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Lithic Analysis of Chipped Stone Artifacts Recovered From Quebrada Jaguay, Peru

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LITHIC ANALYSIS OF CHIPPED STONE ARTIFACTS RECOVERED FROM QUEBRADA JAGUAY, PERU

By

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Submitted in Partial Fulfillment of the

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Thesis Co-Advisors: Dr. Daniel H. Sandweiss and Dr. David Sanger

An Abstract of the Thesis Presented
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Quebrada Jaguay, a Terminal Pleistocene to Early Holocene archaeological site in Southern Peru, is recognized as one of the few sites in the Americas that features evidence of a Paleoindian maritime adaptation. Faunal remains from this multi-component shell midden include shellfish, fish, crustaceans, and shorebirds.

Lithic remains recovered from the site over the course of two field seasons (1996 and 1999) provide information about the technology of the site's inhabitants and afford comparisons with other contemporary sites. These lithic materials provide answers to questions dealing with lithic procurement and production strategies and questions about relationships with other groups along the coast. A systematic survey of several potential quarry sites conducted in 2000 offers useful information about source locations and compliments the lithic analysis. Methods used in the analysis provide a framework for future researchers in the area to use.

At Quebrada Jaguay, there is a strong preference for finer-grained materials during the earliest occupation, with a wider variety of materials present later on. In general, as distance from the quarry increases, waste-flake size decreases. Obsidian, with its source in Alca, 130 km distant from Quebrada Jaguay, demonstrates that the inhabitants of the site had some contact with the highlands. Lithic materials from the

various components indicate later stage reduction, with primary production focused on the manufacture of use flakes from prepared cores, as well as the maintenance of bifacial and unifacial tools. In the Early Holocene component from the site, there is a shift from late-stage reduction to initial reduction. Quantification of debitage attributes permits the comparison of Quebrada Jaguay lithic materials to materials from Quebrada Tacahuay, another late Pleistocene maritime site.

Because so few maritime Paleoindian sites have been discovered, Quebrada Jaguay provides a unique opportunity to study alternative Paleoindian lifeways (those not related to big-game hunting). The methodology used and analysis of the lithic materials recovered from the site provide a useful groundwork for future researchers to build on. When future work aimed at locating additional sites in the highlands is completed, we will understand much more about Paleoindian migration patterns and will potentially understand more about the initial settlement of the New World.

ACKNOWLEDGEMENTS

Gratitude is hereby expressed for the financial support afforded by Thor Heyerdahl for the 1999 and 2000 field seasons at Quebrada Jaguay. I would also like to extend appreciation to Drs. Daniel H. Sandweiss, David Sanger, Martin Yates, and James B. Richardson III for serving as committee members and for generously offering their time and assistance throughout all phases of this project. Furthermore, Dr. Daniel Sandweiss graciously allowed me to participate in all aspects of fieldwork in Peru, and offered much additional guidance, advice, and support thoughout all of the challenges of my graduate work. I could not imagine working with a better Professor. I would also like to thank Steve Bicknell for assisting me with artifact photography.

I would like to send out my deepest gratitude to my parents, Bruce and Bonnie Tanner, who always offer encouragement and love, and are the greatest parents in the world. Also, I credit my Grandfather, Dr. William F. Tanner, for inspiring me to pursue study in the sciences. I hope that I can one day make half the contribution that he has made. Finally, I would like to thank my love, Wendy, for showing me that the greatest things in life have nothing to do with school or science, but are instead found within our relationships, and are built from the heart.

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Chapter 1: Introduction

Quebrada Jaguay (QJ 280) is one of the few sites in the New World to feature solid evidence of a late Pleistocene culture supported largely by a maritime resource base (Sandweiss et al. 1998). The site is situated about 30 km north of the modern town of Camaná, on the southern coast of Peru (Figure 1.1). Quebrada Jaguay was first occupied at the very end of the late Pleistocene (around ca. 11,000 uncalibrated RCY BP) through the early Holocene (around ca. 7,500 uncalibrated RCY BP). Through an analysis of the fauna recovered from the site, McInnis (1999) demonstrated that the site's inhabitants were supported primarily by a maritime resource base, preferring Drum fish (Sciaenidae), as well as marine and/or freshwater crustaceans and the mollusk *Mesodesma donacium*. The site apparently was occupied only seasonally, during the late winter to early summer months (McInnis 1999, Sandweiss et al. 1998). Located approximately 220 km south of QJ 280, on the south coast of Peru near the modern town of Puerto Ilo, Quebrada Tacahuay also features evidence of a late Pleistocene maritime culture. Quebrada Tacahuay was occupied in late Pleistocene times, followed by a 3,500 yr. hiatus before the site was subsequentely reoccupied. Also, the main function of the site seems to be a processing station and special extractive site for seabirds (Keefer et al. 1998, deFrance et al., n.d.).

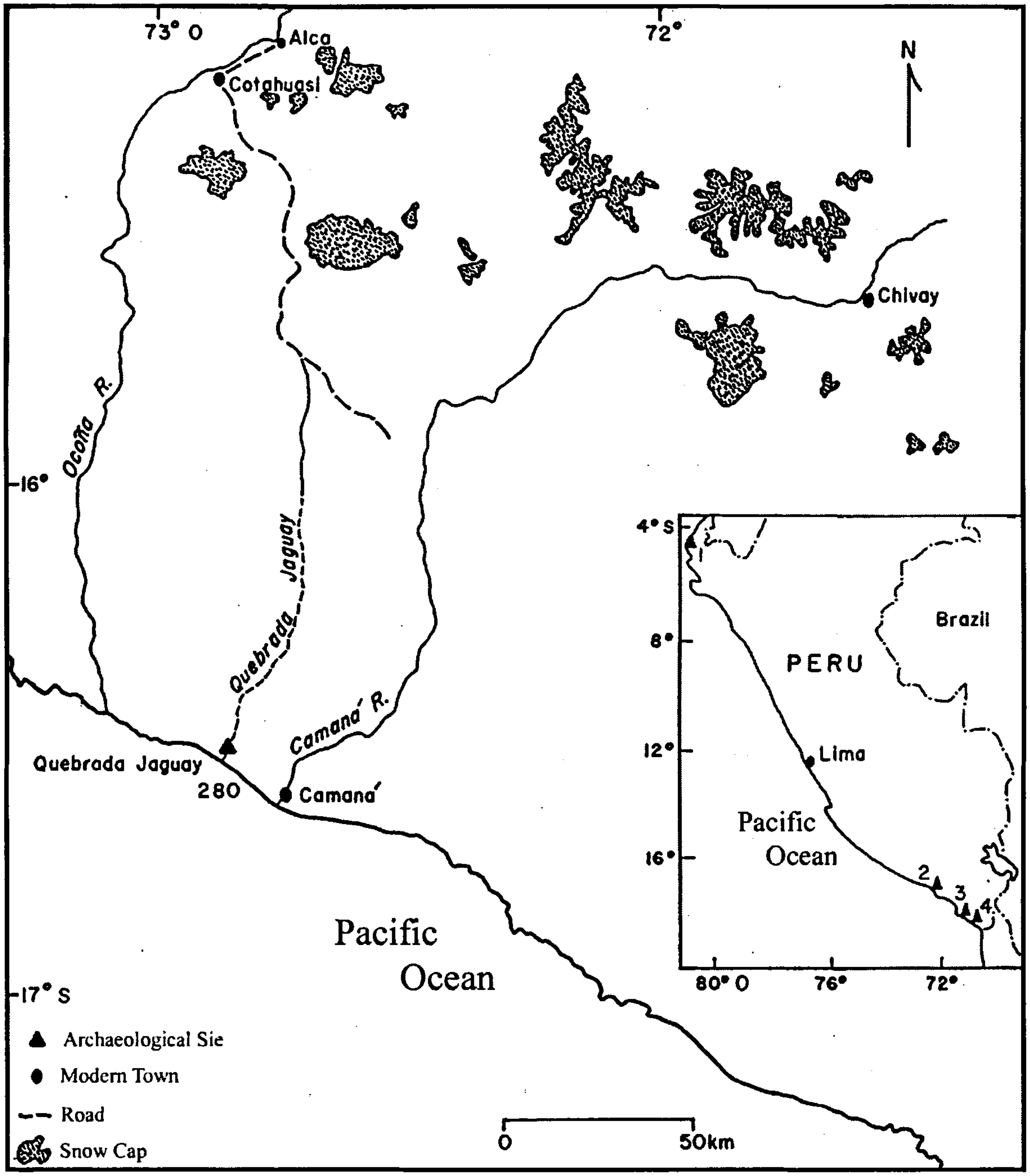

Figure 1.1. Map showing general site location of QJ-280 and highland obsidian source in Alca (Inset: 1, Amotape Campsites; 2, Quebrada Jaguay; 3, Ring Site; 4, Quebrada Tacahuay).

The only other South American site to feature evidence of a late Pleistocene maritime adaptation is the Ring Site, also located on the south coast of Peru (Sandweiss et al. 1989). Terminal Pleistocene maritime-based sites may be scarce because many may have been inundated during Holocene sea-level rise (Richardson 1981). In the Andean area, sea-level rise displaced as much as 80 km of land horizontally, potentially drowning many sites. For sites dating before ca. 5,000 BP, only those lying on a narrow coastal plain are likely to have been preserved. However, the recent discovery of Paleoindian coastal maritime sites are now being discovered reinforces Richardson's 1981 hypothesis of their presence (Richardson 1998).

Because of the unique evidence present at both Quebrada Jaguay and Quebrada Tacahuay, these sites provide tremendous opportunities for research. Thus far, very little work has been done with the lithic material recovered from these sites, and the lithic technology of early maritime people in Peru is poorly understood. This thesis represents an initial inquiry into their lithic technology.

Research Goals

Lithic material remains offer important avenues for research because they are often the only class of artifact that survives in any abundance at prehistoric archaeological sites (Andrefsky 1998, Speth 1972). While other, more perishable materials such as bone and fiber are likely to degrade over time leaving little evidence of their presence, stone tools strongly resist weathering. Therefore, lithic materials can be compared from location to location wherever they are preserved. Debitage, which is the bi-product of chipped stone manufacture, offers further advantages for study. Because stone is a subtractive medium (Shott 1994), what we are left with, the finished product or tool, represents only the final stage of a sequence that involves raw material extraction, shaping, use, and possible re-sharpening or retooling (Henry 1989). While the stone tool itself may show little or no evidence of this process, debitage often records the activities or processes that went into making the stone tool (Magne 1989, Shott 1994). Furthermore, while tools are often made offsite, and are transported onsite, debitage is not likely to have been transported, and reflects the activities that were taking place at the location under consideration (Ahler 1989, Collins 1975, Magne 1989, Shott 1994).

The various processes that were involved in the manufacture of stone tools can be referred to as lithic technology. Understanding the lithic technology of a particular culture, at a particular temporal and spatial location, requires the study of quarry and raw-material source locations, as well as the debitage and formal tools from the site under question.

I chose to study the lithic technology of the inhabitants of Quebrada Jaguay and Quebrada Tacahuay because technological studies can provide answers to important research questions that are crucial to understanding the culture of these early maritime people. Three questions guide the research.

(1) What lithic procurement and production strategies were practiced by the inhabitants of QJ-280? Did these strategies change through time?

(2) Can a duplicable method and typology be introduced that future researchers in the area can use, thereby making comparisons between sites valid?

(3) Were the inhabitants of QJ-280 in some way associated with other groups in the highlands or along the coast?

With the intent of providing answers to these questions, I subjected the lithic materials recovered from both Quebrada Jaguay and Quebrada Tacahuay to an intensive analysis. This analysis involved classification and comparison of the debitage, as well as a thorough description of the formal tools recovered from the sites. Also, at Quebrada Jaguay, we undertook a lithic sourcing survey with the intent of discovering the raw material source locations exploited by the site's inhabitants. We discovered a number of potential source locations, which were systematically investigated. The results of this sourcing survey provide a backdrop against which to view the lithic technology of Quebrada Jaguay's inhabitants.

Site Setting

Site QJ 280 sits on an alluvial terrace directly adjacent to a seasonally flowing stream, Jaguay Canyon (Figure 1.2). This terrace is one of many alluvial terraces in the area whose origins reflect long-term tectonic uplift and sea level fluctuation. The site is now located approximately 2 km from the modern shoreline and is 40 meters above sea level (masl). Before Holocene sea level rise, the site would have been located approximately 7 to 8 km from the coast (Sandweiss et al. 1998). The modern coastline consists of broad sandy beaches fronting river valleys, and rocky headlands that extend where the foothills of the Andes reach the ocean.

While the coastal desert in the vicinity of site QJ 280 is generally devoid of vegetation, seasonal flow within the quebrada bed promotes the growth of a variety of species within its channels (Sandweiss et al. 1999a). Also, fog-dependent vegetation, known as lomas, occur on the western slopes of the foothills between 200 and 1000 masl (Dillon 1997).

Work by McInnis (1999) demonstrates that the inhabitants of site QJ 280 relied exclusively on marine resources for the animal portion of their diet while living at the site. The inhabitants of the site mainly exploited a mollusk (*Mesodesma donacium*), freshwater and/or marine crustaceans, and several species of drum fish. These animals

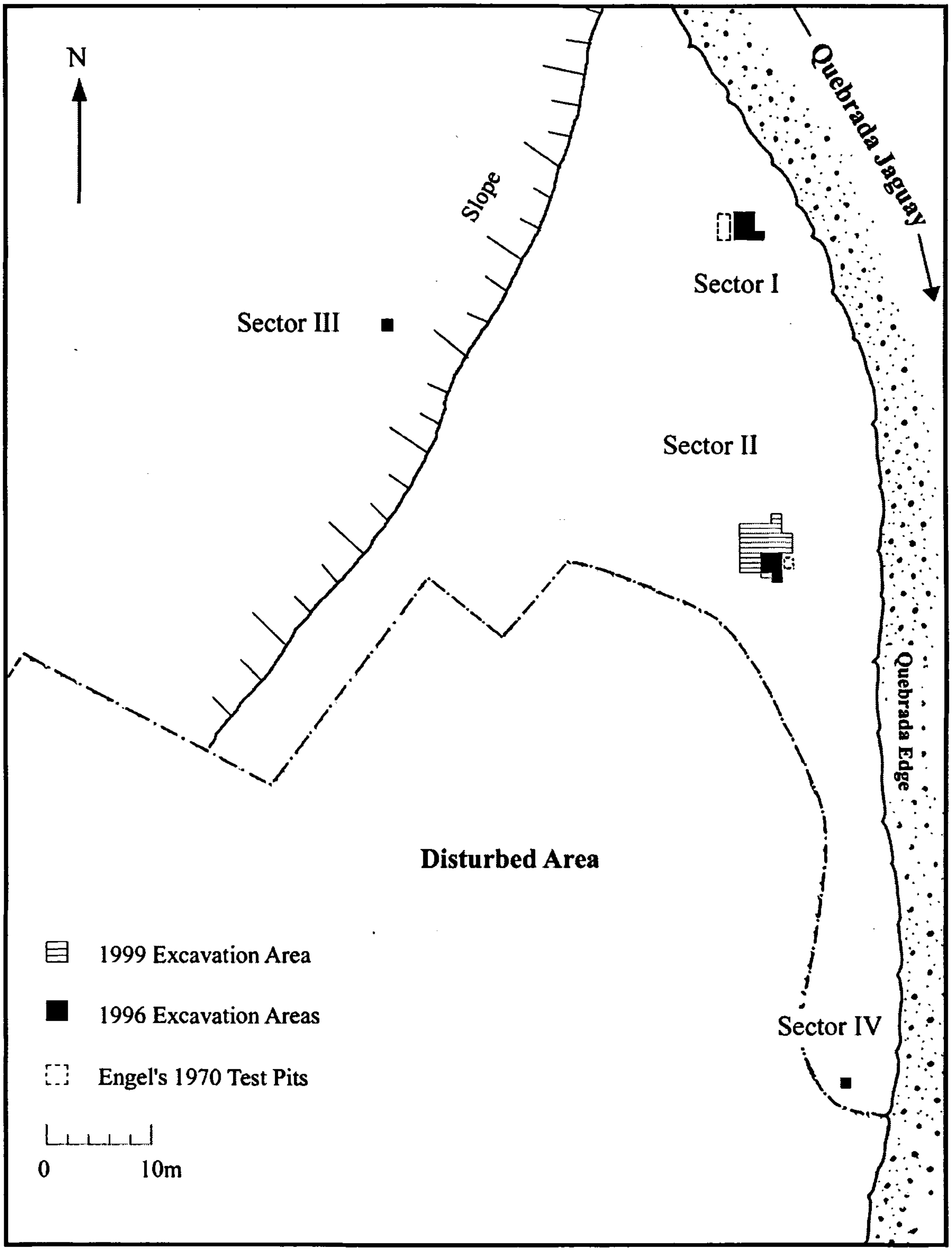

Figure 1.2. Map of Site QJ-280 showing the various excavated sectors.

would have been available in a variety of near-shore habitats, and measured sizes of the drums indicate that small fish were targeted for capture, most likely with nets.

Quebrada Tacahuay is located about 0.3 to 0.4 km inland of the modern shoreline and is 47 to 56 masl. When the site was occupied, it probably would have been 1 to 1.3 km from the shoreline. The site sits on an alluvial fan and is located approximately 2 km southeast of a rocky headland. Road and water pipeline artificial cuts expose the archaeological materials (Keefer et al. 1998).

Faunal remains recovered from the Quebrada Tacahuay show a heavy reliance on seabirds, with the guanay cormorant (*Phalacrocorax bougainvilli*) being the most abundant species. Marine fish are also present and include anchoveta (*Engraulis ringens*), anchovy (*Anchoa* spp.), and an unidentified bony fish (*Osteichthyes* uid.). Fragments of three marine mollusks were also recovered from the site, and these include a Veneroid clam, a choro mussel (*Choromytilus chorus*), and an unidentified mollusk (Keefer et al. 1998).

History of Research

Site QJ 280 was first discovered and excavated by Fredric Engel, who located the site while surveying much of the southern Peruvian coast in 1970. Engel opened three test units at the site and reported a radiocarbon date of 10,200 ^{14}C yr BP (Engel 1981).

Engel's work at the site was minimal, and the 1981 report offers little coverage of QJ 280. Recognizing the importance of the site, Daniel Sandweiss, accompanied by Bernardino Ojeda, visited Quebrada Jaguay in 1992. Sandweiss and Ojeda noted the abundance of shellfish and bone, and they drew profiles of Engel's still-open test units. Carbon collected by Sandweiss and Ojeda from Engel's test pits yielded dates between 7,500 and 10,770 ^{14}C yr BP (Sandweiss et al. 1999a, 1999b). Led by Sandweiss, a team returned to QJ in the summer of 1996 to excavate the site and survey the region. Our team, also lead by Sandweiss, excavated again in 1999, after the 1996 excavations uncovered abundant evidence of Terminal Pleistocene and early Holocene maritime resource utilization, as well as evidence of a series of structures. We undertook a sourcing survey in the summer of 2000 with the intention of finding the likely raw-material sources exploited by the site's inhabitants.

Archaeological remains at Quebrada Tacahuay were first discovered during a geoarchaeological survey conducted near Puerto Ilo, Peru in 1996. Excavations at the site proceeded over the course of two field seasons, one in 1997 and one in 1998. These excavations were brief, and were focused on establishing a chronological sequence for the deposits as well as characterizing their depositional history, defining the extent of the site, and collecting cultural remains.

QJ-280 Components

A brief discussion of provenience terminology is in order. The site was divided into Sectors based on topography and surface features visible in 1996. Units are discrete 2 x 2 m squares within individual Sectors. Pits are 1 x 1m squares within Units. Each unit contains four Pits. Levels are stratigraphically separable soil horizons. These stratigraphic divisions are made based upon distinguishing characteristics such as color and texture. Elements are features encountered during excavation (i.e. hearths, postholes, storage pits, etc.) Each element is assigned a discrete number. A Component is some grouping of Units, Elements, and Levels based on proposed cultural affiliation, radiocarbon dates, etc.

Excavations in 1996 at Quebrada Jaguay focused on three areas directly adjacent to the north edge of the quebrada bank (Sectors I, II, and IV)(Figure 1.2), and on a shell scatter located approximately 30 m northwest of a stream depression believed to have been a former Quebrada bed (Sector III)(Figure 1.2). A total area of 13.5 m^2 was excavated in these sectors (McInnis 1999). Excavations in 1999 focused on Sector II, and a total area of 19.5 m^2 was excavated (Figure 1.2). Sector I consists of shell midden deposits filling a semi-subterranean house structure with an associated hearth feature, and underlying midden (McInnis 1999). Sector II consists of a shell midden containing several hearth features and a possible storage pit. This shell midden fills a series of circular postholes, which likely represent a series of structures (unpublished field notes).

Sector IV is located about 3 m west of the quebrada bank and consists of a semi-compact sandy matrix that slopes south parallel to the stream bank. Fragmented shell, disintegrated charcoal, lithic debitage, pumice and faunal remains were also found throughout this unit (McInnis 1999).

Three cultural components and two subcomponents related to the history of the region have been defined at Site QJ 280 deposits using radiocarbon dates from charcoal samples (Tables 1.1 to 1.3), stratigraphic analysis, and associated features. These components are (McInnis 1999):

Terminal Pleistocene (TP): 11,100-9,850 ^{14}C yr BP

Early Holocene I (EHI): 9,850-9,000 ^{14}C yr BP

Early Holocene II (EHII): 9,000-7,500 ^{14}C yr BP

(subcomponents EH IIa and EH IIb)

The TP component was further divided into subcomponents in Sector II on the basis upon the relative stratigraphic position of the indurated layer. These are:

Below-Induration (BI): 10,900-10,200 ^{14}C yr BP

Above-Induration (AI): 10,200-9,500 ^{14}C yr BP

The Above-Induration dates from the 1999 season suggest that occupation of Sector II continued into the Early Holocene.

Table 1.1. QJ-280, Sector I radiocarbon dates.

Stratum	Date	Corrected date	Calibrated 1s range	Lab #	Reference
1992 Level 1b	7,500±130	-	8,393-8,169	BGS 1700	
I-3-B Level 1b	7,690±100	-	8,542-8,379	BGS 1959	
I-3-B, Level 1c	7,650±50*	-	8,420-8,384	Beta 134112	
I-3-B, Level 1d	7,660±50*	-	8,425-8,386	Beta 134111	
I-3-B Level 1e	7,620±100	-	8,447-8,339	BGS 1958	
I-3-B, Level 1f	8,053±115	-	9,060-8,653	BGS 1944	
I-2-B, Level 2a	9,657±220	-	11,228-10,599	BGS 2023	
I-3-B, Element I-9	9,597±135	-	11,168-10,604	BGS 1960	
1992 Level 3	9,120±300	-	10,666-9,785	BGS 1701	
I-2-D, Level 3b	10,274±125	-	12,339-11,694	BGS 1943	
1970 Layer 4	10,200±140	-	12,305-11,361		Engel 1981
I-2-B, Level 4c	11,088±220	-	13,184-12,889	BGS 2024	
I-2-D, Level 4c	11,105±260	-	13,345-12,885	BGS 1942	
* = AMS dates					

Table 1.2. QJ-280, Sector IV radiocarbon dates.

Sector IV-Engel Pit C				
Stratum	Date	Corrected Date	Calibrated 1s range	Lab #
1992 Level 4	9,020±170 BP	-	10,957-9,874	BGS 1703
Sector IV-Unit IV-1-C				
Stratum	Date	Corrected Date	Calibrated 1s range	Lab #
IV-1-C, Level 2c	10,507±125 BP	-	12,822-12,143	BGS 2025

Stratum	Date	Corrected Date	Calibrated 1s range	Lab #
II-3-A, N. 1ii	9,270±75	9,263±75	10,547-10,243	BGS 2193
II-4-D El. II-30bii	9873±80	9862±80	11,258-11,180	BGS 2206
II-4-D, El. II-30biii	9520±125	9506±125	11,087-10,561	BGS 2207
II-1-D Level 1b M	10,190±220	-	12,339-11,261	BGS 1957
II-5-D, El. II-33ii	10,000±90	9973±90	11,553-11,228	BGS 2198
II-7-C, El. II-56	10,325±275	10,310±275	12,795-11,343	BGS 2199
II-8-C, El. II-59b	10,640±90,	10,630±90	12,882-12,378	BGS 2200
II-4-D, N. 2cii	9,990±90	9968±90	11,552-11,227	BGS 2205
II-4-D, N. 2bi	11,340±300	11,343±300	13,784-13,002	BGS 2203
II-1-D, Element II-5bi	10,475±125	-	12,809-12,105	BGS 1936
II-1-C, Element II-5bii	9,850±170	-	11,546-11,121	BGS 1956
II-5-B, N. 2ci2	10,535±95	10,516±95	12,817-12,182	BGS 2197
II-3-D, N. 2c+2c2	10,600±140	10,580±140	12,872-12,334	BGS 2194
II-3-A, N. 2c+2c2	10,885±175	10,867±175	13,014-12,655	BGS 2201
II-5-B, N. 2ci3 II-7-D, N. 2ci3	9,855±275 (small sample)	9839±275	11,685-10,754	BGS 2197
II-I-D, Level 2c	10,700±300	-	12,995-12,184	BGS 1940
II-1-D, Level 2c2	10,600±135	-	12,881-12,343	BGS 1939
II-1-D, Level 2c3 (charred twigs)	10190±40*	10,220±40	12,111-11,700	Beta-149397
II-1-D, Level 2c3	10,560±125	-	12,851-12,330	BGS 1938
II-3-B, El. II-88 II-3-B , El. II-88b	10,282±165	10,264±165	12,571-11,571	BGS 2204
II-3-B, El/ II-88b (post)	10280±40*	10,250±40	12,285-11,759	Beta-149398
II-3-A, El. II-68	10,880±90	10,782±90	12,952-12,649	BGS 2202
II-3-D, N. 2c4	10,350±250 (small)			BGS 2195
	10,300±180 (small)	10,277±180	12,597-11,569	BGS 2195R
II-1-D, Level 2c4	10,725±175 BP	-	12,955-12,408	BGS 1937
1992 Level 3	10,770±130 BP	-	12,959-12,349	BGS 1702
* = AMS date				

Table 1.3. QJ-280, Sector II radiocarbon dates.

Sector I TP

The Sector I TP component includes levels 3 and 4 with their associated sublevels. Only level 3b from Unit 3, Pit B is not included, as this level is associated with the EHI component. Features 1 and 6 are also associated with the Sector I TP component. These Terminal Pleistocene deposits consist of strata sandwiched between a basal indurated soil horizon and Feature 5, an unconsolidated sandy sediment that may have been associated with a younger indurated horizon (see Figure 1.3). A hearth feature, Feature 6, was incorporated into the upper strata of the Terminal Pleistocene deposits, and consisted of a depressed area of loose sand with charcoal fragments, burned bone, and only a few small fragments of mollusk shell. Debitage and broken tool fragments were also recovered from this component (description borrowed largely from McInnis 1999).

Sector I EHI

The EHI component from Sector I includes level 2 with its associated sublevels, level 3b from Unit 3, Pit B, and also Features 4, 5, 7, 8, and 9 (see Figure 1.4). Also, level 2di belongs with the EHII component and is not included with the EHI component. EHI deposits (earlier Holocene component) contain the basal remains of a semi-subterranean circular house, approximately 5 m in diameter, and an associated hearth (Feature 9). The

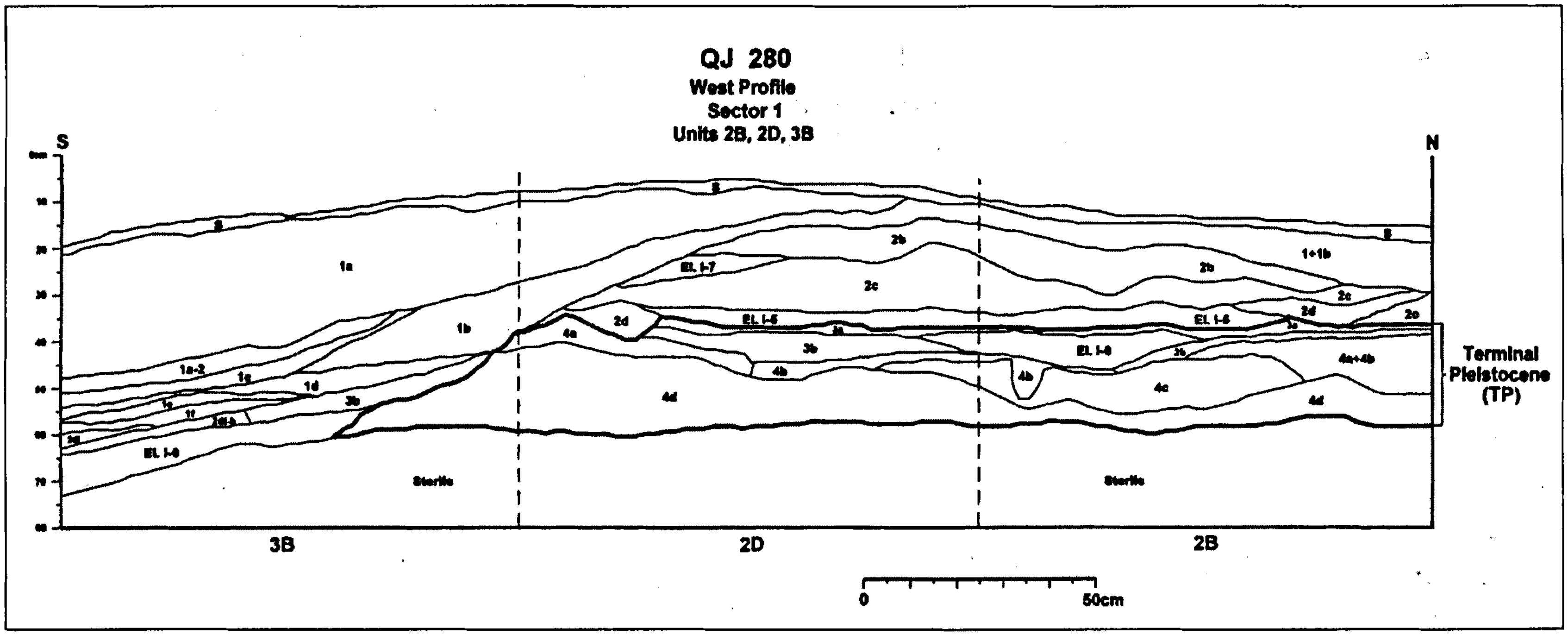

Figure 1.3. Profile showing Terminal Pleistocene (TP) component from west wall of QJ-280, Sector I.

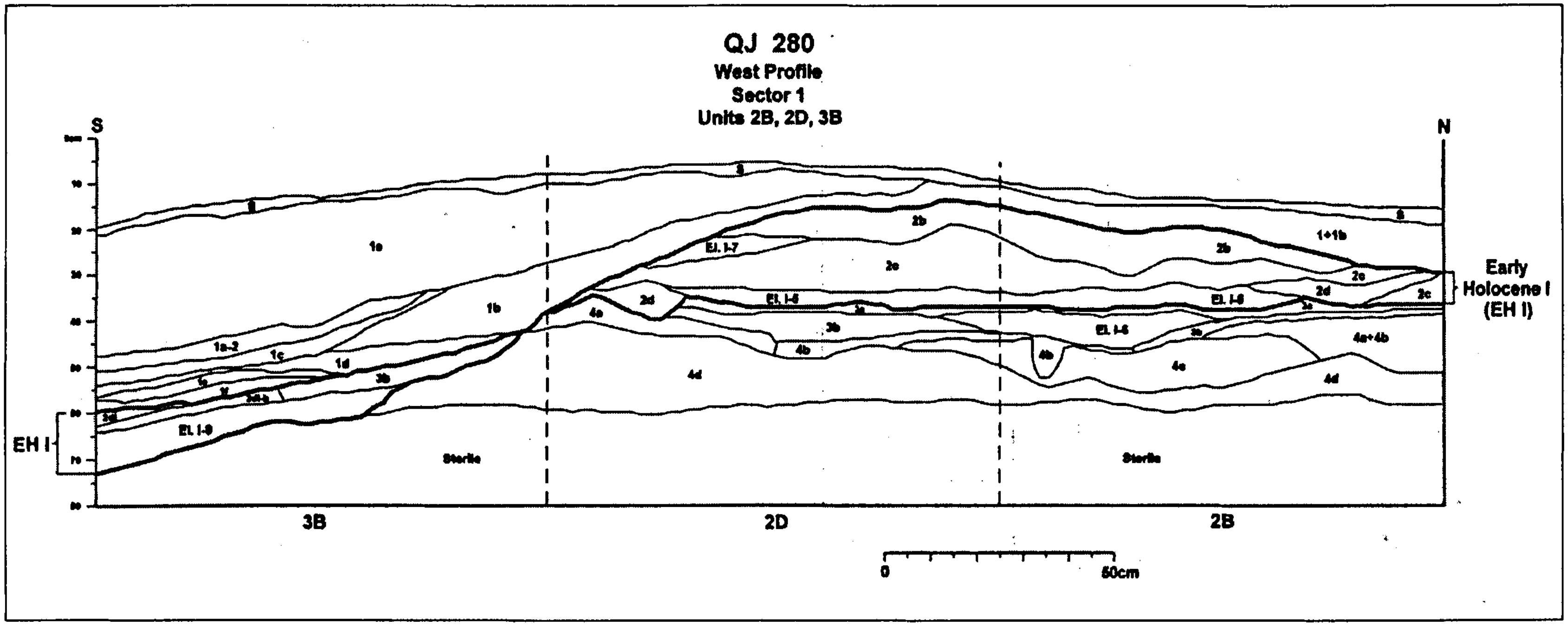

Figure 1.4. Profile showing Early Holocene I (EHI) component from west wall of QJ-280, Sector I.

foundation of this house is composed of mud and stone, which may have supported a roof, made of wood or other organic material (Sandweiss et al. 1998, 1999a, 1999b).

Feature 9 is a relatively shell-free, charcoal-rich feature that appears to be the basal level for the semi-subterranean house. Feature 9 rests on sterile soil and was superimposed by levels 2di-b and 3b, which may be related to the first occupation of this structure in the early Holocene. Level 2d represents an indurated horizon. Post-facto examination of the stratigraphic profile in Unit 3, Pit B indicates that level 3b in this area is not related to level 3b in the remainder of Sector I which yielded Terminal Pleistocene material. Level 3b, from Unit 3, Pit B is a transitional level between the two early Holocene levels, and cultural materials from Unit 3, Pit B have been included with the EHI component. The EHI component contained abundant unidentified fish and Drum specimens, as well as crustacean. Debitage, as well as unifacial and bifacial tools were also identified in EHI deposits (EHI details borrowed largely from McInnis 1999).

Sector I EHII

The EHII component contains level 1, with all of its associated sublevels, and also level 2di (Figure 1.5). Features 2 and 3 are included with the EHII deposits. EHII deposits were found within the house structure in Sector I, and consist of a series of living floors covered by a thick deposit of primarily whole shell valves. Early Holocene II deposits are superimposed on Early Holocene I levels 2di-b, 3b, and Feature 9, which

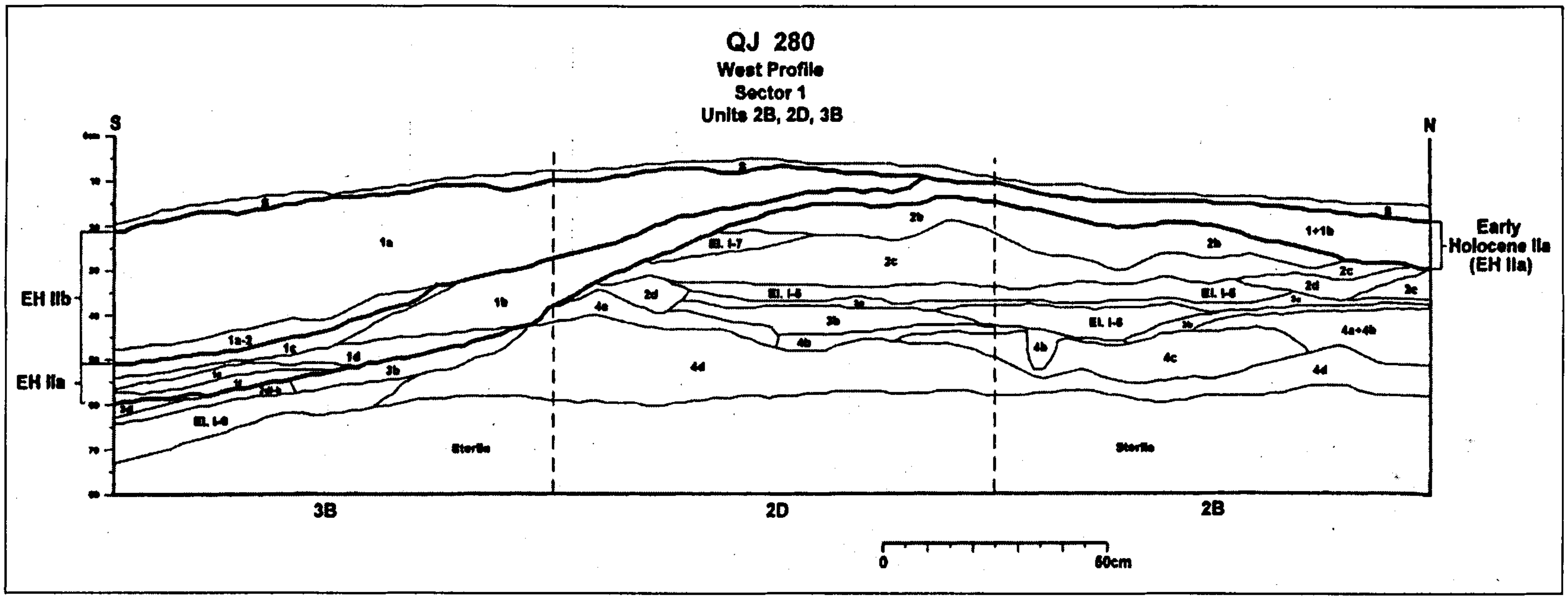

Figure 1.5. Profile showing Early Holocene II (EHII) component from west wall of QJ-280, Sector I.

clearly truncate the Terminal Pleistocene deposits in the rest of Sector I and form the original surface of the house. These EHII deposits are divided into two subcomponents, EHIIa and EHIIb on the basis of stratigraphic changes.

The EHIIa subcomponent consists of levels 1b through 2di, as well as Features 2 and 3. The EHIIa subcomponent contains the living floor surfaces of the structure, and these levels are characterized by thin deposits of fragmented, burned shell, charcoal, burned faunal remains, pumice, a piece of rope or cordage, debitage, as well as a biface, uniface, and utilized flake. These deposits are generally confined to the interior of the house structure in the southwest corner of the excavation. Only level 1b extends beyond the house and may represent the last occupation surface of the structure. EHIIa deposits slope down toward the center of the house in the southwest corner of the excavated area. Levels 2di, 2di-b, and 1f were slightly hard in texture and exhibited a dark gray color that appeared to be a burned area rather than disintegrated charcoal mixed into the sandy matrix. Levels 1c, 1d, and1e were characterized by a small number of crushed *Mesodesma donacium* fragments and an abundance of charcoal and crustacean fragments. Plant leaves, gourd fragments, and a stick were also found in level 1e, along with fragments of chiton and lithic debitage. Burned fish bone, a burned bird bone, and abraded fish hyperostoses fragments were also recovered from levels 1c2, 1d, and 1e.

During the latter part of the Early Holocene occupation of QJ 280, the semi-subterranean house structure in Sector I was filled with midden debris, representing the

EHIIb deposits. These deposits include levels 1a and 1a2. The EHIIb deposits were confined to the house foundation. Large pieces of faunal material, particularly fish bone and shell, were recovered from this area, as well as a large quantity of charcoal and smaller amounts of hair, seeds, wood, and pieces of rope. Very little debitage was recovered from this subcomponent, and only one tool, a utilized flake, was noted. Level 1a consisted of a tan sandy matrix with an increased number of whole and broken shell compared to the underlying Early Holocene IIa living floors, a large amount of charcoal, and burned shell. Pieces of burned wood were found at the base of level 1a2 suggesting that they were present during the time of the fire which produced the burned shell, bone, and charcoal in this area (description of EHII borrowed largely from McInnis 1999).

Sector II Below-Induration

Sector II below-induration deposits include all levels from 2c to 2c4 (see Figures 1.6 and 1.7). These levels are stratigraphically below the indurated layer, which includes levels 2 and 2b. A sample of lithic material was drawn from the Sector II above and below-induration deposits because of the high number of lithic pieces associated with this sector. Only features from the sampled units will be listed. These units include: Unit 3, Pits A, B, and C, and Unit 1, Pit D. Features associated with these Units that are stratigraphically below the indurated level include Features II-42, 45, 49, 50, 51, 69 (with sublevels), 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 82, 83, 84, 86, 87, 88, 88b, and 89,

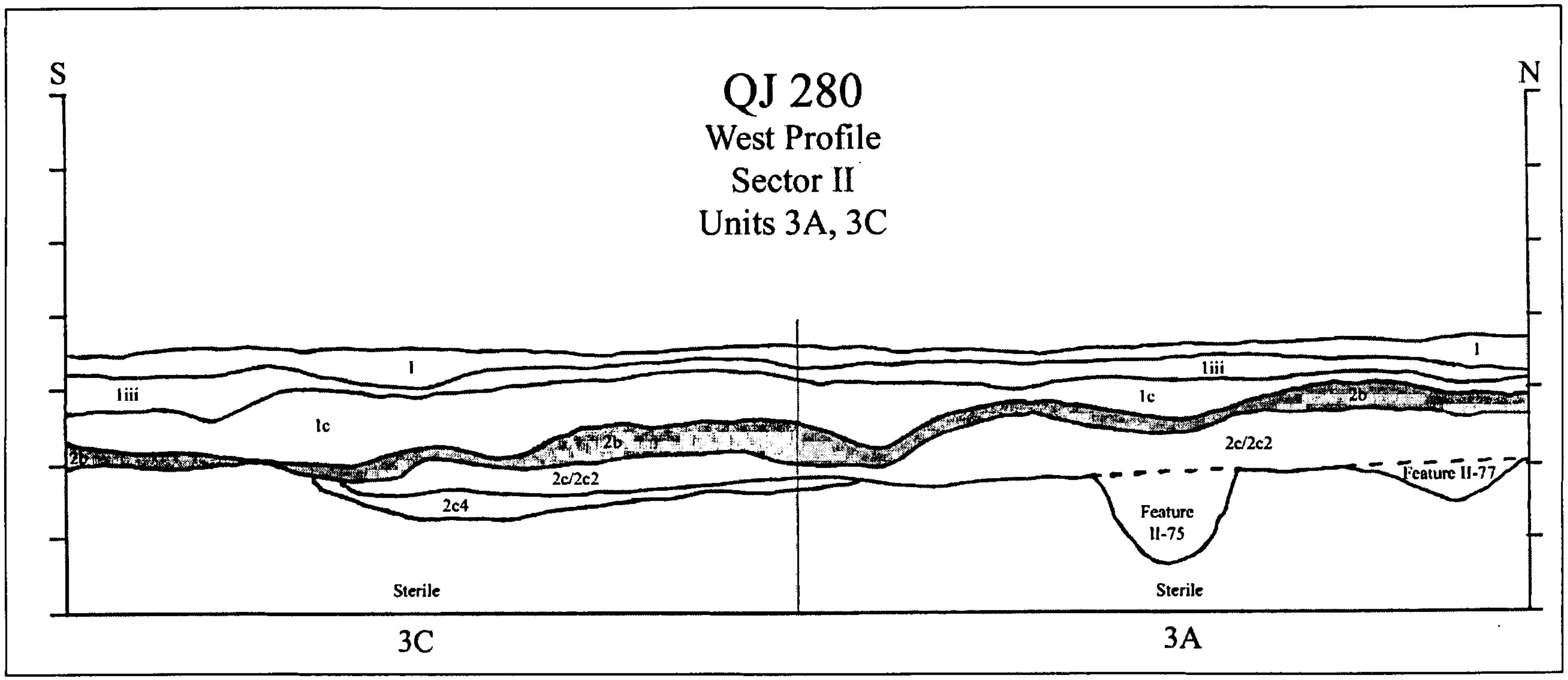

Figure 1.6. Profile showing above and below-induration components from west wall of QJ-280, Sector II (Indurated layer is shaded).

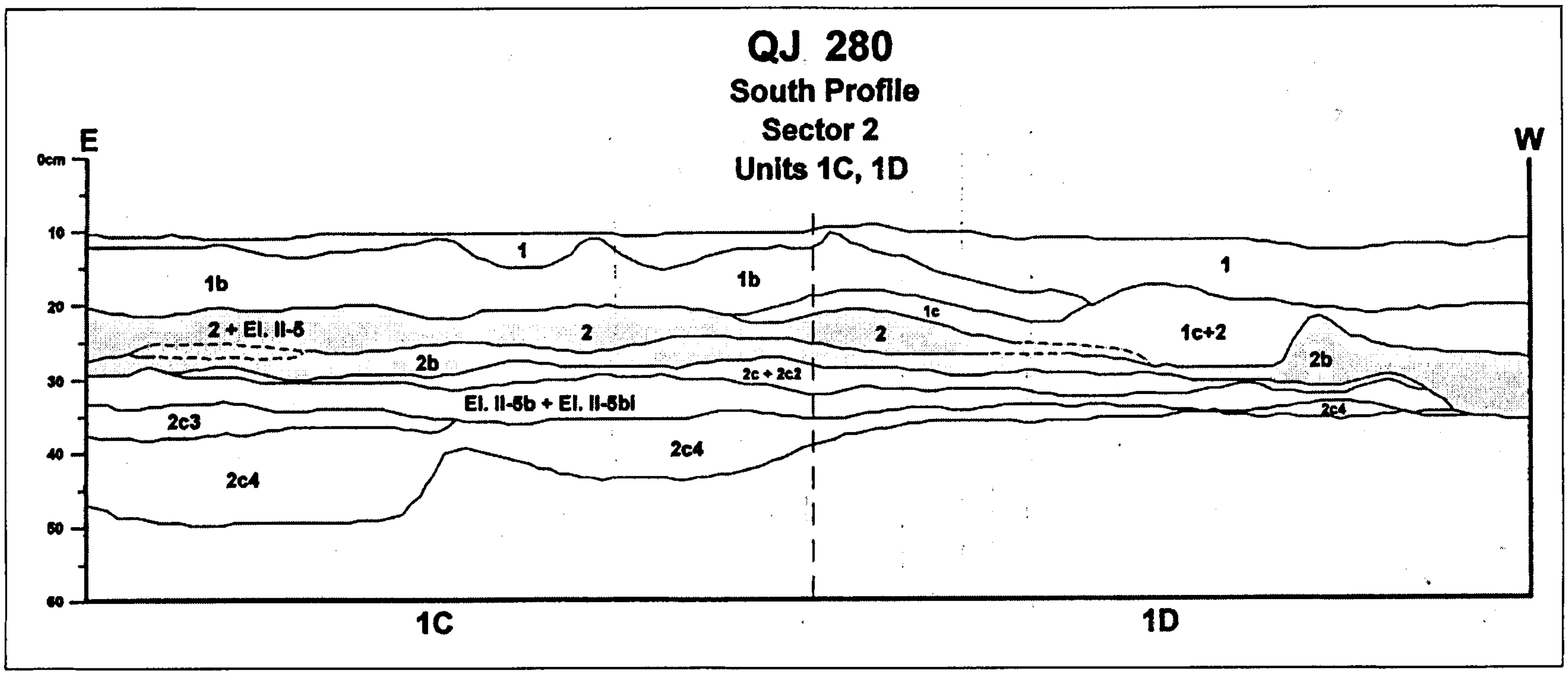

Figure 1.7. Profile showing above and below-induration components from south wall of QJ-280, Sector II (Indurated layer is shaded).

