LITHIC RAW MATERIAL PROCUREMENT AND THE TECHNOLOGICAL ORGANIZATION OF OLYMPIC PENINSULA PEOPLES

By

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Abstract

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While the Olympic Peninsula's littoral zone has a long, rich history of archaeological research, it wasn't until the 1980s that survey expanded into the mountainous interior. Today, over 75% of all recorded sites lie deep in the Olympic Peninsula's interior, yet exceptionally little is known about their role in prehistory. As archaeologists move out of the identification phase, what has become abundantly clear is the overwhelming dominance of a single lithic raw material type, dacite, which has been argued to be an exotic raw material transported by human agents. This thesis will present a combination of evidence derived from x-ray florescence (XRF) as well as lithic technological organization to show that the prehistoric peoples of the Olympic Peninsula procured dacite from a local secondary source.

As was suggested by previous archaeologists, it is first hypothesized that the favored toolstone, dacite, is available to collect from glacial deposits on the northern Olympic Peninsula.

Cobbles from glacial deposits are characterized through XRF and the results are compared against archaeological specimens to show that favored raw material type, Watts Point dacite, can be derived from a secondary local source. In addition, while radiocarbon dates from lithic scatters are scarce, XRF results from a Clovis point show that the same Watts Point dacite material was used for the last 12,000 years.

A study of the lithic technological organization shows that the prehistoric stone tool makers did not necessarily conserve the use of Watts Point dacite, a practice that would occur if the raw material had been procured from its primary source in British Columbia. Indicators of increasing intensity of use including amount of dorsal cortex, dorsal flake count, and artifact size showed little to no changes when comparing sites where the raw material is available at hand versus those where travel was necessary to collect. Artifact attributes were analyzed in order to gain insight into the type of objective piece carried on the stone tool maker. Research from this thesis helps to create a foundation for further, more detailed, raw material characterization studies on the Olympic Peninsula and on the greater Northwest Coast.

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CHAPTER ONE

INTRODUCTION AND SETTING

1.1 Introduction to Research

While the focus of archaeological research on the Olympic Peninsula has largely centered on its littoral zone, few studies have focused on the numerous lithic scatters of the interior uplands. With few exceptions (e.g. Morgan et al. 1999), relatively little is known about these site types due to their remote location and ephemeral nature. This thesis will explore the character of these lithic scatters which are overwhelming dominated by a single raw material type – dacite. It is hypothesized that the raw material used for stone tool manufacture, dacite, was procured from local, secondarily deposited sources on the Olympic Peninsula. Both x-ray florescence (XRF) (Chapter 4) and lithic analysis (Chapter 5) act as independent avenues to test this hypothesis. Analysis begins by investigating where the predominant toolstone was procured from. Once this is determined, similarly positioned sites are grouped in order to see if differences exist in artifact sizes, objective pieces, places of manufacture, intensity of use, and tool formality. Results from these analyses provide a basis to infer where dacite was procured from.

The following two chapters (2 and 3) present the archaeological context to aid in the understanding of the studied collections and the ideas that help formulate hypotheses. Chapter 2 discusses the metadata used to categorize the raw archaeological data which are presented at the end of the chapter. Included in this presentation is a review of raw material, debitage, tools and metric dimensions of 2,200 artifacts from 91 lithic scatters. Chapter 3 discusses concepts that frame analysis in subsequent chapters including distance decay, lithic technological organization, and human behavioral ecology.

The first research question addressed focuses on the raw material that dominates an overwhelming majority of lithic scatters on the Peninsula. Dacite, a fine-grained volcanic rock often mistaken for basalt, is found in nearly every Olympic Peninsula archaeological site yet its place of procurement is still under debate. Controversy exists as to whether cobbles of the raw material were obtained by human agents at its primary outcrop at the Watts Point volcanic center, B.C., and brought to the Olympic Peninsula, or whether it could be found in large enough quantities to qualify as a secondary source in the local glacial deposits on the Peninsula. Chapter 4 will discuss the research and debate surrounding the Watts Point source and then elaborate on prior raw material characterization studies to determine if Watts Point dacite occurs in the studied collection, if the same material is available locally, and if Watts Point dacite is unique when compared to other dacites from the same volcanic arc.

Building from these foundations, research questions concerning how people interacted with their surroundings can be more focused once the availability of raw material is understood. Chapter 5 begins with the creation of two proxy measures which group sites differently based on the relative effort it would take to reach a site from where raw material is potentially available. Subsequent analyses use these proxy measures to compare and contrast groups to see if prehistoric peoples used raw materials differently at sites that require more effort to get to. It is hypothesized that analyses will show increased reduction intensity, increased tool formality, smaller size, and less shatter as distance from site to procurement location increases. Discussion will follow pertaining to these results and hypotheses shall be assessed. The final chapter summarizes the findings as well as continues with a discussion of the relevance of this study outside of the Olympic Peninsula.

The remainder of this chapter frames the physical and cultural setting of the Olympic Peninsula to situate the archaeological data in proper spatial and temporal context.

1.2 Physical Setting

The Olympic Peninsula is located in the west-northwestern most portion of Washington State and includes approximately 6,000 square miles of land. It is bounded by salt waters on three sides with the Pacific Ocean on the west, the Strait of Juan de Fuca to the north, and Puget Sound to the east (Figure 1-1). The Peninsula is known for its diverse ecosystems including subalpine, montane and lowland forests, subalpine and alpine meadows and ocean shorelines. The Peninsula is also known for its reduced mammalian species diversity and high degree of endemism including the Roosevelt Elk (*Cervus canadensis roosevelti*), Olympic Marmot (*Marmota olympus*), and Piper's bellflower (*Campanula piperi),* strongly influenced by the Peninsula's isolation during the last ice age (Houston et al. 1994). The Olympic Mountains are a circular and isolated range of mountains centered on the Olympic Peninsula with radial river valleys draining from several large peaks including its highest, Mount Olympus, at 7,995 ft (2,437 m). Interconnected ridgelines paralleling these drainages tend to run from the edge of the coastal plains upwards to subalpine parklands.

The Olympic Peninsula is largely composed of sedimentary and volcanic rocks that were structurally deformed and subjected to low degrees of metamorphism (Fay et al. 2009). These rocks were deposited in marine environments and are largely alternating beds of silt and

Figure 1-1 Location of Olympic Peninsula in the Northwest coast.

sandstones. These fine deposits are interpreted as being from the slow accumulation of deposits along a submarine fan. Occasional coarse deposits are the result of submarine landslides and debris flows that created chaotic bedding, coarse-grained sandstones, and conglomerates. Volcanic rocks present on the Peninsula are predominantly tholeiitic basalts that erupted at fissures along the sea floor. At several localities, basalt erupted into the marine waters creating outcrops of billow basalt. The Olympic Peninsula is believed to have been formed when the marine deposits of the Juan de Fuca plate accreted at the subduction zone with the North American plate. These accreted marine deposits created a large horseshoe fold which rose to the top of the heavier surrounding rocks and created the Olympic Mountains. This giant horseshoe fold occupies most of the Olympic Peninsula.

The surficial landscape of the Olympic Peninsula was largely shaped by glacial scouring during the Fraser glaciation that began in British Columbia around 29,000 years B.P. (Clague and James 2002). By 22,500 B.P. the Cordilleran ice sheet had reached the vicinity of Victoria, B.C. (Clague et al. 1980). When the advancing ice sheet hit the northeast corner of the Olympic Mountains it split in two lobes: the Puget lobe, which is responsible for the current topography of the Puget Sound, and the Juan de Fuca lobe, which headed westward and scoured the Strait of Juan de Fuca. During the expansion of the ice sheet, the north and east flowing rivers of the Olympic Peninsula were dammed forming large glacial lakes in the river valleys. Evidence of these glacial lakes, such as large perched delta deposits, can be found throughout the Olympic Peninsula (Smith 2006). The Juan de Fuca lobe reached its terminus at the continental shelf near Cape Flattery around 14,500 B.P. (Heusser 1973). The Puget lobe grew to its maximum south of Olympia by 14,150 B.P. and retreated to the Seattle area by 13,600 B.P. (Porter and Swanson 1998). The two lobes retreated into just one lobe shortly afterwards and by 10,000 B.P. the

Fraser glaciation had all but ended leaving behind massive glacial till, drift and outwash deposits throughout northwestern Washington.

Post-glacial sea levels were radically affected by the retreat of the massive glaciers and the addition of melt water to the ocean. Following initial deglaciation approximately 14,500 years ago, isostatically depressed land in the vicinity of the northern Olympic Peninsula created higher than modern relative sea levels at about 164 feet (50m) above that of today (Dethier et al. 1995; Mosher and Hewitt 2004). With eustatic rebound slow, isostatic rebound of the land gradually lowered the relative level of the ocean and by 9,900 B.P. sea levels were significantly lower at 180 feet (55m) below the modern level (Mosher and Hewitt 2004). After reaching this all time low, eustatic sea levels again began to rise as the rate of isostatic rebound declined until 5,500 B.P. when sea levels reached near modern levels (Mosher and Hewitt 2004). Since this time, eustatic sea level has continued to rise at a very slow rate and is approximately 8 feet (2.5 m) above that of the middle Holocene (Mosher and Hewitt 2004)

The barren landscapes covered in snow, alpine and continental glaciers slowly began to restore themselves with flora as the land was exposed. In northwest Washington, species such as lodgepole pine, bracken fern, and red alder were the initial dominant species followed by Douglas fir a few centuries later (Barnosky et al. 1987). A warm and dry period between 10,500 and 7,000 B.P. saw the persistence of Douglas fir and led the way for the increase in grasses, oak and hazel (Barnosky et al. 1987). A moist and cool period after 7,000 B.P. allowed for the growth of cedar and hemlock which established themselves as the dominant species by 5,000 B.P. Significant vegetation changes were reduced after 5,000 B.P. with only a modest warming between 2,400 and 1,200 B.P. which likely increased forest fire frequencies (Lepofsky et al. 2005).

In today's modern environment, four vegetation zones are recognized on the Olympic Peninsula (Franklin and Dyrness 1973). Like many western Washington forests, the Olympic Peninsula is dominated by the wet, mild, maritime climate of the *Tsuga heterophylla* Zone which contains a mixture of Douglas fir (*Pseudotsuga menziesii*), Western hemlock (*Tsuga heterophylla*), and Western red cedar (*Thuja plicata*). Extending around the coastal margins of the Peninsula is the *Picea sitchensis* Zone, the most uniformly wet and mild of the four zones. It is predominantly composed of three species: Sitka spruce (*Picea sitchensis*), Western hemlock (*Tsuga heterophylla*), and Western red cedar (*Thuja plicata*). The *Abies amabilis* Zone lies just under the subalpine and has a highly variable composition due to local influences. Most often this zone contains Pacific silver fir (*Abies amabilis*), Western hemlock (*Tsuga heterophylla*), and Noble Fir (*Abies procera*). Lastly, the *Tsuga mertensiana* Zone is the highest forested zone ranging in elevation from 4,000 to 5,500 feet. These forests largely contain Subalpine fir (*Abies lasiocarpa*) and Mountain hemlock (*Tsuga mertensiana*) which are controlled by the accumulation and duration of snow on the landscape.

While known for being one of the wettest places in Washington State, the Olympic Peninsula actually has quite of range of moisture and temperature. Most of the precipitation falls between October and May, however the prevailing northeasterly winds push the moisture-laden air up against the mountains creating a rain shadow effect on the lee side. The southwestern central Peninsula receives upwards of 200 inches of rain annually, while in the heart of the rain shadow, the city of Sequim receives only 15 inches. Precipitation below 2,500 feet in elevation generally falls as rain with snow infrequent in winter. In the highest of elevations, snow pack persists from November through May, helping to maintain the Peninsula's 266 glaciers. Modern temperatures on the Peninsula are relatively mild with summer highs in the 60s to 70s and winter highs in the 30s to 40s. The high levels of precipitation, combined with elevations that vary from sea level to glaciers, creates a huge diversity in landscapes and resources within a condensed area (Houston et al. 1994).

While species diversity is relatively low, the Olympic Mountains' vast habitat still houses numerous animal species. The Roosevelt elk, for which Olympic National Park was founded, is the largest and most abundant ungulate on the Peninsula. Migratory bands of both elk and black-tailed deer move into the mountains to browse and graze in the meadows during the summer months while the non-migratory bands remain in the lower elevations year round (Schwartz and Mitchell 1945). While less abundant, other large mammals of the Peninsula include both black bear and cougar. A variety of smaller animals are less noticeable but are none the less fairly common which include, but are limited to, wolf, coyote, bobcat, beaver, marmot, rabbit, squirrel, raccoon, grouse, duck, goose, loon, and cormorants.

Salt water and fresh water aquatic environments contain high biological diversity in the form of sea mammals, fish, and invertebrates. The Olympic Peninsula is known to have prehistorically supported runs of all five pacific salmon species as well as steelhead. Other fish such as herring, perch, rockfish, greenling, Pacific cod, lingcod, sole, and halibut can also be found in the Pacific waters. Shellfish, and other invertebrates, are extremely common in the intertidal areas of the Peninsula. Common species include basket cockle, bay mussel, little neck clam, butter clam, and horse clam. Sea mammals, both migratory and resident, include Gray whales, Killer whales, Harbor seals, Sea otters, Northern fur seals, Steller sea lions, and California sea lions, amongst others (see Samuels 1994 for a summary).

Little direct evidence exists to suggest how the Olympic Peninsula fauna has changed since the late Pleistocene. Like other low latitude post-glacial settings, the Olympic Peninsula is thought to have been inhabited by a high diversity of species with large body masses (Geist 1978). Mastodon, bison, and caribou are identified in archaeological deposits dating to the late Pleistocene at the Manis Mastodon site near Sequim, WA (Gustafson et al. 1979) and mastodon bones are frequently found eroding from beach cliffs in the northeastern Peninsula. While the presence of these species has been substantiated, other later Pleistocene megafauna have not. It is reasonable to infer that as with other landscapes in western Washington, species such as camel, ground sloth, musk ox, moose, and short-faced bear were likely present on the Olympic Peninsula at this time (Schalk 1988).

1.3 Cultural Setting

The Northwest Coast culture area refers to the area from the northern California coast to Yakutat Bay along the Alaskan panhandle (Ames and Maschner 1999; Kroeber 1939; Matson and Coupland 1995; Wissler 1914). The Olympic Peninsula lies in the center of this culture area and was home to people of six separate ethno-linguistic groups most of which are Salishan: Central Coast Salish, Southern Coast Salish, Makah, Quileute, Chemakum, and Southwestern Coast Salish (Ames and Maschner 1999). Although separated by 100 miles, both the Quileute and Chemakum originate from the same distinct language family, the Chemakum, and are unrelated to both the Makah and Salish groups (Elmendorf 1990, McMillian 2003; Jay Powell personal communication; Swadesh 1955; Wray 1997). It has been suggested that the Chemakum/Quileute group once inhabited the entire Olympic Peninsula prior to the Salish, and later Makah, migrations to the area (Elmendorf 1990; Wray 1997). The Makah, also linguistically distinct, are the southernmost immigrants of the Wakashan people who are primarily located on northwestern Vancouver Island and the central British Columbian coast

(McMillian 2003). While the timing of initial occupation of both Salish and Chemakum on the Olympic Peninsula are unknown, it is estimated that the Makah began inhabiting the area approximately 1,000 years ago (Jacobsen 1979).

The prehistoric chronology of the Olympic Peninsula is poorly understood in terms of its own, independently derived, timeline. Due to this, archaeologists have largely relied upon interpretations of more thorough and complete investigations in both the Gulf of Georgia and the Puget Sound. Because the Peninsula is said to have had closer alliances with the Gulf of Georgia than with the Puget Sound (Matson and Coupland 1995; Morgan et al. 1999; Schalk 1988) the

Table 1-1 Various Cultural Sequences Used for the Olympic Peninsula.

Present	Gulf of Georgia 1,200	Late Prehistoric 3,000-200	Late Prehistoric Northwest Coast Pattern 1,000-200
1,000			
2,000	Marpole 2,400 -1,200		Late Prehistoric, Early Maritime 3,000-1,000
3,000	Locarno Beach 3,500-2,400		
4,000	St. Mungo 4,500-3,500	Old Cordilleran, Late Old Cordilleran 6,000-3,000	Middle Prehistoric 6,000-3,000
5,000	Old Cordilleran, Olcott 10,000-4,500		
6,000			
7,000		Old Cordilleran, Early Old Cordilleran 10,000-6,000	Early Prehistoric 12,000-6,000
8,000			
9,000			
10,000			
11,000	Pebble Tool Tradition >10,000	Paleo Indian >10,000	
12,000 Years B.P.			
	Croes and Hackenberger 1988	Schalk 1988	Bergland 1983

prehistory of the Olympic Peninsula will primarily be discussed in terms of what is known about the Gulf of Georgia (Table 1-1). Having said this, the Olympic Peninsula is a spatial outlier of both of the Gulf of Georgia and the Puget Sound so it should be expected that with increasing data, the emerging story of this area will prove to be unique. Extremely few dates are associated with the lithic scatters used for analysis (see Appendix A) so, assuming that the sites could represent any of the time periods, a review of prehistoric land use as a whole will be examined.

At the time of contact, the groups of Native Americans encountered along the Pacific Northwest Coast were not typical hunter-gatherers. These groups had a high degree of organizational and social complexity and lived in large semi-sedentary villages with high overall population densities yet never practiced agriculture. Anthropology's fascination with this unique phenomenon attracted some of its biggest names including both Franz Boas and Alfred Kroeber. The archaeology of the Northwest Coast has continued to be focused on these topics and centered on the investigation of sites along the coast. However, Northwest coast peoples also have a long history of visiting inland locations to procure terrestrial resources.

Four hundred years after Fray Jose de Acosta speculated that Indians of the New World likely migrated from a place where it meets with the Old World (O'Neill 2004), the timing and route of the first Americans' travel onto the continent is still under debate. Regardless of the specific route, the central northwest coast, including the northern Olympic Peninsula, had certainly become ice-free by 10,000 BP (Heusser 1973), if not as early as 12,000 BP (Peterson et al. 1983). The earliest non-disputable occupations in the central northwest coast are sites containing Clovis culture dated between 11,050 and 10,800 years BP (Waters and Stafford 2007, Carlson 1996). Clovis sites may typically exist with the well-known fluted spear point, crescent bifaces and may be also associated with the remains of mammoths and mastodons (Matson and

Coupland 1995). While widely found throughout much of North America south of the maximum of the Fraser glaciation, Clovis sites are far less frequent in western Washington with eight recorded sites west of the Washington Cascade range including points found in Chehalis, Olympia, Whidbey Island, Bremerton, and Maple Valley (Croes et al. 2008). Sites in Washington are largely isolated finds and are typically found without datable materials.

The Manis Mastodon site (45-CA-218), located south of Sequim, is disputably the earliest demonstration of prehistoric human activity on the Northwest coast. Lacking the quintessential artifact that typically denotes a Paleo-Indian site, the Manis Mastodon site does not contain a fluted point. This site contains the remains of an extinct Pleistocene mega-fauna, *Mammut americanum,* with possible evidence of human predation. X-ray analysis of a pointed bone object found protruding from a rib of the animal suggests that the object is a bone projectile point healed in the rib (Gustafson et al. 1979; Ames and Maschner 1999:66). Two radiocarbon dates from associated peat bog materials provide an age of 12,000 +/- 310 B.P and 11,850 +/- 60 B.P. (Gustafson et al. 1979). While the nature of the bone object has since been questioned (Carlson 1990; Fladmark 1982:106; Grayson and Meltzer 2002), this site still tenuously remains the oldest known on the Olympic Peninsula.

Cultural traditions that follow the fluted point horizon on the Northwest coast are not well defined and are referred to by a variety of names. Perhaps one of the most liberally used and ill-defined cultural sequences in the Pacific Northwest coast is Olcott, also used interchangeably with the terms Old Cordilleran, Cascade, and Pebble Tool Tradition (Carlson 1996; Croes et al. 2008). All of the above names generally refer to the time period between 8,000 and 4,000 years B.P. but differ slightly in location and in the details of their assemblages.

This cultural sequence was first loosely described by Butler (1961) as containing bi-pointed or leaf shaped projectile points. Coined as a Cascade point they are found in context with simple cutting, scraping and chopping tools from ‘early’ sites. Butler (1961) used the term Old Cordilleran to describe a generalized hunter-gatherer culture, represented by this assemblage, which was the first to occupy the Pacific Northwest at the end of the Pleistocene. Butler (1961) argued that the assemblages he found throughout Washington, Idaho, and the northern Great Basin resembled that found by MacNeish (1958 in Butler 1961) in north eastern Mexico. From this he believed that these assemblages were representative of a widespread basal culture group of both North and South America. While Butler’s idea of the Old Cordilleran Culture was quickly criticized (e.g. Daugherty 1962; Carlson 1962), he was the first to describe the Cascade point, a diagnostic point type found on the Columbia Plateau of Washington State.

The term Olcott was first referred to as a complex by Kidd (1964) and was used to describe a suite of artifacts found at the Olcott site (45-SN-14) which Butler had earlier described as Cascade points. Kidd (1964) proposed a threefold sequence pertaining to the prehistory of the Northwest and used the Olcott complex as the criteria for the Early period even though he had no dates linking this complex to the early Holocene. More recent excavations have bracketed Olcott assemblages between 8,000 and 4,000 B.P although few of these sites are well-described or free from natural and historic disturbances (Wessen 1993).

Since the 1960s, the terms Olcott, Cascade, and Old Cordilleran have frequently been used interchangeably to refer to the assemblages described above. While the Cascade complex has been the focus of more detailed investigations, especially on the Columbia Plateau (e.g. Butler 1961; Daugherty 1956; Hicks 2004), the fluid definition of the Olcott complex, which has come to refer to the Cascade complex west of the Cascade Mountains, has long been accepted. It has become practice in the Puget Sound region to call fine-grained volcanic (basalt and dacite) lithic scatters composed of predominantly debitage, occasional scrapers, and leaf shaped projectile points absent of organic and therefore datable materials as Olcott assemblages. It is worth noting that most of the artifact types that are considered part of the Olcott complex also occur in other contexts and while their occurrence together is telling, it is not diagnostic (Wessen 1993).

It has been speculated that the lithic scatters in the interior of the Olympic Mountains all represent the Olcott period (Bergland 1987; Schalk 1988; Wessen 1978). However, only two dated interior sites correspond to this time. The Seven Lakes Hearth (45-CA-274), a small lithic scatter set at 4,450 feet, yielded a date of 4,990 B.P., however, the circumstances surrounding its collection make it questionable (see Appendix A). At the Hurricane Z site, a buried soil horizon associated with chipped stone artifacts was dated at 7,950 B.P. Two other sites located on the coastal plane (45-CA-426 and 45-CA-433), excavated during the Highway 101 Sequim Bypass re-alignment, unearthed one of the largest Olcott artifact assemblages from an excavated context in the Puget Sound (Morgan et. al, 1999). However, only one of 47 radiocarbon dates from the sites is Olcott age; the majority are Marpole and Locarno Beach.

Somewhere around 4,500 years B.P., Northwest coast cultures began developing traits that will later be seen in the “Developed Northwest Coast pattern” (Matson and Coupland 1995). Croes and Hackenberger (1988) speculate that in this phase populations began to steadily increase and people began focusing on more predictable resources such as roundfish, flatfish, and shellfish exploitation without yet practicing a storage economy. With sea level stabilizing, this was likely the beginning of a transitional period from that of forager-based to a collector-based economy (Matson and Coupland 1995). Only one site from this time period is known to exist on the Olympic Peninsula from this period: an inland shell midden on a raised terrace near the Waatch River (45-CA-400) (see Appendix A). St. Mungo phase artifacts include Olcott period artifacts with an initial appearance of ground stone, bone, antler and shell tools (Pratt 1992). A large percentage of the artifacts of these assemblages are perishable items not previously present in other assemblages due to their deposition in calcium rich shell middens of this phase. Similar species of both terrestrial and aquatic fauna continue to be present from the Old Cordilleran into St. Mungo, however, sustenance is largely based on coastal and riverine resources as evidenced by an increased in salmon and bay mussel (Matson and Coupland 1995).

Following the St. Mungo phase is the Locarno Beach phase. Analyses from components at least 28 sites have produced numerous radiocarbon dates placing this phase between 3,500 to 2,400 years B.P. (Matson and Coupland 1995). It is suggested that on the Olympic Peninsula, overharvesting of shellfish during the previous phase led to the beginning of a storage economy initially dependent upon flatfish and some roundfish (Croes and Hackenberger 1988). At least four Olympic Peninsula sites are known to have dates from this period (45-CA-213, 45-CA-426, 45-CA-433, and 45-CA-270) (see Appendix A). Assemblages of the Locarno Beach phase distinguish themselves from the earlier St. Mungo phase with an evidence of increased dependence on marine resources as well as status indicators. Typical artifacts include composite toggling harpoon valves, unilaterally barbed harpoon points, large slate points, shaped and decorated ground stone, stemmed chipped stone projectile points, small adzes, and labrets (Matson and Coupland 1995). In a few sites, including both Hoko and Sequim, obsidian and quartz crystal microblades were found. Microblades, as well as ground slate knives and the lack of salmon cranial bones are the basis of the argument for early salmon storage (Matson 1992;

Matson and Coupland 1995; Moss and Erlandson 1995), while others believe salmon cranial bones absence are due to differential preservation.

While the roots of socioeconomic complexity can be found in earlier phases, it was not until the Marpole phase that complexly was attained. The period between 2,400 and 1,200 years B.P., known as Marpole, is considered by many to be the full achievement of the "Developed Northwest Coast pattern" (Matson and Coupland 1995). At least three sites with Marpole dates exist on the Olympic Peninsula including the Ozette Village (45-CA-24) and two lithic scatters (45-JE-216 and 45-CA-485) (see Appendix A). While Borden reported on some of the specific traits which defined Marpole on the Fraser River delta, it wasn't until Mitchell (1971) and later Burley (1980) synthesized discussion that the three phase cultural sequence (Locarno Beach, Marpole, Late Prehistoric) for the Northwest coast was verified and widely accepted (Matson and Coupland 1995).

During the Marpole phase many of the characteristics that are ascribed to Northwest Coast cultures at contact came into full florescence. Due to increased economic and resource pressures, storage economy expands to include resources primary harvested in the summer/fall, namely riverine salmon (Croes and Hackenberger 1988). Several important developments occurred including the appearance of winter villages with several large multi-family planked long houses, elaborate burials, status ascription, ranked society, craft specialization, storage economy and standardized art forms which link sites back to the Fraser River region (Grier 2003). Some of the key components include ground slate knives and points, large adzes, labrets, hand mauls, perforated stones, large needles, an increase in bone tools, a sharp decline in chipped stone, as well as increased cairn and mound burials (Burley 1980; Mitchell 1971).

Particularly defining is the replacement of composite toggling harpoon points with unilaterally barbed bone and antler harpoon points.

The final cultural period is referred to by many names, such as, the Gulf of Georgia (Croes and Hackenberger 1988), the San Juan Phase (Carlson 1970), the Stselax phase (Borden 1970), and simply the Late Prehistoric (Matson and Coupland 1995). This Gulf of Georgia period is seen as a continuation of Marpole gradually blending into the ethnographic record from approximately 1,200 to 250 years B.P. At least four sites are dated to this period on the Olympic Peninsula all of which are shell middens (45-JE-15, 45-JE-08, 45-CA-29, and 45-CA-30) (see Appendix A). Material culture of this period is marked by the dominance of bone and antler tools, the near absence of chipped stone, a plethora of bone unipoints and bipoints, the introduction of flat topped mauls, the reintroduction of composite toggling harpoon point, and tools associated with weaving technology such as blanket pins and spindle whorls (Matson and Coupland 1995).

Winter villages with large mutli-family plank houses remain common as do resource-specific procurement sites. In this period, sites begin to show evidence of intercommunity violence. Defensive sites including lookouts, rock wall and trench-embankment fortifications, and stockades are new additions to sites around the Gulf of Georgia and beyond which predominantly occur between 1,600 and 500 years B.P. (Angelbeck 2009).

By the time Spanish and British ships first made contact in the late 1700s (Gunther 1972) Northwest Coast Native Americans had become “Affluent Foragers”, reaching a level of socioeconomic complexity not achieved by other hunter-gatherer populations. The European explorers soon brought traders, settlers, epidemics and great change which unequivocally altered the life-ways that Northwest Coast peoples had built upon for 12,000 years.

Today, the Olympic Peninsula is home to eight Federally-recognized tribes (Figure 1-2) (Wray1997). Except for the Makah, traditional territories generally extend from the coast, up a major river valley into the interior of the Olympic Mountains, converging in the vicinity of Mount Olympus. While the territorial lines are fairly straightforward in the coastal lowlands, territories begin to overlap in the interior. Being recent immigrants to the Peninsula, the Makah territory is in the extreme northwest of the Olympic Peninsula (Mitchell 2003). While these territorial lines are drawn from historical documentation are approximate interpretations of true tribal range, they offer insight as to the cultural affiliations of the residents of the Peninsula.

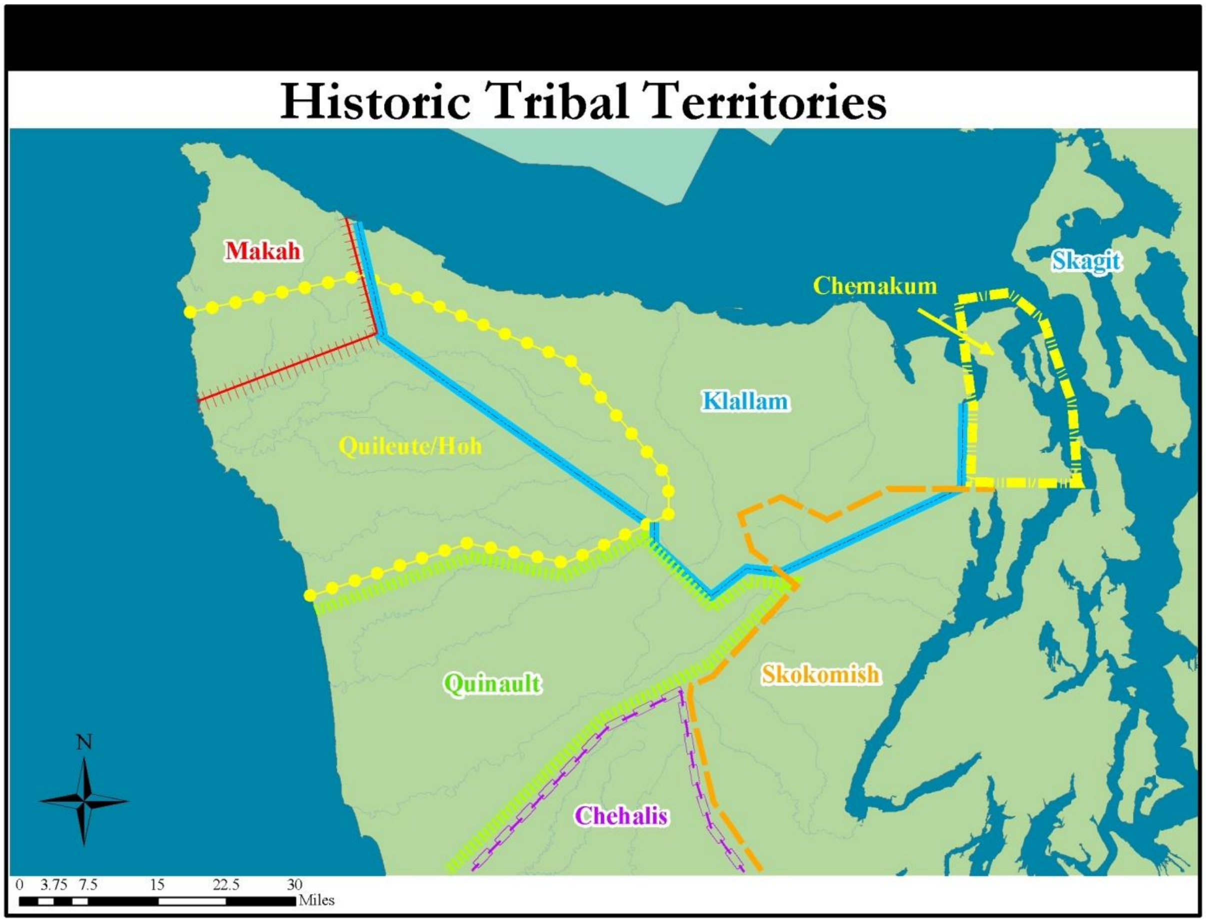


Figure 1-2 Tribal Territories on the Olympic Peninsula (from Wray 1997).

CHAPTER TWO

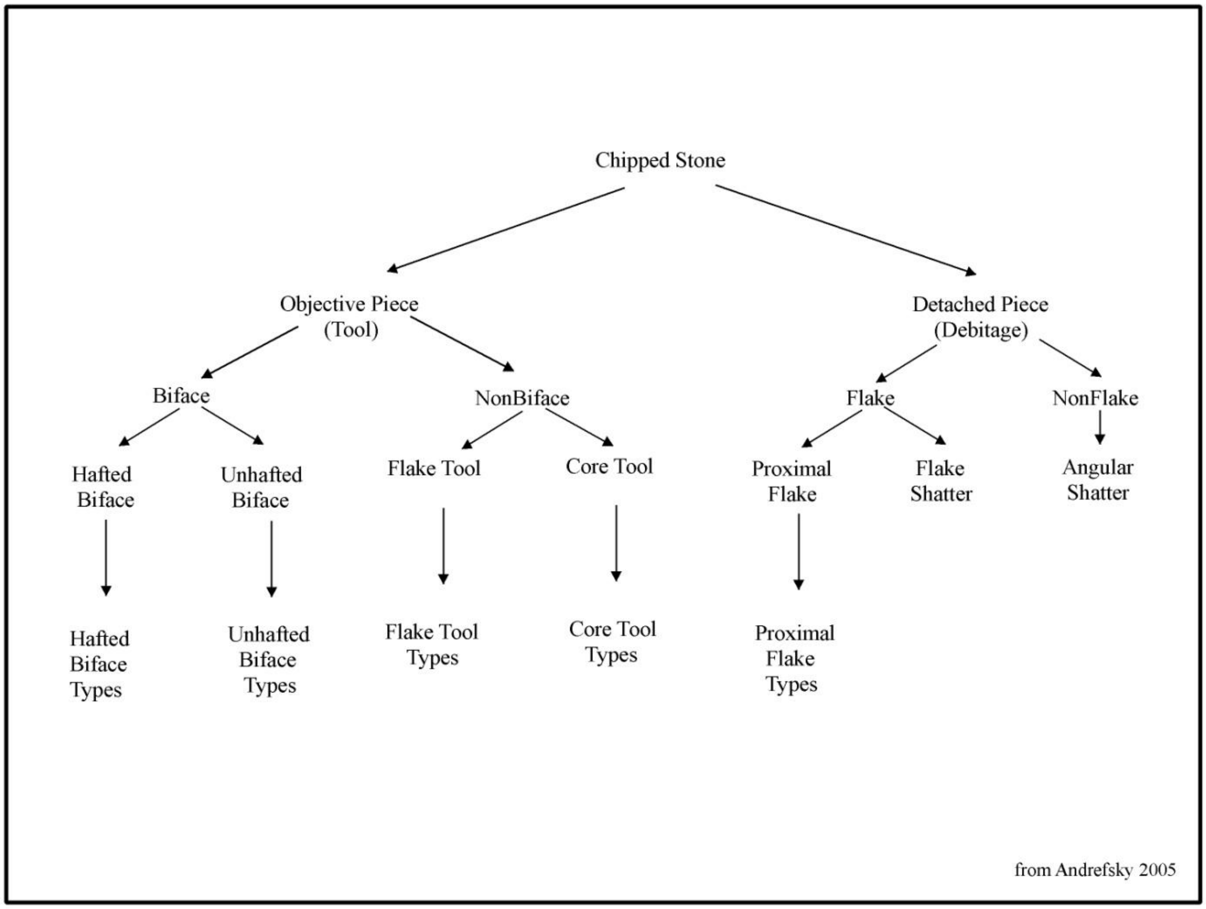
DESCRIPTION OF ASSEMBLAGE

In order to test the hypothesis in subsequent chapters that dacite was collected from local secondary sources on the Olympic Peninsula, the classification of the data must be made clear and the overall characteristics of the lithic assemblages in this study should be described. In this chapter I will define the terms used to describe artifacts and explain how artifacts were morphologically classified. Once this is understood, the characteristics of the assemblage as a whole are described to provide an overview of the materials used in this study.

2.1 Analysis Metadata

To carry out a meaningful, systematic analysis of chipped stone artifacts from the study area, artifact attributes must be clearly described in replicable, mutually exclusive categories (citation). All chipped stone artifacts were measured for a variety of characteristics in order to describe technological and metric attributes. Chipped stone artifacts were first assigned to one of two categories; an objective piece or detached piece (Andrefsky 2005). An objective piece is an item that is modified through numerous means, typically percussion or pressure flaking, during the process of flint knapping. The portion that breaks off of the objective piece is a detached piece is synonymous with debitage. Once a detached piece is removed, it too can be the objective piece if chosen by the stone tool maker for further modification or use. Below I describe the terminology used during this study to characterize the assemblages for data analysis.

While some typologies have been created for specific study areas or for the purposes of determining chronology or function, the typology used in this study is largely "interpretation-free" (Sullivan and Rozen 1985). A typology that is based on the morphology of an artifact helps to decrease subjectivity and increase replicability, allowing for attribute analyses to test hypotheses. Adapted from Andrefsky's (2005) morphological typology, chipped stone artifacts were first determined to be either debitage (detached piece) or a tool (objective piece) (Figure 2-1). Stone tools are objects modified by the process of shaping, sharpening, or unintentionally through use wear. Debitage consist of all other detached pieces created during the practice of stone tool manufacture. Detached pieces were determined to be a flake with one ventral and one dorsal surface, or to be angular shatter where the detached piece lacks identifiable flake attributes. Flakes were classified as being whole, (having a striking platform and retaining all



from Andrefsky 2005

Figure 2-1 Flowchart for Chipped Stone Morphological Classification.

margins), proximal, (having a striking platform but lacking a portion of its distal margin), or flake shatter, (lacking a striking platform but still with a recognizable dorsal and ventral surface).

Objective pieces were first determined to be bifaces or non-bifaces. Bifaces are defined as an artifact with two major surfaces that meet to form a single margin with flake scars circumscribing the tool (Andrefsky 2005; Crabtree 1972:38). Bifaces were divided into hafted or unhafted bifaces, the latter of which were further subdivided into early and late stage bifaces. Early stage bifaces have little evidence of shaping, a sinuous margin, and an irregular shape. Late stage bifaces are typically symmetrical, with straight margins and show ample of evidence of shaping and thinning. Non-bifaces contain two categories of tools; cores and flake tools. Flake tools are described as being unifacially modified, bifacially modified, or utilized. Cores are objective pieces used as a source for detached pieces and are divided into unidirectional, multidirectional, bipolar and cobble core.

Additional selected attributes were recorded to help aid in characterization during analysis. The amount of dorsal cortex was recorded on a ranked scale from 0 to 3 (Andrefsky 2005). If no cortex was present on the artifact it was recorded as a 0. An artifact with some cortex present but with less than 50% of its dorsal surface was recorded as a 1. A 2 was recorded for artifacts with 50% or greater but less than 100% dorsal cortex. Artifacts with 100% dorsal cortex were recorded as a 3. Striking platforms were recorded for every whole and proximal flake. Cortical platforms retain original cobble cortex from the objective piece. Flat platforms contain a single smooth surface. Faceted platforms exhibit numerous small flake scars near the striking platform. Abraded platforms are similar to faceted but are also smoothed through grinding or rubbing. Termination types were recorded, which included feather, step, hinge and plunging terminations. Feather terminations are a smooth transition where the distal end gradually shears off of the objective piece. Step terminations occur when the flake breaks as it is being removed from the objective piece creating a 90 degree angle with the ventral surface. A hinge fracture is a smooth, rounded termination that turns back towards the dorsal surface. A plunging, or overshot, termination is when the force turns back towards the objective piece and ends with a hook on the ventral side.

Debitage was also classified as to the reduction technology from which it was derived. Bifacial thinning flakes are typically long and small with expanding margins from the platform, feather terminations, faceted platforms, and more than two dorsal flake scars (Andrefsky 2005). Bipolar flakes generally exhibit two striking platforms or the remnant of and a relatively flat bulb of percussion. Lastly, a blade is a long narrow flake with a 2:1 ratio, removed from a unidirectional core and with a flat platform.

The number of dorsal flake scars on all debitage was recorded in order to help understand at what stage in the reduction sequence it was removed. All negative flake scars were counted, excluding small scars around the margins that likely occurred during platform preparation, breaks, and modification after detachment (Andrefsky 2005).

Metric attributes were taken for all pieces of debitage and tools in the sampled collection. A maximum linear dimension (MLD) was taken in millimeters with digital calipers regardless of flake orientation (Figure 2-2). This method was chosen to ensure that all artifacts were measured in the same manner and as a means to focus on the absolute size of an artifact regardless of platform presence. Width was taken at the next greatest dimension 90 degrees from the MLD. Thickness was taken at 90 degrees from the width dimension at the point where it intersects with the MLD. Additionally, all artifacts were weighed in grams with a digital scale.

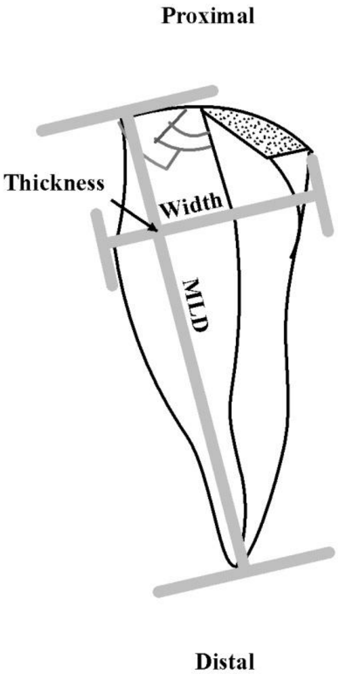


Figure 2-2 Explanation of Artifact Measurements on a Sample Artifact.

Lithic raw material type was recorded in one of ten categories. As will be further discussed in Chapter 4, mafic, fine-grained volcanics, petrographically and chemically identified as dacite (Bakewell 1990b), have been found to be common components at lithic scatters on the Olympic Peninsula. Additional raw material categories were created after a review of collections and include quartzite, quartz crystal, meta-sediment, cryptocrystalline silica (CCS), obsidian, sandstone, fine-grained volcanic, coarse-grained volcanic and unknown. During analysis, both fine-grained volcanic and coarse-grained volcanic are combined into the category of other volcanic.

2.2 Assemblage Characteristics

Sites chosen for inclusion in this thesis were largely dictated by their availability for analysis at Olympic National Park's curatorial facility in Port Angeles, Washington. For a period of ten years, various pedestrian surveys and small scale CRM projects in remote areas of the Park were accompanied by surface collection of the sites. This practice accumulated collections from nearly 100 lithic scatters, all of which were used for this analysis (Figure 2-3). Three sites in the collection, Shelter Rock, Slab Camp and Ozette River, were considerably larger than the remainder of the sites containing three to four times the chipped stone artifacts as the next largest in the current sample. In order to reduce the influence these three very large sites might have

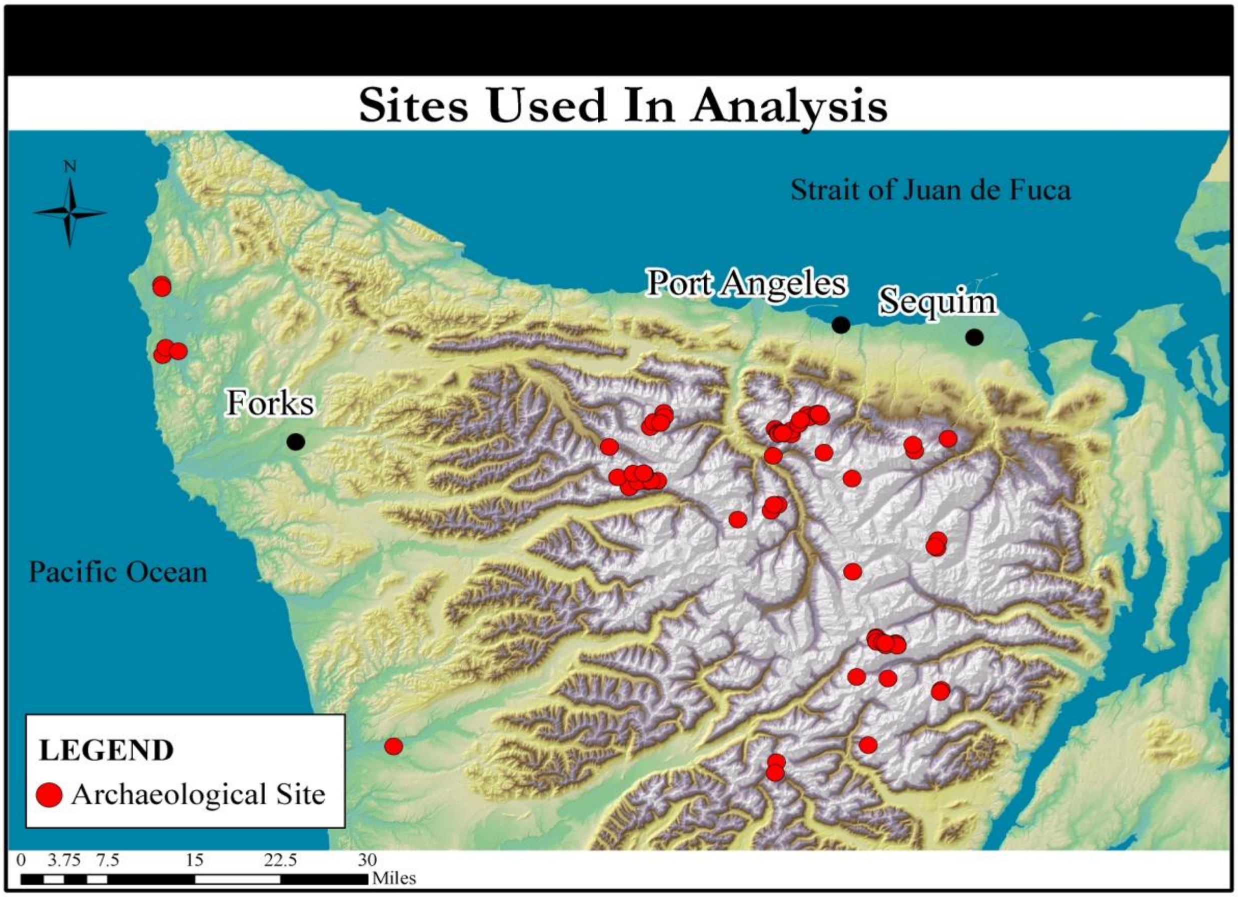


Figure 2-3 Location of Archaeological Sites Used in Analysis.

on the analysis, only a sample of their assemblages were analyzed. Drawn from each site was a simple random sample of approximately 20% of each original assemblage.

In total, 2,200 chipped stone artifacts were analyzed for the purposes of this thesis. These include artifacts from 91 lithic scatters and isolates ranging from 30 to 6,500 feet above sea level from all major watersheds of the Olympic Peninsula. On average, a site is composed of 24 chipped stone artifacts with a range from 1 to 346 and a standard deviation of 58. This distribution is not normal with a positive skew and excessive kurtosis. Of the 91 sites, a vast majority of them (74%) are small composed of 10 artifacts or less while the remaining 24 sites are fairly evenly distributed through the remainder of the categories (Figure 2-4).

Chipped stone artifacts are by far the most abundant artifact type represented at sites in this study nearly to the exclusion of all other artifact types. As documented at other Olympic Peninsula lithic scatters, dacite, often classified by previous researchers as basalt, is the most

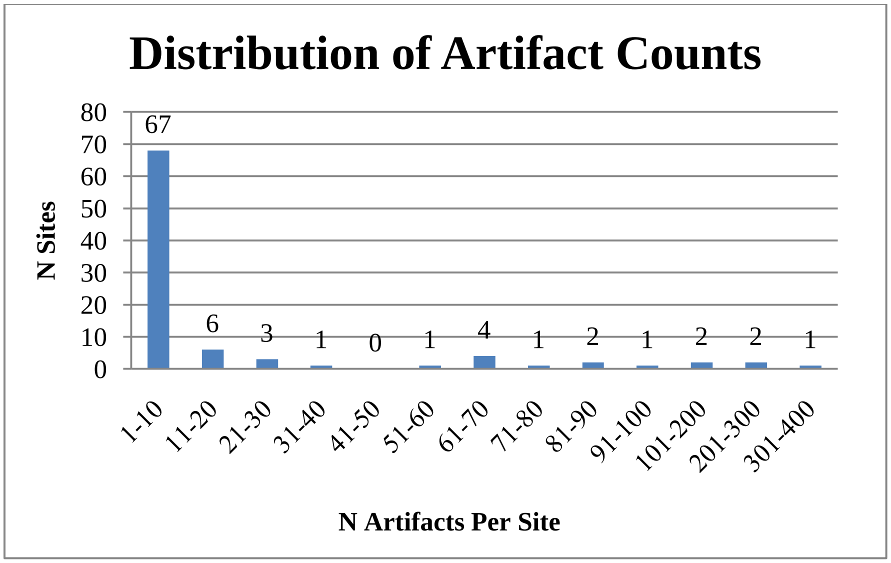


Figure 2-4 Number of Chipped Stone Artifacts Per Site.

common raw material type, representing 86.9% of all artifacts (Table 2-1). The remaining seven material types are rather equally represented in the remaining 13.1% of the sample. Meta-sediments are the second most common material type identified in 4% of the sample. Both quartzite and sandstone make up 2.9%, while CCS and quartz crystal are represented by 1%each. The remaining raw materials are obsidian and other volcanic rocks, which both were identified in 0.7% of the sample each.

Debitage from stone tool manufacture makes up the largest category of artifact type within the assemblage at 85.6% and is dominated by dacite. Again, tools are overwhelming composed of dacite, with a negligible amount made of other raw materials. Flake tools compose the second most abundant artifact type at 8%. Cores represent 4.9% of the sample, while bifaces are also present at 1.5% in the assemblage.

2.2.1 Debitage Characteristics

Debitage, or the unused detached portions removed during lithic reduction, typically compose the most common artifact type in lithic scatters in this study. In total, 1885 of 2200 artifacts were identified as debitage, which are unequally represented by all material types. Again, dacite composes the largest proportion, 88%, of all the identified debitage. Such a high

Table 2-1 Summary of Chipped Stone Artifacts.

Material Type	Core	Flake Tool	Biface	Debitage	Totals	% of Total
Dacite	80	144	29	1659	1912	86.9
Quartzite	8	5	0	50	63	2.9
Meta Sediment	3	15	1	69	88	4
Quartz Crystal	7	2	1	11	21	1
Obsidian	0	0	0	15	15	0.7
CCS	4	2	2	14	22	1
Sandstone	5	2	0	57	64	2.9
Other Volcanic	1	4	1	10	16	0.7
Totals	108	174	34	1885	**2201**	
% of Total	4.9	8	1.5	85.6		

proportion of debitage in a single material class generally suggests that early stages of reduction were occurring on sites, but further analysis will help to characterize this large class of artifacts (Pecora 2001:188).

The proportion of proximal flakes in comparison with flake and angular shatter can indicate the condition of the collection. The most common type of debitage at 47.4% are proximal flakes, including whole flakes (Table 2-2). Proximal flakes, by definition, have a point of impact which can be used to count the minimum number of times an objective piece was impacted during the reduction process (Andrefsky 2005). While proximal flakes are most abundant within the material types dacite, quartzite, CCS, sandstone, and other volcanics, it is not the case across the board. Both meta-sediment and obsidian exhibit the highest debitage class in flake shatter at 46.4% and 53.3%, respectively. High frequencies of flake shatter in these material types may suggest that flakes are more likely to break during or after detachment. Quartz crystal, with the smallest sample size within the debitage category, shares its highest counts between proximal flakes and angular shatter, both with 40%. Flake shatter composes a

Table 2-2 Debitage Types.

Material Type	Whole Flake	Proximal Flake	Flake Shatter	Angular Shatter	Total N
Dacite	325 *(19.6)*	468 *(28.2)*	732 *(44.2)*	132 *(8.0)*	1657 *(100)*
Quartzite	10 *(20.0)*	15 *(30.0)*	13 *(26.0)*	12 *(24.0)*	50 *(100)*
Meta Sediment	3 *(4.3)*	20 *(29.0)*	32 *(46.4)*	14 *(20.3)*	69 *(100)*
Quartz Crystal	1 *(10.0)*	3 *(30.0)*	2 *(20.0)*	4 *(40.0)*	10 *(100)*
Obsidian	3 *(20.0)*	4 *(26.7)*	8 *(53.3)*	0	15 *(100)*
CCS	4 *(28.6)*	6 *(42.9)*	2 *(14.3)*	2 *(14.3)*	14 *(100)*
Sandstone	17 *(29.8)*	10 *(17.5)*	24 *(42.1)*	6 *(10.5)*	57 *(100)*
Other Volcanic	4 *(40.0)*	1 *(10.0)*	4 *(40.0)*	1 *(10.0)*	10 *(100)*
Total N	367	527	817	171	1885
% of Total	19.5	27	43.3	9.1	

Percent of material type given in parentheses

close second to proximal flakes in terms of total frequencies across material types with 43.3%. Angular shatter composes the smallest category of debitage at 9.1%. Obsidian is the only material type not having a count in all debitage types. No piece of obsidian angular shatter was identified during this analysis and, in combination with its small frequencies and exotic nature, suggests that the initial reduction of obsidian occurred before it was transported to the Olympic Peninsula.

The study of platform types has been used to determine several characteristics of lithic reduction including stage of manufacture, type of objective piece, and flake size (Andrefsky 2005). Faceted platforms were the most commonly recorded platform type at 44.8%, which was heavily weighted by the abundance of dacite platforms (Table 2-3). The abundance of faceted platforms implies greater care in flake removal, later stages of reduction, and perhaps biface production (Andrefsky 2005; Magne and Pokotylo1981). Other categories of material to record faceted platforms as the most abundant were obsidian, CCS and meta-sediment. Cortical platforms were the next most common type observed with 30.1% of the sample. Since cortex is generally removed early on in reduction, these platforms are more indicative of initial reduction.

Table 2-3 Debitage Platform Types.

Material Type	Cortical	Flat	Faceted	Crushed	Totals
Dacite	218	201	364	4	787
Quartzite	14	5	6	0	25
Meta Sediment	6	7	9	0	22
Quartz Crystal	2	0	2	0	4
Obsidian	0	0	7	0	7
CCS	0	3	7	0	10
Sandstone	23	3	1	0	27
Other Volcanic	4	0	1	0	5
Total N	267	219	397	4	887
% of Total	30.1	24.7	44.8	0.5	

Percent of material type given in parentheses

Quartzite, sandstone, and other volcanics all had the highest counts for platforms in the cortical category, while quartz crystal was split between cortical and faceted platforms.

Feather terminations are, for the most part, the desired outcome during lithic reduction because they leave a smooth surface on the objective piece and a long sharp edge on the detached piece (Whittaker 1994:106). As it turns out, the most commonly identified termination within the assemblage was a feather termination, representing 59.4% of the observations (Table 2-4). All material types, except quartz crystal, also record feather terminations as being their most abundant terminations, ranging from 54% to 100% of the total observed. Step terminations are the second most common with 39.8% of the occurrences, and only quartz crystal records this termination most often with 60%. These two termination types combined make up 99% of the observations, with hinge and plunging terminations appearing only in dacite at less than 1% together. Both hinge and step terminations are thought to be undesirable terminations because they interfere with subsequent reduction, however, step terminations may also occur later in a flake's life history after detachment as the result of trampling (Whittaker 1994:109).

Table 2-4 Debitage Termination Types.

Material Type	**Feather**	**Step**	**Hinge**	**Plunge**	**Totals**
Dacite	753 *(57.5)*	545 *(41.6)*	10 *(0.8)*	1 *(0.1)*	1309 *(100)*
Quartzite	17 *(85.0)*	3 *(15.0)*	0	0	20 *(100)*
Meta Sediment	28 *(65.1)*	15 *(34.9)*	0	0	43 *(100)*
Quartz Crystal	2 *(40.0)*	3 (60.0)	0	0	5 (100)
Obsidian	8 *(100)*	0	0	0	8 *(100)*
CCS	6 *(54.5)*	5 *(45.5)*	0	0	11 *(100)*
Sandstone	36 *(94.7)*	2 *(5.3)*	0	0	38 *(100)*
Other Volcanic	7 *(87.5)*	1 *(12.5)*	0	0	8 *(100)*
Total N	857	574	10	1	1442
% of Total	59.4	39.8	0.7	0.1	

Percent of material type given in parentheses

Table 2-5 Amount of Dorsal Cortex on Whole Flakes.

Material Type	**None**	**≤50%**	**≥50%**	**100%**	**Total N**
Dacite	242 *(69.7)*	76 *(21.9)*	23 *(6.6)*	6 *(1.7)*	347 *(100)*
Quartzite	6 *(50.0)*	1 *(8.3)*	1 *(8.3)*	4 *(33.3)*	12 *(100)*
Meta Sediment	2 *(40.0)*	2 *(40.0)*	0	1 *(20.0)*	5 *(100)*
Quartz Crystal	1 (100)	0	0	0	1 *(100)*
Obsidian	3 *(100)*	0	0	0	3 *(100)*
CCS	4 *(100)*	0	0	0	4 *(100)*
Sandstone	5 *(26.3)*	2 *(10.5)*	1 *(5.3)*	11 *(57.9)*	19 *(100)*
Other Volcanic	2 *(40.0)*	1 *(20.0)*	1 *(20.0)*	1 *(20.0)*	5 *(100)*
Total N	265	82	26	23	396
% of Total	67.0	20.7	6.6	5.8	

Percent of material type given in parentheses

Under the assumption that dorsal cortex is removed during initial stages of lithic reduction the amount of dorsal cortex present on debitage can be suggestive of a reduction stage (Marwick 2008). No dorsal cortex was the most commonly classified rank category in the subsample of whole flakes (67.0%) (Table 2-5). Regardless of material type, all other whole flakes, with the exception of meta-sediment, followed the majority with a predominance of no dorsal cortex.   Meta-sediment shared its highest counts between no cortex and less than 50%.

The second most often recorded cortex rank was in the category of less than 50%, which contained 20.7% of the subsample. Three material types, quartz crystal, obsidian, and CCS, recorded all of their frequencies in the rank of no dorsal cortex present. This is not surprising in the case of obsidian and CCS given that these materials are more highly valued because of their superior conchoidal fracture and ease of fracture control (Whittaker 1994:69); however, these materials also are represented by the 3 smallest frequencies.   In addition to the ranked scale, the presence or absence of cortex was recorded for all artifact types, regardless of where it was on the artifact. In accordance with the previous measure, the majority of the artifacts did not exhibit cortex anywhere on them, but at a much more equal frequency (54.7%) (Table 2-6). It is interesting to note that while “no cortex” was dominant, only three material types, dacite,

Table 2-6 Presence of Cortex For All Artifacts.

Material Type	**Present**	**Absent**	**Totals**
Dacite	805 *(42.1)*	1107 *(57.9)*	1912 *(100)*
Quartzite	45 *(71.4)*	18 *(28.6)*	63 *(100)*
Meta Sediment	52 *(59.1)*	36 *(40.9)*	88 *(100)*
Quartz Crystal	20 *(95.2)*	1 *(4.8)*	21 *(100)*
Obsidian	0 *(0.0)*	15 *(100)*	15 *(100)*
CCS	4 *(18.2)*	18 *(81.8)*	22 *(100)*
Sandstone	59 *(92.2)*	5 *(7.8)*	64 *(100)*
Other Volcanic	13 *(81.3)*	3 *(18.7)*	16 *(100)*
Total N	998	1203	2201
% of Total	45.3	54.7	

Percent of material type given in parentheses

obsidian, and CCS, follow this pattern. All other material types are rather heavily weighted toward a dominance of cortex present somewhere on the artifact.

The range of metric attributes collected for debitage vary quite drastically through the sample. Mean weights range from 0.1 to 66.5 grams and MLD from 7.9 to 69.4 mm (Figure 2-7). On average in this assemblage, whole flakes are the largest in all dimensions except thickness where angular shatter records the largest figures. Both proximal flakes and flake shatter share similar dimensions and are generally smaller and weigh less than angular shatter.

A review of the means for material types begins to illustrate some patterns in size distribution. In general, quartz crystal, CCS, and especially obsidian regularly have the smallest measurements in all four metric categories throughout all debitage categories as well as small standard deviations. The small sizes of the debitage indicate that the package size of the material may be small, whether it arrives here as a biface or begins as a small pebble. However, these three material types also have the lowest sample sizes as well. Sandstone, on the other hand, has the largest dimensions for weight, MLD, width, and thickness of all material types for all

Table 2-7 Debitage Sizes.

Material Type	**Weight (g)**	**MLD (mm)**	**Width (mm)**	**Thickness (mm)**	**Total N**
Whole Flake					
Dacite	4.2 *(12.2)*	26.0 *(10.6)*	18.3 *(8.3)*	5.4 *(3.5)*	325
Quartzite	25.3 *(62.0)*	26.8 *(21.0)*	18.2 *(16.6)*	9.2 *(8.4)*	10
Meta Sediment	3.4 *(1.4)*	28.3 *(1.3)*	19.1 *(4.3)*	4.9 *(2.7)*	3
Quartz Crystal	3.3	27.1	15.6	8	1
Obsidian	0.1 *(0)*	8.6 *(1.7)*	5.7 *(1.8)*	1.3 *(0.5)*	3
CCS	0.1 *(0)*	10.5 *(0.7)*	8.1 *(0.5)*	1.3 *(0.1)*	4
Sandstone	66.5 *(69.9)*	69.4 *(28.5)*	50.0 *(21.2)*	14.2 *(7.4)*	17
Other Volcanic	18.0 *(16.3)*	52.6 *(16.6)*	30.1 *(12.4)*	10.5 *(4.7)*	4
All Materials	7.7 *(25.0)*	28 *(15.6)*	19.7*(11.7)*	5.9 *(4.4)*	
Proximal Flake					
Dacite	2.8 *(5.2)*	22.2 *(9.4)*	15.8 *(7.3)*	4.9 *(7.1)*	468
Quartzite	2.3 *(3.2)*	20.3 *(7.2)*	14.1 *(4.9)*	4.9 *(2.7)*	15
Meta Sediment	1.8 *(1.9)*	22.4 *(9.4)*	16.73 *(6.0)*	3.7 *(1.4)*	20
Quartz Crystal	0.3 *(0.1)*	12.57 *(2.3)*	9.0 *(1.6)*	3.4 *(1.8)*	3
Obsidian	0.1 *(0)*	9.8 *(0.5)*	7.6 *(1.5)*	1.3 *(0.3)*	4
CCS	3.0 *(5.7)*	19.1 *(12.9)*	9.3 *(5.2)*	3.7 *(3.4)*	6
Sandstone	45.6 (80.0)	48.4 *(24.8)*	35.0 *(22.4)*	11.4 *(7.7)*	10
Other Volcanic	17.2	54	25.9	9	1
All Materials	3.5 *(13.0)*	22.5 *(10.5)*	16.0 *(8.2)*	4.9 *(6.9)*	
Flake Shatter					
Dacite	2.4 *(4.1)*	21.5 *(10.0)*	14.3 *(6.9)*	4.9 *(3.4)*	732
Quartzite	6.3 *(16.0)*	23.9 *(15.4)*	16.3 *(10.6)*	5.8 *(5.0)*	13
Meta Sediment	2.1 *(3.6)*	21.6 *(8.7)*	14.2 (5.9)	4.4 *(2.9)*	32
Quartz Crystal	0.7 *(0.3)*	14.2 *(4.6)*	10.3 *(4.4)*	5.3 *(0.3)*	2
Obsidian	0.1 *(0)*	7.9 *(1.7)*	4.5 *(1.2)*	0.8 *(0.4)*	8
CCS	0.5 *(0.1)*	15.7 *(6.0)*	11.8 *(3.1)*	2.7 *(0.2)*	2
Sandstone	39.6 *(45.0)*	53.5 *(24.1)*	34.5 *(14.5)*	13.6 *(6.4)*	24
Other Volcanic	1.6 *(1.5)*	22.5 *(12.1)*	13.3 *(3.3)*	5.3 *(1.4)*	4
All Materials	3.5 *(10.8)*	22.3*(12.1)*	14.8 *(8.1)*	5.1 *(3.8)*	
Angular Shatter					
Dacite	4.4 *(6.3)*	23.6 *(9.8)*	14.8 *(6.8)*	9.2 *(5.0)*	132
Quartzite	3.8 *(6.2)*	21.2 *(12.3)*	13.1 *(6.5)*	7.7 *(5.2)*	12
Meta Sediment	6.9 *(9.3)*	28.5 *(13.0)*	18.1 *(7.8)*	9.8 *(5.1)*	14
Quartz Crystal	0.9 *(1.0)*	12.7 *(4.2)*	8.9 *(4.0)*	6.9 *(2.5)*	4
Obsidian	0	0	0	0	0
CCS	0.8 *(0.4)*	14.7 *(5.8)*	9.6 *(1.7)*	5.3 *(1.4)*	2
Sandstone	57.8 *(70.1)*	60.7 *(23.8)*	36.3 *(16.4)*	18.3 *(8.4)*	6
Other Volcanic	1.2	16.1	12.8	7.2	1
All Materials	6.3 *(16.8)*	24.7 *(12.9)*	15.5 *(8.3)*	9.4 *(5.4)*	

Standard deviations given in parentheses

debitage types. Similarly, these large pieces indicate a large package size, earlier stages of reduction and a local source for this material type.

2.2.2 Flake Tool Characteristics

Flake tools are represented by 8 of the 9 raw material types except obsidian (Table 2-8). Flake tools are largely dominated by dacite, which is the most common material type in the assemblage. Meta-sediments are also represented in all three flake tool classes. Meta-sediment tools tend to be larger than dacite tools in all dimensions but are generally smaller than the few sandstone tools that are recorded. Additionally, means for all measurements of dacite and meta-sediment flake tools gradually increase in size in the 3 tool classes from utilized flake to unifacially retouched flake to bifacially modified flake. When comparing means for flake tool

Table 2-8 Flake Tool Sizes.

Material Type	Weight	MLD	Width	Thickness	Cortex Present	Total N
Utilized Flake						
Dacite	8.3 *(8.2)*	36.2 *(12.4)*	23.6 *(8.5)*	8.5 *(3.7)*	38 *(61%)*	62
Quartzite	0	0	0	0	0	0
Meta Sediment	22.1 *(35.4)*	50.8 *(23.6)*	31.9 *(16.7)*	10.1 *(5.7)*	4 *(57%)*	7
Quartz Crystal	0.6	19.4	9.1	5	1 *(100%)*	1
Obsidian	0	0	0	0	0	0
CCS	1.8	20	11.6	8	0	1
Sandstone	297.3	141.6	80.6	22	1 *(100%)*	1
Other Volcanic	166.5	112.1	61.1	17	1 *(100%)*	1
All Materials	15.4 *(40.2)*	39.7 *(20.5)*	25.3 *(12.5)*	8.8 *(4.2)*	45 *(61.6)*	
Unifacially Retouched Flake						
Dacite	15.3 *(17.7)*	40.7 *(12.7)*	28.4 *(9.9)*	10.6 *(4.5)*	40 *(58%)*	69
Quartzite	63.2 *(64.0)*	51.6 *(13.9)*	40.0 *(15.2)*	15.7 *(9.3)*	5 *(100%)*	5
Meta Sediment	36.5 *(38.2)*	55.4 *(17.6)*	38.3 *(16.0)*	15.5 *(5.6)*	4 *(100%)*	4
Quartz Crystal	0.3	10.6	6.9	4	1 *(100%)*	1
Obsidian	0	0	0	0	0	0
CCS	0	0	0	0	0	0
Sandstone	52.4	66.4	51.5	16	1 *(100%)*	1
Other Volcanic	219.2 *(179.9)*	74.1 *(28.6)*	62.0 *(26.8)*	31.3 *(19.4)*	3 *(100%)*	3
All Materials	25.9 *(52.5)*	42.7 *(15.8)*	30.3 *(13.4)*	11.61 *(7.0)*	54 *(65.1)*	
Bifacially Modified Flake						
Dacite	19.4 *(24.7)*	45.1 *(13.2)*	31.4 *(8.3)*	10.9 *(3.7)*	7 *(64%)*	11
Quartzite	0	0	0	0	0	0
Meta Sediment	93	91.7	79.7	97.4	0 *(0%)*	1
Quartz Crystal	0	0	0	0	0	0
Obsidian	0	0	0	0	0	0
CCS	0	0	0	0	0	0
Sandstone	0	0	0	0	0	0
Other Volcanic	0	0	0	0	0	0
All Materials	25.6 *(31.7)*	48.9 *(18.4)*	35.4 *(16.0)*	18.1 *(25.2)*	7 *(58.3)*	

Standard deviations given in parentheses except for Cortex Present column.

sizes to the means of debitage, another interesting trend is noticed. Assuming that flake tools were preferably made on whole flakes, the mean sizes for all flake tool classes are larger than the mean sizes for whole flakes in both dacite and meta-sediment. This suggests that the largest flakes were being chosen to make flake tools on.

2.2.3 Core Characteristics

The sizes of cores are highly variable ranging from sandstone, the largest in alldimensions, to quartz crystal, the smallest in all dimensions (Table 2-9). Noticeably absent from the sample are obsidian cores, which suggests that, in combination with small debitage size,

Table 2-9 Size of Core Tools.

Material Type	Weight	MLD	Width	Thickness	Total N
Dacite	52.5 *(103.9)*	48.6 *(16.4)*	34.8 *(12.1)*	22.2 *(10.3)*	80
Quartzite	80.7 *(87.1)*	51.4 *(15.9)*	40.0 *(14.0)*	27.1 *(10.3)*	8
Meta Sediment	89.0 *(125.9)*	53.9 *(32.1)*	42.4 *(19.8)*	21.2 *(13.7)*	3
Quartz Crystal	3.9 *(3.7)*	20.4 *(7.9)*	13.6 *(6.9)*	10.4 *(5.4)*	7
Obsidian	0.0	0.0	0.0	0.0	0
CCS	31.95 *(27.3)*	40.6 *(9.0)*	28.2 *(7.3)*	22.3 *(9.8)*	4
Sandstone	354.1 *(237.1)*	94.4 *(27.0)*	114.4 *(113.6)*	39.9 *(17.3)*	5
Other Volcanic	67.5 *(0)*	67.17 *(0)*	37.9 *(0)*	24.65 *(0)*	1

Standard deviations given in parentheses

Table 2-10 Core Type by Material.

Material Type	Multi Directional	Uni Directional	Bipolar	Cobble Core	Total N
Dacite	61 *(76.3)*	10 *(12.5)*	5 *(6.3)*	4 *(5.0)*	80 *(100)*
Quartzite	8 *(100)*	0	0	0	8 *(100)*
Meta Sediment	3 *(100)*	0	0	0	3 *(100)*
Quartz Crystal	1 *(14.3)*	4 *(57.1)*	2 *(28.6)*	0	7 *(100)*
Obsidian	0	0	0	0	0
CCS	3 *(75.0)*	1 *(25.0)*	0	0	4 *(100)*
Sandstone	1 *(20.0)*	0	0	4 *(80.0)*	5 *(100)*
Other Volcanic	1 *(100)*	0	0	0	1 *(100)*
Total N	78	15	7	8	108
% of Total	72.2	13.9	6.5	7.4	

Percent of material type given in parentheses

absent cortex from all surfaces, and all around small sample sizes, obsidian was not being reduced for the purposes of making flakes but more likely during resharpening events. The most frequently represented core type recorded was a multi-directional core found in 72.2% of the subsample (Table 2-10). Quartz crystal is the only material type to differ from the subsample average having its highest frequency in uni-directional cores and its second most frequency in bipolar. In the overall assemblage, quartz crystal debitage and tools regularly differed from the averages.

2.2.4 Biface Characteristics

In total, 30 early stage, late stage, and hafted bifaces were identified in the assemblage. Dacite was the most commonly used material type chosen to make all three types of bifaces representing all but two of the subsample (Table 2-11). The 2 remaining bifaces show evidence of hafting and are fashioned on meta-sediment and CCS. Late stage bifaces are the most common type making up 60% of the total subsample, one of which still has cortex present on it. The vast majority of the dacite bifaces are of the Olcott type (N=15) which is very common on the Olympic Peninsula and elsewhere. These points are typically willow-leaf to diamond-shaped bifaces that lack the finely patterned flakes scars found on well made bifaces. Five bifaces are lanceolate shaped with contracting stems or broken at the base. Contracting stem bifaces are present with four identified in the sample. The remaining bifaces are either small fragments too small to identify or uncommon. Figure 2-5 shows a sample of these point types found in the study area.

Table 2-11 Biface Sizes.

