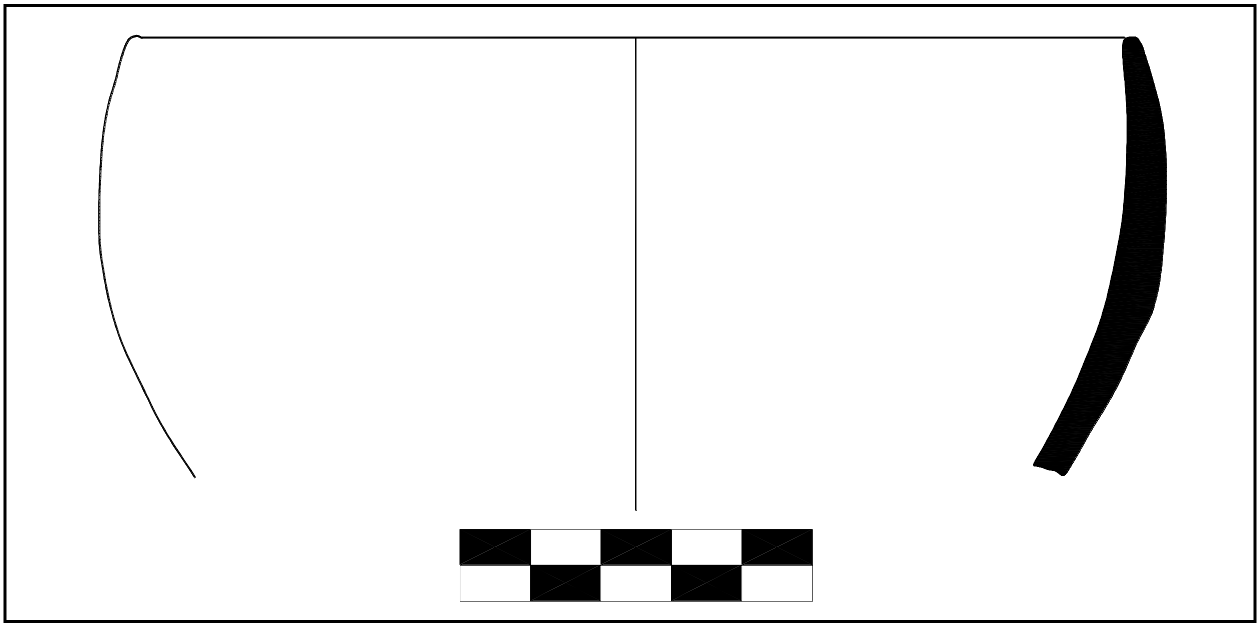


Figure A.33. Example of a large deep bowl with curving walls; this specimen is from Excavation Unit 7, Quad 25 and is made from *Huaracane Fino rojo*.

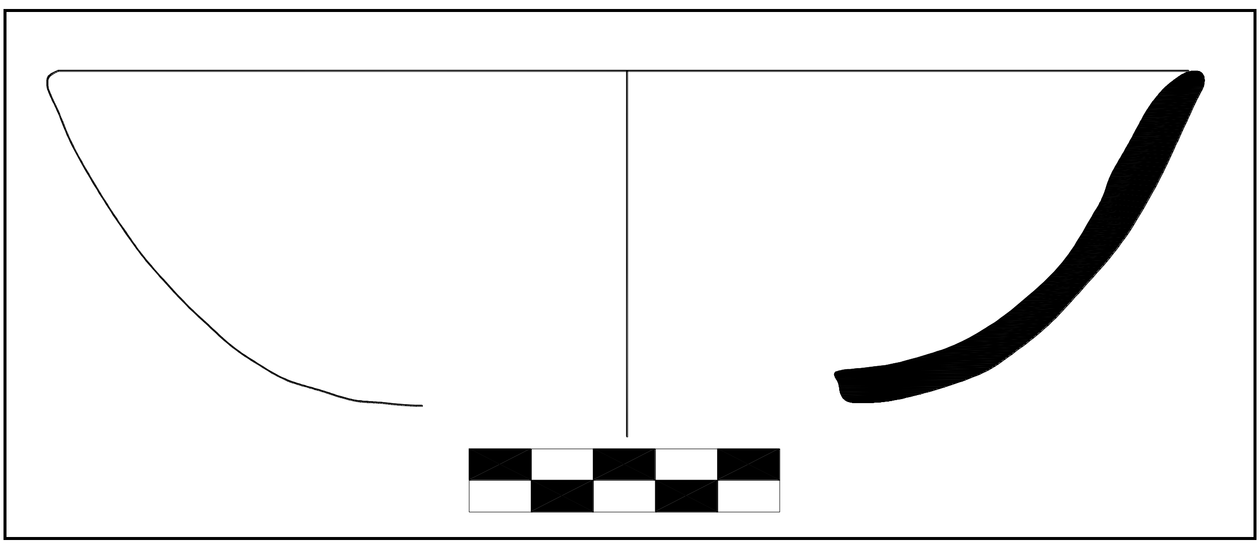


Figure A.34. Example of a large, shallow bowl with curving walls and a flat base; this specimen is from Excavation Unit 8, Quad 34 and is made from *Huaracane Fino negro*.

Figure A.35. Example of a *Huaracane Fino negro* bowl sherd with thin red painted line on rim; this specimen is from Surface Collection Unit 121 in Sector B.

Figure A.36. Example of a *Huaracane Fino rojo* bowl sherd with thick red painted band below rim on exterior surface; this specimen is from Surface Collection Unit 47 in Sector E.

Figure A.37. Example of a *Huaracane Fino rojo* bowl sherd with thin red painted band below rim on interior and exterior surfaces; this specimen is from Surface Collection Unit 79 in Sector C.

Figure A.38. Example of a *Huaracane Fino rojo* bowl sherd with a pair of vertical parallel painted lines on interior surface; this specimen is from Surface Collection Unit 80 in Sector C.

Figure A.39. Example of a *Huaracane Fino rojo* bowl sherd with a pair of vertical parallel painted lines on interior surface; this specimen is from Surface Collection Unit 121 in Sector B.

Figure A.40. Example of a *Huaracane Fino rojo* bowl sherd with four diagonal parallel painted lines on exterior surface; this specimen is from Surface Collection Unit 136 in Sector A. This specimen is the most elaborately decorated bowl sherd found at Yahuay Alta.

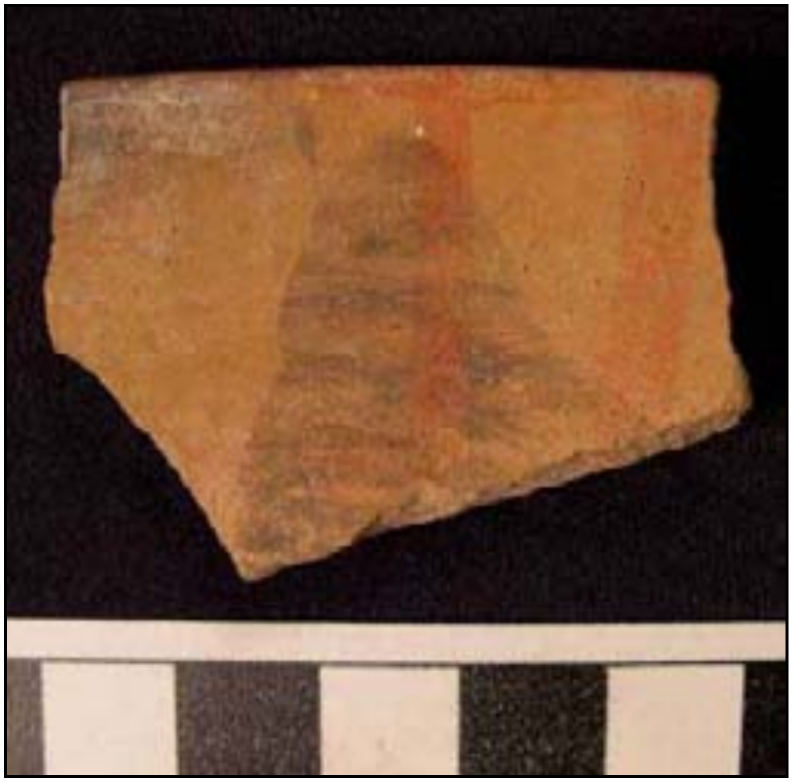


Figure A.41. Example of a *Huaracane Fino rojo* bowl sherd with a pair of vertical parallel painted lines on interior surface; this specimen is from Excavation Collection Unit 2, Quad 23.

Figure A.42. Example of *Huaracane Fino negro* bowl sherds with paired vertical parallel painted lines on their interior surfaces and a pained line on the rim; these specimens are from Excavation Unit 6, Quads 13, 21, & 22.

Figure A.43. Example of a *Huaracane Fino rojo* bowl sherd with a pair of vertical parallel painted lines on interior surface; this specimen is from Excavation Unit 8, Quad 21.

APPENDIX B

SURFACE COLLECTION DATA

Table B.1. Raw counts and weights from surface collection

Sector	Unit	Material	Description	Count	Weight (g)
F	1	Ceramic	Artificial accumulation of sherds on P1	69	903
F	1	Ceramic		44	125
F	1	Lithic		15	57.2
F	1	Marine Shell	*Oliva peruviana*	1	1.1
F	1	Animal Bone		1	0.2
F	1	Bead	Green Stone	1	0.2
F	2	Ceramic		117	510
F	2	Lithic		20	867
F	2	Animal Bone		96	48.1
F	3	Ceramic		101	428
F	3	Lithic		16	288.3
F	3	Animal Bone		44	16.2
F	4A	Ceramic		7	20.1
F	4A	Lithic		1	7.4
F	4B	Ceramic		1	7.5
F	4C	Ceramic		1	38.4
F	4C	Lithic		2	10
F	5	Ceramic		3	10.9
F	5	Lithic		12	157.1
F	5	Animal Bone		3	0.3
F	5	Ceramic	Glazed colonial ceramic sherds	5	1.6
F	6	Ceramic		5	51.9
F	6	Lithic		2	6.7
F	6	Animal Bone		1	0.1
F	7	Ceramic		29	91.8
F	7	Lithic		1	1.4
F	8	Ceramic		33	78.6
F	8	Lithic		1	97.6
F	8	Animal Bone		5	0.6

Sector	Unit	Material	Description	Count	Weight (g)
F	8	Ceramic	Glazed colonial ceramic sherds	1	0.3
F	9	Ceramic		1	8.3
F	9	Lithic		1	0.3
F	10	Ceramic		14	118.6
F	10	Lithic		5	59.9
F	10	Lithic	Projectile points	3	1
F	11	Ceramic		3	29.9
F	11	Lithic		3	26.6
F	11	Animal Bone		2	0.2
F	12	Ceramic		2	26.6
F	13	Ceramic		9	129.4
F	13	Animal Bone		1	0.1
F	13	Lithic		1	6.4
F	14	Ceramic		32	121.32
F	14	Lithic		18	44.1
F	14	Animal Bone		2	0.3
F	15	Ceramic		62	334.9
F	15	Lithic		5	51.4
F	16	Ceramic		90	620
F	16	Lithic		2	19.8
F	17	Ceramic		2	48.7
F	17	Lithic		3	1.4
F	18	Ceramic		31	620
F	18	Lithic		5	150.7
F	19A	Ceramic		16	133
F	19A	Lithic		4	76.2
F	19A	Animal Bone		1	0.9
F	19B	Ceramic		90	575
F	19B	Lithic		4	6.1
F	19B	Animal Bone		1	0.2
F	19C	Ceramic		36	164
F	19C	Lithic		5	33.4
F	19C	Animal Bone		7	3
F	19D	Ceramic		10	53.7
F	19E	Ceramic		4	18
F	19E	Lithic		1	1.1
F	20	Ceramic		344	1567
F	20	Lithic		37	1243.8
F	20	Lithic		4	696
F	20	Animal Bone		19	7.9
F	20	Marine Shell	*Choromytilus ch.*	5	3.4
F	21	Ceramic		244	770
F	21	Lithic		31	374.6
F	21	Animal Bone		12	5.3
F	21	Marine Shell		1	0.5
F	22	Ceramic		8	62.4
F	22	Lithic		1	33

Sector	Unit	Material	Description	Count	Weight (g)
F	23	Ceramic		34	166.8
F	23	Lithic		2	29.3
F	23	Animal Bone		4	0.5
E	24	Ceramic		179	1247
E	24	Lithic		44	310.2
E	24	Animal Bone		73	25.4
E	24	Marine Shell	*Choromytilus ch.*	7	1.7
E	25	Ceramic		224	923
E	25	Lithic		11	94.7
E	25	Lithic		1	1113
E	25	Animal Bone		3	0.7
E	26	Ceramic		15	70
E	26	Lithic		33	161.5
E	26	Lithic	Projectile point	1	0.5
E	26	Animal Bone		15	70
E	27	Ceramic		16	81
E	27	Lithic		2	22.2
E	27	Animal Bone		1	0.7
E	28A	Ceramic		37	161
E	28A	Lithic		7	25
E	28A	Lithic		1	571
E	28A	Animal Bone		3	2.4
E	28B	Ceramic		3	16
E	28B	Lithic		1	1.9
E	29	Ceramic		29	187
E	29	Lithic		8	101.1
E	30	Ceramic		81	599.7
E	30	Lithic		4	186.3
E	30	Animal Bone		1	1
E	31	Ceramic		4	31
E	31	Lithic		10	73.4
E	31	Animal Bone		6	1.8
E	32	Ceramic		24	496
E	32	Lithic		11	141.9
E	32	Animal Bone		24	0.8
E	33	Ceramic		12	54
E	33	Animal Bone		2	0.6
E	34	Ceramic		43	30
E	34	Lithic		2	268.8
E	34	Animal Bone		8	16.3
E	35	Ceramic		21	144
E	36	Ceramic		83	770
E	36	Lithic		9	174.7
E	36	Lithic		1	517
E	36	Animal Bone		6	4.5
E	36	Marine Shell	*Concholepas c.*& *Turritella c.*	2	2.4
E	37	Ceramic		14	94

Sector	Unit	Material	Description	Count	Weight (g)
E	38	Animal Bone		2	2.3
E	39	Ceramic		69	306
E	39	Lithic		13	61.9
E	39	Lithic	Projectile point	1	0.5
E	39	Animal Bone		1	0.2
E	40	Ceramic		63	402
E	40	Lithic		1	11.2
E	40	Animal Bone		8	2.6
E	40	Marine Shell		5	2.5
E	41	Ceramic		85	383
E	41	Lithic		4	271.2
E	42	Ceramic		6	38.4
E	43	Ceramic		71	431
E	43	Lithic		2	42.6
E	44	Ceramic		21	79
E	44	Lithic		9	101.2
E	45	Ceramic		20	130.1
E	45	Lithic		6	45.7
E	46	Ceramic		14	177.4
E	46	Lithic		6	117.2
E	46	Animal Bone		11	3.8
E	47	Ceramic		7	36.7
E	47	Lithic		3	68.3
E	47	Marine Shell		1	0.1
E	48	Ceramic		35	164.2
E	48	Lithic		8	254.7
E	49	Ceramic		5	46.2
E	49	Lithic		2	572
E	50	Ceramic		14	169.8
E	50	Lithic		6	35.7
E	51	Ceramic		46	420
E	51	Lithic		11	436.7
E	51	Animal Bone		1	0.9
E	52	Ceramic		56	525
E	52	Lithic		6	35.7
E	52	Lithic	Projectile point	1	3.2
E	52	Animal Bone		8	2.8
E	53	Ceramic		1	22.6
E	53	Lithic		1	1.5
E	54	Ceramic		1	2.8
E	54	Animal Bone		2	2.7
E	55	Ceramic		9	35.4
E	55	Lithic		2	2.8
E	55	Animal Bone		1	0.1
E	56	Ceramic		30	286.8
E	56	Lithic		13	343.9
E	56	Animal Bone		7	1.8

Sector	Unit	Material	Description	Count	Weight (g)
E	56	Marine Shell	*Choromytilus ch.*	2	1.5
D	57	Ceramic		39	324
D	57	Lithic		9	274.5
D	57	Animal Bone		1	1.4
D	57	Marine Shell	*Choromytilus ch.*	2	2.5
D	58	Ceramic		16	209
D	58	Lithic		8	92.7
D	58	Animal Bone		2	1.1
D	58	Marine Shell	*Choromytilus ch.*	1	1.9
D	59	Ceramic		7	237.1
D	59	Lithic		2	2.8
D	60	Ceramic		5	100
D	60	Lithic		4	241
D	60	Lithic		1	1028
D	61	Ceramic		3	28
D	61	Lithic		6	195.4
D	62	Ceramic		1	21
D	62	Lithic		1	0.5
D	63	Ceramic		7	297.6
D	63	Lithic		3	193.4
D	64	Ceramic		5	18
D	64	Lithic		8	13.1
D	64	Animal Bone		10	3.7
D	65	Ceramic		4	35
D	65	Lithic		7	56.5
D	65	Lithic		3	4874
D	66	Ceramic		1	44.4
D	66	Lithic		2	12.5
D	67A/B	Ceramic		20	370
D	67A/B	Lithic		4	129.2
D	68	Ceramic		1	12
D	69	Ceramic		30	302
D	69	Lithic		4	191.3
D	69	Animal Bone		2	0.9
D	70	Ceramic		6	94
D	70	Lithic		7	26.5
D	70	Animal Bone		2	0.5
D	71	Lithic		2	0.5
D	71	Marine Shell		1	0.1
C	72	Ceramic		16	155
C	72	Lithic		12	80.2
C	72	Lithic	Projectile point	1	2.3
C	72	Animal Bone		1	0.2
C	73	Ceramic		21	358
C	73	Lithic		3	15.9
C	73	Animal Bone		7	2.5
C	73	Marine Shell	*Concholepas c.?*	1	4

Sector	Unit	Material	Description	Count	Weight (g)
C	74	Ceramic		63	478
C	74	Lithic		5	127.9
C	74	Animal Bone		4	4.5
C	74	Marine Shell	*Choromytilus ch.*	6	0,7
C	75	Ceramic		122	915.2
C	75	Lithic		8	428
C	75	Animal Bone		3	2.6
C	76A	Ceramic		78	637
C	76A	Lithic		12	666
C	76A	Animal Bone		7	5.4
C	76B	Ceramic		19	276
C	76B	Lithic		2	5.3
C	76B	Animal Bone		4	3.6
C	77	Ceramic		52	662
C	77	Lithic		1	3
C	77	Animal Bone		3	0.8
C	78	Ceramic		227	2747
C	78	Lithic		10	114.1
C	78	Lithic		1	1075
C	78	Animal Bone		2	5.4
C	79	Ceramic		127	2720
C	79	Lithic		20	156.4
C	79	Lithic	Projectile point	1	0.5
C	79	Lithic		2	0.1
C	79	Animal Bone		22	20.7
C	80	Ceramic		68	864
C	80	Lithic		5	216.7
C	80	Marine Shell		1	1.6
C	81	Ceramic		47	592
C	81	Lithic		10	230
C	81	Marine Shell	*Choromytilus ch.*	1	0.7
C	82	Ceramic		142	2019
C	82	Lithic		8	184
C	82	Animal Bone		16	12.4
C	83	Ceramic		12	95.5
C	83	Lithic		2	5.2
C	84	Ceramic		24	179.3
C	84	Lithic		4	7.2
C	84	Animal Bone		1	2
C	85	Ceramic		18	288
C	85	Lithic		31	534
C	86	Ceramic		26	447
C	86	Lithic		7	33.9
C	86	Lithic		1	626
C	86	Animal Bone		5	1.6
C	87	Ceramic		21	312
C	87	Lithic		6	56

Sector	Unit	Material	Description	Count	Weight (g)
C	88	Ceramic		180	1589
C	88	Lithic		18	120.1
C	88	Lithic		1	1590
C	88	Animal Bone		11	3.7
C	88	Marine Shell	*Chrormytilus ch.*	1	0.5
C	89A	Ceramic		65	455
C	89A	Lithic		18	365
C	89A	Animal Bone		1	0.4
C	89B	Ceramic		34	221
C	89B	Lithic		10	25
C	89B	Animal Bone		15	53
C	90A	Ceramic		92	749
C	90A	Lithic		15	246.8
C	90A	Animal Bone		6	4.7
C	90A	Marine Shell	*Choromytilus ch.*	1	0.5
C	90B	Ceramic		21	286.1
C	90B	Lithic		11	263.4
C	90B	Animal Bone		1	0.9
C	90B	Marine Shell	*Oliva p.*	3	0.2
C	91	Ceramic		406	4681
C	91	Lithic		49	1652
C	92	Ceramic		107	1286
C	92	Lithic		5	144
C	92	Marine Shell		1	0.1
C	93	Ceramic		28	549
C	93	Lithic		3	74.4
C	93	Animal Bone		26	18.9
C	94	Ceramic		37	455
C	94	Lithic		5	19.7
C	94	Lithic		1	1278
C	95	Ceramic		5	69.5
C	95	Lithic		12	21.9
C	95	Lithic		1	0.4
C	96	Ceramic		8	90
C	96	Lithic		2	220.6
C	96	Bead	Marine shell	1	<0.1
C	97	Ceramic		2	42.1
C	98	Ceramic		29	361.1
C	98	Lithic		28	197.7
C	98	Bead	Marine shell	1	0.1
C	99	Ceramic		18	348.1
C	99	Lithic		6	614
C	100	Ceramic		68	748
C	100	Lithic		15	706
C	100	Animal Bone		5	6.1
C	101	Ceramic		28	389.9
C	101	Lithic		8	21.8

Sector	Unit	Material	Description	Count	Weight (g)
c	101	Animal Bone		1	0.7
C	102	Ceramic		22	277.4
C	102	Lithic		5	8.2
C	103	Ceramic		13	114.5
C	103	Lithic		12	21.5
C	104	Ceramic		34	440
C	104	Lithic		41	297
C	104	Animal Bone		2	0.9
C	104	Marine Shell		2	0.4
C	105	Lithic		2	4.9
C	105	Marine Shell	*Oliva p.*	2	0.6
C	106	Ceramic		4	55
C	106	Lithic		53	38.6
C	107	Ceramic		1	1
C	107	Lithic		30	40.8
C	108	Ceramic		13	58.5
C	108	Lithic		29	40.3
C	109	Lithic		1	145.1
C	110	-	No material found	-	-
C	111	Ceramic		96	1026
C	111	Lithic		19	228
B	112	Ceramic		12	182.6
B	112	Lithic		2	626.8
B	112	Animal Bone		1	0.3
B	113	Ceramic		14	132.9
B	113	Animal Bone		1	0.7
B	114	Ceramic		2	19.2
B	115	Ceramic		11	102.1
B	115	Lithic		1	5.4
B	115	Animal Bone		1	0.1
B	116	-	No material found	-	-
B	117	Ceramic		4	44.5
B	117	Lithic		2	310.7
B	118	Ceramic		43	165
B	118	Lithic		4	24
B	118	Lithic		2	2050
B	119	Ceramic		14	455
B	119	Lithic		4	607.4
B	120	Ceramic		19	107.3
B	120	Lithic		3	20.4
B	120	Lithic	Projectile point	1	1.7
B	121	Ceramic		73	524
B	121	Lithic		52	3517
B	121	Animal Bone		22	4.8
B	121	Marine Shell	*Oliva p.*	1	1.3
B	122	Ceramic		57	379.4
B	122	Lithic		90	1981.7

Sector	Unit	Material	Description	Count	Weight (g)
B	122	Animal Bone		2	1.7
A	123A	Ceramic		66	483
A	123A	Lithic		10	78.5
A	123A	Animal Bone		15	10.4
A	123A	Marine Shell		2	1.5
A	123B	Ceramic		26	181.6
A	123B	Lithic		7	513.4
A	124	Ceramic		12	56
A	124	Lithic		4	6.7
A	124	Animal Bone		1	0.4
A	125	Ceramic		91	528
A	125	Lithic		7	77.6
A	125	Animal Bone		10	6.7
A	126	Ceramic		36	303.2
A	126	Lithic		15	421
A	126	Animal Bone		15	3.2
A	127	Ceramic		55	656
A	127	Lithic		8	191.3
A	127	Lithic		1	1037
A	127	Animal Bone		5	7.3
A	128	Ceramic		51	647
A	128	Lithic		6	484.9
A	128	Animal Bone		18	4.9
A	128	Marine Shell	*Choromytilus ch.*	1	0.3
A	129	Ceramic		64	299.7
A	129	Lithic		2	76.9
A	129	Animal Bone		22	11.8
A	129	Marine Shell		1	0.2
A	130	Ceramic		44	322.5
A	130	Lithic		8	26.4
A	130	Animal Bone		2	0.4
A	130	Marine Shell		1	0.6
A	131	Ceramic		57	566
A	131	Lithic		3	22.5
A	131	Animal Bone		1	0.4
A	132	Ceramic		195	1262.6
A	132	Lithic		7	555
A	132	Animal Bone		5	1.5
A	132	Marine Shell		2	1.8
A	133	Ceramic		137	945
A	133	Lithic		2	4.1
A	133	Animal Bone		3	1
A	134	Ceramic		49	272.2
A	134	Lithic		6	87.3
A	134	Lithic	Projectile point	1	0.7
A	134	Animal Bone		5	0.3
A	135	Ceramic		65	577

Sector	Unit	Material	Description	Count	Weight (g)
A	135	Lithic		7	39.3
A	135	Animal Bone		3	0.6
A	135	Bead	Marine shell	1	<0.1
A	136	Ceramic		44	442
A	136	Lithic		5	206.6
A	136	Animal Bone		11	4.1
A	136	Marine Shell		3	1.4
A	137	Ceramic		1	2.1
A	137	Lithic		1	5.1
A	138	Ceramic		77	2013
A	138	Lithic		7	11.6
A	138	Animal Bone		1	0.3

Table B.2. Surface collection units utilized in the intra-sector analysis of ceramics

Sector	Unit	# Of Sherds Found in Unit
F	1	44
F	2	117
F	3	101
F	7	29
F	8	33
F	14	32
F	15	62
F	16	90
F	18	31
F	19B	90
F	19C	36
F	20	344
F	21	244
F	23	34
E	24	179
E	25	224
E	26	15
E	28A	37
E	29	29
E	30	81
E	32	24
E	34	43
E	35	21
E	36	83
E	39	69
E	40	63
E	41	85
E	43	71
E	44	21
E	45	20
E	48	35
E	51	46
E	52	56
E	56	30
D	57	39
D	69	30
C	73	21
C	74	63
C	75	122
C	76A	78
C	77	52
C	78	227
C	79	127

Sector	Unit	# Of Sherds Found in Unit
C	80	68
C	81	47
C	82	142
C	84	24
C	86	26
C	87	21
C	88	180
C	89A	65
C	89B	34
C	90A	92
C	90B	21
C	91	406
C	92	107
C	93	28
C	94	37
C	98	29
C	100	68
C	101	28
C	102	22
C	104	34
C	111	96
B	118	43
B	121	73
B	122	57
A	123A	66
A	123B	26
A	125	91
A	126	36
A	127	55
A	128	51
A	129	64
A	130	44
A	131	57
A	132	195
A	133	137
A	134	49
A	135	65
A	136	44
A	138	77

Table B.2. Grouping of surface collection units for intra-sector analysis of lithics

Group #	Surface Collection Units In Each Group
1	1
2	2
3	3
4	5, 6, 7, 8
5	9, 10, 11, 15
6	13, 14
7	16, 17, 18
8	19A, 19B, 19C, 19E
9	20
10	21
11	24
12	25
13	26
14	28A, 28B, 29
15	31, 32
16	34, 35, 36
17	39
18	41, 42, 43, 47
19	44, 45, 46
20	49, 50, 51
21	52
22	56
23	578, 58, 59
24	60, 61, 62, 63, 64
25	65, 66, 67, 69, 70, 71
26	72, 73, 74, 75
27	76A, 76B
28	78, 79
29	80, 81
30	82, 83, 84
31	85
32	86, 87
33	88
34	89A, 89B
35	90A, 90B
36	91
37	94, 95, 96
38	98
39	100
40	99, 101
41	102, 103
42	104

Group #	Surface Collection Units In Each Group
43	105, 105
44	107
45	108
46	111
47	112, 115, 117, 118, 119, 120
48	121
49	122
50	123A, 123b
51	124, 125, 126, 130
52	127, 128, 129
53	131, 132, 133
54	135, 136
55	137, 138

Table B.3. Artifact densities for surface collection units[23]

Sector	Unit	Area (m^2)	# Of Ceramic Sherds	# Of Lithic Fragments	Artifact Density (per m^2)
F	1	100	44	15	0.59
F	2	100	117	17	1.34
F	3	100	101	16	1.17
F	4A	37.4	7	1	0.21
F	4B	13.9	1	0	0.07
F	4C	6.1	1	2	0.49
F	5	48.8	3	12	0.31
F	6	20.9	5	2	0.34
F	7	55.7	29	0	0.52
F	8	43.2	33	1	0.79
F	9	5.8	1	1	0.35
F	10	20.6	14	8	1.07
F	11	19.8	3	3	0.3
F	12	12.6	2	0	0.16
F	13	22.8	9	1	0.44
F	14	100	32	17	0.49
F	15	20.4	62	5	3.29
F	16	47.2	90	2	1.95
F	17	6.2	2	3	0.8
F	18	100	31	5	0.36
F	19A	15.2	16	4	1.32
F	19B	57.2	90	4	1.64
F	19C	22.2	36	5	1.85
F	19D	34.5	10	0	0.29
F	19E	5.5	4	1	0.92
F	20	100	344	60	4.04
F	21	100	244	31	2.75
F	22	14.5	8	1	0.62
F	23	30.1	34	2	1.2
E	24	84.7	179	44	2.63
E	25	100	224	12	2.36
E	26	42.5	15	33	1.13
E	27	38.1	16	2	0.47
E	28A	42.6	37	8	1.06
E	28B	12.1	3	1	0.33
E	29	36.3	29	8	1.02
E	30	89.5	81	4	0.95

[23] Artifact densities calculated by adding up the total number of ceramic sherds and lithic fragments found in each surface collection unit and dividing by the area of said unit.

Sector	Unit	Area (m^2)	# Of Ceramic Sherds	# Of Lithic Fragments	Artifact Density (per m^2)
E	31	18.1	4	10	0.77
E	32	30	24	11	1.17
E	33	11.4	12	0	1.05
E	34	10.1	43	1	4.37
E	35	11.9	21	0	1.76
E	36	18.3	83	10	5.07
E	37	8	13	0	1.62
E	39	97.7	69	14	0.85
E	40	19.4	63	1	3.3
E	41	11.7	85	4	7.63
E	42	12.6	6	0	0.48
E	43	13.9	71	2	5.27
E	44	47.4	21	9	0.63
E	45	45.6	20	6	0.57
E	46	34.3	14	6	0.58
E	47	5.9	7	3	1.69
E	48	68.2	35	8	0.63
E	49	13.2	5	2	0.53
E	50	6	14	6	3.31
E	51	49.8	46	9	1.1
E	52	25	56	20	3.04
E	53	6.4	1	1	0.31
E	54	5	1	0	0.2
E	55	5.2	9	2	2.11
E	56	44.3	30	13	0.97
D	57	38	39	8	1.24
D	58	30.5	17	7	0.79
D	59	6.2	7	2	1.46
D	60	26.7	6	4	0.37
D	61	27.5	3	6	0.33
D	62	12.3	1	1	0.16
D	63	8	7	2	1.12
D	64	25	5	8	0.52
D	65	16.5	4	10	0.85
D	66	6.6	1	2	0.45
D	67	16.8	18	4	1.31
D	68	4.5	1	0	0.22
D	69	7.8	30	4	4.36
D	70	20.3	6	7	0.64
D	71	15.8	0	2	0.13
C	72	13	16	13	2.24
C	73	4	21	2	5.8
C	74	14.7	63	5	4.61
C	75	21.7	122	8	6
C	76A	33.4	78	11	2.67
C	76B	4.2	19	2	4.95

Sector	Unit	Area (m^2)	# Of Ceramic Sherds	# Of Lithic Fragments	Artifact Density (per m^2)
C	77	19	52	1	2.79
C	78	43.3	227	10	5.48
C	79	15.5	127	23	9.7
C	80	12.6	68	5	5.79
C	81	30.4	47	10	1.87
C	82	25	142	8	6
C	83	16.9	12	2	0.83
C	84	10.7	24	4	2.61
C	85	12.6	18	31	3.9
C	86	8.3	26	8	4.08
C	87	16.4	21	6	1.64
C	88	47.9	180	19	4.16
C	89A	14.2	65	18	5.83
C	89B	12.8	34	10	3.43
C	90A	7.3	92	15	14.74
C	90B	6.1	21	10	5.1
C	91	66.8	406	49	6.82
C	92	22	107	5	5.09
C	93	18.5	28	3	1.68
C	94	42.6	37	6	1.01
C	95	15.1	5	13	1.2
C	96	20.9	8	2	0.48
C	97	15.6	2	0	0.13
C	98	28.8	29	28	1.98
C	99	29.7	18	6	0.81
C	100	27.2	68	15	3.05
C	101	27.2	28	8	1.32
C	102	16.3	22	5	1.65
C	103	13	13	12	1.92
C	104	47.8	34	41	1.57
C	105	12.8	0	2	0.16
C	106	21.4	4	53	2.66
C	107	16.7	1	30	1.85
C	108	22.6	13	29	1.86
C	109	23.5	0	1	0.04
C	111	16.7	96	19	6.87
B	112	19.6	12	1	0.66
B	113	11.2	16	0	1.43
B	114	16.4	2	0	0.12
B	115	6	11	1	2
B	117	18	4	2	0.33
B	118	23.4	43	6	2.09
B	119	25	15	3	0.72
B	120	25	19	4	0.92
B	121	100	73	50	1.23
B	122	100	57	91	1.48

Sector	Unit	Area (m^2)	# Of Ceramic Sherds	# Of Lithic Fragments	Artifact Density (per m^2)
A	123A	24.8	66	10	3.06
A	123B	7.6	26	7	4.35
A	124	19	13	3	0.84
A	125	12.8	91	7	7.63
A	126	19.4	36	13	2.53
A	127	24.2	55	8	2.61
A	128	10	51	6	5.7
A	129	17.7	64	2	3.73
A	130	10.7	44	8	4.84
A	131	25.5	57	3	2.35
A	132	49.8	195	7	4.06
A	133	41.5	137	2	3.35
A	134	25	49	7	2.24
A	135	25	65	7	2.88
A	136	12.5	44	5	3.9
A	137	12.8	1	1	0.16
A	138	29.9	77	7	2.81

Table B.4. Ceramic ware counts in each surface collection unit

Sector	Unit	Total Count	*Huaracane Vegetal*	*Huaracane Arena*	*Huaracane Fino*	*Pasta Biotite*	*Pasta Centro Rosada*	*Pasta Naranja*	Other
F	1	70	28	38	3	1	0	0	0
F	1	44	5	32	2	0	0	5	0
F	2	117	12	80	21	0	0	0	4
F	3	101	1	92	8	0	0	0	0
F	4A	7	0	2	5	0	0	0	0
F	4B	1	0	1	0	0	0	0	0
F	4C	1	0	1	0	0	0	0	0
F	5	3	0	2	0	1	0	0	0
F	6	5	0	5	0	0	0	0	0
F	7	29	0	23	1	0	5	0	0
F	8	33	0	21	5	0	7	0	0
F	9	1	0	0	1	0	0	0	0
F	10	14	1	12	1	0	0	0	0
F	11	3	1	2	0	0	0	0	0
F	12	2	0	1	0	0	1	0	0
F	13	9	2	7	0	0	0	0	0
F	14	32	1	26	5	0	0	0	0
F	15	62	3	57	2	0	0	0	0
F	16	90	14	73	3	0	0	0	0
F	17	2	1	0	1	0	0	0	0
F	18	31	3	24	4	0	0	0	0
F	19A	16	0	14	0	2	0	0	0
F	19B	90	9	64	12	4	1	0	0
F	19C	36	1	26	7	2	0	0	0
F	19D	10	0	7	2	1	0	0	0
F	19E	4	0	3	1	0	0	0	0
F	20	344	4	303	15	22	0	0	0
F	21	244	0	209	33	2	0	0	0
F	22	8	0	8	0	0	0	0	0
F	23	34	0	10	5	16	0	3	0
E	24	179	1	57	2	74	0	45	0
E	25	224	5	177	7	15	0	14	6
E	26	15	0	14	1	0	0	0	0
E	27	16	1	4	7	4	0	0	0
E	28A	37	1	36	0	0	0	0	0
E	28B	3	1	2	0	0	0	0	0
E	29	29	1	22	4	2	0	0	0

Sector	Unit	Total Count	*Huaracane Vegetal*	*Huaracane Arena*	*Huaracane Fino*	*Pasta Biotite*	*Pasta Centro Rosada*	*Pasta Naranja*	Other
E	30	81	4	47	30	0	0	0	0
E	31	4	3	1	0	0	0	0	0
E	32	24	8	13	3	0	0	0	0
E	33	12	0	9	3	0	0	0	0
E	34	43	5	35	3	0	0	0	0
E	35	21	1	14	6	0	0	0	0
E	36	83	25	37	20	0	0	1	0
E	37	13	0	11	2	0	0	0	0
E	39	69	2	55	10	0	2	0	0
E	40	63	2	55	4	1	1	0	0
E	41	85	52	24	7	1	0	1	0
E	42	6	0	3	2	0	0	1	0
E	43	71	25	32	14	0	0	0	0
E	44	21	1	11	9	0	0	0	0
E	45	20	10	8	2	0	0	0	0
E	46	14	2	5	7	0	0	0	0
E	47	7	0	6	1	0	0	0	0
E	48	35	0	34	1	0	0	0	0
E	49	5	5	0	0	0	0	0	0
E	50	14	10	0	3	0	0	0	1
E	51	46	8	32	6	0	0	0	0
E	52	56	38	8	7	2	1	0	0
E	53	1	1	0	0	0	0	0	0
E	54	1	0	0	1	0	0	0	0
E	55	9	0	7	2	0	0	0	0
E	56	30	13	16	0	0	0	1	0
D	57	39	13	9	17	0	0	0	0
D	58	17	4	4	9	0	0	0	0
D	59	7	6	0	1	0	0	0	0
D	60	6	1	3	2	0	0	0	0
D	61	3	1	2	0	0	0	0	0
D	62	1	0	1	0	0	0	0	0
D	63	7	2	1	4	0	0	0	0
D	64	5	1	3	1	0	0	0	0
D	65	4	4	0	0	0	0	0	0
D	66	1	0	0	1	0	0	0	0
D	67	18	12	2	3	0	1	0	0
D	68	1	0	0	0	1	0	0	0
D	69	30	0	28	2	0	0	0	0
D	70	6	2	2	1	0	1	0	0

Sector	Unit	Total Count	*Huaracane Vegetal*	*Huaracane Arena*	*Huaracane Fino*	*Pasta Biotite*	*Pasta Centro Rosada*	*Pasta Naranja*	Other
C	72	16	5	7	0	0	2	2	0
C	73	21	4	12	3	0	1	1	0
C	74	63	19	34	8	1	0	1	0
C	75	122	35	78	9	0	0	0	0
C	76A	78	6	57	10	4	0	1	0
C	76B	19	4	10	3	0	0	2	0
C	77	52	13	34	1	1	3	0	0
C	78	227	19	151	10	44	3	0	0
C	79	127	24	96	5	1	0	1	0
C	80	68	23	28	11	6	0	0	0
C	81	47	33	7	7	0	0	0	0
C	82	142	68	60	9	5	0	0	0
C	83	12	2	7	3	0	0	0	0
C	84	24	13	5	6	0	0	0	0
C	85	18	12	1	4	1	0	0	0
C	86	26	14	8	4	0	0	0	0
C	87	21	14	7	0	0	0	0	0
C	88	180	54	93	9	24	0	0	0
C	89A	65	15	39	10	1	0	0	0
C	89B	34	4	19	7	3	1	0	0
C	90A	92	33	51	0	6	1	1	0
C	90B	21	9	10	0	2	0	0	0
C	91	406	307	89	8	2	0	0	0
C	92	107	80	14	13	0	0	0	0
C	93	28	7	14	0	7	0	0	0
C	94	37	25	8	4	0	0	0	0
C	95	5	4	0	1	0	0	0	0
C	96	8	3	4	1	0	0	0	0
C	97	2	1	0	1	0	0	0	0
C	98	29	13	15	1	0	0	0	0
C	99	18	9	7	2	0	0	0	0
C	100	68	39	22	7	0	0	0	0
C	101	28	26	0	2	0	0	0	0
C	102	22	16	4	2	0	0	0	0
C	103	13	8	4	1	0	0	0	0
C	104	34	8	11	5	10	0	0	0
C	106	4	2	0	2	0	0	0	0
C	107	1	0	0	1	0	0	0	0
C	108	13	2	0	7	0	4	0	0
C	111	96	46	29	4	1	16	0	0

Sector	Unit	Total Count	*Huaracane Vegetal*	*Huaracane Arena*	*Huaracane Fino*	*Pasta Biotite*	*Pasta Centro Rosada*	*Pasta Naranja*	Other
B	112	12	5	6	1	0	0	0	0
B	113	16	3	5	2	6	0	0	0
B	114	2	0	2	0	0	0	0	0
B	115	11	0	9	0	2	0	0	0
B	117	4	0	2	1	1	0	0	0
B	118	43	39	4	0	0	0	0	0
B	119	15	10	5	0	0	0	0	0
B	120	19	18	1	0	0	0	0	0
B	121	73	40	17	15	1	0	0	0
B	122	57	26	12	17	2	0	0	0
A	123A	66	8	34	7	17	0	0	0
A	123B	26	4	17	3	2	0	0	0
A	124	13	0	9	1	3	0	0	0
A	125	91	19	41	16	15	0	0	0
A	126	36	4	22	4	0	2	4	0
A	127	55	18	19	14	0	4	0	0
A	128	51	18	17	11	3	0	2	0
A	129	64	5	44	7	6	2	0	0
A	130	44	21	16	5	0	2	0	0
A	131	57	23	13	20	0	0	1	0
A	132	195	40	125	25	0	3	2	0
A	133	137	67	63	3	4	0	0	0
A	134	49	12	14	14	6	3	0	0
A	135	65	24	18	7	16	0	0	0
A	136	44	31	6	6	0	1	0	0
A	137	1	0	0	0	1	0	0	0
A	138	77	72	3	2	0	0	0	0

Table B.5. Codes for the analysis of diagnostic ceramics

Ceramic Paste Types	
Code	**Paste**
1	*Huaracane Vegetal*
2	*Huaracane Arena*
4	*Huaracane Fino*
6	*Pasta Naranja*
7	*Pasta Biotite*
8	*Pasta Centro Rosada*
9	Other
Ceramic Vessel Types	
Code	**Vessel Type**
1	Bowl
2	*Olla sin cuello*
3	*Olla* with neck
5	Jar
7	Bottle
10	Ceramic Artifact
Rim Forms	
Code	**Form**
1	Rounded (no clear corners, continuously rounded)
2	Slightly Rounded (rounded corners, flat area, but not table top flat)
3	Squared (Distinct corners, Corners are right angels, Table top flat)
4	Rounded Under (one corner at exterior wall, rounded interior, no corner)
5	Pointed (Always tapering thickness, tapers to a rounded point less than 2mm)
6	Folded Under (Rounded Profile, Smooth exterior edge, interior edge folded un forming lip)
Surface Treatments	
Code	**Treatment**
1	No treatment
2	Roughly smoothed (Thick parallel smoothing lines without sheen)
3	Finely smoothed (Fine parallel smoothing lines without sheen)
4	Burnished (Smoothing lines with uneven sheen)
4	Polished (No smoothing lines and uniform sheen)
Slip Type	
Code	**Slip**
1	No slip
2	Semi-slipped (uneven slip or slip same color as paste)

3	Slipped (Uniform slip and slip different color than paste)
4	Partially slipped (only specific areas of vessel, such as rim, slipped)
Decoration Types	
Code	**Decoration**
1	Band of paint[24] along rim
2	Paint on rim and vertical streaks or drips of slip on interior
3	Paint on rim and vertical streaks or drips of paint on exterior
4	Paint on rim and diagonal lines of paint on interior
5	Vertical and horizontal streaks or lines of paint on interior
6	Thick band of paint on and below rim on exterior, interior, or both
7	Horizontal line of paint on interior
8	Unidentifiable geometric design on exterior
9	Paint on rim and diagonal lines of paint on exterior
10	Dot of paint and post-fire groove on exterior

[24] All painted designs on *Huaracane Fino* bowls (these were the only decorated vessels at Yahuay Alta) were a faint red in color and the paint may better be described as a weak slip painted onto the vessel.

Table B.6. Analysis of diagnostic ceramic sherds

Specimen #			Sector	Unit	Weight (g)	Vessel form	Rim present	Rim form	Neck present	Body present	Base present	Handle present	Paste	Body thickness (mm)	Rim thickness (mm)	Rim diameter (cm)	Treatment Ext.	Treatment Int.	Slip Ext.	Slip Int.	Decoration
YA06-1-	001-001	# 1	F	1	5.2	1	x	5	-	x	-	-	4	5.97	1.90	9	4	4	1	1	0
YA06-1-	001-001	# 2	F	1	6.8	2	x	2	-	x	-	-	1	6.51	7.36	-	4	4	1	1	0
YA06-1-	001-001	# 3	F	1	5.6	2	x	2	-	-	-	-	1	-	7.83	-	4	4	1	1	0
YA06-1-	001-001	# 4	F	1	6.4	2	x	2	-	x	-	-	7	7.39	6.76	-	1	1	1	1	0
YA06-1-	002-001	# 1	F	2	5.9	1	x	1	-	x	-	-	9	6.42	5.09	18	1	5	1	1	0
YA06-1-	002-001	# 2	F	2	9.7	1	x	1	-	x	-	-	9	6.74	5.09	18	1	5	1	1	0
YA06-1-	002-001	# 3	F	2	4.6	2	x	2	-	x	-	-	9	7.80	5.86	21	2	3	1	1	0
YA06-1-	002-001	# 4	F	2	7.8	2	x	2	-	x	-	-	9	7.76	5.60	21	2	3	1	1	0
YA06-1-	002-001	# 5	F	2	10.3	2	x	4	-	x	-	-	1	8.29	5.56	11	2	1	1	1	0
YA06-1-	002-001	# 6	F	2	7.3	2	x	2	-	x	-	-	2	6.91	5.77	11	4	3	1	1	0
YA06-1-	002-001	# 7	F	2	6.5	2	x	1	-	x	-	-	2	5.90	4.91	9	1	1	1	1	0
YA06-1-	002-001	# 8	F	2	6.3	2	x	2	-	x	-	-	2	5.71	5.52	-	4	1	1	1	0
YA06-1-	002-001	# 9	F	2	2.1	2	x	1	-	x	-	-	2	4.32	3.76	8	1	1	1	1	0
YA06-1-	002-001	# 10	F	2	2.3	2	x	3	-	x	-	-	2	5.31	4.62	-	1	1	1	1	0
YA06-1-	002-001	# 11	F	2	3.4	1	x	2	-	x	-	-	4	6.45	3.43	11	4	4	4	1	1
YA06-1-	002-001	# 12	F	2	4.5	1	x	2	-	x	-	-	4	5.60	4.04	-	3	3	4	1	1
YA06-1-	002-001	# 13	F	2	2.7	1	x	2	-	x	-	-	4	5.77	3.89	-	4	3	4	1	1
YA06-1-	002-001	# 14	F	2	1.5	1	x	2	-	x	-	-	4	5.65	4.08	-	4	3	1	1	0
YA06-1-	002-001	# 15	F	2	3.7	1	x	2	-	x	-	-	4	5.68	3.98	14	3	4	4	1	1
YA06-1-	002-001	# 16	F	2	1.1	1	x	1	-	x	-	-	4	5.15	3.59	-	4	4	4	1	1
YA06-1-	003-001	# 1	F	3	5.4	2	x	6	-	x	-	-	2	5.41	7.41	8	2	1	1	1	0
YA06-1-	003-001	# 2	F	3	3.2	2	x	6	-	x	-	-	2	6.24	7.05	-	2	1	1	1	0
YA06-1-	003-001	# 3	F	3	5.2	2	x	6	-	x	-	-	2	4.78	7.82	-	2	1	1	1	0
YA06-1-	003-001	# 4	F	3	7.1	2	x	2	-	x	-	-	2	5.60	5.72	15	2	1	1	1	0
YA06-1-	003-001	# 5	F	3	9.9	2	x	4	-	x	-	-	2	4.34	8.60	-	2	1	1	1	0
YA06-1-	003-001	# 6	F	3	5.7	1	x	2	-	x	-	-	4	6.32	4.32	-	4	4	4	4	1
YA06-1-	003-001	# 7	F	3	0.7	1	x	2	-	x	-	-	4	5.67	3.35	-	4	4	4	1	1
YA06-1-	003-001	# 8	F	3	0.8	1	x	2	-	x	-	-	4	5.76	3.57	-	4	4	4	1	1
YA06-1-	004-001	# 1	F	4	3.6	1	x	3	-	x	-	-	4	4.35	3.77	14	4	5	1	1	0
YA06-1-	004-001	# 2	F	4	0.9	1	x	1	-	x	-	-	4	5.50	2.96	-	4	5	1	1	0
YA06-1-	008-001	# 1	F	8	2.0	0	x	2	-	x	-	-	8	6.69	5.43	-	1	1	1	1	0
YA06-1-	008-001	# 2	F	8	3.3	0	x	1	-	x	-	-	8	7.59	5.38	-	1	1	1	1	0
YA06-1-	008-001	# 3	F	8	2.4	2	x	2	-	x	-	-	2	5.90	4.14	-	1	1	1	1	0
YA06-1-	008-001	# 4	F	8	4.5	1	x	2	-	x	-	-	4	6.83	4.10	-	4	4	1	1	0
YA06-1-	008-001	# 5	F	8	1.1	1	x	2	-	x	-	-	4	5.51	3.24	-	4	4	1	1	0
YA06-1-	010-001	# 1	F	10	1.4	1	x	5	-	x	-	-	4	4.52	2.10	-	4	4	3	3	0
YA06-1-	014-001	# 1	F	14	2.0	2	x	2	-	x	-	-	2	5.09	4.49	9	1	1	1	1	0
YA06-1-	015-001	# 1	F	15	11.9	2	x	1	-	x	-	-	1	9.90	5.80	-	1	1	1	1	0
YA06-1-	015-001	# 2	F	15	4.2	2	x	1	-	x	-	-	2	6.72	3.56	-	1	1	1	1	0

Specimen #	Sector	Unit	Weight (g)	Vessel form	Rim present	Rim form	Neck present	Body present	Base present	Handle present	Paste	Body thickness (mm)	Rim thickness (mm)	Rim diameter (cm)	Treatment Ext.	Treatment Int.	Slip Ext.	Slip Int.	Decoration
YA06-1- 015-001 # 3	F	15	22.5	2	x	2	-	x	-	-	2	6.28	9.06	25	2	1	1	1	0
YA06-1- 015-001 # 4	F	15	1.4	1	x	2	-	x	-	-	4	6.29	3.66	11	4	4	1	1	0
YA06-1- 016-001 # 1	F	16	12.0	2	x	1	-	x	-	-	2	7.70	8.65	18	2	1	1	1	0
YA06-1- 016-001 # 2	F	16	6.9	2	x	2	-	x	-	-	2	5.79	5.61	-	1	1	1	1	0
YA06-1- 016-001 # 3	F	16	6.7	2	x	1	-	x	-	-	2	5.82	6.34	12	3	3	1	1	0
YA06-1- 018-001 # 1	F	18	84.6	5	x	2	x	-	-	-	2	8.63	5.48	10	1	1	1	1	0
YA06-1- 018-001 # 2	F	18	29.3	5	x	2	x	-	-	-	2	8.65	4.80	10	1	1	1	1	0
YA06-1- 018-001 # 3	F	18	32.6	5	x	2	x	-	-	-	2	8.99	5.16	10	1	1	1	1	0
YA06-1- 018-004 # 4	F	18	12.3	5	x	2	x	-	-	-	2	8.24	5.69	10	1	1	1	1	0
YA06-1- 019-004 # 1	F	19B	9.0	2	x	3	-	x	-	-	2	7.39	6.91	-	1	1	1	1	0
YA06-1- 019-004 # 2	F	19B	2.5	1	x	2	-	x	-	-	4	4.44	3.83	-	4	4	1	1	0
YA06-1- 019-004 # 3	F	19B	7.8	10	-	-	-	-	-	-	0	5.09	-	-	1	1	1	1	0
YA06-1- 019-007 # 1	F	19C	2.1	1	x	1	-	x	-	-	4	6.17	3.87	-	4	4	3	3	0
YA06-1- 019-010 # 1	F	19D	4.5	1	x	2	-	x	-	-	4	5.55	3.73	13	4	4	3	2	0
YA06-1- 019-011 # 1	F	19E	3.4	1	x	2	-	x	-	-	4	6.58	3.47	-	5	4	4	1	1
YA06-1- 020-001 # 1	F	20	1.8	7	x	2	x	x	-	-	2	4.06	4.34	4	1	1	1	1	0
YA06-1- 020-001 # 2	F	20	8.0	1	x	1	-	x	-	-	1	6.73	5.46	-	1	1	1	1	0
YA06-1- 020-001 # 3	F	20	1.8	2	x	3	-	x	-	-	2	6.33	4.70	-	1	1	1	1	0
YA06-1- 020-001 # 4	F	20	9.8	1	x	2	-	x	-	-	2	6.73	6.65	15	2	2	2	2	0
YA06-1- 020-001 # 5	F	20	4.8	1	x	1	-	x	-	-	4	5.67	2.94	10	4	4	3	3	0
YA06-1- 020-001 # 6	F	20	1.9	1	x	2	-	x	-	-	4	5.94	3.70	-	4	4	1	4	2
YA06-1- 020-001 # 7	F	20	5.2	1	x	1	-	x	-	-	4	6.58	3.42	14	4	4	1	1	0
YA06-1- 020-001 # 8	F	20	1.5	1	x	2	-	x	-	-	4	6.05	3.60	-	4	1	1	1	0
YA06-1- 021-001 # 1	F	21	3.7	3	x	5	x	x	-	-	2	3.74	2.55	8	1	1	1	1	0
YA06-1- 021-001 # 2	F	21	2.1	3	x	5	x	-	-	-	2	3.72	2.60	8	1	1	1	1	0
YA06-1- 021-001 # 3	F	21	6.7	1	x	1	-	x	-	-	4	6.48	3.72	-	4	5	3	3	0
YA06-1- 021-001 # 4	F	21	4.6	1	x	1	-	x	-	-	4	5.52	3.19	-	4	4	3	3	0
YA06-1- 021-001 # 5	F	21	1.2	1	x	1	-	x	-	-	4	5.58	3.50	11	5	5	3	2	0
YA06-1- 021-001 # 6	F	21	1.5	1	x	1	-	x	-	-	4	6.46	3.01	-	5	5	1	4	1
YA06-1- 021-001 # 7	F	21	5.1	1	x	1	-	x	-	-	4	5.24	3.62	15	4	4	1	4	1
YA06-1- 023-001 # 1	F	23	20.4	5	x	2	x	x	-	-	7	4.70	6.10	12	1	1	1	1	0
YA06-1- 023-001 # 2	F	23	0.9	1	x	-	-	x	-	-	4	3.96	2.96	-	1	2	1	1	0
YA06-1- 024-001 # 1	E	24	6.5	2	x	2	-	x	-	-	2	6.82	6.20	15	2	1	1	1	0
YA06-1- 024-001 # 2	E	24	3.2	2	x	6	-	x	-	-	2	6.16	8.34	-	1	1	1	1	0
YA06-1- 025-001 # 1	E	25	17.0	2	x	1	-	x	-	-	1	6.92	12.61	-	1	1	1	1	0
YA06-1- 025-001 # 2	E	25	8.0	2	x	2	-	x	-	-	2	5.91	8.85	13	2	1	1	1	0
YA06-1- 025-001 # 3	E	25	5.1	2	x	2	-	x	-	-	2	5.28	7.12	-	2	1	1	1	0
YA06-1- 025-001 # 4	E	25	9.9	2	x	3	-	x	-	-	2	6.09	5.99	15	2	1	1	1	0
YA06-1- 025-001 # 5	E	25	7.1	3	x	1	x	x	-	-	2	5.31	4.07	7	4	1	2	1	0
YA06-1- 025-001 # 6	E	25	10.4	2	x	3	-	x	-	-	2	4.19	4.66	18	3	1	1	1	0

Specimen #	Sector	Unit	Weight (g)	Vessel form	Rim present	Rim form	Neck present	Body present	Base present	Handle present	Paste	Body thickness (mm)	Rim thickness (mm)	Rim diameter (cm)	Treatment Ext.	Treatment Int.	Slip Ext.	Slip Int.	Decoration
YA06-1- 025-001 # 7	E	25	3.8	2	x	3	-	x	-	-	2	4.71	4.31	18	3	1	1	1	0
YA06-1- 025-001 # 8	E	25	3.3	2	x	2	-	x	-	-	2	4.22	4.27	11	3	1	1	1	0
YA06-1- 025-001 # 9	E	25	1.5	2	x	3	-	x	-	-	2	4.98	4.83	-	3	1	1	1	0
YA06-1- 025-001 # 10	E	25	3.5	2	x	1	-	x	-	-	2	5.28	4.79	9	1	1	1	1	0
YA06-1- 025-001 # 11	E	25	3.1	3	x	1	x	x	-	-	2	5.01	5.86	8	1	1	1	1	0
YA06-1- 025-001 # 12	E	25	2.6	1	x	1	-	x	-	-	4	5.89	4.62	-	5	5	3	3	0
YA06-1- 025-001 # 13	E	25	2.3	1	x	2	-	x	-	-	4	6.56	4.53	14	5	4	2	1	0
YA06-1- 025-001 # 14	E	25	13.8	1	x	2	-	x	-	-	4	5.14	4.70	15	4	4	1	1	0
YA06-1- 025-001 # 15	E	25	19.2	0	-	-	-	-	-	x	7	-	-	-	1	-	1	-	0
YA06-1- 025-001 # 16	E	25	22.5	0	-	-	-	-	-	x	7	-	-	-	1	-	1	-	0
YA06-1- 025-001 # 17	E	25	0.8	0	x	1	x	-	-	-	9	4.36	3.94	-	1	1	1	1	0
YA06-1- 025-001 # 18	E	25	0.7	0	x	1	x	-	-	-	9	4.10	4.31	5	1	1	1	1	0
YA06-1- 025-001 # 19	E	25	0.7	0	x	1	x	-	-	-	9	4.56	3.61	5	1	1	1	1	0
YA06-1- 026-001 # 1	E	26	1.3	1	x	2	-	x	-	-	4	6.39	3.28	-	4	4	4	2	1
YA06-1- 027-001 # 1	E	27	9.8	1	x	1	-	x	-	-	4	7.75	4.31	-	4	5	2	3	0
YA06-1- 027-001 # 2	E	27	6.5	1	x	1	-	x	-	-	4	5.71	4.02	-	4	4	2	4	4
YA06-1- 027-001 # 3	E	27	5.3	1	x	1	-	x	-	-	4	5.01	3.81	-	5	5	3	3	0
YA06-1- 029-001 # 1	E	29	37.7	2	x	2	-	x	-	-	2	6.63	7.86	27	1	1	1	1	0
YA06-1- 029-001 # 2	E	29	1.6	7	x	2	x	-	-	-	2	4.29	3.05	5	1	1	1	1	0
YA06-1- 029-001 # 3	E	29	5.5	1	x	1	-	x	-	-	4	5.45	3.43	13	4	5	2	2	0
YA06-1- 030-001 # 1	E	30	3.1	7	x	1	x	-	-	-	2	3.87	3.52	3	1	1	1	1	0
YA06-1- 030-001 # 2	E	30	6.0	2	x	1	-	x	-	-	2	6.05	5.33	20	3	1	1	1	0
YA06-1- 030-001 # 3	E	30	3.9	2	x	2	-	x	-	-	2	6.47	5.21	-	2	1	1	1	0
YA06-1- 030-001 # 4	E	30	9.3	1	x	5	-	x	-	-	4	4.47	3.19	9	4	5	3	1	0
YA06-1- 030-001 # 5	E	30	5.1	1	x	2	-	x	-	-	4	6.88	2.93	17	3	3	1	1	2
YA06-1- 030-001 # 6	E	30	3.1	1	x	1	-	x	-	-	4	5.62	3.79	11	4	5	2	1	0
YA06-1- 030-001 # 7	E	30	1.7	1	x	1	-	x	-	-	4	6.28	4.12	-	2	5	1	4	1
YA06-1- 030-001 # 8	E	30	1.9	1	x	5	-	x	-	-	4	5.41	2.84	-	3	2	2	1	0
YA06-1- 030-001 # 9	E	30	0.5	1	x	2	-	-	-	-	4	-	2.46	-	5	5	3	3	0
YA06-1- 030-001 # 10	E	30	7.8	1	x	1	-	x	-	-	4	5.52	3.57	14	3	3	1	4	1
YA06-1- 030-001 # 11	E	30	3.1	1	x	2	-	x	-	-	4	5.56	3.75	-	4	4	1	1	0
YA06-1- 030-001 # 12	E	30	12.5	1	x	1	-	x	-	-	4	7.16	5.30	-	4	5	2	4	2
YA06-1- 030-001 # 13	E	30	4.5	1	-	-	-	x	-	-	4	4.78	-	-	3	5	1	4	2
YA06-1- 033-001 # 1	E	33	3.4	2	x	1	-	x	-	-	2	8.03	7.82	-	2	1	1	1	0
YA06-1- 033-001 # 2	E	33	6.9	1	x	1	-	x	-	-	4	8.04	5.35	17	4	4	3	3	0
YA06-1- 033-001 # 3	E	33	0.8	1	x	-	-	-	-	-	4	-	4.02	-	-	5	-	4	1
YA06-1- 034-001 # 1	E	34	8.2	1	x	2	-	x	-	-	4	6.05	3.94	14	2	5	1	1	0
YA06-1- 035-001 # 1	E	35	12.1	1	x	1	-	x	-	-	4	7.21	3.39	12	3	3	2	2	0
YA06-1- 035-001 # 2	E	35	1.3	1	x	2	-	x	-	-	4	5.86	4.22	-	3	3	2	2	1
YA06-1- 036-001 # 1	E	36	9.1	3	x	1	x	x	-	-	1	10.88	5.03	11	1	1	1	1	0