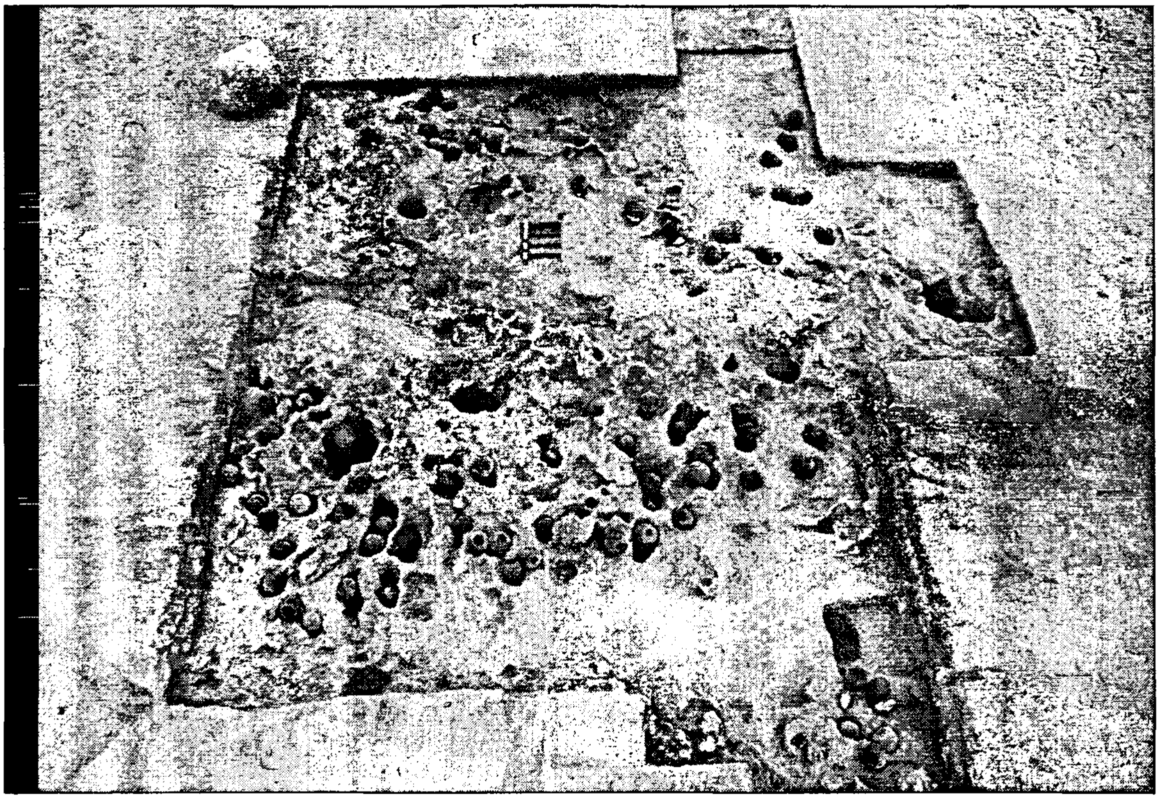

Figure 1.8. Photograph of postholes and other features from Sector II of QJ-280. Balloons are in features that are associated with the below-induration component.

which are all posthole features associated with a series of rectangular structures. These structures were reconstructed in slightly different positions through time (see Figure 1.8). Feature II-68, from Unit 3, Pit A appears to have been a storage pit. A single post was found in situ and is associated with features II-88 and II-88b (postholes). This post was directly dated using the AMS technique (Table 1.3). Features 5b, 5bi, and 5bii from Unit II, Pit D (and Pit B) consisted of an ashy, sandy matrix with large pieces of charcoal, lithic debris, plant material, fish bone, and crustacean remains.

Below-induration levels in general contained many charcoal, lithic, crustacean, and bone fragments. Bifaces, a uniface fragment, and utilized flakes are all associated with below-induration level. Although these levels lie below the salt-indurated level, this induration apparently formed post-deposition. Therefore, the indurated level itself is probably equivalent to the below-induration deposits. However, the materials from the indurated level have been kept separate from the below and above-induration deposits because we do not know what component the materials on the very surface of the indurated level are associated with. Sterile soil is present directly beneath the below-induration component.

Sector II Above-Induration

Levels from Sector II that were stratigraphically above the level 2/2b indurated layer include level 1 with all of its associated sublevels (Figures 1.6 and 1.7). Features associated with the above-induration component from Unit 3, Pits A, B, and C and Unit I, Pit D include Features II-5, 27, 28, 28I, 28ii, and 34. Above-induration levels contained abundant charcoal, debitage, crustacean remains, fish bone, bifacial and unifacial tools, as well as a utilized flake.

Some of the features that are stratigraphically above the indurated layer cut through the indurated level. Many of these features apparently are postholes (Figure 1.9). For many of these postholes, the bordering indurated matrix is very smooth, suggesting

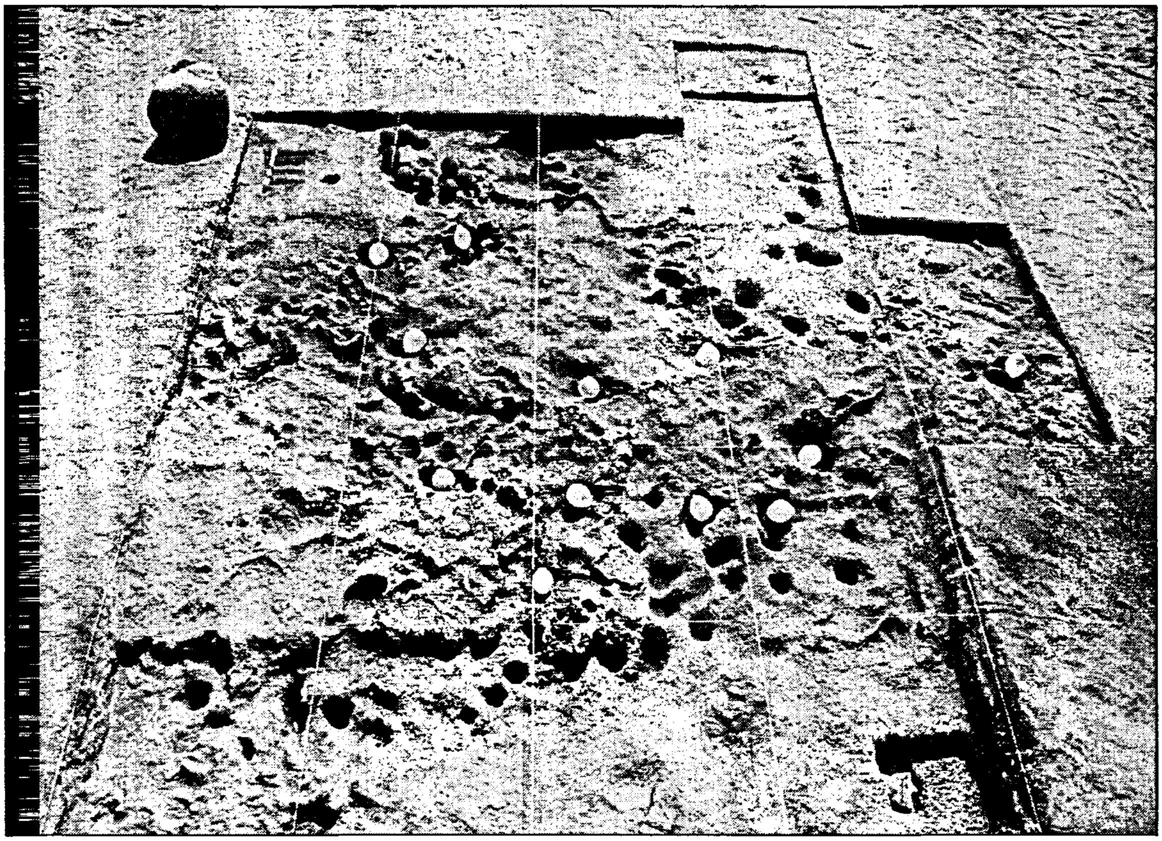

Figure 1.9. Photograph of postholes and other features from Sector II of QJ-280. Balloons are in features that are associated with the above-induration component.

that the posts were in place when the indurated level formed. Feature II-30bi is a posthole feature that cut through the indurated level. At the bottom of this feature, we encountered the remains of a bird (tern) that was wrapped in a bundle of fibers and cordage. More bird bones were encountered at the bottom of the Feature II-33 posthole. Level 2/2b induration lies directly below all above-induration levels, and provides a separation of these levels from the below-induration levels.

Sector III

Charcoal from Sector III was not dated. Also, very little lithic material was associated with Sector III. For these two reasons, the Sector III deposits will not be considered here.

Sector IV

Sector IV deposits date to the Terminal Pleistocene, and include many unidentified fish bone fragments (see McInnis 1999). Unfortunately, very little lithic material was recovered from Sector IV, and these deposits will not be considered further.

Quebrada Tacahuay

Sediments containing archaeological materials are exposed along five near-vertical cuts, made for a road and water pipeline. The northeastern-most cut exposes a hearth that is composed of a cohesive mixture of ash, sand, and charcoal. This hearth sits in a 50-cm-thick stratum composed of fine aeolian sand locally interbedded with lenses of water-laid, desiccation-cracked silt. In addition to the hearth feature, other areas were selected for sampling due to the presence of exposed bones and two lithic artifacts. All analyzed faunal remains were from excavated material found in place in the hearth or in unit 8 sediment. Charcoal dates place the cultural occupation in the Terminal Pleistocene (description borrowed largely from Keefer et al. 1998).

Chapter 2: Background

Central Andean Environment

The eastern margin of the South American continent is a collision coast, as defined by Inman and Nordstrom (1971). This continental margin was geologically active during the Proterozoic and Paleozoic periods, forming the "older Andes", comprised mainly of clastic sedimentary sequences that have been regionally metamorphosed, and that have various phases of granitic activity associated with them (Cobbing 1985). More recent evolution of the Andes began in the Mesozoic, and Quaternary tectonic deformation suggests that the Andes are presently active. Evolution of the main longitudinal morphostructural zones of the Peruvian Andes took place during the Cenozoic, and this evolution includes the Coastal, Western Cordillera, Altiplano, Eastern Cordillera, and Subandean Zones (Mégard 1987).

Tosi (1960) defines 35 distinctive natural climatic life zones encountered in the central Andes, and these lie in a diversity of environments, from the coastal desert, to sub-alpine environments, and also high-elevation formations. Focusing on the coastal zone, there are 3,700 km of coastal desert along the western margin of the central Andes, stretching from northern Peru to a southernmost extent in Chile. In Chile, this coastal desert is known as the Atacama, one of the driest deserts in the world (Meigs 1966). The desert littoral itself is dissected by more than 40 river valleys, which would have been an important source of fresh water for early coastal inhabitants. The streams and rivers within these valleys differ greatly with regard to amount of flow, seasonality of flow, and fluctuation from year to year. Maximum flow is during the austral summer (October to April), and many of the streams dry up during the winter months. The coastal plain itself varies in width, and while it is often 160 km wide in the north, near Chiclayo the coastal plain narrows and averages only 15 to 25 km in width further south (Meigs 1966). In certain places along the south coast of Peru, such as near Quebrada Jaguay, the coastal plain is even narrower, spanning roughly 5 km.

Offshore of the Peruvian littoral, the ocean supports one of the most productive fisheries in the world (Murphy 1923, Sánchez 1973). This productivity is made possible by the upwelling system of Peru, which represents an extreme tropical case of a classic wind-driven coastal upwelling system (Bakun 1990). The wind driven system is dominated by vigorous along-shore winds that drive the coastal upwelling throughout the year. This wind is maintained in part by a strong atmospheric pressure gradient between a thermal low-pressure cell that develops over the heated landmass and the higher barometric pressure over the cooler ocean (Bakun 1990). Upwelling of cool, nutrient-enriched water from depth balances the loss of surface water near the coast, and brings essential nutrients to the surface layers of the ocean (Bakun 1990).

One property of the cool water offshore, and the prevalence of south-westerly winds, is the moderate climate of the littoral. The coolest month, usually August, averages above 16° C., while the warmest month, January or February, averages between 20° to 27° C. (Meigs 1966). One other consequence of the cool air mass over the upwelling waters is that evaporation is held to a minimum. When the air mass begins to reach the shore, the increased temperature of the land causes the air to warm, and evaporation begins. However, the presence of a low coastal temperature gradient causes the clouds moving off of the ocean to retain their moisture, and rainfall does not occur until the clouds reach the higher, cooler elevations of the Andes (above 2,500 m). These clouds do support a fog-dependant assemblage of plants known as lomas, which occurs at elevations of approximately 200 to 1000 masl. Lomas may have been an exploitable resource for early human inhabitants near the coast (Dillon 1997, Engel 1973, Lanning 1963, Moseley 1975).

The nutrients supplied by the upwelling current support a variety of potential human resources, including an abundance of fish species, seabirds, sea lions, penguins, fur seals, and sea elephants (Murphy 1923). In addition to these fish, bird, and mammal resources, the upwelling also supports large numbers of shellfish, which can be easily collected and are found in abundance within shell middens along the coast.

One mechanism that upsets the balance and availability of marine resources along the coast is ENSO (El Niño/Southern Oscillation). During an El Niño year, a warm, southward-moving countercurrent develops in the tropics, and water temperatures along much of the Peruvian coast rise from 6° to 9° C., causing tropical fish and birds to migrate slightly south. If the event is severe enough, warm waters kill off surface plankton, upsetting the food chain, and having catastrophic effects on marine species that depend upon colder waters (Murphy 1923, Parsons 1970). ENSO events sometimes alter the availability of coastal resources to human populations, and can be associated to some degree with cultural change (Sandweiss et al. 1999c).

History of Climate Change

Evidence for past environments and periods of climate change exists on a variety of scales. While some data deal with large scale environmental changes that are far-reaching, such as those experienced at the LGM (Last Glacial Maximum), other data focus on the specifics of change at discrete loci, such as some of those data dealing with El Niño events. This review provides a broad look at the process of environmental change within the Andean region in order to understand better the contextual background for change through time and space. I will focus first on widespread climatic events, or those events that have been detected in both hemispheres, and will then proceed in chronological order from the LGM to the termination of the last ice age, a Younger Dryas event, El Niño events, and finally the Little Ice Age.

Recent evidence from Chile, New Zealand, and elsewhere suggests that many major climatic events may have occurred simultaneously in both the Northern and Southern hemispheres. These data come from ice core evidence from Peru (Thompson et al. 1995) and Bolivia (Thompson et al. 1998), glacial-geologic data from Chile and New Zealand (Lowell et al. 1995, Denton et al. 1999), and vegetation data from Chile (Heusser et al. 1999, Moreno et al. 1999) and New Zealand (Moreno et al. 1999). These various lines of evidence point to an atmospheric signal initiating global-scale climatic change. Events correlated thus far include the LGM, termination of the last glaciation, a Younger Dryas event, and evidence for the Little Ice Age (see Thompson et al. 1998 and Thompson et al. 1985), which have been repeatedly detected in the northern hemisphere, but only fairly recently detected and correlated in the southern hemisphere.

Available evidence suggests that the LGM occurred in South America between roughly 29,000 to12,000 ^{14}C yr. BP (Clapperton 1993, Seltzer 1990, Denton et al. 1999). While this is a fairly broad date range, there is general agreement among the various lines of evidence. Denton et al. (1999) argue for major glacier advances in the southern Andes at 29,400, 26,760, 22,295-22,570, and 14,550-14,805 ^{14}C yr. BP. Clapperton (1993) notes that while icefields in the southern Andes were most expansive when global temperature and sea level were lowest (at the LGM), reduced precipitation at the LGM, caused by lower temperatures and lower humidity, probably led to a slight glacier recession in the tropical Andes. Thus, glaciers appear to have reached their maximal extent around 27,000 ^{14}C yr. BP in the tropical Andes (Clapperton 1993). Also, the “draw-down” of water tables possibly impacted the forest cover, thereby enhancing the drying influence of reduced sea surface temperature and atmospheric humidity. As forest and grass cover diminished, colluvial and aeolian processes became more active and widespread.

Denton et al. (1999) suggest that the initial phase of the last termination involved two steps, with the first step beginning at 14,600 ^{14}C yr. BP and another occurring at 12,700-13,000 ^{14}C yr. BP. These dates are supported by Moreno et al. (1999), Heusser et al. (1999), and Thompson et al. (1995 and 1998), who place the termination between 14,000-15,000 yr. BP through ice layer counting (supporting the later radiocarbon dates). Fiedel (1999a) notes that a 2,000 yr. discrepancy between the radiocarbon and ice layer count dates should be expected during this time-period because of significant temporal atmospheric carbon perturbations. After the initial deglaciation, there appears to be a Younger Dryas re-advance with an associated cooling trend around 11,000-11,400 ^{14}C yr. BP (Lowell et al. 1995, Thompson et al. 1995, Thompson et al. 1998, Denton et al. 1999), ending with the beginning of the Holocene at around 10,000 ^{14}C yr. BP.

Rodbell and Seltzer (2000) argue for a Younger Dryas like ice-readvance at 11, 500 ^{14}C yr. BP, with a retreat at 10,900 ^{14}C yr. BP from a study of peat stratigraphy bounding glacial outwash gravel. These dates are slightly earlier than the other listed dates. However, the authors note that for ice fronts to retreat during the latter half of the deglacial cold reversal (or Younger Dryas), climatic conditions must have become substantially dryer. So while temperatures may have actually been cooler during the

Younger Dryas, glaciers in the Tropical Andes were in retreat. The authors finally argue that:

> "while the Younger Dryas may indeed have been felt in the tropical Andes as an interval of cool and dry conditions, it was preceded by an interval of cool and moist conditions that differed substantially from the Bølling-Allerød of the North Atlantic region...if the ensuring [sic] Younger Dryas were indeed transmitted globally, then the latter half of the deglacial cold reversal in the tropical Andes would have been cool and dry – conditions that are consistent with retreating ice margins and an invariant $\partial^{18}O$ composition of Sajama ice." (Rodbell and Seltzer 2000, p. 336)

This suggestion would fit the model proposed by Clapperton (1993) of reduced precipitation, due to lower temperatures, leading to glacial recession. Thus, while atmospheric temperature fluctuations may have been "in-phase" globally, tropical Andean glaciation was likely "out of phase."

Beginning in the middle Holocene, ENSO (El Niño/Southern Oscillation) events are recognized along the coast of Peru (Rollins et al. 1986, Sandweiss et al. 1996, Sandweiss et al. 1997, Keefer et al. 1998, Fontugue et al. 1999), and also lake Titicaca (Seltzer et al. 1998) where low lake levels indicate the warm phase of ENSO. While there is some suggestion that the ENSO cycle may have been in place before roughly 8,000 ^{14}C yr. BP (Keefer et al. 1998, Seltzer et al. 1998, Fontugne et al. 1999), there is general agreement that there was a 3,000 yr. Hiatus, with ENSO becoming active again sometime after 5,000 ^{14}C yr. BP (Rollins et al. 1986, Sandweiss et al. 1996, Sandweiss et al. 1997, Keefer et al. 1998, Seltzer et al. 1998, Fontugne et al. 1999; cf. DeVries et al. 1997). ENSO events continue to the present day, periodicially bringing increased moisture to the coast and increased aridity to the Altiplano.

Finally, a Little Ice Age signal, occurring in the 17th and 18th centuries, is inferred using ice core data from the Quelccaya ice cap (Thompson et al. 1985) and from the Huascarán ice core (Thompson et al. 1995). Seltzer also presents evidence for a Little Ice Age in Peru (1990). The Little Ice Age signal corresponds to a general cooling, and appears to be short-lived, as warmer conditions prevail after the 18th century (Seltzer 1990).

While climatic events may not necessarily induce cultural change, adaptation to changing resource availability is a critical factor influencing human activity. Events like El Niño can alter and change the availability of resources, especially along the coast (see Parsons 1970, Rollins et al. 1986). Likewise, events such as the Younger Dryas readvance and retreat could have significantly altered the availability of water and provided an impetus for population movement. Also, sea-level rise, associated with warming at the termination of the last glaciation, may have altered the range of lomas vegetation, which was likely a critical resource for early populations (Engel 1973, Lanning 1963, 1977; cf. Craig and Psuty 1968). Lomas zones are very sensitive to climatic change, and it is not clear to what extent they have been altered (Craig and Psuty 1968). However, a rising sea level would almost certainly mean a rising lomas baseline, which would in turn mean reduced lomas in areas where foothills top out at or below 1000 masl (Sandweiss, n.d.).

Culture History

There is ample evidence for the occupation of the Central Andean region from the Terminal Pleistocene to modern times. I will follow the general cultural chronology published by Rowe (1960: 627-631), as it is generally accepted, and widely used by many scholars. While Rowe's scheme divides up the ceramic period of Peruvian prehistory according to various Periods, based on regional changes, and Horizons, based on artifact styles that have a wide distribution, none of these Periods and Horizons are related to absolute dates. Rather, Rowe's attempt represents a relative chronology. In 1967, Lanning and Patterson (Lanning 1967: 25) proposed a new chronology using Rowe's Periods and Horizons, but with the added addition of giving them absolute dates, even though some of the dates are only estimated. Lanning and Patterson also added a Preceramic chronology. Keatinge (1988) uses the chronology proposed by Lanning and Patterson, but removes some of the error associated with a few of the dates. I adopt the chronology used by Keatinge (Table 2.1), but divide the Preceramic into 3 periods rather than 5 (see Richardson 1994). Furthermore, I focus on the first two Preceramic periods in the following discussion, as these periods are directly relevant to work at Quebrada Jaguay. I have included both standard radiocarbon dates and calibrated dates. The standard dates are included because they are prevalent in Andean literature. While the chronology adopted here separates culture history into time units that permit easy discussion, Rick (1988) points out that the use of wide-ranging chronologies such as these ignores the fact that different adaptations were evolving at varying speeds in contrasting ecological situations.

Table 2.1: Archaeological chronology of the Andes

Periods/Horizons	Year BP	Year BC/AD	Year BC/AD Cal.
Colonial Period	416 BP to Present	AD 1534* to Present	
Late Horizon	474 to 416 BP	AD 1476* to 1534*	
Late Intermediate Period	950 to 474 BP	AD 1000+ to 1476*	AD 1100 to 1476
Middle Horizon	1,350 to 950 BP	AD 600+ to 1000+	AD 700 to 1100
Early Intermediate Period	2,150 to 1,350 BP	200+ BC to AD 600+	200 BC to AD 700
Early Horizon	2,850 to 2,150 BP	900+ to 200+ BC	1100 to 200 BC
Initial Period	3,750 to 2,850 BP	1800+ to 900+ BC	2200 to 1100 BC
Late Preceramic Period	4,950 to 3,750 BP	3000+ to 1800+ BC	3750 to 2200 BC
Middle Preceramic Period	7, 950 to 4,950 BP	6000+ to 3000+ BC	6850 to 3750 BC
Early Preceramic Period	?11,100 to 7,950 BP	?10,000+ to 6000+ BC	11,950 to 6850 BC
(* = Calendar Dates, + = 14C Dates)			

Early Preceramic Period

Although the date of the initial human occupation of South America remains uncertain (Collins 1999, Dillehay and Collins 1991, Dillehay et al. 1999, Fiedel 1999b, 2000, Gruhn and Bryan 1991, Lynch 1990, 1991), there is evidence that firmly establish human presence on the continent by 11,100 ^{14}C yr. BP (Sandweiss et al. 1998). The Paleoindian period, which corresponds to roughly the first 1,100 years of the Early Preceramic Period (circa ?11,100-10,000 ^{14}C yr. BP.), has traditionally been viewed as a time of big-game hunting. More recent evidence from South America is beginning to dispel this myth, and analysis of faunal remains recovered from Paleoindian-age sites shows that a variety of resources were being exploited by Paleoindians (Roosevelt et al. 1996, Sandweiss et al. 1998). Traditional Holocene adaptations, where distinct regional traditions are formed, appear to have been present during the Terminal Pleistocene as well (Dillehay et al. 1992, Dillehay 1999).

There is evidence for big-game hunting, some of which includes the exploitation of now-extinct Pleistocene Megafauna, taking place during the Paleoindian period in South America from a variety of sites in Peru, Argentina, Venezuela, Chile, Brazil, and Columbia (Bird 1971, Bryan et al. 1978, Chauchat 1988, Cruxent 1970, Dillehay et al. 1992, Lynch 1978, MacNeish 1979, Montané 1968, Nuñez 1983, Rick 1988, Roosevelt et al. 1996, Urrego 1986). At Pedra Pintada in the Brazilian Amazon, investigators recovered the remains of plants, fruits, nuts, and freshwater shellfish from the site, these remains indicating a generalized foraging strategy (Roosevelt et al. 1996). In southern Peru, the Ring Site, Quebrada Jaguay, and Quebrada Tacahuay demonstrate the use of maritime resources during late Pleistocene times (deFrance et al., n.d., Keefer et al. 1998, Sandweiss et al. 1989, Sandweiss et al. 1998).

Thus, at the start of the Holocene, there were a variety of adaptations in South America, focused on a variety of resources. When we look specifically at the Central Andean region, it is apparent that this diversity characterizes the entire preceramic period. Here, there are different adaptations to the distinct environments, from the coastal zone to the various highlands settings.

One question currently being debated in Andean archaeology regards the migration routes of early colonizing populations. Possibilities include migration along the coast, through the highlands, or possibly some combination of the two. Evidence from Quereo, Tiliviche, Quebrada Jaguay, Quebrada Tacahuay, and the Ring Site (deFrance et al., n.d., Keefer et al. 1998, Núñez et al. 1983: 66-69, Sandweiss et al. 1989, 1998) indicates that the coastal zone was being exploited in the late Pleistocene. All of these sites feature some evidence of maritime resource use except Quereo, where maritime resource use seems to be limited. There is also evidence for occupation of the Peruvian highlands and exploitation of highland resources during late Pleistocene times. Highland environments posed additional difficulties for early inhabitants. Physiological adaptation of humans to the high Andes may have been difficult due to lower oxygen availability or hypoxia (Richardson 1992, 1994). These biological controls may have kept human populations out of the highlands, or below ca. 2800 masl, before 10,500 BP (Aldenderfer 1998), and could argue for a coastal migration route. Early inhabitants of the high Andes may have either died out or retreated to lower elevations (Richardson 1992). Highland sites with radiocarbon dates in the Terminal Pleistocene include Pachamachay Cave, Pikimachay Cave, and Guitarrero Cave (Lynch 1980: 29-42, MacNeish 1979: 19-21, Rick 1980: 65). Highland sites that may have some Terminal Pleistocene association, but lack supporting radiocarbon dates include Lauricocha, and Uchkumachay (Cardich 1983, Kaulicke 1980). The only other sites in Peru with a Terminal Pleistocene association are those of the coastal Paiján Complex (See Chauchat 1988). Most of the Paiján sites represent surface scatters, and the dating of some of these sites has been problematic. Stratified deposits from the Moche valley have yielded dates between 12,795 and 8,645 ^{14}C yr. BP, with one aberrant date of 4,740 ^{14}C yr. BP being rejected by the investigator (Ossa 1978). On the coast of northern Chile, Quereo also offers evidence of late Pleistocene occupation, but it appears that the site's inhabitants were hunting megafauna and not exploiting maritime resources (Núñez 1983, Núñez et al. 1994).

While populations existed in both the highlands and along the coast in the Central Andean region during Terminal Pleistocene times, thus far there is very little evidence that demonstrates contact between the two locations. The only clear evidence that points to some connection between the coast and highlands is highland obsidian that was recovered from the coastal site of Quebrada Jaguay (Sandweiss et al. 1998). At Asana, in the Andean Highlands, there is some evidence for the use of coastal lithic raw materials by around 9,500 ^{14}C yr. BP (Aldenderfer 1998: 145). Therefore, while it is clear that various resource zones were being exploited in the Andes during the Terminal

Pleistocene, there is not yet abundant evidence for highland/coast contacts. Thus, questions regarding possible migration routes may potentially be answered only when additional highland sites are discovered and excavated. Potential sites near the Quebrada Jaguay highland obsidian source in Alca could be the most logical place to look for coast/highland contacts and will be critical for testing Richardson's (1992, 1994) hypothesis of coastal to highlands Andes migration.

Focusing more specifically on the various cultural complexes present in the Central Andes during the early Preceramic Period, there is also evidence for the occupation of both highland and coastal zones into early Holocene times. However, even after 10,000 ^{14}C yr. BP, there is very little evidence for coast/highland interaction (Richardson 1994: 35, Rick 1988: 38). Therefore, it appears that at many locations, coastal and highland populations had little contact and utilized dissimilar resources during the Early Preceramic Period, although the presence of highland resources in coastal sites and vice versa, does argue for some contact (Aldenderfer 1989, 1998). However, the decrease in obsidian at Quebrada Jaguay and increase in coastal zone sites in the Early Holocene could signify a decreased coast-highland interaction, i.e. year-round coastal zone occupation (Sandweiss et al. 1998).

Lynch (1967,1980) first popularized the idea of a distinct highland population when he proposed his idea of a Central Andean Preceramic Tradition. This tradition includes Guitarrero, Chobshi, and Lauricocha caves, as well as the various Junín sites, such as Pachamachay. These sites are located in the central and north-central Sierra. Rick (1988) proposes that the Ayacucho (Pikimachay) area should also be included in this tradition. This would have the tradition encompassing the entire central Andean area of highland Peru. The idea of the Central Andean Preceramic Tradition is based upon similarities in stone tools. These tools include small projectile points of various forms, unifaces, and other tool types including notched, denticulate, and pointed forms as well as utilized flakes (Rick 1988:18).

Some difference of opinion exists as to Early Preceramic settlement patterns in the highlands. While Lynch (1980: 293-317) favors seasonal transhumance between the valley and Puna sites, with populations following seasonally available resources, Rick (1980: 268-270) favors the year round occupation of the Puna by highland groups. These dissimilar interpretations may due to differences in the various sites under study. Regardless of what type of settlement highland inhabitants practiced in the Early Preceramic Period, many highland populations hunted camilids and deer and gathered wild plants (see Lynch 1980, Rick 1980). While early populations were subsisting on terrestrial resources in the highlands, people along the coast were exploiting maritime resources.

Although there is evidence from a variety of sites for coastal exploitation during early preceramic times, many more of these coastal sites may now lie submerged under water due to a relative sea level rise of approximately 135 m after termination at the

LGM (Richardson 1981). A number of sites have been excavated along the coasts of Ecuador, Peru, and Chile that were possibly occupied beginning in the late Pleistocene, but more securely in the early Holocene. These include the Las Vegas and Amotape sites on the northern coast of Peru and southern coast of Ecuador, Paiján sites along the north and central coasts of Peru, the Ring site, Quebrada Jaguay, and Quebrada Tacahuay on the south Coast of Peru (the latter two have a more secure Terminal Pleistocene component), and Quereo, Las Conchas, and Tiliviche along the Chilean coast.

The Las Vegas campsites on the Ecuadorian coast feature evidence of a mixed terrestrial and maritime subsistence strategy. Remains of deer, fox, rabbit, small rodents, weasel, ant-eater, squirrel, peccary, opposum, frog, boa constrictor, parrot, lizard, and fish were encountered in a shell midden composed mainly of mangrove mollusks (Stothert 1985). Las Vegas tool technology appears to be unspecialized, and includes bone dart tips or composite fishhooks, shell tools, modified pebbles and cobbles, ground stone axes, a flaked axe, and utilized flakes. Formal chipped stone tools were notably absent at the Las Vegas site (Stothert 1985).

The Las Vegas Culture may be related to the contemporary Amotape groups of northern Peru, where people also exploited mangrove resources in early Holocene times (Stothert 1985). The Amotape toolkit is similar to the Las Vegas toolkit, and includes denticulates (notched and pointed tools), utilized flakes, pebble flakes, and cores

(Richardson 1978). Richardson suggests that some of these tools may have been used for woodworking.

The Paiján complex of the central and northern coasts of Peru is believed to date to the late Pleistocene and early Holocene as well (see Ossa 1978). The stone tool technology from these sites appears to be relatively complex, and Paiján sites are usually identified by distinctive stemmed points (Ossa 1978). Thus, the tool kit from Paiján sites appears to be different than that of the Las Vegas and Amotape complexes. However, Paiján sites feature similar evidence of both marine and terrestrial resource utilization. Faunal remains found at Paiján sites include the remains of landsnails, fish, lizards, desert fox, as well as small birds, reptiles, and rodents. Shellfish are notably absent (Chauchat 1988: 57). The Paiján sites now lie at least 15 km inland, and this figure would have been even greater before sea-level rise. These inland sites may have functioned primarily for hunting purposes and a true maritime subsistence pattern could have existed on the now submerged Late Pleistocene/Early Holocene coastline (Richardson 1981).

On the south coast of Peru, there are currently three well studied Early Preceramic sites. The Ring Site and Quebrada Jaguay are shell middens that also include bones of fish and shorebirds, with sea mammals also present at the Ring Site (Sandweiss et al. 1989, Sandweiss et al. 1998). Unifacial stone tools and utilized flakes were recovered from the Ring Site, as well as a bone harpoon and bone and shell (1) barbs for composite fishhooks. More about the stone tools from Quebrada Jaguay will be presented in chapters 4-6 of this volume. Fish and shorebird bones were also found at Quebrada Tacahuay. However, excavations at Quebrada Tacahuay failed to produce many shellfish remains, so it is not a true shell midden (Keefer et al. 1998). Lithic remains from Quebrada Tacahuay will also be discussed in detail in chapters 4-6 of this volume.

Further south, on the Chilean north coast, Tiliviche also offers evidence of maritime resource utilization in Early Preceramic times (Núñez and Moragas 1977-1978, Núñez 1983). Radiocarbon dates from the site range between 9,760 and 6,060 ^{14}C yr. BP. Faunal remains from Tiliviche include shellfish, fish, camelids, rodents, birds, and seals. Most of the faunal remains recovered from the site were derived from the coast (Núñez and Moragas 1977-1978, Núñez 1983). Tools found at the site included lanceolate points and knives, scrapers, bifacial preforms, manos, mortars, barbs from compound fishhooks, shell fishhooks, bone punches, shell knives, and bags made from bladders.

On the central coast of Chile, Llagostera (1979) has found similar evidence of maritime resource utilization. At Quebrada Las Conchas, two radiocarbon dates place human occupation firmly in the Early Preceramic Period (9,400 and 9,680 ^{14}C yr. BP). Tools found at this shell midden include chipped granite and basalt choppers, worked cobbles with retouched edges, pressure flaked core tools, mortars, metates, mullers, plummets, sandstone abraders, geometric sandstone objects, and bone tools. In addition to the shellfish, 24 species of fish were identified. Llagostera (1979) suggests that these fish were caught using a net, as some of the fish present in the assemblage cannot be caught with a hook. Llagostera (1992) sees the later adoption of the fishhook as an important innovation, as he goes on to suggest that its use in the north, and later in the south, allowed coastal inhabitants to exploit the "bathitudinal dimension" of the ocean. According to Llagostera, this led to the establishment of groups with a "true" maritime adaptation.

The Early Preceramic Period in the central Andes can be seen as a time of radiation and adaptation to a variety of resources, both inland and coastal. Though there is some evidence for contact between coastal and highland groups, this evidence remains scarce, and the specifics of initial migration routes are not yet worked out. However, in the initial stages of the Early Preceramic Period, all resource zones were being exploited, and the groundwork for subsequent adaptations and the eventual emergence of civilization on the coast was laid (see Moseley 1975).

Middle Preceramic Period

The Middle Preceramic Period in the central Andes is seen as a time of increased diversity within highland and coastal populations. The stabilization of sea level, which reached its present position late in Middle Preceramic times, enhanced the survival of sites along the coast. Sedentism and food production began to evolve during the Middle Preceramic Period. An increased concern with the remains of the deceased (e.g. mummified remains, defleshed skeletons bundled with other individuals, burial under structures, and some burial goods) offers evidence for religious ideology. Intensified plant use, along with increased camelid management, led to the domestication of plants and animals during this time period. Also, the introduction of farming brought water management techniques. There is also more evidence for long-distance interaction. The Middle Preceramic Period laid the groundwork for the sociopolitical religious systems that proliferated in the Late Preceramic Period (Benfer 1984, Moseley 1992a, Quilter 1989, Richardson 1994, Sandweiss 1996).

Maritime Origins and A Final Word

The Late Preceramic Period saw the maritime origins of civilization on the Peruvian coast, and subsequent developments included the formation of state level society, the final manifestation of which was the Inca Empire. In 1532, Francisco Pizarro led an invasion force of 260 Spanish mercenaries to the highland city of Cajamarca, where they captured the new Inca emperor and slaughtered thousands of his nobles. At the time of the Spanish invasion, the Inca empire was suffering the effects of both civil war and the spread of European infectious diseases. Eventually, the Inca empire was devastated through pandemics of smallpox, measles, mumps, influenza, and typhus (Lanning 1967, Lumbreras 1974, Moseley 1992, Richardson 1994).

Pre-European inhabitants of the central Andes faced the challenge of survival in a multitude of disparate environments. The forms through which these adaptations manifested themselves were inventive and equally distinct. Examples of this ingenuity include the maritime foundations of Andean civilization, the mulitude of sociopolitical organizational systems that evolved in different times and places, and the ability of the Inca to simultaneously control a diversity of environments such as the coastal deserts, highlands, and jungle. Now, there is evidence that diverse adaptations were present during the initial habitation of the central Andes. Archaeological sites such as the Ring Site, Quebrada Jaguay, and Quebrada Tacahuay demonstrate a maritime subsistence base beginning in the late Pleistocene.

Environmental evidence must be kept in mind as we look more in depth at Quebrada Tacahuay and Quebrada Jaguay. The initial occupation of Sectors I and II at Quebrada Jaguay, and the initial occupation of Tacahuay, took place just into the Younger Dryas reversal, when sea levels were much lower. While temperatures were probably cooler during this time-period, tropical Andean glaciers were apparently in retreat. Quebrada Tacahuay and Sector II of Quebrada Jaguay were abandoned just after the end of the Younger Dryas, and at the very beginning of the Holocene, when essentially modern conditions were in place. Finally, Sector I of Quebrada Jaguay may have been abandoned just before stabilization of relative sea level. While these various climatic events did not necessarily drive cultural and population change, they nonetheless provided a changing environment in which early cultures had to live and adapt.

Thus far, very little is known about these early coastal populations. Research presented in this thesis will begin to clarify how early maritime peoples existed and functioned, as well as how they articulated with other populations. An increased understanding of these early lifeways will advance our understanding of initial New World inhabitants, and will put subsequent central Andean developments into a more complete context.

Chapter 3: Methodology

Excavation Methods

QJ-280 was excavated over the course of two summers, one in 1996 and the other in 1999. During the 1996 field season, workers surveyed and mapped the surrounding region of QJ-280, excavated shovel test units at survey sites, and excavated an area of 13.5 m^2 at QJ-280. During the 1999 field season, we excavated an area of 19.5 m^2, and excavation focused only on Sector II (Figures 1.1 and 1.2). During the summer of 2000, we undertook an intensive survey of potential quarry source locations. The methodology described herein relates to the excavation of site QJ-280, the survey of various quarry sites, and the subsequent analysis of lithic material recovered from the archaeological site. The description of site excavation methods is borrowed largely from McInnis (1999).

During the 1996 excavation, two areas of QJ-280 (Sectors I and II) were selected for excavation based on the location of test pits A and B, dug previously and left unfilled by Fredric Engel in 1970 (Figure 1.2) (Engel 1981, McInnis 1999, Sandweiss et al. 1998). These two sectors were excavated in order that the sample include Paleoindian-age remains associated with Early Preceramic dates recovered from Engel's test pits, and to take advantage of the well-defined stratigraphy in that part of the site. During the 1996 season, 7.0 m^2 were excavated in Sector I, and 4.5 m^2 were excavated in Sector II. Two additional sectors (Sectors III and IV) were established as the field season progressed. These two sectors will not be included in this analysis because of the small sample size of lithic material recovered from them.

For the 1999 season, we chose to concentrate exclusively on Sector II, where a possible structure was identified in Terminal Pleistocene levels during the 1996 field season. All 19.5 m^2 excavated during the 1999 field season were from Sector II. We focused on uncovering the nature of the structure.

During both field seasons, each sector consisted of 2.0 m x 2.0 m units that were divided into 1.0 m x 1.0 m squares, designated Pits A, B, C, and D. These pits were excavated following natural stratigraphic levels due to the clear stratigraphic profiles at the site. Artifacts and other remains were collected by level or feature from each pit, and artifact provenience was recorded according to sector, unit, pit, and level or feature.

Excavation following natural levels permits the distinction between site deposits. This distinction is important, as one of the major deposits at the site, the Sector II "indurated" deposit, is a layer of cultural sediment that was post-depositionally enriched by salt, causing the layer to harden. This salt enrichment may have been due to the aboriginal inhabitants of the site pouring seawater over portions of the site, possibly to secure the posts of their structure (Fred Andrus, personal communication). All stratigraphic levels above this indurated layer (above-induration deposits) are well separated from the levels below the indurated layer (below-induration deposits). It is unlikely that any mixing between these two components was possible. For the lithic analysis, the above-induration and below-induration components represent the only stratigraphic assignments for Sector II deposits. The indurated deposits themselves should probably be assigned to the below-induration component, but will be kept separate, due to the lack of secure depositional context right at the surface of the indurated layer.

All excavated sediment was screened through nested 1/4" (6.4 mm) and 1/16" (1.6 mm) screens, with the exception of unscreened samples taken from levels or features with a high concentration of organic material, and from levels that consisted of indurated deposits. From the 1/4" screen, all otoliths, bone, lithic debris, and other artifacts were collected. Bone, otoliths, lithic debris, and other artifacts were also collected from the 1/16" screen. Apart from this collection, which we labeled General, a 12-liter "standard sample" of sediment was collected from the most secure context possible in each level or feature within each 1x1 m pit. In cases where the level itself consisted of less than 12 liters of sediment, a smaller sample was taken and recorded as a percentage of the standard sample. Recovered artifacts include culturally modified materials, as well as bone and shell. All artifacts and organic material from the 1/4" screened standard samples were collected and sorted in the field, and artifacts and organic material in the 1/16" screen were collected for sorting in the field lab. From each unit of excavation there are four possible samples of material: 1/4" screened General or Sample (4G or 4M in the lithic spreadsheet), and 1/16" screened General or Sample (16G or 16M in the lithic spreadsheet).

Sourcing Survey

Field Methods

During the summer of 2000, we undertook a sourcing survey in the surrounding area of QJ-280, with the primary goal of locating the likely sources of raw materials found in abundance at the site. The development of a systematic means by which "cobble fields" could be characterized was another goal. The survey was led by University of Maine Geologist, Martin Yates. Figure 3.1 is a map showing the three general survey locations.

We chose these three locations for intensive scrutiny by using a combination of methods that involved reconnoitering the vicinity of QJ-280, by relying on previously known potential source locations found during archaeological survey work conducted during the summer of 1996, and by observations made over the course of two field seasons (1996 and 1999). We found potential sources of raw material adjacent to QJ-280 in the Quebrada bed (QB) consisting of recent deposits of fluvial cobbles, at a location nicknamed the "cobble field (CF)", located approximately 3 km west of QJ-280 and consisting of fluvial deposits from the Oligocene/Miocene Camaná Formation, and at a location approximately 3 km northeast of QJ-280, which also consisted of fluvial Camaná

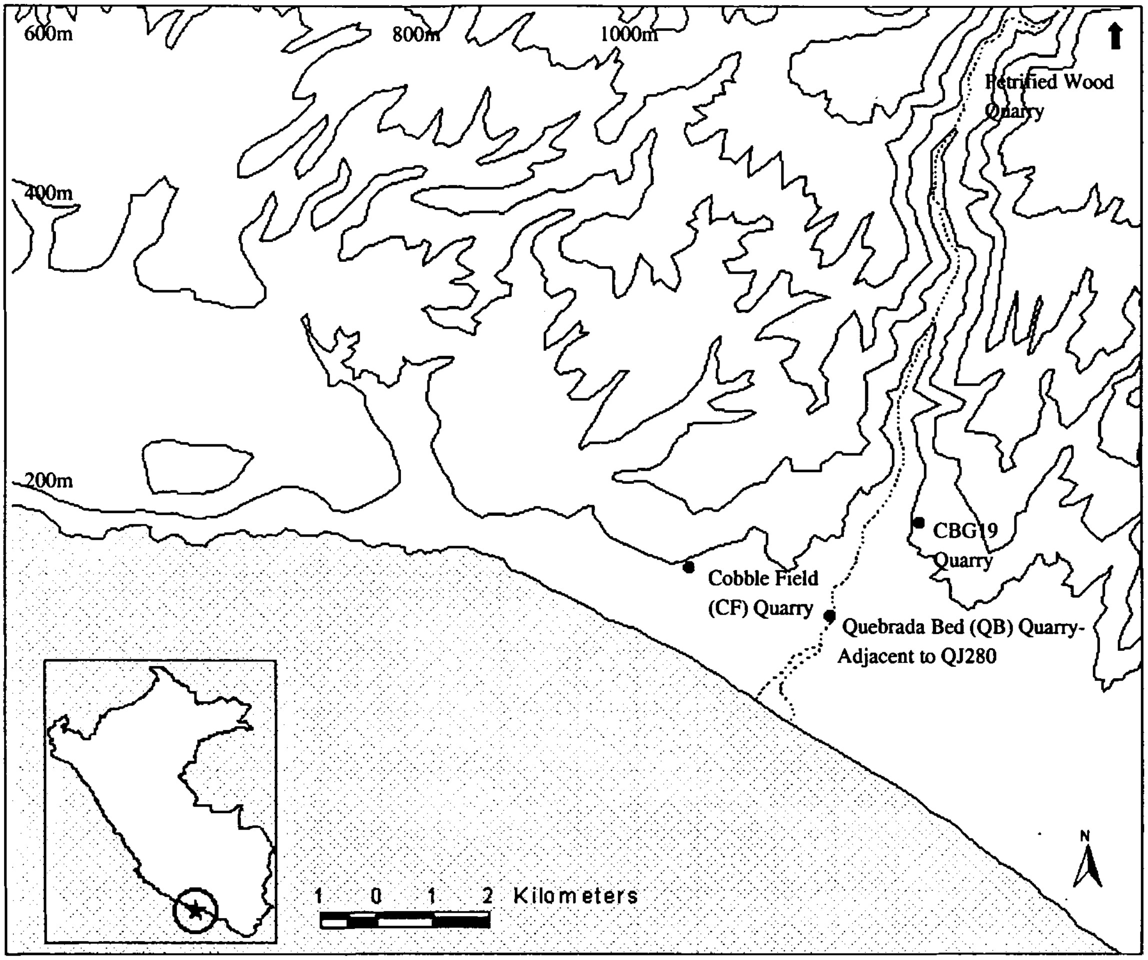

Figure 3.1. Map showing quarry locations discussed in text. Contour interval is 200 m.

Formation deposits (CBG019). A likely source of petrified wood was located at a distance of 15 km up the Quebrada, north of QJ-280, but these deposits were not subject to intensive survey. Finally, the source of obsidian recovered during 1996 from Sectors I and II of QJ-280 was found to be in Alca, some 130 km from QJ-280, in the adjacent highlands (Figure 1.1). This determination was made by Michael Glascock and Richard Burger using instrumental neutron activation analysis (Sandweiss et al. 1998).

At the cobble field (CF) and CBG019 locations, we found pebbles (0.2 – 6.4 cm), cobbles (6.4 – 25.6 cm), and boulders (> 25.6 cm) cropping out on hillslopes, where they were eroding out of a poorly consolidated sand matrix. At these locations clasts were densely concentrated (Figure 3.2), and we chose to survey intensively certain areas where concentrations were particularly dense. Within the Quebrada bed, located directly adjacent to QJ-280, cobble and pebble concentrations were likewise extremely dense (Figure 3.3), however, there was very little sand matrix. These three survey locations were sampled using a variety of methods.

Within the Quebrada bed, at the cobble field, and at the CBG019 locations, we originally sampled clasts using a "grid" technique. With the grid technique, we chose a point within a dense concentration of pebbles, cobbles, and boulders to serve as the southwest corner of the grid. Latitude and Longitude coordinates were recorded for the southwest corner of all grid surveys using a handheld Global Positioning System (GPS) receiver. We recorded all of our GPS measurements in June of 2000, just after GPS

Figure 3.2. Photograph of cobble field (CF) location showing dense outcrop of clasts.

Figure 3.3. Photograph of quebrada bed (QB) location showing concentration of clasts.

signals had been unscrambled by the United States Department of Defense. Therefore, accuracy of the handheld unit was within 10 m. The grids were established by laying out an 18x18 m area with a Brunton compass and tape. Within the 18x18 m square grid, we collected samples at 2 m intervals. In this fashion, 100 samples were recorded during one grid survey. We sampled only clasts with a largest dimension of greater than or equal to 5 cm. Samples were cracked open on the spot, and various attributes were recorded (see below). Grid surveys are denoted by the suffix "G" in all of the Tables and include CFG001, CFG004, CFG007 in the cobble field, QBG002 within the Quebrada bed, and CBG019.