Material Type	Weight	MLD	Width	Thickness	Cortex Present	Total N
Early Stage Biface						
Dacite	5.35*(2.6)*	32.2 *(7.27)*	19.5 *(4.3)*	8.3 *(1.1)*	1 *(25%)*	4 *(100)*
Quartzite	0	0	0	0	0	0
Meta Sediment	0	0	0	0	0	0
Quartz Crystal	0	0	0	0	0	0
Obsidian	0	0	0	0	0	0
CCS	0	0	0	0	0	0
Sandstone	0	0	0	0	0	0
Other Volcanic	0	0	0	0	0	0
Late Stage Biface						
Dacite	7.7 *(7.1)*	36.6 *(13.6)*	21.3 *(8.1)*	8.1 *(2.7)*	3 *(17%)*	18 *(100)*
Quartzite	0	0	0	0	0	0
Meta Sediment	0	0	0	0	0	0
Quartz Crystal	0	0	0	0	0	0
Obsidian	0	0	0	0	0	0
CCS	0	0	0	0	0	0
Sandstone	0	0	0	0	0	0
Other Volcanic	0	0	0	0	0	0
Hafted Biface						
Dacite	10.4 *(4.6)*	48.1 *(7.1)*	26.4 *(5.8)*	8.3 *(1.6)*	0 *(0%)*	6 *(100)*
Quartzite	0	0	0	0	0	0
Meta Sediment	3.6	32.5	18.8	7.29	0	1 *(100)*
Quartz Crystal	0	0	0	0	0	0
Obsidian	0	0	0	0	0	0
CCS	9.2	48.4	23.4	8.7	0 *(0%)*	1 *(100)*
Sandstone	0	0	0	0	0	0
Other Volcanic	0	0	0	0	0	0

Standard deviations given in parentheses except for Cortex Present column.

2.3 Summary of Assemblage

In summation, the 2,200 chipped stone artifacts included in this analysis represent 91 lithic scatters collected from the Olympic Mountains. Nearly 87% of these artifacts are made of a mafic fine-grained volcanic often classified as dacite. Except for obsidian and potentially CCS, the remaining raw materials were likely collected from bedrock sources. More than three quarters of the artifacts were identified as debitage, with the remaining 14% made of core, flake and bifacial tools. Typical traits of the debitage include faceted platforms, feather terminations, and no dorsal cortex however, the predominance of dacite artifacts likely skews the overall picture in their favor. Few formal tools were observed in comparison to informal flake tools, and

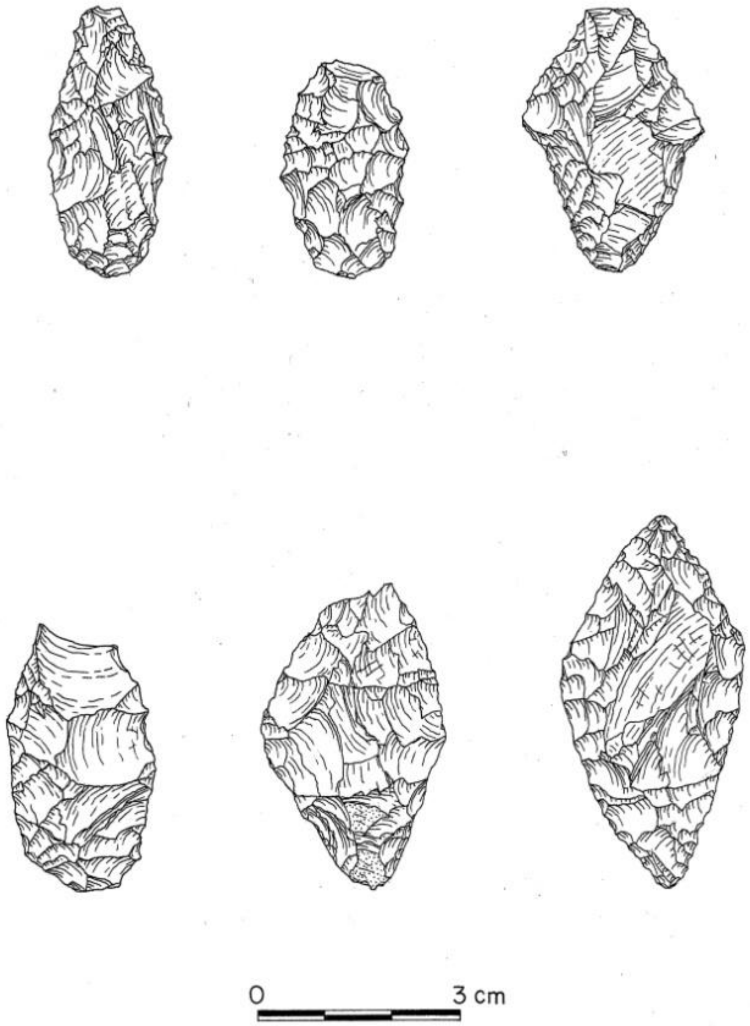


Figure 2-5 Sample of Bifaces Included in this Study (Illustrations by Sarah Moore).

multi-directional cores were the most common type recorded. With a basic understanding of the assemblage characteristics, a more detailed analysis can help answer questions about patterns observed in the data.

CHAPTER THREE

CONCEPTS FOR ANALYSIS

A set of overlapping concepts are employed here to aid in the understanding of artifact as the result of past human behaviors. To understand the combined approach taken in this analysis, it is first important to look individually at the foundational concepts. In this chapter I review the ideas behind distance decay and exchange, lithic technological organization, and human behavioral ecology as they apply to creating hypotheses to explain variability in the lithic assemblages in this study.

3.1 Distance Decay and Exchange

Exchange models help to reconstruct trade and social interactions of groups of people through analysis of spatial patterning of artifacts with known sources. The distance decay model was introduced to the field of archaeology first by Renfrew (1969) and later Hodder (1974). Renfrew (1969) modified Reilly's (1931) model, derived from analysis of retail purchases, which posited that greater exchange occurred between areas that were close to each other than to those that were far. Renfrew applied this model to sites in the European Bronze Age and found that the frequency of obsidian artifacts likewise declined with greater distance from the source (Renfrew 1972).

Renfrew (1972) modeled the expected decrease in frequency of "down-the-line exchange" in the *contact zone* and in the *fall off zone* (Figure 3-1). Though the proportion of obsidian in the overall assemblages tends to "fall off" as distance is gained from the source, in the "contact zone", obsidian remained near 100% in the assemblages within 300 km of the

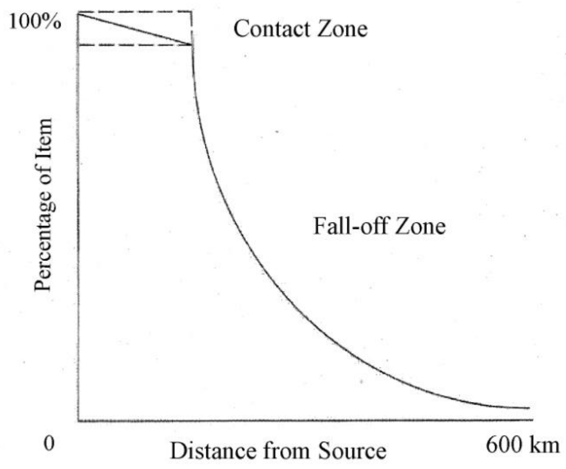


Figure 3-1 Modeled Example of Down-The-Line Exchange (from Renfrew 1977).

source. The contact zone is the area in which groups traveled directly to the quarry to acquire material for themselves. Those within the contact zone would, through reciprocal exchange, trade a proportion of their material with neighboring groups. The neighboring group would trade a smaller proportion "down-the-line" to other groups creating an exponential curve of frequency and distance.

While exchange models worked well in interpreting archaeological assemblages for sedentary populations, it became clear that this was not the primary method in which mobile hunter-gatherers acquired tool stone. Binford's (1979) introduction of embedded procurement proposes that tool stone is acquired by the stone tool maker incidentally during the completion of other subsistence related activities and there is little to no additional effort at obtaining them. With this new enlightenment, the distance decay model becomes governed by different factors as the distance between stone tool maker and quarry is no longer static through time.

Gould and Saggers (1985), as well as others, brought attention to the difficulty in differentiating between archaeological assemblages with tool stone acquired directly and that acquired indirectly through down-the-line trade because neither produces distinctive assemblages. Hence, unless it was known in which manner the raw material was acquired (direct vs. indirect), the distance decay model could not be used as an indicator of the distance traveled by a group (Beck and Jones 1990). Logically following, only in cases of direct procurement of resource by the user would artifact frequencies decline from source in a predictable manner within a group's range.

In the description of the archaeological assemblages used for this thesis (Chapter 2), it was stated that 87% of all the artifacts are dacite. Taking what is known about down-the-line exchange, the high proportion of dacite implies that stone tool makers on the Olympic Peninsula were within the contact zone for dacite or along its periphery. From a combination of Renfrew's (1972) work and data on dacite frequencies in this study, it is hypothesized that stone tool makers on the Olympic Peninsula had direct access to collect dacite for themselves. This hypothesis will be elaborated in Chapter 4. Furthermore, because it is suspected that dacite is a component of glacial deposits which are limited to the northern end of the Olympic Peninsula, it is hypothesized that the ratio of dacite to other raw materials will decrease as distance from the source is gained. Evaluation of this hypothesis is undertaken in Chapter 5.

A second key component of the work of Renfrew (1969, 1972) and Hodder (1974) is the concept of distance decay, archaeologists have since determined that not only did tool stone become less frequent with increasing distance in the fall of zone, but artifact size also decreased. In an analysis of chipped stone artifacts from the central Texas Gulf Coast during the Late Prehistoric, Ricklis and Cox (1993) found that with greater distance from source there was an increased utilization of flakes and decreasing length of arrow points. Newman (1994) found statistically significant evidence that flake thickness and the overall volume of a flake (L x W x T) decreased the further an assemblage was from the tool stone source. He speculated that this finding was due to decreasing parent material size as well as an emphasis on technology that was geared towards toolstone conservation.

Once the distribution of dacite on the Olympic Peninsula is determined (Chapter 4), hypotheses pertaining to patterns in the size of artifacts can be made more concrete. Similar to the decreasing proportions of dacite in the assemblages, it is hypothesized that size of dacite artifacts will likewise decrease as distance from the source increases. It is proposed that, similar to Ricklis and Cox (1993) and Newman's (1994) findings, objective pieces will become smaller making detached pieces smaller and artifacts will be more conserved.

3.2 Human Behavioral Ecology and Optimal Foraging Theory

In the 1970s, human behavioral ecology (HBE) emerged from the biological sciences' evolutionary ecology that had developed in the decade prior (Smith and Winterhalder 1982). HBE attempts to model human behavior under the assumption that natural selection favors organisms that adapt to their environments in ways that enhance their fitness (Boone and Smith 1999). HBE provides a tool to generate middle range theory and testable models pertaining to the optimization of resources (Boone and Smith 1999). These models aim at simplifying the data, while ignoring stochastic noise, in order to see the pattern in the big picture (Winterhalder and Smith 2000). However, it is seldom the case that an optimization model plays out in the archaeological record in the most simple and optimal way without subsequent fine-tuning: models are good at explaining but not predicting (Kelly 1995). It is these deviations from the model that help archaeologists understand the negotiations prehistoric peoples made with resources in a landscape.

Optimal foraging theory (OFT), a branch of HBE also conceptualized by biologists, asserts that natural selection plays a large part in creating the behaviors of an individual's choice of resources regardless of whether the resource is plant, animal or tool stone (Pyke et al. 1977). Success of a person is measured in terms of reproductive fitness, which is largely shaped by the ability to harness energy, i.e. food. OFT predicts that people, as fitness maximizers, will pursue the resource that offers the highest return on the smallest amount of energy spent. Humans leave traces of their choices in the form of artifacts, which serves as a proxy measure for archaeologists to study behavior (Bird and O'Connell 2006). Several models, including time allocation, resource selection, patch choice, and prey choice, have been developed to help analyze decision making.

One model developed by archaeologists deals with decision-making for field processing of a resource. This model helps predict when low value portions of a resource will, or will not, be removed prior to it being brought back to camp (Barlow 1992). Depending on the distance between camp and place of resource, negotiations may be made which will have an effect on the archaeological record. The model predicts that if a large resource is taken at a distance from camp, the resource may be field processed, removing low value portions to make it easier to transport. On the other hand, this same resource may be transported without processing if it is close to camp. An unprocessed resource reduces handling time, which allows for multiple trips if necessary. Examples include; removing lower limbs from artiodactyls (Lupo 2001), discarding the shell of a shellfish (Bettinger et al. 1997), and making a biface at a quarry (Beck et al. 2002). The presence or absence of these low value items at a site can help archaeologists decipher the field processing decisions.

Another concept used to interpret difference in archaeological assemblages deals with the intensification of resources. In a given environment, resources are ranked in terms of their profitability. For example, a big, slow moving animal would rank higher than a small, quick animal due to its ease in capture and large caloric return. Resources are ranked based on their overall return which considers a variety of factors not limited to travel costs, search costs, processing costs and size of package (Gremillion 2002). The prey choice model leads to the idea that highest-ranked resources were taken every time upon encounter while lower-ranked resources were bypassed (Gremillion 2002). As encounter rates for a high ranked resources decline due to things such as over-harvesting or population growth, time spent looking for high-ranked resources increases. Increased search time drives up procurement costs due to lower overall net return (Boone and Smith 1998). In reaction to this, new less-costly resources are sought and diet breadth is expanded to include resources that were formerly lower-ranked. The lower-ranked resources become more profitable to take because their encounter rates are higher and unaffected by the decline in the highest-ranked resources (Boone and Smith 1998). This change in resource procurement strategy is also called the “broad spectrum revolution” (Winterhalder and Smith 2000).

The fundamental ideas for the prey mode, in terms of resource value and encounter, can be applied to raw material procurement due to the nature of the distribution of dacite. Dacite occurs in glacial deposits on the northern Olympic Peninsula and can be found in low abundance where glacial deposits are exposed. Mass wasting of these deposits continually moves materials downhill into watersheds that drain into the Strait of Juan de Fuca, and, to a lesser degree, the

Hood Canal. Since dacite is a finite source and is no longer being deposited on the Peninsula, there will always be more dacite at lower elevations than at higher elevations. Due to its low abundance in glacial deposits, one must search for it similar to the act of foraging. The greatest encounter rates for dacite are in areas with the greatest exposure which, observed through personal experience, are rocky beaches. Dacite can also be found less reliably along the coastal plains, but only in areas where glacial deposits are cut into, such as river banks. However, as stated before, dacite is always moving downhill. Limited modern search events in river valleys have been less successful than those that occur on the beach (see Figure 4-5, Chapter 5).

So, given this, OFT predicts that dacite, as the highest ranked available resource for stone tool manufacture, would have been procured most often from the location with the highest encounter rate; on the coast. Quartzite co-occurs with dacite in glacial deposits, and modestly in local conglomerates (Flenniken 1981). However, as evident by quartzite's low frequency in most archaeological assemblages in this study, was regularly passed over for dacite. Through time, continual resource harvesting would have had diminished returns and increased search times, depending on resource pressure, which could have led to expanding resource breadth (Gremillion 2002). Alternatively, it's been shown that certain raw materials were preferred for certain types of tools (Beck and Jones 1990, Kelly 1988). It is further hypothesized that sites where dacite is not the dominant tool stone will be located far from the source of dacite. In cases where this hypothesis does not hold true, I further investigate the possibility of certain raw materials used for a specific task. These hypotheses are tested in the following chapter.

3.3 Lithic Technological Organization

The organization of lithic technology refers to the way that prehistoric peoples made conscious decisions in the use of lithic raw materials in interacting with their surroundings in both known and unknown tasks within their daily life (Andrefsky 2008). Lithic technological organization (LTO) is a fairly broad, overarching paradigm that studies the life cycle of an artifact from the time it is procured, manufactured, maintained, recycled and eventually discarded (Andrefsky 2008:4). LTO studies have explored re-occurring themes which include lithic raw material variability and availability, expedient versus curated tools, measuring retouch, and tool transformation (Andrefsky 2008:4). While this same concept can be disguised under a variety of specific names including lithic reduction sequences, *chaine operatoire* , life histories and LTO, I agree with Andrefsky (2008:4) that they all embody the same overall philosophy of archaeologists attempting to model how people used the land in social, environmental and historical contexts.

In its infancy, foundational concepts for LTO were first introduced in Frison's (1968) analysis of a buffalo kill site in northern Wyoming. In this study of retouch flakes from tools used in a relatively short time period, he concluded that the same tool may appear extremely different at different phases of its use. A variety of behaviors, such as recycling, can drastically transform the original artifact into something needed for the task at hand. This idea of viewing the life history of tool from its production, use, and maintenance came to be known as the "Frison Effect" (Andrefsky 2008:xi).

The study of LTO was introduced by Binford's in-depth ethnoarchaeological study of the hunter-gatherer Numamiut in Alaska and numerous publications stemming from this work. It is during this study that Binford (1973, 1979) first introduced the ideas of embedded procurement as well as expedient and curated technology. Tools are said to be organized on a continuum from expedient (tools that are made as needed and discarded shortly there afterwards) to curated (tools which are formalized with more forethought) (Bamforth 1986). Since its inaugural use, the concept of curation has had a variety of approaches including transported tools, advanced production of a tool, multi-functionality, tool recycling, maintenance of the tool, and production effort of complex tools (Andrefsky 1994, 2008; Bamforth 1986).

The effort put into the manufacture of tool kits for both mobile and sedentary populations under varying circumstances has been the topic of much discussion (Andrefsky 1994; Binford 1979; Jeske 1989; Kelly 1988; Parry and Kelly 1987; MacDonald 2008). Parry and Kelly (1987) believed that the tool kit of mobile hunter-gatherers should be standardized cores and formal tools arguing that because they carried all possessions on their back, all excess was discarded and preparedness was vital. Formal tools are the result of much expended energy, either as the result of directed flint knapping for a finished product, or as an indirect result of resharpening and reworking limited material (Kelly 1988). Formal tools including bifaces, formal cores and some intentionally retouched flake tools, are desirable in a tool kit because they are maintainable, have many functions, and have the potential to be redesigned for new tasks (Parry and Kelly 1987; Shott, 1986). Conversely, sedentary groups did not need portable tools so little energy was placed into the preparation of tool kits, hence informal tools are dominate (Parry and Kelly 1987). Informal tools, such as notched and utilized flakes, are created at the place of need to fulfill the task at hand. They are made with little attention to form and are generally discarded when the task is complete. Andrefsky (1994) found that raw material abundance and quality crucially affected the types of tools produced. In groups where abundance was low but quality was high, tools were found to be primarily formal. Where lithic quality was both high and abundant, tools were mixtures of both formal and informal. Where low quality material was scarce, tools tended to be informal.

Prehistoric populations on the Olympic Peninsula, like on the greater Northwest coast, began as mobile populations that, with time, became seasonally semi-sedentary up to the late prehistoric. While the residential mobility of occupants of the lowlands is unknown, it is known that sites in the mountains represent mobile populations due to the fact that the area is covered in snow nine months a year. At least in the late Holocene, these areas were likely logistical resource procurement zones and sites were the result of multi-day camps. Given what is known about mobility, it is hypothesized that tools will become more formal as distance from the source of dacite increases. Following from this, if dacite is procured from the glacial deposits, it is hypothesized that little evidence of reduction occurring on site will be found further from the source.

The following two chapters will attempt to elucidate the source of the predominant toolstone on the Olympic Peninsula, and, once this is known, test the hypotheses formulated throughout this chapter.

CHAPTER FOUR

ESTABLISHING DACITE PROVENIENCE

4.1 Introduction

Chipped stone archaeological sites on the Olympic Peninsula are routinely dominated by a single raw material – dacite. This designation is based on Bakewell's (1990b) research identifying a small sample of artifacts throughout the Puget Sound region, including the Olympic Peninsula, as dacite rather than basalt. Furthermore, Bakewell found that many of his regionally sampled dacite artifacts originated from the Watts Point volcanic center, B.C. (Figure 4-1), and subsequently argued that the raw material was culturally transported to the Olympic Peninsula. Others alleged that Watts Point dacite was available as a secondary source in glacial deposits throughout western Washington (Conca 2000; Kenady 1973; King 1950; Kornbacher 1992:168-169; Morgan et al 1999:C4; Schalk 1988:158; Wessen 1993). The parent outcrop exists over a hundred miles away from the Olympic Peninsula at Watts Point, B.C., but it has not been established whether prehistoric peoples traveled to the source to acquire this material, traded other goods for it, or if it was available closer to the Olympic Peninsula.

The focus of this chapter is to present new data in an attempt to resolve the debate concerning the use of Watts Point dacite. While most of the Olympic Peninsula's chipped stone artifacts appear to be dacite, it is still unknown as to whether Watts Point itself is the dominant source or if other sources of dacite are also present. It is first hypothesized that Watts Point dacite is the largest dacite source represented in the archaeological collections used in this thesis. Once this is known, it follows to ask whether or not the Watts Point dacite source is

Figure 4-1 Watts Point Vicinity in the Pacific Northwest.

geochemically distinctive in comparison to other nearby dacite outcrops. If it is not geochemically distinctive then it is a poor candidate for further sourcing studies through XRF. Finally, potential secondary local sources of Watts Point dacite are investigated around the Peninsula. It is hypothesized that Watts Point dacite is available in glacial deposits on the Olympic Peninsula as a significant secondary toolstone source. Knowing the availability of a potential tool stone source will assist in structuring the analysis of chipped stone artifacts in Chapter 5.

In this chapter, I will first review previous work regarding the initial identification of Watts Point dacite in the Puget Sound-Gulf of Georgia region. Next I will evaluate each of the three hypotheses stated above to determine if Watts Point dacite is found in the archaeological collections, if it is unique, and if it can be found in local secondary glacial deposits. Additionally, I will discuss the duration of time Watts Point dacite was used for adding strength to the hypothesis that it can be found in glacial deposits. For the purposes of this thesis, the tool stone of topic will be referred to as Watts Point dacite, and not San Juan dacite, in order to refer to the tool stone's primary quarry and not the location of the archeological site where it was first identified.

4.2 Understanding the Debate

In western Washington and southwestern British Columbia, vast quantities of the archaeological sites are reported to contain basalt chipped stone (Butler 1961; Conca 2000; Kornbacher 1989; Matson 1976; Morgan et al. 1999; Schalk 1988; Wessen 1993). It wasn't until 1990 that archaeologists began questioning the authenticity of the field identification of all mafic fine-grained volcanic materials as basalt. Bakewell (1990a) suspected that the basalt chipped stone artifacts from the greater Puget Sound-Gulf of Georgia region were macroscopically being classified incorrectly. He argued that incorrectly classifying them as basalt, a material widely found in Washington State, masks the material variability and therefore past cultural dynamics (Bakewell 1993:23). He first identified through both petrographic and chemical analysis that the "basalt" artifacts from British Camp (45-SJ-24), San Juan Island, were dacite rather than basalt. Furthermore, he stated that due to the chemical similarities in the artifacts they likely originated from a single source and hypothesized that this source may potentially be Mount Garibaldi in British Columbia.

Due to their exceptionally similar physical appearance, dacite and basalt are frequently misclassified. Both rocks are mafic (dark colored) extrusive volcanics and are two of the most abundant rocks found on earth. Dacites range from light gray to black in color and basalts are typically black. However, a gray cortex or patina can disguise the true color of either of these rocks. Dacite has a silica (SiO_2) content between 63% and 68% while rhyolite has a greater silica content and basalt has a lower content. While it is not possible to accurately classify rocks based on their physical appearance, it is possible to roughly discriminate between several varieties with a trained eye.

Acting under the suspicion that this fallacy was repeated at other Puget Sound-Gulf of Georgia archaeological sites, 24 additional "basalt" artifacts from 8 spatially diverse sites were analyzed, including 2 sites on the Olympic Peninsula (Bakewell 1990b). Petrographic and chemical analysis of these materials revealed a wider variety of raw materials grouped under the same classification of basalt. Of the 22 samples, 1 was determined to be pyroclastic rock, 3 were determined to be sandstone, and the remaining 18 were determined to be dacite. Five of the dacite artifacts were then analyzed for major and trace elements and compared against the results of dacite from the San Juans to determine whether or not they all shared the same geologic source. Bakewell (1990b:12) concluded that there was not a significant difference between the major and trace elements among the sample artifacts and the artifacts from the San Juan Islands. From these results he stated that tool stone frequently classified as basalt throughout the entire region, is in fact dacite, and originates from a single geologic source. It is during this research that Bakewell first used the phrase "San Juan dacite" to describe the raw material, a term that has found its way into literature of the Pacific Northwest.

While it was suggested several times over that the primary source of the San Juan Dacite was located in the Garibaldi Provincial Park, British Columbia, the source location wasn't positively identified until 2005(Bakewell 2005). As a part of his dissertation research, Bakewell petrographically and geochemically analyzed samples from Watts Point and the surrounding beaches to confirm that his San Juan lithics matched the Watts Point dacite source.

This identification led Bakewell and others to make two far reaching conclusions. First, Bakewell (1993:31; 1996:137; 2002:49; 2005), Stein (2000:55) and Close (2006) argue that dacite cobbles were procured from the primary source in British Columbia and brought by canoe to various places throughout the Puget Sound-Gulf of Georgia region. As a second conclusion, Bakewell (1991:13; 1993:31; 2005:40) argued that the exclusive use of vitrophyric dacite from Watts Point, deemed "San Juan Dacite", and access to its quarry location in British Columbia, were controlled by Coast Salish groups. Furthermore, the documented archaeological distribution defines a prehistoric geopolitical boundary. Evidence for the validity of this argument was demonstrated when artifacts from 12 western Washington sites returned the Watts Point petrographic signature and were found to lie within the same language group based territory attributed to the Coast Salish by Suttles (1990) (Bakewell 2005:38-39). To date, these arguments remain the most formally articulated assessment as to where and how Northwest coast peoples obtained their preferred tool stone. Since then, this explanation has been reiterated and unchallenged.

While Watts Point dacite cobbles could always have been procured from its primary source in British Columbia, some archaeologists wondered if the tool stone was available in other areas than the primary source (Conca 2000; Kenady 1973; King 1950; Kornbacher 1992:168-169; Morgan et al 1999:C4; Schalk 1988:158; Wessen 1993). While surveying the Olympic National Park's interior, Schalk noticed "several unworked basalt nodules" (1988:158) in a trail tread that were practically indistinguishable from the tool stone in archaeological sites he had recorded. He suggested that it should be considered that these exotic materials were glacially transported into areas that were formerly glaciated. Additionally, after completing a detailed analysis of the lithics at English Camp, Kornbacher (1992:168-169) concluded that, based on macroscopic characteristics, cobbles of the same dacite used for stone tool manufacture could be found in glacial deposits on San Juan Island and likely the greater archipelago. Taking this one step further, archaeologists working on the Sequim Bypass Project sought to determine if the dacite found at the two sites of the project could be found nearby. Several rock samples taken from the Dungeness River, less than one mile away, returned geochemical signatures indistinguishable from the tool stone used at the sites on the Sequim Bypass Project (Morgan et al. 1999:C4).

However, even with evidence that Watts Point dacite can be found on the Olympic Peninsula, it cannot be ruled out that these small amounts of potentially naturally occurring dacite were instead culturally transported in prehistory. The three previous examples (Schalk

1988:158; Kornbacker 1992:168-169; Morgan et al. 1999:C4) of potentially naturally occurring dacite was found in small quantities in very close proximity to known archaeological sites. Stein (2000:55) and Bakewell (1993:31; 1996:137; 2005) both argue that any modern dacite found on the local beaches are remnants from prehistoric maritime trade and do not occur in glacial tills in sufficient quantities necessary to exploit. Even though macroscopic and limited geochemical identification (eg. Morgan et al. 1999:C4) suggests a more localized secondary source, no formal documentation of its availability and abundance has occurred and its place of procurement is still under speculation.

Arguing against those who believe the raw material to be available in local tills, Bakewell offered his own points to defend his stance. Even though Kornbacher and Bakewell used the same site for analysis, they arrived at two different conclusions concerning provenience. In order to test Kornbacher's (1992:168-169) local hypothesis, Bakewell analyzed several geologic samples from San Juan Island that were potentially dacite. One of the samples returned identical results to that of Watts Point dacite; however, he discarded this result because the sample was collected from an excavation backfill pile (Bakewell 1990a:37; 1996:137). From these results, Bakewell concluded that dacite cobbles were not present in glacial deposits, but agrees with Kornbacher's lithic analysis in which she asserts that flakes were reduced from cobble form on site. Bakewell (2005:83,104) states that beach cobbles are surface finds which therefore leaves their provenience questionable. He suggested that in order to resolve this debate, several cubic meter blocks of undisturbed glacial till should be excavated to search for dacite *in situ*.

4.3 Understanding the Resource

Watts Point dacite is part of the greater Garibaldi volcanic belt which is comprised of 6 volcanic fields in southwestern British Columbia, Canada (Green et al. 1998). The Garibaldi belt represents a portion of the Canadian Cascade Mountain range trending north/northwest paralleling the British Columbian shoreline for the distance of approximately 240 km. Beginning in the south at Howe Sound is the Watts Point volcanic field, and continuing north are the Mount Garibaldi, Garibaldi Lake, Mount Cayley, Elaho Valley, Meager Creek, and terminating in the north is Salal Glacier volcanic field. These volcanoes are the result of convergence between the North American and Juan de Fuca plates 250 km west along the continental shelf. In general, these volcanoes are composed of a variety of lavas including biotite rhyodacite, hornblende andesite, hornblende-biotite andesite, augite-olivine basalt and hypersthene andesite. Dacite lava flows are present at several of the volcanic fields including Mount Garibaldi, Mount Cayley and Meager Creek.

The Watts Point volcanic field is the southern most of these six fields located on the south side of Howe Sound approximately 50 km north of Vancouver, B.C. This small outcrop is estimated to have a total volume of 0.02 km^3 and is described as a sparsely porphyritic, highly jointed hornblende and pyroxene dacite lava (Bye et al. 2000). While first impressions pointed to its formation as the result of lava pooling in a semi-circular depression adjacent to a glaciofluvial sediment terrace (Green et al. 1988), more recent research interprets its variable columnar joint sizes, crystalinity, decreasing column diameter with height, radiating column orientations and overlying glacial till as indicators of its subglacial eruption (Bye et al. 2000). While the eruptive history for the greater Garibaldi volcanic belt spanned much of the Quaternary, the Watts Point volcanic field is one of the youngest lavas with the shortest duration of eruptions. Potassium-Argon (K-Ar) dates from two whole rock samples placed the Watts

Point eruptions at 90 +/- 30 kya and 130 +/- 30 kya (Green et al. 1998). The two K-Ar dates at Watts Point also provided evidence for its subglacial eruption; British Columbia was inundated with ice during the Salmon Springs Glaciation prior to 50 kya. Today this outcrop underlies a provincial park, rock quarry, and has undergone substantial shoreline modification from blasting for a railroad track.

Late Pleistocene glacial deposits in southwestern British Columbia and northwestern Washington are the result of the Salmon Springs Glaciation prior to 50 kya and the Fraser Glaciation from 10 to 26 kya (Armstrong et al. 1965). Greater surface topography of the Olympic Peninsula is largely the result of the advance and retreat of the last far reaching stade of the Fraser glaciation, the Vashon stade. By 19,000 B.P. the Puget lobe of the Cordilleran ice sheet had arrived at southeastern Vancouver Island, advanced to the Puget lowland by 15,000 B.P. and reached its terminus near Chehalis by 13,600 B.P. (Armstrong et al. 1965). The Juan de Fuca lobe, which split off of the Puget lobe after being pushed up against the northeastern corner of the Olympic Peninsula, advanced westward concurrent with the Puget lobe. It reached its maximum extent by 14,500 B.P. past Cape Flattery, rounding the northwestern corner of the Peninsula down to Lake Ozette. Since the Watts Point lava was present during the advance of the Fraser glaciation and it is the southernmost volcanic field of the Garibaldi belt, there is a high likelihood that it is included within the glacial deposits of western Washington.

4.4 Hypothesis 1: Is it in the Study Collection?

Bakewell’s (1990b) initial study identified two Watts Point dacite chipped stone artifacts on the Olympic Peninsula implies that the there is potential for the remaining dacite artifacts to be from the same source. In order to determine whether further characterization studies are pertinent to this study area it first needs to be determined whether or not Watts Point dacite occurs in the study collection in greater than normal quantities. It is hypothesized that Watts Point dacite is the largest dacite source represented in the archaeological collections used in this thesis. In order to address this question, a 5% simple random sample of all fine-grained volcanic artifacts in the collection facility at Olympic National Park were selected for trace element analysis. In total, 111 artifacts from 54 archaeological sites were sent to Northwest Research Obsidian Studies Lab in Corvallis, OR, for non-destructive x-ray florescence (XRF) analysis.

Results from the XRF analysis of sampled artifacts suggests that the misidentification of dacite chipped stone artifacts first discovered by Bakewell (1990a) likewise exists extensively on the Olympic Peninsula (Figure 4-2). Of the 111 FGV artifacts sourced, 100 (90%) returned with the trace elements indistinguishable from that of Watts Point. While these artifacts have been field characterized for the last 25 years as basalt, they are indeed predominantly dacite as suspected. Furthermore, the dacite artifacts are overwhelmingly from the same source. Since this sample was randomly selected from the greater population, it follows that approximately 90% of the FGV collection used in this study, or 1,980 artifacts, are also from the Watts Point parent source further emphasizing the intentional selection of this material. This kind of continuity in raw material source suggests that its preference was aided by its ease of access either directly or through trade. In sum, XRF analysis supports the hypothesis that Watts Point dacite was a major raw material source for the Olympic Peninsula peoples.

Of the 11 artifacts with trace elements not corresponding to Watts Point, 6 of the artifacts with unknown FGV sources are in close proximity in the very northwest corner of the Olympic Peninsula. This variability corresponds to the area where the Fraser Glaciation terminated in the

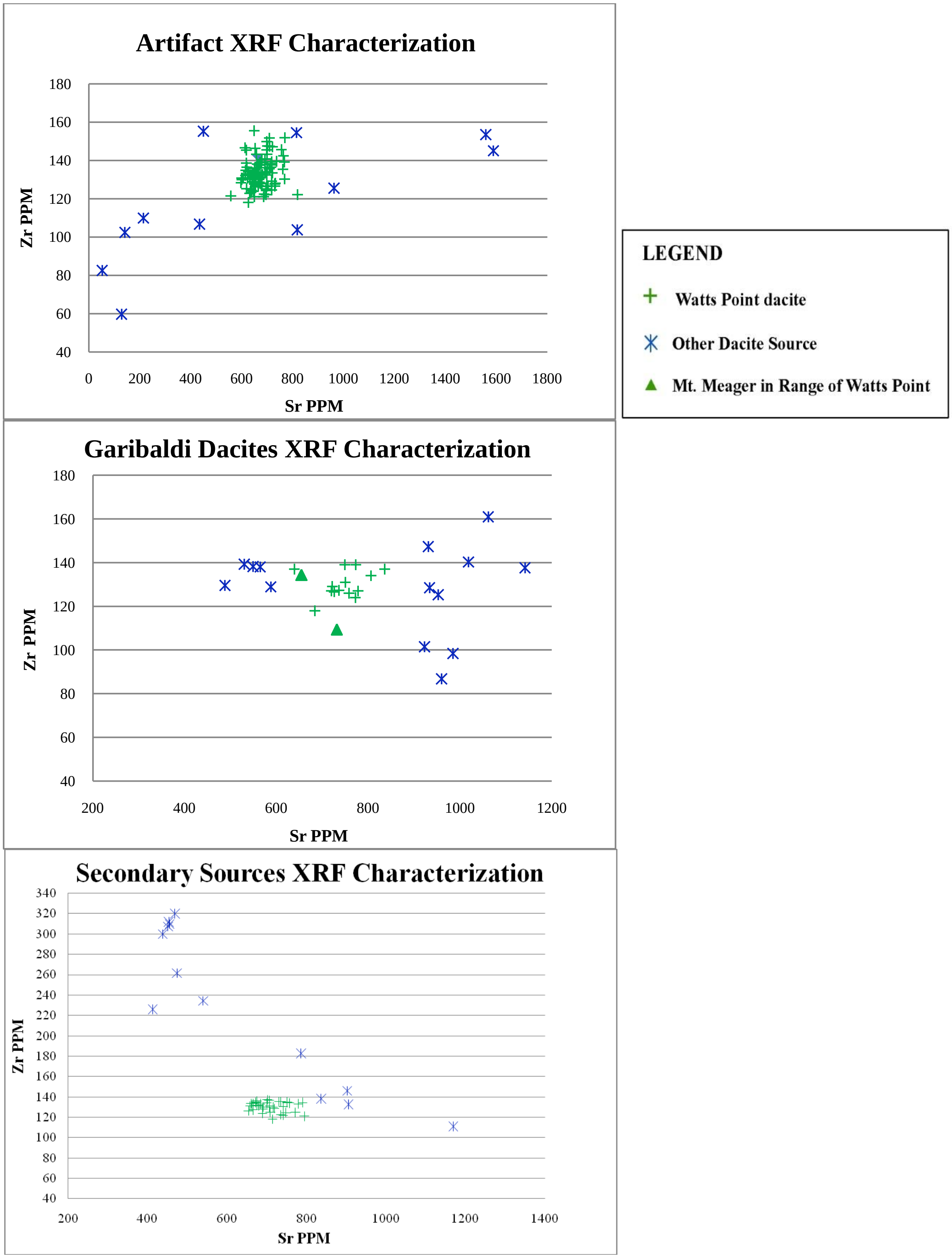


Figure 4.2 XRF Results for Artifacts, Garibaldi Dacites, and Secondary Sources.

Strait of Juan de Fuca. This pioneering portion of the continental ice sheet may have perhaps overridden areas different than that following it in turn leaving behind different sources of glacial deposit. While this is purely speculation, is remains unclear as to why over half of the unknown sources are found in the same general area and warrants additional investigation in the future.

4.5 Hypothesis 2: Is it a Distinctive Raw Material?

In order to determine whether the dacite at Watts Point carries a distinct suite of trace elements, a pilot study was initiated to assess the variability of dacites in close proximity along the greater Garibaldi belt. It is hypothesized that the Watts Point dacite source is a geochemically unique dacite. While Watts Point is in the southern-most volcanic field in the Greater Garibaldi Belt, dacite is also known to exist in the central and northern portions of the Garabaldi Belt (Russell et al. 2007). In total, 16 primary geologic samples were collected, 8 from each of 2 volcanic fields including Mount Cayley (central) and Mount Meager (northern) (Figure 4-3). These specimens were sent to Northwest Research Obsidian Studies Lab for XRF analysis. The results from this study will help to establish if further provenience analyses will be of any analytical value by determining trace element characteristics of several other dacite flows.

Results from sampling of other primary geologic Garibaldi belt dacites produced a mixed outcome. All 8 specimens from the 2 Mount Cayley locations of the central Garibaldi belt returned trace element compositions that are dissimilar to the Watts Point dacite. While the Mount Cayley samples have similar levels of Zirconium (Zr), they have higher levels of Strontium (Sr) which bring them out of the known Watts Point range. However, trace element composition from 2 of the 8 samples from the Mount Meager volcanic field, in the northern Garibaldi belt, are indistinguishable from that of Watts Point (Figure 4-2, center, marked by

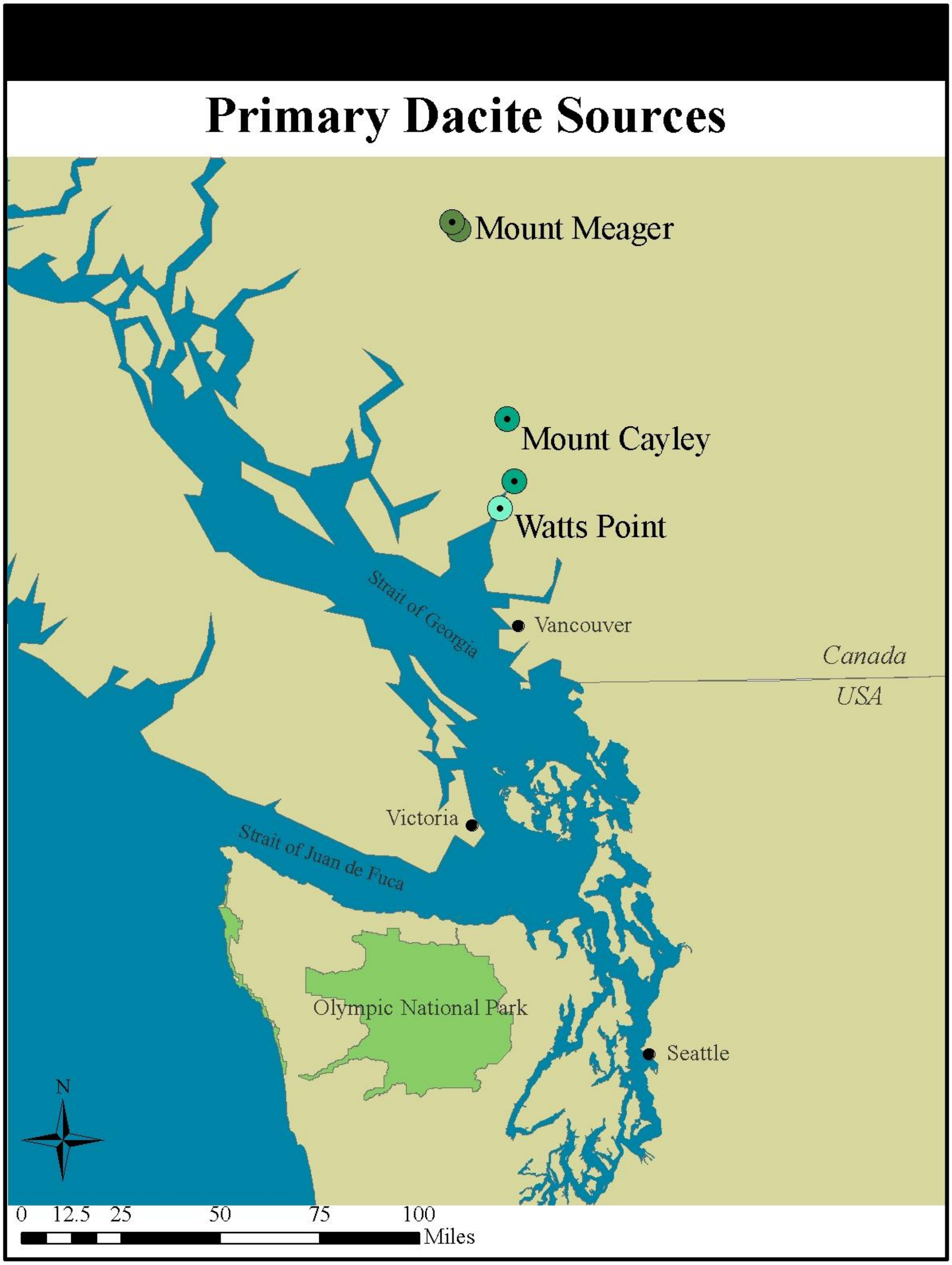


Figure 4-3 Location of Garibaldi Belt Volcanoes Sampled.

triangles). These samples also have Zr ranges similar to Mount Cayley and Watts Point but generally have lower levels of Sr. It is within the higher ranges of Sr for the Mount Meager samples that they overlap with the lower end of the known ranges for Watts Point samples.

While the diagnostic trace elements of Watts Point and Mount Meager may overlap along their peripheries, macroscopic properties of the two dacites are not similar. In general, the samples collected from the Mount Meager and Mount Cayley volcanic fields are different grades of vitreous aphanitic dacite (Russell et al. 2007) and would not make a suitable tool stone. On the other hand, Watts Point dacite is vitrophyric, sparsely porphyritic and macroscopically would not be mistaken for the previous. While these results should only be considered a preliminary look into the trace element variability of the dacites of the Garibaldi volcanic belt, they do suggest that there may be some overlap between the sources. In sum, these results do not support the hypothesis that Watts Point dacite is a geochemically unique material; however, macroscopic qualities of the Watts Point and Mount Meager can distinguish between the two.

4.6 Hypothesis 3: Is there a Local Secondary Source?

Lastly, in order to determine if a secondary source of Watts Point dacite can be found locally, cobbles were sampled from areas where glacial deposits from the Fraser Glaciation were exposed on the Olympic Peninsula (Figure 4-4). It is hypothesized that Watts Point dacite is available in glacial deposits on the Olympic Peninsula as a significant secondary toolstone source. While theoretically glacial till, drift, and outwash containing Watts Point dacite could occur anywhere overridden by the Fraser Glaciation, the easiest place to locate cobbles is in large unvegetated exposures, primarily beaches and river banks. With intention, collection locations

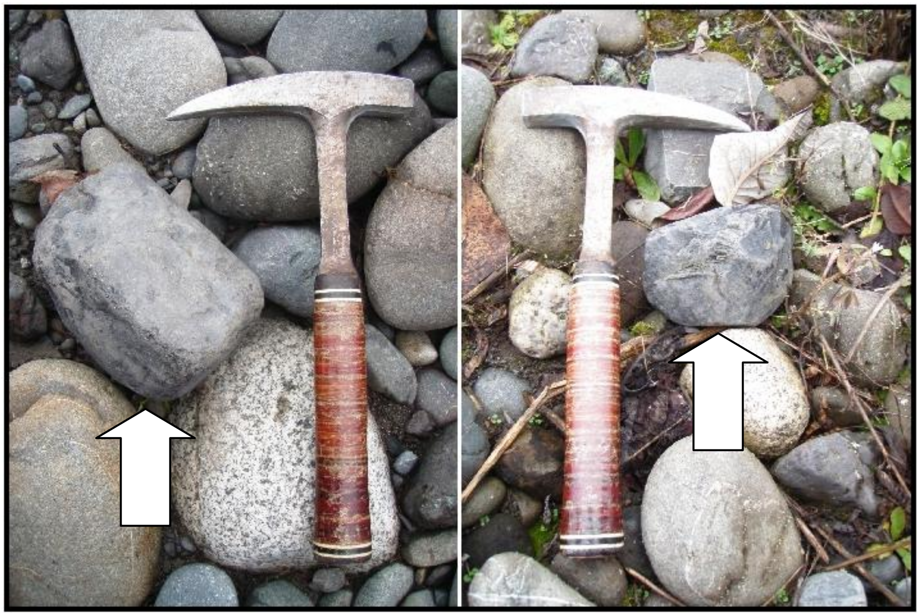


Figure 4-4 Examples of Dacite Cobbles Collected.

were chosen away from known archaeological sites in order to avoid the chance of collecting a manuport. A total of 234 cobbles visually identified by the author as dacite were collected from 17 spatially diverse areas along the northern Olympic Peninsula (Figure 4-5). Collection locations were largely dictated by areas of public access and places both within and past the glacial maximum were chosen. Collection areas where no cobbles were identified were also noted. All samples were individually described in terms of shape, degree of physical and chemical weathering of cortex, weight, greatest linear dimension and UTM location (Appendix B). A 20% stratified simple random sample (n=47) was taken of the geologic specimens and sent to Northwest Research Obsidian Laboratory for XRF analysis. The sample population was stratified in order to sample at least one cobble from every collection location because knowing the distribution is a key component to hypothesis testing. These results were combined with 4 additional samples from my pilot study for a total of 51 secondary geologic samples with XRF results.

Of the 51 geologic samples visually identified as dacite and collected from glacial

deposits, 36 (63%) of them returned trace element compositions that were indiscernible from the primary source at Watts Point, British Columbia and create a noticeable cluster when graphed (Figure 4-2, bottom). Of the 17 locations sampled, all but 4 contained at least 1 Watts Point dacite sample. Positively identified samples were found all along the northern Olympic Peninsula, San Juan Islands, and near the American-Canadian border. While the author's macroscopic identification skills of Watts Point dacite were not at keen as was thought, it was still proven that with focused attention to minute variations in FGV cobbles one can repeatedly discern between sources, a skill that is certainly perfected with time. These results support the hypothesis that Watts Point dacite is available as a secondary source to stone tool makers on the Olympic Peninsula.

Of the 4 sample locations that did not include Watts Point dacite, 2 of them are on central Whidbey Island (Ferry House, Keystone Beach). These locations account for more than half of the unknown source count (53%), and are composed *entirely* of the unknown source. All 8 samples are graphed in a noticeably different area than other samples with a combination of higher quantities of Zirconium and lower quantities of Strontium that are not found in the archaeological collection nor the other Garibaldi dacites. This dacite appears to constitute a new and unknown source of dacite. While this is a curious pattern, no immediate explanation can account for this. This result, in combination with the unknown artifact sources grouped in the Northwest corner of the Peninsula described in section 4.4, suggests that secondary dacite sources *may* have spatial limitations. At the two remaining locations where Watts Point dacite was not identified, Pillar Point and Panorama Point, the author found it difficult to find potential geologic samples and only collected one sample at each place, both of which returned an unknown FGV source. If all 65 samples, sourced or not, from Whidbey Island are removed from the original population, prior to sampling, the new total is 169 and the remaining 43 XRF-ed samples consist of a 25% sample of the population. This brings the Watts Point dacite up to 84% of the sample and a much smaller macroscopic identification error rate by the author.

While the diagnostic composition of Watts Point dacite is a fluid definition that changes with every addition of a geologic source sample, some trends in what we know about its composition can be stated. When determining whether or not an artifact is from this source, Sr and Zr parts per million are heavily relied upon, however, Rubidium (Rb), Yttrium (Y), Niobium (Nb), and Barium (Ba) are also examined (Craig Skinner, personal communication 2010). The known ranges from the source outcrop (N=65) available to Northwest Research Obsidian Studies Laboratory are below in Table 4-1. Because small numbers of primary source samples are typically used to characterize a large number of artifacts, the variability in the artifacts themselves may come to characterize the primary source better. In order to account for the unknown variability, an artifact is considered to be from the Watts Point source when it falls

Table 4-1. Known Range of Diagnostic Elements for Watts Point Dacite.

Element	**Range (ppm)**	**Std. Deviation (ppm)**
Rb	19-34	+/- 4
Sr	623-836	+/- 9
Y	13-20	+/- 4
Zr	109-141	+/- 7
Nb	2-11	+/- 2
Ba	516-758	+/- 25

within two standard deviations of the known upper and lower limits of variation.

Also important to this study is where Watts Point dacite was absent from search locations. On nearly every instance of collection (except Beach Grove), anywhere from 30 to 90 minutes were spent searching for the tool stone with the shorter duration spent at locations where dacite was abundant. What is apparent by their distribution on a map (Figure 4-5) is that Watts Point dacite was never found south of the maximum extent of the Fraser glaciation. While the lack of evidence should not act as evidence itself, this pattern lends credence to the idea that these cobbles were transported glacially. Another pattern noted is that while for the most part Watts Point dacite was easily found along the previously glaciated coast lines, it was more difficult to find in the river valleys. Additionally, in both the Elwha and Dungeness drainages, Watts Point dacite was found in the lower elevations of the valley (locations 10 and 12) but not in the upper portions. Rivers along the northern Olympic Peninsula cut through and erode glacial deposits creating gravel bars that include both local and glacially deposited rock. These large exposures along river banks are another potential source of secondary raw materials. However, mass wasting of the glacial deposits is continually moving dacite downhill which may account for its discovery at lower elevations of the river valleys.

4.7. Longevity of Local Use

The previous sections of this chapter have established three points – first, that Watts Point dacite is predominant in the archaeological collections; second, that Watts Point dacite can be identified through macroscopic and geochemical means; and lastly, that Watts Point dacite is available in the glacial deposits as a secondary toolstone source. These conclusions tell us that

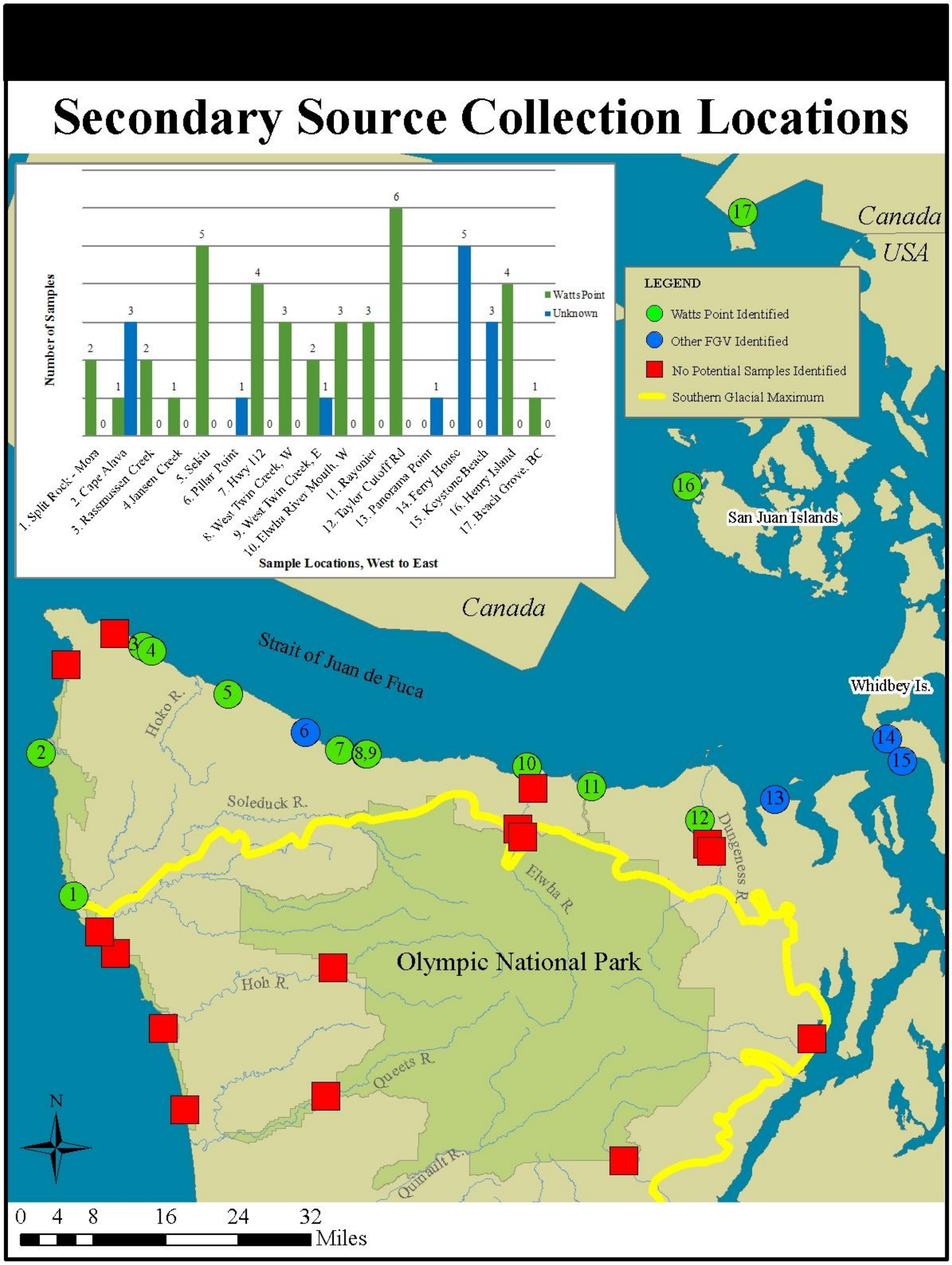


Figure 4-5 Map with Sampled FGV Search Locations.

while it was always possible to acquire the material by travel or through trade, it was not necessary to do so because it could be found nearby. I hypothesize that while Watts Point dacite could always be procured from its primary location, Olympic Peninsula peoples were procuring it from the local secondary source and not the distant one. Therefore, the distribution of chipped stone artifacts made of Watts Point dacite does not constitute a geopolitical boundary on the Olympic Peninsula (cf. Bakewell 2005). The following section provides evidence to support this hypothesis.

Bakewell's (2005) dissertation argued that artifacts fashioned of Watts Point dacite marked a geopolitical boundary in the Northwest Coast. He argued that Salishan groups controlled the Watts Point quarry and its distribution was limited only to Salish groups, just as the Shuswap controlled a vitrophyre quarry and its distribution near Keatley Creek (Bakewell 2005). He argued that in these locations, the distribution of tool stone from the quarry could be used as an alternative and complementary means of defining language groups where boundaries were unknown. Bakewell sourced limited artifacts from several sites in the northern Puget Sound and the eastern Olympic Peninsula and found that Watts Point dacite was the predominant FGV in his study. The distribution of these artifacts fell within the Salishan language group; however, he did not attempt to source FGV outside of the language group. This study identified Watts Point artifacts from across the Olympic Peninsula, including some from the Makah territory, a group that is linguistically part of the Wakashan language, not Salishan (Kinkade and Powell 1976). While the Makah are relatively recent immigrants originating from Vancouver Island approximately 1,000 years ago, the same area was inhabited by Chimakuan people who also spoke a language distinct from Salishan groups prior to the Makah (Kinkade and Powell 1976). While Bakewell may have argued in his dissertation correctly in other instances of cultural groups controlling the distribution of a local tool stone, XRF results do not support that this was the case for Watts Point dacite on the Olympic Peninsula.

Just 25 kilometers to the north east of the primary Watts Point source lies the source of Garibaldi obsidian. Garibaldi obsidian frequently dominates assemblages in archaeological sites throughout southwestern British Columbia and has been in use for over 10,000 years (Reimer 1997). While obsidian artifacts are uncommon on the Olympic Peninsula, the few artifacts encountered have been collected to provide XRF data. In total, 6 obsidian artifacts from 5 sites have been sourced from within Olympic National Park, only 2 of which were included in the analyzed sample described in Chapter 2. Results show that these artifacts represent 5 different obsidian sources: Whitewater Ridge, Newberry Volcano, Gregory Creek, Wolf Creek, and Obsidian Cliffs, all of which are in central and eastern Oregon. To my knowledge, no other archaeologists have ever identified Garibaldi obsidian on the Olympic Peninsula. Again, revisiting the hypothesis that Watts Point dacite was transported by human agents to the Olympic Peninsula, it seems highly unlikely that an obsidian source in such close proximity to the Watts Point dacite source would not have occasionally been transported alongside dacite.

In order for Watts Point dacite to be a constituent of the glacial deposits in northwest Washington, it must be older than the retreat of the continental glaciers. In a recent discussion of archaeological sites in the Gulf of Georgia, it was stated that the Watts Point dacite source erupted in the Holocene (Bakewell 2005:104, Stein 2000:55 caption), which would therefore make it too young to be glacially transported. Instead, others argue that due to its modern position along the coast, dacite cobbles could have been easily picked up at the source and transported by canoe (Stein 2000:55 caption). However, a closer look at the data identified the eruption occurring circa 160 kya, not 10 kya, based on 2 K-Ar dates of whole rock samples

(Green et al. 1988:566). More recently, the lava dome at Watts Point was described as having a distinctive radial columnar joint pattern, glassy to fine-grained ground mass, and with overlying glacial till that suggests the lava erupted subglacially (Bye et al. 2000). This places Watts Point dacite as being present during two glacial advances and highly likely to have been sheared off by the massive weight of the glaciers.

Test excavations conducted by Gallison (1994) at Slab Camp, in the northeast corner of the Olympic Peninsula, uncovered one of few dense forested lithic scatters known on the Peninsula. Even more uncommon for this area was the positive identification of Mazama ash overlying earlier deposits. One dacite artifact from the pre-mazama component was included in the artifacts sampled for XRF analysis (Table 4-2). Results confirm that this dacite artifact was indeed Watts Point dacite. Being that the eruption of Mount Mazama is firmly dated to 7,627 +/- 150 years B.P. (Zdanowicz et al. 1999), and that Watts Point dacite artifacts were deposited prior to the eruption, the longevity of use of this material begins to emerge.

While radio carbon dates for western Washington sites during the late Pleistocene are limited in number, the relative age of Clovis points, one of the most far reaching material

Table 4-2 Dated Sites with Watts Point Dacite.

Site Name	Trinomial	Age
Shelter Rock	45-JE-216	1700+/-70 B.P.
Happy Birthday	45-CA-287	1740+/-40 B.P. [+]
Hurricane Z	45-CA-302	7950+/-50 B.P. [+]
Slab Camp	45-CA-SC	Pre-Mazama (7627 B.P.)
Bishop Clovis Point	45-IS-112	~11000 B.P.

[+] Date from buried soil horizon with associated artifacts.

Figure 4-6 Line Drawing of Bishop Clovis Point (dacite) and Crescent (CCS) (courtesy of Cascadia Archaeology).

cultures in North America, has been established by archaeological research. The Bishop Clovis point, site 45-IS -112 (Figure 4-6), which is held in a private collection from a site on central Whidbey Island, was recently macroscopically described as dacite (Schalk 2010). Because it is the only known Clovis point to be described as dacite and it is the closest occurring Clovis point to the study area, permission was granted to x-ray fluoresce the artifact. Results from its analysis show that the trace elements from the Bishop Clovis point are indistinguishable from the Watts Point source (Figure 4-7). Recent investigations into the age of Clovis points outside of the Northwest coast place them into a fairly narrow age bracket ranging from 11,050 to 10,800 years

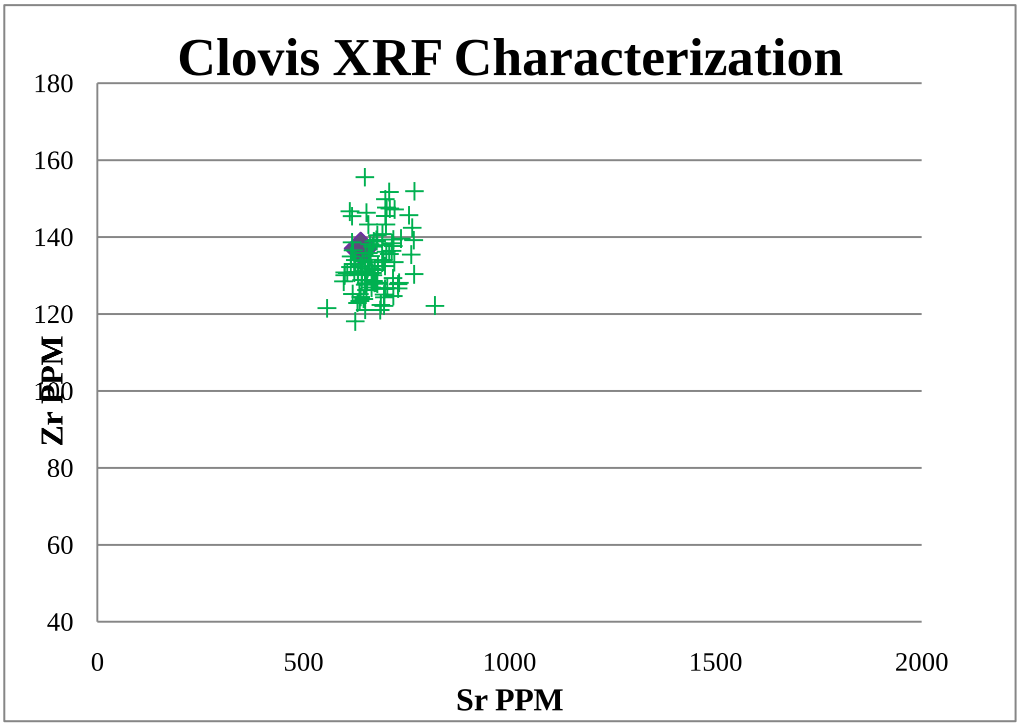


Figure 4-7 Bishop Clovis Point (diamond) XRF Characterization Graphed with other Watts Point Dacite Artifacts.

B.P. for all reliable Clovis dates (Waters and Stafford 2007). Assigning the Bishop Clovis point to the youngest date of 10,800 years B.P. and following the previous line of reasoning, the idea of a maritime trade pattern for the continuous acquisition of Watts Point dating back 12,000 years starts to become less likely.

The previous paragraphs have illustrated a few points that add strength to and support the hypothesis that Watts Point dacite was collected from local secondary deposits. First, it was shown that the local distribution of Watts Point dacite was not dictated by the Salishan language group as was previously argued. Next it was show that the eruption of dacite magma at Watts Point is older than previously understood by archaeologists making it present during the advance of continental glaciers into western Washington. Lastly, a Clovis point was demonstrated to be made with Watts Point dacite which significantly predates complex maritime trading systems on the Northwest Coast. Additionally, at the time when the Clovis point was made, the Watts Point source was likely still covered by ice or water during the Fraser Glaciation. This evidence strongly suggests that prehistoric peoples were procuring their Watts Point dacite from the glacial deposits. This conclusion does not, however, rule out the possibility that in the late Holocene, prehistoric stone tool makers may indeed have traveled to the primary source to augment their supplies. This conclusion only confirms it was known that the material existed in a secondary source and at least some of the time was procured from the secondary source but not to the exclusion of other procurement areas.

4.8 Summary of Results

The results of this study have demonstrated that Watts Point dacite was locally available to stone tool makers on the Olympic Peninsula and beyond. It can be found in the Olympic Peninsula's glacial deposits as a non-discrete resource available on a relatively large scale, however, with some spatial limitations. Some degree of uncertainty must have existed when prehistoric peoples were seeking out tool stone. It is not equally abundant in all locations, and even absent in some where it was expected by the author. In the course of doing so it was shown that Watts Point dacite is the most common tool stone found in lithic assemblages. A 5% sample of the FGV artifact population demonstrated that the stone tool makers were extremely accurate at choosing the *same* raw material source repeatedly amongst a range of other fine-grained materials available in glacial deposits. Additionally, as evidenced by the Clovis point and a pre-mazama artifact, the same material has been used throughout the entire Holocene. Lastly, it was also found that Watts Point dacite is distinguishable from other Garibaldi volcanic belt dacites macroscopically, through trace element analysis or through a combination of both. Even though a small portion of the primary geologic samples did return trace elements indistinguishable from Watts Point, these two sources would not be confused.

CHAPTER FIVE

DATA ANALYSIS AND HYPOTHESIS TESTING

5.1 Introduction

While the most frequent site type on the Olympic Peninsula is a lithic scatter, very little is known about these sites. In this chapter, I will explore the nature of the archaeological collections described in Chapter 2 by testing hypotheses created in Chapter 3 concerning distance decay, human behavioral ecology and lithic technological organization. Given what is known about distance decay, it is hypothesized that as the effort increases to move from a secondary source of Watts Point dacite to a site, artifacts of this material should decrease in metric size. Furthermore, given what is known about the technological organization of lithics, it is hypothesized that analyses will show increased reduction intensity, increased tool formality, and less shatter as distance between site and source location increases. While Chapter 4 established that Watts Point dacite is locally available as a secondary source in the Peninsula's glacial deposits, these deposits are widely spread over the northern Olympic Peninsula. It is lastly hypothesized that stone tool makers were primarily acquiring Watts Point dacite from the ocean beaches, and not from inland sources, because it was more reliably found there. To help compare expectations about where Watts Point dacite was collected, two proxy measures were created to relate a site to a tool stone source location in terms of difficulty to access the site. The outcome of these hypotheses have the potential to complement the results of Chapter 4 and to support the greater hypothesis of this thesis; that Watts Point dacite was procured from a local secondary source on the Olympic Peninsula.

5.2 Creation of Proxy Measures

Archaeological sites included in this investigation have a broad distribution throughout the Olympic Peninsula and, in order to create hypotheses about trends in the data, two proxy measures were created. These measures were created to capture the relative idea of the effort it may have taken for a stone tool maker to get from an area where dacite could have been collected to the place where it was used, i.e. a site's location. Chapter 2 discussed the investigation into the distribution of dacite as being in the glacial till of areas overridden by continental ice sheets during the last ice age. However, from the experience of the author searching for dacite in many exposed inland areas of the Olympic Peninsula, it is suspected that dacite can only *reliably* be procured from extreme lowland northern river valleys or northern beaches. Because the exact places of procurement are unknown, proxy measures were created to encompass the effort in transporting Watts Point dacite from the coastlines to a site location and, alternatively, from the furthest point inland where dacite could potentially be procured (the glacial maximum) to the site location. For every artifact, the effort it took to reach a site from the coast was calculated by taking its distance from the nearest formerly glaciated coastline in feet, multiplying it by its elevation in feet and dividing by 10,000 to make the value more manageable (Figure 5-1). Similarly, the value for the glacial maximum proxy was calculated by multiplying a site's distance from the nearest glacial maximum by the change in elevation from that point to the site's elevation, and dividing by 10,000. In both cases if the site's elevation was not the highest point crossed from the place where procurement was measured from while traveling up a river valley (e.g. back side of a ridge), then the height of the nearest ridge crossed was used in place of site elevation.

$$\text{Proxy Value} = \frac{(\text{Distance to Nearest Source})(\text{Elevation Change from Source to Site})}{10{,}000}$$

Figure 5-1 Proxy Measure Calculation.

While regression analysis is a better method of showing linear relationships, these data are not well-suited for regression. Regardless of where the artifact was collected on site, they all likely arrived as undetached pieces on a core and therefore have the same proxy value which creates the problem of attenuation. In its place, artifacts were given a rank score between 1 and 5, based on its proxy value, in order to discuss the differences between groups of sites at similar effort values, and to avoid the problem of small sample sizes at individual sites (Table 5-1). Hence a site would have a rank of 1 when it was very easy to acquire Watts Point dacite and would have a rank of either 5 (for coastal rank) or a 3 (for glacial maximum) when it was difficult to acquire. Given that the proxy measured from the coast will always be larger than the proxy to the glacial maximum, it is not surprising to find that the two proxy measures are significantly positively correlated (r^2= .81, p= .01). It should be expected that these two

Table 5-1 Description of Proxy Measures.

Proxy Score	Effort from the Coast Rank	Effort from Glacial Maximum Rank
0-10,000	1	1
10,001-20,000	2	2
20,001-30,000	3	3
30,001-40,000	4	NA
40,001 +	5	NA

Increasing Effort ↓

measures create results that are similar and, when the results diverge, may deserve further investigation.

Comparisons between what is predicted to be the most optimal in a particular environment and what was actually pursued, as evidenced in the archaeological record, has the potential to indicate the types of negotiations being made between the prehistoric peoples and their environment. My hypothesis is that effort from coast proxy will better explain trends in the data than effort from glacial maximum proxy. In subsequent discussions pertaining to "distance from the source" of dacite, I use both proxy measures as an experiment throughout this chapter. A discussion of the differences between the results for the proxies will be included with each analysis.

5.3 Application and Distance Decay Concepts

If dacite was constrained by availability for tool users in the interior of the Olympic Peninsula, then, according to distance decay models, there should be fewer and smaller pieces recorded further from the perceived place of procurement. Likewise, bedrock derived materials not found in the glacial deposits should not change. To measure availability of dacite I examine artifact size. Figure 5-2 displays the maximum linear dimension (MLD) as mean and standard deviation for all dacite artifacts in increasing distance from the nearest proxy location. ANOVA results confirm that the mean measurements from the group are different ($F=50.26$; d.f.= 2, 1908; $p < .0005$), and a post hoc Bonferroni t-test further shows that each rank's means are statistically different from each other at the 0.05 level. The largest mean measurements agree with the hypothesis in the category closest to the glacial deposits (1). However the smallest mean

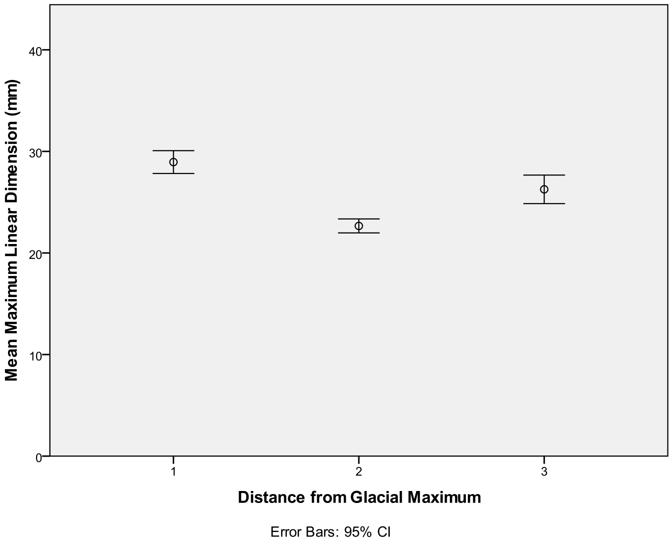


Figure 5-2 Mean and Standard Deviation for all Dacite Artifacts.

measurements exist in category 2 and not in category 3, as predicted. These results do not contribute support to the hypothesis that the availability of dacite was a constraining factor upon the prehistoric stone tool makers when it is measured from the glacial maximum. This suggests that the proxy measure is either not measuring what it was created to do or that all three rank locations are within the contact zone for its availability to be a limiting factor (see Figure 3-1).

The same hypothesis was applied to the data using the alternative way of ranking the data. A site's distance from the coast was used to see if it better explained trends in the data. Figure 5-3 displays the means and standard deviation for the maximum linear dimensions of artifacts throughout the five categories. The means of the groups as a whole are different (F=20.41; d.f. = 4, 1906; p < .0005) with a similar trend as the previous proxy measure of a gradual decline then small increase with distance. A Bonferroni post hoc t-test shows that both the highest and lowest GLD group means (1 and 3) are primarily driving the ANOVA apart. Rank 1 significantly differs from all the remaining ranks and rank 3 differs from all but rank 4.

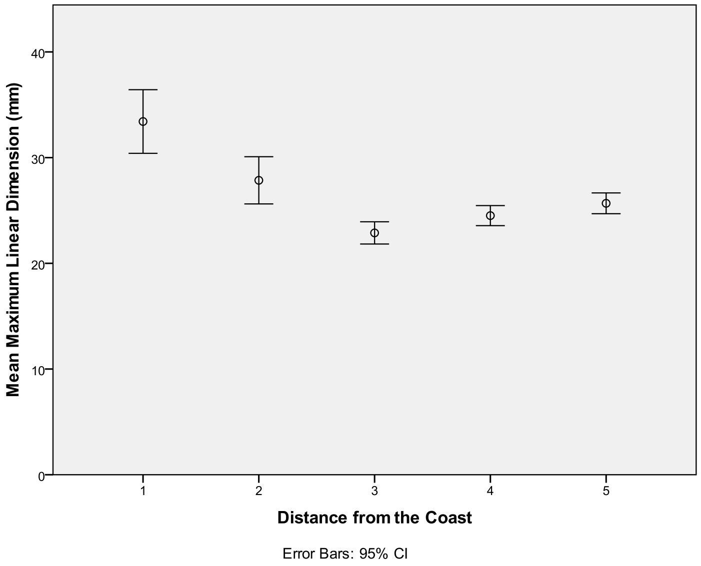


Figure 5-3 Mean and Standard Deviation of all Dacite Artifacts.