Specimen #	Sector	Unit	Weight (g)	Vessel form	Rim present	Rim form	Neck present	Body present	Base present	Handle present	Paste	Body thickness (mm)	Rim thickness (mm)	Rim diameter (cm)	Treatment Ext.	Treatment Int.	Slip Ext.	Slip Int.	Decoration
YA06-1- 036-001 # 2	E	36	3.0	3	x	1	x	-	-	-	1	6.82	4.99	-	1	1	1	1	0
YA06-1- 036-001 # 3	E	36	7.8	2	x	1	-	x	-	-	1	8.96	7.98	-	1	1	1	1	0
YA06-1- 036-001 # 4	E	36	24.0	0	-	-	-	x	-	-	2	8.23	-	-	2	1	1	1	0
YA06-1- 036-001 # 5	E	36	6.4	2	x	6	-	x	-	-	2	6.45	7.98	11	1	1	1	1	0
YA06-1- 036-001 # 6	E	36	28.0	0	-	-	-	-	-	x	6	-	-	-	1	-	1	-	0
YA06-1- 036-001 # 7	E	36	17.3	1	x	5	-	x	-	-	4	7.33	3.79	12	4	4	2	2	0
YA06-1- 036-001 # 8	E	36	13.2	1	x	1	-	x	-	-	4	6.22	3.11	-	4	4	3	3	0
YA06-1- 036-001 # 9	E	36	3.7	1	x	1	-	x	-	-	4	5.86	3.87	-	4	4	3	3	0
YA06-1- 036-001 # 10	E	36	2.1	1	x	1	-	x	-	-	4	5.82	3.02	-	4	4	3	3	0
YA06-1- 036-001 # 11	E	36	24.7	1	x	2	-	x	-	-	4	6.29	3.84	16	4	5	1	1	0
YA06-1- 036-001 # 12	E	36	9.5	1	x	1	-	x	-	-	4	6.81	3.38	10	3	3	2	1	0
YA06-1- 036-001 # 13	E	36	2.2	1	x	2	-	x-	-	-	4	5.34	3.70	-	4	4	2	2	0
YA06-1- 036-001 # 14	E	36	1.6	1	x	2	-	x	-	-	4	5.23	3.35	-	4	4	2	2	0
YA06-1- 037-001 # 1	E	37	9.4	1	x	1	-	x	-	-	4	7.37	4.59	11	2	4	1	2	0
YA06-1- 039-001 # 1	E	39	9.9	2	x	2	-	x	-	-	1	9.56	7.77	23	2	2	2	2	0
YA06-1- 039-001 # 2	E	39	3.7	2	x	1	-	x	-	-	2	3.86	3.69	12	1	1	1	1	0
YA06-1- 039-001 # 3	E	39	3.2	1	x	2	-	x	-	-	4	6.43	2.91	-	4	5	1	4	1
YA06-1- 039-001 # 4	E	39	1.5	1	x	1	-	x	-	-	4	5.49	4.32	-	4	4	2	4	1
YA06-1- 039-001 # 5	E	39	17.2	1	-	-	-	x	-	-	4	5.32	-	-	4	5	1	4	4
YA06-1- 039-006 # 6	E	39	6.0	1	x	1	-	x	-	-	4	7.50	3.93	11	4	4	1	4	4
YA06-1- 040-001 # 1	E	40	15.0	3	x	2	x	-	-	-	2	5.46	5.69	8	3	2	1	1	0
YA06-1- 040-001 # 2	E	40	3.3	3	x	1	-	x	-	-	2	6.93	7.28	-	2	2	1	1	0
YA06-1- 041-001 # 1	E	41	6.2	2	x	1	-	x	-	-	1	4.86	3.88	-	2	2	1	1	0
YA06-1- 041-001 # 2	E	41	1.0	1	x	1	-	x	-	-	4	4.39	3.84	-	3	3	1	1	0
YA06-1- 042-001 # 1	E	42	15.4	1	x	1	-	x	x	-	4	6.65	5.27	-	4	4	2	2	0
YA06-1- 043-001 # 1	E	43	1.8	1	x	1	-	x	-	-	4	6.43	3.54	-	3	3	2	2	0
YA06-1- 044-001 # 1	E	44	8.9	1	x	2	-	x	-	-	4	7.87	4.09	12	4	2	3	2	0
YA06-1- 044-001 # 2	E	44	2.3	1	x	1	-	x	-	-	4	6.46	4.08	10	4	4	3	2	0
YA06-1- 045-001 # 1	E	45	5.0	1	x	1	-	x	-	-	4	5.91	4.35	15	4	5	2	2	0
YA06-1- 045-001 # 2	E	45	6.0	2	x	2	-	x	-	-	2	5.41	7.04	-	2	1	1	1	0
YA06-1- 046-001 # 1	E	46	3.5	10	-	-	-	-	-	-	4	5.69	-	-	3	2	1	1	0
YA06-1- 046-001 # 2	E	46	3.9	1	x	3	-	x	-	-	4	6.82	4.24	13	4	4	2	2	0
YA06-1- 046-001 # 3	E	46	4.7	1	x	-	-	x	-	-	4	6.51	-	-	4	4	2	3	5
YA06-1- 047-001 # 1	E	47	15.1	1	x	1	-	x	-	-	4	4.87	3.50	14	4	4	3	4	6
YA06-1- 048-001 # 1	E	48	10.7	2	x	2	-	x	-	-	2	5.10	4.87	-	2	1	1	1	0
YA06-1- 048-001 # 2	E	48	6.6	2	x	2	-	x	-	-	2	4.69	5.99	-	2	1	1	1	0
YA06-1- 048-001 # 3	E	48	4.7	2	x	2	-	x	-	-	2	4.42	5.09	-	2	1	1	1	0
YA06-1- 048-001 # 4	E	48	2.2	2	x	1	-	x	-	-	2	5.70	5.31	-	1	1	1	1	0
YA06-1- 050-001 # 1	E	50	22.4	0	-	-	-	-	-	x	1	-	-	-	1	-	1	-	0
YA06-1- 051-001 # 1	E	51	12.8	5	x	1	x	-	-	-	2	6.21	6.84	11	3	1	2	1	0

Specimen #	Sector	Unit	Weight (g)	Vessel form	Rim present	Rim form	Neck present	Body present	Base present	Handle present	Paste	Body thickness (mm)	Rim thickness (mm)	Rim diameter (cm)	Treatment Ext.	Treatment Int.	Slip Ext.	Slip Int.	Decoration
YA06-1- 051-001 # 2	E	51	7.8	1	x	3	-	x	-	-	4	5.00	3.20	13	4	4	2	2	0
YA06-1- 052-001 # 1	E	52	12.1	3	x	2	x	x	-	-	1	6.78	6.52	11	3	1	1	1	0
YA06-1- 052-001 # 2	E	52	10.6	3	x	2	x	-	-	-	1	7.80	5.62	-	3	1	1	1	0
YA06-1- 052-001 # 3	E	52	1.9	1	x	5	-	x	-	-	4	6.70	2.36	-	4	4	3	3	7
YA06-1- 052-001 # 4	E	52	10.1	1	x	2	-	x	-	-	4	5.52	4.82	11	4	3	2	2	1
YA06-1- 052-001 # 5	E	52	1.3	1	x	2	-	x	-	-	4	7.98	4.72	-	4	4	2	3	4
YA06-1- 055-001 # 1	E	55	2.7	1	x	2	-	x	-	-	4	6.13	3.31	-	3	3	2	2	0
YA06-1- 056-001 # 1	E	56	5.6	3	x	3	x	-	-	-	2	5.18	3.70	12	3	1	2	1	0
YA06-1- 056-001 # 2	E	56	15.0	0	-	-	-	-	-	x	6	-	-	-	1	-	1	-	0
YA06-1- 057-001 # 1	D	57	20.7	2	x	1	-	x	-	-	1	11.16	8.43	19	1	1	1	1	0
YA06-1- 057-001 # 2	D	57	2.6	3	x	1	x	x	-	-	1	5.02	2.94	-	1	1	1	1	0
YA06-1- 057-001 # 3	D	57	21.2	2	x	1	-	x	-	x	2	4.43	4.41	12	2	2	2	2	0
YA06-1- 057-001 # 4	D	57	9.5	1	x	1	-	x	-	-	4	6.49	4.77	16	3	3	1	1	0
YA06-1- 057-001 # 5	D	57	9.5	1	x	2	-	x	-	-	4	5.29	4.64	12	4	4	2	2	0
YA06-1- 057-001 # 6	D	57	2.0	1	x	2	-	x	-	-	4	5.58	4.27	-	4	4	2	2	0
YA06-1- 057-001 # 7	D	57	17.6	1	x	2	-	x	-	-	4	5.93	4.54	14	4	4	2	3	0
YA06-1- 058-001 # 1	D	58	1.8	0	x	2	-	x	-	-	1	6.12	4.26	-	2	1	1	1	0
YA06-1- 058-001 # 2	D	58	2.3	1	x	1	-	x	-	-	4	5.99	3.52	-	5	4	3	3	0
YA06-1- 060-001 # 1	D	60	17.1	2	x	2	-	x	-	-	2	5.96	6.79	10	1	1	1	1	0
YA06-1- 060-001 # 2	D	60	7.4	5	x	1	x	-	-	-	2	5.81	3.92	7	2	3	1	1	0
YA06-1- 063-001 # 1	D	63	12.6	1	-	-	-	x	-	-	4	4.96	-	-	3	4	3	3	2
YA06-1- 065-001 # 1	D	65	20.4	0	-	-	-	x	-	x	1	8.10	-	-	1	1	1	1	0
YA06-1- 067-001 # 1	D	67	91.7	0	-	-	-	-	x	-	1	10.75	-	-	1	1	1	1	0
YA06-1- 067-001 # 2	D	67	26.2	5	x	1	x	-	-	x	1	5.59	5.84	9	1	1	1	1	0
YA06-1- 067-001 # 3	D	67	19.6	1	x	3	-	x	-	-	4	5.67	15.59	16	2	2	2	2	0
YA06-1- 068-001 # 1	D	68	11.9	0	-	-	-	-	-	x	7	-	-	-	1	-	1	-	0
YA06-1- 070-001 # 1	D	70	6.8	0	-	-	-	-	-	x	1	-	-	-	1	-	1	-	0
YA06-1- 072-001 # 1	C	72	9.6	2	x	2	-	x	-	-	2	3.43	5.01	20	1	1	1	1	0
YA06-1- 072-001 # 2	C	72	1.8	2	x	1	-	x	-	-	2	3.19	2.33	5	2	1	1	1	0
YA06-1- 073-001 # 1	C	73	27.4	1	x	2	-	x	-	-	4	7.27	3.24	-	3	3	2	2	9
YA06-1- 073-001 # 2	C	73	26.9	3	x	3	x	x	-	-	8	7.00	5.41	20	1	1	1	1	0
YA06-1- 074-001 # 1	C	74	23.7	1	-	-	-	x	-	-	4	5.79	-	-	3	3	3	3	4
YA06-1- 074-001 # 2	C	74	4.4	1	x	1	-	x	-	-	4	6.89	4.60	10	4	4	3	3	0
YA06-1- 074-001 # 3	C	74	1.5	1	x	1	-	x	-	-	4	5.06	4.36	12	4	4	3	3	0
YA06-1- 075-001 # 1	C	75	4.8	2	x	2	-	x	-	-	2	5.90	3.77	-	2	2	3	3	0
YA06-1- 075-001 # 2	C	75	6.5	2	x	2	-	x	-	-	2	5.94	4.36	-	1	1	1	1	0
YA06-1- 075-001 # 3	C	75	9.0	1	x	1	-	x	-	-	4	5.50	4.54	14	4	5	3	3	0
YA06-1- 075-001 # 4	C	75	2.4	1	x	2	-	x	-	-	4	5.42	4.42	-	2	2	3	3	0
YA06-1- 076-001 # 1	C	76A	4.5	1	x	5	-	x	-	-	4	4.68	4.26	10	4	4	2	2	2
YA06-1- 076-001 # 2	C	76A	7.7	1	x	1	-	x	-	-	4	7.66	3.70	-	4	5	3	3	1

Specimen #	Sector	Unit	Weight (g)	Vessel form	Rim present	Rim form	Neck present	Body present	Base present	Handle present	Paste	Body thickness (mm)	Rim thickness (mm)	Rim diameter (cm)	Treatment Ext.	Treatment Int.	Slip Ext.	Slip Int.	Decoration
YA06-1- 076-001 # 3	C	76A	1.0	1	x	2	-	x	-	-	4	5.20	3.58	-	3	4	2	3	0
YA06-1- 076-004 # 1	C	76B	9.7	1	x	5	-	x	-	-	4	5.29	4.77	-	4	5	3	3	0
YA06-1- 077-001 # 1	C	77	4.4	2	x	2	-	x	-	-	1	8.21	4.51	-	4	3	2	2	0
YA06-1- 077-001 # 2	C	77	6.6	2	x	1	-	x	-	-	1	10.95	8.38	-	2	2	2	2	0
YA06-1- 077-001 # 3	C	77	7.5	1	x	1	-	x	-	-	4	6.64	6.04	16	4	5	3	3	0
YA06-1- 077-001 # 4	C	77	8.2	3	x	2	x	x	-	-	8	6.17	5.73	7	1	1	1	1	0
YA06-1- 077-001 # 5	C	77	6.4	3	x	2	x	x	-	-	8	8.34	5.46	-	2	3	2	4	0
YA06-1- 079-001 # 1	C	79	13.7	3	x	2	x	x	-	-	1	6.05	8.09	20	2	2	2	2	0
YA06-1- 079-001 # 2	C	79	8.1	1	x	2	-	x	-	-	4	6.29	5.20	13	4	4	4	4	1
YA06-1- 079-001 # 3	C	79	4.8	1	x	1	-	x	-	-	4	7.30	4.59	12	4	4	2	2	1
YA06-1- 078-001 # 1	C	78	75.6	3	x	2	x	x	-	-	2	8.23	10.75	11	2	1	2	1	0
YA06-1- 078-001 # 2	C	78	7.2	2	x	2	-	x	-	-	2	7.98	4.09	18	3	3	1	1	0
YA06-1- 078-001 # 3	C	78	8.8	1	x	2	-	x	-	-	4	6.28	5.29	16	4	4	3	3	0
YA06-1- 078-001 # 4	C	78	2.4	1	x	5	-	x	-	-	4	6.04	2.91	-	4	4	3	3	0
YA06-1- 078-001 # 5	C	78	22.4	5	x	1	x	x	-	-	7	7.55	5.44	14	3	1	1	1	0
YA06-1- 078-001 # 6	C	78	4.5	5	x	1	x	-	-	-	7	6.72	5.13	14	3	1	1	1	0
YA06-1- 080-001 # 1	C	80	16.9	2	x	2	-	x	-	-	1	10.94	8.89	-	2	2	2	2	0
YA06-1- 080-001 # 2	C	80	30.7	1	x	2	-	x	-	-	4	7.03	4.55	15	4	4	3	3	2
YA06-1- 080-003 # 3	C	80	67.6	1	x	1	-	x	x	-	4	7.58	4.00	15	4	4	3	3	0
YA06-1- 080-001 # 4	C	80	7.1	2	x	1	-	x	-	-	7	7.12	4.79	-	2	1	1	1	0
YA06-1- 081-001 # 1	C	81	39.3	2	x	2	-	x	-	-	1	9.32	6.76	20	2	2	2	2	0
YA06-1- 081-001 # 2	C	81	9.6	2	x	2	-	x	-	-	1	5.99	8.03	-	2	2	2	2	0
YA06-1- 081-001 # 3	C	81	34.7	5	x	3	x	-	-	-	2	6.86	6.73	15	4	4	3	3	0
YA06-1- 081-001 # 4	C	81	2.0	1	x	2	-	x	-	-	4	5.37	3.21	-	5	5	3	3	0
YA06-1- 082-001 # 1	C	82	80.2	2	x	2	-	x	-	-	1	11.60	5.86	28	2	2	2	2	0
YA06-1- 082-001 # 2	C	82	43.0	2	x	2	-	x	-	-	1	10.53	8.99	-	2	1	2	1	0
YA06-1- 082-001 # 3	C	82	19.2	3	x	2	x	-	-	-	1	6.57	7.42	-	2	1	2	2	0
YA06-1- 082-001 # 4	C	82	6.9	3	x	2	x	-	-	-	1	6.29	8.05	13	2	2	2	2	0
YA06-1- 082-001 # 5	C	82	3.4	2	x	1	-	-	-	-	1	-	8.98	-	2	2	2	2	0
YA06-1- 082-001 # 6	C	82	10.9	1	x	2	-	x	-	-	4	7.01	3.89	15	4	4	3	3	0
YA06-1- 082-001 # 7	C	82	9.0	1	x	1	-	x	-	-	4	4.25	2.58	14	4	5	3	3	0
YA06-1- 083-001 # 1	C	83	16.1	1	x	1	-	x	-	-	4	4.83	3.39	13	4	4	3	3	0
YA06-1- 084-001 # 1	C	84	30.4	2	x	1	-	x	-	-	1	9.44	7.75	-	2	2	2	2	0
YA06-1- 084-001 # 2	C	84	7.2	3	x	1	x	x	-	-	1	8.74	5.59	10	2	1	2	1	0
YA06-1- 085-001 # 1	C	85	22.7	2	x	1	-	x	-	-	1	9.12	9.14	18	2	2	2	2	0
YA06-1- 085-001 # 2	C	85	30.6	1	x	1	-	x	-	-	4	8.28	4.75	21	4	4	2	2	0
YA06-1- 085-001 # 3	C	85	6.8	1	x	1	-	x	-	-	4	4.75	3.37	14	4	5	3	3	0
YA06-1- 086-001 # 1	C	86	42.5	1	x	1	-	x	-	-	4	6.99	4.49	21	4	4	3	3	0
YA06-1- 087-001 # 1	C	87	16.5	2	x	2	-	x	-	-	1	11.24	8.45	20	3	3	2	2	0
YA06-1- 088-001 # 1	C	88	19.5	2	x	2	-	x	-	-	1	10.12	6.87	-	2	2	2	2	0

Specimen #	Sector	Unit	Weight (g)	Vessel form	Rim present	Rim form	Neck present	Body present	Base present	Handle present	Paste	Body thickness (mm)	Rim thickness (mm)	Rim diameter (cm)	Treatment Ext.	Treatment Int.	Slip Ext.	Slip Int.	Decoration
YA06-1- 088-001 # 2	C	88	12.8	3	-	-	x	x	-	-	1	4.77	-	-	1	1	2	1	0
YA06-1- 088-001 # 3	C	88	28.5	2	x	2	-	x	-	-	2	6.88	7.73	17	1	1	1	1	0
YA06-1- 088-001 # 4	C	88	17.6	1	x	1	-	x	-	-	4	4.12	3.61	14	4	4	3	3	0
YA06-1- 088-001 # 5	C	88	3.6	1	x	2	-	x	-	-	4	5.34	3.51	-	4	5	3	3	0
YA06-1- 088-001 # 6	C	88	4.0	3	x	1	x	-	-	-	7	7.57	6.74	-	2	1	1	1	0
YA06-1- 089-001 # 1	C	89A	13.2	2	x	1	-	x	-	-	1	10.55	7.11	-	2	1	2	1	0
YA06-1- 089-001 # 2	C	89A	3.4	0	x	2	x	-	-	-	2	6.34	3.62	-	2	1	3	3	0
YA06-1- 089-001 # 3	C	89A	5.1	1	x	1	-	x	-	-	4	7.08	3.29	18	5	5	3	3	0
YA06-1- 089-001 # 4	C	89A	1.0	1	x	2	-	x	-	-	4	6.10	4.30	-	2	3	3	3	0
YA06-1- 089-004 # 1	C	89B	21.2	1	-	-	-	x	x	-	4	4.13	-	-	1	1	3	4	0
YA06-1- 089-004 # 2	C	89B	8.8	1	-	-	-	x	-	-	4	5.88	-	-	4	5	3	3	2
YA06-1- 090-001 # 1	C	90A	29.6	2	x	2	-	x	-	-	1	13.44	5.41	8	2	2	2	2	0
YA06-1- 091-001 # 1	C	91	59.6	2	x	2	-	x	-	-	1	9.77	6.97	27	4	1	2	1	0
YA06-1- 091-001 # 2	C	91	18.6	2	x	5	-	x	-	-	1	7.13	1.96	8	2	2	2	2	0
YA06-1- 091-001 # 3	C	91	56.7	2	x	2	-	x	-	-	1	9.89	10.39	-	4	2	2	2	0
YA06-1- 091-001 # 4	C	91	30.5	2	x	2	-	x	-	-	1	10.84	10.32	27	4	1	2	2	0
YA06-1- 091-001 # 5	C	91	17.9	2	x	2	-	x	-	-	1	10.82	8.97	-	2	2	2	2	0
YA06-1- 091-001 # 6	C	91	25.5	2	x	2	-	x	-	-	1	8.99	9.16	14	4	2	2	2	0
YA06-1- 091-001 # 7	C	91	11.9	2	x	1	-	x	-	-	1	10.83	8.83	-	2	2	2	2	0
YA06-1- 091-001 # 8	C	91	4.7	3	x	2	x	x	-	-	1	4.66	4.18	10	4	2	2	2	0
YA06-1- 091-001 # 9	C	91	3.9	3	x	1	x	x	-	-	1	5.14	5.28	-	4	2	2	1	0
YA06-1- 092-001 # 1	C	92	66.8	2	x	2	-	x	-	-	1	11.33	6.07	25	2	2	2	2	0
YA06-1- 092-001 # 2	C	92	3.1	3	x	1	x	x	-	-	1	4.96	4.43	-	4	1	2	1	0
YA06-1- 092-001 # 3	C	92	28.8	3	x	2	x	x	-	-	1	6.62	4.59	17	3	3	3	2	0
YA06-1- 092-001 # 4	C	92	9.2	1	x	1	-	x	-	-	4	6.80	3.40	18	3	1	3	1	0
YA06-1- 092-001 # 5	C	92	1.0	1	x	1	-	x	-	-	4	5.49	4.48	-	4	4	2	3	0
YA06-1- 093-001 # 1	C	93	7.0	2	x	2	-	x	-	-	1	6.17	5.39	-	2	1	2	2	0
YA06-1- 094-001 # 1	C	94	6.1	2	x	1	-	x	-	-	1	7.80	5.33	-	2	1	2	1	0
YA06-1- 094-001 # 2	C	94	4.1	1	x	2	-	x	-	-	4	5.50	3.76	-	4	4	3	3	6
YA06-1- 095-001 # 1	C	95	24.5	1	x	1	-	x	-	-	4	5.95	5.04	16	4	4	3	3	0
YA06-1- 096-001 # 1	C	96	11.5	10	-	-	-	x	-	-	4	7.10	-	-	4	4	3	3	0
YA06-1- 097-001 # 1	C	97	24.1	1	x	2	-	x	-	-	4	6.24	4.39	15	4	4	3	2	0
YA06-1- 098-001 # 1	C	98	42.3	3	x	1	x	x	-	-	1	8.30	6.04	21	4	4	2	2	0
YA06-1- 099-001 # 1	C	99	115.0	2	x	1	-	x	-	-	1	9.45	5.95	21	4	2	2	2	0
YA06-1- 099-001 # 2	C	99	12.1	2	x	1	-	x	-	-	1	8.02	5.65	-	4	2	2	2	0
YA06-1- 100-001 # 1	C	100	13.2	1	x	1	-	x	-	-	4	4.52	5.90	12	4	5	3	3	0
YA06-1- 101-001 # 1	C	101	20.7	0	-	-	-	-	-	x	1	-	-	-	1	-	1	-	0
YA06-1- 102-001 # 1	C	102	48.6	0	-	-	-	-	-	x	1	-	-	-	2	-	2	-	0
YA06-1- 102-001 # 2	C	102	37.9	1	x	1	-	x	x	-	4	5.01	4.02	14	4	4	3	3	0
YA06-1- 104-001 # 1	C	104	17.1	5	x	1	x	x	-	-	1	9.42	5.24	-	2	4	2	2	0

Specimen #	Sector	Unit	Weight (g)	Vessel form	Rim present	Rim form	Neck present	Body present	Base present	Handle present	Paste	Body thickness (mm)	Rim thickness (mm)	Rim diameter (cm)	Treatment Ext.	Treatment Int.	Slip Ext.	Slip Int.	Decoration
YA06-1- 104-001 # 2	C	104	17.6	3	x	1	x	x	-	-	1	8.49	5.00	-	2	2	2	2	0
YA06-1- 104-001 # 3	C	104	45.7	0	-	-	-	x	-	x	1	7.32	-	-	2	1	2	1	0
YA06-1- 104-001 # 4	C	104	45.7	2	x	2	-	x	-	-	2	6.62	6.68	16	2	1	2	2	0
YA06-1- 104-001 # 5	C	104	1.5	1	x	1	-	x	-	-	4	4.36	3.04	10	4	4	3	3	1
YA06-1- 104-001 # 6	C	104	13.0	1	x	1	-	x	-	-	4	6.46	5.28	14	4	4	3	3	1
YA06-1- 106-001 # 1	C	106	2.8	1	x	1	-	x	-	-	4	6.05	3.56	-	4	4	3	3	6
YA06-1- 108-001 # 1	C	108	8.4	1	x	1	-	x	-	-	4	5.14	3.72	15	4	4	2	2	0
YA06-1- 108-001 # 2	C	108	1.9	1	x	1	-	x	-	-	4	7.54	3.53	-	4	4	3	3	1
YA06-1- 111-001 # 1	C	111	11.0	3	x	2	x	-	-	-	2	6.53	5.64	9	4	4	2	2	0
YA06-1- 111-001 # 2	C	111	6.6	1	x	1	-	x	-	-	4	4.55	4.00	12	4	5	3	1	6
YA06-1- 111-001 # 3	C	111	3.0	1	-	-	-	x	x	-	4	4.56	-	-	4	5	3	3	0
YA06-1- 111-001 # 4	C	111	13.7	0	-	-	-	-	-	x	8	-	-	-	2	-	3	-	0
YA06-1- 111-001 # 5	C	111	63.7	0	-	-	-	x	-	x	8	11.19	-	-	1	1	1	1	0
YA06-1- 117-001 # 1	B	117	13.2	1	x	2	-	x	-	-	4	6.17	3.78	11	4	3	2	2	0
YA06-1- 120-001 # 1	B	120	12.8	0	-	-	-	-	-	x	1	-	-	-	1	-	1	-	0
YA06-1- 120-001 # 2	B	120	6.6	2	x	2	-	x	-	-	1	7.04	4.49	12	4	4	2	2	0
YA06-1- 120-001 # 3	B	120	5.1	2	x	1	-	x	-	-	1	4.73	5.56	13	4	4	2	2	0
YA06-1- 121-001 # 1	B	121	23.0	1	x	2	-	x	-	-	4	6.08	2.50	-	4	5	2	3	2
YA06-1- 121-001 # 2	B	121	2.7	1	x	1	-	x	-	-	4	5.45	3.61	-	4	4	3	4	6
YA06-1- 121-001 # 3	B	121	5.0	1	x	1	-	x	-	-	4	6.23	3.08	17	4	4	3	3	0
YA06-1- 121-001 # 4	B	121	2.8	1	x	1	-	x	-	-	4	5.74	2.49	-	4	4	3	3	0
YA06-1- 121-001 # 5	B	121	1.3	1	x	1	-	x	-	-	4	6.34	3.32	-	5	4	3	3	1
YA06-1- 121-001 # 6	B	121	1.9	1	x	2	-	x	-	-	4	5.64	3.46	-	4	4	2	2	1
YA06-1- 121-001 # 7	B	121	1.5	1	x	2	-	x	-	-	4	5.44	3.98	-	3	3	1	1	0
YA06-1- 121-001 # 8	B	121	1.5	1	x	1	-	x	-	-	4	5.06	3.17	-	3	3	2	2	0
YA06-1- 121-001 # 9	B	121	6.8	1	x	1	-	x	-	-	4	4.52	3.47	12	4	4	3	3	1
YA06-1- 122-001 # 1	B	122	19.1	0	-	-	-	x	-	x	1	6.89	-	-	2	1	1	1	0
YA06-1- 122-001 # 2	B	122	2.7	2	x	3	-	x	-	-	1	5.41	4.32	-	2	2	2	2	0
YA06-1- 122-001 # 3	B	122	9.1	3	x	2	x	-	-	-	2	5.30	4.42	12	2	2	2	2	0
YA06-1- 122-001 # 4	B	122	3.8	1	x	5	-	x	-	-	4	5.70	2.83	-	4	4	3	3	0
YA06-1- 123-001 # 1	A	123A	4.5	3	x	1	x	x	-	-	1	6.37	6.49	12	1	1	1	1	0
YA06-1- 123-001 # 2	A	123A	36.6	2	x	6	-	x	-	-	2	6.17	5.98	9	2	2	1	1	0
YA06-1- 123-001 # 3	A	123A	0.6	1	x	1	-	-	-	-	4	-	5.23	-	4	-	4	4	1
YA06-1- 124-001 # 1	A	124	6.2	5	x	2	x	-	-	-	7	10.64	9.81	10	1	1	1	1	0
YA06-1- 125-001 # 1	A	125	12.8	0	-	-	-	x	-	x	2	5.18	-	-	1	1	1	1	0
YA06-1- 125-001 # 2	A	125	7.4	1	x	1	-	x	-	-	4	6.33	4.15	13	4	5	3	3	0
YA06-1- 125-001 # 3	A	125	2.9	1	x	2	-	x	-	-	4	4.88	3.04	15	4	4	3	3	0
YA06-1- 125-001 # 4	A	125	1.9	1	x	1	-	x	-	-	4	5.06	3.20	-	4	4	3	3	0
YA06-1- 125-001 # 5	A	125	0.7	1	x	1	-	x	-	-	4	4.02	3.23	-	4	4	3	3	0
YA06-1- 125-001 # 6	A	125	12.6	0	-	-	-	-	-	x	7	-	-	-	1	-	1	-	0

Specimen #	Sector	Unit	Weight (g)	Vessel form	Rim present	Rim form	Neck present	Body present	Base present	Handle present	Paste	Body thickness (mm)	Rim thickness (mm)	Rim diameter (cm)	Treatment Ext.	Treatment Int.	Slip Ext.	Slip Int.	Decoration
YA06-1- 126-001 # 1	A	126	18.8	1	x	2	-	x	x	-	4	6.05	4.26	10	3	3	1	4	1
YA06-1- 126-001 # 2	A	126	6.0	1	x	1	-	x	-	-	4	4.67	4.79	8	2	3	2	2	0
YA06-1- 127-001 # 1	A	127	7.4	1	x	2	-	x	-	-	4	7.03	2.61	11	4	3	2	1	0
YA06-1- 127-001 # 2	A	127	4.8	1	x	1	-	x	-	-	4	6.24	4.47	11	4	4	4	2	3
YA06-1- 128-001 # 1	A	128	55.8	0	-	-	-	x	-	x	2	6.65	-	-	1	1	1	1	0
YA06-1- 128-001 # 2	A	128	8.5	1	x	2	-	x	-	-	4	7.28	3.56	12	4	5	3	3	0
YA06-1- 128-001 # 3	A	128	5.0	1	x	5	-	-	-	-	4	6.19	3.31	-	4	4	3	3	0
YA06-1- 128-001 # 4	A	128	7.6	1	-	-	-	-	x	-	4	7.25	-	-	4	4	3	3	0
YA06-1- 128-001 # 5	A	128	32.1	5	x	1	x	x	-	-	7	7.11	5.58	14	2	2	1	1	0
YA06-1- 129-001 # 1	A	129	3.6	2	x	1	-	x	-	-	1	7.37	6.70	-	2	2	1	1	0
YA06-1- 129-001 # 2	A	129	8.6	0	-	-	-	-	-	x	1	-	-	-	1	-	1	-	0
YA06-1- 129-001 # 3	A	129	7.9	1	x	3	-	x	-	-	4	7.40	3.42	10	4	4	3	3	0
YA06-1- 129-001 # 4	A	129	2.8	1	x	2	-	x	-	-	4	5.59	3.13	13	4	4	3	3	0
YA06-1- 129-001 # 5	A	129	0.6	1	x	1	-	x	-	-	4	4.97	3.03	-	4	4	3	3	0
YA06-1- 129-001 # 6	A	129	4.2	1	x	-	-	x	-	-	4	5.12	3.38	10	4	5	1	1	0
YA06-1- 129-001 # 7	A	129	17.4	0	-	-	-	x	-	x	7	4.04	-	-	1	1	1	1	0
YA06-1- 130-001 # 1	A	130	6.6	1	x	2	-	x	-	-	4	5.51	3.87	13	4	4	3	3	0
YA06-1- 130-001 # 2	A	130	2.4	1	-	-	-	x	x	-	4	4.06	-	-	4	4	2	3	0
YA06-1- 131-001 # 1	A	131	10.7	0	-	-	-	-	-	x	1	-	-	-	1	-	1	-	0
YA06-1- 131-001 # 2	A	131	18.5	1	-	-	-	x	x	-	4	7.41	-	-	4	4	3	3	0
YA06-1- 131-001 # 3	A	131	2.3	0	-	-	-	x	-	-	4	5.84	-	-	1	1	1	1	10
YA06-1- 132-001 # 1	A	132	5.4	3	x	1	x	x	-	-	1	8.89	5.79	10	2	1	1	1	0
YA06-1- 132-001 # 2	A	132	8.4	0	-	-	-	x	-	x	1	5.19	-	-	1	1	1	1	0
YA06-1- 132-001 # 3	A	132	7.2	0	-	-	-	-	-	x	1	-	-	-	1	-	1	1	0
YA06-1- 132-001 # 4	A	132	37.9	0	-	-	x	x	-	-	2	8.17	-	-	1	1	1	1	0
YA06-1- 132-001 # 5	A	132	1.5	0	x	1	-	x	-	-	2	6.10	4.01	-	3	3	2	2	0
YA06-1- 132-001 # 6	A	132	1.9	1	x	2	-	x	-	-	4	4.86	3.72	13	4	4	3	3	1
YA06-1- 132-001 # 7	A	132	3.6	1	x	2	-	x	-	-	4	6.83	3.71	17	4	4	3	3	0
YA06-1- 132-001 # 8	A	132	20.9	1	x	1	-	x	-	-	4	6.08	5.12	17	4	4	2	3	0
YA06-1- 132-001 # 9	A	132	12.1	1	x	2	-	x	-	-	4	5.67	5.57	14	4	4	2	2	0
YA06-1- 132-001 # 10	A	132	1.9	1	x	2	-	x	-	-	4	5.56	5.11	-	4	4	3	3	0
YA06-1- 132-001 # 11	A	132	2.4	1	x	2	-	x	-	-	4	6.25	5.39	-	4	4	3	3	0
YA06-1- 133-001 # 1	A	133	12.6	2	x	1	-	x	-	-	1	8.53	6.53	-	1	2	1	1	0
YA06-1- 133-001 # 2	A	133	10.5	3	x	1	x	x	-	-	1	8.77	7.33	11	1	2	2	2	0
YA06-1- 133-001 # 3	A	133	14.0	3	x	2	x	x	-	-	1	8.77	6.93	11	2	2	2	2	0
YA06-1- 134-001 # 1	A	134	9.7	2	x	2	-	x	-	-	2	6.08	4.63	10	2	1	1	1	0
YA06-1- 134-001 # 2	A	134	3.0	0	-	-	-	x	-	-	2	5.26	-	-	5	1	4	1	8
YA06-1- 134-001 # 3	A	134	2.7	1	x	2	-	x	-	-	4	6.13	3.82	-	4	4	2	2	1
YA06-1- 134-001 # 4	A	134	5.9	1	x	1	-	x	-	-	4	5.85	3.63	-	3	3	2	2	0
YA06-1- 134-001 # 5	A	134	12.2	1	x	2	-	x	-	-	4	5.86	4.23	13	4	4	2	2	0

Specimen #			Sector	Unit	Weight (g)	Vessel form	Rim present	Rim form	Neck present	Body present	Base present	Handle present	Paste	Body thickness (mm)	Rim thickness (mm)	Rim diameter (cm)	Treatment Ext.	Treatment Int.	Slip Ext.	Slip Int.	Decoration
YA06-1-	135-001	# 1	A	135	10.5	2	x	1	-	x	-	-	2	6.28	6.98	-	2	1	1	1	0
YA06-1-	135-001	# 2	A	135	0.9	1	x	1	-	x	-	-	4	4.80	4.27	-	4	4	2	4	1
YA06-1-	136-001	# 1	A	136	13.6	0	-	-	-	-	-	x	1	-	-	-	1	-	1	-	0
YA06-1-	136-001	# 2	A	136	7.2	2	x	1	-	x	-	-	1	7.23	6.02	-	4	4	1	1	0
YA06-1-	136-001	# 3	A	136	4.0	2	x	1	-	x	-	-	1	7.16	7.29	-	3	2	1	1	0
YA06-1-	136-001	# 4	A	136	7.2	1	x	2	-	x	-	-	4	4.51	3.62	17	4	4	3	3	10&2
YA06-1-	136-001	# 5	A	136	3.7	1	x	2	-	x	-	-	4	6.66	4.74	-	4	4	3	3	0
YA06-1-	138-001	# 1	A	138	64.5	0	-	-	-	x	-	x	1	8.93	-	-	2	1	2	1	0
YA06-1-	138-001	# 2	A	138	3.5	2	x	2	-	x	-	-	1	7.55	6.29	-	2	2	2	1	0

B.7. Counts of lithic materials in each surface collection unit

Sector	Unit	Total	Obsidian	Dacite	Rhyolite	Andesite	Chert	Fine -Grained Rhyolite	Copper Mineral	Quartz	Fine-grained Sandstone	River Cobble	River Pebble	Turquoise	Unidentifiable Material
F	1	15	0	1	1	0	7	2	0	4	0	0	0	0	0
F	2	20	0	3	3	0	7	1	0	2	0	1	0	0	3
F	3	16	0	1	4	6	1	1	0	1	1	1	0	0	0
F	4A	1	0	0	0	0	1	0	0	0	0	0	0	0	0
F	4C	2	0	0	0	1	1	0	0	0	0	0	0	0	0
F	5	12	0	1	4	0	3	1	0	3	0	0	0	0	0
F	6	2	0	0	0	0	0	0	0	2	0	0	0	0	0
F	7	1	0	0	0	0	0	0	0	0	0	0	0	0	0
F	8	1	0	1	0	0	0	0	0	0	0	0	0	0	0
F	9	1	0	0	0	0	1	0	0	0	0	0	0	0	0
F	10	8	0	1	2	0	4	0	0	0	0	1	0	0	0
F	11	3	0	1	0	0	2	0	0	0	0	0	0	0	0
F	13	1	0	0	0	0	1	0	0	0	0	0	0	0	0
F	14	18	0	0	1	0	9	4	0	3	0	0	0	0	1
F	15	5	0	0	2	0	2	1	0	0	0	0	0	0	0
F	16	2	0	0	0	0	2	0	0	0	0	0	0	0	0
F	17	3	0	0	2	0	0	0	1	0	0	0	0	0	0
F	18	5	0	1	3	0	0	0	0	0	0	1	0	0	0
F	19A	4	0	1	0	0	2	0	0	1	0	0	0	0	0
F	19B	4	1	0	0	0	3	0	0	0	0	0	0	0	0
F	19C	5	0	1	0	0	2	0	0	2	0	0	0	0	0
F	19E	1	0	0	0	0	0	0	0	1	0	0	0	0	0
F	20	60	0	19	11	0	22	2	1	2	2	1	0	0	0
F	21	31	0	3	2	0	12	0	0	1	12	0	1	0	0
F	22	1	0	0	0	0	1	0	0	0	0	0	0	0	0
F	23	2	0	1	0	0	1	0	0	0	0	0	0	0	0
E	24	44	0	4	1	0	33	2	1	2	0	0	1	0	0
E	25	12	0	1	2	0	5	3	0	1	0	0	0	0	0
E	26	34	0	3	0	0	4	0	5	21	0	0	0	0	0
E	27	2	0	0	0	0	2	0	0	0	0	0	0	0	0
E	28A	8	0	3	0	0	2	0	1	1	0	1	0	0	0
E	28B	1	0	0	0	0	0	0	1	0	0	0	0	0	0
E	29	8	0	3	0	0	1	0	3	1	0	0	0	0	0
E	30	4	0	1	0	0	0	0	0	1	1	1	0	0	0
E	31	10	0	1	0	0	5	0	1	3	0	0	0	0	0
E	32	11	0	0	0	1	1	0	0	9	0	0	0	0	0
E	34	2	0	0	0	0	0	1	0	0	0	0	0	0	1
E	36	10	0	4	1	0	1	0	0	3	0	0	1	0	0

Sector	Unit	Total	Obsidian	Dacite	Rhyolite	Andesite	Chert	Fine -Grained Rhyolite	Copper Mineral	Quartz	Fine-grained Sandstone	River Cobble	River Pebble	Turquoise	Unidentifiable Material
E	39	14	1	0	0	0	3	4	3	3	0	0	0	0	0
E	40	1	0	0	1	0	0	0	0	0	0	0	0	0	0
E	41	4	0	1	0	0	3	0	0	0	0	0	0	0	0
E	43	2	0	0	0	0	1	0	0	1	0	0	0	0	0
E	44	9	0	0	0	0	2	2	4	1	0	0	0	0	*0*
E	45	6	0	1	1	0	0	1	1	1	1	0	0	0	0
E	46	6	0	0	0	0	4	0	1	0	0	1	0	0	0
E	47	3	0	1	0	0	2	0	0	0	0	0	0	0	0
E	48	8	0	0	0	0	6	2	0	0	0	0	0	0	0
E	49	2	0	1	0	0	0	0	0	0	0	0	0	1	0
E	50	6	0	0	0	0	3	2	0	1	0	0	0	0	0
E	51	11	0	0	2	0	6	0	0	1	0	0	0	0	2
E	52	20	0	2	0	0	12	1	0	5	0	0	0	0	0
E	53	1	0	0	0	0	0	0	0	1	0	0	0	0	0
E	55	2	0	1	0	0	0	0	0	1	0	0	0	0	0
E	56	13	0	4	0	0	3	1	0	4	0	1	0	0	0
D	57	8	0	0	0	0	3	0	3	0	0	2	0	0	*0*
D	58	8	0	0	0	0	4	0	0	2	0	1	0	0	0
D	59	2	0	0	0	0	0	0	1	1	0	0	0	0	0
D	60	5	0	0	0	0	1	1	0	1	0	1	0	0	0
D	61	6	0	0	0	0	4	0	0	1	0	1	0	0	0
D	62	1	0	0	0	0	1	0	0	0	0	0	0	0	0
D	63	3	0	0	0	0	1	0	0	1	0	0	0	0	1
D	64	8	0	0	0	0	5	0	1	2	0	0	0	0	*0*
D	65	10	0	3	0	0	1	1	0	2	0	3	0	0	0
D	66	2	0	2	0	0	0	0	0	0	0	0	0	0	0
D	67	4	0	0	0	0	2	0	0	2	0	0	0	0	0
D	69	4	0	0	0	0	1	0	1	1	0	1	0	0	0
D	70	7	0	0	0	0	4	0	0	3	0	0	0	0	0
D	71	2	0	1	0	0	0	0	0	1	0	0	0	0	0
C	72	13	1	4	0	0	4	0	0	3	1	0	0	0	0
C	73	3	0	0	0	0	1	0	0	0	1	0	0	0	1
C	74	5	0	0	0	0	0	2	0	3	0	0	0	0	0
C	75	8	0	4	0	0	1	0	0	3	0	0	0	0	0
C	76A	12	0	2	0	0	3	0	1	5	0	0	0	0	0
C	76B	2	0	0	0	0	0	0	0	2	0	0	0	0	0
C	77	1	0	0	0	0	0	0	0	1	0	0	0	0	0
C	78	11	0	0	1	0	3	0	1	5	0	0	0	0	1
C	79	23	1	4	0	0	4	0	3	9	0	0	0	2	0
C	80	6	0	0	1	0	0	1	0	3	0	0	0	0	1

Sector	Unit	Total	Obsidian	Dacite	Rhyolite	Andesite	Chert	Fine -Grained Rhyolite	Copper Mineral	Quartz	Fine-grained Sandstone	River Cobble	River Pebble	Turquoise	Unidentifiable Material
C	81	10	0	0	0	0	3	0	0	6	0	1	0	0	0
C	82	8	0	1	1	0	4	0	0	2	0	0	0	0	0
C	83	2	0	0	0	0	1	0	0	1	0	0	0	0	0
C	84	4	1	0	0	0	2	0	0	1	0	0	0	0	0
C	85	31	0	1	0	0	0	0	0	29	0	1	0	0	0
C	86	8	0	2	0	0	0	1	0	4	0	1	0	0	0
C	87	6	0	0	0	0	1	0	0	5	0	0	0	0	0
C	88	19	0	2	0	0	4	0	0	12	0	1	0	0	0
C	89A	18	0	6	2	0	7	1	0	2	0	0	0	0	0
C	89B	10	0	0	2	0	1	0	2	5	0	0	0	0	0
C	90A	15	0	4	0	0	1	0	3	7	0	0	0	0	0
C	90B	11	0	0	0	0	1	0	0	8	0	1	0	0	0
C	91	49	0	14	2	6	9	1	2	14	0	1	0	0	0
C	92	5	0	0	1	0	1	1	0	2	0	0	0	0	0
C	93	3	0	1	0	0	0	0	0	2	0	0	0	0	0
C	94	6	0	2	0	0	1	0	0	3	0	0	0	0	0
C	95	13	0	0	0	0	0	0	1	12	0	0	0	0	0
C	96	2	0	1	0	0	1	0	0	0	0	0	0	0	0
C	98	28	0	1	1	0	1	0	0	25	0	0	0	0	0
C	99	6	0	2	0	0	0	0	0	4	0	0	0	0	0
C	100	15	0	3	0	0	0	0	0	12	0	0	0	0	0
C	101	8	0	0	0	0	0	0	0	8	0	0	0	0	0
C	102	5	0	0	0	0	0	0	0	5	0	0	0	0	0
C	103	12	0	1	0	0	1	0	0	10	0	0	0	0	0
C	104	41	0	1	1	0	0	0	0	39	0	0	0	0	0
C	105	2	0	1	0	0	0	0	0	1	0	0	0	0	0
C	106	53	0	0	0	0	0	0	0	53	0	0	0	0	0
C	107	30	0	0	0	0	0	0	0	30	0	0	0	0	0
C	108	29	0	0	0	0	0	0	0	29	0	0	0	0	0
C	109	1	0	0	1	0	0	0	0	0	0	0	0	0	0
C	111	19	0	2	3	0	8	0	0	6	0	0	0	0	0
B	112	2	0	0	0	0	1	0	0	0	0	0	0	0	1
B	115	1	0	0	0	0	0	0	0	0	0	0	1	0	0
B	117	2	0	1	0	0	0	0	0	1	0	0	0	0	0
B	118	5	0	2	2	1	0	0	0	1	0	0	0	0	0
B	119	4	0	0	0	0	1	0	1	0	0	1	0	0	0
B	120	4	0	1	0	0	3	0	0	0		0	0	0	0
B	121	52	0	27	10	1	3	0	1	7	1	0	0	0	2
B	122	91	0	55	20	4	2	3	0	5	1	0	0	1	0
A	123A	10	0	2	0	0	3	1	1	2	0	1	0	0	0

Sector	Unit	Total	Obsidian	Dacite	Rhyolite	Andesite	Chert	Fine -Grained Rhyolite	Copper Mineral	Quartz	Fine-grained Sandstone	River Cobble	River Pebble	Turquoise	Unidentifiable Material
A	123B	7	0	1	1	0	0	4	0	1	0	0	0	0	0
A	124	4	0	0	2	0	0	0	0	1	0	0	0	0	0
A	125	7	0	1	0	1	2	0	1	2	0	0	0	0	0
A	126	15	0	3	2	0	1	0	1	4	0	2	0	0	2
A	127	7	0	2	1	0	2	2	0	1	0	0	0	0	0
A	128	6	0	1	0	0	1	0	0	3	0	1	0	0	0
A	129	2	0	1	0	0	0	0	0	1	0	0	0	0	0
A	130	8	0	4	1	0	3	0	0	0	0	0	0	0	0
A	131	3	0	1	1	0	1	0	0	0	0	0	0	0	0
A	132	7	0	1	1	0	2	3	0	0	0	0	0	0	1
A	133	2	0	1	0	0	0	0	1	0	0	0	0	0	0
A	134	7	1	1	1	0	3	0	0	1	0	0	0	0	0
A	135	7	0	6	0	0	0	0	0	1	0	0	0	0	0
A	136	5	0	1	0	0	1	0	0	3	0	0	0	0	0
A	137	1	0	1	0	0	0	0	0	0	0	0	0	0	0
A	138	7	0	0	0	0	0	0	0	7	0	0	0	0	0

Table B.8. Counts for lithic implement types in each surface collection unit

Sector	Unit	Total	Nodules	Flakes	*Pulidores*	*Manos*	Utilzed cores	Projectile points	Choppers	Hoes	Expedient Tools	Quatz Crystals	Quartz Fragments	Chrysacola	*Lajas*	Catidad Otros
F	1	15	0	10	0	0	0	0	0	0	1	4	0	0	0	0
F	2	20	6	8	1	0	0	0	0	0	2	0	2	0	0	1
F	3	16	3	9	2	0	0	0	0	0	2	0	1	0	0	0
F	4A	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
F	4C	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0
F	5	12	4	5	0	0	0	0	0	0	0	1	2	0	0	0
F	6	2	0	0	0	0	0	0	0	0	0	0	2	0	0	0
F	7	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0
F	8	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
F	9	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0
F	10	8	0	4	1	0	0	3	0	0	0	0	0	0	0	0
F	11	3	1	2	0	0	0	0	0	0	0	0	0	0	0	0
F	13	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
F	14	18	0	14	1	0	0	0	0	0	0	3	0	0	0	0
F	15	5	0	3	0	0	0	0	0	0	2	0	0	0	0	0
F	16	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0
F	17	3	0	2	0	0	0	0	0	0	0	0	0	1	0	0
F	18	5	0	3	1	0	0	0	0	0	1	0	0	0	0	0
F	19A	4	2	1	0	0	0	0	0	0	0	0	1	0	0	0
F	19B	4	0	3	0	0	0	1	0	0	0	0	0	0	0	0
F	19C	5	1	2	0	0	0	0	0	0	0	1	1	0	0	0
F	19E	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0
F	20	60	18	31	2	2	1	0	0	0	3	1	1	1	0	0
F	21	31	10	18	1	0	0	0	0	0	1	1	0	0	0	0
F	22	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0
F	23	2	0	1	0	0	0	0	0	0	1	0	0	0	0	0
E	24	44	4	36	1	0	0	0	0	0	0	1	1	1	0	0
E	25	12	0	9	1	1	0	0	0	0	0	1	0	0	0	0
E	26	34	7	3	0	0	0	1	0	0	1	3	19	0	0	0
E	27	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0
E	28A	8	1	5	0	1	0	0	0	0	0	0	1	0	0	0
E	28B	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0
E	29	8	3	4	0	0	0	0	0	0	0	0	1	0	0	0
E	30	4	0	1	1	0	0	0	0	0	1	0	1	0	0	0
E	31	10	3	4	0	0	0	0	0	0	0	0	3	0	0	0
E	32	11	1	1	0	0	0	0	0	0	0	0	9	0	0	0
E	34	2	0	1	0	1	0	0	0	0	0	0	0	0	0	0
E	36	10	0	4	1	0	1	0	0	0	1	3	0	0	0	0
E	39	14	2	7	0	0	0	1	0	0	0	3	0	1	0	0

Sector	Unit	Total	Nodules	Flakes	*Pulidores*	*Manos*	Utilzed cores	Projectile points	Choppers	Hoes	Expedient Tools	Quatz Crystals	Quartz Fragments	Chrysacola	*Lajas*	Catidad Otros
E	40	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
E	41	4	0	3	0	0	1	0	0	0	0	0	0	0	0	0
E	43	2	0	1	0	0	0	0	0	0	0	0	1	0	0	0
E	44	9	5	3	0	0	0	0	0	0	0	1	0	0	0	0
E	45	6	1	4	0	0	0	0	0	0	0	1	0	0	0	0
E	46	6	2	4	0	0	0	0	0	0	0	0	0	0	0	0
E	47	3	0	3	0	0	0	0	0	0	0	0	0	0	0	0
E	48	8	8	0	0	0	0	0	0	0	0	0	0	0	0	0
E	49	2	0	0	0	0	1	0	0	0	0	0	0	0	0	1
E	50	6	4	1	0	0	0	0	0	0	0	1	0	0	0	0
E	51	11	6	4	0	0	0	0	0	0	0	0	1	0	0	0
E	52	21	9	7	0	0	0	1	0	0	0	2	3	0	0	0
E	53	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0
E	55	2	0	1	0	0	0	0	0	0	0	0	1	0	0	0
E	56	13	3	6	0	0	0	0	0	0	0	0	4	0	0	0
D	57	8	4	2	2	0	0	0	0	0	0	0	0	0	0	0
D	58	8	3	3	0	0	0	0	0	0	0	1	1	0	0	0
D	59	2	1	0	0	0	0	0	0	0	0	1	0	0	0	0
D	60	5	0	1	0	1	1	0	0	0	0	0	2	0	0	0
D	61	6	4	0	1	0	0	0	0	0	0	1	0	0	0	0
D	62	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
D	63	3	0	1	0	1	0	0	0	0	0	0	1	0	0	0
D	64	8	1	5	0	0	0	0	0	0	0	0	2	0	0	0
D	65	10	0	5	0	3	0	0	0	0	0	2	0	0	0	0
D	66	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0
D	67	4	0	1	0	0	1	0	0	0	0	0	2	0	0	0
D	69	4	1	1	1	0	0	0	0	0	0	0	1	0	0	0
D	70	7	3	1	0	0	0	0	0	0	0	0	3	0	0	0
D	71	2	0	1	0	0	0	0	0	0	0	0	1	0	0	0
C	72	13	4	5	0	0	0	1	0	0	0	1	2	0	0	0
C	73	3	1	1	0	0	0	0	0	0	0	0	0	0	0	1
C	74	5	0	0	0	0	1	0	0	0	1	1	2	0	0	0
C	75	8	0	4	0	0	0	0	1	0	0	0	3	0	0	0
C	76A	12	1	6	0	0	0	0	0	0	0	0	5	1	0	0
C	76B	2	0	0	0	0	0	0	0	0	0	1	1	0	0	0
C	77	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0
C	78	11	1	4	0	1	0	0	0	0	0	4	1	0	0	0
C	79	23	3	8	0	0	0	1	0	0	0	3	6	0	0	2
C	80	6	0	2	0	1	0	0	0	0	0	1	2	0	0	0
C	81	10	0	3	1	0	0	0	0	0	0	5	1	0	0	0
C	82	8	1	4	0	0	1	0	0	0	0	1	1	0	0	0

Sector	Unit	Total	Nodules	Flakes	*Pulidores*	*Manos*	Utilzed cores	Projectile points	Choppers	Hoes	Expedient Tools	Quatz Crystals	Quartz Fragments	Chrysacola	*Lajas*	Catidad Otros
C	83	2	0	1	0	0	0	0	0	0	0	0	1	0	0	0
C	84	4	0	2	0	0	0	0	0	0	1	0	1	0	0	0
C	85	31	0	0	0	1	1	0	0	0	0	12	17	0	0	0
C	86	8	0	3	0	1	0	0	0	0	0	2	2	0	0	0
C	87	6	1	0	0	0	0	0	0	0	0	2	3	0	0	0
C	88	19	0	6	0	1	0	0	0	0	0	2	10	0	0	0
C	89A	18	0	15	0	0	1	0	0	0	0	2	0	0	0	0
C	89B	10	2	3	0	0	0	0	0	0	0	2	3	0	0	0
C	90A	15	3	4	0	0	0	0	0	0	1	2	5	0	0	0
C	90B	11	2	0	0	0	0	0	0	0	0	0	9	0	0	0
C	91	49	9	26	0	0	0	0	0	0	0	4	10	0	0	0
C	92	5	0	2	1	0	0	0	0	0	0	1	1	0	0	0
C	93	3	0	1	0	0	0	0	0	0	0	1	1	0	0	0
C	94	6	0	2	0	0	0	0	1	0	0	0	3	0	0	0
C	95	13	0	0	0	0	0	0	0	0	0	6	6	1	0	0
C	96	2	1	0	0	0	1	0	0	0	0	0	0	0	0	0
C	98	28	0	3	0	0	0	0	0	0	0	12	13	0	0	0
C	99	6	0	0	0	0	2	0	0	0	0	4	0	0	0	0
C	100	15	0	2	0	0	0	0	1	0	0	6	6	0	0	0
C	101	8	0	0	0	0	0	0	0	0	0	2	6	0	0	0
C	102	5	0	0	0	0	0	0	0	0	0	3	2	0	0	0
C	103	12	0	2	0	0	0	0	0	0	0	4	6	0	0	0
C	104	41	1	1	0	0	0	0	0	0	0	23	16	0	0	0
C	105	2	0	1	0	0	0	0	0	0	0	0	1	0	0	0
C	106	53	0	0	0	0	0	0	0	0	0	15	38	0	0	0
C	107	30	0	0	0	0	0	0	0	0	0	19	11	0	0	0
C	108	29	0	0	0	0	0	0	0	0	0	4	25	0	0	0
C	109	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0
C	111	19	2	11	0	0	0	0	0	0	0	3	3	0	0	0
B	112	2	0	1	0	1	0	0	0	0	0	0	0	0	0	0
B	115	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0
B	117	2	0	0	0	0	1	0	0	0	0	0	1	0	0	0
B	118	5	0	3	0	2	0	0	0	0	0	1	0	0	0	0
B	119	4	0	2	0	1	0	0	0	0	0	0	0	1	0	0
B	120	4	0	3	0	0	0	1	0	0	0	0	0	0	0	0
B	121	52	6	31	0	0	1	0	0	0	3	4	3	0	4	0
B	122	91	2	66	0	1	0	0	0	1	2	3	2	0	13	1
A	123A	10	1	5	1	0	0	0	0	0	0	2	0	1	0	0
A	123B	7	2	4	0	0	0	0	0	0	0	0	1	0	0	0
A	124	4	0	2	0	0	0	0	0	0	0	2	0	0	0	0
A	125	7	1	4	0	0	0	0	0	0	0	0	2	0	0	0