We used "Linear" surveys in addition to the grid surveys. Linear surveys proved to be easier to set up and slightly faster to complete. Linear surveys were conducted over the same areas as the grid surveys, and used the southwest corners of the various grids as their points of origin. With a linear survey, we set up a line from the southwest corner of the original grid, to the northeast corner of the same grid. Samples were collected on the basis of whether they touched the line, or whether they were at some distance from the line (usually the closest clast to the line) at a certain interval spacing (usually 1 meter). We used one of these different collection procedures depending on the density in which the clasts were concentrated. Clasts were either collected at intervals, or in order (i.e. first 100 touching the line). Only clasts greater than or equal to 5 cm were collected and recorded. Clasts were broken open and measurements were recorded on the spot. Linear surveys, denoted by the suffix L, include CFL005 (corresponding to CFG004), CFL006 (corresponding to CFG 001), CFL008 (corresponding to CFG007) for the cobble field, and QBL003 (corresponding to QBG002) for the Quebrada bed. Two other survey types were also used in order to sample prehistorically unavailable materials.

In the cobble field, we used "trench" surveys for the purpose of sampling prehistorically buried clasts (i.e. not altered by people). In the first trench (CFT015 and CFT016), two separate layers were collected, one from 10-15 cm below the surface (CFT015), and the other from 15-20 cm below the surface (CFT 016). This trench measured 20 cm x 2 m, and 100 samples were collected from each layer. Samples were broken open, and observations were recorded on the spot. We took coordinates for the southern end of the trench using a handheld GPS receiver. The second trench (CBT018) in the cobble field used the same techniques. However, CBT018 was 1x4 m, and was sampled from 25-40 cm below the surface, just beneath an indurated layer. We recorded coordinates for the southwest corner of this trench using a handheld GPS receiver.

In order to sample buried clasts from the quebrada, we collected samples from the wall of the quebrada, adjacent to QJ-280. The present quebrada bed is composed of recent deposits and because the quebrada is still active and flows seasonally, it probably also represents an anthropogenically unaltered deposit. We undertook three surveys of quebrada wall deposits (QW009, QW010, and QW011). All three surveys started at the bottom of the quebrada wall and moved to the top. For each survey, we laid out 10 one-meter squares in a straight line from the bottom of the quebrada wall to the top. We took coordinates at the bottom of the wall for each individual survey using a handheld GPS receiver. Ten clasts were collected from each 1 m square, providing 100 samples for each survey. In each square, we collected clasts that were nearest the edge of the square in a counterclockwise fashion beginning at the bottom right-hand corner of the square. Only clasts greater than or equal to 5 cm were collected. Clasts were broken open, and measurements were taken on the spot.

Attributes recorded in the field for each clast include rock category, rock type, color, texture, transmittance, grain size, fresh surface texture, mineralogy, roundness, dimensions, cortex cover and texture, cortex staining, and previous fracture. Appendix A summarizes all attribute types and their possible values. Attributes that proved to be useful in this analysis include rock category, rock type, roundness, dimensions, break, and previous fracture. We were able to provide no use for the remaining recorded attributes in the analysis and it is possible that they could go unrecorded in the field without a loss of useful information.

Rock category is recorded as either plutonic (P), volcanic (V), sedimentary (S), metamorphic (M), or metasomatic (MS). Plutonic and volcanic rocks are both igneous. However, plutonic rocks form deep (1 km or more) beneath the Earth's surface, giving their crystals more time to form. Volcanic rocks form at or near the Earth's surface. The sedimentary and metamorphic categories are self-explanatory. Metasomatic rocks form where metamorphism is accompanied by the introduction of ions from an external source. Silicates such as chert, chalcedony, jasper, etc. are included within this category (Thompson and Turk 1993).

Rock type can include a great number of values. Examples include gneiss, sandstone, granite, basalt, andesite, and quartzite.

Roundness is an ordinal scale variable whose variates include all whole numbers from 1-10. Number 1 represents an angular rock, 5 an intermediate rock, and 10 a perfect sphere.

The dimension category includes the three variables: long (L), short (S), and intermediate (I). All measurements were taken with a tape measure to 0.1 cm.

Break is an ordinal scale variable whose variates take on whole number values from 1-5. The number one represents a very rough break, and 5 represents a clean break with straight or curved, well-defined edges.

Previous fracture is recorded as either "yes" (Y) or "no" (N). Previously fractured rocks are defined as rocks whose cortex cover is not continuous, and which exhibit a "break".

Laboratory Methods

In the lab, quarry data were entered into the Microsoft Excel spreadsheet. A variety of quantification techniques, including descriptive and inferential statistics, summarize the data. Data groups depend on the hypothesis being tested. General groupings of data include grid vs. linear survey, surveys in one location vs. surveys from another location, and surface vs. below ground (or Quebrada wall) surveys. Quantification methods include ternary diagrams, bar graphs, percentage summaries, computation of means and standard deviations, as well as the use of the Chi-square statistic. The reasons for using the groupings and quantification techniques will be presented in the Interpretation and Discussion chapter.

Methodology used for the sourcing survey allowed many questions regarding the habits of QJ-280 inhabitants to be answered.

Lithic Analysis

Research Questions

Analysis proceeded from questions asked, including:

(1) What lithic procurement and production strategies were practiced by the inhabitants of QJ-280? Did these strategies change through time?

(2) Can a duplicable method and typology be introduced that future researchers in the area can use, thereby making comparisons between sites valid?

(3) Were the inhabitants of QJ-280 in some way associated with other groups in the highlands or along the coast?

An analysis of the lithic technology of the site's inhabitants provides an answer to question 1, and begins to answer question 3. Also, the methods used here are easy to duplicate, and can be used for other sites.

Lithic Technology

Lithic technology is the means by which social groups solve problems related to an initial need and use of a stone implement for some purpose, whether that need lie in the future or in the present. Settlement configuration, raw material availability, tool function, and tool use life are important variables that are part of this problem solving process. Because the properties of workable materials are well known (Speth 1972), and because specific actions result in a specific outcome often distinguishable on the worked lithic material (Dibble and Whittaker 1981), we can infer many aspects of stone tool production from the by-products of chipped stone manufacture (debitage). The study of quarry locations can give us information concerning raw material availability. If both the original state of the raw material and the state of the material once it is on-site are known, we can infer processes that took place between the original quarry and the site in question.

Lithic technology provides an avenue through which to study culture-historical links. While it may not be advisable to make comparisons outside of the study area, within which the analysis is controlled, when properties of the original raw material are well understood, relative comparisons within a specific study area should yield meaningful results. As noted by Shott (1994), the diversity of formal typologies hinders interassemblage comparison. Therefore, until strict standards are established, all comparisons must be made in relation to sites where a similar study has been undertaken. For this thesis, comparisons will be made in relation to the various components of QJ-280, as well as other sites (Quebrada Tacahuay) under direct study by this author. One of the major goals of this analysis is the establishment of a standard methodology that other researchers in the area can use, thereby making broader-scale comparisons valid.

There have been a number of studies that link lithic technological strategies to settlement mobility by using ethnography (Shott 1986) and archaeology (Cowan 1999, Henry 1989). The underlying assumption of these studies is that mobility places certain constraints on technological options. The production of formal tools, or tools that have undergone additional effort (besides removal from a core) in their production, are generally associated with mobile groups. Tools that fall into this category include bifaces, prepared cores, and retouched or unifacial flake tools. Informal tools, or expedient tools, are generally associated with sedentary groups, and are believed to have been manufactured, used, and discarded over relatively short time periods. These tools are wasteful with regard to raw material, and are usually minimally modified.

When considering the application of technology to problems dealing with settlement mobility, it is also important to consider the effects of raw-material availability

(Andrefsky 1994). In his study, Andrefsky concludes that when lithic quality and abundance are high, both formal and informal tool production is likely. When lithic quality is high and lithic abundance is low, formal tool production is likely to result. When lithic quality is low and lithic abundance is either high or low, informal tool production is likely to occur. Using lithic technology to uncover aspects of settlement mobility is obviously a very complicated issue, and many different variables influence the lithic technology of a social group. One important variable is culture itself. Therefore, speculation about settlement mobility is beyond the scope of this lithic analysis.

A consideration of lithic technology, mechanical aspects of flake variation, and knowledge of the original raw material form allow Question 1 to be answered with some confidence. The establishment of a standard, easy replicable methodology will fulfill the goals of question 2. Finally, technological comparisons between sites (Question 3) can be made as long as the analysis is uniform and there is knowledge of original raw material form.

Sampling Procedure

A sampling strategy was used for analysis of the Sector II lithics from QJ-280. Also, many of the cultural deposits of the site remain unexcavated. A less than 100% sample of the lithic material from a site can result in a potential bias due to different activities taking place in different locations of the site, this being reflected in the

Table 3.1. Chi-Square comparison for cortex cover between different units and components.

Unit	α=0.01	X^2	H_0	Unit	α=0.01	X^2	H_0
Sector II, Below-Induration (BI):				**Sector II, Above-Induration (AI):**			
3A vs. 3B	6.63	3.99	Accepted	3A vs. 3B	6.63	0.00	Accepted
3A vs. 3C	6.63	0.51	Accepted	3A vs. 3C	6.63	0.87	Accepted
3A vs. 1D	6.63	4.08	Accepted	3A vs. 1D	6.63	1.97	Accepted
3B vs. 3C	6.63	0.65	Accepted	3B vs. 3C	6.63	0.96	Accepted
3B vs. 1D	6.63	0.52	Accepted	3B vs. 1D	6.63	2.09	Accepted
3C vs. 1D	6.63	0.19	Accepted	3C vs. 1D	6.63	0.23	Accepted
Sector I, Terminal Pleistocene (TP):				**Sector I, EHI:**			
1A vs. 2B	6.63	1.80	Accepted	2B vs. 2D	6.63	0.65	Accepted
1A vs. 2D	6.63	0.91	Accepted	**Sector I, EHIIa:**			
2B vs. 2D	6.63	0.00	Accepted	3B vs. 4A	6.63	1.52	Accepted
Between Components:							
BI vs. AI	6.63	2.14	Accepted	AI vs. TP	6.63	0.08	Accepted
BI vs. TP	6.63	2.30	Accepted	AI vs. EHI	6.63	1.32	Accepted
BI vs. EHI	6.63	3.79	Accepted	AI vs. EHIIa	6.63	16.35	Rejected
BI vs. EHIIa	6.63	32.04	Rejected	TP vs. EHI	6.63	0.81	Accepted
EHI vs. EHIIa	6.63	2.70	Accepted	TP vs. EHIIa	6.63	11.70	Rejected

Sample size for each individual unit is > 30. Units that did not achieve this sample size were not included. Comparison is between flakes with cortex cover vs. flakes without cortex cover. Unit is listed followed by Pit (ie. 3A, 3C, 1D).

distributions of artifacts left behind. Errors in the interpretation of the site could result if individual activity areas (i.e. tool manufacture vs. animal processing) are neglected in the sampling. The total available lithic remains is already a sample, as much of the site has been destroyed and only a portion of the surviving deposits have been excavated thus far. In this analysis, I attempt only comparisons between different components (i.e. Sectors I and II), but not between areas within components (i.e. Unit 2 and Unit 3). Cortex cover, used as a proxy for relative reduction stage, is used to show that there are no statistically significant differences (Chi-square, 0.01 level) between individual pits within particular components with respect to cortex cover (Table 3.1). However, statistically significant differences do exist between components, and it is logical to lump pits within components together to increase sample size for the lithic analysis (See Chapter 1 for the level groupings). Therefore, all site components are kept separate in the analysis, while individual units, pits and features within particular components are combined.

All lithics from Sector I of QJ-280 were subject to analysis (n=794). Sectors III and IV were omitted from analysis (see above). A 42% sample of lithics (n=3,240) was drawn from Sector II because of the high number of lithic fragments recovered from this sector (n=7,711). This sample included units with the largest amounts (in grams) of lithic material that had above and below-induration components. Units and pits included in the analysis are Pits A, B, and C from Unit 3, excavated in 1999, and Pit D from Unit 1, excavated in 1996. Obsidian was analyzed from all Units and Pits in Sector II because of the relatively small sample sizes of obsidian and its exotic nature. I also analyzed all lithics from Quebrada Tacahuay (n=1,052). However, 76% of the Tacahuay lithics proved to be too small to record some measurements (n=800).

Finally, obsidian from the 1996 excavations was destroyed for Neutron Activation Analysis (n=30 pieces). This debitage was analyzed and reported on by Warren B. Church (Church 1996). Many of the measurements recorded by Church were not used in my analysis. Therefore, for all tables and figures in this thesis, 4 pieces of obsidian from Sector I and 26 pieces from Sector II are not included. This is not true for the general

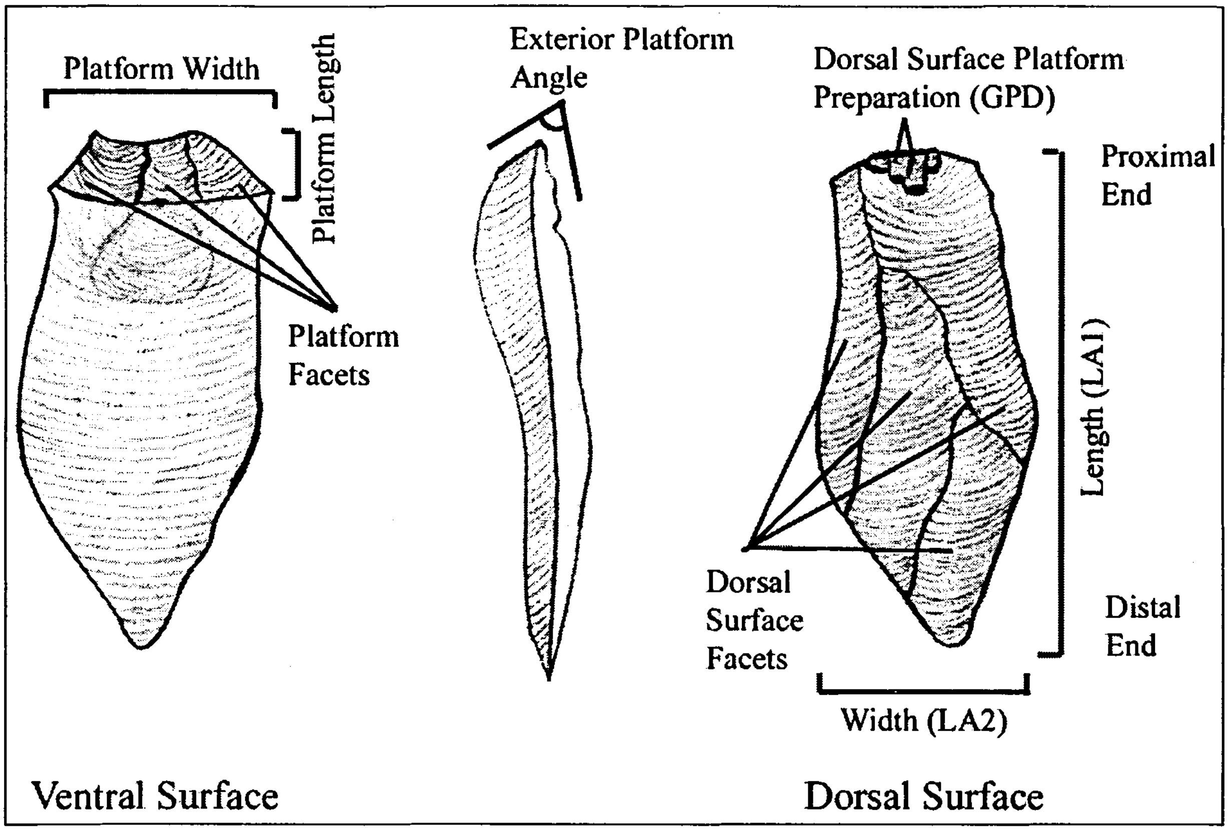

Figure 3.4. General flake morphology showing examples of relevant terms discussed in text.

rock type percentage usage table, where I was able to include Church's counts (Table 5.3).

Laboratory Analysis

A number of flake attributes were analyzed for the purpose of addressing the research questions presented above. Some of these attributes are shown graphically in Figure 3.4. Variables under consideration for this analysis include flake length (LA1), flake width (LA2), weight, flake type (Whole Flake [WF], Broken Flake [BF], Flake

Fragment [FF], Shatter [SH]), exterior platform angle (EP>), cortex cover, platform preparation, presence of platform faceting (FP), presence of dorsal surface faceting (DSF), presence of use-wear (UW), and rock type (RT). Appendix C provides a full description of all categories measured. All recorded categories proved to be useful in the lithic analysis and all should be recorded in future work. Formal tool attributes were also recorded. Important attributes for this analysis include edge angle and tool type (unifacial, bifacial, bifacially worked, utilized flake). Appendix F presents a detailed description of all formal tools recovered from QJ-280. Once I recorded the data, I entered them into the Microsoft Excel Spreadsheet. As a final note, only length and weight measurements from many of the lithic pieces (75%) from Quebrada Tacahuay could be recorded because their extremely small nature did not allow accurate identification of the other attributes. This was not a problem for the QJ-280 lithics.

Flake type categories include whole flake (WF), broken flake (BF), flake fragment (FF), or shatter (SH). Whole flakes are flakes that have platforms, are not broken, and have distinguishable dorsal and ventral surfaces. Broken flakes have platforms, distinguishable dorsal and ventral surfaces, but are broken at either the distal end, or along one of the flake margins. Flake fragments lack platforms, but have distinguishable dorsal and ventral surfaces. Shatter includes all pieces of debitage that cannot be oriented (not able to identify dorsal and ventral surfaces).

Flake length (LA1), and width (LA2) were recorded at interval spacings of 5.0 mm by fitting flakes into squares which had dimensions equal to the class boundaries (until a "fit" was achieved). The first category includes flakes less than 5.0 mm, the second category includes flakes whose sizes range from 5.0 to 9.9 mm, the next category includes flakes from 10.0 to 14.9 mm (and so on). For computing totals (including means), the midpoints of the categories were used (for instance the midpoint of the 5.0 to 9.9 mm category is 7.5 mm). Length (LA1) runs along the length of the flake, beginning at the proximal end and running to the distal end. With a flake fragment or piece of shatter, the longest measurement possible is recorded. Width (LA2) is recorded perpendicular to the length measurement and is taken at the flake's widest point (Figure 3.4).

Flake weight is recorded in grams to 0.1 g on an electronic scale. For flakes less than 0.1 g, a weight of 0.05 g was assigned for totals and computing means.

Exterior platform angle (EP>) is measured in degrees. Measurements are taken at intervals of 5° using a paper method for larger flakes, with lines drawn at 5° increments using a protractor, and a microscope for smaller flakes, with a goniometer that has 5° angle increments. Exterior platform angle is the angle of intersection of the platform surface and dorsal flake surface (Figure 3.4).

Cortex cover is divided into three categories: no cortex (NC), less than 50% cortex (<50%C), or greater than or equal to 50% cortex (≥50%C).

Platform preparation is an attribute that can possess either, neither, or both of the following values: ground platform edge (GPE), and dorsal surface chipping (DSC). Flakes designated "GPE" show evidence of platform grinding or abrasion on the edge of the platform nearest the dorsal surface of the flake. Flakes designated as "DSC" display dorsal surface platform preparation in the form of chipping (Figure 3.4).

Platform faceting (FP) is recorded as either present or absent. Faceted platforms have two or more facets (flake scars)(Figure 3.4).

Dorsal surface faceting (DSF) is also recorded as either present or absent. The presence of two or more facets on the dorsal surface of the flake indicates the presence of dorsal surface faceting (Figure 3.4).

Use-wear (UW) is expressed as either present or absent. Flakes that have use-wear show obvious signs of edge damage in the form of patterned microchipping. Flakes with edge "polish" were not counted as utilized flakes.

Rock type can assume a wide variety of values. This category is the same as the rock type category used in the cobble field survey. Examples of potential values assumed by its variates include sandstone, petrified wood, basalt, and obsidian.

Tool attributes analyzed include tool type and edge angle. Tool types include bifaces (Bif. for complete, Bif. [B] for broken), which are pieces that have been heavily flaked on both the ventral and dorsal surfaces, bifacially modified pieces (BM) which are only minimally bifacially worked, unifaces (Unif. for complete, Unif [B] for broken), which are pieces that have been flaked only on one surface, either ventral or dorsal, and utilized flakes, which are flakes that show edge damage in the form of patterned microchipping, but which show no other modification. Edge angle represents the angle of the working edge of the tool, and is measured in degrees (Figure 3.5).

Once data were recorded, a variety of descriptive quantification techniques including means, proportions, ratios, correlation, bar graphs, line graphs, and scatterplots were applied. The results of these quantifications are presented below.

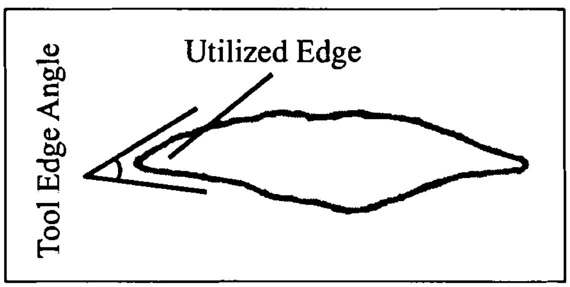

Figure 3.5. Cross-section of a biface showing edge angle.

Chapter 4: Results

Sourcing Survey Data

Data for the lithic sourcing survey are summarized and presented in both Tables and graphs. Complete data Tables, including all observations recorded in the field, are appended (Appendix B). A Table describing the spreadsheet categories is also appended (Appendix A).

Figures 4.1 and 4.2 are a series of ternary diagrams that graph abundance of rock categories (using percentages) with all possible combinations of the four categories: metamorphic, sedimentary, volcanic, and plutonic. The remaining rock category, metasomatic (MS), was left out of this comparison because sample sizes of MS rocks are low for all surveys, and in some surveys, including all quebrada surveys, there were no metasomatic rocks counted. Total n refers to the smallest sample size recorded for an individual survey.

Figures 4.3 and 4.4 are histograms comparing the amount of sandstone and metasomatic rocks recorded for each survey. The y-axis can be read as either a percentage or a count, as 100 total samples were collected and recorded in each individual survey.

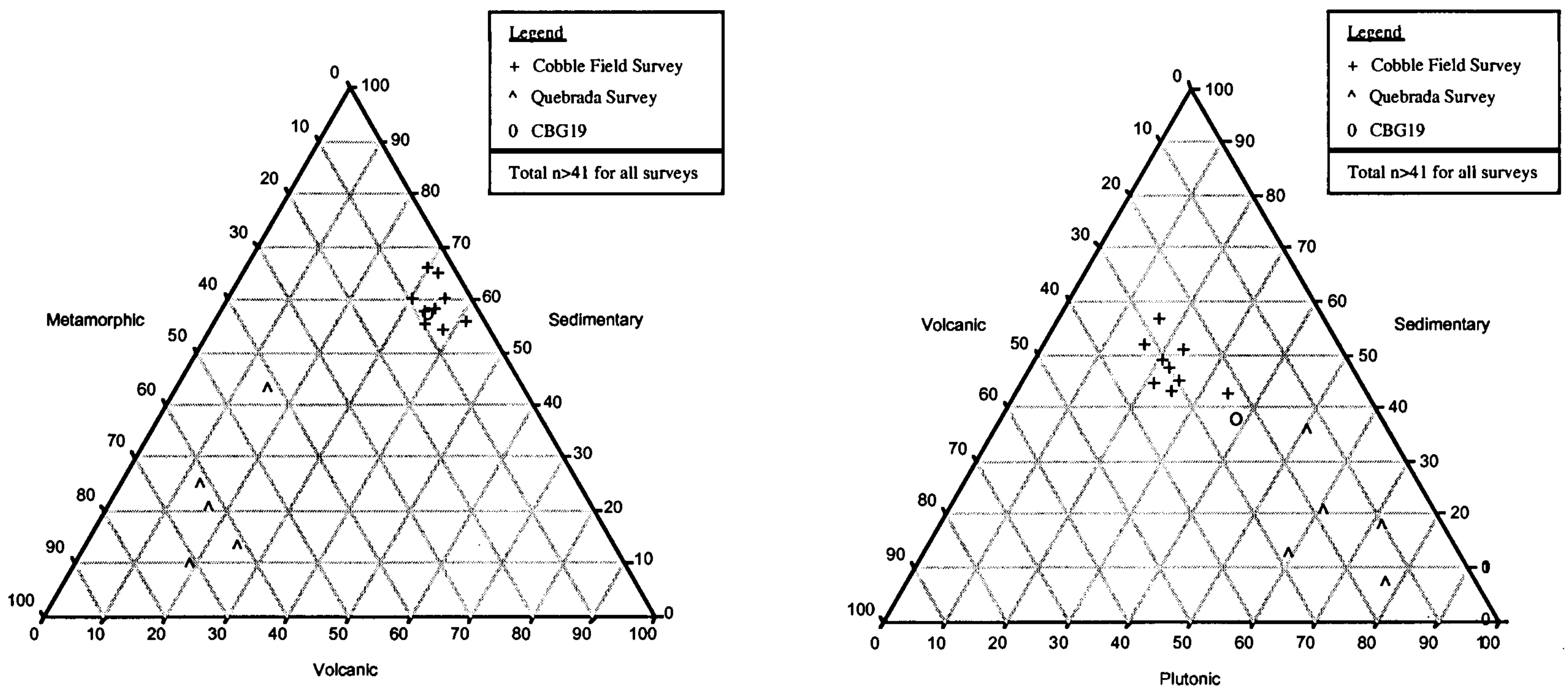

Figure 4.1. Ternary diagrams plotting relative abundance of rock categories from survey locations.

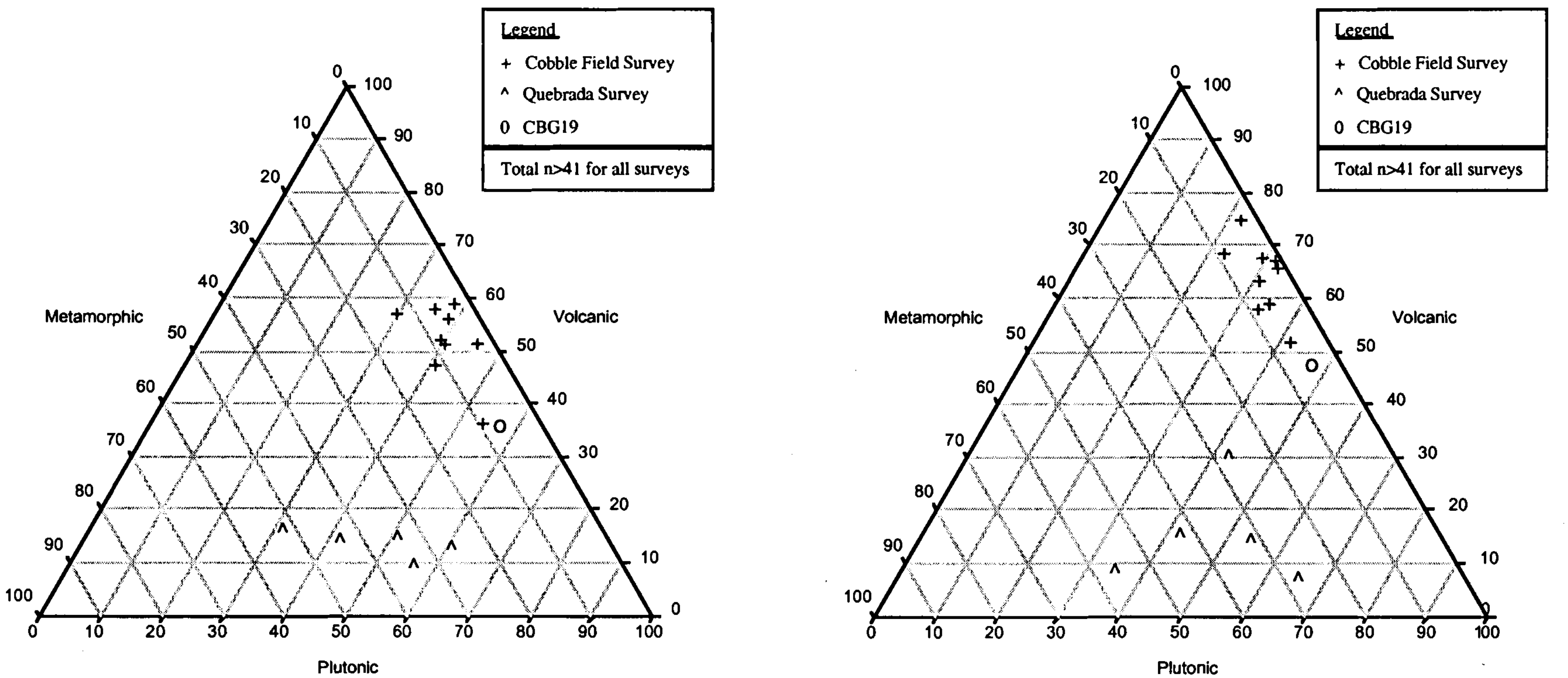

Figure 4.2. Ternary diagrams plotting relative abundance of rock categories from survey locations.

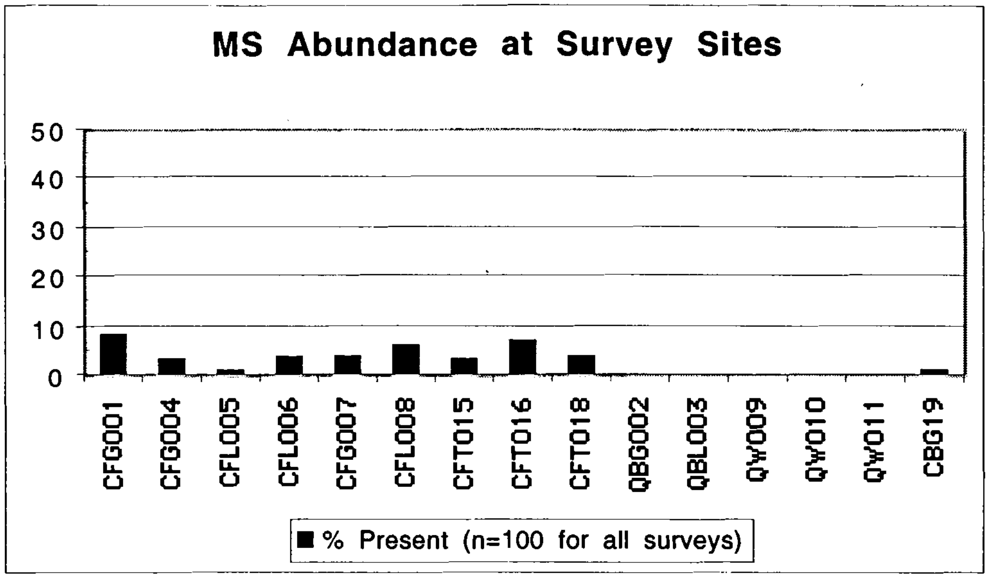

Figure 4.3. MS abundance at the different sourcing survey locations. Y-axis ends at 50%.

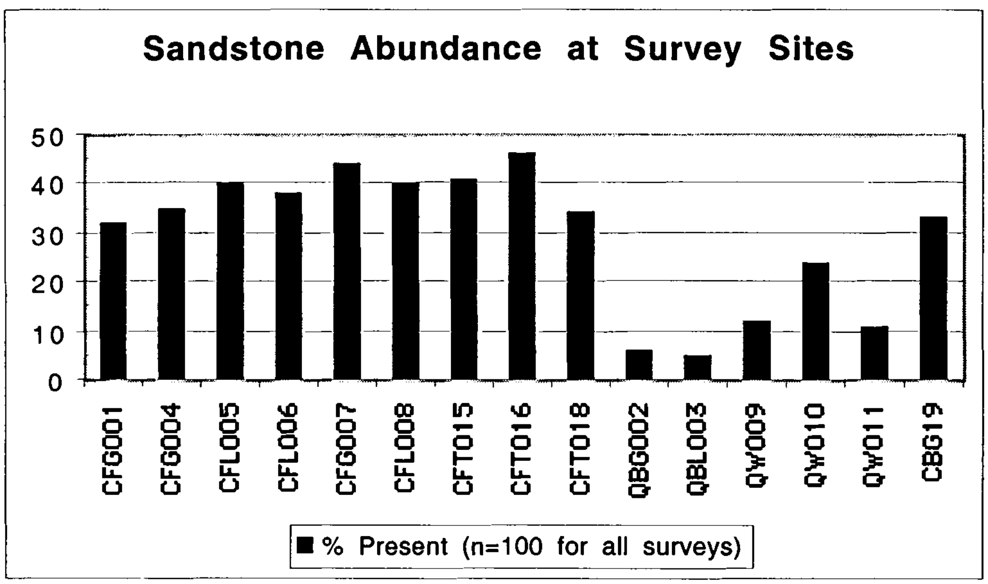

Figure 4.4. Sandstone abundance at the different sourcing survey locations. Y-axis ends at 50%.

Table 4.1 is a summary of rock category data, with computed means and standard deviations for certain grouped data. Totals for individual surveys can be read as either counts or percentages, as 100 samples were collected in each individual survey. The "match with" field lists the linear or grid survey that covered the same area as the survey listed in the "site" field. No trench or quebrada wall survey had a matching survey. Only one survey, a grid survey, was conducted at the CBG019 location. Means and standard deviations were computed for combined cobble field grid surveys, combined cobble field linear surveys, combined cobble field trench surveys, combined quebrada wall surveys, combined linear and grid surveys for the quebrada bed (grouped together), combined quebrada wall bottom (QWB) surveys, and combined quebrada wall top (QWT) surveys. For the QWB combination, only the bottom five meters of each quebrada wall survey were included. For the QWT combination, only the top five meters of each Quebrada wall survey were included. Because QWB and QWT designations represent half of a survey, individual examples (such as QWB of QW010) include 50 cobbles only. Therefore, because there were three quebrada wall surveys, n=150 for all computations.

Table 4.2 represents summary percentages of rocks found to be previously fractured in various survey combinations. The only rock type categories used in this Table were all rock types combined (Total Number), metasomatic rocks (MS), sandstone, sandstone with a break of 5, and basalt. An arbitrary rule was made in which total n had

Table 4.1. Rock category abundance comparison between survey locations.

Site	match with	#Plut.	#Sed.	#Met.	# MS	#Vol.
CFG001	CFL006	22	37	5	9	27
CFG004	CFL005	21	42	2	3	32
CFG007	CFL008	15	46	7	4	28
CFL005	CFG004	23	49	2	1	25
CFL006	CFG001	23	40	7	4	26
CFL008	CFG007	19	44	3	7	27
CFT015		21	43	5	3	27
CFT016		15	51	3	7	24
CFT018		31	38	6	4	20
QBG002	QBL003	30	6	50	0	14
QBL003	QBG002	58	5	26	0	11
CBG19		36	36	5	1	22
QW009		50	12	31	0	7
QW010		38	26	26	0	10
QW011		37	12	39	0	11
Mean of CFG		**19**	**42**	**5**	**5**	**29**
Std. Dev of CBG		4	5	3	3	3
Mean of CFL		**22**	**44**	**4**	**4**	**26**
Std. Dev of CBL		2	5	3	3	1
Mean of CFT		**22**	**44**	**5**	**5**	**24**
Std. Dev. of CFT		8	7	2	2	4
Mean of QW		**42**	**17**	**32**	**0**	**9**
Std. Dev. of QW		7	8	7	0	2
Mean of QBL+G		**44**	**6**	**38**	**0**	**13**
Std. Dev. of QB		20	1	17	0	2
Mean of QWB		**20**	**9**	**16**	**0**	**4**
Std. Dev. of QWB		5	3	5	0	2
Mean of QWT		**21**	**8**	**16**	**0**	**5**
Std. Dev. of QWT		4	6	2	0	2

Note: In all surveys, 100 samples were collected. For the Quebrada wall comparison, surveys were divided into bottom (QWB) and top (QWT) components, and thus these individual surveys represent 50 samples each.

Survey	Total Number	PF%	MS Number	PF%	Sandstone Number	PF%	Sandstone w/break=5 number	PF%
CFG	300	**51%**	16	75%	113	**58%**	77	**57%**
CFT	300	**48%**	14	71%	122	**37%**	82	**32%**
QBG	100	**8%**	0		6		6	
QW	300	**20%**	0		47	**13%**	30	**10%**
CBG19	100	**74%**	0		33	**64%**	19	**58%**
CFT015	100	**47%**	3		41	**22%**	28	**18%**
CFT016	100	**46%**	7		46	**46%**	35	**37%**
CFT018	100	**51%**	4		35	**49%**	19	**42%**

n Must be >/= 10

Note: There were no cases where n >/= 10 for basalt.

Table 4.2. Percentages of materials found during survey work that were previously fractured.

Survey Type	L	S	I	R	n=		Survey Type	L	S	I	R	n=
All Rock Types							***Plutonic + Metamorphic***					
CFG (MEAN)	**8.7**	**3.8**	**6.1**	**6.2**	300		**CFG** (MEAN)	**9.7**	**4.2**	**6.7**	**6.0**	72
(STD. DEV.)	3.2	1.7	2.4	2.2			(STD. DEV.)	4.0	2.1	2.7	2.3	
CFT (MEAN)	**7.5**	**3.2**	**5.2**	**6.6**	300		**CFT** (MEAN)	**7.1**	**3.0**	**4.6**	**6.2**	81
(STD. DEV.)	2.5	1.4	1.8	1.2			(STD. DEV.)	2.2	1.3	1.4	1.1	
QBG (MEAN)	**13.8**	**6.5**	**9.8**	**5.5**	100		**QBG** (MEAN)	**15.0**	**7.0**	**10.6**	**5.2**	80
(STD. DEV.)	6.2	3.1	4.5	2.0			(STD. DEV.)	6.2	3.2	4.7	1.9	
QW (MEAN)	**11.1**	**4.7**	**7.5**	**5.4**	300		**QW** (MEAN)	**11.6**	**4.9**	**7.7**	**5.1**	221
(STD. DEV.)	4.8	2.3	3.3	1.9			(STD. DEV.)	4.7	2.3	3.3	1.9	
CBG19 (MEAN)	**9.7**	**3.8**	**6.5**	**5.8**	100		**CBG19** (MEAN)	**9.5**	**3.8**	**6.5**	**5.7**	41
(STD. DEV.)	4.3	2.3	3.1	1.2			(STD. DEV.)	4.3	2.3	3.2	1.0	
Sandstone	L	S	I	R	n=		***Volcanic***	L	S	I	R	n=
CFG (MEAN)	**8.6**	**3.7**	**6.2**	**6.7**	113		**CFG** (MEAN)	**8.4**	**3.7**	**6.0**	**5.9**	87
(STD. DEV.)	2.8	1.6	2.2	2.0			(STD. DEV.)	2.9	1.7	2.4	2.2	
CFT (MEAN)	**7.6**	**3.2**	**5.4**	**7.0**	122		**CFT** (MEAN)	**7.8**	**3.4**	**5.3**	**6.7**	71
(STD. DEV.)	2.5	1.3	2.0	1.1			(STD. DEV.)	2.5	1.5	1.8	1.2	
QBG (MEAN)	**8.9**	**4.7**	**6.8**	**6.8**	6		**QBG** (MEAN)	**8.6**	**4.4**	**6.9**	**6.9**	14
(STD. DEV.)	2.7	1.7	1.8	2.1			(STD. DEV.)	2.8	1.6	2.7	1.8	
QW (MEAN)	**8.6**	**3.8**	**6.0**	**5.9**	47		**QW** (MEAN)	**11.7**	**5.2**	**8.1**	**7.2**	28
(STD. DEV.)	3.6	1.4	2.3	1.6			(STD. DEV.)	6.0	2.9	3.8	1.2	
CBG19 (MEAN)	**9.8**	**3.8**	**6.5**	**5.8**	33		**CBG19** (MEAN)	**10.0**	**3.9**	**6.8**	**5.9**	22
(STD. DEV.)	4.5	2.4	2.8	1.4			(STD. DEV.)	4.6	2.2	3.7	1.2	
MS	L	S	I	R	n=							
CFG (MEAN)	**6.9**	**2.8**	**4.5**	**5.4**	16							
(STD. DEV.)	1.9	1.3	1.6	2.9								
CFT (MEAN)	**7.5**	**3.3**	**5.0**	**5.7**	14							
(STD. DEV.)	2.0	1.1	1.2	0.9								

Note: Sandstone figures can be used as an estimate for all sedimentary rocks, as sandstone accounted for over 93% of all sedimentary rocks in all surveys.

Table 4.3. Size and shape mean values for rock categories from the sourcing survey locations.

to be ≥10. Because no survey combination produced numbers ≥10 for basalt, its percentage data were not included in this Table.

Table 4.3 represents summary data for the dimensions longest (L), shortest (S), and intermediate (I), as well as roundness (R) for the surveys and rock types listed. Mean values and standard deviations were computed.

Lithic Analysis

Data are summarized and presented in a series of graphs and tables. Complete data Tables, including all observations recorded in the field, are appended (Appendix D), as is a description of the spreadsheet categories (Appendix C).

Table 4.4 presents percentage data for rock type abundance for the various components for the more abundant rock types found at the site. These rock types include metasomatic rocks (or MS rocks – chert, chalcedony, etc.), petrified wood, basalt, sandstone, quartz, and obsidian. All other individual rock types each comprised less than 5% of the material for all components under consideration (the "other" category is the percentage value of their summation), and were not included in the analysis. Although obsidian did not reach 5% for any component, it was included for comparison because of its exotic nature.

Sector	Component	MS	Pet. Wood	Basalt	Sandstone	Quartz	Obsidian	Other	n=
QJ-Sec.I	TP	52%	5%	13%	6%	11%	2%	11%	321
QJ-Sec.II	Above Ind.	59%	12%	10%	5%	5%	3%	6%	577
QJ-Sec.II	Below Ind.	67%	23%	2%	1%	2%	4%	0%	2091
QJ-Sec.I	EHI	47%	5%	14%	8%	8%	2%	16%	128
QJ-Sec.I	EHIIa	35%	4%	7%	36%	3%	1%	14%	240
QJ-Sec.I	EHIIb	32%	8%	5%	31%	5%	0%	19%	74

Table 4.4. Proportions of rock types most frequently used at Quebrada Jaguay.

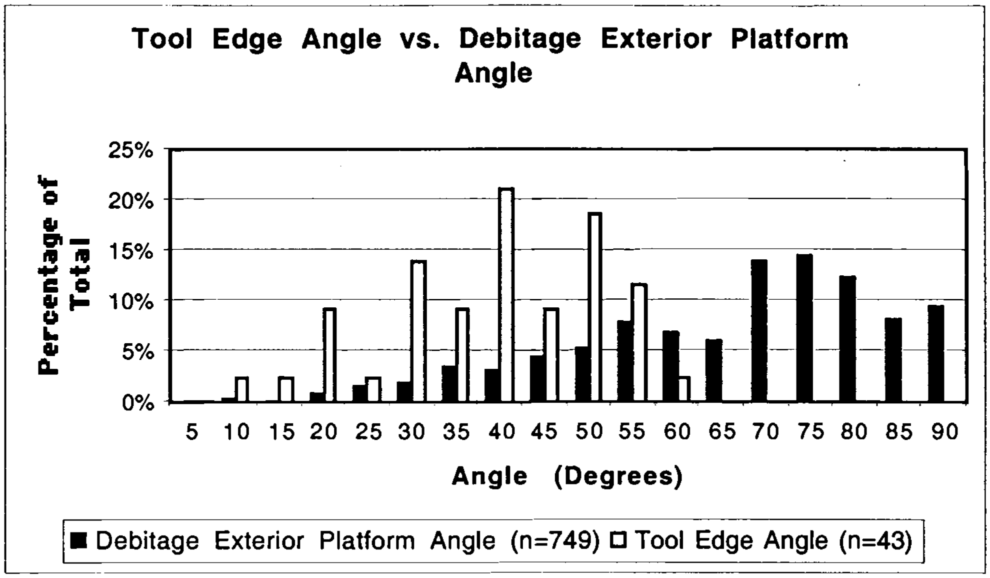

Figure 4.5. Debitage exterior platform angle and tool edge angle distribution for all components from QJ-280 and Quebrada Tacahuay.

Table 4.5. Cortex proportions for different rock types from the various components.

Sector	Component	Rock Type	No Cortex	<50% Cortex	>50% Cortex	n=
QT	TP	MS	95%	5%	0%	98
QJ-Sec.I	TP	MS	81%	16%	3%	57
QJ-Sec.II	Above Ind.	MS	86%	12%	2%	114
QJ-Sec.II	Below Ind.	MS	86%	12%	2%	452
QJ-Sec.II	Above Ind.	Pet. Wood	87%	9%	4%	23
QJ-Sec.II	Below Ind.	Pet. Wood	92%	7%	1%	154
QJ-Sec.I	TP	Basalt	100%	0%	0%	13
QJ-Sec.II	Above Ind.	Basalt	79%	5%	16%	19
QJ-Sec.II	TP	Obsidian	93%	5%	2%	44
QJ-Sec.I	EHI	MS	82%	18%	0%	17
QJ-Sec.I	EHIIa	MS	86%	14%	0%	29
QJ-Sec.I	EHIIb	MS	91%	9%	0%	11
QJ-Sec.I	EHIIa	Sandstone	42%	46%	12%	26

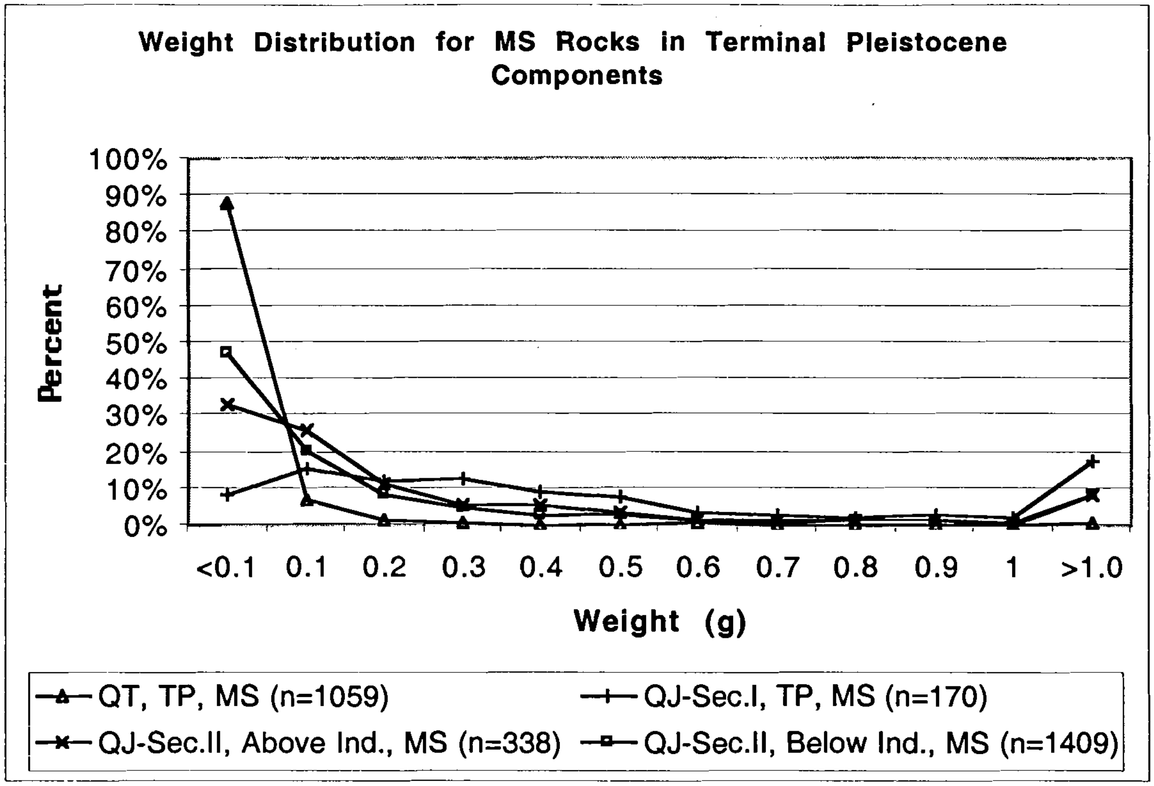

Figure 4.6. Weight distributions for MS debitage from the Terminal Pleistocene.