Also evident is the decreasing size of the standard deviation throughout the categories. Again, this additional proxy measure cannot confirm the hypothesis that dacite sizes continue to decrease; however, there does appear to be some sort of relationship that is portrayed in both proxy measures. A slight decrease in the variability of size in the assemblages suggests that the original package size of the objective piece was likewise decreasing since an objective piece cannot make a detached piece larger than itself.

Since only modest results were discovered when the MLD was used for the dependant variable, a new variable was created to capture the overall artifact size. The intention of some reduction technologies, such as the production of blades, is to create long, narrow flakes. These types of artifacts would generate a high MLD but may have a low weight and overall volume compared to artifacts with similar MLDs. While blade technology was not recorded in this assemblage, long narrow flakes certainly were. In order to compensate for this, the weight of an artifact was multiplied by the MLD and used as a new dependant variable to see if it better fits the hypothesis that dacite artifacts should decrease in size as distance from the source increases. When using the glacial maximum proxy, the mean measurements of the group for the new size variable are not the same as a whole (F=3.466; d.f.= 2, 1908; p =.031) (Figure 5-4). A post hoc Bonferroni t-test shows that only ranks 1 and 2 have statistically significant differences in their means with the first rank having the highest mean as predicted. Perhaps the most interesting pattern is the fact that the range in artifact size variability for each rank does decrease with increasing distance similar to the results in Figure 5-3. Decreasing artifact sized range such as this is what would be expected with decreasing objective piece size.

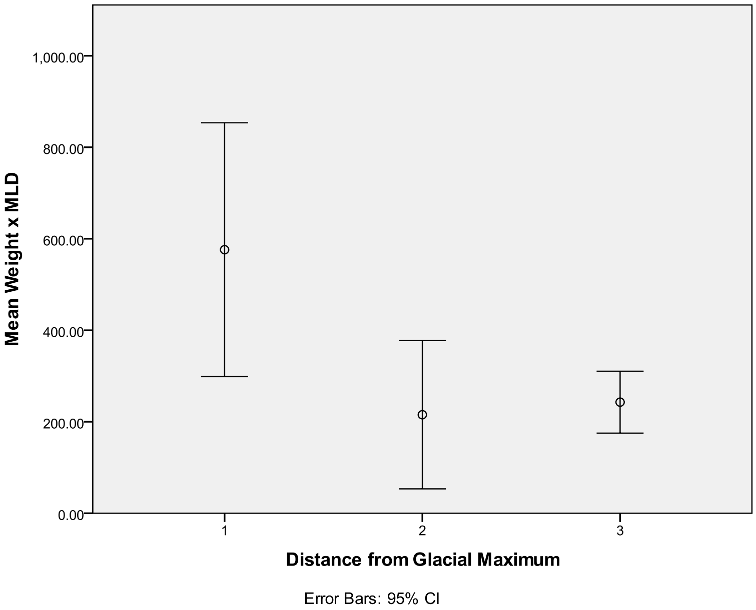


Figure 5-4 Mean Weight x MLD for Dacite Artifacts.

Lastly, the new dependant variable of mean MLD multiplied by weight was graphed for distance from the coast. Similar to the previous results, these results show that means of the groups as a whole are different (F=4.098; d.f. = 4, 1906; p = .003). A post hoc Bonferroni t-test shows again that rank 1 means play the largest role in the significant ANOVA test: its mean is significantly different that rank 3 and 4 while the remaining ranks have means that could have been drawn from the same population. Figure 5-5 shows a very noticeable change in both the average size and the range in sizes from sites that are close (1 and 2) to sites that are far (3-4) in accordance with the hypothesis. This suggests that the size of the artifact measured in terms of MLD and weight are better than just MLD at explaining the variation for this hypothesis. Additionally, the proxy for distance from the coast appears to play out only minimally better according to the hypothesis.

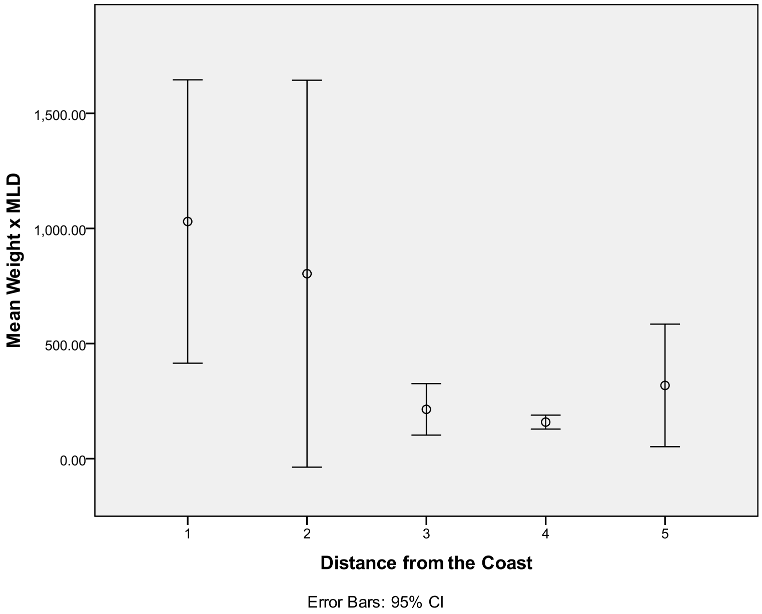


Figure 5-5 Mean Weight x MLD for Dacite Artifacts.

It was hypothesized in Chapter 3 that in areas where dacite was not available to collect, that stone tool makers would expand the range of material types they used. In the archaeological assemblages this should be expressed as a decreasing percentage of dacite as distance from the source increase. Table 5-2 presents the results that are exactly opposite of what was predicted. Instead of the amount of dacite decreasing, dacite steadily increases in the assemblages as distance becomes greater in both of the proxy measures. A few points may help to explain these

Table 5-2 Proportion of Dacite in Assemblages.

Distance from Coast	Dacite Proportion	Distance from Glacial Max	Dacite Proportion
1	0.51	1	0.77
2	0.75	2	0.92
3	0.94	3	0.96
4	0.93		
5	0.94		

findings as opposite of the hypothesis. Sites that are closer to the source, and therefore generally lower in elevation, may have been occupied for a longer duration, younger in age, and represent more diverse activities. All of these factors have the potential to add more diversity to raw material diversity at a site.

A combination of expectations derived from distance decay concepts paired with proxy measures provided less clear results than what was predicted. As was discussed in Chapter 3, it was predicted that the size of dacite artifacts should decrease in size farther away from where it was procured. While my hypothesis predicted that distance from the coast would explain variation better, the results did not play out in a definitive manner where it became clear that one proxy measure was superior to the other. This suggests that both strategies were being used; that Watts Point dacite was often procured from the beaches, but, more often than initially thought, it was also taken from more inland sources when it was encountered. This sort of inconsistent strategy could create these imprecise results.

Neither proxy measure created definitive results in accordance with the hypothesis that dacite artifacts should get smaller as distance increased. This can be interpreted in a number of ways. First, these results may suggest that there is not a strong correlation between these two variables (size and distance) because the overall effort measured by these proxies is very small and, accordingly, the graphed change is small. None of the sites used in this study are greater than three days walk from potential sources of dacite. The sites categorized with the highest ranks (either 5 or 3) are predominantly located in subalpine settings, which, by definition, are covered in persistent snow pack up to 9 months a year. For that reason, the stone tool makers who created these sites were very mobile because of the short window for access to the areas. Traditional territories of many Peninsula tribes run from the coast, up a major river valley to the crests at its headwaters (see Figure 1.3, Chapter 1). So, when the upper elevations became snow-free, stone tool makers were beginning in an area where dacite was close by. When the time came to expand seasonal territories into a poor lithic landscape, procurement of raw material was likely embedded with other resource-related pursuits in the lowlands. However, as evidenced by a poor relationship between declining size and effort to get to a site, the distance to replenish the resource was likely easy to get to and embedded with a rotation that returned subalpine resources to more permanent camps at lower elevations. The second explanation to this is that the proxy measures themselves do not measure the intended variable so while there may be a change in the data, it is not teased out by the proxies.

5.4 Application of LTO Concepts

In order to investigate how the form of a core may have changed from the lower elevations up to the more difficult to access sites, platform types on all dacite artifacts were compared against their proxy measures. Using the proxy measure from the glacial maximum, the platform categories are not equally distributed amongst the groups ($X^2= 20.270$, d.f.= 4, $p< .0005$), however the association is very weak (Cramer's V= 0.114) (Table 5-3). Again tabulated with the proxy measured from the coastline, the results are very similar showing that platforms are not equally distributed (X^2= 35.838, d.f.= 8, p< .0005) and a slightly higher, yet still weak, measure of association (Cramer's V= .151).

In every group, faceted platforms are the most common platform found on whole and proximal flakes however, there is a fairly strong mix of platforms throughout the sample. Faceted platforms are the result of increased care in platform preparation and often occur during biface reduction (Andrefsky 2005:90; Kooyman 2000:51-53). This suggests that the most common type of objective piece may have been a biface. A biface could have been used as a multi-function tool for people traveling into areas where future tasks are not anticipated and quality raw materials are less common (Kelly 1988). Bifaces could have occurred as a core to produce flakes for expedient tools or as a finished tool itself. Flat platforms are typically associated with uni-directional cores but can also be created from multi-directional cores during initial stages of reduction (Kooyman 2000:53). Because cortex is generally regarded as an

Table 5-3 Frequency and Proportion of Platforms.

Glacial Maximum Proxy	**Cortical**	**Flat**	**Faceted**	**Total N**
1	82 *(36.6%)*	70 *(28.7%)*	92 *(37.7%)*	244
2	95 *(22.3%)*	104 *(24.4%)*	227 *(53.3%)*	426
3	41 *(35.3%)*	27 *(23.3%)*	48 *(41.4%)*	116
Total N	218	201	367	786

X^2 =20.270, d.f.=8, p< .0005, Cramer's V = 0.114

Coast Proxy	**Cortical**	**Flat**	**Faceted**	**Total N**
1	17 *(45.9%)*	3 *(8.1%)*	17 *(45.9%)*	37
2	18 *(20.9%)*	31 *(36.0%)*	37 *(43.0%)*	86
3	55 *(27.8%)*	40 *(20.2%)*	103 *(52.0%)*	198
4	51 *(20.2%)*	68 *(27.0%)*	133 *(52.8%)*	252
5	77 *(36.2%)*	56 *(26.3%)*	77 *(36.2%)*	213
Total N	218	201	367	786

X^2 =35.838, d.f.=8, p< .0005, Cramer's V = 0.151

Percent of platform type given in parentheses undesirable portion of the objective piece, it is typically removed during early stages of reduction. Having said this, experimental studies have found that that cortex and cortical platforms can remain well into the reduction sequence (Odell 1989a; Tonka 1989). Taken altogether, the slight preference of faceted platforms suggests that bifaces were carried with the stone tool maker, however, there does appear to be mixed strategies found at all locations on the Peninsula.

To continue investigating whether the prehistoric stone tool makers carried bifaces with them as a core to produce flake tools as the need arises, I now look into the nature of isolates. If flake tools are created from a bifacial core as the need arises, then isolated artifacts should be dominated by expediently made informal flake tools with faceted platforms. The sample consists of 17 isolates all of which are dacite. The tool to debitage ratio of this sample is 10:7, which is significantly higher than the ratio for the entire lithic assemblage at 63:377 (Figure 5-6). Of

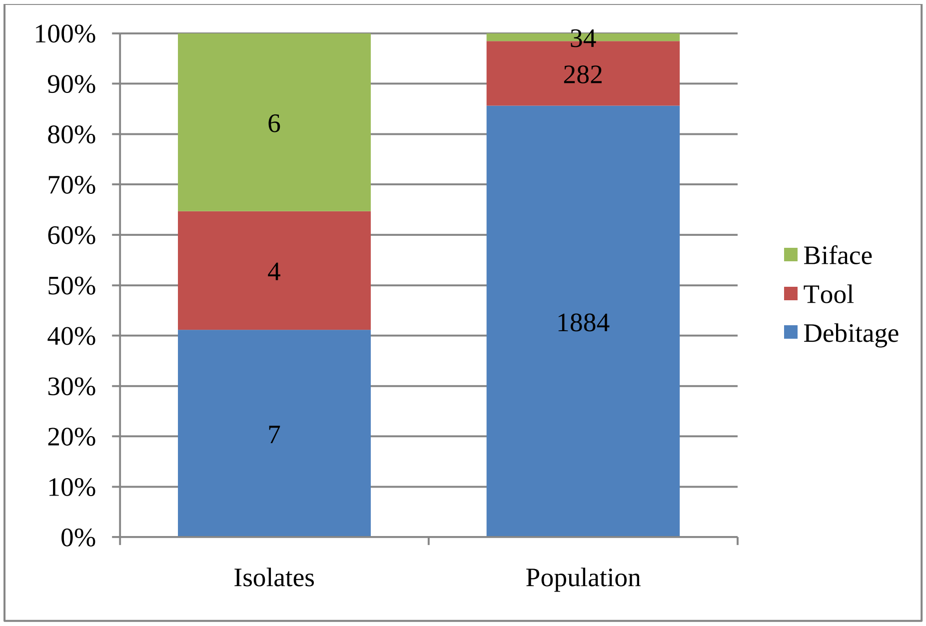


Figure 5-6 Artifact Proportions in Isolates and the Remaining Assemblage.

these artifacts, only 2 of the 6 reported platforms are faceted and, surprisingly, 3 are cortical. A closer look at the isolated tools shows that 6 are bifaces, which includes 3 broken hafted bifaces. These likely represent artifacts lost or discarded as stone tool makers traveled through the landscape. These results do not support the hypothesis that bifaces were carried as a source for flake tools however, it does support the idea that multiple strategies were practiced. Again, very low frequencies are far from illuminating a pattern and only minimally insightful.

The amount of dorsal cortex is frequently used as an indicator of the amount of reduction a lithic assemblage has gone through. This idea rests in the overly simplistic suggestion that the outer surfaces containing cortex will be removed before the inner surfaces. Thus, assemblages with less cortex are those that have gone through more extensive core reduction. Some argue that factors such as reduction technology, transport, package size, and reduction intensity need to be considered in order to understand the complex relationship (Dibble et al. 2005). Odell (1989b) found that measuring dorsal cortex is only helpful in determining the beginning and ending stages of reduction from each other. Alternatively, Marwick (2008) found a significant positive correlation between percentage of flake dorsal cortex and the extent of cobble reduction. While clearly there is much to learn about the relationship between cortex and reduction intensity, it is agreed upon that its measurement is still a useful heuristic tool.

Acting on the assumption that dorsal cortex does decrease with intensity of use, it is and obsidian while materials represented in various bedrock sources include meta-sediment, quartzite, quartz crystal, and sandstone. The results show that the observed frequencies are not hypothesized that more desirable or higher quality raw material types not available in bedrock sources will have lesser amounts of cortex. These more desirable materials include dacite, CCS, from chance (X^2= 97.177, d.f.= 3, p< .0005) (Table 5-4). Additionally, there is a strong possibility that the relationship exists (Cramer's V=0.330) between less cortex on more desirable materials and more cortex on bedrock available materials. Drawing from Marwick (2008), the hypothesis is supported in that dacite and other favored material types were being used more intensely.

Table 5-4 Frequency and Proportion of Cortex on Proximal and Whole Flakes.

Material Type	**No Cortex**	**1-50%**	**50-99%**	**All Cortex**	**Total N**
Dacite, CCS, Obsidian	603 *(74.4%)*	152 *(18.8%)*	40 *(4.9%)*	15 *(1.9%)*	810
Meta Sediment, Quartzite, Quartz Crystal, Sandstone	44 *(54.3%)*	11 *(13.6%)*	7 *(8.6%)*	19 *(23.5%)*	81
Total N	647	163	47	34	891

X^2 =97.177, d.f.=3, p< .0005, Cramer's V = 0.330

Percent of material type given in parentheses

As another indicator of intensity of material use similar to measuring dorsal cortex, complex dorsal surfaces are often used as a proxy to suggest greater intensity of use. The number of dorsal flake scars on artifacts has been found to be positively correlated with intensity of use (Marwick 2008). However, considering Mauldin and Amick's (1989) findings that larger flakes tend to have more flake scars Marwick (2008) finds that correlation to flake mass is stronger than to intensity of use. With an experimental collection, Odell (1989b) found that more flake scars are associated with the middle and not the end of a reduction process, as assumed by most. While this measure of use intensity is less reliable than dorsal cortex amounts, its results will still be considered.

To test the assumption that higher dorsal flake scar counts and, therefore, later stages of reduction occur in areas that require more effort to get to, observations were compared to

Table 5-5 Dorsal Flake Scar Complexity.

Glacial Maximum Proxy	1 Flake Scar	2 Flake Scars	3+ Flake Scars	Total N
1	53 *(31.2%)*	92 *(28.8%)*	95 *(34.1%)*	245
2	95 *(55.9%)*	166 *(51.9%)*	156 *(55.9%)*	428
3	22 *(12.9%)*	62 *(19.4%)*	28 *(10.0%)*	117
Total N	170	320	279	790

X^2 =11.221, d.f.=4, p=0.024, Cramer's V = 0.085

Coast Proxy	1 Flake Scar	2 Flake Scars	3+ Flake Scars	Total N
1	7 *(4.1%)*	18 *(5.6%)*	10 *(3.6%)*	35
2	15 *(8.8%)*	30 *(9.4%)*	41 *(14.7%)*	86
3	39 *(22.9%)*	77 *(24.1%)*	79 *(28.3%)*	195
4	51 *(30.0%)*	103 *(32.2%)*	92 *(33.0%)*	246
5	58 *(34.1%)*	92 *(28.8%)*	57 *(26.9%)*	207
Total N	170	320	279	769

X^2 =16.213, d.f.=8, p=0.039, Cramer's V = 0.103

Percent of material type given in parentheses

expectations.   Flake scars were counted for all whole and proximal dacite flakes, disregarding the small incidental scars typically found around the margins and eliminating 0 scar counts due to low frequencies. For both proxy measures, the distribution amongst groups is inconsistent the with frequencies expected by chance (X^2= 11.221, 16.213; d.f.= 4, 8; p= 0.024, 0.039), however, measures of association are weak (Cramer’s V = 0.085, 0.103) which negates the significance of the findings (Table 5-5). These results suggest that there is not a trend for increasing dorsal complexity, which either corroborates Odell’s (1989b) findings that this may not be a useful tool or simply that many stages of reduction are represented amongst these groups.

Quality and abundance of raw material types plays a large role in determining the types of tools made from a material (Andrefsky 1994). The best quality, most adaptable and most abundant raw material type on the Olympic Peninsula is dacite; however, it is far from the perfect material. While it has a cryptocrystalline groundmass, this particular dacite is vitrophyric; or porphyritic with large phenocrysts. Different qualities of dacite have been observed in artifacts, secondary sources and at the primary source which are generally dictated by the size and abundance of phenocrysts and phorphyry. These irregularities in composition make cobble reduction less predictable. Overall, Watts Point dacite can range from average to above average in quality of material.

In Chapter 4, it was found that Watts Point dacite is fairly abundant, but only in areas overridden by glaciers during the last ice age. However, lithic scatters are found throughout the Olympic Peninsula in areas where dacite does not exist. While Andrefsky (1994) deals with raw material quality on a dichotomous basis of either ‘high’ quality or ‘low’ quality, I would consider Watts Point dacite to be in the middle, of ‘moderate’ quality. Having said this, the abundance of dacite does change across the landscape, which allows for the basis of a prediction of kinds of tools produced. I hypothesize that formal tool frequency will increase at the expense of informal tools as increasing energy is spent traveling to a location and away from a raw material source. Informal tools include utilized flakes, retouched flakes, and informal cores while formal tools include scrapers, bifaces, hafted bifaces, and a single formal core.

While all previous analyses using both proxy measures have generally followed similar trends, this is the first to have contradictory results (Figure 5-7). The proxy measuring effort required when collecting dacite from the coast produced results showing a sharp rise then decline of formal tools, opposite of what was hypothesized. On the other hand, measuring effort from the glacial maximum, an increase in formal tool frequency was found corresponding to the hypothesis. Additionally, this is the first time that the glacial maximum proxy has explained the assemblage characteristics according to the hypothesis better than the other proxy. Having said this, the distribution amongst these groups in both proxy measures is consistent with frequencies expected by chance (X^2= 1.525, 2.113; d.f.= 4, 2; p= 0.822, 0.348). Consequently, it does not

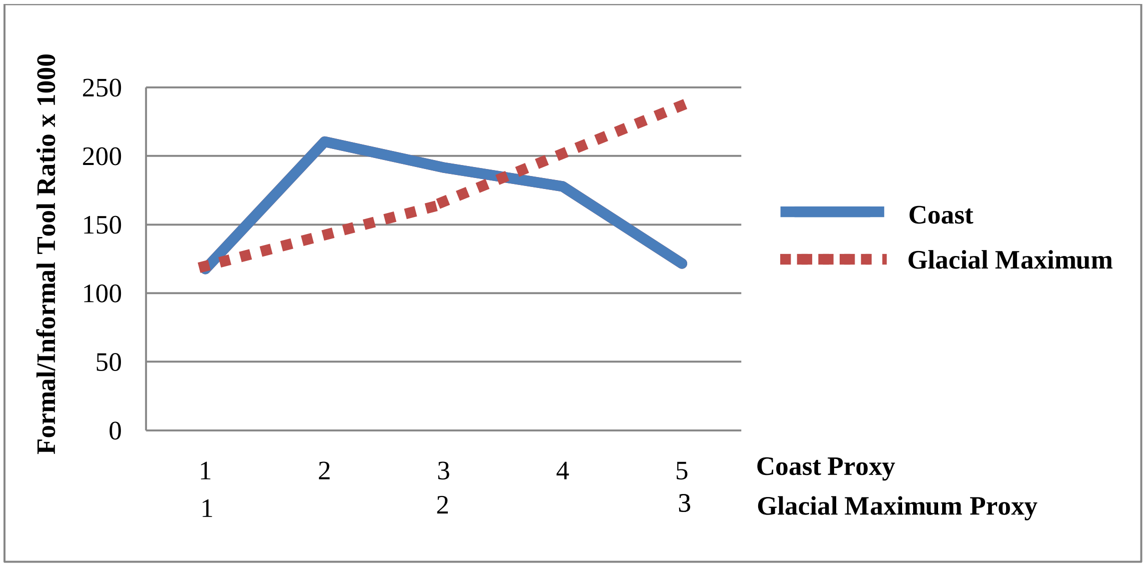


Figure 5-7 Ratios of Formal and Informal Dacite Tools.

appear that significant changes in formal tool frequencies occur further away from the source. This result paired with high overall frequencies of informal tools dominating the dacite assemblages is consistent of the "low" quality materials, whether its abundance is "high" or "low" (Andrefsky 1994:30).

Initial stages of core reduction are thought to contain different relative proportions of debitage types. This is true when it comes to the increased proportion and size of shatter (Burtchard 1998:206; Kooyman 2000:54) which, when a byproduct of bifacial reduction is often thought to be an inadvertent result and can be exacerbated by poorly homogenous materials with less predictable breakage patterns (Andrefsky 2005:12). Increased shatter should co-occur with high cortex proportions, larger metric dimensions and negatively with dorsal complexity. On the other hand, a bipolar reduction strategy, which may be preferred when package sizes are small or when increased economy of material is needed (Andrefsky 1994; Morrow 1997), has also been found to be associated with large frequencies of shatter (Kuijt et al. 1995). Contradictory to the previous findings, it has also been found that the low skill of novice flint knappers create higher shatter frequencies regardless of reduction strategy or material type (Milne 2005; Shelley 1990:191).

It is predicted that initial stages of reduction of dacite were taking place closer to where it was procured and, therefore, increased shatter ratios should be found in lower ranks. Converse to that, later stages of reduction, and with it smaller proportions of shatter, should be found in areas that are harder to get to. Taking into consideration Kuijt and colleagues' (1995) findings that bipolar reduction creates large amounts of shatter, it was found that only 1% of the total assemblage used in this analysis was identified as the result of bipolar reduction. This is probably an under-estimation of all bipolarly generated debitage, however, it still remains a very small proportion of the whole. A ratio of shatter count in each group, divided by assemblage count for each group, then multiplied by 1000, was used as an index. Only dacite artifacts were used for this analysis because of the very small sample sizes for shatter in the remaining material types. Ratios were plotted for both effort-related proxy measures on the same line graph because they represent the same overall degree of effort used but with different division.

Like many of the previous analyses, there are mixed results from what was predicted. The proxy measuring distance from the coast records diminishing ratios as predicted for the first four groups but spikes back up to the second highest ratio in the last group (Figure 5-8). Likewise, while less obvious than the first proxy, the second proxy takes a small decline in its shatter ratio, then returns to its previous level at the greatest distance remaining fairly unchanged overall. In total, angular shatter only makes up 8% of all dacite artifacts, and excluding obsidian, has the lowest overall shatter observed of any material type. These results suggest that, generally speaking, the decrease in shatter demonstrates that more initial processing was occurring in areas

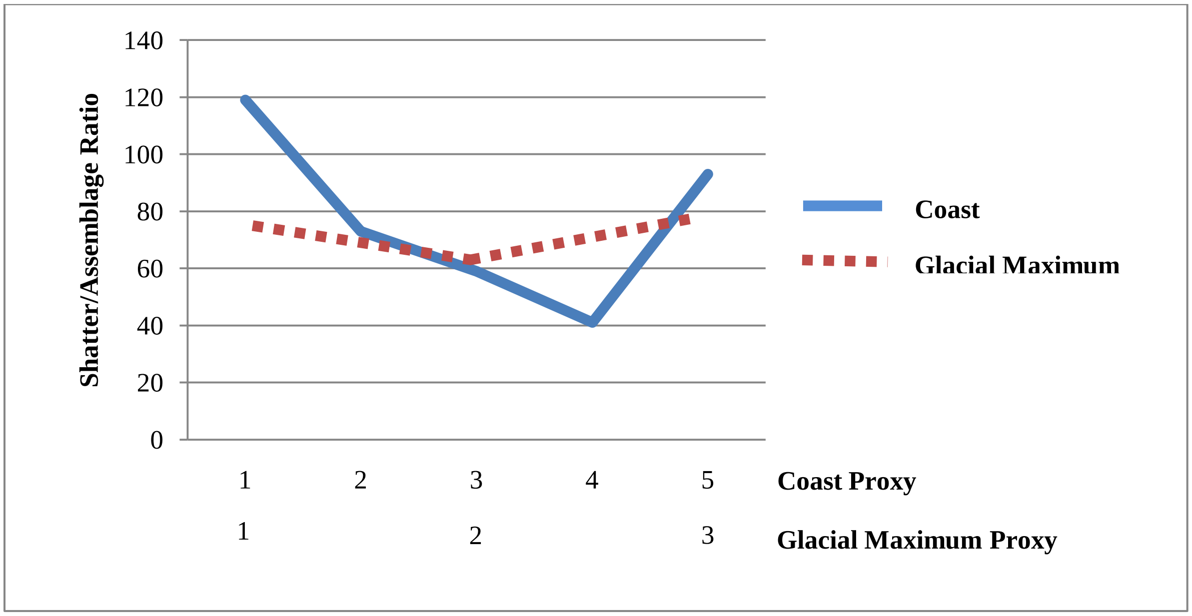


Figure 5-8 Change of Dacite Shatter in Both Proxy Measures.

closer to the source. However, because both values rebound in the final group, this assemblage may support critics' findings that shatter may not be a good indicator of early reduction stages.

CHAPTER SIX

SUMMARY AND CONCLUSIONS

The results of this thesis have helped substantiate, through two complementary means, that dacite was readily available to the stone tool makers on the northern Olympic Peninsula. While many archaeologists working in the area have suspected this was the case strictly through good field observations (Conca 2000; Kenady 1973; King 1950; Kornbacher 1992:168-169; Morgan et al. 1999:C4; Schalk 1988:158; Wessen 1993), this is the first body of work to demonstrate this point through a XRF study.

The purpose of Chapter 4 was to address questions related to the geochemical signature of Watts Point dacite. A simple random sample of dacite artifacts in the collection facility at Olympic National Park found that 91% of the sampled artifacts were indistinguishable from the Watts Point dacite source. The knowledge that a single rock type was the main constituent in the chipped stone assemblage allows for questions pertaining to the provenience of this material to be applicable. Geologic samples of other Garibaldi belt dacites found through a combination of geochemical and macroscopic indicators, that Watts Point dacite was unique in character. Finally, to investigate the suspicion into whether dacite cobbles were available as a secondary source, 234 cobbles were collected from glacial deposits and sampled. XRF results found that the toolstone preferred by the Peninsula’s inhabitants was available as a secondary source in the glacial deposits on the Olympic Peninsula.

These findings have significance outside of the Olympic Peninsula into greater western Washington and southwestern Canada. While it is documented that Watts Point dacite is found on the Olympic Peninsula, it is suspected that the same raw material is likewise available in glacial deposits throughout the Puget Sound and Gulf of Georgia regions. Limited sampling by the author of secondary geologic sources outside of this study area found that Watts Point dacite also occurs at Beach Grove in Canada and in the San Juan Islands. Similarly, Bakewell (2005) found unmodified beach cobbles of Watts Point dacite at Cypress Island, Lake Cushman, and in the San Juan Islands. As stated previously, he argued that these occurrences were manuports instead of glacially transported, a notion that now seems unlikely.

Through the work of others, it is known that Watts Point dacite occurs in chipped stone assemblages outside of this study area. In his analysis, Bakewell (1990b) found that this same raw material occurs in archaeological sites at British Camp, Montague Harbor, Glenrose Cannery, Rosario Beach, Coronet Bay and the Skagit River delta. All of the artifacts he sampled had been incorrectly field classified as basalt rather than dacite. This suggests that the large scale use of basalt in western Washington archaeological sites may perhaps be a large scale use of Watts Point dacite instead. Further sourcing studies into the extent to which Watts Point dacite occurs in western Washington chipped stone assemblages will help aid in the foundational understanding of northwest coast peoples' technological organization.

In chapter five, analysis of chipped stone artifacts from various sites throughout the Olympic Peninsula helped support the hypothesis that local secondary sources of Watts Point dacite were used instead of primary sources in British Columbia. A proxy measure was created in an attempt to sort sites by the effort it would take to reach that location from the nearest place that dacite could have been procured from. Two measures were created; one that measured effort from the coast and one that measured effort from the glacial maximum, to see if one measure explained the variation in observations better than the other.

Using distance decay concepts, a raw material type should show a regular decline in size measurements such as weight, width and length as it is found further from its source. While many size measurements were tried, only the MLD and the size (MLD x weight) of dacite artifacts showed a small decline in size when measured from the coast. What is most notable is that when the mean size measurements were graphed there is the lack of a clear trend. Dacite artifact sizes do not drastically decrease as one might expect if this raw material was brought over 100 miles from its primary source. The lack of trend is more similar to what would be expected if the raw material was easy to access. This result helps support the hypothesis that Watts Point dacite was collected as a secondary source on the Olympic Peninsula.

Correspondingly, various artifact attributes were analyzed in order to gain insight as to how prehistoric peoples were organized with respect to their lithic resources. Faceted platforms were the most common type of platform observed which suggests that bifaces may have been carried by the stone tool makers. Cortical and flat platforms were also very common which implies there was not a strong preference for a particular objective piece. If bifaces were carried as multifunction tools then isolated artifacts should be utilized flakes with faceted platforms. This was not found to be the case. However, isolated artifacts had a much higher tool to debitage ratio than what was found in the sample population. While there was a slight increase in the occurrence of faceted platforms within the proxy measures, there is again not much of a directional trend as would be expected for people who were constrained by the availability of their main lithic material.

In gauging the intensity of use amongst raw materials, those materials that are more highly desired should show increased intensity while those that are less desired will show less intense use. It was found that as an indicator of use intensity, less cortex was found on dacite, CCS and obsidian as compared to sandstone, meta-sediment and quartzite indicating that these materials were used in different ways. Likewise, dorsal flake scar counts should increase on dacite if it was difficult to obtain as effort to reach a site increases. This was found not to not hold true again suggesting that little pressure was placed upon the stone tool makers in renewing their resource.

To assess perceived quality and abundance of raw materials, changes in tool formality were analyzed. It is hypothesized that formal tools will increase as a site becomes more difficult to access from the sources of dacite. The distribution of different tools amongst the proxy measures was explained by chance. This result, in combination with high frequencies of informal tools in the assemblages, is similar to what is expected with a low quality raw material regardless of its abundance (Andrefsky 1994).

In attempting to determine where initial stages of reduction took place, the relative proportions of shatter was compared. While a small decline in its proportion was found in the proxy measuring from the coast, there was not a clear directional trend as was hypothesized which may support the idea that shatter proportions are not a good indicator of stage of reduction.

Two proxy measures, rather than one, were created to measure the distance between the sites where dacite was found and its place of procurement. Unlike many major raw material outcrops which are fairly restricted, Watts Point dacite may potentially be found for hundreds of square miles along the Olympic Peninsula. These proxy measures represented the possibility of collecting the raw material from two extremes: in *all* glacially overridden land and *only* along the perimeter (i.e. the coast). It was hoped that the comparison of this data would favor one of these extremes and help narrow down the large area where dacite may be found. However, results where both proxies were used did not show that one or the other was remarkably better. As stated earlier, this suggests that people were collecting dacite where ever they could find it whether it was from an elk trail, a river cut, or from the coasts. Additionally, these results can be interpreted to suggest that the distance to renew dacite, even from some of the most remote places on the Olympic Peninsula, were not very great for the stone tool maker. Future research that has a better hold of temporal factors than are understood in this thesis may be able tease out stronger patterns.

Overall it appears as though Olympic Peninsula peoples were practicing mixed strategies whether that relates to where they were collecting dacite from or what type of objective piece they carried with them. One thing that was consistent was their continual use of Watts Point dacite for the last 12,000 years. It was abundant, and while not available in every location, it was the preferred material type over other satisfactory raw materials. Research from this thesis helps to create a foundation for further, more detailed, raw material characterization studies on the Olympic Peninsula and on the greater Northwest Coast.

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APPENDIX A

Radio Carbon Dates from the Olympic Peninsula*

SITE NAME	TRINOMIAL		DATE	CITATION
Tongue Point	45-CA-16	SI4362	2385+/-50	Wessen, In Schalk 1988
Tongue Point	45-CA-16	SI4363	2565+/-70	Wessen, In Schalk 1988
Tongue Point	45-CA-16	SI4364	2220+/-55	Wessen, In Schalk 1988
Hoko Rock Shelter	45-CA-21		225	Croes, in Schalk 1988
Hoko Rock Shelter	45-CA-21		720	Croes, in Schalk 1988
Hoko Rock Shelter	45-CA-21		810	Croes, in Schalk 1988
Hoko Rock Shelter	45-CA-21		920	Croes, in Schalk 1988
Hoko Rock Shelter	45-CA-21		185	Croes, in Schalk 1988
Neah Bay	45-CA-22	SU1607	modern	Friedman 1976
Neah Bay	45-CA-22	WSU1608	modern	Friedman 1976
Ozette Village	45-CA-24	WSU1123	2010+/-190	Gleeson 1980
Ozette Village	45-CA-24	WSU1778	440+/-90	Gleeson 1980
Ozette Village	45-CA-24	WSU1865	790+/-80	Gleeson 1980
Ozette A75	45-CA-24 A75	WSU1609	440+/-65	Friedman 1976
Ozette A75	45-CA-24 A75	WSU1610	710+/-65	Friedman 1976
Sooes	45-CA-25	WSU1611	980+/-60	Friedman 1976
Sooes	45-CA-25	WSU1612	1110+/-60	Friedman 1976
Cedar Creek	45-CA-29	Beta154927	190+/-60	NPS
Cedar Creek	45-CA-29	Beta154928	350+/-50	NPS
Cedar Creek	45-CA-29		1120+/-70	NPS
White Rock	45-CA-30		387+/-42	Guinn 1963
Chilean Memorial	45-CA-32	Beta172646	1160+/-40	NPS
Chilean Memorial	45-CA-32	Beta172647	870+/-50	NPS
Chilean Memorial	45-CA-32	Beta172648	800+/-50	NPS
Chilean Memorial	45-CA-32	Beta172649	1050+/-100	NPS
Chilean Memorial	45-CA-32	Beta159029	680+/-70	NPS
Chilean Memorial	45-CA-32	Beta159030	680+/-70	NPS
Sand Point	45-CA-201	SI4366	2270 +/-75	Wessen 1993
Sand Point	45-CA-201	SI4367	1600+/-75	Wessen 1993
Warmhouse	45-CA-204	WSU1603	200+/-60	Friedman 1976
Achawat	45-CA-206	WSU1604	150+/-60	Friedman 1976
Tatoosh	45-CA-207	WSU1606	960+/-60	Friedman 1976
Hoko River Wet site	45-CA-213	WSU1443	2750+/-90	Flenniken 1981
Hoko River Wet site	45-CA-213	WSU1442	2210+/-70	Flenniken 1981
Hoko River Wet site	45-CA-213	WSU2200	2750+/-90	Flenniken 1981
Hoko River Wet site	45-CA-213	WSU2014	2530+/-60	Flenniken 1981
Hoko River Wet site	45-CA-213	WSU2015	2610+/-100	Flenniken 1981
Hoko River Wet site	45-CA-213	WSU2201	2570+/-70	Flenniken 1981
Hoko River Wet site	45-CA-213	WSU2016	2580+/-80	Flenniken 1981
Pitship point	45-CA-214		2200 +/- 75	Kennedy and Thomas 1977
Pitship point	45-CA-214		390 +/- 50	Wessen
Pitship point	45-CA-214		570 +/- 70	

Manis Mastodon site	45-CA-218	WSU1866	12000 +/- 310	Gustafson et al. 1979
Manis Mastodon site	45-CA-218	WSU1867	12100 +/-310	Petersen et al. 1983
Manis Mastodon site	45-CA-218	WSU2208	11000+/-150	Petersen et al. 1983
Manis Mastodon site	45-CA-218	WSU2210	8920+/-100	Petersen et al. 1983
Manis Mastodon site	45-CA-218	WSU2211	11560+/-160	Petersen et al. 1983
Manis Mastodon site	45-CA-218	USGS591	11850 +/- 60	Gustafson et al. 1979
Washington Harbor	45-CA-227		650 +/-75	Onat and Larson 1984
Norwegian Memorial	45-CA-252		1070+/-50	Wessen/NPS
Obstruction Point Basket	45-CA-270	Beta132680	2880+/-70	NPS
Seven Lakes Hearth	45-CA-274	WSU2874	4990 +/-60**	Bergland 1983
Hurricane Z	45-CA-302	Beta276525	7950+/-50[+]	NPS
Waatch River site	45-CA-400		4000	Wessen
North Sand Point	45-CA-423		730+/-50	Wessen
North Sand Point	45-CA-423		650+/-60	Wessen
Sequim Bypass	45-CA-426	Beta107616	4960+/-50 ***	Morgan et al. 1999
Log Cabin Creek	45-CA-485	Beta153935	1,930+/-70	NPS
Happy Birthday Site	45-CA-487	Beta276526	1740+/-40[+]	NPS
Minard	45-GH-218		1080+/-110	Roll 1974
Minard	45-GH-218		980+/-95	Roll 1974
Minard	45-GH-218		865+/-95	Roll 1974
Strawberry Point	45-JE-08		160 +/-60	Wessen/NPS
Strawberry Point	45-JE-08		100 +/- 50	Wessen/NPS
Toleak Point	45-JE-09	SI4365	995+/-60	
Seal Rock	45-JE-15		750 +/- 65	Wessen
Seal Rock	45-JE-15		410 +/- 80	Wessen
Seal Rock	45-JE-15		540 +/-70	Wessen
Shelter Rock	45-JE-216	Beta132678	360+/-40	NPS
Shelter Rock	45-JE-216	Beta132679	260+/-80	NPS
Shelter Rock	45-JE-216	Beta146149	1700+/-70	NPS
Skokomish Reserve	45-MS-51	UW482	1470+/-55	Kennedy 1979
Skokomish Reserve	45-MS-51	UW487	1545+/-65	Kennedy 1979
Skokomish Reserve	45-MS-51	UW485	1555+/-60	Kennedy 1979
Skokomish Reserve	45-MS-53	UW250	565+/-90	Munsell 1972
Skokomish Reserve	45-MS-53	UW486	1180+/-65	Kennedy 1979
Skokomish Reserve	45-MS-53	UW483	1745+/-45	Kennedy 1979
Skokomish Reserve	45-MS-56	UW484	Modern	Kennedy 1979
Hoko River Dry Site		WSU2202	2770+/-90	
Hoko River Dry Site		WSU2203	2520+/-90	
Camp downriver from Hoko		WSU2652	1700+/-65	
LaPush Village		UW351	550+/-75	Duncan 1981
LaPush Village		UW350	590+/-75	Duncan 1981
LaPush Village		UW352	470+/-90	Duncan 1981
LaPush Village		UW353	765+/-75	Duncan 1981

Indian Island		WSU1591	950+/-65	Onat 1976
Indian Island		WSU1592	modern	Onat 1976
Indian Island		WSU1593	270+/-60	Onat 1976
Indian Island		WSU1594	315+/-60	Onat 1976
Indian Island		WSU1595	90+/-60	Onat 1976
Slab Camp	None	WSU3881	1870+/-90	Gallison 1994
Slab Camp	None	WSU3882	1420+/-130	Gallison 1994
Slab Camp	None	WSU3889	6400+/-90	Gallison 1994

*Updated list from Schalk 1988, Appendix B. Sites in bold are new and shaded boxes are sites use in this study.

** Original charcoal sample collected by archaeologist was misplaced by a volunteer. Volunteer returned to site and collected a second sample. This date comes from the second sample.

***Oldest date for this site.

[+] Date from buried soil horizon with associated artifacts.

APPENDIX B

Description of Secondary Dacite Cobbles

#	Individually assigned number
Other Des	Other Designation: Previously assigned number/letter
Lot	What 30 minute collection lot it was collected in, if any
Location	Descriptive location
UTM E	UTM Easting
UTM N	UTM Northing
Physical	Degree of physical weathering on cortex- 0: None 1: light, 2: medium, 3: heavy
Chemical	Degree of chemical weathering on cortex- 0: None1: light, 2: medium, 3: heavy
Shape	Cobble Shape: Round, Subrounded, Subangular, angular
Max Length	Maximum linear dimension in mm
Weight	Weight in grams

#	Other Des.	Lot	Location	Environment	UTM E	UTM N	Physical	Chemical	Shape	Max Length mm	Weight (g)	XRF Source	Notes
1	a	.	Taylor Cutoff Rd	River	488403	5323381	2	1	Subangular	114.66		Watts Point	*
2	b	.	Taylor Cutoff Rd	River	488403	5323381	2	1	Subrounded	58.42	133.3	Watts Point	*
3	c	.	Taylor Cutoff Rd	River	488403	5323381	2	2	Subangular	82.01	166	Watts Point	*
4	d	.	Taylor Cutoff Rd	River	488403	5323381	2	1	Subrounded	82.72	344.4	Watts Point	*light green phenocrysts
5	e		Taylor Cutoff Rd	River	488403	5323381	2	1	Subangular	97.14	304	Watts Point	* heavy quartzite phenocrysts
6		.	White Rock Beach	Beach	372247	5333685	2	0	Subrounded	73.23	175.3	uk	*
7	g	.	Taylor Cutoff Rd	River	488403	5323381	2	2	subangular	80.49	277.5	Watts Point	*
8	h	.	Beach Grove, BC	Beach	496091	5431122	1	1	Subangular	88.68	277	Watts Point	*Vessicular, light Quartzite Phenocrysts
9	i	.	Sand Point Beach	Beach	372918	5332429	2	0	Subrounded	66.92	202.4	uk	*
10	.	.	Elwha River Mouth, W	River	457667	5332760	2	2	Subangular	90.59	300.5		
11	Y	.	Elwha River Mouth, W	River	457667	5332760	3	2	Subangular	79.5	248.2	Watts Point	
12	Y	.	Elwha River Mouth, W	River	457667	5332760	2	2	Subangular	115.19	530.6	uk	?
13	.	.	Elwha River Mouth, W	River	457667	5332760	2	2	Subangular	70.15	216.7		?
14	Y	.	Elwha River Mouth, W	River	457667	5332760	2	0	Subrounded	128.44		Watts Point	
15	.	.	Elwha River Mouth, W	River	457667	5332760	3	1	Subangular	145.81			
16	.	A	West Twin Creek, W	Beach	429073	5335113	2	1	Subangular	82.96	246.9		quartzite phenocrysts
17	Y	A	West Twin Creek, W	Beach	429073	5335113	2	1	Subrounded	78.59	335.4	Watts Point	
18	Y	A	West Twin Creek, W	Beach	429073	5335113	2	1	Subangular	45.89	69.4	Watts Point	
19	.	A	West Twin Creek, W	Beach	429073	5335113	2	1	Subrounded	48.63	63		
20		A	West Twin Creek, W	Beach	429073	5335113	2	0	Subangular	30.85	16.2		
21		A	West Twin Creek, W	Beach	429073	5335113	1	0	Subangular	47.23	71.1		
22		A	West Twin Creek, W	Beach	429073	5335113	1	1	Subrounded	39.38	27.6		vessicular
23		A	West Twin Creek, W	Beach	429073	5335113	1	1	Subangular	51.66	47		light Quartzite Phenocrysts
24		A	West Twin Creek, W	Beach	429073	5335113	2	1	Subrounded	41.12	43.7		lighly vessicular
25		A	West Twin Creek, W	Beach	429073	5335113	2	1	Subrounded	76.83	185.3		
26		A	West Twin Creek, W	Beach	429073	5335113	3	1	Rounded	66.8	162		
27		A	West Twin Creek, W	Beach	429073	5335113	2	1	Subrounded	32.55	12.3		lighly vessicular
28		A	West Twin Creek, W	Beach	429073	5335113	1	1	Rounded	29.67	15.2		lighly vessicular
29		A	West Twin Creek, W	Beach	429073	5335113	1	1	Subangular	66.84	122.5		
30		A	West Twin Creek, W	Beach	429073	5335113	1	1	Subrounded	57.69	108.9		Vessicular, light Quartzite Phenocrysts
31		A	West Twin Creek, W	Beach	429073	5335113	2	1	Rounded	52.89	79.6		? Vessicular
32	Y	A	West Twin Creek, W	Beach	429073	5335113	2	1	Rounded	43.06	69	Watts Point	? Vessicular
33		A	West Twin Creek, W	Beach	429073	5335113	3	1	Subrounded	49.82	59.5		
34		A	West Twin Creek, W	Beach	429073	5335113	2	1	Rounded	61.99	17.1		
35		A	West Twin Creek, W	Beach	429073	5335113	2	0	Subangular	122.8			
36		B	Rassmussen Creek	Beach	389526	5354127	2	1	Subangular	50.75	47.3		
37		B	Rassmussen Creek	Beach	389526	5354127	2	1	Subrounded	38.37	33.9		
38		B	Rassmussen	Beach	389526	5354127	2	0	Rounded	46.93	61.7		

			Creek										
39		B	Rassmussen Creek	Beach	389526	5354127	2	2	Subrounded	50.44	68.8		lighly vessicular
40		B	Rassmussen Creek	Beach	389526	5354127	2	2	Subangular	69.56	174.6		
41		B	Rassmussen Creek	Beach	389526	5354127	2	2	Subrounded	72.97	232.5		
42		B	Rassmussen Creek	Beach	389526	5354127	2	1	Subrounded	50.52	80		
43	Y	B	Rassmussen Creek	Beach	389526	5354127	2	0	Rounded	51.77	90.9	Watts Point	
44		B	Rassmussen Creek	Beach	389526	5354127	3	1	Subrounded	74.15	280.1		
45		B	Rassmussen Creek	Beach	389526	5354127	1	3	Subangular	58.34	87.4		
46		B	Rassmussen Creek	Beach	389526	5354127	2	1	Subangular	77.87	198		
47		B	Rassmussen Creek	Beach	389526	5354127	2	2	Subrounded	57.64	78.3		
48	Discard	B	Rassmussen Creek	Beach	389526	5354127	2	2	Subrounded	45.46	63.1		
49	Discard	B	Rassmussen Creek	Beach	389526	5354127	2	2	Subrounded	33.12	25.6		
50	Y	B	Rassmussen Creek	Beach	389526	5354127	3	2	Subangular	110.96	571.4	Watts Point	
51			Keystone Beach	Beach	524316	5333797	2	0	Subrounded	44.88	35.6		
52			Keystone Beach	Beach	524316	5333797	2	1	Subrounded	39.98	38.5		
53			Keystone Beach	Beach	524316	5333797	2	1	Subrounded	49.49	91.1		
54	Y		Keystone Beach	Beach	524316	5333797	3	1	Subrounded	61.41	131.6	uk	
55			Keystone Beach	Beach	524316	5333797	3	0	Rounded	69.23	138.6		
56			Keystone Beach	Beach	524316	5333797	3	1	Subrounded	50.95	93.8		light Quartzite Phenocrysts
57	Y		Keystone Beach	Beach	524316	5333797	2	1	Subrounded	68.93	165.6	uk	
58			Keystone Beach	Beach	524316	5333797	3	1	Rounded	73.71	257.4		light Quartzite Phenocrysts
59			Keystone Beach	Beach	524316	5333797	3	1	Rounded	75.22	208.2		? Quartzite phenocrysts
60			Keystone Beach	Beach	524316	5333797	3	1	Rounded	61.74	140.8		
61			Keystone Beach	Beach	524316	5333797	3	1	Subrounded	75.9	184.4		
62			Keystone Beach	Beach	524316	5333797	3	1	Subrounded	69.15	142.3		light Quartzite Phenocrysts
63	Y		Keystone Beach	Beach	524316	5333797	2	1	Subrounded	76.01	177.4	uk	light Quartzite Phenocrysts
64			Keystone Beach	Beach	524316	5333797	2	0	Rounded	55.41	149.6		
65			Keystone Beach	Beach	524316	5333797	2	1	Rounded	107.03			
66			Keystone Beach	Beach	524316	5333797	3	1	Rounded	100.94	766.2		light Quartzite Phenocrysts
67		C?	Hwy 112	Beach	424457	5335835	2	1	Subrounded	102.89	456.5		vessicular
68		C?	Hwy 112	Beach	424457	5335835	2	1	Subrounded	89.05	318.1		
69		C?	Hwy 112	Beach	424457	5335835	2	1	Subrounded	74.23	236.5		light Quartzite Phenocrysts
70	Y	C?	Hwy 112	Beach	424457	5335835	2	1	Subangular	74.24	2244.3	Watts Point	light Quartzite Phenocrysts
71		C?	Hwy 112	Beach	424457	5335835	1	0	Rounded	95.48	484.8		vessicular
72		C?	Hwy 112	Beach	424457	5335835	2	1	Subrounded	70.95	163.2		
73		C?	Hwy 112	Beach	424457	5335835	1	1	Rounded	61.07	120.6		light Quartzite Phenocrysts
74		C?	Hwy 112	Beach	424457	5335835	2	1	Subrounded	68.77	150.8		light Quartzite Phenocrysts
75		C?	Hwy 112	Beach	424457	5335835	2	1	Subangular	59.08	106.2		
76		C?	Hwy 112	Beach	424457	5335835	2	1	Subangular	57.38	106.1		
77		C?	Hwy 112	Beach	424457	5335835	2	1	Subrounded	62.82	161.6		
78		C?	Hwy 112	Beach	424457	5335835	2	1	Subrounded	55.67	85.6		
79	Y	C?	Hwy 112	Beach	424457	5335835	2	1	Rounded	57.75	134.2	Watts Point	vessicular
80	Y	C?	Hwy 112	Beach	424457	5335835	2	1	Subrounded	58.2	107.8	Watts Point	glassy
81		C?	Hwy 112	Beach	424457	5335835	2	0	Subrounded	41.04	44.6		
82		C?	Hwy 112	Beach	424457	5335835	3	1	Subrounded	48.65	57.5		
83		C?	Hwy 112	Beach	424457	5335835	2	1	Subrounded	48.15	59.4		
84		C?	Hwy 112	Beach	424457	5335835	2	1	Subrounded	50.27	54.7		vessicular
85		C?	Hwy 112	Beach	424457	5335835	1	0	Rounded	44.89	65.2		
86		C?	Hwy 112	Beach	424457	5335835	1	1	Rounded	53.11	107.2		
87		C?	Hwy 112	Beach	424457	5335835	1	1	Rounded	45.72	94.2		
88		C?	Hwy 112	Beach	424457	5335835	2	1	Subrounded	49.8	68		

89	Y	C?	Hwy 112	Beach	424457	5335835	2	1	Subangular	66.6	77.3	Watts Point	vessicular
90		D	Ferry House	Beach	521615	5337739	3	1	Rounded	60.04	177.6		
91		D	Ferry House	Beach	521615	5337739	2	1	Subrounded	83.6	399.1		
92	Discard	D	Ferry House	Beach	521615	5337739	2	2	Rounded	74.93	337.4		
93		D	Ferry House	Beach	521615	5337739	2	0	Rounded	82.28	403.5		
94		D	Ferry House	Beach	521615	5337739	2	2	Subrounded	74.86	257.2		light Quartzite Phenocrysts
95		D	Ferry House	Beach	521615	5337739	2	1	Subrounded	84.97	290.5		light Quartzite Phenocrysts
96		D	Ferry House	Beach	521615	5337739	2	2	Subrounded	68.39	190.4		light Quartzite Phenocrysts
97	Y	D	Ferry House	Beach	521615	5337739	3	1	Subrounded	60.82	184.9	UK	
98		D	Ferry House	Beach	521615	5337739	2	1	Subrounded	71	237.4		
99		D	Ferry House	Beach	521615	5337739	2	1	Subrounded	68.69	211.3		
100		D	Ferry House	Beach	521615	5337739	2	1	Subrounded	67.11	200.1		light Quartzite Phenocrysts
101		D	Ferry House	Beach	521615	5337739	2	2	Rounded	90.88	567.1		quartzite phenocrysts
102		D	Ferry House	Beach	521615	5337739	2	1	Rounded	117.39			
103		D	Ferry House	Beach	521615	5337739	3	1	Rounded	58.8	126.2		light Quartzite Phenocrysts
104		D	Ferry House	Beach	521615	5337739	2	1	Rounded	47.22	60.2		
105		D	Ferry House	Beach	521615	5337739	2	2	Subrounded	59.71	118.4		quartzite phenocrysts
106		E	Ferry House	Beach	521615	5337739	1	1	Rounded	80.67	413.8		
107		E	Ferry House	Beach	521615	5337739	2	2	Rounded	66.99	240.3		light Quartzite Phenocrysts
108	Y	E	Ferry House	Beach	521615	5337739	2	2	Subrounded	68.39	183.4	uk	
109		E	Ferry House	Beach	521615	5337739	2	1	Rounded	106.38			
110		E	Ferry House	Beach	521615	5337739	2	1	Subrounded	138.04			quartzite phenocrysts
111		E	Ferry House	Beach	521615	5337739	2	2	Rounded	68.72	189.5		quartzite phenocrysts
112		E	Ferry House	Beach	521615	5337739	3	1	Rounded	58.78	164.9		
113		E	Ferry House	Beach	521615	5337739	2	0	Subrounded	65.13	136.4		glassy
114		E	Ferry House	Beach	521615	5337739	2	1	Subrounded	60.82	130		
115		E	Ferry House	Beach	521615	5337739	3	1	Rounded	58.33	111.3		quartzite phenocrysts
116		E	Ferry House	Beach	521615	5337739	2	1	Subangular	59.43	70.9		glassy
117		E	Ferry House	Beach	521615	5337739	2	1	Rounded	59.34	98.3		lighly vessicular
118		E	Ferry House	Beach	521615	5337739	3	1	Rounded	46.35	67.9		light Quartzite Phenocrysts
119	Y	E	Ferry House	Beach	521615	5337739	1	1	Subangular	49.11	52.4	UK	light Quartzite Phenocrysts, glassy
120	Y	E	Ferry House	Beach	521615	5337739	2	1	Subrounded	55.74	108.6	UK	
121		F	Ferry House	Beach	521615	5337739	2	1	Subrounded	68.15	219.9		glassy ?
122		F	Ferry House	Beach	521615	5337739	2	1	Subrounded	106.74	474.3		
123		F	Ferry House	Beach	521615	5337739	1	1	Subrounded	76.69	313		quartzite phenocrysts
124		F	Ferry House	Beach	521615	5337739	1	1	Subrounded	61.61	116		
125		F	Ferry House	Beach	521615	5337739	2	1	Rounded	70.9	202		
126		F	Ferry House	Beach	521615	5337739	2	1	Subrounded	112.93			glassy ?
127	Y	F	Ferry House	Beach	521615	5337739	3	2	Rounded	130.33		UK	
128		G	Ferry House	Beach	521615	5337739	1	1	Rounded	92.64			
129		G	Ferry House	Beach	521615	5337739	2	2	Rounded	44.16	59.3		quartzite phenocrysts
130		G	Ferry House	Beach	521615	5337739	2	2	Subrounded	61.45	130.9		
131		G	Ferry House	Beach	521615	5337739	3	2	Subrounded	57.11	122.3		
132		G	Ferry	Beach	521615	5337739	2	1	Rounded	63.9	161.1		

			House										
133		G	Ferry House	Beach	521615	5337739	2	2	Rounded	69.34	124.4		quartzite phenocrysts
134		G	Ferry House	Beach	521615	5337739	2	2	Subangular	54.02	90.8		glassy
135		G	Ferry House	Beach	521615	5337739	3	2	Subrounded	61.77	192.4		
136		G	Ferry House	Beach	521615	5337739	2	2	Subrounded	81.99	388.9		
137		G	Ferry House	Beach	521615	5337739	3	2	Subrounded	108.07	590.7		quartzite phenocrysts
138		G	Ferry House	Beach	521615	5337739							Really fricking big rock!
139	Y	H	West Twin Creek, E	Beach	429237	5335108	3	1	Subangular	86.8	420	UK	
140		H	West Twin Creek, E	Beach	429237	5335108	2	2	Subrounded	79.21	355.5		vessicular
141		H	West Twin Creek, E	Beach	429237	5335108	3	2	Rounded	80.43	295.6		
142		H	West Twin Creek, E	Beach	429237	5335108	1	2	Rounded	66.43	180.2		vessicular
143		H	West Twin Creek, E	Beach	429237	5335108	2	1	Subrounded	67.38	181.4		
144		H	West Twin Creek, E	Beach	429237	5335108	3	2	Subangular	66.49	163.4		
145		H	West Twin Creek, E	Beach	429237	5335108	2	2	Rounded	60.58	168.4		
146		H	West Twin Creek, E	Beach	429237	5335108	1	2	Rounded	59.65	130.9		
147		H	West Twin Creek, E	Beach	429237	5335108	2	1	Subrounded	51.05	110.5		
148		H	West Twin Creek, E	Beach	429237	5335108	2	1	Subrounded	51.86	86.7		vessicular
149		H	West Twin Creek, E	Beach	429237	5335108	3	1	Subrounded	54.64	85.6		
150		H	West Twin Creek, E	Beach	429237	5335108	2	1	Subrounded	51.6	85.7		light quartzite phenocrysts
151		H	West Twin Creek, E	Beach	429237	5335108	2	1	Subangular	52.37	88.5		
152		H	West Twin Creek, E	Beach	429237	5335108	2	1	Subangular	54.19	55.6		
153		H	West Twin Creek, E	Beach	429237	5335108	2	2	Subangular	46.7	62.5		quartzite phenocrysts
154		H	West Twin Creek, E	Beach	429237	5335108	2	2	Subangular	41.47	32.2		vessicular
155	Y	H	West Twin Creek, E	Beach	429237	5335108	2	2	Rounded	45.64	43.4	Watts Point	
156		H	West Twin Creek, E	Beach	429237	5335108	2	2	Subrounded	48.02	51.8		vessicular
157		H	West Twin Creek, E	Beach	429237	5335108	2	2	Rounded	43.05	46.9		
158	Y	H	West Twin Creek, E	Beach	429237	5335108	1	2	Subrounded	34.06	28	Watts Point	
159		I	Sekiu	Beach	404635	5345749	2	2	Subrounded	65.09	203.7		? Vessicular
160		I	Sekiu	Beach	404635	5345749	2	2	Subrounded	61.99	184.7		quartzite phenocrysts
161		I	Sekiu	Beach	404635	5345749	1	1	Rounded	57.41	128.6		lighly vessicular
162		I	Sekiu	Beach	404635	5345749	1	2	Rounded	56.42	116.7		lighly vessicular
163		I	Sekiu	Beach	404635	5345749	2	1	Rounded	58.21	121.4		glassy
164	Y	I	Sekiu	Beach	404635	5345749	2	2	Subrounded	62.78	136.8	Watts Point	quartzite phenocrysts
165	Y	I	Sekiu	Beach	404635	5345749	2	2	Rounded	60.3	107.6	Watts Point	
166	Y	I	Sekiu	Beach	404635	5345749	2	1	Subrounded	62.03	104.7	Watts Point	
167		I	Sekiu	Beach	404635	5345749	2	2	Subrounded	53.34	80.5		
168		I	Sekiu	Beach	404635	5345749	1	2	Subrounded	47.25	60.7		
169		I	Sekiu	Beach	404635	5345749	1	1	Rounded	46.57	65.7		lighly vessicular
170		I	Sekiu	Beach	404635	5345749	1	2	Subrounded	55.57	76.6		
171		I	Sekiu	Beach	404635	5345749	1	2	Rounded	45.15	60.1		
172		I	Sekiu	Beach	404635	5345749	1	2	Rounded	42.92	58.1		quartzite phenocrysts
173		I	Sekiu	Beach	404635	5345749	1	1	Rounded	52.02	63.7		
174		I	Sekiu	Beach	404635	5345749	1	2	Rounded	55.87	56.3		
175		I	Sekiu	Beach	404635	5345749	1	1	Well Rounded	41.27	60.1		lighly vessicular
176		I	Sekiu	Beach	404635	5345749	1	1	Rounded	36.92	25.8		quartzite phenocrysts
177		I	Sekiu	Beach	404635	5345749	2	2	Rounded	44.65	58.6		
178		I	Sekiu	Beach	404635	5345749	2	1	Rounded	40.97	52.5		quartzite phenocrysts ?
179	Y	I	Sekiu	Beach	404635	5345749	1	1	Rounded	40.82	29.7	Watts Point	
180	Y	I	Sekiu	Beach	404635	5345749	1	1	Rounded	39.19	32.7	Watts Point	

181		I	Sekiu	Beach	404635	5345749	1	1	Rounded	35.75	26.6		quartzite phenocrysts
182		I	Sekiu	Beach	404635	5345749	1	1	Rounded	34.5	29.1		lighly vessicular
183		I	Sekiu	Beach	404635	5345749	1	1	Rounded	33.54	22		
184		I	Sekiu	Beach	404635	5345749	1	1	Subrounded	45.54	29.7		
185		I	Sekiu	Beach	404635	5345749	1	1	Rounded	30.96	19.1		quartzite phenocrysts
186		J	Rayonier	Beach	469226	5329293	2	1	Subangular	73.26	232.9		
187	Y	J	Rayonier	Beach	469226	5329293	1	1	Subangular	87.87	334	Watts Point	
188		J	Rayonier	Beach	469226	5329293	1	2	Subrounded	59.34	119.3		vessicular
189		J	Rayonier	Beach	469226	5329293	1	1	Subrounded	84.49	395.6		vessicular
190		J	Rayonier	Beach	469226	5329293	1	1	Subrounded	71.12	229.5		
191		J	Rayonier	Beach	469226	5329293	1	2	Rounded	41.72	46.9		
192		J	Rayonier	Beach	469226	5329293	3	2	Rounded	46.47	83.6		
193	Y	J	Rayonier	Beach	469226	5329293	2	2	Subrounded	77.59	175.3	Watts Point	quartzite phenocrysts
194	Y	K	Rayonier	Beach	469226	5329293	1	2	Subangular	77.14	214.8	Watts Point	
195		K	Rayonier	Beach	469226	5329293	2	2	Subangular	55.81	100.5		
196		K	Rayonier	Beach	469226	5329293	1	2	Subrounded	49.95	92.5		lighly vessicular
197		K	Rayonier	Beach	469226	5329293	2	1	Subangular	56.37	83.2		
198	Discard	K	Rayonier	Beach	469226	5329293	2	1	Subrounded	50.93	71.1		quartzite phenocrysts
199		K	Rayonier	Beach	469226	5329293	1	2	Subangular	57.35	117.2		vessicular
200		K	Rayonier	Beach	469226	5329293	2	2	Subangular	55.39	109.2		
201	y		Split Rock - Mora	Beach	376843	5310957	1	1	Subrounded	90.2		Watts Point	quartzite phenocrysts
202	y		Split Rock - Mora	Beach	377272	5309864	1	1	Rounded	47.9		Watts Point	quartzite phenocrysts
203			White Rock	Beach	372119	5333392	1	1	Rounded	62.36	131.4		quartzite phenocrysts
204	Y		Cape Alava	Beach	371458	5335242	1	1	Subrounded	46.23	51.9	Watts Point	
205			Cape Alava	Beach	371458	5335242	1	1	Subrounded	55.95	81.2		
206	Y		Cape Alava	Beach	371458	5335242	2	1	Rounded	78.91	308.3	UK	
207			Henry Island	Beach	486587	5383995	2	1	Subangular	79.43	180.7		
208			Henry Island	Beach	486587	5383995	1	1	Subangular	80.41	221.3		
209			Henry Island	Beach	486587	5383995	1	1	Subangular	70.27	145.3		
210			Henry Island	Beach	486587	5383995	2	1	Subangular	54.61	69.7		
211	Y		Henry Island	Beach	486587	5383995	1	1	Subangular	46.41	55	Watts Point	
212			Henry Island	Beach	486587	5383995	1	1	Subangular	53.33	59.6		lighly vessicular
213			Henry Island	Beach	486587	5383995	2	1	Subangular	88.49	471.4		
214			Henry Island	Beach	486587	5383995	1	1	Subangular	55.37	70.2		
215			Henry Island	Beach	486587	5383995	2	1	Subangular	43.57	36.1		
216	Y		Henry Island	Beach	486159	5382646	1	2	Subrounded	54.25	67.5	Watts Point	
217			Henry Island	Beach	486159	5382646	1	1	Subrounded	52.68	63.1		quartzite phenocrysts
218			Henry Island	Beach	486159	5382646	1	1	Subrounded	52.58	66.7		quartzite phenocrysts
219			Henry Island	Beach	486159	5382646	1	2	Rounded	42.86	34.2		lighly vessicular
220	Y		Henry Island	Beach	486159	5382646	1	1	Rounded	49.37	60.7	Watts Point	lighly vessicular
221			Henry Island	Beach	486159	5382646	1	1	Subrounded	52.19	58.5		
222	Y		Henry Island	Beach	486159	5382646	1	1	Rounded	48.15	61.6	Watts Point	
223			Henry Island	Beach	486159	5382646	1	1	Rounded	42.89	30.1		quartzite phenocrysts
224			Henry Island	Beach	486159	5382646	1	1	Subrounded	46.99	40.1		
225			Henry Island	Beach	486159	5382646	1	1	Subrounded	49.89	53.1		quartzite phenocrysts
226	Y		Pillar Point	Beach	418390	5338951	1	3	Subrounded	49.35	63	UK	
227			Pillar Point	Beach	418390	5338951	1	3	Subrounded	48.1	55.9		
228			Pillar Point	Beach	418390	5338951	2	3	Rounded	46.89	82.6		
229	Y		Panorama Point	Beach	501720	5327074	1	3	Rounded	59.54	123.9	UK	
230			Jansen Creek	Beach	391093	5353303	1	1	Subangular	34.34	18.1		
231	Y		Jansen Creek	Beach	391093	5353303	2	1	Rounded	53.87	100.7	Watts Point	

232			Jansen Creek	Beach	391093	5353303	2	1	Rounded	44.82	58.9		
233			Jansen Creek	Beach	391093	5353303	2	1	Subrounded	81.99	259		looks metamorphosed
234			Split Rock - Mora	Beach	376843	5310957	1	1	Rounded	92.72	482.6		

APPENDIX C

Chipped Stone Artifact Data A

Category	Code Description
Prov 1	S= Surface, E= Excavation
Prov 2	CSC= Controlled Surface Collection, TEU= Test Excavation Unit, SHP= Shovel Probe, SQ= Square, USC= Uncontrolled Surface Collection
Prov 3	Levels and Strata for Test Units and Loci for CSC
Type	T= Tool, D= Debitage
Raw Material	D= Dacite, Q= Quartzite, Z= Quartz Crystal, O= Obsidian, C= CCS, M= Metasediment, S= Sandstone, F= Fine-grained Volcanic, G= Coarse-grained Volcanic, H= Other
Frag Cat	P= Proximal Flake Fragment, N= Non-Proximal or Flake Shatter, A= Angular Shatter
Flk Type	W= Whole Flake, B= Bifacial thinning flake, P= Bipolar flake, L= Blade
Tech Cat	1= Primary, 2= Secondary, 3= Interior
Dorsal Cortex	Amount of dorsal cortex 0 = 0%, 1 = 1-50%, 2=51-99%, 3 = 100%
Cortex Type	S= Smooth, I= Incipient cone, P= Pitted/vessicular, F= Flat
N Dorsal Flk Scars	Count of flake scars on dorsal side
Flake Term Type	F= Feather, S= Step, H= Hinge, P= Plunging
Platform	C= Cortical, F= Flat, T= Faceted, R= Crushed, A= Abraded
Weight	Weight in grams
GLD	Greatest linear dimension
Width	Next largest dimension 90 degrees from GLD
Thickness	Thickness where GLD and Width meet
Class	BF= Biface, U= Uniface, CCT= Cores/Cobble Tools
SubClass	BFF= Bifacial flake, HBF= Hafted Biface, ESB= Early Stage Biface, LSB= Late Stage Biface, RUF= Retouched Uniface, UTF= Utilized Flake- no retouch, UDC= Unidirectional Core, MDC= Multidirectional core
Retouched?	Y = Yes, N = No
Cortex	Y = Yes, N = No
Biface W/B	Biface whole or broken
FGV Name	Name of primary source

#	Site	Prov _1	Prov_2	Prov_3	Type	Raw Mtrl	Frag Cat	Flk Type	Tech Cat	Dors al Cort	Cortex Type	N Dors Flk	Flake Term	Platform
8	45-CA-476	S	CSC		T	D	WHF		2	1	P	4	F	C
9	45-CA-476	S	CSC		D	D	NPF		2	1	P	2		
10	45-CA-476	S	CSC		T	D	NPF		2	1	P	3		
11	45-CA-476	S	CSC		D	D	PFF		3	1	P	2		T
12	45-CA-476	S	CSC		D	D	NPF		2	1	P	3		
13	45-CA-476	S	CSC		T	D								
14	45-CA-476	S	CSC		D	D	NPF		2	0		2		
15	45-CA-476	S	CSC		D	D	NPF		2	1	P	3	H	
16	45-CA-476	S	CSC		D	D	NPF		2	1	P	2		
17	45-CA-476	S	CSC		D	D	NPF		2	1	P	1		
18	45-CA-477	S	CSC		T	D	NPF		2	1	I	2		
19	45-CA-477	S	CSC		D	D	WHF	B	3	0		3	F	T
20	45-CA-477	S	CSC		T	Z								
21	45-CA-477	S	CSC		D	D	NPF		3	0		2		
22	45-CA-477	S	CSC		D	D	NPF		3	0		1		
23	45-CA-477	S	CSC		T	D								
24	45-CA-477	S	CSC		D	D	NPF		2	1	P	2		
25	45-CA-477	S	CSC		D	D	PFF		3	1	P	2		C
26	45-CA-477	S	CSC		D	F	NPF		2	2		1		
27	45-CA-477	S	CSC		D	D	WHF		3	0		2	F	T
28	45-CA-477	S	CSC		D	D	WHF		2	1	P	3	F	R
29	45-CA-477	S	CSC		D	D	PFF		3	0		2		F
30	45-CA-477	S	CSC		D	D	PFF		3	0		2	S	T
31	45-CA-477	S	CSC		D	Z	NPF		1	3		0		
32	45-CA-477	S	CSC		D	D	PFF		2	1	P	2		T
33	45-CA-477	S	CSC		D	D	WHF		2	1	P	2	F	C
34	45-JE-237	S	CSC		T	D								
35	45-CA-479	S	CSC		D	D	WHF		2	1	P	1	F	C
36	45-CA-414	S	CSC		T	D					I			
37	45-CA-414	S	CSC		D	D	NPF		2	2	P	1		
38	45-CA-414	S	CSC		D	D	ANW				I			
39	45-CA-480	S	CSC		D	D	PFF		1	2	P	0		C
40	45-CA-480	S	CSC		D	D	ANW				P			
41	45-CA-414	S	CSC		D	D	ANW				I			
42	45-CA-414	S	CSC		T	Q								
43	45-CA-414	S	CSC		D	M	ANW							
44	45-CA-482	S	CSC		T	D					I			