Sector	Unit	Total	Nodules	Flakes	*Pulidores*	*Manos*	Utilzed cores	Projectile points	Choppers	Hoes	Expedient Tools	Quatz Crystals	Quartz Fragments	Chrysacola	*Lajas*	Catidad Otros
A	126	15	1	6	2	0	0	0	0	1	0	4	0	1	0	0
A	127	7	1	2	0	1	0	0	0	0	3	1	0	0	0	0
A	128	6	0	1	1	0	1	0	0	0	0	2	1	0	0	0
A	129	2	0	1	0	0	0	0	0	0	0	0	1	0	0	0
A	130	8	0	8	0	0	0	0	0	0	0	0	0	0	0	0
A	131	3	0	3	0	0	0	0	0	0	0	0	0	0	0	0
A	132	7	0	6	0	1	0	0	0	0	0	0	0	0	0	0
A	133	2	0	1	0	0	0	0	0	0	0	0	0	1	0	0
A	134	7	0	5	0	0	0	1	0	0	0	1	0	0	0	0
A	135	7	0	6	0	0	0	0	0	0	0	1	0	0	0	0
A	136	5	0	1	0	0	0	0	0	0	1	1	2	0	0	0
A	137	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
A	138	7	0	0	0	0	0	0	0	0	0	2	5	0	0	0

Table B.9. Analysis of flake sizes in each surface collection unit

Sector	Unit	Total Count	Total Weight (g)	Count < 2 cm	Weight (g) < 2cm	Count 2 - 4 cm	Weight (g) 2 - 4 cm	Count 4 - 6 cm	Weight (g) 4 - 6 cm	Count 6 - 8 cm	Weight (g) 6 - 8 cm	Count 8 - 10 cm	Weight (g) 8 - 10 cm	Count > 10 cm	Weight (g) > 10 cm
F	1	10	12.9	6	4.6	4	8.3	0	0.0	0	0.0	0	0.0	0	0.0
F	2	8	73.1	2	2.0	2	6.9	4	64.3	0	0.0	0	0.0	0	0.0
F	3	11	134.5	1	0.2	5	24.3	3	41.3	2	68.7	0	0.0	0	0.0
F	4A	1	7.4	0	0.0	0	0.0	1	7.4	0	0.0	0	0.0	0	0.0
F	4C	2	10.2	0	0.0	2	10.2	0	0.0	0	0.0	0	0.0	0	0.0
F	5	5	112.8	0	0.0	1	11.3	2	29.9	1	71.6	0	0.0	0	0.0
F	8	1	97.7	0	0.0	0	0.0	0	0.0	1	97.7	0	0.0	0	0.0
F	10	4	47.2	0	0.0	2	4.5	2	42.7	0	0.0	0	0.0	0	0.0
F	11	2	25.4	0	0.0	1	6.7	1	18.7	0	0.0	0	0.0	0	0.0
F	13	1	6.5	0	0.0	0	0.0	1	6.5	0	0.0	0	0.0	0	0.0
F	14	14	44.3	7	4.5	6	27.1	1	12.6	0	0.0	0	0.0	0	0.0
F	15	5	51.4	2	4.0	2	17.1	0	0.0	0	0.0	1	30.4	0	0.0
F	16	1	1.8	1	1.8	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
F	17	2	1.4	1	0.4	1	1.0	0	0.0	0	0.0	0	0.0	0	0.0
F	18	4	67.4	0	0.0	0	0.0	3	40.7	1	26.7	0	0.0	0	0.0
F	19A	1	56.0	0	0.0	0	0.0	0	0.0	0	0.0	1	56.0	0	0.0
F	19B	3	4.7	1	0.4	2	4.3	0	0.0	0	0.0	0	0.0	0	0.0
F	19C	2	3.9	1	1.4	1	2.5	0	0.0	0	0.0	0	0.0	0	0.0
F	20	34	339.2	10	6.0	14	60.8	8	161.6	0	0.0	1	34.0	1	76.8
F	21	19	258.7	2	1.9	9	52.6	6	72.4	1	60.5	1	71.3	0	0.0
F	23	2	29.3	0	0.0	1	3.9	0	0.0	1	25.4	0	0.0	0	0.0
E	24	36	97.3	26	13.1	6	24.9	4	59.3	0	0.0	0	0.0	0	0.0
E	25	9	61.8	4	2.7	3	11.8	2	47.3	0	0.0	0	0.0	0	0.0
E	26	4	58.3	1	1.5	1	1.3	2	55.4	0	0.0	0	0.0	0	0.0
E	28A	5	13.7	3	2.3	2	11.4	0	0.0	0	0.0	0	0.0	0	0.0
E	29	4	84.6	0	0.0	0	0.0	3	52.3	1	32.2	0	0.0	0	0.0
E	30	2	70.5	0	0.0	0	0.0	1	19.3	1	51.2	0	0.0	0	0.0
E	31	4	17.5	1	1.0	2	8.8	1	7.7	0	0.0	0	0.0	0	0.0
E	32	1	20.4	0	0.0	0	0.0	1	20.4	0	0.0	0	0.0	0	0.0
E	34	1	6.9	0	0.0	1	6.9	0	0.0	0	0.0	0	0.0	0	0.0
E	36	5	125.5	0	0.0	1	8.1	3	71.0	1	46.5	0	0.0	0	0.0
E	39	7	49.9	2	1.3	3	18.4	2	30.3	0	0.0	0	0.0	0	0.0
E	40	1	11.2	0	0.0	0	0.0	1	11.2	0	0.0	0	0.0	0	0.0
E	41	3	74.7	0	0.0	1	5.5	1	25.2	1	44.0	0	0.0	0	0.0
E	43	1	42.1	0	0.0	0	0.0	1	42.1	0	0.0	0	0.0	0	0.0
E	44	3	19.8	0	0.0	3	19.8	0	0.0	0	0.0	0	0.0	0	0.0
E	45	4	38.8	1	0.9	1	6.1	2	31.7	0	0.0	0	0.0	0	0.0
E	46	4	57.2	1	0.2	2	2.6	1	54.3	0	0.0	0	0.0	0	0.0
E	47	3	68.6	2	0.9	0	0.0	1	67.7	0	0.0	0	0.0	0	0.0

Sector	Unit	Total Count	Total Weight (g)	Count < 2 cm	Weight (g) < 2cm	Count 2 - 4 cm	Weight (g) 2 - 4 cm	Count 4 - 6 cm	Weight (g) 4 - 6 cm	Count 6 - 8 cm	Weight (g) 6 - 8 cm	Count 8 - 10 cm	Weight (g) 8 - 10 cm	Count > 10 cm	Weight (g) > 10 cm
E	50	1	1.9	1	1.9	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
E	51	4	46.9	1	2.2	3	44.6	0	0.0	0	0.0	0	0.0	0	0.0
E	52	7	57.9	4	2.2	2	11.6	1	44.1	0	0.0	0	0.0	0	0.0
E	55	1	1.8	0	0.0	1	1.8	0	0.0	0	0.0	0	0.0	0	0.0
E	56	6	20.3	1	0.8	4	10.8	1	8.7	0	0.0	0	0.0	0	0.0
D	57	2	21.6	1	0.6	0	0.0	1	21.0	0	0.0	0	0.0	0	0.0
D	58	3	29.4	1	0.9	1	2.6	2	25.9	0	0.0	0	0.0	0	0.0
D	60	1	5.9	0	0.0	1	5.9	0	0.0	0	0.0	0	0.0	0	0.0
D	62	1	0.5	1	0.5	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
D	63	1	49.9	0	0.0	0	0.0	1	49.9	0	0.0	0	0.0	0	0.0
D	64	5	5.5	4	1.8	1	3.7	0	0.0	0	0.0	0	0.0	0	0.0
D	65	5	55.2	2	3.3	2	14.9	0	0.0	1	37.0	0	0.0	0	0.0
D	66	2	12.5	0	0.0	2	12.5	0	0.0	0	0.0	0	0.0	0	0.0
D	67	1	0.3	1	0.3	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
D	69	1	5.6	0	0.0	1	5.6	0	0.0	0	0.0	0	0.0	0	0.0
D	70	1	1.5	1	1.5	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
D	71	1	8.0	0	0.0	1	8.0	0	0.0	0	0.0	0	0.0	0	0.0
C	72	5	14.4	0	0.0	5	14.4	0	0.0	0	0.0	0	0.0	0	0.0
C	73	1	2.2	0	0.0	1	2.2	0	0.0	0	0.0	0	0.0	0	0.0
C	74	1	21.7	0	0.0	0	0.0	1	21.7	0	0.0	0	0.0	0	0.0
C	75	4	7.9	1	0.4	3	7.5	0	0.0	0	0.0	0	0.0	0	0.0
C	76A	6	218.0	2	0.8	0	0.0	3	87.6	0	0.0	1	129.6	0	0.0
C	78	4	103.9	0	0.0	3	21.1	0	0.0	1	82.8	0	0.0	0	0.0
C	79	8	110.9	1	0.8	3	25.1	4	84.9	0	0.0	0	0.0	0	0.0
C	80	2	16.1	0	0.0	0	0.0	2	16.1	0	0.0	0	0.0	0	0.0
C	81	3	25.5	1	1.3	1	2.3	1	21.9	0	0.0	0	0.0	0	0.0
C	82	4	9.4	2	3.4	2	6.0	0	0.0	0	0.0	0	0.0	0	0.0
C	83	1	4.6	0	0.0	0	0.0	1	4.6	0	0.0	0	0.0	0	0.0
C	84	2	2.4	1	0.8	1	1.6	0	0.0	0	0.0	0	0.0	0	0.0
C	86	3	19.1	0	0.0	2	6.1	1	13.0	0	0.0	0	0.0	0	0.0
C	88	6	73.7	3	4.7	2	6.5	0	0.0	0	0.0	1	62.5	0	0.0
C	89A	15	305.7	2	1.3	9	21.4	2	28.1	1	40.3	0	0.0	1	214.6
C	89B	3	12.2	0	0.0	2	6.6	1	5.6	0	0.0	0	0.0	0	0.0
C	90A	5	222.6	0	0.0	2	17.9	1	29.2	1	103.1	1	72.3	0	0.0
C	91	26	583.6	4	1.9	7	54.1	10	201.7	4	185.8	0	0.0	1	140.2
C	92	2	10.1	1	1.3	0	0.0	1	8.8	0	0.0	0	0.0	0	0.0
C	93	1	71.5	0	0.0	0	0.0	0	0.0	1	71.5	0	0.0	0	0.0
C	94	2	11.3	0	0.0	2	11.3	0	0.0	0	0.0	0	0.0	0	0.0
C	98	3	104.3	0	0.0	2	8.9	0	0.0	1	95.4	0	0.0	0	0.0
C	100	2	20.2	0	0.0	1	8.5	1	11.6	0	0.0	0	0.0	0	0.0
C	103	2	4.0	1	0.3	0	0.0	1	3.7	0	0.0	0	0.0	0	0.0

Sector	Unit	Total Count	Total Weight (g)	Count < 2 cm	Weight (g) < 2cm	Count 2 - 4 cm	Weight (g) 2 - 4 cm	Count 4 - 6 cm	Weight (g) 4 - 6 cm	Count 6 - 8 cm	Weight (g) 6 - 8 cm	Count 8 - 10 cm	Weight (g) 8 - 10 cm	Count > 10 cm	Weight (g) > 10 cm
C	104	1	20.2	0	0.0	0	0.0	1	20.2	0	0.0	0	0.0	0	0.0
C	105	1	1.2	0	0.0	1	1.2	0	0.0	0	0.0	0	0.0	0	0.0
C	111	11	150.3	3	3.7	3	21.7	4	93.7	1	31.0	0	0.0	0	0.0
B	112	1	1.8	0	0.0	1	1.8	0	0.0	0	0.0	0	0.0	0	0.0
B	119	2	0.4	2	0.4	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
B	121	34	1053.4	2	2.5	13	67.3	13	306.6	3	200.4	3	476.7	0	0.0
B	122	68	864.8	2	1.8	36	179.9	25	413.0	4	202.0	1	68.2	0	0.0
A	123A	5	19.4	1	0.9	4	18.5	0	0.0	0	0.0	0	0.0	0	0.0
A	123B	4	30.5	0	0.0	3	9.6	1	20.9	0	0.0	0	0.0	0	0.0
A	124	2	4.8	0	0.0	2	4.8	0	0.0	0	0.0	0	0.0	0	0.0
A	125	4	59.0	2	0.6	0	0.0	1	8.4	1	50.0	0	0.0	0	0.0
A	126	6	185.2	0	0.0	2	8.7	3	60.7	1	115.7	0	0.0	0	0.0
A	127	5	185.9	0	0.0	2	13.3	2	81.8	1	90.8	0	0.0	0	0.0
A	128	1	22.4	0	0.0	0	0.0	1	22.4	0	0.0	0	0.0	0	0.0
A	129	1	2.3	0	0.0	1	2.3	0	0.0	0	0.0	0	0.0	0	0.0
A	130	8	26.4	2	0.3	5	13.6	1	12.5	0	0.0	0	0.0	0	0.0
A	131	3	22.5	1	0.3	1	9.9	1	12.3	0	0.0	0	0.0	0	0.0
A	132	6	117.1	4	5.3	0	0.0	1	9.0	1	102.8	0	0.0	0	0.0
A	133	1	4.1	0	0.0	1	4.1	0	0.0	0	0.0	0	0.0	0	0.0
A	134	5	85.8	2	0.3	2	6.6	0	0.0	1	78.9	0	0.0	0	0.0
A	135	6	37.6	0	0.0	3	13.7	3	23.9	0	0.0	0	0.0	0	0.0
A	136	1	0.4	1	0.4	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
A	137	1	5.1	0	0.0	1	5.1	0	0.0	0	0.0	0	0.0	0	0.0

APPENDIX C

EXCAVATION DATA

Table C.1. Raw counts and weights from excavation contexts

Unit	Area	Layer	Quad	Rasgo	Material	Count	Weight (g)
1	B	A	20	-	Botanical	-	1.8
1	B	A	26	-	Botanical	-	1.3
1	B	A-1	16	2	Botanical	-	5.4
1	B	A-2	16	2	Botanical	-	3.4
1	B	A	19	-	Botanical	-	13.2
1	B	B	11,12,18,19,	-	Botanical	-	0.2
1	B	A-2	16	2	C14	1	1.8
1	B	A-2	16	2	C14	1	3.7
1	B	A-2	16	2	C14	1	1.7
1	B	A	25	-	Carbon	-	0.2
1	B	A	26	-	Carbon	-	0.1
1	A	A	21	-	Carbon	-	0.1
1	B	A-1	16	2	Carbon	-	0.1
1	B	A-2	16	2	Carbon	-	0.4
1	B	A	10	-	Carbon	-	0.2
1	B	A	18	-	Carbon	-	0.3
1	B	B	11,12,18,19,	-	Carbon	-	0.3
1	A	A	4	-	Ceramic	1	2.5
1	B	A	16	-	Ceramic	12	2.1
1	B	A	17	-	Ceramic	12	2.1
1	B	A	11	-	Ceramic	1	0.3
1	A	A	27	-	Ceramic	1	26.4
1	B	A	11	-	Coprolite	-	0.6
1	B	A	18	-	Coprolite	-	1.1

Unit	Area	Layer	Quad	Rasgo	Material	Count	Weight (g)
1	A	A	9	-	FLOT[25]	1	2 liters
1	A	A	8	-	FLOT	1	2 liters
1	A	A	2	-	FLOT	1	2 liters
1	A	A	3	-	FLOT	1	2 liters
1	A	A	6	-	FLOT	1	2 liters
1	A	A	13	-	FLOT	1	2 liters
1	B	A	19	-	FLOT	1	2 liters
1	B	A-2	16	2	FLOT	1	2 liters
1	B	A-2	23	2	FLOT	1	2 liters
1	B	A-2	16	2	FLOT	1	2 liters
1	B	A-2	17	2	FLOT	1	2 liters
1	B	A-2	23	2	FLOT	1	2 liters
1	B	A	12	-	FLOT	1	2 liters
1	B	A	19	-	FLOT	1	2 liters
1	B	A	11	-	FLOT	1	2 liters
1	B	A	12	-	FLOT	1	2 liters
1	B	A	17	-	FLOT	1	2 liters
1	B	A	18	-	FLOT	1	2 liters
1	B	A	19	-	FLOT	1	2 liters
1	B	B	11,12,18,19,	-	FLOT	1	2 liters
1	A	S	35	-	Lithic	2	29.8
1	A	S	37	-	Lithic	3	31.7
1	A	S	40	-	Lithic	3	139.5
1	A	S	42	-	Lithic	1	8.9
1	A	A	22	-	Lithic	1	503
1	A	A	8	-	Lithic	2	280
1	B	A	16	-	Lithic	3	504
1	B	A	11	-	Lithic	3	6.9
1	A	A	28	-	Lithic	1	7.1
1	A	A	40	-	Lithic	1	13.6
1	A	A	41	-	Lithic	1	3.9
1	B	A-1	16	2	Lithic	5	1968
1	B	A-2	16	2	Lithic	2	153.3
1	B	A	10	-	Lithic	2	30.6
1	B	A	18	-	Lithic	1	41.5
1	B	A-2	16	2	Lithic	11	1738
1	B	A	26	-	Marine Shell	1	0.2
1	B	B	11,12,18,19,	-	Marine Shell	3	0.4
1	B	A	16	-	Muestra	1	149.8
1	B	A-1	16	2	Muestra	-	110.3
1	A	A	15	-	Animal Bone	5	0.4
1	B	A	11	-	Animal Bone	2	0.2

[25] FLOT's were soil samples taken for microbotanical analysis.

Unit	Area	Layer	Quad	Rasgo	Material	Count	Weight (g)
2	-	C	22	9	Botanical	2	1.7
2	-	B	37	7	C14	1	3.2
2	-	C	12	9	C14	1	2.1
2	-	C	11	9	C14	1	2.6
2	-	A	2	-	Carbon	-	<0.1
2	-	A	3	-	Carbon	-	<0.1
2	-	A	4	-	Carbon	-	<0.1
2	-	A	6	-	Carbon	-	<0.1
2	-	A	12	-	Carbon	-	0.1
2	-	A	13	-	Carbon	-	<0.1
2	-	A	14	-	Carbon	-	0.1
2	-	A	27	-	Carbon	-	0.4
2	-	A	29	-	Carbon	-	0.1
2	-	A	34	-	Carbon	-	0.1
2	-	A	37	-	Carbon	-	0.1
2	-	B	4	-	Carbon	-	0.2
2	-	B	23	-	Carbon	-	<0.1
2	-	B	25	-	Carbon	-	<0.1
2	-	B	22	-	Carbon	-	0.1
2	-	B	42	2	Carbon	-	<0.1
2	-	B	15	-	Carbon	-	0.6
2	-	B	26	-	Carbon	-	0.2
2	-	B	31	-	Carbon	-	<0.1
2	-	B	32	-	Carbon	-	<0.1
2	-	B	27	-	Carbon	-	0.4
2	-	B	28	-	Carbon	-	0.1
2	-	B	33	-	Carbon	-	<0.1
2	-	B	29	-	Carbon	-	<0.1
2	-	B	36	-	Carbon	-	<0.1
2	-	B	37	-	Carbon	-	0.1
2	-	B	16	-	Carbon	-	<0.1
2	-	B	17	-	Carbon	-	0.3
2	-	B	12	-	Carbon	-	0.3
2	-	B	13	-	Carbon	-	0.1
2	-	C	22	9	Carbon	-	<0.1
2	-	C	12	9	Carbon	-	0.4
2	-	C	11	9	Carbon	-	0.7
2	-	S	1	-	Ceramic	4	48.7
2	-	S	4	-	Ceramic	1	6.4
2	-	S	6	-	Ceramic	1	5.1
2	-	S	9	-	Ceramic	2	3.8
2	-	S	11	-	Ceramic	2	19.5
2	-	S	12	-	Ceramic	2	3.8
2	-	S	13	-	Ceramic	2	9.7
2	-	S	16	-	Ceramic	2	10.7
2	-	S	18	-	Ceramic	1	4.7

Unit	Area	Layer	Quad	Rasgo	Material	Count	Weight (g)
2	-	S	19	-	Ceramic	4	19.2
2	-	S	22	-	Ceramic	4	11.5
2	-	S	27	-	Ceramic	4	20.6
2	-	S	28	-	Ceramic	3	10.5
2	-	S	31	-	Ceramic	2	10.6
2	-	S	32	-	Ceramic	7	20.1
2	-	S	33	-	Ceramic	1	4.4
2	-	S	35	-	Ceramic	1	1.5
2	-	S	36	-	Ceramic	1	2.3
2	-	S	37	-	Ceramic	5	30.5
2	-	S	39	-	Ceramic	1	1.2
2	-	S	41	-	Ceramic	1	8.8
2	-	S	43	-	Ceramic	1	1.2
2	-	S	45	-	Ceramic	2	2.6
2	-	S	54	-	Ceramic	1	3.8
2	-	A	1	-	Ceramic	2	13.8
2	-	A	8	-	Ceramic	3	16.9
2	-	A	11	-	Ceramic	2	4.7
2	-	A	14	-	Ceramic	3	10.7
2	-	A	15	-	Ceramic	3	19.3
2	-	A	18	-	Ceramic	2	10.2
2	-	A	19	-	Ceramic	8	79.5
2	-	A	21	-	Ceramic	1	25.3
2	-	A	22	-	Ceramic	13	80.7
2	-	A	23	-	Ceramic	1	27.7
2	-	A	26	-	Ceramic	5	33.8
2	-	A	27	-	Ceramic	3	15.8
2	-	A	28	-	Ceramic	8	68.4
2	-	A	29	-	Ceramic	2	8.2
2	-	A	31	-	Ceramic	4	6.5
2	-	A	32	-	Ceramic	2	10.1
2	-	A	37	-	Ceramic	3	7.5
2	-	A	40	-	Ceramic	1	0.7
2	-	A	42	-	Ceramic	1	2.8
2	-	A	46	-	Ceramic	1	0.9
2	-	A	47	-	Ceramic	1	3.4
2	-	B	23	-	Ceramic	1	10.1
2	-	B	22	-	Ceramic	2	7.8
2	-	B	21	-	Ceramic	2	21.8
2	-	B	27	-	Ceramic	5	32.6
2	-	B	28	-	Ceramic	11	70.2
2	-	B	34	-	Ceramic	1	5
2	-	B	37	-	Ceramic	20	5.9
2	-	B	44	-	Ceramic	1	11.4
2	-	B	17	-	Ceramic	2	26.5
2	-	B	18	-	Ceramic	8	57.6

Unit	Area	Layer	Quad	Rasgo	Material	Count	Weight (g)
2	-	B	19	-	Ceramic	23	84.4
2	-	B	11	-	Ceramic	6	21.6
2	-	A	45	-	Bead	1	0.1
2	-	A	21	-	FLOT	1	1 liter
2	-	A	22	-	FLOT	1	1 liter
2	-	A	23	-	FLOT	1	1 liter
2	-	A	24	-	FLOT	1	1 liter
2	-	A	25	-	FLOT	1	1 liter
2	-	A	26	-	FLOT	1	1 liter
2	-	A	27	-	FLOT	1	1 liter
2	-	A	28	-	FLOT	1	1 liter
2	-	A	29	-	FLOT	1	1 liter
2	-	A	31	-	FLOT	1	1 liter
2	-	A	32	-	FLOT	1	1 liter
2	-	A	33	-	FLOT	1	1 liter
2	-	A	34	-	FLOT	1	1 liter
2	-	A	35	-	FLOT	1	1 liter
2	-	A	36	-	FLOT	1	1 liter
2	-	A	37	-	FLOT	1	1 liter
2	-	A	38	-	FLOT	1	1 liter
2	-	A	39	-	FLOT	1	1 liter
2	-	A	44	-	FLOT	1	1 liter
2	-	A	45	-	FLOT	1	1 liter
2	-	A	46	-	FLOT	1	1 liter
2	-	B	4	-	FLOT	1	1 liter
2	-	B	14	-	FLOT	1	1 liter
2	-	B	24	-	FLOT	1	1 liter
2	-	B	23	-	FLOT	1	1 liter
2	-	B	25	-	FLOT	1	1 liter
2	-	B	22	-	FLOT	1	1 liter
2	-	B	26	-	FLOT	1	1 liter
2	-	B	21	-	FLOT	1	1 liter
2	-	B	27	-	FLOT	1	1 liter
2	-	B	15	-	FLOT	1	1 liter
2	-	B	28	-	FLOT	1	1 liter
2	-	B	31	-	FLOT	1	1 liter
2	-	B	43	3	FLOT	1	1 liter
2	-	B	42	2	FLOT	1	1 liter
2	-	B	32	-	FLOT	1	1 liter
2	-	B	33	-	FLOT	1	1 liter
2	-	B	34	-	FLOT	1	1 liter
2	-	B	29	-	FLOT	1	1 liter
2	-	B	41	1	FLOT	1	1 liter
2	-	B	35	-	FLOT	1	1 liter
2	-	B	39	-	FLOT	1	1 liter
2	-	B	45	4	FLOT	1	1 liter

Unit	Area	Layer	Quad	Rasgo	Material	Count	Weight (g)
2	-	B	38	-	FLOT	1	1 liter
2	-	B	36	-	FLOT	1	1 liter
2	-	B	41	-	FLOT	1	1 liter
2	-	B	42	-	FLOT	1	1 liter
2	-	B	43	-	FLOT	1	1 liter
2	-	B	37	-	FLOT	1	1 liter
2	-	B	44	-	FLOT	1	1 liter
2	-	B	45	-	FLOT	1	1 liter
2	-	B	46	-	FLOT	1	1 liter
2	-	B	47	-	FLOT	1	1 liter
2	-	B	48	-	FLOT	1	1 liter
2	-	B	49	-	FLOT	1	1 liter
2	-	B	31	6	FLOT	1	1 liter
2	-	C	34	5	FLOT	1	1 liter
2	-	C	37	7	FLOT	1	1 liter
2	-	C	37	8	FLOT	1	1 liter
2	-	C	32	-	FLOT	1	1 liter
2	-	C	26	-	FLOT	1	1 liter
2	-	C	22	9	FLOT	1	1 liter
2	-	C	12	9	FLOT	1	1 liter
2	-	C	11	9	FLOT	1	1 liter
2	-	S	7	-	Lithic	1	0.4
2	-	S	12	-	Lithic	1	0.6
2	-	S	13	-	Lithic	-	-
2	-	S	16	-	Lithic	1	2.5
2	-	S	17	-	Lithic	1	1.1
2	-	S	21	-	Lithic	1	0.9
2	-	S	34	-	Lithic	1	0.1
2	-	A	1	-	Lithic	1	9
2	-	A	5	-	Lithic	1	2.1
2	-	A	11	-	Lithic	1	26.8
2	-	A	13	-	Lithic	2	0.7
2	-	A	27	-	Lithic	1	22.7
2	-	A	36	-	Lithic	1	7.4
2	-	A	40	-	Lithic	1	0.4
2	-	B	4	-	Lithic	1	0.3
2	-	B	14	-	Lithic	1	0.1
2	-	B	23	-	Lithic	3	0.9
2	-	B	22	-	Lithic	-	-
2	-	B	28	-	Lithic	4	3.5
2	-	B	33	-	Lithic	-	-
2	-	B	45	-	Lithic	1	0.1
2	-	B	51	-	Lithic	1	0.3
2	-	B	17	-	Lithic	1	25.1
2	-	B	18	-	Lithic	1	0.3
2	-	B	19	-	Lithic	1	<0.1

Unit	Area	Layer	Quad	Rasgo	Material	Count	Weight (g)
2	-	B	17	-	Marine Shell	2	0.1
2	-	C	22	-	Marine Shell	1	<0.1
2	-	S	29	-	Animal Bone	1	<0.1
2	-	A	23	-	Animal Bone	13	7.4
2	-	A	33	-	Animal Bone	1	0.4
2	-	A	34	-	Animal Bone	1	0.1
2	-	A	38	-	Animal Bone	2	1.4
2	-	A	42	-	Animal Bone	10	3.2
2	-	B	25	-	Animal Bone	1	0.3
2	-	B	22	-	Animal Bone	2	0.1
2	-	B	21	-	Animal Bone	23	2.3
2	-	B	32	-	Animal Bone	10	0.5
2	-	B	28	-	Animal Bone	13	0.2
2	-	B	34	-	Animal Bone	1	0.3
2	-	B	16	-	Animal Bone	2	<0.1
2	-	B	17	-	Animal Bone	3	<0.1
2	-	B	11	-	Animal Bone	2	0.2
2	-	B	12	-	Animal Bone	4	0.4
2	-	B	13	-	Animal Bone	3	1.6
2	-	C	22	9	Animal Bone	1	0.2
2	-	C	12	9	Animal Bone	1	0.2
3	B	A	59	-	Antler	2	3.9
3	B	B	90, 91, 106,	26	Antler	1	0.4
3	C	A	142	-	Botanical	25	1.5
3	B	A	43	-	Botanical	2	0.2
3	B	A	60	-	Botanical	8	2.4
3	B	A	130	-	Botanical	1	<0.1
3	B	B	76	17	Botanical	-	0.9
3	B	B	91	19	Botanical	-	<0.1
3	B	A	73	-	C14	1	2.3
3	B	B	74	13	C14	1	5.1
3	B	B	76	17	C14	1	5.1
3	B	B	92	19	C14	1	2.7
3	A	S	101	-	Carbon	-	0.2
3	A	S	119	-	Carbon	-	<0.1
3	A	S	162	-	Carbon	-	0.1
3	C	S	144	-	Carbon	-	<0.1
3	C	S	143	-	Carbon	-	<0.1
3	B	S	125	-	Carbon	1	0.1
3	C	S	122	-	Carbon	-	<0.1
3	B	S	53	-	Carbon	-	0.4
3	B	S	68	-	Carbon	-	0.5
3	B	S	54	-	Carbon	-	0.3
3	B	S	70	-	Carbon	-	<0.1
3	B	S	87	-	Carbon	-	0.2
3	B	S	58	-	Carbon	-	<0.1

Unit	Area	Layer	Quad	Rasgo	Material	Count	Weight (g)
3	B	S	74	-	Carbon	-	0.4
3	B	S	74	-	Carbon	-	0.3
3	B	S	75	-	Carbon	-	1.8
3	B	S	91	-	Carbon	-	<0.1
3	B	S	106	-	Carbon	-	0.1
3	B	S	107	-	Carbon	-	0.2
3	B	S	93	-	Carbon	-	0.5
3	B	S	108	-	Carbon	-	0.3
3	B	S	109	-	Carbon	-	0.2
3	B	S	62	-	Carbon	-	<0.1
3	B	S	78	-	Carbon	-	0.1
3	B	S	94	-	Carbon	-	0.2
3	B	S	110	-	Carbon	-	<0.1
3	B	S	96	-	Carbon	-	<0.1
3	A	A	66	-	Carbon	-	0.2
3	A	A	82	-	Carbon	-	0.5
3	A	A	119	-	Carbon	-	<0.1
3	A	A	103	-	Carbon	-	0.2
3	A	A	102	-	Carbon	-	<0.1
3	A	A	137	-	Carbon	-	0.3
3	A	A	122	-	Carbon	-	0.3
3	A	A	139	-	Carbon	-	<0.1
3	C	A	141	-	Carbon	-	<0.1
3	B	A	125	-	Carbon	-	0.2
3	C	A	144	-	Carbon	-	0.1
3	C	A	142	-	Carbon	-	0.2
3	A	A	147	-	Carbon	-	0.1
3	A	A	4	-	Carbon	-	0.4
3	B	A	23	-	Carbon	-	<0.1
3	B	A	38	-	Carbon	-	0.1
3	B	A	36	-	Carbon	-	0.7
3	B	A	54	-	Carbon	-	2.4
3	B	A	55	-	Carbon	-	0.8
3	B	A	56	-	Carbon	-	0.1
3	B	A	37	-	Carbon	-	1.3
3	B	A	52	-	Carbon	-	0.3
3	B	A	53	-	Carbon	-	0.6
3	B	A	68	-	Carbon	-	1.2
3	B	A	70	-	Carbon	-	2.1
3	B	A	71	-	Carbon	-	0.3
3	B	A	72	-	Carbon	-	0.2
3	B	A	57	-	Carbon	-	0.5
3	B	A	86	-	Carbon	-	0.5
3	B	A	67	-	Carbon	-	0.1
3	B	A	84	-	Carbon	-	0.2
3	B	A	69	-	Carbon	-	1.3

Unit	Area	Layer	Quad	Rasgo	Material	Count	Weight (g)
3	B	A	87	-	Carbon	-	0.4
3	B	A	88	-	Carbon	-	0.3
3	B	A	89	-	Carbon	-	0.2
3	B	A	73	-	Carbon	-	7.6
3	B	A	90	-	Carbon	-	0.2
3	B	A	74	-	Carbon	-	4.8
3	B	A	42	-	Carbon	1	<0.1
3	B	A	44	-	Carbon	-	<0.1
3	B	A	106	-	Carbon	-	0.7
3	B	A	60	-	Carbon	-	7
3	B	A	58	-	Carbon	-	0.9
3	B	A	59	-	Carbon	-	1.3
3	B	A	53	1	Carbon	-	1.3
3	B	A	75	-	Carbon	-	6.5
3	B	A	76	-	Carbon	-	12.9
3	B	A	77	-	Carbon	-	0.2
3	B	A	78	-	Carbon	-	0.7
3	B	A	93	-	Carbon	-	3.9
3	B	A	62	-	Carbon	-	0.5
3	B	A	91	-	Carbon	-	2.1
3	B	A	92	-	Carbon	-	6
3	B	A	107	-	Carbon	-	0.1
3	B	A	108	-	Carbon	-	2.1
3	B	A	109	-	Carbon	-	0.5
3	B	A	110	-	Carbon	-	0.1
3	B	A	94	-	Carbon	-	1.5
3	B	A	111	-	Carbon	-	0.7
3	B	A	96	-	Carbon	-	3.3
3	B	A	112	-	Carbon	-	0.6
3	B	A	113	-	Carbon	-	0.3
3	B	A	129	-	Carbon	-	0.5
3	B	A	127	-	Carbon	-	1.4
3	B	A	79	-	Carbon	-	0.1
3	B	A	130	-	Carbon	-	0.1
3	B	A	104	-	Carbon	-	<0.1
3	B	A	105	-	Carbon	-	0.3
3	B	A	103	-	Carbon	-	0.2
3	B	A	102	-	Carbon	-	<0.1
3	B	A	85	-	Carbon	-	<0.1
3	B	A	69	1	Carbon	-	0.4
3	B	A	70	1	Carbon	-	<0.1
3	B	A	71	3	Carbon	-	0.9
3	B	A	54	1	Carbon	-	0.5
3	B	A	75	2	Carbon	-	2
3	A	B	122	-	Carbon	-	0.2
3	B	B	54	-	Carbon	-	0.1

Unit	Area	Layer	Quad	Rasgo	Material	Count	Weight (g)
3	B	B	55	7	Carbon	-	0.3
3	B	B	56	8	Carbon	-	<0.1
3	B	B	73	11	Carbon	-	30.1
3	B	B	58	12	Carbon	-	0.3
3	B	B	74	13	Carbon	-	0.9
3	B	B	59	14	Carbon	-	2.2
3	B	B	60	15	Carbon	-	0.1
3	B	B	75	16	Carbon	-	0.6
3	B	B	76	17	Carbon	-	10.5
3	B	B	91	18	Carbon	-	5.3
3	B	B	92	19	Carbon	-	11.6
3	B	B	91	19	Carbon	-	30.1
3	B	B	108	19	Carbon	-	2
3	B	B	110	22	Carbon	-	0.2
3	B	B	108	23	Carbon	-	0.2
3	B	B	77	27	Carbon	-	0.6
3	B	B	90, 91, 106,	26	Carbon	-	1
3	B	B	89	25	Carbon	-	0.2
3	A	S	3	-	Ceramic	2	5.3
3	A	S	19	-	Ceramic	1	2.4
3	B	S	51	-	Ceramic	5	14.1
3	A	S	50	-	Ceramic	8	47.9
3	A	S	66	-	Ceramic	9	46.3
3	B	S	67	-	Ceramic	3	19.4
3	A	S	82	-	Ceramic	4	49.2
3	A	S	83	-	Ceramic	5	12.5
3	A	S	100	-	Ceramic	13	74.5
3	A	S	118	-	Ceramic	1	9.1
3	A	S	120	-	Ceramic	17	99.4
3	A	S	121	-	Ceramic	12	88.5
3	A	S	137	-	Ceramic	21	140.7
3	A	S	138	-	Ceramic	11	93.4
3	A	S	139	-	Ceramic	8	77.8
3	A	S	140	-	Ceramic	2	7
3	A	S	158	-	Ceramic	1	8.2
3	A	S	162	-	Ceramic	1	5.7
3	A	S	145	-	Ceramic	2	5.5
3	A	S	146	-	Ceramic	1	6.6
3	A	S	147	-	Ceramic	1	9.7
3	A	S	1	-	Ceramic	3	14.1
3	A	S	2	-	Ceramic	2	36.1
3	A	S	10	-	Ceramic	2	7.1
3	A	S	14	-	Ceramic	2	10.7
3	C	S	144	-	Ceramic	13	76.7
3	C	S	143	-	Ceramic	3	23.6
3	A	S	34	-	Ceramic	1	16.1

Unit	Area	Layer	Quad	Rasgo	Material	Count	Weight (g)
3	C	S	159	-	Ceramic	3	25.6
3	A	S	49	-	Ceramic	1	10.3
3	C	S	160	-	Ceramic	1	5.1
3	A	S	65	-	Ceramic	2	3.5
3	A	S	115	-	Ceramic	2	30.5
3	A	S	116	-	Ceramic	4	55.3
3	A	S	117	-	Ceramic	5	49.9
3	A	S	133	-	Ceramic	5	52.2
3	A	S	134	-	Ceramic	4	18.9
3	A	S	135	-	Ceramic	1	14.5
3	A	S	136	-	Ceramic	4	38.8
3	B	S	4	-	Ceramic	1	3.4
3	C	S	142	-	Ceramic	1	2.4
3	B	S	125	-	Ceramic	-	-
3	C	S	124	-	Ceramic	3	9.5
3	C	S	123	-	Ceramic	2	20.5
3	C	S	122	-	Ceramic	3	49.6
3	C	S	105	-	Ceramic	1	4.8
3	B	S	20	-	Ceramic	3	4.4
3	A	S	151	-	Ceramic	1	6.1
3	A	S	152	-	Ceramic	1	6.3
3	A	S	153	-	Ceramic	2	15.5
3	A	S	154	-	Ceramic	1	7.2
3	A	S	155	-	Ceramic	2	23.3
3	A	S	156	-	Ceramic	3	40.5
3	A	S	157	-	Ceramic	1	4.8
3	B	S	36	-	Ceramic	3	3.5
3	B	S	37	-	Ceramic	1	1.5
3	B	S	52	-	Ceramic	8	19
3	B	S	53	-	Ceramic	52	200.9
3	B	S	68	-	Ceramic	6	26.9
3	B	S	69	-	Ceramic	26	124.8
3	B	S	85	-	Ceramic	11	40.7
3	B	S	38	-	Ceramic	6	1.6
3	B	S	39	-	Ceramic	5	24.1
3	B	S	54	-	Ceramic	14	70.5
3	B	S	55	-	Ceramic	13	51.3
3	B	S	70	-	Ceramic	11	57
3	B	S	71	-	Ceramic	8	76.9
3	B	S	86	-	Ceramic	12	69
3	B	S	87	-	Ceramic	5	34.5
3	B	S	40	-	Ceramic	2	15.2
3	B	S	41	-	Ceramic	4	27.1
3	B	S	56	-	Ceramic	8	22.8
3	B	S	57	-	Ceramic	1	10.4
3	B	S	72	-	Ceramic	6	38.8

Unit	Area	Layer	Quad	Rasgo	Material	Count	Weight (g)
3	B	S	73	-	Ceramic	2	11.4
3	B	S	88	-	Ceramic	4	16.1
3	B	S	89	-	Ceramic	7	56.9
3	B	S	58	-	Ceramic	4	49.1
3	B	S	42	-	Ceramic	6	63.8
3	B	S	74	-	Ceramic	2	33.9
3	B	S	28	-	Ceramic	2	12.9
3	B	S	59	-	Ceramic	2	12.6
3	B	S	74	-	Ceramic	-	-
3	B	S	75	-	Ceramic	4	17.2
3	B	S	90	-	Ceramic	4	34.8
3	B	S	91	-	Ceramic	4	70.5
3	B	S	106	-	Ceramic	1	2.6
3	B	S	107	-	Ceramic	11	70.4
3	B	S	60	-	Ceramic	6	15.3
3	B	S	61	-	Ceramic	1	7.6
3	B	S	76	-	Ceramic	2	9.7
3	B	S	77	-	Ceramic	8	44
3	C	S	106	-	Ceramic	1	34.1
3	B	S	92	-	Ceramic	2	7.4
3	B	S	93	-	Ceramic	3	30.8
3	B	S	108	-	Ceramic	6	26.2
3	B	S	109	-	Ceramic	11	216.7
3	B	S	126	-	Ceramic	1	6.4
3	B	S	62	-	Ceramic	3	4.7
3	B	S	78	-	Ceramic	2	6.3
3	B	S	110	-	Ceramic	5	40.7
3	B	S	127	-	Ceramic	4	82.3
3	B	S	63	-	Ceramic	4	14.3
3	B	S	79	-	Ceramic	2	2.8
3	B	S	80	-	Ceramic	3	8.2
3	B	S	113	-	Ceramic	5	38.7
3	B	S	129	-	Ceramic	2	18
3	B	S	130	-	Ceramic	4	65.6
3	B	S	31	-	Ceramic	1	0.9
3	A	A	3	-	Ceramic	2	11.1
3	A	A	35	-	Ceramic	1	0.9
3	A	A	50	-	Ceramic	5	22.8
3	A	A	51	-	Ceramic	1	2.7
3	A	A	66	-	Ceramic	8	40.7
3	A	A	82	-	Ceramic	1	10.3
3	A	A	83	-	Ceramic	13	43.6
3	A	A	84	-	Ceramic	3	17.5
3	A	A	100	-	Ceramic	12	73.1
3	A	A	101	-	Ceramic	1	9
3	A	A	118	-	Ceramic	4	11.3

Unit	Area	Layer	Quad	Rasgo	Material	Count	Weight (g)
3	A	A	119	-	Ceramic	3	15.3
3	A	A	120	-	Ceramic	8	67.1
3	A	A	102	-	Ceramic	6	21.8
3	A	A	137	-	Ceramic	5	23.4
3	A	A	121	-	Ceramic	2	9.3
3	A	A	122	-	Ceramic	5	35.3
3	A	A	139	-	Ceramic	5	38.1
3	B	A	125	-	Ceramic	3	40.5
3	C	A	144	-	Ceramic	1	13.7
3	C	A	142	-	Ceramic	1	14.7
3	A	A	147	-	Ceramic	3	69
3	A	A	4	-	Ceramic	4	6.6
3	B	A	22	-	Ceramic	4	42.7
3	B	A	23	-	Ceramic	2	7.3
3	B	A	38	-	Ceramic	2	4.3
3	B	A	39	-	Ceramic	2	6.2
3	B	A	40	-	Ceramic	1	3.3
3	B	A	41	-	Ceramic	4	11.1
3	B	A	36	-	Ceramic	2	12.5
3	B	A	51	-	Ceramic	-	-
3	B	A	54	-	Ceramic	11	112
3	B	A	55	-	Ceramic	9	39
3	B	A	56	-	Ceramic	3	62
3	B	A	37	-	Ceramic	4	13.2
3	B	A	53	-	Ceramic	2	16.9
3	B	A	68	-	Ceramic	12	67
3	B	A	70	-	Ceramic	25	136.9
3	B	A	71	-	Ceramic	8	43.5
3	B	A	72	-	Ceramic	6	78.1
3	B	A	57	-	Ceramic	15	196.5
3	B	A	86	-	Ceramic	9	38.4
3	B	A	67	-	Ceramic	6	32.2
3	B	A	84	-	Ceramic	3	23.8
3	B	A	85	-	Ceramic	5	25.7
3	B	A	69	-	Ceramic	23	131.6
3	B	A	87	-	Ceramic	14	91.9
3	B	A	88	-	Ceramic	4	104.6
3	B	A	89	-	Ceramic	2	30.9
3	B	A	73	-	Ceramic	16	35.1
3	B	A	105	-	Ceramic	3	10.3
3	B	A	90	-	Ceramic	6	61.3
3	B	A	74	-	Ceramic	4	26.4
3	B	A	42	-	Ceramic	1	2.4
3	B	A	106	-	Ceramic	5	47.9
3	B	A	45	-	Ceramic	1	76.4
3	B	A	60	-	Ceramic	3	25.7

Unit	Area	Layer	Quad	Rasgo	Material	Count	Weight (g)
3	B	A	58	-	Ceramic	14	117.1
3	B	A	59	-	Ceramic	4	121.3
3	B	A	53	1	Ceramic	8	60.6
3	B	A	75	-	Ceramic	21	103.5
3	B	A	76	-	Ceramic	6	54.9
3	B	A	77	-	Ceramic	3	10.1
3	B	A	93	-	Ceramic	7	120.3
3	B	A	46	-	Ceramic	1	3
3	B	A	91	-	Ceramic	10	205.5
3	B	A	92	-	Ceramic	4	20.7
3	B	A	107	-	Ceramic	7	29.2
3	B	A	108	-	Ceramic	6	16.9
3	B	A	109	-	Ceramic	11	78.8
3	B	A	113	-	Ceramic	3	17.4
3	B	A	128	-	Ceramic	1	4
3	B	A	80	-	Ceramic	2	9.6
3	B	A	126	-	Ceramic	4	19.6
3	B	A	130	-	Ceramic	1	20.1
3	B	A	104	-	Ceramic	1	2.4
3	B	A	103	-	Ceramic	1	3.6
3	B	A	102	-	Ceramic	4	18.8
3	B	A	69	1	Ceramic	10	33.4
3	B	A	70	1	Ceramic	1	1.1
3	B	A	71	3	Ceramic	4	18.4
3	B	A	54	1	Ceramic	7	19.7
3	B	B	54	-	Ceramic	2	40.2
3	B	B	57	-	Ceramic	1	0.9
3	B	B	73	11	Ceramic	3	14.3
3	B	B	74	13	Ceramic	1	1.7
3	B	B	59	14	Ceramic	1	0.9
3	B	B	76	17	Ceramic	1	24.5
3	B	B	91	18	Ceramic	2	14.7
3	B	B	91	19	Ceramic	8	89.4
3	B	B	92	19	Ceramic	9	61.7
3	B	B	108	19	Ceramic	6	72.4
3	B	B	77	27	Ceramic	5	174.5
3	B	B	90, 91, 106,	26	Ceramic	16	153.4
3	B	B	89	25	Ceramic	5	95.4
3	B	A	70	-	Bead	1	<0.1
3	B	A	73	-	Bead	1	<0.1
3	B	A	20	-	FLOT	1	1 liter
3	B	A	21	-	FLOT	1	1 liter
3	B	A	22	-	FLOT	1	1 liter
3	B	A	38	-	FLOT	1	1 liter
3	B	A	39	-	FLOT	1	1 liter
3	B	A	40	-	FLOT	1	1 liter

Unit	Area	Layer	Quad	Rasgo	Material	Count	Weight (g)
3	B	A	41	-	FLOT	1	1 liter
3	B	A	36	-	FLOT	1	1 liter
3	B	A	54	-	FLOT	1	1 liter
3	B	A	55	-	FLOT	1	1 liter
3	B	A	56	-	FLOT	1	1 liter
3	B	A	57	-	FLOT	1	1 liter
3	B	A	52	-	FLOT	1	1 liter
3	B	A	53	-	FLOT	1	1 liter
3	B	A	68	-	FLOT	1	1 liter
3	B	A	70	-	FLOT	1	1 liter
3	B	A	71	-	FLOT	1	1 liter
3	B	A	72	-	FLOT	1	1 liter
3	B	A	57	-	FLOT	1	1 liter
3	B	A	86	-	FLOT	1	1 liter
3	B	A	85	-	FLOT	1	1 liter
3	B	A	69	-	FLOT	1	1 liter
3	B	A	87	-	FLOT	1	1 liter
3	B	A	88	-	FLOT	1	1 liter
3	B	A	89	-	FLOT	1	1 liter
3	B	A	73	-	FLOT	1	1 liter
3	B	A	90	-	FLOT	1	1 liter
3	B	A	74	-	FLOT	1	1 liter
3	B	A	42	-	FLOT	1	1 liter
3	B	A	43	-	FLOT	1	1 liter
3	B	A	44	-	FLOT	1	1 liter
3	B	A	58	-	FLOT	1	1 liter
3	B	A	59	-	FLOT	1	1 liter
3	B	A	60	-	FLOT	1	1 liter
3	B	A	45	-	FLOT	1	1 liter
3	B	A	61	-	FLOT	1	1 liter
3	B	A	53	1	FLOT	1	1 liter
3	B	A	75	-	FLOT	1	1 liter
3	B	A	76	-	FLOT	1	1 liter
3	B	A	77	-	FLOT	1	1 liter
3	B	A	78	-	FLOT	1	1 liter
3	B	A	93	-	FLOT	1	1 liter
3	B	A	62	-	FLOT	1	1 liter
3	B	A	46	-	FLOT	1	1 liter
3	B	A	91	-	FLOT	1	1 liter
3	B	A	92	-	FLOT	1	1 liter
3	B	A	107	-	FLOT	1	1 liter
3	B	A	108	-	FLOT	1	1 liter
3	B	A	109	-	FLOT	1	1 liter
3	B	A	110	-	FLOT	1	1 liter
3	B	A	94	-	FLOT	1	1 liter
3	B	A	63	-	FLOT	1	1 liter

Unit	Area	Layer	Quad	Rasgo	Material	Count	Weight (g)
3	B	A	64	-	FLOT	1	1 liter
3	B	A	80	-	FLOT	1	1 liter
3	B	A	95	-	FLOT	1	1 liter
3	B	A	96	-	FLOT	1	1 liter
3	B	A	111	-	FLOT	1	1 liter
3	B	A	112	-	FLOT	1	1 liter
3	B	A	128	-	FLOT	1	1 liter
3	B	A	129	-	FLOT	1	1 liter
3	B	A	47	-	FLOT	1	1 liter
3	B	A	79	-	FLOT	1	1 liter
3	B	A	69	1	FLOT	1	1 liter
3	B	A	70	1	FLOT	1	1 liter
3	B	A	71	3	FLOT	1	1 liter
3	B	A	54	1	FLOT	1	1 liter
3	B	A	75	2	FLOT	1	1 liter
3	B	B	54	-	FLOT	1	1 liter
3	B	B	57	-	FLOT	1	1 liter
3	B	B	21	4	FLOT	1	1 liter
3	B	B	21	5	FLOT	1	1 liter
3	B	B	21	6	FLOT	1	1 liter
3	B	B	55	7	FLOT	1	1 liter
3	B	B	87	9	FLOT	1	1 liter
3	B	B	87	10	FLOT	1	1 liter
3	B	B	56	8	FLOT	1	1 liter
3	B	B	73	11	FLOT	1	1 liter
3	B	B	58	12	FLOT	1	1 liter
3	B	B	74	13	FLOT	1	1 liter
3	B	B	59	14	FLOT	1	1 liter
3	B	B	60	15	FLOT	1	1 liter
3	B	B	75	16	FLOT	1	1 liter
3	B	B	76	17	FLOT	1	1 liter
3	B	B	91	18	FLOT	1	1 liter
3	B	B	91	19	FLOT	1	1 liter
3	B	B	92	19	FLOT	1	1 liter
3	B	B	45	20	FLOT	1	1 liter
3	B	B	94	21	FLOT	1	1 liter
3	B	B	110	22	FLOT	1	1 liter
3	B	B	108	23	FLOT	1	1 liter
3	A	B	146	24	FLOT	1	1 liter
3	B	B	77	27	FLOT	1	1 liter
3	B	B	90, 91, 106,	26	FLOT	1	1 liter
3	B	B	89	25	FLOT	1	1 liter
3	A	S	3	-	Lithic	1	1.8
3	A	S	35	-	Lithic	1	3.1
3	A	S	51	-	Lithic	2	0.6
3	B	S	51	-	Lithic	1	5.4

Unit	Area	Layer	Quad	Rasgo	Material	Count	Weight (g)
3	A	S	50	-	Lithic	1	12.5
3	A	S	82	-	Lithic	5	29.6
3	A	S	83	-	Lithic	2	0.5
3	A	S	101	-	Lithic	2	18.8
3	A	S	118	-	Lithic	1	1.5
3	A	S	102	-	Lithic	1	7.9
3	A	S	137	-	Lithic	1	42.1
3	A	S	139	-	Lithic	2	775
3	A	S	158	-	Lithic	1	2.5
3	A	S	162	-	Lithic	1	0.7
3	A	S	145	-	Lithic	1	<0.1
3	A	S	161	-	Lithic	1	<0.1
3	A	S	1	-	Lithic	1	1.2
3	A	S	15	-	Lithic	1	0.7
3	C	S	143	-	Lithic	1	56.9
3	A	S	81	-	Lithic	1	0.4
3	A	S	131	-	Lithic	1	54.7
3	A	S	136	-	Lithic	3	350.5
3	A	S	4	-	Lithic	5	0.5
3	B	S	21	-	Lithic	1	5.2
3	A	S	152	-	Lithic	1	466
3	A	S	153	-	Lithic	1	70.1
3	B	S	36	-	Lithic	1	2.4
3	B	S	37	-	Lithic	3	2.8
3	B	S	53	-	Lithic	2	31.5
3	B	S	22	-	Lithic	1	0.6
3	B	S	54	-	Lithic	1	2.9
3	B	S	55	-	Lithic	2	10.9
3	B	S	71	-	Lithic	1	1
3	B	S	86	-	Lithic	12	7.3
3	B	S	87	-	Lithic	4	5.3
3	B	S	86	-	Lithic	1	-
3	B	S	56	-	Lithic	1	0.4
3	B	S	72	-	Lithic	2	3.8
3	B	S	73	-	Lithic	1	166.5
3	B	S	58	-	Lithic	2	1
3	B	S	74	-	Lithic	1	24.5
3	B	S	59	-	Lithic	1	1741
3	B	S	59	-	Lithic	1	-
3	B	S	74	-	Lithic	1	24.5
3	B	S	75	-	Lithic	3	91.6
3	B	S	92	-	Lithic	1	0.1
3	B	S	109	-	Lithic	1	0.3
3	B	S	110	-	Lithic	1	0.3
3	B	S	127	-	Lithic	1	1.9
3	B	S	63	-	Lithic	2	0.5

Unit	Area	Layer	Quad	Rasgo	Material	Count	Weight (g)
3	B	S	79	-	Lithic	1	0.2
3	B	S	58	-	Lithic	1	0.3
3	B	S	72		Lithic	1	19
3	A	A	3	-	Lithic	1	5.2
3	A	A	51	-	Lithic	2	0.5
3	A	A	120	-	Lithic	2	<0.1
3	A	A	103	-	Lithic	1	20
3	A	A	137	-	Lithic	1	0.7
3	A	A	121	-	Lithic	2	0.4
3	C	A	143	-	Lithic	1	42.3
3	B	A	21	-	Lithic	1	0.1
3	B	A	22	-	Lithic	2	0.8
3	B	A	23	-	Lithic	1	0.2
3	B	A	39	-	Lithic	2	0.5
3	B	A	35	-	Lithic	1	31
3	B	A	54	-	Lithic	3	0.5
3	B	A	55	-	Lithic	5	0.6
3	B	A	56	-	Lithic	4	44.4
3	B	A	52	-	Lithic	1	4.6
3	B	A	53	-	Lithic	2	0.2
3	B	A	68	-	Lithic	4	0.9
3	B	A	70	-	Lithic	3	<0.1
3	B	A	71	-	Lithic	6	7.7
3	B	A	72	-	Lithic	1	7.4
3	B	A	57	-	Lithic	1	2.4
3	B	A	86	-	Lithic	1	<0.1
3	B	A	37	-	Lithic	2	1.3
3	B	A	67	-	Lithic	3	4.3
3	B	A	84	-	Lithic	1	1.8
3	B	A	85	-	Lithic	2	0.6
3	B	A	69	-	Lithic	1	0.5
3	B	A	87	-	Lithic	3	1.8
3	B	A	88	-	Lithic	2	3
3	B	A	89	-	Lithic	2	8.6
3	B	A	73	-	Lithic	2	8.1
3	B	A	90	-	Lithic	1	0.2
3	B	A	74	-	Lithic	3	1
3	B	A	60	-	Lithic	1	0.2
3	B	A	30	-	Lithic	1	0.5
3	B	A	58	-	Lithic	3	5.3
3	B	A	59	-	Lithic	4	9.8
3	B	A	53	1	Lithic	3	3.8
3	B	A	75	-	Lithic	10	6.7
3	B	A	93	-	Lithic	2	1.5
3	B	A	46		Lithic	1	1.2
3	B	A	76	-	Lithic	15	5.4

Unit	Area	Layer	Quad	Rasgo	Material	Count	Weight (g)
3	B	A	107	-	Lithic	1	2.9
3	B	A	110	-	Lithic	1	0.5
3	B	A	94	-	Lithic	1	49.5
3	B	A	93	-	Lithic	1	0.5
3	B	A	63	-	Lithic	1	0.4
3	B	A	96	-	Lithic	1	0.5
3	B	A	129	-	Lithic	1	4.9
3	B	A	128	-	Lithic	2	0.4
3	B	A	126	-	Lithic	1	1.3
3	B	A	127	-	Lithic	1	<0.1
3	B	A	69	1	Lithic	2	3.3
3	B	A	70	1	Lithic	1	0.8
3	B	A	54	1	Lithic	1	1.6
3	A	B	101	-	Lithic	1	13.2
3	B	B	54	-	Lithic	6	13
3	B	B	57	-	Lithic	2	<0.1
3	B	B	74	13	Lithic	1	0.5
3	B	B	60	15	Lithic	4	<0.1
3	B	B	75	16	Lithic	1	3.2
3	B	B	56	8	Lithic	1	<0.1
3	B	B	76	17	Lithic	2	1.3
3	B	B	91	18	Lithic	1	0.6
3	B	B	91	19	Lithic	2	39.6
3	B	B	92	19	Lithic	1	15.4
3	B	B	110	22	Lithic	1	1841
3	B	B	77	27	Lithic	1	0.1
3	B	B	89	25	Lithic	1	0.1
3	B	S	67	-	Marine Shell	2	0.1
3	A	S	82	-	Marine Shell	1	0.5
3	A	S	83	-	Marine Shell	1	0.4
3	A	S	138	-	Marine Shell	1	0.8
3	A	S	145	-	Marine Shell	1	0.5
3	C	S	159	-	Marine Shell	1	0.6
3	A	S	81	-	Marine Shell	1	0.3
3	C	S	142	-	Marine Shell	1	1.3
3	C	S	105	-	Marine Shell	2	1.5
3	B	S	69	-	Marine Shell	1	1.7
3	B	S	86	-	Marine Shell	1	0.2
3	B	S	87	-	Marine Shell	1	0.2
3	B	S	40	-	Marine Shell	1	0.1
3	B	S	58	-	Marine Shell	1	<0.1
3	C	S	106	-	Marine Shell	11	0.7
3	A	A	139	-	Marine Shell	1	0.3
3	A	A	145	-	Marine Shell	1	3.9
3	C	A	143	-	Marine Shell	1	0.7
3	B	A	21	-	Marine Shell	1	0.1