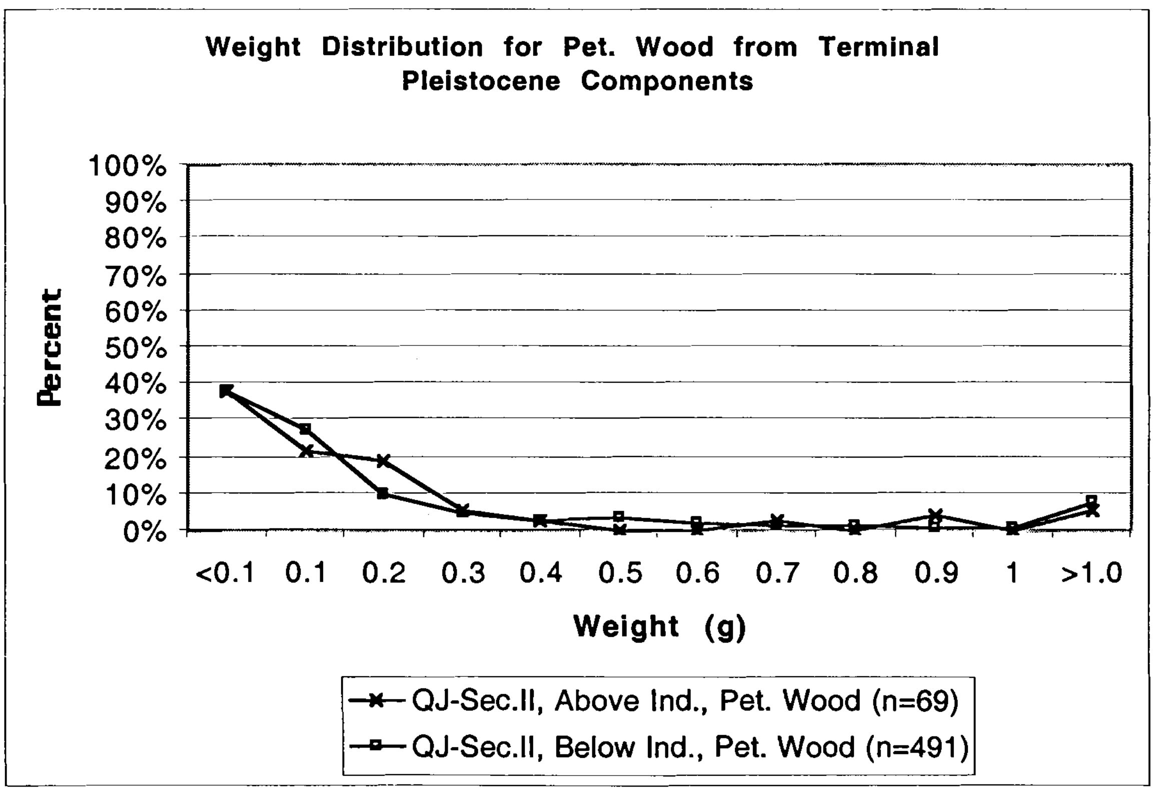

Figure 4.7. Weight distributions for petrified wood from QJ-280, Sector II.

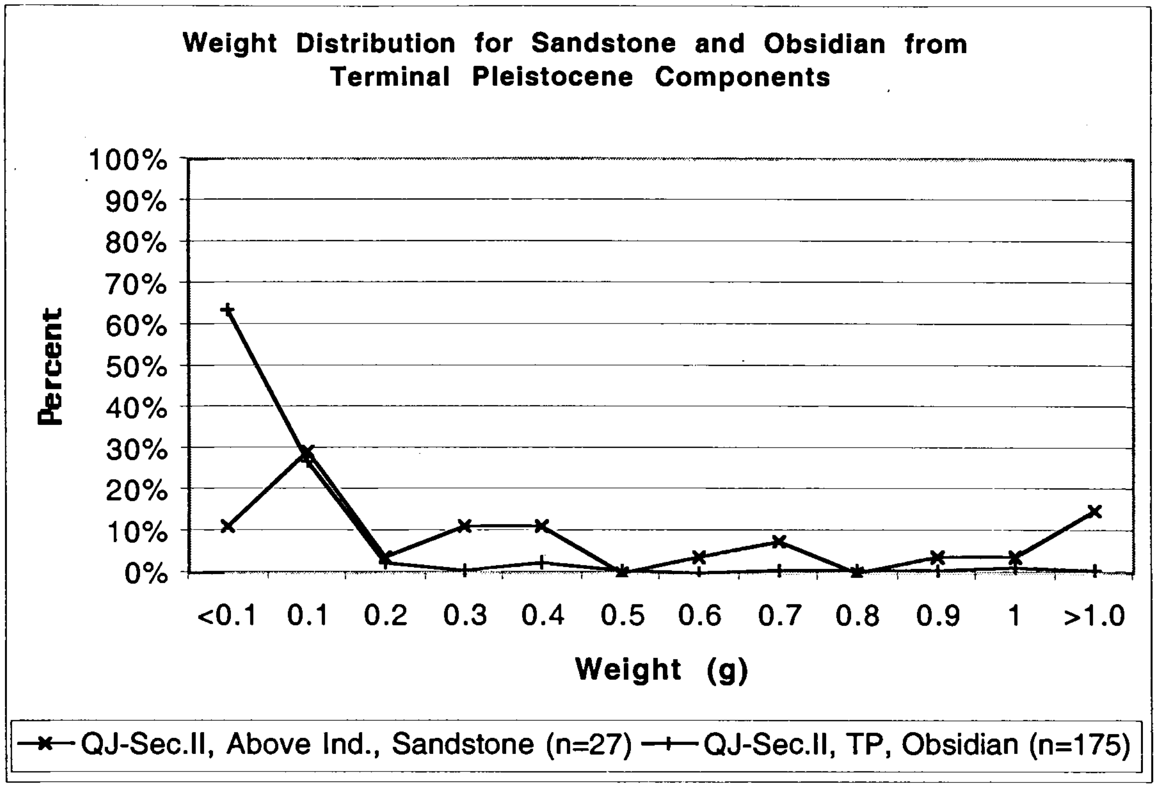

Figure 4.8. Weight distributions for sandstone and obsidian from QJ-280, Sector II.

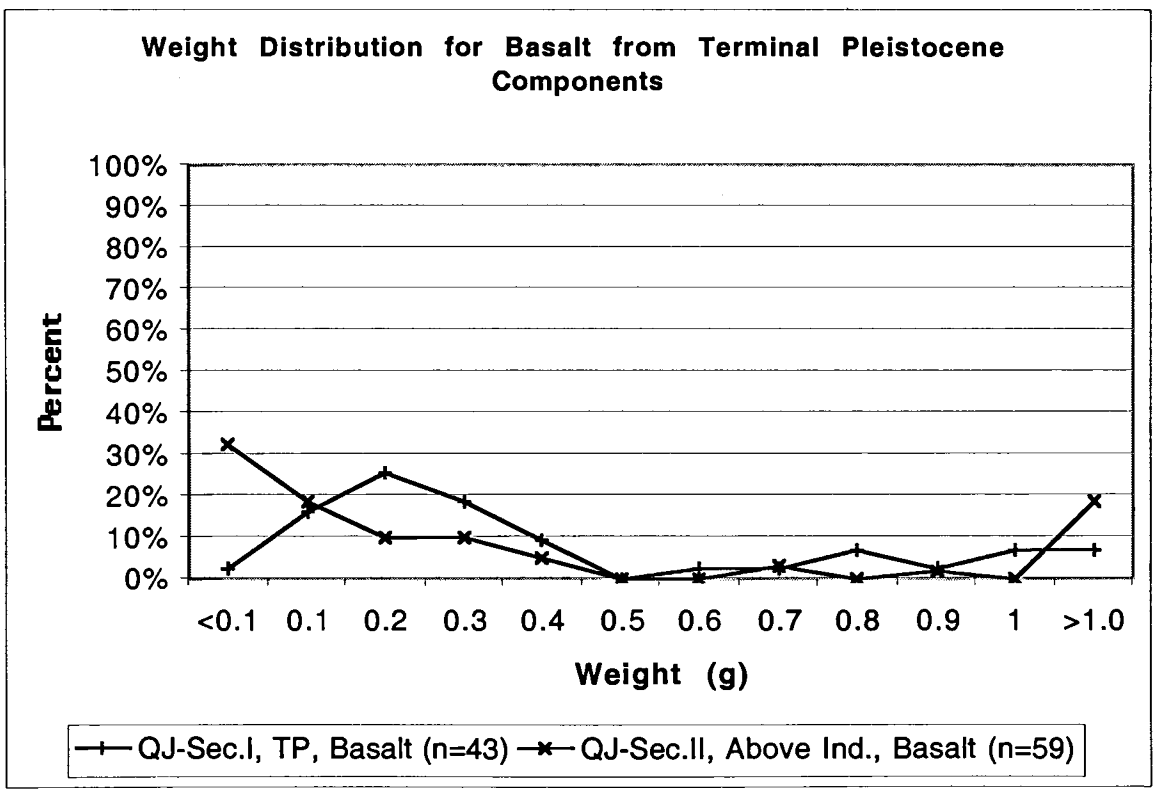

Figure 4.9. Weight distributions for basalt from QJ-280, Terminal Pleistocene.

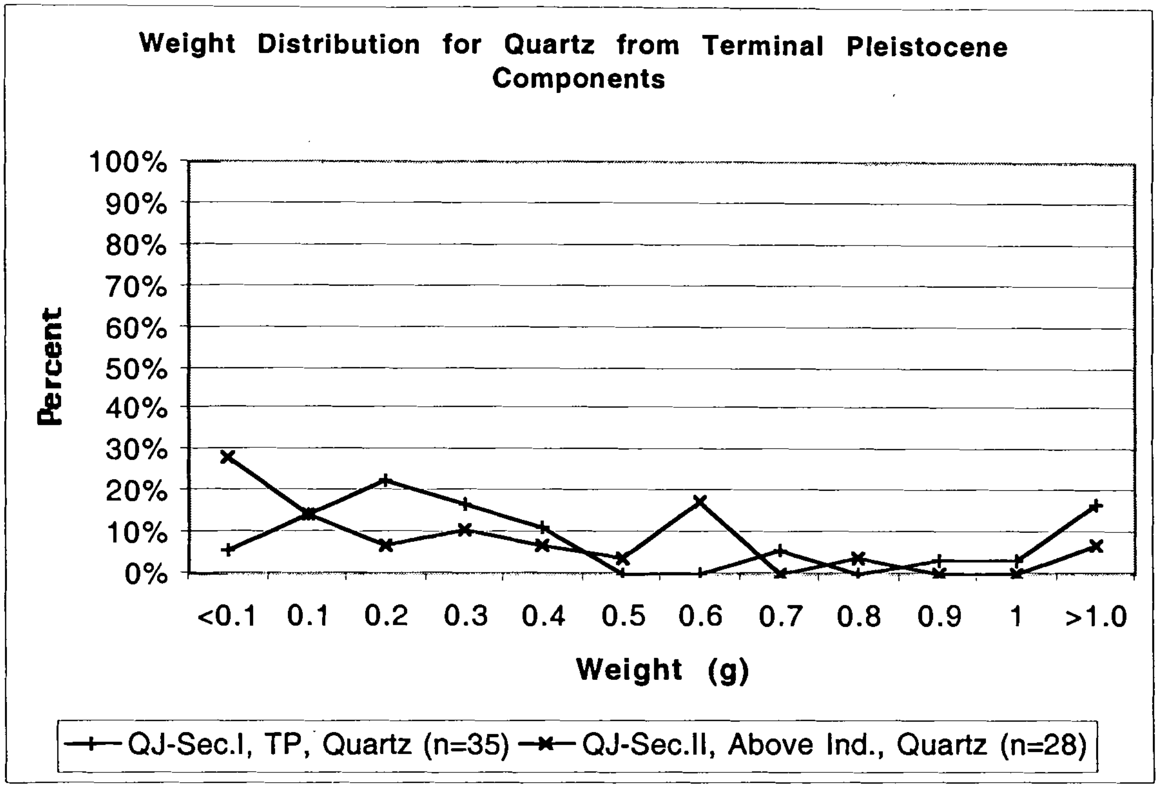

Figure 4.10. Weight distributions for quartz from QJ-280, Terminal Pleistocene.

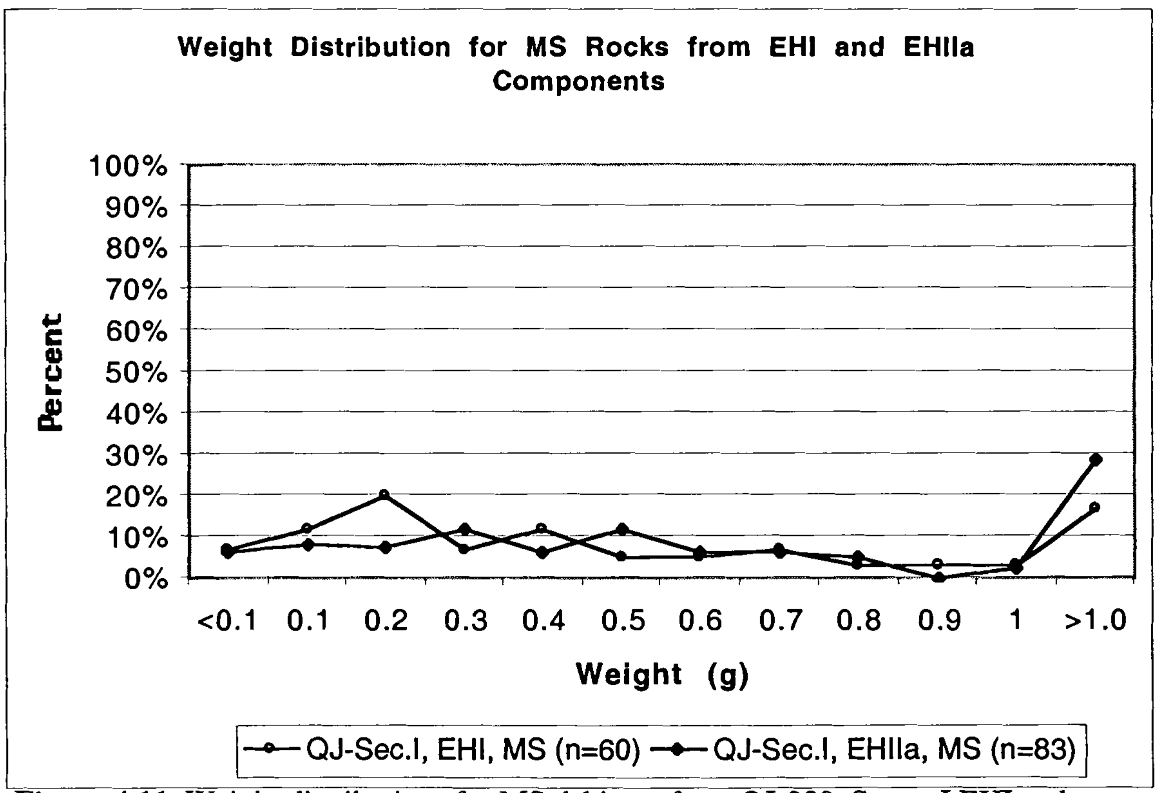

Figure 4.11. Weight distributions for MS debitage from QJ-280, Sector I EHI and EHIIa.

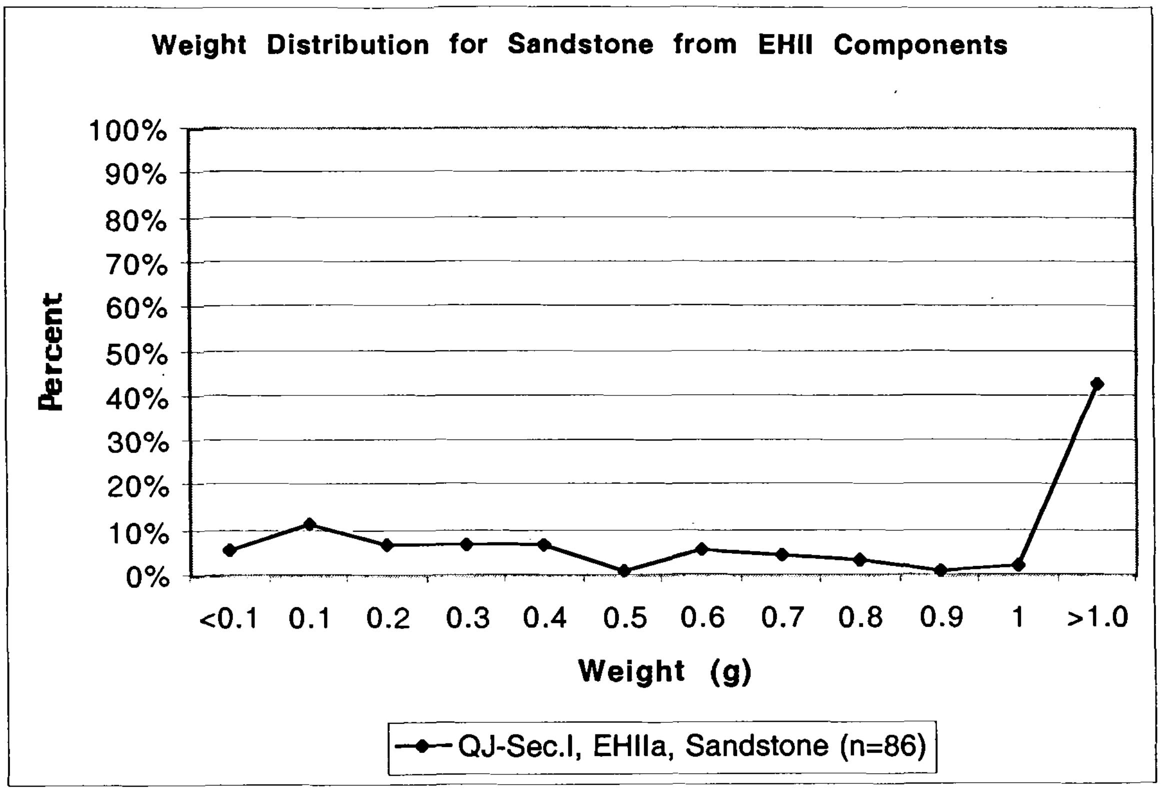

Figure 4.12. Weight distribution for sandstone from QJ-280, Sector I EHIIa.

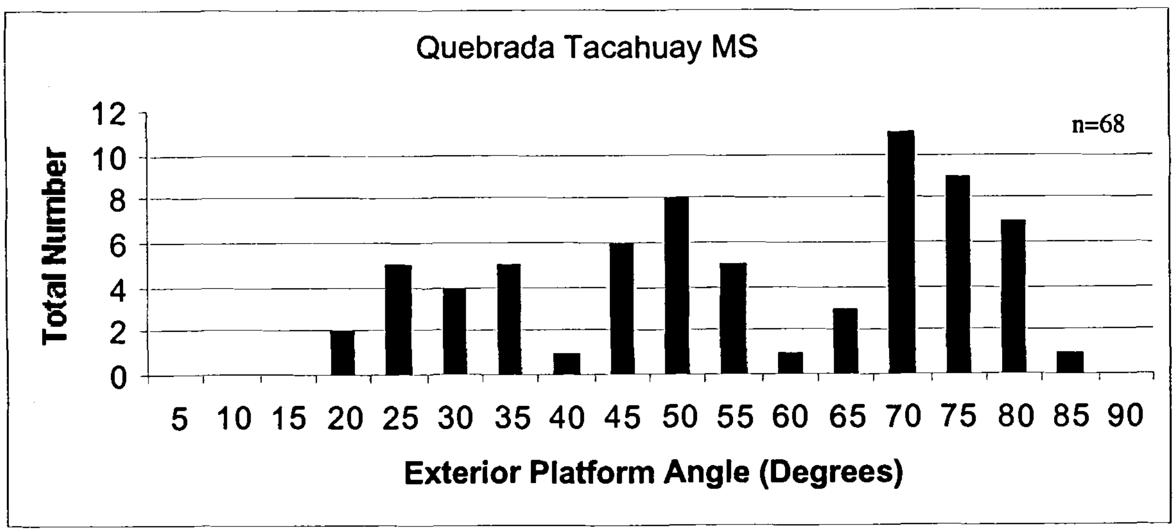

Figure 4.13. Exterior platform angle distribution for debitage from Quebrada Tacahuay.

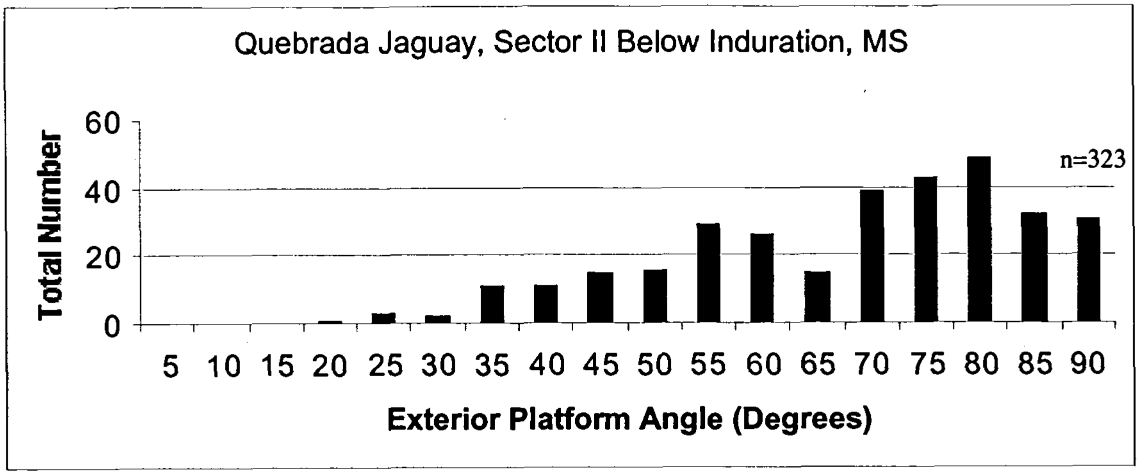

Figure 4.14. Exterior platform angle distribution for MS debitage from Below-Induration.

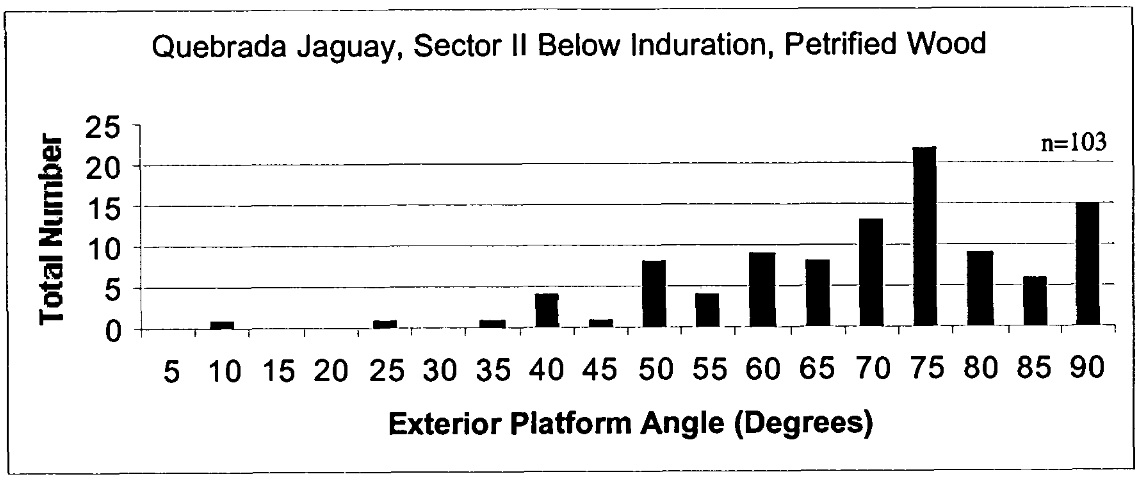

Figure 4.15. Exterior platform angle distribution for petrified wood from Sector II, Below-Induration

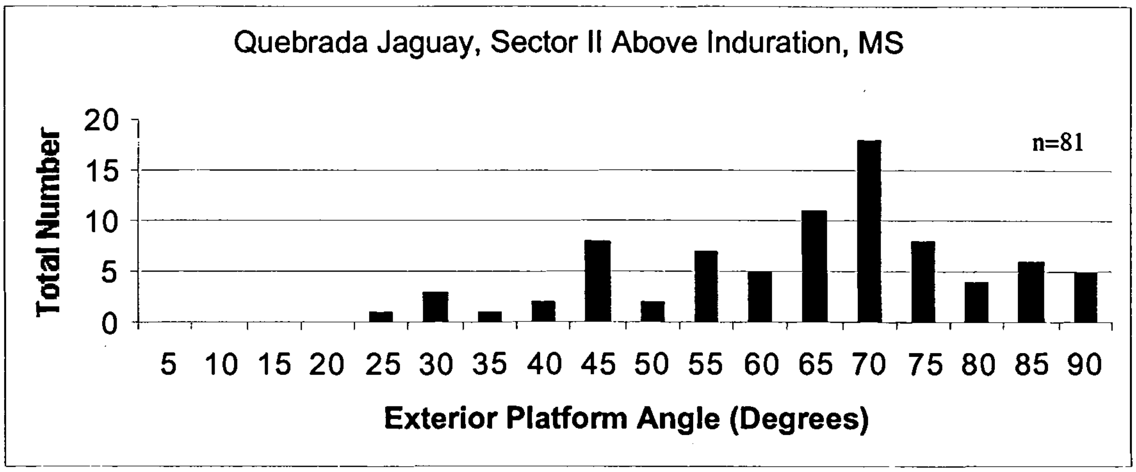

Figure 4.16. Exterior platform angle distribution for MS debitage from Above-Induration.

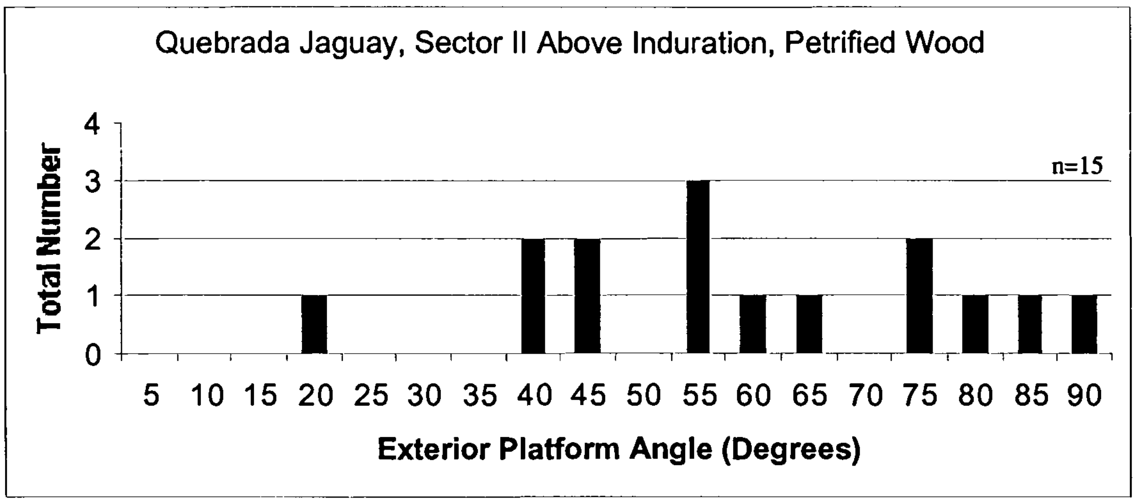

Figure 4.17. Exterior platform angle distribution for petrified wood from Sector II, Above-Induration.

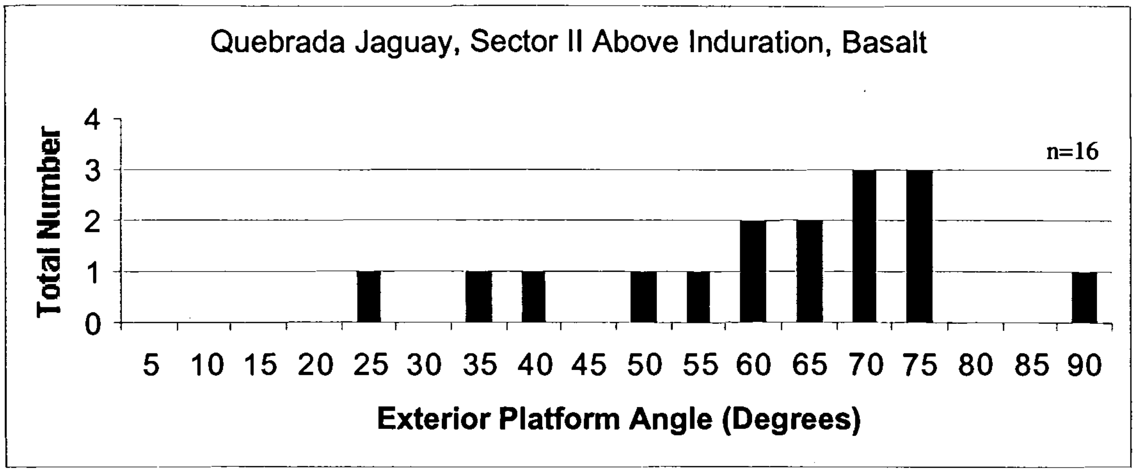

Figure 4.18. Exterior platform angle distribution for basalt from Sector II, Above-Induration.

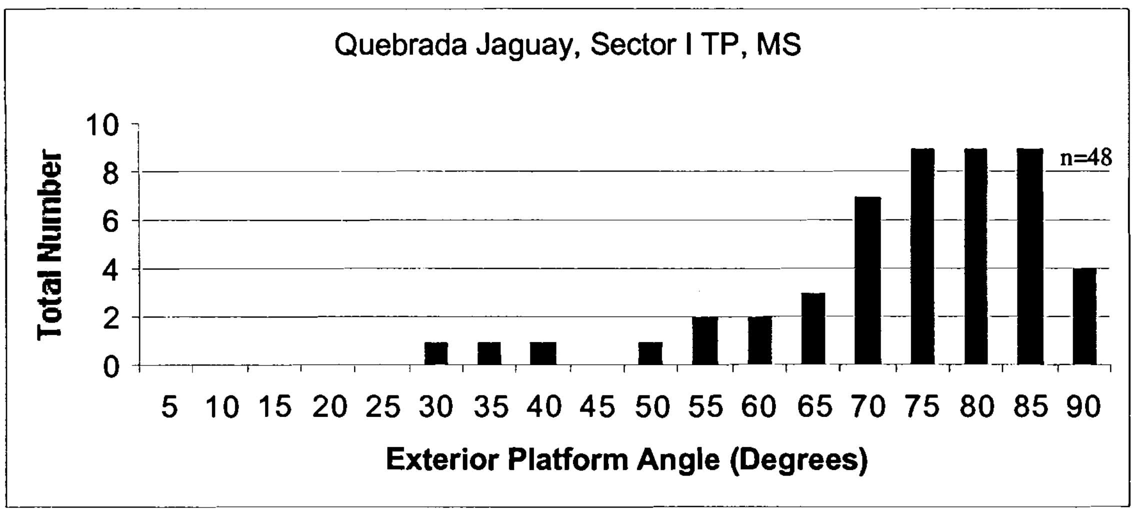

Figure 4.19. Exterior platform angle distribution for MS debitage from QJ-280, Sector I TP.

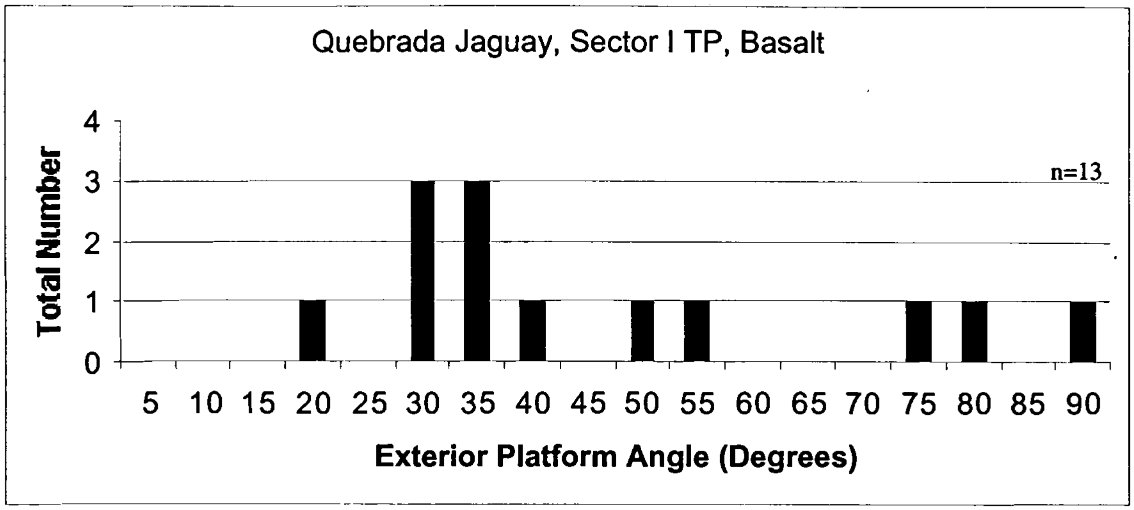

Figure 4.20. Exterior platform angle distribution for basalt from QJ-280, Sector I TP.

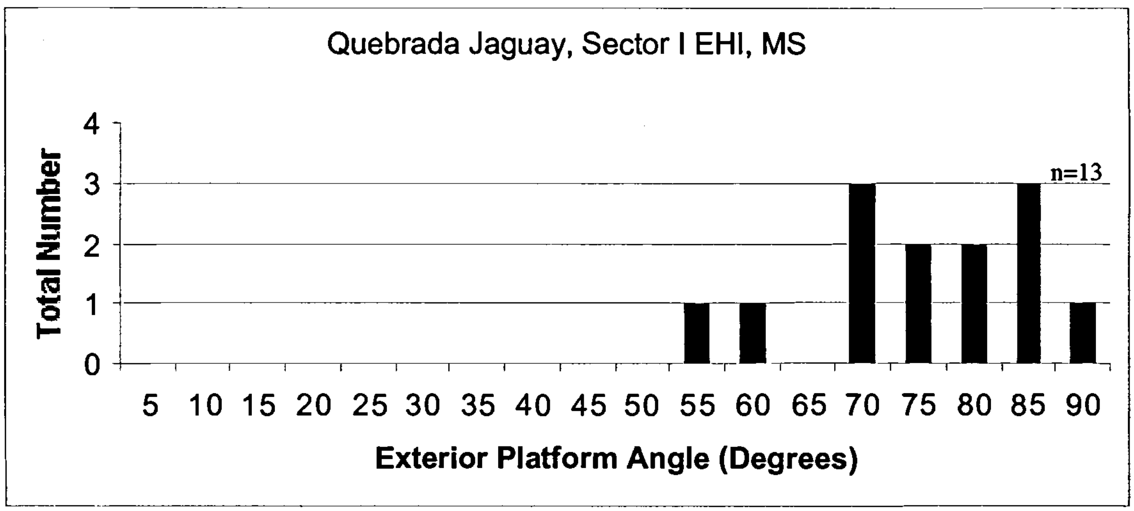

Figure 4.21. Exterior platform angle distribution for MS debitage from QJ-280, Sector I EHI.

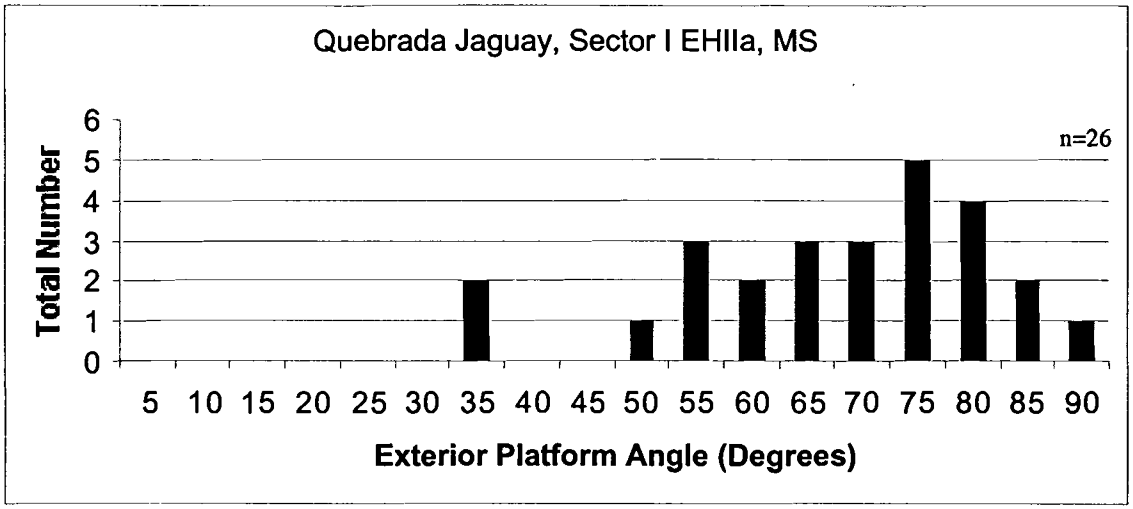

Figure 4.22. Exterior platform angle distribution for MS debitage from Sector I EHIIa.

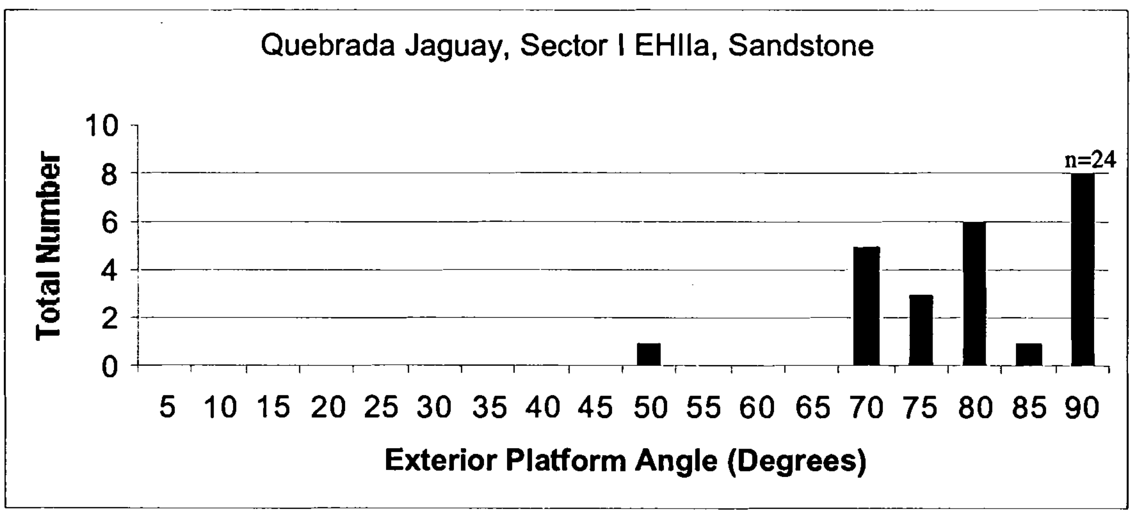

Figure 4.23. Exterior platform angle distribution for sandstone from QJ-280, Sector I EHIIa.

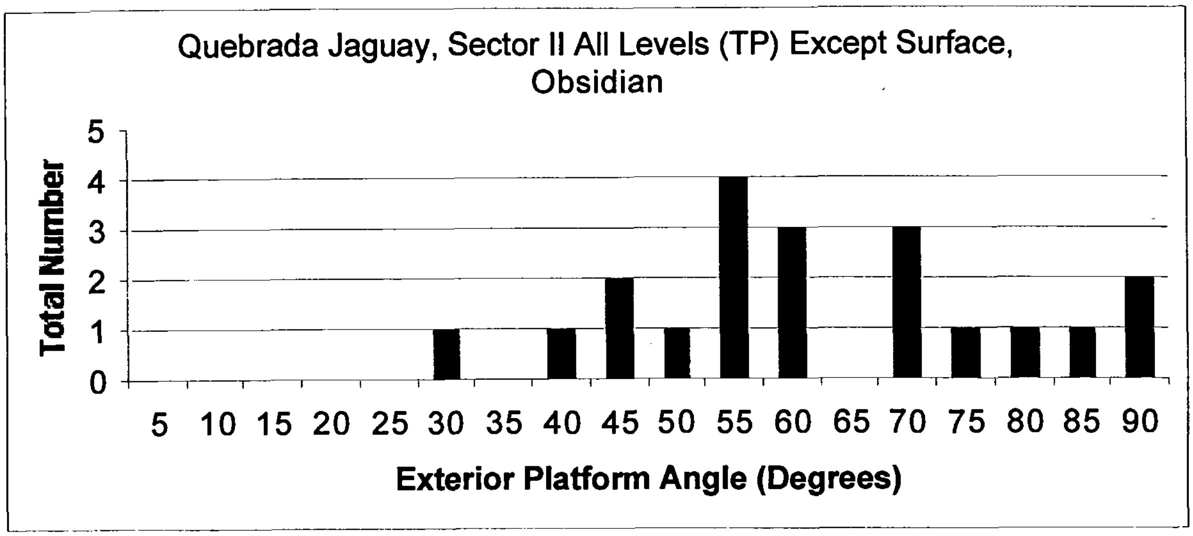

Figure 4.24. Exterior platform angle distribution for obsidian from Terminal Pleistocene.

Table 4.6. Slope and mean weight totals for the different rock types from the various components.

Exterior Platform angle ≥ 60 deg.						
Sector	**Component**	**RT**	**Mean Length(mm)**	**Mean Width(mm)**	**Slope(m)**	**n=**
QT	TP	MS	13.6	10.0	0.54	18
QJ-Sec.I	TP	MS	16.5	13.3	0.40	31
QJ-Sec.II	Above Cal.	MS	10.1	10.1	0.77	35
QJ-Sec.II	Below Cal.	MS	10.8	9.9	0.64	158
QJ-Sec.II	Below Cal.	Pet. Wood	11.5	9.5	0.65	57
QJ-Sec.I	EHIIa	MS	13.8	14.2	0.73	16
QJ-Sec.I	EHIIa	Sandstone	29.0	24.1	0.66	19
Exterior Platform angle < 60 deg.						
Sector	**Component**	**RT**	**Mean Length(mm)**	**Mean Width(mm)**	**Slope(m)**	**n=**
QT	TP	MS	10.9	10.0	0.83	16
QJ-Sec.II	Above Cal.	MS	7.2	6.3	0.52	16
QJ-Sec.II	Below Cal.	MS	10.3	9.4	0.75	57
QJ-Sec.II	Below Cal.	Pet. Wood	12.1	7.5	0.43	14

Figures 4.25, 4.26, 4.27, 4.28, 4.29, 4.30, 4.31, 4.32, 4.33, 4.34, and 4.35 are a series of scatterplots showing width plotted against length for the different rock types from the various components. Only whole flakes with platforms are considered. Also, only samples with a size of $n \geq 10$ were included. I plotted a regression line for each of the graphs, and the slopes (m) for the lines are given. The slope of the line gives us one number to consider relative length vs. width. The included Pearson Correlation (r) gives a measure of the "goodness of fit" of the points to the regression line. Values of 0.7 to 1 are considered to be strong correlations, 0.4 to 0.7 are moderate correlations, and 0 to 0.4 are weak correlations (Roscoe 2000). Table 4.6 summarizes slopes from all scatterplots, and also includes mean length and width figures.

Table 4.7 presents percentage summaries for platform and flake attributes for various rock types from the different components. Summaries are divided by exterior platform angle, where flakes having an exterior platform angle of ≥60° are considered separately from flakes having an exterior platform angle of <60°. The category DSF+FP includes flakes that had both dorsal surface faceting and faceted platforms. The category DSF+FP+DSCorGPE includes flakes that had both dorsal surface faceting and faceted platforms, and also had either dorsal surface chipping or preparation (DSC) or platform edge grinding (GPE). For this table, all whole and broken flakes with measurable platforms were considered. Only samples with a size of $n \geq 10$ were included.

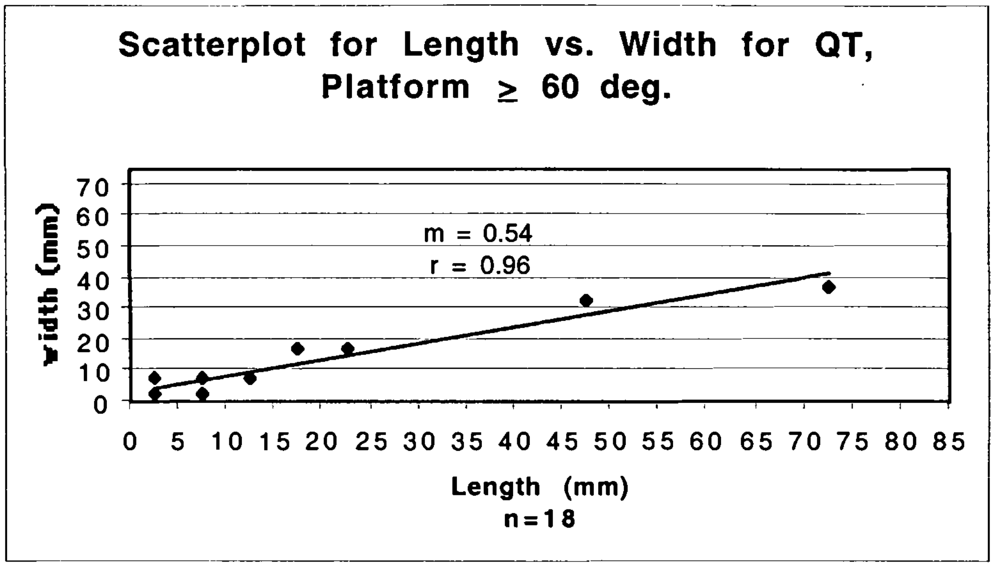

Figure 4.25. Graph for Quebrada Tacahuay MS debitage showing length plotted against width with included slope (m) and Pearson Correlation (r) values.

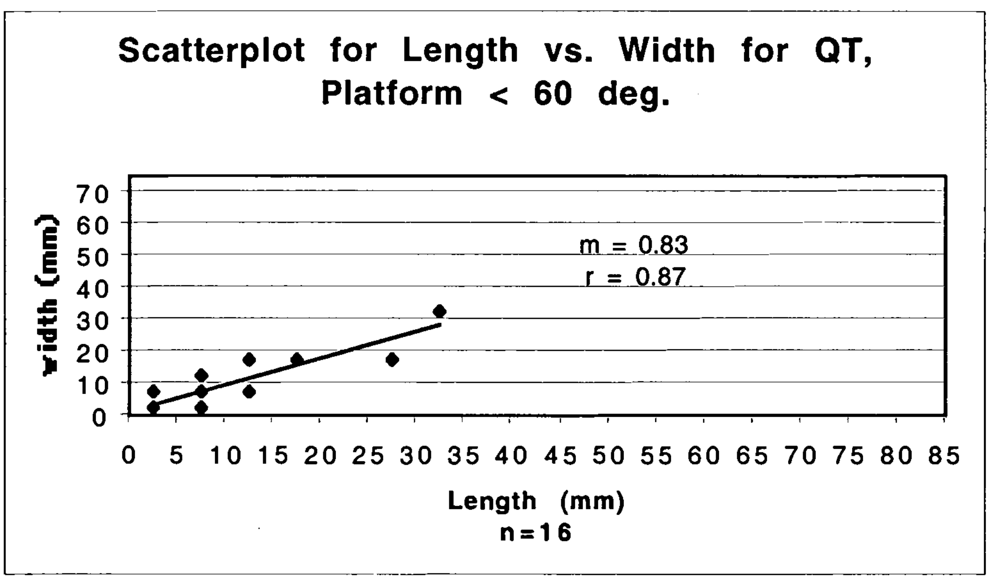

Figure 4.26. Graph for Quebrada Tacahuay MS debitage showing length plotted against width with included slope (m) and Pearson Correlation (r) values.