45	45-CA-482	S	CSC		T	D								
46	45-CA-414	S	CSC		T	D					I			
47	45-CA-290	S	CSC		D	D	NPF		3	0		1		
48	45-CA-290	S	CSC		D	D	NPF		2	1	P	4	F	
49	45-CA-290	S	CSC		D	D	ANW				I			
50	45-CA-290	S	CSC		D	D	NPF		2	1	P	2		
51	45-CA-290	S	CSC		D	D	PFF		2	2	P	1		
52	45-CA-290	S	CSC		D	D	NPF		2	1	P	2	F	
53	45-CA-290	S	CSC		D	D	ANW		3	0				
54	45-CA-290	S	CSC		D	D	NPF		2	1	P	3		
55	45-CA-290	S	CSC		D	D	PFF		2	1	I	2		C
56	45-CA-290	S	CSC		D	D	NPF		2	1	P	1		
57	45-CA-290	S	CSC		D	D	WHF		3	0	P	3	F	C
58	45-CA-290	S	CSC		D	D	ANW				I			
59	45-CA-290	S	CSC		D	D	NPF		2	1	I	2		
60	45-CA-290	S	CSC		D	D	NPF		2	2	P	1		
61	45-CA-290	S	CSC		D	D	ANW				I			
62	45-CA-290	S	CSC		D	D	WHF		3	0		2	F	R
63	45-CA-290	S	CSC		T	D					P			
64	45-CA-290	S	CSC		D	D	WHF		3	0		2	F	T
65	45-CA-290	S	CSC		T	D	NPF			3	I	0		
66	45-CA-441	S	CSC		D	D	ANW				P			
67	45-CA-441	S	CSC		D	D	ANW				I			
68	45-CA-441	S	CSC		D	D	WHF		2	2	I	2	F	C
69	45-CA-441	S	CSC		D	D	PFF		3	0		3		T
70	45-CA-441	S	CSC		D	D	WHF	B	3	0		1	F	T
71	45-CA-441	S	CSC		D	D	PFF		3	0	I	2		C
72	45-CA-441	S	CSC		D	D	PFF		3	0		1		F
73	45-CA-441	S	CSC		D	D	NPF		2	1	I	2		
74	45-CA-441	S	CSC		D	D	PFF		3	0	I	2		C
75	45-CA-441	S	CSC		D	D	WHF		3	0		2	F	C
76	45-CA-441	S	CSC		D	D	PFF		3	0		0		T
77	45-CA-441	S	CSC		D	D	NPF		3	0		2		
78	45-CA-441	S	CSC		D	D	NPF		2	1	I	2		
79	45-CA-441	S	CSC		D	D	WHF		3	0		3	F	T
80	45-CA-441	S	CSC		D	D	ANW							
81	45-CA-441	S	CSC		D	D	ANW				P			
82	45-CA-441	S	CSC		D	D	NPF		2	1	I	1		
83	45-CA-441	S	CSC		D	D	WHF		3	0		2	F	F

84	45-CA-441	S	CSC		D	D	NPF		3	0	P	2		C
85	45-CA-441	S	CSC		D	D	NPF		3	0		2	F	
86	45-CA-435	S	CSC		D	D	PFF		2	1	P	2		C
87	45-CA-435	S	CSC		T	D	NPF		3	0				
88	45-CA-435	S	CSC		D	D	NPF		2	1	P	3		
89	45-CA-435	S	CSC		D	D	PFF		3	0		1		F
90	45-CA-435	S	CSC		D	D	PFF		2	1	P	2		C
91	45-CA-435	S	CSC		T	D	NPF		3	0		3		
92	45-JE-215	S	CSC		D	D	PFF		3	0		2		F
93	45-JE-215	S	CSC		D	D	NPF		3	0		4		
94	45-JE-215	S	CSC		D	D	NPF		2	1	P	3		
95	45-JE-215	S	CSC		D	D	PFF		3	0		2		T
96	45-JE-215	S	CSC		D	D	NPF		3	0		1		
97	45-JE-215	S	CSC		T	D					P			
98	45-JE-215	S	CSC		T	D	PFF		3	0	I	3	F	C
99	45-JE-228	S	CSC		D	D	PFF		3	0		1		F
100	45-CA-425	S	CSC		T	D	NPF		2	1	I	2		
101	45-JE-227	S	CSC		D	D	NPF		2	1	f	1		
102	45-JE-227	S	CSC		D	D	PFF		3	0	f	1		C
103	45-JE-233	S	CSC		T	D					P			
104	45-CA-288	S	USC		T	D	NPF							
105	45-CA-288	S	USC		D	D	NPF			2	I	0		
106	45-CA-471	S	CSC		T	D	NPF			0				
107	45-CA-471	S	CSC		D	D	PFF		2	1	P	1		C
108	45-CA-471	S	CSC		T	D								
109	45-CA-430	S	CSC		D	D	NPF		3	0		2		
110	45-CA-430	S	CSC		T	D								
111	45-CA-430	S	CSC		T	D								
112	45-CA-430	S	CSC		D	D	NPF		3	0		1		
113	45-CA-430	S	CSC		D	D	PFF		2	3	P	0		C
114	45-CA-430	S	CSC		D	D	WHF		3		P	2	F	C
115	45-CA-430	S	CSC		D	D	NPF		3	0		1		
116	45-CA-430	S	CSC		D	D	NPF		2	3	P	0	F	
117	45-CA-430	S	CSC		T	D	PFF		3	0	P	4		C
118	45-CA-430	S	CSC		D	D	NPF		3	0		2		
119	45-CA-430	S	CSC		D	D	WHF		3	0		3	F	T
120	45-CA-430	S	CSC		D	D	NPF		2	2	P	1		
121	45-CA-430	S	CSC		D	D	PFF		3	0		2		T
122	45-CA-430	S	CSC		D	D	NPF		3	0		2		

123	45-CA-430	S	CSC		D	D	PFF		3	0	P	2		C
124	45-CA-430	S	CSC		D	D	PFF		2	1	P	1		C
125	45-CA-430	S	CSC		D	D	NPF		2	1	f	2		
126	45-CA-430	S	CSC		D	D	WHF		3	0		1	F	F
127	45-CA-430	S	CSC		D	D	WHF		3	0		2	F	C
128	45-CA-430	S	CSC		D	D	WHF		3	0		3	F	T
129	45-CA-430	S	CSC		T	D					I			
130	45-CA-430	S	CSC		T	D					f			
131	45-CA-430	S	CSC		T	D	NPF							
132	45-CA-430	S	CSC		D	D	NPF		3	0		3		
133	45-CA-430	S	CSC		D	D	NPF		2	1	f	1		
134	45-CA-430	S	CSC		D	D	PFF		3	0		1	F	T
135	45-CA-430	S	CSC		D	D	WHF		3	0		2	F	F
136	45-CA-430	S	CSC		T	D	PFF		3	0	f	2		C
137	45-CA-430	S	CSC		D	D	WHF		3	0		2	F	F
138	45-CA-430	S	CSC		D	D	WHF		2	1	f	2	F	F
139	45-CA-430	S	CSC		D	D	PFF		3	0		2		T
140	45-CA-430	S	CSC		D	D	WHF		3	0		2	F	T
141	45-CA-430	S	CSC		D	D	NPF		3	0		1	F	
142	45-CA-430	S	CSC		D	D	NPF		3	0		2		
143	45-CA-430	S	CSC		D	D	PFF		2	1	P	2		T
144	45-CA-430	S	CSC		D	D	ANW				P			
145	45-CA-430	S	CSC		D	D	NPF		2	2	P	1	F	
146	45-CA-430	S	CSC		D	D	WHF		3	0	P	4	F	T
147	45-CA-430	S	CSC		D	D	NPF		2	1	I	1	F	
148	45-CA-430	S	CSC		D	D	NPF		3	0		1	F	
149	45-CA-430	S	CSC		D	Q	PFF		3	0		2		F
150	45-CA-430	S	CSC		D	Q	WHF		3	0		3	F	T
151	45-CA-430	S	CSC		D	D	PFF		3	0		3	F	T
152	45-CA-430	S	CSC		D	D	NPF		3	0		1	F	
153	45-CA-430	S	CSC		T	D					P			
154	45-CA-430	S	CSC		D	D	PFF		3	0		2		T
155	45-CA-430	S	CSC		D	D	NPF		2	1	P	1		
156	45-CA-430	S	CSC		D	D	PFF		3	0	P	2		C
157	45-CA-430	S	CSC		D	D	NPF		2	1	P	3		
158	45-CA-430	S	CSC		D	D	PFF		3	0	P	2		C
159	45-CA-430	S	CSC		D	D	WHF		2	1	P	2	F	T
160	45-CA-430	S	CSC		D	D	NPF		2	1	P	3	F	
161	45-CA-430	S	CSC		D	D	NPF		2	2	P	1	F	

162	45-CA-430	S	CSC		D	D	WHF		3	0		2	F	F
163	45-CA-430	S	CSC		T	Q	PFF		2	1		1		C
164	45-CA-430	S	CSC		D	D	NPF		0	0		1	F	
165	45-CA-430	S	CSC		T	D	NPF		3	0				
166	45-CA-430	S	CSC		T	D	WHF		2	1	P	1	F	C
167	45-CA-430	S	CSC		T	D	NPF		2	1	P	2		
168	45-CA-430	S	CSC		D	Q	PFF		1	3		0		F
169	45-CA-430	S	CSC		D	D	PFF	B	3	0		2		T
170	45-CA-430	S	CSC		D	S	NPF		2	2		1		
171	45-CA-430	S	CSC		D	D								
172	45-CA-429	S	CSC		D	D	NPF		3	0		2		
173	45-CA-429	S	CSC		D	D	PFF		3	0		2		T
174	45-CA-429	S	CSC		D	D	PFF		2	2	f	1		T
175	45-CA-429	S	CSC		D	D	WHF		3	0	P	2	F	C
176	45-CA-429	S	CSC		D	Q	WHF		3	0		2	F	C
177	45-CA-429	S	CSC		D	D	NPF		2	1	I	3		
178	45-CA-429	S	CSC		D	D	NPF		2	2	P	1		
179	45-CA-429	S	CSC		D	D	PFF		3	0		2		T
180	45-CA-429	S	CSC		D	D	NPF		3	0		1		
181	45-CA-429	S	CSC		D	D	PFF		3	0		3		T
182	45-CA-429	S	CSC		D	D	PFF		2	2	P	1		F
183	45-CA-429	S	CSC		D	D	PFF	B	3	0		3		T
184	45-CA-429	S	CSC		D	D	PFF		3	0	P	2		C
185	45-CA-429	S	CSC		D	D	PFF		3	0	P	1		C
186	45-CA-429	S	CSC		D	D	WHF		2	1	f	2	F	C
187	45-CA-429	S	CSC		D	D	PFF		3	0		2		F
188	45-CA-429	S	CSC		D	Q	PFF		3	0		2		C
189	45-CA-429	S	CSC		D	D	NPF		2	2	f	1	F	
190	45-CA-429	S	CSC		D	D	WHF		3	0		1	F	T
191	45-CA-429	S	CSC		D	D	NPF		3	0		1		
192	45-CA-429	S	CSC		D	D	WHF		2	1	P	2	F	T
193	45-CA-429	S	CSC		D	D	WHF		3	0		2	F	F
194	45-CA-429	S	CSC		D	D	NPF		3	0		1		
195	45-CA-429	S	CSC		D	D	PFF		2	1	f	1		C
196	45-CA-429	S	CSC		D	D	PFF	B	3	0		2		T
197	45-CA-429	S	CSC		T	D	WHF		3	0	I	2	F	C
198	45-CA-429	S	CSC		D	D	NPF		3	0		1		
199	45-CA-429	S	CSC		D	D	ANW							
200	45-CA-429	S	CSC		D	D	WHF		3	0	f	3	F	C

201	45-CA-429	S	CSC		D	D	WHF		2	1	P	2	F	F
202	45-CA-429	S	CSC		D	D	PFF		3	0		2		T
203	45-CA-429	S	CSC		D	D	WHF		2	1	P	2	F	F
204	45-CA-429	S	CSC		D	D	PFF	B	3	0		3		T
205	45-CA-429	S	CSC		D	D	NPF		3	0		2		
206	45-CA-429	S	CSC		D	D	NPF		3	0		1	F	
207	45-CA-429	S	CSC		D	D	PFF	B	3	0		3		T
208	45-CA-429	S	CSC		D	D	NPF		3	0		1		
209	45-CA-429	S	CSC		D	D	ANW				f			
210	45-CA-429	S	CSC		D	D	NPF		3	0		1		
211	45-CA-429	S	CSC		D	D	NPF		3	0		3	F	
212	45-CA-429	S	CSC		D	D	NPF		3	0		3	F	
213	45-CA-429	S	CSC		D	D	WHF		3	0		2	F	F
214	45-CA-429	S	CSC		D	D	PFF		2	2	f	0		F
215	45-CA-429	S	CSC		D	D	PFF	B	3	0		2		T
216	45-CA-429	S	CSC		D	D	WHF		3	0		2	F	F
217	45-CA-429	S	CSC		D	D	PFF		2	1	f	4		F
218	45-CA-429	S	CSC		D	D	ANW				P			
219	45-CA-429	S	CSC		D	D	NPF		2	1	f	1		
220	45-CA-429	S	CSC		D	D	WHF	B	3	0		3	F	T
221	45-CA-429	S	CSC		D	D	WHF		3	0	P	3	F	C
222	45-CA-429	S	CSC		D	D	ANW							
223	45-CA-429	S	CSC		D	D	PFF		3	0		2		T
224	45-CA-429	S	CSC		D	D	PFF		3	0		1		T
225	45-CA-429	S	CSC		D	D	ANW							
226	45-CA-429	S	CSC		D	D	PFF		2	1	f	3		C
227	45-CA-301	S	CSC		D	D	WHF		3	0		3	P	F
228	45-CA-301	S	CSC		D	D	NPF		2	1	I	3		
229	45-CA-301	S	CSC		D	D	NPF		2	1	f	1	F	
230	45-CA-301	S	CSC		D	D	NPF		2	1	P	1		
231	45-CA-301	S	CSC		D	D	WHF		2	1	P	3	F	C
232	45-CA-301	S	CSC		T	D	NPF		2	1	P	2	F	
233	45-CA-301	S	CSC		D	D	PFF	B	3	0		2		T
234	45-CA-301	S	CSC		D	D	WHF		2	1	P	3	F	C
235	45-CA-301	S	CSC		D	D	NPF		2	2	f	1		
236	45-CA-301	S	CSC		D	D	PFF		2	1	I	3		C
237	45-CA-301	S	CSC		D	D	WHF		2	1	f	1	F	F
238	45-CA-301	S	CSC		D	D	WHF		3	0	f	3	F	C
239	45-CA-301	S	CSC		D	D	WHF		3	0	P	3	F	C

240	45-CA-301	S	CSC		D	D	NPF		2	1	f	2		
241	45-CA-301	S	CSC		D	D	PFF		3	0	P	2		C
242	45-CA-301	S	CSC		D	D	WHF	B	3	0		3	F	T
243	45-CA-301	S	CSC		D	D	NPF		2	1	f	1	F	
244	45-CA-301	S	CSC		D	D	NPF		3	0		1		
245	45-CA-301	S	CSC		T	D	WHF		3	0	f	4	F	C
246	45-CA-301	S	CSC		D	O	PFF	B	3	0		3		T
247	45-CA-301	S	CSC		D	O	PFF	B	3	0		3		T
248	45-CA-301	S	CSC		D	O	PFF	B	3	0		2		T
249	45-CA-301	S	CSC		D	O	WHF	B	3	0		3	F	T
250	45-CA-301	S	CSC		D	O	WHF	B	3	0		2	F	T
251	45-CA-301	S	CSC		D	O	NPF	B	3	0		3	F	
252	45-CA-301	S	CSC		D	O	NPF	B	3	0		4	F	
253	45-CA-301	S	CSC		D	O	NPF	B	3	0		3	F	
254	45-CA-301	S	CSC		D	O	NPF	B	3	0		3	F	
255	45-CA-301	S	CSC		D	O	NPF	B	3	0		3	F	
256	45-CA-301	S	CSC		D	O	NPF		3	0		2		
257	45-CA-301	S	CSC		D	O	NPF		3	0		2		
258	45-CA-301	S	CSC		D	O	NPF		3	0		2		
259	45-CA-301	S	CSC		D	O	PFF	B	3	0		4		T
260	45-CA-301	S	CSC		D	O	WHF	B	3	0		3	F	T
261	45-CA-442	S	CSC		T	D								
262	45-CA-434	S	CSC		D	D	PFF	B	2	1	P	2		T
263	45-CA-443	S	CSC		T	M	NPF		3	0		1		
264	45-CA-443	S	CSC		D	D	NPF		3	0		1	F	
265	45-CA-434	S	CSC		T	D	WHF		3	0	f	4	F	C
266	45-CA-429	E	TEU 2	LEVEL 2	D	D	WHF	B	3	0		2	F	T
267	45-CA-429	S	CSC		D	D	NPF		3	0		1		
268	45-CA-429	S	CSC		D	D	NPF		3	0		1		
269	45-JE-107	S	CSC		T	D								
270	45-JE-110	S	CSC		T	D								
271	45-CA-552				D	D	WHF		3	0	f	2	F	C
272	45-CA-434	S	CSC		D	D	NPF		3	0		3		
273	45-CA-430	S	CSC		T	D								
274	45-CA-430	S	CSC		T	D								
275	45-JE-216	E	TEU 9	LEVEL 2	D	D	PFF		2	1	f	2		C
276	45-CA-482	S	CSC		T	D								
277	45-CA-430	S	CSC		T	D								
278	45-CA-478	S	CSC		T	D								

279	45-CA-270	S	CSC	LOCUS 2	T	D								
280	45-CA-432	E	TEU 12	LEVEL 4	T	D								
281	45-JE-236	S	CSC		T	D								
282	45-CA-444	S	CSC		T	D								
283	ONP-2007-09	E	TEU 4	lEVEL 4	D	D	WHF	B	3	0		4	F	T
284	ONP-2007-09	E	TEU 1	lEVEL 4	D	D	WHF		2	2	f	2	F	F
285	45-CA-487	E	TEU 1	LEVEL 2	D	D	WHF		2	2	P	2	F	F
286	45-CA-487	E	TEU 1	LEVEL 3	D	D	WHF		3	0	f	2	F	C
287	45-CA-302	E	SHP 8		D	D	NPF		2	1	I	2		
288	45-CA-302	E	SHP 4		T	D					P			
289	45-CA-561	S	CSC		T	D	PFF		2	0	I	2		C
290	45-CA-478	S	CSC		T	D	NPF		3	0		3		
291	45-CA-478	S	CSC		D	D	PFF		2	1	P	2		C
292	45-CA-478	S	CSC		D	D	WHF		3	0		3	F	F
293	45-CA-291	S	CSC		D	Q	ANW							
294	45-CA-291	S	CSC		D	D	PFF		3	0		2		R
295	45-CA-291	S	CSC		D	D	WHF		3	0		4	F	F
296	45-CA-291	S	CSC		D	D	NPF		3	0		3	F	
297	45-CA-291	S	CSC		D	D	PFF		3	0		1		F
298	45-CA-291	S	CSC		D	D	NPF		3	0		2	F	
299	45-CA-291	S	CSC		D	D	NPF		3	0		1		
300	45-CA-291	S	CSC		D	D	NPF		3	0		2	F	
301	45-CA-291	S	CSC		D	D	WHF		2	1	f	4	F	C
302	45-CA-291	S	CSC		D	D	ANW				P			
303	45-CA-291	S	CSC		D	D	NPF		2	1	f	2	F	
304	45-CA-291	S	CSC		D	D	NPF		3	0		2	F	
305	45-CA-291	S	CSC		D	D	NPF		3	0		2		
306	45-CA-291	S	CSC		T	D			2		f			
307	45-CA-291	S	CSC		D	D	PFF		3	0		3		T
308	45-CA-291	S	CSC		D	D	NPF		3	0		1		
309	45-CA-291	S	CSC		D	D	NPF		2	1	P	1	F	
310	45-CA-291	S	CSC		D	D	WHF		3	0		4	F	F
311	45-CA-291	S	CSC		D	D	ANW							
312	45-CA-291	S	CSC		D	D	NPF		3	0		2	F	
313	45-CA-291	S	CSC		T	Q								
314	45-CA-291	S	CSC		D	D	ANW							
315	45-CA-291	S	CSC		D	D	ANW							
316	45-CA-291	S	CSC		D	D	NPF		3	0		2	F	

317	45-CA-291	S	CSC		T	D								
318	45-CA-291	S	CSC		D	D	NPF		2	2	f	2		
319	45-CA-291	S	CSC		D	D	NPF		2	1	P	3		
320	45-CA-291	S	CSC		D	D	NPF		2	1	f	3		
321	45-CA-291	S	CSC		D	D	PFF		3	0		1		T
322	45-CA-291	S	CSC		D	D	NPF		3	0		2		
323	45-CA-291	S	CSC		D	D	NPF		2	2	I	1		
324	45-CA-291	S	CSC		D	D	NPF		3	0		1	F	
325	45-CA-291	S	CSC		D	D	WHF		2	0	f	1	F	C
326	45-CA-291	S	CSC		D	D	NPF		2	2	I	1		
327	45-CA-291	S	CSC		D	D	WHF		2	1	P	2	F	C
328	45-CA-291	S	CSC		D	D	PFF		3	0	P	2		C
329	45-CA-291	S	CSC		D	D	PFF		3	0	P	2		C
330	45-CA-291	S	CSC		D	D	NPF		3	0		1	F	
331	45-CA-291	S	CSC		D	D	WHF		3	0		2	F	R
332	45-CA-291	S	CSC		D	D	NPF		2	1	I	1		
333	45-CA-291	S	CSC		D	D	NPF		2	1	P	3		
334	45-CA-291	S	CSC		D	D	NPF		2	1	P	1		
335	45-CA-291	S	CSC		D	D	ANW							
336	45-CA-291	S	CSC		D	D	PFF		2	1	I	1		F
337	45-CA-291	S	CSC		D	D	NPF		2	1	P	2		
338	45-CA-291	S	CSC		D	D	ANW				I			
339	45-CA-291	S	CSC		D	D	PFF		3	0		2		C
340	45-CA-291	S	CSC		D	D	ANW				P			
341	45-CA-291	S	CSC		D	D	NPF		2	1	P	1	F	
342	45-CA-291	S	CSC		D	D	NPF		3	0		2	F	
343	45-CA-291	S	CSC		D	D	PFF		3	0		2		F
344	45-CA-291	S	CSC		D	D	WHF		3	0	P	2	F	C
345	45-CA-291	S	CSC		D	D	NPF		3	0		2	F	
346	45-CA-291	S	CSC		D	D	WHF		3	0	f	2	F	C
347	45-CA-291	S	CSC		D	D	NPF		3	0		3	F	
348	45-CA-291	S	CSC		D	D	NPF		3	0		4		
349	45-CA-291	S	CSC		D	D	WHF		2	2	P	2	F	T
350	45-CA-291	S	CSC		D	D	PFF		3	0		2	F	F
351	45-CA-291	S	CSC		D	D	NPF		3	0		1		
352	45-CA-291	S	CSC		D	D	WHF		2	1	f	3	F	C
353	45-CA-291	S	CSC		D	D	NPF		2	1	f	2		
354	45-CA-291	S	CSC		D	D	PFF		3	0	f	2		C
355	45-CA-291	S	CSC		T	D					P			

356	45-CA-291	S	CSC		T	D					P			
357	45-CA-291	S	CSC		D	D	WHF		2	2	p	2	F	T
358	45-CA-291	S	CSC		T	D					P			
359	45-CA-291	S	CSC		D	D	NPF		3	0		2	F	
360	45-CA-291	S	CSC		D	D	NPF		3	0		2	F	
361	45-CA-291	S	CSC		D	D	NPF		3	0		1		
362	45-CA-291	S	CSC		T	D					I			
363	45-CA-291	S	CSC		D	D	NPF		2	2	f	3		
364	45-CA-291	S	CSC		D	D	ANW				f			
365	45-CA-292	S	CSC		T	D					P			
366	45-CA-292	S	CSC		T	D						p		
367	45-CA-292	S	CSC		T	D								
368	45-CA-292	S	CSC		D	D	PFF		1	3	P	0		C
369	45-CA-293	S	CSC		D	D	WHF		2	0	P	1	F	F
370	45-CA-293	S	CSC		T	D					I			
371	45-CA-293	S	CSC		D	D	NPF		2	2	f	1		
372	45-CA-293	S	CSC		D	D	PFF		3	0		2		T
373	45-CA-257	S	CSC		T	D	WHF		2	1	f	2	F	F
374	45-CA-257	S	CSC		D	D	PFF		2	1	I	3		C
375	45-CA-257	S	CSC		D	D	NPF		3	0		2	F	
376	45-CA-257	S	CSC		D	D	WHF		1	3	f	0	F	C
377	45-CA-257	S	CSC		D	D	PFF		3	0		3		F
378	45-JE-238	E	TEU 1	LEVEL 1	D	M	PFF		2	1		1		C
379	45-JE-238	E	TEU 1	LEVEL 1	T	M								
380	45-JE-238	E	TEU 1	LEVEL 2	D	M	PFF		2	2		1		C
381	45-JE-238	E	TEU 1	LEVEL 2	D	F	WHF		3	0		5	F	C
382	45-JE-238	E	TEU 1	LEVEL 2	D	Q	NPF		2	1		1		
383	45-JE-238	E	TEU 1	LEVEL 2	D	M	NPF		2	1		1		
384	45-JE-238	E	TEU 1	LEVEL 2	D	S	NPF		2	3		0	F	
385	45-JE-238	E	TEU 1	LEVEL 2	D	S	NPF		2	3		0	F	
386	45-JE-238	E	TEU 1	LEVEL 2	D	S	WHF		1	3		0	F	C
387	45-JE-238	E	TEU 1	LEVEL 2	D	S	NPF		2	2		1		
388	45-JE-238	E	TEU 1	LEVEL 2	D	S	NPF		2	1			F	
389	45-JE-238	E	TEU 1	LEVEL 2	D	S	WHF	P	1	3		0	F	C
390	45-JE-238	E	TEU 1	LEVEL 2	D	S	PFF		2	1		1		C
391	45-JE-238	E	TEU 1	LEVEL 2	D	S	NPF		2	1		2	F	
392	45-JE-238	E	TEU 1	LEVEL 2	D	S	NPF		3	0		2	F	
393	45-JE-238	E	TEU 1	LEVEL 3	D	Q	NPF		2	3		0	F	

394	45-JE-238	E	TEU 1	LEVEL 3	D	M	NPF		3	0		3	F	
395	45-JE-238	E	TEU 1	LEVEL 3	D	Q	ANW							
396	45-JE-238	E	TEU 1	LEVEL 3	D	Q	ANW							
397	45-JE-238	E	TEU 1	LEVEL 3	D	Q	NPF		3	0		1	F	
398	45-JE-238	E	TEU 1	LEVEL 3	D	Q	ANW							
399	45-JE-238	E	TEU 1	LEVEL 3	D	Q	PFF		3	0		2		F
400	45-JE-238	E	TEU 1	LEVEL 3	D	Q	WHF		3	0		2	F	F
401	45-JE-238	E	TEU 1	LEVEL 3	D	Q	PFF		3	0		1		C
402	45-JE-238	E	TEU 1	LEVEL 3	D	C	PFF	B	3	0		4		T
403	45-JE-238	E	TEU 1	LEVEL 3	D	Q	PFF	B	3	0		2		T
404	45-JE-238	E	TEU 1	LEVEL 3	D	M	PFF	B	3	0		3		F
405	45-JE-238	E	TEU 1	LEVEL 3	D	M	NPF		3	0		2		
406	45-JE-238	E	TEU 1	LEVEL 3	T	S								
407	45-JE-238	E	TEU 1	LEVEL 3	D	S	NPF		2	2		1	F	
408	45-JE-238	E	TEU 1	LEVEL 3	D	S	PFF		3	0		1		C
409	45-JE-238	E	TEU 1	LEVEL 3	D	S	WHF	P	1	3		0	F	C
410	45-JE-238	E	TEU 1	LEVEL 3	D	S	NPF		2	3		0	F	
411	45-JE-238	E	TEU 1	LEVEL 3	T	S	WHF		1	3		0	F	C
412	45-JE-238	E	TEU 1	LEVEL 3	D	S	NPF		2	1		0	F	
413	45-JE-238	E	TEU 1	LEVEL 3	D	S	ANW							
414	45-JE-238	E	TEU 1	LEVEL 3	D	S	PFF		2	1		1		C
415	45-JE-238	E	TEU 1	LEVEL 3	D	S	NPF		2	3		0		
416	45-JE-238	E	TEU 1	LEVEL 3	D	S	PFF		2	3		0		C
417	45-JE-238	E	TEU 1	LEVEL 4	D	S	WHF		3	0		3	F	C
418	45-JE-238	E	TEU 1	LEVEL 4	D	M	NPF		3	0		1	F	
419	45-JE-238	E	TEU 1	LEVEL 4	D	M	NPF		2	1		1	F	
420	45-JE-238	E	TEU 1	LEVEL 4	D	S	ANW							
421	45-JE-238	E	TEU 1	LEVEL 4	D	M	PFF		3	0		2		C
422	45-JE-238	E	TEU 1	LEVEL 4	D	Q	ANW							
423	45-JE-238	E	TEU 1	LEVEL 4	D	Q	NPF		3	0		1	F	
424	45-JE-238	E	TEU 1	LEVEL 4	D	S	PFF		3	0		1		C
425	45-JE-238	E	TEU 1	LEVEL 4	D	S	PFF		3	0		3		C
426	45-JE-238	E	TEU 1	LEVEL 4	D	Q	ANW							
427	45-JE-238	E	TEU 1	LEVEL 4	D	M	PFF		2	1		3		C
428	45-JE-238	E	TEU 1	LEVEL 4	D	M	PFF	B	3	0		2		T
429	45-JE-238	E	TEU 1	LEVEL 4	D	Q	ANW							

430	45-JE-238	E	TEU 1	LEVEL 4	D	Q	NPF		3	0		1		
431	45-JE-238	E	TEU 1	LEVEL 4	T	Q								
432	45-JE-238	E	TEU 1	LEVEL 4	D	S	WHF		3	0		4	F	C
433	45-JE-238	E	TEU 1	LEVEL 4	D	S	ANW							
434	45-JE-238	E	TEU 1	LEVEL 4	D	S	WHF		1	0		0	F	C
435	45-JE-238	E	TEU 1	LEVEL 4	D	S	WHF		1	3		0	F	C
436	45-JE-238	E	TEU 1	LEVEL 4	D	S	WHF		1	3		0	F	C
437	45-JE-238	E	TEU 1	LEVEL 4	D	S	ANW							
438	45-JE-238	E	TEU 1	LEVEL 4	D	S	WHF		1	3		0	F	C
439	45-JE-238	E	TEU 1	LEVEL 4	D	S	NPF		2	2		1		
440	45-JE-238	E	TEU 1	LEVEL 4	D	S	WHF	P	1	3		0	F	C
441	45-JE-238	E	TEU 1	LEVEL 4	D	S	PFF		1	3		0		C
442	45-JE-238	E	TEU 1	LEVEL 5	D	S	WHF		3	0		2	F	C
443	45-JE-238	E	TEU 1	LEVEL 5	D	S	NPF		2	3		0	F	
444	45-JE-238	E	TEU 1	LEVEL 5	D	S	NPF		2	1		1	F	
445	45-JE-238	E	TEU 1	LEVEL 5	D	S	WHF	P	1	3		0	F	C
446	45-JE-238	E	TEU 1	LEVEL 5	D	S	WHF	P	1	3		0	F	C
447	45-JE-238	E	TEU 1	LEVEL 6	T	Q								
448	45-JE-238	E	TEU 1	LEVEL 6	D	Q	PFF		2	1		1		C
449	45-JE-238	E	TEU 2	LEVEL 1	D	M	PFF		2	1		2	F	F
450	45-JE-238	E	TEU 2	LEVEL 1	D	M	PFF		2	1		1		F
451	45-JE-238	E	TEU 2	LEVEL 2	T	M								
452	45-JE-238	E	TEU 2	LEVEL 3	D	F	ANW							
453	45-JE-238	E	TEU 2	LEVEL 3	D	M	PFF	B	3	0		3		T
454	45-JE-238	E	TEU 2	LEVEL 3	D	Q	WHF	P	1	3		0	F	C
455	45-JE-238	E	TEU 2	LEVEL 3	T	Q	WHF	P	1	3		0	F	C
456	45-JE-238	E	TEU 2	LEVEL 3	T	Q	WHF		2	1		1	F	C
457	45-JE-238	E	TEU 2	LEVEL 3	D	S	NPF		2	1		1	F	
458	45-JE-238	E	TEU 2	LEVEL 3	D	S	PFF		2	1		1		C
459	45-JE-238	E	TEU 2	LEVEL 3	D	S	NPF		2	2		1	F	
460	45-JE-238	E	TEU 2	LEVEL 3	T	S								
461	45-JE-238	E	TEU 2	LEVEL 3	T	S								
462	45-JE-238	E	TEU 2	LEVEL 4	D	Q	WHF		3	0		1	F	C
463	45-JE-238	E	TEU 2	LEVEL 4	T	S								
464	45-CA-432	E	TEU 11	LEVEL 3	D	D	WHF		3	0		1	F	T
465	45-CA-432	E	TEU 11	LEVEL 3	D	D	NPF		3	0		1	F	

466	45-CA-432	E	TEU 12	LEVEL 3	D	D	NPF		3	0		2	F	
467	45-CA-432	E	TEU 12	LEVEL 3	D	D	NPF		3	0		3		
468	45-CA-432	E	TEU 12	LEVEL 3	D	D	NPF		3	0		2	F	
469	45-CA-432	E	TEU 12	LEVEL 4	D	D	NPF		3	0		2	F	
470	45-CA-432	E	TEU 15	LEVEL 3	D	D	NPF		3	0		2	F	
471	45-CA-432	E	TEU 15	LEVEL 3	D	D	NPF		3	0		1	F	
472	45-CA-432	E	TEU 44	LEVEL 1	D	D	NPF		3	0		1	F	
473	45-CA-432	E	TEU 44	LEVEL 2	D	D	NPF		2	1	P	2	F	
474	45-CA-432	E	TEU 44	LEVEL 4	D	D	PFF		3	0		2		T
475	45-CA-432	E	TEU 44	LEVEL 5	D	D	NPF		3	0		1	F	
476	45-CA-432	E	TEU 44	LEVEL 5	T	D					f			
477	45-CA-432	E	TEU 1	LEVEL 3	D	Q	NPF		1	3		0		
478	45-CA-432	E	TEU 12	LEVEL 3	D	Q	NPF		2	2		2	F	
479	45-CA-432	E	TEU 4	LEVEL 2	D	Q	PFF		3	0		1		C
480	45-CA-432	E	TEU 44	LEVEL 1	D	Q	PFF		3	0		2		T
481	45-CA-432	E	TEU 4	LEVEL 4	D	G	WHF		2	2		1	F	C
482	45-CA-432	E	TEU 7	LEVEL 2	D	D	ANW							
483	45-CA-432	E	TEU 28	LEVEL 2	D	D	ANW							
484	45-CA-432	E	TEU 44	LEVEL 4	D	D	ANW							
485	45-CA-432	E	TEU 45	LEVEL 3	D	D	ANW							
486	45-CA-432	E	TEU 45	LEVEL 3	D	D	NPF		3	0		2	F	
487	45-CA-432	E	TEU 44	LEVEL 4	D	D	NPF		3	0		2	F	
488	45-CA-432	E	TEU 3	LEVEL 4	T	D	WHF		2	2	P	1	F	C
489	45-CA-432	E	TEU 12	LEVEL 3	D	D	WHF		2	1	I	1	F	C
490	45-CA-432	E	TEU 12	LEVEL 3	D	D	ANW							
491	45-CA-432	E	TEU 7	LEVEL 4	D	D	ANW							
492	45-CA-432	E	TEU 28	LEVEL 3	T	Q								
493	45-CA-432	E	TEU 3	LEVEL 2	D	Q	ANW							
494	45-CA-432	E	TEU 7	LEVEL 1	D	Q	PFF		3	0		2		C
495	45-CA-432	E	TEU 14	LEVEL 1	D	Q	PFF		3	0		2		C
496	45-CA-432	E	TEU 44	LEVEL 4	D	Q	NPF		2	1		1		
497	45-CA-432	E	TEU 45	LEVEL 2	D	Q	ANW							
498	45-CA-432	E	TEU 45	LEVEL 2	D	Q	ANW							
499	45-CA-432	E	TEU 7	LEVEL 2	D	Q	WHF		3	0		1	F	T
500	45-CA-432	E	TEU 7	LEVEL 3	D	Q	WHF		3	0		2	F	C
501	45-CA-432	E	TEU 44	LEVEL 2	D	Q	NPF		3	0		2		

502	45-CA-432	E	TEU 7	LEVEL 4	D	Q	PFF	B	3	0		3		F
503	45-CA-432	E	TEU 12	LEVEL 5	D	Q	PFF	B	3	0		3		T
504	45-CA-432	E	TEU 12	LEVEL 2	D	D	WHF		2	2	P	1	F	C
505	45-CA-432	E	TEU 4	LEVEL 3	D	D	PFF		3	0		2		T
506	45-CA-432	E	TEU 43	LEVEL 2	D	D	NPF		3	0		2	F	
507	45-CA-432	E	TEU 44	LEVEL 2	D	D	PFF		2	1	P	2		C
508	45-CA-432	E	TEU 12	LEVEL 2	D	Q	NPF		2	1		2	F	
509	45-CA-432	E	TEU 30	LEVEL 3	D	D	NPF		3	0		4	F	
510	45-CA-432	E	TEU 7	LEVEL 4	T	D								
511	45-CA-432	E	TEU 33	LEVEL 3	T	D	NPF		2	1	f	2	F	
512	45-CA-432	E	TEU 11	LEVEL 1	T	D								
513	45-CA-432	E	TEU 7	LEVEL 2	D	D	NPF		3	0		3		
514	45-CA-432	E	TEU 7	LEVEL 2	D	D	PFF		3	0	P	1		C
515	45-CA-432	E	TEU 7	LEVEL 2	D	D	NPF		3	0		1	F	
516	45-CA-432	E	TEU 7	LEVEL 3	D	D	NPF		3	0		1	F	
517	45-CA-432	E	TEU 11	LEVEL 3	D	D	NPF		3	0		1		
518	45-CA-432	E	TEU 4	LEVEL 3	D	D	NPF		3	0		2		
519	45-CA-432	E	TEU 7	LEVEL 1	D	D	NPF		2	1	P	1	F	
520	45-CA-432	E	TEU 7	LEVEL 1	D	D	NPF		2	3	P	0	F	
521	45-CA-432	E	TEU 34	LEVEL 4	D	D	WHF	B	3	0		3	F	T
522	45-CA-432	E	TEU 44	LEVEL 2	D	D	WHF	B	3	0		3	F	T
523	45-CA-432	E	TEU 7	LEVEL 1	D	D	NPF		3	0		3	F	
524	45-CA-432	E	TEU 44	LEVEL 1	D	D	PFF	B	3	0		3		T
525	45-CA-432	E	TEU 44	LEVEL 4	D	D	NPF		3	0		2	F	
526	45-CA-432	E	TEU 4	LEVEL 2	D	D	PFF	B	3	0		3		T
527	45-CA-432	E	TEU 10	LEVEL 3	D	D	WHF		3	0		2	F	T
528	45-CA-432	E	TEU 12	LEVEL 3	D	D	PFF	L	3	0	P	2		C
529	45-CA-432	E	TEU 34	LEVEL 3	D	D	WHF		1	3	P	0	F	C
530	45-CA-432	E	TEU 12	LEVEL 3	D	D	PFF		2	1	I	3		F
531	45-JE-238	S			T	M	PFF		2	1		1		C
532	45-JE-238	S			D	Z	WHF		3	0		2	F	C
533	45-CA-270	E	TEU 1	LEVEL 1	T	D	PFF		2	1	F	2		C
534	45-CA-270	E	TEU 1	LEVEL 1	D	D	WHF		2	1	P	1	F	C
535	45-CA-270	E	TEU 1	LEVEL 1	D	S	WHF		3	0		3	F	T
536	45-CA-270	E	TEU 1	LEVEL 1	D	D	NPF		3	0		2	F	
537	45-CA-270	E	TEU 1	LEVEL 1	D	D	NPF		3	0		1		

538	45-CA-270	E	TEU 1	LEVEL 2	D	Z	ANW							
539	45-CA-270	E	TEU 1	LEVEL 2	D	D	PFF	B	3	0		2		T
540	45-CA-270	E	TEU 1	LEVEL 1	T	D								
541	45-CA-270	E	TEU 1	LEVEL 1	T	Z								
542	45-CA-270	E	TEU 1	LEVEL 1	D	D	PFF		2	1	P	2		C
543	45-CA-270	E	TEU 1	LEVEL 1	D	D	NPF		3	0		3		
544	45-CA-270	E	TEU 1	LEVEL 1	D	D	NPF		3	0		1		
545	45-CA-270	E	TEU 1	LEVEL 1	D	D	PFF	B	3	0		3		T
546	45-CA-270	E	TEU 1	LEVEL 1	D	D	WHF		2	2	P	1	F	F
547	45-CA-270	E	TEU 1	LEVEL 1	D	D	NPF		3	0		2	F	
548	45-CA-270	E	TEU 1	LEVEL 1	D	D	NPF		3	0		4	F	
549	45-CA-270	S	CSC	LOCUS 1	D	D	WHF		3	0		2	F	F
550	45-CA-270	S	CSC	LOCUS 1	D	D	NPF		2	2	P	1	F	
551	45-CA-270	S	CSC	LOCUS 1	D	D	NPF		3	0		3	F	
552	45-CA-270	S	CSC	LOCUS 1	D	D	WHF		2	2	P	1	F	C
553	45-CA-270	S	CSC	LOCUS 1	T	D	NPF		3	0		2		
554	45-CA-270	S	CSC	LOCUS 1	D	D	ANW							
555	45-CA-270	S	CSC	LOCUS 1	D	D	NPF		3	0		4		
556	45-CA-270	S	CSC	LOCUS 1	D	D	ANW							
557	45-CA-270	S	CSC	LOCUS 1	D	D	NPF		3	0		3	F	
558	45-CA-270	S	CSC	LOCUS 1	D	D	NPF		2	1	I	2	F	
559	45-CA-270	S	CSC	LOCUS 1	T	D					P			
560	45-CA-270	S	CSC	LOCUS 1	T	D					P			
561	45-CA-270	S	CSC	LOCUS 1	D	D	NPF		2	1	P	2		
562	45-CA-270	S	CSC	LOCUS 1	D	D	ANW							
563	45-CA-270	S	CSC	LOCUS 1	D	D	NPF		2	1	P	3	F	
564	45-CA-270	S	CSC	LOCUS 1	T	D	NPF		2	1	P	3		
565	45-CA-270	S	CSC	LOCUS 1	D	D	PFF		3	0	P	1		C
566	45-CA-270	S	CSC	LOCUS 1	D	D	NPF		3	0		3	F	
567	45-CA-270	S	CSC	LOCUS 1	D	D	NPF		3	0		1	F	
568	45-CA-270	S	CSC	LOCUS 1	D	D	NPF		3	0		2		
569	45-CA-270	S	CSC	LOCUS 1	T	D								
570	45-CA-270	S	CSC	LOCUS 1	T	D					P			
571	45-CA-270	S	CSC	LOCUS 1	D	D	NPF		2	1	I	1	F	
572	45-CA-270	S	CSC	LOCUS 1	D	D	WHF		2	1	I	1	F	C
573	45-CA-270	S	CSC	LOCUS 1	D	D	NPF		2	1	I	1	F	

574	45-CA-270	S	CSC	LOCUS 1	D	D	NPF		3	0		2		
575	45-CA-270	S	CSC	LOCUS 1	D	D	NPF		2	1	P	2		
576	45-CA-270	S	CSC	LOCUS 1	D	D	NPF		3	0		1	F	
577	45-CA-270	S	CSC	LOCUS 1	D	D	ANW				P			
578	45-CA-270	S	CSC	LOCUS 1	D	D	NPF		3	0		1		
579	45-CA-270	S	CSC	LOCUS 1	D	D	NPF		2	1	I	1		F
580	45-CA-270	S	CSC	LOCUS 1	T	D					P			
581	45-CA-270	S	CSC	LOCUS 1	D	D	NPF		3	0		2	F	
582	45-CA-270	S	CSC	LOCUS 1	D	D	NPF		3	0		1	F	
583	45-CA-270	S	CSC	LOCUS 1	D	D	WHF		3	0		2	F	T
584	45-CA-270	S	CSC	LOCUS 1	D	D	PFF		3	0		2		F
585	45-CA-270	S	CSC	LOCUS 1	D	D	NPF		3	0		1	F	
586	45-CA-270	S	CSC	LOCUS 1	D	D	PFF	B	3	0		2		T
587	45-CA-270	S	CSC	LOCUS 1	D	D	NPF		2	1	P	2		
588	45-CA-270	S	CSC	LOCUS 1	D	D	NPF		2	1	P	3	F	
589	45-CA-270	S	CSC	LOCUS 1	D	D	NPF		2	3	P	0		
590	45-CA-270	S	CSC	LOCUS 1	D	D	ANW							
591	45-CA-270	S	CSC	LOCUS 1	T	D	NPF		2	1	F	3	F	
592	45-CA-270	S	CSC	LOCUS 2	D	D	NPF		2	1	P	2	F	
593	45-CA-270	S	CSC	LOCUS 2	D	D	NPF		3	0		2		
594	45-CA-270	S	CSC	LOCUS 2	D	D	NPF		2	1	I	2	F	
595	45-CA-270	S	CSC	LOCUS 2	D	D	PFF		3	0		1		C
596	45-CA-270	S	CSC	LOCUS 2	D	D	NPF		2	1	P	1		
597	45-CA-270	S	CSC	LOCUS 2	D	D	NPF		2	1	F	3		
598	45-CA-270	S	CSC	LOCUS 2	D	D	ANW							
599	45-CA-270	S	CSC	LOCUS 2	D	D	NPF		2	1	P	2	F	
600	45-CA-270	S	CSC	LOCUS 2	D	D	NPF		2	1	P	2	F	
601	45-CA-270	S	CSC	LOCUS 2	D	D	NPF		3	0		3	F	
602	45-CA-270	S	CSC	LOCUS 2	D	D	NPF		3	0		2		
603	45-CA-270	S	CSC	LOCUS 2	D	D	PFF		3	0		2		C
604	45-CA-270	S	CSC	LOCUS 2	T	D	NPF		2	1	P	2		
605	45-CA-270	S	CSC	LOCUS 2	D	D	PFF		3	0		2		F
606	45-CA-270	S	CSC	LOCUS 2	D	D	NPF		3	0		1		
607	45-CA-270	S	CSC	LOCUS 2	D	D	PFF		2	1	P	2		C
608	45-CA-270	S	CSC	LOCUS 2	T	D	PFF		3	0	P	2		C
609	45-CA-270	S	CSC	LOCUS 2	D	M	ANW							

610	45-CA-270	S	CSC	LOCUS 2	D	D	NPF		3	0		2	F	
611	45-CA-270	S	CSC	LOCUS 2	D	M	ANW							
612	45-CA-270	S	CSC	LOCUS 2	D	D	NPF		2	1	I	1	F	
613	45-CA-270	S	CSC	LOCUS 2	D	D	PFF	B	3	0		4	S	T
614	45-CA-270	S	CSC	LOCUS 2	D	M	ANW							
615	45-CA-270	S	CSC	LOCUS 2	T	D	NPF		2	0	P	2		
616	45-CA-270	S	CSC	LOCUS 2	D	M	ANW							
617	45-CA-270	S	CSC	LOCUS 2	D	D	WHF	B	2	1	P	3	F	T
618	45-CA-270	S	CSC	LOCUS 2	D	D	PFF		3	0		1		F
619	45-CA-270	S	CSC	LOCUS 2	D	D	WHF		3	0		3	F	T
620	45-CA-270	S	CSC	LOCUS 2	D	D	NPF		3	0		3	F	
621	45-CA-270	S	CSC	LOCUS 2	D	D	NPF		3	0		1		
622	45-CA-270	S	CSC	LOCUS 2	D	D	PFF		2	1	I	1		F
623	45-CA-270	S	CSC	LOCUS 2	D	D	NPF		3	0		1	F	
624	45-CA-270	S	CSC	LOCUS 2	T	D					P			
625	45-CA-270	S	CSC	LOCUS 2	T	D								
626	45-CA-270	S	CSC	LOCUS 2	T	D	WHF		3	0		3		F
627	45-CA-270	S	CSC	LOCUS 2	D	M	ANW							
628	45-CA-270	S	CSC	LOCUS 2	D	D	NPF		3	0		2	F	
629	45-CA-270	S	CSC	LOCUS 2	D	D	NPF		3	0		2	F	
630	45-CA-270	S	CSC	LOCUS 2	D	D	NPF		3	0		1		
631	45-CA-270	S	CSC	LOCUS 2	T	D					P			
632	45-CA-270	S	CSC	LOCUS 2	T	M								
633	45-CA-270	S	CSC	LOCUS 2	D	D	ANW							
634	45-CA-270	S	CSC	LOCUS 2	D	D	NPF		3	0		2		
635	45-CA-270	S	CSC	LOCUS 2	D	D	WHF		3	0		2	F	F
636	45-CA-270	S	CSC	LOCUS 2	D	D	NPF		3	0		1		
637	45-CA-270	S	CSC	LOCUS 2	D	D	NPF		2	2	P	1	F	
638	45-CA-270	S	CSC	LOCUS 2	D	D	NPF		3	0		2	F	
639	45-CA-270	S	CSC	LOCUS 2	D	M	NPF		2	2		2	F	
640	45-CA-270	S	CSC	LOCUS 2	T	M	ANW							
641	45-CA-270	S	CSC	LOCUS 2	T	D					P			
642	45-CA-270	S	CSC	LOCUS 2	D	D	NPF		3	0		3	F	
643	45-CA-270	S	CSC	LOCUS 2	D	D	WHF		3	0		2	F	T
644	45-CA-270	S	CSC	LOCUS 2	T	D					P			
645	45-CA-270	S	CSC	LOCUS 2	D	D	NPF		3	0		3	F	

646	45-CA-270	S	CSC	LOCUS 2	D	D	NPF		2	3	P	0	F	
647	45-CA-270	S	CSC	LOCUS 3	T	D					P			
648	45-CA-270	S	CSC	LOCUS 3	D	D	NPF		3	0		4	F	
649	45-CA-270	S	CSC	LOCUS 3	D	D	ANW				F			
650	45-CA-270	S	CSC	LOCUS 3	D	D	NPF		3	0		2	F	
651	45-CA-270	S	CSC	LOCUS 3	D	D	NPF		2	1	F	1		
652	45-CA-270	S	CSC	LOCUS 3	D	D	NPF		2	1	P	3	F	
653	45-CA-270	S	CSC	LOCUS 3	D	D	PFF		3	0	P	3		C
654	45-CA-270	S	CSC	LOCUS 3	D	D	NPF		3	0		2		
655	45-CA-270	S	CSC	LOCUS 3	D	D	NPF		3	0		2		
656	45-CA-270	S	CSC	LOCUS 3	D	D	NPF		3	0		1		
657	45-CA-270	S	CSC	LOCUS 3	D	D	PFF		3	0		2		T
658	45-CA-270	S	CSC	LOCUS 3	D	D	NPF		3	0		2		
659	45-CA-270	S	CSC	LOCUS 3	D	D	NPF		3	0		3	F	
660	45-CA-270	S	CSC	LOCUS 3	D	D	ANW							
661	45-CA-270	S	CSC	LOCUS 3	D	D	WHF		3	0		2	F	T
662	45-CA-270	S	CSC	LOCUS 3	D	D	NPF		2	1	P	2	F	
663	45-CA-270	S	CSC	LOCUS 3	D	D	WHF		2	1	P	1	F	C
664	45-CA-436	S	CSC		T	D	PFF		2	1	I	1		T
665	45-CA-436	S	CSC		D	D	PFF		2	1	I	1		T
666	45-CA-436	S	CSC		T	D	PFF		2	1	F	2		T
667	45-CA-436	S	CSC		D	D	NPF		3	0		1	F	
668	45-CA-436	S	CSC		D	D	WHF		3	0	F	1	F	C
669	45-CA-436	S	CSC		D	D	PFF		3	0	F	1		C
670	45-CA-436	S	CSC		T	D	WHF		3	0	F	4		C
671	45-CA-436	S	CSC		T	D					F			
672	45-CA-436	S	CSC		T	D	WHF		2	1	F	3	F	C
673	45-CA-436	S	CSC		T	D	NPF		3	0		1	F	
674	45-CA-436	S	CSC		T	D	WHF		3	0		5	F	T
675	45-CA-436	S	CSC		T	D	PFF		3	0	F	3	S	C
676	45-CA-436	S	CSC		D	D	PFF		2	1	F	1	S	C
677	45-CA-436	S	CSC		T	D	NPF		2	1	F	1	F	
678	45-CA-436	S	CSC		D	D	NPF		3	0		1		
679	45-CA-436	S	CSC		D	D	PFF		2	2	I	2	S	C
680	45-CA-436	S	CSC		T	Q								
681	45-CA-439	S	CSC		T	D	NPF		2	2	F	0	F	
682	45-CA-439	S	CSC		T	D	NPF		2	1	F	2		

683	45-CA-439	S	CSC		D	D	NPF		2	1	F	2	F	
684	45-CA-439	S	CSC		D	D	NPF		3	0		2	F	
685	45-CA-439	S	CSC		D	D	PFF		2	1	F	2	F	C
686	45-CA-439	S	CSC		D	D	NPF		3	0		2	F	
687	45-CA-439	S	CSC		D	D	NPF		3	0		1	F	
688	45-CA-439	S	CSC		D	D	NPF		3	0		1	F	
689	45-CA-439	S	CSC		D	D	NPF		3	0		1		
690	45-CA-438	S	CSC		D	D	NPF		3	0		1	F	
691	45-CA-438	S	CSC		D	D	NPF		3	0		1	F	
692	45-CA-438	S	CSC		D	D	NPF		3	0		1	F	
693	45-CA-438	S	CSC		D	D	NPF		3	0		2	F	
694	45-CA-438	S	CSC		D	D	PFF	B	3	0		3	S	T
695	45-CA-438	S	CSC		D	D	NPF		3	0		1	F	
696	45-CA-438	S	CSC		D	D	NPF		3	0		1		
697	45-CA-438	S	CSC		D	D	NPF		3	0		1		
698	45-CA-438	S	CSC		D	D	NPF		3	0		1	S	
699	45-CA-438	S	CSC		D	D	PFF		3	0		1	S	F
700	45-CA-438	S	CSC		D	D	NPF		3	0		1	F	
701	45-CA-438	S	CSC		D	D	NPF		3	0		1	F	
702	45-CA-438	S	CSC		D	D	NPF		2	2	F	1	F	
703	45-CA-438	S	CSC		D	D	NPF		3	0		3	F	
704	45-CA-438	S	CSC		D	D	NPF		2	1	F	1	S	
705	45-CA-438	S	CSC		D	D	WHF		1	3	F	0	F	F
706	45-CA-438	S	CSC		D	D	WHF		2	1	F	3	F	F
707	45-CA-438	S	CSC		D	D	WHF		2	1	F	3	F	T
708	45-CA-438	S	CSC		D	D	ANW							
709	45-CA-438	S	CSC		D	D	NPF		3	0		3	S	
710	45-CA-438	S	CSC		T	D	NPF		2	1	P	1	F	
711	45-CA-438	S	CSC		D	D	PFF		2	1	P	2	S	T
712	45-CA-438	S	CSC		T	D	NPF		2	1	F	2	F	
713	45-CA-438	S	CSC		D	D	WHF		3	0		1	F	F
714	45-CA-438	S	CSC		D	D	WHF		3	0	F	2	F	C
715	45-CA-438	S	CSC		D	D	PFF		2	1	F	1		T
716	45-CA-438	S	CSC		D	D	NPF		2	1	F	1	F	
717	45-CA-438	S	CSC		D	D	PFF		2	1	P	2	S	C
718	45-CA-438	S	CSC		D	D	WHF		3	0	F	2	F	C
719	45-CA-438	S	CSC		D	D	NPF		2	1	F	1	S	
720	45-JE-234	S	CSC		D	D	WHF	B	3	0		4	F	T
721	45-MS-113	S	CSC		D	D	NPF		3	0		2	S	

722	45-CA-446	S	CSC		D	D	ANW							
723	45-JE-107	S	CSC		D	D	NPF		2	1	P	2	F	
724	45-CA-445	S	CSC		D	D	PFF		3	0	I	2	S	C
725	45-CA-437	S	CSC		D	D	WHF		3	0		3	F	T
726	45-CA-437	S	CSC		D	D	NPF		3	0		2		
727	45-CA-437	S	CSC		D	D	NPF		3	0		3	F	
728	45-CA-437	S	CSC		D	D	NPF		3	0		2	F	
729	45-CA-SC	E	SQ 6		T	F	WHF		1	3		0	H	C
730	45-CA-SC	E	TEU 7		D	S	WHF		2	1		2	F	F
731	45-CA-SC	E	SQ 6	LEVEL 10-20	D	D	PFF		2	1	P	2	S	F
732	45-CA-SC	E	SQ 10		D	D	WHF	B	3	0		2	F	T
733	45-CA-SC	E	SQ 10		D	D	NPF		3	0		2	S	
734	45-CA-SC	E	SQ 22		D	D	PFF	B	3	0		3		F
735	45-CA-SC	E	SQ 23		D	D	ANW				P			
736	45-CA-SC	E	SQ 23		D	D	WHF	B	3	0		3	F	T
737	45-CA-SC	E	SQ 23		D	D	NPF		3	0		3	F	
738	45-CA-SC	E	SQ 23		D	M	NPF		2	1		3	F	
739	45-CA-SC	E	SQ 24		T	M								
740	45-CA-SC	E	SQ 24		D	D	NPF		3	0		1	F	
741	45-CA-SC	E	SQ 24		D	S	NPF		2	1		2	F	
742	45-CA-SC	E	SQ 24	CN 7	D	D	NPF		3	0		4	F	
743	45-CA-SC	E	SQ 24	CN 17	D	M	NPF		2	1		2		
744	45-CA-SC	E	SQ 25	CN 290	D	D	WHF		3	0		4	F	F
745	45-CA-SC	E	SQ 25	CN 290	D	D	WHF		3	0		3	F	F
746	45-CA-SC	E	SQ 25	CN 290	D	D	WHF		2	1	F	5	F	T
747	45-CA-SC	E	SQ 25	CN 290	D	D	PFF		3	0	F	3	S	C
748	45-CA-SC	E	SQ 25	CN 290	D	D	WHF		2	1	F	3	F	C
749	45-CA-SC	E	SQ 25	CN 290	D	D	WHF		3	0	F	3	F	C
750	45-CA-SC	E	SQ 25	CN 290	D	D	NPF		2	1	F	1		
751	45-CA-SC	E	SQ 25	CN 290	D	D	PFF		3	0		3	S	F
752	45-CA-SC	E	SQ 25	CN 290	D	D	NPF		2	1	P	3	F	
753	45-CA-SC	E	SQ 25	CN 290	D	D	NPF		3	0		1	F	
754	45-CA-SC	E	SQ 25	CN 290	D	D	PFF		3	0		4	S	F
755	45-CA-SC	E	SQ 25	CN 290	D	D	NPF		2	1	F	2	F	
756	45-CA-SC	E	SQ 25	CN 290	D	D	NPF		3	0		3	F	
757	45-CA-SC	E	SQ 25	CN 290	D	D	PFF		3	0		1	S	F
758	45-CA-SC	E	SQ 25	CN 290	D	D	PFF		3	0	F	3	S	C
759	45-CA-SC	E	SQ 25	CN 290	D	D	ANW							

760	45-CA-SC	E	SQ 25	CN 290	D	D	PFF		3	0	F	2		C
761	45-CA-SC	E	SQ 25	CN 290	D	D	NPF		2	2	P	1	S	
762	45-CA-SC	E	SQ 25	CN 290	D	D	PFF		3	0		2	S	F
763	45-CA-SC	E	SQ 25	CN 290	D	D	NPF		3	0		2	F	
764	45-CA-SC	E	SQ 25	CN 290	D	D	WHF		3	0		3	F	F
765	45-CA-SC	E	SQ 25	CN 290	D	D	PFF		3	0		2	S	F
766	45-CA-SC	E	SQ 25	CN 290	D	D	NPF		3	0		1	F	
767	45-CA-SC	E	SQ 25	CN 290	D	D	NPF		3	0		2	F	
768	45-CA-SC	E	SQ 25	CN 290	D	D	NPF		3	0		1	S	
769	45-CA-SC	E	SQ 25	CN 290	D	D	PFF		3	0		2	S	F
770	45-CA-SC	E	SQ 25	CN 290	D	D	NPF		3	0		1	F	
771	45-CA-SC	E	SQ 25	CN 290	D	D	WHF		3	0		3	F	F
772	45-CA-SC	E	SQ 25	CN 292	D	D	PFF		3	0		2	S	T
773	45-CA-SC	E	SQ 25	CN 292	D	D	NPF		3	0		3	F	
774	45-CA-SC	E	SQ 25	CN 292	D	D	WHF		3	0		2	F	T
775	45-CA-SC	E	SQ 25	CN 292	D	D	PFF		3	0		2	S	F
776	45-CA-SC	E	SQ 25	CN 292	D	D	PFF	B	3	0		2	S	T
777	45-CA-SC	E	SQ 25	CN 292	D	D	NPF		3	0		2	S	
778	45-CA-SC	E	SQ 25	CN 292	D	D	NPF		2	2	F	1	F	
779	45-CA-SC	E	SQ 25	CN 292	D	D	NPF		3	0		2	F	
780	45-CA-SC	E	SQ 25	CN 292	D	D	WHF	B	3	0		4	F	T
781	45-CA-SC	E	SQ 25	CN 292	D	D	NPF		3	0		2	F	
782	45-CA-SC	E	SQ 25	CN 292	D	D	PFF		2	1	F	1	S	F
783	45-CA-SC	E	SQ 25	CN 292	D	D	NPF		3	0		3	F	
784	45-CA-SC	E	SQ 26	CN 304	T	D					F			
785	45-CA-SC	E	SQ 26	CN 304	D	D	WHF		3	0	P	1	F	C
786	45-CA-SC	E	SQ 26	CN 304	D	D	ANW							
787	45-CA-SC	E	SQ 26	CN 305	D	D	PFF		2	1	P	2	S	C
788	45-CA-SC	E	TU 28	CN 302	D	M	PFF		2	1		1	S	T
789	45-CA-SC	E	SQ 28	CN 302	D	M	PFF		3	0		2	S	T
790	45-CA-SC	E	SQ 29	CN 108	T	D					P			
791	45-CA-SC	E	SQ 29	CN 108	D	D	ANW				I			
792	45-CA-SC	E	SQ 29	CN 108	D	D	PFF	B	3	0		3	S	T
793	45-CA-SC	E	SQ 29	CN 108	D	D	NPF		3	0		3	F	
794	45-CA-SC	E	SQ 29	CN 108	D	M	PFF	B	3	0		2	S	T
795	45-CA-SC	E	SQ 29	CN 106	D	D	WHF		2	2	F	1	F	T
796	45-CA-SC	E	SQ 29	CN 106	T	M	PFF		2	1		2	S	C
797	45-CA-SC	E	SQ 29	CN 106	D	D	PFF	B	3	0		3	S	F
798	45-CA-SC	E	SQ 29	CN 106	D	D	NPF		3	0		2	S	

799	45-CA-SC	E	SQ 29	CN 106	D	D	ANW				P			
800	45-CA-SC	E	TEU 31	CN 24	D	D	WHF		2	2	P	1	F	C
801	45-CA-SC	E	TEU 31	CN 24	D	D	WHF		2	1	P	3	F	F
802	45-CA-SC	E	TEU 31	CN 28	D	D	NPF		2	1	F	1	S	
803	45-CA-SC	E	TEU 31	CN 30	D	D	ANW				P			
804	45-CA-SC	E	TU 31	CN 28	D	S	NPF		2	2		2	F	
805	45-CA-SC	E	SQ 32	CN 34	T	D					F			
806	45-CA-SC	E	SQ 32	CN 34	D	M	NPF		2	1		1	F	
807	45-CA-SC	E	SQ 32	CN 34	D	M	NPF		3	0		1	S	
808	45-CA-SC	E	SQ 32	CN 34	T	D	NPF		2	1	F	2	F	
809	45-CA-SC	E	SQ 34	CN 62	D	D	PFF	B	3	0		2	S	T
810	45-CA-SC	E	SQ 34	CN 64	D	S	WHF		2	2		1	F	F
811	45-CA-SC	E	SQ 34	CN 64	D	D	NPF		3	0		1	F	
812	45-CA-SC	E	SQ 34	CN 64	D	C	ANW							
813	45-CA-SC	E	SQ 34	CN 64	D	D	NPF		3	0		2	F	
814	45-CA-SC	E	SQ 34	CN 52	T	D					p			
815	45-CA-SC	E	SQ 36	CN 74	D	D	WHF		3	0		3	F	F
816	45-CA-SC		SQ 36	CN 76	D	D	NPF		3	0		1	F	
817	45-CA-SC	E	SQ 36	CN 76	D	D	NPF		3	3	P	0	F	
818	45-CA-SC	E	SQ 36	CN 70	T	S	WHF		2	1		1	F	C
819	45-CA-SC	E	SQ 37	CN 196	D	D	ANW							
820	45-CA-SC	E	SQ 37	CN 196	D	D	PFF		3	0	P	2	S	C
821	45-CA-SC	E	SQ 37	CN 196	D	D	WHF		2	1	P	1	F	C
822	45-CA-SC	E	SQ 37	CN 196	T	D	WHF		2	1	P	5	F	C
823	45-CA-SC	E	SQ 38	CN 36	D	D	NPF		2	2	P	2	F	
824	45-CA-SC	E	SQ 38	CN 36	D	D	NPF		2	1	P	4	F	C
825	45-CA-SC	E	SQ 38	CN 36	D	C	PFF		3	0		2	S	F
826	45-CA-SC	E	SQ 38	CN 36	D	S	NPF		3	0		1	F	
827	45-CA-SC	E	SQ 38	CN 36	D	D	PFF		2	1	P	1	S	T
828	45-CA-SC	E	SQ 38	CN 36	D	D	ANW							
829	45-CA-SC	E	SQ 38	CN 36	D	D	NPF		2	2	P	1	F	
830	45-CA-SC	E	SQ 38	CN 36	D	D	NPF		3	0		1	F	
831	45-CA-SC	E	SQ 38	CN 204	D	D	NPF		3	0		2	F	
832	45-CA-SC	E	SQ 38	CN 204	D	D	WHF		3	0		2	F	T
833	45-CA-SC	E	SQ 38	CN 204	D	D	WHF	B	3	0		3	F	T
834	45-CA-SC	E	SQ 38	CN 204	D	D	NPF		3	0		3	F	
835	45-CA-SC	E	SQ 38	CN 204	D	D	NPF		3	0		4	S	
836	45-CA-SC	E	SQ 38	CN 204	D	D	PFF		2	1	P	3	S	F
837	45-CA-SC	E	SQ 38	CN 204	D	D	WHF		3	0	F	3	F	C

838	45-CA-SC	E	SQ 38	CN 204	D	D	PFF		3	0		2	S	F
839	45-CA-SC	E	SQ 38	CN 208	D	D	NPF		3	0		2	F	
840	45-CA-SC	E	SQ 38	CN 208	D	D	NPF		3	0		2	S	
841	45-CA-SC	E	SQ 38	CN 208	D	D	PFF		3	0		3	S	F
842	45-CA-SC	E	SQ 38	CN 208	D	Q	NPF		3	0		1	F	
843	45-CA-SC	E	SQ 39	CN 44	D	D	ANW							
844	45-CA-SC	E	SQ 39	CN 44	D	G	WHF		3	0		3	F	C
845	45-CA-SC	E	SQ 39	CN 44	D	M	WHF		2	0		2	F	C
846	45-CA-SC	E	SQ 39	CN 44	D	M	NPF		3	0		2	F	
847	45-CA-SC	E	SQ 39	CN 46	D	D	NPF		3	0		2	S	
848	45-CA-SC	E	SQ 39	CN 46	D	D	NPF		3	0		4	F	
849	45-CA-SC	E	SQ 39	CN 222	D	D	WHF	B	3	0		3	F	T
850	45-CA-SC	E	SQ 39	CN 222	D	D	PFF	B	3	0		4	S	T
851	45-CA-SC	E	SQ 39	CN 222	D	D	PFF		3	0		2	S	T
852	45-CA-SC	E	SQ 39	CN 222	D	D	WHF		2	1	P	1	F	F
853	45-CA-SC	E	SQ 39	CN 222	D	D	NPF		2	1	P	4	F	R
854	45-CA-SC	E	SQ 41	CN 184	D	S	NPF		3	3		0	F	
855	45-CA-SC	E	SQ 41	CN 182	D	D	NPF		2	2	P	1	F	
856	45-CA-SC	E	SQ 50	CN 152	D	M	NPF		2	2		2	F	
857	45-CA-SC	E	SQ 50	CN 152	D	M	NPF		3	0		1	F	
858	45-CA-SC	E	SQ 50	CN 152	D	S	ANW							
859	45-CA-SC	E	SQ 50	CN 154	D	M	NPF		3	0		3	F	
860	45-CA-SC	E	SQ 50	CN 154	D	C	NPF		3	0		1	F	
861	45-CA-SC	E	SQ 51	CN 160	D	C	NPF		3	0		5	F	
862	45-CA-SC	E	SQ 51	CN 160	D	S	PFF		2	2		1		F
863	45-CA-SC	E	SQ 51	CN 170	D	D	PFF	B	3	0		4	S	T
864	45-CA-SC	E	SQ 51	CN 170	D	M	ANW							
865	45-CA-SC	E	SQ 51	CN 170	D	D	NPF		3	0		3	F	
866	45-CA-SC	E	SQ 51	CN 170	D	D	WHF		2	1	P	2	F	T
867	45-CA-SC	E	SQ 51	CN 160	T	C								
868	45-CA-SC	E	SQ 52		D	S	NPF		2	1		1	S	
869	45-CA-SC	E	SQ 52		D	D	PFF		3	0		2	S	T
870	45-CA-SC	E	SQ 52		T	D					P			
871	45-CA-SC	E	SQ 52		D	D	NPF		2	1	P	1	S	
872	45-CA-SC	E	SQ 52		D	D	WHF	B	3	0		5	F	T
873	45-CA-SC	E	SQ 53	CN 210	D	M	PFF		2	3		0	S	F
874	45-CA-SC	E	SQ 53	CN 298	D	M	NPF		2	3		0	F	
875	45-CA-SC	E	SQ 53	CN 298	D	Q	NPF		3	0		3	F	
876	45-CA-SC	E	SQ 52	CN 174-1	T	C								

877	45-CA-SC	E	SQ 52	CN 172	D	D	NPF		3	0		3	F	
878	45-CA-SC	E	SQ 52		D	M	NPF		3	0		1	S	
879	45-CA-SC	E	SQ 54	CN 172	D	S	ANW							
880	45-CA-SC	E	SQ 54	CN 214	D	D	NPF		3	0		3	F	
881	45-CA-SC	E	SQ 54	CN 218-1	T	D					P			
882	45-CA-SC	E	SQ 54	CN 224	T	C								
883	45-CA-SC	E	TEU 55	NA	D	D	PFF	B	2	1	F	4	S	T
884	45-CA-SC	E	TEU 55	NA	D	D	NPF		2	3	P	0	S	
885	45-CA-SC	E	TEU 55	CN 228	D	D	NPF		3	0		2	F	
886	45-CA-SC	E	TEU 55	CN 228	D	D	ANW							
887	45-CA-SC	E	TEU 55	CN 235	D	M	NPF		2	1		1	F	
888	45-CA-SC	E	SQ 56	CN 240	T	D					I			
889	45-CA-SC	E	SQ 56	CN 240	D	D	ANW				F			
890	45-CA-SC	E	SQ 56	CN 240	D	D	NPF		2	1	P	1	F	
891	45-CA-SC	E	SQ 56	CN 240	D	D	PFF	B	3	0		3	F	T
892	45-CA-SC	E	SQ 56	CN 240	D	D	PFF		2	1	P	2	S	C
893	45-CA-SC	E	SQ 56	CN 240	D	D	NPF		3	0		2	F	
894	45-CA-SC	E	SQ 56	CN 240	D	M	NPF		3	0		1	F	
895	45-CA-SC	E	SQ 56	CN 256	D	M	NPF		2	2		2	F	
896	45-CA-SC	E	SQ 56	CN 244	D	D	NPF		3	0		2	F	
897	45-CA-SC	E	SQ 56	CN 244	D	M	NPF		2	1		1	F	
898	45-CA-SC	E	SQ 58	CN 98	D	D	WHF		2	1	I	1	F	C
899	45-CA-SC	E	SQ 59	CN 260	D	S	NPF		2	3		0	F	
900	45-CA-SC	E	SQ 59	CN 260	D	S	WHF		1	3		0	F	C
901	45-CA-SC	E	SQ 59	CN 260	D	M	NPF		3	0		1	F	
902	45-CA-SC	E	SQ 59	CN 260	D	D	WHF	B	3	0		3	F	T
903	45-CA-SC	E	SQ 59	CN 262	D	D	WHF		3	0		2	F	T
904	45-CA-SC	E	SQ 59	CN 262	T	C	NPF		3	0		4	F	
905	45-CA-SC	E	SQ 59	CN 264	D	D	NPF		3	0		2	F	
906	45-CA-SC	E	SQ 60	CN 266	D	M	NPF		2	3		0	F	
907	45-CA-SC	E	SQ 60	CN 266	D	D	NPF		3	0		1	F	
908	45-CA-SC	E	SQ 60	CN 266	D	S	NPF		3	0		2	F	
909	45-CA-SC	E	SQ 60	CN 266	D	G	NPF		2	3		0	F	
910	45-CA-SC	E	SQ 60	CN 266	D	D	PFF		3	0		2	S	F
911	45-CA-SC	E	SQ 60	CN 266	D	D	PFF		2	1	I	3	S	F
912	45-CA-SC	E	SQ 60	CN 266	D	D	WHF		2	2	F	1	F	T
913	45-CA-SC	E	SQ 61	CN 268	D	D	WHF	B	2	1	F	4	F	T
914	45-CA-SC	E	SQ 61	CN 268	D	D	NPF		2	1	F	2	F	
915	45-CA-SC	E	SQ 61	CN 268	D	D	PFF		3	0		2	S	F