Unit	Area	Layer	Quad	Rasgo	Material	Count	Weight (g)
3	B	A	53	-	Marine Shell	1	<0.1
3	B	A	70	-	Marine Shell	3	0.1
3	B	A	87	-	Marine Shell	4	7.3
3	B	A	88	-	Marine Shell	2	0.6
3	B	A	89	-	Marine Shell	1	<0.1
3	B	A	73	-	Marine Shell	1	0.1
3	B	A	74	-	Marine Shell	2	1.6
3	B	A	106	-	Marine Shell	1	0.5
3	B	A	53	1	Marine Shell	5	0.4
3	B	A	75	-	Marine Shell	1	0.3
3	B	A	76	-	Marine Shell	1	0.2
3	B	A	91	-	Marine Shell	1	1.2
3	B	A	92	-	Marine Shell	3	<0.1
3	B	A	109	-	Marine Shell	1	0.8
3	B	A	96	-	Marine Shell	1	<0.1
3	B	A	85	-	Marine Shell	1	0.1
3	B	B	57	-	Marine Shell	1	2
3	B	B	91	18	Marine Shell	1	<0.1
3	B	B	89	25	Marine Shell	2	0.1
3	B	A	54	-	Metal	1	5.2
3	B	A	58	-	Metal	1	13.9
3	B	B	74	13	Metal	1	1
3	A	S	19	-	Animal Bone	1	<0.1
3	A	S	50	-	Animal Bone	1	0.2
3	A	S	66	-	Animal Bone	1	0.8
3	B	S	67	-	Animal Bone	1	1.2
3	A	S	82	-	Animal Bone	2	0.3
3	A	S	100	-	Animal Bone	2	0.7
3	A	S	118	-	Animal Bone	6	0.3
3	A	S	137	-	Animal Bone	1	1.5
3	A	S	147	-	Animal Bone	1	0.5
3	C	S	143	-	Animal Bone	1	0.9
3	A	S	4	-	Animal Bone	2	0.4
3	C	S	142	-	Animal Bone	4	0.4
3	B	S	125	-	Animal Bone	1	<0.1
3	B	S	52	-	Animal Bone	5	3.3
3	B	S	53	-	Animal Bone	10	5.2
3	B	S	69	-	Animal Bone	5	3.8
3	B	S	85	-	Animal Bone	1	0.3
3	B	S	39	-	Animal Bone	1	0.3
3	B	S	54	-	Animal Bone	4	4.9
3	B	S	55	-	Animal Bone	2	3.1
3	B	S	70	-	Animal Bone	10	4.7
3	B	S	71	-	Animal Bone	3	2.3
3	B	S	86	-	Animal Bone	1	0.6
3	B	S	87	-	Animal Bone	1	0.3

Unit	Area	Layer	Quad	Rasgo	Material	Count	Weight (g)
3	B	S	24	-	Animal Bone	1	<0.1
3	A	S	26	-	Animal Bone	15	6.8
3	B	S	72	-	Animal Bone	14	3.8
3	B	S	73	-	Animal Bone	1	1.7
3	B	S	58	-	Animal Bone	30	14.1
3	B	S	42	-	Animal Bone	3	2.8
3	B	S	74	-	Animal Bone	3	1.4
3	B	S	59	-	Animal Bone	6	2.8
3	B	S	74	-	Animal Bone	3	1.4
3	B	S	75	-	Animal Bone	25	6.6
3	B	S	91	-	Animal Bone	4	0.9
3	B	S	106	-	Animal Bone	3	0.5
3	B	S	90	-	Animal Bone	17	5.3
3	B	S	60	-	Animal Bone	10	3.6
3	B	S	76	-	Animal Bone	1	0.8
3	C	S	106	-	Animal Bone	1	1.1
3	B	S	108	-	Animal Bone	1	0.1
3	B	S	109	-	Animal Bone	1	0.3
3	B	S	126	-	Animal Bone	2	6.3
3	B	S	78	-	Animal Bone	17	4.1
3	B	S	94	-	Animal Bone	1	0.4
3	B	S	127	-	Animal Bone	11	0.7
3	B	S	79	-	Animal Bone	1	0.8
3	B	S	80	-	Animal Bone	7	5.6
3	B	S	96	-	Animal Bone	2	0.2
3	B	S	113	-	Animal Bone	2	6.6
3	B	S	130	-	Animal Bone	1	2.2
3	A	A	19	-	Animal Bone	1	0.2
3	A	A	51	-	Animal Bone	6	0.4
3	A	A	101	-	Animal Bone	22	9.3
3	A	A	118	-	Animal Bone	9	12.4
3	A	A	119	-	Animal Bone	5	1.7
3	A	A	120	-	Animal Bone	26	9.7
3	A	A	103	-	Animal Bone	3	1.1
3	A	A	102	-	Animal Bone	1	0.3
3	A	A	121	-	Animal Bone	6	5
3	A	A	105	-	Animal Bone	1	0.4
3	A	A	140	-	Animal Bone	3	0.7
3	A	A	124	-	Animal Bone	3	0.7
3	C	A	141	-	Animal Bone	3	0.4
3	B	A	125	-	Animal Bone	1	0.4
3	C	A	144	-	Animal Bone	11	3.2
3	C	A	142	-	Animal Bone	5	0.1
3	C	A	143	-	Animal Bone	27	2.5
3	A	A	147	-	Animal Bone	5	2.8
3	C	A	159	-	Animal Bone	1	0.1

Unit	Area	Layer	Quad	Rasgo	Material	Count	Weight (g)
3	B	A	5	-	Animal Bone	1	0.4
3	B	A	21	-	Animal Bone	4	0.2
3	B	A	22	-	Animal Bone	5	0.2
3	B	A	38	-	Animal Bone	17	5
3	B	A	39	-	Animal Bone	4	1.6
3	B	A	41	-	Animal Bone	15	4
3	B	A	36	-	Animal Bone	1	0.1
3	B	A	51	-	Animal Bone	2	0.4
3	B	A	54	-	Animal Bone	47	14.4
3	B	A	55	-	Animal Bone	16	2.7
3	B	A	56	-	Animal Bone	21	8.2
3	B	A	37	-	Animal Bone	11	1.4
3	B	A	52	-	Animal Bone	9	0.8
3	B	A	53	-	Animal Bone	8	1.3
3	B	A	68	-	Animal Bone	57	11.3
3	B	A	70	-	Animal Bone	28	7.8
3	B	A	71	-	Animal Bone	16	6
3	B	A	72	-	Animal Bone	32	42.3
3	B	A	57	-	Animal Bone	40	19.3
3	B	A	86	-	Animal Bone	18	6.6
3	B	A	67	-	Animal Bone	6	0.8
3	B	A	84	-	Animal Bone	11	3.2
3	B	A	85	-	Animal Bone	22	2.9
3	B	A	69	-	Animal Bone	8	1.1
3	B	A	87	-	Animal Bone	67	11.1
3	B	A	88	-	Animal Bone	17	9.4
3	B	A	89	-	Animal Bone	14	3.4
3	B	A	73	-	Animal Bone	9	6
3	B	A	90	-	Animal Bone	62	14.5
3	B	A	74	-	Animal Bone	88	28.3
3	B	A	74	-	Animal Bone	2	2
3	B	A	26	-	Animal Bone	18	0.8
3	B	A	42	-	Animal Bone	1	7.7
3	B	A	43	-	Animal Bone	10	1.2
3	B	A	44	-	Animal Bone	8	0.7
3	B	A	60	-	Animal Bone	33	12
3	B	A	58	-	Animal Bone	147	24.4
3	B	A	59	-	Animal Bone	156	35.7
3	B	A	53	1	Animal Bone	10	2.9
3	B	A	75	-	Animal Bone	78	18.3
3	B	A	75	-	Animal Bone	10	3.1
3	B	A	76	-	Animal Bone	24	7.4
3	B	A	77	-	Animal Bone	3	0.5
3	B	A	78	-	Animal Bone	4	1.6
3	B	A	93	-	Animal Bone	22	8.7
3	B	A	62	-	Animal Bone	2	1

Unit	Area	Layer	Quad	Rasgo	Material	Count	Weight (g)
3	B	A	46	-	Animal Bone	4	0.7
3	B	A	91	-	Animal Bone	8	3.7
3	B	A	92	-	Animal Bone	8	2.2
3	B	A	107	-	Animal Bone	6	1.1
3	B	A	108	-	Animal Bone	22	2.5
3	B	A	109	-	Animal Bone	61	4.2
3	B	A	110	-	Animal Bone	19	5.7
3	B	A	94	-	Animal Bone	4	0.7
3	B	A	96	-	Animal Bone	48	42.7
3	B	A	112	-	Animal Bone	10	1.4
3	B	A	64	-	Animal Bone	1	0.4
3	B	A	113	-	Animal Bone	27	4.8
3	B	A	129	-	Animal Bone	1	<0.1
3	B	A	128	-	Animal Bone	-	-
3	B	A	126	-	Animal Bone	5	0.4
3	B	A	127	-	Animal Bone	7	<0.1
3	B	A	79	-	Animal Bone	9	0.9
3	B	A	130	-	Animal Bone	16	1.6
3	B	A	104	-	Animal Bone	1	0.3
3	B	A	105	-	Animal Bone	1	<0.1
3	B	A	103	-	Animal Bone	4	0.1
3	B	A	102	-	Animal Bone	4	0.2
3	B	A	106	-	Animal Bone	5	0.2
3	B	A	69	1	Animal Bone	13	0.9
3	B	A	70	1	Animal Bone	10	0.9
3	B	A	71	3	Animal Bone	6	0.6
3	B	A	54	1	Animal Bone	4	0.7
3	B	A	75	2	Animal Bone	3	0.3
3	A	B	122	-	Animal Bone	1	1.2
3	B	B	54	-	Animal Bone	40	3.1
3	C	B	143	-	Animal Bone	1	2.7
3	B	B	57	-	Animal Bone	24	5.9
3	B	B	56	-	Animal Bone	41	8.1
3	B	B	56	8	Animal Bone	4	0.2
3	B	B	73	11	Animal Bone	24	0.8
3	B	B	58	12	Animal Bone	2	<0.1
3	B	B	74	13	Animal Bone	15	2.3
3	B	B	59	14	Animal Bone	102	18.8
3	B	B	60	15	Animal Bone	1	<0.1
3	B	B	75	16	Animal Bone	3	1.8
3	B	B	76	17	Animal Bone	5	1.3
3	B	B	91	18	Animal Bone	16	2.6
3	B	B	92	19	Animal Bone	27	7.4
3	B	B	108	19	Animal Bone	4	1.1
3	B	B	77	27	Animal Bone	47	41
3	B	B	90, 91, 106,	26	Animal Bone	45	16.3

Unit	Area	Layer	Quad	Rasgo	Material	Count	Weight (g)
3	B	B	89	25	Animal Bone	8	5.3
3	B	A	59	-	Chalk	40	2.1
4	-	S	20	-	Botanical	-	6.6
4	-	S	17	-	Botanical	-	3.1
4	A	A	33	-	C14	1	1.2
4	A	A	25	1	C14	1	2.3
4	-	S	33	-	Carbon	-	<0.1
4	-	S	25	-	Carbon	-	0.1
4	A	A	33	-	Carbon	-	1.2
4	A	A	32	-	Carbon	-	<0.1
4	A	A	27	-	Carbon	-	<0.1
4	A	A	26	-	Carbon	-	0.1
4	A	A	25	-	Carbon	-	0.1
4	B	A	27	-	Carbon	-	0.2
4	B	A	21	-	Carbon	-	<0.1
4	B	B	12	2	Carbon	-	0.7
4	A	A	11	-	Carbon	-	0.4
4	A	A	4	-	Carbon	-	<0.1
4	B	B	20	-	Carbon	-	0.4
4	B	B	5,6,8,9	-	Carbon	-	<0.1
4	-	S	31	-	Ceramic	4	35.1
4	-	S	32	-	Ceramic	2	4.9
4	-	S	28	-	Ceramic	4	82.3
4	-	S	29	-	Ceramic	1	4
4	-	S	30	-	Ceramic	3	10.8
4	-	S	25	-	Ceramic	4	16.8
4	-	S	26	-	Ceramic	2	5.8
4	-	S	27	-	Ceramic	6	44.1
4	-	S	22	-	Ceramic	5	21.9
4	-	S	23	-	Ceramic	2	7.8
4	-	S	24	-	Ceramic	1	24.6
4	-	S	19	-	Ceramic	13	57.4
4	-	S	20	-	Ceramic	2	3.2
4	-	S	21	-	Ceramic	1	17.5
4	-	S	16	-	Ceramic	5	19
4	-	S	17	-	Ceramic	4	35.8
4	-	S	13	-	Ceramic	3	10.3
4	-	S	14	-	Ceramic	2	9.7
4	-	S	15	-	Ceramic	1	7.5
4	-	S	10	-	Ceramic	10	97.9
4	-	S	11	-	Ceramic	4	61.8
4	-	S	12	-	Ceramic	1	6.3
4	-	S	8	-	Ceramic	3	14.7
4	-	S	4	-	Ceramic	9	62.1
4	-	S	5	-	Ceramic	1	1.9
4	-	S	1	-	Ceramic	8	75.9

Unit	Area	Layer	Quad	Rasgo	Material	Count	Weight (g)
4	-	S	2	-	Ceramic	1	4.8
4	-	S	3	-	Ceramic	1	7.3
4	A	A	33	-	Ceramic	5	40.3
4	A	A	32	-	Ceramic	7	29.5
4	A	A	30	-	Ceramic	1	2.1
4	A	A	29	-	Ceramic	4	31.9
4	A	A	27	-	Ceramic	5	23.6
4	A	A	28	-	Ceramic	1	0.7
4	A	A	26	-	Ceramic	3	15.1
4	A	A	25	-	Ceramic	1	3.8
4	A	A	19	-	Ceramic	1	2.3
4	A	A	13	-	Ceramic	1	4.1
4	A	A	10	-	Ceramic	3	13.1
4	B	A	24	-	Ceramic	1	1.5
4	B	A	23	-	Ceramic	4	73
4	B	A	20	-	Ceramic	3	17.7
4	B	B	12	2	Ceramic	11	214
4	B	A	9	-	Ceramic	4	31.8
4	A	A	25	1	Ceramic	1	6.1
4	A	A	14	-	Ceramic	11	116.6
4	A	A	15	-	Ceramic	1	7.7
4	B	A	8	-	Ceramic	2	82.9
4	A	A	11	-	Ceramic	1	26.3
4	B	A	5	-	Ceramic	4	43.6
4	A	A	4	-	Ceramic	3	11.1
4	B	B	20	-	Ceramic	11	79.7
4	B	B	5,6,8,9	-	Ceramic	2	15.1
4	A	A	32	-	Crustacean	1	0.2
4	A	A	16	-	Crustacean	1	0.1
4	A	A	10	-	Crustacean	1	0.1
4	A	A	33	-	FLOT	1	1 liter
4	A	A	32	-	FLOT	1	1 liter
4	A	A	31	-	FLOT	1	1 liter
4	A	A	30	-	FLOT	1	1 liter
4	A	A	29	-	FLOT	1	1 liter
4	A	A	27	-	FLOT	1	1 liter
4	A	A	28	-	FLOT	1	1 liter
4	A	A	26	-	FLOT	1	1 liter
4	B	B	12	2	FLOT	1	2 liters
4	B	B	12	2	FLOT	1	2 liters
4	A	A	25	1	FLOT	1	2 liters
4	A	A	25	1	FLOT	1	2 liters
4	A	A	25	1	FLOT	1	2 liters
4	B	B	20	-	FLOT	1	1 liter
4	B	B	5,6,8,9	-	FLOT	1	2 liters
4	B	C	5,6,8,9	-	FLOT	1	2 liters

Unit	Area	Layer	Quad	Rasgo	Material	Count	Weight (g)
4	-	S	31	-	Lithic	2	4.1
4	-	S	32	-	Lithic	2	3
4	-	S	28	-	Lithic	3	9.1
4	-	S	26	-	Lithic	2	17
4	-	S	19	-	Lithic	3	4.1
4	-	S	20	-	Lithic	1	2.3
4	-	S	16	-	Lithic	7	117.9
4	-	S	17	-	Lithic	1	0.7
4	-	S	13	-	Lithic	2	15
4	-	S	10	-	Lithic	1	7.7
4	-	S	8	-	Lithic	1	1.8
4	-	S	4	-	Lithic	1	41.3
4	A	A	32	-	Lithic	5	54.9
4	A	A	29	-	Lithic	1	10.8
4	A	A	27	-	Lithic	2	17.7
4	B	B	12	2	Lithic	1	6.6
4	A	A	14	-	Lithic	1	17.4
4	A	A	27	-	Marine Shell	1	1
4	B	B	5,6,8,9	-	Metal	1	1.1
4	B	B	5,6,8,9	-	Muestra	1	159.7
4	-	S	31	-	Animal Bone	2	1.3
4	-	S	32	-	Animal Bone	6	1.8
4	-	S	33	-	Animal Bone	5	0.7
4	-	S	25	-	Animal Bone	2	1
4	-	S	26	-	Animal Bone	3	4.7
4	-	S	19	-	Animal Bone	7	2.1
4	-	S	16	-	Animal Bone	3	2.9
4	-	S	13	-	Animal Bone	2	0.3
4	-	S	10	-	Animal Bone	4	0.6
4	-	S	11	-	Animal Bone	3	1.9
4	-	S	7	-	Animal Bone	6	1.2
4	-	S	4	-	Animal Bone	28	19.5
4	-	S	5	-	Animal Bone	1	0.4
4	-	S	1	-	Animal Bone	1	0.4
4	-	S	3	-	Animal Bone	1	0.1
4	A	A	33	-	Animal Bone	11	4.2
4	A	A	32	-	Animal Bone	36	10.3
4	A	A	31	-	Animal Bone	3	0.9
4	A	A	30	-	Animal Bone	2	1
4	A	A	29	-	Animal Bone	9	2.5
4	A	A	27	-	Animal Bone	16	5.2
4	A	A	28	-	Animal Bone	2	0.6
4	A	A	26	-	Animal Bone	12	8
4	A	A	25	-	Animal Bone	6	0.8
4	A	A	22	-	Animal Bone	3	0.6
4	A	A	13	-	Animal Bone	1	0.5

Unit	Area	Layer	Quad	Rasgo	Material	Count	Weight (g)
4	A	A	10	-	Animal Bone	1	0.1
4	B	A	27	-	Animal Bone	2	0.4
4	B	A	24	-	Animal Bone	5	1.8
4	B	A	23	-	Animal Bone	6	3.7
4	B	A	21	-	Animal Bone	1	0.6
4	B	A	20	-	Animal Bone	11	2.9
4	A	B	17	-	Animal Bone	7	0.7
4	B	B	12	2	Animal Bone	65	12.4
4	B	A	9	-	Animal Bone	10	4.5
4	A	A	14	-	Animal Bone	10	3.1
4	A	A	7	-	Animal Bone	1	0.5
4	B	A	8	-	Animal Bone	3	3
4	A	A	11	-	Animal Bone	10	6.2
4	B	A	5	-	Animal Bone	7	5.3
4	A	A	4	-	Animal Bone	12	6.4
4	A	A	2	-	Animal Bone	6	2.4
4	B	B	20	-	Animal Bone	71	40
4	B	B	5,6,8,9	-	Animal Bone	15	20.5
5	B	B	20,21	3	Botanical	-	0.1
5	B	A	5	-	C14	1	2.1
5	B	B	20, 21	3	C14	1	2.5
5	A	S	24	-	Carbon	-	0.2
5	B	S	23	-	Carbon	-	0.4
5	B	S	18	-	Carbon	-	0.2
5	B	A	23	-	Carbon	-	0.2
5	B	A	21	-	Carbon	-	0.1
5	B	A	15	-	Carbon	-	0.2
5	B	A	12	-	Carbon	-	0.1
5	B	B	7	1	Carbon	-	<0.1
5	B	A	5	-	Carbon	-	<0.1
5	B	B	11	4	Carbon	-	0.1
5	B	B	20, 21	3	Carbon	-	0.8
5	B	B	16, 17	2	Carbon	-	1.3
5	A	S	24	-	Ceramic	1	3.7
5	B	S	20	-	Ceramic	1	3.1
5	B	S	19	-	Ceramic	1	9.9
5	B	S	18	-	Ceramic	1	15.9
5	B	S	17	-	Ceramic	5	78
5	B	S	15	-	Ceramic	1	26
5	B	S	14	-	Ceramic	1	23.5
5	B	S	12	-	Ceramic	4	68.7
5	B	S	11	-	Ceramic	3	34.1
5	B	S	6	-	Ceramic	2	17.2
5	B	S	4	-	Ceramic	1	13
5	B	S	3	-	Ceramic	4	75.5
5	B	S	8	-	Ceramic	2	21.5

Unit	Area	Layer	Quad	Rasgo	Material	Count	Weight (g)
5	B	S	20	-	Ceramic	1	10.3
5	B	A	24	-	Ceramic	1	15.2
5	B	A	23	-	Ceramic	1	1.8
5	B	A	22	-	Ceramic	2	13.1
5	B	A	21	-	Ceramic	3	41.1
5	B	A	20	-	Ceramic	2	25.6
5	B	A	19	-	Ceramic	1	22.6
5	B	A	18	-	Ceramic	4	42.6
5	B	A	14	-	Ceramic	1	121.2
5	B	A	15	-	Ceramic	8	211
5	B	A	12	-	Ceramic	1	24.7
5	B	A	11	-	Ceramic	1	5
5	B	A	10	-	Ceramic	5	31.9
5	B	A	9	-	Ceramic	3	23.2
5	B	A	8	-	Ceramic	1	12.6
5	B	A	7	-	Ceramic	3	40.9
5	B	A	4	-	Ceramic	1	26.2
5	B	A	5	-	Ceramic	2	60.1
5	B	A	1	-	Ceramic	1	21.6
5	B	A	2	-	Ceramic	10	175.9
5	B	A	3	-	Ceramic	1	25.3
5	B	B	11	4	Ceramic	12	985.9
5	B	B	16, 17	2	Ceramic	1	1.7
5	B	B	17	2	Ceramic	1	23.8
5	B	A	23	-	FLOT	1	1 liter
5	B	A	21	-	FLOT	1	1 liter
5	B	A	20	-	FLOT	1	1 liter
5	B	A	17	-	FLOT	1	1 liter
5	B	A	18	-	FLOT	1	1 liter
5	B	A	14	-	FLOT	1	1 liter
5	B	A	15	-	FLOT	1	1 liter
5	B	A	12	-	FLOT	1	1 liter
5	B	A	11	-	FLOT	1	1 liter
5	B	A	9	-	FLOT	1	1 liter
5	B	A	8	-	FLOT	1	1 liter
5	B	B	7	1	FLOT	1	1 liter
5	B	B	4	1	FLOT	1	1 liter
5	B	A	5	-	FLOT	1	1 liter
5	B	A	6	-	FLOT	1	1 liter
5	B	A	2	-	FLOT	1	1 liter
5	B	A	3	-	FLOT	1	1 liter
5	B	B	11	4	FLOT	1	2 liters
5	B	B	21,21	3	FLOT	1	2 liters
5	B	B	16, 17	2	FLOT	1	2 liters
5	B	S	22	-	Lithic	1	0.7
5	B	S	20	-	Lithic	1	0.9

Unit	Area	Layer	Quad	Rasgo	Material	Count	Weight (g)
5	B	S	19	-	Lithic	8	19.3
5	B	S	16	-	Lithic	3	2.2
5	B	S	12	-	Lithic	1	3.8
5	B	S	10	-	Lithic	2	1
5	B	S	9	-	Lithic	1	2.1
5	B	S	3	-	Lithic	2	4.4
5	B	S	5	-	Lithic	2	17
5	B	A	23	-	Lithic	1	3.2
5	B	A	22	-	Lithic	3	4.6
5	B	A	19		Lithic	2	3.5
5	B	A	18	-	Lithic	1	0.8
5	B	A	12	-	Lithic	2	1.7
5	B	A	10	-	Lithic	1	0.4
5	B	A	9	-	Lithic	2	3.3
5	B	A	8	-	Lithic	2	3
5	B	A	7	-	Lithic	1	0.6
5	B	B	4	1	Lithic	2	2.3
5	B	A	5	-	Lithic	1	0.6
5	B	A	5	-	Lithic	1	1.2
5	B	A	1	-	Lithic	1	2.2
5	B	A	2	-	Lithic	1	2.3
5	B	A	3	-	Lithic	1	<0.1
5	B	B	20,21	3	Lithic	2	0.5
5	B	B	16,17	2	Lithic	9	7.1
5	B	B	17	2	Lithic	4	4.7
5	B	S	17	-	Animal Bone	1	2.3
5	B	A	17	-	Animal Bone	3	0.2
5	B	A	10	-	Animal Bone	3	0.4
5	B	A	2	-	Animal Bone	2	0.3
5	B	B	11	4	Animal Bone	2	0.1
5	B	B	20,21	3	Animal Bone	2	<0.1
6	B	A-1	75	1	C14	1	4.1
6	B	A-1	67	1	C14	1	3.7
6	C	B	71	7	C14	1	2.3
6	C	B	70	8	C14	1	2.3
6	D	C	52, 53	16	C14	1	3.1
6	D	S	53	-	Carbon	-	0.3
6	C	A	85	-	Carbon	-	0.3
6	C	A	78	-	Carbon	-	0.1
6	C	A	77	-	Carbon	-	0.6
6	C	A	84	-	Carbon	-	1.3
6	D	A	53	-	Carbon	-	0.1
6	D	A	60	-	Carbon	-	0.1
6	C	A	83	-	Carbon	-	0.6
6	B	A-1	75	1	Carbon	-	7.3

Unit	Area	Layer	Quad	Rasgo	Material	Count	Weight (g)
6	B	A-1	83	-	Carbon	-	3.6
6	B	A-1	74	-	Carbon	-	0.2
6	B	A-1	67	-	Carbon	-	1.6
6	B	A-1	66	-	Carbon	-	2.9
6	A	A	57	-	Carbon	-	<0.1
6	B	A-1	67	1	Carbon	-	5
6	D	A	46	-	Carbon	-	0.1
6	E	A	38	-	Carbon	-	-
6	E	A	37	-	Carbon	-	0.4
6	D	A	45	-	Carbon	1	0.4
6	E	A	44	-	Carbon	-	0.4
6	E	A	28	-	Carbon	-	1.4
6	E	A	19	-	Carbon	-	-
6	E	A	26	-	Carbon	-	<0.1
6	E	A	10	-	Carbon	-	0.2
6	B	A-2	67	2	Carbon	-	1.1
6	B	A-2	75	2	Carbon	-	0.7
6	C	B	71	7	Carbon	-	1
6	B	A-2	82	2	Carbon	-	0.4
6	B	A-2	83	2	Carbon	-	0.3
6	C	B	70	8	Carbon	-	3.1
6	D	B	46	9	Carbon	-	0.4
6	A	B	41, 49	12	Carbon	-	0.5
6	E	B	2	15	Carbon	-	0.8
6	E	B	35	-	Carbon	-	0.4
6	E	B	30	-	Carbon	-	0.4
6	E	B	38	-	Carbon	-	0.8
6	D	B	45	-	Carbon	-	0.2
6	D	B	53	-	Carbon	-	0.2
6	D	C	52, 53	16	Carbon	-	2.9
6	B	A-3	66	2	Carbon	-	0.2
6	B	A-3	75	2	Carbon	-	0.3
6	B	A-3	67	2	Carbon	-	0.7
6	B	A-3	82	2	Carbon	-	0.6
6	B	A-3	76	2	Carbon	-	0.9
6	D	S	7	-	Ceramic	1	3
6	D	S	8	-	Ceramic	4	39.1
6	D	S	16	-	Ceramic	46	430.3
6	D	S	24	-	Ceramic	27	346.6
6	D	S	32	-	Ceramic	6	44.7
6	D	S	40	-	Ceramic	4	26.8
6	D	S	48	-	Ceramic	4	19.4
6	D	S	56	-	Ceramic	15	159.6
6	D	S	64	-	Ceramic	14	136.9
6	C	S	86	-	Ceramic	2	22
6	C	S	87	-	Ceramic	2	112

Unit	Area	Layer	Quad	Rasgo	Material	Count	Weight (g)
6	C	S	88	-	Ceramic	3	24.5
6	C	S	84	-	Ceramic	4	27.9
6	B	S	83	-	Ceramic	1	13.8
6	B	S	82	-	Ceramic	5	46.5
6	A	S	81	-	Ceramic	4	12.7
6	C	S	76	-	Ceramic	2	34.8
6	B	S	75	-	Ceramic	5	19.9
6	B	S	74	-	Ceramic	3	13.9
6	B	S	73	-	Ceramic	3	18.9
6	A	S	73	-	Ceramic	4	23.2
6	C	S	68	-	Ceramic	1	2.9
6	B	S	68	-	Ceramic	2	48.2
6	B	S	66	-	Ceramic	2	5.8
6	A	S	65	-	Ceramic	16	125.8
6	D	S	60	-	Ceramic	7	39.5
6	D	S	59	-	Ceramic	1	2.8
6	D	S	58	-	Ceramic	7	25
6	A	S	57	-	Ceramic	4	37.6
6	D	S	52	-	Ceramic	3	15.3
6	D	S	51	-	Ceramic	5	14.8
6	D	S	50	-	Ceramic	2	14
6	C	S	85	-	Ceramic	5	32.4
6	C	S	80	-	Ceramic	6	57.8
6	C	S	79	-	Ceramic	4	20.3
6	C	S	78	-	Ceramic	9	85.1
6	C	S	77	-	Ceramic	6	50.6
6	C	S	72	-	Ceramic	5	27.3
6	C	S	71	-	Ceramic	2	10.1
6	C	S	70	-	Ceramic	6	16.8
6	C	S	69	-	Ceramic	2	7.3
6	D	S	63	-	Ceramic	3	61.3
6	D	S	62	-	Ceramic	5	61.7
6	D	S	44	-	Ceramic	4	17.3
6	D	S	55	-	Ceramic	10	42.6
6	D	S	54	-	Ceramic	3	14
6	D	S	53	-	Ceramic	8	42.5
6	D	S	47	-	Ceramic	28	226.3
6	D	S	46	-	Ceramic	2	5.2
6	D	S	45	-	Ceramic	9	58
6	D	S	43	-	Ceramic	6	26.1
6	D	S	42	-	Ceramic	2	11.1
6	D	S	39	-	Ceramic	32	222.9
6	E	S	38	-	Ceramic	1	1.6
6	E	S	37	-	Ceramic	4	31.1
6	E	S	36	-	Ceramic	3	67.3
6	E	S	35	-	Ceramic	1	19.5

Unit	Area	Layer	Quad	Rasgo	Material	Count	Weight (g)
6	E	S	34	-	Ceramic	10	82.6
6	A	S	33	-	Ceramic	19	136.1
6	D	S	31	-	Ceramic	12	122.4
6	E	S	30	-	Ceramic	8	50.1
6	E	S	29	-	Ceramic	2	13.3
6	D	S	23	-	Ceramic	15	156
6	D	S	22	-	Ceramic	3	31.3
6	D	S	15	-	Ceramic	16	240.8
6	D	S	14	-	Ceramic	5	56.8
6	E	S	13	-	Ceramic	1	7.4
6	D	S	5	-	Ceramic	1	13.4
6	E	S	28	-	Ceramic	3	11.3
6	E	S	27	-	Ceramic	4	25.6
6	E	S	26	-	Ceramic	1	15.6
6	E	S	25	-	Ceramic	12	56.5
6	E	S	20	-	Ceramic	2	10.5
6	E	S	19	-	Ceramic	1	2.6
6	E	S	18	-	Ceramic	6	46.4
6	A	S	17	-	Ceramic	6	48.1
6	E	S	12	-	Ceramic	4	33.6
6	E	S	11	-	Ceramic	2	12.9
6	A	S	9	-	Ceramic	12	159.6
6	D	S	6	-	Ceramic	2	5.4
6	E	S	4	-	Ceramic	5	56.3
6	E	S	3	-	Ceramic	4	22.8
6	E	S	2	-	Ceramic	2	8.9
6	A	S	1	-	Ceramic	8	52.1
6	C	A	80	-	Ceramic	1	9.1
6	C	A	79	-	Ceramic	4	33.7
6	C	A	78	-	Ceramic	2	14.5
6	C	A	77	-	Ceramic	1	12.5
6	C	A	72	-	Ceramic	1	5.7
6	C	A	70	-	Ceramic	6	36.1
6	D	A	63	-	Ceramic	2	27.4
6	D	A	62	-	Ceramic	2	10.3
6	D	A	55	-	Ceramic	7	51.2
6	D	A	54	-	Ceramic	2	12.6
6	C	A	84	-	Ceramic	10	74.7
6	C	A	76	-	Ceramic	2	10.8
6	D	A	61	-	Ceramic	3	12.6
6	D	A	60	-	Ceramic	10	206
6	D	A	59	-	Ceramic	9	50
6	D	A	58	-	Ceramic	7	45.7
6	D	A	52	-	Ceramic	7	46.8
6	D	A	51	-	Ceramic	3	9.3
6	D	A	50	-	Ceramic	7	31.6

Unit	Area	Layer	Quad	Rasgo	Material	Count	Weight (g)
6	B	A-1	75	-	Ceramic	6	98.2
6	B	A-1	83	-	Ceramic	2	33.6
6	A	A	81	-	Ceramic	1	18.8
6	A	A	73	-	Ceramic	16	132.9
6	B	A-1	82	-	Ceramic	11	106.9
6	B	A-1	74	-	Ceramic	12	109.8
6	B	A-1	67	-	Ceramic	2	8.9
6	A	A	65	-	Ceramic	14	472.4
6	A	A	57	-	Ceramic	22	108.7
6	B	A-1	75	1	Ceramic	1	1.8
6	D	A	47	-	Ceramic	42	274.1
6	D	A	39	-	Ceramic	11	72.6
6	D	A	31	-	Ceramic	23	167.7
6	D	A	46	-	Ceramic	25	247.5
6	D	A	38	-	Ceramic	5	25
6	E	A	38	-	Ceramic	8	81.4
6	D	A	30	-	Ceramic	1	16.6
6	E	A	30	-	Ceramic	4	769
6	D	A	23	-	Ceramic	14	70.1
6	D	A	15	-	Ceramic	4	14.5
6	E	A	22	-	Ceramic	1	3.7
6	D	A	6	-	Ceramic	2	14.8
6	D	A	14	-	Ceramic	4	157.3
6	E	A	37	-	Ceramic	2	7.7
6	E	A	21	-	Ceramic	1	19.5
6	D	A	44	-	Ceramic	2	15.8
6	E	A	13	-	Ceramic	1	15.3
6	E	A	5	-	Ceramic	6	128.3
6	E	A	36	-	Ceramic	7	66.1
6	E	A	28	-	Ceramic	3	21.1
6	E	A	20	-	Ceramic	6	53.7
6	E	A	12	-	Ceramic	1	6.4
6	E	A	4	-	Ceramic	5	97.7
6	D	A	43	-	Ceramic	1	2.3
6	D	A	42	-	Ceramic	9	141.7
6	E	A	35	-	Ceramic	10	57.9
6	E	A	34	-	Ceramic	14	120.8
6	D	A	34	-	Ceramic	5	152.2
6	E	A	27	-	Ceramic	10	90.3
6	E	A	19	-	Ceramic	5	64.8
6	E	A	11	-	Ceramic	4	61.8
6	B	A-2	74	2	Ceramic	42	3633
6	B	A-2	82	2	Ceramic	3	33.4
6	E	A	26	-	Ceramic	2	10.1
6	E	A	18	-	Ceramic	8	56.4
6	E	A	10	-	Ceramic	12	65.5

Unit	Area	Layer	Quad	Rasgo	Material	Count	Weight (g)
6	E	A	3	-	Ceramic	21	232.2
6	E	A	2	-	Ceramic	8	113.3
6	A	A	41	-	Ceramic	2	13.1
6	A	A	33	-	Ceramic	13	121.6
6	A	A	25	-	Ceramic	8	66.4
6	E	A	17	-	Ceramic	8	39.5
6	A	A	9	-	Ceramic	4	75.3
6	A	A	1	-	Ceramic	1	13.8
6	B	A-2	75	2	Ceramic	37	2926
6	B	A-2	76	2	Ceramic	1	7.8
6	C	B	71	7	Ceramic	2	29.5
6	B	A-2	83	2	Ceramic	4	65.5
6	D	B	46	9	Ceramic	12	48.8
6	D	B	59	10	Ceramic	1	2.2
6	A	B	33, 41	13	Ceramic	1	3
6	E	B	2	15	Ceramic	13	264.4
6	E	B	3	15	Ceramic	1	10.3
6	E	B	3	-	Ceramic	3	42.2
6	E	B	4	-	Ceramic	4	38.3
6	E	B	5	-	Ceramic	2	45.7
6	E	B	10	-	Ceramic	1	58.6
6	E	B	12	-	Ceramic	1	5.8
6	E	B	13	-	Ceramic	67	561
6	E	B	20	-	Ceramic	3	13.3
6	E	B	21	-	Ceramic	15	158.8
6	E	B	22	-	Ceramic	27	140.2
6	E	B	26	-	Ceramic	2	18.9
6	E	B	28	-	Ceramic	3	33.5
6	E	B	29	-	Ceramic	4	36.4
6	E	B	35	-	Ceramic	2	15.1
6	E	B	30	-	Ceramic	4	34.1
6	E	B	37	-	Ceramic	5	32.7
6	E	B	38	-	Ceramic	4	24.6
6	D	B	43	-	Ceramic	2	23.8
6	D	B	44	-	Ceramic	8	20.6
6	D	B	45	-	Ceramic	11	68.8
6	D	B	50	-	Ceramic	3	39.4
6	D	B	52	-	Ceramic	4	90.6
6	D	B	53	-	Ceramic	3	18.3
6	D	B	58	-	Ceramic	5	75.6
6	D	B	60	-	Ceramic	2	16.1
6	E	C	27	-	Ceramic	1	65.4
6	D	C	52, 53	16	Ceramic	6	16.1
6	E	C	35	-	Ceramic	2	22.9
6	B	A-3	75	2	Ceramic	1	129.1
6	B	A-3	67	2	Ceramic	13	339.4

Unit	Area	Layer	Quad	Rasgo	Material	Count	Weight (g)
6	B	A-3	76	2	Ceramic	6	30.3
6	B	A-3	66	2	Ceramic	1	1.3
6	A	A	57	-	Crustacean	1	0.2
6	E	A	30	-	Crustacean	1	<0.1
6	D	C	52, 53	16	Crustacean	2	<0.1
6	D	S	54	-	Bead	1	<0.1
6	D	S	15	-	Bead	1	<0.1
6	E	S	18	-	Bead	1	<0.1
6	C	A	77	-	Bead	1	<0.1
6	C	A	70	-	Bead	1	<0.1
6	C	A	69	-	Bead	2	0.3
6	D	A	63	-	Bead	1	<0.1
6	D	A	62	-	Bead	4	0..2
6	E	A	22	-	Bead	1	<0.1
6	E	A	29	-	Bead	2	<0.1
6	C	B	70	8	Bead	2	0.3
6	D	B	46	9	Bead	1	<0.1
6	E	B	21	-	Bead	1	<0.1
6	C	A	80	-	FLOT	1	1 liter
6	C	A	79	-	FLOT	1	1 liter
6	C	A	78	-	FLOT	1	1 liter
6	C	A	85	-	FLOT	1	1 liter
6	C	A	77	-	FLOT	1	1 liter
6	C	A	72	-	FLOT	1	1 liter
6	C	A	71	-	FLOT	1	1 liter
6	C	A	70	-	FLOT	1	1 liter
6	C	A	69	-	FLOT	1	1 liter
6	D	A	63	-	FLOT	1	1 liter
6	D	A	62	-	FLOT	1	1 liter
6	D	A	55	-	FLOT	1	1 liter
6	D	A	54	-	FLOT	1	1 liter
6	C	A	84	-	FLOT	1	1 liter
6	C	A	76	-	FLOT	1	1 liter
6	C	A	68	-	FLOT	1	1 liter
6	D	A	61	-	FLOT	1	1 liter
6	D	A	53	-	FLOT	1	1 liter
6	D	A	60	-	FLOT	1	1 liter
6	D	A	59	-	FLOT	1	1 liter
6	D	A	58	-	FLOT	1	1 liter
6	D	A	52	-	FLOT	1	1 liter
6	D	A	51	-	FLOT	1	1 liter
6	D	A	50	-	FLOT	1	1 liter
6	B	A-1	75	-	FLOT	1	1 liter
6	A	A	81	-	FLOT	1	1 liter
6	A	A	73	-	FLOT	1	1 liter
6	B	A-1	74	-	FLOT	1	1 liter

Unit	Area	Layer	Quad	Rasgo	Material	Count	Weight (g)
6	A	A	65	-	FLOT	1	1 liter
6	A	A	57	-	FLOT	1	1 liter
6	A	A	49	-	FLOT	1	1 liter
6	B	A-1	75	1	FLOT	1	1 liter
6	B	A-1	67	1	FLOT	1	1 liter
6	D	A	47	-	FLOT	1	1 liter
6	D	A	39	-	FLOT	1	1 liter
6	D	A	31	-	FLOT	1	1 liter
6	D	A	23	-	FLOT	1	1 liter
6	D	A	46	-	FLOT	1	1 liter
6	D	A	38	-	FLOT	1	1 liter
6	E	A	38	-	FLOT	1	1 liter
6	D	A	30	-	FLOT	1	1 liter
6	E	A	30	-	FLOT	1	1 liter
6	D	A	15	-	FLOT	1	1 liter
6	E	A	22	-	FLOT	1	1 liter
6	D	A	22	-	FLOT	1	1 liter
6	D	A	6	-	FLOT	1	1 liter
6	D	A	14	-	FLOT	1	1 liter
6	E	A	29	-	FLOT	1	1 liter
6	E	A	37	-	FLOT	1	1 liter
6	D	A	45	-	FLOT	1	1 liter
6	E	A	21	-	FLOT	1	1 liter
6	E	A	13	-	FLOT	1	1 liter
6	D	A	44	-	FLOT	1	1 liter
6	E	A	36	-	FLOT	1	1 liter
6	D	A	5	-	FLOT	1	1 liter
6	E	A	5	-	FLOT	1	1 liter
6	E	A	28	-	FLOT	1	1 liter
6	E	A	20	-	FLOT	1	1 liter
6	E	A	12	-	FLOT	1	1 liter
6	E	A	4	-	FLOT	1	1 liter
6	D	A	43	-	FLOT	1	1 liter
6	E	A	43	-	FLOT	1	1 liter
6	D	A	42	-	FLOT	1	1 liter
6	E	A	35	-	FLOT	1	1 liter
6	E	A	34	-	FLOT	1	1 liter
6	E	A	27	-	FLOT	1	1 liter
6	E	A	19	-	FLOT	1	1 liter
6	E	A	11	-	FLOT	1	1 liter
6	B	A-2	74	2	FLOT	1	1 liter
6	E	A	26	-	FLOT	1	1 liter
6	E	A	18	-	FLOT	1	1 liter
6	E	A	10	-	FLOT	1	1 liter
6	E	A	3	-	FLOT	1	1 liter
6	E	A	2	-	FLOT	1	1 liter

Unit	Area	Layer	Quad	Rasgo	Material	Count	Weight (g)
6	A	A	41	-	FLOT	1	1 liter
6	A	A	33	-	FLOT	1	1 liter
6	A	A	25	-	FLOT	1	1 liter
6	E	A	17	-	FLOT	1	1 liter
6	A	A	9	-	FLOT	1	1 liter
6	A	A	1	-	FLOT	1	1 liter
6	B	A-2	67	2	FLOT	1	1 liter
6	B	A-2	75	2	FLOT	1	1 liter
6	C	B	77	3	FLOT	1	1 liter
6	C	B	79	4	FLOT	1	1 liter
6	C	B	79	5	FLOT	1	1 liter
6	C	B	71	6	FLOT	1	1 liter
6	C	B	71	7	FLOT	1	1 liter
6	C	B	70	8	FLOT	1	1 liter
6	D	B	46	9	FLOT	1	1 liter
6	D	B	59	10	FLOT	1	1 liter
6	A	B	57	11	FLOT	1	1 liter
6	A	B	41, 49	12	FLOT	1	1 liter
6	A	B	33, 41	13	FLOT	1	1 liter
6	E	B	18, 19	14	FLOT	1	1 liter
6	E	B	2	15	FLOT	1	1 liter
6	E	B	3	15	FLOT	1	1 liter
6	E	B	2	-	FLOT	1	1 liter
6	E	B	3	-	FLOT	1	1 liter
6	E	B	4	-	FLOT	1	1 liter
6	E	B	5	-	FLOT	1	1 liter
6	E	B	10	-	FLOT	1	1 liter
6	E	B	11	-	FLOT	1	1 liter
6	E	B	12	-	FLOT	1	1 liter
6	E	B	13	-	FLOT	1	1 liter
6	E	B	18	-	FLOT	1	1 liter
6	E	B	19	-	FLOT	1	1 liter
6	E	B	20	-	FLOT	1	1 liter
6	E	B	21	-	FLOT	1	1 liter
6	E	B	22	-	FLOT	1	1 liter
6	E	B	26	-	FLOT	1	1 liter
6	E	B	27	-	FLOT	1	1 liter
6	E	B	28	-	FLOT	1	1 liter
6	E	B	29	-	FLOT	1	1 liter
6	E	B	34	-	FLOT	1	1 liter
6	E	B	35	-	FLOT	1	1 liter
6	E	B	30	-	FLOT	1	1 liter
6	E	B	36	-	FLOT	1	1 liter
6	E	B	37	-	FLOT	1	1 liter
6	E	B	38	-	FLOT	1	1 liter
6	D	B	42	-	FLOT	1	1 liter

Unit	Area	Layer	Quad	Rasgo	Material	Count	Weight (g)
6	D	B	43	-	FLOT	1	1 liter
6	D	B	44	-	FLOT	1	1 liter
6	D	B	45	-	FLOT	1	1 liter
6	D	B	46	-	FLOT	-	1 liter
6	D	B	50	-	FLOT	1	1 liter
6	D	B	51	-	FLOT	1	1 liter
6	D	B	52	-	FLOT	1	1 liter
6	D	B	53	-	FLOT	1	1 liter
6	D	B	54	-	FLOT	1	1 liter
6	D	B	58	-	FLOT	1	1 liter
6	D	B	59	-	FLOT	1	1 liter
6	D	B	60	-	FLOT	1	1 liter
6	D	B	61	-	FLOT	1	1 liter
6	D	C	52, 53	16	FLOT	1	1 liter
6	E	C	3	17	FLOT	1	1 liter
6	E	C	4	18	FLOT	1	1 liter
6	E	C	35	-	FLOT	1	1 liter
6	B	A-3	76	2	FLOT	1	1 liter
6	D	S	7	-	Lithic	2	6.1
6	D	S	8	-	Lithic	2	7.6
6	D	S	16	-	Lithic	1	180.6
6	D	S	24	-	Lithic	3	18.9
6	D	S	32	-	Lithic	5	46.8
6	D	S	40	-	Lithic	1	25.9
6	D	S	48	-	Lithic	1	1.3
6	D	S	64	-	Lithic	1	2.8
6	C	S	86	-	Lithic	1	0.2
6	C	S	88	-	Lithic	1	2.7
6	B	S	74	-	Lithic	1	<0.1
6	A	S	65	-	Lithic	2	5.1
6	D	S	58	-	Lithic	1	0.8
6	A	S	57	-	Lithic	1	153.8
6	C	S	80	-	Lithic	4	54
6	C	S	78	-	Lithic	1	0.1
6	C	S	72	-	Lithic	6	16
6	C	S	69	-	Lithic	1	2
6	D	S	62	-	Lithic	2	1.4
6	D	S	61	-	Lithic	1	<0.1
6	D	S	55	-	Lithic	10	64.4
6	D	S	47	-	Lithic	10	918
6	D	S	42	-	Lithic	1	7.2
6	D	S	41	-	Lithic	1	1.1
6	D	S	39	-	Lithic	4	72.5
6	E	S	34	-	Lithic	1	5.8
6	A	S	33	-	Lithic	2	177.4
6	D	S	31	-	Lithic	2	40.1

Unit	Area	Layer	Quad	Rasgo	Material	Count	Weight (g)
6	D	S	23	-	Lithic	3	26.5
6	D	S	15	-	Lithic	1	32.6
6	D	S	14	-	Lithic	1	9.1
6	E	S	28	-	Lithic	3	1.6
6	E	S	20	-	Lithic	1	0.7
6	A	S	17	-	Lithic	1	18.1
6	A	S	17	-	Lithic	2	2.4
6	D	S	6	-	Lithic	1	0.7
6	E	S	4	-	Lithic	1	0.9
6	A	S	1	-	Lithic	4	8.5
6	C	A	85	-	Lithic	7	7.4
6	C	A	80	-	Lithic	6	2.9
6	C	A	79	-	Lithic	5	10.9
6	C	A	78	-	Lithic	4	19.5
6	C	A	77	-	Lithic	3	3
6	C	A	72	-	Lithic	6	9.6
6	C	A	71	-	Lithic	2	1.1
6	C	A	70	-	Lithic	10	5.7
6	C	A	69	-	Lithic	4	3
6	D	A	63	-	Lithic	12	14.5
6	D	A	62	-	Lithic	9	5
6	D	A	55	-	Lithic	4	2
6	D	A	54	-	Lithic	4	1.3
6	C	A	76	-	Lithic	5	4.8
6	C	A	68	-	Lithic	5	3.2
6	D	A	61	-	Lithic	5	1.3
6	D	A	60	-	Lithic	3	0.5
6	D	A	59	-	Lithic	3	4
6	D	A	58	-	Lithic	3	0.9
6	D	A	52	-	Lithic	1	0.2
6	A	A	73	-	Lithic	2	7.3
6	B	A-1	74	-	Lithic	1	0.7
6	B	A-1	67	-	Lithic	1	0.3
6	A	A	65	-	Lithic	4	156.2
6	A	A	57	-	Lithic	2	44.4
6	D	A	47	-	Lithic	-	-
6	D	A	39	-	Lithic	1	0.6
6	D	A	46	-	Lithic	2	4.1
6	D	A	38	-	Lithic	3	14.1
6	D	A	30	-	Lithic	1	0.3
6	E	A	30	-	Lithic	4	47.9
6	D	A	23	-	Lithic	7	16.4
6	D	A	15	-	Lithic	1	0.1
6	E	A	22	-	Lithic	1	1.3
6	D	A	22	-	Lithic	2	1.1
6	D	A	6	-	Lithic	1	13.7

Unit	Area	Layer	Quad	Rasgo	Material	Count	Weight (g)
6	D	A	14	-	Lithic	3	26.7
6	E	A	29	-	Lithic	1	6.8
6	E	A	37	-	Lithic	1	29.5
6	E	A	13	-	Lithic	3	3
6	E	A	5	-	Lithic	1	4
6	E	A	36	-	Lithic	1	96.4
6	E	A	28	-	Lithic	3	10.1
6	E	A	20	-	Lithic	2	12.1
6	E	A	4	-	Lithic	1	1.4
6	D	A	43	-	Lithic	1	2.1
6	E	A	35	-	Lithic	1	1.6
6	E	A	34	-	Lithic	1	2.4
6	E	A	19	-	Lithic	3	7.5
6	E	A	11	-	Lithic	1	3.1
6	B	A-2	74	2	Lithic	2	164.8
6	E	A	18	-	Lithic	1	5.9
6	E	A	10	-	Lithic	7	4.1
6	E	A	3	-	Lithic		10.2 5
6	E	A	2	-	Lithic	7	11.7
6	A	A	41	-	Lithic	2	388
6	A	A	33	-	Lithic	2	2.3
6	E	A	17	-	Lithic	1	1.2
6	A	A	9	-	Lithic	1	1053
6	B	A-2	67	2	Lithic	1	4.1
6	B	A-2	75	2	Lithic	4	2.3
6	C	B	79	5	Lithic	1	0.2
6	C	B	71	7	Lithic	2	0.8
6	C	B	70	8	Lithic	1	0.2
6	D	B	46	9	Lithic	4	3
6	D	B	59	10	Lithic	1	4.1
6	E	B	2	15	Lithic	4	2.5
6	E	B	3	15	Lithic	2	2.6
6	E	B	3	-	Lithic	2	6.7
6	E	B	4	-	Lithic	1	5
6	E	B	10	-	Lithic	2	4.8
6	E	B	13	-	Lithic	5	15.2
6	E	B	18	-	Lithic	2	1.8
6	E	B	21	-	Lithic	1	7.7
6	E	B	22	-	Lithic	3	4.8
6	E	B	26	-	Lithic	3	7.8
6	E	B	28	-	Lithic	1	2.7
6	E	B	29	-	Lithic	2	2.6
6	E	B	35	-	Lithic	1	7.9
6	E	B	30	-	Lithic	1	0.8
6	E	B	37	-	Lithic	4	3
6	E	B	38	-	Lithic	1	0.3

Unit	Area	Layer	Quad	Rasgo	Material	Count	Weight (g)
6	D	B	44	-	Lithic	7	6.6
6	D	B	45	-	Lithic	4	4.9
6	D	B	46	-	Lithic	3	1.7
6	D	B	53	-	Lithic	2	4.2
6	D	B	58	-	Lithic	2	13.4
6	D	B	59	-	Lithic	7	5.3
6	D	B	60	-	Lithic	3	1.6
6	D	B	61	-	Lithic	1	0.7
6	C	B	72	-	Lithic	1	1848
6	D	C	52, 53	16	Lithic	9	6.1
6	B	A-3	75	2	Lithic	1	<0.1
6	B	A-3	67	2	Lithic	1	2.9
6	B	A-3	76	2	Lithic	2	157.6
6	D	S	47	-	Marine Shell	1	0.3
6	E	S	34	-	Marine Shell	1	1.1
6	A	S	17	-	Marine Shell	1	0.5
6	A	S	9	-	Marine Shell	1	0.2
6	C	A	80	-	Marine Shell	5	0.9
6	C	A	79	-	Marine Shell	6	0.3
6	C	A	78	-	Marine Shell	4	1
6	C	A	77	-	Marine Shell	1	0.1
6	C	A	69	-	Marine Shell	1	0.1
6	D	A	63	-	Marine Shell	1	0.1
6	D	A	54	-	Marine Shell	2	0.3
6	D	A	53	-	Marine Shell	2	0.2
6	B	A-1	66	-	Marine Shell	1	0.6
6	A	A	57	-	Marine Shell	1	3.1
6	D	A	47	-	Marine Shell	11	2.3
6	D	A	39	-	Marine Shell	-	-
6	D	A	46	-	Marine Shell	6	1.8
6	D	A	5	-	Marine Shell	1	0.6
6	B	A-2	74	2	Marine Shell	1	0.5
6	B	A-2	75	2	Marine Shell	1	0.9
6	C	B	71	7	Marine Shell	1	0.3
6	D	B	46	9	Marine Shell	1	0.5
6	E	B	2	15	Marine Shell	1	0.3
6	B	A-3	67	2	Marine Shell	1	0.7
6	E	A	11	-	Marine Shell	3	1.6
6	B	A-2	75	2	Muestra	-	114.5
6	D	C	52, 53	16	Muestra	1	6.5
6	B	A-3	66	2	Muestra	-	225.2
6	B	A-3	75	2	Muestra	-	156.9
6	D	S	8	-	Animal Bone	1	0.6
6	D	S	40	-	Animal Bone	4	0.8
6	D	S	48	-	Animal Bone	8	0.6
6	D	S	56	-	Animal Bone	1	0.5

Unit	Area	Layer	Quad	Rasgo	Material	Count	Weight (g)
6	D	S	64	-	Animal Bone	3	0.9
6	C	S	84	-	Animal Bone	4	1.5
6	A	S	73	-	Animal Bone	15	6.2
6	D	S	60	-	Animal Bone	1	0.2
6	A	S	57	-	Animal Bone	1	0.8
6	D	S	51	-	Animal Bone	2	0.3
6	A	S	49	-	Animal Bone	2	8.3
6	C	S	80	-	Animal Bone	1	1.3
6	C	S	79	-	Animal Bone	1	1.3
6	C	S	72	-	Animal Bone	1	0.4
6	C	S	69	-	Animal Bone	1	0.9
6	D	S	61	-	Animal Bone	1	<0.1
6	D	S	55	-	Animal Bone	3	0.9
6	D	S	47	-	Animal Bone	16	4.6
6	D	S	46	-	Animal Bone	5	3.3
6	D	S	43	-	Animal Bone	9	5.4
6	D	S	39	-	Animal Bone	5	6.4
6	E	S	38	-	Animal Bone	5	2.4
6	E	S	37	-	Animal Bone	2	0.8
6	E	S	36	-	Animal Bone	18	10.6
6	D	S	31	-	Animal Bone	3	4.5
6	D	S	23	-	Animal Bone	1	0.2
6	D	S	5	-	Animal Bone	1	0.9
6	E	S	28	-	Animal Bone	6	4.1
6	E	S	20	-	Animal Bone	4	5.2
6	A	S	17	-	Animal Bone	1	0.5
6	E	S	11	-	Animal Bone	1	0.3
6	A	S	9	-	Animal Bone	1	0.3
6	D	S	6	-	Animal Bone	1	0.8
6	E	S	4	-	Animal Bone	1	0.2
6	C	A	85	-	Animal Bone	12	2.2
6	C	A	80	-	Animal Bone	18	18.3
6	C	A	79	-	Animal Bone	3	0.9
6	C	A	78	-	Animal Bone	19	13.5
6	C	A	77	-	Animal Bone	3	0.8
6	C	A	72	-	Animal Bone	25	16.9
6	C	A	70	-	Animal Bone	13	2.9
6	C	A	69	-	Animal Bone	4	0.8
6	D	A	63	-	Animal Bone	2	3.6
6	D	A	62	-	Animal Bone	8	0.9
6	D	A	55	-	Animal Bone	21	16.5
6	D	A	54	-	Animal Bone	11	4
6	C	A	84	-	Animal Bone	3	0.8
6	C	A	76	-	Animal Bone	7	2.1
6	C	A	68	-	Animal Bone	3	0.6
6	D	A	61	-	Animal Bone	7	1.3

Unit	Area	Layer	Quad	Rasgo	Material	Count	Weight (g)
6	D	A	53	-	Animal Bone	10	2.1
6	D	A	60	-	Animal Bone	19	6.8
6	D	A	59	-	Animal Bone	4	6.9
6	D	A	58	-	Animal Bone	2	3.5
6	D	A	52	-	Animal Bone	11	2.3
6	D	A	51	-	Animal Bone	3	1.8
6	A	A	73	-	Animal Bone	8	5.3
6	B	A-1	74	-	Animal Bone	6	2.2
6	A	A	65	-	Animal Bone	3	0.5
6	A	A	57	-	Animal Bone	1	0.4
6	A	A	49	-	Animal Bone	3	1
6	D	A	47	-	Animal Bone	25	8.7
6	D	A	39	-	Animal Bone	7	2.5
6	D	A	31	-	Animal Bone	16	18.8
6	D	A	46	-	Animal Bone	11	1.6
6	D	A	38	-	Animal Bone	4	0.4
6	E	A	38	-	Animal Bone	3	1
6	D	A	30	-	Animal Bone	2	0.4
6	E	A	30	-	Animal Bone	5	1.5
6	D	A	23	-	Animal Bone	14	0.9
6	E	A	22	-	Animal Bone	-	-
6	D	A	6	-	Animal Bone	23	2.3
6	E	A	29	-	Animal Bone	8	5.8
6	E	A	37	-	Animal Bone	23	7.3
6	D	A	45	-	Animal Bone	8	5.8
6	E	A	21	-	Animal Bone	2	0.5
6	D	A	44	-	Animal Bone	9	6.2
6	E	A	44	-	Animal Bone	17	3.5
6	E	A	36	-	Animal Bone	3	1
6	E	A	28	-	Animal Bone	1	0.4
6	E	A	20	-	Animal Bone	5	2.3
6	E	A	4	-	Animal Bone	1	1.2
6	D	A	43	-	Animal Bone	11	3.4
6	E	A	43	-	Animal Bone	18	8.8
6	D	A	42	-	Animal Bone	16	2.8
6	E	A	35	-	Animal Bone	15	8.2
6	E	A	34	-	Animal Bone	17	4.2
6	E	A	27	-	Animal Bone	-	-
6	E	A	19	-	Animal Bone	1	1.5
6	E	A	11	-	Animal Bone	13	4.6
6	E	A	26	-	Animal Bone	8	9.7
6	E	A	18	-	Animal Bone	1	0.1
6	E	A	10	-	Animal Bone	1	0.5
6	E	A	3	-	Animal Bone	12	5.7
6	E	A	2	-	Animal Bone	2	0.6
6	A	A	41	-	Animal Bone	1	0.4