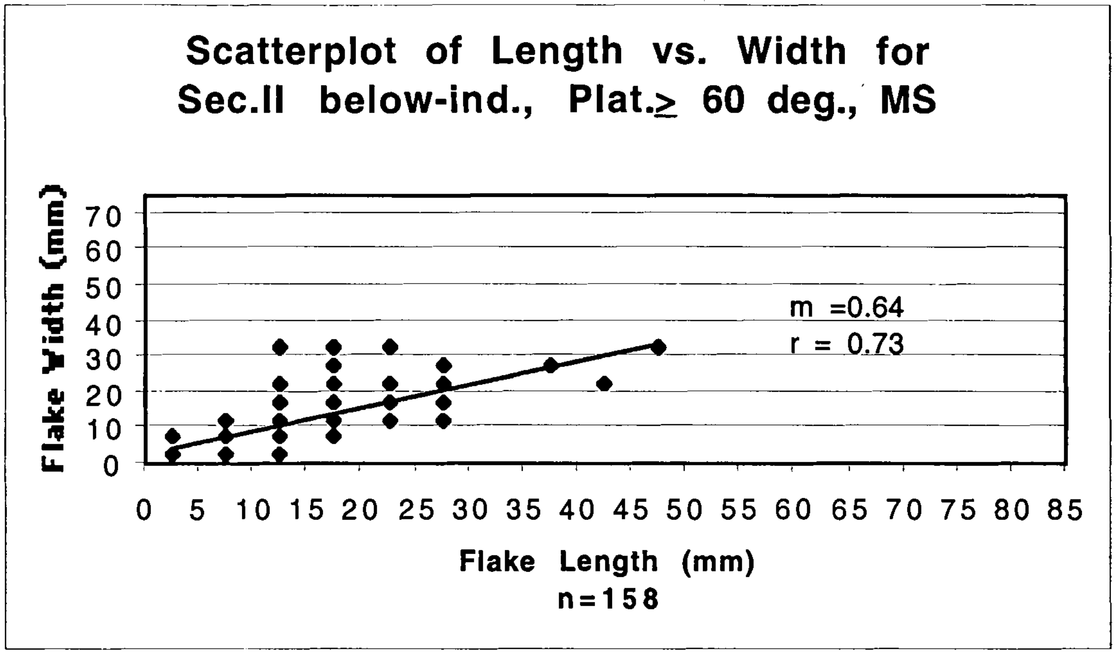

Figure 4.27. Graph for Below-Induration MS debitage showing length plotted against width with included slope (m) and Pearson Correlation (r) values.

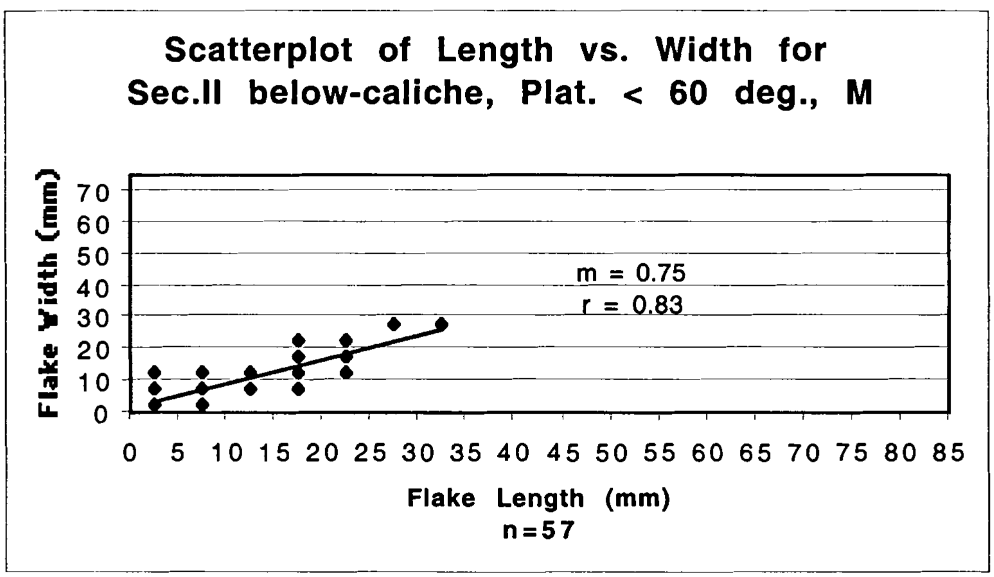

Figure 4.28. Graph for Below-Induration MS debitage showing length plotted against width with included slope (m) and Pearson Correlation (r) values.

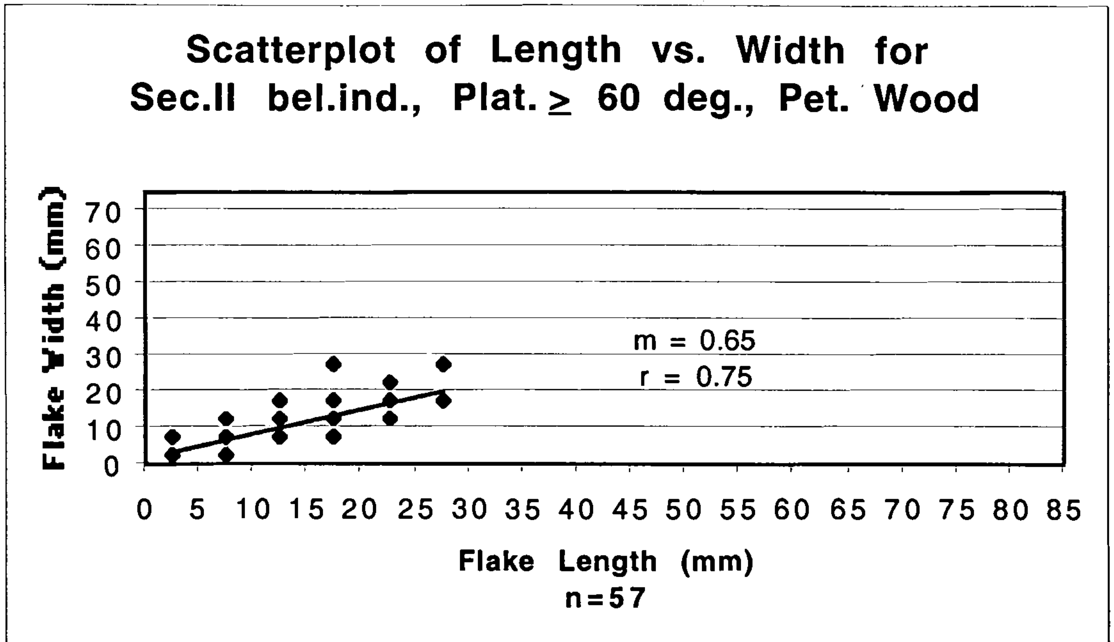

Figure 4.29. Graph for Below-Induration petrified wood debitage showing length plotted against width with included slope (m) and Pearson Correlation (r) values.

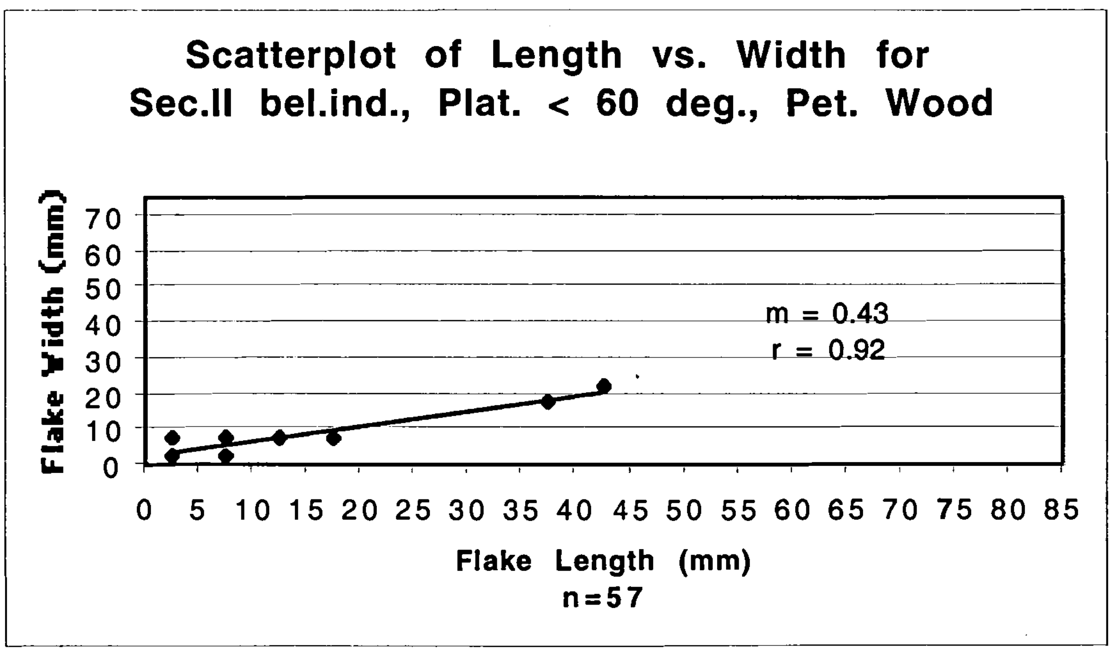

Figure 4.30. Graph for Below-Induration petrified wood debitage showing length plotted against width with included slope (m) and Pearson Correlation (r) values.

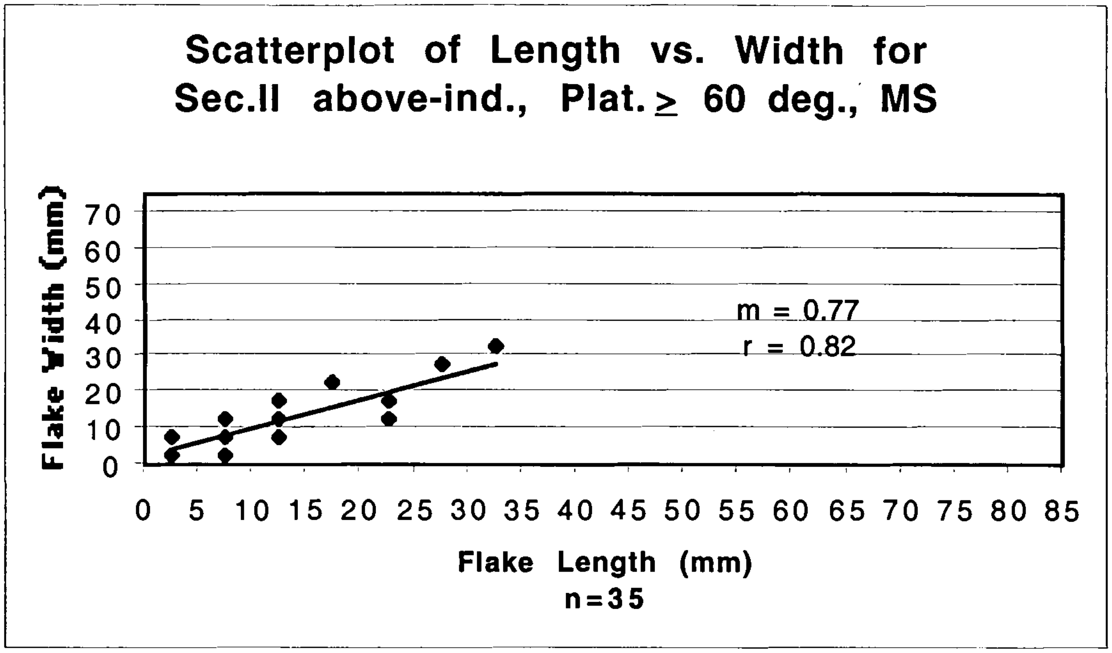

Figure 4.31. Graph for Above-Induration MS debitage showing length plotted against width with included slope (m) and Pearson Correlation (r) values.

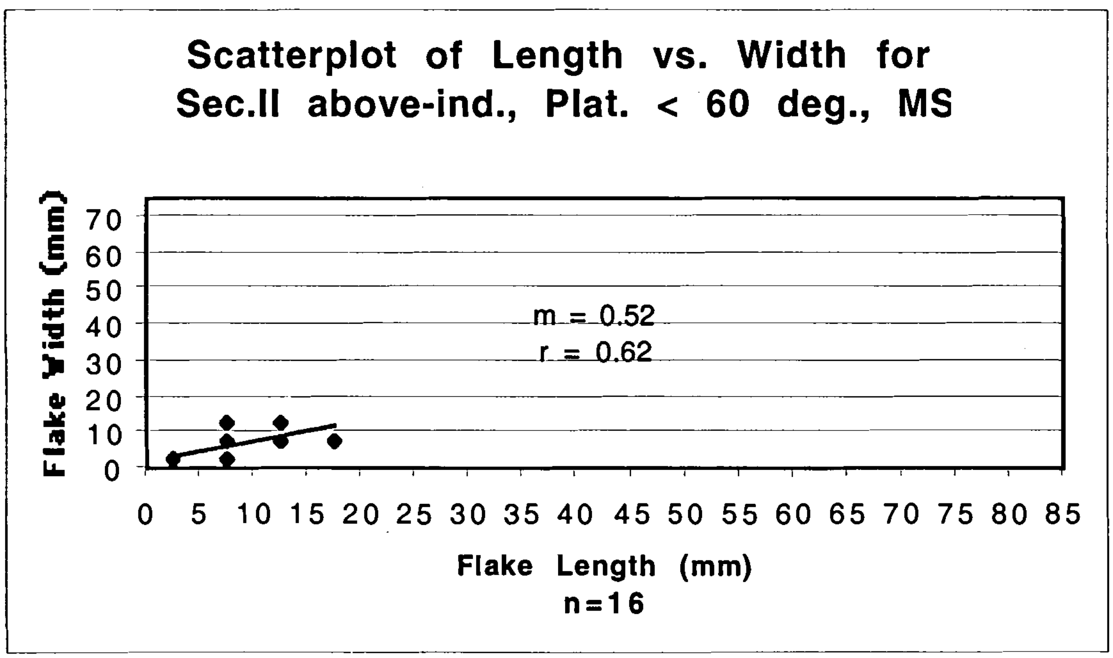

Figure 4.32. Graph for Above-Induration MS debitage showing length plotted against width with included slope (m) and Pearson Correlation (r) values.

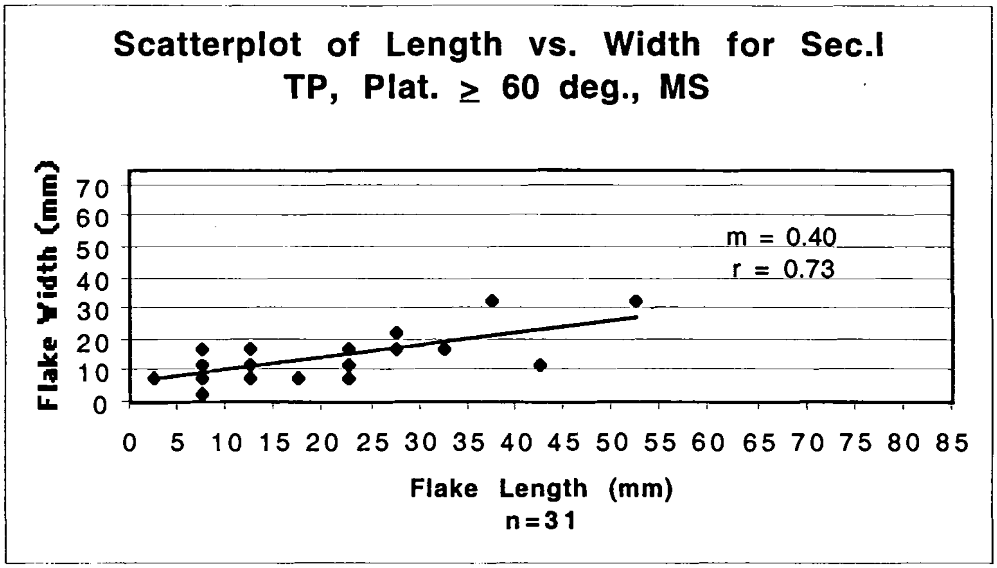

Figure 4.33. Graph for Sec. I TP MS debitage showing length plotted against width with included slope (m) and Pearson Correlation (r) values.

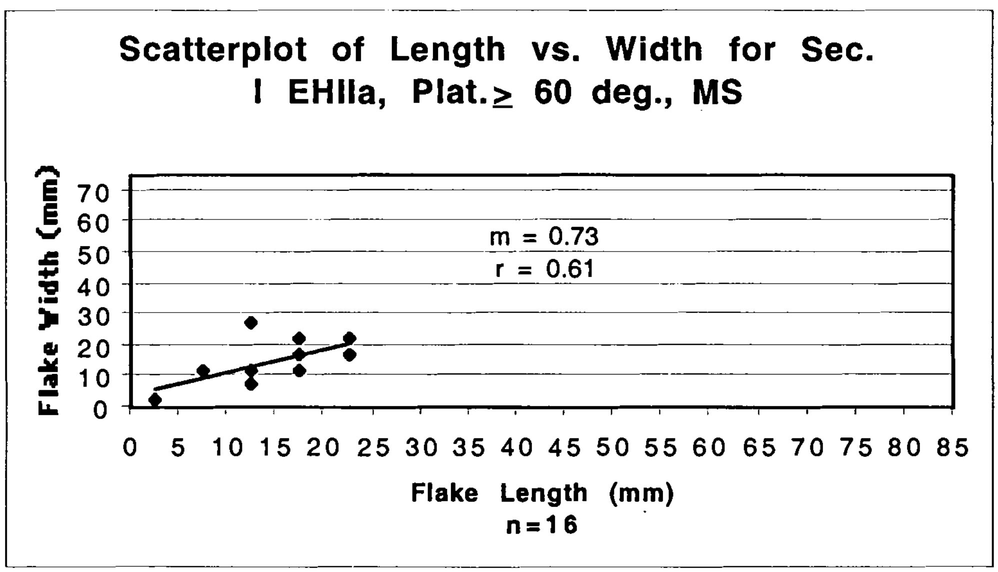

Figure 4.34. Graph for EHIIa MS debitage showing length plotted against width with included slope (m) and Pearson Correlation (r) values.

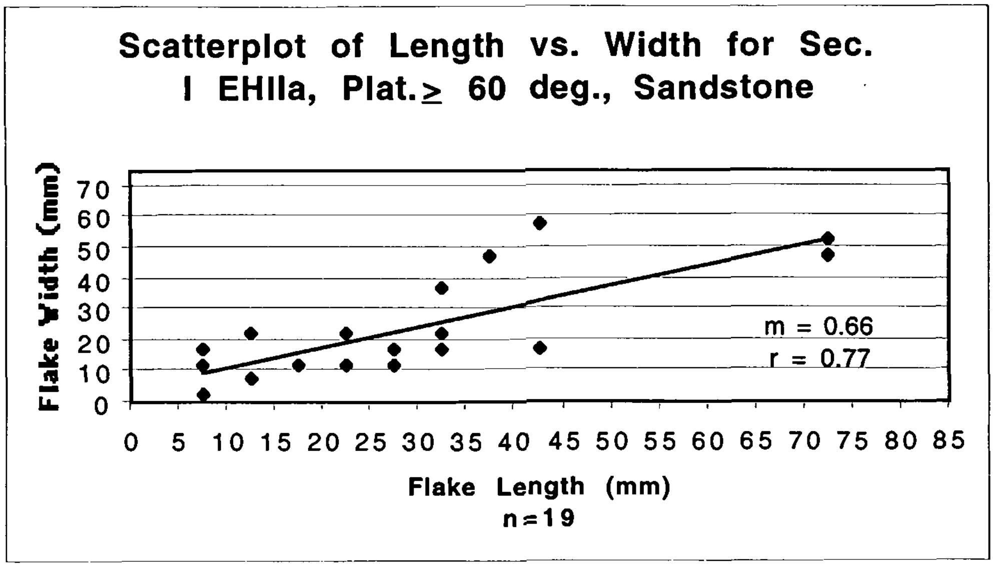

Figure 4.35. Graph for EHIIa sandstone debitage showing length plotted against width with included slope (m) and Pearson Correlation (r) values.

Exterior Platform angle ≥ 60 deg.									
Area	**Component**	**RT**	**GPT(%)**	**GPD(%)**	**FP(%)**	**DSF(%)**	**DSF+FP(%)**	**DSF+FP+GPDorGPT(%)**	**n=**
QT	TP	MS	3%	28%	16%	59%	9%	3%	32
QJ-Sec.I	TP	MS	12%	55%	26%	79%	14%	7%	42
QJ-Sec.II	Above Cal.	MS	9%	28%	19%	60%	12%	9%	57
QJ-Sec.II	Below Cal.	MS	14%	22%	25%	64%	17%	9%	235
QJ-Sec.II	Below Cal.	Pet. Wood	15%	17%	21%	68%	15%	7%	82
QJ-Sec.II	Above Cal.	Basalt	0%	27%	18%	18%	0%	0%	11
QJ-Sec.II	TP	Obsidian	9%	18%	18%	73%	18%	0%	11
QJ-Sec.I	EHI	MS	25%	42%	42%	100%	42%	25%	12
QJ-Sec.I	EHIIa	MS	5%	35%	1%	95%	30%	5%	20
QJ-Sec.I	EHIIa	Sandstone	0%	26%	0%	65%	0%	0%	23
Exterior Platform angle < 60 deg.									
Area	**Component**	**RT**	**GPT(%)**	**GPD(%)**	**FP(%)**	**BTF(%)**	**BTF+FP(%)**	**BTF+FP+GPDorGPT(%)**	**n=**
QT	TP	MS	0%	42%	17%	69%	11%	6%	36
QJ-Sec.II	Above Cal.	MS	17%	29%	33%	58%	29%	17%	24
QJ-Sec.II	Below Cal.	MS	26%	34%	31%	70%	27%	19%	88
QJ-Sec.I	TP	Basalt	0%	60%	0%	80%	0%	0%	10
QJ-Sec.II	Below Cal.	Pet. Wood	45%	35%	35%	55%	20%	20%	20
GPT=Ground Platform Top, GPD=Ground Platform Dorsal, FP=Faceted Platform, DSF=Dorsal Surface Facets									

Table 4.7. Platform attribute data for the different rock types from the various components.

Table 4.8 represents total counts of tools, separated by component and rock type. Edge angle (range) is also included in this table.

Sector	Component	Rock Type	Bif.	Bif. (B)	BM	Unif.	Unif. (B)	UF	Other	Edge Angle (Range)
QT	TP	MS	0	0	1	0	2	4	0	10-50 deg.
QJ-Sec. I	TP	MS	0	4	1	0	1	0	0	30-55 deg.
QJ-Sec. II	Above Ind.	MS	1	2	0	0	1	1	0	30-45 deg.
QJ-Sec. II	Below Ind.	MS	0	1	0	0	1	1	0	25-60 deg.
QJ-Sec. II	Induration	MS	0	2	1	0	0	2	1	40-55 deg.
QJ-Sec. I	TP	Pet. Wood	0	0	0	0	0	2	0	15-45 deg.
QJ-Sec. II	Below Ind.	Pet. Wood	0	3	0	0	0	0	0	30-40 deg.
QJ-Sec. I	TP	Obsidian	0	1	0	0	0	0	0	35 deg.
QJ-Sec. II	Above Ind.	Basalt-F. Gr.	0	1	0	0	0	0	0	55 deg.
QJ-Sec. I	EHI	MS	0	2		2	0	1	0	30-45 deg.
QJ-Sec.I	EHIIa	MS	0	1	0	0	1	1	0	45-55 deg.
QJ-Sec.I	EHIIa	Pet. Wood	0	0	0	0	1	0	0	30 deg.
QJ-Sec.I	EHIIb	Pet. Wood	0	0	0	0	0	1	0	25 deg.
Note: (B) stands for "broken", BM for "bifacially modified", and UF for "utilized flake".										

Table 4.8. Tool count totals for the various components with their associated edge angle range.

Chapter 5: Interpretation and Discussion

Lithic technology is understood herein to be a problem solving process involving an initial need for an implement with subsequent raw material acquisition, reduction practices, tool use, possible resharpening, and finally discard and abandonment. Understanding this process in its totality requires a research design that includes quarry investigation, study of debitage, which leads to inferences about reduction practices, and study of formal tools recovered from the site. Using techniques described in the methodology chapter, lithics from the sites of Quebrada Jaguay and Quebrada Tacahuay were subject to an intensive analysis involving quarry (except for QT), debitage, and formal tool study. Using these lines of inquiry, I will develop a hypothesis that does not unequivocally infer the activities practiced by the inhabitants of Quebrada Jaguay, but that does agree with inferences from other data collected in the field. This type of analysis is by nature subjective, and has been separated from the Results chapter of this thesis, where the data have been presented as objectively as possible.

Sourcing Surveys

During survey work, we located two outcrops of pebbles, cobbles, and boulders within 3 km of QJ-280. One of these outcrops was a "cobble field" located to the west of the site (CF prefix), and the other was an outcrop of clasts to the north, further up the quebrada (CBG019). Figure 3.1 shows the locations of both of these sites. The CF and

CBG019 locations are eroded directly from the underlying Camaná Formation, which is described by Pecho and Morales (1969)(Figure 5.1). The Camaná Formation is Miocene/Oligocene in age and consists of arkose sandstones and clays, cream and yellowish white, intercalated with shell-bearing sandstones, coquinas, and conglomerate lenses. The Camaná formation also contains abundant micro and macro-fauna. The original bedrock source of Camaná Formation conglomerate clasts is not known, and may no longer be exposed.

The quebrada bed itself was also a likely source of raw material for the inhabitants of QJ-280. Because the Quebrada is still active and flows seasonally, it continues to transport clasts from locations upstream. The Precambrian rocks of the Complejo Basal de la Costa (Coastal Basement Complex) are the likely bedrock source of the gneiss and diorite clasts found within the quebrada bed. Included within this formation are intrusives consisting of red granite and other clasts derived from pegmatite dikes (see Figure 5.1). Mesozoic diorites and granodiorites are also intrusive to this formation. The source of the volcanic rocks found within the quebrada bed is most likely the Moquegua Formation (Mio-Pliocene), which consists of conglomerates in a sandy matrix intercalated with sandstones, mudstones, tuff banks, and grey colored tuffacious sands. Also, there is arkose intercalated with chocolate or reddish clays, with lenses of fine conglomerates and layers of gypsum (Pecho and Morales1969). These deposits are being actively reworked and fluvially transported within the quebrada.

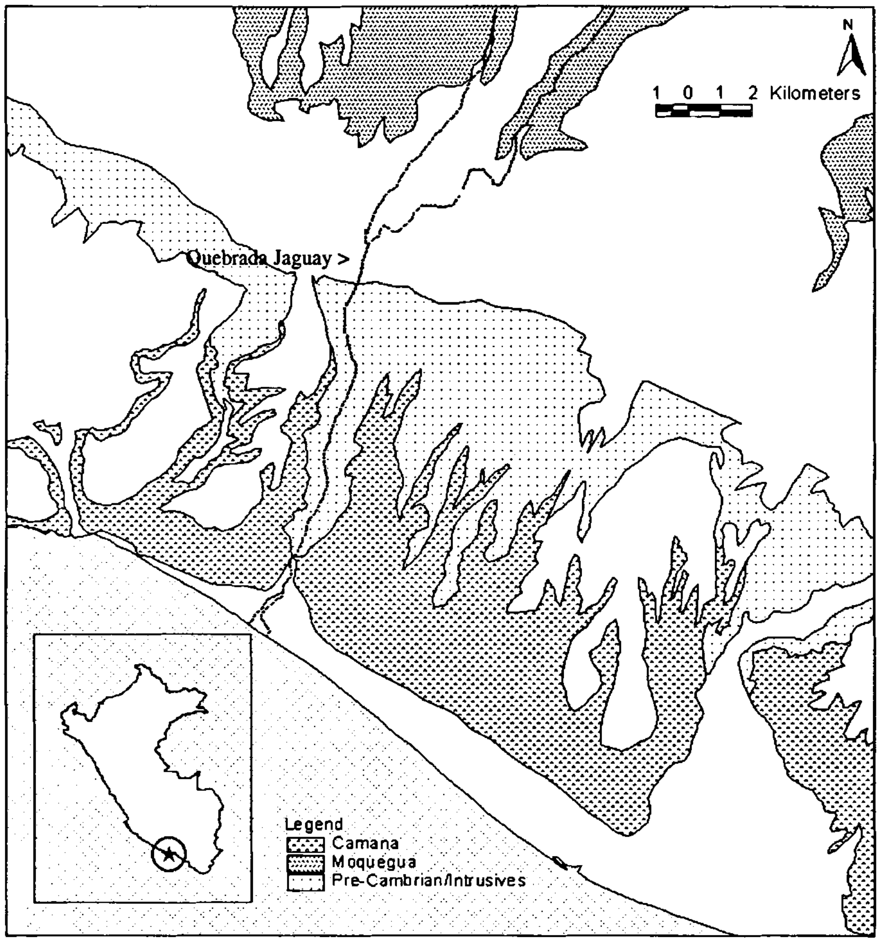

Figure 5.1. Map of QJ-280 area showing major geologic formations discussed in text. All non-patterned areas belong to geologic formations not discussed in text. Adapted from Pecho and Morales (1969).

While the contents of the quebrada bed may have been naturally altered since prehistoric times due to continued fluvial erosion and deposition, it is unlikely that the cobble field locations were naturally altered. Furthermore, because we sampled the wall and the bed of the quebrada, we have a good idea of its composition in both present times and in the past. At the cobble field locations, the lack of ventifacts means that eolian deposition is unlikely to have altered the deposits, and the cobbles sampled represent a stable surface.

One of the major objectives of the sourcing survey was to develop a survey method that would allow characterization of quarry sources using easily replicable field techniques. One question that we wanted to answer was that of the comparability between a "grid" survey, which covered more area, and a "linear" survey, which covered less area, but also required less time. In both survey types, 100 samples were collected.

The comparability of survey types can first be argued from a theoretical basis. Because both grid and linear surveys covered the same general area, one might expect that the samples from the survey types would be similar. Data collected support this theoretical position. A review of Table 4.1 suggests that the two survey types are closely related (See Figure 3.1 for a map of survey locations). Looking at the cobble field data (CF prefix in the Table), where sample sizes allow for meaningful comparisons, we can see that the mean values computed for the linear (CFL) and grid (CFG) surveys overlap at one standard deviation for all 5 rock categories. Because only one linear and one grid survey were run in the quebrada bed (QBL and QBG), mean values and standard deviations could not be computed. Comparison of linear and grid surveys within the quebrada bed will not be attempted.

Table 5.1 presents the results of a Chi-square analysis applied to the sourcing survey data. Rock category totals are used in the comparisons, and comparisons are made between sites specified. Rock category totals used are those in Table 4.1 (plutonic, sedimentary, metamorphic, MS, and volcanic). However, for the Chi-square statistic, Metamorphic and MS totals were lumped into a combined category to nullify the effects of small values. The standard equation for Chi-square is given by the formula:

$$X^2 = \sum_{i=1}^{k} \frac{(O_i - E_i)^2}{E_i}$$

where O_i are the experimentally observed values, and E_i are the theoretically expected frequencies for the kth class (Thomas 1986, pp. 264-302). Referring to Table 5.1, $\propto$=0.01 represents the significance level with its associated Chi-square value using 3 degrees of freedom, X^2 is the experimental value of Chi-square, and H_0 represents the null hypothesis. The null hypothesis stated herein implies that cobbles are distributed in a random fashion, and any difference between surveys is due to chance sampling fluctuation. If the null hypothesis is rejected, then the alternative hypothesis is proposed, that the surveys under consideration are significantly different with respect to rock

Sites to Test	$\propto$=0.01	X^2	H_O	Sites to Test	$\propto$=0.01	X^2	H_O
CFT vs. CFG	11.34	2.52	Accepted	CFG001 vs. CFG004	11.34	5.03	Accepted
CFT vs. QBG	11.34	99.78	Rejected	CFG001 vs. CFG007	11.34	2.68	Accepted
CFT vs. QW	11.34	110.43	Rejected	CFG004 vs. CFG007	11.34	3.70	Accepted
QWT vs. QWB	11.34	1.85	Accepted	CFT015 vs. CFT016	11.34	2.07	Accepted
QW vs. QBG	11.34	16.91	Rejected	CFT015 vs. CFT018	11.34	3.50	Accepted
CFG vs. QBG	11.34	99.69	Rejected	CFT016 vs. CFT018	11.34	7.82	Accepted
CFG vs. QW	11.34	121.51	Rejected	QW009 vs. QW010	11.34	7.76	Accepted
CFG vs. CBG19	11.34	12.15	Rejected	QW009 vs. QW011	11.34	3.74	Accepted
QBG vs. CBG19	11.34	58.32	Rejected	QW010 vs. QW011	11.34	7.81	Accepted
QW vs. CBG19	11.34	43.07	Rejected	CFL vs. CFG	11.34	1.80	Accepted
CFT vs. CBG19	11.34	7.62	Accepted				

Table 5.1. Chi-square comparison between survey locations using rock category totals.

category frequency at the 0.01 level. For a more thorough discussion of Chi-square, see Thomas (1986, pp. 264-302).

While Chi-square was computed for linear vs. grid comparisons, Chi-square is not a valid statistic when one of the categories could logically influence the other (which is the case for the linear vs. grid surveys). For example, linear surveys were conducted subsequent to the grid surveys, and ran over the same area. Because clasts from the grid surveys were modified (broken open), this could have affected the results of the subsequent linear surveys. This effect does not appear to be strong, however, as the Table 4.1 totals, and the Figures 4.1 and 4.2 ternary diagrams demonstrate a close association between survey types. However, while Chi-square results are presented for linear surveys, these results will not be used in future comparisons because they could theoretically introduce some error.

There is also general agreement between the grid surveys conducted in the cobble field, and the trench (CFT) surveys conducted in the cobble field (Figures 4.1 and 4.2, Table 5.1). The goal of the trench sample was to collect from an area that had not been anthropogenically altered. To this end, we excavated through the surface deposits and collected samples from a subsurface unit, which was less likely to have been picked over by aboriginal inhabitants. Chi-square is valid for this comparison, because the grid surveys in no way influenced the subsurface trench surveys. Because none of the grid surveys (CFG) were significantly different (Table 5.1), the grid surveys were lumped together for the comparisons. The same is true for the trench surveys (CFT). From Table 5.1, CFT and CFG surveys are not significantly different at the 0.01 significance level. The null hypothesis, H_o, is accepted in each case.

Within the Quebrada, there is no significant difference between quebrada wall top (QWT) and bottom (QWB) divisions (Table 5.1). However, there is significant difference in rock category proportions between quebrada wall (QW) and quebrada bed grid (QBG) surveys. This difference is likely to be due to real differences in rock category proportions being transported fluvially through time.

When comparing surveys from different locations (quebrada vs. cobble field vs. CBG019), other trends in the data are apparent. Differences between the various survey sites in raw material availability, as will be suggested shortly, may not only have an influence on the mobility of the inhabitants of Quebrada Jaguay, but may also influence their lithic reduction process. Table 5.1 demonstrates that the different survey locations can be discriminated using rock type categories.

From Table 5.1, it is apparent that all quebrada vs. cobble field rock category proportions are significantly different in all cases. Likewise, quebrada and CBG019 proportions are significantly different. The cobble field grid (CFG) rock category proportions are also significantly different than those from CBG019. However the cobble field trench surveys (CFT) are not significantly different from CBG019. This result is not surprising, as both the cobble field and CBG019 locations are part of the Camaná

Formation. Perhaps the CFT surveys and CBG019 surveys are not significantly different because neither location was as exploited by prehistoric peoples as the cobble field surface locations (CFG) were.

The fact that the different survey locations contain different types and abundance of raw material had a significant effect on the availability of resources to the site's inhabitants. Table 4.4 shows the percentages of raw materials utilized by the inhabitants of Quebrada Jaguay during the various time-periods of occupation. Figure 4.3 demonstrates that metasomatic (MS) rocks, the most abundant rock type utilized at Quebrada Jaguay, are available in significant quantities only in the cobble field and to a lesser extent at the CBG019 locations, both close to 3 km from QJ-280. No metasomatic rocks were found within the quebrada bed itself, which is located immediately adjacent to QJ-280, using either grid or linear surveys. Sandstone, another dominant rock type utilized at QJ-280, is found at all three locations (Quebrada, Cobble Field, and CBG019)(Figure 4.4). Likewise, basalt is found in limited quantity at all three locations.

The other dominant rock types utilized at Quebrada Jaguay, petrified wood, and to a lesser extent obsidian, were available 15 km and 130 km away from the site respectively (Figures 1.1 and 3.1). Neither of these rock types showed up in cobble field, quebrada, or CBG019 surveys. A significant source of quartz was not located during survey work. Limited quantities of quartz were found in the cobble field surveys (three samples) and quebrada wall surveys (one sample). One other potential source of MS material could be from gypsum veins that are part of the Camaná formation.

During fieldwork, Martin Yates discovered that metasomatic rock had formed along the edges of some of the gypsum veins. When present, this material was roughly 5 to 20 mm thick. Looking at these gypsum veins as a potential source of raw material for the inhabitants of QJ-280, I paid close attention to the type of cortex present on MS debitage pieces recovered from the site. I noted no debitage specimens that had this "gypsum vein" cortex cover. Rather, all of the identifiable cortex that I noted was cobble cortex.

There is some evidence for the modification, or "testing" of rocks at the cobble field sites. Table 4.2 shows that sandstone cobbles collected during survey work were found to be previously fractured 58% of the time on the cobble field surface (CFG), and only 37% in cobble field trenches (CFT). This 21% difference between surface and below-surface contexts is strong evidence for aboriginal "testing" of sandstone. However, MS rocks do not show this trend. MS rocks were previously fractured 75% of the time in surface contexts (CFG) and a similar 71% of the time below the surface (CFT), a difference of only 4%. Because it is highly likely that the trench surveys sampled an undisturbed context, there is no strong evidence for the aboriginal "testing" of MS material. MS rocks are easy to identify, even with cortex cover. One other explanation for this apparent lack of MS testing may be due to its small sample size (n=30 combined).

Size and shape data for the various survey locations (Table 4.3) can help determine not only the size and shape of raw materials that were available for the inhabitants of QJ-280, but can also give us some information concerning the distance of the original bedrock sources. The size and shape of the original quarried raw materials could influence the size of debitage from the cultural components of QJ-280. Therefore, if comparisons are to be made across rock type categories using debitage size, we must also address issues of raw material size from the quarries.

Table 4.3 demonstrates that at the various quarry locations, sandstone and metasomatic cobbles are similar in terms of size and shape. In general, metasomatic clasts tend to be slightly smaller and also slightly more angular than sandstone cobbles from similar survey locations. MS materials from the gypsum veins are tabular, and were anywhere from 5 to 20 mm thick. However, there is a lack of evidence for aboriginal use of this material. Quartz was not found in any significant quantity at the various survey locations. There was no systematic survey carried out at the petrified wood source. However, as a general observation, at outcrop locations, petrified wood occurs in long, slender nodules (Figure 5.2). While we did not undertake any survey work at the Alca obsidian source, earlier work there by Burger et al. (1998) suggests that the obsidian occurs as a bedrock outcrop, and that large chunks of obsidian can be found beneath this outcrop along the valley bottom. The largest of these nodules measured about 60 cm on a

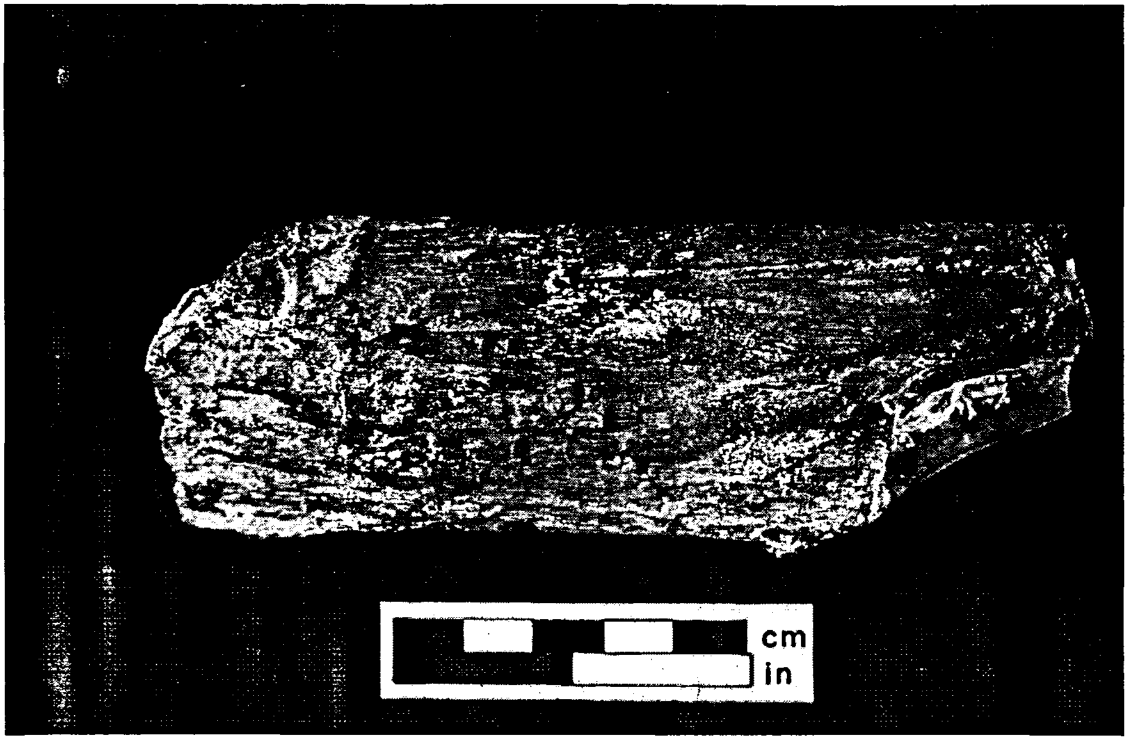

Figure 5.2. Photograph of petrified wood nodule found 15 km up the quebrada, north of QJ-280.

side, but many measured only 20 cm. Thus, at the obsidian source, the raw material may be in a somewhat larger state than utilized materials from the area surrounding QJ-280.

From Table 4.3, it is apparent that mean sizes for both of the quebrada surveys are larger than means for all other surveys when looking at all rock types combined. Also, mean shapes are more angular for both quebrada wall and quebrada bed surveys. One explanation for this trend is that there is a bedrock outcrop of plutonic and metamorphic rocks within 1 km of QJ-280 (See Figure 5.1 - Precambrian/Intrusives). These bedrock outcrops are being actively eroded, and material from the outcrops is most likely being fluvially transported in the quebrada bed. As a consequence of their proximity, plutonic and metamorphic rocks are larger and more angular than other rock types found within the quebrada. One exception to this observation is that mean sizes of volcanic rocks are also large in quebrada wall surveys (Table 4.3). However, these volcanic rocks are more round than all other rock type categories for all other surveys. These two observations in combination suggest that volcanic rocks resist weathering better than the other rock categories. Conversely, these volcanic rocks may have had a longer transport history or they could also be reworked Moquegua formation cobbles.

Finally, while we did not collect or attempt an analysis of debitage from the quarry locations, we did note that early-stage debitage is present at the quarries. Unfortunately, no systematic excavation or collection was carried out, so this observation remains unsubstantiated. Further work at the quarry sites specifically aimed at collecting debitage and recording its attributes would further complement the analysis of on-site (QJ-280) debitage.

Our methodology and investigation of the potential quarry sites provided us with much useful information and also compliments the lithic analysis. Not only were we able to discriminate utilized quarry locations on the basis of rock type, but we were also able to get an idea of the original size and shape of the raw material as well as an idea of the extent to which potential quarry sources were utilized and depleted in prehistoric times (CF location). One avenue that we did not explore that could provide beneficial information was the extent to which chipped stone was worked at the quarry sites.

Data collected from the quarry surveys not only add information concerning sourcing locations to the lithic analysis for QJ-280, but also increase the significance of other data (i.e., size data). Also, using information about "previously fractured" cobbles gives us clues about the habits of aboriginal peoples at the quarry sites. By looking at source data in combination with lithic data derived from QJ-280, we will be examining a large part of the stone tool production system of the site's inhabitants.

Chipped Stone

The quarry data provide a backdrop for evaluation of the lithic material recovered from QJ-280. Although there has not been a systematic quarry investigation at Quebrada Tacahuay up to this point, some types of analysis are valid, and some comparisons can be made between Quebrada Tacahuay and QJ-280. Raw materials in use at both sites provide a context through which to view subsequent types of analysis and comparison.

Table 4.4 provides a summary of the significant rock types used by the inhabitants of QJ-280. Although a variety of raw materials were used at QJ-280, these materials were processed in different ways depending on location and distance of the raw material source, component of the site, and type of raw material that was being worked. We can infer relative reduction stage from size of the debitage present at the site, as well as cortex cover of that debitage. Rather than specifically defining reduction stages present at QJ-280, I will compare raw materials between components on a relative basis. This requires that the raw materials have similar original shapes and sizes. Table 4.3 demonstrates that MS rocks, various volcanic rocks (including basalt), and sandstone all have similar sizes and shapes. These materials all occur in cobble form and have cobble cortex. While the petrified wood has a somewhat different shape in that it is nodular (Figure 5.2), its size is roughly similar to the other materials, and it also has complete cortex cover in its original state. It is difficult to estimate the size and shape of quartz pieces, but the original size of the obsidian is fairly large, around 20 cm for nodules, and it occurs as bedrock and as talus at the Alca quarry location (Burger et al. 1998). Also, I noted cortex cover on many of the debitage fragments. Therefore, cortex cover data for obsidian should be comparable with cortex data for the other rock types. In addition, because the obsidian may occur in a somewhat larger form than the other rock types, size comparisons for obsidian are significant if the size of the obsidian debitage is smaller or equal to the sizes of the debitage for the other rock types. As a caution, obsidian could potentially also occur in pebble, cobble, or boulder form. I noted that the cortex on two specimens is potentially cobble/pebble cortex (Figure 5.3), and Church (1996) also noted that "the cortex [on some of the obsidian pieces] appears pitted and/or water-worn, indicating that some or all the raw material was gathered as pebbles from a stream bed or alluvial gravel deposit."

In order to achieve enough obsidian specimens for comparison, Sector II above and below-induration levels were combined during analysis of the obsidian. To test the

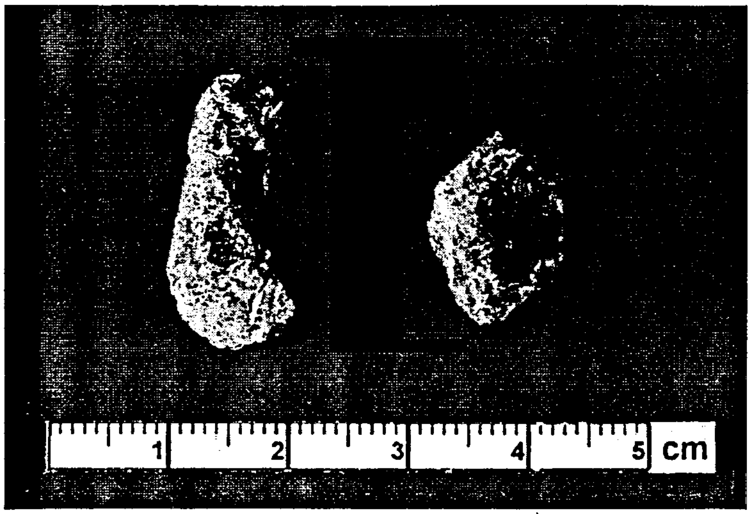

Figure 5.3. Photograph of obsidian flakes that show potential pebble/cobble cortex.

validity of this combination, I used Student's t-test to check for statistically significant differences in debitage weight, which can also be used as a relative proxy for reduction stage. There was no significant difference between the below and above-induration components for obsidian (t-test, 0.01 level).

Table 5.2 presents Pearson's Correlation (r), and the Coefficient of Determination (r^2) for mean weight (of all debitage) vs. distance from quarry. Only rock types with known quarry locations were considered (sandstone, MS, petrified wood, and obsidian). Obsidian was not included for the Sector I EHI and EHII components because of extremely small total numbers. Distance from quarry is the distance in km from the suspected quarry site for the particular raw material. For the Quebrada bed, located directly adjacent to the QJ-280 site, a distance of 0.1 km was used. The equation for the Pearson Correlation is as follows:

Table 5.2. Pearson's Correlation Coefficient for the log of distance vs. the log of mean weight.