916	45-CA-SC	E	SQ 61	CN 268	D	D	NPF		3	0		1	F	
917	45-CA-SC	E	SQ 61	CN 268	D	D	WHF	B	3	0		2	F	T
918	45-CA-487	E	TEU 2	LEVEL 4/S2	D	D	PFF		3	0		2	S	T
919	45-CA-487	E	TEU 1	LEVEL 2	T	D								
920	45-CA-487	E	TEU 1	LEVEL 2	D	D	WHF		3	0		1	F	T
921	45-CA-487	E	TEU 1	LEVEL 2	D	D	ANW							
922	45-CA-487	E	TEU 1	LEVEL 2	D	D	PFF	B	3	0		2	S	T
923	45-CA-487	E	TEU 1	LEVEL 2	D	D	NPF		3	0		2	S	
924	45-CA-487	E	TEU 1	LEVEL 2	D	D	PFF		3	0		1	S	T
925	45-CA-487	E	TEU 1	LEVEL 2	D	D	ANW				P			
926	45-CA-487	E	TEU 1	LEVEL 2	D	D	NPF		3	0		2	F	
927	45-CA-487	E	TEU 1	LEVEL 2	D	D	NPF		3	0		1	F	
928	45-CA-487	E	TEU 1	LEVEL 2	D	D	NPF		2	1	F	1	S	
929	45-CA-487	E	TEU 1	LEVEL 2	D	D	NPF		3	0		1	F	
930	45-CA-487	E	TEU 1	LEVEL 2	D	D	NPF		3	0		1	F	
931	45-CA-487	E	TEU 1	LEVEL 3	D	D	PFF		2	1	F	3		C
932	45-CA-487	E	TEU 1	LEVEL 3	D	D	NPF		2	1	P	2	S	
933	45-CA-487	E	TEU 1	LEVEL 3	D	D	WHF		1	3	F	0	F	C
934	45-CA-487	E	TEU 1	LEVEL 3	D	D	ANW							
935	45-CA-487	E	TEU 2	LEVEL 2/S1	D	Z								
936	45-CA-487	E	TEU 2	LEVEL 4/S1	D	M	ANW							
937	45-CA-487	E	TEU 2	LEVEL 4/S2	D	D	NPF		2	2	P	1	F	
938	45-CA-487	E	TEU 2	LEVEL 4/S2	T	D					P			
939	45-CA-487	E	TEU 2	LEVEL 4/S2	D	D	PFF		3	0		3	S	F
940	45-CA-487	E	TEU 2	LEVEL 4/S2	D	D	NPF		3	0		3	F	
941	45-CA-487	E	TEU 2	LEVEL 4/S2	D	D	NPF		3	0		2	F	
942	45-CA-487	E	TEU 2	LEVEL 4/S2	T	D	PFF		2	2	I	3	S	C
943	45-CA-487	E	TEU 2	LEVEL 4/S2	D	D	PFF		2	1	I	2	S	C
944	45-CA-487	E	TEU 2	LEVEL 4/S2	D	S	PFF		3	0		1	S	C
945	45-CA-487	E	TEU 2	LEVEL 4/S2	D	D	NPF		2	2	P	3	F	
946	45-CA-487	E	TEU 2	LEVEL 4/S2	D	D	NPF		3	0		3	S	
947	45-CA-487	E	TEU 2	LEVEL 4/S2	D	D	NPF		3	0		2	S	
948	45-CA-487	E	TEU 2	LEVEL 4/S2	D	D	PFF		3	0		2	S	C
949	45-CA-487	E	TEU 2	LEVEL 4/S2	D	D	PFF	B	3	0		4	S	T
950	45-CA-487	E	TEU 2	LEVEL 4/S2	D	D	NPF		3	0		1	F	
951	45-CA-487	E	TEU 2	LEVEL 4/S2	D	D	NPF		3	0		2	F	

952	45-CA-487	E	TEU 2	LEVEL 4/S2	D	D	PFF		3	0		2	S	F
953	45-CA-487	E	TEU 2	LEVEL 4/S2	D	D	ANW							
954	45-CA-487	E	TEU 2	LEVEL 4/S2	D	D	PFF	B	3	0		3	S	T
955	45-CA-487	E	TEU 2	LEVEL 4/S2	D	D	ANW				F			
956	45-CA-487	E	TEU 2	LEVEL 4/S2	D	D	NPF		3	1		3	F	
957	45-CA-487	E	TEU 2	LEVEL 4/S2	D	D	WHF		3	0	F	3	F	C
958	45-CA-487	E	TEU 2	LEVEL 4/S2	D	D	PFF		3	0		2	S	T
959	45-CA-487	E	TEU 2	LEVEL 4/S2	D	D	NPF		3	0		2	S	
960	45-CA-487	E	TEU 2	LEVEL 4/S2	D	D	NPF		3	0		1	F	
961	45-CA-487	E	TEU 2	LEVEL 4/S2	T	D	PFF		3	0	P	3	S	C
962	45-CA-487	E	TEU 2	LEVEL 4/S2	T	D	PFF		3	0		3	F	F
963	45-CA-487	E	TEU 2	LEVEL 4/S2	T	D	NPF		3	0		1	F	
964	45-CA-487	E	TEU 2	LEVEL 4/S2	D	D	NPF		3	0		2	S	
965	45-CA-487	E	TEU 2	LEVEL 4/S2	D	D	NPF		2	1	F	2	F	
966	45-CA-487	E	TEU 2	LEVEL 4/S2	D	D	ANW				I			
967	45-CA-487	E	TEU 2	LEVEL 4/S2	D	D	PFF		3	0		4	S	T
968	45-CA-487	E	TEU 2	LEVEL 4/S2	D	D	PFF		3	0		3	S	F
969	45-CA-487	E	TEU 2	LEVEL 4/S2	D	D	PFF		2	1	I	1	S	T
970	45-CA-487	E	TEU 2	LEVEL 4/S2	D	D	NPF		3	0		1	S	
971	45-CA-487	E	TEU 2	LEVEL 4/S2	D	D	WHF		2	1	I	2	F	F
972	45-CA-487	E	TEU 2	LEVEL 4/S2	D	D	PFF	B	3	0		4	S	F
973	45-CA-487	E	TEU 2	LEVEL 4/S2	D	D	NPF		3	0		2	S	
974	45-CA-487	E	TEU 2	LEVEL 4/S2	D	D	PFF		2	1	F	1	F	T
975	45-CA-487	E	TEU 2	LEVEL 4/S2	D	D	WHF	B	3	0		3	F	T
976	45-CA-487	E	TEU 2	LEVEL 4/S2	D	D	PFF		3	0	P	1		C
977	45-CA-487	E	TEU 2	LEVEL 4/S2	D	D	NPF		3	0		3	F	
978	45-CA-487	E	TEU 2	LEVEL 4/S2	D	D	NPF		3	0		1	S	
979	45-CA-487	E	TEU 2	LEVEL 4/S2	D	D	PFF		2	2	P	1	S	F
980	45-CA-487	E	TEU 2	LEVEL 4/S2	D	D	NPF		2	1	P	3	F	
981	45-CA-487	E	TEU 2	LEVEL 4/S2	D	D	NPF		2	1	P	3	S	
982	45-CA-487	E	TEU 2	LEVEL 4/S2	D	D	NPF		2	1	F	1	F	
983	45-CA-487	E	TEU 2	LEVEL 4/S2	D	D	NPF		3	0		3	F	
984	45-CA-487	E	TEU 2	LEVEL 4/S2	D	D	NPF		3	0		4	F	
985	45-CA-487	E	TEU 2	LEVEL 4/S2	D	D	NPF		2	3	I	0	F	
986	45-CA-487	E	TEU 2	LEVEL 4/S2	D	D	WHF	B	2	1	P	3	F	T
987	45-CA-487	E	TEU 2	LEVEL 4/S2	D	D	WHF	B	3	0		2	F	T

988	45-CA-487	E	TEU 2	LEVEL 4/S2	D	D	ANW				P			
989	45-CA-487	E	TEU 2	LEVEL 4/S2	T	D	NPF		3	0		3	F	
990	45-CA-487	E	TEU 2	LEVEL 4/S2	D	D	PFF	B	3	0		2	S	T
991	45-CA-487	E	TEU 2	LEVEL 4/S2	D	D	PFF		2	2	P	1	S	T
992	45-CA-487	E	TEU 2	LEVEL 4/S2	D	D	NPF		3	0		3	H	
993	45-CA-487	E	TEU 2	LEVEL 4/S2	D	D	NPF		2	3	P	0	S	
994	45-CA-487	E	TEU 2	LEVEL 4/S2	D	D	NPF		2	1	P	1	S	
995	45-CA-487	E	TEU 2	LEVEL 4/S2	D	D	PFF	B	3	0		4	S	F
996	45-CA-487	E	TEU 2	LEVEL 4/S2	D	D	NPF		2	2	P	2	S	
997	45-CA-487	E	TEU 2	LEVEL 4/S2	D	D	PFF		3	0		2	S	T
998	45-CA-487	E	TEU 2	LEVEL 4/S2	D	D	PFF	B	3	0		3	S	T
999	45-CA-487	E	TEU 2	LEVEL 4/S2	D	D	PFF	B	3	0		3	S	T
1000	45-CA-487	E	TEU 2	LEVEL 4/S2	D	D	PFF	B	3	0		2	S	T
1001	45-CA-487	E	TEU 2	LEVEL 4/S2	D	D	NPF		3	0		1	S	
1002	45-CA-487	E	TEU 2	LEVEL 4/S2	D	D	NPF		2	1	F	1	F	
1003	45-CA-487	E	TEU 2	LEVEL 4/S2	D	D	WHF		2	1	P	4	F	T
1004	45-CA-487	E	TEU 2	LEVEL 4/S2	D	D	PFF	B	3	0		2	S	T
1005	45-CA-487	E	TEU 2	LEVEL 4/S2	D	D	PFF	B	3	0		2	S	T
1006	45-CA-487	E	TEU 2	LEVEL 4/S2	D	D	ANW							
1007	45-CA-487	E	TEU 2	LEVEL 4/S2	D	D	NPF		3	0		2	H	
1008	45-CA-487	E	TEU 2	LEVEL 4/S2	D	D	WHF	B	3	0		3	F	T
1009	45-CA-487	E	TEU 2	LEVEL 4/S2	D	D	NPF		3	0		3	F	
1010	45-CA-487	E	TEU 2	LEVEL 4/S2	D	D	NPF		3	0		1	F	
1011	45-CA-487	E	TEU 2	LEVEL 4/S2	D	D	NPF		3	0		2	S	
1012	45-CA-487	E	TEU 2	LEVEL 4/S2	D	D	NPF		3	0		1	F	
1013	45-CA-487	E	TEU 2	LEVEL 4/S2	D	D	NPF		3	0		3	F	
1014	45-CA-487	E	TEU 2	LEVEL 4/S2	D	D	PFF	B	3	0		2	H	F
1015	45-CA-487	E	TEU 2	LEVEL 4/S2	D	D	NPF		3	0		3	F	
1016	45-CA-487	E	TEU 2	LEVEL 4/S2	D	D	NPF		3	0		2	F	
1017	45-CA-487	E	TEU 2	LEVEL 4/S2	D	D	NPF		3	0		1	S	
1018	45-CA-487	E	TEU 2	LEVEL 4/S2	D	D	PFF	B	3	0		3	S	T
1019	45-CA-487	E	TEU 2	LEVEL 4/S2	D	D	NPF		2	3	P	0	F	
1020	45-CA-487	E	TEU 2	LEVEL 4/S2	D	D	NPF		3	0		1	F	
1021	45-CA-487	E	TEU 2	LEVEL 4/S2	D	D	NPF		3	0		1	F	
1022	45-CA-487	E	TEU 2	LEVEL 4/S2	D	D	PFF		3	0		3	S	T
1023	45-CA-487	E	TEU 2	LEVEL 4/S2	D	D	NPF		3	0		3	S	

1024	45-CA-487	E	TEU 2	LEVEL 4/S2	D	D	NPF		3	0		2	S	
1025	45-CA-487	E	TEU 2	LEVEL 4/S2	D	D	PFF		3	0		1	S	
1026	45-CA-487	E	TEU 2	LEVEL 4/S2	D	D	NPF		3	0		2	S	
1027	45-CA-487	E	TEU 2	LEVEL 4/S2	D	D	NPF		3	0		3	F	
1028	45-CA-487	E	TEU 2	LEVEL 4/S2	D	D	PFF		3	0		3	S	T
1029	45-CA-487	E	TEU 2	LEVEL 4/S2	D	D	NPF		3	0		2	F	
1030	45-CA-487	E	TEU 2	LEVEL 4/S2	D	D	PFF		3	0		2	S	F
1031	45-CA-487	E	TEU 2	LEVEL 4/S2	D	D	PFF	B	3	0		2	S	T
1032	45-CA-487	E	TEU 2	LEVEL 4/S2	D	D	NPF		3	0		2	S	
1033	45-CA-487	E	TEU 2	LEVEL 4/S2	D	D	NPF		2	1	F	1	S	
1034	45-CA-487	E	TEU 2	LEVEL 4/S2	D	D	NPF		2	1	P	1	S	
1035	45-CA-487	E	TEU 2	LEVEL 4/S2	D	D	ANW				P			
1036	45-CA-487	E	TEU 2	LEVEL 4/S2	D	D	NPF		3	0		3	F	
1037	45-CA-487	E	TEU 2	LEVEL 4/S2	D	D	NPF		2	2	P	1	S	
1038	45-CA-487	E	TEU 2	LEVEL 4/S2	D	D	ANW							
1039	45-CA-487	E	TEU 2	LEVEL 4/S2	D	D	NPF		3	0		1	F	
1040	45-CA-487	E	TEU 2	LEVEL 4/S2	D	D	PFF		3	0		1	S	F
1041	45-CA-487	E	TEU 2	LEVEL 4/S2	D	D	NPF		2	3	F	0	F	
1042	45-CA-487	E	TEU 2	LEVEL 4/S2	D	D	PFF		3	0		2	S	T
1043	45-CA-487	E	TEU 2	LEVEL 4/S2	D	D	PFF		3	0		1	S	T
1044	45-CA-487	E	TEU 2	LEVEL 4/S2	D	D	PFF		3	0		1	S	T
1045	45-CA-487	E	TEU 2	LEVEL 4/S2	D	D	NPF		3	0		3	F	
1046	45-CA-487	E	TEU 2	LEVEL 4/S2	D	D	ANW				F			
1047	45-CA-487	E	TEU 2	LEVEL 4/S2	D	D	NPF		3	0		2	S	
1048	45-CA-487	E	TEU 2	LEVEL 4/S2	D	D	NPF		2	1	P	1	S	
1049	45-CA-487	E	TEU 2	LEVEL 4/S2	D	D	NPF		3	0		1	F	
1050	45-CA-487	E	TEU 2	LEVEL 4/S2	D	D	PFF		2	2	I	1	S	T
1051	45-CA-487	E	TEU 2	LEVEL 4/S2	D	D	NPF		3	0		1	F	
1052	45-CA-487	E	TEU 2	LEVEL 4/S2	D	D	NPF		3	0		2	S	
1053	45-CA-487	E	TEU 2	LEVEL 4/S2	D	D	PFF		3	0		2	S	T
1054	45-CA-487	E	TEU 2	LEVEL 4/S2	D	D	NPF		2	3	P	0	F	
1055	45-CA-487	E	TEU 2	LEVEL 4/S2	D	D	ANW							
1056	45-CA-487	E	TEU 2	LEVEL 4/S2	D	D	NPF		2	1	P	3	F	
1057	45-CA-487	E	TEU 2	LEVEL 4/S2	D	D	NPF		3	0		3	F	
1058	45-CA-487	E	TEU 2	LEVEL 4/S2	D	D	NPF		3	0		2	F	
1059	45-CA-487	E	TEU 2	LEVEL 4/S2	D	D	PFF	B	3	0		2	S	T

1060	45-CA-487	E	TEU 2	LEVEL 4/S2	D	D	NPF		3	0		1	S	
1061	45-CA-487	E	TEU 2	LEVEL 4/S2	D	D	NPF		3	0		2	S	
1062	45-CA-487	E	TEU 2	LEVEL 4/S2	D	D	PFF		3	0		2	S	
1063	45-CA-487	E	TEU 2	LEVEL 4/S2	D	D	NPF		3	0		2	F	
1064	45-CA-487	E	TEU 2	LEVEL 4/S2	D	D	NPF		2	1	P	1	F	
1065	45-CA-487	E	TEU 2	LEVEL 4/S2	D	D	NPF		3	0		2	F	
1066	45-CA-487	E	TEU 2	LEVEL 4/S2	D	D	PFF		3	0		2	S	T
1067	45-CA-487	E	TEU 2	LEVEL 4/S2	D	D	ANW							
1068	45-CA-487	E	TEU 2	LEVEL 4/S2	D	D	WHF	B	3	0		3	F	T
1069	45-CA-487	E	TEU 2	LEVEL 4/S2	D	D	NPF		2	1	P	2	F	
1070	45-CA-487	E	TEU 2	LEVEL 4/S2	D	D	NPF		3	0		1	F	
1071	45-CA-487	E	TEU 2	LEVEL 4/S2	T	Q								
1072	45-CA-487	E	TEU 2	LEVEL 4/S2	T	M								
1073	45-CA-487	E	TEU 2	LEVEL 5/S2	D	D	PFF		3	0		3	S	F
1074	45-CA-487	E	TEU 2	LEVEL 5/S2	D	D	NPF		2	1	F	1	F	
1075	45-CA-487	E	TEU 2	LEVEL 5/S2	D	D	NPF		3	0		3	F	
1076	45-CA-487	E	TEU 2	LEVEL 5/S2	D	D	PFF	B	2	1	F	3	S	T
1077	45-CA-487	E	TEU 2	LEVEL 5/S2	D	D	WHF		3	0		2	F	F
1078	45-CA-487	E	TEU 2	LEVEL 5/S2	D	D	ANW				I			
1079	45-CA-487	E	TEU 2	LEVEL 5/S2	D	D	PFF		3	0		2	S	F
1080	45-CA-487	E	TEU 2	LEVEL 5/S2	D	D	PFF		3	0	F	1	S	C
1081	45-CA-487	E	TEU 2	LEVEL 5/S2	D	D	WHF		3	0		4	F	F
1082	45-CA-487	E	TEU 2	LEVEL 5/S2	D	D	WHF		3	0		4	F	T
1083	45-CA-487	E	TEU 2	LEVEL 5/S2	D	D	NPF		3	0		3	F	
1084	45-CA-487	E	TEU 2	LEVEL 5/S2	D	D	NPF		3	0		1	F	
1085	45-CA-487	E	TEU 2	LEVEL 5/S2	D	D	WHF		2	2	P	2	F	C
1086	45-CA-487	E	TEU 2	LEVEL 5/S2	D	D	NPF		3	0		3	F	
1087	45-CA-487	E	TEU 2	LEVEL 5/S2	D	D	PFF		3	0		1	F	T
1088	45-CA-487	E	TEU 2	LEVEL 5/S2	D	D	NPF		3	0		3	F	
1089	45-CA-487	E	TEU 2	LEVEL 5/S2	D	D	WHF	B	3	0		3	F	T
1090	45-CA-487	E	TEU 2	LEVEL 5/S2	D	D	NPF		3	0		3	F	
1091	45-CA-487	E	TEU 2	LEVEL 5/S2	D	D	WHF		2	1	P	2	F	C
1092	45-CA-487	E	TEU 2	LEVEL 5/S2	D	D	NPF		3	0		1	S	
1093	45-CA-487	E	TEU 2	LEVEL 5/S2	D	D	WHF	B	3	0		2	F	T
1094	45-CA-487	E	TEU 2	LEVEL 5/S2	D	D	PFF		3	0	F	2	S	C
1095	45-CA-487	E	TEU 2	LEVEL 5/S2	D	D	PFF	B	3	0		3	S	T

1096	45-CA-487	E	TEU 2	LEVEL 5/S2	D	D	NPF		3	0		4	F	
1097	45-CA-487	E	TEU 2	LEVEL 5/S2	D	D	PFF		3	0		3	S	T
1098	45-CA-487	E	TEU 2	LEVEL 5/S2	D	D	NPF		2	1	F	2	F	
1099	45-CA-487	E	TEU 2	LEVEL 5/S2	D	D	PFF		3	0		3	S	F
1100	45-CA-487	E	TEU 2	LEVEL 5/S2	T	D	WHF		3	0		3	F	F
1101	45-CA-487	E	TEU 2	LEVEL 6/S1	T	D								
1102	45-CA-487	E	TEU 3	LEVEL 1	T	D	NPF		3	0		2		
1103	45-CA-487	E	TEU 3	LEVEL 1	D	D	ANW				P			
1104	45-CA-487	E	TEU 3	LEVEL 1	D	D	PFF		3	0		3		T
1105	45-CA-487	E	TEU 3	LEVEL 2	T	D					I			
1106	45-CA-487	E	TEU 3	LEVEL 2	T	M	WHF		2	1		5	F	C
1107	45-CA-487	E	TEU 3	LEVEL 2	D	D	WHF	B	3	0		4	F	T
1108	45-CA-487	E	TEU 3	LEVEL 2	D	D	NPF		2	1	I	2	F	
1109	45-CA-487	E	TEU 3	LEVEL 2	D	D	NPF		2	2	I	2	F	
1110	45-CA-487	E	TEU 3	LEVEL 2	D	D	WHF	B	3	0		5	F	T
1111	45-CA-487	E	TEU 3	LEVEL 2	D	D	WHF	B	3	0		4	F	T
1112	45-CA-487	E	TEU 3	LEVEL 2	D	D	NPF		3	0		1	S	
1113	45-CA-487	E	TEU 3	LEVEL 2	D	D	NPF		3	0		2	F	
1114	45-CA-487	E	TEU 3	LEVEL 2	D	D	PFF	B	3	0		3	S	T
1115	45-CA-487	E	TEU 3	LEVEL 2	D	D	NPF		3	0		2	S	
1116	45-CA-487	E	TEU 3	LEVEL 2	D	D	ANW							
1117	45-CA-487	E	TEU 3	LEVEL 2	D	D	PFF	B	3	0		3	S	T
1118	45-CA-487	E	TEU 3	LEVEL 2	D	D	NPF		3	0		4	F	
1119	45-CA-487	E	TEU 3	LEVEL 2	D	D	PFF		3	0		2	S	F
1120	45-CA-487	E	TEU 3	LEVEL 2	D	D	NPF		3	0		2	S	
1121	45-CA-487	E	TEU 3	LEVEL 2	D	Z	ANW							
1122	45-CA-487	E	TEU 3	LEVEL 2	D	D	NPF		2	1	F	2	F	
1123	45-CA-487	E	TEU 3	LEVEL 2	D	D	PFF	B	3	0		2	S	T
1124	45-CA-487	E	TEU 3	LEVEL 2	D	D	WHF		2	1	I	3	F	F
1125	45-CA-487	E	TEU 3	LEVEL 2	D	D	WHF	B	3	0		3	F	T
1126	45-CA-487	E	TEU 3	LEVEL 2	D	M	PFF		3	0		2	S	T
1127	45-CA-487	E	TEU 4	LEVEL 2	D	D	ANW							
1128	45-CA-487	E	TEU 4	LEVEL 2	D	D	NPF		3	0		1	F	
1129	45-CA-487	E	TEU 4	LEVEL 2	D	D	NPF		3	0		1	S	
1130	45-CA-487	E	TEU 4	LEVEL 2	D	M	NPF		2	1		1	F	
1131	45-CA-487	E	TEU 4	LEVEL 2	T	D	WHF		2	2	I	2	F	F

1132	45-CA-487	E	TEU 4	LEVEL 2	T	D	NPF		2	2	I	1	F	
1133	45-CA-487	E	TEU 4	LEVEL 2	D	D	NPF		3	0		2	S	
1134	45-CA-487	E	TEU 4	LEVEL 2	D	D	NPF		3	0		2	S	
1135	45-CA-487	E	TEU 4	LEVEL 2	D	M	WHF		3	0		3	F	F
1136	45-CA-487	E	TEU 4	LEVEL 2	D	D	PFF		3	0		3	S	C
1137	45-CA-487	E	TEU 4	LEVEL 3	D	D	NPF	B	3	0		3	F	
1138	45-CA-487	E	TEU 4	LEVEL 3	T	D								
1139	45-CA-487	E	TEU 4	LEVEL 3	D	D	NPF		3	0		3	F	
1140	45-CA-487	E	TEU 4	LEVEL 3	D	C	WHF	B	3	0		4	F	T
1141	45-CA-487	E	TEU 4	LEVEL 3	D	D	WHF		3	0		3	F	F
1142	45-CA-487	E	TEU 4	LEVEL 3	D	M	ANW							
1143	45-CA-487	E	TEU 4	LEVEL 3	D	D	PFF	b	2	1	P	2	S	T
1144	45-CA-487	E	TEU 4	LEVEL 3	D	D	PFF		3	0		2	S	C
1145	45-CA-487	E	TEU 4	LEVEL 3	D	D	NPF		3	0		2	F	
1146	45-CA-487	E	TEU 4	LEVEL 3	D	M	ANW							
1147	45-CA-487	E	TEU 4	LEVEL 3	D	D	NPF		3	0		2	F	
1148	45-CA-487	E	TEU 4	LEVEL 3	D	D	ANW							
1149	45-CA-487	E	TEU 4	LEVEL 3	D	D	NPF		2	1	I	1	F	
1150	45-CA-487	E	TEU 4	LEVEL 3	D	D	NPF		2	3	F	0	F	
1151	45-CA-487	E	TEU 4	LEVEL 3	D	D	NPF		3	0		2	F	
1152	45-CA-487	E	TEU 4	LEVEL 3	D	D	WHF		3	0		3	F	T
1153	45-CA-487	E	TEU 4	LEVEL 3	D	D	WHF		2	1	F	2	F	T
1154	45-CA-487	E	TEU 4	LEVEL 3	D	D	PFF	B	2	0		3	S	T
1155	45-CA-487	E	TEU 4	LEVEL 3	D	D	NPF		2	1	P	2	F	
1156	45-CA-487	E	TEU 4	LEVEL 3	D	D	NPF		3	0		1	F	
1157	45-CA-487	E	TEU 4	LEVEL 3	D	D	WHF	B	3	0		3	F	T
1158	45-CA-487	E	TEU 4	LEVEL 3	D	D	NPF		2	3	P	0	S	
1159	45-CA-487	E	TEU 4	LEVEL 3	D	D	NPF		3	0		1	F	
1160	45-CA-487	E	TEU 4	LEVEL 3	D	D	NPF		2	1	I		F	
1161	45-CA-487	E	TEU 4	LEVEL 3	T	D					P			
1162	45-CA-487	E	TEU 4	LEVEL 3	D	D	PFF	B	3	0		3	S	T
1163	45-CA-487	E	TEU 4	LEVEL 3	D	D	WHF		2	1	P	2	F	F
1164	45-CA-487	E	TEU 4	LEVEL 3	D	D	NPF		2	1	F	2	F	
1165	45-CA-487	E	TEU 4	LEVEL 3	D	D	PFF		3	0		2	S	F
1166	45-CA-487	E	TEU 4	LEVEL 3	D	D	PFF		3	0	P	2	S	C
1167	45-CA-487	E	TEU 4	LEVEL 3	D	D	NPF		3	0		1	S	

1168	45-CA-487	E	TEU 4	LEVEL 3	D	D	NPF		3	0		2	S	
1169	45-CA-487	E	TEU 4	LEVEL 3	D	D	NPF		3	0		1	S	
1170	45-CA-487	E	TEU 4	LEVEL 3	D	D	NPF		3	0		2	H	
1171	45-CA-487	E	TEU 4	LEVEL 3	D	D	WHF		3	0		4	F	T
1172	45-CA-487	E	TEU 4	LEVEL 3	D	D	PFF		3	0		2	S	T
1173	45-CA-487	E	TEU 4	LEVEL 3	D	D	PFF		3	0		2	S	T
1174	45-CA-487	E	TEU 4	LEVEL 3	D	D	WHF	B	3	0		3	F	T
1175	45-CA-487	E	TEU 4	LEVEL 3	D	D	WHF	B	3	0		2	F	T
1176	45-CA-487	E	TEU 4	LEVEL 3	D	D	NPF		2	1	P	2	F	
1177	45-CA-487	E	TEU 4	LEVEL 3	D	D	PFF		2	3	P	0	S	C
1178	45-CA-487	E	TEU 4	LEVEL 3	D	D	PFF		3	0		2	S	T
1179	45-CA-487	E	TEU 4	LEVEL 3	D	D	NPF		3	0		1	S	
1180	45-CA-487	E	TEU 4	LEVEL 3	D	D	PFF	B	3	0		3	S	T
1181	45-CA-487	E	TEU 4	LEVEL 3	D	D	PFF		3	0		2	S	T
1182	45-CA-487	E	TEU 4	LEVEL 3	D	D	PFF	B	3	0		2	S	T
1183	45-CA-487	E	TEU 4	LEVEL 3	D	M	PFF		2	1		2	S	C
1184	45-CA-487	E	TEU 4	LEVEL 3	D	D	WHF		2	1	P	3	F	T
1185	45-CA-487	E	TEU 4	LEVEL 3	D	M	PFF		3	0		3	S	F
1186	45-CA-487	E	TEU 4	LEVEL 3	D	D	NPF		2	1	P	1	F	
1187	45-CA-487	E	TEU 4	LEVEL 3	D	D	NPF		2	3	P	0	F	
1188	45-CA-487	E	TEU 4	LEVEL 3	D	C	ANW							
1189	45-CA-487	E	TEU 4	LEVEL 3	D	D	NPF		3	0		3	S	
1190	45-CA-487	E	TEU 4	LEVEL 3	D	D	NPF		2	1	P	1	F	
1191	45-CA-487	E	TEU 4	LEVEL 3	D	D	NPF		3	0		2	F	
1192	45-CA-487	E	TEU 4	LEVEL 3	D	D	NPF		3	0		2	F	
1193	45-CA-487	E	TEU 4	LEVEL 3	D	D	NPF		3	0		1	F	
1194	45-CA-487	E	TEU 4	LEVEL 3	D	D	NPF		3	0		1	S	
1195	45-CA-487	E	TEU 4	LEVEL 3	D	D	NPF		3	0		1	F	
1196	45-CA-487	E	TEU 4	LEVEL 3	D	C	PFF		3	0		3	S	T
1197	45-CA-487	E	TEU 4	LEVEL 3	D	Z	PFF		2	2		1	S	T
1198	45-CA-487	E	TEU 4	LEVEL 3	D	C	PFF	B	3	0		3	S	T
1199	45-CA-487	E	TEU 4	LEVEL 4	D	D	PFF		3	0		1	S	T
1200	45-CA-487	E	TEU 4	LEVEL 4	D	D	PFF		3	0	P	3	S	C
1201	45-CA-487	E	TEU 4	LEVEL 4	D	M	ANW							
1202	45-CA-487	E	TEU 4	LEVEL 4	D	D	PFF	B	3	0		3	S	T
1203	45-CA-487	E	TEU 4	LEVEL 4	D	D	PFF		2	1	I	1	S	C

1204	45-CA-487	E	TEU 4	LEVEL 4	D	D	NPF		2	3	P	0	S	
1205	45-CA-487	E	TEU 4	LEVEL 4	D	D	PFF		3	0		1	S	T
1206	45-CA-487	E	TEU 4	LEVEL 4	T	D								
1207	45-CA-487	E	TEU 4	FEATURE 1/L1	T	M								
1208	45-CA-487	E	TEU 4	FEATURE 1/L1	D	D	NPF		2	1	P	3	F	
1209	45-CA-487	E	TEU 4	FEATURE 1/L1	T	D					I			
1210	45-CA-487	E	TEU 2	LEVEL 5/S1	D	D	PFF		3	0		2	S	F
1211	45-CA-487	E	TEU 2	LEVEL 5/S1	D	D	PFF		3	0		2	S	T
1212	45-CA-487	E	TEU 5	LEVEL 1	D	D	PFF		3	0	F	1	S	C
1213	45-CA-487	E	TEU 5	LEVEL 1	D	D	WHF		3	0		3	F	T
1214	45-CA-487	E	TEU 5	LEVEL 2	D	D	PFF		3	0	I	3	S	C
1215	45-CA-487	E	TEU 5	LEVEL 3	D	D	NPF		3	0		3	F	
1216	45-CA-487	E	TEU 6	LEVEL 2	D	D	NPF		2	3	P	0	S	
1217	45-CA-487	E	TEU 6	LEVEL 2	D	D	WHF		3	0		3	F	T
1218	45-CA-487	E	TEU 6	LEVEL 2	D	D	PFF		3	0		1	S	T
1219	45-CA-487	E	TEU 6	LEVEL 3	D	D	PFF		3	0		1	S	T
1220	45-CA-487	E	TEU 6	LEVEL 3	D	D	PFF		3	0		1	S	F
1221	45-CA-487	E	TEU 6	LEVEL 3	D	D	NPF		3	0		2	F	
1222	45-CA-487	E	TEU 6	LEVEL 3	D	D	NPF		2	2	P	1	S	
1223	45-CA-487	E	TEU 6	LEVEL 3	D	D	ANW							
1224	45-CA-487	E	TEU 6	LEVEL 3	D	D	PFF		3	0		2	S	F
1225	45-CA-487	E	TEU 6	LEVEL 4	D	D	PFF		3	0		1	S	T
1226	45-CA-487	E	TEU 2a		D	D	WHF		3	0		3	f	F
1227	45-CA-487	E	TEU 2a		D	D	NPF		2	1	I	3	S	
1228	45-CA-487	E	TEU 2a		D	M	ANW							
1229	45-CA-487	E	TEU 2a		D	D	WHF		3	0		2	F	F
1230	45-CA-487	E	TEU 2a		D	D	NPF		3	0		2	F	
1231	45-CA-487	E	TEU 2a		T	D	PFF		3	0		2		C
1232	45-CA-487	E	TEU 2a		T	D	PFF		3	0	P	3	F	C
1233	45-CA-487	E	TEU 2a		D	D	ANW				F			
1234	45-CA-487	E	TEU 2a		T	D	WHF		3	0	F	3	F	C
1235	45-CA-487	E	TEU 2a		D	D	NPF		3	0		1	S	
1236	45-CA-487	E	TEU 2a		D	M	NPF		2	2		1	F	
1237	45-CA-487	E	TEU 2a		D	D	WHF		3	0	P	1	F	C
1238	45-CA-487	E	TEU 2a		D	D	WHF		3	0	F	2	F	C
1239	45-CA-487	E	TEU 2a		D	D	PFF		3	0	P	2		C

1240	45-CA-487	E	TEU 2a		D	D	PFF		3	0	P	2	S	C
1241	45-CA-487	E	TEU 2a		D	D	ANW				F			
1242	45-CA-487	E	TEU 2a		D	M	NPF		2	2		1	S	
1243	45-CA-487	S	CSC	#1	T	D	WHF		2	1	F	3	F	C
1244	45-CA-487	S	CSC	#2	D	D	NPF		3	0		2	F	
1245	45-CA-487	S	CSC	#3	D	D	PFF		3	0	F	3		C
1246	45-CA-487	S	CSC	#4	D	D	NPF		2	1	P	1	S	
1247	45-CA-487	S	CSC	#5	T	D					I			
1248	45-CA-487	S	CSC	#6	D	D	NPF		3	0		6	F	
1249	45-CA-487	S	CSC	#7	D	D	NPF		2	1	P	2	F	
1250	45-CA-487	S	CSC	#8	D	D	PFF		3	0		2	S	T
1251	45-CA-487	S	CSC	#9	D	D	WHF		3	0	F	4	F	C
1252	45-CA-487	S	CSC	#10	D	D	NPF		3	0		1	F	
1253	45-CA-487	S	CSC	#11	D	D	PFF		3	0		3	S	T
1254	45-CA-487	S	CSC	#12	D	D	WHF		3	0	P	4	F	C
1255	45-CA-487	S	CSC	#13	T	D	NPF		2	2	I	1		
1256	45-CA-487	S	CSC	#14	D	D	WHF		3	0	P	3	F	C
1257	45-CA-487	S	CSC	#15	T	D								
1258	45-CA-487	S	CSC	#16	D	D	ANW							
1259	45-CA-487	S	CSC	#17	D	D	WHF		3	0		3	F	C
1260	45-CA-487	S	CSC	#18	D	D	PFF		2	2	I	2	S	C
1261	45-CA-487	s	CSC	#19	D	D	PFF		3	0	I	3	S	C
1262	45-CA-487	S	CSC	#21	T	D					P			
1263	45-CA-487	S	CSC	#22	D	D	NPF		3	0		3	S	
1264	45-CA-302	E	TEU 1	LEVEL 1	D	D	PFF		3	0	F	3	S	C
1265	45-CA-302	E	TEU 1	LEVEL 2	D	M	NPF		3	0		2	S	
1266	45-CA-302	E	TEU 1	LEVEL 2	T	Z								
1267	45-CA-302	E	TEU 1	LEVEL 3	D	D	WHF		2	2	I	2	F	C
1268	45-CA-302	E	TEU 1	LEVEL 3	T	D					I			
1269	45-CA-302	E	TEU 1	LEVEL 3	D	D	NPF		3	0		1	F	
1270	45-CA-302	E	TEU 1	LEVEL 3	D	D	ANW							
1271	45-CA-302	E	TEU 1	LEVEL 3	T	Z								
1272	45-CA-302	E	TEU 1	LEVEL 4	D	M	ANW							
1273	45-CA-302	E	TEU 2	LEVEL 1	D	C	WHF	B	3	0		3	F	T
1274	45-CA-302	E	TEU 2	LEVEL 3	D	D	NPF		3	0		1	S	
1275	45-CA-302	E	TEU 2	LEVEL 5	T	Z								
1276	45-CA-302	E	TEU 3	LEVEL 1	D	D	WHF	B	3	0		5	F	F
1277	45-CA-302	E	TEU 3	LEVEL 1	D	D	NPF		2	1	I	1	S	

1278	45-CA-302	E	TEU 3	LEVEL 1	D	D	PFF		3	0		2	S	F
1279	45-CA-302	E	TEU 3	LEVEL 1	D	D	WHF		2	2	P	1	F	T
1280	45-CA-302	E	TEU 3	LEVEL 1	D	D	PFF		3	0		4	S	T
1281	45-CA-302	E	TEU 3	LEVEL 1	D	D	NPF		3	0		2	F	
1282	45-CA-302	E	TEU 3	LEVEL 1	D	D	NPF		3	0		2	F	
1283	45-CA-302	E	TEU 3	LEVEL 1	D	D	NPF		2	1	P	2	F	
1284	45-CA-302	E	TEU 3	LEVEL 1	D	D	NPF		3	0		2	F	
1285	45-CA-302	E	TEU 3	LEVEL 1	D	D	PFF	B	3	0		3	S	F
1286	45-CA-302	E	TEU 3	LEVEL 2	D	D	PFF		2	1	P	2	S	T
1287	45-CA-302	E	TEU 3	LEVEL 2	D	D	NPF		3	0		3	F	
1288	45-CA-302	E	TEU 3	LEVEL 2	D	D	WHF	B	3	0		2	F	T
1289	45-CA-302	E	TEU 3	LEVEL 2	D	D	PFF	B	3	0		2	S	T
1290	45-CA-302	E	TEU 3	LEVEL 2	D	D	NPF		3	0		1	S	
1291	45-CA-302	E	TEU 3	LEVEL 2	D	D	PFF		2	1	I	2	S	C
1292	45-CA-302	E	TEU 3	LEVEL 2	D	D	PFF		3	0	F	2	S	F
1293	45-CA-302	E	TEU 3	LEVEL 2	D	D	NPF		3	0		3	S	
1294	45-CA-302	E	TEU 3	LEVEL 2	D	D	PFF		3	0		3	S	T
1295	45-CA-302	E	TEU 3	LEVEL 2	D	D	ANW							
1296	45-CA-302	E	TEU 3	LEVEL 2	D	D	NPF		3	0		2	F	
1297	45-CA-302	E	TEU 3	LEVEL 2	D	D	PFF		3	0		2	S	F
1298	45-CA-302	E	TEU 3	LEVEL 2	D	D	NPF		2	2	P	1	F	
1299	45-CA-302	E	TEU 3	LEVEL 2	D	D	NPF		3	0		2	F	
1300	45-CA-302	E	TEU 3	LEVEL 2	D	D	WHF		3	0		3	F	F
1301	45-CA-302	E	TEU 3	LEVEL 2	D	D	WHF		3	0		2	F	F
1302	45-CA-302	E	TEU 3	LEVEL 2	D	D	PFF		3	0		2	S	T
1303	45-CA-302	E	TEU 3	LEVEL 2	D	D	WHF		3	0		2	F	T
1304	45-CA-302	E	TEU 3	LEVEL 2	D	D	PFF		3	0		3	S	T
1305	45-CA-302	E	TEU 3	LEVEL 2	D	D	NPF		3	0		2	S	
1306	45-CA-302	E	TEU 3	LEVEL 2	D	D	WHF		3	0		2	F	F
1307	45-CA-302	E	TEU 3	LEVEL 2	D	D	NPF		3	0		2	F	
1308	45-CA-302	E	TEU 3	LEVEL 2	D	D	WHF		3	0		2	F	T
1309	45-CA-302	E	TEU 3	LEVEL 2	D	D	NPF		3	0		2	F	
1310	45-CA-302	E	TEU 3	LEVEL 2	D	D	WHF	B	3	0		4	F	T
1311	45-CA-302	E	TEU 3	LEVEL 2	D	D	NPF		3	0		1	S	
1312	45-CA-302	E	TEU 3	LEVEL 2	D	D	NPF		3	0		2	F	
1313	45-CA-302	E	TEU 3	LEVEL 2	D	D	PFF	B	3	0		2	S	T

1314	45-CA-302	E	TEU 3	LEVEL 2	D	D	NPF		3	0		3	F	
1315	45-CA-302	E	TEU 3	LEVEL 2	D	D	NPF		2	1	P	5	F	
1316	45-CA-302	E	TEU 3	LEVEL 2	D	D	NPF		3	0		2	S	
1317	45-CA-302	E	TEU 3	LEVEL 2	D	D	NPF		2	1	I	1	S	
1318	45-CA-302	E	TEU 3	LEVEL 2	D	D	PFF	B	3	0		3	S	T
1319	45-CA-302	E	TEU 3	LEVEL 2	D	D	NPF		3	0		2	S	
1320	45-CA-302	E	TEU 3	LEVEL 2	D	D	WHF	B	3	0		4	F	T
1321	45-CA-302	E	TEU 3	LEVEL 2	D	D	PFF	B	3	0		2	S	T
1322	45-CA-302	E	TEU 3	LEVEL 2	D	D	NPF		3	0		4	F	
1323	45-CA-302	E	TEU 3	LEVEL 2	D	D	PFF	B	3	0		3	S	T
1324	45-CA-302	E	TEU 3	LEVEL 2	D	D	NPF		3	0		4	S	
1325	45-CA-302	E	TEU 3	LEVEL 2	D	D	NPF		3	0		3	F	
1326	45-CA-SC	E	SQ 61	CN 12	D	D	NPF		3	0		5	F	
1327	45-CA-SC	E	SQ 63	CN 328	D	S	NPF		2	1		2	F	
1328	45-CA-SC	E	SQ 63	CN 328	D	C	PFF		3	0		2	S	F
1329	45-CA-SC	E	SQ 65	CN276	D	D	WHF		2	2	F	1	F	C
1330	45-CA-SC	E	SQ 68	CN 292	D	M	PFF		2	0		4	S	T
1331	45-CA-SC	E	SQ 68	CN 292	D	M	NPF		3	0		2	F	
1332	45-CA-SC	E	SQ 68	CN 292	D	D	NPF		2	2	I	2	F	
1333	45-CA-SC	E	SQ 68	CN 294	D	D	NPF		2	1	F	2	S	
1334	45-CA-SC	E	SQ 68	CN 294	D	D	NPF		3	0		2	F	
1335	45-CA-SC	E	SQ 68	CN 294	D	M	NPF		2	1		1	F	
1336	45-CA-SC	E	SQ 69	CN 297	D	D	NPF		3	0		1	F	
1337	45-CA-SC	E	SQ 69	CN 297	D	D	NPF		3	0		3	S	
1338	45-CA-SC	E	SQ 69	CN 297	D	D	NPF		3	0		1	S	
1339	45-CA-SC	E	SQ 72	CN 305	D	D	PFF	B	3	0		4	S	T
1340	45-CA-SC	E	SQ 70	CN 300	D	D	PFF		3	0		3	S	F
1341	45-CA-SC	E	SQ 70	CN 298	D	M	NPF		2	2		1	F	
1342	45-CA-SC	S	USC	CN 308	D	D	NPF		2	3	I	0	S	
1343	45-CA-SC	S	#3	CN 309	D	D	WHF		2	2	I	1	F	C
1344	45-CA-SC	S	#4	CN 309	T	D					I			
1345	45-CA-SC	S	USC	6092	T	D					I			
1346	45-CA-SC	S		AV	T	M	WHF		2	1		2	F	F
1347	45-CA-SC	S		AIII	T	D	PFF		2	3	I	0		C
1348	45-CA-SC	E		TP 7	D	D	NPF		3	0		2	S	
1349	45-CA-SC	E		TP 5	D	D	PFF		3	0		2	S	T
1350	45-CA-SC	E		TP 5	D	D	NPF		2	1	P	2	F	
1351	45-CA-SC	E		TP 5	D	D	NPF		2	1	F	2	F	

1352	45-CA-SC	S		AV	D	D	WHF	B	3	0		3	F	T
1353	45-CA-SC	S		AV	D	D	WHF		3	0	I	4	F	C
1354	45-CA-SC	S		AV	D	D	NPF		2	2	P	1	F	
1355	45-CA-SC	S		AV	D	D	PFF		3	0		2	S	T
1356	45-CA-SC	E		TP 13	D	D	PFF		3	0	I	1	S	C
1357	45-CA-SC	S			T	D	NPF				F			
1358	45-CA-SC	S			D	D	PFF		3	0		2	S	T
1359	45-CA-SC	S			T	D					F			
1360	45-CA-SC	S			D	D	PFF		3	0		3	S	T
1361	45-CA-SC	S			D	Q	PFF		3	0		3	S	T
1362	45-CA-SC	S			T	C								
1363	45-CA-SC	S			T	D					I			
1364	45-CA-SC	S			D	D	PFF		3	0		1	S	T
1365	45-CA-SC	S			T	D								
1366	45-CA-SC	S			T	D					P			
1367	45-CA-SC	S			D	D	PFF		3	0		1	S	T
1368	45-CA-SC	S			D	D	WHF		3	0		3	F	F
1369	45-CA-SC	S			D	D	ANW							
1370	45-CA-SC	S			D	D	NPF		3	0		1	F	
1371	45-CA-SC	S			D	D	ANW							
1372	45-CA-SC	S			D	D	PFF		2	1	F	2	S	F
1373	45-CA-SC	S			T	C								
1374	45-CA-SC	S			D	D	NPF		3	0		2	S	
1375	45-CA-SC	S			D	D	PFF		3	0		2	S	F
1376	45-CA-SC	S			T	D					F			
1377	45-CA-SC	S			D	D	WHF		3	0	P	4	F	C
1378	45-CA-SC	S			D	D	WHF		3	0		3	F	F
1379	45-CA-SC	S			D	D	WHF		3	0		2	F	F
1380	45-CA-SC	S			D	D	WHF	B	3	0		3	F	T
1381	45-CA-SC	S			D	D	ANW							
1382	45-CA-SC	S			D	D	PFF		3	0		3	S	F
1383	45-CA-SC	S			D	D	WHF	B	3	0		2	F	T
1384	45-CA-SC	S	#10	CN 146	T	D								
1385	45-CA-SC	S			T	D								
1386	45-CA-SC	E	SQ 58	CN 98-5	T	D					P			
1387	45-CA-SC	E	SQ 65	CN 326-1	T	G								
1388	45-CA-SC	S			D	C	PFF		3	0		3	S	F
1389	45-CA-SC	S			T	M								
1390	45-JE-225	S			T	F								

1391	45-JE-225	S			D	D	PFF		2	1	P	1	S	C
1392	45-JE-231	S			T	D					P			
1393	45-JE-221	S			D	D	WHF		3	0	I	1	F	C
1394	45-JE-221	S			T	D	WHF		3	0	P	2	F	C
1395	45-CA-440	S			D	D	NPF		3	0		2	S	
1396	45-CA-440	S			D	D	WHF		3	0	P	3	F	C
1397	45-CA-440	S			D	D	NPF		2	1	F	2	S	
1398	45-CA-440	S			T	D	WHF		3	0	F	3	F	C
1399	45-JE-217	S			T	D	PFF		2	1	I	2	S	F
1400	45-JE-217	S			T	D	WHF		3	0	P	2	F	C
1401	45-JE-217	S			T	D								
1402	45-JE-217	S			D	D	NPF		2	2	I	2	F	
1403	45-JE-217	S			T	D	WHF		3	0	P	6	F	C
1404	45-JE-222	S			D	D	NPF		3	0		3	F	
1405	45-JE-222	S			D	D	WHF	P	2	1	I	3	F	T
1406	45-JE-222	S			D	D	PFF		3	0	P	2	S	C
1407	45-JE-222	S			D	D	NPF		2	3	F	0	S	
1408	45-JE-222	S			T	Z								
1409	45-JE-222	S			D	D	ANW							
1410	45-JE-230	S			T	D	WHF		3	0	F	3	F	C
1411	45-JE-223	S			D	D	NPF		3	0		2	F	
1412	45-JE-223	S			D	D	NPF		3	0		2	S	
1413	45-JE-223	S			D	D	NPF		3	0		1	S	
1414	45-JE-217	S			T	D	PFF		3	0	F	5	S	C
1415	45-JE-226	S			T	D	WHF		3	0	P	4	F	C
1416	45-JE-226	S			D	D	PFF		3	0	P	3	S	C
1417	45-JE-226	S			D	D	NPF		2	1	I	1	H	
1418	45-JE-226	S			D	D	PFF		2	1	F	3	S	T
1419	45-JE-226	S			D	D	WHF		3	0		1	F	T
1420	45-JE-226	S			D	D	WHF		3	0	P	4	F	C
1421	45-JE-224	S			T	D	NPF		2	1	P	3	F	
1422	45-JE-224	S			D	D	NPF		3	0		2	F	
1423	45-JE-224	S			T	D					P			
1424	45-JE-224	S			D	D	NPF		3	0		2	S	
1425	45-JE-224	S			D	D	NPF		3	0		2	S	
1426	45-JE-224	S			D	D	WHF		3	0		3	F	F
1427	45-JE-224	S			D	D	WHF	B	3	0		3	F	T
1428	45-JE-219	S			D	D	NPF		2	1	F	3	S	
1429	45-JE-219	S			D	D	PFF		3	0	F	2	S	C

1430	45-JE-219	S			D	D	NPF		3	0		3	F	
1431	45-JE-220	S			T	D								
1432	45-JE-220	S			T	D								
1433	45-JE-220	S			D	D	NPF		3	0		3	F	
1434	45-JE-220	S			D	D	WHF		2	1	P	2	F	C
1435	45-JE-220	S			T	D								
1436	45-JE-220	S			D	D	NPF		3	0		3	F	
1437	45-JE-220	S			D	D	PFF		2	1	I	1	S	T
1438	45-JE-220	S			D	D	NPF		3	0		3	F	
1439	45-CA-483	S			T	D					F			
1440	45-CA-483	S			D	D	PFF		2	1	P	1	S	C
1441	45-CA-483	S			D	D	WHF		3	0		2	H	T
1442	45-CA-483	S			D	D	ANW				P			
1443	45-CA-483	S			D	D	NPF		3	0		2	F	
1444	45-CA-483	S			D	D	WHF	B	3	0		3	F	T
1445	45-CA-483	S			D	D	PFF	B	3	0		3	S	T
1446	45-CA-483	S			D	D	WHF		3	0		2	F	F
1447	45-CA-483	S			T	D					P			
1448	45-CA-483	S			D	D	PFF		3	0		1	S	F
1449	45-CA-483	S			D	D	NPF		3	0		3	F	
1450	45-CA-483	S			D	D	NPF		2	1	I	2	S	
1451	45-CA-483	S			D	D	NPF		2	1	I	1	F	
1452	45-CA-483	S	TEU 1	LEVEL 0	D	D	NPF		2	2	F	1	F	
1453	45-CA-483	E	TEU 1	LEVEL 2	D	D	WHF		3	0		3	F	F
1454	45-CA-483	E	TEU 1	LEVEL 2	D	D	PFF		3	0		2	S	F
1455	45-CA-483	E	TEU 1	LEVEL 2	D	D	NPF		3	0		2	F	
1456	45-CA-483	E	TEU 1	LEVEL 2	D	D	PFF		3	0		2	S	T
1457	45-CA-483	E	TEU 1	LEVEL 1	D	D	NPF		2	1	P	2	F	
1458	45-CA-483	E	TEU 1	LEVEL 1	D	D	WHF		3	0	P	3	F	C
1459	45-CA-483	E	TEU 1	LEVEL 1	D	D	PFF		3	0		1	S	T
1460	45-CA-483	E	TEU 1	LEVEL 1	D	D	NPF		3	0		1	S	
1461	45-CA-483	E	TEU 1	LEVEL 1	D	D	PFF		3	0		1	S	F
1462	45-CA-483	E	TEU 1	LEVEL 3	D	D	WHF		2	1	P	1	F	C
1463	45-CA-483	E	TEU 1	LEVEL 3	D	D	NPF		3	0		1	F	
1464	45-CA-483	E	TEU 1	LEVEL 3	D	D	PFF	B	3	0		4	S	T
1465	45-CA-486	S			D	D	ANW				P			
1466	45-CA-486	S			D	F	WHF		2	1		1	F	T
1467	45-CA-486	S			D	D	ANW							

1468	45-CA-486	S			D	D	NPF		2	1	F	1	F	
1469	45-CA-486	S			D	D	NPF		2	2	F	1	S	
1470	45-CA-486	S			D	D					P			
1471	45-CA-492	S			D	D	NPF		3	0		4	F	
1472	45-CA-492	S			D	D	PFF		3	0	F	4	S	C
1473	45-CA-492	S			D	D	PFF		3	0		2	S	T
1474	45-CA-492	S			D	D	PFF		3	0		1	S	T
1475	45-CA-492	S			D	D	NPF		2	2	F	1	S	
1476	45-CA-492	S			D	D	NPF		2	1	P	1	S	
1477	45-CA-492	S			D	D	NPF		3	0		1	S	
1478	45-CA-492	S			D	D	PFF		3		P	1	S	C
1479	45-CA-492	S			D	D	NPF		3	0		2	S	
1480	45-CA-492	S			D	D	NPF		3	0		2	S	
1481	45-CA-492	S			D	D	PFF		3	0	F	2	S	C
1482	45-CA-492	S			D	D	NPF		3	0		1	S	
1483	45-CA-492	S			D	D	NPF		3	0		1	S	
1484	45-CA-492	S			T	D	NPF		3	0		1	S	
1485	45-CA-492	S			D	D	PFF		3	0		1	S	T
1486	45-CA-492	S			T	D	NPF		3	0		1	F	
1487	45-CA-492	S			D	D	NPF		3	0		2	F	
1488	45-CA-492	S			D	D	NPF		3	0		1	F	
1489	45-CA-492	S			T	D	NPF		2	1	F			
1490	45-CA-492	S			D	D	ANW							
1491	45-CA-492	S			D	D	PFF		3	0	P	1	S	
1492	45-CA-492	S			D	D	WHF		3	0		2	F	F
1493	45-CA-492	S			D	D	NPF		3	0		1	S	
1494	45-CA-484	S			D	D	NPF		3	0		1	S	
1495	45-CA-484	S			D	D	NPF		2	1	P	2	F	
1496	45-CA-484	S			D	D	PFF		2	2	F	2	S	C
1497	45-CA-488	S			T	D	PFF		3	0		6	S	T
1498	45-CA-488	S			D	D	WHF		3	0		4	F	T
1499	45-CA-490	S			D	D	WHF		2	1	P	4	F	T
1500	45-CA-491	S			D	D	PFF	P	2	1	F	2	S	T
1501	45-CA-489	S			T	D								
1502	45-CA-489	S			T	D					P			
1503	45-CA-487	S			D	D	PFF		3	0	P	3	S	C
1504	45-CA-487	S			D	D	NPF		2	1	I	3	F	
1505	45-CA-487	S			D	D	NPF		2	2	I	2	S	
1506	45-CA-487	S			D	D	NPF		3	0		1	S	

1507	45-CA-487	S			D	Q	PFF	P	2	2		1	S	C
1508	45-CA-487	S			D	D	NPF		2	2	I	1	F	
1509	45-CA-487	S			D	D	WHF		3	0	I	3	F	C
1510	45-CA-487	S			D	D	NPF		3	0		2	S	
1511	45-CA-487	S			T	D	NPF		2	1	P	3	F	
1512	45-CA-487	S			D	D	PFF		3	0		3	S	F
1513	45-CA-487	S			D	D	PFF	B	3	0		4	S	T
1514	45-CA-487	S			D	D	ANW							
1515	45-CA-487	S			D	D	PFF		2	1	P	3	S	C
1516	45-CA-487	S			T	D					F			
1517	45-CA-481	S			D	D	PFF		3	0	I	3	S	C
1518	45-CA-481	S			T	D					P			
1519	45-CA-481	S			D	D	PFF		2	1	I	1	S	C
1520	45-CA-481	S			T	D					I			
1521	45-CA-481	S			D	D	PFF	B	3	0		2	S	T
1522	45-CA-481	S			D	D	NPF		2	1	I	1	F	
1523	45-CA-481	S			T	D					F			
1524	45-CA-481	S			D	D	ANW				P			
1525	45-CA-481	S			T	D								
1526	45-CA-481	S			D	D	PFF		3	0		2	S	T
1527	45-CA-481	S			D	D	PFF		2	2	I	2	S	C
1528	45-CA-481	S			D	D	WHF		3	0	I	2	F	C
1529	45-CA-481	S			D	D	WHF	B	3	0		3	F	T
1530	45-CA-481	S			D	D	NPF		2	2	I	1	F	
1531	45-CA-481	S			T	D					I			
1532	45-CA-481	S			T	D								
1533	45-CA-481	S			D	D	NPF		3	0		3	F	
1534	45-CA-481	S			T	D					I			
1535	45-CA-481	S			D	D	WHF		2	1	I	2	F	F
1536	45-CA-481	S			T	D								
1537	45-CA-481	S			D	D	PFF		2	2	I	2	S	T
1538	45-CA-481	S			D	D	PFF		3	0		2	S	T
1539	45-CA-481	S			T	D	PFF		2	3	I	0	S	C
1540	45-CA-481	S			T	D					I			
1541	45-CA-481	S			T	G								
1542	45-CA-481	S			T	F								
1543	45-CA-481	S			D	D	ANW							
1544	45-CA-481	S			D	D	WHF	B	3	0		3	F	T
1545	45-CA-481	S			D	D	PFF		3	0		2	S	T

1546	45-CA-481	S			D	D	PFF		3	0	I	2	S	C
1547	45-CA-481	S			T	D								
1548	45-CA-481	S			T	D	PFF		2	2	P	1	S	F
1549	45-CA-481	S			D	D	PFF		3	0		1	S	F
1550	45-CA-481	S			T	D					I			
1551	45-CA-481	S			D	D	ANW				P			
1552	45-CA-481	S			T	D					I			
1553	45-CA-481	S			T	D	WHF		2	1	I	4	F	F
1554	45-CA-481	S			D	D	PFF		2	1	I	2	S	T
1555	45-CA-481	S			D	D	NPF		3	0		3	S	
1556	45-CA-481	S			T	C								
1557	45-CA-481	S			D	D	PFF		3	0	I	1	S	C
1558	45-CA-481	S			D	D	WHF		2	1	P	2	F	C
1559	45-CA-481	S			D	D	NPF		3	0		1	S	
1560	45-CA-481	S			T	D	NPF		3	0		2	F	
1561	45-CA-481	S			T	D					I			
1562	45-CA-481	S			D	D	ANW							
1563	45-CA-481	S			D	D	NPF		2	1	P	2	F	
1564	45-CA-481	S			D	D	NPF		2	1	I	2	S	
1565	45-CA-481	S			D	D	NPF		2	2	P	1	F	
1566	45-CA-481	S			T	D	WHF		2	2	I	1	F	C
1567	45-CA-481	S			T	D	NPF		2	3	I	0	F	
1568	45-CA-481	S			T	D					P			
1569	45-CA-481	S			D	D	NPF		2	1	I	3	F	
1570	45-CA-481	S			D	F	PFF		3	0		1	S	C
1571	45-CA-481	S			T	D					I			
1572	45-CA-481	S			T	D								
1573	45-CA-481	S			D	Q	WHF		2	2		1	F	C
1574	45-CA-481	S			D	Q	ANW							
1575	45-CA-481	S			T	D					I			
1576	45-CA-481	S			T	D					I			
1577	45-CA-481	S			D	D	ANW				I			
1578	45-CA-481	S			D	D	WHF		3	0	I	2	F	C
1579	45-CA-481	S			D	D	WHF		2	1	P	3	H	C
1580	45-CA-481	S			D	D	NPF		2	1	I	2	F	
1581	45-CA-481	S			D	D	NPF		3	0		3	F	
1582	45-CA-481	S			D	D	PFF		3	0		2	S	T
1583	45-CA-481	S			D	D	NPF		2	1	I	3	F	
1584	45-CA-481	S			T	Q								

1585	45-CA-481	S			T	D					I			
1586	45-CA-481	S			D	D	ANW				I			
1587	45-CA-481	S			D	Q	NPF		2	3		0	S	
1588	45-CA-481	S			T	D					I			
1589	45-CA-481	S			D	D	PFF		2	3	I	0	S	C
1590	45-CA-481	S			D	D	WHF		3	0	I	3	F	C
1591	45-CA-481	S			D	D	ANW				F			
1592	45-CA-481	S			D	Q	WHF		1	3		0	F	C
1593	45-CA-481	S			D	Q	WHF		1	3		0	F	C
1594	45-CA-481	S			T	Q								
1595	45-CA-481	S			D	Q	ANW							
1596	45-CA-481	S			T	Q			2	2		1	F	C
1597	45-CA-481	S			T	S								
1598	45-CA-302	E	TEU 3	LEVEL 3	D	D	WHF		3	0		2	F	F
1599	45-CA-302	E	TEU 3	LEVEL 3	D	D	PFF		3	0		3	S	T
1600	45-CA-302	E	TEU 3	LEVEL 3	D	D	NPF		3	0		2	S	
1601	45-CA-302	E	TEU 3	LEVEL 3	D	D	PFF	B	3	0		3	S	T
1602	45-CA-302	E	TEU 3	LEVEL 3	D	D	WHF	B	3	0		3	F	T
1603	45-CA-302	E	TEU 3	LEVEL 3	D	D	ANW				F			
1604	45-CA-302	E	TEU 3	LEVEL 3	D	D	WHF		2	1	I	3	F	T
1605	45-CA-302	E	TEU 3	LEVEL 3	D	D	WHF		2	1	P	3	F	F
1606	45-CA-302	E	TEU 3	LEVEL 3	T	D					F			
1607	45-CA-302	E	TEU 3	LEVEL 3	D	D	WHF		3	0		4	F	F
1608	45-CA-302	E	TEU 3	LEVEL 3	D	D	WHF		3	0		2	F	F
1609	45-CA-302	E	TEU 3	LEVEL 3	D	D	WHF		3	0		2	F	F
1610	45-CA-302	E	TEU 3	LEVEL 3	D	D	PFF	B	3	0		4	S	T
1611	45-CA-302	E	TEU 3	LEVEL 3	D	D	PFF		2	1	F	3	S	T
1612	45-CA-302	E	TEU 3	LEVEL 3	D	D	NPF		3	0		3	F	
1613	45-CA-302	E	TEU 3	LEVEL 3	D	D	WHF		3	0		4	F	T
1614	45-CA-302	E	TEU 3	LEVEL 3	D	D	PFF		3	0		2	S	T
1615	45-CA-302	E	TEU 3	LEVEL 3	D	D	WHF	B	3	0		4	F	T
1616	45-CA-302	E	TEU 3	LEVEL 3	D	D	WHF		2	1	P	2	F	F
1617	45-CA-302	E	TEU 3	LEVEL 3	D	D	PFF		3	0		2	S	T
1618	45-CA-302	E	TEU 3	LEVEL 3	D	D	WHF	B	3	0		3	F	T
1619	45-CA-302	E	TEU 3	LEVEL 3	D	D	WHF		2	1	P	3	F	F
1620	45-CA-302	E	TEU 3	LEVEL 3	T	D	PFF		3	0		2	S	T
1621	45-CA-302	E	TEU 3	LEVEL 3	D	D	NPF		2	1	P	1	F	

1622	45-CA-302	E	TEU 3	LEVEL 3	D	D	WHF		3	0		2	F	T
1623	45-CA-302	E	TEU 3	LEVEL 3	D	D	WHF	B	3	0		2	F	T
1624	45-CA-302	E	TEU 3	LEVEL 3	D	D	NPF		3	0		2	S	
1625	45-CA-302	E	TEU 3	LEVEL 3	D	D	NPF		3	0		1	F	
1626	45-CA-302	E	TEU 3	LEVEL 3	D	D	NPF		3	0		1	F	
1627	45-CA-302	E	TEU 3	LEVEL 3	D	D	WHF		3	0		1	F	T
1628	45-CA-302	E	TEU 3	LEVEL 3	D	D	NPF		3	0		2	F	
1629	45-CA-302	E	TEU 3	LEVEL 3	D	D	WHF	B	3	0		2	F	T
1630	45-CA-302	E	TEU 3	LEVEL 3	D	D	WHF	B	3	0		3	F	T
1631	45-CA-302	E	TEU 3	LEVEL 3	D	D	WHF		3	0		3	F	F
1632	45-CA-302	E	TEU 3	LEVEL 3	D	D	WHF		3	0		2	F	T
1633	45-CA-302	E	TEU 3	LEVEL 3	D	D	PFF		2	1	P	1	S	F
1634	45-CA-302	E	TEU 3	LEVEL 3	D	D	PFF	B	3	0		2	S	T
1635	45-CA-302	E	TEU 3	LEVEL 3	D	D	WHF		3	0		2	F	T
1636	45-CA-302	E	TEU 3	LEVEL 3	D	D	PFF		2	1	P	1	S	F
1637	45-CA-302	E	TEU 3	LEVEL 3	D	D	NPF		3	0		2	F	
1638	45-CA-302	E	TEU 3	LEVEL 3	D	D	PFF		3	0		2	S	F
1639	45-CA-302	E	TEU 3	LEVEL 3	D	D	PFF		2	1	P	2	S	F
1640	45-CA-302	E	TEU 3	LEVEL 3	D	D	PFF		3	0		3	S	F
1641	45-CA-302	E	TEU 3	LEVEL 3	D	D	PFF		3	0		3	S	T
1642	45-CA-302	E	TEU 3	LEVEL 3	D	D	PFF		3	0		2	S	T
1643	45-CA-302	E	TEU 3	LEVEL 3	D	D	NPF		3	0		2	F	
1644	45-CA-302	E	TEU 3	LEVEL 3	D	D	NPF		3	0		3	S	
1645	45-CA-302	E	TEU 3	LEVEL 3	D	D	NPF		3	0		1	F	
1646	45-CA-302	E	TEU 3	LEVEL 3	D	D	WHF		2	1	P	1	F	T
1647	45-CA-302	E	TEU 3	LEVEL 3	D	D	NPF		2	1	P	3	F	
1648	45-CA-302	E	TEU 3	LEVEL 3	D	D	NPF		3	0		3	S	
1649	45-CA-302	E	TEU 3	LEVEL 3	D	D	NPF		3	0		3	S	
1650	45-CA-302	E	TEU 3	LEVEL 3	D	D	PFF		3	0		1	S	T
1651	45-CA-302	E	TEU 3	LEVEL 3	D	D	WHF	B	3	0		3	F	T
1652	45-CA-302	E	TEU 3	LEVEL 3	D	D	PFF	B	3	0		4	S	T
1653	45-CA-302	E	TEU 3	LEVEL 3	D	D	NPF		3	0		2	F	
1654	45-CA-302	E	TEU 3	LEVEL 3	D	D	NPF		3	0		2	F	
1655	45-CA-302	E	TEU 3	LEVEL 3	D	D	NPF		3	0		2	F	
1656	45-CA-302	E	TEU 3	LEVEL 3	D	D	PFF		3	0		1	S	T
1657	45-CA-302	E	TEU 3	LEVEL 3	D	D	PFF	B	3	0		2	S	T

1658	45-CA-302	E	TEU 3	LEVEL 3	D	D	PFF		3	0		2	S	T
1659	45-CA-302	E	TEU 3	LEVEL 3	D	D	PFF		3	0		1	S	T
1660	45-CA-302	E	TEU 3	LEVEL 3	D	D	WHF		3	0		2	F	T
1661	45-CA-302	E	TEU 3	LEVEL 3	D	D	PFF		3	0		1	S	T
1662	45-CA-302	E	TEU 3	LEVEL 3	D	D	PFF		3	0		1	S	F
1663	45-CA-302	E	TEU 3	LEVEL 3	D	D	PFF		3	0		3	S	T
1664	45-CA-302	E	TEU 3	LEVEL 3	D	D	PFF		2	1	P	2	S	C
1665	45-CA-302	E	TEU 3	LEVEL 3	D	D	WHF		2	1	P	2	F	T
1666	45-CA-302	E	TEU 3	LEVEL 3	D	D	WHF		3	0		2	F	F
1667	45-CA-302	E	TEU 3	LEVEL 3	D	D	NPF		3	0		2	F	
1668	45-CA-302	E	TEU 3	LEVEL 3	D	D	PFF		3	0		2	S	T
1669	45-CA-302	E	TEU 3	LEVEL 3	D	D	WHF		3	0		2	F	F
1670	45-CA-302	E	TEU 3	LEVEL 3	D	D	NPF		3	0		2	S	
1671	45-CA-302	E	TEU 3	LEVEL 3	D	D	PFF		3	0		1	S	F
1672	45-CA-302	E	TEU 3	LEVEL 3	D	D	PFF		3	0		2	S	F
1673	45-CA-302	E	TEU 3	LEVEL 3	D	D	PFF		3	0		1	S	T
1674	45-CA-302	E	TEU 3	LEVEL 3	D	D	WHF		3	0		4	F	F
1675	45-CA-302	E	TEU 3	LEVEL 3	D	D	NPF		3	0		1	F	
1676	45-CA-302	E	TEU 3	LEVEL 3	D	D	NPF		2	2	F	2	S	
1677	45-CA-302	E	TEU 3	LEVEL 3	D	D	WHF		3	0		4	F	T
1678	45-CA-302	E	TEU 3	LEVEL 3	D	D	NPF		2	1	P	2	F	
1679	45-CA-302	E	TEU 3	LEVEL 3	D	D	NPF		3	0		2	F	
1680	45-CA-302	E	TEU 3	LEVEL 3	D	D	WHF		3	0		1	F	F
1681	45-CA-302	E	TEU 3	LEVEL 3	D	D	PFF		3	0		3	S	T
1682	45-CA-302	E	TEU 3	LEVEL 3	D	D	WHF		3	0		1	F	F
1683	45-CA-302	E	TEU 3	LEVEL 3	D	D	WHF		3	0		3	F	T
1684	45-CA-302	E	TEU 3	LEVEL 3	D	D	WHF	B	3	0		3	F	F
1685	45-CA-302	E	TEU 3	LEVEL 3	D	D	NPF		3	0		2	F	
1686	45-CA-302	E	TEU 3	LEVEL 3	D	D	PFF	B	3	0		2	S	T
1687	45-CA-302	E	TEU 3	LEVEL 3	D	D	NPF		3	0		3	F	
1688	45-CA-302	E	TEU 3	LEVEL 3	D	D	NPF		3	0		3	S	
1689	45-CA-302	E	TEU 3	LEVEL 3	D	D	PFF	B	3	0		2	S	T
1690	45-CA-302	E	TEU 3	LEVEL 3	D	D	NPF		3	0		2	S	
1691	45-CA-302	E	TEU 3	LEVEL 3	D	D	NPF		3	0		3	F	
1692	45-CA-302	E	TEU 3	LEVEL 3	D	D	NPF		3	0		3	F	
1693	45-CA-302	E	TEU 3	LEVEL 3	D	D	WHF		3	0		2	F	T