Unit	Area	Layer	Quad	Rasgo	Material	Count	Weight (g)
6	A	A	25	-	Animal Bone	3	3.6
6	A	A	17	-	Animal Bone	10	1.5
6	C	B	79	4	Animal Bone	2	2
6	C	B	71	7	Animal Bone	5	0.5
6	D	B	46	9	Animal Bone	11	5.9
6	D	B	59	10	Animal Bone	4	4.3
6	A	B	41, 49	12	Animal Bone	1	0.4
6	E	B	2	15	Animal Bone	13	12.9
6	E	B	3	15	Animal Bone	6	2
6	E	B	3	-	Animal Bone	1	0.7
6	E	B	4	-	Animal Bone	3	2.7
6	E	B	10	-	Animal Bone	9	7.7
6	E	B	12	-	Animal Bone	9	0.5
6	E	B	13	-	Animal Bone	4	4.9
6	E	B	21	-	Animal Bone	10	10.6
6	E	B	22	-	Animal Bone	2	1.8
6	E	B	29	-	Animal Bone	7	6.3
6	E	B	35	-	Animal Bone	6	1.9
6	E	B	30	-	Animal Bone	10	8.3
6	E	B	36	-	Animal Bone	6	1.4
6	E	B	38	-	Animal Bone	14	12.8
6	D	B	44	-	Animal Bone	3	0.6
6	D	B	45	-	Animal Bone	1	0.4
6	D	B	46	-	Animal Bone	3	0.9
6	D	B	51	-	Animal Bone	1	0.3
6	D	B	53	-	Animal Bone	-	0.9
6	D	B	58	-	Animal Bone	5	0.9
6	D	B	59	-	Animal Bone	4	16.6
6	D	B	60	-	Animal Bone	15	8,6
6	D	C	52, 53	16	Animal Bone	27	10.2
6	E	C	3	17	Animal Bone	1	0.2
6	B	A-2	74	2	Oseo Humano	58	19.7
6	B	A-2	82	2	Oseo Humano	38	30.9
6	B	A-2	67	2	Oseo Humano	-	475
6	B	A-2	75	2	Oseo Humano	-	799
6	B	A-2	76	2	Oseo Humano	-	1792
6	B	A-2	83	2	Oseo Humano	19	3.4
6	B	A-3	75	2	Oseo Humano	2	3.8
6	B	A-3	82	2	Oseo Humano	4	2.5
6	B	A-3	76	2	Oseo Humano	1	0.2
6	B	A-2	67	2	Oseo Humano	66	16.1

7	B	S	14	-	Botanical	9	5.3
7	B	S	14	-	Botanical	1	0.3
7	B	S	19	-	Botanical	1	0.9
7	B	A	9	-	Botanical	4	0.8

Unit	Area	Layer	Quad	Rasgo	Material	Count	Weight (g)
7	B	A	24	-	Botanical	9	0.7
7	B	A	23	-	Botanical	1	0.1
7	B	B	18	2	Botanical	-	1041
7	B	B	18	2	Botanical	-	2.9
7	B	B	18	2	Botanical	-	<0.1
7	B	B	18	2	Botanical	-	1.4
7	B	B	18	2	Botanical	1	<0.1
7	B	B	13	2	Botanical	-	2066
7	B	B	13	2	Botanical	-	1.7
7	B	B	13	2	Botanical	-	3.8
7	B	B	13	2	Botanical	6	0.1
7	B	B	13	2	Botanical	1	<0.1
7	B	B	13	2	Botanical	1	<0.1
7	B	B	13	2	Botanical	-	3.7
7	B	B	13	2	Botanical	-	3.2
7	B	B	19	-	Botanical	3	0.2
7	B	C-1	23	9	Botanical	34	1.3
7	B	C-2	32	6	Botanical	-	151.2
7	B	C-2	32	6	Botanical	4	<0.1
7	B	C-2	32	6	Botanical	1	<0.1
7	B	C-2	32	6	Botanical	4	0.1
7	B	C	31	3A	Botanical	1	<0.1
7	B	C-2	31	3B	Botanical	-	1018
7	B	C-2	23	9	Botanical	-	2.3
7	B	B	31	1	C14	1	3.7
7	B	B	18	2	C14	-	41.7
7	B	B	13	2	C14	1	6.3
7	B	C-2	23	9	C14	1	21.1
7	C	S	2	-	Carbon	-	<0.1
7	B	S	7	-	Carbon	-	1.9
7	B	S	8	-	Carbon	-	3.5
7	B	S	14	-	Carbon	-	1
7	B	S	23	-	Carbon	-	0.4
7	B	S	18	-	Carbon	-	0.2
7	B	S	19	-	Carbon	-	0.1
7	B	S	13	-	Carbon	-	0.5
7	B	S	12	-	Carbon	-	0.2
7	A	S	33	-	Carbon	-	0.2
7	A	S	30	-	Carbon	-	0.1
7	B	S	31	-	Carbon	-	1.4
7	B	S	27	-	Carbon	-	0.8
7	A	S	26	-	Carbon	-	0.2
7	A	S	11	-	Carbon	-	-
7	A	S	21	-	Carbon	-	0.3
7	A	S	37	-	Carbon	-	2.5
7	B	S	35	-	Carbon	-	0.2

Unit	Area	Layer	Quad	Rasgo	Material	Count	Weight (g)
7	B	A	7	-	Carbon	-	2.6
7	B	A	8	-	Carbon	-	4.5
7	B	A	9	-	Carbon	-	7.4
7	B	A	12	-	Carbon	-	0.3
7	B	A	13	-	Carbon	-	1.3
7	B	A	14	-	Carbon	-	21.5
7	B	A	19	-	Carbon	-	10.4
7	B	A	28	-	Carbon	-	1
7	B	A	29	-	Carbon	-	1
7	B	A	24	-	Carbon	-	3.1
7	B	A	18	-	Carbon	-	0.7
7	B	A	22	-	Carbon	-	<0.1
7	B	A	23	-	Carbon	-	1.2
7	B	A	27	-	Carbon	-	1.9
7	B	A	33	-	Carbon	-	0.8
7	A	A	21	-	Carbon	-	0.3
7	B	A	32	-	Carbon	-	0.4
7	A	A	30	-	Carbon	-	<0.1
7	B	A	31	-	Carbon	-	0.7
7	B	A	36	-	Carbon	-	0.1
7	B	A	37	-	Carbon	-	<0.1
7	B	A	35	-	Carbon	-	0.3
7	A	A	16	-	Carbon	-	0.3
7	B	B	24	-	Carbon	-	0.1
7	B	B	31	1	Carbon	-	1.7
7	B	B	18	-	Carbon	1	0.2
7	B	B	18	2	Carbon	-	4.6
7	B	B	27	-	Carbon	-	1.6
7	B	B	31	-	Carbon	-	0.8
7	B	B	13	2	Carbon	-	14.8
7	B	B	13	4	Carbon	-	0.1
7	B	B	14	-	Carbon	-	2.7
7	B	B	32	-	Carbon	-	0.4
7	B	B	28	-	Carbon	-	0.7
7	B	B	23	-	Carbon	-	1.6
7	B	B	19	-	Carbon	-	9.4
7	B	B	36	-	Carbon	-	0.7
7	B	B	37	-	Carbon	-	0.9
7	B	B	9	-	Carbon	-	0.7
7	B	B	8	-	Carbon	-	1
7	B	B	35	-	Carbon	-	6.7
7	B	B	33	-	Carbon	-	0.2
7	B	B	25	-	Carbon	-	0.2
7	B	B	7	-	Carbon	-	0.8
7	B	B	29	-	Carbon	-	1.1
7	B	C	14	5	Carbon	-	0.4

Unit	Area	Layer	Quad	Rasgo	Material	Count	Weight (g)
7	B	C	36	11	Carbon	-	0.2
7	B	C	23	8	Carbon	-	0.2
7	B	C	35	12	Carbon	-	14.9
7	B	C-1	23	9	Carbon	-	2.2
7	B	C	28	7	Carbon	-	0.2
7	B	C-1	32	6	Carbon	-	0.9
7	B	C-2	32	6	Carbon	-	0.1
7	B	C	27	3A	Carbon	-	10.2
7	B	C-1	31	3B	Carbon	-	2.2
7	B	C	31	3A	Carbon	-	14.6
7	B	C-2	31	3B	Carbon	-	25
7	B	C-2	23	9	Carbon	-	0.6
7	B	S	8	-	Ceramic	7	31.9
7	A	S	20	-	Ceramic	10	225
7	A	S	25	-	Ceramic	4	28.7
7	B	S	17	-	Ceramic	15	153.9
7	B	S	18	-	Ceramic	1	6.7
7	B	S	19	-	Ceramic	1	13.7
7	B	S	13	-	Ceramic	9	101.4
7	B	S	12	-	Ceramic	1	3.8
7	B	S	32	-	Ceramic	1	9.3
7	A	S	30	-	Ceramic	2	31.6
7	A	S	11	-	Ceramic	3	30.2
7	A	S	16	-	Ceramic	2	10.2
7	A	S	21	-	Ceramic	1	2
7	A	S	37	-	Ceramic	1	42.5
7	B	S	35	-	Ceramic	1	6
7	A	S	34	-	Ceramic	3	28.5
7	B	A	7	-	Ceramic	4	14.5
7	B	A	8	-	Ceramic	16	190.3
7	B	A	9	-	Ceramic	2	13.4
7	B	A	12	-	Ceramic	2	33.5
7	B	A	13	-	Ceramic	4	12.1
7	B	A	14	-	Ceramic	4	17.7
7	B	A	28	-	Ceramic	1	10.5
7	B	A	24	-	Ceramic	1	18.9
7	B	A	18	-	Ceramic	1	10.6
7	B	A	22	-	Ceramic	4	26.4
7	B	A	23	-	Ceramic	10	39.6
7	B	A	27	-	Ceramic	2	14.8
7	A	A	21	-	Ceramic	2	11.1
7	B	A	32	-	Ceramic	1	2.8
7	B	A	31	-	Ceramic	1	5.5
7	B	B	24	-	Ceramic	2	26.2
7	B	B	27	-	Ceramic	11	58.6
7	B	B	18	2	Ceramic	5	22.9

Unit	Area	Layer	Quad	Rasgo	Material	Count	Weight (g)
7	B	B	31	-	Ceramic	2	11.8
7	B	B	13	2	Ceramic	17	154.2
7	B	B	13	4	Ceramic	1	1.5
7	B	B	9	-	Ceramic	2	220.1
7	B	B	32	-	Ceramic	3	8.3
7	B	B	28	-	Ceramic	1	11.2
7	B	B	23	-	Ceramic	14	132.3
7	B	B	19	-	Ceramic	2	19.7
7	B	B	36	-	Ceramic	2	33.3
7	B	B	13	-	Ceramic	2	18.3
7	B	B	8	-	Ceramic	2	7.7
7	B	C-1	23	9	Ceramic	2	2.2
7	B	C	31	3A	Ceramic	1	1.6
7	B	B	32	-	Bead	1	<0.1
7	B	A	7	-	FLOT	1	1 liter
7	B	A	8	-	FLOT	1	1 liter
7	B	A	9	-	FLOT	1	1 liter
7	B	A	12	-	FLOT	1	1 liter
7	B	A	13	-	FLOT	1	1 liter
7	B	A	14	-	FLOT	1	1 liter
7	B	A	19	-	FLOT	1	1 liter
7	B	A	28	-	FLOT	1	1 liter
7	B	A	24	-	FLOT	1	1 liter
7	B	A	27	-	FLOT	1	1 liter
7	B	A	23	-	FLOT	1	1 liter
7	B	A	18	-	FLOT	1	1 liter
7	B	A	22	-	FLOT	1	1 liter
7	B	A	32	-	FLOT	1	1 liter
7	B	A	31	-	FLOT	1	1 liter
7	B	A	17	-	FLOT	1	1 liter
7	B	A	36	-	FLOT	1	1 liter
7	B	A	35	-	FLOT	1	1 liter
7	B	B	18	-	FLOT	1	1 liter
7	B	B	24	-	FLOT	1	1 liter
7	B	B	31	1	FLOT	1	1 liter
7	B	B	27	-	FLOT	1	1 liter
7	B	B	18	2	FLOT	1	1 liter
7	B	B	31	-	FLOT	-	-
7	B	B	13	2	FLOT	1	1 liter
7	B	B	14	-	FLOT	1	1 liter
7	B	B	32	-	FLOT	1	1 liter
7	B	B	28	-	FLOT	1	1 liter
7	B	B	23	-	FLOT	1	1 liter
7	B	B	19	-	FLOT	1	1 liter
7	B	B	36	-	FLOT	1	1 liter
7	B	B	13	-	FLOT	1	1 liter

Unit	Area	Layer	Quad	Rasgo	Material	Count	Weight (g)
7	B	B	35	-	FLOT	1	1 liter
7	B	B	9	-	FLOT	1	1 liter
7	B	B	8	-	FLOT	1	1 liter
7	B	C	36	11	FLOT	1	1 liter
7	B	C	23	8	FLOT	1	1 liter
7	B	C	35	12	FLOT	1	1 liter
7	B	C-1	23	9	FLOT	1	1 liter
7	B	C	28	7	FLOT	1	1 liter
7	B	C-1	32	6	FLOT	1	1 liter
7	B	C	27	3A	FLOT	1	1 liter
7	B	C	31	3A	FLOT	1	1 liter
7	B	C-1	31	3B	FLOT	1	1 liter
7	B	C	19	10	FLOT	1	1 liter
7	B	C-2	23	9	FLOT	1	1 liter
7	B	S	23	-	Lithic	1	1.8
7	B	S	18	-	Lithic	3	0.4
7	B	S	12	-	Lithic	1	930
7	B	A	7	-	Lithic	3	0.3
7	B	A	19	-	Lithic	1	1987
7	B	A	24	-	Lithic	1	>4000
7	B	A	25	-	Lithic	1	<0.1
7	B	A	27	-	Lithic	1	0.5
7	B	A	33	-	Lithic	2	3.9
7	B	A	23	-	Lithic	2	0.8
7	A	A	21	-	Lithic	1	0.1
7	B	A	32	-	Lithic	1	1.1
7	B	A	17	-	Lithic	1	<0.1
7	B	A	37	-	Lithic	1	0.6
7	B	A	24	-	Lithic	2	1.7
7	B	B	31	1	Lithic	1	<0.1
7	B	B	18	2	Lithic	2	0.9
7	B	B	18	2	Lithic	2	<0.1
7	B	B	24	-	Lithic	1	0.6
7	B	B	18	2	Lithic	1	0.1
7	B	B	27	-	Lithic	2	1
7	B	B	31	-	Lithic	1	0.2
7	B	B	13	2	Lithic	1	0.1
7	B	B	32	-	Lithic	2	3.1
7	B	B	32	-	Lithic	1	0.1
7	B	B	28	-	Lithic	2	6
7	B	B	28	-	Lithic	2	0.6
7	B	B	23	-	Lithic	1	<0.1
7	B	B	23	-	Lithic	2	0.6
7	B	B	19	-	Lithic	2	1.2
7	B	B	19	-	Lithic	4	0.4
7	B	B	19	-	Lithic	1	<0.1

Unit	Area	Layer	Quad	Rasgo	Material	Count	Weight (g)
7	B	B	36	-	Lithic	1	0.4
7	B	B	36	-	Lithic	3	3
7	B	B	35	-	Lithic	1	0.2
7	B	B	35	-	Lithic	1	0.3
7	B	B	33	-	Lithic	1	0.5
7	B	B	25	-	Lithic	1	0.8
7	B	C	23	8	Lithic	1	0.8
7	B	C-1	23	9	Lithic	1	3.1
7	B	C	28	7	Lithic	1	0.1
7	B	C	27	3A	Lithic	1	357.4
7	B	C	27	3A	Lithic	1	1.3
7	B	C-1	31	3B	Lithic	1	0.6
7	B	C	31	3A	Lithic	4	12.7
7	B	C	31	3A	Lithic	1	0.6
7	B	S	14	-	Marine Shell	33	6.5
7	B	S	19	-	Marine Shell	21	1.1
7	B	S	13	-	Marine Shell	4	0.2
7	A	S	21	-	Marine Shell	5	0.5
7	B	A	14	-	Marine Shell	2	0.7
7	B	A	19	-	Marine Shell	74	10.7
7	B	A	28	-	Marine Shell	1	0.1
7	B	A	24	-	Marine Shell	2	1.7
7	B	A	18	-	Marine Shell	3	0.4
7	B	A	27	-	Marine Shell	1	0.2
7	A	A	21	-	Marine Shell	9	0.8
7	A	A	16	-	Marine Shell	2	0.2
7	B	B	31	-	Marine Shell	1	0.1
7	B	B	28	-	Marine Shell	1	0.3
7	B	B	36	-	Marine Shell	1	0.2
7	B	C	35	12	Marine Shell	1	<0.1
7	B	C-1	32	6	Marine Shell	1	0.1
7	B	C-2	32	6	Marine Shell	2	1
7	B	C	31	3A	Marine Shell	2	<0.1
7	B	C-2	31	3B	Marine Shell	1	0.2
7	B	B	35	-	Muestra	-	939
7	C	S	4	-	Animal Bone	1	0.2
7	B	S	14	-	Animal Bone	1	0.5
7	A	S	20	-	Animal Bone	1	0.5
7	B	S	17	-	Animal Bone	5	1.7
7	A	S	7	-	Animal Bone	18	1.8
7	A	S	33	-	Animal Bone	1	1.9
7	A	S	30	-	Animal Bone	2	0.9
7	A	S	26	-	Animal Bone	4	2.3
7	A	S	11	-	Animal Bone	4	1.7
7	A	S	16	-	Animal Bone	1	0.3
7	A	S	21	-	Animal Bone	1	8.1

Unit	Area	Layer	Quad	Rasgo	Material	Count	Weight (g)
7	A	S	34	-	Animal Bone	1	0.2
7	B	A	7	-	Animal Bone	2	0.5
7	B	A	12	-	Animal Bone	6	8.1
7	B	A	14	-	Animal Bone	4	<0.1
7	B	A	24	-	Animal Bone	32	4.2
7	B	A	18	-	Animal Bone	23	5.3
7	B	A	22	-	Animal Bone	2	0.9
7	B	A	23	-	Animal Bone	25	3.5
7	B	A	27	-	Animal Bone	1	<0.1
7	A	A	21	-	Animal Bone	10	1.7
7	A	A	26	-	Animal Bone	20	4.6
7	B	A	31	-	Animal Bone	9	1.3
7	A	A	34	-	Animal Bone	1	<0.1
7	B	A	36	-	Animal Bone	8	0.2
7	B	A	35	-	Animal Bone	2	0.1
7	A	A	16	-	Animal Bone	4	1.9
7	B	B	24	-	Animal Bone	1	5
7	B	B	27	-	Animal Bone	33	15.9
7	B	B	31	-	Animal Bone	9	4.3
7	B	B	13	2	Animal Bone	3	0.5
7	B	B	14	-	Animal Bone	2	1.5
7	B	B	32	-	Animal Bone	17	0.7
7	B	B	28	-	Animal Bone	11	9.4
7	B	B	23	-	Animal Bone	19	2.5
7	B	B	19	-	Animal Bone	32	24.9
7	B	B	36	-	Animal Bone	14	0.6
7	B	B	35	-	Animal Bone	27	1.6
7	B	B	29	-	Animal Bone	8	0.3
7	B	C	28	7	Animal Bone	2	0.3
7	B	C-1	32	6	Animal Bone	1	0.1
7	B	C-1	31	3B	Animal Bone	1	0.2
7	B	C	31	3A	Animal Bone	3	0.5
7	B	A	7	-	Chalk	6	0.5
7	A	A	26	-	Chalk	3	0.1
7	A	A	30	-	Chalk	5	0.5
7	B	B	27	-	Chalk	5	1.8
7	B	B	31	-	Chalk	4	0.3
7	B	C	27	3A	Chalk	1	0.1
8	B	B	50	-	Clay	4	1.2
8	A	B	21	-	Clay	8	66.4
8	A	B	27	-	Botanical	1	0.1
8	A	B	34	10	Botanical	-	36.2
8	B	C	42	13	Botanical	-	0.1
8	B	B	41	-	C14	1	6.2
8	A	B	34	10	C14	1	19.1
8	B	S	46	-	Carbon	-	0.1

Unit	Area	Layer	Quad	Rasgo	Material	Count	Weight (g)
8	A	S	11	-	Carbon	-	<0.1
8	B	A	49	-	Carbon	1	<0.1
8	B	A	41	-	Carbon	-	0.1
8	B	A	42	-	Carbon	-	<0.1
8	B	A	52	-	Carbon	-	0.1
8	C	A	63	-	Carbon	-	1.4
8	B	A	53	-	Carbon	-	<0.1
8	B	A	44	-	Carbon	-	<0.1
8	B	A	45	-	Carbon	-	0.2
8	C	A	47	-	Carbon	-	0.1
8	C	A	55	-	Carbon	-	0.1
8	C	A	39	-	Carbon	-	0.1
8	A	A	37	-	Carbon	-	0.7
8	C	A	32	-	Carbon	-	2.9
8	C	A	24	-	Carbon	-	<0.1
8	C	A	23	-	Carbon	-	0.2
8	A	A	16	-	Carbon	-	1.5
8	A	A	15	-	Carbon	-	0.1
8	C	A	8	-	Carbon	-	<0.1
8	C	A	7	-	Carbon	-	0.4
8	C	A	6	-	Carbon	-	0.5
8	A	A	29	-	Carbon	-	0.5
8	A	A	36	-	Carbon	-	2.7
8	A	A	35	-	Carbon	-	0.6
8	A	A	21	-	Carbon	-	0.3
8	A	A	28	-	Carbon	-	3.8
8	A	A	27	-	Carbon	-	0.8
8	A	A	13	-	Carbon	-	0.1
8	A	A	20	-	Carbon	-	0.2
8	A	A	19	-	Carbon	-	0.8
8	C	A	5	-	Carbon	-	0.9
8	A	A	11	-	Carbon	-	1
8	A	A	3	-	Carbon	-	0.2
8	A	A	34	-	Carbon	-	0.2
8	A	A	33	-	Carbon	-	0.4
8	C	A	33	-	Carbon	-	<0.1
8	A	A	25	-	Carbon	-	<0.1
8	A	A	26	-	Carbon	-	0.2
8	A	A	10	-	Carbon	-	1.6
8	A	A	17	-	Carbon	-	0.1
8	A	A	18	-	Carbon	-	1.3
8	A	A	2	-	Carbon	-	<0.1
8	A	A	9	-	Carbon	-	0.2
8	B	B	45	1	Carbon	-	1.2
8	B	B	41	-	Carbon	-	3.4
8	A	B	21	6	Carbon	-	0.2

Unit	Area	Layer	Quad	Rasgo	Material	Count	Weight (g)
8	A	B	30	2	Carbon	-	0.6
8	A	B	29	3	Carbon	-	0.3
8	C	B	46	7	Carbon	-	<0.1
8	B	B	44	1	Carbon	-	1.7
8	B	B	42	-	Carbon	-	0.9
8	B	B	51	-	Carbon	-	<0.1
8	C	B	7	5	Carbon	1	<0.1
8	B	B	43	-	Carbon	-	<0.1
8	A	B	28	8	Carbon	-	0.6
8	B	B	52	-	Carbon	-	2.8
8	B	B	26	10	Carbon	-	0.1
8	B	B	53	-	Carbon	-	0.2
8	B	B	45	-	Carbon	-	<0.1
8	B	B	54	-	Carbon	-	0.2
8	A	B	35	-	Carbon	-	0.1
8	A	B	36	-	Carbon	1	<0.1
8	A	B	27	-	Carbon	-	0..6
8	A	B	38	-	Carbon	-	0.2
8	A	B	34	10	Carbon	-	8.9
8	A	B	21	-	Carbon	-	0.8
8	A	B	26	-	Carbon	-	0.6
8	A	B	16	-	Carbon	-	2.2
8	A	B	33	10	Carbon	-	0.9
8	A	B	25	-	Carbon	-	<0.1
8	B	C	49	11	Carbon	-	0.3
8	B	C	51	14	Carbon	-	0.1
8	B	C	43	15	Carbon	-	0.1
8	B	C	43	16	Carbon	-	0.2
8	B	C	42	13	Carbon	-	11.4
8	B	C	52	18	Carbon	-	<0.1
8	B	C	52	19	Carbon	-	2.6
8	B	C	44	20	Carbon	-	0.4
8	B	C	44	22	Carbon	-	0.2
8	B	C	44	21	Carbon	-	0.5
8	B	C	54	23	Carbon	-	0.2
8	A	C	35	24	Carbon	-	0.5
8	A	C	36	25	Carbon	-	1.5
8	A	C	37	26	Carbon	-	1.6
8	A	C	37	28	Carbon	-	0.8
8	A	C	38	28	Carbon	-	3.2
8	B	C	50	13	Carbon	-	14.9
8	B	S	41	-	Ceramic	5	37.2
8	B	S	42	-	Ceramic	1	2.2
8	B	S	43	-	Ceramic	1	9.1
8	B	S	44	-	Ceramic	1	16
8	B	S	49	-	Ceramic	7	60.1

Unit	Area	Layer	Quad	Rasgo	Material	Count	Weight (g)
8	B	S	50	-	Ceramic	1	2.9
8	B	S	51	-	Ceramic	2	11.2
8	C	S	57	-	Ceramic	7	38.4
8	B	S	58	-	Ceramic	2	6.9
8	C	S	60	-	Ceramic	2	15.1
8	C	S	61	-	Ceramic	3	10.3
8	C	S	54	-	Ceramic	2	56.7
8	B	S	54	-	Ceramic	5	15.1
8	C	S	46	-	Ceramic	1	7.1
8	B	S	46	-	Ceramic	1	4.6
8	B	S	45	-	Ceramic	3	38.5
8	A	S	45	-	Ceramic	1	20.5
8	C	S	64	-	Ceramic	1	3.2
8	C	S	55	-	Ceramic	7	36.4
8	C	S	48	-	Ceramic	1	1.7
8	C	S	47	-	Ceramic	2	4.5
8	C	S	40	-	Ceramic	1	4
8	C	S	39	-	Ceramic	2	43.7
8	C	S	32	-	Ceramic	1	2.6
8	C	S	31	-	Ceramic	1	141.3
8	A	S	37	-	Ceramic	2	9.4
8	A	S	30	-	Ceramic	1	1.9
8	A	S	29	-	Ceramic	1	4
8	A	S	23	-	Ceramic	2	6.1
8	A	S	22	-	Ceramic	2	2.7
8	A	S	14	-	Ceramic	1	25.4
8	A	S	13	-	Ceramic	1	1.7
8	A	S	8	-	Ceramic	3	18.9
8	C	S	70	-	Ceramic	6	50.5
8	A	S	36	-	Ceramic	2	6.3
8	A	S	35	-	Ceramic	3	16.7
8	A	S	6	-	Ceramic	1	2
8	C	S	6	-	Ceramic	2	22.6
8	A	S	5	-	Ceramic	1	8.6
8	C	S	5	-	Ceramic	1	4.9
8	A	S	34	-	Ceramic	1	1.6
8	A	S	33	-	Ceramic	1	3
8	A	S	28	-	Ceramic	2	10
8	A	S	27	-	Ceramic	2	14.3
8	A	S	20	-	Ceramic	3	36
8	A	S	19	-	Ceramic	2	18
8	A	S	18	-	Ceramic	2	11.3
8	A	S	4	-	Ceramic	4	43.4
8	C	S	4	-	Ceramic	1	9
8	A	S	3	-	Ceramic	2	18.7
8	C	S	3	-	Ceramic	1	4.5

Unit	Area	Layer	Quad	Rasgo	Material	Count	Weight (g)
8	A	S	26	-	Ceramic	2	10.3
8	A	S	25	-	Ceramic	7	28.6
8	A	S	17	-	Ceramic	4	14
8	A	S	2	-	Ceramic	2	40.5
8	C	A	57	-	Ceramic	6	65.7
8	B	A	49	-	Ceramic	9	73.2
8	B	A	50	-	Ceramic	4	8.2
8	B	A	41	-	Ceramic	14	75.2
8	C	A	60	-	Ceramic	1	5.5
8	B	A	52	-	Ceramic	2	2.8
8	B	A	51	-	Ceramic	3	9.9
8	C	A	61	-	Ceramic	6	64.6
8	B	A	53	-	Ceramic	3	10.9
8	B	A	43	-	Ceramic	3	26.3
8	B	A	44	-	Ceramic	3	9.8
8	B	A	45	-	Ceramic	6	113.4
8	C	A	54	-	Ceramic	1	5.4
8	B	A	54	-	Ceramic	1	2.8
8	B	A	46	-	Ceramic	2	21.8
8	C	A	39	-	Ceramic	3	174.4
8	A	A	38	-	Ceramic	7	184.5
8	A	A	37	-	Ceramic	6	40.6
8	C	A	31	-	Ceramic	1	6
8	A	A	30	-	Ceramic	1	23.6
8	C	A	24	-	Ceramic	1	9.9
8	C	A	23	-	Ceramic	1	6
8	A	A	16	-	Ceramic	5	37.4
8	A	A	15	-	Ceramic	2	42.6
8	A	A	14	-	Ceramic	1	1.5
8	C	A	8	-	Ceramic	3	15.6
8	C	A	7	-	Ceramic	32	239.9
8	C	A	6	-	Ceramic	17	87
8	A	A	29	-	Ceramic	8	22.1
8	A	A	36	-	Ceramic	6	21.6
8	A	A	35	-	Ceramic	10	37.4
8	A	A	28	-	Ceramic	6	54.5
8	A	A	27	-	Ceramic	12	42.2
8	A	A	13	-	Ceramic	3	31.2
8	A	A	20	-	Ceramic	5	15.9
8	A	A	19	-	Ceramic	7	35.2
8	A	A	5	-	Ceramic	1	9.7
8	C	A	5	-	Ceramic	4	17
8	A	A	11	-	Ceramic	5	48.2
8	A	A	3	-	Ceramic	1	6.1
8	A	A	34	-	Ceramic	14	46.5
8	A	A	33	-	Ceramic	2	6.5

Unit	Area	Layer	Quad	Rasgo	Material	Count	Weight (g)
8	C	A	33	-	Ceramic	4	31.6
8	A	A	25	-	Ceramic	4	53.3
8	A	A	26	-	Ceramic	12	55.9
8	A	A	10	-	Ceramic	4	17.2
8	A	A	17	-	Ceramic	2	11.4
8	A	A	18	-	Ceramic	2	7.5
8	A	A	2	-	Ceramic	4	11.7
8	A	A	9	-	Ceramic	2	35.2
8	C	A	2	-	Ceramic	2	7
8	B	B	49	-	Ceramic	10	83.5
8	B	B	58	-	Ceramic	3	18
8	B	B	45	1	Ceramic	27	156.8
8	B	B	41	-	Ceramic	3	31.9
8	B	B	50	-	Ceramic	6	80.8
8	A	B	21	6	Ceramic	1	2.3
8	A	B	30	2	Ceramic	2	7.7
8	A	B	29	3	Ceramic	1	4.5
8	B	B	44	1	Ceramic	6	68.7
8	A	B	22	4	Ceramic	1	1.7
8	B	B	42	-	Ceramic	13	136
8	B	B	59	-	Ceramic	2	8.1
8	B	B	60	-	Ceramic	4	28.9
8	B	B	51	-	Ceramic	5	21.3
8	C	B	7	5	Ceramic	32	315.1
8	B	B	43	-	Ceramic	31	177.8
8	A	B	28	8	Ceramic	2	1
8	B	B	52	-	Ceramic	11	73.9
8	B	B	26	10	Ceramic	7	65.4
8	B	B	44	-	Ceramic	16	84.2
8	B	B	53	-	Ceramic	9	77.1
8	B	B	45	-	Ceramic	4	10.9
8	B	B	46	-	Ceramic	1	53.7
8	A	B	35	-	Ceramic	5	11.4
8	A	B	36	-	Ceramic	2	73.3
8	A	B	37	-	Ceramic	6	113.9
8	A	B	27	-	Ceramic	4	58,7
8	A	B	38	-	Ceramic	14	178.8
8	A	B	34	10	Ceramic	13	65.8
8	A	B	21	-	Ceramic	10	121.6
8	A	B	26	-	Ceramic	21	181.1
8	A	B	16	-	Ceramic	3	17.7
8	A	B	33	10	Ceramic	3	0.5
8	A	B	25	-	Ceramic	15	146.5
8	B	C	49	11	Ceramic	1	5
8	B	C	51	14	Ceramic	1	5.6
8	B	C	43	16	Ceramic	1	3.8

Unit	Area	Layer	Quad	Rasgo	Material	Count	Weight (g)
8	B	C	52	17	Ceramic	1	3.5
8	B	C	42	13	Ceramic	41	196.7
8	B	C	52	19	Ceramic	4	8
8	B	C	44	20	Ceramic	2	110.4
8	B	C	44	21	Ceramic	9	58.6
8	A	C	35	24	Ceramic	3	17.5
8	A	C	36	25	Ceramic	1	57
8	A	C	37	26	Ceramic	13	356.7
8	A	C	37	28	Ceramic	13	102.7
8	A	C	38	28	Ceramic	16	190.2
8	B	C	50	13	Ceramic	21	130.5
8	A	C	34	10	Ceramic	2	143.9
8	A	A	11	-	Crustacean	8	<0.1
8	A	B	21	6	Crustacean	3	0.2
8	A	B	28	8	Crustacean	2	0.1
8	B	B	54	-	Crustacean	-	<0.1
8	A	B	38	-	Crustacean	-	-
8	A	A	35	-	Bead	1	<0.1
8	A	A	27	-	Bead	1	<0.1
8	A	A	10	-	Bead	1	<0.1
8	B	B	49	-	Bead	1	0.2
8	B	C	52	19	Bead	2	0.2
8	B	C	50	13	Bead	1	<0.1
8	B	A	49	-	FLOT	1	1 liter
8	B	A	50	-	FLOT	1	1 liter
8	B	A	41	-	FLOT	1	1 liter
8	B	A	42	-	FLOT	1	1 liter
8	B	A	51	-	FLOT	1	1 liter
8	B	A	52	-	FLOT	1	1 liter
8	B	A	43	-	FLOT	1	1 liter
8	B	A	44	-	FLOT	1	1 liter
8	B	A	53	-	FLOT	1	1 liter
8	B	A	45	-	FLOT	1	1 liter
8	A	A	38	-	FLOT	1	1 liter
8	A	A	37	-	FLOT	1	1 liter
8	A	A	30	-	FLOT	1	1 liter
8	A	A	22	-	FLOT	1	1 liter
8	A	A	14	-	FLOT	1	1 liter
8	A	A	29	-	FLOT	1	1 liter
8	A	A	35	-	FLOT	1	1 liter
8	A	A	36	-	FLOT	1	1 liter
8	A	A	28	-	FLOT	1	1 liter
8	A	A	21	-	FLOT	1	1 liter
8	A	A	27	-	FLOT	1	1 liter
8	A	A	13	-	FLOT	1	1 liter
8	A	A	20	-	FLOT	1	1 liter

Unit	Area	Layer	Quad	Rasgo	Material	Count	Weight (g)
8	A	A	19	-	FLOT	1	1 liter
8	A	A	12	-	FLOT	1	1 liter
8	A	A	11	-	FLOT	1	1 liter
8	A	A	34	-	FLOT	1	1 liter
8	A	A	25	-	FLOT	1	1 liter
8	A	A	26	-	FLOT	1	1 liter
8	A	A	10	-	FLOT	1	1 liter
8	A	A	17	-	FLOT	1	1 liter
8	A	A	18	-	FLOT	1	1 liter
8	A	A	9	-	FLOT	1	1 liter
8	B	B	49	-	FLOT	1	1 liter
8	B	B	50	-	FLOT	1	1 liter
8	B	B	41	-	FLOT	1	1 liter
8	B	B	45	1	FLOT	1	1 liter
8	B	B	42	-	FLOT	1	1 liter
8	B	B	51	-	FLOT	1	1 liter
8	C	B	46	7	FLOT	1	1 liter
8	A	B	30	2	FLOT	1	1 liter
8	A	B	29	3	FLOT	1	1 liter
8	A	B	21	6	FLOT	1	1 liter
8	A	B	22	4	FLOT	1	1 liter
8	B	B	52	-	FLOT	1	1 liter
8	B	B	43	-	FLOT	1	1 liter
8	B	B	53	-	FLOT	1	1 liter
8	A	B	28	8	FLOT	1	1 liter
8	A	B	27	9	FLOT	1	1 liter
8	A	B	26	10	FLOT	1	1 liter
8	B	B	44	-	FLOT	1	1 liter
8	B	B	45	-	FLOT	1	1 liter
8	A	B	35	-	FLOT	1	1 liter
8	A	B	36	-	FLOT	1	1 liter
8	A	B	37	-	FLOT	1	1 liter
8	A	B	27	-	FLOT	1	1 liter
8	A	B	38	-	FLOT	1	1 liter
8	A	B	16	-	FLOT	1	1 liter
8	A	B	21	-	FLOT	1	1 liter
8	A	B	26	-	FLOT	1	1 liter
8	A	B	25	-	FLOT	1	1 liter
8	B	C	49	11	FLOT	1	1 liter
8	B	C	41	12	FLOT	1	1 liter
8	B	C	42	13	FLOT	1	1 liter
8	B	C	51	14	FLOT	1	1 liter
8	B	C	43	15	FLOT	1	1 liter
8	B	C	43	16	FLOT	1	1 liter
8	B	C	52	17	FLOT	1	1 liter
8	B	C	52	18	FLOT	1	1 liter

Unit	Area	Layer	Quad	Rasgo	Material	Count	Weight (g)
8	B	C	52	19	FLOT	1	1 liter
8	B	C	44	20	FLOT	1	1 liter
8	B	C	44	22	FLOT	1	1 liter
8	B	C	44	21	FLOT	1	1 liter
8	B	C	54	23	FLOT	1	1 liter
8	A	C	35	24	FLOT	1	1 liter
8	A	C	36	25	FLOT	1	1 liter
8	A	C	37	27	FLOT	1	1 liter
8	A	C	37	26	FLOT	1	1 liter
8	A	C	37	28	FLOT	1	1 liter
8	A	C	38	28	FLOT	1	1 liter
8	C	S	60	-	Lithic	1	1.2
8	B	S	49	-	Lithic	1	0.8
8	C	S	48	-	Lithic	2	4.1
8	A	S	29	-	Lithic	1	0.6
8	A	S	8	-	Lithic	1	9.1
8	A	S	7	-	Lithic	1	2.3
8	A	S	34	-	Lithic	1	0.1
8	C	A	57	-	Lithic	1	0.3
8	B	A	57	-	Lithic	1	0.4
8	B	A	58	-	Lithic	1	0.6
8	B	A	49	-	Lithic	4	2.9
8	B	A	41	-	Lithic	1	0.6
8	B	A	41	-	Lithic	3	0.8
8	B	A	51	-	Lithic	1	8
8	C	A	61	-	Lithic	1	0.8
8	B	A	44	-	Lithic	1	<0.1
8	B	A	45	-	Lithic	1	0.4
8	C	A	47	-	Lithic	1	184.1
8	B	A	54	-	Lithic	1	0.2
8	A	A	37	-	Lithic	2	0.6
8	A	A	16	-	Lithic	1	57.4
8	C	A	7	-	Lithic	2	0.8
8	C	A	7	-	Lithic	1	0.5
8	A	A	29	-	Lithic	19	0.2
8	A	A	36	-	Lithic	1	0.4
8	A	A	36	-	Lithic	2	0.1
8	A	A	35	-	Lithic	1	<0.1
8	A	A	35	-	Lithic	1	<0.1
8	A	A	35	-	Lithic	9	<0.1
8	A	A	28	-	Lithic	2	2.1
8	A	A	28	-	Lithic	1	<0.1
8	A	A	27	-	Lithic	1	0.5
8	A	A	27	-	Lithic	2	<0.1
8	A	A	20	-	Lithic	1	0.2
8	A	A	19	-	Lithic	1	5.2

Unit	Area	Layer	Quad	Rasgo	Material	Count	Weight (g)
8	C	A	4	-	Lithic	2	2.5
8	C	A	5	-	Lithic	2	0.4
8	A	A	11	-	Lithic	2	0.3
8	A	A	11	-	Lithic	1	0.6
8	A	A	3	-	Lithic	2	0.6
8	A	A	34	-	Lithic	4	0.9
8	A	A	34	-	Lithic	2	0.2
8	A	A	33	-	Lithic	1	0.5
8	C	A	3	-	Lithic	1	<0.1
8	A	A	25	-	Lithic	2	1
8	A	A	26	-	Lithic	2	0.3
8	A	A	26	-	Lithic	1	0.2
8	A	A	10	-	Lithic	4	1.5
8	A	A	18	-	Lithic	2	0.7
8	A	A	2	-	Lithic	1	<0.1
8	C	A	2	-	Lithic	1	0.5
8	B	B	49	-	Lithic	6	1.1
8	B	B	58	-	Lithic	1	0.3
8	B	B	45	1	Lithic	1	1.8
8	B	B	45	1	Lithic	1	0.6
8	B	B	50	-	Lithic	3	1.3
8	B	B	50	-	Lithic	1	<0.1
8	A	B	30	2	Lithic	1	0.2
8	B	B	44	1	Lithic	2	0.1
8	B	B	42	-	Lithic	1	18.3
8	B	B	42	-	Lithic	2	0.3
8	B	B	60	-	Lithic	23	3.8
8	B	B	60	-	Lithic	1	0.1
8	B	B	51	-	Lithic	1	7.1
8	C	B	7	5	Lithic	1	2578
8	C	B	7	5	Lithic	2	25
8	B	B	43	-	Lithic	4	1.9
8	B	B	52	-	Lithic	1	1.7
8	B	B	52	-	Lithic	18	1
8	B	B	52	-	Lithic	1	<0.1
8	B	B	52	-	Lithic	3	0.3
8	B	B	26	10	Lithic	1	0.3
8	B	B	44	-	Lithic	4	<0.1
8	B	B	53	-	Lithic	1	0.6
8	B	B	53	-	Lithic	1	0.1
8	B	B	53	-	Lithic	3	4.1
8	A	B	35	-	Lithic	7	5.3
8	A	B	37	-	Lithic	1	3.6
8	A	B	37	-	Lithic	2	<0.1
8	A	B	38	-	Lithic	2	0.5
8	A	B	34	10	Lithic	1	1.1

Unit	Area	Layer	Quad	Rasgo	Material	Count	Weight (g)
8	A	B	34	10	Lithic	1	0.7
8	A	B	21	-	Lithic	3	0.8
8	A	B	26	-	Lithic	5	3.5
8	A	B	16	-	Lithic	1	122.1
8	A	B	33	10	Lithic	3	1.2
8	A	B	25	-	Lithic	4	3.7
8	B	C	42	13	Lithic	1	0.7
8	B	C	42	13	Lithic	1	0.3
8	B	C	42	13	Lithic	1	1.5
8	B	C	52	19	Lithic	1	0.4
8	A	C	36	25	Lithic	1	0.2
8	A	C	36	25	Lithic	1	385.4
8	A	C	37	26	Lithic	2	2.3
8	A	C	37	26	Lithic	1	1057
8	A	C	31	28	Lithic	1	0.7
8	A	C	38	28	Lithic	1	23.9
8	B	C	50	13	Lithic	7	4.3
8	B	C	50	13	Lithic	21	0.2
8	B	C	50	13	Lithic	3	4
8	B	S	50	-	Marine Shell	1	2.5
8	C	S	59	-	Marine Shell	1	0.6
8	C	S	63	-	Marine Shell	1	1.4
8	C	S	55	-	Marine Shell	1	3.2
8	C	S	2	-	Marine Shell	1	3.7
8	B	A	59	-	Marine Shell	4	1.2
8	C	A	62	-	Marine Shell	1	0.4
8	B	A	46	-	Marine Shell	1	<0.1
8	C	A	7	-	Marine Shell	6	7.1
8	A	A	29	-	Marine Shell	3	0.8
8	A	A	36	-	Marine Shell	3	0.2
8	A	A	35	-	Marine Shell	5	0.4
8	A	A	27	-	Marine Shell	5	1.2
8	A	A	19	-	Marine Shell	2	0.5
8	C	A	5	-	Marine Shell	1	<0.1
8	A	A	34	-	Marine Shell	2	0.9
8	A	A	26	-	Marine Shell	2	1.9
8	B	B	49	-	Marine Shell	1	1.7
8	B	B	50	-	Marine Shell	1	0.7
8	B	B	59	-	Marine Shell	3	3.4
8	C	B	7	5	Marine Shell	1	0.1
8	A	B	28	8	Marine Shell	1	0.1
8	B	B	52	-	Marine Shell	1	0.9
8	B	B	26	10	Marine Shell	1	0.5
8	A	B	38	-	Marine Shell	1	0.1
8	A	B	34	10	Marine Shell	4	0.8
8	A	B	26	-	Marine Shell	2	0.1

Unit	Area	Layer	Quad	Rasgo	Material	Count	Weight (g)
8	A	B	22	10	Marine Shell	1	2.4
8	A	B	33	10	Marine Shell	1	<0.1
8	A	B	25	-	Marine Shell	1	0.4
8	A	B	21	-	Marine Shell	2	0.1
8	B	C	50	13	Marine Shell	3	0.6
8	B	C	50	13	Marine Shell	2	<0.1
8	A	A	34	-	Metal	1	0.2
8	A	B	37	-	Gold	1	0.1
8	B	S	41	-	Animal Bone	2	0.7
8	C	S	57	-	Animal Bone	44	4.8
8	B	S	45	-	Animal Bone	1	0.2
8	C	S	64	-	Animal Bone	1	0.1
8	C	S	55	-	Animal Bone	1	0.3
8	C	S	48	-	Animal Bone	1	0.7
8	C	S	47	-	Animal Bone	1	0.6
8	A	S	8	-	Animal Bone	8	0.8
8	A	S	70	-	Animal Bone	1	0.3
8	A	S	34	-	Animal Bone	2	0.2
8	A	S	33	-	Animal Bone	1	0.2
8	A	S	18	-	Animal Bone	2	0.5
8	C	S	3	-	Animal Bone	1	0.3
8	A	S	25	-	Animal Bone	2	1.7
8	A	S	17	-	Animal Bone	2	1
8	A	S	2	-	Animal Bone	2	1.3
8	C	S	2	-	Animal Bone	1	0.3
8	C	A	57	-	Animal Bone	9	1.3
8	B	A	57	-	Animal Bone	1	0.2
8	B	A	50	-	Animal Bone	7	0.3
8	B	A	41	-	Animal Bone	6	0.3
8	B	A	42	-	Animal Bone	1	0.1
8	B	A	49	-	Animal Bone	8	1.8
8	B	A	60	-	Animal Bone	13	4.4
8	C	A	60	-	Animal Bone	1	0.1
8	B	A	52	-	Animal Bone	11	0.8
8	C	A	61	-	Animal Bone	2	12.1
8	C	A	63	-	Animal Bone	1	<0.1
8	B	A	53	-	Animal Bone	3	0.5
8	B	A	45	-	Animal Bone	5	0.9
8	C	A	55	-	Animal Bone	1	<0.1
8	C	A	54	-	Animal Bone	1	1.3
8	B	A	46	-	Animal Bone	1	0.2
8	C	A	39	-	Animal Bone	4	0.3
8	A	A	38	-	Animal Bone	1	0.1
8	A	A	37	-	Animal Bone	8	0.7
8	C	A	32	-	Animal Bone	13	0.5
8	C	A	23	-	Animal Bone	1	1

Unit	Area	Layer	Quad	Rasgo	Material	Count	Weight (g)
8	A	A	16	-	Animal Bone	198	25.1
8	A	A	15	-	Animal Bone	2	0.2
8	A	A	14	-	Animal Bone	25	3.8
8	C	A	8	-	Animal Bone	14	4.2
8	C	A	7	-	Animal Bone	36	9.4
8	C	A	6	-	Animal Bone	51	21
8	A	A	29	-	Animal Bone	6	<0.1
8	A	A	36	-	Animal Bone	12	1.3
8	A	A	35	-	Animal Bone	8	2.8
8	A	A	21	-	Animal Bone	3	0.9
8	A	A	28	-	Animal Bone	3	0.8
8	A	A	27	-	Animal Bone	34	6.1
8	A	A	13	-	Animal Bone	1	0.1
8	A	A	20	-	Animal Bone	3	0.2
8	A	A	19	-	Animal Bone	6	0.6
8	A	A	4	-	Animal Bone	4	0.1
8	C	A	4	-	Animal Bone	1	<0.1
8	C	A	5	-	Animal Bone	8	0.2
8	A	A	11	-	Animal Bone	4	0.3
8	A	A	3	-	Animal Bone	6	1.1
8	A	A	34	-	Animal Bone	29	2.9
8	A	A	33	-	Animal Bone	5	1.5
8	C	A	33	-	Animal Bone	6	0.8
8	C	A	3	-	Animal Bone	3	0.2
8	A	A	25	-	Animal Bone	16	0.5
8	A	A	26	-	Animal Bone	41	4.9
8	A	A	10	-	Animal Bone	10	8
8	A	A	17	-	Animal Bone	27	2.8
8	A	A	18	-	Animal Bone	14	5.8
8	A	A	2	-	Animal Bone	44	4
8	A	A	9	-	Animal Bone	20	1
8	C	A	1	-	Animal Bone	2	0.2
8	C	A	2	-	Animal Bone	1	5.9
8	B	B	49	-	Animal Bone	12	0.6
8	B	B	58	-	Animal Bone	7	1.2
8	B	B	45	1	Animal Bone	93	12.3
8	B	B	41	-	Animal Bone	20	0.8
8	B	B	50	-	Animal Bone	5	0.2
8	A	B	21	6	Animal Bone	5	<0.1
8	B	B	44	1	Animal Bone	111	12.8
8	B	B	42	-	Animal Bone	47	8.5
8	B	B	60	-	Animal Bone	12	0.9
8	B	B	51	-	Animal Bone	55	19.8
8	C	B	7	5	Animal Bone	23	6.1
8	B	B	43	-	Animal Bone	45	4.5
8	A	B	28	8	Animal Bone	12	0.7

Unit	Area	Layer	Quad	Rasgo	Material	Count	Weight (g)
8	B	B	52	-	Animal Bone	16	3.3
8	B	B	26	10	Animal Bone	56	9.4
8	B	B	26	10	Animal Bone	1	0.1
8	B	B	44	-	Animal Bone	34	7.1
8	B	B	53	-	Animal Bone	26	3.9
8	B	B	45	-	Animal Bone	21	4.4
8	B	B	46	-	Animal Bone	3	5.6
8	A	B	36	-	Animal Bone	2	3.9
8	A	B	37	-	Animal Bone	4	0.5
8	A	B	27	-	Animal Bone	24	1.9
8	A	B	38	-	Animal Bone	6	1.4
8	A	B	34	10	Animal Bone	180	27.7
8	A	B	21	-	Animal Bone	61	28.2
8	A	B	26	-	Animal Bone	98	22.3
8	A	B	16	-	Animal Bone	47	12.6
8	A	B	33	10	Animal Bone	10	27
8	A	B	25	-	Animal Bone	60	14
8	B	C	43	15	Animal Bone	7	0.2
8	B	C	43	16	Animal Bone	1	0.1
8	A	C	34	10	Animal Bone	4	1.1
8	B	C	42	13	Animal Bone	21	16.7
8	B	C	52	19	Animal Bone	3	0.3
8	B	C	44	20	Animal Bone	6	3.1
8	B	C	44	21	Animal Bone	13	3.6
8	A	C	35	24	Animal Bone	11	1.3
8	A	C	36	25	Animal Bone	80	23.8
8	A	C	37	26	Animal Bone	17	1
8	A	C	37	28	Animal Bone	18	12.6
8	A	C	38	28	Animal Bone	18	14.4
8	B	C	50	13	Animal Bone	29	11
8	C	A	3	-	Chalk	1	0.4

Table C.2. Ceramic ware counts for excavation contexts

Unit	Area	Layer	Quad	Rasgo	Total Count	*Huaracane Vegetal*	*Huaracane Arena*	*Huaracane Fino*	*Pasta Biotite*	*Pasta Centro Rosada*	*Pasta Naranja*	Other
1	A	A	4	-	1	0	1	0	0	0	0	0
1	B	A	11	-	1	0	1	0	0	0	0	0
1	B	A	16	-	12	0	12	0	0	0	0	0
1	B	A	17	-	1	1	0	0	0	0	0	0
1	A	A	27	-	1	1	0	0	0	0	0	0
2	-	S	1	-	4	2	2	0	0	0	0	0
2	-	S	4	-	1	0	0	1	0	0	0	0
2	-	S	6	-	1	0	1	0	0	0	0	0
2	-	S	9	-	2	0	2	0	0	0	0	0
2	-	S	11	-	2	0	1	1	0	0	0	0
2	-	S	12	-	2	0	1	1	0	0	0	0
2	-	S	13	-	2	1	1	0	0	0	0	0
2	-	S	16	-	2	1	0	1	0	0	0	0
2	-	S	18	-	1	0	1	0	0	0	0	0
2	-	S	19	-	5	0	5	0	0	0	0	0
2	-	S	22	-	4	0	4	0	0	0	0	0
2	-	S	27	-	4	1	3	0	0	0	0	0
2	-	S	28	-	3	0	3	0	0	0	0	0
2	-	S	32	-	7	0	6	1	0	0	0	0
2	-	S	31	-	2	1	1	0	0	0	0	0
2	-	S	33	-	1	0	0	1	0	0	0	0
2	-	S	35	-	1	0	0	1	0	0	0	0
2	-	S	36	-	1	0	1	0	0	0	0	0
2	-	S	37	-	5	0	5	0	0	0	0	0
2	-	S	39	-	1	0	1	0	0	0	0	0
2	-	S	41	-	1	1	0	0	0	0	0	0
2	-	S	43	-	1	0	1	0	0	0	0	0
2	-	S	45	-	2	0	2	0	0	0	0	0
2	-	S	54	-	1	0	1	0	0	0	0	0
2	-	A	1	-	2	0	1	1	0	0	0	0
2	-	A	8	-	3	0	3	0	0	0	0	0
2	-	A	11	-	2	0	2	0	0	0	0	0
2	-	A	14	-	3	0	3	0	0	0	0	0
2	-	A	15	-	3	0	2	1	0	0	0	0
2	-	A	18	-	2	0	2	0	0	0	0	0
2	-	A	19	-	8	1	7	0	0	0	0	0
2	-	A	21	-	1	1	0	0	0	0	0	0
2	-	A	22	-	13	0	12	1	0	0	0	0

Unit	Area	Layer	Quad	Rasgo	Total Count	*Huaracane Vegetal*	*Huaracane Arena*	*Huaracane Fino*	*Pasta Biotite*	*Pasta Centro Rosada*	*Pasta Naranja*	Other
2	-	A	23	-	1	1	0	0	0	0	0	0
2	-	A	26	-	5	0	5	0	0	0	0	0
2	-	A	27	-	3	0	3	0	0	0	0	0
2	-	A	28	-	8	0	8	0	0	0	0	0
2	-	A	29	-	2	0	2	0	0	0	0	0
2	-	A	31	-	3	0	3	0	0	0	0	0
2	-	A	32	-	2	0	2	0	0	0	0	0
2	-	A	33	-	2	0	2	0	0	0	0	0
2	-	A	37	-	2	0	2	0	0	0	0	0
2	-	A	40	-	1	0	1	0	0	0	0	0
2	-	A	42	-	1	0	1	0	0	0	0	0
2	-	A	46	-	1	0	1	0	0	0	0	0
2	-	A	47	-	1	0	1	0	0	0	0	0
2	-	B	11	-	6	1	5	0	0	0	0	0
2	-	B	17	-	2	0	2	0	0	0	0	0
2	-	B	18	-	8	0	8	0	0	0	0	0
2	-	B	19	-	23	0	23	0	0	0	0	0
2	-	B	21	-	2	0	2	0	0	0	0	0
2	-	B	22	-	2	0	1	1	0	0	0	0
2	-	B	23	-	1	0	0	1	0	0	0	0
2	-	B	27	-	5	1	3	1	0	0	0	0
2	-	B	28	-	11	0	11	0	0	0	0	0
2	-	B	34	-	2	0	2	0	0	0	0	0
2	-	B	37	-	21	0	21	0	0	0	0	0
2	-	B	44	-	1	1	0	0	0	0	0	0
3	A	S	1	-	3	0	2	0	1	0	0	0
3	A	S	2	-	2	0	1	0	1	0	0	0
3	A	S	3	-	2	0	1	0	1	0	0	0
3	B	S	4	-	1	1	0	0	0	0	0	0
3	A	S	10	-	2	0	2	0	0	0	0	0
3	A	S	14	-	2	0	2	0	0	0	0	0
3	A	S	19	-	1	0	1	0	0	0	0	0
3	B	S	20	-	3	0	3	0	0	0	0	0
3	B	S	28	-	2	0	1	0	0	0	1	0
3	B	S	31	-	1	0	1	0	0	0	0	0
3	A	S	34	-	1	0	0	0	1	0	0	0
3	B	S	36	-	3	0	2	1	0	0	0	0
3	B	S	37	-	1	0	0	0	1	0	0	0
3	B	S	38	-	2	0	1	0	1	0	0	0
3	B	S	39	-	5	1	3	0	1	0	0	0

Unit	Area	Layer	Quad	Rasgo	Total Count	*Huaracane Vegetal*	*Huaracane Arena*	*Huaracane Fino*	*Pasta Biotite*	*Pasta Centro Rosada*	*Pasta Naranja*	Other
3	B	S	40	-	2	0	1	0	1	0	0	0
3	B	S	41	-	4	0	2	1	1	0	0	0
3	B	S	42	-	5	0	0	2	3	0	0	0
3	B	S	43	-	1	0	1	0	0	0	0	0
3	A	S	49	-	1	0	1	0	0	0	0	0
3	A	S	50	-	8	0	6	0	2	0	0	0
3	B	S	51	-	5	0	5	0	0	0	0	0
3	B	S	52	-	8	0	3	0	5	0	0	0
3	B	S	53	-	51	1	11	0	37	0	2	0
3	B	S	54	-	14	0	4	0	9	0	1	0
3	B	S	55	-	13	0	2	0	7	0	4	0
3	B	S	56	-	8	1	1	1	5	0	0	0
3	B	S	57	-	1	0	0	1	0	0	0	0
3	B	S	58	-	4	0	0	0	3	0	1	0
3	B	S	59	-	2	0	0	0	2	0	0	0
3	B	S	60	-	6	0	2	0	4	0	0	0
3	B	S	61	-	1	0	0	0	1	0	0	0
3	B	S	62	-	3	0	3	0	0	0	0	0
3	B	S	63	-	4	0	4	0	0	0	0	0
3	A	S	65	-	2	0	1	1	0	0	0	0
3	A	S	66	-	9	0	3	1	4	0	1	0
3	B	S	67	-	3	0	2	0	1	0	0	0
3	B	S	68	-	6	0	2	0	4	0	0	0
3	B	S	69	-	27	0	5	0	21	0	1	0
3	B	S	70	-	11	0	3	0	6	0	2	0
3	B	S	71	-	8	0	1	0	6	0	1	0
3	B	S	72	-	6	0	1	0	4	0	1	0
3	B	S	73	-	2	0	1	0	1	0	0	0
3	B	S	74	-	2	0	0	0	2	0	0	0
3	B	S	75	-	4	0	1	0	3	0	0	0
3	B	S	76	-	2	0	1	0	1	0	0	0
3	B	S	77	-	8	0	0	0	8	0	0	0
3	B	S	78	-	2	0	1	0	1	0	0	0
3	B	S	79	-	2	0	2	0	0	0	0	0
3	B	S	80	-	3	0	3	0	0	0	0	0
3	A	S	82	-	4	1	1	0	1	0	1	0
3	A	S	83	-	5	1	1	3	0	0	0	0
3	B	S	85	-	11	0	1	0	8	0	2	0
3	B	S	86	-	12	0	8	0	3	0	1	0
3	B	S	87	-	5	0	0	0	4	0	1	0

Unit	Area	Layer	Quad	Rasgo	Total Count	*Huaracane Vegetal*	*Huaracane Arena*	*Huaracane Fino*	*Pasta Biotite*	*Pasta Centro Rosada*	*Pasta Naranja*	Other
3	B	S	88	-	4	0	0	0	4	0	0	0
3	B	S	89	-	7	0	0	0	7	0	0	0
3	B	S	90	-	4	0	1	0	1	2	0	0
3	B	S	91	-	4	0	0	0	3	1	0	0
3	B	S	92	-	2	0	1	0	0	1	0	0
3	B	S	93	-	3	0	1	0	0	2	0	0
3	A	S	100	-	13	0	11	0	2	0	0	0
3	C	S	106	-	1	0	0	0	0	0	1	0
3	B	S	107	-	11	0	5	0	3	3	1	0
3	C	S	105	-	1	0	0	0	1	0	0	0
3	B	S	106	-	1	0	0	0	1	0	0	0
3	B	S	108	-	6	0	5	0	1	0	0	0
3	B	S	109	-	11	1	2	0	6	2	0	0
3	B	S	110	-	5	0	0	0	4	0	1	0
3	B	S	113	-	5	0	0	1	0	2	2	0
3	A	S	115	-	2	0	0	1	1	0	0	0
3	A	S	116	-	4	0	2	0	1	0	1	0
3	A	S	117	-	5	0	1	0	3	0	0	0
3	A	S	118	-	1	0	0	0	0	0	1	0
3	A	S	120	-	17	0	11	0	6	0	0	0
3	A	S	121	-	12	0	1	0	10	1	0	0
3	C	S	122	-	3	0	1	0	0	2	0	0
3	C	S	123	-	2	0	2	0	0	0	0	0
3	C	S	124	-	3	0	2	1	0	0	0	0
3	B	S	125	-	9	0	2	1	5	0	0	0
3	B	S	126	-	1	0	0	0	1	0	0	0
3	B	S	127	-	4	0	0	0	2	1	1	0
3	B	S	129	-	2	0	0	0	2	0	0	0
3	B	S	130	-	4	0	1	1	0	0	2	0
3	A	S	133	-	5	0	1	0	2	0	2	0
3	A	S	134	-	4	0	0	0	4	0	0	0
3	A	S	135	-	1	0	0	0	0	1	0	0
3	A	S	136	-	4	0	4	0	0	0	0	0
3	A	S	137	-	21	0	6	3	4	7	1	0
3	A	S	138	-	11	0	2	2	4	3	0	0
3	A	S	139	-	8	0	4	0	1	3	0	0
3	A	S	140	-	2	0	2	0	0	0	0	0
3	C	S	142	-	1	0	0	1	0	0	0	0
3	C	S	143	-	3	0	0	2	1	0	0	0
3	C	S	144	-	12	0	0	4	8	0	0	0