Component (All QJ280)	Rock Type	Mean Weight (g)	log	Distance (km)	log	n=
Sector II, Below Ind.	Sandstone	1.44	0.16	0.1	-1.00	20
	MS	0.37	-0.43	3	0.48	1414
	Pet. Wood	0.42	-0.38	15	1.18	492
	Obsidian	0.11	-0.96	130	2.11	65
Sector II, Above Ind.	Sandstone	2.17	0.34	0.1	-1.00	27
	MS	0.44	-0.36	3	0.48	339
	Pet. Wood	0.25	-0.60	15	1.18	69
	Obsidian	0.07	-1.15	130	2.11	15
Sector I, TP	Sandstone	1.77	0.25	0.1	-1.00	20
	MS	0.99	0.00	3	0.48	170
	Pet. Wood	0.53	-0.28	15	1.18	16
	Obsidian	0.09	-1.05	130	2.11	6
Sector I, EHI	Sandstone	2.23	0.35	0.1	-1.00	10
	MS	0.73	-0.14	3	0.48	62
	Pet. Wood	0.31	-0.51	15	1.18	7
Sector I, EHII	Sandstone	5.81	0.76	0.1	-1.00	109
	MS	1	0.00	3	0.48	107
	Pet. Wood	0.38	-0.42	15	1.18	15
		log W vs. log D., r=	-0.94	r^2=	0.88	

$$r = \frac{\sum \frac{XY}{n} - \overline{X}\overline{Y}}{S_X S_Y}$$

where S_X and S_Y are the standard deviations of the two variables, X and Y, in this case mean weight and distance. For a full discussion of correlation, see Thomas (1986, pp. 383-438). The Coefficient of Determination (r^2) is simply the square of the Pearson correlation. The Coefficient of Determination provides a measure of how much of the variability in one variable, in this case weight, is associated with variability in the other variable, distance. Because the scatterplot of mean weight vs. distance (Figure 5.4) showed a possible curvilinear relationship, the variables (mean weight and distance) were

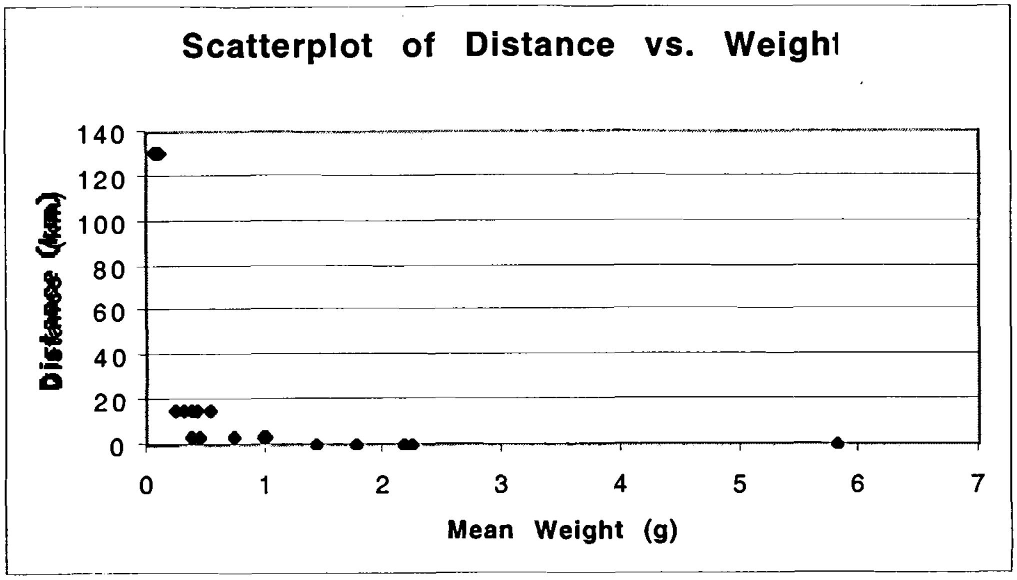

Figure 5.4. Scatterplot showing curvilinear relationship between mean debitage weight and distance.

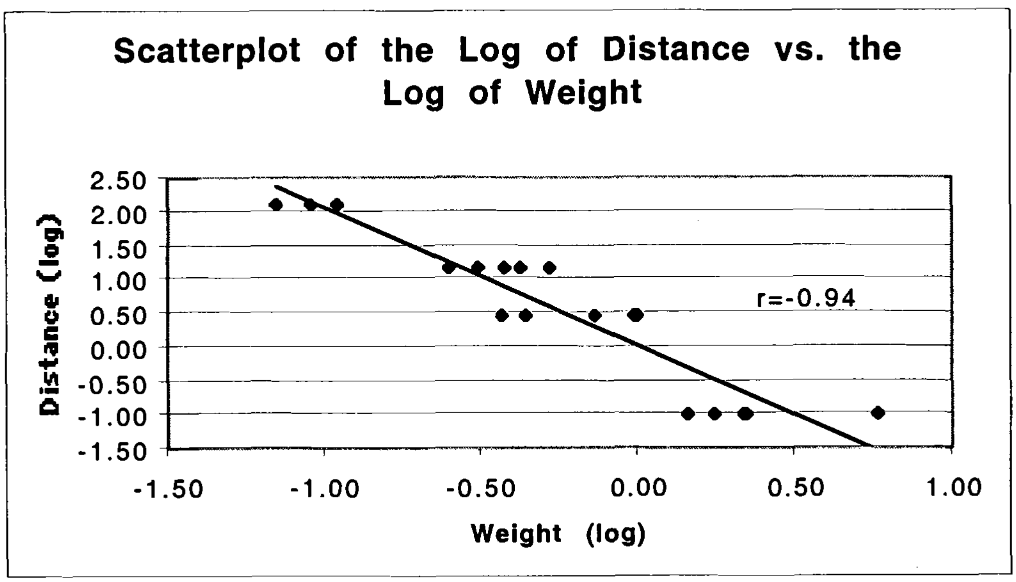

Figure 5.5. Scatterplot showing linear relationship between the log of mean debitage weight vs. the log of distance.

converted to log form for the correlation (Thomas 1986), where a linear relationship is observed (Figure 5.5). The presented r-value for this comparison is very high, and approaches unity (perfect correlation). A strong, inverse relationship is observed between distance from quarry and debitage weight.

Exterior platform angle data will be used to answer questions regarding the general form of the material being worked on the site. These data help to determine whether cores were being worked on the site, whether flakes were being struck from cores and then subsequently worked, or whether the cores themselves were reduced until there was a finished product. Figure 4.5 provides evidence for at least two general reduction sequences. In this graph, tool edge angles are plotted with debitage exterior platform angles. All components from QJ-280, as well as materials from Quebrada Tacahuay are included. Tool edge angles are generally unimodal with a peak at 40°, and range from 10° to 60°. The debitage exterior platform angle distribution is bi-modal, with peaks at 55° and 75°. Core reduction is assumed to be associated with the 75° peak, and tool work is assumed to be associated with the 55° peak. There may be some overlap in the 55° to 65° distributions. I will group many of the debitage comparisons depending on exterior platform angle. Debitage with angles greater than 60° will generally be separated from debitage with angles less than 60° unless there is good reason to do otherwise. Also, exterior platform angle data will be analyzed for each individual rock type and component to see if the distribution conforms to this (Figure 4.5) general distribution. I will present alternative explanations in cases where the individual exterior platform angle data do not agree with the general distribution.

Quebrada Tacahuay

At Quebrada Tacahuay, the only type of raw material recovered from the site was chalcedony (included in my MS category).

From Table 4.5, MS debitage at Quebrada Tacahuay is apparently in a very late stage of reduction relative to all rock types from QJ-280, not including obsidian. However, as there has been no extensive quarry investigation at Quebrada Tacahuay, the original state of the MS raw material is not well known. Nevertheless, reconnaissance of the area around the site suggests that the raw material occurs in pebble form (Richardson nd.). Presence of pebble cortex on some of the tools and debitage pieces supports this conclusion. Weight distribution data support the cortex data and suggest that debitage is indeed in a late stage of reduction at Tacahuay (Figure 4.6). The weight distribution of MS debitage from Quebrada Tacahuay is heavily skewed towards the lighter end of the scale.

MS debitage from Quebrada Tacahuay displays a bi-modal, and possibly multi-modal distribution for the exterior platform angle attribute (Figure 4.13). There is an obvious low point in the distribution at 60°, and a possible break in the distribution at 40°. The depression at 40° is rather abrupt, but the depression at 60° seems to be real, as the trends on each side of the 60° angle are sloping down. The depression in the distribution at 60° probably means that two stages of reduction were taking place at Quebrada Tacahuay. Figure 4.5 suggests that in general, larger angles represent initial core work, and smaller angles represent tool reduction. The exterior platform angle data presented in Figure 4.13 agree with the hypothesized distribution.

Looking at shape data for the QT debitage (Figure 4.25, Table 4.6), the regression line for larger platform angle (≥ 60°) flakes has an intermediate slope. Also, the flakes have an intermediate mean length (Table 4.6), but tend to be small (Figure 4.25). The two outliers on the scatterplot are exaggerating the mean weight. In general, these are small and slightly elongated (from the slope data) flakes. It is possible that these flakes represent platform preparation flakes, with the subsequent removal of larger flakes for use and/or retouch. MS flakes with smaller platform angles (<60°) have fairly low mean lengths and a very high slope for the regression line (Figure 4.26, Table 4.6). These flakes are small and wide, and could represent retouch or thinning flakes. Caution must be used when making these comparisons for Quebrada Tacahuay, as the vast majority of the Tacahuay debitage was not subject to this analysis. Around 75% of the debitage was too small to for this comparison because determinations could not be made regarding platform angle and flake type. The fact that 75% of the debitage was too small for accurate analysis could mean that most of the debitage from the site was produced during tool use, possibly bird processing, as suggested by Keefer et al. (1998). An alternative explanation would be that there is a high incidence of trampling at Tacahuay, thus producing many small fragments. Data from the measurable debitage pieces indicate that some core preparation was taking place on the site, and flakes were most likely being struck from cores and removed, possibly for use. The smaller platform angle debitage could be from retouch or possible tool resharpening.

Platform attribute data and tools recovered from Quebrada Tacahuay support the above assessment (Table 4.7). When we look at the platform attributes of the large platform angle ($\geq 60^\circ$) Tacahuay MS debitage, there are a relatively high number of pieces with dorsal surface faceting, and a relatively low number of pieces with faceted platforms. Also, there is a high occurrence of platform preparation in the form of chipping on the dorsal surface (Dorsal Surface Chipping, or DSC), but not a lot of preparation in the form of grinding on platform edge (Ground Platform Edge or GPE). In addition, there are not many flakes with both dorsal surface facets and faceted platforms. The high occurrence of dorsal surface faceting and dorsal surface platform preparation supports the idea that platforms are being prepared on cores, and larger flakes are being subsequently removed. The relatively low incidence of platform faceting may mean that these cores are not usually multidirectional.

The fact that the platform data suggest that some core work took place at Quebrada Tacahuay must be balanced with the idea that the Tacahuay lithics are in a relatively late stage of the reduction process, as evidenced by the cortex and weight distribution data. One hypothesis that accounts for both of these observations is that cores are initially "roughed out" elsewhere, possibly near the quarry source, and then transported to the site in a semi-prepared state. When people needed a flake for some purpose, they could then finish preparing the core, and subsequently remove the desired flake. This strategy would allow people to transport raw material easily, without having to carry large numbers of flakes with them. Prepared, or formal cores may provide the most efficient form of usable cutting-edge storage (Clark 1987).

Looking at the platform attribute data for the smaller platform angle MS debitage (Table 4.7), there is a relatively high occurrence of dorsal surface faceting, a high level of dorsal surface platform preparation and grinding, a low incidence of platform faceting, and a low occurrence of dorsal surface faceting with platform faceting. Many of these flakes are very likely unifacial retouch flakes, owing to the great deal of dorsal surface faceting and lack of platform faceting, or are from utilized flakes. A count of Quebrada Tacahuay tools supports this assessment (Table 4.8). Tools recovered from Quebrada Tacahuay include two uniface fragments and four utilized flakes. The remaining tool, a bifacially modified piece, is not a true biface. This bifacially modified piece was removed from a core that had previous flake removals, and these facets ended up on the dorsal surface of the bifacially modified piece. After the flake was removed from the core, a series of flakes were removed from the ventral surface of the flake. Thus, while the piece at first appears to have been bifacially worked, in reality its dorsal surface flake scars were present when the flake was still on the core, and the ventral surface flake scars were removed after the flake had been struck from the core. Thus, at Quebrada Tacahuay stone tool technology is essentially unifacial in nature, in combination with the production of use flakes from prepared cores.

Quebrada Jaguay

Sector II, Below-Induration (QJ-280)

In the Sector II, below-induration component, the inhabitants of the site preferred metasomatic (MS) rocks and petrified wood almost exclusively (Table 4.4). Other rock types account for only 8% of the raw material recovered from this component. Obsidian accounts for almost half of this remaining 8%. This evidence suggests that below-induration inhabitants had a strong preference for extremely fine-grained materials.

Looking at MS cortex cover data for the below-induration component (Table 4.5), this debitage shows relatively little cortex cover compared to the debitage from other rock types, such as basalt from the above-induration component, and sandstone from the EHII component. This observation implies that a relatively late stage of the reduction sequence is present.

Weight distribution data for below-induration MS debitage (Figure 4.6) show that for this component, distributions are skewed towards the lighter end of the scale, but not quite as much as for QT debitage. The weight distribution supports the idea that MS rocks are in a later stage of reduction for this component.

Exterior platform angle counts for MS debitage show a bi-modal distribution (Figure 4.14), with the break in the distribution right around 65°, fitting the hypothesized distribution (Figure 4.5). The fact that there are a great deal of platform measurements around 60-65° may be due to some overlap of the high angle and low angle distribution. However, because sample sizes are large, this slight depression at 60-65° does seem to reflect a real depression in the distribution. In general, there are more high angle platforms for below-induration MS debitage than low angle platforms.

Looking at shape data for the larger angle platforms (≥ 60°), debitage on average has a low mean length and the regression line has an intermediate slope (Figure 4.27, Table 4.6). These flakes could represent core preparation flakes. Larger flakes could have been either removed, used, or further worked into tools. The fact that there are fewer smaller platform angle flakes may indicate that formal tool production was of secondary importance.

Smaller platform angle (<60°) MS debitage has a low mean length and a relatively high slope for the regression line (Figure 4.28, Table 4.6). In general, these numbers are very similar to the Quebrada Tacahuay numbers. However, many flakes from Quebrada Tacahuay were excluded from the sample because of their extremely small size. In terms of reduction technique, the QJ-280 below-induration MS debitage may be similar to the

Quebrada Tacahuay debitage, representing final core preparation with flake removals, with subsequent retouch and resharpening.

Platform attribute data for large angle ($\geq 60^{\circ}$) MS debitage (Table 4.7) show that there is a high occurrence of dorsal surface faceting, some platform faceting, a relatively high incidence of dorsal surface platform preparation, and a low level of platform (edge) grinding. These data suggest that some of the cores may be multidirectional, as there is a high occurrence of dorsal surface faceting with platform faceting, and that many platforms are being prepared on the dorsal surface so that flakes can be removed, as there is a high level of dorsal surface platform preparation. The fact that the cortex and size data suggest that below-induration MS debitage is in later stage reduction may mean that there is a procurement system in place that is similar to the system at Quebrada Tacahuay. Again, cores are initially shaped at or near the quarry, and these"roughed-out" cores are then transported to the base camp or elsewhere for further working when flakes are needed. In this case the quarry is probably located about 3 km away at the cobble field location.

Platform attribute data for low angle ($<60^{\circ}$) MS debitage (Table 4.7) show a high incidence of dorsal surface faceting, a fairly high occurrence of platform faceting, and a fairly high occurrence of flakes with platform faceting in combination with dorsal surface faceting. There is also a relatively high level of platform preparation (GPE and DSC). These data suggest that there is some bifacial work taking place (DSF+FP), and the high occurrence of dorsal surface faceting without platform faceting could mean that uniface and flake retouch were also taking place on site. This is supported by the formal tool data (Table 4.8) which show that there are bifaces, unifaces, and utilized flakes recovered from this component (see also Figures 5.6 and 5.7). However, while it is apparent that bifaces and unifaces were being retouched and resharpened on site, the relatively low number of smaller angle platforms (Figure 4.14) suggests that primary tool production, or initial shaping, was taking place off site, possibly at or near the quarries.

Petrified wood cortex data (Table 4.5) show that this debitage is also in a relatively late stage of the reduction process. The petrified wood debitage from the below-induration component displays slightly less cortex than the petrified wood debitage from the above-induration component, and also slightly less cortex than below-induration MS debitage. Weight distributions (Figure 4.7) for petrified wood support a late-stage reduction hypothesis, as the distribution is heavily skewed towards the lighter end of the scale and is very similar to the MS weight distribution.

Exterior platform angle data for petrified wood show that the distribution is heavily skewed to the larger end of the scale (Figure 4.15). Matching this distribution to the hypothetical two level distribution (Figure 4.5), most of the debitage is seemingly from core reduction. Shape data for the larger angle ($\geq 60°$) flakes show that they are small, and the regression line has an intermediate slope (Figure 4.29, Table 4.6). The smaller platform angle flakes have a relatively high mean length, and an extremely low

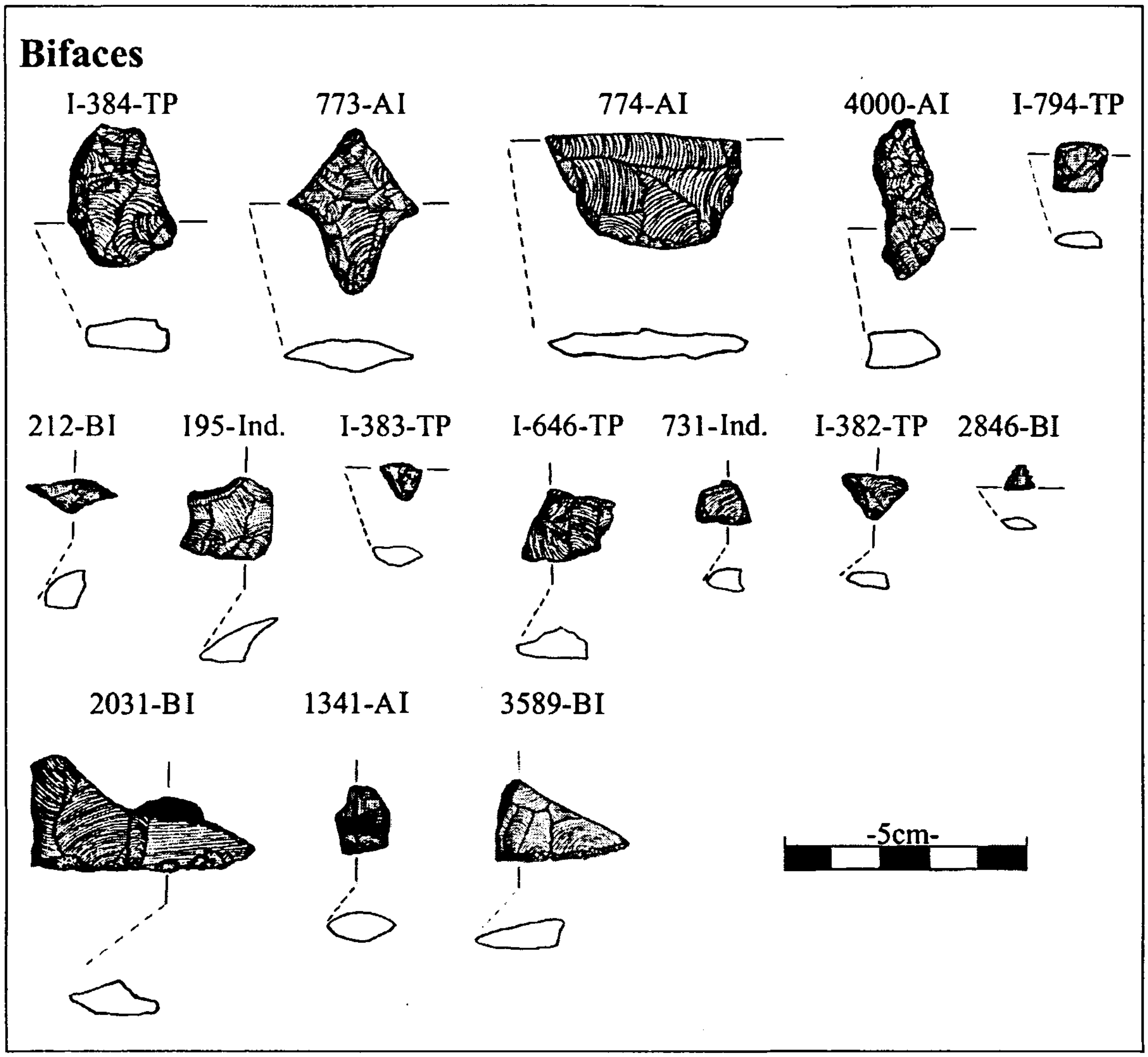

Figure 5.6. Bifaces from the QJ-280 Terminal Pleistocene components (See Appendix E).

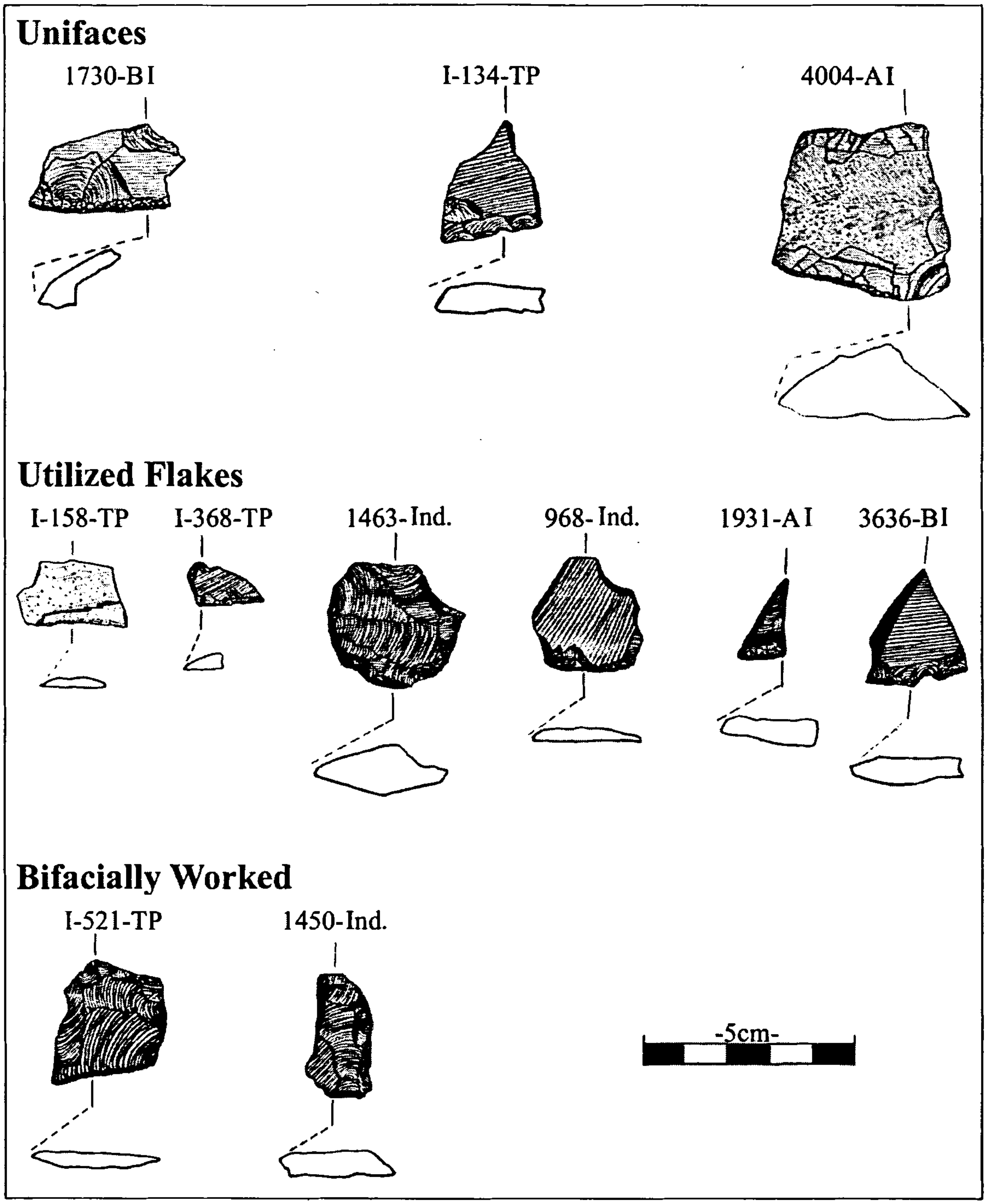

Figure 5.7. Other tools from QJ-280 Terminal Pleistocene components (See Appendix E).

regression slope (Figure 4.30). The fact that these flakes have small platform angles and that they are relatively long and narrow suggests control by the flintknapper on flake termination, an important variable in biface production (Dibble and Whittaker 1981).

Size distribution data and cortex cover data for petrified wood debitage suggest that it is in a very late stage of the reduction process. Platform attribute data for the high platform angle petrified wood indicate a high occurrence of dorsal surface faceting, an average incidence of platform faceting, a low occurrence of dorsal surface platform preparation, and a relatively high level of platform edge grinding. It appears that platforms are being minimally prepared, and flakes are being driven off down the long axis of the nodules due to constraints on raw material shape (Figure 5.2). Initial reduction is taking place elsewhere, possibly at the quarry.

Data for the smaller angle platforms for petrified wood show that there is a fairly high number of flakes with dorsal surface facets, platform faceting, and platform preparation (DSF+FP+DSC or GPE). These flakes are probably biface retouch or resharpening flakes. This idea is supported by the mean length and slope data. The remaining small platform angle flakes could be from flake retouch, as there is not a high percentage of flakes with dorsal surface faceting. Because there are so few smaller angle platform petrified wood flakes, only later stage bifacial reduction was probably taking place in the below-induration component. This pattern is similar to the MS debitage.

Formal tool frequencies (Table 4.8, Figures 5.6 and 5.7) support a biface retouch hypothesis, as two biface fragments were recorded in the below-induration component. I would expect there to be utilized flakes as well, perhaps elsewhere in the site.

Obsidian is apparently also in a very late stage of the reduction process for Sector II Terminal Pleistocene components (combined), as obsidian debitage lacks significant cortex cover (Table 4.5). However, because the original size and shape of obsidian raw material is not well known, comparison with the other rock types is more difficult. Taking this point into account, obsidian should logically be in later stage reduction, as its source is 130 km from QJ-280 (Sandweiss et al. 1998). The weight distribution graph for obsidian supports this conclusion, as the distribution is very heavily skewed towards the lighter end of the scale (Figure 4.6).

Exterior platform angle results for obsidian imply a bi-modal distribution, supporting the two-level model (Figures 4.24 and 4.5). Also, there are more smaller-angle platforms than larger angle platforms. Small sample sizes do not permit size and weight ratio comparisons. The larger angle platforms (≥ 60 deg) have a high occurrence of dorsal surface faceting and relatively low incidence of platform preparation and platform faceting (Table 4.7). Small sample sizes for obsidian do not allow for consideration of the smaller angle platforms. In general, weight distribution data and cortex data indicate that the obsidian is in a very late stage of the reduction process. The extremely small nature of the obsidian debitage implies that any core work taking place on-site is most likely to prepare platforms for the removal of use flakes. Smaller platform angle flakes most likely represent retouch and resharpening flakes, as the size distribution data indicates that obsidian flakes are very small. Only one obsidian tool, a broken biface, was recovered (Table 4.8 and Figure 5.6, Artifact I-794-TP). Church (1996) noted that one of the destroyed pieces had been retouched and utilized.

Sector II, Above-Induration (QJ-280)

From the above-induration component of Sector II, there is still a strong preference for MS rocks and petrified wood, but this preference is weaker than for the below-induration component (Table 4.4). Also, other rock types, such as basalt, quartz, and sandstone are now relatively more abundant.

MS cortex cover percentages reflect the presence of relatively little cortex cover compared to other rock types such as basalt from the above-induration component, and sandstone from the EHII component in Sector I (Table 4.5). This lack of cortex suggests that a relatively late stage of the reduction sequence is present.

The weight distribution graph (Figure 4.6) shows that the frequency is skewed towards the lighter end of the scale. This distribution supports the idea that MS rocks are in a later stage of reduction for this component.

The exterior platform angle data for MS debitage demonstrates that there are many more large angle platforms than low angle platforms (Figure 4.16). In this graph, there is no obvious depression in the distribution. There are possible depressions at 50° and 60°. However, the trend is very irregular in general. Thus, above-induration MS debitage does not directly support the theoretical two-level model (Figure 4.5). Rather than a two-level sequence, with core and tool work separated by a depression in the exterior platform angle distribution, this irregular distribution may reflect some other type of activity. One possibility would be bifacial core reduction, where the core itself is reduced until a biface is produced. However, the depression in the distribution at 50° could be due to chance, and the actual population distribution may in fact be bi-modal.

Looking at shape data for the large platform angle (≥ 60°) MS debitage, there is a low mean length and the regression line has an unusually high slope (Figure 4.31, Table 4.6). Production of short, wide flakes indicates a concern for the distal edge angle and form of the flake (Rossen 1998, Speth 1972). In general these flakes appear to be from core preparation and flake production. This Production may be geared towards the manufacture of use flakes where the use is on the distal margin of the flake. Shape data for smaller angle platforms show a very low mean length, and the regression line displays a low slope (Figure 4.32 and Table 4.6). These flakes could represent retouch or resharpening flakes.

Platform attribute proportions for the larger angle ($\geq 60°$) MS debitage (Table 4.7) indicate a relatively high occurrence of dorsal surface faceting, and a fairly low incidence of platform faceting, especially in combination with dorsal surface faceting, There is also a high level of platform preparation in the form of chipping on the dorsal surface (DSC), and a low level of platform grinding on the edges of the platforms (GPE). These flakes generally seem to represent core preparation flakes. The fact that this debitage appears to be in a relatively late stage of reduction from the cortex and weight data supports the model advanced for the Quebrada Tacahuay and below-induration debitage, in which cores are "roughed" out elsewhere and are further worked on-site when usable flakes are needed.

Analysis of the platform attribute data for the smaller angle ($< 60°$) MS debitage (Table 4.7) shows a relatively low occurrence of dorsal surface faceting, and a high occurrence of platform faceting. In addition, there is a very high incidence of platform faceting in combination with dorsal surface faceting, and a relatively low level of platform preparation. This evidence suggests that many of these flakes could be from bifacial retouch, owing to the high incidence of dorsal surface faceting in combination with platform faceting. The fact that there are relatively few flakes with only dorsal surface faceting could mean that uniface retouch and flake retouch were of secondary importance in this component. Formal tool data (Table 4.8) support this assessment, as there are more bifaces and biface fragments than unifaces and utilized flakes, even though sample sizes are small. However, the fact that the mean size of smaller platform angle flakes from this component is so small (Table 4.6) probably means that the majority of this activity was later stage bifacial retouch and resharpening, rather than full biface production.

Petrified wood cortex figures for the above-induration component show that this debitage is also in a relatively late stage of the reduction process (Table 4.5). The petrified wood debitage from the above-induration component displays slightly more cortex than the petrified wood debitage from the below-induration component, and has very similar cortex proportions to the above-induration MS debitage. Weight distribution data (Figure 4.7) support a late-stage reduction hypothesis, as the distribution is heavily skewed towards the lighter end of the scale and is very similar to the MS weight distribution.

The petrified wood has an irregular exterior platform angle distribution and does not fit the hypothesized two-level model (Figures 4.17 and 4.5). However, the true break in the distribution may be at 70° for this rock type. Small sample sizes probably mask the true distribution of the population. Also, small sample sizes do not allow for consideration of other attributes for petrified wood. No tools made out of petrified wood were found in this component. Petrified wood does not seem to be as important in the above-induration component as in the below-induration component, and it does not seem to be very important in the Sector I TP component, either. However, size distribution figures and cortex cover proportions indicate that the above-induration petrified wood is in a late stage of the reduction process, further supporting the proposed model of later stage core and tool work.

Basalt cortex proportions suggest that basalt is in an earlier stage of reduction in the above-induration component than in the Sector I TP component (Table 4.5). However, this result must be viewed with caution, as cortex cover is very difficult to distinguish for basalt, and sample sizes for this comparison are very low. Indeed, the weight distribution data, which are possibly more accurate than the cortex data for basalt, show that the Sector II above-induration component is skewed towards the lighter end of the scale, indicating later-stage reduction (Figure 4.9). This evidence suggests that the above-induration basalt is in a relatively late stage of reduction.

Exterior platform angles for basalt show a distribution skewed towards the larger end of the scale, fitting the core reduction peak in the hypothesized two level distribution (Figures 4.18 and 4.5). Low numbers of basalt whole flakes did not permit mean length and regression slope to be computed. Because cortex cover is difficult to distinguish for this rock type, we are forced to rely on size distribution data for reduction stage. These data imply that basalt was in a relatively late stage of reduction. When looking at platform attribute proportions for basalt (Table 4.7), there is a very low occurrence of flakes with dorsal surface faceting and a low number of flakes with faceted platforms. The number of flakes with dorsal surface platform preparation is relatively high. Thus, the evidence likely reflects core platform preparation. The primary function of basalt may have been almost exclusively geared toward the production of use flakes, indicated by the low numbers of flakes with faceting. At the site of Loma Lasca at the mouth of the Santa River Valley (Peru), Donnan and Moseley found that basalt flakes were used abundantly at the site, perhaps for cleaning fish (Donnan and Moseley 1968). Above-induration basalt is in keeping with the model presented of initial “roughing out” being done elsewhere, with subsequent final preparation and working being done on site. As a final note, there were no tools recovered that were made out of the basalt described here. The one tool found in above-induration context that was made out of basalt was fashioned out of a very fine-grained basalt. This raw material was unlike any that we located in the sourcing surveys, and its quarry location is not known.

Weight distribution figures for the quartz debitage are very similar to the above-induration basalt weight distribution (Figure 4.10). However, the distribution is slightly irregular. This irregularity might be due to the difficulty in distinguishing quartz debitage from the potentially natural distribution of quartz pebbles at the site. Cortex cover percentages for quartz are not presented for this component because of low sample size.

Moving to sandstone, the weight distribution is fairly even, but is slightly higher towards the lighter end of the scale (Figure 4.8). This distribution implies that sandstone is in a fairly late stage of reduction for this component, but possibly not as late as MS, petrified wood, or obsidian debitage. However, these differences could also be due to varying knapping characteristics of the raw material. In general, sandstone is somewhat coarse grained, while MS, petrified wood, and obsidian are all very fine grained.

In general, above-induration debitage is in a relatively late stage of reduction. Much of the work taking place on site is aimed at final platform preparation with the removal of use flakes. Formal tool production is later stage, and is most likely geared towards tool maintenance and final retouch. Thus, there is seemingly a great deal of continuity between the Sector II above and below-induration components.

Sector I, TP (QJ-280)

The Terminal Pleistocene (TP) component from Sector I shows some similarity to the above-induration component of Sector II, as there is a relative abundance of several varieties of raw material (Table 4.4). For this component (TP, Sector I), MS rocks are again the most abundant rock type, followed by basalt, then quartz, sandstone, and petrified wood.

Cortex cover proportions for MS debitage show relatively little cortex cover compared to other rock types, such as basalt from the above-induration component, and sandstone from the EHIIa component (Table 4.5). This relative lack of cortex is evidence for a later stage of the reduction sequence. This debitage displayed slightly more cortex than MS debitage from Sector II Terminal Pleistocene components and had almost identical cortex proportions to MS debitage from the EHI component, which also exhibited relatively little cortex cover.

For the Sector I TP MS debitage, the weight distribution is fairly even, but is still slightly skewed to the lighter end of the scale (Figure 4.6). Also, weight figures for MS debitage from the Sector I TP component are very similar to those from the Sector I EHI component (Figure 4.6), suggesting some level of continuity in the use of Sector I through the Terminal Pleistocene into the Early Holocene. This agreement supports the cortex cover data.

Exterior platform angle distributions for MS debitage show that angles are highly skewed to the larger end of the scale, fitting the larger peak of the theoretical two-level distribution (Figures 4.19 and 4.5). There are very few smaller platform angle flakes. Larger platform angle debitage (≥ 60°) has a high mean length and an exceedingly low regression slope (Figure 4.33 and Table 4.6). These data, in combination with the fact that MS debitage appears to be in a somewhat earlier stage of the reduction process than

MS debitage from other Terminal Pleistocene components, suggests that there was more core work being done at Sector I in the Terminal Pleistocene than at Sector II. However, because size and weight figures do not indicate very early stage reduction, as they do for EHIIa sandstone, initial core work is apparently not taking place at Sector I in the Terminal Pleistocene. Rather, the low slope value for the regression line (m=40) suggests production of long, narrow flakes, indicating a general concern for the lateral edges of the flake (Rossen 1998, Speth 1972) and reflecting a production strategy geared towards the manufacture of use flakes. Platform attribute figures show that there is a relatively high occurrence of dorsal surface faceting and platform faceting (Table 4.7). Also, there is a high incidence of dorsal surface platform preparation. These cores were very likely multidirectional.

There were a lot of broken MS bifaces in the TP component (Table 4.8 and Figures 5.6 and 5.7). Because there does not appear to be any formal tool manufacture taking place in this component due to a lack of small-angle platforms, the Sector I TP component could represent an area of discard, and an area of intermediate to late stage core work.

Basalt cortex proportions for Terminal Pleistocene components imply that basalt is in later stage reduction in the Sector I TP component, and earlier stage reduction in the Sector II above-induration component (Table 4.5). Because basalt does not comprise a significant proportion of the below-induration assemblage, figures for this component could not be computed. Again, basalt cortex cover results must be viewed with caution, as cortex cover is very difficult to distinguish for basalt, and sample sizes are very low. The weight distributions, which are likely to be more accurate than the cortex data for basalt, show that the Sector II above-induration component is skewed towards the lighter end of the scale, indicating later-stage reduction (Figure 4.9). The Sector I TP basalt distribution is more even, but still slightly skewed towards the lighter end of the scale. These data indicate that the Sector I TP basalt debitage is in a slightly earlier stage of reduction than the above-induration basalt debitage.

When looking at the exterior platform angle distribution for basalt (Figure 4.20), there is a bi-modal distribution, with the pattern skewed towards the smaller end of the scale, supporting the hypothesized two-level model (Figure 4.5). Because of the low number of whole flakes, mean weights and regression slopes were not computed. The weight distribution graph reflects a later stage of reduction for basalt. Platform attributes imply that the smaller angle basalt platforms are frequently prepared and faceted on their dorsal surface (Table 4.7). There were no flakes with faceted platforms. Taken together, these data indicate that most of the reduction taking place in the Sector I TP component for basalt is later stage uniface retouch and resharpening. Unfortunately, no basalt tools or tool fragments were recorded for the TP component.

Weight distributions for the quartz debitage are very similar to basalt (Figure 4.10). However, this distribution is slightly irregular. This pattern may be due to the difficulty in distinguishing quartz debitage from the potentially natural distribution of quartz pebbles at the site. Cortex cover proportions for quartz are not presented for this component because of low numbers.

In general, the Sector I TP component is apparently an area of intermediate to late stage reduction. Again, there is some core preparation and later-stage tool work. Data also indicate that Sector I, TP may be a site of discard.

Sector I, EHI (QJ-280)

In the Sector I EHI component (Early Holocene), raw material preferences are very similar to the TP levels from the same Sector. MS rocks are again the most abundant rock type (Table 4.4), but other rock types are in heavy use as well. Basalt is abundant, as are sandstone, quartz, and to a lesser extent petrified wood. So, while there is still a preference for fine-grained silicates, this preference seems to be diminished from the Sectors I and II TerminalPleistocene components.

Looking at MS cortex cover proportions (Table 4.5), debitage shows relatively little cortex cover compared to other rock types, such as basalt from the above-induration component or sandstone from the EHIIa component. This lack of cortex implies that a relatively late stage of the reduction sequence is present. The MS debitage from the Sector I EHI component exhibited slightly more cortex than MS debitage from Sector II Terminal Pleistocene components, and it had almost identical cortex proportions to MS debitage from the Sector I TP component, which also displayed relatively little cortex cover.

The weight distributions for the MS debitage is fairly even, but is still slightly skewed to the lighter end of the scale (Figure 4.11). Also, weight distribution for MS debitage from the Sector I EHI component is very similar to that from Sector I TP (Figure 4.6), suggesting some continuity in the use of this site through the Terminal Pleistocene into the Early Holocene. This agreement supports the cortex cover data.

Exterior platform angle data for EHI MS debitage, like MS debitage from the Sector I TP component, show a pattern highly skewed towards the larger end of the scale (Figure 4.21), comparing well with the larger mode of the hypothetical two-level distribution (Figure 4.5). Unfortunately, a small sample size for whole flakes with a measurable platform angle did not permit mean weight and regression slope figures to be computed. However, the fact that the exterior platform angle distribution is so similar to the pattern from the Sector I TP component, and that cortex and size distribution data suggest a similar stage of reduction for Sector I TP and EHI debitage, could mean that

Sector I had the same function from the Terminal Pleistocene into the Early Holocene: as a intermediate-stage core preparation and a possible discard site. Platform attribute totals are also similar, as there is a relatively high occurrence of dorsal surface faceting and platform faceting (Table 4.7). Also, there is a high level of dorsal surface platform preparation. Thus, cores appear to have been multidirectional. Further, both bifaces recovered from the EHI component were fragments (Table 4.8 and Figure 5.8). However, the fact that two complete unifaces were also found in the EHI component may also mean that it was a processing site.

<u>Sector I, EHII, EHIIa, and EHIIb (QJ-280)</u>

In the later Holocene (EHII) component, there seems to be a major shift in raw material preference (Table 4.4). For this component, there is a preference for a wide variety of raw materials. MS debitage is not as dominant in this component, and accounts for only 35% and 32% of the raw material recovered from EHIIa and EHIIb levels respectively. In general, moving through all components from both sectors, there is a shift in raw material preference through time. Initially, for the Terminal Pleistocene below-induration component, there is a strong preference for extremely fine-grained silicates (Table 4.4). This preference diminishes through time, and finally by the EHIIa and EHIIb components, sandstone makes up a very large proportion of the material. One hypothesis

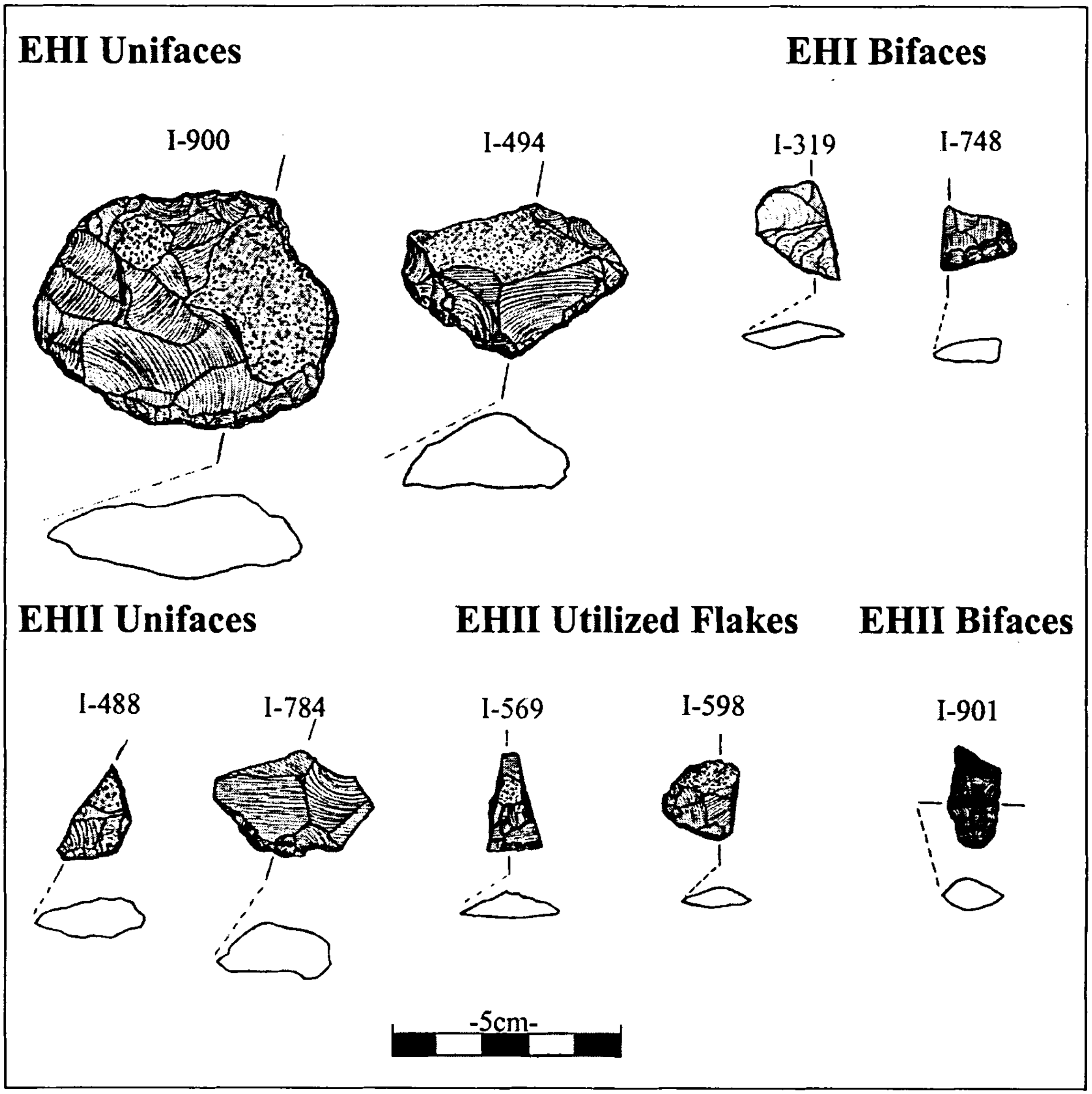

Figure 5.8. Tools recovered from QJ-280 Holocene components (See Appendix E).

that could account for this shift in resource use is depletion of fine-grained materials through time.

As a check on this raw-material exhaustion hypothesis, observation of MS frequency in the cobble field trench (CFT) and grid (CFG) surveys shows that MS material was more abundant in the surface grid surveys (n=16) than in the trench surveys (n=14) even though total survey sample sizes are equal. This evidence suggests that fine-grained materials were not significantly depleted through time, but rather that there was a shift in cultural preference to a wider range of materials, some of which are coarse-grained.

Sandstone has almost identical abundance to the MS debitage in the EHII components (Table 4.4). Other preferences include basalt, and to a lesser extent petrified wood and quartz. EHIIb is very similar to the EHIIa component in terms of raw material abundance.

MS Debitage from the two EHII levels (a and b) also displayed very little cortex cover, somewhat less than Sector I TP and EHI MS debitage. From Table 4.5, EHIIb MS debitage has slightly less cortex cover than EHIIa debitage. In both cases, MS debitage displays relatively little cortex cover, and seems to be in a later stage of the reduction process.

The weight distribution for MS debitage for these two components is slightly skewed towards the lighter end of the scale, but is relatively even (Figure 4.11). This result conflicts slightly with the cortex proportions that display very little cortex cover. Perhaps there is some shift in tool production for this component. It could also mean that the reduction practices for MS rocks are more similar to the Sector I TP and EHI components than the cortex cover data indicate.

The exterior platform angle distribution for MS debitage from the Sector I EHIIa component is very similar to the pattern of exterior platform angles from the TP and EHI components (Figures 4.33, 4.21 and 4.22). The distribution is heavily skewed towards the larger end of the scale. This debitage has an typical mean length and a high regression slope value for larger platform angle flakes (Figure 4.34 and Table 4.6). Production of short, wide flakes such as these indicates a general concern for the distal edge angle and form of the flake (Rossen 1998, Speth 1972).

Cortex cover proportions for EHIIa and b MS debitage indicate that the pieces are in later stage reduction. However, size data do not suggest that they are in as late a reduction stage as debitage from the Terminal Pleistocene components of Sector II. Platform attribute data shows that EHIIa MS debitage has a high occurrence of dorsal surface faceting, platform faceting, and dorsal surface platform preparation. Therefore, cores appear to be multidirectional, like those from the Sector I TP and EHI components.