1694	45-CA-302	E	TEU 3	LEVEL 3	D	D	NPF		3	0		3	F	
1695	45-CA-302	E	TEU 3	LEVEL 3	D	D	NPF		3	0		1	F	
1696	45-CA-302	E	TEU 3	LEVEL 3	D	D	NPF		3	0		2	F	
1697	45-CA-302	E	TEU 3	LEVEL 3	D	D	NPF		3	0		2	F	
1698	45-CA-302	E	TEU 3	LEVEL 3	D	D	PFF	B	3	0		2	S	T
1699	45-CA-302	E	TEU 3	LEVEL 3	D	D	NPF		3	0		1	F	
1700	45-CA-302	E	TEU 3	LEVEL 3	D	D	NPF		3	0		1	F	
1701	45-CA-302	E	TEU 3	LEVEL 3	D	D	NPF		3	0		2	F	
1702	45-CA-302	E	TEU 3	LEVEL 3	D	D	PFF	B	3	0		3	S	T
1703	45-CA-302	E	TEU 3	LEVEL 3	D	D	PFF	B	3	0		4	S	T
1704	45-CA-302	E	TEU 3	LEVEL 3	D	D	PFF	B	3	0		2	S	T
1705	45-CA-302	E	TEU 3	LEVEL 3	D	D	PFF	B	3	0		2	S	T
1706	45-CA-302	E	TEU 3	LEVEL 3	D	D	NPF		3	0		1	S	
1707	45-CA-302	E	TEU 3	LEVEL 3	D	D	NPF		3	0		1	S	
1708	45-CA-302	E	TEU 3	LEVEL 3	D	D	NPF		3	0		2	S	
1709	45-CA-302	E	TEU 3	LEVEL 3	D	D	PFF	B	3	0		2	S	T
1710	45-CA-302	E	TEU 3	LEVEL 3	D	D	PFF	B	3	0		2	S	T
1711	45-CA-302	E	TEU 3	LEVEL 4	T	Z								
1712	45-CA-302	E	TEU 3	LEVEL 4	D	D	PFF		3	0		2	S	T
1713	45-CA-302	E	TEU 3	LEVEL 4	D	D	PFF		3	0		3	S	T
1714	45-CA-302	E	TEU 3	LEVEL 4	D	D	NPF		3	0		3	F	
1715	45-CA-302	E	TEU 3	LEVEL 4	D	D	NPF		2	2	P	2	S	
1716	45-CA-302	E	TEU 3	LEVEL 4	D	D	PFF		3	0		1	S	T
1717	45-CA-302	E	TEU 3	LEVEL 4	D	D	NPF		3	0		1	F	
1718	45-CA-302	E	TEU 3	LEVEL 4	D	D	NPF		3	0		1	S	
1719	45-CA-302	E	TEU 3	LEVEL 4	D	D	PFF		3	0		2	S	F
1720	45-CA-302	E	TEU 3	LEVEL 4	D	D	PFF		3	0		3	S	T
1721	45-CA-302	E	TEU 3	LEVEL 4	D	D	NPF		3	0		1	S	
1722	45-CA-302	E	TEU 3	LEVEL 4	D	D	PFF		3	0	P	3	S	C
1723	45-CA-302	E	TEU 3	LEVEL 4	D	D	NPF		3	0		3	F	
1724	45-CA-302	E	TEU 3	LEVEL 4	D	D	NPF		3	0		3	F	
1725	45-CA-302	E	TEU 3	LEVEL 4	T	D	NPF		3	0		1	F	
1726	45-CA-302	E	TEU 3	LEVEL 4	D	D	WHF		3	0		3	F	T
1727	45-CA-302	E	TEU 3	LEVEL 4	D	D	PFF		2	3	I	0	S	F
1728	45-CA-302	E	TEU 3	LEVEL 4	D	D	PFF		2	1	P	1	S	T
1729	45-CA-302	E	TEU 3	LEVEL 4	D	D	PFF		3	0		2	S	F

1730	45-CA-302	E	TEU 3	LEVEL 4	D	D	PFF	B	3	0		3	S	T
1731	45-CA-302	E	TEU 3	LEVEL 4	D	D	NPF		2	2	I	1	S	
1732	45-CA-302	E	TEU 3	LEVEL 4	T	F								
1733	45-CA-302	E	TEU 3	LEVEL 4	D	D	WHF		2	2	P	1	F	T
1734	45-CA-302	E	TEU 3	LEVEL 4	D	D	PFF	B	3	0		2	S	T
1735	45-CA-302	E	TEU 3	LEVEL 4	D	D	PFF		2	2	P	1	S	T
1736	45-CA-302	E	TEU 3	LEVEL 4	D	D	WHF	B	3	0		2	F	T
1737	45-CA-302	E	TEU 3	LEVEL 4	D	D	NPF		3	0		1	S	
1738	45-CA-302	E	TEU 3	LEVEL 4	D	D	PFF	B	3	0		3	S	T
1739	45-CA-302	E	TEU 3	LEVEL 4	D	D	WHF	B	3	0		3	F	T
1740	45-CA-302	E	TEU 3	LEVEL 4	D	D	PFF		3	0		3	S	T
1741	45-CA-302	E	TEU 3	LEVEL 4	D	D	PFF	B	3	0		2	S	T
1742	45-CA-302	E	TEU 3	LEVEL 4	D	D	PFF	B	3	0		2	S	T
1743	45-CA-302	E	TEU 3	LEVEL 4	D	D	WHF	B	3	0		2	F	T
1744	45-CA-302	E	TEU 3	LEVEL 4	D	D	PFF		3	0		3	S	F
1745	45-CA-302	E	TEU 3	LEVEL 4	D	D	NPF		3	0		1	S	
1746	45-CA-302	E	TEU 3	LEVEL 4	D	D	PFF		3	0		2	S	T
1747	45-CA-302	E	TEU 3	LEVEL 4	D	D	PFF		3	0		3	S	T
1748	45-CA-302	E	TEU 3	LEVEL 4	D	D	NPF		3	0		1	S	
1749	45-CA-302	E	TEU 3	LEVEL 4	D	D	PFF	B	3	0		3	S	T
1750	45-CA-302	E	TEU 3	LEVEL 4	D	D	WHF		3	0		1	F	F
1751	45-CA-302	E	TEU 3	LEVEL 4	D	D	PFF		3	0		1	S	T
1752	45-CA-302	E	TEU 3	LEVEL 4	D	D	NPF		3	0		2	S	
1753	45-CA-302	E	TEU 3	LEVEL 5	D	M	NPF		3	0		3	F	
1754	45-CA-302	E	TEU 4	LEVEL 2	D	D	WHF		2	2	F	1	F	F
1755	45-CA-302	E	TEU 4	LEVEL 2	D	D	PFF		3	0		2	S	F
1756	45-CA-302	E	TEU 4	LEVEL 3	T	D					I			
1757	45-CA-302	E	TEU 4	LEVEL 3	D	D	WHF		3	0		4	F	T
1758	45-CA-302	E	TEU 4	LEVEL 3	D	D	NPF		3	0		2	F	
1759	45-CA-302	E	TEU 4	LEVEL 3	D	D	NPF		3	0		1	F	
1760	45-CA-302	E	TEU 4	LEVEL 4	D	D	WHF		3	0		3	F	F
1761	45-CA-302	E	TEU 4	LEVEL 4	D	D	NPF		3	0		2	F	
1762	45-CA-302	E	TEU 4	LEVEL 4	D	Z	NPF		2	2		2	F	
1763	45-CA-302	E	TEU 6	LEVEL 1	D	D	WHF		3	0	F	2	F	C
1764	45-CA-302	E	TEU 6	LEVEL 1	T	Z								
1765	45-CA-302	E	TEU 6	LEVEL 2	T	D								

1766	45-CA-302	E	TEU 6	LEVEL 2	T	D								
1767	45-CA-302	E	TEU 6	LEVEL 2	D	D	PFF		3	0	F	1	S	C
1768	45-CA-302	E	TEU 6	LEVEL 2	D	D	NPF		3	0		1	S	
1769	45-CA-302	E	TEU 6	LEVEL 2	D	D	ANW				F			
1770	45-CA-302	E	TEU 6	LEVEL 2	D	D	NPF		2	1	F	1	F	
1771	45-CA-302	E	TEU 6	LEVEL 2	D	D	NPF		3	0		1	S	
1772	45-CA-302	E	TEU 6	LEVEL 2	D	D	PFF		3	0		1	S	T
1773	45-CA-302	E	TEU 6	LEVEL 2	D	D	NPF		3	0		1	F	
1774	45-CA-302	E	TEU 6	LEVEL 2	D	D	PFF		3	0		1	S	T
1775	45-CA-302	E	TEU 6	LEVEL 3	D	D	PFF		3	0		2	S	T
1776	45-CA-302	E	TEU 6	LEVEL 3	D	M	PFF		3	0		1	S	F
1777	45-CA-302	E	TEU 6	LEVEL 3	D	D	ANW				F			
1778	45-CA-302	E	TEU 6	LEVEL 3	D	D	WHF		3	0		2	F	T
1779	45-CA-302	E	TEU 6	LEVEL 3	D	D	PFF		3	0		1	S	T
1780	45-CA-302	E	TEU 6	LEVEL 4	D	D	NPF		3	0		3	S	
1781	45-CA-302	E	TEU 6	LEVEL 4	D	Z	ANW							
1782	45-CA-302	E	TEU 6	LEVEL 6	D	D	NPF		2	1	F	1	F	
1783	45-CA-302	E	TEU 7	LEVEL 1	D	D	PFF		3	0		1	S	T
1784	45-CA-302	E	TEU 7	LEVEL 1	D	D	NPF		3	0		1	F	
1785	45-CA-302	E	TEU 7	LEVEL 1	D	Z	PFF		3	0		1	S	T
1786	45-CA-302	E	TEU 7	LEVEL 1	D	D	NPF		2	1	I	2	S	
1787	45-CA-302	E	TEU 7	LEVEL 1	D	D	PFF		2	3	P	0	S	T
1788	45-CA-302	E	TEU 7	LEVEL 1	D	D	PFF	B	3	0		2	S	T
1789	45-CA-302	E	TEU 7	LEVEL 2	D	D	NPF		3	0		1	F	
1790	45-CA-302	E	TEU 7	LEVEL 2	D	D	PFF		3	0		2	S	T
1791	45-CA-302	E	TEU 7	LEVEL 2	D	D	NPF		3	0		1	F	
1792	45-CA-302	E	TEU 7	LEVEL 2	D	D	WHF		1	2	F	1	F	F
1793	45-CA-302	E	TEU 7	LEVEL 2	D	M	NPF		2	2		2	F	
1794	45-CA-302	E	TEU 7	LEVEL 2	D	D	NPF		3	0		1	F	
1795	45-CA-302	E	TEU 7	LEVEL 3	D	D	NPF		2	3	F	0	F	
1796	45-CA-302	E	TEU 7	LEVEL 3	D	D	PFF		3	0		2	S	T
1797	45-CA-302	E	TEU 7	LEVEL 3	D	D	PFF		2	1	F	2	S	T
1798	45-CA-302	E	TEU 7	LEVEL 4	D	D	WHF		3	0	F	1	F	C
1799	45-CA-302	E	TEU 7	LEVEL 4	D	C	WHF	B	3	0		3	F	T
1800	45-CA-302	E	TEU 8	LEVEL 2	D	F	NPF		3	0		2	F	
1801	45-CA-302	E	TEU 8	LEVEL 2	D	D	NPF		3	0		1	S	

1802	45-CA-302	E	TEU 8	LEVEL 2	T	M								
1803	45-CA-302	E	TEU 8	LEVEL 2	D	M	PFF		3	0		2	S	T
1804	45-CA-302	E	TEU 8	LEVEL 2	D	D	NPF		3	0		2	F	
1805	45-CA-302	E	TEU 8	LEVEL 2	D	D	WHF		3	0		3	H	F
1806	45-CA-302	E	TEU 8	LEVEL 3	D	D	NPF		3	0		2	S	
1807	45-CA-302	E	TEU 8	LEVEL 4	T	D								
1808	45-CA-302	E	TEU 8	LEVEL 4	D	D	WHF		3	0	P	2	F	C
1809	45-CA-302	E	TEU 8	LEVEL 4	D	M	WHF	P	1	3				
1810	45-CA-302	E	TEU 8	LEVEL 5	T	Z								
1811	45-CA-302	E	TEU 9	LEVEL 2	D	D	NPF		3	0		1	S	
1812	45-CA-302	E	TEU 10	LEVEL 1	D	M	PFF		3	0		3	S	T
1813	45-CA-302	E	TEU 10	LEVEL 2	D	D	PFF		3	0		4	S	T
1814	45-CA-302	E	TEU 10	LEVEL 2	T	D								
1815	45-CA-302	E	TEU 10	LEVEL 4	D	D	WHF		2	1	P	1	F	C
1816	45-CA-302	E	TEU 11	LEVEL 1	D	D	NPF		3	0		2	F	
1817	45-CA-302	E	TEU 11	LEVEL 1	D	D	NPF		3	0		2	S	
1818	45-CA-302	E	TEU 11	LEVEL 1	D	D	NPF		3	0		2	F	
1819	45-CA-302	E	TEU 11	LEVEL 2	D	D	PFF	B	3	0		3	S	T
1820	45-CA-302	E	TEU 11	LEVEL 2	D	D	NPF		2	1	P	1	S	
1821	45-CA-302	E	TEU 11	LEVEL 2	D	D	PFF		3	0		3	S	T
1822	45-CA-302	E	TEU 11	LEVEL 2	D	D	WHF		2	1	P	2	F	C
1823	45-CA-302	E	TEU 11	LEVEL 3	D	D	PFF		2	1	F	2	S	F
1824	45-CA-302	E	TEU 11	LEVEL 3	D	Z	PFF		2	3		0	S	C
1825	45-CA-302	E	TEU 11	LEVEL 4	T	Z								
1826	45-CA-302	E	TEU 12	LEVEL 1	D	Z	ANW							
1827	45-CA-302	E	TEU 12	LEVEL 2	T	D								
1828	45-CA-302	E	TEU 12	LEVEL 4	T	C								
1829	45-CA-302	E	TEU 13	LEVEL 1	D	D	NPF		3	0		4	F	
1830	45-CA-302	E	TEU 13	LEVEL 3	D	D	NPF		3	0		2	S	
1831	45-CA-302	E	TEU 13	LEVEL 3	D	D	PFF	B	3	0		2	S	T
1832	45-CA-302	E	TEU 13	LEVEL 3	D	D	NPF		3	0		1	F	
1833	45-CA-302	E	TEU 14		D	D	WHF		2	1		2	F	C
1834	45-CA-302	E	TEU 14		D	D	ANW							
1835	45-CA-302	E	TEU 15	LEVEL 1	D	D	PFF		2	2	F	1	S	T
1836	45-CA-302	E	TEU 15	LEVEL 2	D	D	PFF		3	0		3	S	F
1837	45-CA-302	E	TEU 15	LEVEL 2	D	D	NPF		3	0		3	F	

1838	45-CA-302	E	TEU 15	LEVEL 2	D	D	PFF		3	0	F	2	S	C
1839	45-CA-302	E	TEU 16	LEVEL 1	D	D	PFF		3	0		1	S	T
1840	45-CA-302	E	TEU 16	LEVEL 2	D	D	NPF		3	0		1	S	
1841	45-CA-302	E	TEU 16	LEVEL 2	D	D	NPF		3	0		1	S	
1842	45-CA-302	E	TEU 16	LEVEL 3	D	D	WHF		1	3	F	0	F	C
1843	45-CA-302	E	TEU 16	LEVEL 3	D	D	WHF	P	3	0		2	F	T
1844	45-CA-302	E	TEU 16	LEVEL 3	D	D	NPF		2	1	P	3	F	
1845	45-CA-302	E	TEU 16	LEVEL 3	D	D	NPF		3	0		1	F	
1846	45-CA-302	E	TEU 16	LEVEL 3	D	D	PFF		2	1	P	2	S	C
1847	45-CA-302	E	TEU 16	LEVEL 5/F1	D	D	NPF		3	0		2	F	
1848	45-CA-302	E	TEU 16	LEVEL 5	D	C	WHF	B	3	0		2	F	T
1849	45-CA-302	E	TEU 5	LEVEL 1	D	D	WHF		3	0		1	F	T
1850	45-CA-302	E	TEU 5	LEVEL 2	T	D					P			
1851	45-CA-302	E	TEU 5	LEVEL 2	D	D	NPF		2	1	I	4	F	
1852	45-CA-302	E	TEU 5	LEVEL 2	D	D	PFF		2	3	P	0	S	C
1853	45-CA-302	E	TEU 5	LEVEL 2	D	D	PFF	B	3	0		2	S	T
1854	45-CA-302	E	TEU 5	LEVEL 2	D	D	NPF		3	0		2	F	
1855	45-CA-302	E	TEU 5	LEVEL 2	D	D	NPF		2	1	I	2	S	
1856	45-CA-302	E	TEU 5	LEVEL 2	D	D	NPF		3	0		1	F	
1857	45-CA-302	E	TEU 5	LEVEL 2	D	D	NPF		3	0		2	S	
1858	45-CA-302	E	TEU 5	LEVEL 2	D	D	NPF		3	0		1	F	
1859	45-CA-302	E	TEU 5	LEVEL 2	D	D	NPF		3	0		1	F	
1860	45-CA-302	E	TEU 5	LEVEL 2	D	D	NPF		3	0		1	F	
1861	45-CA-302	E	TEU 5	LEVEL 3	D	D	WHF		2	1	P	2	F	T
1862	45-CA-302	E	TEU 5	LEVEL 3	D	D	PFF		2	2	P	2	S	T
1863	45-CA-302	E	TEU 5	LEVEL 3	D	D	NPF		3	0		1	F	
1864	45-CA-302	E	TEU 5	LEVEL 3	D	D	PFF		3	0		1	S	T
1865	45-CA-302	E	TEU 5	LEVEL 4	D	M	ANW							
1866	45-JE-216	E	TEU 1	LEVEL 2	T	D								
1867	45-JE-216	E	TEU 1	LEVEL 2	D	D	NPF		3	0		1	F	
1868	45-JE-216	E	TEU 1	LEVEL 2	D	D	NPF		2	3	F	0	F	
1869	45-JE-216	E	TEU 1	LEVEL 2	D	D	ANW				F			
1870	45-JE-216	E	TEU 1	LEVEL 2	D	D	WHF	P	2	1	P	2	F	T
1871	45-JE-216	E	TEU 1	LEVEL 2	D	D	PFF		3	0		2	S	F
1872	45-JE-216	E	TEU 1	LEVEL 2	D	D	NPF		2	1	F	1	F	
1873	45-JE-216	E	TEU 1	LEVEL 2	D	D	PFF	P	3	0		2	F	T

1874	45-JE-216	E	TEU 1	LEVEL 2	D	D	NPF		2	1	F	3	S	
1875	45-JE-216	E	TEU 1	LEVEL 3	D	D	NPF		2	1	P	2	F	
1876	45-JE-216	E	TEU 2	LEVEL 1/S1	T	D								
1877	45-JE-216	E	TEU 2	LEVEL 1/S1	T	M								
1878	45-JE-216	E	TEU 2	LEVEL 1/S1	D	D	NPF		3	0		2	F	
1879	45-JE-216	E	TEU 2	LEVEL 2/S2	D	D	ANW							
1880	45-JE-216	E	TEU 2	LEVEL 2/S2	D	D	ANW				F			
1881	45-JE-216	E	TEU 2	LEVEL 2/S2	D	D	NPF		3	0		2	S	
1882	45-JE-216	E	TEU 2	LEVEL 2/S2	D	D	ANW				F			
1883	45-JE-216	E	TEU 2	LEVEL 2/S2	D	D	NPF		3	0		2	S	
1884	45-JE-216	E	TEU 2	LEVEL 2/S2	D	D	NPF		2	1	F	1	F	
1885	45-JE-216	E	TEU 2	LEVEL 2/S2	D	D	NPF		3	0		1	F	
1886	45-JE-216	E	TEU 2	LEVEL 2/S2	D	D	WHF		3	0	F	1	F	C
1887	45-JE-216	E	TEU 2	LEVEL 2/S2	D	D	NPF		3	0		1	F	
1888	45-JE-216	E	TEU 2	LEVEL 2/S2	D	D	NPF		2	1	F	1	F	
1889	45-JE-216	E	TEU 2	LEVEL 2/S2	D	D	NPF		2	1	F	1	S	
1890	45-JE-216	E	TEU 2	LEVEL 2/S2	D	D	NPF		3	0		1	S	
1891	45-JE-216	E	TEU 2	LEVEL 2/S2	D	D	WHF		2	1	F	2	F	T
1892	45-JE-216	E	TEU 2	EVEL 2/S3	D	D	PFF		2	1	F	3	S	T
1893	45-JE-216	E	TEU 2	EVEL 2/S3	T	D								
1894	45-JE-216	E	TEU 2	EVEL 2/S3	D	D	PFF		2	1	F	2	S	C
1895	45-JE-216	E	TEU 2	EVEL 2/S3	D	D	NPF		3	0		1	S	
1896	45-JE-216	E	TEU 2	EVEL 2/S3	D	D	NPF		3	0		3	F	
1897	45-JE-216	E	TEU 2	EVEL 2/S3	D	D	PFF		2	1	F	1	S	T
1898	45-JE-216	E	TEU 2	EVEL 2/S3	D	D	PFF		3	0		2	S	F
1899	45-JE-216	E	TEU 2	EVEL 2/S3	D	D	NPF		2	1	P	3	S	
1900	45-JE-216	E	TEU 2	EVEL 2/S3	D	D	PFF		3	0		1	S	T
1901	45-JE-216	E	TEU 2	EVEL 2/S3	T	D								
1902	45-JE-216	E	TEU 2	EVEL 2/S3	D	D	NPF		3	0		3	S	
1903	45-JE-216	E	TEU 2	EVEL 2/S3	D	D	WHF		3	0	F	3	F	C
1904	45-JE-216	E	TEU 2	EVEL 2/S3	D	D	NPF		2	2	F	2	S	
1905	45-JE-216	E	TEU 2	EVEL 2/S3	D	D	ANW				F			
1906	45-JE-216	E	TEU 2	EVEL 2/S3	D	D	PFF		3	0		1	S	T
1907	45-JE-216	E	TEU 2	EVEL 2/S3	D	D	PFF		3	0		1	S	T
1908	45-JE-216	E	TEU 2	EVEL 2/S3	T	D					F			
1909	45-JE-216	E	TEU 2	EVEL 2/S3	D	D	ANW							

1910	45-JE-216	E	TEU 2	LEVEL 3/S3	T	D								
1911	45-JE-216	E	TEU 2	LEVEL 3/S3	D	D	PFF		3	0		1	S	T
1912	45-JE-216	E	TEU 2	LEVEL 3/S3	D	D	NPF		3	0		3	S	
1913	45-JE-216	E	TEU 2	LEVEL 3/S3	D	D	WHF		3	0		2	F	F
1914	45-JE-216	E	TEU 2	LEVEL 3/S3	D	D	NPF		3	0		1	F	
1915	45-JE-216	E	TEU 2	LEVEL 3/S3	T	D								
1916	45-JE-216	E	TEU 2	LEVEL 3/S3	T	D					F			
1917	45-JE-216	E	TEU 2	LEVEL 3/S3	D	D	NPF		3	0		2	S	
1918	45-JE-216	E	TEU 2	LEVEL 3/S3	T	D					F			
1919	45-JE-216	E	TEU 2	LEVEL 3/S3	D	D	NPF		3	0		1	F	
1920	45-JE-216	E	TEU 2	LEVEL 3/S3	D	D	ANW							
1921	45-JE-216	E	TEU 2	LEVEL 3/S3	D	D	ANW							
1922	45-JE-216	E	TEU 2	LEVEL 3/S3	D	D	PFF		3	0	F	1	S	C
1923	45-JE-216	E	TEU 2	LEVEL 3/S3	D	D	ANW							
1924	45-JE-216	E	TEU 2	LEVEL 3/S3	D	D	NPF		3	0		1	S	
1925	45-JE-216	E	TEU 2	LEVEL 3/S3	D	D	NPF		3	0		1	S	
1926	45-JE-216	E	TEU 2	LEVEL 3/S3	D	D	NPF		2	2	F	1	F	
1927	45-JE-216	E	TEU 2	LEVEL 3/S3	D	D	WHF		3	0		2	F	F
1928	45-JE-216	E	TEU 2	LEVEL 3/S3	D	D	NPF		2	1	F	1	F	
1929	45-JE-216	E	TEU 2	LEVEL 3/S3	D	D	NPF		3	0		1	S	
1930	45-JE-216	E	TEU 2	LEVEL 3/S3	D	D	NPF		3	0		1	F	
1931	45-JE-216	E	TEU 2	LEVEL 3/S3	D	D	WHF		3	0		2	F	F
1932	45-JE-216	E	TEU 2	LEVEL 3/S3	D	D	NPF		3	0		1	S	
1933	45-JE-216	E	TEU 2	LEVEL 3/S3	D	D	NPF		3	0		3	F	
1934	45-JE-216	E	TEU 2	LEVEL 3/S3	T	D					F			
1935	45-JE-216	E	TEU 2	LEVEL 3/S3	D	D	PFF	P	2	1	F	2	S	T
1936	45-JE-216	E	TEU 2	LEVEL 3/S3	D	D			2	3	F	0	S	
1937	45-JE-216	E	TEU 2	LEVEL 3/S3	D	D	NPF		3	0		2	F	
1938	45-JE-216	E	TEU 2	LEVEL 3/S4	D	D	WHF		3	0	F	3	F	C
1939	45-JE-216	E	TEU 2	LEVEL 3/S4	D	D	NPF		2	1	F	2	S	
1940	45-JE-216	E	TEU 2	LEVEL 3/S4	D	D	NPF		2	1	F	2	S	
1941	45-JE-216	E	TEU 2	LEVEL 3/S4	D	D	NPF		2	1	F	1	F	
1942	45-JE-216	E	TEU 2	LEVEL 3/S4	T	M								
1943	45-JE-216	E	TEU 2	LEVEL 3/S4	T	D					F			
1944	45-JE-216	E	TEU 2	LEVEL 3/S4	D	D	PFF		3	0		1	S	T
1945	45-JE-216	E	TEU 2	LEVEL 3/S4	T	D								

1946	45-JE-216	E	TEU 2	LEVEL 3/S4	D	D	NPF		2	1	F	1	F	
1947	45-JE-216	E	TEU 2	LEVEL 3/S4	D	D	PFF		3	0		3	S	F
1948	45-JE-216	E	TEU 2	LEVEL 3/S3	T	D								
1949	45-JE-216	E	TEU 3	LEVEL 3/S3	D	D	PFF	P	2	1	F	1	S	C
1950	45-JE-216	E	TEU 3	LEVEL 3/S3	D	D	PFF		3	0	F	4	S	C
1951	45-JE-216	E	TEU 3	LEVEL 3/S3	T	D								
1952	45-JE-216	E	TEU 3	LEVEL 3/S3	D	D	PFF		3	0	F	4	S	C
1953	45-JE-216	E	TEU 3	LEVEL 3/S3	D	D	WHF		3	0		3	F	T
1954	45-JE-216	E	TEU 3	LEVEL 3/S3	D	D	PFF		3	0		2	S	F
1955	45-JE-216	E	TEU 3	LEVEL 3/S3	D	D	NPF		3	0		3	F	
1956	45-JE-216	E	TEU 3	LEVEL 3/S3	D	D	PFF		2	1	F	1	S	C
1957	45-JE-216	E	TEU 3	LEVEL 3/S3	T	D								
1958	45-JE-216	E	TEU 3	LEVEL 3/S3	D	D	NPF		3	0		3	F	
1959	45-JE-216	E	TEU 3	LEVEL 3/S3	D	D	PFF		3	0		4	S	F
1960	45-JE-216	E	TEU 3	LEVEL 3/S3	D	D	WHF		2	1	F	1	F	F
1961	45-JE-216	E	TEU 3	LEVEL 3/S3	D	D	ANW							
1962	45-JE-216	E	TEU 3	LEVEL 3/S3	D	D	ANW							
1963	45-JE-216	E	TEU 3	LEVEL 4/S4	D	D	ANW							
1964	45-JE-216	E	TEU 3	LEVEL 4/S4	D	D	WHF		3	0		4	F	T
1965	45-JE-216	E	TEU 3	LEVEL 4/S4	D	D	NPF		3	0		2	F	
1966	45-JE-216	E	TEU 3	LEVEL 4/S4	D	D	NPF		3	0		2	F	
1967	45-JE-216	E	TEU 3	LEVEL 4/S4	D	D	NPF		2	1	F	2	S	
1968	45-JE-216	E	TEU 3	LEVEL 4/S4	D	D	PFF		3	0	F	3	S	C
1969	45-JE-216	E	TEU 3	LEVEL 4/S4	D	D	NPF		3	0		1	S	
1970	45-JE-216	E	TEU 3	LEVEL 4/S4	D	D	PFF		3	0		2	S	F
1971	45-JE-216	E	TEU 3	LEVEL 4/S4	D	D	ANW							
1972	45-JE-216	E	TEU 3	LEVEL 4/S4	D	D	WHF		1	3	F	0	F	C
1973	45-JE-216	E	TEU 3	LEVEL 4/S4	D	D	NPF		3	0		2	F	
1974	45-JE-216	E	TEU 3	LEVEL 4/S4	D	D	PFF		3	0		2	S	T
1975	45-JE-216	E	TEU 3	LEVEL 4/S4	D	D	WHF		3	0		2	F	F
1976	45-JE-216	E	TEU 3	LEVEL 4/S4	D	D	ANW							
1977	45-JE-216	E	TEU 3	LEVEL 4/S4	D	D	WHF		3	0	F	2	F	C
1978	45-JE-216	E	TEU 3	LEVEL 4/S4	D	D	ANW							
1979	45-JE-216	E	TEU 3	LEVEL 4/S4	T	D								
1980	45-JE-216	E	TEU 3	LEVEL 4/S4	D	D	PFF		2	1	F	1	S	C
1981	45-JE-216	E	TEU 3	LEVEL 4/S4	D	D	WHF	P	2	1	F	3	F	T

1982	45-JE-216	E	TEU 3	LEVEL 3/S5	D	D	WHF		3	0		3	F	F
1983	45-JE-216	E	TEU 3	LEVEL 3/S5	D	D	WHF		3	0		3	F	F
1984	45-JE-216	E	TEU 3	LEVEL 3/S5	T	D								
1985	45-JE-216	E	TEU 3	LEVEL 3/S5	D	D	ANW							
1986	45-JE-216	E	TEU 3	LEVEL 3/S5	D	F	NPF		3	0		2	F	
1987	45-JE-216	E	TEU 3	LEVEL 3/S5	D	D	WHF	P	2	1	F	1	F	T
1988	45-JE-216	E	TEU 3	LEVEL 3/S5	D	D	WHF		3	0	F	1	F	C
1989	45-JE-216	E	TEU 3	LEVEL 3/S5	D	D	PFF		3	0		1	S	F
1990	45-JE-216	E	TEU 3	LEVEL 3/S5	D	D	NPF		3	0		2	F	
1991	45-JE-216	E	TEU 3	LEVEL 3/S5	D	D	NPF		3	0		3	S	
1992	45-JE-216	E	TEU 3	LEVEL 2/S3	D	D	WHF	P	3	0		4	F	T
1993	45-JE-216	E	TEU 3	LEVEL 2/S3	D	D	NPF		3	0		3	S	
1994	45-JE-216	E	TEU 3	LEVEL 2/S3	D	D	PFF		3	0		2	S	F
1995	45-JE-216	E	TEU 3	LEVEL 2/S3	D	D	WHF	B	3	0		4	F	T
1996	45-JE-216	E	TEU 3	LEVEL 2/S3	D	D	PFF		3	0		1	S	F
1997	45-JE-216	E	TEU 3	LEVEL 4/S3	D	D	WHF		3	0		3	F	F
1998	45-JE-216	E	TEU 3	LEVEL 4/S3	D	D	PFF	B	3	0		2	S	T
1999	45-JE-216	E	TEU 3	LEVEL 4/S3	D	D	ANW				I			
2000	45-JE-216	E	TEU 3	LEVEL 2/S1	D	D	NPF		3	0		2	S	
2001	45-JE-216	E	TEU 3	LEVEL 2/S2	D	D	PFF	P	2	1		f	S	C
2002	45-JE-216	E	TEU 3	LEVEL 3/S5	T	M								
2003	45-JE-216	E	TEU 3	LEVEL 4/S4	T	D					F			
2004	45-JE-216	E	TEU 3	LEVEL 4/S4	D	D	WHF		3	0	F	4	F	C
2005	45-JE-216	E	TEU 4	LEVEL 2/2	D	D	NPF		3	0		1	S	
2006	45-JE-216	E	TEU 3	LEVEL 2/2	D	D	NPF		3	0		2	F	
2007	45-JE-216	E	TEU 4	LEVEL 2/2	D	D	NPF		3	0		2	S	
2008	45-JE-216	E	TEU 4	LEVEL 2/2	D	D	WHF		3	0		1	F	F
2009	45-JE-216	E	TEU 4	LEVEL 2/2	D	D	NPF		2	1	I	4	F	
2010	45-JE-216	E	TEU 4	LEVEL 2/2	D	D	PFF		3	0		3	S	T
2011	45-JE-216	E	TEU 4	LEVEL 2/2	D	D	NPF		2	1	F	2	F	
2012	45-JE-216	E	TEU 4	LEVEL 2/2	D	D	PFF		2	3	F	0	S	F
2013	45-JE-216	E	TEU 4	LEVEL 2/2	D	D	PFF		2	1	I	1	S	C
2014	45-JE-216	E	TEU 4	LEVEL 2/2	D	D	NPF		2	1	F	2	F	
2015	45-JE-216	E	TEU 4	LEVEL 2/2	D	D	WHF		2	1	I	1	F	C
2016	45-JE-216	E	TEU 3	LEVEL 2/2	D	D	WHF		3	0		1	F	F
2017	45-JE-216	E	TEU 4	LEVEL 2/2	D	M	NPF		3	0		3	F	

2018	45-JE-216	E	TEU 4	LEVEL 1/S1	T	D								
2019	45-JE-216	E	TEU 4	LEVEL 1/S1	D	D	PFF	P	2	1	F	1	S	T
2020	45-JE-216	E	TEU 4	LEVEL 2/S1	T	D								
2021	45-JE-216	E	TEU 4	LEVEL 3/S3	D	D	WHF		3	0		2	F	F
2022	45-JE-216	E	TEU 4	LEVEL 3/S4	T	D					F			
2023	45-JE-216	E	TEU 4	LEVEL 3/S4	T	D								
2024	45-JE-216	E	TEU 4	LEVEL 3/S4	D	D	NPF		3	0		1	S	
2025	45-JE-216	E	TEU 4	LEVEL 3/S4	D	D	PFF	P	3	0	I	1	S	C
2026	45-JE-216	E	TEU 3	LEVEL 3/S4	D	D	NPF		3	0		2	F	
2027	45-JE-216	E	TEU 4	LEVEL 3/S4	D	D	PFF		3	0	F	2	S	C
2028	45-JE-216	E	TEU 4	LEVEL 3/S4	D	D	PFF		3	0		4	S	F
2029	45-JE-216	E	TEU 4	LEVEL 3/S4	D	D	ANW				F			
2030	45-JE-216	E	TEU 7	LEVEL 3/S3	D	D	NPF		2	1	F	1	F	
2031	45-JE-216	E	TEU 7	LEVEL 3/S3	D	D	WHF		3	0		2	F	T
2032	45-JE-216	E	TEU 7	LEVEL 3/S3	D	D	NPF		3	0		1	S	
2033	45-JE-216	E	TEU 7	LEVEL 3/S3	D	D	NPF		3	0		2	F	
2034	45-JE-216	E	TEU 7	LEVEL 3/S3	D	D	NPF		3	0		2	S	
2035	45-JE-216	E	TEU 7	LEVEL 3/S3	D	D	ANW							
2036	45-JE-216	E	TEU 7	LEVEL 3/S3	T	D					F			
2037	45-JE-216	E	TEU 7	LEVEL 3/S3	D	D	NPF		3	0		3	F	
2038	45-JE-216	E	TEU 7	LEVEL 3/S3	D	D	PFF	P	2	1	F	1	S	T
2039	45-JE-216	E	TEU 7	LEVEL 3/S3	D	D	ANW				F			
2040	45-JE-216	E	TEU 7	LEVEL 3/S3	D	D	NPF		3	0		1	F	
2041	45-JE-216	E	TEU 7	LEVEL 3/S3	D	D	NPF		3	0		1	S	
2042	45-JE-216	E	TEU 7	LEVEL 3/S3	D	D	PFF		3	0	F	2	S	C
2043	45-JE-216	E	TEU 7	LEVEL 3/S3	D	D	NPF		3	0		4	F	
2044	45-JE-216	E	TEU 7	LEVEL 3/S3	D	D	NPF		3	0		2	S	
2045	45-JE-216	E	TEU 7	LEVEL 3/S3	D	D	WHF	P	2	1	F	1	F	T
2046	45-JE-216	E	TEU 7	LEVEL 3/S3	D	D	NPF		3	0		1	F	
2047	45-JE-216	E	TEU 7	LEVEL 3/S3	D	D	ANW							
2048	45-JE-216	E	TEU 7	LEVEL 3/S3	D	D	NPF		2	3	F	0	S	
2049	45-JE-216	E	TEU 7	LEVEL 3/S3	D	D	WHF		3	0		1	F	F
2050	45-JE-216	E	TEU 7	LEVEL 3/S3	D	D	NPF		2	1	F	4	S	
2051	45-JE-216	E	TEU 7	LEVEL 3/S3	T	M								
2052	45-JE-216	E	TEU 7	LEVEL 3/S3	D	D	NPF		2	1	F	3	F	
2053	45-JE-216	E	TEU 7	LEVEL 3/S3	D	D	PFF		3	0	F	2	S	C

2054	45-JE-216	E	TEU 7	LEVEL 3/S3	D	D	NPF		3	0		3	S	
2055	45-JE-216	E	TEU 7	LEVEL 3/S3	D	D	PFF		3	0		1	S	F
2056	45-JE-216	E	TEU 7	LEVEL 3/S3	D	D	NPF		3	0		1	S	
2057	45-JE-216	E	TEU 7	LEVEL 3/S3	D	D	WHF	P	3	0	F	2	F	C
2058	45-JE-216	E	TEU 7	LEVEL 3/S3	D	D	ANW				F			
2059	45-JE-216	E	TEU 7	LEVEL 3/S3	T	D					F			
2060	45-JE-216	E	TEU 7	LEVEL 3/S3	D	D	NPF		2	1	F	3	S	
2061	45-JE-216	E	TEU 7	LEVEL 3/S3	D	D	PFF		3	0	F	2	S	C
2062	45-JE-216	E	TEU 7	LEVEL 3/S3	D	D	PFF	P	3	0		1	S	F
2063	45-JE-216	E	TEU 7	LEVEL 3/S2	D	D	PFF		2	2	F	1	S	C
2064	45-JE-216	E	TEU 7	LEVEL 3/S2	D	D	ANW							
2065	45-JE-216	E	TEU 7	LEVEL 3/S2	T	D					F			
2066	45-JE-216	E	TEU 7	LEVEL 3/S2	D	D	NPF		3	0		1	F	
2067	45-JE-216	E	TEU 7	LEVEL 3/S2	D	D	PFF		3	0		1	S	T
2068	45-JE-216	E	TEU 7	LEVEL 3/S2	D	D	WHF		2	1	F	1	F	T
2069	45-JE-216	E	TEU 7	LEVEL 3/S2	D	D	NPF		3	0		1	F	
2070	45-JE-216	E	TEU 7	LEVEL 3/S2	D	D	ANW				I			
2071	45-JE-216	E	TEU 7	LEVEL 3/S2	T	D								
2072	45-JE-216	E	TEU 7	LEVEL 3/S2	D	D	NPF		2	1	F	1	F	
2073	45-JE-216	E	TEU 7	LEVEL 3/S2	D	D	NPF		3	0		2	F	
2074	45-JE-216	E	TEU 7	LEVEL 3/S2	D	D	NPF		2	2	I	1	F	
2075	45-JE-216	E	TEU 7	LEVEL 2/S2	D	D	PFF		3	0		3	S	F
2076	45-JE-216	E	TEU 7	LEVEL 2/S2	D	D	NPF		3	0		2	F	
2077	45-JE-216	E	TEU 7	LEVEL 2/S2	D	D	WHF		3	0		4	F	F
2078	45-JE-216	E	TEU 7	LEVEL 2/S2	T	D					F			
2079	45-JE-216	E	TEU 7	LEVEL 2/S2	D	D	PFF		3	0		2	S	T
2080	45-JE-216	E	TEU 7	LEVEL 2/S2	D	D	PFF		3	0	F	2	S	C
2081	45-JE-216	E	TEU 7	LEVEL 2/S2	D	D	NPF		2	1	F	2	F	
2082	45-JE-216	E	TEU 7	LEVEL 2/S2	D	D	NPF		2	1	F	2	F	
2083	45-JE-216	E	TEU 7	LEVEL 2/S2	D	D	WHF		3	0		4	F	F
2084	45-JE-216	E	TEU 7	LEVEL 4/S3	D	D	WHF	P	2	2	F	3	F	T
2085	45-JE-216	E	TEU 7	LEVEL 2/S1	T	D					F			
2086	45-JE-216	E	TEU 7	LEVEL 3/S2	T	M								
2087	45-JE-216	E	TEU 7	LEVEL 3/S3	T	D								
2088	45-JE-216	E	TEU 9	LEVEL 2/S2	D	D	PFF		3	0		1	S	F
2089	45-JE-216	E	TEU 9	LEVEL 2/S2	D	D	PFF		2	2	F	1	S	T

2090	45-JE-216	E	TEU 9	LEVEL 2/S2	D	D	NPF		3	0		1	F	
2091	45-JE-216	E	TEU 9	LEVEL 2/S2	T	D								
2092	45-JE-216	E	TEU 9	LEVEL 2/S2	D	D	NPF		3	0		2	F	
2093	45-JE-216	E	TEU 9	LEVEL 2/S2	D	D	ANW				F			
2094	45-JE-216	E	TEU 9	LEVEL 2/S2	D	D	NPF		3	0		2	F	
2095	45-JE-216	E	TEU 9	LEVEL 2/S4	T	D					F			
2096	45-JE-216	E	TEU 9	LEVEL 2/S4	T	D								
2097	45-JE-216	E	TEU 9	LEVEL 2/S4	D	D	ANW							
2098	45-JE-216	E	TEU 9	LEVEL 2/S4	D	D	NPF		3	0		2	F	
2099	45-JE-216	E	TEU 9	LEVEL 2/S4	D	D	WHF		3	0	F	4	F	C
2100	45-JE-216	E	TEU 9	LEVEL 2/S4	D	D	PFF		3	0		2	S	C
2101	45-JE-216	E	TEU 9	LEVEL 2/S4	D	D	ANW							
2102	45-JE-216	E	TEU 9	LEVEL 2/S4	D	D	NPF		3	0		1	S	
2103	45-JE-216	E	TEU 9	LEVEL 2/S3	D	D	PFF		3	0		1	S	F
2104	45-JE-216	E	TEU 9	LEVEL 2/S3	D	D	NPF		3	0		1	F	
2105	45-JE-216	E	TEU 9	LEVEL 2/S3	D	D	NPF		3	0		4	F	
2106	45-JE-216	E	TEU 9	LEVEL 2/S3	D	D	WHF	P	3	0	F	1	F	C
2107	45-JE-216	E	TEU 9	LEVEL 2/S3	D	D	PFF	P	3	0	F	1	S	C
2108	45-JE-216	E	TEU 9	LEVEL 2/S3	D	D	ANW				I			
2109	45-JE-216	E	TEU 7a	LEVEL 3	D	D	NPF		2	1	F	1	F	
2110	45-JE-216	E	TEU 7a	LEVEL 2	D	D	ANW				F			
2111	45-JE-216	E	TEU 7a	LEVEL 2	D	D	NPF		3	0		4	F	
2112	45-JE-216	E	TEU 7a	LEVEL 2	D	D								
2113	45-JE-216	E	TEU 7a	LEVEL 2	D	D	NPF		3	0		1	S	
2114	45-JE-216	E	TEU 7a	LEVEL 1	T	D					F			
2115	45-JE-216	E	TEU 7a	LEVEL 1	D	D	NPF		2	1	F	2	F	
2116	45-JE-216	E	TEU 6	LEVEL 1	T	D								
2117	45-CA-257	S	CSC	32	D	D	NPF		2	1	P	2	F	
2118	45-CA-257	S	CSC	111	D	D	PFF		3	0		3	S	F
2119	45-CA-257	S	CSC	104	D	D	WHF		3	0		4	F	F
2120	45-CA-257	S	CSC	63	D	D	PFF	B	3	0		4	S	T
2121	45-CA-257	S	CSC	48	D	D	ANW				P			
2122	45-CA-257	S	CSC	113	T	D								
2123	45-CA-257	S	CSC	112	D	D	NPF		2	1	F	3	S	
2124	45-CA-257	S	CSC	92	T	D								
2125	45-CA-257	S	CSC	8	D	D	PFF		3	0		4	S	T
2126	45-CA-257	S	CSC	1	D	D	WHF		3	0		2	F	F

2127	45-CA-257	S	CSC	39	D	D	NPF		3	0		3	F	
2128	45-CA-257	S	CSC	11	D	D	NPF		3	0		1	S	
2129	45-CA-257	S	CSC	13	D	D	PFF		2	1	F	3	S	C
2130	45-CA-257	S	CSC	10B	D	D	PFF		2	1	F	2	S	C
2131	45-CA-257	S	CSC	10b	D	D	WHF		3	0		3	F	F
2132	45-CA-257	S	CSC	70	D	D	NPF		2	1	P	2	S	
2133	45-CA-257	S	CSC	66	D	D	WHF	B	3	0		5	F	T
2134	45-CA-257	S	CSC	35	D	D	PFF		3	0	P	3	S	C
2135	45-CA-257	S	CSC	61	D	D	PFF		3	0		3	S	F
2136	45-CA-257	S	CSC	102	D	D	WHF		2	1	P	2	F	C
2137	45-CA-257	S	CSC	27	D	D	WHF		3	0		2	H	T
2138	45-CA-257	S	CSC	36	D	D	NPF		3	0		3	F	
2139	45-CA-257	S	CSC	33	D	D	NPF		3	0		3	F	
2140	45-CA-257	S	CSC	21	D	D	NPF		2	1	F	2	S	
2141	45-CA-257	S	CSC	67	D	D	PFF		2	1	P	2	S	T
2142	45-CA-257	S	CSC	47	D	D	PFF		2	2	P	1	S	C
2143	45-CA-257	S	CSC	95	D	D	PFF		3	0	F	3	S	C
2144	45-CA-257	S	CSC	46	D	D	NPF		3	0		2	F	
2145	45-CA-257	S	CSC	24	D	D	PFF		2	3	I	o	S	C
2146	45-CA-257	S	CSC	28	D	D	WHF		3	0	P	1	F	C
2147	45-CA-257	S	CSC	30	T	D								
2148	45-CA-257	S	CSC	50	D	D	PFF		3	0		2	S	F
2149	45-CA-257	S	CSC	20	D	D	NPF		3	0		3	S	
2150	45-CA-257	S	CSC	79	D	D	NPF		3	0		3	S	
2151	45-CA-257	S	CSC	74	D	D	WHF		3	0	F	4	F	C
2152	45-CA-257	S	CSC	5	D	D	WHF		2	1	I	1	F	C
2153	45-CA-257	S	CSC	17	D	D	NPF		3	0		3	F	
2154	45-CA-257	S	CSC	16	D	D	WHF		2	1	I	3	F	F
2155	45-CA-257	S	CSC	34	D	D	WHF		2	1	F	1	F	F
2156	45-CA-257	S	CSC	29	D	D	WHF	P	2	1	P	2	F	C
2157	45-CA-257	S	CSC	83	D	D	ANW							
2158	45-CA-257	S	CSC	84	D	D	WHF		3	0		3	F	T
2159	45-CA-257	S	CSC	101	D	D	NPF		3	0		2	S	
2160	45-CA-257	S	CSC	25	D	D	ANW				P			
2161	45-CA-257	S	CSC	85	D	D	PFF	B	3	0		3	S	T
2162	45-CA-257	S	CSC	40	D	D	PFF		3	0	P	3	S	C
2163	45-CA-257	S	CSC	72	D	D	WHF		3	0		4	F	F
2164	45-CA-257	S	CSC	94	T	D					F			
2165	45-CA-257	S	CSC	98	T	D					P			

2166	45-CA-257	S	CSC	31	T	D					F			
2167	45-CA-257	S	CSC	44	D	D	PFF		2	1	P	2	S	C
2168	45-CA-257	S	CSC	42	D	D	PFF		3	0		1	S	F
2169	45-CA-257	S	CSC	52	D	D	NPF		2	2	F	1	S	
2170	45-CA-257	S	CSC	12	D	D	WHF		3	0	P	3	F	C
2171	45-CA-257	S	CSC	105	D	D	PFF		2	1	P	2	S	T
2172	45-CA-257	S	CSC	110	D	D	PFF		3	0		3	S	T
2173	45-CA-257	S	CSC	43	D	D	NPF		2	1	P	1	F	
2174	45-CA-257	S	CSC	97	D	D	PFF		3	0		3	S	F
2175	45-CA-257	S	CSC	65	D	D	ANW							
2176	45-CA-257	S	CSC	78	D	D	NPF		2	1	F	2	F	
2177	45-CA-257	S	CSC	58	D	D	WHF		3	0	F	3	F	C
2178	45-CA-257	S	CSC	82	D	D	ANW							
2179	45-CA-257	S	CSC	81	D	D	NPF		3	0		5	F	
2180	45-CA-257	S	CSC	80	D	D	NPF		3	0		2	S	
2181	45-CA-257	S	CSC	75	T	D					F			
2182	45-CA-257	S	CSC	103	D	D	PFF	B	3	0		2	S	T
2183	45-CA-257	S	CSC	54	T	D					F			
2184	45-CA-257	S	CSC	90	D	D	ANW				P			
2185	45-CA-257	S	CSC	4	D	D	WHF		3	0		3	F	F
2186	45-CA-257	S	CSC	18	D	D	NPF		3	0		4	F	
2187	45-CA-257	S	CSC	60	D	D	PFF		3	0		3	S	F
2188	45-CA-257	S	CSC	22	D	D	PFF	B	3	0		3	S	F
2189	45-CA-257	S	CSC	10	D	D	NPF		2	1	P	3	S	
2190	45-CA-257	S	CSC	99	D	D	PFF		2	1	P	1	S	C
2191	45-CA-257	S	CSC	91	T	D								
2192	45-CA-257	S	CSC	69	D	D	PFF		3	0		4	S	T
2193	45-CA-257	S	CSC	76	D	D	PFF		2	1	P	2	S	C
2194	45-CA-257	S	CSC	15	D	D	NPF		2	2	I	1	F	
2195	45-CA-257	S	CSC	14	T	D					I			
2196	45-CA-257	S	CSC	2	D	D	WHF		3	0	F	4	F	C
2197	45-CA-257	S	CSC	3	D	D	WHF		3	0		4	F	F
2198	45-CA-257	S	CSC	68	D	D	WHF		3	0		4	F	F
2199	45-CA-257	S	CSC	93	T	D								
2200	45-CA-257	S	CSC	57	D	D	WHF		3	0	F	2	F	C
2201	45-CA-257	S	CSC	59	D	D	PFF		3	0		2		T
2202	45-CA-257	S	CSC	6	D	D	NPF		3	0		2	F	
2203	45-CA-257	S	CSC	107	D	D	NPF		2	1	F	2	F	
2204	45-CA-257	S	CSC	86	D	D	PFF		2	2	P	2	S	F

2205	45-CA-257	S	CSC	87	D	D	NPF		3	0		3	F	
2206	45-CA-257	S	CSC	89	D	D	NPF		3	0		2	F	
2207	45-CA-257	S	CSC	19	D	D	WHF		2	1	F	2	F	F
2208	45-CA-257	S	CSC	100	D	D	NPF		3	0		1	S	

APPENIX D

Chipped Stone Artifact Data B

Category	Code Description
Prov 1	S= Surface, E= Excavation
Prov 2	CSC= Controlled Surface Collection, TEU= Test Excavation Unit, SHP= Shovel Probe, SQ= Square, USC= Uncontrolled Surface Collection
Prov 3	Levels and Strata for Test Units and Loci for CSC
Type	T= Tool, D= Debitage
Raw Material	D= Dacite, Q= Quartzite, Z= Quartz Crystal, O= Obsidian, C= CCS, M= Metasediment, S= Sandstone, F= Fine-grained Volcanic, G= Coarse-grained Volcanic, H= Other
Frag Cat	P= Proximal Flake Fragment, N= Non-Proximal or Flake Shatter, A= Angular Shatter
Flk Type	W= Whole Flake, B= Bifacial thinning flake, P= Bipolar flake, L= Blade
Tech Cat	1= Primary, 2= Secondary, 3= Interior
Dorsal Cortex	Amount of dorsal cortex 0 = 0%, 1 = 1-50%, 2=51-99%, 3 = 100%
Cortex Type	S= Smooth, I= Incipient cone, P= Pitted/vessicular, F= Flat
N Dorsal Flk Scars	Count of flake scars on dorsal side
Flake Term Type	F= Feather, S= Step, H= Hinge, P= Plunging
Platform	C= Cortical, F= Flat, T= Faceted, R= Crushed, A= Abraded
Weight	Weight in grams
GLD	Greatest linear dimension
Width	Next largest dimension 90 degrees from GLD
Thickness	Thickness where GLD and Width meet
Class	BF= Biface, U= Uniface, CCT= Cores/Cobble Tools
SubClass	BFF= Bifacial flake, HBF= Hafted Biface, ESB= Early Stage Biface, LSB= Late Stage Biface, RUF= Retouched Uniface, UTF= Utilized Flake- no retouch, UDC= Unidirectional Core, MDC= Multidirectional core
Retouched?	Y = Yes, N = No
Cortex	Y = Yes, N = No
Biface W/B	Biface whole or broken
FGV Name	Name of primary source

#	Site	Weight	GLD	Width	Thick	Class	Sub Class	Retouch	Cortex	Biface W/B	FGV	Notes
8	45-CA-476	12.6	36.47	39.7	8.94	UFT	RUF	Y	Y		Watts Point	
9	45-CA-476	7.0	32.67	29.17	12.63			N	Y			
10	45-CA-476	8.7	37.62	18.23	12.17	UFT	RUF	Y	Y			
11	45-CA-476	1.5	19.86	20.62	3.05			N	Y			
12	45-CA-476	11.0	38.94	31.27	11.44			N	Y		Watts Point	
13	45-CA-476	11.1	44.8	18.65	12.85	BFT	LSB	Y	N		Watts Point	Ventral surface visible, broken
14	45-CA-476	1.3	18.79	14.31	5.29			N	N			
15	45-CA-476	11.1	45.36	35.89	8.03			N	Y			
16	45-CA-476	5.8	41.52	20.35	10.69				Y			
17	45-CA-476	1.5	20.41	17.55	6.08				Y			
18	45-CA-477	22.2	49.95	38.72	11.55	UFT	RUF	Y	Y		Watts Point	
19	45-CA-477	2.4	28.41	17.70	5.06				N			
20	45-CA-477	8.8	26.59	24.05	16.6	CCT	BPC		Y			
21	45-CA-477	2.2	29.68	15.58	7.24				N			
22	45-CA-477	2.1	27.06	17.14	4.86				N			
23	45-CA-477	14.2	50.15	31.15	8.18	BFT	HBF	Y	N		Watts Point	Ventral surface visible, broken
24	45-CA-477	9.2	41.47	24.61	13.65				Y			
25	45-CA-477	5.0	22.69	27.58	7.42				Y			
26	45-CA-477	1.1	17.28	15.16	5.48				Y			
27	45-CA-477	2.5	26.33	26.09	4.57				N			
28	45-CA-477	2.8	22.06	18.57	7.04				Y			
29	45-CA-477	2.2	22.66	19.58	4.01				N			
30	45-CA-477	1.3	19.86	21.86	2.61				N			
31	45-CA-477	0.9	17.51	13.41	5.46				Y			
32	45-CA-477	8.7	32.48	22.96	14.83				Y			
33	45-CA-477	3.9	29.11	19.97	7.22				Y			
34	45-JE-237	6.1	39.68	18.32	8.5	BFT	HBF	Y	N		Watts Point	
35	45-CA-479	19.6	45.46	3.18	13.25				Y			
36	45-CA-414	28.3	52.99	33.69	19.03	CCT	MDC		Y			water worn
37	45-CA-414	13.1	42.65	27.33	9.47				Y			water worn
38	45-CA-414	19.3	37.37	25.11	23.11				Y			
39	45-CA-480	7.6	30.58	25.45	8.22				Y			
40	45-CA-480	7.5	32.65	27.72	9.57				Y			
41	45-CA-414	11.9	32.69	23.59	17.53				Y			
42	45-CA-414	47.1	43.92	33.39	23.83	CCT	MDC		Y			water worn
43	45-CA-414	8.2	27.11	24.21	11.93				Y			
44	45-CA-482	54.5	48.47	37.73	30.36	CCT	MDC		Y			water worn

45	45-CA-482	162.0	80.48	50.75	43.11	CCT	MDC		Y			broken in 2 - likely recent
46	45-CA-414	309.1	113.32	70.57	32.99	BFT	ESB		Y		Watts Point	water worn
47	45-CA-290	11.8	42.35	32.32	10.01				N			
48	45-CA-290	2.6	28.91	13.67	6.86				Y			
49	45-CA-290	7.5	29.9	21.79	13.89				Y			
50	45-CA-290	2.4	21.26	16.05	9.27				Y			
51	45-CA-290	22.44	42.75	24.47	19.02				Y			
52	45-CA-290	3.1	25.57	20.21	5.81				Y			
53	45-CA-290	0.8	12.8	11.54	5.24				N		Watts Point	
54	45-CA-290	6.3	34.07	18.24	8.88				Y			
55	45-CA-290	16.9	21.57	35.05	12.47				Y			
56	45-CA-290	3.9	28.14	22.41	6.47				Y			
57	45-CA-290	5.6	29.4	26.48	7.27				Y			
58	45-CA-290	8.8	31.78	24.79	15.32				Y			
59	45-CA-290	9.2	43.49	22.32	7.93				Y			
60	45-CA-290	31.6	59.47	32.33	19.39				Y		Watts Point	
61	45-CA-290	0.6	13.43	7.17	5.42				Y			
62	45-CA-290	4.8	29.93	19.01	6.28				N			
63	45-CA-290	24.8	43.6	37.55	16.65	CCT	MDC		Y			
64	45-CA-290	6.8	38.07	26.91	6.4				N			
65	45-CA-290	30.7	71.9	37.16	14.68	UFT	UTF	N	Y			
66	45-CA-441	6.2	28.2	18.37	12.77				Y			
67	45-CA-441	9.5	32.35	23.82	16.37				Y			
68	45-CA-441	12.9	37.25	36.93	10.57				Y			
69	45-CA-441	0.8	12.23	17.94	2.57				N		Watts Point	
70	45-CA-441	0.1	11.79	7.99	1.39				N			
71	45-CA-441	7.6	24.97	31.41	7.07				Y			
72	45-CA-441	0.7	16.81	11.0	3.21				N			
73	45-CA-441	0.6	12.53	8.01	5.21				Y			
74	45-CA-441	3.6	26.21	22.56	4.56				Y			
75	45-CA-441	1.4	16.81	14.95	4.54				Y			
76	45-CA-441	0.1	5.74	5.18	0.89				N			
77	45-CA-441	1.2	14.63	12.75	8.24				N			
78	45-CA-441	3.0	23.66	15.89	6.39				Y			
79	45-CA-441	2.6	18.82	21.69	4.28				N			
80	45-CA-441	0.1	8.3	6.69	4.79				N			
81	45-CA-441	0.2	10.66	6.57	3.34				Y			
82	45-CA-441	0.1	8.91	7.7	3.64				N			

83	45-CA-441	0.1	7.51	6.02	1.74				N			
84	45-CA-441	0.2	11.95	9.13	3.61				Y			
85	45-CA-441	0.1	12.51	7.97	1.70				N			
86	45-CA-435	16.9	36.87	44.19	7.27				Y			
87	45-CA-435	14.1	43.5	33.01	11.22	UFT	RUF	Y	N		Watts Point	scraper -possibly hafted
88	45-CA-435	3.5	20.73	18.57	9.64				Y			
89	45-CA-435	3.0	19.67	18.73	5.36				N			
90	45-CA-435	5.2	27.17	13.38	14.85				Y			
91	45-CA-435	4.0	27.95	16.69	7.91	UFT	RUF	Y	N			
92	45-JE-215	8.6	26.15	29.77	8.25				N			
93	45-JE-215	7.7	34.44	23.18	11.22				Y			
94	45-JE-215	16.5	41.9	33.68	33.68				Y			
95	45-JE-215	1.4	12.92	22.22	5.74				N			
96	45-JE-215	1.5	29.77	12.07	5.55				N			
97	45-JE-215	19.8	40.43	27.85	18.95	CCT	MDC		Y		Watts Point	
98	45-JE-215	13.6	47.06	29.34	7.56	UFT	UTF	N	Y		Watts Point	sawing/cutting action
99	45-JE-228	2.9	18.52	31.96	4.22				Y			
100	45-CA-425	17.8	50.1	40.39	9.7	UFT	UTF	N	Y			
101	45-JE-227	9.5	48.67	26.63	12.27				Y		Watts Point	
102	45-JE-227	3.6	28.22	18.45	10.21				Y			
103	45-JE-233	24.0	41.85	31.84	21.18	CCT	MDC		Y			
104	45-CA-288	41.2	53.76	40.79	16.81	UFT	RUF	Y	N		Watts Point	lots of trail damage
105	45-CA-288	6.2	25.89	22.47	14.08				Y			lots of trail damage
106	45-CA-471	5.1	36.55	22.39	7.21	UFT	UTF	N	N			
107	45-CA-471	24.9	37.56	55.28	10.23				Y		Watts Point	
108	45-CA-471	38.2	64.99	40.74	16.75	CCT	MDC	N	N		Watts Point	also utilized
109	45-CA-430	1.2	20.46	17.94	4.18				N			
110	45-CA-430	4.7	23.87	18.09	12.90	CCT	MDC		N			
111	45-CA-430	12.0	44.2	26.73	12.33	BFT	LSB	N	Y	W	Watts Point	cortex on biface/ppt
112	45-CA-430	2.6	28.87	19.24	6.4				N			
113	45-CA-430	6.3	28.3	21.75	10.79				Y			
114	45-CA-430	11.0	37.71	31.45	6.21				Y			
115	45-CA-430	1.3	21.56	15.85	5.0				N			
116	45-CA-430	2.1	26.79	16.55	5.41				Y			
117	45-CA-430	28.8	48.32	47.08	13.08	UFT	RUF	Y	Y			
118	45-CA-430	4.7	35.74	26.57	7.52				N			
119	45-CA-430	1.1	19.33	15.68	4.12				N			
120	45-CA-430	12.5	31.29	20.20	14.11				Y			

121	45-CA-430	1.3	20.71	16.32	4.81				N			
122	45-CA-430	0.9	16.5	15.2	4.12				N			
123	45-CA-430	1.4	22.43	13.37	5.71				Y			
124	45-CA-430	0.9	18.93	13.85	4.45				Y			
125	45-CA-430	0.4	15.83	10.21	3.4				Y			
126	45-CA-430	2.1	29.88	21.97	3.67				N			
127	45-CA-430	0.3	12.94	9.99	3.36				Y			
128	45-CA-430	0.8	19.92	15.95	3.65				N			
129	45-CA-430	21.3	39.41	31.77	18.62	CCT	MDC		Y			
130	45-CA-430	26.5	48.38	30.30	19.67	CCT	MDC		Y			
131	45-CA-430	4.6	25.26	21.08	9.20	UFT	UTF	N	N			
132	45-CA-430	5.0	36.90	16.95	7.68				N			
133	45-CA-430	1.8	19.14	14.79	6.16				Y			
134	45-CA-430	0.4	13.49	13.18	2.74				N			
135	45-CA-430	0.6	15.87	14.22	2.73				N			
136	45-CA-430	10.3	45.05	35.47	7.77	UFT	RUF	Y	Y			
137	45-CA-430	0.7	17.22	13.44	3.44				N			
138	45-CA-430	1.3	23.29	14.36	4.25				Y			
139	45-CA-430	0.2	13.72	12.81	2.23				N			
140	45-CA-430	0.8	18.14	14.96	3.37				N			
141	45-CA-430	0.4	14.40	10.10	3.97				N			
142	45-CA-430	6.1	37.28	19.73	9.63				N			
143	45-CA-430	6.0	30.34	21.72	11.87				Y			
144	45-CA-430	0.3	11.97	9.79	4.64				Y			
145	45-CA-430	3.0	23.83	14.63	10.47				Y			
146	45-CA-430	11.6	39.29	32.37	8.17				Y			
147	45-CA-430	0.1	11.74	7.49	1.94				Y			
148	45-CA-430	0.1	12.57	5.66	2.02				N			
149	45-CA-430	1.0	17.9	12.17	3.4				N			
150	45-CA-430	0.4	17.47	9.71	2.75				N			
151	45-CA-430	7.8	39.44	27.78	7.78				N			
152	45-CA-430	0.1	11.07	9.16	1.74				N			
153	45-CA-430	1.2	16.62	13.31	6.16	BFT	LSB		Y	B		
154	45-CA-430	1.6	21.13	19.87	3.23				N			
155	45-CA-430	2.5	28.29	18.33	5.77				Y			
156	45-CA-430	1.3	18.98	11.45	6.25				Y			
157	45-CA-430	4.4	32.49	15.8	9.4				Y			
158	45-CA-430	6.9	37.46	26.41	7.94				Y			
159	45-CA-430	13.7	42.03	30.79	12.16				Y			

160	45-CA-430	13.1	40.71	36.76	11.34				Y			
161	45-CA-430	0.9	21.4	15.5	3.47				Y			
162	45-CA-430	0.4	16.93	12.16	2.22				N			
163	45-CA-430	13.7	37.83	22.79	11.38	UFT	RUF	Y	Y			
164	45-CA-430	0.1	13.19	9.84	2.41				N		Watts Point	
165	45-CA-430	7.5	31.79	27.44	9.67	UFT	RUF	Y	N			
166	45-CA-430	12.1	44.95	33.23	7.67	BFT	BFF	Y	Y			
167	45-CA-430	4.7	26.47	21.16	10.44	UFT	RUF	Y	Y			
168	45-CA-430	1.3	23.69	16.63	3.86				Y			
169	45-CA-430	0.8	20.02	12.14	2.33				N			
170	45-CA-430	36.3	51.89	42.71	15.35				Y			
171	45-CA-430	126.5	58.86	47.78	43.06				Y		Watts Point	
172	45-CA-429	1.1	18.59	14.3	6.2				N			
173	45-CA-429	0.3	13.64	9.7	3.06				N			
174	45-CA-429	2.0	19.11	17.24	5.9				Y			
175	45-CA-429	3.0	24.50	12.64	7.65				Y			
176	45-CA-429	1.4	21.16	13.73	5.14				Y			
177	45-CA-429	0.7	19.03	9.99	3.5				Y			
178	45-CA-429	0.6	14.33	9.16	5.64				Y			
179	45-CA-429	0.6	17.67	10.87	3.03				N			
180	45-CA-429	2.9	25.63	15.36	8.55				N			
181	45-CA-429	1.8	24.83	17.75	3.46				N			
182	45-CA-429	15.2	43.82	36.12	10.27				Y			
183	45-CA-429	0.7	17.69	9.79	4.29				N		Watts Point	
184	45-CA-429	0.3	10.78	8.66	2.20				Y			
185	45-CA-429	0.6	16.70	9.44	2.69				Y			
186	45-CA-429	0.6	19.48	8.76	3.08				Y			
187	45-CA-429	1.6	20.82	14.14	4.31				N			
188	45-CA-429	1.8	21.02	15.69	4.40				Y			
189	45-CA-429	0.7	25.71	10.59	4.04				Y			
190	45-CA-429	0.1	12.37	10.21	1.49				N			
191	45-CA-429	0.4	14.14	7.00	3.19				N			
192	45-CA-429	2.5	24.01	21.82	4.64				Y			
193	45-CA-429	5.3	35.56	32.74	4.97				N			
194	45-CA-429	0.9	19.48	12.10	4.79				N			
195	45-CA-429	1.6	22.89	13.45	5.05				Y			
196	45-CA-429	0.1	9.97	7.67	2.34				N			
197	45-CA-429	2.1	21.89	18.18	4.43	UFT	UTF	N	Y			

198	45-CA-429	1.7	24.19	10.68	7.79				N			
199	45-CA-429	0.9	12.95	10.51	7.07				N			
200	45-CA-429	0.6	17.41	10.56	3.04				Y			
201	45-CA-429	1.1	17.09	12.74	4.01				Y			
202	45-CA-429	2.0	26.65	17.37	5.74				N			
203	45-CA-429	1.2	21.87	14.38	4.38				Y			
204	45-CA-429	0.7	16.7	12.11	3.41				N			
205	45-CA-429	0.5	17.19	16.87	2.65				N			
206	45-CA-429	0.9	16.02	13.25	6.35				N			
207	45-CA-429	0.5	15.82	10.67	3.39				Y			
208	45-CA-429	0.2	10.74	6.71	2.64				N			
209	45-CA-429	1.2	22.73	10.04	6.67				Y			
210	45-CA-429	0.4	14.54	7.29	3.75				N			
211	45-CA-429	0.8	19.58	8.08	6.31				N			
212	45-CA-429	0.4	12.13	10.51	3.97				N			
213	45-CA-429	0.3	15.89	10.38	2.52				N		Watts Point	
214	45-CA-429	5.1	34.21	19.15	7.04				Y			
215	45-CA-429	0.4	16.18	10.92	2.3				N			
216	45-CA-429	15.3	48.97	32.32	10.22				N			
217	45-CA-429	3.7	29.94	28.61	4.34				Y			
218	45-CA-429	3.0	19.13	14.68	11.67				Y			
219	45-CA-429	1.1	18.45	14.61	4.61				Y			
220	45-CA-429	0.4	14.42	9.66	2.96				N			
221	45-CA-429	1.1	19.13	17.65	2.77				Y			
222	45-CA-429	0.6	15.88	9.25	5.34				N			
223	45-CA-429	0.2	12.58	8.72	2.16				N			
224	45-CA-429	1.2	23.18	13.99	3.08				N			
225	45-CA-429	1.5	19.49	12.91	6.31				N			
226	45-CA-429	1.5	22.27	11.67	7.43				Y			
227	45-CA-301	18.1	47.25	30.47	11.28				N			
228	45-CA-301	1.4	21.20	11.22	8.45				Y			
229	45-CA-301	5.1	37.47	30.08	5.34				Y			
230	45-CA-301	3.9	35.89	17.44	6.01				Y		Watts Point	
231	45-CA-301	7.3	35.34	25.25	8.58				Y			
232	45-CA-301	14.2	51.4	30.6	14.17	UFT	RUF	Y	Y			
233	45-CA-301	0.2	10.53	10.35	2.15				N			
234	45-CA-301	15.5	43.07	32.77	10.66				Y			
235	45-CA-301	8.1	30.71	25.90	18.12				Y			
236	45-CA-301	26.1	48.99	39.69	18.7				Y			

237	45-CA-301	12.9	48.95	30.60	7.67				Y			
238	45-CA-301	14.1	39.8	36.01	11.39				Y			
239	45-CA-301	5.2	36.72	24.06	5.18				Y			
240	45-CA-301	2.6	24.15	20.68	5.86				Y			
241	45-CA-301	2.2	29.64	15.92	4.64				Y			
242	45-CA-301	1.7	25.72	18.68	3.59				N			
243	45-CA-301	3.1	29.29	16.22	6.34				Y			
244	45-CA-301	1.2	21.71	13.26	5.03				N			
245	45-CA-301	16.1	56.32	36.54	10.12	UFT	UTF	N	Y		Watts Point	
246	45-CA-301	0.1	10.34	9.41	1.62				N			pressure flake, dorsal arisses are worn
247	45-CA-301	0.1	9.68	5.75	1.07				N			pressure flake, dorsal arisses are worn
248	45-CA-301	0.1	9.89	7.29	0.99				N			pressure flake, dorsal arisses are worn
249	45-CA-301	0.1	10.59	7.81	1.07				N			pressure flake, dorsal arisses are worn
250	45-CA-301	0.1	8.10	5.04	0.99				N			pressure flake, dorsal arisses are worn
251	45-CA-301	0.1	8.19	5.94	0.77				N			pressure flake, dorsal arisses are worn
252	45-CA-301	0.1	7.99	4.5	1.31				N			pressure flake, dorsal arisses are worn
253	45-CA-301	0.1	8.71	5.99	0.95				N			pressure flake, dorsal arisses are worn
254	45-CA-301	0.1	10.53	3.67	1.11				N			pressure flake, dorsal arisses are worn
255	45-CA-301	0.1	9.55	5.22	1.09				N			pressure flake, dorsal arisses are worn
256	45-CA-301	0.1	5.74	3.70	0.34				N			pressure flake, dorsal arisses are worn
257	45-CA-301	0.1	7.16	4.79	0.80				N			pressure flake, dorsal arisses are worn
258	45-CA-301	0.1	5.62	2.52	0.34				N			pressure flake, dorsal arisses are worn
259	45-CA-301	0.1	9.22	7.90	1.56				N			pressure flake, dorsal arisses are worn
260	45-CA-301	0.1	7.25	4.36	1.88				N			pressure flake, dorsal arisses are worn
261	45-CA-442	10.2	49.97	27.19	7.22	BFT	HBF		N	B	Watts Point	
262	45-CA-434	1.0	20.56	14.66	2.92				Y			
263	45-CA-443	3.1	33.87	14.29	5.99	UFT	RUF	Y	N			scraper
264	45-CA-443	1.4	21.03	19.67	3.37				N		Watts Point	
265	45-CA-434	16.0	40.77	27.88	14.86	UFT	RUF	Y	Y			
266	45-CA-429	0.1	11.24	9.44	1.52				N			
267	45-CA-429	5.4	31.69	20.95	6.79				N			
268	45-CA-429	1.6	22.50	11.92	5.55				N			
269	45-JE-107	11.1	54.37	27.25	10.87	BFT	LSB	Y	N	W	Watts Point	Olcott point
270	45-JE-110	2.7	31.90	12.36	6.63	BFT	LSB	Y	N	W	Watts Point	
271	45-CA-552	0.4	18.55	11.53	2.25				Y			
272	45-CA-434	9.9	42.85	25.51	7.94				N			
273	45-CA-430	7.6	33.77	23.69	9.33	BFT	ESB		Y	B	Watts Point	