Unit	Area	Layer	Quad	Rasgo	Total Count	*Huaracane Vegetal*	*Huaracane Arena*	*Huaracane Fino*	*Pasta Biotite*	*Pasta Centro Rosada*	*Pasta Naranja*	Other
3	A	S	145	-	2	0	0	2	0	0	0	0
3	A	S	146	-	1	0	1	0	0	0	0	0
3	A	S	147	-	1	0	0	0	1	0	0	0
3	A	S	151	-	1	0	0	0	1	0	0	0
3	A	S	152	-	1	1	0	0	0	0	0	0
3	A	S	153	-	2	0	1	1	0	0	0	0
3	A	S	154	-	1	0	0	0	0	0	1	0
3	A	S	155	-	2	1	0	0	0	0	1	0
3	A	S	156	-	3	0	1	1	0	1	0	0
3	A	S	157	-	1	0	1	0	0	0	0	0
3	A	S	158	-	1	0	0	1	0	0	0	0
3	C	S	159	-	3	0	0	2	0	1	0	0
3	C	S	160	-	1	0	1	0	0	0	0	0
3	A	S	162	-	1	0	0	1	0	0	0	0
3	A	A	3	-	2	0	2	0	0	0	0	0
3	A	A	4	-	4	1	1	1	1	0	0	0
3	B	A	22	-	4	0	3	0	0	1	0	0
3	B	A	23	-	2	0	2	0	0	0	0	0
3	A	A	35	-	1	0	0	0	0	1	0	0
3	B	A	36	-	2	0	2	0	0	0	0	0
3	B	A	37	-	4	0	2	0	2	0	0	0
3	B	A	38	-	2	0	1	1	0	0	0	0
3	B	A	39	-	2	0	1	0	1	0	0	0
3	B	A	40	-	1	0	1	0	0	0	0	0
3	B	A	41	-	4	0	3	0	1	0	0	0
3	B	A	42	-	1	0	1	0	0	0	0	0
3	B	A	45	-	1	0	0	0	1	0	0	0
3	B	A	46	-	1	0	0	0	0	1	0	0
3	A	A	50	-	5	0	3	0	1	1	0	0
3	A	A	51	-	1	0	1	0	0	0	0	0
3	B	A	53	-	2	0	0	0	2	0	0	0
3	B	A	53	1	8	0	3	0	5	0	0	0
3	B	A	54	-	11	2	7	0	1	0	1	0
3	B	A	54	1	7	0	3	0	4	0	0	0
3	B	A	55	-	9	0	4	1	0	1	3	0
3	B	A	56	-	3	2	0	1	0	0	0	0
3	B	A	57	-	15	0	2	3	7	3	0	0
3	B	A	58	-	14	0	0	0	12	2	0	0
3	B	A	59	-	4	1	0	0	3	0	0	0
3	B	A	60	-	3	0	2	0	1	0	0	0

Unit	Area	Layer	Quad	Rasgo	Total Count	*Huaracane Vegetal*	*Huaracane Arena*	*Huaracane Fino*	*Pasta Biotite*	*Pasta Centro Rosada*	*Pasta Naranja*	Other
3	A	A	66	-	8	0	5	0	3	0	0	0
3	B	A	67	-	7	0	5	0	1	0	1	0
3	B	A	68	-	12	0	6	0	6	0	0	0
3	B	A	69	-	10	0	5	0	5	0	0	0
3	B	A	70	-	25	0	10	1	11	3	0	0
3	B	A	70	1	1	0	1	0	0	0	0	0
3	B	A	71	-	9	0	1	0	7	0	1	0
3	B	A	71	3	4	0	2	0	1	0	1	0
3	B	A	72	-	6	3	0	1	1	0	1	0
3	B	A	73	-	16	0	10	6	0	0	0	0
3	B	A	74	-	4	0	0	1	2	1	0	0
3	B	A	75	-	21	0	4	0	16	1	0	0
3	B	A	76	-	6	0	1	1	1	3	0	0
3	B	A	77	-	3	0	0	0	1	2	0	0
3	B	A	80	-	2	0	2	0	0	0	0	0
3	A	A	82	-	1	0	0	1	0	0	0	0
3	A	A	83	-	13	0	2	10	0	1	0	0
3	A	A	84	-	3	0	3	0	0	0	0	0
3	B	A	84	-	3	0	1	0	2	0	0	0
3	B	A	85	-	5	1	3	0	1	0	0	0
3	B	A	86	-	9	0	2	0	6	1	0	0
3	B	A	87	-	14	0	1	0	11	0	2	0
3	B	A	88	-	4	0	0	0	4	0	0	0
3	B	A	89	-	2	0	0	0	1	1	0	0
3	B	A	69	-	23	0	4	0	11	6	1	0
3	B	A	90	-	6	0	0	0	6	0	0	0
3	B	A	91	-	10	0	0	0	1	9	0	0
3	B	A	92	-	4	0	1	0	1	2	0	0
3	B	A	93	-	7	0	1	1	0	4	0	0
3	A	A	100	-	12	0	10	0	2	0	0	0
3	A	A	101	-	1	0	0	0	1	0	0	0
3	A	A	102	-	6	0	4	0	2	0	0	0
3	B	A	102	-	4	0	2	1	1	0	0	0
3	B	A	103	-	1	0	0	0	1	0	0	0
3	B	A	104	-	1	0	0	0	1	0	0	0
3	B	A	105	-	3	0	1	2	0	0	0	0
3	B	A	106	-	5	1	1	2	1	0	0	0
3	B	A	107	-	7	0	1	5	0	1	0	0
3	B	A	108	-	6	0	5	0	1	0	0	0
3	B	A	109	-	11	0	8	0	2	1	0	0

Unit	Area	Layer	Quad	Rasgo	Total Count	*Huaracane Vegetal*	*Huaracane Arena*	*Huaracane Fino*	*Pasta Biotite*	*Pasta Centro Rosada*	*Pasta Naranja*	Other
3	B	A	113	-	3	0	3	0	0	0	0	0
3	A	A	118	-	4	0	0	0	1	0	3	0
3	A	A	119	-	3	0	1	0	2	0	0	0
3	A	A	120	-	9	0	3	0	6	0	0	0
3	A	A	121	-	2	0	1	1	0	0	0	0
3	A	A	122	-	5	0	1	1	1	1	1	0
3	B	A	125	-	3	0	0	0	3	0	0	0
3	B	A	126	-	4	3	0	0	1	0	0	0
3	B	A	128	-	1	0	1	0	0	0	0	0
3	B	A	130	-	1	0	0	0	1	0	0	0
3	A	A	137	-	5	0	2	0	3	0	0	0
3	A	A	139	-	5	0	2	0	0	3	0	0
3	C	A	142	-	1	0	0	1	0	0	0	0
3	C	A	144	-	1	0	0	1	0	0	0	0
3	A	A	147	-	3	0	0	0	2	0	1	0
3	B	B	54	-	2	1	1	0	0	0	0	0
3	B	B	59	14	1	0	1	0	0	0	0	0
3	B	B	57	-	1	0	1	0	0	0	0	0
3	B	B	73	11	3	0	2	1	0	0	0	0
3	B	B	74	13	1	0	1	0	0	0	0	0
3	B	B	76	17	1	0	0	0	0	1	0	0
3	B	B	77	27	5	0	1	0	1	3	0	0
3	B	B	89	25	5	0	1	0	2	1	1	0
3	B	B	90	26	16	0	6	0	6	3	1	0
3	B	B	91	18	2	0	1	0	0	1	0	0
3	B	B	91	19	8	0	2	0	4	2	0	0
3	B	B	92	19	9	0	3	0	3	3	0	0
3	B	B	108	19	6	0	3	0	2	1	0	0
4	-	S	1	-	8	2	6	0	0	0	0	0
4	-	S	2	-	1	0	1	0	0	0	0	0
4	-	S	3	-	1	0	0	0	0	1	0	0
4	-	S	4	-	9	0	9	0	0	0	0	0
4	-	S	5	-	1	0	1	0	0	0	0	0
4	-	S	8	-	3	0	3	0	0	0	0	0
4	-	S	10	-	10	0	4	6	0	0	0	0
4	-	S	11	-	4	0	4	0	0	0	0	0
4	-	S	12	-	1	0	1	0	0	0	0	0
4	-	S	13	-	3	0	2	1	0	0	0	0
4	-	S	14	-	2	0	2	0	0	0	0	0
4	-	S	15	-	1	0	1	0	0	0	0	0

Unit	Area	Layer	Quad	Rasgo	Total Count	*Huaracane Vegetal*	*Huaracane Arena*	*Huaracane Fino*	*Pasta Biotite*	*Pasta Centro Rosada*	*Pasta Naranja*	Other
4	-	S	16	-	5	0	5	0	0	0	0	0
4	-	S	17	-	4	0	3	1	0	0	0	0
4	-	S	19	-	13	0	12	1	0	0	0	0
4	-	S	20	-	2	0	2	0	0	0	0	0
4	-	S	21	-	1	0	1	0	0	0	0	0
4	-	S	22	-	5	0	5	0	0	0	0	0
4	-	S	23	-	2	0	2	0	0	0	0	0
4	-	S	24	-	1	1	0	0	0	0	0	0
4	-	S	25	-	4	0	4	0	0	0	0	0
4	-	S	26	-	2	0	1	1	0	0	0	0
4	-	S	27	-	6	2	4	0	0	0	0	0
4	-	S	28	-	4	1	2	1	0	0	0	0
4	-	S	29	-	1	0	1	0	0	0	0	0
4	-	S	30	-	3	0	3	0	0	0	0	0
4	-	S	31	-	4	1	2	0	0	1	0	0
4	-	S	32	-	2	0	2	0	0	0	0	0
4	A	A	4	-	3	0	2	1	0	0	0	0
4	A	A	5	-	4	0	4	0	0	0	0	0
4	B	A	8	-	2	0	1	1	0	0	0	0
4	B	A	9	-	4	1	3	0	0	0	0	0
4	A	A	10	-	3	0	3	0	0	0	0	0
4	A	A	11	-	1	0	1	0	0	0	0	0
4	B	A	12	-	11	0	11	0	0	0	0	0
4	A	A	13	-	1	0	1	0	0	0	0	0
4	A	A	14	-	11	0	11	0	0	0	0	0
4	A	A	15	-	1	0	1	0	0	0	0	0
4	A	A	19	-	1	0	1	0	0	0	0	0
4	B	A	20	-	3	0	2	1	0	0	0	0
4	B	A	23	-	4	2	2	0	0	0	0	0
4	B	A	24	-	1	0	1	0	0	0	0	0
4	A	A	25	-	1	0	1	0	0	0	0	0
4	A	A-1	25	1	1	0	1	0	0	0	0	0
4	A	A	26	-	3	0	3	0	0	0	0	0
4	A	A	27	-	5	0	5	0	0	0	0	0
4	A	A	28	-	1	0	0	1	0	0	0	0
4	A	A	29	-	4	1	3	0	0	0	0	0
4	A	A	30	-	1	0	1	0	0	0	0	0
4	A	A	32	-	7	0	7	0	0	0	0	0
4	A	A	33	-	5	0	5	0	0	0	0	0
4	B	B	5 & 6	-	2	1	1	0	0	0	0	0

Unit	Area	Layer	Quad	Rasgo	Total Count	*Huaracane Vegetal*	*Huaracane Arena*	*Huaracane Fino*	*Pasta Biotite*	*Pasta Centro Rosada*	*Pasta Naranja*	Other
4	B	B	20	-	11	0	11	0	0	0	0	0
5	B	S	2	-	1	1	0	0	0	0	0	0
5	B	S	3	-	4	3	1	0	0	0	0	0
5	B	S	4	-	1	1	0	0	0	0	0	0
5	B	S	6	-	2	1	1	0	0	0	0	0
5	B	S	8	-	2	2	0	0	0	0	0	0
5	B	S	11	-	3	3	0	0	0	0	0	0
5	B	S	12	-	4	2	0	0	1	1	0	0
5	B	S	14	-	1	0	0	0	0	1	0	0
5	B	S	15	-	1	0	1	0	0	0	0	0
5	B	S	17	-	5	0	3	0	0	2	0	0
5	B	S	18	-	1	0	0	0	0	1	0	0
5	B	S	19	-	1	1	0	0	0	0	0	0
5	B	S	20	-	1	0	1	0	0	0	0	0
5	A	S	24	-	1	0	0	1	0	0	0	0
5	B	A	1	-	1	1	0	0	0	0	0	0
5	B	A	2	-	10	10	0	0	0	0	0	0
5	B	A	3	-	1	1	0	0	0	0	0	0
5	B	A	4	-	1	1	0	0	0	0	0	0
5	B	A	5	-	2	2	0	0	0	0	0	0
5	B	A	7	-	3	1	0	2	0	0	0	0
5	B	A	8	-	1	1	0	0	0	0	0	0
5	B	A	9	-	3	3	0	0	0	0	0	0
5	B	A	10	-	4	4	0	0	0	0	0	0
5	B	A	11	-	1	1	0	0	0	0	0	0
5	B	A	12	-	1	1	0	0	0	0	0	0
5	B	A	14	-	1	1	0	0	0	0	0	0
5	B	A	18	-	4	1	3	0	0	0	0	0
5	B	A	15	-	8	2	6	0	0	0	0	0
5	B	A	19	-	1	1	0	0	0	0	0	0
5	B	A	20	-	2	0	0	0	0	2	0	0
5	B	A	21	-	3	1	1	1	0	0	0	0
5	B	A	22	-	2	1	1	0	0	0	0	0
5	B	A	23	-	1	0	1	0	0	0	0	0
5	B	A	24	-	1	1	0	0	0	0	0	0
5	B	B	11	4	12	10	1	1	0	0	0	0
5	B	B	16 & 17	1	1	0	1	0	0	0	0	0
5	B	B	17	2	1	1	0	0	0	0	0	0
6	D	S	7	-	1	0	1	0	0	0	0	0
6	D	S	8	-	4	2	2	0	0	0	0	0

Unit	Area	Layer	Quad	Rasgo	Total Count	*Huaracane Vegetal*	*Huaracane Arena*	*Huaracane Fino*	*Pasta Biotite*	*Pasta Centro Rosada*	*Pasta Naranja*	Other
6	D	S	16	-	47	45	2	0	0	0	0	0
6	D	S	24	-	29	23	5	1	0	0	0	0
6	D	S	32	-	6	0	2	1	0	2	0	1
6	D	S	40	-	4	0	4	0	0	0	0	0
6	D	S	48	-	4	0	2	2	0	0	0	0
6	D	S	56	-	15	2	4	7	0	2	0	0
6	D	S	64	-	14	3	6	2	0	3	0	0
6	C	S	86	-	2	1	0	1	0	0	0	0
6	C	S	87	-	2	2	0	0	0	0	0	0
6	C	S	88	-	3	2	1	0	0	0	0	0
6	A	S	1	-	8	7	1	0	0	0	0	0
6	E	S	2	-	2	1	1	0	0	0	0	0
6	E	S	3	-	4	1	1	2	0	0	0	0
6	E	S	4	-	5	3	0	2	0	0	0	0
6	D	S	5	-	1	0	1	0	0	0	0	0
6	D	S	6	-	2	0	0	2	0	0	0	0
6	A	S	9	-	12	6	3	1	2	0	0	0
6	E	S	11	-	2	1	1	0	0	0	0	0
6	E	S	12	-	4	1	2	1	0	0	0	0
6	E	S	13	-	1	0	0	0	1	0	0	0
6	D	S	15	-	16	12	3	1	0	0	0	0
6	D	S	14	-	5	3	2	0	0	0	0	0
6	A	S	17	-	4	2	0	1	1	0	0	0
6	E	S	18	-	6	0	6	0	0	0	0	0
6	A	S	19	-	1	0	1	0	0	0	0	0
6	E	S	20	-	2	0	1	1	0	0	0	0
6	D	S	22	-	3	1	1	1	0	0	0	0
6	D	S	23	-	15	12	2	1	0	0	0	0
6	A	S	25	-	12	4	8	0	0	0	0	0
6	E	S	26	-	1	0	1	0	0	0	0	0
6	E	S	27	-	4	1	3	0	0	0	0	0
6	E	S	28	-	3	0	3	0	0	0	0	0
6	E	S	29	-	2	0	2	0	0	0	0	0
6	E	S	30	-	8	3	2	3	0	0	0	0
6	D	S	31	-	12	3	4	1	0	4	0	0
6	A	S	33	-	19	2	16	1	0	0	0	0
6	E	S	34	-	10	1	9	0	0	0	0	0
6	E	S	35	-	1	0	1	0	0	0	0	0
6	E	S	36	-	3	0	0	0	3	0	0	0
6	E	S	37	-	4	0	4	0	0	0	0	0

Unit	Area	Layer	Quad	Rasgo	Total Count	*Huaracane Vegetal*	*Huaracane Arena*	*Huaracane Fino*	*Pasta Biotite*	*Pasta Centro Rosada*	*Pasta Naranja*	Other
6	E	S	38	-	1	0	1	0	0	0	0	0
6	D	S	39	-	32	5	19	5	0	3	0	0
6	D	S	42	-	2	2	0	0	0	0	0	0
6	D	S	43	-	6	0	5	1	0	0	0	0
6	D	S	44	-	4	2	1	0	0	1	0	0
6	D	S	45	-	9	2	4	1	0	2	0	0
6	D	S	46	-	2	0	2	0	0	0	0	0
6	D	S	47	-	28	1	8	4	0	15	0	0
6	D	S	50	-	2	0	2	0	0	0	0	0
6	D	S	51	-	6	1	5	0	0	0	0	0
6	D	S	52	-	3	1	2	0	0	0	0	0
6	D	S	53	-	8	0	6	2	0	0	0	0
6	D	S	54	-	3	0	2	1	0	0	0	0
6	D	S	55	-	10	3	3	1	0	3	0	0
6	A	S	57	-	4	1	2	1	0	0	0	0
6	D	S	58	-	7	0	7	0	0	0	0	0
6	D	S	59	-	1	0	1	0	0	0	0	0
6	D	S	60	-	7	1	6	0	0	0	0	0
6	D	S	62	-	5	3	0	0	0	2	0	0
6	D	S	63	-	3	0	1	1	0	1	0	0
6	A	S	65	-	16	4	11	1	0	0	0	0
6	B	S	66	-	2	0	2	0	0	0	0	0
6	C	S	68	-	1	0	1	0	0	0	0	0
6	B	S	68	-	1	1	0	0	0	0	0	0
6	C	S	69	-	2	0	2	0	0	0	0	0
6	C	S	70	-	6	1	3	2	0	0	0	0
6	C	S	71	-	2	2	0	0	0	0	0	0
6	C	S	72	-	5	1	0	3	0	1	0	0
6	B	S	73	-	3	0	1	0	0	2	0	0
6	A	S	73	-	4	0	4	0	0	0	0	0
6	B	S	74	-	3	1	2	0	0	0	0	0
6	B	S	75	-	5	0	3	2	0	0	0	0
6	C	S	76	-	2	1	1	0	0	0	0	0
6	C	S	77	-	6	3	2	1	0	0	0	0
6	C	S	78	-	9	6	1	1	0	0	0	1
6	C	S	79	-	4	1	2	0	0	1	0	0
6	C	S	80	-	6	3	3	0	0	0	0	0
6	B	S	82	-	5	1	4	0	0	0	0	0
6	B	S	83	-	1	0	1	0	0	0	0	0
6	C	S	84	-	4	1	1	2	0	0	0	0

Unit	Area	Layer	Quad	Rasgo	Total Count	*Huaracane Vegetal*	*Huaracane Arena*	*Huaracane Fino*	*Pasta Biotite*	*Pasta Centro Rosada*	*Pasta Naranja*	Other
6	C	S	85	-	5	1	4	0	0	0	0	0
6	A	S	89	-	4	0	4	0	0	0	0	0
6	E	A	2	-	8	7	0	1	0	0	0	0
6	E	A	3	-	21	2	16	0	0	3	0	0
6	E	A	4	-	5	3	2	0	0	0	0	0
6	E	A	5	-	6	6	0	0	0	0	0	0
6	E	A	10	-	12	8	3	1	0	0	0	0
6	E	A	11	-	5	2	0	3	0	0	0	0
6	E	A	12	-	1	0	0	1	0	0	0	0
6	E	A	13	-	1	0	1	0	0	0	0	0
6	E	A	18	-	8	2	6	0	0	0	0	0
6	E	A	19	-	5	1	2	2	0	0	0	0
6	E	A	20	-	6	0	4	0	1	0	0	1
6	E	A	21	-	1	0	1	0	0	0	0	0
6	E	A	22	-	1	0	1	0	0	0	0	0
6	E	A	26	-	2	0	1	1	0	0	0	0
6	E	A	27	-	10	3	6	0	1	0	0	0
6	E	A	28	-	3	2	0	1	0	0	0	0
6	E	A	30	-	4	1	3	0	0	0	0	0
6	E	A	34	-	14	3	6	5	0	0	0	0
6	E	A	35	-	10	0	9	0	1	0	0	0
6	E	A	36	-	7	3	1	3	0	0	0	0
6	E	A	37	-	2	0	1	1	0	0	0	0
6	E	A	38	-	8	1	5	2	0	0	0	0
6	D	A	6	-	2	0	1	1	0	0	0	0
6	D	A	14	-	4	0	4	0	0	0	0	0
6	D	A	15	-	4	1	1	2	0	0	0	0
6	D	A	23	-	16	3	5	8	0	0	0	0
6	D	A	30	-	1	0	1	0	0	0	0	0
6	D	A	31	-	24	3	14	4	0	3	0	0
6	D	A	34	-	5	2	2	1	0	0	0	0
6	D	A	38	-	5	0	4	1	0	0	0	0
6	D	A	39	-	11	2	5	4	0	0	0	0
6	D	A	42	-	9	2	7	0	0	0	0	0
6	D	A	43	-	1	0	1	0	0	0	0	0
6	D	A	44	-	2	0	2	0	0	0	0	0
6	D	A	46	-	25	0	15	8	0	1	0	0
6	D	A	47	-	42	2	13	12	0	15	0	0
6	D	A	50	-	7	0	6	1	0	0	0	0
6	D	A	51	-	3	1	2	0	0	0	0	0

Unit	Area	Layer	Quad	Rasgo	Total Count	*Huaracane Vegetal*	*Huaracane Arena*	*Huaracane Fino*	*Pasta Biotite*	*Pasta Centro Rosada*	*Pasta Naranja*	Other
6	D	A	52	-	7	2	5	0	0	0	0	0
6	D	A	54	-	2	0	1	0	0	1	0	0
6	D	A	55	-	7	2	1	3	0	1	0	0
6	D	A	58	-	7	0	6	1	0	0	0	0
6	D	A	59	-	11	1	9	1	0	0	0	0
6	D	A	60	-	10	9	1	0	0	0	0	0
6	D	A	61	-	3	0	3	0	0	0	0	0
6	D	A	62	-	2	0	0	0	0	2	0	0
6	D	A	63	-	2	0	1	1	0	0	0	0
6	C	A	84	-	11	1	2	8	0	0	0	0
6	C	A	70	-	6	4	0	2	0	0	0	0
6	C	A	72	-	1	0	0	0	0	1	0	0
6	C	A	76	-	2	1	1	0	0	0	0	0
6	C	A	78	-	2	0	2	0	0	0	0	0
6	C	A	77	-	1	1	0	0	0	0	0	0
6	C	A	79	-	4	0	3	1	0	0	0	0
6	C	A	80	-	1	0	1	0	0	0	0	0
6	A	A	1	-	1	1	0	0	0	0	0	0
6	A	A	9	-	4	3	0	0	1	0	0	0
6	A	A	17	-	8	3	3	0	2	0	0	0
6	A	A	25	-	8	0	8	0	0	0	0	0
6	A	A	33	-	13	2	9	1	0	1	0	0
6	A	A	41	-	2	0	0	2	0	0	0	0
6	A	A	57	-	22	4	9	8	1	0	0	0
6	A	A	73	-	15	0	13	1	0	1	0	0
6	A	A	65	-	14	3	10	1	0	0	0	0
6	A	A	81	-	1	0	0	1	0	0	0	0
6	B	A-1	75	1	1	0	1	0	0	0	0	0
6	B	A-1	67	-	2	0	2	0	0	0	0	0
6	B	A-1	74	-	12	1	11	0	0	0	0	0
6	B	A-1	75	-	6	2	3	1	0	0	0	0
6	B	A-1	82	-	11	2	7	1	1	0	0	0
6	B	A-1	83	-	2	1	1	0	0	0	0	0
6	B	A-2	76	2	1	0	1	0	0	0	0	0
6	B	A-2	82	2	3	1	2	0	0	0	0	0
6	B	A-2	83	2	4	2	2	0	0	0	0	0
6	B	A-2	74	-	43	39	4	0	0	0	0	0
6	B	A-2	75	2	38	37	0	1	0	0	0	0
6	B	A-3	67	2	13	10	3	0	0	0	0	0
6	E	B	2	15	13	1	11	1	0	0	0	0

Unit	Area	Layer	Quad	Rasgo	Total Count	*Huaracane Vegetal*	*Huaracane Arena*	*Huaracane Fino*	*Pasta Biotite*	*Pasta Centro Rosada*	*Pasta Naranja*	Other
6	E	B	3	15	1	1	0	0	0	0	0	0
6	E	B	3	-	3	1	2	0	0	0	0	0
6	E	B	4	-	4	0	2	2	0	0	0	0
6	E	B	5	-	2	2	0	0	0	0	0	0
6	E	B	10	-	1	1	0	0	0	0	0	0
6	E	B	12	-	1	0	0	0	0	0	0	1
6	E	B	13	-	71	1	0	10	0	0	0	60
6	E	B	20	-	3	1	2	0	0	0	0	0
6	E	B	21	-	16	0	1	2	0	0	0	13
6	E	B	22	-	27	0	0	4	0	0	0	23
6	E	B	26	-	2	1	1	0	0	0	0	0
6	E	B	28	-	3	1	2	0	0	0	0	0
6	E	B	29	-	4	1	2	1	0	0	0	0
6	E	B	30	-	4	0	4	0	0	0	0	0
6	A	B	33 & 41	13	1	0	1	0	0	0	0	0
6	E	B	35	-	2	0	2	0	0	0	0	0
6	E	B	37	-	5	2	2	0	0	0	0	0
6	E	B	38	-	4	1	2	1	0	0	0	0
6	D	B	43	-	2	0	2	0	0	0	0	0
6	D	B	44	-	8	0	7	1	0	0	0	0
6	D	B	45	-	11	0	3	7	0	1	0	0
6	D	B	46	9	12	1	9	2	0	0	0	0
6	D	B	50	-	3	0	3	0	0	0	0	0
6	D	B	52	-	4	1	3	0	0	0	0	0
6	D	B	53	-	3	0	1	0	0	2	0	0
6	D	B	58	-	5	1	2	1	0	1	0	0
6	D	B	59	10	1	0	1	0	0	0	0	0
6	D	B	60	-	2	1	1	0	0	0	0	0
6	C	B	71	7	2	0	2	0	0	0	0	0
6	B	A-3	66	2	1	0	1	0	0	0	0	0
6	B	A-3	75	2	1	1	0	0	0	0	0	0
6	B	A-3	76	2	6	1	5	0	0	0	0	0
6	E	C	27	-	1	0	0	1	0	0	0	0
6	E	C	35	-	2	1	1	0	0	0	0	0
6	D	C	52 & 53	16	6	0	6	0	0	0	0	0
7	B	S	8	-	7	0	7	0	0	0	0	0
7	B	S	11	-	3	0	2	0	1	0	0	0
7	B	S	12	-	1	0	1	0	0	0	0	0
7	B	S	13	-	9	0	9	0	0	0	0	0
7	A	S	16	-	2	0	1	0	1	0	0	0

Unit	Area	Layer	Quad	Rasgo	Total Count	*Huaracane Vegetal*	*Huaracane Arena*	*Huaracane Fino*	*Pasta Biotite*	*Pasta Centro Rosada*	*Pasta Naranja*	Other
7	B	S	17	-	16	0	8	0	8	0	0	0
7	B	S	18	-	1	0	1	0	0	0	0	0
7	B	S	19	-	1	0	1	0	0	0	0	0
7	A	S	20	-	10	0	10	0	0	0	0	0
7	A	S	21	-	1	0	1	0	0	0	0	0
7	A	S	25	-	4	0	0	4	0	0	0	0
7	A	S	30	-	2	0	0	0	2	0	0	0
7	B	S	32	-	1	0	1	0	0	0	0	0
7	A	S	34	-	3	0	2	1	0	0	0	0
7	B	S	35	-	1	0	1	0	0	0	0	0
7	A	S	37	-	1	1	0	0	0	0	0	0
7	B	A	7	-	4	0	3	0	1	0	0	0
7	B	A	8	-	16	0	14	0	2	0	0	0
7	B	A	9	-	2	0	2	0	0	0	0	0
7	B	A	12	-	2	0	2	0	0	0	0	0
7	B	A	13	-	4	0	4	0	0	0	0	0
7	B	A	14	-	4	0	4	0	0	0	0	0
7	B	A	18	-	1	0	0	0	1	0	0	0
7	A	A	21	-	2	0	2	0	0	0	0	0
7	B	A	22	-	4	1	2	0	1	0	0	0
7	B	A	23	-	10	0	5	0	5	0	0	0
7	B	A	24	-	1	0	1	0	0	0	0	0
7	B	A	27	-	2	0	2	0	0	0	0	0
7	B	A	28	-	1	0	0	0	1	0	0	0
7	B	A	31	-	1	1	0	0	0	0	0	0
7	B	A	32	-	1	0	1	0	0	0	0	0
7	B	B	8	-	2	0	2	0	0	0	0	0
7	B	B	9	-	12	0	12	0	0	0	0	0
7	B	B	13	2	17	0	17	0	0	0	0	0
7	B	B	13	4	1	0	1	0	0	0	0	0
7	B	B	13	-	2	0	2	0	0	0	0	0
7	B	B	18	2	5	0	5	0	0	0	0	0
7	B	B	19	-	2	0	2	0	0	0	0	0
7	B	B	23	-	14	0	6	0	8	0	0	0
7	B	B	24	-	2	0	2	0	0	0	0	0
7	B	B	27	-	11	0	9	0	2	0	0	0
7	B	B	28	-	1	0	0	0	1	0	0	0
7	B	B	31	-	2	0	1	1	0	0	0	0
7	B	B	32	-	3	0	0	3	0	0	0	0
7	B	B	35	-	6	0	3	2	1	0	0	0

Unit	Area	Layer	Quad	Rasgo	Total Count	*Huaracane Vegetal*	*Huaracane Arena*	*Huaracane Fino*	*Pasta Biotite*	*Pasta Centro Rosada*	*Pasta Naranja*	Other
7	B	B	36	-	2	0	2	0	0	0	0	0
7	B	C-1	23	9	2	0	2	0	0	0	0	0
7	B	C	31	3A	1	0	1	0	0	0	0	0
8	A	S	2	-	2	1	0	0	1	0	0	0
8	A	S	3	-	2	0	1	1	0	0	0	0
8	C	S	3	-	1	0	1	0	0	0	0	0
8	A	S	4	-	4	1	2	0	0	1	0	0
8	C	S	4	-	1	0	1	0	0	0	0	0
8	A	S	5	-	1	0	0	1	0	0	0	0
8	C	S	5	-	1	0	1	0	0	0	0	0
8	A	S	6	-	1	0	0	0	1	0	0	0
8	C	S	6	-	2	0	0	0	2	0	0	0
8	C	S	7	-	6	0	5	1	0	0	0	0
8	A	S	8	-	3	0	3	0	0	0	0	0
8	A	S	13	-	1	0	1	0	0	0	0	0
8	A	S	14	-	1	1	0	0	0	0	0	0
8	A	S	17	-	4	0	2	2	0	0	0	0
8	A	S	18	-	2	1	1	0	0	0	0	0
8	A	S	19	-	2	0	0	0	1	1	0	0
8	A	S	20	-	3	1	2	0	0	0	0	0
8	A	S	22	-	2	1	0	0	0	1	0	0
8	A	S	23	-	2	1	0	0	1	0	0	0
8	A	S	25	-	7	1	3	0	3	0	0	0
8	A	S	26	-	2	0	1	0	1	0	0	0
8	A	S	27	-	2	0	2	0	0	0	0	0
8	A	S	28	-	2	0	1	0	1	0	0	0
8	A	S	29	-	1	0	1	0	0	0	0	0
8	A	S	30	-	1	1	0	0	0	0	0	0
8	C	S	32	-	1	0	1	0	0	0	0	0
8	A	S	33	-	1	0	1	0	0	0	0	0
8	A	S	34	-	1	0	0	0	1	0	0	0
8	A	S	35	-	3	0	2	0	1	0	0	0
8	A	S	36	-	2	0	1	0	1	0	0	0
8	A	S	37	-	2	0	2	0	0	0	0	0
8	C	S	39	-	2	0	1	0	1	0	0	0
8	C	S	40	-	1	0	0	0	1	0	0	0
8	B	S	41	-	5	0	2	0	3	0	0	0
8	B	S	42	-	1	0	1	0	0	0	0	0
8	B	S	43	-	1	0	1	0	0	0	0	0
8	B	S	44	-	2	0	2	0	0	0	0	0

Unit	Area	Layer	Quad	Rasgo	Total Count	*Huaracane Vegetal*	*Huaracane Arena*	*Huaracane Fino*	*Pasta Biotite*	*Pasta Centro Rosada*	*Pasta Naranja*	Other
8	B	S	45	-	3	1	3	0	0	0	0	0
8	A	S	45	-	1	1	0	0	0	0	0	0
8	C	S	46	-	1	0	1	0	0	0	0	0
8	B	S	46	-	1	0	1	0	0	0	0	0
8	C	S	47	-	2	2	0	0	0	0	0	0
8	C	S	48	-	1	0	0	0	1	0	0	0
8	B	S	49	-	8	0	8	0	0	0	0	0
8	B	S	50	-	1	0	1	0	0	0	0	0
8	B	S	51	-	2	0	1	0	1	0	0	0
8	C	S	54	-	2	1	0	0	1	0	0	0
8	B	S	54	-	5	1	3	1	0	0	0	0
8	C	S	55	-	7	4	0	3	0	0	0	0
8	C	S	57	-	7	1	6	0	0	0	0	0
8	B	S	58	-	2	0	2	0	0	0	0	0
8	C	S	60	-	2	0	1	1	0	0	0	0
8	C	S	61	-	3	0	1	2	0	0	0	0
8	C	S	64	-	1	1	0	0	0	0	0	0
8	A	A	2	-	4	1	2	0	1	0	0	0
8	C	A	2	-	2	0	2	0	0	0	0	0
8	A	A	3	-	1	0	0	1	0	0	0	0
8	A	A	5	-	1	0	1	0	0	0	0	0
8	C	A	6	-	17	2	9	2	4	0	0	0
8	C	A	8	-	3	0	2	1	0	0	0	0
8	C	A	5	-	4	0	2	2	0	0	0	0
8	C	A	7	-	32	0	26	0	6	0	0	0
8	A	A	9	-	2	2	0	0	0	0	0	0
8	A	A	10	-	4	0	3	1	0	0	0	0
8	A	A	11	-	5	1	4	0	0	0	0	0
8	A	A	13	-	3	1	2	0	0	0	0	0
8	A	A	14	-	1	0	1	0	0	0	0	0
8	A	A	15	-	2	1	0	0	1	0	0	0
8	A	A	16	-	5	0	3	0	2	0	0	0
8	A	A	17	-	2	0	1	0	1	0	0	0
8	A	A	18	-	2	0	2	0	0	0	0	0
8	A	A	19	-	7	0	6	0	1	0	0	0
8	A	A	20	-	5	0	5	0	0	0	0	0
8	C	A	23	-	1	0	0	0	0	1	0	0
8	C	A	24	-	1	0	0	1	0	0	0	0
8	A	A	25	-	4	1	3	0	0	0	0	0
8	A	A	26	-	12	0	4	3	5	0	0	0

Unit	Area	Layer	Quad	Rasgo	Total Count	*Huaracane Vegetal*	*Huaracane Arena*	*Huaracane Fino*	*Pasta Biotite*	*Pasta Centro Rosada*	*Pasta Naranja*	Other
8	A	A	27	-	12	0	9	1	2	0	0	0
8	A	A	28	-	6	0	5	1	0	0	0	0
8	A	A	29	-	8	0	6	0	2	0	0	0
8	A	A	30	-	1	1	0	0	0	0	0	0
8	C	A	31	-	1	1	0	0	0	0	0	0
8	A	A	33	-	2	0	0	0	1	1	0	0
8	C	A	33	-	4	0	0	0	4	0	0	0
8	A	A	34	-	14	0	11	0	3	0	0	0
8	A	A	35	-	10	0	8	1	1	0	0	0
8	A	A	36	-	6	1	5	0	0	0	0	0
8	A	A	37	-	6	1	5	0	0	0	0	0
8	A	A	38	-	7	3	1	2	0	1	0	0
8	C	A	39	-	3	2	0	0	1	0	0	0
8	B	A	41	-	14	1	9	1	3	0	0	0
8	B	A	43	-	3	1	2	0	0	0	0	0
8	B	A	44	-	3	0	3	0	0	0	0	0
8	B	A	45	-	8	3	5	0	0	0	0	0
8	B	A	46	-	2	1	1	0	0	0	0	0
8	B	A	49	-	9	1	8	0	0	0	0	0
8	B	A	50	-	4	2	1	0	1	0	0	0
8	B	A	51	-	3	0	2	1	0	0	0	0
8	B	A	52	-	2	0	2	0	0	0	0	0
8	B	A	53	-	3	0	3	0	0	0	0	0
8	C	A	54	-	1	0	0	0	0	1	0	0
8	B	A	54	-	1	0	0	1	0	0	0	0
8	C	A	57	-	6	1	5	0	0	0	0	0
8	C	A	60	-	1	0	0	0	0	0	1	0
8	C	A	61	-	6	1	3	1	1	0	0	0
8	C	B	7	5	32	4	12	4	8	1	0	0
8	A	B	16	-	3	0	0	3	0	0	0	0
8	A	B	21	6	1	0	0	0	1	0	0	0
8	A	B	21	-	10	0	9	1	0	0	0	0
8	A	B	22	4	1	0	1	0	0	0	0	0
8	A	B	25	-	15	0	9	1	4	1	0	0
8	A	B	26	10	7	1	2	0	4	0	0	0
8	A	B	26	-	20	3	7	4	6	0	0	0
8	A	B	27	-	4	1	3	0	0	0	0	0
8	A	B	28	8	2	0	0	1	1	0	0	0
8	A	B	29	3	1	0	1	0	0	0	0	0
8	A	B	30	2	2	0	2	0	0	0	0	0

Unit	Area	Layer	Quad	Rasgo	Total Count	*Huaracane Vegetal*	*Huaracane Arena*	*Huaracane Fino*	*Pasta Biotite*	*Pasta Centro Rosada*	*Pasta Naranja*	Other
8	A	B	33	10	3	0	0	3	0	0	0	0
8	A	B	34	10	13	0	2	9	1	1	0	0
8	A	B	35	-	5	0	4	0	1	0	0	0
8	A	B	36	-	2	0	2	0	0	0	0	0
8	A	B	37	-	6	1	5	0	0	0	0	0
8	A	B	38	-	14	3	10	1	0	0	0	0
8	B	B	41	-	3	0	2	0	1	0	0	0
8	B	B	42	-	13	1	10	1	0	1	0	0
8	B	B	43	-	31	2	13	15	0	1	0	0
8	B	B	44	1	6	3	3	0	0	0	0	0
8	B	B	44	-	16	0	13	3	0	0	0	0
8	B	B	45	1	27	4	20	0	2	1	0	0
8	B	B	45	-	4	0	2	0	2	0	0	0
8	B	B	46	-	1	0	1	0	0	0	0	0
8	B	B	49	-	10	1	9	0	0	0	0	0
8	B	B	50	-	6	1	4	0	1	0	0	0
8	B	B	51	-	5	3	1	0	0	1	0	0
8	B	B	52	-	11	0	9	0	2	0	0	0
8	B	B	53	-	9	2	6	1	0	0	0	0
8	B	B	60	-	4	0	4	0	0	0	0	0
8	B	B	58	-	3	0	3	0	0	0	0	0
8	B	B	59	-	2	0	2	0	0	0	0	0
8	A	C	34	10	2	1	0	1	0	0	0	0
8	A	C	35	24	3	0	0	3	0	0	0	0
8	A	C	36	25	1	0	1	0	0	0	0	0
8	B	C	43	16	1	0	0	1	0	0	0	0
8	A	C	37	26	13	0	13	0	0	0	0	0
8	A	C	37	28	13	3	10	0	0	0	0	0
8	A	C	38	28	16	2	14	0	0	0	0	0
8	B	C	42	13	41	1	29	6	1	4	0	0
8	B	C	44	20	2	2	0	0	0	0	0	0
8	B	C	44	21	9	0	9	0	0	0	0	0
8	B	C	49	11	1	0	0	0	1	0	0	0
8	B	C	50	13	21	2	11	3	3	2	0	0
8	B	C	51	14	1	0	1	0	0	0	0	0
8	B	C	52	17	1	0	1	0	0	0	0	0
8	B	C	52	19	4	0	3	0	0	1	0	0

Table C.3. Analysis of diagnostic ceramic sherds (see Table B.6 for codes)

# de Especimen	Sector	Unit	Area	Layer	Quad	Rasgo	Weight (g)	Vessel form	Rim present	Rim form	Neck present	Body present	Base present	Handle present	Paste	Body thickness (mm)	Rim thickness (mm)	Rim diameter (cm)	Treatment Ext.	Treatment Int.	Slip Ext.	Slip Int.	Decoration
YA06-2- 02-009-001 #1	F	2	-	S	9	-	0.8	7	x	1	x	-	-	-	3	3.46	2.69	3	1	1	1	1	0
YA06-2- 02-011-001 #1	F	2	-	S	11	-	14.4	2	x	1	-	x	-	-	3	9.02	7.39	20	2	2	1	1	0
YA06-2- 02-012-001 #1	F	2	-	S	12	-	3.0	1	x	1	-	x	-	-	4	6.41	4.27	13	4	4	3	3	0
YA06-2- 02-022-001 #1	F	2	-	S	22	-	8.9	3	x	1	x	-	-	-	3	3.97	3.80	9	1	1	1	1	0
YA06-2- 02-035-001 #1	F	2	-	S	35	-	1.6	1	x	1	-	x	-	-	4	6.64	3.38	-	4	4	3	3	1
YA06-2- 02-019-002 #1	F	2	-	A	19	-	29.4	2	x	1	-	x	-	-	2	6.64	9.76	24	2	1	1	1	0
YA06-2- 02-022-002 #1	F	2	-	A	22	-	6.5	3	x	2	x	-	-	-	3	4.76	3.18	7	1	1	2	2	0
YA06-2- 02-022-002 #2	F	2	-	A	22	-	2.1	3	x	2	x	-	-	-	3	4.64	3.71	-	1	1	1	1	0
YA06-2- 02-022-002 #3	F	2	-	A	22	-	1.2	1	-	-	-	x	-	-	4	5.09	-	-	4	5	3	3	2
YA06-2- 02-018-003 #1	F	2	-	B	18	-	30.1	2	x	2	-	x	-	-	2	5.67	9.33	-	2	1	1	1	0
YA06-2- 02-023-007 #1	F	2	-	B	23	-	10.1	1	x	2	-	x	-	-	4	5.64	3.60	15	4	5	3	3	2
YA06-2- 03-028-001 #1	E	3	B	S	28	-	11.2	10	-	-	-	x	-	-	2	4.90	-	-	2	2	2	2	0
YA06-2- 03-036-001 #1	E	3	B	S	36	-	1.4	1	x	2	-	x	-	-	4	5.80	3.08	-	4	4	3	3	0
YA06-2- 03-041-001 #1	E	3	B	S	41	-	4.6	1	x	1	-	x	-	-	5	6.71	3.30	-	4	4	3	3	0
YA06-2- 03-042-001 #1	E	3	B	S	42	-	4.7	1	x	1	-	x	-	-	4	4.84	3.96	-	4	4	2	2	0
YA06-2- 03-042-001 #2	E	3	B	S	42	-	8.5	1	x	1	-	x	-	-	5	5.92	3.19	11	4	5	3	3	0
YA06-2- 03-042-002 #3	E	3	B	S	42	-	34.7	5	x	1	x	x	-	-	7	7.02	5.92	15	1	1	1	1	0
YA06-2- 03-052-001 #1	E	3	B	S	52	-	4.1	2	x	3	-	x	-	-	7	6.96	7.37	-	2	2	2	2	0
YA06-2- 03-060-001 #1	E	3	B	S	60	-	4.7	2	x	2	-	x	-	-	7	6.40	5.83	15	1	1	1	1	0
YA06-2- 03-065-001 #1	E	3	A	S	65	-	1.8	1	x	1	-	x	-	-	4	6.54	3.60	12	4	4	3	3	0
YA06-2- 03-083-001 #1	E	3	A	S	83	-	5.6	1	x	1	-	x	-	-	4	5.73	3.13	-	4	4	3	3	0
YA06-2- 03-085-001 #1	E	3	B	S	85	-	4.6	1	x	1	-	x	-	-	7	4.95	5.31	-	2	2	2	2	0
YA06-2- 03-088-001 #1	E	3	B	S	88	-	5.1	10	-	-	-	x	-	-	7	5.63	-	-	2	1	2	1	0
YA06-2- 03-089-001 #1	E	3	B	S	89	-	6.0	0	-	-	-	-	-	x	7	-	-	-	1	-	1	-	0
YA06-2- 03-107-001 #1	E	3	B	S	107	-	21.7	5	x	2	x	x	-	-	8	6.82	6.83	-	3	4	1	1	0

# de Especimen		Sector	Unit	Area	Layer	Quad	Rasgo	Weight (g)	Vessel form	Rim present	Rim form	Neck present	Body present	Base present	Handle present	Paste	Body thickness (mm)	Rim thickness (mm)	Rim diameter (cm)	Treatment Ext.	Treatment Int.	Slip Ext.	Slip Int.	Decoration
YA06-2- 03-109-001	#1	E	3	B	S	109	-	41.1	0	-	-	-	x	-	x	7	6.73	-	-	1	2	1	1	0
YA06-2- 03-123-001	#1	E	3	C	S	123	-	9.8	2	x	1	-	-	-	-	2	11.52	-	-	2	2	1	1	0
YA06-2- 03-137-001	#1	E	3	A	S	137	-	38.5	0	-	-	-	x	-	x	8	4.57	-	-	2	1	2	1	0
YA06-2- 03-138-001	#1	E	3	A	S	138	-	31.7	2	x	1	-	x	x	-	4	6.27	3.29	18	4	4	3	3	0
YA06-2- 03-142-001	#1	E	3	C	S	142	-	2.5	1	x	3	-	x	-	-	4	5.20	3.56	-	4	4	3	3	0
YA06-2- 03-144-001	#1	E	3	C	S	144	-	11.6	1	x	1	-	x	-	-	4	6.15	3.30	11	4	5	3	3	0
YA06-2- 03-144-001	#2	E	3	C	S	144	-	6.8	1	x	2	-	x	-	-	4	5.05	3.68	16	4	4	3	3	0
YA06-2- 03-144-001	#3	E	3	C	S	144	-	6.2	10	-	-	-	x	-	-	4	4.65	-	-	4	4	3	3	0
YA06-2- 03-145-001	#1	E	3	A	S	145	-	3.7	1	x	1	-	x	-	-	4	5.32	3.55	-	4	5	3	3	0
YA06-2- 03-155-001	#1	E	3	A	S	155	-	9.0	2	x	1	-	x	-	-	1	8.71	8.14	-	4	2	2	2	0
YA06-2- 03-159-001	#1	E	3	C	S	159	-	10.2	3	x	3	x	x	-	-	8	9.28	7.35	-	1	1	2	1	0
YA06-2- 03-004-004	#1	E	3	A	A	4	-	0.8	1	x	2	-	x	-	-	4	5.82	3.18	-	4	5	3	3	0
YA06-2- 03-038-003	#1	E	3	B	A	38	-	1.1	1	x	2	-	x	-	-	4	5.64	3.60	-	4	5	3	3	0
YA06-2- 03-054-006	#1	E	3	B	A	54	-	37.9	2	x	1	-	x	-	-	1	9.87	10.12	-	2	2	2	2	0
YA06-2- 03-054-006	#2	E	3	B	A	54	-	16.4	2	x	1	-	x	-	-	1	8.50	9.05	-	2	2	2	2	0
YA06-2- 03-055-005	#1	E	3	B	A	55	-	8.2	2	x	3	-	x	-	-	3	6.00	6.16	11	2	1	2	1	0
YA06-2- 03-055-005	#2	E	3	B	A	55	-	3.0	7	x	2	x	-	-	-	3	3.63	2.84	5	1	1	1	1	0
YA06-2- 03-058-008	#1	E	3	B	A	58	-	13.6	3	x	3	x	-	-	-	7	7.06	5.83	14	2	1	2	1	0
YA06-2- 03-060-004	#1	E	3	B	A	60	-	20.3	3	x	2	x	x	-	-	7	7.02	6.04	14	1	1	1	1	0
YA06-2- 03-072-005	#1	E	3	B	A	72	-	3.0	1	x	1	-	x	-	-	5	6.00	2.99	10	4	4	3	3	0
YA06-2- 03-074-006	#1	E	3	B	A	74	-	17.1	5	x	3	x	-	-	-	8	5.54	6.05	16	3	4	2	2	0
YA06-2- 03-083-004	#1	E	3	A	A	83	-	2.6	3	x	2	x	-	-	-	2	5.01	4.30	-	1	1	2	2	0
YA06-2- 03-083-004	#2	E	3	A	A	83	-	5.3	1	x	1	-	x	-	-	4	4.72	3.15	12	4	5	5	3	0
YA06-2- 03-083-004	#3	E	3	A	A	83	-	2.9	1	x	1	-	x	-	-	4	-	-	12	4	5	3	3	0
YA06-2- 03-083-004	#4	E	3	A	A	83	-	2.8	1	x	1	-	x	-	-	4	5.56	3.29	12	4	4	3	3	0
YA06-2- 03-083-004	#5	E	3	A	A	83	-	5.5	1	x	1	-	x	-	-	4	5.49	4.41	14	4	4	3	3	0
YA06-2- 03-083-004	#6	E	3	A	A	83	-	2.5	1	x	1	-	x	-	-	4	5.84	3.48	-	4	4	3	3	0

# de Especimen	Sector	Unit	Area	Layer	Quad	Rasgo	Weight (g)	Vessel form	Rim present	Rim form	Neck present	Body present	Base present	Handle present	Paste	Body thickness (mm)	Rim thickness (mm)	Rim diameter (cm)	Treatment Ext.	Treatment Int.	Slip Ext.	Slip Int.	Decoration
YA06-2- 03-086-001 #1	E	3	B	A	86	-	1.9	3	x	1	x	-	-	-	7	5.13	5.48	-	2	2	2	2	0
YA06-2- 03-089-003 #1	E	3	B	A	89	-	31.0	5	x	3	x	-	-	-	8	7.38	6.84	18	1	2	1	1	0
YA06-2- 03-102-005 #1	E	3	B	A	102	-	6.2	1	-	-	-	x	-	-	4	5.72	-	-	4	4	3	3	0
YA06-2- 03-107-004 #1	E	3	B	A	107	-	3.5	1	x	1	-	x	-	-	4	6.61	3.96	-	4	4	3	3	0
YA06-2- 03-107-004 #2	E	3	B	A	107	-	4.5	1	x	1	-	x	-	-	4	5.08	4.00	-	3	3	2	2	0
YA06-2- 03-109-006 #1	E	3	B	A	109	-	28.5	5	x	3	x	x	-	-	8	9.47	7.26	19	2	2	1	1	0
YA06-2- 03-130-003 #1	E	3	B	A	130	-	20.1	5	x	1	x	-	-	-	7	7.66	6.96	-	1	1	4	1	6
YA06-2- 03-144-003 #1	E	3	C	A	144	-	13.7	1	x	1	-	x	-	-	4	7.77	4.57	13	4	4	3	3	0
YA06-2- 03-147-003 #1	E	3	A	A	147	-	26.1	5	x	2	-	x	-	-	7	8.37	7.15	28	1	1	4	1	6
YA06-2- 03-054-017 #1	E	3	B	B	54	-	30.0	10	-	-	-	x	-	-	2	5.76	-	-	4	1	2	1	0
YA06-2- 03-077-007 #1	E	3	B	B	77	27	151.4	5	x	3	x	x	-	-	8	5.93	7.31	14.5	2	2	2	2	0
YA06-2- 03-077-007 #2	E	3	B	B	77	27	5.3	10	-	-	-	x	-	-	7	6.23	-	-	2	1	1	1	0
YA06-2- 03-090-009 #1	E	3	B	B	90	26	40.5	5	x	2	x	x	-	-	8	9.74	8.32	18	1	2	1	1	0
YA06-2- 03-090-009 #2	E	3	B	B	90	26	18.7	5	x	2	x	x	-	-	8	8.86	8.09	-	2	3	2	2	0
YA06-2- 03-090-009 #3	E	3	B	B	90	26	8.3	3	x	2	x	-	-	-	8	7.39	7.30	15	2	3	1	2	0
YA06-2- 03-108-008 #1	E	3	B	B	108	19	13.6	5	x	2	x	-	-	-	8	7.48	6.34	16	1	4	1	2	0
YA06-2- 04-010-001 #1	E	4	-	S	10	-	5.0	1	x	1	-	x	-	-	4	6.39	3.26	-	5	5	3	3	0
YA06-2- 04-019-001 #1	E	4	-	S	19	-	3.6	3	x	1	x	-	-	-	2	8.18	7.78	-	2	2	2	2	0
YA06-2- 04-019-001 #2	E	4	-	S	19	-	4.2	1	x	2	-	x	-	-	4	6.35	2.92	-	4	4	3	3	0
YA06-2- 04-025-001 #1	E	4	-	S	25	-	6.7	2	x	6	-	x	-	-	2	6.25	9.30	20	2	1	3	3	0
YA06-2- 04-009-001 #1	E	4	B	A	9	-	9.2	3	x	1	x	-	-	-	2	6.31	4.23	8	1	1	2	2	0
YA06-2- 04-012-004 #1	E	4	B	A	12	-	109.1	2	x	2	-	x	-	-	2	7.82	7.80	26	2	2	2	2	0
YA06-2- 04-020-004 #1	E	4	B	A	20	-	13.0	1	x	1	-	x	-	-	4	5.84	4.03	18	4	4	3	3	0
YA06-2- 04-020-007 #1	E	4	B	B	20	-	10.2	2	x	6	-	x	-	-	3	5.76	5.27	9	2	1	3	3	0
YA06-2- 05-012-001 #1	C	5	B	S	12	-	2.7	3	x	2	x	-	-	-	7	4.56	4.26	10	1	1	1	1	0
YA06-2- 05-015-001 #1	C	5	B	S	15	-	26.0	5	x	1	x	-	-	-	2	7.21	7.26	14	1	1	1	1	0
YA06-2- 05-018-004 #1	C	5	B	A	18	-	11.9	2	x	1	-	x	-	-	1	8.94	6.22	16	2	2	1	1	0

# de Especimen	Sector	Unit	Area	Layer	Quad	Rasgo	Weight (g)	Vessel form	Rim present	Rim form	Neck present	Body present	Base present	Handle present	Paste	Body thickness (mm)	Rim thickness (mm)	Rim diameter (cm)	Treatment Ext.	Treatment Int.	Slip Ext.	Slip Int.	Decoration
YA06-2- 06-024-001 #1	C	6	D	S	24	-	10.1	2	x	3	-	x	-	-	1	7.47	8.04	19	2	1	1	1	0
YA06-2- 06-024-001 #2	C	6	D	S	24	-	5.7	2	x	3	-	x	-	-	1	8.25	7.30	16	2	1	2	1	0
YA06-2- 06-048-001 #1	C	6	D	S	48	-	7.3	10	-	-	-	x	-	-	2	4.64	-	-	4	4	2	2	0
YA06-2- 06-048-001 #2	C	6	D	S	48	-	3.3	1	x	1	-	x	-	-	5	6.52	4.24	-	4	4	3	3	0
YA06-2- 06-056-001 #1	C	6	D	S	56	-	8.4	1	x	1	-	x	-	-	4	5.90	4.04	-	4	4	3	3	0
YA06-2- 06-056-001 #2	C	6	D	S	56	-	3.7	1	x	2	-	x	-	-	4	7.48	3.77	-	4	4	3	3	0
YA06-2- 06-056-001 #3	C	6	D	S	56	-	2.7	1	x	1	-	x	-	-	4	6.72	6.30	-	4	4	3	3	0
YA06-2- 06-056-001 #4	C	6	D	S	56	-	67.9	0	-	-	-	x	-	x	8	8.09	-	-	1	1	3	1	0
YA06-2- 06-064-001 #1	C	6	D	S	64	-	3.0	2	x	3	-	x	-	-	2	6.15	5.43	-	4	2	3	3	0
YA06-2- 06-064-001 #2	C	6	D	S	64	-	7.2	1	x	1	-	x	-	-	4	6.07	4.05	13	4	5	3	3	2
YA06-2- 06-064-001 #3	C	6	D	S	64	-	18.0	3	x	1	x	-	-	-	8	9.13	5.11	11	2	2	1	1	0
YA06-2- 06-001-001 #1	C	6	A	S	1	-	19.1	2	x	1	-	x	-	-	1	6.63	6.30	-	2	2	2	2	0
YA06-2- 06-002-001 #1	C	6	E	S	2	-	3.3	2	x	2	-	x	-	-	2	5.99	5.31	9	4	3	3	3	0
YA06-2- 06-004-001 #1	C	6	E	S	4	-	34.0	0	-	-	-	x	-	x	1	5.62	-	-	1	1	1	1	0
YA06-2- 06-004-001 #2	C	6	E	S	4	-	3.3	1	x	2	-	x	-	-	4	6.10	3.84	-	3	3	3	3	0
YA06-2- 06-009-001 #1	C	6	A	S	9	-	2.4	3	x	1	x	-	-	-	1	5.65	5.05	10	2	2	2	2	0
YA06-2- 06-009-001 #2	C	6	A	S	9	-	8.5	3	x	1	x	-	-	-	2	6.37	5.51	11	2	1	1	1	0
YA06-2- 06-009-001 #3	C	6	A	S	9	-	59.6	0	-	-	-	x	x	-	7	3.98	-	-	2	2	1	1	0
YA06-2- 06-015-001 #1	C	6	D	S	15	-	24.6	2	x	2	-	x	-	-	1	8.45	4.89	10	2	2	2	2	0
YA06-2- 06-015-001 #2	C	6	D	S	15	-	9.3	3	x	1	x	x	-	-	1	6.60	4.53	-	2	1	2	1	0
YA06-2- 06-015-001 #3	C	6	D	S	15	-	4.7	1	x	1	-	x	-	-	5	6.28	5.96	12	5	5	3	3	0
YA06-2- 06-020-001 #1	C	6	E	S	20	-	7.1	1	x	1	-	x	-	-	4	6.13	2.50	20	4	4	3	3	0
YA06-2- 06-023-001 #1	C	6	D	S	23	-	4.5	2	x	3	-	x	-	-	1	9.16	6.60	-	2	2	2	2	0
YA06-2- 06-031-001 #1	C	6	D	S	31	-	11.6	1	x	1	-	x	-	-	4	6.69	4.10	14	5	4	3	3	0
YA06-2- 06-033-001 #1	C	6	A	S	33	-	5.5	1	x	5	-	x	-	-	4	6.68	1.60	-	4	4	3	3	1
YA06-2- 06-034-001 #1	C	6	E	S	34	-	3.3	5	x	1	x	-	-	-	2	6.38	5.19	10.5	2	2	2	2	0
YA06-2- 06-035-001 #1	C	6	E	S	35	-	19.5	5	x	1	x	-	-	-	2	5.28	5.65	10.5	3	4	2	2	0