Perhaps the EHIIa component is also an intermediate core reduction site. Alternatively, EHIIa MS tool production could be aimed at the production of use flakes with a concern for the distal end of the flake. The platform angle data show that formal tool production was not an important activity in the EHIIa component.

Cortex cover figures for EHIIa sandstone debitage imply that it is in an early stage of reduction (Table 4.5). This result is not surprising, as the Quebrada bed located directly adjacent to the site is a significant source of sandstone (Figure 4.4). Early stage reduction is supported strongly by the weight distribution data, as sandstone weights are heavily skewed to the higher end of the scale for the EHIIa component (Figure 4.12).

The exterior platform angle distribution for EHIIa sandstone reflects the larger mode of the hypothesized two-level model, suggesting general core reduction (Figures 4.23 and 4.5). This debitage also has a very high mean weight and an intermediate regression slope value for the larger angle platforms (Figure 4.35 and Table 4.6). Weight distribution data and cortex cover data indicate that sandstone is in a very early stage of the reduction process in the EHII component. The mean size figure supports this suggestion. Looking at platform attribute data for these flakes (Table 4.7), there is a relatively high occurrence of dorsal surface faceting and dorsal surface platform preparation, and a lack (0%) of other attributes. Also, there were no tools recovered from the EHIIa component that were made out of sandstone. It is obvious that sandstone is in a very early stage of the reduction process in the EHIIa component. Evidence implies that cores are being initially "roughed out". Also, the MS debitage from this component suggested that it was an "intermediate" working area, as well as a location of possible discard. Thus, the function of the Sector I EHIIa component is fundamentally different than the function of the Sector II Terminal Pleistocene components, and somewhat different than the other Sector I components.

Summary

Lithic data collected over the course of three field seasons at Quebrada Jaguay reveal a great deal about the technological organization of the site's inhabitants. Inferences regarding technological organization are afforded only after an intensive analysis of lithic debitage and lithic tool form, as well as quarry research. These various lines of evidence, in their totality, allow us to begin to understand hitherto poorly known aspects of early Andean maritime culture.

Intensive survey of the proposed quarry sites allowed examination of raw material location and availability. The technological strategies of the site's inhabitants were apparently conditioned by the distance to the nearest outcrop of the raw material under consideration. Specifically, there is an inverse relationship for all components between the distance from the quarry of a specific raw material, and the weight of that material: as distance from the quarry increases, mean weight goes down. Some of the raw materials most favored by the inhabitants of QJ-280 that are available at varying distances include sandstone (0.1 km), MS rocks (3 km), petrified wood (15 km), and obsidian (130 km). Other rock types often used by the inhabitants of QJ-280, but whose specific quarry locations are unknown include quartz and basalt, which are potentially available at all three sourcing survey locations.

The fact that the site's inhabitants had to travel some distance to procure many of their chosen raw materials suggests that the raw materials were not a significant control for the location of the site. Other possibilities for choosing the observed site location include proximity to a source of fresh water (Quebrada Bed) that would have been important in the arid desert, or proximity to the altitude-dependent lomas, which may have been present near the site during its occupation due to a lowered sea level.

In general, debitage varies slightly with regard to the stage of reduction depending on the raw material under question, although all materials are in later stage reduction (except EHIIa sandstone). The further the nearest quarry location is, the less cortex the debitage has, and the smaller the debitage tends to be.

Obsidian for the combined Terminal Pleistocene Sector II components of QJ-280 is in very late stage reduction. Also, exterior platform angle data indicate a bi-modal distribution, suggesting that late stage core preparation and use-flake removal, as well as tool retouch and resharpening, were taking place on site. This pattern implies a two-level reduction technology and not biface cores. Obsidian was likely roughed out at the quarries, and only pieces that needed minimal further modification were transported to the site.

In the earliest Sector II Terminal Pleistocene component thus far located at QJ-280, the below-induration component, inhabitants of QJ-280 strongly preferred extremely fine grained materials, including MS rocks, obsidian, and petrified wood. This preference is almost to the exclusion of other rock types. These fine-grained materials were in a late stage of the reduction sequence. In general, major lithic reduction activity at the site during this time was related to final core preparation with use-flake removals, or the use of formal cores, as well as formal bifacial and unifacial retouch and resharpening. These data support the idea that Sector II of QJ-280 was a domestic site in the Terminal Pleistocene for the below-induration component. Most initial core work took place off site, possibly near the quarry locations.

In the later Terminal Pleistocene Sector II component, the above-induration component, there is also a strong preference for the extremely fine-grained materials. However, this preference diminishes slightly, as other raw material types are used in somewhat greater abundance. All rock types for this component appear to be in later stage reduction. However, distance from the original quarry again has much to do with relative reduction stage even though all materials are later stage. Evidence suggests that petrified wood and MS rocks are in the latest stage, followed by sandstone, basalt, and quartz. The sources of sandstone, basalt, and quartz may have been closer to the site. For all raw material types, there is apparently later stage platform preparation, with flakes being removed for use. Initial core work must have taken place elsewhere. In addition, for the MS rocks, there is also bifacial retouch and resharpening. Because of the bi-modal distribution of exterior platform angles, this also seems to be true for the petrified wood. However, platform attribute data were not available for this rock type because of low sample size. The function of QJ-280 in the above-induration component is presumably the same as for the below-induration component, and is associated with domestic activity.

The Sector I Terminal Pleistocene component of QJ-280 shows a strong preference for fine-grained materials. However, other rock types are also used, much like the above-induration component of Sector II. It appears that all debitage is in a relatively late stage of reduction, but not as late as for both Terminal Pleistocene components in Sector II. Because of a large number of high angle MS platforms, the Sector I TP component could be an intermediate to later stage core reduction location. Most core work involves platform preparation. MS rocks seem to have been initially roughed out elsewhere. However, the somewhat earlier stage of reduction of MS debitage in the Sector I TP component supports the idea that the Sector I TP component may have functioned as an intermediate to late stage core preparation area. Also, the relatively high number of broken bifaces in the TP component indicates that it was also an area of tool discard. The low number of smaller-angle platforms indicates that formal tool work was not a major activity here. Data for basalt and quartz suggest that they, too, are in some intermediate to late stage of reduction in the Sector I TP component, and platform attribute data for basalt imply that most work on basalt was related to uniface retouch and resharpening.

Moving to the Sector I EHI component, there is a preference for finer grained materials, but this preference is somewhat diminished from the Terminal Pleistocene components, but most similar to the Sector I TP component. MS rocks were the only rock type where there was enough debitage to allow comparisons. In general, this debitage seems to have been in a relatively late stage of reduction, on par with Sector I TP, but somewhat earlier than Sector II above and below-induration. Exterior platform angle data indicate that core preparation activity was commonplace, perhaps at some intermediate to late level, with removal of flakes, probably for use. Initial "roughing out" very likely took place elsewhere. However, with two complete unifaces being found on site in this component, perhaps there is some processing activity associated with EHI.

For the Sector II EHIIa and b components, there is no longer a strong preference for MS rocks. Sandstone is used in these components in almost equal proportions to the

MS materials. MS rocks are apparently in a relatively late stage of reduction, but not as late as the Sector II above and below-induration components. Again, for MS rocks, there could be some level of intermediate to late stage core reduction activity associated with the site. The situation for sandstone is very different in the EHIIIa component. Sandstone is in a very early stage of the reduction process, with cores being roughed out on site, and later stage reduction taking place elsewhere. Again raw material location seems to have a great deal to do with reduction stage, as sandstone is present in adequate abundance within the Quebrada bed directly adjacent to QJ-280. The primary function of Sector I seems to change slightly in EHII times.

Chapter 6: Conclusions

Looking at all data, a few generalizations can be made. First, raw material preference shifts away from the finer grained materials through time. Quarry data imply that this is a cultural shift, and is not due to raw material depletion. Second, reduction activity is initially shaped by the nearest location of the raw material. Third, the function of the individual site sectors (I and II) remains remarkably constant through time. Sector II seems to relate mainly to domestic activity, and Sector I appears to be an intermediate to late stage workshop area, with earlier stage reduction for sandstone in the EHIIa component. Finally, for all components, technological strategies at the site are concerned with later stage production and maintenance of formal tools and the production of use-flakes from prepared or formal cores.

I have also analyzed the lithics from Quebrada Tacahuay, another site with a Terminal Pleistocene maritime association. MS debitage, the only rock type recovered from QT, is in a very late stage of the reduction process. Platform data indicate that core preparation with the removal of use flakes, formal tool use, resharpening, and retouch were all taking place at Quebrada Tacahuay. However, the vast majority of debitage recovered from the site was extremely small, and this could imply either tool use or post-depositional trampling. Keefer et al. (1998) believe that these small flakes may be use-flakes related to bird processing. Lithic technology at Quebrada Tacahuay looks very similar to the Terminal Pleistocene components of QJ-280. However, bifacial work is either absent or very minimal at QT.

Central Andean Terminal Pleistocene maritime sites studied thus far, including Quebrada Jaguay and Quebrada Tacahuay, show a prepared core and formal tool technology. Though the technological orientation of the two sites is very similar, the function of Quebrada Tacahuay seems to be somewhat different. While Sector II of Quebrada Jaguay appears to have domestic associations, Quebrada Tacahuay could be associated with bird processing. Although we are beginning to learn more about these early maritime peoples, much more work is needed in order to establish their connection with the highlands, the source of the QJ-280 obsidian. Only after associated highland sites are excavated and analyzed will we be able to work out questions dealing with larger scale technological orientation and mobility, as well as larger scale migration patterns.

The methodology used herein can serve as a model for future work in the Central Andean area. Useful attributes to record in a sourcing survey include rock category, rock type, roundness, dimensions, presence of previous fractures, and break. Useful attributes for a lithic analysis include flake length, flake width, weight, flake type, exterior platform angle, cortex cover, platform preparation, presence of platform faceting, presence of dorsal surface faceting, presence of use-wear, and rock type. In the future, it would be constructive to study the reduction practices at the quarry sites. Otherwise, our methodology proved to be very useful. This thesis represents a first attempt at understanding the lithic technology of these newly-discovered maritime peoples, and will serve as a model for future lithic analysis related to these groups.

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Appendix A: Sourcing Survey Spreadsheet Category Description

Table A.1

RT (Rock-Type) P-Plutonic V-Volcanic S-Sedimentary M-Metamorphic U-Undetermined	**R (Roundness)** 1 Angular 5 Intermediate 10 Sphere
Color Munsell Color Format	
Tx (Texture) NA Not Applicable BD Banded, Distinct BI Banded, Indistinct M Mottled V Veined P Porphyrititc I Inclusions M Massive	**Dimensions:** L Long S Short I Intermediate
Tr (Transmittance) NA Not Applicable O Opaque Tl Translucent Tp Transparent	**PF (Previously Fractured)** Y Yes N No
Gr (Grain-size) G Glass or smooth S Silt size VF Very Fine F Fine M Medium C Course VC Very Course	**Crtx (Cortex) T (Texture)** S Smooth G Grainy P Pitted F Faceted B Blocky FeOx
ST (Fresh Surface Texture) NA Not Applicable S Smooth F Flawed M Matte H Hacky O Other (Comments)	**Crtx (Cortex) S (Staining)** FeOx Black Brown Yellow
Mineralogy (Useful Abbreviations) Q Quartz F Feldspar B Biotite M Muscovite C Clinobole	**B (Break)** 1 Rough 3 Intermediate 5 Clean

Appendix B: QJ-280 Sourcing Survey Data

Table B.1. QJ-280 Sourcing Survey Data

Grid#	L	S	I	R	CxT	CxS	RT	Color(s)	Tx	Gr	Trm	SfTx	Minerology	B	FF	Comments	SQ#
1	11	2.5	6	6	P	BLK/FEOX	V	N4	M	VF	O	M	F,Q	4	Y	?	
1	6	2.5	3	6	S	FEOX	MS	10YR6/2	M	S	TL	S	Q	5	Y	?	
1	11	3.5	7.5	7	P	FEOX	V	N6	M	VF	O	H	F, EPIDOTE	2	Y	ALTERED DACITE	
1	6.5	3	6	1	G	NONE	P	NA	M	VC	O	NA	Q,F,B	3	N	ALTERED GRANITE	
1	5.5	2.5	5	7	S	FEOX	S	5GY4/1	M	VF	TL	M	Q	5	Y	ALTERED SILTSTONE	
1	6	2	3	5	P	FEOX	MS	N6	MT	S	TL	M	Q	5	Y	ALTERED VOLCANIC	
1	6.5	0.7	2.5	1	S	FEOX	MS	5YR6/4	MT	S	TL	M	Q	5	Y	ALTERED VOLCANIC	
1	9	3	4.5	2	S	NONE	MS	N8	M	S	TL	M	Q,CHL,PYRITE	5	N	ALTERED VOLCANIC	
1	5.5	2	2.5	1	NA	NA	MS	10YR4/2	MT	S	O	S	F,Q	5	Y	ALTERED VOLCANIC	
1	9.5	3.5	6		P	FEOX	V	5Y7/2	P	VC/VF	O	H	Q,B,F	5	Y	B,Q PHENO'S/RHYOLITE	
1	6	3.5	4	2	P	NONE	V	N2	M	F	O	H		5	N	BASALT	
1	9.5	5	7.5	7	S	FEOX	V	N4	M	VF	TL	M	Q,B	5	N	BLACK RHYOLITE	
1	10	4.5	6	5	P	FEOX	V	N4.5	P	C/VF	O	NA	C,P	4	Y	C PHENO'S/BASALT	
1	10	2.5	7	3	S	FEOX	V	N4	M	VF	O	M	C	5	Y	C PHENO'S/BASALT	
1	6	1.5	3.5	3	S	FEOX	V	5GY4/1	P	VF	O	H	C	4	Y	C PHENO'S/DACITE	
1	9.5	4.5	7	3	P	NONE	V	5GY4/1	P	M/VF	O	H	C	5	Y	C PHENO'S/DACITE	
1	5	3.5	4.5	9	P	BROWN	V	5YR4/1	P	C/S	O	H	C,F	3	N	C,F PHENO'S/BASALT	
1	5.5	2	3.5	7	P	NONE	V	N4	P	C/S	O	H	C,F	4	N	C,F PHENO'S/BASALT	
1	9	2.5	3.5	5	S	FEOX	V	5Y4/1	P	VC/S	O	NA	C,F	4	N	C,F PHENO'S/DACITE	
1	8	5	6	7	S	NONE	V	5GY6/1	P	VC,S	O	H	F,C	5	N	C,F PHENO'S/DACITE	
1	10	6	7.5	8	S	FEOX	V	5Y4/1	M	S	TL	H	Q,C,P	5	N	DACITE	
1	17	6	16	9	S	FEOX	V	5GY5/1	P	VC/S	O	NA	P	5	Y	F PHENO'S/?	
1	8	4	5.5	6	G	FEOX	V	5YR6/1	P	C/S	O	NA	F	2	N	F PHENO'S/ALTERED BASALT	
1	12	7	10	3	G	FEOX	V	NA	P	C/S	O	NA	F	1	Y	F PHENO'S/ALTERED TUFT	
1	7	4	6	8	S	FEOX	V	5YR4/1	P	VC/S	O	H	F	4	N	F PHENO'S/ANDESITE	
1	7.5	4	7	5	P	FEOX	V	N3	P	C/S	O	H	F	5	Y	F PHENO'S/BASALT	
1	7	2.5	4	5	P	NONE	V	5YR4/1	P	C/S	O	H	F,C	3	Y	F PHENO'S/BASALT	
1	14	8	13	7	S	BROWN	V	5GY4/1	P	VC/F	O	H	F	4	N	F PHENO'S/BASALT	
1	7	4	5.5	5	S	BROWN	V	N4	P	VC/S	O	H	C,F	4	N	F PHENO'S/CLINOBOLE	
1	6.5	2.5	5	8	P	FEOX	V	5Y6/1	P	VC/S	O	H	F	4	N	F PHENO'S/DACITE	

1	6	2.5	5.5	7	S	FEOX	V	N4	P	VC/S	O	H	F	4	Y	F PHENO'S/DACITE	
1	7	2	5	1	F	FEOX	V	5YR6/1	P	VF/C	O	H		4	N	F PHENO'S/LITHIC TUFT	
1	7	2.5	3.5	4	S	NONE	V	5G6/1	P	C/S	TL	M	F,B	5	N	F PHENO'S/RHYO-DACITE	
1	7	4	6	8	S	NONE	V	5Y6/1	P	VC/S	TL	H	Q,F	5	Y	F,Q PHENO'S/RHYO-DACITE	
1	10	6	8.5	4	F	NONE	P	NA	M	VC	O	NA	F,C	4	N	GABBRO	
1	8	2.5	7	5	S	FEOX	P	NA	BI	VC	O	NA	C,P	3	N	GABBRO	
1	7.5	3	6	2	F	NONE	P	N4	M	VC	O	NA	C,F	4	N	GABBRO	
1	8.5	3	8	9	P	FEOX	P	N2	M	VC	O	H	C,F	3	N	GABBRO	
1	11	5.5	6.5	8	S	NONE	P	N4	M	VC	O	H	C,F	5	N	GABBRO	
1	6	2.5	3.5	3	S	NONE	P	5GY4/1	M	VC	O	M	F,C	4	N	GABBRO	
1	16	7	12	6	S	BLK/FEOX	P	5B5/1	M	VC	O	H	F,C	5	Y	GABBRO	
1	19	10	14	9	S	FEOX	M	NA	BD	VC	O	NA	F,C,Q	4	N	GNEISS	
1	6	2	5	5	G	NONE	M	NA	BD	VC	O	NA	B,Q,F	3	Y	GNEISS	
1	9	4	5.5	1	G	NONE	M	NA	BD	VC	O	NA	B,Q,F	2	N	GNEISS	
1	6	1.5	4	4	G	FEOX	M	NA	BD	VC	O	NA	Q,F,B	3	N	GNEISS	
1	6	2	5	7	S	FEOX	P	NA	M	VC	O	NA	Q,F,CHL	4	Y	GRANITE	
1	6	3	4	9	P	NONE	P	NA	M	VC	O	NA	C,Q,F	3	N	GRANITE	
1	5.5	2	3.5	8	S	NONE	P	NA	M	VC	O	NA	F,C,Q,B	4	Y	GRANITE	
1	9	4	7.5	8	S	NONE	P	NA	M	VC	O	NA	Q,B,F	3	Y	GRANITE	
1	6.5	2.5	6	8	G	FEOX	P	NA	M	VC	O	H	BIOTITE,Q,F	3	N	GRANITE	
1	6	3.5	5	8	G	NONE	P	NA	M	VC	O	H	Q,F,B	3	Y	GRANITE	
1	5.5	1.5	5	1	G	NONE	P	NA	M	VC	O	NA	Q,F,C	3	N	GRANITE	
1	10	8	9	9	S	BLK/FEOX	M	N4	M	F	O	H	Q,B,S	5	Y	HORNFELS	
1	8	4	6.5	9	S	BROWN	MS	10YR6/6	MT	S	O	S	Q	5	Y	JASPER	
1	6.5	4	5	8	P	NONE	P	N8	M	C	O	H	Q,F	4	Y	LEUCO GRANITE	
1	6	2.5	3.5	5	S	FEOX	P	5Y8/1	M	VC	O	H	F,Q	3	N	LEUCO GRANITE	
1	6.5	4	5	8	S	NONE	P	N8	M	VC	O	H	Q,F,M	4	N	LEUCO GRANITE	
1	8.5	4	5	7	S	NONE	P	NA	BI	VC	O	NA	Q,F,C	5	N	MAFIC GNEISS	
1	6.5	3	4	7	S	NONE	MS	5YR3/2 5YR7/2	M	S	TL	S	Q	5	Y	PETRIFIED WOOD	
1	8	4	5	5	S	NONE	P	5YR8/1	M	M	TL	H	Q, CHL, GARNET	5	N	PRE-CAMBRIAN	
1	7	3	5	9	S	FEOX	S	NA	M	VC	O	H	Q,B,S	5	N	QUARTZITE	

1	7	3	4	6	S	NONE	S	5R3/2	BI	VF	TL	M	Q	5	N	QUARTZITE	
1	9	4.5	7	3	G	NA	P	NA	M	VC	O	NA	F,Q,C,M	3	N	RED GRANITE	
1	9	2.5	6	8	F	FEOX	P	NA	M	VC	O	NA	F,Q,M	3	N	RED GRANITE	
1	8.5	3	4	9	S	FEOX	S	5GY6/2	M	VF	O	H	Q,B,S	5	Y	SANDSTONE	
1	6	3.5	4.5	6	S	BROWN	S	5Y3/1	M	VF	O	M	Q,B,S	5	N	SANDSTONE	
1	8	4	6	8	S	FEOX	S	10Y8/2	M	M	O	H	Q	5	N	SANDSTONE	
1	6.5	3.5	4.5	9	F	FEOX	S	5Y5/2	M	VF	TL	M	Q	5	N	SANDSTONE	
1	7	4	5	5	P	NONE	S	5Y8/1	M	VC	O	NA	Q	4	Y	SANDSTONE	
1	9.5	4.5	6.5	8	S	FEOX	S	N7/N6	M	F	O	M	Q	5	N	SANDSTONE	
1	8	5	6.5	8	S	NONE	S	N8	M	C/VF	TL	H	Q	4	N	SANDSTONE	
1	6	3	4.5	9	S	FEOX	S	5Y8/1	M	F	TL	H	Q	5	Y	SANDSTONE	
1	9	1	8.5	8	S	FEOX	S	5Y8/1	M	C	O	NA	Q	5	Y	SANDSTONE	
1	10	4.5	8	8	S	NONE	S	5Y8/1	M	M	O	H	Q	4	N	SANDSTONE	
1	6.5	5	6	1	NA	NA	S	5Y6/1	M	F	O	H	Q	5	Y	SANDSTONE	
1	13	5	10	5	S	FEOX	S	N6	M	VF	TL	M	Q	5	N	SANDSTONE	
1	7	2.5	4.5	5	S	NONE	S	5Y6/1	M	M	TL	M	Q	4	Y	SANDSTONE	
1	8	4	4	8	S	NONE	S	5Y6/1	M	VF	TL	M	Q	5	N	SANDSTONE	
1	11	4.5	9	8	F	NONE	S	5YR7/1	M	M	TL	H	Q	4	N	SANDSTONE	
1	6.5	2.5	3.5	5	S	NONE	S	5GY4/1	M	VF	O	H	Q	5	N	SANDSTONE	
1	12	5	9	8	S	NONE	S	5YR8/1	BD	F	TL	H	Q	5	Y	SANDSTONE	
1	6.5	1	3	4	S	FEOX	S	5Y6/1	M	F	O	H	Q	3	N	SANDSTONE	
1	14	5	12	7	S	FEOX	S	5Y8/1	M	C	TL	H	Q	3	N	SANDSTONE	
1	5.5	3	5	3	F	FEOX	S	5RP6/2	M	M	O	M	Q,HEM	5	N	SANDSTONE	
1	6.5	2.5	4	6	S	NONE	S	N5	M	VF	TL	M	Q	5	N	SANDSTONE	
1	10	4.5	8	5	S	FEOX	S	5Y6/1	MT	C	O	H	Q, HEM	4	N	SANDSTONE	
1	6.5	2	3	3	F	NONE	S	5Y4/1	M	VF	O	H	Q	5	Y	SANDSTONE	
1	7.5	3.5	5.5	6	S	NONE	S	5Y8/1	M	C	TL	H	Q, HEM	4	Y	SANDSTONE	
1	10	5	5.5	8	S	NONE	S	5YR6/1	M	M	TL	H	Q	5	Y	SANDSTONE	
1	8	3	5.5	7	S	FEOX	S	10YR6/2	M	C	TL	H	Q	5	Y	SANDSTONE	
1	13	9	11	8	S	NONE	S	5RP6/2	M	F	TL	M	Q	5	N	SANDSTONE	
1	8.5	2.5	5	1	F	NONE	S	5Y4/1	M	F	O	H	Q	2	N	SANDSTONE	

1	6	5	6	8	S	NONE	S	N5	M	F	O	H	HEM,Q	5	Y	SANDSTONE	
1	6	2	4.5	2	F	NONE	S	5Y4/1	M	F	O	H	Q	4	N	SANDSTONE	
1	5.5	2.5	4	1	F	NONE	MS	5Y6/1	MT	S	TL	M	Q	5	N	SANDSTONE/CHERT	
1	6.5	3	5	8	S	BLK	MS	5YR4/1	BI	S	O	S	Q	5	Y	SILICEOUS ROCK	
1	5	2.5	4	1	F	BROWN	S	5Y4/2	BI	S	O	M	Q	5	N	SILTSTONE	
1	10	3.5	6	4	S	NONE	S	N5	M	S	TL	M	Q, HEM	5	N	SILTSTONE	
1	5	1.5	3.5	3	S	NONE	S	5Y6/1	M	VF	TL	M	Q	5	N	SILTSTONE	
1	6	3.5	4.5	8	S	FEOX	S	5YR6/1	M	F	O	H	Q,F	4	N	VOLCANIC SANDSTONE	
2	9	4.5	5	6	G	NONE	M	NA	BI	VC	O	H	Q,B,M	3	Y	?	
2	16	7	11	3	G	NONE	P	5YR5/2	BI	C	O	H	CHL,F,Q	3	N	?	
2	26	9.5	18	7	S	FEOX	P	5YR7/2	M	C	O	H	Q,F,C	2	Y	?	
2	18	5.5	8	2	G	NONE	P	5Y5/1	M	C	O	H	F,Q,B	2	N	ALTERED DIORITE?	
2	11	7	11	4	G	NONE	M	NA	M	VC	O	H	Q,B,F,CHL	2	N	ALTERED RED GRANITE	
2	15	9	12	7	S	NONE	V	N4-5YR2/2	P/BD	VC/VF	O	M	F,Q,B	5	N	B,F,Q PHENO'S/RHYO-DACITE	
2	5	3	5	7	S	FEOX	V	5YR6/1	P	VC/S	O	H	B,Q	4	N	B,Q PHENO'S/RHYOLITE	
2	7	4	5	6	S	NONE	V	5YR7/2	P	VC/VF	O	H	B,Q,F	1	Y	B,Q,F PHENO'S/TUFT	
2	6	3	5	2	S	NONE	V	N4	M	F	O	H	NONE VIS	4	N	BASALT	
2	12	5	9.5	9	S	NONE	V	10YR6/2	P	C/S	O	H	C,F	5	N	C,F PHENO'S/ANDESITE	
2	8.5	4.5	8	7	S	NONE	V	N4	P	C/VF	O	H	F,C	4	N	C,F PHENO'S/BASALT	
2	7	5	5.5	8	P	NONE	V	5Y6/1	P	C/S	O	H	F,C,B	5	N	C,F,B PHENO'S/DACITE	
2	6	3.5	3.5	8	S	NONE	V	5Y6/1	P	C/S	O	H	Q,C,F	5	N	C,F,Q PHENO'S/RHYO-DACITE	
2	13	6	11	9	P	NONE	V	N6	M	C	O	H	F	3	N	DACITE?	
2	8.5	7	5	6	S	NONE	P	5G4/1	M	C	O	H	B,F,Q	5	N	DIORITE	
2	8	3.5	4.5	7	S	NONE	V	5YR4/1	P	C/S	O	H	F	4	Y	F PHENO'S/ANDESITE	
2	11	4.5	8	8	P	NONE	V	N4	P	M/S	O	H	F	4	N	F PHENO'S/BASALT	
2	8	4	7	6	S	NONE	V	5GY5/1	P	VC/VF	O	H	F,B	5	N	F,B PHENO'S/?	
2	31	11	14	5	S	NONE	P	N5	M	C	O	H	B,F,PYRITE	5	N	GABBRO	
2	15	5.5	11	2	G	NONE	P	5Y4/1	M	C	O	H	C,F	3	N	GABBRO	
2	16	7	14	8	G	NONE	P	N4	M	VC	O	H	F,C	5	N	GABBRO	
2	20	6	11	7	G	NONE	M	NA	BI	VC	O	H	B,Q,F	4	N	GNEISS	
2	14	6	7	5	G	NONE	M	NA	BI	VC	O	H	F,Q,C	4	N	GNEISS	

2	15	5	7	3	G	NONE	M	N4	BI	VC	O	H	F,Q,B	4	N	GNEISS	
2	15	6	11	6	G	NONE	M	NA	M	VC	O	H	Q,C,F	4	N	GNEISS	
2	14	7	11	4	G	NONE	M	NA	BI	VC	O	H	F,C,Q	4	N	GNEISS	
2	13	3	9.5	3	G	NONE	M	NA	BI	VC	O	H	F,Q,C	4	N	GNEISS	
2	15	8	10	4	G	NONE	M	NA	BI	VC	O	H	Q,F,C,B	4	N	GNEISS	
2	23	12	14	4	G	NONE	M	NA	BI	VC	O	H	C,Q,F,B	4	N	GNEISS	
2	23	13	19	8	G	NONE	M	NA	BI	VC	O	H	B,Q,F	3	N	GNEISS	
2	8.5	3.5	7	6	G	NONE	M	NA	BI	VC	O	H	Q,F,C	4	N	GNEISS	
2	14	5.5	9.5	5	G	NONE	M	NA	BI	VC	O	H	Q,F,B,C	4	N	GNEISS	
2	14	5	9	4	G	NONE	M	NA	BI	C	O	H	B,Q,F,C	5	N	GNEISS	
2	8	3	4.5	6	G	NONE	M	NA	BI	VC	O	H	B,Q,F,C	4	N	GNEISS	
2	21	7	16	5	G	NONE	M	NA	BI	VC	O	H	C,Q,F,B	4	N	GNEISS	
2	14	9	10	6	G	NONE	M	NA	BI	VC	O	H	Q,F,C	4	N	GNEISS	
2	25	12	18	8	G	NONE	M	NA	BD	VC	O	H	Q,M,B,F	3	N	GNEISS	
2	7	2.5	5	4	G	NONE	M	N6	BI	C	O	H	B,M,Q,F	4	N	GNEISS	
2	16	7	15	5	G	NONE	M	N5	BI	C	O	H	F,B,Q,SULFIDE	5	N	GNEISS	
2	14	9	12	4	G	NONE	M	N5	M	VC	O	H	C,Q,F	5	N	GNEISS	
2	9	4	7	5	G	NONE	M	N5	M	C	O	H	Q,B	4	N	GNEISS	
2	21	8	16	5	G	NONE	M	NA	BI	VC	O	H	Q,B,F	5	N	GNEISS	
2	8	2.5	6.5	3	G	NONE	M	NA	BI	VC	O	H	B,F,Q	4	N	GNEISS	
2	25	8	16	5	G	NONE	M	NA	BI	VC	O	H	C,Q,F	4	N	GNEISS	
2	11	5	7	7	G	NONE	M	NA	M	VC	O	H	Q,B,F	4	Y	GNEISS	
2	8	4.5	8	6	G	NONE	M	N5	BI	C	O	H	C,Q,F	4	N	GNEISS	
2	14	4.5	10	8	G	NONE	M	N5	BI	C	O	H	C,Q,F	4	N	GNEISS	
2	12	8	11	3	S	NONE	M	NA	BD	C	O	H	F,Q,C	4	N	GNEISS	
2	18	6.5	10	8	G	NONE	M	NA	BI	VC	O	H	F,Q,C	4	N	GNEISS	
2	18	8.5	9.5	7	G	NONE	M	NA	BI	VC	O	H	Q,F,B	4	N	GNEISS	
2	21	12.5	16	6	G	NONE	M	NA	BI	VC	O	H	C,B,F,Q	4	N	GNEISS	
2	18	8	14	5	G	NONE	M	N5	BI	C	O	H	B,Q,F	4	N	GNEISS	
2	26	15.5	19	7	G	NONE	M	NA	BI	VC	O	H	Q,F,C,CHL	4	N	GNEISS	
2	7.5	4	5	6	G	NONE	M	NA	BI	VC	O	H	F,Q,C	3	N	GNEISS	

2	24	9.5	19	6	G	NONE	M	5YR5/1	BI	C	O	H	F,B,Q,SULFIDE	5	Y	GNEISS	
2	7	3.5	3.5	3	S	NONE	M	NA	BI	VC	O	H	Q,F,B	4	N	GNEISS	
2	14	4.5	8	5	G	NONE	M	N5	BI	C	O	H	F,C	4	N	GNEISS	
2	22	14.5	20	9	G	NONE	M	NA	BI	VC	O	H	F,B,Q,SULFIDE	4	N	GNEISS	
2	20	13.5	15	6	G	FEOX	M	NA	BI	VC	O	H	C,F,Q,B	4	N	GNEISS	
2	16	7	7.5	5	G	NONE	M	NA	BI	C	O	H	F,B,C,Q	4	N	GNEISS	
2	8.5	3	6.5	4	G	NONE	M	NA	BI	M	O	H	Q,B,F	4	N	GNEISS	
2	21	6.5	17	5	G	NONE	M	NA	BI	C	O	H	B,Q,F	5	N	GNEISS	
2	19	11	13	6	G	NONE	M	NA	BI	C	O	H	F,C,B,Q	4	N	GNEISS	
2	12	6	9	5	S	NONE	M	NA	BI	VC	O	H	F,C	4	N	GNEISS	
2	13	3.5	6.5	4	S	NONE	M	NA	BI	C	O	H	C,Q,F	4	N	GNEISS	
2	20	11.5	15	7	G	NONE	M	NA	BI	VC	O	H	Q,F,C	4	N	GNEISS	
2	25	9	20	9	G	NONE	M	NA	BI	VC	O	H	Q,F,B	3	N	GNEISS	
2	13	5	9	3	S	FEOX	P	5YR7/2	M	VC	O	H	F,Q,B	4	N	GRANITE	
2	12	5	6	6	G	NONE	P	NA	M	C	O	H	Q,F,B	3	N	GRANITE W/MAFIC ENCLAVE	
2	21	9	11	5	G	NONE	P	NA	M	C	O	H	Q,B,F	4	N	INCLUDED HORNFELS IN GRANITE	
2	8.5	5	6.5	3	S	NONE	M	5YR7/2	BI	VC	O	H	F,B	4	N	LEUCO GNEISS	
2	19	11	13	7	G	NONE	P	5YR8/1	M	VC	O	H	Q,F,CHL	3	N	LEUCO GRANITE	
2	6.5	2.5	3	1	G	NONE	P	NA	M	C	O	H	Q,F,B,CHL	3	N	LEUCO GRANITE	
2	27	12.5	22	6	G	NONE	P	NA	BI	C	O	H	F,Q,B,CHL	3	N	LEUCO GRANITE W/MAFIC ENCLAVE	
2	8.5	4	7	7	G	NONE	M	N4	BI	C	O	H	B,Q,F	5	N	MAFIC GNEISS	
2	23	10	20	8	G	NONE	P	5Y6/1	M	C	O	H	F,B,Q,SULFIDE	3	N	MONZENITE	
2	9.5	4	8.5	8	S	NONE	V	5YR5/2	P	VC/S	O	H	Q,F,C,B	4	N	Q,F,C PHENO'S/DACITE	
2	6.5	3	4	5	P	NONE	V	5YR7/2	P	VC/VF	O	H	Q,PUMICE	2	N	Q,PUMICE,F,B PHENO'S/TUFT	
2	12	7	9	4	G	NONE	P	NA	M	VC	O	H	B,F,Q	3	N	RED GRANITE	
2	9	5.5	8	4	G	NONE	P	NA	M	VC	O	H	Q,F,B	3	N	RED GRANITE	
2	12	7.5	9	6	G	NONE	P	NA	M	VC	O	H	F,Q,B	3	N	RED GRANITE	
2	6.5	4.5	6.5	7	G	NONE	P	NA	M	VC	TL	H	Q,F,B	3	N	RED GRANITE	
2	15	6	11	3	G	NONE	P	NA	M	VC	O	H	F,Q,B	3	N	RED GRANITE	
2	7	2.5	5	1	G	NONE	P	NA	M	VC	O	H	Q,F,B	3	N	RED GRANITE	
2	8	4	6	5	G	NONE	P	NA	M	VC	O	H	Q,B,F	2	Y	RED GRANITE	

2	24	12	19	8	S	NONE	P	NA	M	VC	O	H	B,Q,F	3	N	RED GRANITE	
2	16	11.5	12	5	G	NONE	P	NA	M	VC	O	H	B,F,Q	3	N	RED GRANITE	
2	25	9.5	12	6	S	NONE	P	N8	M	C	O	H	Q,F,B	4	N	RED GRANITE	
2	9	4.5	7	4	G	NONE	P	NA	M	C	O	H	F,Q,B,CHL	4	N	RED GRANITE	
2	6.5	4	6	3	G	NONE	P	5YR4/4	M	VC	O	H	F,CHL,Q	2	N	RED GRANITE	
2	12	5	8	3	G	NONE	P	NA	M	VC	O	H	Q,F,B,CHL	3	N	RED GRANITE	
2	10	7	8.5	6	G	NONE	P	NA	M	VC	O	H	B,Q,F	1	N	RED GRANITE	
2	8	4.5	5.5	8	G	NONE	P	NA	M	VC	O	H	Q,F,B	3	N	RED GRANITE W/MAFIC ENCLAVE	
2	5.5	2	4	6	S	NONE	S	N4	M	VF	TL	M	Q	5	N	SANDSTONE	
2	7	5	6	9	S	NONE	S	N9	M	M	TL	H	Q	5	N	SANDSTONE	
2	13	6	9	7	S	NONE	S	N8	M	M	TL	H	Q	5	N	SANDSTONE	
2	9	6.5	8	3	S	FEOX	S	5YR7/1	M	F	TL	M	Q	5	N	SANDSTONE	
2	8	3.5	6	8	S	FEOX	S	5YR6/2	M	F	O	M	Q	5	N	SANDSTONE	
2	11	5	8	8	S	FEOX	S	10YR7/2	M	M	TL	H	Q	5	N	SANDSTONE	
2	7	2	3.5	1	G	NONE	P	NA	M	VC	O	H	F,B,Q,SULFIDE	2	Y	WEATHERED GRANITE	
3	7.5	4	6	5	G	NONE	P	5YR7/2	M	VC	O	H	F,C,MTE	3	N	?	
3	13	4	7	2	S	NONE	P	NA	M	VC	O	H	B,Q,CHL	3	N	?	
3	6	3.5	4.5	3	F	NONE	P	NA	M	VC	O	H	CHL,Q,F	4	N	ALTERED RED GRANITE	
3	8	5	7	2	G	NONE	P	NA	M	VC	O	H	F,Q,B,CHL	3	N	ALTERED RED GRANITE	
3	5.5	2	5.5	2	S	FEOX	P	5YR7/2	M	M	O	H	Q,F	4	N	APLITE	
3	12	5	9	2	S	NONE	V	N4	M	M	O	H	F,C,SU	5	N	BASALT	
3	7	3.5	4	1	S	NONE	V	N4	M	F	O	M	C	5	N	BASALT	
3	15	6	13	8	S	NONE	V	5YR5/2	P	C/S	O	H	F,C	5	N	C,F PHENO'S/ANDESITE	
3	12	7.5	9	6	S	NONE	V	5R6/2	P	C/S	O	H	F,C	4	N	C,F PHENO'S/ANDESITE	
3	13	5.5	11	6	S	NONE	V	5R5/2	P	C/S	O	H	C,F	5	N	C,F PHENO'S/ANDESITE	
3	7	4.5	5	9	S	NONE	V	5YR5/1	P	C/VF	O	H	F,C	5	N	C,F PHENO'S/ANDESITE	
3	9	7	7	9	S	NONE	V	N5	P	C/S	O	H	C,F,B	4	N	C,F,B PHENO'S/ANDESITE	
3	7.5	4	5	9	S	NONE	V	N5	P	VC/S	O	H	F,Q,C	5	N	C,F,Q PHENO'S/RHYO-DACITE	
3	14	6	9	7	S	NONE	P	N5	M	M	O	H	F,B	4	N	DIORITE	
3	6	3	3	3	S	NONE	P	N5	M	C	O	H	B,F,Q,C	4	N	DIORITE?	
3	5	2.5	4	7	S	NONE	V	5YR5/2	P	C/F	O	H	F,B	4	N	F,B PHENO'S/ANDESITE	

3	14	7	13	9	S	NONE	V	5YR5/2	P	C/VF	O	H	F,MTE	5	N	F,MTE PHENO'S/ANDESITE	
3	6	4.5	5	8	G	NONE	V	10YR6/2	P	VC/VF	O	H	F,Q	4	N	F,Q PHENO'S/RHYO-DACITE	
3	5.5	3.5	4.5	6	S	NONE	P	N5	M	C	O	H	F,C	4	N	GABBRO	
3	11	5.5	9	8	S	NONE	P	N5	M	C	O	H	B,F,Q,C	3	N	GABBRO	
3	8	5	6	4	S	NONE	P	5GY4/1	M	M	O	H	B,F,C	3	N	GABBRO	
3	19	6	13	7	S	NONE	P	N4	M	C	O	H	F,B,C	4	N	GABBRO	
3	15	5.5	13	7	S	NONE	P	N4	M	C	O	H	C,F	5	N	GABBRO	
3	10	2.5	6	2	S	NONE	P	N4	M	C	O	H	F,B,H	4	N	GABBRO	
3	15	5	9	5	G	NONE	M	NA	BI	VC	O	H	B,Q,F,G	3	N	GARNET GNEISS	
3	24	9	19	7	S	NONE	M	NA	BI	C	O	H	F,Q,B	4	N	GNEISS	
3	6.5	2.5	3	6	F	NONE	M	NA	BI	C	O	H	Q,F,CHL,B	3	N	GNEISS	
3	10	5.5	8	8	G	NONE	M	5GY4/1	BI	C	O	H	B,F,Q,C	4	N	GNEISS	
3	13	5.5	11	8	G	NONE	M	NA	BI	C	O	H	F,Q,C,B	4	N	GNEISS	
3	15	5	10	4	G	NONE	M	5GY6/1	BI	C	O	H	Q,B,CHL	4	N	GNEISS	
3	14	5	12	4	G	NONE	M	N5	BI	C	O	H	Q,F,C	4	N	GNEISS	
3	13	4.5	10	4	G	NONE	M	NA	BI	C	O	H	C,F,Q,B	4	N	GNEISS	
3	9	3	7	4	G	NONE	M	NA	BI	C	O	H	F,Q,B	4	N	GNEISS	
3	5.5	4	5.5	4	S	NONE	M	5Y6/1	BI	C	O	H	Q,C,F,B	4	N	GNEISS	
3	14	5	10	3	G	NONE	M	NA	BI	VC	O	H	F,Q,B,GN	4	N	GNEISS	
3	24	7	14	8	G	NONE	M	N5	BI	C	O	H	F,Q,B	4	N	GNEISS	
3	14	6.5	9	4	G	NONE	M	NA	BI	C	O	H	Q,B,F	3	N	GNEISS	
3	18	9	11	7	G	FEOX	M	NA	BI	VC	O	H	C,F,Q,GN	4	N	GNEISS	
3	10	3	4.5	4	G	NONE	M	NA	BI	C	O	H	Q,F,B	3	Y	GNEISS	
3	19	7.5	17	7	G	NONE	M	NA	BI	VC	O	H	F,C,B,Q	4	N	GNEISS	
3	7	2	5	4	G	NONE	M	NA	BI	VC	O	H	Q,F,B	4	N	GNEISS	
3	7	6	10	6	G	NONE	M	NA	BI	C	O	H	F,B,Q	4	N	GNEISS	
3	7	3.5	6.5	2	F	NONE	M	NA	BI	VC	O	H	Q,C,F,B	4	N	GNEISS	
3	15	8	10	4	G	NONE	M	NA	BI	C	O	H	F,B	4	N	GNEISS	
3	14	6	11	4	G	NONE	M	NA	BI	C	O	H	F,B,Q	4	N	GNEISS	
3	18	6	10	5	G	NONE	M	NA	BI	C	O	H	Q,F,B,GN	4	N	GNEISS	
3	19	6.5	9	5	S	NONE	M	N5	BI	C	O	H	B,Q,F,GN	4	N	GNEISS	

3	11	5	8	5	G	NONE	M	NA	BI	C	O	H	Q,F,B	4	Y	GNEISS	
3	22	8	12	4	F	NONE	M	NA	BI	VC	O	H	F,Q,B,C	4	N	GNEISS	
3	10	6	9	5	G	NONE	P	NA	M	C	O	H	Q,F,B	2	N	GRANITE	
3	6	3.5	4.5	6	G	NONE	P	NA	M	VC	O	H	F,Q,B	3	N	GRANITE	
3	23	6	17	2	F	FEOX	P	5YR8/1	M	C	O	H	Q,F,B	4	N	GRANITE	
3	26	10	15	9	G	NONE	P	NA	M	VC	O	H	F,Q,B	3	N	GRANITE	
3	19	8	9	4	G	NONE	P	NA	M	VC	O	H	F,Q,B	3	N	GRANITE	
3	17	7	10	7	G	NONE	P	NA	M	VC	O	H	F,Q,MTE	4	N	GRANITE	
3	5.5	3.5	4.5	7	G	NONE	P	NA	M	C	O	H	F,Q,B	3	N	GRANITE	
3	7	2	4	3	G	NONE	P	NA	M	VC	O	H	B,Q,F	3	N	GRANITE	
3	19	6.5	13	6	G	NONE	P	NA	M	VC	O	H	F,Q,B	2	N	GRANITE	
3	6	1.5	2.5	1	G	NONE	P	NA	M	VC	O	H	Q,F,B	3	N	GRANITE	
3	14	9	13	6	G	NONE	P	NA	M	VC	O	H	F,Q,MTE	3	N	GRANITE	
3	22	8.5	15	3	G	NONE	P	NA	M	VC	O	H	F,Q,B	3	N	GRANITE	
3	19	6.5	12	8	G	NONE	P	NA	BI	VC	O	H	F,Q,B	3	N	GRANITE	
3	8	2.5	6	4	S	NONE	P	NA	M	C	O	H	C,Q,F,B	4	N	GRANITE	
3	13	8	10	7	G	NONE	P	NA	M	VC	O	H	F,B,Q,SULFIDE	3	N	GRANITE	
3	18	8	13	6	S	NONE	P	NA	M	VC	O	H	CHL, M,F,Q	3	N	GRANITE W/MAFIC ENCLAVE	
3	8	4	7.5	3	F	NONE	P	NA	M	VC	O	H	F,Q,B	3	N	GRANITE W/MAFIC ENCLAVE	
3	12	5.5	9	6	S	NONE	P	NA	M	VC	O	H	Q,F,B	3	N	GRANITE W/MAFIC ENCLAVE	
3	9	5.5	8	2	G	NONE	P	5YR8/1	M	C	O	H	F,Q	3	N	LEUCO GRANITE	
3	16	7.5	10	5	F	NONE	P	5YR8/1	M	C	O	H	F,Q,B	3	N	LEUCO GRANITE	
3	15	8.5	10	6	G	NONE	P	5YR8/1	M	C	O	H	F,Q,B	3	N	LEUCO GRANITE	
3	27	7.5	20	7	G	NONE	M	N5	BI	C	O	H	GN,C,F	4	N	MAFIC GNEISS	
3	8	4	5	3	S	NONE	P	NA	M	VC	O	H	Q,F,B	3	N	PEGMATITE/RED GRANITE	
3	15	7	10	8	G	NONE	P	NA	M	VC	O	H	F,Q,B	3	N	RED GRANITE	
3	19	6	14	5	G	NONE	P	NA	M	VC	O	H	F,Q,B	3	N	RED GRANITE	
3	7	3	4	6	S	NONE	P	NA	M	VC	O	H	Q,F,B	3	N	RED GRANITE	
3	17	6	9	4	G	NONE	P	NA	M	VC	O	H	F,Q,B	3	N	RED GRANITE	
3	6	3	5	7	S	NONE	P	5YR6/1	M	C	O	H	F,Q,B	3	N	RED GRANITE	
3	12	6	10	6	G	NONE	P	NA	M	VC	O	H	Q,F,B	3	N	RED GRANITE	