274	45-CA-430	1.2	17.39	15.97	5.93	BFT	LSB		N	B	Watts Point	
275	45-JE-216	27.6	57.81	43.67	14.8				Y		Watts Point	
276	45-CA-482	13.5	49.25	28.37	7.98	BFT	LSB		N	B	Unknown	
277	45-CA-430	7.0	45.26	18.82	8.36	BFT	LSB		N	B	Watts Point	
278	45-CA-478	25.1	59.35	32.50	11.59	BFT	LSB		N	W	Watts Point	ventral surface hardly retouched, can still see bulb. V. trail polished.
279	45-CA-270	22.6	48.93	42.76	11.85	BFT	LSB		N	B	Watts Point	v. large/wide biface
280	45-CA-432	8.7	55.30	21.96	7.33	BFT	HBF		N	W	Watts Point	
281	45-JE-236	5.4	38.11	28.07	5.91	BFT	LSB		N	W	Watts Point	ventral surface hardly retouched
282	45-CA-444	17.4	54.51	34.29	11.32	BFT	HBF		N	B	Watts Point	
283	ONP-2007-09	4.0	34.65	25.58	4.73				N		Watts Point	
284	ONP-2007-09	6.4	29.18	25.97	8.53				Y		Watts Point	
285	45-CA-487	2.0	24.69	22.84	4.72				Y		Watts Point	
286	45-CA-487	1.8	23.31	18.74	5.06				Y		Watts Point	
287	45-CA-302	4.4	30.09	26.32	7.95				Y		Watts Point	
288	45-CA-302	18.3	38.08	32.44	15.39	CCT	UDC		Y		Watts Point	
289	45-CA-561	11.9	46.97	24.27	7.10	UFT	RUF	Y	Y		Unknown	
290	45-CA-478	7.4	39.13	26.43	7.45	UFT	RUF	Y	N			
291	45-CA-478	11.6	36.13	35.16	11.19				Y			
292	45-CA-478	1.3	23.82	16.68	3.01				N			
293	45-CA-291	4.0	26.84	18.14	10.3				Y			
294	45-CA-291	3.6	27.54	25.42	7.11				N			
295	45-CA-291	15.4	49.21	35.19	8.21				N			
296	45-CA-291	9.1	39.74	38.04	8.57				N			
297	45-CA-291	0.1	8.50	5.75	1.24				N			
298	45-CA-291	0.4	16.00	12.06	2.76				N			
299	45-CA-291	0.1	8.92	6.06	1.87				N			
300	45-CA-291	0.2	18.32	6.92	2.51				N			
301	45-CA-291	6.8	40.65	22.05	9.64				Y			
302	45-CA-291	2.9	30.62	12.19	11.35				Y			
303	45-CA-291	0.1	10.51	5.97	2.46				Y			
304	45-CA-291	0.9	24.02	12.21	3.20				N			
305	45-CA-291	0.1	12.01	5.69	2.15				N			
306	45-CA-291	5.7	37.78	21.65	8.27	UFT	RUF	Y	Y			
307	45-CA-291	0.4	12.64	12.31	2.70				N			
308	45-CA-291	2.1	23.81	20.78	4.41				N			
309	45-CA-291	1.3	27.64	13.7	4.01				Y			
310	45-CA-291	2.7	29.21	22.95	5.45				N			

311	45-CA-291	0.6	18.94	8.39	5.76				N			
312	45-CA-291	0.3	11.3	9.54	3.23				N			
313	45-CA-291	13.3	36.56	18.85	15.44	CCT	MDC		Y			
314	45-CA-291	1.3	19.09	10.16	6.41				N			
315	45-CA-291	0.2	12.20	6.49	3.69				N			
316	45-CA-291	0.3	13.25	9.43	3.36				N			
317	45-CA-291	10.0	40.42	26.62	10.80	UFT	UTF	N	N			
318	45-CA-291	21.1	47.29	33.33	18.03				Y			
319	45-CA-291	8.6	35.94	29.59	7.61				Y			
320	45-CA-291	6.7	37.75	26.10	7.77				Y			
321	45-CA-291	0.5	17.73	13.03	2.61				N			
322	45-CA-291	1.7	25.24	11.67	6.44				N			
323	45-CA-291	1.0	18.56	11.34	4.24				Y			
324	45-CA-291	0.1	9.08	6.19	0.95				N			
325	45-CA-291	0.1	13.25	7.78	2.11				Y			
326	45-CA-291	1.0	16.89	12.81	4.78				Y			
327	45-CA-291	1.2	20.24	12.99	3.95				Y			
328	45-CA-291	0.5	14.11	12.39	2.87				Y			
329	45-CA-291	1.2	24.08	14.11	3.76				Y			
330	45-CA-291	0.4	18.28	11.42	2.73				N			
331	45-CA-291	0.3	16.93	9.16	2.42				N			
332	45-CA-291	0.2	10.07	8.89	3.11				Y			
333	45-CA-291	2.4	24.44	22.48	6.21				Y		Watts Point	
334	45-CA-291	1.7	20.49	17.84	7.07				Y			
335	45-CA-291	0.2	10.43	6.28	3.01				N			
336	45-CA-291	0.2	11.54	10.12	2.37				Y			
337	45-CA-291	4.9	32.40	19.45	8.21				Y			
338	45-CA-291	0.8	13.28	10.72	6.08				Y			
339	45-CA-291	0.2	12.3	11.43	1.71				Y			
340	45-CA-291	0.8	19.31	8.53	6.93				Y			
341	45-CA-291	2.0	29.48	11.72	5.96				Y		Watts Point	
342	45-CA-291	0.1	12.57	5.65	2.04				N			
343	45-CA-291	0.3	11.96	9.21	2.56				N			
344	45-CA-291	2.0	26.40	15.38	5.17				Y			
345	45-CA-291	3.2	32.42	25.63	4.48				N			
346	45-CA-291	2.5	27.08	17.31	6.69				Y			
347	45-CA-291	1.3	22.26	16.69	4.61				N			
348	45-CA-291	9.3	41.25	26.03	8.87				N			
349	45-CA-291	3.6	23.25	19.75	9.90				Y			

350	45-CA-291	1.7	25.38	16.28	4.53				N			
351	45-CA-291	1.6	26.79	12.27	4.95				N			
352	45-CA-291	2.2	26.97	17.83	6.04				Y			
353	45-CA-291	1.1	23.29	14.50	4.46				Y			
354	45-CA-291	12.1	50.37	25.82	8.59				Y			
355	45-CA-291	23.7	44.40	26.31	22.64	CCT	MDC		Y			
356	45-CA-291	27.0	48.34	35.28	17.89	CCT	MDC		Y			
357	45-CA-291	33.1	60.60	39.07	15.92				Y			
358	45-CA-291	56.9	51.25	36.55	28.54	CCT	MDC		Y			
359	45-CA-291	2.7	34.02	18.50	4.64				N			
360	45-CA-291	0.3	15.90	9.85	2.48				N			
361	45-CA-291	0.1	12.17	7.37	1.83				N			
362	45-CA-291	19.1	50.22	37.97	11.74	BFT	BFF	Y	Y			bifacially modified flake
363	45-CA-291	2.9	27.41	23.09	6.95				Y			
364	45-CA-291	1.1	20.44	7.61	7.02				Y			
365	45-CA-292	25.9	41.71	36.74	19.70	CCT	MDC		Y			
366	45-CA-292	20.0	39.46	34.18	14.40	UFT	RUF	Y	Y		Watts Point	core turned unifacial tool
367	45-CA-292	13.9	49.33	28.71	9.84	UFT	RUF	Y	N			
368	45-CA-292	7.0	37.79	24.32	7.17				Y			
369	45-CA-293	7.7	33.71	28.21	8.21				Y		Watts Point	
370	45-CA-293	35.8	48.19	36.24	22.98	CCT	MDC		Y			
371	45-CA-293	1.3	19.10	15.88	4.83				Y			
372	45-CA-293	0.5	15.44	10.16	3.35				N			
373	45-CA-257	18.3	56.85	32.47	7.22	UFT	RUF	Y	Y			
374	45-CA-257	6.4	26.59	20.13	9.87				Y			
375	45-CA-257	0.9	23.66	12.16	3.55				N		Watts Point	
376	45-CA-257	7.9	35.99	24.71	9.31				Y			
377	45-CA-257	2.6	28.20	12.69	7.02				N			
378	45-JE-238	8.1	42.21	24.71	5.85				Y			
379	45-JE-238	3.6	32.5	18.80	7.29	BFT	HBF		N			
380	45-JE-238	5.1	44.93	26.19	4.96				Y			
381	45-JE-238	16.1	61.11	32.78	8.26				Y		Unknown	
382	45-JE-238	0.8	16.12	14.45	3.65				Y			
383	45-JE-238	0.3	14.61	9.55	2.94				Y			
384	45-JE-238	24.5	55.4	35.21	15.89				Y			
385	45-JE-238	147.0	76.12	65.05	25.99				Y			
386	45-JE-238	89.1	81.21	58.08	15.41				Y			
387	45-JE-238	106.8	80.50	56.62	17.99				Y			

388	45-JE-238	19.4	50.56	36.14	10.25				Y			
389	45-JE-238	138.7	94.61	56.65	20.49				Y			
390	45-JE-238	18.6	56.40	33.89	12.10				Y			
391	45-JE-238	4.1	26.35	22.69	9.90				Y			
392	45-JE-238	15.9	45.79	35.27	11.95				N			
393	45-JE-238	4.1	30.46	16.03	9.07				Y			
394	45-JE-238	1.8	26.75	16.29	4.52				N			
395	45-JE-238	3.2	23.6	12.13	11.26				Y			
396	45-JE-238	1.1	16.79	9.23	6.64				Y			
397	45-JE-238	0.3	11.44	7.97	3.5				Y			
398	45-JE-238	0.3	12.37	8.16	3.06				N			
399	45-JE-238	0.4	12.74	8.42	3.90				N			
400	45-JE-238	1.3	16.78	14.56	4.86				N			
401	45-JE-238	0.1	10.35	9.11	1.65				Y			
402	45-JE-238	0.1	9.48	7.15	1.60				N			
403	45-JE-238	0.1	9.23	8.61	2.08				N			
404	45-JE-238	0.3	13.85	12.01	2.30				N			
405	45-JE-238	0.2	11.85	9.38	2.27				N			
406	45-JE-238	255.3	105.98	50.52	35.28	CCT	MDC		Y			
407	45-JE-238	19.0	56.93	28.94	12.94				Y			
408	45-JE-238	21.3	50.09	36.16	10.85				Y			
409	45-JE-238	49.7	72.16	58.48	10.46				Y			
410	45-JE-238	54.5	79.24	43.57	18.66				Y			
411	45-JE-238	297.3	141.63	80.56	22.20	UFT	UTF		Y			
412	45-JE-238	65.6	66.55	48.36	16.55				Y			
413	45-JE-238	29.2	61.00	35.26	16.62				Y			
414	45-JE-238	18.1	50.60	28.80	10.51				Y			
415	45-JE-238	19.3	51.82	42.30	7.93				Y			
416	45-JE-238	115.1	64.24	50.14	29.15				Y			
417	45-JE-238	10.2	38.50	23.61	9.91				Y			
418	45-JE-238	0.4	16.36	11.67	2.28				N			
419	45-JE-238	0.5	20.01	11.47	2.23				Y			
420	45-JE-238	4.9	36.50	15.90	9.63				N			
421	45-JE-238	1.1	16.53	14.60	4.96				Y			
422	45-JE-238	1.3	15.64	14.76	6.44				Y			
423	45-JE-238	9.4	40.09	25.21	14.11				N			
424	45-JE-238	2.6	22.57	20.45	4.62				Y			
425	45-JE-238	6.0	30.67	22.53	10.41				Y			
426	45-JE-238	0.3	12.35	6.43	3.86				Y			

427	45-JE-238	1.9	19.87	16.31	4.86				Y			
428	45-JE-238	0.1	10.74	6.48	0.91				N			
429	45-JE-238	0.1	10.48	6.55	1.63				Y			
430	45-JE-238	0.6	14.37	9.01	5.05				N			
431	45-JE-238	30.4	39.61	31.65	24.85	CCT	MDC		Y			
432	45-JE-238	47.9	72.73	57.96	13.01				Y			
433	45-JE-238	190.8	105.41	58.02	31.72				Y			
434	45-JE-238	59.7	83.87	52.09	12.93				Y			
435	45-JE-238	32.5	58.35	47.40	10.43				Y			
436	45-JE-238	105.1	98.95	59.52	18.29				Y			
437	45-JE-238	79.4	61.65	49.60	24.89				Y			
438	45-JE-238	136.8	99.16	80.02	16.10				Y			
439	45-JE-238	22.5	48.23	29.56	18.85				Y			
440	45-JE-238	270.6	122.91	94.61	19.63				Y			
441	45-JE-238	252.4	106.71	92.61	19.62				Y			
442	45-JE-238	17.5	48.31	29.81	9.25				Y			
443	45-JE-238	32.9	82.25	23.60	18.47				Y			
444	45-JE-238	11.6	49.62	26.97	12.20				Y			
445	45-JE-238	108.1	72.54	45.78	26.19				Y			
446	45-JE-238	23.01	92.64	66.17	32.25				Y			
447	45-JE-238	62.0	48.72	39.90	32.69	CCT	MDC		Y			
448	45-JE-238	3.5	22.70	12.60	8.95				Y			
449	45-JE-238	2.0	29.62	19.27	5.06				Y			
450	45-JE-238	1.7	24.84	18.11	3.85				Y			
451	45-JE-238	5.9	32.25	25.22	12.16	UFT	UTF	N	Y			scraper
452	45-JE-238	1.2	16.12	12.78	7.24				N			
453	45-JE-238	0.5	16.11	14.71	3.79				N			
454	45-JE-238	199.8	80.23	60.81	25.93				Y			
455	45-JE-238	145.8	65.95	61.82	19.46	UFT	RUF	Y	Y			recycled artifact - waterworn
456	45-JE-238	118.6	57.82	45.11	30.28	UFT	RUF	Y	Y			
457	45-JE-238	119.6	107.61	42.84	20.70				Y			
458	45-JE-238	14.8	44.03	26.39	5.60				Y			
459	45-JE-238	117.3	82.06	62.12	19.38				Y			
460	45-JE-238	68.9	48.51	46.13	18.82	CCT	FLC		Y			
461	45-JE-238	650	119.21	92.59	58.34	CCT	FLC		Y			
462	45-JE-238	0.3	7.67	5.09	2.66				Y			
463	45-JE-238	252.7	96.65	66.61	30.17	CCT	FLC		Y			
464	45-CA-432	0.2	12.03	11.22	1.44				N			

465	45-CA-432	0.1	12.59	7.43	1.88				N			
466	45-CA-432	1.7	25.63	14.70	4.65				N			
467	45-CA-432	0.6	16.40	12.15	3.06				N			
468	45-CA-432	0.2	12.11	6.63	2.89				N			
469	45-CA-432	0.2	12.91	9.99	2.10				N			
470	45-CA-432	0.2	14.78	8.04	2.32				N			
471	45-CA-432	0.1	10.11	6.57	1.22				N			
472	45-CA-432	0.1	9.84	7.63	1.45				N			
473	45-CA-432	1.2	17.80	16.33	6.74				Y			
474	45-CA-432	1.0	20.11	15.17	2.62				N			
475	45-CA-432	0.4	15.67	9.33	3.07				N			
476	45-CA-432	14.9	41.88	28.72	12.86	BFT	BFF	N	Y			
477	45-CA-432	1.5	23.26	15.63	3.55				Y			
478	45-CA-432	2.0	23.62	19.78	4.86				Y			
479	45-CA-432	0.1	11.61	10.73	1.81				Y			
480	45-CA-432	1.2	19.66	16.29	4.26				N			
481	45-CA-432	40.9	71.42	45.19	15.57				Y			
482	45-CA-432	0.3	11.11	7.67	7.62				N			
483	45-CA-432	6.4	42.22	16.47	9.26				N		Unknown	
484	45-CA-432	0.3	12.5	9.21	5.03				N			
485	45-CA-432	0.4	14.13	8.61	4.38				Y			
486	45-CA-432	0.1	10.33	6.62	2.87				N			
487	45-CA-432	0.2	11.61	9.23	2.61				N			
488	45-CA-432	127.2	76.93	51.49	29.63	UFT	RUF	Y	Y		Unknown	
489	45-CA-432	3.1	24.59	20.44	4.62				Y			
490	45-CA-432	0.3	12.35	7.43	3.13				Y			
491	45-CA-432	9.1	36.16	19.25	17.88				Y			
492	45-CA-432	126.7	66.56	58.55	31.21	CCT	MDC		Y			
493	45-CA-432	1.1	19.22	10.34	8.76				Y			
494	45-CA-432	3.6	26.35	18.48	7.99				Y			
495	45-CA-432	1.7	20.22	14.42	5.12				Y			
496	45-CA-432	0.7	16.61	12.91	3.55				Y			
497	45-CA-432	0.4	12.66	12.14	3.57				N			
498	45-CA-432	0.7	16.89	9.60	4.14				Y			
499	45-CA-432	0.2	12.78	9.15	1.69				N			
500	45-CA-432	0.3	15.20	6.67	3.08				Y			
501	45-CA-432	1.5	23.23	14.55	5.60				N			
502	45-CA-432	1.3	22.55	12.44	3.86				N			
503	45-CA-432	1.2	22.46	12.61	4.82				N			

504	45-CA-432	5.3	29.65	26.15	7.38				Y			
505	45-CA-432	0.9	20.15	12.70	3.23				N			
506	45-CA-432	0.3	16.74	10.65	2.39				N			
507	45-CA-432	4.3	35.11	22.78	6.12				Y			
508	45-CA-432	1.5	28.75	16.91	2.56				Y			
509	45-CA-432	2.2	23.57	20.23	4.21				N			
510	45-CA-432	62.6	75.63	46.71	19.41	CCT	MDC		Y			
511	45-CA-432	7.1	44.34	31.85	7.20	UFT	UTF	N	Y		Watts Point	
512	45-CA-432	39.8	65.06	43.20	14.42	CCT	UDC		Y			
513	45-CA-432	3.3	31.22	22.15	5.80				N			
514	45-CA-432	0.2	14.49	6.48	2.01				Y			
515	45-CA-432	0.2	11.39	8.73	2.03				N			
516	45-CA-432	0.1	4.97	3.42	0.73				N			
517	45-CA-432	1.1	24.95	14.64	3.21				N			
518	45-CA-432	1.8	26.62	12.92	6.52				N			
519	45-CA-432	0.4	12.11	10.56	3.01				Y			
520	45-CA-432	1.0	24.14	10.17	4.62				Y			
521	45-CA-432	0.5	18.43	12.54	2.85				N			
522	45-CA-432	0.3	12.33	11.06	2.32				N			
523	45-CA-432	0.9	18.41	12.21	4.06				N			
524	45-CA-432	0.2	11.24	8.74	1.96				N			
525	45-CA-432	0.1	10.99	6.32	2.23				N			
526	45-CA-432	0.5	15.78	10.82	2.91				N		Watts Point	
527	45-CA-432	0.6	22.08	10.50	2.89				n			
528	45-CA-432	1.4	36.71	9.78	3.13				Y			
529	45-CA-432	5.7	31.95	25.66	8.59				Y			
530	45-CA-432	0.9	20.46	13.82	3.65				Y			
531	45-JE-238	18.3	50.51	31.25	12.96	UFT	RUF	Y	Y			
532	45-JE-238	3.3	27.11	15.57	8.11				Y			
533	45-CA-270	5.1	35.60	26.42	6.05	UFT	UTF	N	Y			
534	45-CA-270	4.9	32.97	23.13	6.58				Y			
535	45-CA-270	2.3	26.23	20.60	5.11				N			
536	45-CA-270	0.1	5.03	3.93	1.09				N			
537	45-CA-270	0.2	10.87	8.35	1.70				N			
538	45-CA-270	2.4	19.04	14.54	10.62				Y			
539	45-CA-270	0.1	10.10	6.71	1.73				N			
540	45-CA-270	5.3	32.34	22.76	6.82	BFT	BFF	Y	N			
541	45-CA-270	9.4	29.26	20.47	18.78	CCT	MDC		Y			
542	45-CA-270	2.7	25.16	19.65	5.09				Y			

543	45-CA-270	1.4	19.55	17.19	4.19				N			
544	45-CA-270	0.5	15.85	12.39	2.50				N			
545	45-CA-270	0.5	15.65	12.19	2.44				N			
546	45-CA-270	0.6	16.31	10.10	2.80				Y			
547	45-CA-270	0.1	11.19	7.03	1.91				N			
548	45-CA-270	0.4	15.43	14.63	2.34				N			
549	45-CA-270	0.3	12.79	9.14	3.42				N			
550	45-CA-270	0.5	15.64	10.78	4.30				Y			
551	45-CA-270	1.0	22.23	11.83	4.67				N			
552	45-CA-270	12.3	40.31	34.33	12.24				Y			
553	45-CA-270	34.6	61.68	44.13	14.65	UFT	RUF	Y	N			
554	45-CA-270	1.9	17.90	14.42	11.95				N			
555	45-CA-270	1.4	23.59	14.64	6.41				N			
556	45-CA-270	0.7	12.76	9.14	7.23				N			
557	45-CA-270	3.1	30.44	25.20	5.04				N			
558	45-CA-270	1.5	17.22	13.82	7.42				Y			
559	45-CA-270	28.3	44.04	38.12	19.22	CCT	UDC		Y			
560	45-CA-270	15.1	32.55	30.07	16.81	CCT	UDC		Y			
561	45-CA-270	23.6	42.61	40.21	12.71				Y			
562	45-CA-270	18.1	40.20	26.79	26.57				N			
563	45-CA-270	6.2	34.24	19.26	10.23				Y			
564	45-CA-270	7.6	37.09	28.53	8.67	UFT	RUF	Y	Y			
565	45-CA-270	0.8	16.65	11.07	4.20				Y			
566	45-CA-270	0.8	15.63	12.37	4.58				N			
567	45-CA-270	4.8	32.61	20.59	6.41				N			
568	45-CA-270	4.3	25.87	18.21	10.41				N			
569	45-CA-270	27.0	45.65	41.23	16.44	CCT	UDC		N			
570	45-CA-270	18.6	36.38	34.52	20.39	CCT	MDC		Y			
571	45-CA-270	19.1	48.34	35.29	11.49				Y			
572	45-CA-270	1.0	20.28	11.38	3.41				Y			
573	45-CA-270	6.8	34.76	29.67	8.39				Y			
574	45-CA-270	3.8	26.35	22.08	8.34				N			
575	45-CA-270	11.2	40.93	32.26	10.24				Y			
576	45-CA-270	0.9	20.01	17.43	3.02				N			
577	45-CA-270	4.9	26.21	16.02	12.05				Y			
578	45-CA-270	0.3	12.94	10.94	2.14				N			
579	45-CA-270	3.4	25.66	23.42	7.29				Y			
580	45-CA-270	18.6	43.86	24.14	19.64	CCT	MDC		Y			
581	45-CA-270	0.5	16.64	11.26	3.57				N			

582	45-CA-270	0.1	12.42	6.82	2.05				N			
583	45-CA-270	2.7	24.37	19.07	8.15				N			
584	45-CA-270	1.4	26.23	14.66	4.05				N			
585	45-CA-270	0.4	16.18	9.33	3.48				N			
586	45-CA-270	0.6	19.22	11.28	3.44				N		Watts Point	
587	45-CA-270	4.4	26.48	20.56	10.09				Y			
588	45-CA-270	21.6	49.11	42.38	12.75				Y			
589	45-CA-270	2.2	23.64	16.43	6.23				Y		Unknown	
590	45-CA-270	4.8	28.69	16.68	12.35				Y			
591	45-CA-270	9.0	35.73	25.42	9.67	UFT	RUF	Y	Y			
592	45-CA-270	14.2	51.62	28.69	9.62				Y			
593	45-CA-270	16.9	49.47	32.18	10.56				N			
594	45-CA-270	12.8	45.56	30.39	11.95				Y			
595	45-CA-270	3.0	25.14	16.67	6.13				Y			
596	45-CA-270	0.8	15.86	10.77	3.87				Y			
597	45-CA-270	17.4	48.19	30.79	12.90				Y			
598	45-CA-270	2.1	18.90	12.97	7.52				Y			
599	45-CA-270	19.6	49.25	32.62	10.76				Y		Watts Point	
600	45-CA-270	12.2	44.36	19.40	16.07				Y			
601	45-CA-270	0.2	10.99	8.12	2.86				N			
602	45-CA-270	21.0	42.91	35.81	16.53				N			
603	45-CA-270	1.8	20.26	20.00	4.03				Y			
604	45-CA-270	28.8	50.22	38.24	20.34	UFT	RUF	Y	Y			
605	45-CA-270	1.2	25.40	12.93	2.97				N			
606	45-CA-270	23.1	43.60	41.69	14.68				N			
607	45-CA-270	11.0	36.30	28.96	12.83				Y			
608	45-CA-270	7.9	44.88	19.67	7.21	UFT	UTF	N	Y			
609	45-CA-270	6.8	36.01	22.69	7.97				N			
610	45-CA-270	5.0	31.46	19.52	7.61				N		Watts Point	
611	45-CA-270	35.7	61.66	28.95	20.38				Y			
612	45-CA-270	6.8	37.88	25.65	8.09				Y			
613	45-CA-270	7.2	40.33	28.86	6.66				N			
614	45-CA-270	12.2	36.11	23.99	19.12				Y			
615	45-CA-270	1.1	20.65	15.20	3.95	UFT	UTF	N	Y			
616	45-CA-270	13.4	36.03	34.67	15.79				Y			
617	45-CA-270	2.7	28.89	20.25	4.91				Y			
618	45-CA-270	0.9	20.47	11.49	4.48				N			
619	45-CA-270	25.7	46.72	40.84	12.64				N			

620	45-CA-270	8.9	38.24	34.10	7.20				N			
621	45-CA-270	0.5	14.69	11.81	2.76				N			
622	45-CA-270	1.0	16.65	14.69	4.40				Y			
623	45-CA-270	0.8	16.47	10.45	5.09				N			
624	45-CA-270	15.2	55.59	20.47	12.01	CCT	UDC		Y			blade core
625	45-CA-270	21.4	41.65	36.04	15.67	CCT	MDC		N			
626	45-CA-270	12.0	48.58	23.89	9.22	UFT	RUF	Y	N			
627	45-CA-270	4.3	26.62	20.72	9.40				Y			
628	45-CA-270	1.1	18.48	15.16	3.51				N			
629	45-CA-270	2.6	31.41	20.77	4.21				N			
630	45-CA-270	0.2	10.62	6.70	2.74				N			
631	45-CA-270	21.9	38.67	25.20	25.02	CCT	MDC		Y			
632	45-CA-270	25.8	36.94	33.99	19.69	CCT	MDC		Y			
633	45-CA-270	3.2	24.87	16.62	9.07				N			
634	45-CA-270	0.5	13.89	12.07	2.84				N			
635	45-CA-270	6.0	30.53	27.18	6.47				N			
636	45-CA-270	0.2	10.53	9.66	2.34				N			
637	45-CA-270	2.0	22.65	15.85	6.59				Y			
638	45-CA-270	9.2	32.82	25.64	12.19				N			
639	45-CA-270	12.9	40.90	30.62	10.99				Y			
640	45-CA-270	7.4	32.79	19.16	16.54	UFT	RUF	Y	Y			
641	45-CA-270	26.0	50.81	28.82	18.99	CCT	UDC		Y			
642	45-CA-270	0.5	12.83	11.00	2.59				N			
643	45-CA-270	0.9	18.52	12.84	3.64				N			
644	45-CA-270	39.4	48.42	35.79	19.54	CCT	UDC		Y			
645	45-CA-270	3.9	26.32	24.87	7.56				N			
646	45-CA-270	7.8	35.95	26.24	8.16				Y			
647	45-CA-270	44.7	43.25	33.82	32.11	CCT	UDC		Y			
648	45-CA-270	3.3	32.06	19.12	5.97				N			
649	45-CA-270	3.0	20.44	11.84	10.76				Y			
650	45-CA-270	1.9	19.22	18.17	5.95				N			
651	45-CA-270	3.4	23.98	19.54	7.55				Y			
652	45-CA-270	7.3	36.37	24.99	9.16				Y			
653	45-CA-270	4.1	24.16	14.63	7.62				Y			
654	45-CA-270	0.5	14.40	11.15	3.2				N			
655	45-CA-270	0.8	16.53	12.01	3.38				N			
656	45-CA-270	0.8	18.55	12.26	3.05				N			
657	45-CA-270	0.5	15.21	10.17	3.22				N			
658	45-CA-270	0.9	20.44	12.64	4.14				N			

659	45-CA-270	1.2	20.54	16.56	3.87				N			
660	45-CA-270	6.5	32.65	22.55	12.35				N			
661	45-CA-270	1.7	25.86	12.57	5.11				N			
662	45-CA-270	4.6	29.96	18.65	10.16				Y			
663	45-CA-270	4.8	36.49	20.14	4.84				Y			
664	45-CA-436	5.1	31.51	25.44	6.67	UFT	RUF	Y	Y			
665	45-CA-436	1.5	22.56	17.45	3.39				Y			
666	45-CA-436	7.9	41.01	23.80	10.27	UFT	UTF	N	Y			
667	45-CA-436	1.6	22.58	14.75	4.01				N			
668	45-CA-436	4.2	31.70	28.48	4.44				Y			
669	45-CA-436	0.5	12.73	10.38	3.64				Y			
670	45-CA-436	37.1	69.01	41.95	12.46	UFT	RUF	Y	Y		Watts Point	
671	45-CA-436	18.5	43.64	28.75	17.48	CCT	UDC		Y			
672	45-CA-436	7.2	42.49	17.39	10.68	UFT	UTF	N	Y			
673	45-CA-436	18.4	45.60	36.32	10.87	BFT	BFF	Y	N			
674	45-CA-436	13.2	49.33	30.55	10.30	UFT	RUF	Y	N			
675	45-CA-436	28.2	56.38	34.85	10.63	UFT	UTF	N	Y			
676	45-CA-436	3.2	24.93	16.97	6.23				Y			
677	45-CA-436	1.4	25.28	11.66	4.52	UFT	RUF	Y	Y			
678	45-CA-436	1.1	23.49	16.05	3.12				N			
679	45-CA-436	52.4	56.25	43.41	23.13				Y			
680	45-CA-436	294.7	80.91	64.38	48.25	CCT	MDC		Y			
681	45-CA-439	92.2	81.17	50.50	20.19	BFT	BFF	Y	Y			
682	45-CA-439	18.8	47.91	40.45	9.38	UFT	RUF	Y	Y			
683	45-CA-439	4.7	38.64	23.65	8.20				Y			
684	45-CA-439	0.4	16.32	9.01	3.61				N			
685	45-CA-439	2.7	26.52	20.55	4.89				Y		Watts Point	
686	45-CA-439	0.1	8.4	4.61	1.55				N			
687	45-CA-439	0.2	12.79	7.24	1.84				N			
688	45-CA-439	0.1	13.88	4.53	2.49				N			
689	45-CA-439	0.1	6.28	4.48	1.44				N			
690	45-CA-438	0.2	11.79	9.10	2.05				N			
691	45-CA-438	0.2	11.78	5.84	3.42				N			
692	45-CA-438	0.4	14.43	11.49	3.22				N			
693	45-CA-438	1.4	22.41	14.69	4.36				N			
694	45-CA-438	0.6	18.02	12.71	2.78				N			
695	45-CA-438	0.1	8.63	6.06	1.19				N			
696	45-CA-438	0.1	7.50	6.54	2.35				N			
697	45-CA-438	0.2	12.05	6.41	2.14				N			

698	45-CA-438	1.8	25.88	16.40	3.91				N			
699	45-CA-438	1.8	31.19	20.31	2.93				N			
700	45-CA-438	0.4	16.16	10.04	2.92				N			
701	45-CA-438	0.1	10.99	5.03	1.65				N			
702	45-CA-438	1.0	19.66	15.96	3.27				Y		Watts Point	
703	45-CA-438	0.1	8.08	6.69	2.50				N			
704	45-CA-438	2.3	25.81	16.17	5.04				Y			
705	45-CA-438	10.1	41.49	30.52	7.65				Y			
706	45-CA-438	1.6	24.01	18.16	5.99				Y			
707	45-CA-438	0.8	18.99	12.07	3.79				Y			
708	45-CA-438	1.0	16.87	12.43	7.63				N			
709	45-CA-438	1.7	26.79	12.22	4.71				N			
710	45-CA-438	0.6	19.65	9.99	2.46	UFT	UTF	N	Y			
711	45-CA-438	6.3	31.66	23.16	7.68				Y			
712	45-CA-438	1.4	18.55	12.05	7.26	UFT	UTF	N	Y			
713	45-CA-438	0.1	7.40	4.65	1.25				N			
714	45-CA-438	3.2	26.89	16.62	6.60				Y			
715	45-CA-438	0.3	12.12	8.05	2.51				Y			
716	45-CA-438	1.8	20.54	12.63	8.09				Y			
717	45-CA-438	3.6	40.56	17.85	5.52				Y			
718	45-CA-438	3.7	33.98	19.94	6.64				Y			
719	45-CA-438	1.6	22.76	20.38	3.59				Y			
720	45-JE-234	5.6	32.22	26.74	6.50				N			
721	45-MS-113	1.1	19.39	13.87	4.27				N		Watts Point	
722	45-CA-446	2.9	30.69	15.46	9.05				N			
723	45-JE-107	1.2	23.24	11.95	3.83				Y			
724	45-CA-445	2.1	26.56	19.66	4.01				Y		Watts Point	
725	45-CA-437	1.2	20.74	14.44	5.56				N		Watts Point	
726	45-CA-437	0.1	9.95	7.23	2.40				N			
727	45-CA-437	0.7	19.25	7.65	6.54				N			
728	45-CA-437	0.1	8.41	7.21	1.66				N			
729	45-CA-SC	350.6	79.69	78.70	49.22	UFT	RUF	Y	Y			
730	45-CA-SC	32.2	60.82	56.41	11.15				Y			
731	45-CA-SC	2.0	22.61	17.89	4.79				Y			
732	45-CA-SC	0.1	12.63	7.67	1.62				N			
733	45-CA-SC	1.1	24.22	14.26	2.90				N			
734	45-CA-SC	3.7	32.92	30.00	3.59				N			
735	45-CA-SC	3.3	30.01	16.42	11.27				Y			

736	45-CA-SC	1.3	25.66	20.21	3.17				N			
737	45-CA-SC	0.2	11.27	9.58	1.90				N			
738	45-CA-SC	5.3	36.82	18.63	9.16				Y			
739	45-CA-SC	233.9	90.85	65.03	35.60	CCT	MDC		Y			18-6
740	45-CA-SC	0.8	16.22	10.51	5.05				N			18-1
741	45-CA-SC	2.8	25.90	16.17	6.41				Y			18-9
742	45-CA-SC	1.5	19.93	12.12	6.22				N			7-2
743	45-CA-SC	0.5	16.62	10.61	2.87				Y			286-10
744	45-CA-SC	1.1	23.92	14.26	3.55				N			290-4
745	45-CA-SC	2.1	23.40	18.83	4.97				N			290-19
746	45-CA-SC	8.2	36.71	25.98	8.31				Y		Watts Point	290-13
747	45-CA-SC	0.8	16.40	14.19	2.95				Y			290-21
748	45-CA-SC	5.4	34.03	19.91	10.50				Y			290-30
749	45-CA-SC	2.1	32.80	16.05	6.61				Y			290-28
750	45-CA-SC	1.0	18.33	11.68	4.34				Y			290-48
751	45-CA-SC	1.5	22.46	19.21	4.50				N		Watts Point	290-37
752	45-CA-SC	0.8	18.38	11.28	4.36				Y			290-38
753	45-CA-SC	0.2	14.61	6.49	1.83				N			290-49
754	45-CA-SC	0.5	16.17	9.81	3.13				N			290-45
755	45-CA-SC	0.3	12.87	8.10	3.93				Y			290-34
756	45-CA-SC	0.4	15.27	10.37	4.60				N			290-71
757	45-CA-SC	0.3	16.74	8.12	2.60				N			290-56
758	45-CA-SC	0.6	18.85	9.62	2.77				Y			290-74
759	45-CA-SC	0.6	14.75	11.49	4.55				N			290-62
760	45-CA-SC	0.4	14.77	9.15	2.5				Y			290-63
761	45-CA-SC	0.6	17.92	12.42	3.01				Y			290-55
762	45-CA-SC	0.7	16.20	13.95	3.23				N			290-57
763	45-CA-SC	0.1	11.49	7.40	1.67				N			290-64
764	45-CA-SC	0.1	10.12	7.20	1.68				N			290-91
765	45-CA-SC	0.4	15.48	10.24	2.33				N			290-86
766	45-CA-SC	0.1	8.06	5.89	1.41				N			290-85
767	45-CA-SC	0.3	14.07	11.56	2.53				N			290-96
768	45-CA-SC	0.2	12.56	7.51	2.21				N			290-95
769	45-CA-SC	0.1	9.02	8.16	1.59				N			290-82
770	45-CA-SC	0.2	9.87	7.20	2.63				N			290-93
771	45-CA-SC	2.5	28.81	15.67	6.18				N			290-78
772	45-CA-SC	0.3	12.66	9.20	2.05				N			292-35
773	45-CA-SC	0.3	16.81	13.81	1.65				N			292-21
774	45-CA-SC	0.7	19.18	10.97	2.83				N			292-3

775	45-CA-SC	0.5	16.00	12.91	2.08				N			292-1
776	45-CA-SC	0.4	19.87	9.82	2.69				N			292-24
777	45-CA-SC	0.6	18.54	10.61	3.13				N			292-18
778	45-CA-SC	0.9	20.03	12.36	5.65				Y			292-23
779	45-CA-SC	0.5	19.98	11.16	2.19				N			292-17
780	45-CA-SC	0.3	16.47	10.26	1.65				N			292-5
781	45-CA-SC	0.6	17.80	12.01	3.25				N			292-14
782	45-CA-SC	0.6	16.44	12.06	2.56				Y			292-16
783	45-CA-SC	0.4	16.65	12.24	2.13				N			292-12
784	45-CA-SC	15.7	51.40	32.75	12.89	CCT	MDC		Y			304-17
785	45-CA-SC	0.2	11.99	9.93	1.42				Y			304-2
786	45-CA-SC	0.4	14.55	8.04	3.63				N			304-6
787	45-CA-SC	28.8	58.15	32.15	12.12				Y			305-11
788	45-CA-SC	0.5	15.39	11.23	2.38				Y			302-4
789	45-CA-SC	1.2	18.63	16.55	4.95				N			302-11
790	45-CA-SC	48.1	44.82	36.65	30.28	CCT	MDC		Y			106-31 core v. lightly used
791	45-CA-SC	3.5	30.56	16.27	9.81				Y			108-16
792	45-CA-SC	3.6	30.0	25.65	5.08				N			108-17
793	45-CA-SC	1.1	19.24	14.65	4.82				N			108-5
794	45-CA-SC	0.1	10.47	8.61	0.90				N			1081
795	45-CA-SC	1.1	18.84	16.79	4.92				Y			106-22
796	45-CA-SC	2.1	19.14	15.43	8.36	UFT	UTF	N	Y			106-26
797	45-CA-SC	0.4	15.98	11.06	2.31				N			106-11
798	45-CA-SC	0.9	20.00	15.65	2.77				N			106-16
799	45-CA-SC	1.2	18.82	11.40	6.45				Y			106-25
800	45-CA-SC	17.7	51.63	32.26	12.64				Y			24-18
801	45-CA-SC	1.9	22.43	14.45	5.82				Y			24-12
802	45-CA-SC	0.6	12.93	8.76	5.07				Y			28-1
803	45-CA-SC	9.7	45.57	19.66	11.61				Y		Watts Point	30-3
804	45-CA-SC	102.9	81.67	45.96	26.19				Y			28-8
805	45-CA-SC	27.6	47.95	32.01	24.44	CCT	MDC		Y			34-22
806	45-CA-SC	0.8	18.65	10.53	4.20				Y			34-6
807	45-CA-SC	1.1	19.98	18.01	3.46				N			34-10
808	45-CA-SC	15.9	44.53	20.07	15.80	UFT	RUF	Y	Y			34-20
809	45-CA-SC	0.1	9.69	7.90	1.47				N			62-1
810	45-CA-SC	5.1	35.95	24.83	6.41				Y			64-14
811	45-CA-SC	3.9	36.92	24.69	4.55				N			64-12
812	45-CA-SC	1.1	18.82	10.85	6.33				N			64-6
813	45-CA-SC	0.2	11.48	8.77	1.97				N			64-2

814	45-CA-SC	13.2	36.37	16.79	16.60	CCT	MDC		Y			52-10 core v. lightly used
815	45-CA-SC	1.3	19.65	15.20	4.92				N			74-4
816	45-CA-SC	1.2	22.61	17.87	3.24				N			74-1
817	45-CA-SC	1.5	19.95	15.52	5.09				Y			74-3
818	45-CA-SC	52.4	66.41	51.54	16.16	UFT	RUF	Y	Y			70-11
819	45-CA-SC	31.2	51.21	28.96	25.97				Y			196-15
820	45-CA-SC	1.1	18.31	16.64	3.61				Y			196-3
821	45-CA-SC	2.4	22.52	16.18	12.67				Y			196-7
822	45-CA-SC	15.0	47.79	33.89	9.82	UFT	RUF	Y	Y			196-9
823	45-CA-SC	25.3	57.86	27.01	18.02				Y			36-21
824	45-CA-SC	16.8	50.17	29.09	14.29				Y			36-20
825	45-CA-SC	2.7	29.60	19.13	3.04				N			36-16
826	45-CA-SC	2.2	25.88	16.85	6.43				N			36-12
827	45-CA-SC	1.6	28.50	16.91	3.22				Y			36-9
828	45-CA-SC	2.2	25.25	18.25	6.47				N			38-14
829	45-CA-SC	0.3	15.55	10.29	2.58				Y			38-4
830	45-CA-SC	0.2	15.67	9.16	1.67				N			38-15
831	45-CA-SC	0.2	12.65	10.39	2.70				N			204-9
832	45-CA-SC	1.0	19.44	14.62	4.07				N			204-5
833	45-CA-SC	2.6	34.71	19.04	4.63				N			204-16
834	45-CA-SC	1.9	22.75	20.14	6.51				N			204-11
835	45-CA-SC	5.2	39.61	31.22	5.66				N			204-21
836	45-CA-SC	7.2	40.56	26.94	7.54				Y			206-16
837	45-CA-SC	0.6	16.60	12.85	3.27				Y			206-9
838	45-CA-SC	0.1	12.98	8.87	1.42				N			206-1
839	45-CA-SC	5.8	38.56	20.02	7.23				N			208-4
840	45-CA-SC	2.1	19.50	15.89	6.49				N			208-3
841	45-CA-SC	0.7	22.58	9.63	3.01				N			208-2
842	45-CA-SC	0.1	9.93	7.25	1.22				N			210-8
843	45-CA-SC	1.2	16.01	12.00	8.56				N			44-1
844	45-CA-SC	12.5	42.06	26.98	12.96				Y			44-17
845	45-CA-SC	2.2	26.79	20.24	6.64				Y			44-4
846	45-CA-SC	3.3	36.26	20.55	6.09				N			44-9
847	45-CA-SC	0.3	19.98	9.95	1.94				N			46-11
848	45-CA-SC	0.4	14.49	12.73	2.88				N			46-9
849	45-CA-SC	0.5	23.63	11.21	1.83				N			48-7
850	45-CA-SC	2.2	25.22	20.33	4.87				N			48-5
851	45-CA-SC	0.9	19.79	15.28	3.43				N			48-4
852	45-CA-SC	0.7	16.11	15.38	4.55				Y		Watts Point	222-3

853	45-CA-SC	11.9	40.07	29.69	11.59				Y		Watts Point	222
854	45-CA-SC	1.8	27.17	20.52	3.80				Y			146-8
855	45-CA-SC	8.4	40.38	19.49	15.52				Y			182-2
856	45-CA-SC	16.0	41.83	28.49	12.82				Y			152-1
857	45-CA-SC	1.9	25.46	22.58	5.01				N			152-5
858	45-CA-SC	15.0	48.08	19.88	12.91				Y			152-4
859	45-CA-SC	0.8	18.57	12.95	4.80				N			154-3
860	45-CA-SC	0.4	11.51	9.56	2.84				N			154-2
861	45-CA-SC	0.6	19.98	13.95	2.58				N			160-5
862	45-CA-SC	4.9	35.38	22.56	5.59				Y			160.9
863	45-CA-SC	5.3	31.24	28.13	5.85				N			170-13
864	45-CA-SC	1.1	14.63	10.04	7.87				Y			170-3
865	45-CA-SC	1.5	24.83	9.89	4.37				N			170-14
866	45-CA-SC	2.5	24.71	18.71	6.01				Y			170-16
867	45-CA-SC	68.9	48.72	38.57	36.08	CCT	MDC		Y			160-12
868	45-CA-SC	18.1	39.79	32.06	12.00				Y			162-10
869	45-CA-SC	15.4	36.11	31.88	12.57				N			226-18
870	45-CA-SC	20.86	65.12	31.41	15.23	CCT	MDC		Y			242-8
871	45-CA-SC	6.5	31.47	23.00	11.05				Y			170-12
872	45-CA-SC	4.2	32.95	31.98	4.84				N			292-55
873	45-CA-SC	0.6	16.98	12.06	3.78				Y			210-2
874	45-CA-SC	1.7	24.47	10.08	6.44				Y			39
875	45-CA-SC	0.1	7.25	5.58	1.40				N			28
876	45-CA-SC	36.4	47.61	28.23	22.19	CCT	MDC		Y			174-1
877	45-CA-SC	0.4	10.31	9.80	3.56				N			172-3
878	45-CA-SC	0.2	10.64	7.89	2.01				N			172-2
879	45-CA-SC	27.2	51.62	38.88	14.00				Y			216-8
880	45-CA-SC	0.4	16.35	9.96	3.02				N			214-2
881	45-CA-SC	18.8	47.20	33.06	12.06	BFT	BFF	N	Y		Watts Point	218-1
882	45-CA-SC	0.5	13.01	10.29	3.24	BFT	LSB	Y	N			224-2
883	45-CA-SC	4.3	35.17	21.12	6.00				Y			260-18
884	45-CA-SC	9.1	38.51	32.57	9.45				Y			260-27
885	45-CA-SC	3.8	26.74	22.49	9.94				N			228-5
886	45-CA-SC	0.1	13.41	5.12	2.39				N			228-2
887	45-CA-SC	0.6	19.60	11.87	2.50				Y			235-4
888	45-CA-SC	30.2	44.23	28.36	21.92	CCT	MDC		Y			240-1, 240-2 Core was refit to be one artifact
889	45-CA-SC	4.0	26.14	14.41	12.19				Y			240-11
890	45-CA-SC	4.4	37.95	14.39	11.36				Y			240-3

891	45-CA-SC	2.3	26.17	21.53	3.25				N			240-5
892	45-CA-SC	2.5	26.02	15.15	5.24				Y			240-6
893	45-CA-SC	1.0	20.28	17.14	3.47				N			240-24
894	45-CA-SC	0.6	18.48	15.58	2.79				N			240-26
895	45-CA-SC	7.4	33.86	20.39	11.23				Y			256-6
896	45-CA-SC	0.9	26.01	12.27	3.84				N			244-4
897	45-CA-SC	0.3	15.22	10.27	2.55				Y			244-3
898	45-CA-SC	2.9	26.02	18.06	9.89				Y		Watts Point	98-2
899	45-CA-SC	2.2	24.62	17.96	6.38				Y			260-16
900	45-CA-SC	1.3	21.58	17.44	4.44				Y			260-12
901	45-CA-SC	0.8	22.32	16.02	2.37				N			260-17
902	45-CA-SC	0.6	20.65	12.68	2.90				N			260-5
903	45-CA-SC	1.1	21.02	13.06	5.40				N			262-7
904	45-CA-SC	1.8	19.97	11.56	7.51	UFT	UTF	N	N			262-6
905	45-CA-SC	0.1	9.18	8.22	1.21				N			264-3
906	45-CA-SC	0.1	8.76	7.33	1.55				Y			266-2
907	45-CA-SC	0.5	19.63	8.65	3.20				N			266-6
908	45-CA-SC	1.1	16.82	15.54	5.65				N			266-7
909	45-CA-SC	3.8	39.44	17.03	7.03				Y			266-17
910	45-CA-SC	1.1	22.23	15.47	3.58				N			266-13
911	45-CA-SC	3.7	35.22	15.66	5.89				Y			266-12
912	45-CA-SC	7.9	35.38	26.39	10.31				Y			266-19
913	45-CA-SC	2.8	29.56	16.53	6.40				Y			268-18
914	45-CA-SC	1.1	18.43	12.85	4.19				Y			268-15
915	45-CA-SC	0.9	20.11	15.07	3.57				N			268-11
916	45-CA-SC	0.1	10.55	9.61	1.44				N			268-3
917	45-CA-SC	0.1	11.58	7.13	1.40				N			268-6
918	45-CA-487	0.4	12.65	10.79	1.63				N			
919	45-CA-487	10.7	36.14	19.04	12.39	CCT	MDC		N			
920	45-CA-487	1.1	20.82	18.27	3.36				N			
921	45-CA-487	1.0	21.95	11.39	4.99				N			
922	45-CA-487	0.4	12.75	11.81	2.55				Y			
923	45-CA-487	0.5	16.24	10.96	3.56				N			
924	45-CA-487	1.3	26.27	15.31	4.24				N			
925	45-CA-487	0.6	21.19	11.14	2.65				Y			
926	45-CA-487	0.6	18.07	10.94	2.24				N			
927	45-CA-487	0.1	11.04	7.51	2.13				N			
928	45-CA-487	0.6	18.65	10.64	3.42				Y			
929	45-CA-487	0.2	11.84	10.48	2.33				N			

930	45-CA-487	0.3	14.16	10.89	2.39				N			
931	45-CA-487	1.2	18.95	15.28	6.88				Y			
932	45-CA-487	0.3	16.30	8.58	2.32				Y			
933	45-CA-487	1.0	20.69	16.08	3.26				Y			
934	45-CA-487	0.8	12.71	12.10	5.66				N			
935	45-CA-487	1.6	16.40	9.81	6.83				Y			
936	45-CA-487	5.1	42.62	15.41	7.30				Y			
937	45-CA-487	6.9	35.28	23.64	8.12				Y			
938	45-CA-487	3.7	28.38	22.00	8.05	UFT	RUF	Y	Y			
939	45-CA-487	0.5	18.03	10.65	1.81				N			
940	45-CA-487	0.8	8.27	13.20	4.59				N			
941	45-CA-487	0.3	15.33	8.83	3.85				N			
942	45-CA-487	10.4	42.41	30.03	7.59	UFT	UTF	N	Y			
943	45-CA-487	1.0	19.63	15.71	4.17				Y			
944	45-CA-487	1.9	23.03	16.75	5.57				Y			
945	45-CA-487	1.7	31.30	14.71	3.46				Y			
946	45-CA-487	0.8	19.59	13.41	3.97				N			
947	45-CA-487	0.1	11.28	9.26	1.88				N			
948	45-CA-487	0.7	20.88	14.06	2.81				Y			
949	45-CA-487	3.3	32.51	25.52	4.39				N			
950	45-CA-487	0.7	16.68	10.42	3.00				N			
951	45-CA-487	0.8	23.50	15.62	2.99				N			
952	45-CA-487	0.3	14.10	9.32	2.40				N			
953	45-CA-487	0.4	15.85	7.39	6.76				N			
954	45-CA-487	0.4	14.41	11.40	2.78				N			
955	45-CA-487	0.6	21.06	11.66	3.48				Y		Watts Point	
956	45-CA-487	7.2	41.65	31.50	6.47				N			
957	45-CA-487	4.1	29.13	22.98	10.85				Y			
958	45-CA-487	1.1	20.97	17.46	3.25				N			
959	45-CA-487	1.5	24.81	12.84	8.45				N			
960	45-CA-487	0.1	10.82	7.50	2.43				N			
961	45-CA-487	2.3	28.48	13.32	5.24	UFT	UTF	N	Y			
962	45-CA-487	2.7	25.17	21.56	4.81	UFT	UTF	N	N			
963	45-CA-487	3.9	28.76	22.12	9.05	UFT	UTF	N	N		Watts Point	
964	45-CA-487	1.7	24.50	18.35	5.29				N			
965	45-CA-487	2.2	23.92	18.61	7.45				Y			
966	45-CA-487	4.5	31.70	20.49	7.53				Y			
967	45-CA-487	1.9	26.58	22.71	2.60				N		Watts Point	

968	45-CA-487	2.2	24.00	17.86	4.35				N			
969	45-CA-487	0.2	13.84	8.20	2.75				Y			
970	45-CA-487	2.1	26.00	20.96	4.10				N			
971	45-CA-487	2.5	25.89	21.27	4.60				Y			
972	45-CA-487	1.9	25.68	18.05	3.33				N			
973	45-CA-487	0.1	13.28	10.18	1.74				N			
974	45-CA-487	2.6	27.73	15.43	4.75				Y			
975	45-CA-487	1.1	26.61	13.33	3.48				N			
976	45-CA-487	2.4	21.08	14.17	4.66				Y			
977	45-CA-487	0.6	15.63	10.88	3.47				N			
978	45-CA-487	1.7	23.73	19.09	4.30				N			
979	45-CA-487	2.4	26.52	17.71	2.86				Y			
980	45-CA-487	1.1	22.20	11.84	3.66				Y			
981	45-CA-487	1.9	25.32	14.75	4.42				Y		Watts Point	
982	45-CA-487	1.2	23.02	16.61	3.81				Y			
983	45-CA-487	0.4	18.23	12.92	3.01				N			
984	45-CA-487	1.3	27.60	11.69	4.28				N			
985	45-CA-487	2.4	25.44	14.88	7.30				Y			
986	45-CA-487	1.1	20.99	13.32	3.40				Y			
987	45-CA-487	1.4	29.00	16.86	3.98				N			
988	45-CA-487	0.4	11.65	6.69	5.49				Y			
989	45-CA-487	0.9	18.19	16.01	4.32	UFT	RUF	Y	N			
990	45-CA-487	0.3	14.69	10.58	2.43				N			
991	45-CA-487	0.7	14.31	12.30	3.47				Y			
992	45-CA-487	0.4	15.34	8.96	2.42				N			
993	45-CA-487	0.8	17.60	12.88	3.64				Y			
994	45-CA-487	1.0	23.18	11.36	4.09				Y			
995	45-CA-487	1.0	21.12	14.65	3.90				N			
996	45-CA-487	0.7	18.15	8.88	4.31				Y			
997	45-CA-487	0.3	11.70	9.19	2.43				N			
998	45-CA-487	0.6	19.37	9.10	2.33				N			
999	45-CA-487	0.4	14.92	10.35	1.52				N			
1000	45-CA-487	0.5	14.04	11.79	2.01				N			
1001	45-CA-487	0.2	13.15	11.14	2.01				N			
1002	45-CA-487	0.3	13.05	9.24	3.15				Y			
1003	45-CA-487	1.0	18.09	14.14	2.60				Y			
1004	45-CA-487	0.4	13.31	11.96	1.24				N			
1005	45-CA-487	0.6	18.56	10.56	3.23				N			
1006	45-CA-487	0.6	17.54	7.18	6.22				N			

1007	45-CA-487	0.5	16.01	15.32	2.42				N			
1008	45-CA-487	0.1	12.48	8.86	1.51				N			
1009	45-CA-487	0.6	16.84	9.85	4.51				N			
1010	45-CA-487	0.2	13.74	9.05	1.80				N			
1011	45-CA-487	0.5	22.62	9.54	2.95				N			
1012	45-CA-487	0.3	12.77	8.55	4.41				N			
1013	45-CA-487	0.6	14.85	11.79	4.56				N			
1014	45-CA-487	0.2	9.52	8.85	1.82				N			
1015	45-CA-487	0.3	16.03	8.73	2.32				N			
1016	45-CA-487	0.3	17.36	8.43	2.29				N			
1017	45-CA-487	0.4	15.19	8.87	3.33				N			
1018	45-CA-487	0.1	9.07	7.73	1.47				N			
1019	45-CA-487	1.0	22.60	14.43	4.30				Y			
1020	45-CA-487	0.1	15.10	6.82	1.72				N			
1021	45-CA-487	0.1	9.25	6.43	2.40				N			
1022	45-CA-487	0.2	12.56	9.61	2.06				N			
1023	45-CA-487	0.3	13.44	10.24	2.31				N			
1024	45-CA-487	0.2	10.71	9.18	3.68				N			
1025	45-CA-487	0.2	14.76	9.31	1.09				N			
1026	45-CA-487	0.1	8.60	6.69	2.41				N			
1027	45-CA-487	0.1	12.38	5.57	1.89				N			
1028	45-CA-487	0.4	14.17	10.44	3.26				N			
1029	45-CA-487	0.1	9.12	7.35	1.01				N			
1030	45-CA-487	0.2	10.23	6.66	2.36				N			
1031	45-CA-487	0.1	12.05	9.03	1.16				N			
1032	45-CA-487	0.1	7.92	7.92	2.33				N			
1033	45-CA-487	0.2	11.66	8.24	2.26				Y			
1034	45-CA-487	0.4	13.19	8.22	2.80				Y			
1035	45-CA-487	0.2	12.61	3.99	2.59				Y			
1036	45-CA-487	0.2	11.94	8.40	2.66				N			
1037	45-CA-487	0.4	14.12	9.60	3.72				Y			
1038	45-CA-487	0.4	14.85	9.63	4.56				N			
1039	45-CA-487	0.1	10.89	7.95	1.87				N			
1040	45-CA-487	0.2	9.88	8.36	1.14				N			
1041	45-CA-487	0.2	11.96	7.60	2.66				Y			
1042	45-CA-487	0.2	11.11	8.42	2.37				N			
1043	45-CA-487	0.2	12.21	10.96	1.51				N			
1044	45-CA-487	0.1	7.79	5.88	0.88				N			
1045	45-CA-487	0.7	18.09	10.68	3.34				N			

1046	45-CA-487	0.4	14.00	8.67	5.53				Y			
1047	45-CA-487	0.3	15.99	7.19	2.25				N			
1048	45-CA-487	0.3	12.87	9.11	3.27				Y			
1049	45-CA-487	0.1	11.19	9.09	1.44				N			
1050	45-CA-487	0.2	10.32	8.16	1.82				Y			
1051	45-CA-487	0.3	15.30	7.56	3.49				N			
1052	45-CA-487	0.3	11.58	10.66	3.73				N			
1053	45-CA-487	0.1	10.17	7.52	1.14				N			
1054	45-CA-487	0.4	12.33	8.98	3.62				Y			
1055	45-CA-487	0.5	15.21	9.60	4.24				N			
1056	45-CA-487	0.6	14.81	13.56	4.88				Y			
1057	45-CA-487	0.4	13.21	8.86	3.37				N			
1058	45-CA-487	0.1	11.25	7.22	2.10				N			
1059	45-CA-487	0.2	13.05	6.37	1.73				N			
1060	45-CA-487	0.3	13.52	9.82	2.03				N			
1061	45-CA-487	0.1	9.32	7.85	1.74				N			
1062	45-CA-487	0.3	12.36	10.97	1.84				N			
1063	45-CA-487	0.1	11.28	7.17	2.70				N			
1064	45-CA-487	0.3	11.89	11.09	2.80				Y			
1065	45-CA-487	0.3	14.16	11.10	2.35				N			
1066	45-CA-487	0.2	12.14	9.66	2.13				N			
1067	45-CA-487	0.2	10.87	7.23	3.33				N			
1068	45-CA-487	0.1	10.95	9.01	1.21				N			
1069	45-CA-487	0.4	13.84	9.40	2.27				Y			
1070	45-CA-487	0.1	11.17	8.18	2.15				N			
1071	45-CA-487	44.9	57.76	41.60	19.34	CCT	MDC		N			
1072	45-CA-487	99.9	87.85	64.60	19.42	UFT	UTF	N	Y			
1073	45-CA-487	1.0	19.45	12.44	1.78				N			
1074	45-CA-487	2.6	32.13	14.47	5.04				Y			
1075	45-CA-487	0.7	16.60	12.12	4.98				N			
1076	45-CA-487	0.7	20.02	13.74	2.56				Y			
1077	45-CA-487	0.4	16.16	7.61	3.78				N			
1078	45-CA-487	5.9	32.79	18.80	12.51				Y			
1079	45-CA-487	0.2	11.49	8.41	2.12				N			
1080	45-CA-487	0.1	9.61	6.87	0.97				N			
1081	45-CA-487	0.6	18.47	13.54	2.40				N			
1082	45-CA-487	0.5	17.63	11.85	2.30				N			
1083	45-CA-487	0.6	15.63	10.41	3.93				N			
1084	45-CA-487	2.8	33.16	25.51	5.62				N			

1085	45-CA-487	9.0	31.99	24.84	9.47				Y			
1086	45-CA-487	1.3	21.61	18.72	5.54				N			
1087	45-CA-487	2.1	33.17	13.90	4.53				N			
1088	45-CA-487	0.3	16.09	8.43	2.63				N			
1089	45-CA-487	0.1	14.78	7.40	1.47				N			
1090	45-CA-487	0.3	11.16	8.27	3.18				N			
1091	45-CA-487	2.7	27.95	18.77	4.97				Y			
1092	45-CA-487	0.1	11.54	9.70	1.61				N			
1093	45-CA-487	0.1	10.79	7.94	1.08				N			
1094	45-CA-487	0.8	21.42	12.65	2.31				Y			
1095	45-CA-487	0.4	14.96	9.83	1.82				N			
1096	45-CA-487	7.2	39.43	32.39	7.70				N			
1097	45-CA-487	0.9	18.58	16.03	3.92				N			
1098	45-CA-487	0.3	14.61	11.60	2.39				Y			
1099	45-CA-487	0.4	14.64	10.25	2.86				N			
1100	45-CA-487	4.7	33.28	25.37	5.47	UFT	RUF	Y	N			
1101	45-CA-487	5.9	38.95	25.75	7.08	BFT	HBF	Y	N	W		
1102	45-CA-487	5.6	36.48	21.01	9.85	UFT	RUF	Y	N			
1103	45-CA-487	0.3	12.87	8.21	3.29				Y			
1104	45-CA-487	1.2	24.14	15.14	3.52				N			
1105	45-CA-487	88.5	63.51	40.30	23.83	CCT	MDC		Y			
1106	45-CA-487	27.8	65.82	49.95	9.74	UFT	RUF	Y	Y			
1107	45-CA-487	2.0	32.30	19.97	3.78				N			
1108	45-CA-487	1.1	17.36	16.09	4.49				Y			
1109	45-CA-487	2.3	24.03	18.53	5.58				Y			
1110	45-CA-487	0.4	15.48	13.33	1.95				N			
1111	45-CA-487	3.4	28.07	18.90	5.02				N			
1112	45-CA-487	0.2	13.55	6.22	2.81				N			
1113	45-CA-487	0.5	19.84	11.30	2.21				N			
1114	45-CA-487	0.3	16.14	11.42	2.06				N			
1115	45-CA-487	0.2	13.78	8.32	1.77				N			
1116	45-CA-487	1.8	26.48	15.88	6.15				N			
1117	45-CA-487	1.3	22.94	20.29	1.84				N			
1118	45-CA-487	0.1	12.20	9.50	1.93				N			
1119	45-CA-487	0.6	16.85	12.15	2.96				N			
1120	45-CA-487	0.1	7.46	5.95	1.22				N			
1121	45-CA-487	0.4	11.11	9.09	5.77				Y			
1122	45-CA-487	2.7	22.94	21.47	4.43				Y			
1123	45-CA-487	0.2	11.07	7.32	1.78				N			

1124	45-CA-487	4.6	29.38	23.70	8.30				Y			
1125	45-CA-487	2.3	28.06	15.44	4.42				N			
1126	45-CA-487	2.2	25.91	22.75	2.53				N			
1127	45-CA-487	4.2	31.74	12.89	10.79				N			
1128	45-CA-487	0.9	24.85	10.23	4.80				N			
1129	45-CA-487	0.1	10.99	9.54	1.59				N			
1130	45-CA-487	1.0	22.30	10.73	4.48				Y			
1131	45-CA-487	13.5	46.08	26.23	10.70	UFT	RUF	Y	Y			
1132	45-CA-487	6.6	36.63	23.76	9.38	UFT	UTF	N	Y			
1133	45-CA-487	0.9	23.15	10.64	4.24				N			
1134	45-CA-487	0.3	12.41	12.96	2.18				N			
1135	45-CA-487	3.0	28.98	22.76	6.28				N			
1136	45-CA-487	19.6	47.14	33.08	15.33				Y			
1137	45-CA-487	1.3	24.07	18.03	3.29				N		Watts Point	
1138	45-CA-487	20.4	42.59	31.96	19.26	CCT	MDC		N			
1139	45-CA-487	5.1	40.00	18.47	8.82				N			
1140	45-CA-487	0.1	10.79	8.13	1.36				N			
1141	45-CA-487	2.1	24.31	20.73	5.34				N			
1142	45-CA-487	1.8	18.76	12.44	7.25				Y			
1143	45-CA-487	0.1	9.02	7.14	0.94				Y			
1144	45-CA-487	0.6	22.4	14.51	2.09				Y			
1145	45-CA-487	2.7	28.28	24.52	4.26				N		Watts Point	
1146	45-CA-487	0.5	14.04	8.31	5.11				N			
1147	45-CA-487	0.4	17.39	11.67	2.84				N			
1148	45-CA-487	0.9	16.05	12.23	6.41				N			
1149	45-CA-487	0.3	12.83	9.75	4.49				Y			
1150	45-CA-487	1.2	18.80	15.85	5.22				Y			
1151	45-CA-487	0.6	10.61	13.89	2.62				N			
1152	45-CA-487	0.5	21.90	9.90	3.05				N			
1153	45-CA-487	4.4	32.09	18.97	8.74				Y			
1154	45-CA-487	0.2	12.98	10.01	2.10				N			
1155	45-CA-487	2.2	24.64	16.76	8.63				Y			
1156	45-CA-487	0.3	13.07	11.90	3.23				N			
1157	45-CA-487	0.4	14.53	9.86	2.03				N			
1158	45-CA-487	0.8	19.63	10.67	4.20				Y			
1159	45-CA-487	0.1	11.35	8.68	1.38				N			
1160	45-CA-487	0.5	17.09	9.84	4.04				Y			
1161	45-CA-487	11.9	28.84	24.00	16.96	CCT	MDC		Y			
1162	45-CA-487	0.8	24.02	14.75	1.63				N			

1163	45-CA-487	0.6	18.29	10.46	4.41				Y			
1164	45-CA-487	0.4	13.12	10.56	3.0				Y			
1165	45-CA-487	0.1	9.42	6.09	1.13				N			
1166	45-CA-487	0.6	15.69	12.67	3.76				Y			
1167	45-CA-487	0.5	22.10	11.29	1.75				N			
1168	45-CA-487	0.2	16.17	6.92	2.54				N			
1169	45-CA-487	0.1	11.18	7.18	1.56				N			
1170	45-CA-487	0.9	16.18	12.57	3.89				N			
1171	45-CA-487	0.9	19.22	15.25	2.90				N			
1172	45-CA-487	0.5	18.12	10.05	2.95				N			
1173	45-CA-487	0.2	11.56	10.58	1.50				N			
1174	45-CA-487	0.9	23.03	12.92	2.87				N			
1175	45-CA-487	0.1	11.06	8.79	0.99				N			
1176	45-CA-487	0.6	14.16	11.52	3.95				Y			
1177	45-CA-487	0.4	14.01	9.43	3.79				Y			
1178	45-CA-487	0.5	17.89	10.08	2.99				N			
1179	45-CA-487	0.1	9.57	9.16	1.19				N			
1180	45-CA-487	0.1	10.86	7.00	2.25				N			
1181	45-CA-487	0.1	11.23	9.39	2.42				N			
1182	45-CA-487	0.2	11.60	9.57	2.90				N			
1183	45-CA-487	2.2	30.36	25.67	2.80				Y		Watts Point	
1184	45-CA-487	3.7	42.46	22.97	5.37				Y			
1185	45-CA-487	2.4	21.36	19.81	4.74				N			
1186	45-CA-487	0.2	16.53	7.58	3.24				Y			
1187	45-CA-487	0.2	11.66	0.62	2.16				Y			
1188	45-CA-487	0.5	10.57	8.44	4.29				N			
1189	45-CA-487	0.3	11.51	8.89	1.95				N			
1190	45-CA-487	0.5	19.98	9.15	3.44				Y			
1191	45-CA-487	0.1	10.39	9.03	1.41				N			
1192	45-CA-487	0.2	11.76	7.77	2.41				N			
1193	45-CA-487	0.1	11.29	7.73	1.66				N			
1194	45-CA-487	0.1	11.70	6.98	1.19				N			
1195	45-CA-487	0.1	11.23	4.99	1.37				N			
1196	45-CA-487	0.3	12.83	8.69	2.27				N			
1197	45-CA-487	0.4	14.79	10.37	2.77				Y			
1198	45-CA-487	0.2	13.68	9.68	2.32				N			
1199	45-CA-487	1.2	25.71	13.50	3.74				N			
1200	45-CA-487	1.7	23.09	14.69	4.92				Y			
1201	45-CA-487	1.9	19.36	12.46	7.87				Y			

1202	45-CA-487	0.3	17.57	7.12	1.94				N			
1203	45-CA-487	8.7	38.47	26.94	4.08				Y			
1204	45-CA-487	0.2	12.29	11.20	2.13				Y			
1205	45-CA-487	0.1	12.92	7.53	1.90				N			
1206	45-CA-487	5.1	32.41	18.51	7.63	BFT	LSB	Y	N			
1207	45-CA-487	7.2	33.83	28.08	8.28	CCT	MDC		Y			
1208	45-CA-487	0.7	15.52	9.91	6.97				Y			
1209	45-CA-487	9.5	37.63	20.73	11.66	CCT	MDC		Y			
1210	45-CA-487	0.2	12.16	8.56	2.14				N			
1211	45-CA-487	0.2	13.40	7.33	2.99				N			
1212	45-CA-487	0.8	21.30	12.61	2.40				Y			
1213	45-CA-487	0.2	17.00	9.25	1.16				N			
1214	45-CA-487	14.80	48.98	32.65	10.07				Y			
1215	45-CA-487	1.0	23.01	11.74	3.80				N			
1216	45-CA-487	3.0	28.18	18.78	5.08				Y			
1217	45-CA-487	0.8	16.29	14.91	2.03				N			
1218	45-CA-487	0.3	12.6	11.67	1.52				N			
1219	45-CA-487	2.4	27.10	17.30	6.21				N			
1220	45-CA-487	0.7	17.60	13.23	2.07				N			
1221	45-CA-487	0.8	20.64	11.37	2.96				N			
1222	45-CA-487	0.7	17.82	12.96	4.41				Y			
1223	45-CA-487	1.1	19.90	13.31	5.48				N			
1224	45-CA-487	4.8	32.88	22.42	7.65				N			
1225	45-CA-487	0.3	11.52	10.98	2.06				N			
1226	45-CA-487	1.3	23.02	19.18	2.93				N			
1227	45-CA-487	5.8	40.23	15.34	11.78				Y			
1228	45-CA-487	2.0	22.78	14.66	5.47				Y			
1229	45-CA-487	2.0	24.92	20.94	2.36				N			
1230	45-CA-487	0.7	16.26	12.35	3.80				N			
1231	45-CA-487	2.8	28.10	21.13	4.19	UFT	RUF	Y	N			
1232	45-CA-487	31.5	72.80	47.02	10.02	UFT	UTF	N	Y			
1233	45-CA-487	3.7	31.22	17.26	10.09				Y			
1234	45-CA-487	4.9	29.64	18.92	12.20	UFT	UTF	N	Y			
1235	45-CA-487	1.2	19.67	15.72	3.09				N			
1236	45-CA-487	1.2	19.76	12.95	4.79				Y			
1237	45-CA-487	0.7	19.81	13.40	4.16				Y			
1238	45-CA-487	1.3	22.78	14.45	2.72				Y			
1239	45-CA-487	0.7	20.55	12.23	2.29				Y			
1240	45-CA-487	0.7	17.16	12.20	2.18				Y			