# de Especimen	Sector	Unit	Area	Layer	Quad	Rasgo	Weight (g)	Vessel form	Rim present	Rim form	Neck present	Body present	Base present	Handle present	Paste	Body thickness (mm)	Rim thickness (mm)	Rim diameter (cm)	Treatment Ext.	Treatment Int.	Slip Ext.	Slip Int.	Decoration
YA06-2- 06-039-001 #1	C	6	D	S	39	-	15.5	2	x	2	-	x	-	-	1	7.22	5.17	20	2	1	1	1	0
YA06-2- 06-039-001 #2	C	6	D	S	39	-	2.4	3	x	1	x	-	-	-	2	4.69	2.97	-	2	2	1	1	0
YA06-2- 06-039-001 #3	C	6	D	S	39	-	2.1	1	x	5	-	x	-	-	4	5.99	1.94	12	5	5	3	3	0
YA06-2- 06-039-001 #4	C	6	D	S	39	-	2.9	1	x	1	-	x	-	-	4	6.46	3.44	15	5	5	3	3	0
YA06-2- 06-043-001 #1	C	6	D	S	43	-	5.3	2	x	2	-	x	-	-	2	5.78	3.43	-	1	2	1	2	0
YA06-2- 06-045-001 #1	C	6	D	S	45	-	6.1	1	x	1	-	x	-	-	4	7.34	5.90	10	4	2	2	1	0
YA06-2- 06-047-001 #1	C	6	D	S	47	-	7.3	1	x	1	-	x	-	-	4	7.69	6.67	10	2	2	2	1	0
YA06-2- 06-058-001 #1	C	6	D	S	58	-	3.4	2	x	1	-	x	-	-	2	6.12	4.88	11	1	2	1	1	0
YA06-2- 06-058-001 #2	C	6	D	S	58	-	0.9	7	x	1	x	-	-	-	3	5.07	4.99	4	2	2	4	1	0
YA06-2- 06-063-001 #1	C	6	D	S	63	-	6.1	1	x	1	-	x	-	-	4	5.22	3.29	-	4	5	3	3	0
YA06-2- 06-064-001 #1	C	6	A	S	64	-	8.1	1	x	1	-	x	-	-	4	4.27	4.24	15	4	5	3	3	0
YA06-2- 06-069-001 #1	C	6	C	S	69	-	6.1	3	x	2	x	-	-	-	2	6.75	6.20	18	1	1	1	1	0
YA06-2- 06-070-001 #1	C	6	C	S	70	-	2.1	1	x	1	-	x	-	-	4	5.10	3.19	-	4	5	3	3	0
YA06-2- 06-071-001 #1	C	6	C	S	71	-	10.1	3	x	2	x	x	-	-	1	5.64	6.29	18	2	2	2	2	0
YA06-2- 06-072-001 #1	C	6	C	S	72	-	10.3	1	x	1	-	x	-	-	4	6.17	3.00	17	3	3	1	4	1
YA06-2- 06-074-001 #1	C	6	B	S	74	-	3.0	3	x	1	x	x	-	-	1	4.21	4.38	7	2	1	2	1	0
YA06-2- 06-075-001 #1	C	6	B	S	75	-	13.2	3	x	1	x	x	-	-	3	5.10	4.52	6	3	2	1	1	0
YA06-2- 06-077-001 #1	C	6	C	S	77	-	12.7	2	x	3	x	-	-	-	2	6.54	6.06	29	1	1	1	1	0
YA06-2- 06-078-001 #1	C	6	C	S	78	-	1.1	1	x	1	-	x	-	-	4	-	3.62	-	4	4	3	3	0
YA06-2- 06-078-001 #2	C	6	C	S	78	-	1.0	0	-	-	-	x	-	-	9	2.90	-	-	-	3	-	3	11
YA06-2- 06-084-001 #1	C	6	C	S	84	-	15.8	1	x	1	-	x	-	-	4	6.02	3.70	17	4	5	3	3	0
YA06-2- 06-085-001 #1	C	6	C	S	85	-	6.3	3	x	1	x	x	-	-	3	5.05	4.05	15	4	1	3	1	0
YA06-2- 06-089-001 #1	C	6	C	S	89	-	7.6	3	x	1	x	-	-	-	3	5.62	4.12	6	1	1	1	1	0
YA06-2- 06-002-003 #1	C	6	E	A	2	-	10.8	1	x	1	-	x	-	-	5	6.76	6.13	18	4	4	3	3	0
YA06-2- 06-011-004 #1	C	6	E	A	11	-	20.5	1	x	1	-	x	-	-	5	6.54	6.21	18	4	4	3	3	0
YA06-2- 06-018-004 #1	C	6	E	A	18	-	13.2	2	x	2	-	x	-	-	2	5.04	6.31	-	4	4	3	3	0
YA06-2- 06-019-003 #1	C	6	E	A	19	-	18.3	1	x	2	-	x	-	-	4	5.07	6.07	-	3	3	2	2	0

# de Especimen	Sector	Unit	Area	Layer	Quad	Rasgo	Weight (g)	Vessel form	Rim present	Rim form	Neck present	Body present	Base present	Handle present	Paste	Body thickness (mm)	Rim thickness (mm)	Rim diameter (cm)	Treatment Ext.	Treatment Int.	Slip Ext.	Slip Int.	Decoration
YA06-2- 06-027-003 #1	C	6	E	A	27	-	4.9	3	x	1	x	-	-	-	2	5.70	5.08	-	4	4	2	2	0
YA06-2- 06-028-005 #1	C	6	E	A	28	-	5.2	1	x	1	-	x	-	-	4	6.09	4.66	11	4	5	3	3	1
YA06-2- 06-034-005 #1	C	6	E	A	34	-	2.4	1	x	1	-	x	-	-	4	6.02	5.49	-	4	5	3	3	0
YA06-2- 06-015-005 #1	C	6	D	A	15	-	8.7	3	x	1	x	x	-	-	1	8.08	5.61	-	2	1	2	1	0
YA06-2- 06-015-005 #2	C	6	D	A	15	-	2.4	1	x	3	-	x	-	-	4	6.31	4.24	-	3	4	3	3	0
YA06-2- 06-023-005 #1	C	6	D	A	23	-	21.3	2	x	2	-	x	-	-	2	8.14	5.76	14	3	1	1	1	0
YA06-2- 06-031-005 #1	C	6	D	A	31	-	9.2	2	x	2	-	x	-	-	2	7.60	5.73	14	3	1	1	1	0
YA06-2- 06-031-005 #2	C	6	D	A	31	-	3.5	1	x	2	-	x	-	-	4	6.87	3.57	-	4	5	3	3	0
YA06-2- 06-034-008 #1	C	6	D	A	34	-	50.0	3	x	1	x	x	-	-	1	9.35	6.11	12	3	1	2	2	0
YA06-2- 06-039-005 #1	C	6	D	A	39	-	14.1	5	x	1	x	-	-	-	2	5.35	4.26	10	-	1	-	1	0
YA06-2- 06-039-005 #2	C	6	D	A	39	-	6.7	1	x	2	-	x	-	-	5	6.92	4.09	13	4	4	2	2	0
YA06-2- 06-043-004 #1	C	6	D	A	43	-	2.3	3	x	1	x	-	-	-	2	4.90	4.54	-	4	4	3	3	0
YA06-2- 06-046-004 #1	C	6	D	A	46	-	3.1	1	x	2	-	x	-	-	5	4.63	3.48	11	4	4	3	2	0
YA06-2- 06-046-004 #2	C	6	D	A	46	-	52.9	1	x	2	-	x	-	-	5	6.61	5.47	19	4	4	3	3	0
YA06-2- 06-047-006 #1	C	6	D	A	47	-	1.5	7	x	1	x	-	-	-	2	4.76	3.07	6	2	2	2	2	0
YA06-2- 06-047-006 #2	C	6	D	A	47	-	9.1	1	x	1	-	x	-	-	4	7.03	4.54	18	4	4	3	3	6
YA06-2- 06-047-006 #3	C	6	D	A	47	-	9.1	1	x	2	-	x	-	-	5	6.77	4.50	19	4	4	3	3	0
YA06-2- 06-055-005 #1	C	6	D	A	55	-	7.1	1	x	1	-	x	-	-	4	7.14	3.66	15	4	4	3	3	0
YA06-2- 06-055-005 #2	C	6	D	A	55	-	9.0	1	x	1	-	x	-	-	5	6.67	4.23	13	4	4	3	3	0
YA06-2- 06-084-004 #1	C	6	C	A	84	-	17.5	1	x	1	-	x	-	-	4	6.24	3.75	9	4	4	3	3	0
YA06-2- 06-077-003 #1	C	6	C	A	77	-	12.1	3	x	1	x	x	-	-	1	6.79	7.63	12	3	3	1	1	0
YA06-2- 06-009-005 #1	C	6	A	A	9	-	14.8	3	x	1	x	x	-	-	1	6.80	4.66	14	2	2	2	2	0
YA06-2- 06-009-005 #2	C	6	A	A	9	-	9.1	3	x	1	x	x	-	-	1	5.56	5.95	10	4	1	2	1	0
YA06-2- 06-025-003 #1	C	6	A	A	25	-	14.7	5	x	1	x	-	-	-	2	4.92	5.05	7	4	4	2	2	0
YA06-2- 06-025-003 #2	C	6	A	A	25	-	6.5	3	x	1	x	-	-	-	2	5.84	4.90	17	4	4	3	3	0
YA06-2- 06-041-004 #1	C	6	A	A	41	-	3.7	1	x	1	-	x	-	-	4	6.80	6.39	-	5	5	3	3	0
YA06-2- 06-057-005 #1	C	6	A	A	57	-	11.3	1	x	1	-	x	-	-	4	4.66	4.54	15	4	5	3	3	0

# de Especimen		Sector	Unit	Area	Layer	Quad	Rasgo	Weight (g)	Vessel form	Rim present	Rim form	Neck present	Body present	Base present	Handle present	Paste	Body thickness (mm)	Rim thickness (mm)	Rim diameter (cm)	Treatment Ext.	Treatment Int.	Slip Ext.	Slip Int.	Decoration
YA06-2- 06-073-005	#1	C	6	A	A	73	-	6.1	2	x	5	-	x	-	-	3	5.15	1.61	-	4	1	3	3	0
YA06-2- 06-073-005	#2	C	6	A	A	73	-	33.1	1	x	1	-	x	-	-	4	6.01	3.23	16	4	4	3	4	6
YA06-2- 06-065-004	#1	C	6	A	A	65	-	11.2	1	x	1	-	x	-	-	4	4.62	4.51	16	4	4	3	3	0
YA06-2- 06-081-003	#1	C	6	A	A	81	-	18.8	1	x	1	-	x	-	-	4	7.04	6.38	16	4	4	3	4	6
YA06-2- 06-075-007	#1	C	6	B	A-1	75	1	1.8	2	x	2	-	x	-	-	3	3.63	3.77	13	3	3	3	3	0
YA06-2- 06-074-004	#1	C	6	B	A-1	74	-	50.0	2	x	2	-	x	-	-	2	6.93	5.07	-	2	2	1	1	0
YA06-2- 06-074-004	#2	C	6	B	A-1	74	-	5.4	3	x	1	x	x	-	-	3	5.78	4.01	-	2	2	1	1	0
YA06-2- 06-082-001	#1	C	6	B	A-1	82	-	6.2	2	x	2	-	x	-	-	1	8.19	6.13	-	1	2	1	1	0
YA06-2- 06-082-001	#2	C	6	B	A-1	82	-	17.5	2	x	2	-	x	-	-	2	6.91	6.22	15	2	1	2	1	0
YA06-2- 06-074-009	#1	C	6	B	A-2	74	-	1375.0	2	x	2	-	x	-	-	1	18.80	9.30	-	4	1	1	1	0
YA06-2- 06-075-009	#1	C	6	B	A-2	75	2	390.4	2	x	2	-	x	-	-	1	14.03	5.96	40	4	1	1	1	0
YA06-2- 06-075-009	#2	C	6	B	A-2	75	2	50.4	2	x	2	-	x	-	-	1	14.91	5.26	-	4	4	1	1	0
YA06-2- 06-075-009	#3	C	6	B	A-2	75	2	61.0	3	x	2	x	x	-	-	1	8.90	8.31	17	4	4	1	1	0
YA06-2- 06-075-009	#4	C	6	B	A-2	75	2	80.6	0	-	-	-	x	-	x	1	7.22	-	-	4	4	1	1	0
YA06-2- 06-075-009	#5	C	6	B	A-2	75	2	20.4	1	x	1	-	x	-	-	4	6.03	3.10	16	4	4	3	3	1
YA06-2- 06-002-007	#1	C	6	E	B	2	15	1.4	1	x	1	-	x	-	-	4	5.39	4.20	-	2	2	4	1	1
YA06-2- 06-003-012	#1	C	6	E	B	3	-	29.1	2	x	2	-	x	-	-	1	9.98	6.69	27	4	2	1	1	0
YA06-2- 06-013-006	#1	C	6	E	B	13	-	8.9	1	x	1	-	x	-	-	5	4.03	4.02	13	4	4	3	3	2
YA06-2- 06-013-006	#2	C	6	E	B	13	-	9.6	1	x	1	-	x	-	-	5	6.46	3.68	13	4	4	3	3	1
YA06-2- 06-021-005	#1	C	6	E	B	21	-	10.8	1	x	1	-	x	-	-	5	6.40	3.35	13	4	4	3	3	2
YA06-2- 06-022-010	#1	C	6	E	B	22	-	11.0	1	x	1	-	x	-	-	5	6.88	3.42	13	4	4	3	3	1
YA06-2- 06-029-007	#1	C	6	E	B	29	-	2.8	1	x	5	-	x	-	-	4	4.84	1.65	-	4	4	3	3	0
YA06-2- 06-045-006	#1	C	6	D	B	45	-	9.4	1	x	1	-	x	-	-	5	7.35	4.12	15	4	4	3	3	0
YA06-2- 06-045-006	#2	C	6	D	B	45	-	1.0	1	x	2	-	-	-	-	5	-	3.96	-	4	4	3	3	0
YA06-2- 06-046-010	#1	C	6	D	B	46	9	1.4	2	x	2	-	x	-	-	2	5.47	3.45	-	1	1	1	1	0
YA06-2- 06-046-010	#2	C	6	D	B	46	9	3.7	1	x	2	-	x	-	-	4	6.45	3.47	-	4	4	4	4	1
YA06-2- 06-050-005	#1	C	6	D	B	50	-	9.1	2	x	2	-	x	-	-	2	6.13	3.52	-	2	1	1	1	0

# de Especimen	Sector	Unit	Area	Layer	Quad	Rasgo	Weight (g)	Vessel form	Rim present	Rim form	Neck present	Body present	Base present	Handle present	Paste	Body thickness (mm)	Rim thickness (mm)	Rim diameter (cm)	Treatment Ext.	Treatment Int.	Slip Ext.	Slip Int.	Decoration
YA06-2- 06-050-005 #2	C	6	D	B	50	-	10.5	2	x	2	-	x	-	-	2	5.75	3.38	-	2	1	1	1	0
YA06-2- 06-052-007 #1	C	6	D	B	52	-	70.0	2	x	2	-	x	-	-	1	7.07	6.08	30	4	1	1	1	0
YA06-2- 06-052-007 #2	C	6	D	B	52	-	13.8	2	x	2	-	x	-	-	2	5.34	3.43	-	2	1	1	1	0
YA06-2- 06-058-008 #1	C	6	D	B	58	-	14.7	1	x	1	-	x	-	-	4	5.97	4.23	16	3	3	2	2	0
YA06-2- 06-027-006 #1	C	6	E	C	27	-	65.4	1	x	1	-	x	x	-	4	7.10	4.02	16	5	5	3	3	0
YA06-2- 06-052-009 #1	C	6	D	C	52 & 53	16	1.3	2	x	3	-	x	-	-	2	6.29	5.29	-	1	1	1	1	0
YA06-2- 07-025-001 #1	B	7	A	S	25	-	28.8	1	x	1	-	x	-	-	4	7.98	3.18	14	5	5	3	3	0
YA06-2- 07-007-004 #1	B	7	B	A	7	-	1.6	2	x	2	-	x	-	-	2	4.77	4.54	-	1	1	1	1	0
YA06-2- 07-023-004 #1	B	7	B	A	23	-	10.7	3	x	2	x	-	-	-	7	6.21	5.99	4	1	4	1	2	0
YA06-2- 07-023-004 #2	B	7	B	A	23	-	1.6	0	x	1	-	-	-	-	7	-	5.96	-	1	1	1	1	0
YA06-2- 07-027-003 #1	B	7	B	A	27	-	14.8	3	x	1	x	x	-	-	2	5.40	7.09	8	4	4	3	3	0
YA06-2- 07-023-010 #1	B	7	B	B	23	-	39.4	5	x	2	x	x	-	-	7	6.76	6.16	17	4	4	2	2	0
YA06-2- 07-023-010 #2	B	7	B	B	23	-	2.6	3	x	1	-	-	-	-	7	-	6.09	-	2	1	1	1	0
YA06-2- 07-032-007 #1	B	7	B	B	32	-	1.3	1	X	1	-	X	-	-	4	4.03	3.14	-	4	4	3	3	0
YA06-2- 08-003-001 #1	A	8	A	S	3	-	4.2	3	x	6	x	-	-	-	2	4.92	4.99	-	1	1	1	1	0
YA06-2- 08-003-001 #2	A	8	A	S	3	-	14.4	1	x	2	-	x	-	-	4	5.70	3.41	17	4	4	3	3	6
YA06-2- 08-005-001 #1	A	8	A	S	5	-	8.6	1	-	-	-	x	-	-	4	5.86	-	-	3	3	3	3	2
YA06-2- 08-061-001 #1	A	8	C	S	61	-	2.4	1	x	1	-	x	-	-	5	5.58	4.57	-	4	4	3	3	0
YA06-2- 08-003-004 #1	A	8	A	A	3	-	6.1	1	-	-	-	x	-	-	4	7.70	-	-	4	4	3	3	2
YA06-2- 08-006-003 #1	A	8	C	A	6	-	3.7	1	x	1	-	x	-	-	4	5.70	3.30	-	4	4	2	2	1
YA06-2- 08-008-004 #1	A	8	C	A	8	-	5.6	1	x	2	-	x	-	-	5	5.52	4.82	15	4	4	3	3	0
YA06-2- 08-007-004 #1	A	8	C	A	7	-	42.4	0	-	-	-	x	-	x	7	8.55	-	-	1	1	1	1	0
YA06-2- 08-010-002 #1	A	8	A	A	10	-	2.4	1	x	1	-	x	-	-	4	6.35	4.21	-	4	4	2	2	1
YA06-2- 08-025-004 #1	A	8	A	A	25	-	11.2	2	x	4	-	x	-	-	1	11.33	8.27	-	4	1	2	1	0
YA06-2- 08-026-003 #1	A	8	A	A	26	-	13.2	1	x	1	-	x	-	-	5	4.69	4.06	18	5	5	3	3	0
YA06-2- 08-026-003 #2	A	8	A	A	26	-	1.5	1	x	2	-	x	-	-	5	4.36	3.07	12	5	5	3	3	0
YA06-2- 08-028-003 #1	A	8	A	A	28	-	10.9	2	x	2	-	x	-	-	2	9.18	6.48	-	2	1	2	2	0

# de Especimen	Sector	Unit	Area	Layer	Quad	Rasgo	Weight (g)	Vessel form	Rim present	Rim form	Neck present	Body present	Base present	Handle present	Paste	Body thickness (mm)	Rim thickness (mm)	Rim diameter (cm)	Treatment Ext.	Treatment Int.	Slip Ext.	Slip Int.	Decoration
YA06-2- 08-028-003 #2	A	8	A	A	28	-	1.1	1	x	2	-	x	-	-	4	6.98	3.86	-	4	4	3	3	1
YA06-2- 08-035-003 #1	A	8	A	A	35	-	5.4	3	x	1	x	-	-	-	2	5.39	5.12	-	2	1	2	1	0
YA06-2- 08-035-003 #2	A	8	A	A	35	-	1.3	1	x	2	-	x	-	-	5	4.15	3.07	12	5	5	3	3	0
YA06-2- 08-038-002 #1	A	8	A	A	38	-	23.6	10	-	-	-	x	-	-	1	9.46	-	-	4	4	1	1	0
YA06-2- 08-038-002 #2	A	8	A	A	38	-	6.6	1	x	2	-	x	-	-	4	5.86	4.38	16	4	4	3	3	2
YA06-2- 08-045-005 #1	A	8	B	A	45	-	67.2	2	x	2	-	x	-	-	1	6.69	7.45	30	1	2	1	1	0
YA06-2- 08-049-004 #1	A	8	B	A	49	-	2.4	3	x	1	x	-	-	-	1	6.14	5.97	-	2	2	1	1	0
YA06-2- 08-051-003 #1	A	8	B	A	51	-	1.7	1	x	1	-	x	-	-	4	6.03	3.32	-	4	5	3	3	2
YA06-2- 08-054-005 #1	A	8	B	A	54	-	2.8	1	-	-	-	x	-	-	4	5.62	-	-	4	4	3	3	2
YA06-2- 08-007-010 #1	A	8	C	B	7	5	2.3	2	x	3	-	x	-	-	1	7.95	5.79	-	4	4	1	1	0
YA06-2- 08-007-010 #2	A	8	C	B	7	5	61.8	2	x	2	-	x	-	-	2	6.98	6.97	30	2	1	1	1	0
YA06-2- 08-007-010 #3	A	8	C	B	7	5	3.9	1	x	2	-	x	-	-	4	5.50	3.80	15	4	5	3	3	1
YA06-2- 08-016-006 #1	A	8	A	B	16	-	14.9	1	x	2	-	x	-	-	4	6.62	3.16	18	4	5	3	3	2
YA06-2- 08-016-006 #2	A	8	A	B	16	-	2.7	1	x	1	-	x	-	-	4	7.33	4.34	-	4	5	3	3	1
YA06-2- 08-021-010 #1	A	8	A	B	21	-	15.9	1	x	1	-	x	-	-	4	4.95	3.85	16	4	4	3	3	2
YA06-2- 08-025-009 #1	A	8	A	B	25	-	47.5	2	x	2	-	x	-	-	2	7.30	7.47	-	1	2	2	2	0
YA06-2- 08-025-009 #2	A	8	A	B	25	-	1.2	10	-	-	-	x	-	-	5	5.58	-	-	5	5	3	3	0
YA06-2- 08-026-017 #1	A	8	A	B	26	-	1.7	3	x	1	x	-	-	-	2	6.20	5.19	-	4	4	3	3	0
YA06-2- 08-026-017 #2	A	8	A	B	26	-	1.2	0	x	2	-	-	-	-	3	-	4.55	-	3	3	2	2	1
YA06-2- 08-026-017 #3	A	8	A	B	26	-	6.4	1	x	2	-	x	-	-	4	7.28	3.74	16	4	4	3	3	1
YA06-2- 08-026-017 #4	A	8	A	B	26	-	2.0	1	x	2	-	x	-	-	5	3.32	3.13	15	4	3	3	3	0
YA06-2- 08-026-017 #5	A	8	A	B	26	-	1.5	10	-	-	-	x	-	-	7	5.56	-	-	3	3	2	1	0
YA06-2- 08-034-012 #1	A	8	A	B	34	10	15.6	1	x	1	-	x	-	-	4	6.87	4.67	16	5	5	3	3	0
YA06-2- 08-034-012 #2	A	8	A	B	34	10	7.5	1	x	1	-	x	-	-	4	6.07	3.57	-	4	4	3	3	2
YA06-2- 08-034-012 #3	A	8	A	B	34	10	2.3	1	x	1	-	x	-	-	4	7.85	4.84	-	4	4	3	3	1
YA06-2- 08-034-012 #4	A	8	A	B	34	10	1.3	1	x	2	-	x	-	-	4	4.78	3.41	-	4	5	3	3	1
YA06-2- 08-034-012 #5	A	8	A	B	34	10	16.7	1	-	-	-	x	-	-	4	5.25	-	-	4	4	3	3	2

# de Especimen		Sector	Unit	Area	Layer	Quad	Rasgo	Weight (g)	Vessel form	Rim present	Rim form	Neck present	Body present	Base present	Handle present	Paste	Body thickness (mm)	Rim thickness (mm)	Rim diameter (cm)	Treatment Ext.	Treatment Int.	Slip Ext.	Slip Int.	Decoration
YA06-2- 08-037-008	#1	A	8	A	B	37	-	3.0	3	x	1	x	-	-	-	2	8.03	5.35	-	4	3	3	3	0
YA06-2- 08-042-006	#1	A	8	B	B	42	-	3.8	1	x	2	-	x	-	-	5	4.68	3.01	-	4	4	3	3	1
YA06-2- 08-043-005	#1	A	8	B	B	43	-	5.1	1	x	1	-	x	-	-	4	7.59	4.87	-	4	5	3	3	1
YA06-2- 08-043-005	#2	A	8	B	B	43	-	1.3	1	x	1	-	-	-	-	4	6.74	4.70	-	4	5	3	3	1
YA06-2- 08-043-005	#3	A	8	B	B	43	-	36.9	1	x	-	-	x	-	-	4	6.85	-	-	4	5	3	3	2
YA06-2- 08-043-005	#4	A	8	B	B	43	-	4.9	1	x	2	-	x	-	-	5	4.98	3.28	-	4	4	3	3	2
YA06-2- 08-044-011	#1	A	8	B	B	44	-	13.8	1	-	-	-	x	-	-	4	5.73	-	-	4	4	3	3	2
YA06-2- 08-045-009	#1	A	8	B	B	45	1	2.8	3	x	1	x	-	-	-	7	5.51	4.80	-	4	1	1	1	0
YA06-2- 08-046-004	#1	A	8	B	B	46	-	53.7	2	x	2	-	x	-	-	2	6.56	6.65	-	2	1	2	1	0
YA06-2- 08-034-021	#1	A	8	A	C	34	10	87.9	2	x	3	-	x	-	-	1	10.01	5.38	26	4	4	1	1	0
YA06-2- 08-034-021	#2	A	8	A	C	34	10	56.2	1	x	1	-	x	x	-	5	4.95	7.55	18	4	4	3	3	0
YA06-2- 08-035-012	#1	A	8	A	C	35	24	13.8	1	x	1	-	x	-	-	4	7.10	4.28	-	4	4	3	3	0
YA06-2- 08-043-013	#1	A	8	B	C	43	16	3.8	1	x	1	-	x	-	-	4	4.01	5.15	-	1	3	1	2	0
YA06-2- 08-038-005	#1	A	8	A	C	38	28	39.7	5	-	-	x	x	-	-	2	7.13	-	-	2	1	1	1	0
YA06-2- 08-042-012	#1	A	8	B	C	42	13	11.7	0	-	-	-	-	-	x	2	-	-	-	2	-	1	-	0
YA06-2- 08-042-012	#2	A	8	B	C	42	13	6.5	1	x	2	-	x	-	-	4	8.15	5.60	-	3	1	2	2	0
YA06-2- 08-042-012	#3	A	8	B	C	42	13	3.4	1	x	1	-	x	-	-	4	5.55	5.23	-	2	2	2	2	0
YA06-2- 08-050-013	#1	A	8	B	C	50	13	6.9	1	x	2	-	x	-	-	5	5.17	4.44	-	4	4	3	3	0

Table C.4. Lithic materials from excavation contexts

Unit	Area	Layer	Quad	Rasgo	Total	Obsidian	Dacite	Rhyolite	Andesite	Chert	Fine-Grained Rhyolite	Copper Mineral	Quartz	Fine-grained Sandstone	River Cobble	River Pebble	Turquoise	Chalk	Mica	Lapis Lazuli	Unidentifiable Material
1	A	S	30	-	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0
1	A	S	37	-	3	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0
1	A	S	42	-	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
1	A	S	40	-	3	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0
1	A	A	8	-	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0
1	B	A	10	-	2	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0
1	B	A	11	-	3	0	0	0	0	1	0	1	1	0	0	0	0	0	0	0	0
1	B	A	12	-	3	0	0	0	0	2	0	0	1	0	0	0	0	0	0	0	0
1	B	A	16	-	3	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0
1	B	A	18	-	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
1	A	A	22	-	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
1	A	A	28	-	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
1	A	A	40	-	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
1	A	A	41	-	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
1	B	A-1	16	2	5	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0
1	B	A-2	16	2	2	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0
1	B	A-2	16	2	11	0	0	11	0	0	0	0	0	0	0	0	0	0	0	0	0
2	-	S	7	-	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
2	-	S	12	-	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
2	-	S	16	-	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
2	-	S	17	-	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
2	-	S	21	-	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
2	-	S	34	-	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
2	-	A	1	-	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
2	-	A	5	-	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
2	-	A	11	-	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
2	-	A	13	-	2	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
2	-	A	27	-	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
2	-	A	36	-	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
2	-	A	40	-	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
2	-	B	4	-	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
2	-	B	14	-	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
2	-	B	17	-	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
2	-	B	18	-	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
2	-	B	19	-	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
2	-	B	23	-	3	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0
2	-	B	28	-	4	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	0
2	-	B	45	-	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0

Unit	Area	Layer	Quad	Rasgo	Total	Obsidian	Dacite	Rhyolite	Andesite	Chert	Fine-Grained Rhyolite	Copper Mineral	Quartz	Fine-grained Sandstone	River Cobble	River Pebble	Turquoise	Chalk	Mica	Lapis Lazuli	Unidentifiable Material
2	-	B	51	-	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
3	A	S	1	-	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
3	A	S	3	-	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
3	A	S	4	-	5	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0
3	A	S	15	-	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
3	B	S	21	-	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
3	B	S	22	-	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
3	A	S	35	-	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
3	B	S	36	-	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
3	B	S	37	-	3	0	1	0	0	1	0	0	1	0	0	0	0	0	0	0	0
3	A	S	50	-	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
3	A	S	51	-	2	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0
3	B	S	51	-	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
3	B	S	53	-	2	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0
3	B	S	54	-	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
3	B	S	55	-	2	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0
3	B	S	56	-	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
3	B	S	58	-	3	1	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0
3	B	S	59	-	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
3	B	S	63	-	2	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0
3	B	S	72	-	3	1	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0
3	B	S	73	-	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
3	B	S	74	-	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
3	B	S	75	-	3	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0
3	B	S	79	-	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
3	A	S	81	-	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
3	A	S	82	-	5	0	0	0	0	3	0	0	0	2	0	0	0	0	0	0	0
3	A	S	83	-	2	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0
3	B	S	86	-	12	0	0	0	0	12	0	0	0	0	0	0	0	0	0	0	0
3	B	S	87	-	4	0	0	0	0	3	0	0	1	0	0	0	0	0	0	0	0
3	B	S	92	-	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
3	A	S	101	-	2	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0
3	A	S	102	-	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
3	B	S	109	-	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
3	B	S	110	-	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
3	A	S	118	-	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
3	B	S	127	-	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
3	A	S	131	-	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
3	A	S	136	-	3	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	1
3	A	S	137	-	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0

Unit	Area	Layer	Quad	Rasgo	Total	Obsidian	Dacite	Rhyolite	Andesite	Chert	Fine-Grained Rhyolite	Copper Mineral	Quartz	Fine-grained Sandstone	River Cobble	River Pebble	Turquoise	Chalk	Mica	Lapis Lazuli	Unidentifiable Material
3	A	S	139	-	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0
3	C	S	143	-	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	A	S	145	-	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
3	A	S	152	-	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	A	S	153	-	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
3	A	S	158	-	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
3	C	S	161	-	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
3	A	S	162	-	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
3	A	A	3	-	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
3	B	A	21	-	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
3	B	A	22	-	2	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0
3	B	A	23	-	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
3	B	A	30	-	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
3	B	A	35	-	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
3	B	A	37	-	2	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0
3	B	A	39	-	2	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0
3	B	A	46	-	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
3	A	A	51	-	2	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0
3	B	A	52	-	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
3	B	A	53	-	2	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0
3	B	A	53	1	3	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0
3	B	A	54	-	3	0	0	0	0	1	0	1	1	0	0	0	0	0	0	0	0
3	B	A	54	1	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
3	B	A	55	-	5	0	0	0	0	4	0	1	0	0	0	0	0	0	0	0	0
3	B	A	56	-	5	0	0	0	0	2	0	0	1	0	0	2	0	0	0	0	0
3	B	A	57	-	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	B	A	58	-	3	0	0	0	0	1	0	1	0	0	0	1	0	0	0	0	0
3	B	A	59	-	44	0	0	0	0	4	0	0	0	0	0	0	0	40	0	0	0
3	B	A	60	-	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
3	B	A	63	-	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
3	B	A	67	-	3	0	0	0	0	2	1	0	0	0	0	0	0	0	0	0	0
3	B	A	68	-	4	0	0	0	0	3	0	1	0	0	0	0	0	0	0	0	0
3	B	A	69	-	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
3	B	A	69	1	2	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0
3	B	A	70	-	3	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0
3	B	A	70	1	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
3	B	A	71	-	6	0	0	0	0	6	0	0	0	0	0	0	0	0	0	0	0
3	B	A	72	-	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
3	B	A	73	-	2	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0
3	B	A	74	-	3	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0

Unit	Area	Layer	Quad	Rasgo	Total	Obsidian	Dacite	Rhyolite	Andesite	Chert	Fine-Grained Rhyolite	Copper Mineral	Quartz	Fine-grained Sandstone	River Cobble	River Pebble	Turquoise	Chalk	Mica	Lapis Lazuli	Unidentifiable Material
3	B	A	75	-	10	0	0	0	0	9	0	1	0	0	0	0	0	0	0	0	0
3	B	A	76	-	15	0	0	0	0	13	0	1	1	0	0	0	0	0	0	0	0
3	B	A	84	-	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
3	B	A	85	-	2	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0
3	B	A	86	-	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
3	B	A	87	-	4	0	0	0	0	1	0	0	3	0	0	0	0	0	0	0	0
3	B	A	88	-	2	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0
3	B	A	89	-	2	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0
3	B	A	90	-	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
3	B	A	93	-	3	0	0	0	0	2	0	0	1	0	0	0	0	0	0	0	0
3	B	A	94	-	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	B	A	96	-	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
3	A	A	103	-	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
3	B	A	107	-	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
3	B	A	110	-	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
3	A	A	120	-	2	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0
3	A	A	121	-	2	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0
3	B	A	126	-	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
3	B	A	127	-	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
3	B	A	128	-	2	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
3	B	A	129	-	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
3	A	A	137	-	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
3	C	A	143	-	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
3	B	B	54	-	6	0	0	0	0	4	1	0	0	1	0	0	0	0	0	0	0
3	B	B	56	8	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
3	B	B	57	-	2	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0
3	B	B	60	15	4	1	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0
3	B	B	74	13	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
3	B	B	75	16	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
3	B	B	76	17	2	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0
3	B	B	77	27	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	B	B	89	25	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
3	B	B	91	18	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
3	B	B	91	19	2	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0
3	B	B	92	19	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
3	A	B	101	-	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
3	B	B	110	22	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
4	-	S	4	-	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	-	S	8	-	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
4	-	S	10	-	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Unit	Area	Layer	Quad	Rasgo	Total	Obsidian	Dacite	Rhyolite	Andesite	Chert	Fine-Grained Rhyolite	Copper Mineral	Quartz	Fine-grained Sandstone	River Cobble	River Pebble	Turquoise	Chalk	Mica	Lapis Lazuli	Unidentifiable Material
4	-	S	13	-	2	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0
4	-	S	16	-	6	0	0	1	0	3	0	0	2	0	0	0	0	0	0	0	0
4	-	S	17	-	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
4	-	S	19	-	3	0	0	0	0	1	0	0	2	0	0	0	0	0	0	0	0
4	-	S	20	-	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
4	-	S	26	-	2	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0
4	-	S	28	-	3	0	0	0	0	2	0	0	1	0	0	0	0	0	0	0	0
4	-	S	31	-	2	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0
4	-	S	32	-	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	A	A	14	-	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
4	A	A	27	-	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	A	A	29	-	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	A	A	32	-	5	0	0	0	0	4	1	0	0	0	0	0	0	0	0	0	0
4	B	A-1	12	2	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
5	B	S	3	-	2	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0
5	B	S	5	-	2	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0
5	B	S	9	-	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
5	B	S	10	-	2	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0
5	B	S	12	-	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
5	B	S	16	-	3	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0
5	B	S	19	-	8	0	0	0	0	1	0	0	7	0	0	0	0	0	0	0	0
5	B	S	20	-	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
5	B	S	22	-	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
5	B	A	1	-	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
5	B	A	2	-	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
5	B	A	3	-	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
5	B	A	5	-	2	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
5	B	A	7	-	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	B	A	8	-	2	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0
5	B	A	9	-	2	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0
5	B	A	10	-	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
5	B	A	12	-	2	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0
5	B	A	18	-	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
5	B	A	19	-	2	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0
5	B	A	22	-	3	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0
5	B	A	23	-	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
5	B	B	4	1	2	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
5	B	B	16	2	9	0	0	0	0	0	0	0	9	0	0	0	0	0	0	0	0
5	B	B	17	2	4	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0
5	B	B	20	3	2	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0

Unit	Area	Layer	Quad	Rasgo	Total	Obsidian	Dacite	Rhyolite	Andesite	Chert	Fine-Grained Rhyolite	Copper Mineral	Quartz	Fine-grained Sandstone	River Cobble	River Pebble	Turquoise	Chalk	Mica	Lapis Lazuli	Unidentifiable Material
6	A	S	1	-	4	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0
6	E	S	4	-	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
6	D	S	6	-	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
6	D	S	7	-	2	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0
6	D	S	8	-	2	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0
6	D	S	14	-	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
6	D	S	15	-	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
6	D	S	16	-	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
6	A	S	17	-	3	2	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
6	E	S	20	-	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	D	S	23	-	3	0	1	0	0	1	0	0	1	0	0	0	0	0	0	0	0
6	D	S	24	-	3	0	0	0	1	1	0	0	1	0	0	0	0	0	0	0	0
6	E	S	28	-	3	0	0	0	0	0	0	2	1	0	0	0	0	0	0	0	0
6	D	S	31	-	2	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0
6	D	S	32	-	5	0	1	1	1	2	0	0	0	0	0	0	0	0	0	0	0
6	A	S	33	-	2	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0
6	E	S	34	-	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	D	S	39	-	4	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	1
6	D	S	40	-	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
6	A	S	41	-	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
6	D	S	42	-	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	D	S	47	-	10	0	4	2	0	2	0	0	1	0	0	0	1	0	0	0	0
6	D	S	48	-	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
6	D	S	55	-	10	0	1	1	1	6	0	0	1	0	0	0	0	0	0	0	0
6	A	S	57	-	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	D	S	58	-	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
6	D	S	61	-	3	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0
6	D	S	62	-	2	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0
6	D	S	64	-	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
6	A	S	65	-	2	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0
6	C	S	69	-	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
6	C	S	72	-	5	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	1
6	C	S	78	-	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
6	C	S	80	-	4	0	2	0	0	1	1	0	0	0	0	0	0	0	0	0	0
6	C	S	86	-	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
6	C	S	88	-	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
6	E	A	2	-	7	0	0	0	0	2	0	0	5	0	0	0	0	0	0	0	0
6	E	A	3	-	5	0	0	0	0	2	0	0	3	0	0	0	0	0	0	0	0
6	E	A	4	-	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
6	E	A	5	-	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0

Unit	Area	Layer	Quad	Rasgo	Total	Obsidian	Dacite	Rhyolite	Andesite	Chert	Fine-Grained Rhyolite	Copper Mineral	Quartz	Fine-grained Sandstone	River Cobble	River Pebble	Turquoise	Chalk	Mica	Lapis Lazuli	Unidentifiable Material
6	E	A	6	-	2	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0
6	A	A	9	-	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
6	E	A	10	-	7	0	0	0	0	0	0	4	3	0	0	0	0	0	0	0	0
6	E	A	11	-	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
6	E	A	13	-	3	0	0	0	0	2	0	0	1	0	0	0	0	0	0	0	0
6	E	A	14	-	3	0	0	1	0	1	0	0	1	0	0	0	0	0	0	0	0
6	D	A	15	-	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
6	A	A	17	-	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
6	E	A	18	-	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
6	E	A	19	-	3	1	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0
6	E	A	20	-	2	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0
6	E	A	22	-	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
6	D	A	22	-	2	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0
6	D	A	23	-	7	0	0	1	0	5	0	0	1	0	0	0	0	0	0	0	0
6	E	A	28	-	3	0	0	0	0	1	0	0	2	0	0	0	0	0	0	0	0
6	E	A	29	-	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	D	A	30	-	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
6	E	A	30	-	4	0	2	0	0	0	1	0	1	0	0	0	0	0	0	0	0
6	A	A	33	-	2	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0
6	E	A	34	-	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
6	E	A	35	-	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
6	E	A	36	-	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
6	E	A	37	-	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
6	D	A	38	-	3	0	0	1	0	1	0	0	0	0	0	0	1	0	0	0	0
6	D	A	39	-	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
6	A	A	41	-	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0
6	D	A	43	-	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
6	D	A	46	-	2	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0
6	D	A	47	-	5	0	0	1	2	2	0	0	0	0	0	0	0	0	0	0	0
6	D	A	52	-	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
6	D	A	54	-	4	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0
6	D	A	55	-	4	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0
6	A	A	57	-	2	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0
6	D	A	58	-	3	0	0	0	0	1	1	0	0	0	0	0	1	0	0	0	0
6	D	A	59	-	3	0	0	0	0	2	0	0	1	0	0	0	0	0	0	0	0
6	D	A	60	-	3	0	0	0	0	2	0	0	1	0	0	0	0	0	0	0	0
6	D	A	61	-	5	0	0	0	0	4	0	0	1	0	0	0	0	0	0	0	0
6	D	A	62	-	9	0	0	0	0	5	0	0	4	0	0	0	0	0	0	0	0
6	D	A	63	-	12	0	2	0	0	9	0	0	1	0	0	0	0	0	0	0	0
6	A	A	65	-	4	0	0	2	0	1	1	0	0	0	0	0	0	0	0	0	0

Unit	Area	Layer	Quad	Rasgo	Total	Obsidian	Dacite	Rhyolite	Andesite	Chert	Fine-Grained Rhyolite	Copper Mineral	Quartz	Fine-grained Sandstone	River Cobble	River Pebble	Turquoise	Chalk	Mica	Lapis Lazuli	Unidentifiable Material
6	B	A-1	67	-	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
6	C	A	68	-	5	0	0	0	0	3	0	0	2	0	0	0	0	0	0	0	0
6	C	A	69	-	4	0	0	0	0	3	0	0	1	0	0	0	0	0	0	0	0
6	C	A	70	-	10	0	1	0	0	7	1	0	0	0	0	0	1	0	0	0	0
6	C	A	71	-	2	0	0	0	0	2	0	0	0	0	0	0	1	0	0	0	0
6	C	A	72	-	6	0	1	0	0	3	2	0	0	0	0	0	1	0	0	0	0
6	A	A	73	-	2	0	0	0	0	2	0	0	0	0	0	0	1	0	0	0	0
6	B	A-1	74	-	1	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0
6	B	A-2	74	-	2	0	0	1	0	0	0	0	0	0	1	0	1	0	0	0	0
6	C	A	76	-	5	0	0	0	0	4	1	0	0	0	0	0	1	0	0	0	0
6	C	A	77	-	3	0	0	0	0	2	0	0	1	0	0	0	1	0	0	0	0
6	C	A	78	-	4	0	1	1	0	2	0	0	0	0	0	0	1	0	0	0	0
6	C	A	79	-	5	0	0	0	0	4	0	0	1	0	0	0	1	0	0	0	0
6	C	A	80	-	6	0	0	0	0	5	1	0	0	0	0	0	1	0	0	0	0
6	C	A	85	-	9	0	0	0	0	7	0	2	0	0	0	0	1	0	0	0	0
6	B	A-2	67	2	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
6	B	A-2	75	2	4	0	0	0	0	3	0	0	0	0	0	0	0	0	1	0	0
6	B	A-3	67	2	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
6	B	A-3	75	2	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
6	B	A-3	76	2	2	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0
6	E	B	2	15	4	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0
6	E	B	3	15	2	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0
6	E	B	3	-	2	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0
6	E	B	4	-	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
6	E	B	10	-	2	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0
6	E	B	13	-	5	0	0	0	0	2	0	0	3	0	0	0	0	0	0	0	0
6	E	B	18	-	2	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0
6	E	B	22	-	3	0	0	0	0	1	0	0	2	0	0	0	0	0	0	0	0
6	E	B	21	-	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
6	E	B	26	-	4	0	0	0	0	3	0	0	0	0	0	0	1	0	0	0	0
6	E	B	28	-	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
6	E	B	29	-	2	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0
6	E	B	30	-	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
6	E	B	35	-	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
6	E	B	37	-	4	0	0	0	0	3	0	0	1	0	0	0	0	0	0	0	0
6	E	B	38	-	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
6	D	B	44	-	7	0	0	0	0	3	1	0	3	0	0	0	0	0	0	0	0
6	D	B	45	-	4	0	0	0	0	3	0	0	1	0	0	0	0	0	0	0	0
6	D	B	46	9	4	0	0	0	0	3	0	0	1	0	0	0	0	0	0	0	0
6	D	B	46	-	3	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0

Unit	Area	Layer	Quad	Rasgo	Total	Obsidian	Dacite	Rhyolite	Andesite	Chert	Fine-Grained Rhyolite	Copper Mineral	Quartz	Fine-grained Sandstone	River Cobble	River Pebble	Turquoise	Chalk	Mica	Lapis Lazuli	Unidentifiable Material
6	D	B	53	-	2	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0
6	D	B	58	-	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	D	B	59	-	7	0	0	0	0	6	0	0	1	0	0	0	0	0	0	0	0
6	D	B	59	10	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
6	D	B	60	-	3	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0
6	D	B	61	-	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
6	C	B	70	8	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
6	C	B	71	7	2	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0
6	C	B	72	-	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
6	C	B	79	5	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
6	D	C	52 & 53	-	9	0	0	0	0	4	1	0	4	0	0	0	0	0	0	0	0
7	B	S	12	-	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
7	B	S	18	-	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
7	B	S	23	-	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	B	A	7	-	9	0	0	0	0	0	0	3	0	0	0	0	0	6	0	0	0
7	B	A	17	-	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
7	B	A	19	-	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
7	A	A	21	-	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
7	B	A	23	-	2	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0
7	B	A	24	-	3	0	0	1	0	0	0	0	2	0	0	0	0	0	0	0	0
7	B	A	25	-	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	A	A	26	-	3	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0
7	B	A	27	-	1	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0
7	B	A	30	-	5	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0
7	B	A	32	-	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	B	A	33	-	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	B	A	37	-	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	B	B	13	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	B	B	18	2	5	0	0	0	0	1	0	0	2	0	0	0	0	0	0	2	0
7	B	B	19	-	7	0	0	0	0	0	0	4	2	0	0	0	0	0	0	1	0
7	B	B	23	-	3	0	0	0	0	0	0	2	0	0	0	0	0	0	0	1	0
7	B	B	24	-	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
7	B	B	25	-	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
7	B	B	27	-	7	0	0	0	0	0	0	0	1	0	0	0	0	5	0	0	0
7	B	B	28	-	4	0	1	0	0	0	0	2	0	0	0	1	0	0	0	0	0
7	B	B	31	1	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
7	B	B	31	-	5	1	0	0	0	0		0	0	0	0	0	0	4	0	0	0
7	B	B	32	-	3	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	1
7	B	B	33	-	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	B	B	35	-	2	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0

Unit	Area	Layer	Quad	Rasgo	Total	Obsidian	Dacite	Rhyolite	Andesite	Chert	Fine-Grained Rhyolite	Copper Mineral	Quartz	Fine-grained Sandstone	River Cobble	River Pebble	Turquoise	Chalk	Mica	Lapis Lazuli	Unidentifiable Material
7	B	B	36	-	4	1	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0
7	B	C	23	8	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	B	C-1	23	9	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
7	B	C	27	3A	3	0	1	0	0	0	0	0	1	0	0	0	0	1	0	0	0
7	B	C	28	7	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
7	B	C	31	3A	5	1	0	0	0	0	0	0	3	0	0	0	0	0	0	0	1
7	B	C-1	31	3B	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
8	A	S	7	-	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
8	A	S	8	-	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
8	A	S	29	-	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
8	A	S	34	-	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
8	C	S	48	-	2	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0
8	B	S	49	-	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
8	C	S	60	-	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
8	A	A	2	-	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8	C	A	2	-	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
8	A	A	3	-	2	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0
8	C	A	3	-	2	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0
8	C	A	4	-	2	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0
8	C	A	5	-	2	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0
8	C	A	7	-	3	0	0	0	0	0	2	1	0	0	0	0	0	0	0	0	0
8	A	A	10	-	4	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0
8	A	A	11	-	3	0	0	0	0	2	0	1	0	0	0	0	0	0	0	0	0
8	A	A	16	-	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
8	A	A	18	-	2	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0
8	A	A	19	-	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8	A	A	20	-	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
8	A	A	25	-	2	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0
8	A	A	26	-	3	0	0	0	0	2	0	1	0	0	0	0	0	0	0	0	0
8	A	A	27	-	3	0	0	0	0	0	0	2	1	0	0	0	0	0	0	0	0
8	A	A	28	-	3	0	0	0	0	2	0	1	0	0	0	0	0	0	0	0	0
8	A	A	29	-	19	0	0	0	0	0	0	19	0	0	0	0	0	0	0	0	0
8	A	A	33	-	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
8	A	A	34	-	6	0	0	0	0	0	0	2	4	0	0	0	0	0	0	0	0
8	A	A	35	-	11	1	0	0	0	0	0	9	1	0	0	0	0	0	0	0	0
8	A	A	36	-	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8	A	A	37	-	2	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0
8	B	A	37	-	4	1	0	0	0	2	0	0	1	0	0	0	0	0	0	0	0
8	B	A	44	-	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
8	B	A	45	-	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0

Unit	Area	Layer	Quad	Rasgo	Total	Obsidian	Dacite	Rhyolite	Andesite	Chert	Fine-Grained Rhyolite	Copper Mineral	Quartz	Fine-grained Sandstone	River Cobble	River Pebble	Turquoise	Chalk	Mica	Lapis Lazuli	Unidentifiable Material
8	C	A	47	-	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
8	B	A	49	-	4	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0
8	B	A	51	-	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
8	B	A	54	-	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
8	C	A	57	-	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
8	B	A	57	-	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
8	B	A	58	-	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
8	C	A	61	-	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
8	C	B	7	5	3	0	0	1	0	2	0	0	0	0	0	0	0	0	0	0	0
8	A	B	16	-	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8	A	B	21	-	3	0	0	0	0	2	0	0	1	0	0	0	0	0	0	0	0
8	A	B	25	-	4	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0
8	A	B	26	10	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
8	A	B	26	-	5	0	0	0	0	3	1	0	1	0	0	0	0	0	0	0	0
8	A	B	30	2	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
8	A	B	33	10	3	0	0	0	0	1	0	0	2	0	0	0	0	0	0	0	0
8	A	B	34	10	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8	A	B	35	-	7	0	0	0	0	0	0	7	0	0	0	0	0	0	0	0	0
8	A	B	37	-	3	0	0	0	0	1	0	2	0	0	0	0	0	0	0	0	0
8	A	B	38	-	2	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0
8	B	B	42	-	3	0	0	0	0	1	0	2	0	0	0	0	0	0	0	0	0
8	B	B	43	-	4	0	0	0	0	1	0	0	3	0	0	0	0	0	0	0	0
8	B	B	44	1	2	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0
8	B	B	44	-	4	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0
8	B	B	45	1	2	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
8	B	B	49	-	6	0	0	0	0	4	0	0	2	0	0	0	0	0	0	0	0
8	B	B	50	-	4	0	0	0	0	2	1	1	0	0	0	0	0	0	0	0	0
8	B	B	51	-	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8	B	B	52	-	23	18	0	0	0	1	0	1	3	0	0	0	0	0	0	0	0
8	B	B	53	-	5	1	0	0	0	1	0	1	2	0	0	0	0	0	0	0	0
8	B	B	58	-	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
8	B	B	60	-	23	22	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
8	A	C	36	25	2	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0
8	A	C	37	26	3	0	0	1	0	1	1	0	0	0	0	0	0	0	0	0	0
8	A	C	37	28	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
8	A	C	38	28	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
8	B	C	42	13	3	1	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0
8	B	C	50	13	31	0	0	0	0	5	0	21	2	0	0	0	0	0	0	0	0
8	B	C	52	19	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0

Table C.5. Lithic implements in each excavated context

Unit	Area	Layer	Quad	Rasgo	Total	Nodules	Flakes	*Pulidores*	*Manos*	Utilized cores	Projectile points	Choppers	Hoes	Expiedent tools	Quartz crystals	Quartz fragments	Chrysacolla	*Lajas*	Other
1	A	S	30	-	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0
1	A	S	37	-	3	1	2	0	0	0	0	0	0	0	0	0	0	0	0
1	A	S	42	-	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
1	A	S	40	-	3	0	0	0	0	0	0	0	0	0	0	0	0	3	0
1	A	A	8	-	2	0	0	0	0	0	0	0	0	0	0	0	0	2	0
1	B	A	10	-	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0
1	B	A	11	-	3	1	0	0	0	0	0	0	0	0	0	1	1	0	0
1	B	A	12	-	3	1	1	0	0	0	0	0	0	0	0	1	0	0	0
1	B	A	16	-	3	0	0	0	0	0	0	0	0	0	0	0	0	3	0
1	B	A	18	-	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
1	A	A	22	-	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0
1	A	A	28	-	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0
1	A	A	40	-	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
1	A	A	41	-	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0
1	B	A-1	16	2	5	0	0	0	0	0	0	0	0	0	0	0	0	5	0
1	B	A-2	16	2	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0
1	B	A-2	16	2	11	0	0	0	0	0	0	0	0	0	0	0	0	11	0
2	-	S	7	-	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0
2	-	S	12	-	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0
2	-	S	16	-	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0
2	-	S	17	-	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0
2	-	S	21	-	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0
2	-	S	34	-	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
2	-	A	1	-	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
2	-	A	5	-	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0
2	-	A	11	-	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
2	-	A	13	-	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0

Unit	Area	Layer	Quad	Rasgo	Total	Nodules	Flakes	*Pulidores*	*Manos*	Utilized cores	Projectile points	Choppers	Hoes	Expiedent tools	Quartz crystals	Quartz fragments	Chrysacolla	*Lajas*	Other
2	-	A	27	-	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0
2	-	A	36	-	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0
2	-	A	40	-	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0
2	-	B	4	-	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0
2	-	B	14	-	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0
2	-	B	17	-	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
2	-	B	18	-	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
2	-	B	19	-	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
2	-	B	23	-	3	0	0	0	0	0	0	0	0	0	3	0	0	0	0
2	-	B	28	-	4	2	2	0	0	0	0	0	0	0	0	0	0	0	0
2	-	B	45	-	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0
2	-	B	51	-	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0
3	A	S	1	-	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
3	A	S	3	-	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
3	A	S	4	-	5	0	0	0	0	0	0	0	0	0	0	0	5	0	0
3	A	S	15	-	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
3	B	S	21	-	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0
3	B	S	22	-	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
3	A	S	35	-	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
3	B	S	36	-	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
3	B	S	37	-	3	0	2	0	0	0	0	0	0	0	1	0	0	0	0
3	A	S	50	-	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
3	A	S	51	-	2	0	1	0	0	0	0	0	0	0	0	0	1	0	0
3	B	S	51	-	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0
3	B	S	53	-	2	0	1	1	0	0	0	0	0	0	0	0	0	0	0
3	B	S	54	-	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0
3	B	S	55	-	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0
3	B	S	56	-	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0

Unit	Area	Layer	Quad	Rasgo	Total	Nodules	Flakes	*Pulidores*	*Manos*	Utilized cores	Projectile points	Choppers	Hoes	Expiedent tools	Quartz crystals	Quartz fragments	Chrysacolla	*Lajas*	Other
3	B	S	58	-	3	0	1	0	0	0	1	0	0	0	0	0	1	0	0
3	B	S	59	-	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0
3	B	S	63	-	2	0	1	0	0	0	0	0	0	0	0	0	1	0	0
3	B	S	71	-	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0
3	B	S	72	-	3	0	2	0	0	0	0	0	0	1	0	0	0	0	0
3	B	S	73	-	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0
3	B	S	74	-	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0
3	B	S	75	-	3	0	2	1	0	0	0	0	0	0	0	0	0	0	0
3	B	S	79	-	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
3	A	S	81	-	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
3	A	S	82	-	5	2	3	0	0	0	0	0	0	0	0	0	0	0	0
3	A	S	83	-	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0
3	B	S	86	-	12	0	12	0	0	0	0	0	0	0	0	0	0	0	0
3	B	S	87	-	4	1	1	0	0	0	0	0	0	0	1	0	0	0	0
3	B	S	92	-	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0
3	A	S	101	-	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0
3	A	S	102	-	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
3	B	S	109	-	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
3	B	S	110	-	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
3	A	S	118	-	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
3	B	S	127	-	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
3	A	S	131	-	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
3	A	S	136	-	3	0	1	0	1	0	0	0	0	1	0	0	0	0	0
3	A	S	137	-	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
3	A	S	139	-	2	0	0	0	1	0	0	0	1	0	0	0	0	0	0
3	C	S	143	-	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
3	A	S	145	-	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0
3	A	S	152	-	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0

Unit	Area	Layer	Quad	Rasgo	Total	Nodules	Flakes	*Pulidores*	*Manos*	Utilized cores	Projectile points	Choppers	Hoes	Expiedent tools	Quartz crystals	Quartz fragments	Chrysacolla	*Lajas*	Other
3	A	S	153	-	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
3	A	S	158	-	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0
3	C	S	161	-	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
3	A	S	162	-	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
3	A	A	3	-	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
3	B	A	21	-	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0
3	B	A	22	-	2	0	1	0	0	0	0	0	0	0	0	0	1	0	0
3	B	A	23	-	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
3	B	A	30	-	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
3	B	A	35	-	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
3	B	A	37	-	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0
3	B	A	39	-	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0
3	B	A	46	-	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
3	A	A	51	-	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0
3	B	A	52	-	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
3	B	A	53	-	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0
3	B	A	53	1	3	1	2	0	0	0	0	0	0	0	0	0	0	0	0
3	B	A	54	-	3	0	1	0	0	0	0	0	0	0	0	1	1	0	0
3	B	A	54	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
3	B	A	55	-	5	0	4	0	0	0	0	0	0	0	0	0	1	0	0
3	B	A	56	-	5	0	2	2	0	0	0	0	0	0	1	0	0	0	0
3	B	A	57	-	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
3	B	A	58	-	3	1	1	0	0	0	0	0	0	0	0	0	1	0	0
3	B	A	59	-	44	0	4	0	0	0	0	0	0	0	0	0	0	0	40
3	B	A	60	-	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
3	B	A	63	-	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
3	B	A	67	-	3	0	3	0	0	0	0	0	0	0	0	0	0	0	0
3	B	A	68	-	4	0	3	0	0	0	0	0	0	0	0	0	1	0	0