1241	45-CA-487	9.7	36.39	21.15	15.27				Y			
1242	45-CA-487	2.8	26.29	17.37	5.16				Y			
1243	45-CA-487	16.8	41.18	31.32	13.09	UFT	RUF	Y	Y			
1244	45-CA-487	1.0	19.78	15.66	3.90				N			
1245	45-CA-487	2.9	25.49	19.55	3.48				N			
1246	45-CA-487	0.1	8.99	6.34	1.33				Y			
1247	45-CA-487	37.2	41.42	32.93	26.17	CCT	MDC		Y		Watts Point	
1248	45-CA-487	9.7	40.67	22.08	11.95				N			
1249	45-CA-487	0.9	23.05	17.01	3.06				Y			
1250	45-CA-487	2.3	25.57	18.07	3.27				N			
1251	45-CA-487	1.5	23.37	16.83	4.60				Y			
1252	45-CA-487	0.5	20.28	10.71	3.62				N			
1253	45-CA-487	3.5	30.16	19.12	3.93				N			
1254	45-CA-487	5.4	33.20	23.07	6.09				Y			
1255	45-CA-487	4.2	30.31	22.53	6.41	UFT	RUF	Y	Y			scraper
1256	45-CA-487	6.0	35.05	25.40	8.65				Y			
1257	45-CA-487	1.2	20.00	14.61	5.59	BFT	LSB	N	N	B		
1258	45-CA-487	1.2	16.82	11.00	7.41				N			
1259	45-CA-487	1.4	25.56	15.46	3.98				Y			
1260	45-CA-487	12.0	22.30	9.6	12.91				Y			
1261	45-CA-487	14.3	39.65	33.26	15.15				Y			
1262	45-CA-487	24.1	44.40	35.94	17.07	CCT	MDC		Y			
1263	45-CA-487	3.9	39.86	18.59	5.89				N			
1264	45-CA-302	4.7	31.52	20.59	7.50				Y			
1265	45-CA-302	1.0	21.06	11.18	4.05				N			
1266	45-CA-302	2.2	26.31	7.79	6.37	CCT	UDC		Y			
1267	45-CA-302	7.6	41.81	26.15	8.18				Y			
1268	45-CA-302	19.7	47.06	26.58	15.19	CCT	MDC		Y			one flake scar
1269	45-CA-302	2.2	31.43	15.14	5.72				N			
1270	45-CA-302	0.9	15.08	12.46	5.83				N			
1271	45-CA-302	3.9	22.21	16.57	11.20	CCT	UDC		Y			One flake scar
1272	45-CA-302	1.7	21.27	13.02	6.23				Y			
1273	45-CA-302	0.1	11.10	8.81	1.27				N			
1274	45-CA-302	0.4	10.95	8.16	2.71				N			
1275	45-CA-302	0.5	9.03	7.69	6.14	CCT	UDC		Y			
1276	45-CA-302	7.9	41.36	22.47	6.83				N			
1277	45-CA-302	0.4	16.27	9.99	3.25				Y			
1278	45-CA-302	1.2	20.00	13.93	3.70				N			
1279	45-CA-302	2.2	23.14	22.85	5.46				Y			

1280	45-CA-302	4.8	36.06	26.57	5.92				N			
1281	45-CA-302	0.7	18.16	10.89	4.24				N			
1282	45-CA-302	3.6	33.53	20.18	8.06				N			
1283	45-CA-302	1.3	20.63	15.00	3.52				Y			
1284	45-CA-302	0.3	14.41	11.47	1.73				N			
1285	45-CA-302	1.1	25.09	13.63	3.11				N			
1286	45-CA-302	3.4	30.70	28.34	4.86				Y			
1287	45-CA-302	3.5	35.17	24.04	5.45				N			
1288	45-CA-302	0.3	15.90	12.47	2.85				N			
1289	45-CA-302	0.3	14.72	10.00	2.15				N			
1290	45-CA-302	0.9	21.61	16.32	2.65				N			
1291	45-CA-302	0.6	13.70	12.68	3.58				Y			
1292	45-CA-302	0.6	17.36	13.31	3.55				Y			
1293	45-CA-302	0.4	15.98	12.44	2.47				N			
1294	45-CA-302	0.8	19.74	12.44	3.19				N			
1295	45-CA-302	3.0	24.68	17.92	9.31				N			
1296	45-CA-302	5.3	35.36	27.65	4.16				N			
1297	45-CA-302	0.8	19.55	10.79	3.45				N			
1298	45-CA-302	1.2	18.03	12.87	5.48				Y		Watts Point	
1299	45-CA-302	1.9	26.62	20.72	4.32				N			
1300	45-CA-302	0.2	13.07	6.38	1.58				N			
1301	45-CA-302	0.3	20.62	11.10	1.90				N			
1302	45-CA-302	0.4	17.93	10.03	2.22				N			
1303	45-CA-302	0.5	17.06	12.30	3.15				N			
1304	45-CA-302	0.2	12.80	9.42	2.46				N			
1305	45-CA-302	0.2	10.05	8.25	2.44				N			
1306	45-CA-302	0.8	19.42	16.81	3.19				N			
1307	45-CA-302	0.1	7.11	5.56	1.12				N			
1308	45-CA-302	1.3	25.56	19.12	3.20				N			
1309	45-CA-302	0.1	8.92	4.08	0.76				N			
1310	45-CA-302	1.4	21.60	18.16	4.70				N			
1311	45-CA-302	0.1	5.69	4.09	0.53				N			
1312	45-CA-302	2.5	36.40	14.12	6.15				N		Watts Point	
1313	45-CA-302	0.1	10.68	8.58	1.08				N			
1314	45-CA-302	0.7	21.48	14.44	2.97				N			
1315	45-CA-302	6.1	39.11	19.88	8.63				Y			
1316	45-CA-302	0.5	20.22	12.40	2.54				N			
1317	45-CA-302	0.4	15.11	11.44	3.11				Y			
1318	45-CA-302	1.7	25.90	20.98	3.26				N			

1319	45-CA-302	0.2	10.42	9.85	2.49				N			
1320	45-CA-302	1.4	21.38	18.65	4.67				N			
1321	45-CA-302	0.4	17.62	12.99	2.21				N			
1322	45-CA-302	1.0	21.57	19.87	2.21				N			
1323	45-CA-302	0.5	19.50	8.37	2.94				N			
1324	45-CA-302	0.6	19.38	14.35	2.84				N			
1325	45-CA-302	1.2	16.06	15.24	6.98				N			
1326	45-CA-SC	2.9	24.92	21.56	7.96				N			12-1
1327	45-CA-SC	3.4	32.12	20.76	6.35				Y			328-3
1328	45-CA-SC	0.2	8.83	7.38	2.42				N			2
1329	45-CA-SC	35.4	55.54	34.21	18.78				Y			276-7
1330	45-CA-SC	3.5	31.42	26.43	4.60				N			292-53
1331	45-CA-SC	0.3	18.48	7.93	2.92				N			292-41
1332	45-CA-SC	3.2	30.59	17.16	6.85				Y			292-43
1333	45-CA-SC	0.3	14.16	8.33	3.71				Y			294-1
1334	45-CA-SC	0.1	14.38	10.85	1.63				N			294-4
1335	45-CA-SC	0.3	16.43	11.25	2.79				Y			294-7
1336	45-CA-SC	0.3	12.56	9.53	2.31				N			297-8
1337	45-CA-SC	0.2	12.50	9.90	2.42				N		Watts Point	297-16
1338	45-CA-SC	2.9	24.18	18.15	6.21				N			297-13
1339	45-CA-SC	2.8	29.70	20.00	4.92				N			305-7
1340	45-CA-SC	2.3	28.45	17.29	6.50				N			300-21
1341	45-CA-SC	0.1	8.93	8.13	1.89				Y			298-1
1342	45-CA-SC	17.5	51.19	34.59	12.43				Y			309-2
1343	45-CA-SC	203.7	91.36	69.10	34.01				Y			309-3
1344	45-CA-SC	650	122.12	78.33	67.92	CCT	MDC		Y			309-4
1345	45-CA-SC	130.4	64.0	50.25	38.68	CCT	FLC		Y			only one flake scar = unidirectional
1346	45-CA-SC	28.8	60.33	40.96	14.80	UFT	UTF	N	Y			SF AV (roman numeral 5)
1347	45-CA-SC	46.3	67.98	45.17	12.99	UFT	RUF	Y	Y			SF AIII retouched tool on primary flake
1348	45-CA-SC	5.6	35.45	26.37	6.10				N			TP 7
1349	45-CA-SC	0.1	9.91	7.15	1.78				N			
1350	45-CA-SC	2.1	24.36	15.95	8.03				Y			
1351	45-CA-SC	1.9	29.46	15.36	4.96				Y			
1352	45-CA-SC	2.6	26.94	23.70	5.19				N			
1353	45-CA-SC	6.6	31.40	25.45	8.85				Y			
1354	45-CA-SC	9.6	42.77	29.12	10.71				Y			
1355	45-CA-SC	21.1	48.77	35.59	12.99				N			
1356	45-CA-SC	0.7	18.64	16.26	1.99				Y		Watts Point	

1357	45-CA-SC	31.8	52.72	37.36	20.48	UFT	UTF	N	Y			6092-38
1358	45-CA-SC	4.0	29.39	21.91	6.47				N			6092-18
1359	45-CA-SC	24.2	44.68	31.34	18.76	CCT	MDC		Y			6092-51
1360	45-CA-SC	8.4	43.17	26.42	6.63				N			6092-58
1361	45-CA-SC	3.4	28.61	15.48	7.15				N			6092-10
1362	45-CA-SC	10.6	30.24	22.23	16.56	CCT	MDC		Y			6092-50
1363	45-CA-SC	12.3	35.59	22.20	15.39	UFT	RUF	Y	Y			6092-59
1364	45-CA-SC	4.2	33.35	27.84	5.00				N			6092-54
1365	45-CA-SC	2.5	26.23	19.94	5.05	BFT	LSB	Y	N	B		13, 25 cm, BUD, B1 very finely made ppt
1366	45-CA-SC	7.4	30.65	25.59	8.82	UFT	RUF	Y	Y			6092-46
1367	45-CA-SC	12.0	46.46	24.64	11.46				N			6092-9
1368	45-CA-SC	13.2	37.22	28.56	15.09				N			6092-3
1369	45-CA-SC	2.5	18.21	16.18	9.62				N			6092-24
1370	45-CA-SC	10.3	35.28	29.54	16.02				N			6092-42
1371	45-CA-SC	4.6	23.92	18.41	9.31				N			6092-25
1372	45-CA-SC	8.9	36.60	33.89	8.20				Y			6092-4
1373	45-CA-SC	11.9	35.87	23.91	14.20	CCT	UDC		Y			6092-47 only two flake scars on core
1374	45-CA-SC	1.4	19.28	17.78	5.03				N			6092-56
1375	45-CA-SC	5.0	31.81	23.05	6.94				N			6092-7
1376	45-CA-SC	15.7	35.58	25.14	18.03	UFT	RUF	Y	Y			6092-37
1377	45-CA-SC	12.3	42.17	38.57	9.60				Y			6092-14
1378	45-CA-SC	1.7	19.20	13.61	8.52				N			6092-26
1379	45-CA-SC	8.1	42.01	23.75	8.16				N			6092-53
1380	45-CA-SC	1.2	21.39	11.93	5.37				N			6092-41
1381	45-CA-SC	29.4	41.97	41.03	16.78				N			6092-27
1382	45-CA-SC	3.1	25.01	18.29	5.48				N			6092-15
1383	45-CA-SC	1.1	24.75	15.86	3.17				N			6092
1384	45-CA-SC	45.0	72.71	46.83	13.73	UFT	RUF	Y	N			146-10
1385	45-CA-SC	5.3	44.38	17.81	6.76	BFT	LSB	Y	N	B	Watts Point	
1386	45-CA-SC	0.5	13.61	11.85	4.32	BFT	LSB	Y	Y	n		98-5
1387	45-CA-SC	292.7	99.54	76.15	33.96	UFT	RUF	Y	Y			326-1 Large cobble chopper/scraper
1388	45-CA-SC	14.5	40.31	3.70	10.56				N			292-52
1389	45-CA-SC	92.3	72.45	52.85	22.81	UFT	RUF	Y	Y			169-14
1390	45-JE-225	67.5	67.17	37.90	24.65	CCT	MDC		Y			
1391	45-JE-225	3.0	24.81	21.59	4.21				Y		Unknown	
1392	45-JE-231	5.3	38.96	22.77	10.32	UFT	UTF	N	Y			
1393	45-JE-221	7.6	39.32	29.46	5.39				Y		Watts Point	
1394	45-JE-221	7.7	49.23	21.79	8.18	UFT	UTF	N	Y			

1395	45-CA-440	3.9	27.77	21.48	7.37				N		Watts Point	
1396	45-CA-440	9.5	36.74	30.27	9.10				Y			
1397	45-CA-440	9.0	37.79	22.46	13.73				Y			
1398	45-CA-440	9.3	37.54	27.37	8.28	UFT	UTF	N	Y			
1399	45-JE-217	11.7	41.45	23.76	16.14	UFT	RUF	Y	Y		Watts Point	
1400	45-JE-217	4.1	26.98	24.42	7.21	UFT	UTF	N	Y			
1401	45-JE-217	29.9	54.73	37.30	22.36	CCT	MDC	N	N			also unifacially utilized tool
1402	45-JE-217	12.1	38.64	23.58	15.62				Y			
1403	45-JE-217	24.2	49.11	30.62	16.32	UFT	RUF	Y	Y			
1404	45-JE-222	7.3	35.39	24.78	11.24				N			
1405	45-JE-222	10.1	37.51	29.71	9.45				Y		Watts Point	
1406	45-JE-222	3.1	24.95	23.74	5.03				Y			
1407	45-JE-222	1.5	22.74	17.05	5.17				Y			
1408	45-JE-222	0.6	19.36	9.08	4.74	UFT	UTF	N	Y			
1409	45-JE-222	6.3	30.99	26.62	8.28				N			
1410	45-JE-230	4.8	29.67	24.82	9.39	UFT	UTF	N	Y			
1411	45-JE-223	0.8	20.50	10.63	3.54				N			
1412	45-JE-223	3.1	25.41	19.92	7.39				N		Watts Point	
1413	45-JE-223	0.1	12.90	4.66	2.47				N			
1414	45-JE-217	18.4	44.06	35.98	11.89	UFT	UTF	N	Y			
1415	45-JE-226	43.7	68.61	54.17	11.00	UFT	RUF	Y	Y		Watts Point	
1416	45-JE-226	6.3	35.26	22.64	7.36				Y			
1417	45-JE-226	6.9	31.24	19.30	12.24				Y			
1418	45-JE-226	12.7	40.33	29.08	12.51				Y			
1419	45-JE-226	1.4	26.24	16.94	3.42				N			
1420	45-JE-226	3.1	27.81	20.97	5.77				Y			
1421	45-JE-224	12.8	54.17	29.06	8.65	UFT	UTF	N	Y			
1422	45-JE-224	0.3	13.57	10.42	3.45				N			
1423	45-JE-224	30.1	45.46	33.41	21.51	CCT	MDC		Y			
1424	45-JE-224	1.1	23.07	11.99	3.93				N			
1425	45-JE-224	4.9	29.22	18.22	7.87				N			
1426	45-JE-224	0.1	7.26	5.32	1.93				N			
1427	45-JE-224	0.6	18.15	12.42	3.53				N		Watts Point	
1428	45-JE-219	13.2	33.81	26.21	15.13				Y		Watts Point	
1429	45-JE-219	3.6	31.15	25.46	6.53				Y			
1430	45-JE-219	3.0	32.90	20.37	6.27				N			
1431	45-JE-220	4.1	31.87	18.12	7.25	BFT	ESB	N	N	B		
1432	45-JE-220	3.4	27.54	21.47	5.72	UFT	RUF	Y	N			

1433	45-JE-220	7.7	37.21	19.55	11.49				N			
1434	45-JE-220	1.6	21.51	15.17	5.53				Y			
1435	45-JE-220	2.4	25.05	20.78	6.85	UFT	UTF	N	N			
1436	45-JE-220	1.0	16.38	13.73	5.60				N			
1437	45-JE-220	0.8	18.86	12.93	2.95				Y		Watts Point	
1438	45-JE-220	5.2	33.66	20.63	9.86				N			
1439	45-CA-483	48.1	57.75	40.46	27.71	CCT	MDC		Y			
1440	45-CA-483	3.2	25.17	20.84	9.04				Y			
1441	45-CA-483	2.6	30.04	19.29	3.92				N			
1442	45-CA-483	2.7	21.56	17.26	10.09				Y			
1443	45-CA-483	0.4	16.39	8.13	3.27				N			
1444	45-CA-483	2.8	30.92	22.78	3.82				N			
1445	45-CA-483	0.8	21.74	11.19	3.50				N			
1446	45-CA-483	3.2	27.06	19.82	3.27				N			
1447	45-CA-483	17.8	33.20	32.40	16.61	UFT	RUF	Y	Y			Retouched thumbnail scraper
1448	45-CA-483	0.7	17.01	14.72	2.62				N			
1449	45-CA-483	1.6	27.64	16.52	4.58				N			
1450	45-CA-483	1.6	23.67	13.79	4.80				Y			trail worn
1451	45-CA-483	2.5	35.75	13.44	5.41				Y			
1452	45-CA-483	0.5	12.20	10.13	3.31				Y			
1453	45-CA-483	10.8	42.83	30.01	7.95				N			
1454	45-CA-483	0.8	20.29	12.23	2.47				N			
1455	45-CA-483	2.6	26.51	16.65	7.49				N			
1456	45-CA-483	0.8	19.20	13.42	3.44				N			
1457	45-CA-483	4.5	30.32	19.99	11.40				Y			
1458	45-CA-483	2.2	22.21	18.53	8.04				Y			
1459	45-CA-483	0.8	18.36	9.68	3.50				N			
1460	45-CA-483	0.2	11.23	7.32	2.44				N			
1461	45-CA-483	0.4	15.61	7.20	3.27				N			
1462	45-CA-483	6.0	36.61	23.38	4.14				Y		Watts Point	
1463	45-CA-483	1.6	29.44	20.12	5.34				N			
1464	45-CA-483	0.6	15.36	12.08	4.34				N			
1465	45-CA-486	19.3	45.38	25.28	22.77				Y			
1466	45-CA-486	2.4	35.61	15.39	5.01				Y			
1467	45-CA-486	1.2	13.79	11.55	7.46				N			
1468	45-CA-486	1.9	20.24	15.90	6.76				Y			
1469	45-CA-486	0.6	15.78	11.24	4.57				Y			
1470	45-CA-486	11.5	29.16	28.25	18.24				Y			

1471	45-CA-492	2.7	35.46	14.55	6.15				N			
1472	45-CA-492	1.6	22.41	16.12	4.89				Y			
1473	45-CA-492	2.6	25.18	18.10	5.39				N			
1474	45-CA-492	1.6	20.89	18.11	3.82				N			
1475	45-CA-492	4.4	30.91	17.99	7.32				Y			
1476	45-CA-492	22.1	52.76	31.20	14.05				Y			
1477	45-CA-492	0.5	14.43	9.62	4.35				N			
1478	45-CA-492	0.4	13.73	11.27	2.87				Y			
1479	45-CA-492	0.8	16.46	15.45	3.92				N			
1480	45-CA-492	0.3	13.39	6.53	3.21				N			
1481	45-CA-492	1.7	22.94	13.09	5.87				Y		Watts Point	
1482	45-CA-492	2.6	24.44	19.92	4.60				N			
1483	45-CA-492	0.2	11.78	9.85	2.56				N			
1484	45-CA-492	0.9	19.67	11.95	4.02	UFT	RUF	Y	N			
1485	45-CA-492	2.1	26.26	20.88	3.77				N			
1486	45-CA-492	2.3	26.93	15.14	4.80	UFT	RUF	Y	N			
1487	45-CA-492	0.5	14.09	10.65	2.93				N			
1488	45-CA-492	0.2	11.14	7.79	2.45				N			
1489	45-CA-492	14.9	39.78	30.00	11.27	UFT	RUF	Y	Y			
1490	45-CA-492	1.4	25.94	9.68	7.08				N			
1491	45-CA-492	3.5	26.80	18.07	5.54				Y			
1492	45-CA-492	2.5	26.78	15.55	6.19				N			
1493	45-CA-492	0.2	11.46	7.76	2.43				N			
1494	45-CA-484	2.0	18.12	15.49	8.65				N			
1495	45-CA-484	4.5	36.44	18.71	8.26				Y			
1496	45-CA-484	26.2	45.89	40.54	11.33				Y			
1497	45-CA-488	4.4	37.19	20.35	6.97	UFT	UTF	N	N			
1498	45-CA-488	1.9	30.14	20.09	4.48				N			
1499	45-CA-490	10.4	36.92	25.76	10.73				Y			
1500	45-CA-491	11.9	40.70	26.18	15.84				Y			
1501	45-CA-489	2.3	22.68	14.15	7.39	BFT	ESB	Y	N	B		
1502	45-CA-489	112.4	63.46	47.65	31.90	CCT	FLC		Y			core has 2 flake scars, looks like bad dacite
1503	45-CA-487	2.7	25.22	15.19	5.89				Y			
1504	45-CA-487	2.5	21.46	13.81	8.44				Y			
1505	45-CA-487	7.8	29.29	19.89	14.64				Y			
1506	45-CA-487	0.1	11.46	7.08	1.34				N			
1507	45-CA-487	13.1	35.40	28.07	10.93				Y			
1508	45-CA-487	22.0	52.04	27.87	13.52				Y			
1509	45-CA-487	12.6	39.07	36.42	10.37				Y			

1510	45-CA-487	2.1	22.49	17.37	4.95				N			
1511	45-CA-487	18.4	56.29	32.13	14.48	UFT	UTF	N	Y			
1512	45-CA-487	1.1	22.66	15.14	2.99				N			
1513	45-CA-487	1.0	23.57	13.40	3.37				N			
1514	45-CA-487	1.0	17.00	13.31	5.24				N			
1515	45-CA-487	7.3	37.30	21.84	9.45				Y			
1516	45-CA-487	289.4	85.88	71.12	48.25	CCT	MDC		Y			
1517	45-CA-481	15.8	45.87	27.30	12.57				Y			water worn - all
1518	45-CA-481	27.6	35.85	31.64	21.82	CCT	FLC		Y			water worn - only one flake scar
1519	45-CA-481	4.2	32.25	19.90	6.07				Y			
1520	45-CA-481	22.6	34.07	28.41	20.39	CCT	FLC		Y			water worn - only one flake scarm nearly whole
1521	45-CA-481	2.1	24.72	16.38	4.81				N			
1522	45-CA-481	1.6	24.22	14.91	5.01				Y			
1523	45-CA-481	11.1	37.62	28.71	8.49	BFT	BFF	Y	Y			
1524	45-CA-481	11.5	33.04	25.65	19.79				Y			
1525	45-CA-481	10.6	30.88	22.31	16.57	CCT	MDC		N			
1526	45-CA-481	4.1	35.72	18.52	5.89				N			
1527	45-CA-481	34.7	50.79	38.61	19.29				Y			
1528	45-CA-481	5.6	34.39	25.41	7.95				Y		Watts Point	
1529	45-CA-481	0.8	18.71	12.87	4.56				N			
1530	45-CA-481	13.6	41.89	31.54	10.28				Y			
1531	45-CA-481	37.2	49.00	31.52	23.06	CCT	MDC		Y			
1532	45-CA-481	35.6	46.18	44.48	21.45	CCT	MDC		N			
1533	45-CA-481	5.1	45.55	19.15	6.30				N			
1534	45-CA-481	35.7	46.22	40.26	20.01	CCT	MDC		Y			
1535	45-CA-481	12.8	37.66	37.63	8.60				Y			
1536	45-CA-481	3.4	34.04	15.81	6.66	BFT	LSB	Y	N	W		
1537	45-CA-481	13.4	40.89	33.99	11.55				Y			
1538	45-CA-481	0.8	19.50	12.13	4.60				N			
1539	45-CA-481	27.7	48.59	36.49	12.98	UFT	RUF	Y	Y			
1540	45-CA-481	59.7	62.18	41.13	23.04	CCT	MDC		Y			
1541	45-CA-481	166.5	112.06	61.06	17.02	UFT	UTF	Y	Y			
1542	45-CA-481	28.01	49.77	40.73	15.18	BFT	ESB	N	Y	W		
1543	45-CA-481	10.2	34.87	21.02	15.16				Y			
1544	45-CA-481	2.4	27.59	20.32	5.23				N			
1545	45-CA-481	2.3	29.12	16.13	3.96				N			
1546	45-CA-481	11.7	35.05	29.87	9.35				Y			
1547	45-CA-481	4.9	36.04	23.03	6.03	UFT	UTF	N	N			

1548	45-CA-481	7.2	34.31	31.95	6.37	UFT	UTF	N	Y			
1549	45-CA-481	3.4	25.85	20.22	7.07				N			
1550	45-CA-481	14.0	39.25	33.36	10.79	UFT	RUF	Y	Y			
1551	45-CA-481	11.3	31.49	23.88	17.67				Y			
1552	45-CA-481	58.2	51.47	45.23	24.75	CCT	MDC		Y			
1553	45-CA-481	11.9	47.04	27.51	10.67	UFT	UTF	N	Y			
1554	45-CA-481	3.4	24.37	20.91	6.98				Y			
1555	45-CA-481	2.2	21.07	16.53	6.57				N			
1556	45-CA-481	9.2	48.44	23.41	8.73	BFT	HBF	N	N	B		
1557	45-CA-481	3.4	31.91	19.83	5.71				Y			
1558	45-CA-481	23.8	48.36	44.12	13.20				Y			
1559	45-CA-481	2.9	25.94	14.62	5.85				N			
1560	45-CA-481	9.8	37.57	23.18	9.91	UFT	RUF	Y	N			
1561	45-CA-481	27.5	44.12	30.39	17.91	CCT	MDC		Y			
1562	45-CA-481	5.7	43.13	14.80	10.24				N			
1563	45-CA-481	4.8	33.09	21.56	7.21				Y			
1564	45-CA-481	6.5	26.14	25.40	9.28				Y			
1565	45-CA-481	4.5	26.08	22.61	7.63				Y			
1566	45-CA-481	20.5	43.14	29.25	16.66	UFT	UTF	N	Y			
1567	45-CA-481	26.9	50.99	33.74	15.15	UFT	UTF	N	Y			
1568	45-CA-481	63.6	56.46	47.74	28.52	CCT	MDC		Y			
1569	45-CA-481	19.9	45.03	30.75	15.54				Y			
1570	45-CA-481	17.2	54.00	25.89	8.91				Y			
1571	45-CA-481	39.1	46.53	38.68	19.75	CCT	MDC		Y			
1572	45-CA-481	93.3	67.37	60.33	28.28	CCT	MDC		Y			dacite ? Has lots of quartzite inclusions
1573	45-CA-481	18.3	36.25	23.28	16.00		SPL		Y			
1574	45-CA-481	19.1	53.64	24.54	14.04				Y			
1575	45-CA-481	37.8	51.59	34.63	22.88	CCT	MDC		Y			
1576	45-CA-481	28.6	50.27	41.47	16.64	UFT	RUF	Y	Y			
1577	45-CA-481	2.9	22.25	15.07	10.33				Y		Watts Point	
1578	45-CA-481	2.3	24.84	17.81	4.63				Y			
1579	45-CA-481	12.0	38.80	29.98	9.32				Y			
1580	45-CA-481	3.9	24.78	21.48	7.75				Y			
1581	45-CA-481	3.3	27.39	15.97	6.91				N			
1582	45-CA-481	2.7	24.67	17.24	5.63				N			
1583	45-CA-481	7.3	28.96	27.77	8.99				Y			
1584	45-CA-481	10.7	35.52	28.77	8.36	UFT	RUF	Y	Y			
1585	45-CA-481	50.7	53.53	34.10	23.82	CCT	MDC		Y		Unknown	

1586	45-CA-481	28.1	44.77	35.31	19.67				Y		Unknown	
1587	45-CA-481	58.7	65.07	46.64	17.76				Y			
1588	45-CA-481	34.8	46.94	34.24	23.77	CCT	MDC		Y			
1589	45-CA-481	29.5	41.93	34.94	21.55				Y			
1590	45-CA-481	4.6	31.46	22.83	6.37				Y			
1591	45-CA-481	14.2	33.34	20.56	16.82				Y			
1592	45-CA-481	25.6	37.19	30.40	18.64		SPL		Y			
1593	45-CA-481	5.0	23.34	15.88	10.87				Y			
1594	45-CA-481	26.5	37.11	31.63	20.85	CCT	MDC		Y			
1595	45-CA-481	14.0	33.68	25.67	19.06				Y			
1596	45-CA-481	27.0	60.67	41.65	9.10	UFT	RUF	Y	Y			
1597	45-CA-481	543.6	101.65	87.32	57.02	CCT	FLC		Y			
1598	45-CA-302	4.1	39.01	23.46	5.37				N			
1599	45-CA-302	4.9	35.13	23.92	7.30				N			
1600	45-CA-302	2.0	26.14	17.52	6.21				N			
1601	45-CA-302	0.7	23.20	14.27	3.18				N			
1602	45-CA-302	1.6	25.56	23.10	3.93				N			
1603	45-CA-302	7.1	32.26	24.08	12.30				Y			
1604	45-CA-302	3.9	34.28	20.93	6.71				Y			
1605	45-CA-302	2.7	24.91	18.27	6.58				Y			
1606	45-CA-302	18.3	39.50	28.38	26.15	CCT	MDC		Y			
1607	45-CA-302	12.3	50.20	35.01	6.90				N		Watts Point	
1608	45-CA-302	1.3	24.72	13.39	5.13				N		Watts Point	
1609	45-CA-302	2.6	24.85	18.52	7.47				N			
1610	45-CA-302	2.3	29.54	22.29	3.56				N			
1611	45-CA-302	3.7	31.74	18.06	8.61				Y		Watts Point	
1612	45-CA-302	2.5	26.10	16.04	5.98				N			
1613	45-CA-302	1.8	29.34	15.43	5.54				N			
1614	45-CA-302	1.0	23.47	17.62	3.72				N			
1615	45-CA-302	0.7	20.05	16.83	2.72				N			
1616	45-CA-302	1.4	23.80	17.64	4.74				Y			
1617	45-CA-302	1.8	28.60	18.72	3.70				N			
1618	45-CA-302	0.9	21.26	15.16	3.19				N			
1619	45-CA-302	2.4	33.24	17.66	7.69				Y			
1620	45-CA-302	10.7	48.73	27.03	9.46	UFT	UTF	N	N			
1621	45-CA-302	2.5	24.68	22.26	6.68				Y			
1622	45-CA-302	0.8	21.02	13.86	3.30				N			
1623	45-CA-302	1.1	32.08	11.24	3.35				N			

1624	45-CA-302	0.9	24.19	10.80	3.25				N			
1625	45-CA-302	0.9	20.44	19.10	3.10				N			
1626	45-CA-302	1.9	28.88	17.50	4.79				N			
1627	45-CA-302	0.9	21.76	13.54	2.91				N			
1628	45-CA-302	1.1	24.95	17.75	3.39				N			
1629	45-CA-302	1.3	24.46	18.37	3.52				N			
1630	45-CA-302	0.5	17.94	14.49	2.56				N			
1631	45-CA-302	2.2	26.40	19.61	6.05				N			
1632	45-CA-302	1.1	24.89	15.47	2.98				N			
1633	45-CA-302	1.0	13.09	9.87	4.25				Y			
1634	45-CA-302	0.6	20.71	17.31	2.29				N			
1635	45-CA-302	2.9	33.60	19.66	6.77				N			
1636	45-CA-302	2.1	26.20	20.66	5.56				Y			
1637	45-CA-302	0.5	17.46	13.52	3.84				N			
1638	45-CA-302	1.4	24.14	18.36	3.74				N			
1639	45-CA-302	2.4	29.30	16.46	3.76				Y			
1640	45-CA-302	1.2	25.65	17.44	4.16				N			
1641	45-CA-302	4.7	29.42	26.80	7.46				N			
1642	45-CA-302	0.8	17.36	16.66	3.69				N			
1643	45-CA-302	1.3	23.27	12.84	5.95				N			
1644	45-CA-302	1.4	23.59	15.83	3.92				N			
1645	45-CA-302	0.6	26.01	10.65	3.01				N			
1646	45-CA-302	2.5	33.83	21.14	5.25				Y			
1647	45-CA-302	2.4	24.71	15.60	6.15				Y			
1648	45-CA-302	0.3	17.44	8.26	2.90				N			
1649	45-CA-302	0.4	19.45	12.50	2.36				N			
1650	45-CA-302	0.2	13.05	12.05	2.07				N			
1651	45-CA-302	1.1	20.16	19.60	3.72				N			
1652	45-CA-302	1.1	18.65	16.67	3.51				N			
1653	45-CA-302	0.8	20.08	15.73	3.88				N			
1654	45-CA-302	0.2	12.28	12.11	1.85				N			
1655	45-CA-302	0.4	20.55	10.48	2.42				N			
1656	45-CA-302	0.6	18.93	17.24	2.21				N			
1657	45-CA-302	0.5	18.94	13.37	1.84				N			
1658	45-CA-302	0.3	16.42	9.34	1.26				N			
1659	45-CA-302	0.5	16.89	12.79	2.82				N			
1660	45-CA-302	0.5	18.15	10.76	3.62				N			
1661	45-CA-302	0.5	19.83	9.90	2.96				N			
1662	45-CA-302	0.6	18.90	11.69	2.16				N			

1663	45-CA-302	0.4	17.00	11.45	2.69				N			
1664	45-CA-302	0.3	13.35	9.59	2.02				Y			
1665	45-CA-302	0.4	15.14	12.10	3.14				Y			
1666	45-CA-302	0.4	20.00	8.31	2.66				N			
1667	45-CA-302	0.8	25.21	14.95	3.75				N			
1668	45-CA-302	0.4	17.41	11.80	2.87				N			
1669	45-CA-302	0.4	16.09	11.02	3.90				N			
1670	45-CA-302	0.2	16.19	8.98	2.11				N			
1671	45-CA-302	0.3	16.16	11.23	1.66				N			
1672	45-CA-302	0.1	12.66	6.62	1.73				N			
1673	45-CA-302	0.3	13.18	11.93	1.78				N			
1674	45-CA-302	0.6	18.87	9.90	3.59				N			
1675	45-CA-302	0.1	14.57	9.25	1.29				N			
1676	45-CA-302	1.2	29.53	12.48	3.49				Y			
1677	45-CA-302	0.3	15.55	12.24	3.27				N			
1678	45-CA-302	0.3	13.00	12.92	2.84				Y			
1679	45-CA-302	0.2	13.22	9.84	4.22				N			
1680	45-CA-302	0.2	16.15	14.04	1.59				N			
1681	45-CA-302	0.6	18.03	13.28	2.47				N			
1682	45-CA-302	0.3	15.99	8.85	2.38				N			
1683	45-CA-302	0.4	12.54	10.63	3.99				N			
1684	45-CA-302	0.3	13.93	11.39	1.23				N			
1685	45-CA-302	0.2	12.78	9.79	1.27				N			
1686	45-CA-302	0.4	20.29	13.77	1.86				N			
1687	45-CA-302	0.5	15.82	12.94	3.60				N			
1688	45-CA-302	0.1	12.22	7.67	1.58				N			
1689	45-CA-302	0.2	13.62	12.59	1.54				N			
1690	45-CA-302	0.4	14.79	9.64	2.93				N			
1691	45-CA-302	0.2	15.09	8.49	2.76				N			
1692	45-CA-302	0.1	11.31	9.05	2.29				N			
1693	45-CA-302	0.1	11.92	9.01	1.58				N			
1694	45-CA-302	0.3	11.88	8.63	2.98				N			
1695	45-CA-302	0.1	9.90	9.77	1.12				N			
1696	45-CA-302	0.1	11.93	8.57	2.30				N			
1697	45-CA-302	0.2	11.93	9.61	2.41				N			
1698	45-CA-302	0.2	12.79	8.61	2.25				N			
1699	45-CA-302	0.1	12.47	8.08	1.47				N		Watts Point	
1700	45-CA-302	0.1	16.35	7.75	1.26				N			
1701	45-CA-302	0.2	11.48	8.45	2.09				N			

1702	45-CA-302	0.3	15.40	10.89	2.07				N			
1703	45-CA-302	0.2	12.90	8.07	2.39				N			
1704	45-CA-302	0.2	13.26	11.79	2.14				N			
1705	45-CA-302	0.2	14.76	11.58	1.83				N			
1706	45-CA-302	0.1	10.43	7.57	1.19				N			
1707	45-CA-302	0.1	13.66	7.51	2.02				N			
1708	45-CA-302	0.1	10.15	9.41	1.43				N			
1709	45-CA-302	0.1	10.07	8.57	1.51				N			
1710	45-CA-302	0.1	11.61	8.25	1.37				N			
1711	45-CA-302	0.3	8.62	7.35	3.47	BFT	ESB	Y	Y	B		
1712	45-CA-302	0.4	15.08	9.44	2.91				N			
1713	45-CA-302	1.3	19.65	17.95	5.17				N			
1714	45-CA-302	0.3	13.59	9.09	3.69				N			
1715	45-CA-302	1.1	25.53	13.44	4.61				Y			
1716	45-CA-302	0.2	14.28	6.83	2.02				N			
1717	45-CA-302	0.4	21.94	10.47	1.98				N			
1718	45-CA-302	0.1	12.83	8.10	1.43				N			
1719	45-CA-302	0.2	11.30	8.23	140				N			
1720	45-CA-302	0.4	14.85	12.50	2.64				N			
1721	45-CA-302	0.1	10.65	8.01	1.46				N			
1722	45-CA-302	0.2	11.20	8.24	2.11				Y			
1723	45-CA-302	0.1	9.30	8.18	1.74				N			
1724	45-CA-302	1.1	23.33	12.41	5.41				N			
1725	45-CA-302	3.1	29.93	26.77	4.38	UFT	UTF	N	N			
1726	45-CA-302	0.5	18.17	10.37	2.97				N			
1727	45-CA-302	1.2	26.44	12.71	3.06				N			
1728	45-CA-302	0.6	19.37	11.36	2.69				Y		Watts Point	
1729	45-CA-302	0.7	20.70	13.89	2.21				N			
1730	45-CA-302	4.2	33.94	23.97	7.16				N			
1731	45-CA-302	0.9	18.01	12.62	3.89				Y			
1732	45-CA-302	14.2	43.21	31.10	10.63	UFT	RUF	Y	Y			
1733	45-CA-302	3.0	28.86	21.71	4.45				Y			
1734	45-CA-302	0.6	21.48	11.26	3.07				N			
1735	45-CA-302	1.3	27.04	16.51	3.49				Y			
1736	45-CA-302	0.9	22.76	15.32	3.27				N			
1737	45-CA-302	0.4	17.93	11.35	2.66				N			
1738	45-CA-302	0.5	13.90	11.26	11.26				N			
1739	45-CA-302	0.2	14.21	9.35	1.63				N			
1740	45-CA-302	0.2	14.18	7.19	3.35				N			

1741	45-CA-302	0.1	11.20	8.69	1.38				N			
1742	45-CA-302	0.3	14.89	13.18	1.94				N			
1743	45-CA-302	0.1	10.22	8.68	1.28				N			
1744	45-CA-302	0.5	16.93	14.28	2.34				N			
1745	45-CA-302	0.2	16.58	6.66	1.66				N			
1746	45-CA-302	0.3	14.53	7.54	2.58				N			
1747	45-CA-302	0.6	18.48	11.16	2.80				N			
1748	45-CA-302	0.1	10.09	8.51	1.06				N			
1749	45-CA-302	0.1	9.77	8.58	1.25				N			
1750	45-CA-302	0.1	11.78	7.75	1.13				N			
1751	45-CA-302	0.1	12.01	8.73	1.19				Y			
1752	45-CA-302	0.2	12.29	5.92	3.29				N			
1753	45-CA-302	0.2	12.21	8.49	3.18				N			
1754	45-CA-302	17.7	47.91	42.82	8.31				Y		Watts Point	
1755	45-CA-302	1.0	18.39	16.35	3.04				N			
1756	45-CA-302	10.9	34.93	23.05	14.15	CCT	MDC		Y			
1757	45-CA-302	1.3	21.85	13.08	5.68				N			
1758	45-CA-302	0.2	13.57	9.21	3.69				N			
1759	45-CA-302	0.3	13.48	10.17	1.58				N			
1760	45-CA-302	0.7	16.72	12.07	3.58				N			
1761	45-CA-302	0.1	10.13	8.52	2.45				N			
1762	45-CA-302	0.5	10.98	7.16	5.07				Y			
1763	45-CA-302	2.0	27.82	14.58	7.01				Y			
1764	45-CA-302	0.4	11.08	6.51	4.74	CCT	UDC		Y			very small core with only one flake scar
1765	45-CA-302	7.8	38.30	19.84	9.53	BFT	LSB	N	N	B	Watts Point	
1766	45-CA-302	1.0	18.19	16.77	4.44	UFT	UTF	N	N			
1767	45-CA-302	0.6	17.00	12.64	2.84				Y			
1768	45-CA-302	0.8	17.65	12.82	4.29				N			
1769	45-CA-302	3.6	24.14	19.38	9.57				Y			
1770	45-CA-302	1.4	20.92	13.2	5.59				Y			
1771	45-CA-302	0.3	14.84	11.44	1.97				N			
1772	45-CA-302	0.2	14.22	8.36	2.41				N			
1773	45-CA-302	0.1	11.04	7.44	2.18				N			
1774	45-CA-302	0.1	12.87	9.24	1.83				N			
1775	45-CA-302	2.1	23.73	16.48	4.44				N			
1776	45-CA-302	1.1	21.77	13.69	3.44				N			
1777	45-CA-302	3.9	28.98	16.79	11.05				Y			
1778	45-CA-302	0.8	23.39	15.56	2.82				N			

1779	45-CA-302	0.8	17.12	12.62	3.61				N			
1780	45-CA-302	0.5	14.01	12.86	3.26				N			
1781	45-CA-302	0.4	10.63	6.37	5.57				Y			
1782	45-CA-302	0.3	12.71	7.62	3.71				Y			
1783	45-CA-302	1.5	25.08	17.93	3.17				N			
1784	45-CA-302	0.3	13.32	10.40	3.61				N			
1785	45-CA-302	0.3	12.78	9.43	1.91				N			
1786	45-CA-302	0.5	12.83	11.94	4.44				Y			
1787	45-CA-302	0.3	14.59	9.99	1.86				Y			
1788	45-CA-302	0.1	10.98	8.77	2.05				N			
1789	45-CA-302	0.6	18.79	13.85	2.33				N			
1790	45-CA-302	1.9	27.47	15.91	4.58				N			
1791	45-CA-302	0.3	12.78	10.85	2.80				N			
1792	45-CA-302	1.0	16.90	12.77	4.26				Y			
1793	45-CA-302	0.5	19.06	14.12	2.70				Y			
1794	45-CA-302	0.1	14.16	11.27	1.39				N			
1795	45-CA-302	0.1	10.75	5.57	3.13				Y			
1796	45-CA-302	0.2	14.65	10.09	2.50				N			
1797	45-CA-302	0.3	14.85	10.52	3.60				Y			
1798	45-CA-302	0.3	21.30	9.66	1.96				Y			
1799	45-CA-302	0.1	10.61	8.05	1.16				N			
1800	45-CA-302	1.0	21.85	9.78	5.17				N			
1801	45-CA-302	3.2	30.90	18.91	4.94				N			
1802	45-CA-302	2.9	23.64	18.89	6.11	UFT	RUF	Y	N			
1803	45-CA-302	1.4	20.15	14.14	4.13				N			
1804	45-CA-302	1.0	20.36	13.68	3.23				N			
1805	45-CA-302	5.5	26.51	17.27	15.43				N			
1806	45-CA-302	0.2	10.75	10.45	1.86				N			
1807	45-CA-302	8.2	34.61	24.88	11.05	UFT	RUF	Y	N			
1808	45-CA-302	0.6	16.97	13.86	3.95				Y			
1809	45-CA-302	5.0	29.09	14.38	1.85				Y			small split pebble
1810	45-CA-302	2.1	18.56	12.35	9.06	CCT	BPC		Y			
1811	45-CA-302	0.4	15.64	9.65	2.75				N			
1812	45-CA-302	0.5	17.78	11.27	2.62				N			
1813	45-CA-302	6.7	28.34	16.61	12.63				N		Watts Point	
1814	45-CA-302	4.5	26.38	23.10	7.29	UFT	RUF	Y	N			
1815	45-CA-302	1.3	18.31	16.25	4.46				Y			
1816	45-CA-302	0.5	18.01	9.48	4.09				N			
1817	45-CA-302	0.8	18.81	15.06	3.90				N			

1818	45-CA-302	0.7	17.86	9.94	4.84				N			
1819	45-CA-302	0.4	14.77	10.81	2.30				N			
1820	45-CA-302	0.5	15.95	5.83	5.02				Y			
1821	45-CA-302	1.9	24.01	17.69	4.41				N			
1822	45-CA-302	0.8	16.52	11.34	4.14				Y			
1823	45-CA-302	2.5	33.20	16.51	5.05				Y			
1824	45-CA-302	0.3	10.14	7.24	5.39				Y			
1825	45-CA-302	0.3	10.58	6.91	3.96	UFT	RUF	Y	Y			
1826	45-CA-302	0.2	10.20	5.78	5.54				Y			
1827	45-CA-302	3.2	31.28	19.50	5.22	UFT	RUF	Y	N			
1828	45-CA-302	0.9	18.76	11.66	4.39	UFT	RUF	Y	N			
1829	45-CA-302	0.6	19.60	13.49	2.86				N			
1830	45-CA-302	0.5	19.09	11.60	2.83				N			
1831	45-CA-302	0.5	17.22	12.76	2.38				N			
1832	45-CA-302	0.1	9.60	8.33	1.16				N			
1833	45-CA-302	6.6	45.01	26.75	7.93				Y			
1834	45-CA-302	0.3	13.57	9.30	3.70				Y			
1835	45-CA-302	2.4	21.00	17.49	9.60				Y			
1836	45-CA-302	2.0	30.16	22.48	3.53				N			
1837	45-CA-302	0.4	13.39	10.62	3.22				N			
1838	45-CA-302	0.2	12.98	11.13	1.76				Y			
1839	45-CA-302	0.8	18.40	16.84	2.87				N			
1840	45-CA-302	0.2	9.22	7.56	2.64				N			
1841	45-CA-302	0.3	11.86	9.74	2.72				N			
1842	45-CA-302	12.6	38.96	33.86	10.12				Y			
1843	45-CA-302	9.7	42.26	23.74	12.06				N		Watts Point	
1844	45-CA-302	2.7	26.36	15.58	7.69				Y			
1845	45-CA-302	0.2	14.66	12.26	1.69				N			
1846	45-CA-302	0.7	19.42	12.47	2.83				Y			
1847	45-CA-302	3.4	33.16	29.25	5.47				N			
1848	45-CA-302	0.1	9.52	7.51	1.21				N			
1849	45-CA-302	0.1	10.84	9.69	1.77				N			
1850	45-CA-302	8.4	37.71	31.96	7.27	UFT	UTF	N	Y			
1851	45-CA-302	5.1	38.88	19.40	7.22				Y			
1852	45-CA-302	4.8	30.26	25.66	7.96				Y			
1853	45-CA-302	0.2	14.28	7.84	2.11				N			
1854	45-CA-302	0.6	18.04	11.98	3.24				N			
1855	45-CA-302	1.3	20.68	13.25	5.86				Y			
1856	45-CA-302	0.2	15.95	6.48	2.05				N			

1857	45-CA-302	0.2	10.64	7.62	1.95				N			
1858	45-CA-302	0.1	12.97	9.04	1.68				N			
1859	45-CA-302	0.1	13.12	6.62	1.68				N			
1860	45-CA-302	0.1	8.94	8.10	1.34				N			
1861	45-CA-302	6.9	40.52	30.25	11.44				Y			
1862	45-CA-302	6.3	43.31	24.23	7.86				Y			
1863	45-CA-302	0.1	13.05	8.66	1.56				N			
1864	45-CA-302	0.3	12.12	6.33	2.17				N			
1865	45-CA-302	1.4	21.57	12.06	5.33				Y			
1866	45-JE-216	10.0	39.47	29.07	11.47	BFT	BFF	Y	N			
1867	45-JE-216	0.7	21.78	8.83	4.38				N			
1868	45-JE-216	6.7	36.93	19.54	10.92				Y			
1869	45-JE-216	7.6	28.78	18.72	14.74				Y			
1870	45-JE-216	5.3	34.24	20.79	8.52				Y			
1871	45-JE-216	0.9	16.84	15.23	5.89				N			
1872	45-JE-216	0.4	18.09	11.14	2.72				Y			
1873	45-JE-216	4.4	30.87	23.49	6.08				N			
1874	45-JE-216	2.3	35.21	14.39	5.31				Y			
1875	45-JE-216	5.6	32.68	24.57	9.43				Y			
1876	45-JE-216	7.6	39.66	17.03	12.31	UFT	RUF	Y	N			
1877	45-JE-216	6.4	57.20	32.16	3.85	UFT	UTF	N	N			red slate
1878	45-JE-216	0.2	13.01	7.73	2.02				N			
1879	45-JE-216	0.7	15.50	10.72	6.15				N			
1880	45-JE-216	13.2	42.01	23.04	14.33				Y			
1881	45-JE-216	9.8	38.46	33.91	10.52				N			
1882	45-JE-216	0.6	17.37	8.66	5.38				Y			
1883	45-JE-216	2.6	30.91	17.05	4.60				N			
1884	45-JE-216	1.1	19.63	16.74	4.69				Y			
1885	45-JE-216	0.6	19.43	11.42	3.46				N			
1886	45-JE-216	0.2	12.78	8.73	1.46				Y			
1887	45-JE-216	0.6	16.60	8.22	3.84				N			
1888	45-JE-216	0.1	12.74	5.24	2.28				Y			
1889	45-JE-216	0.7	17.48	14.15	2.71				Y			
1890	45-JE-216	0.4	14.28	8.60	4.52				N			
1891	45-JE-216	0.3	12.28	9.58	3.71				Y			
1892	45-JE-216	0.5	17.93	10.64	3.35				Y			
1893	45-JE-216	0.6	18.45	10.15	3.84	UFT	UTF	N	N			
1894	45-JE-216	1.5	18.63	16.88	4.90				Y			
1895	45-JE-216	1.7	24.97	13.20	7.41				N			

1896	45-JE-216	0.4	16.13	10.99	3.51				N			
1897	45-JE-216	6.5	47.31	15.95	9.30				Y			
1898	45-JE-216	3.8	28.74	18.54	7.98				N			
1899	45-JE-216	0.8	16.59	13.45	4.83				Y			
1900	45-JE-216	0.3	13.65	7.99	2.06				N			
1901	45-JE-216	2.6	28.24	15.02	6.65	UFT	UTF	N	N			
1902	45-JE-216	2.9	22.11	18.93	6.66				N			
1903	45-JE-216	0.3	16.44	10.23	2.47				Y			
1904	45-JE-216	0.9	19.28	10.97	5.78				Y			
1905	45-JE-216	1.1	18.11	10.87	8.18				Y			
1906	45-JE-216	0.1	10.18	9.04	1.29				N			
1907	45-JE-216	0.4	17.62	10.09	3.45				N			
1908	45-JE-216	14.2	42.81	29.99	13.72	UFT	UTF	N	Y			
1909	45-JE-216	2.5	20.44	18.70	10.00				N			
1910	45-JE-216	1.8	20.86	11.00	9.79	UFT	UTF	N	N			
1911	45-JE-216	0.1	7.73	7.09	1.33				N			
1912	45-JE-216	1.4	20.35	13.46	6.52				N			
1913	45-JE-216	0.5	20.39	8.45	4.24				N			
1914	45-JE-216	0.7	17.92	12.59	3.49				N			
1915	45-JE-216	5.2	31.63	22.45	7.26	UFT	RUF	Y	N			
1916	45-JE-216	7.3	41.82	24.47	8.08	BFT	BFF	Y	Y			
1917	45-JE-216	0.8	17.35	14.43	4.49				N			
1918	45-JE-216	1.8	29.43	13.12	5.86	UFT	UTF	N	Y			
1919	45-JE-216	0.3	16.36	8.88	2.30				N			
1920	45-JE-216	1.5	24.03	10.13	6.12				N			
1921	45-JE-216	0.9	13.36	11.16	6.87				N			
1922	45-JE-216	1.1	20.49	10.49	5.17				Y			
1923	45-JE-216	0.2	10.19	5.87	5.06				N			
1924	45-JE-216	0.4	20.77	15.01	1.55				N			
1925	45-JE-216	0.2	15.31	4.69	2.86				N			
1926	45-JE-216	0.6	15.01	9.91	5.26				Y			
1927	45-JE-216	0.3	15.89	9.67	2.31				N			
1928	45-JE-216	0.7	21.09	11.47	4.83				Y			
1929	45-JE-216	0.3	18.66	11.40	1.66				N			
1930	45-JE-216	0.1	9.60	8.98	2.45				N			
1931	45-JE-216	3.1	26.51	25.07	4.90				N			
1932	45-JE-216	0.1	10.77	5.76	1.42				N			
1933	45-JE-216	0.4	15.56	10.00	2.65				N			
1934	45-JE-216	5.3	29.58	20.58	9.59	UFT	RUF	Y	Y			

1935	45-JE-216	3.9	31.37	12.76	9.92				Y			
1936	45-JE-216	0.2	11.94	9.82	2.04				Y			
1937	45-JE-216	0.3	16.37	6.76	3.03				N			
1938	45-JE-216	14.3	53.81	35.11	8.94				Y			
1939	45-JE-216	2.7	34.16	17.32	5.30				Y			
1940	45-JE-216	2.6	25.04	14.62	6.52				Y			
1941	45-JE-216	0.6	15.68	10.54	4.72				Y			
1942	45-JE-216	6.0	59.25	27.38	3.04	UFT	HBF	N	N	W		Dorsal surface unmodified, concave base
1943	45-JE-216	41.5	43.45	40.60	28.63	CCT	MDC		Y			
1944	45-JE-216	0.3	11.98	10.10	2.53				N			
1945	45-JE-216	12.6	42.22	36.63	8.48	UFT	RUF	Y	N			
1946	45-JE-216	0.3	14.92	9.73	2.70				Y			
1947	45-JE-216	0.8	15.75	13.33	3.59				N			
1948	45-JE-216	2.1	26.74	13.15	6.81	UFT	UTF	N	N			
1949	45-JE-216	3.5	18.90	12.97	11.25				Y			
1950	45-JE-216	4.7	34.71	20.17	8.66				Y			
1951	45-JE-216	2.1	29.60	16.70	4.37	UFT	UTF	N	N			
1952	45-JE-216	0.8	16.35	12.75	4.43				Y			
1953	45-JE-216	0.9	19.55	12.49	3.89				N			
1954	45-JE-216	0.4	15.99	10.52	3.07				N			
1955	45-JE-216	0.3	15.11	7.25	3.25				N			
1956	45-JE-216	1.3	23.13	17.56	4.60				Y			
1957	45-JE-216	4.5	33.38	20.73	9.81	BFT	BFF	Y	N			
1958	45-JE-216	0.5	18.68	10.50	3.41				N			
1959	45-JE-216	0.4	13.83	12.08	3.31				N			
1960	45-JE-216	0.2	15.17	7.67	2.56				Y			
1961	45-JE-216	0.3	15.16	5.19	5.00				N			
1962	45-JE-216	0.3	17.69	5.31	5.01				N			
1963	45-JE-216	0.2	9.91	7.72	3.10				N			
1964	45-JE-216	0.6	17.02	11.75	4.03				N			
1965	45-JE-216	0.3	14.85	8.80	2.71				N			
1966	45-JE-216	1.0	22.34	11.58	6.27				N			
1967	45-JE-216	5.5	35.06	21.13	7.96				Y			
1968	45-JE-216	1.5	20.88	14.29	4.75				Y			
1969	45-JE-216	0.3	13.25	8.89	3.63				N			
1970	45-JE-216	0.1	14.71	6.98	1.49				N			
1971	45-JE-216	0.5	21.31	8.09	5.76				N			
1972	45-JE-216	0.7	16.21	11.87	3.41				Y			

1973	45-JE-216	0.5	15.79	12.66	3.27				N			
1974	45-JE-216	0.2	15.32	7.73	1.65				N			
1975	45-JE-216	0.1	12.04	7.37	2.14				N			
1976	45-JE-216	1.9	20.44	13.73	11.44				N			
1977	45-JE-216	1.0	17.50	13.76	4.22				Y			
1978	45-JE-216	1.2	18.52	11.80	7.57				N			
1979	45-JE-216	2.5	26.25	16.55	5.24	UFT	RUF	Y	N			
1980	45-JE-216	1.5	21.80	14.45	5.76				Y			
1981	45-JE-216	5.4	30.33	12.54	11.75				Y			
1982	45-JE-216	1.1	19.06	11.63	6.27				N			
1983	45-JE-216	2.3	27.71	20.25	4.47				N			
1984	45-JE-216	2.3	28.36	17.85	4.21	UFT	RUF	Y	N			
1985	45-JE-216	1.5	29.36	10.47	6.67				N			
1986	45-JE-216	0.4	11.38	11.37	3.65				N			
1987	45-JE-216	5.2	33.87	16.29	10.99				Y			
1988	45-JE-216	2.4	26.93	19.32	4.01				Y			
1989	45-JE-216	1.7	30.73	12.45	4.60				N			
1990	45-JE-216	0.6	19.57	10.49	4.69				N			
1991	45-JE-216	1.4	27.96	7.34	5.92				N			
1992	45-JE-216	5.0	26.72	21.04	9.32				N			
1993	45-JE-216	2.7	23.63	20.59	7.15				N			
1994	45-JE-216	4.4	33.54	19.22	5.86				N			
1995	45-JE-216	0.2	17.66	8.19	1.55				N			
1996	45-JE-216	0.1	9.73	7.12	1.22				N			
1997	45-JE-216	1.3	22.52	12.37	5.48				N			
1998	45-JE-216	0.3	15.68	11.02	2.34				N			
1999	45-JE-216	2.4	29.74	15.18	7.14				Y			
2000	45-JE-216	4.3	33.50	21.81	5.62				N			
2001	45-JE-216	2.5	27.08	20.12	6.03				Y			
2002	45-JE-216	3.6	33.81	25.53	4.94	UFT	UTF	N	N			
2003	45-JE-216	4.4	34.36	18.93	6.82	UFT	UTF	N	Y			
2004	45-JE-216	8.2	36.85	30.17	7.94				Y			
2005	45-JE-216	0.3	13.55	9.40	2.35				N			
2006	45-JE-216	0.9	18.93	13.17	4.16				N			
2007	45-JE-216	0.3	12.85	4.15	3.87				N			
2008	45-JE-216	2.3	28.80	20.99	3.23				N			
2009	45-JE-216	6.0	43.36	20.55	7.16				Y			
2010	45-JE-216	0.3	16.79	5.91	2.57				N			
2011	45-JE-216	6.4	34.80	20.36	10.77				Y			

2012	45-JE-216	0.4	16.78	11.89	2.69				Y			
2013	45-JE-216	2.9	29.50	13.74	8.85				Y			
2014	45-JE-216	2.6	28.06	26.83	4.05				Y			
2015	45-JE-216	2.0	21.04	15.34	3.48				Y			
2016	45-JE-216	0.6	16.03	11.34	2.05				N			
2017	45-JE-216	2.4	27.53	22.33	5.35				N			
2018	45-JE-216	0.8	21.76	10.53	3.30	UFT	UTF	N	N			
2019	45-JE-216	3.1	25.97	22.08	4.33				Y			
2020	45-JE-216	5.2	35.14	30.79	6.75	UFT	UTF	N	N			
2021	45-JE-216	1.8	22.54	15.30	3.34				N			
2022	45-JE-216	29.2	41.64	30.30	29.32	CCT	MDC		Y			
2023	45-JE-216	2.3	25.33	17.79	4.67	UFT	RUF	Y	N			
2024	45-JE-216	0.1	9.39	7.73	1.37				N			
2025	45-JE-216	1.9	22.85	13.68	4.72				Y			
2026	45-JE-216	0.5	20.34	9.86	5.27				N			
2027	45-JE-216	0.6	18.56	8.84	3.96				Y			
2028	45-JE-216	0.6	15.40	12.66	3.16				N			
2029	45-JE-216	1.3	19.32	13.12	5.40				Y			
2030	45-JE-216	3.5	30.15	24.64	9.27				Y			
2031	45-JE-216	0.4	15.78	7.44	5.06				N			
2032	45-JE-216	0.4	12.20	7.08	3.81				N			
2033	45-JE-216	0.1	9.03	6.05	1.65				N			
2034	45-JE-216	0.6	18.94	14.82	3.56				N			
2035	45-JE-216	0.2	9.67	6.19	4.63				N			
2036	45-JE-216	2.5	33.46	14.09	5.07	UFT	RUF	Y	Y			
2037	45-JE-216	2.2	30.49	20.75	5.05				N			
2038	45-JE-216	8.3	39.38	23.00	5.66				Y			
2039	45-JE-216	10.9	33.22	25.13	15.27				Y			
2040	45-JE-216	0.1	11.83	8.36	2.03				N			
2041	45-JE-216	0.7	20.98	12.79	4.65				N			
2042	45-JE-216	1.0	23.66	8.57	6.40				Y			
2043	45-JE-216	2.7	32.16	17.58	6.85				N			
2044	45-JE-216	0.6	15.33	10.43	3.25				N			
2045	45-JE-216	1.9	19.43	11.02	6.51				Y			
2046	45-JE-216	1.0	24.02	17.92	2.93				N			
2047	45-JE-216	4.7	37.90	18.30	7.64				N			
2048	45-JE-216	11.8	44.88	20.06	12.17				Y			
2049	45-JE-216	4.2	32.81	26.81	5.87				N			
2050	45-JE-216	27.1	49.37	37.26	14.15				Y			

2051	45-JE-216	93.0	91.70	79.70	97.4	BFT	BFF	Y	N			
2052	45-JE-216	2.4	24.46	16.52	6.55				Y			
2053	45-JE-216	5.3	26.21	18.90	12.17				Y			
2054	45-JE-216	2.0	19.75	19.35	6.18				N			
2055	45-JE-216	3.7	27.88	25.00	6.56				N			
2056	45-JE-216	0.9	26.47	12.63	4.21				N			
2057	45-JE-216	5.5	39.19	26.04	5.58				Y			
2058	45-JE-216	22.0	38.50	30.15	19.35				Y			
2059	45-JE-216	9.4	27.22	22.51	20.32	CCT	BPC		Y			
2060	45-JE-216	1.5	22.85	12.54	6.08				Y			
2061	45-JE-216	7.5	43.30	27.48	4.85				Y			
2062	45-JE-216	1.7	27.54	22.66	3.35				N		Group 6 FGV	
2063	45-JE-216	0.6	21.46	8.68	4.21				Y			
2064	45-JE-216	0.6	16.01	9.61	5.16				N			
2065	45-JE-216	2.7	22.77	18.82	6.60	UFT	UTF	N	Y			
2066	45-JE-216	1.4	29.70	12.39	5.05				N			
2067	45-JE-216	0.3	13.42	7.88	2.00				N			
2068	45-JE-216	0.4	16.49	11.01	2.58				Y			
2069	45-JE-216	0.1	12.01	6.24	1.30				N			
2070	45-JE-216	6.4	30.14	15.28	13.65				Y			
2071	45-JE-216	1.7	26.52	11.26	6.70	UFT	UTF	N	N			
2072	45-JE-216	1.3	22.68	15.87	5.64				Y			
2073	45-JE-216	0.1	10.20	6.83	1.36				N			
2074	45-JE-216	0.3	15.09	7.74	2.52				Y			
2075	45-JE-216	1.5	20.20	14.91	5.54				N			
2076	45-JE-216	2.5	24.14	17.60	5.73				N			
2077	45-JE-216	0.9	18.09	11.06	5.04				N			
2078	45-JE-216	5.5	38.26	22.99	5.84	UFT	UTF	N	Y			
2079	45-JE-216	0.3	13.43	10.35	1.92				N			
2080	45-JE-216	0.6	14.92	12.53	3.85				Y			
2081	45-JE-216	3.9	32.88	22.86	5.78				Y			
2082	45-JE-216	2.0	20.12	15.72	6.36				Y			
2083	45-JE-216	1.4	23.14	14.76	3.97				N			
2084	45-JE-216	7.0	36.37	22.10	16.20				Y			
2085	45-JE-216	650	115.68	87.40	71.69	CCT	MDC		Y			Both Bipolar and MDC core
2086	45-JE-216	8.3	65.08	19.35	6.89	UFT	UTF	N	N			Red metasediment, on the long axis of a blade
2087	45-JE-216	7.8	28.80	23.17	11.44	UFT	RUF	Y	N			
2088	45-JE-216	1.0	23.61	8.00	7.12				N			

2089	45-JE-216	2.6	23.38	17.86	6.29				Y			
2090	45-JE-216	1.5	32.65	17.46	2.77				N			
2091	45-JE-216	13.8	37.41	21.97	13.38	CCT	BPC		N			
2092	45-JE-216	1.3	22.10	13.68	4.68				N			
2093	45-JE-216	0.7	14.70	9.93	6.07				Y			
2094	45-JE-216	0.8	20.99	15.17	2.74				N			
2095	45-JE-216	7.2	34.62	23.50	10.39	CCT	BPC		Y			
2096	45-JE-216	3.8	22.73	19.31	9.26	CCT	BPC		N			
2097	45-JE-216	4.2	30.99	15.33	10.25				N			
2098	45-JE-216	1.5	26.23	16.09	3.86				N			
2099	45-JE-216	12.1	41.62	36.59	7.94				Y			
2100	45-JE-216	5.4	28.02	23.80	8.81				Y			
2101	45-JE-216	2.0	23.08	14.47	7.35				N			
2102	45-JE-216	2.8	46.92	12.83	3.61				N			
2103	45-JE-216	0.9	21.48	10.98	4.32				N			
2104	45-JE-216	0.6	24.23	8.76	3.98				N			
2105	45-JE-216	2.4	28.17	14.32	8.46				N			
2106	45-JE-216	1.0	20.90	16.27	3.81				Y			
2107	45-JE-216	5.1	31.20	25.98	5.84				Y			
2108	45-JE-216	4.3	26.85	17.39	11.38				Y			
2109	45-JE-216	12.2	38.54	34.81	11.09				Y			TEU done in 2000
2110	45-JE-216	2.3	20.84	13.15	8.47				Y			
2111	45-JE-216	1.1	21.90	15.42	3.49				N			
2112	45-JE-216	4.3	28.27	17.17	8.72				N			
2113	45-JE-216	0.4	15.82	9.20	2.72				N			
2114	45-JE-216	16.5	36.67	28.66	19.71	UFT	UTF	N	Y			
2115	45-JE-216	1.4	24.91	12.32	9.55				Y			
2116	45-JE-216	2.0	26.37	13.15	5.85	UFT	UTF	N	N			
2117	45-CA-257	15.9	47.71	32.64	12.38				Y			
2118	45-CA-257	2.1	19.74	12.53	8.68				N			
2119	45-CA-257	2.2	24.14	15.38	3.90				N			
2120	45-CA-257	1.8	24.18	18.38	4.52				N			
2121	45-CA-257	5.1	28.31	20.39	11.79				Y			
2122	45-CA-257	7.4	40.29	22.13	9.12	BFT	ESB	N	N			
2123	45-CA-257	1.1	18.59	18.18	4.80				Y			
2124	45-CA-257	2.7	26.67	16.40	6.65	UFT	UTF	N	N			
2125	45-CA-257	4.9	33.23	20.07	10.15				N			
2126	45-CA-257	3.0	24.48	20.47	7.18				N			
2127	45-CA-257	1.6	28.68	12.56	5.74				N			

2128	45-CA-257	1.4	22.20	14.12	5.66				N			
2129	45-CA-257	2.2	24.26	20.50	5.47				Y			
2130	45-CA-257	4.2	30.87	21.39	7.73				Y			
2131	45-CA-257	1.7	26.85	18.53	3.84				N			
2132	45-CA-257	3.1	29.55	16.05	6.78				Y			
2133	45-CA-257	3.3	28.45	23.21	4.54				N			
2134	45-CA-257	0.7	15.90	14.97	4.45				Y			
2135	45-CA-257	4.4	27.72	19.11	5.45				N			
2136	45-CA-257	2.9	25.62	18.78	5.81				Y			
2137	45-CA-257	2.0	31.41	21.91	3.01				N			
2138	45-CA-257	1.1	19.59	15.70	4.81				N			
2139	45-CA-257	0.2	11.78	7.17	2.31				N			
2140	45-CA-257	2.5	25.85	17.68	6.05				Y			
2141	45-CA-257	1.4	20.68	14.48	4.54				Y			
2142	45-CA-257	6.3	34.49	27.06	6.73				Y			
2143	45-CA-257	7.2	32.77	30.21	4.86				Y			
2144	45-CA-257	1.6	23.25	16.77	5.19				N			
2145	45-CA-257	2.0	26.91	17.64	4.56				Y			
2146	45-CA-257	1.8	20.44	13.79	6.28				Y			
2147	45-CA-257	2.6	34.65	13.39	7.04	UFT	UTF	N	N			
2148	45-CA-257	1.9	24.11	16.76	4.44				N			
2149	45-CA-257	0.7	18.57	11.98	3.18				N			
2150	45-CA-257	2.9	30.54	18.60	5.95				N			
2151	45-CA-257	6.0	37.67	25.49	5.76				Y			
2152	45-CA-257	2.2	26.82	18.01	4.56				N			
2153	45-CA-257	1.0	20.27	16.57	3.63				N			
2154	45-CA-257	5.9	31.92	18.56	9.86				Y			
2155	45-CA-257	1.8	21.65	18.18	4.71				Y			
2156	45-CA-257	18.5	49.20	37.45	11.51				Y			
2157	45-CA-257	4.8	31.65	19.58	11.66				N			
2158	45-CA-257	2.4	30.45	18.20	6.09				N			
2159	45-CA-257	0.7	18.16	11.42	3.25				N			
2160	45-CA-257	30.6	49.61	30.63	19.05				Y			
2161	45-CA-257	1.0	19.38	15.75	3.27				N			
2162	45-CA-257	0.8	18.72	11.56	3.32				Y			
2163	45-CA-257	4.1	28.37	22.29	5.84				N			
2164	45-CA-257	25.5	45.40	27.30	20.72	CCT	MDC		Y			
2165	45-CA-257	22.3	55.66	45.07	12.74	UFT	RUF	Y	Y			
2166	45-CA-257	49.8	61.54	31.86	23.01	CCT	MDC		Y			

2167	45-CA-257	6.2	32.92	19.62	10.64				Y			
2168	45-CA-257	1.0	19.93	11.22	5.24				N			
2169	45-CA-257	4.2	25.77	20.55	8.60				Y			
2170	45-CA-257	5.0	36.70	18.67	7.80				Y			
2171	45-CA-257	2.2	26.87	19.38	4.37				Y			
2172	45-CA-257	3.7	26.76	21.56	4.49				N			
2173	45-CA-257	2.2	22.18	20.40	5.79				Y			
2174	45-CA-257	5.2	41.26	13.77	7.91				N			
2175	45-CA-257	4.6	27.14	23.57	11.97				N			
2176	45-CA-257	5.7	28.93	21.59	1.70				Y			
2177	45-CA-257	8.9	44.39	23.55	10.37				Y			
2178	45-CA-257	3.1	28.81	17.91	6.45				N			
2179	45-CA-257	23.3	66.19	28.63	15.32				N			
2180	45-CA-257	2.1	29.01	12.97	7.11				N			
2181	45-CA-257	5.8	32.48	26.64	10.11	UFT	UTF	N	N			
2182	45-CA-257	0.3	18.49	11.58	1.85				N			
2183	45-CA-257	10.5	35.44	31.39	8.59	CCT	BPC		Y			
2184	45-CA-257	10.8	30.13	23.01	16.67				Y			
2185	45-CA-257	1.6	25.36	16.08	4.91				N			
2186	45-CA-257	2.3	28.34	18.73	5.62				N			
2187	45-CA-257	21.9	45.41	34.41	12.87				N			
2188	45-CA-257	0.5	14.99	12.88	3.29				N			
2189	45-CA-257	1.7	23.97	16.56	4.86				Y			
2190	45-CA-257	1.7	22.83	15.27	3.92				Y			
2191	45-CA-257	1.8	25.43	19.55	4.17	UFT	UTF	N	N			
2192	45-CA-257	5.0	30.95	21.11	8.61				N			
2193	45-CA-257	3.1	30.89	16.11	5.30				Y			
2194	45-CA-257	7.6	39.37	23.46	11.41				Y			
2195	45-CA-257	12.3	33.22	20.73	15.41	CCT	MDC		Y			
2196	45-CA-257	1.3	21.31	16.42	5.03				Y			
2197	45-CA-257	1.8	20.65	15.57	6.22				N			
2198	45-CA-257	4.3	31.02	16.52	9.20				N			
2199	45-CA-257	20.7	55.43	29.58	13.64	UFT	RUF	Y	N			
2200	45-CA-257	0.7	15.41	12.14	4.07				Y			
2201	45-CA-257	4.6	30.28	19.74	6.90				N			
2202	45-CA-257	3.5	28.23	25.01	6.76				N			
2203	45-CA-257	1.7	25.38	12.78	5.37				Y			
2204	45-CA-257	1.3	21.01	15.55	4.13				Y			
2205	45-CA-257	2.5	28.80	19.44	7.61				N			

2206	45-CA-257	4.5	33.59	22.70	7.24				N			
2207	45-CA-257	0.5	16.45	13.08	2.95				Y			
2208	45-CA-257	1.2	24.51	14.67	3.36				N			