Unit	Area	Layer	Quad	Rasgo	Total	Nodules	Flakes	*Pulidores*	*Manos*	Utilized cores	Projectile points	Choppers	Hoes	Expiedent tools	Quartz crystals	Quartz fragments	Chrysacolla	*Lajas*	Other
3	B	A	69	-	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
3	B	A	69	1	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0
3	B	A	70	-	3	0	0	0	0	0	0	0	0	0	0	0	0	0	3
3	B	A	70	1	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0
3	B	A	71	-	6	0	6	0	0	0	0	0	0	0	0	0	0	0	0
3	B	A	72	-	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0
3	B	A	73	-	2	0	1	0	0	0	0	0	0	0	0	0	1	0	0
3	B	A	74	-	3	0	2	0	0	0	0	0	0	0	0	0	1	0	0
3	B	A	75	-	10	0	6	0	0	0	0	0	0	0	0	0	1	0	0
3	B	A	76	-	15	0	13	0	0	0	0	0	0	0	1	0	1	0	0
3	B	A	84	-	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
3	B	A	85	-	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0
3	B	A	86	-	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0
3	B	A	87	-	4	0	0	0	0	0	1	0	0	0	0	3	0	0	0
3	B	A	88	-	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0
3	B	A	89	-	2	0	1	0	0	0	0	0	0	1	0	0	0	0	0
3	B	A	90	-	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
3	B	A	93	-	3	0	1	0	0	0	1	0	0	0	0	1	0	0	0
3	B	A	94	-	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
3	B	A	96	-	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
3	A	A	103	-	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
3	B	A	107	-	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
3	B	A	110	-	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
3	A	A	120	-	2	0	0	0	0	0	0	0	0	0	0	0	2	0	0
3	A	A	121	-	2	0	2	0	0	0	0	0	0	0	0	0	0	0	
3	B	A	126	-	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
3	B	A	127	-	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
3	B	A	128	-	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0

Unit	Area	Layer	Quad	Rasgo	Total	Nodules	Flakes	*Pulidores*	*Manos*	Utilized cores	Projectile points	Choppers	Hoes	Expiedent tools	Quartz crystals	Quartz fragments	Chrysacolla	*Lajas*	Other
3	B	A	129	-	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
3	A	A	137	-	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
3	C	A	143	-	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
3	B	B	54	-	6	0	6	0	0	0	0	0	0	0	0	0	0	0	0
3	B	B	56	8	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
3	B	B	57	-	2	0	0	0	0	0	0	0	0	0	0	0	2	0	0
3	B	B	60	15	4	0	4	0	0	0	0	0	0	0	0	0	0	0	0
3	B	B	74	13	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
3	B	B	75	16	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0
3	B	B	76	17	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0
3	B	B	77	27	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
3	B	B	89	25	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0
3	B	B	91	18	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0
3	B	B	91	19	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0
3	B	B	92	19	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
3	A	B	101	-	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
3	B	B	110	22	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0
4	-	S	4	-	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
4	-	S	8	-	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0
4	-	S	10	-	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
4	-	S	13	-	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0
4	-	S	16	-	6	1	3	0	0	0	0	0	0	0	2	0	0	0	0
4	-	S	17	-	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
4	-	S	19	-	3	1	0	0	0	0	0	0	0	0	1	1	0	0	0
4	-	S	20	-	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0
4	-	S	26	-	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0
4	-	S	28	-	3	2	0	0	0	0	0	0	0	0	1	0	0	0	0
4	-	S	31	-	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0

Unit	Area	Layer	Quad	Rasgo	Total	Nodules	Flakes	*Pulidores*	*Manos*	Utilized cores	Projectile points	Choppers	Hoes	Expiedent tools	Quartz crystals	Quartz fragments	Chrysacolla	*Lajas*	Other
4	-	S	32	-	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0
4	A	A	14	-	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
4	A	A	27	-	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0
4	A	A	29	-	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
4	A	A	32	-	5	2	3	0	0	0	0	0	0	0	0	0	0	0	0
4	B	A-1	12	2	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
5	B	S	3	-	2	0	0	0	0	0	0	0	0	0	2	0	0	0	0
5	B	S	5	-	2	0	0	0	0	0	0	0	0	0	0	2	0	0	0
5	B	S	9	-	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
5	B	S	10	-	2	0	0	0	0	0	0	0	0	0	0	2	0	0	0
5	B	S	12	-	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0
5	B	S	16	-	3	0	0	0	0	0	0	0	0	0	2	1	0	0	0
5	B	S	19	-	8	0	1	0	0	0	0	0	0	0	2	5	0	0	0
5	B	S	20	-	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0
5	B	S	22	-	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0
5	B	A	1	-	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0
5	B	A	2	-	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0
5	B	A	3	-	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0
5	B	A	5	-	2	0	0	0	0	0	1	0	0	0	1	0	0	0	0
5	B	A	7	-	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0
5	B	A	8	-	2	0	0	0	0	0	0	0	0	0	2	0	0	0	0
5	B	A	9	-	2	0	0	0	0	0	0	0	0	0	1	1	0	0	0
5	B	A	10	-	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0
5	B	A	12	-	2	0	0	0	0	0	0	0	0	0	2	0	0	0	0
5	B	A	18	-	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0
5	B	A	19	-	2	0	0	0	0	0	0	0	0	0	2	0	0	0	0
5	B	A	22	-	3	0	0	0	0	0	0	0	0	0	1	2	0	0	0
5	B	A	23	-	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0

Unit	Area	Layer	Quad	Rasgo	Total	Nodules	Flakes	*Pulidores*	*Manos*	Utilized cores	Projectile points	Choppers	Hoes	Expiedent tools	Quartz crystals	Quartz fragments	Chrysacolla	*Lajas*	Other
5	B	B	4	1	2	0	0	0	0	0	2	0	0	0	0	0	0	0	0
5	B	B	16	2	9	0	0	0	0	0	0	0	0	0	2	7	0	0	0
5	B	B	17	2	4	0	0	0	0	0	0	0	0	0	0	4	0	0	0
5	B	B	20	3	2	0	0	0	0	0	0	0	0	0	0	1	1	0	0
6	A	S	1	-	4	0	0	0	0	0	0	0	0	0	2	2	0	0	0
6	E	S	4	-	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
6	D	S	6	-	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0
6	D	S	7	-	2	0	0	0	0	0	0	0	0	0	0	2	0	0	0
6	D	S	8	-	2	0	1	0	0	0	0	0	0	0	1	0	0	0	0
6	D	S	14	-	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
6	D	S	15	-	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
6	D	S	16	-	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0
6	A	S	17	-	3	0	0	0	0	0	2	0	0	1	0	0	0	0	0
6	E	S	20	-	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
6	D	S	23	-	3	0	2	0	0	0	0	0	0	0	0	1	0	0	0
6	D	S	24	-	3	1	1	0	0	0	0	0	0	0	0	1	0	0	0
6	E	S	28	-	3	0	0	0	0	0	0	0	0	0	1	0	2	0	0
6	D	S	31	-	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0
6	D	S	32	-	5	0	5	0	0	0	0	0	0	0	0	0	0	0	0
6	A	S	33	-	2	0	0	0	0	1	0	0	0	0	1	0	0	0	0
6	E	S	34	-	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
6	D	S	39	-	4	0	0	0	0	0	0	0	0	1	3	0	0	0	0
6	D	S	40	-	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0
6	A	S	41	-	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0
6	D	S	42	-	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
6	D	S	47	-	10	0	7	0	0	0	0	1	0	0	0	1	0	0	1
6	D	S	48	-	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
6	D	S	55	-	10	0	9	0	0	0	0	0	0	0	1	0	0	0	0

Unit	Area	Layer	Quad	Rasgo	Total	Nodules	Flakes	*Pulidores*	*Manos*	Utilized cores	Projectile points	Choppers	Hoes	Expiedent tools	Quartz crystals	Quartz fragments	Chrysacolla	*Lajas*	Other
6	A	S	57	-	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
6	D	S	58	-	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
6	D	S	61	-	3	0	0	0	0	0	0	0	0	0	0	0	0	0	3
6	D	S	62	-	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0
6	D	S	64	-	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
6	A	S	65	-	2	0	1	0	0	0	0	0	0	0	0	1	0	0	0
6	C	S	69	-	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
6	C	S	72	-	5	1	4	0	0	0	0	0	0	0	0	0	0	0	0
6	C	S	78	-	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
6	C	S	80	-	4	0	4	0	0	0	0	0	0	0	0	0	0	0	0
6	C	S	86	-	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
6	C	S	88	-	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
6	E	A	2	-	7	0	2	0	0	0	0	0	0	0	3	2	0	0	0
6	E	A	3	-	5	0	2	0	0	0	0	0	0	0	1	2	0	0	0
6	E	A	4	-	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
6	E	A	5	-	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0
6	E	A	6	-	2	0	1	0	0	0	0	0	0	0	1	0	0	0	0
6	A	A	9	-	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0
6	E	A	10	-	7	0	0	0	0	0	0	0	0	0	0	3	4	0	0
6	E	A	11	-	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0
6	E	A	13	-	3	0	2	0	0	0	0	0	0	0	1	0	0	0	0
6	E	A	14	-	3	0	2	0	0	0	0	0	0	0	0	1	0	0	0
6	D	A	15	-	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
6	A	A	17	-	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0
6	E	A	18	-	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0
6	E	A	19	-	3	0	1	0	0	0	0	0	0	1	0	1	0	0	0
6	E	A	20	-	2	0	1	0	0	0	0	0	0	0	0	1	0	0	0
6	E	A	22	-	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0

Unit	Area	Layer	Quad	Rasgo	Total	Nodules	Flakes	*Pulidores*	*Manos*	Utilized cores	Projectile points	Choppers	Hoes	Expiedent tools	Quartz crystals	Quartz fragments	Chrysacolla	*Lajas*	Other
6	D	A	22	-	2	0	1	0	0	0	0	0	0	0	0	1	0	0	0
6	D	A	23	-	7	0	6	0	0	0	0	0	0	0	0	1	0	0	0
6	E	A	28	-	3	0	1	0	0	0	0	0	0	0	2	0	0	0	0
6	E	A	29	-	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
6	D	A	30	-	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
6	E	A	30	-	4	0	3	0	0	0	0	0	0	0	1	0	0	0	0
6	A	A	33	-	2	0	0	0	0	0	0	0	0	0	1	1	0	0	0
6	E	A	34	-	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0
6	E	A	35	-	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0
6	E	A	36	-	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
6	E	A	37	-	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
6	D	A	38	-	3	0	2	0	0	0	0	0	0	0	0	0	0	0	1
6	D	A	39	-	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
6	A	A	41	-	2	0	0	0	0	1	0	1	0	0	0	0	0	0	0
6	D	A	43	-	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0
6	D	A	46	-	2	0	1	0	0	0	0	0	0	1	0	0	0	0	0
6	D	A	47	-	5	2	2	0	0	0	0	0	0	1	0	0	0	0	0
6	D	A	52	-	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
6	D	A	54	-	4	0	4	0	0	0	0	0	0	0	0	0	0	0	0
6	D	A	55	-	4	0	4	0	0	0	0	0	0	0	0	0	0	0	0
6	A	A	57	-	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0
6	D	A	58	-	3	0	2	0	0	0	0	0	0	0	0	0	0	0	1
6	D	A	59	-	3	0	2	0	0	0	0	0	0	0	0	1	0	0	0
6	D	A	60	-	3	0	2	0	0	0	0	0	0	0	0	1	0	0	0
6	D	A	61	-	5	0	4	0	0	0	0	0	0	0	1	0	0	0	0
6	D	A	62	-	9	0	5	0	0	0	0	0	0	0	2	2	0	0	0
6	D	A	63	-	12	0	11	0	0	0	0	0	0	0	0	1	0	0	0
6	A	A	65	-	4	0	4	0	0	0	0	0	0	0	0	0	0	0	0

Unit	Area	Layer	Quad	Rasgo	Total	Nodules	Flakes	*Pulidores*	*Manos*	Utilized cores	Projectile points	Choppers	Hoes	Expiedent tools	Quartz crystals	Quartz fragments	Chrysacolla	*Lajas*	Other
6	B	A-1	67	-	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
6	C	A	68	-	5	0	3	0	0	0	0	0	0	0	0	2	0	0	0
6	C	A	69	-	4	0	3	0	0	0	0	0	0	0	1	0	0	0	0
6	C	A	70	-	10	0	9	0	0	0	0	0	0	0	0	0	0	0	1
6	C	A	71	-	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0
6	C	A	72	-	6	0	6	0	0	0	0	0	0	0	0	0	0	0	0
6	A	A	73	-	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0
6	B	A-1	74	-	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
6	B	A-2	74	-	2	0	0	1	0	0	0	0	0	1	0	0	0	0	0
6	C	A	76	-	5	0	5	0	0	0	0	0	0	0	0	0	0	0	0
6	C	A	77	-	3	0	2	0	0	0	0	0	0	0	1	0	0	0	0
6	C	A	78	-	4	0	4	0	0	0	0	0	0	0	0	0	0	0	0
6	C	A	79	-	5	0	4	0	0	0	0	0	0	0	1	0	0	0	0
6	C	A	80	-	6	0	6	0	0	0	0	0	0	0	0	0	0	0	0
6	C	A	85	-	9	0	6	0	0	0	0	0	0	0	0	0	2	0	1
6	B	A-2	67	2	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
6	B	A-2	75	2	4	0	3	0	0	0	0	0	0	0	0	0	0	0	1
6	B	A-3	67	2	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
6	B	A-3	75	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
6	B	A-3	76	2	2	0	0	1	0	0	0	0	0	0	1	0	0	0	0
6	E	B	2	15	4	0	0	0	0	0	0	0	0	0	1	1	0	0	2
6	E	B	3	15	2	0	1	0	0	0	0	0	0	0	1	0	0	0	0
6	E	B	3	-	2	0	1	0	0	0	0	0	0	0	0	1	0	0	0
6	E	B	4	-	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0
6	E	B	10	-	2	0	0	0	0	0	0	0	0	0	1	1	0	0	0
6	E	B	13	-	5	0	2	0	0	0	0	0	0	0	0	3	0	0	0
6	E	B	18	-	2	0	0	0	0	0	0	0	0	0	2	0	0	0	0
6	E	B	22	-	3	0	1	0	0	0	0	0	0	0	2	0	0	0	0

Unit	Area	Layer	Quad	Rasgo	Total	Nodules	Flakes	*Pulidores*	*Manos*	Utilized cores	Projectile points	Choppers	Hoes	Expiedent tools	Quartz crystals	Quartz fragments	Chrysacolla	*Lajas*	Other
6	E	B	21	-	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
6	E	B	26	-	4	0	3	0	0	0	0	0	0	0	0	0	0	0	1
6	E	B	28	-	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
6	E	B	29	-	2	0	1	0	0	0	0	0	0	0	0	1	0	0	0
6	E	B	30	-	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
6	E	B	35	-	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
6	E	B	37	-	4	0	3	0	0	0	0	0	0	0	0	1	0	0	0
6	E	B	38	-	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
6	D	B	44	-	7	0	4	0	0	0	0	0	0	0	3	0	0	0	0
6	D	B	45	-	4	0	3	0	0	0	0	0	0	0	0	1	0	0	0
6	D	B	46	9	4	0	3	0	0	0	0	0	0	0	0	1	0	0	0
6	D	B	46	-	3	0	3	0	0	0	0	0	0	0	0	0	0	0	0
6	D	B	53	-	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0
6	D	B	58	-	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0
6	D	B	59	-	7	0	6	0	0	0	0	0	0	0	1	0	0	0	0
6	D	B	59	10	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
6	D	B	60	-	3	0	3	0	0	0	0	0	0	0	0	0	0	0	0
6	D	B	61	-	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
6	C	B	70	8	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
6	C	B	71	7	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0
6	C	B	72	-	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0
6	C	B	79	5	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
6	D	C	52 & 53	-	9	0	5	0	0	0	0	0	0	0	0	4	0	0	0
7	B	S	12	-	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0
7	B	S	18	-	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
7	B	S	23	-	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
7	B	A	7	-	9	0	0	0	0	0	0	0	0	0	0	0	3	0	6
7	B	A	17	-	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0

Unit	Area	Layer	Quad	Rasgo	Total	Nodules	Flakes	*Pulidores*	*Manos*	Utilized cores	Projectile points	Choppers	Hoes	Expiedent tools	Quartz crystals	Quartz fragments	Chrysacolla	*Lajas*	Other
7	B	A	19	-	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0
7	A	A	21	-	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0
7	B	A	23	-	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0
7	B	A	24	-	3	0	0	0	1	0	0	0	0	0	2	0	0	0	0
7	B	A	25	-	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
7	A	A	26	-	3	0	0	0	0	0	0	0	0	0	0	0	0	0	3
7	B	A	27	-	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0
7	B	A	30	-	5	0	0	0	0	0	0	0	0	0	0	0	0	0	5
7	B	A	32	-	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
7	B	A	33	-	2	0	0	0	0	0	1	0	0	1	0	0	0	0	0
7	B	A	37	-	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0
7	B	B	13	2	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
7	B	B	18	2	5	0	0	0	0	0	2	0	0	0	1	0	0	0	2
7	B	B	19	-	7	0	0	0	0	0	0	0	0	0	2	0	4	0	1
7	B	B	23	-	3	0	0	0	0	0	0	0	0	0	0	0	2	0	1
7	B	B	24	-	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0
7	B	B	25	-	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0
7	B	B	27	-	7	0	0	0	0	0	0	0	0	0	1	1	0	0	5
7	B	B	28	-	4	0	0	2	0	0	0	0	0	0	0	0	2	0	0
7	B	B	31	1	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0
7	B	B	31	-	5	0	1	0	0	0	0	0	0	0	0	0	0	0	4
7	B	B	32	-	3	1	0	0	0	0	0	0	0	0	1	0	1	0	0
7	B	B	33	-	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0
7	B	B	35	-	2	0	1	0	0	0	0	0	0	0	0	0	1	0	0
7	B	B	36	-	4	0	1	0	0	0	0	0	0	0	0	0	3	0	0
7	B	C	23	8	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0
7	B	C-1	23	9	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0
7	B	C	27	3A	3	0	0	0	1	0	0	0	0	0	1	0	0	0	1

Unit	Area	Layer	Quad	Rasgo	Total	Nodules	Flakes	*Pulidores*	*Manos*	Utilized cores	Projectile points	Choppers	Hoes	Expiedent tools	Quartz crystals	Quartz fragments	Chrysacolla	*Lajas*	Other
7	B	C	28	7	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0
7	B	C	31	3A	5	0	1	0	0	0	1	0	0	0	3	0	0	0	0
7	B	C-1	31	3B	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0
8	A	S	7	-	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
8	A	S	8	-	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
8	A	S	29	-	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0
8	A	S	34	-	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
8	C	S	48	-	2	0	1	0	0	0	0	0	0	0	1	0	0	0	0
8	B	S	49	-	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
8	C	S	60	-	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
8	A	A	2	-	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
8	C	A	2	-	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0
8	A	A	3	-	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0
8	C	A	3	-	2	0	0	0	0	0	0	0	0	0	0	0	1	0	1
8	C	A	4	-	2	0	1	0	0	0	0	0	0	0	1	0	0	0	0
8	C	A	5	-	2	0	0	0	0	0	0	0	0	0	2	0	0	0	0
8	C	A	7	-	3	0	2	0	0	0	0	0	0	0	0	0	1	0	0
8	A	A	10	-	4	0	0	0	0	0	0	0	0	0	0	0	4	0	0
8	A	A	11	-	3	0	2	0	0	0	0	0	0	0	0	0	1	0	0
8	A	A	16	-	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0
8	A	A	18	-	2	0	1	0	0	0	0	0	0	0	1	0	0	0	0
8	A	A	19	-	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
8	A	A	20	-	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0
8	A	A	25	-	2	0	0	0	0	0	0	0	0	0	1	1	0	0	0
8	A	A	26	-	3	0	2	0	0	0	0	0	0	0	0	0	1	0	0
8	A	A	27	-	3	0	0	0	0	0	0	0	0	0	1	0	2	0	0
8	A	A	28	-	3	0	2	0	0	0	0	0	0	0	0	0	1	0	0
8	A	A	29	-	19	0	0	0	0	0	0	0	0	0	0	0	19	0	0

Unit	Area	Layer	Quad	Rasgo	Total	Nodules	Flakes	*Pulidores*	*Manos*	Utilized cores	Projectile points	Choppers	Hoes	Expiedent tools	Quartz crystals	Quartz fragments	Chrysacolla	*Lajas*	Other
8	A	A	33	-	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0
8	A	A	34	-	6	0	0	0	0	0	0	0	0	0	4	0	2	0	0
8	A	A	35	-	11	0	1	0	0	0	0	0	0	0	0	1	9	0	0
8	A	A	36	-	3	0	2	0	0	0	1	0	0	0	0	0	0	0	0
8	A	A	37	-	2	0	0	0	0	0	0	0	0	0	0	0	2	0	0
8	B	A	37	-	4	0	2	0	0	0	1	0	0	0	1	0	0	0	0
8	B	A	44	-	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0
8	B	A	45	-	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0
8	C	A	47	-	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0
8	B	A	49	-	4	0	2	0	0	0	0	0	0	0	2	0	0	0	0
8	B	A	51	-	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0
8	B	A	54	-	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
8	C	A	57	-	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0
8	B	A	57	-	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
8	B	A	58	-	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
8	C	A	61	-	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
8	C	B	7	5	3	0	2	0	1	0	0	0	0	0	0	0	0	0	0
8	A	B	16	-	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0
8	A	B	21	-	3	0	2	0	0	0	0	0	0	0	0	1	0	0	0
8	A	B	25	-	4	0	4	0	0	0	0	0	0	0	0	0	0	0	0
8	A	B	26	10	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
8	A	B	26	-	5	0	4	0	0	0	0	0	0	0	1	0	0	0	0
8	A	B	30	2	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0
8	A	B	33	10	3	0	1	0	0	0	0	0	0	0	2	0	0	0	0
8	A	B	34	10	2	0	1	0	0	0	1	0	0	0	0	0	0	0	0
8	A	B	35	-	7	0	0	0	0	0	0	0	0	0	0	0	7	0	0
8	A	B	37	-	3	0	1	0	0	0	0	0	0	0	0	0	2	0	0
8	A	B	38	-	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0

Unit	Area	Layer	Quad	Rasgo	Total	Nodules	Flakes	*Pulidores*	*Manos*	Utilized cores	Projectile points	Choppers	Hoes	Expiedent tools	Quartz crystals	Quartz fragments	Chrysacolla	*Lajas*	Other
8	B	B	42	-	3	0	0	0	0	0	0	0	0	1	0	0	2	0	0
8	B	B	43	-	4	0	1	0	0	0	0	0	0	0	2	1	0	0	0
8	B	B	44	1	2	0	0	0	0	0	0	0	0	0	0	0	2	0	0
8	B	B	44	-	4	0	0	0	0	0	0	0	0	0	0	0	4	0	0
8	B	B	45	1	2	0	1	0	0	0	1	0	0	0	0	0	0	0	0
8	B	B	49	-	6	0	4	0	0	0	0	0	0	0	2	0	0	0	0
8	B	B	50	-	4	0	3	0	0	0	0	0	0	0	0	0	1	0	0
8	B	B	51	-	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0
8	B	B	52	-	23	0	19	0	0	0	0	0	0	0	3	0	1	0	0
8	B	B	53	-	5	0	1	0	0	0	1	0	0	0	2	0	1	0	0
8	B	B	58	-	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0
8	B	B	60	-	23	0	22	0	0	0	0	0	0	0	1	0	0	0	0
8	A	C	36	25	2	0	1	0	1	0	0	0	0	0	0	0	0	0	0
8	A	C	37	26	3	0	2	0	1	0	0	0	0	0	0	0	0	0	0
8	A	C	37	28	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
8	A	C	38	28	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
8	B	C	42	13	3	0	0	0	0	0	1	0	0	0	1	0	1	0	0
8	B	C	50	13	31	0	5	0	0	0	0	0	0	0	3	2	21	0	0
8	B	C	52	19	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0

Table C.7. Flake size analysis for excavation contexts

Unit	Area	Layer	Quad	Rasgo	Total Count	Total Weight (g)	Count < 2 cm	Weight (g) < 2cm	Count 2 - 4 cm	Weight (g) 2 - 4 cm	Count 4 - 6 cm	Weight (g) 4 - 6 cm	Count 6 - 8 cm	Weight (g) 6 - 8 cm	Count 8 - 10 cm	Weight (g) 8 - 10 cm
1	A	S	30	-	2	29.80	0	0.00	0	0.0	1	10.2	1	19.6	0	0.0
1	A	S	37	-	2	3.40	1	1.00	1	2.4	0	0.0	0	0.0	0	0.0
1	A	S	42	-	1	8.90	0	0.00	0	0.0	1	8.9	0	0.0	0	0.0
1	B	A	12	-	1	0.80	1	0.80	0	0.0	0	0.0	0	0.0	0	0.0
1	A	A	40	-	1	13.60	0	0.00	0	0.0	1	13.6	0	0.0	0	0.0
1	B	A-2	16	2	1	1.30	1	1.30	0	0.0	0	0.0	0	0.0	0	0.0
2	-	S	34	-	1	0.10	1	0.10	0	0.0	0	0.0	0	0.0	0	0.0
2	-	A	1	-	1	9.00	0	0.00	1	9.0	0	0.0	0	0.0	0	0.0
2	-	A	11	-	1	26.80	0	0.00	0	0.0	1	26.8	0	0.0	0	0.0
2	-	A	13	-	2	0.60	2	0.60	0	0.0	0	0.0	0	0.0	0	0.0
2	-	A	27	-	1	22.70	0	0.00	0	0.0	0	0.0	1	22.7	0	0.0
2	-	B	17	-	1	25.10	0	0.00	0	0.0	1	25.1	0	0.0	0	0.0
2	-	B	18	-	1	0.30	1	0.30	0	0.0	0	0.0	0	0.0	0	0.0
2	-	B	19	-	1	0.04	1	0.04	0	0.0	0	0.0	0	0.0	0	0.0
2	-	B	28	-	2	1.40	2	1.40	0	0.0	0	0.0	0	0.0	0	0.0
3	A	S	1	-	1	1.20	1	1.20	0	0.0	0	0.0	0	0.0	0	0.0
3	A	S	3	-	1	1.80	0	0.00	1	1.8	0	0.0	0	0.0	0	0.0
3	A	S	15	-	1	0.70	0	0.00	1	0.7	0	0.0	0	0.0	0	0.0
3	B	S	22	-	1	0.60	1	0.60	0	0.0	0	0.0	0	0.0	0	0.0
3	A	S	35	-	1	3.10	0	0.00	1	3.1	0	0.0	0	0.0	0	0.0
3	B	S	36	-	1	2.40	0	0.00	1	2.4	0	0.0	0	0.0	0	0.0
3	B	S	37	-	2	2.20	1	0.30	1	1.9	0	0.0	0	0.0	0	0.0
3	A	S	50	-	1	12.50	0	0.00	1	12.5	0	0.0	0	0.0	0	0.0
3	A	S	51	-	1	0.50	1	0.50	0	0.0	0	0.0	0	0.0	0	0.0
3	B	S	53	-	1	1.50	1	1.50	0	0.0	0	0.0	0	0.0	0	0.0
3	B	S	55	-	2	10.90	1	1.20	0	0.0	1	9.7	0	0.0	0	0.0
3	B	S	56	-	1	0.40	1	0.40	0	0.0	0	0.0	0	0.0	0	0.0
3	B	S	58	-	1	1.00	1	1.00	0	0.0	0	0.0	0	0.0	0	0.0
3	B	S	63	-	1	0.10	1	0.10	0	0.0	0	0.0	0	0.0	0	0.0
3	B	S	72	-	2	3.70	0	0.00	2	3.7	0	0.0	0	0.0	0	0.0
3	B	S	75	-	2	36.00	1	0.40	0	0.0	1	35.6	0	0.0	0	0.0
3	B	S	79	-	1	0.20	1	0.20	0	0.0	0	0.0	0	0.0	0	0.0
3	A	S	81	-	1	0.40	1	0.40	0	0.0	0	0.0	0	0.0	0	0.0
3	A	S	82	-	3	14.40	1	1.50	2	12.9	0	0.0	0	0.0	0	0.0
3	A	S	83	-	2	0.50	2	0.50	0	0.0	0	0.0	0	0.0	0	0.0
3	B	S	86	-	12	7.30	10	2.20	2	5.1	0	0.0	0	0.0	0	0.0
3	B	S	87	-	2	1.00	2	1.00	0	0.0	0	0.0	0	0.0	0	0.0
3	A	S	101	-	1	17.30	0	0.00	0	0.0	1	17.3	0	0.0	0	0.0
3	A	S	102	-	1	7.90	0	0.00	1	7.9	0	0.0	0	0.0	0	0.0

Unit	Area	Layer	Quad	Rasgo	Total Count	Total Weight (g)	Count < 2 cm	Weight (g) < 2cm	Count 2 - 4 cm	Weight (g) 2 - 4 cm	Count 4 - 6 cm	Weight (g) 4 - 6 cm	Count 6 - 8 cm	Weight (g) 6 - 8 cm	Count 8 - 10 cm	Weight (g) 8 - 10 cm
3	B	S	109	-	1	0.30	1	0.30	0	0.0	0	0.0	0	0.0	0	0.0
3	B	S	110	-	1	0.30	1	0.30	0	0.0	0	0.0	0	0.0	0	0.0
3	A	S	118	-	1	1.50	0	0.00	1	1.5	0	0.0	0	0.0	0	0.0
3	B	S	127	-	1	2.00	0	0.00	1	2.0	0	0.0	0	0.0	0	0.0
3	A	S	131	-	1	54.70	0	0.00	0	0.0	1	54.7	0	0.0	0	0.0
3	A	S	136	-	1	0.90	1	0.90	0	0.0	0	0.0	0	0.0	0	0.0
3	A	S	137	-	1	42.10	0	0.00	0	0.0	1	42.1	0	0.0	0	0.0
3	C	S	143	-	1	56.90	0	0.00	0	0.0	0	0.0	1	56.9	0	0.0
3	A	S	153	-	1	70.10	0	0.00	0	0.0	0	0.0	1	70.1	0	0.0
3	C	S	161	-	1	0.04	1	0.04	0	0.0	0	0.0	0	0.0	0	0.0
3	A	S	162	-	1	0.70	1	0.70	0	0.0	0	0.0	0	0.0	0	0.0
3	A	A	3	-	1	5.20	0	0.00	1	5.2	0	0.0	0	0.0	0	0.0
3	B	A	22	-	1	0.40	1	0.40	0	0.0	0	0.0	0	0.0	0	0.0
3	B	A	23	-	1	0.20	1	0.20	0	0.0	0	0.0	0	0.0	0	0.0
3	B	A	30	-	1	0.50	1	0.50	0	0.0	0	0.0	0	0.0	0	0.0
3	B	A	35	-	1	31.00	0	0.00	0	0.0	1	31.0	0	0.0	0	0.0
3	B	A	37	-	1	0.10	1	0.10	0	0.0	0	0.0	0	0.0	0	0.0
3	B	A	39	-	2	0.50	2	0.50	0	0.0	0	0.0	0	0.0	0	0.0
3	B	A	46	-	1	1.20	1	1.20	0	0.0	0	0.0	0	0.0	0	0.0
3	A	A	51	-	2	0.50	2	0.50	0	0.0	0	0.0	0	0.0	0	0.0
3	B	A	52	-	1	4.60	0	0.00	1	4.6	0	0.0	0	0.0	0	0.0
3	B	A	53	-	2	0.20	2	0.20	0	0.0	0	0.0	0	0.0	0	0.0
3	B	A	53	1	2	2.60	2	2.60	0	0.0	0	0.0	0	0.0	0	0.0
3	B	A	54	-	1	0.30	1	0.30	0	0.0	0	0.0	0	0.0	0	0.0
3	B	A	54	1	1	1.60	1	1.60	0	0.0	0	0.0	0	0.0	0	0.0
3	B	A	55	-	4	0.60	4	0.60	0	0.0	0	0.0	0	0.0	0	0.0
3	B	A	56	-	2	0.50	2	0.50	0	0.0	0	0.0	0	0.0	0	0.0
3	B	A	57	-	1	2.40	0	0.00	1	2.4	0	0.0	0	0.0	0	0.0
3	B	A	58	-	1	2.90	0	0.00	1	2.9	0	0.0	0	0.0	0	0.0
3	B	A	59	-	4	9.80	1	0.10	3	9.7	0	0.0	0	0.0	0	0.0
3	B	A	60	-	1	0.20	1	0.20	0	0.0	0	0.0	0	0.0	0	0.0
3	B	A	63	-	1	0.40	1	0.40	0	0.0	0	0.0	0	0.0	0	0.0
3	B	A	67	-	3	4.30	1	0.60	2	3.7	0	0.0	0	0.0	0	0.0
3	B	A	68	-	3	0.80	3	0.80	0	0.0	0	0.0	0	0.0	0	0.0
3	B	A	69	-	1	0.50	1	0.50	0	0.0	0	0.0	0	0.0	0	0.0
3	B	A	69	1	2	3.20	2	3.20	0	0.0	0	0.0	0	0.0	0	0.0
3	B	A	71	-	6	7.80	4	2.80	2	5.0	0	0.0	0	0.0	0	0.0
3	B	A	73	-	1	8.10	0	0.00	1	8.1	0	0.0	0	0.0	0	0.0
3	B	A	74	-	2	1.00	1	0.20	1	0.8	0	0.0	0	0.0	0	0.0
3	B	A	75	-	9	6.10	7	1.00	2	5.1	0	0.0	0	0.0	0	0.0
3	B	A	76	-	13	4.90	12	3.50	1	1.4	0	0.0	0	0.0	0	0.0

Unit	Area	Layer	Quad	Rasgo	Total Count	Total Weight (g)	Count < 2 cm	Weight (g) < 2cm	Count 2 - 4 cm	Weight (g) 2 - 4 cm	Count 4 - 6 cm	Weight (g) 4 - 6 cm	Count 6 - 8 cm	Weight (g) 6 - 8 cm	Count 8 - 10 cm	Weight (g) 8 - 10 cm
3	B	A	84	-	1	1.80	0	0.00	1	1.8	0	0.0	0	0.0	0	0.0
3	B	A	85	-	2	0.60	2	0.60	0	0.0	0	0.0	0	0.0	0	0.0
3	B	A	88	-	2	3.00	1	0.04	1	3.0	0	0.0	0	0.0	0	0.0
3	B	A	89	-	2	8.60	0	0.00	1	2.2	1	6.4	0	0.0	0	0.0
3	B	A	90	-	1	0.20	1	0.20	0	0.0	0	0.0	0	0.0	0	0.0
3	B	A	93	-	1	0.40	0	0.00	1	0.4	0	0.0	0	0.0	0	0.0
3	B	A	94	-	1	49.50	0	0.00	0	0.0	1	49.5	0	0.0	0	0.0
3	B	A	96	-	1	0.50	1	0.50	0	0.0	0	0.0	0	0.0	0	0.0
3	A	A	103	-	1	20.00	0	0.00	0	0.0	1	20.0	0	0.0	0	0.0
3	B	A	107	-	1	2.90	0	0.00	1	2.9	0	0.0	0	0.0	0	0.0
3	B	A	110	-	1	0.50	1	0.50	0	0.0	0	0.0	0	0.0	0	0.0
3	A	A	121	-	2	0.40	2	0.40	0	0.0	0	0.0	0	0.0	0	0.0
3	B	A	126	-	1	1.30	0	0.00	1	1.3	0	0.0	0	0.0	0	0.0
3	B	A	127	-	1	0.04	1	0.04	0	0.0	0	0.0	0	0.0	0	0.0
3	B	A	128	-	2	0.40	2	0.40	0	0.0	0	0.0	0	0.0	0	0.0
3	B	A	129	-	1	4.90	0	0.00	1	4.9	0	0.0	0	0.0	0	0.0
3	A	A	137	-	1	0.60	1	0.60	0	0.0	0	0.0	0	0.0	0	0.0
3	C	A	143	-	1	42.30	0	0.00	0	0.0	1	42.3	0	0.0	0	0.0
3	B	B	54	-	6	13.00	3	1.50	3	11.5	0	0.0	0	0.0	0	0.0
3	B	B	56	8	1	0.04	1	0.04	0	0.0	0	0.0	0	0.0	0	0.0
3	B	B	60	15	4	0.04	4	0.04	0	0.0	0	0.0	0	0.0	0	0.0
3	B	B	74	13	1	0.50	1	0.50	0	0.0	0	0.0	0	0.0	0	0.0
3	B	B	75	16	1	3.20	0	0.00	1	3.2	0	0.0	0	0.0	0	0.0
3	B	B	76	17	2	1.30	2	1.30	0	0.0	0	0.0	0	0.0	0	0.0
3	B	B	77	27	1	0.04	1	0.04	0	0.0	0	0.0	0	0.0	0	0.0
3	B	B	91	19	2	39.70	0	0.00	1	10.0	0	0.0	1	29.7	0	0.0
3	B	B	92	19	1	15.40	0	0.00	0	0.0	1	15.4	0	0.0	0	0.0
3	A	B	101	-	1	13.20	0	0.00	1	13.2	0	0.0	0	0.0	0	0.0
4	-	S	4	-	1	41.30	0	0.00	0	0.0	0	0.0	1	41.3	0	0.0
4	-	S	10	-	1	7.70	0	0.00	1	7.7	0	0.0	0	0.0	0	0.0
4	-	S	16	-	3	36.80	1	1.10	1	14.4	0	0.0	1	21.3	0	0.0
4	-	S	17	-	1	0.70	1	0.70	0	0.0	0	0.0	0	0.0	0	0.0
4	-	S	31	-	2	4.00	1	1.20	1	2.8	0	0.0	0	0.0	0	0.0
4	-	S	32	-	2	2.90	0	0.00	2	2.9	0	0.0	0	0.0	0	0.0
4	A	A	14	-	1	17.40	0	0.00	0	0.0	1	17.4	0	0.0	0	0.0
4	A	A	27	-	2	17.70	0	0.00	1	1.3	1	16.4	0	0.0	0	0.0
4	A	A	29	-	1	10.80	0	0.00	0	0.0	1	10.8	0	0.0	0	0.0
4	A	A	32	-	3	46.80	0	0.00	2	3.2	1	43.6	0	0.0	0	0.0
4	B	A-1	12	2	1	6.60	0	0.00	1	6.6	0	0.0	0	0.0	0	0.0
5	B	S	9	-	1	2.10	0	0.00	1	2.1	0	0.0	0	0.0	0	0.0
5	B	S	19	-	1	11.60	0	0.00	0	0.0	1	11.6	0	0.0	0	0.0

Unit	Area	Layer	Quad	Rasgo	Total Count	Total Weight (g)	Count < 2 cm	Weight (g) < 2cm	Count 2 - 4 cm	Weight (g) 2 - 4 cm	Count 4 - 6 cm	Weight (g) 4 - 6 cm	Count 6 - 8 cm	Weight (g) 6 - 8 cm	Count 8 - 10 cm	Weight (g) 8 - 10 cm
6	E	S	4	-	1	0.90	1	0.90	0	0.0	0	0.0	0	0.0	0	0.0
6	D	S	8	-	1	3.80	0	0.00	1	3.8	0	0.0	0	0.0	0	0.0
6	D	S	14	-	1	9.10	0	0.00	0	0.0	1	9.1	0	0.0	0	0.0
6	D	S	15	-	1	32.60	0	0.00	0	0.0	1	32.6	0	0.0	0	0.0
6	A	S	17	-	1	18.10	0	0.00	0	0.0	1	18.1	0	0.0	0	0.0
6	E	S	20	-	1	0.60	1	0.60	0	0.0	0	0.0	0	0.0	0	0.0
6	D	S	23	-	2	16.20	1	0.40	0	0.0	1	15.8	0	0.0	0	0.0
6	D	S	24	-	1	10.80	0	0.00	0	0.0	1	10.8	0	0.0	0	0.0
6	D	S	31	-	2	40.10	1	0.50	0	0.0	1	39.6	0	0.0	0	0.0
6	D	S	32	-	5	46.80	1	0.20	3	12.8	1	33.8	0	0.0	0	0.0
6	E	S	34	-	1	5.80	0	0.00	1	5.8	0	0.0	0	0.0	0	0.0
6	D	S	42	-	1	7.20	0	0.00	1	7.2	0	0.0	0	0.0	0	0.0
6	D	S	47	-	7	72.70	2	3.30	2	5.5	3	63.9	0	0.0	0	0.0
6	D	S	48	-	1	1.30	1	1.30	0	0.0	0	0.0	0	0.0	0	0.0
6	D	S	55	-	9	64.00	2	1.20	6	32.6	1	30.2	0	0.0	0	0.0
6	A	S	57	-	1	153.80	0	0.00	0	0.0	0	0.0	0	0.0	1	153.8
6	D	S	58	-	1	0.80	0	0.00	1	0.8	0	0.0	0	0.0	0	0.0
6	D	S	62	-	2	1.40	1	0.20	1	1.2	0	0.0	0	0.0	0	0.0
6	D	S	64	-	1	2.80	0	0.00	1	2.8	0	0.0	0	0.0	0	0.0
6	A	S	65	-	1	4.40	0	0.00	1	4.4	0	0.0	0	0.0	0	0.0
6	C	S	69	-	1	2.00	0	0.00	1	2.0	0	0.0	0	0.0	0	0.0
6	C	S	72	-	4	13.70	2	0.90	2	12.8	0	0.0	0	0.0	0	0.0
6	C	S	78	-	1	0.10	1	0.10	0	0.0	0	0.0	0	0.0	0	0.0
6	C	S	80	-	4	54.00	2	1.30	1	4.5	0	0.0	1	48.2	0	0.0
6	C	S	86	-	1	0.30	1	0.30	0	0.0	0	0.0	0	0.0	0	0.0
6	C	S	88	-	1	2.70	0	0.00	1	2.7	0	0.0	0	0.0	0	0.0
6	E	A	2	-	2	4.90	1	0.04	1	4.9	0	0.0	0	0.0	0	0.0
6	E	A	3	-	2	3.70	1	1.00	1	2.7	0	0.0	0	0.0	0	0.0
6	E	A	4	-	1	1.40	0	0.00	1	1.4	0	0.0	0	0.0	0	0.0
6	E	A	6	-	1	12.80	0	0.00	0	0.0	1	12.8	0	0.0	0	0.0
6	E	A	13	-	2	1.30	1	0.50	1	0.8	0	0.0	0	0.0	0	0.0
6	E	A	14	-	2	26.20	1	0.40	0	0.0	1	25.9	0	0.0	0	0.0
6	D	A	15	-	1	0.10	1	0.10	0	0.0	0	0.0	0	0.0	0	0.0
6	E	A	19	-	1	0.60	1	0.60	0	0.0	0	0.0	0	0.0	0	0.0
6	E	A	20	-	1	0.40	1	0.40	0	0.0	0	0.0	0	0.0	0	0.0
6	E	A	22	-	1	1.30	0	0.00	1	1.3	0	0.0	0	0.0	0	0.0
6	D	A	22	-	1	0.30	1	0.30	0	0.0	0	0.0	0	0.0	0	0.0
6	D	A	23	-	6	16.00	4	1.40	1	2.0	1	12.6	0	0.0	0	0.0
6	E	A	28	-	1	4.90	0	0.00	1	4.9	0	0.0	0	0.0	0	0.0
6	E	A	29	-	1	6.80	0	0.00	0	0.0	1	6.8	0	0.0	0	0.0
6	D	A	30	-	1	0.30	1	0.30	0	0.0	0	0.0	0	0.0	0	0.0

Unit	Area	Layer	Quad	Rasgo	Total Count	Total Weight (g)	Count < 2 cm	Weight (g) < 2cm	Count 2 - 4 cm	Weight (g) 2 - 4 cm	Count 4 - 6 cm	Weight (g) 4 - 6 cm	Count 6 - 8 cm	Weight (g) 6 - 8 cm	Count 8 - 10 cm	Weight (g) 8 - 10 cm
6	E	A	30	-	3	42.50	0	0.00	1	1.4	1	4.8	1	36.3	0	0.0
6	E	A	36	-	1	96.40	0	0.00	0	0.0	0	0.0	0	0.0	1	96.4
6	E	A	37	-	1	29.50	0	0.00	0	0.0	1	29.5	0	0.0	0	0.0
6	D	A	38	-	2	14.00	1	0.10	0	0.0	1	13.9	0	0.0	0	0.0
6	D	A	46	-	2	4.10	1	0.20	0	0.0	1	3.9	0	0.0	0	0.0
6	D	A	47	-	2	30.60	0	0.00	1	3.4	1	8.6	0	0.0	0	0.0
6	D	A	52	-	1	0.20	1	0.20	0	0.0	0	0.0	0	0.0	0	0.0
6	D	A	54	-	4	1.20	4	1.20	0	0.0	0	0.0	0	0.0	0	0.0
6	D	A	55	-	4	2.00	4	2.00	0	0.0	0	0.0	0	0.0	0	0.0
6	A	A	57	-	4	44.40	0	0.00	0	0.0	1	21.1	1	23.3	0	0.0
6	D	A	58	-	2	0.90	2	0.90	0	0.0	0	0.0	0	0.0	0	0.0
6	D	A	59	-	2	2.30	1	0.10	1	2.2	0	0.0	0	0.0	0	0.0
6	D	A	60	-	2	0.40	2	0.40	0	0.0	0	0.0	0	0.0	0	0.0
6	D	A	61	-	4	1.00	4	1.00	0	0.0	0	0.0	0	0.0	0	0.0
6	D	A	62	-	5	2.60	4	1.60	1	1.0	0	0.0	0	0.0	0	0.0
6	D	A	63	-	11	14.50	9	2.50	2	12.0	0	0.0	0	0.0	0	0.0
6	A	A	65	-	4	156.30	0	0.00	1	2.9	0	0.0	3	153.4	0	0.0
6	B	A-1	67	-	1	0.30	1	0.30	0	0.0	0	0.0	0	0.0	0	0.0
6	C	A	68	-	3	1.80	2	0.30	1	1.5	0	0.0	0	0.0	0	0.0
6	C	A	69	-	3	2.80	2	1.00	1	1.8	0	0.0	0	0.0	0	0.0
6	C	A	70	-	9	5.70	6	1.30	3	4.4	0	0.0	0	0.0	0	0.0
6	C	A	71	-	2	1.10	2	1.10	0	0.0	0	0.0	0	0.0	0	0.0
6	C	A	72	-	6	9.60	3	2.00	2	7.6	0	0.0	0	0.0	0	0.0
6	C	A	73	-	1	0.10	1	0.10	0	0.0	0	0.0	0	0.0	0	0.0
6	B	A-1	74	-	1	0.70	1	0.70	0	0.0	0	0.0	0	0.0	0	0.0
6	C	A	76	-	5	4.80	3	2.90	2	1.9	0	0.0	0	0.0	0	0.0
6	C	A	77	-	2	2.90	1	0.10	1	2.8	0	0.0	0	0.0	0	0.0
6	C	A	78	-	4	19.50	2	0.50	1	4.4	1	14.6	0	0.0	0	0.0
6	C	A	79	-	4	2.80	3	0.80	1	2.0	0	0.0	0	0.0	0	0.0
6	C	A	80	-	6	2.90	4	1.50	2	1.4	0	0.0	0	0.0	0	0.0
6	C	A	85	-	6	7.40	5	5.90	1	1.5	0	0.0	0	0.0	0	0.0
6	B	A-2	67	2	1	4.10	0	0.00	1	4.1	0	0.0	0	0.0	0	0.0
6	B	A-2	75	2	3	2.00	3	2.00	0	0.0	0	0.0	0	0.0	0	0.0
6	B	A-3	67	2	1	3.10	0	0.00	1	3.1	0	0.0	0	0.0	0	0.0
6	E	B	3	15	1	1.50	0	0.00	1	1.5	0	0.0	0	0.0	0	0.0
6	E	B	3	-	1	6.10	0	0.00	1	6.1	0	0.0	0	0.0	0	0.0
6	E	B	13	-	2	4.30	0	0.00	2	4.3	0	0.0	0	0.0	0	0.0
6	E	B	22	-	1	2.30	0	0.00	1	2.3	0	0.0	0	0.0	0	0.0
6	E	B	21	-	1	7.70	0	0.00	1	7.7	0	0.0	0	0.0	0	0.0
6	E	B	26	-	3	7.80	1	1.20	2	6.6	0	0.0	0	0.0	0	0.0
6	E	B	28	-	1	2.70	1	2.70	0	0.0	0	0.0	0	0.0	0	0.0

Unit	Area	Layer	Quad	Rasgo	Total Count	Total Weight (g)	Count < 2 cm	Weight (g) < 2cm	Count 2 - 4 cm	Weight (g) 2 - 4 cm	Count 4 - 6 cm	Weight (g) 4 - 6 cm	Count 6 - 8 cm	Weight (g) 6 - 8 cm	Count 8 - 10 cm	Weight (g) 8 - 10 cm
6	E	B	29	-	1	1.50	0	0.00	1	1.5	0	0.0	0	0.0	0	0.0
6	E	B	30	-	1	0.80	1	0.80	0	0.0	0	0.0	0	0.0	0	0.0
6	E	B	35	-	1	7.90	0	0.00	0	0.0	1	7.9	0	0.0	0	0.0
6	E	B	37	-	3	2.60	2	1.20	1	1.4	0	0.0	0	0.0	0	0.0
6	E	B	38	-	1	0.30	1	0.30	0	0.0	0	0.0	0	0.0	0	0.0
6	D	B	44	-	4	2.50	4	2.50	0	0.0	0	0.0	0	0.0	0	0.0
6	D	B	45	-	3	4.50	2	1.20	1	3.3	0	0.0	0	0.0	0	0.0
6	D	B	46	9	3	2.50	3	2.50	0	0.0	0	0.0	0	0.0	0	0.0
6	D	B	46	-	3	1.70	2	0.70	1	1.0	0	0.0	0	0.0	0	0.0
6	D	B	53	-	2	4.20	0	0.00	2	4.2	0	0.0	0	0.0	0	0.0
6	D	B	58	-	2	13.30	1	2.00	1	11.3	0	0.0	0	0.0	0	0.0
6	D	B	59	-	6	3.80	5	2.90	1	0.9	0	0.0	0	0.0	0	0.0
6	D	B	59	10	1	4.10	0	0.00	1	4.1	0	0.0	0	0.0	0	0.0
6	D	B	60	-	3	1.60	3	1.60	0	0.0	0	0.0	0	0.0	0	0.0
6	D	B	61	-	1	0.70	0	0.00	1	0.7	0	0.0	0	0.0	0	0.0
6	C	B	70	8	1	0.20	1	0.20	0	0.0	0	0.0	0	0.0	0	0.0
6	C	B	71	7	2	0.80	2	0.80	0	0.0	0	0.0	0	0.0	0	0.0
6	C	B	79	5	1	0.20	1	0.20	0	0.0	0	0.0	0	0.0	0	0.0
6	D	C	52 & 53	-	6	2.70	4	1.60	1	1.1	0	0.0	0	0.0	0	0.0
7	B	S	18	-	1	0.20	1	0.20	0	0.0	0	0.0	0	0.0	0	0.0
7	B	S	23	-	1	1.80	0	0.00	1	1.8	0	0.0	0	0.0	0	0.0
7	B	A	23	-	2	0.80	2	0.80	0	0.0	0	0.0	0	0.0	0	0.0
7	B	A	25	-	1	0.04	1	0.04	0	0.0	0	0.0	0	0.0	0	0.0
7	B	A	32	-	1	1.10	0	0.00	1	1.1	0	0.0	0	0.0	0	0.0
7	B	B	13	2	1	0.10	1	0.10	0	0.0	0	0.0	0	0.0	0	0.0
7	B	B	31	-	1	0.20	0	0.00	1	0.2	0	0.0	0	0.0	0	0.0
7	B	B	35	-	1	0.20	1	0.20	0	0.0	0	0.0	0	0.0	0	0.0
7	B	B	36	-	1	0.40	1	0.40	0	0.0	0	0.0	0	0.0	0	0.0
7	B	C	31	3A	1	11.00	0	0.00	0	0.0	1	11.0	0	0.0	0	0.0
8	A	S	7	-	1	2.30	0	0.00	1	2.3	0	0.0	0	0.0	0	0.0
8	A	S	8	-	1	9.10	0	0.00	1	9.1	0	0.0	0	0.0	0	0.0
8	A	S	34	-	1	0.20	1	0.20	0	0.0	0	0.0	0	0.0	0	0.0
8	C	S	48	-	1	3.30	0	0.00	1	3.3	0	0.0	0	0.0	0	0.0
8	B	S	49	-	1	0.80	1	0.80	0	0.0	0	0.0	0	0.0	0	0.0
8	C	S	60	-	1	1.20	1	1.20	0	0.0	0	0.0	0	0.0	0	0.0
8	A	A	2	-	1	0.04	1	0.04	0	0.0	0	0.0	0	0.0	0	0.0
8	A	A	3	-	2	0.60	2	0.60	0	0.0	0	0.0	0	0.0	0	0.0
8	C	A	4	-	1	2.30	0	0.00	1	2.3	0	0.0	0	0.0	0	0.0
8	C	A	7	-	2	0.80	2	0.80	0	0.0	0	0.0	0	0.0	0	0.0
8	A	A	11	-	2	0.30	2	0.30	0	0.0	0	0.0	0	0.0	0	0.0
8	A	A	18	-	1	0.10	1	0.10	0	0.0	0	0.0	0	0.0	0	0.0

Unit	Area	Layer	Quad	Rasgo	Total Count	Total Weight (g)	Count < 2 cm	Weight (g) < 2cm	Count 2 - 4 cm	Weight (g) 2 - 4 cm	Count 4 - 6 cm	Weight (g) 4 - 6 cm	Count 6 - 8 cm	Weight (g) 6 - 8 cm	Count 8 - 10 cm	Weight (g) 8 - 10 cm
8	A	A	19	-	1	5.20	0	0.00	1	5.2	0	0.0	0	0.0	0	0.0
8	A	A	26	-	2	0.30	2	0.30	0	0.0	0	0.0	0	0.0	0	0.0
8	A	A	28	-	2	2.10	1	0.10	1	2.0	0	0.0	0	0.0	0	0.0
8	A	A	35	-	1	0.04	1	0.04	0	0.0	0	0.0	0	0.0	0	0.0
8	A	A	36	-	2	0.10	2	0.10	0	0.0	0	0.0	0	0.0	0	0.0
8	B	A	41	-	2	0.20	2	0.20	0	0.0	0	0.0	0	0.0	0	0.0
8	B	A	49	-	2	2.60	1	0.10	1	2.5	0	0.0	0	0.0	0	0.0
8	B	A	51	-	1	8.00	0	0.00	0	0.0	1	8.0	0	0.0	0	0.0
8	B	A	54	-	1	0.20	1	0.20	0	0.0	0	0.0	0	0.0	0	0.0
8	B	A	57	-	1	0.40	1	0.40	0	0.0	0	0.0	0	0.0	0	0.0
8	B	A	58	-	1	0.70	0	0.00	1	0.7	0	0.0	0	0.0	0	0.0
8	C	A	61	-	1	0.80	1	0.80	0	0.0	0	0.0	0	0.0	0	0.0
8	C	B	7	5	2	25.00	1	0.80	0	0.0	1	24.2	0	0.0	0	0.0
8	A	B	21	-	2	0.50	2	0.50	0	0.0	0	0.0	0	0.0	0	0.0
8	A	B	25	-	4	3.70	4	3.70	0	0.0	0	0.0	0	0.0	0	0.0
8	A	B	26	10	1	0.30	1	0.30	0	0.0	0	0.0	0	0.0	0	0.0
8	A	B	26	-	4	2.70	4	2.70	0	0.0	0	0.0	0	0.0	0	0.0
8	A	B	33	10	1	0.60	1	0.60	0	0.0	0	0.0	0	0.0	0	0.0
8	A	B	34	10	1	1.00	0	0.00	1	1.0	0	0.0	0	0.0	0	0.0
8	A	B	37	-	1	3.60	0	0.00	1	3.6	0	0.0	0	0.0	0	0.0
8	A	B	38	-	2	0.50	2	0.50	0	0.0	0	0.0	0	0.0	0	0.0
8	B	B	42	-	1	18.30	0	0.00	0	0.0	0	0.0	0	0.0	1	18.3
8	B	B	43	-	1	0.60	1	0.60	0	0.0	0	0.0	0	0.0	0	0.0
8	B	B	45	1	1	1.80	1	1.80	0	0.0	0	0.0	0	0.0	0	0.0
8	B	B	49	-	4	0.10	4	0.10	0	0.0	0	0.0	0	0.0	0	0.0
8	B	B	50	-	3	1.40	1	0.50	2	0.9	0	0.0	0	0.0	0	0.0
8	B	B	52	-	19	2.70	18	1.00	1	1.7	0	0.0	0	0.0	0	0.0
8	B	B	53	-	1	3.30	0	0.00	1	3.3	0	0.0	0	0.0	0	0.0
8	B	B	60	-	22	3.80	19	1.70	3	2.1	0	0.0	0	0.0	0	0.0
8	A	C	36	25	1	0.20	0	0.00	1	0.2	0	0.0	0	0.0	0	0.0
8	A	C	37	26	2	2.30	1	0.50	1	1.8	0	0.0	0	0.0	0	0.0
8	A	C	37	28	1	0.70	1	0.70	0	0.0	0	0.0	0	0.0	0	0.0
8	A	C	38	28	1	23.90	0	0.00	0	0.0	1	23.9	0	0.0	0	0.0
8	B	C	50	13	5	1.00	5	1.00	0	0.0	0	0.0	0	0.0	0	0.0

Table C.7. Geochemical composition of Yahuay Alta obsidian samples[26]

Specimen #	Date	Reading #	Source	K	Ca	Ti	Cr	Mn	Fe	Rb	Sr	Zr	Nb	Mo	Ba	Pb	Bi
YA06-2-05-00	13-Aug-07	10	Quispisisa	21460	3435	459	34	274	4143	145	115	72	<LOD	<LOD	435	<LOD	24
YA06-2-06-01	13-Aug-07	15	Quispisisa	26960	4036	505	22	279	4506	170	129	86	11	<LOD	479	23	25
YA06-2-07-03	13-Aug-07	17	Quispisisa	23841	3995	463	31	284	4355	183	135	94	17	13	536	27	26
YA06-1-019-0	13-Aug-07	2	Chivay	34236	3465	419	<LOD	580	4894	251	48	75	16	<LOD	253	28	26
YA06-1-172-0	13-Aug-07	6	Chivay	26579	2679	344	27	531	4147	247	40	76	18	<LOD	184	27	25
YA06-1-084-0	13-Aug-07	3	Alca	24196	2400	484	27	356	5076	122	71	83	9	<LOD	632	17	16
YA06-1-134-0	13-Aug-07	4	Alca	23470	2242	478	24	325	4315	144	85	100	14	15	630	20	19
YA06-1-139-0	13-Aug-07	5	Alca	23237	2135	435	46	357	4577	156	88	97	18	16	625	20	18
YA06-1-179-0	13-Aug-07	7	Alca	20826	2588	.	76	375	4801	131	82	105	17	13	809	<LOD	20
YA06-2-03-15	13-Aug-07	8	Alca	22269	2245	455	79	362	4279	147	91	94	18	27	585	28	<LOD
YA06-2-03-17	13-Aug-07	9	Alca	24501	2165	391	23	374	4536	125	76	82	10	<LOD	675	19	<LOD
YA06-2-05-00	13-Aug-07	11	Alca	21665	2500	427	28	340	4274	124	80	87	10	13	595	18	20
YA06-2-05-00	13-Aug-07	12	Alca	22469	2395	512	33	354	4323	156	85	97	20	17	593	25	<LOD
YA06-2-06-01	13-Aug-07	13	Alca	23173	4863	512	41	404	4799	137	79	100	15	<LOD	615	20	18
YA06-2-06-01	13-Aug-07	14	Alca	21153	2027	376	39	351	4361	120	70	84	11	<LOD	629	24	17
YA06-2-07-02	13-Aug-07	16	Alca	22311	2079	415	<LOD	361	4185	131	85	89	14	12	554	<LOD	27
YA06-2-07-03	13-Aug-07	19	Alca	23611	2779	429	31	365	4376	143	86	101	15	14	637	24	16
YA06-2-07-03	13-Aug-07	18	Alca	23370	2171	423	48	376	4463	140	85	95	16	14	584	<LOD	16
YA06-2-08-03	13-Aug-07	20	Alca	21780	8376	449	35	340	4323	132	84	101	16	14	556	22	17
YA06-2-08-03	13-Aug-07	21	Alca	22714	4714	523	46	402	4884	148	93	105	19	19	544	22	18
YA06-2-08-04	13-Aug-07	22	Alca	15100	8013.6	452	84	276	4213	127	88	83	18	13	377	20	<LOD
YA06-2-08-04	13-Aug-07	23	Alca	23102	2356	497	35	365	4340	140	91	100	18	18	567	27	18
YA06-2-08-04	13-Aug-07	24	Alca	26675	7647	530	32	368	4502	149	84	103	16	15	578	19	20
YA06-2-08-05	13-Aug-07	25	Alca	23713	4463	538	39	391	4624	141	86	104	13	12	584	18	<LOD

[26] The data in this table was collected by P. R. Williams and the Elemental Analysis Facility at The Field Museum.

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