3	10	3	9	4	G	NONE	P	NA	M	VC	O	H	F,Q,B	3	N	RED GRANITE	
3	9.5	4.5	6	3	G	NONE	P	NA	M	VC	O	H	Q,F,B,CHL	3	N	RED GRANITE	
3	16	10.5	15	5	G	NONE	P	NA	M	VC	O	H	F,Q,B	3	N	RED GRANITE	
3	12	8.5	12	7	G	NONE	P	NA	M	VC	O	H	Q,F,B	3	N	RED GRANITE	
3	11	6	7.5	5	G	NONE	P	NA	M	VC	O	H	Q,F,B	2	N	RED GRANITE	
3	6.5	4.5	6.5	1	G	NONE	P	NA	M	VC	O	H	Q,F,B	3	Y	RED GRANITE	
3	12	2.5	8	3	S	NONE	P	5YR8/1	M	C	O	H	Q,F,B	4	N	RED GRANITE	
3	14	7	13	5	G	NONE	P	NA	M	VC	O	H	F,Q,B	3	N	RED GRANITE	
3	6	3.5	4.5	4	S	NONE	P	NA	M	VC	O	H	Q,F,B	4	N	RED GRANITE	
3	11	5.5	6.5	4	G	NONE	P	NA	M	VC	O	H	Q,F,B	3	N	RED GRANITE	
3	8	5	6	2	G	NONE	P	NA	M	C	O	H	Q,F,B	2	N	RED GRANITE	
3	30	6	20	4	G	NONE	P	NA	M	VC	O	H	Q,F,B	5	N	RED GRANITE	
3	11	3.5	7.5	2	S	NONE	P	NA	M	VC	O	H	Q,F,B	4	N	RED GRANITE	
3	7.5	4	5	3	G	NONE	P	NA	M	VC	O	H	Q,F,B	3	N	RED GRANITE	
3	9.5	3	7	4	G	NONE	P	NA	M	VC	O	H	Q,F,B,MTE	3	N	RED GRANITE	
3	10	4.5	8	3	S	NONE	P	10R8/2	M	C	O	H	F,Q,B	4	N	RED GRANITE	
3	11	4	8	6	S	NONE	P	NA	M	C	O	H	Q,F,B	4	N	RED GRANITE W/MAFIC ENCLAVE	
3	10	4.5	7.5	7	S	NONE	S	5YR5/2	M	M	TL	M	Q	5	Y	SANDSTONE	
3	7	5.5	5.5	3	S	FEOX	S	10YR6/2	M	F	O	H	Q	4	N	SANDSTONE	
3	5.5	2.5	3.5	4	S	FEOX	S	N8	M	M	TL	H	Q	5	N	SANDSTONE	
3	7.5	6	6.5	8	S	NONE	S	N8	M	M	TL	H	Q	5	N	SANDSTONE	
3	7	3	5	7	S	NONE	S	5GY6/1	M	F	O	M	Q	5	N	SANDSTONE	
4	14	4	9	8	S	FEOX	P	NA	M	C	O	H	B,Q,F,EPIDOTE	4	Y	ALTERED GRANITE	
4	5	4	4.5	5	S	BROWN	V	5Y4/1	P	VC/VF	O	H	B,F,Q	3	Y	B,F,Q PHENO'S/RHYO-DACITE	
4	13	5	9	8	S	NONE	V	5R5/2	M	F	O	H	?	5	Y	BASALT	
4	23	6.5	16	8	S	FEOX	V	5Y6/1	P	C/VF	O	H	C,F	5	Y	C,F PHENO'S/?	
4	7	3	4.5	8	S	FEOX	V	5YR6/1	P	VC/S	O	S	F,C	5	Y	C,F PHENO'S/?	
4	12	2	5.5	7	P	FEOX	V	5YR5/1	P	C/VF	O	H	F,C	4	Y	C,F PHENO'S/ANDESITE	
4	9	2	5	?	S	NONE	V	5YR6/1	P	VC/F	O	H	C,F	4	Y	C,F PHENO'S/ANDESITE	
4	9	4.5	6.5	9	S	FEOX	V	5R5/2	P	C/S	O	H	C,F	3	N	C,F PHENO'S/ANDESITE	
4	12	5	8	8	S	YELLOW	V	5Y6/1	P	VC/F	O	H	F,C	3	Y	C,F PHENO'S/ANDESITE	

4	10	3	7	8	S	FEOX	V	5YR6/1	P	C/VF	O	H	F,C	3	Y	C,F PHENO'S/BASALT	
4	5.5	2	4	7	S	NONE	V	N5	P	VC/S	O	H	C,F	5	N	C,F PHENO'S/BASALT	
4	5.5	2	3.5	8	S	BLK	V	5YR4/1	P	C/VF	O	H	F,C	5	Y	C,F PHENO'S/BASALT	
4	6.5	3	4	4	P	BLK	V	N4	P	VC/S	O	H	F,C	3	N	C,F PHENO'S/BASALT	
4	6	3	4	8	P	BLK	V	N4	P	C/VF	O	H	C,F	3	Y	C,F PHENO'S/BASALT	
4	6	1.5	4.5	2	P	FEOX	V	5YR4/1	P	VC/VF	O	H	F,C	4	N	C,F PHENO'S/BASALT	
4	8	2	5.5	5	S	NONE	V	N4	P	VC/VF	O	H	F,C	5	N	C,F PHENO'S/BASALT	
4	8.5	3	6	7	S	FEOX	V	5GY6/1	P	VC/F	O	H	F,C	5	N	C,F PHENO'S/BASALT	
4	14	6	9	8	S	FEOX	V	5R2/2	P	VC/VF	O	H	F,C	5	Y	C,F PHENO'S/BASALT	
4	6	3	4.5	8	S	NONE	V	5G6/1	P	VC/F	O	H	F,C	4	Y	C,F PHENO'S/DACITE	
4	6	3	5	7	S	FEOX	V	5YR3/1	P	VC/VF	O	H	F,C,B	4	Y	C,F,B PHENO'S/ANDESITE	
4	10	4	7	8	G	FEOX	P	5GY7/1	P/M	VC	O	H	C,F,Q	4	Y	C,F,Q PHENO'S/DIORITE	
4	8.5	2.5	5.5	5	G	FEOX	V	5GY6/1	P	VC/S	O	H	F,C,Q	5	N	C,F,Q PHENO'S/RHYO-DACITE	
4	26	12	17	8	G	BLK/FEOX	P	5GY6/1	M	C	O	H	F,B	3	N	DIORITE	
4	8	2	6.5	8	S	NONE	V	N3	P	C/F	O	H	F	3	Y	F PHENO'S/BASALT	
4	8	3	7	6	S	BLK/FEOX	V	N4	P	VC/VF	O	H	F	4	N	F PHENO'S/BASALT	
4	7.5	4	4.5	7	F	FEOX	V	5Y4/1	P	C/VF	O	H	F	4	Y	F PHENO'S/BASALT	
4	6	3.5	5.5	1	G	NONE	V	N5	P	VC/S	O	H	F	1	Y	F PHENO'S/BASALT	
4	9	7.5	9	9	G	NONE	V	N4	P	S	O	H	F	5	Y	F PHENO'S/BASALT	
4	10	4	8	7	S	NONE	V	5Y6/1	P	VC/S	O	H	F,B	5	Y	F,B PHENO'S/ANDESITE	
4	7.5	5	5	7	S	FEOX	V	5YR6/1	P	C/VF	O	H	F,B,C	5	Y	F,B,C PHENO'S/?	
4	6	3	4	6	S	NONE	V	5Y6/1	P	VC/VF	O	H	F,C	3	Y	F,C PHENO'S/DIABASE	
4	10	4	6.5	7	S	FEOX	V	5YR5/2	P	S	O	M	F,Q	5	N	F,Q PHENO'S/?	
4	8.5	1	5.5	?	S	FEOX	S	5Y5/1	M	M	O	H	Q	4	Y	FLAKED SANDSTONE	
4	11	2	6.5	?	S	FEOX	S	5Y8/1	M	M	TL	H	Q	3	Y	FLAKED SANDSTONE	
4	11	5	7	7	S	FEOX	S	5YR6/1	M	M	TL	M	Q	5	Y	FLAKED SANDSTONE	
4	6	1.5	3	?	S	FEOX	S	5YR5/1	M	M	O	H	Q,HEM	4	Y	FLAKED SANDSTONE	
4	7.5	2.5	5.5	9	G	NONE	P	5GY4/1	M	C	O	H	C,F	4	N	GABBRO	
4	8	3	6.5	7	G	BLK	P	5GY5/1	M	C	O	H	F,C	3	N	GABBRO	
4	7	4	6.5	6	P	FEOX	P	5GY6/1	M	VC	O	H	F,C	3	Y	GABBRO	
4	8	4	5	3	S	NONE	M	NA	BI	VC	O	H	Q,F,B,GN	4	N	GNEISS	

4	11	3	5	1	G	NONE	M	NA	BI	VC	O	H	GN,C,Q,F	3	Y	GNEISS	
4	14	7	7.5	8	G	FEOX	P	NA	M	VC	O	H	Q,F,B	4	N	GRANITE	
4	11	3	8	6	G	FEOX	P	NA	M	VC	O	H	Q,F,B,CHL	3	N	GRANITE	
4	9.5	3	6	8	G	FEOX	P	NA	M	VC	O	H	Q,F,B	4	Y	GRANITE	
4	5	3	4	7	G	FEOX	P	NA	M	VC	O	H	Q,F,B	3	N	GRANITE	
4	13	6	9	7	G	FEOX	P	NA	M	VC	O	H	Q,F,B	3	Y	GRANITE	
4	6	1.5	3	8	G	FEOX	P	NA	M	VC	O	H	Q,F,B	3	Y	GRANITE	
4	12	6	8	8	S	BLK	P	NA	M	VC	O	H	Q,F,B	3	N	GRANITE	
4	16	6.5	12	8	P	FEOX	P	NA	M	VC	O	H	Q,F,B	3	Y	GRANITE	
4	14	6	12	6	G	FEOX	P	NA	M	C	O	H	Q,F,B	3	Y	GRANITE	
4	22	10	11	7	G	FEOX	P	NA	M	VC	O	H	Q,F,B	3	N	GRANITE	
4	8	3.5	4	6	G	NONE	P	NA	M	VC	O	H	C,F,B,Q	3	Y	HORNBLENDE GRANITE	
4	6.5	2.5	3	6	P	NONE	P	5GY7/1	M	C	O	H	F,B,Q	3	Y	LEUCO GRANITE	
4	7.5	3	5	6	G	FEOX	P	5GY8/1	M	VC	TL	H	F,C,Q	4	N	PRE-CAMBRIAN	
4	7	3	6	9	S	NONE	V	5YR4/1	P/BI	C/S	O	H	Q,F	5	N	Q,F PHENO'S/WELDED TUFT	
4	10	4.5	8	6	S	FEOX	S	5Y8/1	M	M	TL	H	Q	5	N	SANDSTONE	
4	15	5	8	9	S	FEOX	S	5Y6/1	M	F	O	H	Q	5	N	SANDSTONE	
4	11	5.5	6.5	7	S	FEOX	S	N8	M	VF	TL	H	Q	5	N	SANDSTONE	
4	8	3	4.5	6	S	FEOX	S	5Y6/1	M	F	O	M	Q	5	N	SANDSTONE	
4	5	3	4	7	S	NONE	S	10YR8/2	M	M	O	H	Q	5	Y	SANDSTONE	
4	6.5	2	4	7	S	FEOX	S	5Y6/1	M	F	O	H	Q	4	Y	SANDSTONE	
4	8	1	6.5	1	P	FEOX	S	5YR5/2	M	F	TL	M	Q	5	Y	SANDSTONE	
4	10	4	7	8	S	FEOX	S	5Y6/1	M	M	TL	H	Q	5	Y	SANDSTONE	
4	11	2	5	6	P	FEOX	S	5GY7/1	M	M	O	H	Q	3	Y	SANDSTONE	
4	13	6.5	8.5	8	S	FEOX	S	5GY7/1	M	M	TL	H	Q	5	Y	SANDSTONE	
4	6.5	3	4	5	S	FEOX	S	N7	M	VF	TL	H	Q	5	Y	SANDSTONE	
4	7	3	6	7	S	FEOX	S	N9	M	M	TL	H	Q,H	5	N	SANDSTONE	
4	12	6	10	8	S	FEOX	S	N8	BI	M	TL	M	Q	5	Y	SANDSTONE	
4	6.5	2	3	?	S	FEOX	S	5YR8/1	M	M	TL	H	Q	5	Y	SANDSTONE	
4	14	5	9.5	7	S	FEOX	S	5Y8/1	M	M	O	H	Q	3	Y	SANDSTONE	
4	6	2	4	5	S	NONE	S	N5	M	F	O	H	Q	4	N	SANDSTONE	

4	15	8	13	9	S	FEOX	S	5Y8/1	M	M	TL	H	Q,H	4	Y	SANDSTONE	
4	5.5	2	5	9	S	NONE	S	5Y8/1	M	M	O	H	Q	3	N	SANDSTONE	
4	5.5	3	3	3	S	NONE	S	5GY6/1	M	VF	O	M	Q	5	N	SANDSTONE	
4	8	2.5	5	7	S	NONE	S	5Y8/2	BI	M	TL	H	Q	5	Y	SANDSTONE	
4	6	3	3.5	7	S	FEOX	S	5YR8/1	M	M	TL	H	Q	4	Y	SANDSTONE	
4	12	5	8	8	S	FEOX	S	5Y6/1	M	M	TL	M	Q	5	Y	SANDSTONE	
4	11	3	5.5	7	S	NONE	S	5Y8/1	M	M	TL	H	Q	5	Y	SANDSTONE	
4	8	4	5	7	S	BROWN	S	N5	M	F	O	M	Q	5	Y	SANDSTONE	
4	7	2	5	6	S	FEOX	S	5Y6/1	M	M	O	H	Q	4	Y	SANDSTONE	
4	10	5	8	9	S	FEOX	S	5Y8/1	M	M	O	H	Q	5	Y	SANDSTONE	
4	11	5	8	8	S	FEOX	S	N7	M	M	TL	M	Q	5	N	SANDSTONE	
4	6	1.5	5	?	G	NONE	S	5Y8/1	M	M	O	H	Q,H	1	Y	SANDSTONE	
4	7.5	2	5	?	S	NONE	S	10YR8/2	M	M	O	H	Q,H	4	Y	SANDSTONE	
4	7	3.5	6.5	7	S	FEOX	S	5Y8/1	M	M	TL	H	Q	5	Y	SANDSTONE	
4	7	4	6.5	9	S	NONE	S	5YR8/1	M	M	TL	H	Q,H	5	Y	SANDSTONE	
4	7	3	5	7	G	NONE	S	10YR8/2	M	C	O	H	Q,C	2	Y	SANDSTONE	
4	5	3	4	8	S	NONE	S	N5	M	F	O	H	Q	4	Y	SANDSTONE	
4	6	3	5	6	S	NONE	S	5YR7/1	M	M	TL	H	Q	5	N	SANDSTONE	
4	13	6	10	9	S	FEOX	S	5Y6/1	BI	F	TL	M	Q	5	Y	SANDSTONE	
4	6.5	3	6	8	S	NONE	MS	5Y8/1-N6	MT	S	O	S	Q	5	Y	SILICIFIED VOLCANIC	
4	13	6	9	8	S	BROWN	MS	10YR4/2	MT	S	TL	S	Q	5	Y	SILICIFIED VOLCANIC	
4	7.5	3.5	4.5	7	P	FEOX	MS	N7	V	S	TL	M	Q	5	N	SILICIFIED VOLCANIC	
4	12	5	9	6	S	NONE	S	5YR5/2	M	VF	O	S	Q	5	Y	SILTSTONE	
4	8	3.5	6.5	8	S	BROWN	S	N5	M	VF	O	M	Q	5	Y	SILTSTONE	
4	7	3.5	4.5	1	F	NONE	V	N3	M	S	O	H	NONE	1	Y	VESICULAR BASALT	
4	10	4	9	1	G	NONE	P	NA	M	VC	O	H	Q,F,B	1	N	WEATHERED GRANITE	
4	16	3	8	?	G	FEOX	P	5GY8/1	M	VC	O	H	Q,B,F	1	Y	WEATHERED GRANITE	
4	8	2	2	1	F	NONE	S	N6	M	C	O	H	Q	1	Y	WEATHERED SANDSTONE	
4	6.5	2	5	6	S	FEOX	V	5YR5/2	M	S	O	M	NONE	2	Y	WELDED TUFT	
5	7	3.5	5	7	S	FEOX	P	10R6/4	M	M	O	H	Q,F,B	4	N	APLITE	
5	5	4	4.5	6	G	FEOX	S	5YR5/2	M	C	O	H	Q,F,B,C	3	Y	ARKOSE OR SANDSTONE	

5	7	2.5	4	7	S	FEOX	V	5YR5/2	P	C/VF	O	H	F,Q,B	4	Y	B,F,Q PHENO'S/RHYO-DACITE	
5	7	1.5	4.5	4	P	FEOX	V	5YR5/1	BI/P	C/F	O	H	C,F	4	Y	C,F PHENO'S/?	
5	11	4.5	5	8	S	NONE	V	5GY5/1	P	C/F	O	H	F,C	4	N	C,F PHENO'S/ANDESITE	
5	6.5	4	6	4	P	FEOX	V	5Y4/1	P	C/S	O	H	F,C	5	N	C,F PHENO'S/ANDESITE	
5	9	3	6	7	G	NONE	V	5YR4/1	P	C/VF	O	H	F,C	3	Y	C,F PHENO'S/BASALT	
5	7	3	4.5	5	S	FEOX	V	5YR3/1	P	VC/VF	O	H	F,C	5	N	C,F PHENO'S/BASALT	
5	14	5	8	7	P	FEOX	V	N4	P	C/S	O	H	F,C	5	N	C,F PHENO'S/BASALT	
5	7.5	4	5	8	P	NONE	V	N3	P	C/F	O	H	F,C	3	Y	C,F PHENO'S/BASALT	
5	11	6	7.5	8	P	NONE	V	N5	P	C/VF	O	H	C,F	5	Y	C,F PHENO'S/BASALT	
5	7	2.5	5	2	P	FEOX	V	N4	P	C/VF	O	H	F,C	3	N	C,F PHENO'S/BASALT	
5	5.5	3	3	6	P	NONE	V	5YR5/2	P	C/S	O	H	F,C	3	Y	C,F PHENO'S/BASALT	
5	6	3.5	3.5	7	P	FEOX	V	N4	P	C/F	O	H	F,C	3	Y	C,F PHENO'S/BASALT	
5	7	4	6	7	P	FEOX	V	N5	P	C/VF	O	H	F,C	2	Y	C,F PHENO'S/BASALT	
5	8.5	4	6	7	P	NONE	V	N4	P	C/VF	O	H	C,F	3	Y	C,F PHENO'S/BASALT	
5	9	1.5	6	5	S	NONE	V	5GY4/1	P	C/F	O	H	F,C	5	N	C,F PHENO'S/DACITE	
5	11	5	9	6	P	FEOX	V	5GY5/1	P	VC/VF	O	H	F,C,B	5	Y	C,F,B PHENO'S/DACITE	
5	22	11	11	7	S	BROWN	S	5Y6/1	M	F	O	H	Q	5	N	CONCRETED SANDSTONE	
5	6	2.5	3.5	5	S	NONE	P	5GY6/1	M	C	O	H	Q,C,B,F	4	N	DIORITE	
5	8.5	5	6	6	S	NONE	P	5GY5/1	M	C	O	H	F,B,C	3	Y	DIORITE	
5	6	3	5	7	G	FEOX	P	NA	V/M	C	O	H	Q,F,B,EPIDOTE	2	N	EPIDOTE VEINS IN ALTERED GRANITE	
5	8	2	5	6	P	NONE	V	5YR6/1	P	VC/F	O	H	F	2	Y	F PHENO'S/ANDESITE	
5	6	1	3.5	?	S	NONE	V	N4	P	C/VF	O	H	F	4	Y	F PHENO'S/BASALT	
5	11	5	6	4	S	NONE	V	N5	P	C/S	O	H	F	3	Y	F PHENO'S/BASALT	
5	20	10	16	7	P	FEOX	V	N5	P	C/F	O	H	F	5	Y	F PHENO'S/BASALT	
5	6	1.5	4	1	P	FEOX	V	5YR5/1	P	C/VF	O	H	F	1	N	F PHENO'S/LITHIC TUFT	
5	11	7	8	9	S	NONE	V	5R4/2	P	VC/VF	O	H	F,C	5	N	F,C PHENO'S/BASALTIC TUFT	
5	6	2.5	3.5	7	S	FEOX	V	5R4/2	P	C/VF	O	H	F,C	5	Y	F,C PHENO'S/DACITE OR ANDESITE	
5	8	3	6.5	?	S	NONE	V	5YR6/1	P	C/F	O	H	F,C	5	Y	F,C PHENO'S/FLAKED LITHIC TUFT	
5	6	3	4.5	3	S	NONE	V	5YR6/1	P	VC/S	O	H	F,Q,HEM	5	Y	F,Q,HEM PHENO'S/WELDED TUFT	
5	11	1	8	?	S	FEOX	S	10YR7/2	M	M	O	H	Q,HEM	3	Y	FLAKED SANDSTONE	
5	11	4	9	9	S	FEOX	S	5YR7/1	BI	M	TL	H	Q	5	Y	FLAKED SANDSTONE	

5	10	2	5	?	S	FEOX	S	10YR7/4	M	M	O	H	Q	5	Y	FLAKED SANDSTONE	
5	8.5	2	5.5	9	S	FEOX	S	5Y7/1	M	F	O	M	Q	5	Y	FLAKED SANDSTONE	
5	24	12	14	9	S	FEOX	P	5YR5/1	M	C	O	H	C,F	5	N	GABBRO	
5	7	2.5	4.5	6	S	NONE	P	5Y5/1	M	C	O	H	F,C	4	N	GABBRO	
5	11	3	6	1	G	NONE	M	NA	BI	C	O	H	B,F,Q	3	N	GNEISS	
5	6.5	3.5	5	8	G	FEOX	P	NA	M	VC	O	H	Q,F,B	3	Y	GRANITE	
5	11	4	4	6	G	FEOX	P	NA	M	VC	O	H	Q,F,B,MTE	4	Y	GRANITE	
5	10	5	7	5	G	FEOX	P	NA	M	VC	O	H	Q,F,B	3	N	GRANITE	
5	5	2.5	4.5	4	G	FEOX	P	NA	M	VC	O	H	Q,F,B	3	Y	GRANITE	
5	10	4	7.5	6	S	NONE	P	5GY7/1	M	C	O	H	Q,F,B	3	Y	GRANITE	
5	7	4.5	5.5	4	G	FEOX	P	NA	M	VC	O	H	Q,F,B,EPIDOTE	3	Y	GRANITE	
5	9	5	4	7	S	FEOX	P	5Y6/1	M	VC	O	H	Q,F,B	3	N	GRANITE	
5	17	9	16	8	G	FEOX	P	NA	M	VC	O	H	B,Q,F	3	Y	GRANITE	
5	5	4	4.5	1	G	FEOX	P	NA	M	VC	O	H	Q,F,B	3	N	GRANITE	
5	6	3	4	?	G	NONE	P	NA	M	VC	O	H	Q,F,B	3	Y	GRANITE	
5	6	2	3.5	5	G	FEOX	P	NA	M	VC	O	H	Q,F,B	3	N	GRANITE	
5	12	5	7.5	8	G	NONE	P	NA	M	VC	O	H	Q,F,B,C	3	Y	HORNBLENDE GRANITE	
5	6	2	3	5	S	FEOX	P	NA	M	VC	O	H	Q,F,C,B	4	N	HORNBLENDE GRANITE	
5	9	5	6	7	S	NONE	P	5GY7/1	M	C	O	H	Q,F,B	3	N	LEUCO GRANITE	
5	26	12	16	8	S	FEOX	P	N8	BI	C	O	H	Q,F,C	4	N	LEUCO GRANITE	
5	7	3.5	5	4	S	NONE	P	5Y8/1	M	VC	O	H	Q,F,B	1	N	LEUCO GRANITE	
5	8	4.5	5.5	6	S	NONE	P	5YR7/2	M	C	O	H	Q,F,B	5	Y	LEUCO MONZENITE	
5	10	5	8	7	S	FEOX	S	5Y8/1	M	M	TL	H	Q,HEM	5	N	SANDSTONE	
5	5	2	3	6	S	NONE	S	5GY5/1	M	F	O	M	Q	4	N	SANDSTONE	
5	5.5	2	4	?	S	FEOX	S	5Y8/1	M	M	TL	H	Q	5	Y	SANDSTONE	
5	7.5	3	5	7	S	FEOX	S	5Y8/1	M	M	TL	H	Q	5	Y	SANDSTONE	
5	9.5	4	5	6	S	FEOX	S	5YR7/1	M	M	TL	H	Q,HEM	4	N	SANDSTONE	
5	12	5	10	9	S	FEOX	S	5Y8/1	M	M	TL	H	Q	5	N	SANDSTONE	
5	5.5	3.5	4.5	?	S	FEOX	S	10YR7/2	M	M	TL	H	Q	5	Y	SANDSTONE	
5	7	2	4.5	?	S	FEOX	S	N8	M	F	TL	H	Q	5	Y	SANDSTONE	
5	5.5	3	4	5	S	NONE	S	5YR8/1	M	F	O	H	Q	5	N	SANDSTONE	

5	7	4	5	7	S	NONE	S	N8	M	M	TL	H	Q	5	Y	SANDSTONE	
5	9	2	4	8	S	NONE	S	5Y8/1	M	M	TL	H	Q	5	Y	SANDSTONE	
5	7	2.5	4	8	S	NONE	S	N8	M	M	TL	M	Q	5	N	SANDSTONE	
5	7	2	3.5	6	S	NONE	S	N4	M	F	O	H	Q	5	N	SANDSTONE	
5	7	1.5	4.5	?	G	NONE	S	10YR8/2	M	M	O	H	Q	4	Y	SANDSTONE	
5	14	6	7	8	S	FEOX	S	5YR5/4	M	M	O	H	Q	5	Y	SANDSTONE	
5	12	5.5	7.5	8	S	FEOX	S	5GY7/1	M	M	TL	M	Q	5	N	SANDSTONE	
5	6	3.5	3.5	4	S	NONE	S	10YR6/2	M	M	O	H	Q	5	N	SANDSTONE	
5	11	3.5	6	5	S	FEOX	S	5Y8/1	BI	M	O	H	Q,B	4	N	SANDSTONE	
5	23	10	20	9	S	FEOX	S	5YR6/2	M	M	O	H	Q	5	N	SANDSTONE	
5	10	6	8	9	S	FEOX	S	10YR6/2	M	M	O	H	Q	5	Y	SANDSTONE	
5	18	13	13	8	S	NONE	S	5R 5/2	M	F	TL	M	Q,HEM	5	N	SANDSTONE	
5	7.5	2.5	5.5	8	S	FEOX	S	5Y8/1	M	M	O	H	Q	2	Y	SANDSTONE	
5	10	1	6.5	8	S	FEOX	S	5Y7/1	M	M	TL	H	Q	3	Y	SANDSTONE	
5	11	1	9	8	S	NONE	S	5Y7/1	M	M	TL	H	Q	3	Y	SANDSTONE	
5	6	0.5	3.5	?	S	FEOX	S	10YR7/2	M	M	TL	H	Q	5	Y	SANDSTONE	
5	7.5	4	7	6	S	NONE	S	5Y6/1	M	F	O	M	Q	5	N	SANDSTONE	
5	17	10	11	9	S	FEOX	S	5Y8/1	M	M	O	H	Q	5	Y	SANDSTONE	
5	8	3	6	7	S	NONE	S	5GY7/1	M	M	O	H	Q	4	Y	SANDSTONE	
5	7.5	3	5	?	S	NONE	S	5Y7/1	M	M	O	H	Q	4	Y	SANDSTONE	
5	13	3.5	5	3	S	NONE	S	N5	M	F	O	H	Q	5	N	SANDSTONE	
5	7	3	6	9	S	NONE	S	5Y7/1	M	M	TL	S	Q	5	N	SANDSTONE	
5	7	2.5	4.5	7	S	NONE	S	5Y7/1	M	M	O	H	Q	5	Y	SANDSTONE	
5	8	2.5	4.5	5	S	FEOX	S	N5	M	M	O	H	Q,HEM	5	Y	SANDSTONE	
5	14	4	6	5	S	FEOX	S	10YR7/2	M	M	O	H	Q	4	?	SANDSTONE	
5	13	3.5	8.5	8	S	FEOX	S	N9	M	M	TL	H	Q	5	Y	SANDSTONE	
5	7.5	4.5	7	6	S	NONE	S	5Y8/1	M	M	O	H	Q	5	Y	SANDSTONE	
5	9	5	7	8	S	FEOX	S	N7	M	M	O	H	Q	5	N	SANDSTONE	
5	7	2.5	4	3	S	NONE	S	5Y6/1	M	VF	O	M	Q	5	N	SANDSTONE	
5	9	5	7	6	S	FEOX	S	5YR6/1	M	M	O	M	Q,HEM	5	N	SANDSTONE	
5	12	4	11	7	S	NONE	S	5GY8/1	M	M	TL	H	Q	4	Y	SANDSTONE	

5	5	4.5	5	6	S	NONE	MS	5GY6/1	M	S	TL	S	Q	5	Y	SILICIFIED VOLCANIC	
5	8	1	5	8	S	NONE	S	10R4/2	M	VF	O	H	Q	3	Y	SILTSTONE CONCRETION	
5	11	5	6.5	1	F	FEOX	M	NA	BI	C	O	H	Q,F,C,GN	2	Y	WEATHERED PRE-CAMBRIAN	
5	5	O.5	3	?	S	NONE	S	10YR8/2	M	M	O	H	Q	3	Y	WEATHERED SANDSTONE	
5	6	2	3	1	G	FEOX	S	10YR6/6	M	M	O	H	Q	2	Y	WEATHERED SANDSTONE	
6	6	2.5	3.5	?	S	FEOX	P	5Y7/1	M	C	O	H	Q,F	5	Y	APLITE	
6	9	6.5	7	8	S	FEOX	P	5YR7/2	M	M	O	H	Q,F	4	Y	APLITE	
6	9	4	6.5	2	F	NONE	V	5Y8/1	P	C/F	TL	M	Q,F,B	5	Y	B,F,Q PHENO'S/RHYOLITE	
6	24	13	20	1	F	NONE	V	5R6/2	P	VC/S	O	H	Q,B,F	2	N	B,F,Q PHENO'S/RHYOLITE	
6	5	3	4	8	P	NONE	V	10YR8/2	P	C/F	TL	H	B,Q	5	Y	B,Q PHENO'S/RHYOLITE	
6	5.5	2	3	3	S	NONE	V	N4	M	VF	O	M	NONE VIS	5	N	BASALT	
6	6	3	4	1	F	NONE	V	5YR4/1	M	F	O	H	NONE VIS	3	Y	BASALT	
6	5	2.5	3	7	S	FEOX	V	5YR4/1	P	C/VF	O	H	F,C	3	Y	C,F PHENO'S/?	
6	7	4	5	5	P	BLK	V	N5	P	C/S	O	H	F,C	5	N	C,F PHENO'S/ANDESITE	
6	5	2.5	3	4	S	FEOX	V	10YR6/2	P	C/S	O	H	F,C	5	Y	C,F PHENO'S/ANDESITE	
6	6	2	5	7	S	NONE	V	NA	P	VC/S	O	H	C,F	3	Y	C,F PHENO'S/ANDESITE	
6	7	3	4.5	6	S	FEOX	V	5Y6/1	P	C/VF	O	M	F,C	5	N	C,F PHENO'S/ANDESITE	
6	6	1.5	3.5	?	P	FEOX	V	N5	P	C/VF	O	H	F,C	3	Y	C,F PHENO'S/BASALT	
6	8	2	6	1	P	NONE	V	N4	P	C/F	O	H	F,C	4	N	C,F PHENO'S/BASALT	
6	5.5	2	4	9	S	NONE	V	10R5/2	P	C/F	O	H	F,C	4	N	C,F PHENO'S/BASALT	
6	5	1.5	2.5	8	G	NONE	V	5GY6/1	P	C/F	O	H	F,C	3	Y	C,F PHENO'S/BASALT	
6	5.5	2	4	6	S	NONE	V	N5	P	C/S	O	H	C,F,B	5	N	C,F,B PHENO'S/ANDESITE	
6	5.5	1.5	4.5	6	S	NONE	V	10YR7/2	P	C/VF	O	H	C,F,B,Q	3	Y	C,F,B,Q PHENO'S/RHYO-DACITE	
6	7.5	3	6	1	P	FEOX	V	10YR8/2	P/BI	C/S	O	H	Q,F,C	2	N	C,Q,F PHENO'S/TUFT	
6	10	5	6	9	G	FEOX	P	5GY6/1	M	C	O	M	F,B	4	N	DIORITE	
6	7.5	2	6	6	S	FEOX	P	5Y6/1	M	C	O	H	Q,F,B	4	N	DIORITE	
6	13	7	10	8	G	NONE	P	NA	M	VC	O	H	C,Q,F	4	Y	DIORITE	
6	9	2.5	8.5	4	S	FEOX	P	5GY6/1	M	C	O	H	F,B	4	N	DIORITE	
6	7	2	5	?	G	FEOX	P	N5	M	C	O	H	F,C	4	Y	DIORITE	
6	7	2.5	3.5	5	S	NONE	V	N5	P	C/S	TL	S	F	5	Y	F PHENO'S/?	
6	6	3.5	5	?	P	NONE	V	N4	P	C/F	O	H	F	2	Y	F PHENO'S/BASALT	

6	5	1	3	?	F	NONE	V	N4	P	C/F	O	H	F	4	Y	F PHENO'S/BASALT	
6	5	2.5	2.5	7	P	BLK	V	N3	P	C/F	O	H	F	3	Y	F PHENO'S/BASALT	
6	6.5	3	5	6	P	FEOX	V	N5	P	VC/S	O	H	F	5	Y	F PHENO'S/WELDED TUFT	
6	5.5	1	3	7	S	FEOX	V	10YR4/2	P	C/S	O	H	F,C,B	4	Y	F,C,B PHENO'S/FLAKED DACITE	
6	8	2.5	4	?	P	NONE	V	5YR6/1	P	C/VF	O	H	F,EPIDOTE	4	Y	F,EPIDOTE PHENO'S/ALTERED ANDESITE	
6	8	0.5	6	?	S	NONE	S	5Y7/1	M	M	TL	H	Q	5	Y	FLAKED SANDSTONE	
6	6	1	3	?	S	NONE	S	5GY3/1	M	VF	O	M	Q	5	Y	FLAKED SILTSTONE	
6	6	2.5	3.5	1	F	NONE	P	N5	M	C	O	H	F,C	3	N	GABBRO	
6	7	2.5	2.5	5	G	NONE	P	5GY6/1	M	C	O	H	CHL,C,F	4	Y	GABBRO	
6	5.5	2	4	5	G	FEOX	P	5GY6/1	M	C	O	H	F,C	3	N	GABBRO	
6	7	3.5	6	?	G	FEOX	M	5GY6/1	BI	C	O	H	Q,F,C,B	4	Y	GNEISS	
6	6.5	2.5	5.5	9	G	FEOX	M	5GY6/1	BI	C	O	H	Q,B,F,C	4	N	GNEISS	
6	5.5	2.5	4.5	6	G	FEOX	M	5GY4/1	BI	C	O	H	Q,C,F	4	N	GNEISS	
6	5	3	4	4	G	NONE	M	NA	BI	C	O	H	Q,C,F,GN	4	Y	GNEISS	
6	12	5	9	8	G	FEOX	M	NA	BI	VC	O	H	Q,F,C	4	N	GNEISS	
6	5	2.5	2.5	?	P	NONE	M	NA	BI	VC	O	H	Q,F,C	3	Y	GNEISS	
6	20	10	16	1	G	NONE	P	NA	M	VC	O	H	F,Q,B	1	N	GRANITE	
6	12	5	9	1	G	FEOX	P	NA	M	VC	O	H	Q,F,B	1	N	GRANITE	
6	5	1.5	3.5	4	G	FEOX	P	NA	M	VC	O	H	F,Q,B	3	N	GRANITE	
6	7.5	2	3.5	6	P	NONE	P	5GY7/1	M	VC	O	H	F,B,Q	3	N	GRANITE	
6	5	2	4	6	G	NONE	P	5GY7/1	M	C	O	H	F,B,Q	4	Y	GRANITE	
6	6	3	4	6	G	NONE	P	NA	M	VC	O	H	F,Q,M,CHL	3	N	GRANITE	
6	7.5	3	5	8	G	FEOX	P	NA	M	VC	O	H	B,Q,F	3	N	GRANITE	
6	5.5	2	2.5	7	G	FEOX	P	NA	M	VC	O	H	Q,F,B,EPIDOTE	3	Y	GRANITE	
6	5.5	1.5	4	?	G	FEOX	P	5Y5/1	M	C	O	H	C,Q,F,B	3	Y	GRANO-DIORITE	
6	12	5	6.5	7	G	FEOX	P	5GY7/1	M	C	O	H	Q,M,F,CHL	3	N	LEUCO GRANITE	
6	6.5	3	4.5	6	S	FEOX	P	5GY8/1	M	M	O	H	F,Q,B,C	4	Y	LEUCO GRANITE	
6	9	5	7	7	G	FEOX	P	5GY8/1	M	C	O	H	Q,B,F	3	N	LEUCO GRANITE	
6	5	2.5	3.5	5	S	NONE	P	5GY8/1	M	VC	O	H	Q,F,B	3	Y	LEUCO GRANITE	
6	5.5	1	2.5	?	P	NONE	M	NA	M	VC	O	H	F,C,Q,B,GN	3	Y	PRE-CAMBRIAN?	
6	14	6	10	7	P	FEOX	V	5R5/2	P	VC/S	O	H	Q,F,B	5	Y	Q,F,B PHENO'S/FLAKED RHYOLITE	

6	8.5	1.5	4.5	1	P	FEOX	S	10YR7/2	M	M	TL	M	Q	3	N	SANDSTONE	
6	7	3.5	6	5	S	FEOX	S	N5	M	F	O	M	Q	5	N	SANDSTONE	
6	11	6	6	7	S	FEOX	S	N5	M	F	O	M	Q	4	N	SANDSTONE	
6	5	3	4	3	S	FEOX	S	10R6/2	M	M	O	H	Q	4	N	SANDSTONE	
6	10	1.5	6	?	S	FEOX	S	5YR5/2	M	F	O	M	Q	5	Y	SANDSTONE	
6	6	4	5	9	S	FEOX	S	N8	M	M	TL	H	Q	5	Y	SANDSTONE	
6	10	4	5.5	7	S	FEOX	S	5Y8/1	M	M	O	H	Q	5	N	SANDSTONE	
6	6	2	5	5	G	FEOX	S	5Y8/1	M	C	TL	H	Q,CHL	3	N	SANDSTONE	
6	6	4	4.5	8	S	FEOX	S	5Y6/1	M	F	O	M	Q	5	Y	SANDSTONE	
6	5.5	4	4	5	S	FEOX	S	5GY6/1	M	F	TL	M	Q	5	N	SANDSTONE	
6	7	3	4.5	7	S	FEOX	S	5Y6/1	M	F	O	S	Q	5	Y	SANDSTONE	
6	8.5	5	7	9	S	FEOX	S	10YR6/2	M	F	O	M	Q	5	N	SANDSTONE	
6	5	3.5	4	7	S	FEOX	S	10YR6/2	M	M	TL	M	Q,HEM	5	N	SANDSTONE	
6	13	4	9.5	6	S	FEOX	S	5GY6/1	M	F	O	H	Q	4	Y	SANDSTONE	
6	0.5	1.5	3	7	S	NONE	S	5GY6/1	M	M	O	H	Q	5	Y	SANDSTONE	
6	6	3	4.5	7	S	NONE	S	10R6/2	M	M	TL	H	Q	5	N	SANDSTONE	
6	5	2.5	3	8	S	NONE	S	5Y8/1	M	F	TL	H	Q	5	Y	SANDSTONE	
6	6.5	3	4.5	7	S	FEOX	S	10R6/2	M	M	O	H	Q,HEM	5	Y	SANDSTONE	
6	12	5.5	6	8	S	NONE	S	5Y8/1	M	M	TL	H	Q	5	Y	SANDSTONE	
6	8	3	6	3	F	NONE	S	5YR4/2	M	M	TL	M	Q	5	Y	SANDSTONE	
6	5	1.5	3.5	6	S	NONE	S	5Y6/1	M	M	O	H	Q	4	N	SANDSTONE	
6	8	3	6	3	S	NONE	S	5Y7/1	M	M	TL	H	Q	5	N	SANDSTONE	
6	9	4.5	5	8	F	NONE	S	5Y8/1	M	M	O	H	Q	5	Y	SANDSTONE	
6	6	2	4	3	P	NONE	S	5Y8/1	M	M	TL	H	Q	4	N	SANDSTONE	
6	5.5	2	3.5	7	S	NONE	S	5YR7/1	M	F	TL	M	Q	5	Y	SANDSTONE	
6	5.5	2	3	4	S	FEOX	S	5Y7/1	M	M	TL	M	Q	5	N	SANDSTONE	
6	7	4	4.5	8	S	FEOX	S	5Y6/1	M	F	O	H	Q	5	Y	SANDSTONE	
6	7	2	5	5	S	FEOX	S	N7	M	F	O	M	Q	5	Y	SANDSTONE	
6	8	1.5	5	8	S	NONE	S	5Y6/1	M	F	O	H	Q	4	Y	SANDSTONE	
6	8	2	5	4	F	NONE	S	N8	M	M	O	H	Q	5	N	SANDSTONE	
6	7.5	2	3.5	8	S	NONE	S	10YR5/2	M	F	O	M	Q	5	Y	SANDSTONE	

6	5	2	4	6	S	NONE	S	5Y6/1	M	F	O	H	Q	5	Y	SANDSTONE	
6	5.5	3	4	9	S	NONE	S	10YR7/2	M	M	O	H	Q,HEM	5	N	SANDSTONE	
6	5.5	2.5	3.5	7	S	BROWN	S	5Y6/1	M	F	O	H	Q	4	Y	SANDSTONE	
6	7	1	4.5	1	F	NONE	S	5R4/2	M	F	O	H	Q	3	Y	SANDSTONE	
6	5	1	3	?	S	NONE	S	5GY6/1	M	F	O	H	Q	4	Y	SANDSTONE	
6	9.5	4	5	8	S	FEOX	S	10YR6/2	M	M	O	H	Q,HEM	4	Y	SANDSTONE	
6	5	2	3	5	S	NONE	S	5Y6/1	M	F	TL	M	Q	5	N	SANDSTONE	
6	10	4	7	8	S	NONE	MS	5YR5/2	MT	S	O	S	Q	5	N	SILICIFIED VOLCANIC	
6	6	2	5	2	F	FEOX	MS	10YR6/2-5YR6/4	MT	S	O	S	Q	5	Y	SILICIFIED VOLCANIC	
6	6	3	4	8	S	NONE	MS	10YR6/2	MT/V	S	TL	S	Q	5	N	SILICIFIED VOLCANIC	
6	5	2.5	3	7	S	FEOX	MS	10YR5/2	MT	S	O	S	Q	5	Y	SILICIFIED VOLCANIC	
6	6	3	4	7	F	NONE	V	N5	M	VF	O	M	NONE VIS	5	Y	WELDED TUFT	
7	15	8	10	8	G	FEOX	P	NA	M/V	C	O	H	Q,F,EPIDOTE,C	3	N	ALTERED GRANITE	
7	13	6	8	7	G	NONE	P	5GY7/1	M	C	O	H	Q,F,CHL,EPIDOTE	2	N	ALTERED GRANITE	
7	5	1	3	?	S	NONE	V	5GY6/1	P	M/S	O	M	B,F,C	5	Y	B,F,C PHENO'S/RHYOLITE	
7	11	4	7	6	S	FEOX	V	5GY6/1	P	M/S	O	M	B,F,Q	5	N	B,F,Q PHENO'S/RHYOLITE	
7	11	8	8	8	P	NONE	V	5R7/2	P	VC/S	O	H	Q,B,F	5	Y	B,F,Q PHENO'S/RHYOLITE	
7	6	1	5	5	S	NONE	V	5GY6/1	P	VC/S	O	H	Q,B	4	N	B,Q PHENO'S/RHYOLITE	
7	6	2.5	5	3	P	NONE	V	5GY4/1	M	F	O	H		3	Y	BASALT	
7	9.5	4	6	8	P	NONE	V	N4	M	F	O	H	NONE VIS	4	N	BASALT	
7	12	9	10	9	P	FEOX	V	7R6/2	P	C/VF	O	H	F,C	3	N	C,F PHENO'S/ANDESITE	
7	7.5	4	5.5	8	P	NONE	V	N5	P	C/S	O	H	C,F	3	N	C,F PHENO'S/ANDESITE	
7	7	2.5	4.5	5	P	NONE	V	N5	P	VC/S	O	H	C,F	3	N	C,F PHENO'S/ANDESITE	
7	8	5	7	3	P	NONE	V	5YR4/1	P	C/F	O	H	F,C	2	N	C,F PHENO'S/BASALT	
7	5	3	3	6	P	NONE	V	N5	P	C/VF	O	H	C,F	4	N	C,F PHENO'S/BASALT	
7	5	3	4	2	P	NONE	V	N5	P	C/VF	O	M	F,C	3	N	C,F PHENO'S/BASALT	
7	11	4	5	6	S	FEOX	V	5R4/2	P	C/S	O	M	F,C	5	N	C,F PHENO'S/BASALT	
7	6	2.5	4.5	6	S	NONE	V	N5	P	VC/VF	O	H	F,C	5	Y	C,F PHENO'S/BASALT	
7	6	3	4	7	P	NONE	V	N4	P	C/VF	O	H	F,C	3	Y	C,F PHENO'S/BASALT	
7	14	9	10	9	P	FEOX	V	5YR4/1	P	C/VF	O	H	F,C	5	Y	C,F PHENO'S/BASALT	
7	8	3	5	5	P	NONE	V	N5	P	C/VF	O	H	C,F	4	Y	C,F PHENO'S/BASALT	

7	9	4.5	7	5	P	NONE	V	N4	P	C/VF	O	H	F,C	3	N	C,F PHENO'S/BASALT	
7	13	4	8	5	S	FEOX	V	5GY6/1	P	VC/VF	O	H	C,F	5	N	C,F PHENO'S/DACITE	
7	9	4	5.5	7	G	BLK	V	5GY6/1	P	VC/S	O	H	C,F	4	N	C,F PHENO'S/DACITE	
7	8.5	5	6	5	S	FEOX	V	N6	P	VC/VF	O	H	F,C,B	5	N	C,F,B PHENO'S/DACITE	
7	6	2.5	4.5	4	P	NONE	V	N4	P	C/S	TL	H	F	5	N	F PHENO'S/BASALT	
7	6	2.5	5	5	S	BLK	V	N5	P	C/S	O	H	F	4	N	F PHENO'S/BASALT	
7	9	4	5	1	P	NONE	V	N5	P	C/VF	O	H	F	3	N	F PHENO'S/BASALT	
7	6	3	4	6	G	FEOX	MS	5YR5/2	P	VC/S	TL	H	F	5	Y	F PHENO'S/SILICIFIED LITHIC TUFT	
7	5	2.5	4	4	F	NONE	V	10YR5/2	P	M/S	O	H	F,B	4	N	F,B PHENO'S/WELDED TUFT	
7	7	3.5	5	?	P	NONE	V	5YR6/1	P	VC/VF	O	H	F,Q	3	Y	F,Q PHENO'S/RHYO-DACITE	
7	9.5	4.5	5.5	6	S	FEOX	S	10YR6/2	P	C/F	O	H	F,Q	5	N	F,Q PHENO'S/SANDSTONE	
7	14	3.5	4	6	S	NONE	S	10GY5/1	P	VC/F	O	H	F,Q	5	Y	F,Q PHENO'S/SANDSTONE	
7	8	4	5	4	P	FEOX	V	10YR6/2	P	VC/S	TL	M	F,Q,B	5	N	F,Q,B PHENO'S/WELDED TUFT	
7	12	5.5	6.5	6	G	NONE	P	5GY6/1	M	C	O	H	C,F	4	N	GABBRO	
7	10	5	10	8	G	NONE	P	N5	M	C	O	H	Q,C	4	Y	GABBRO	
7	11	4	5.5	6	G	FEOX	M	NA	BI	C	O	H	C,Q,F,GN	2	Y	GNEISS	
7	10	3	4.5	1	G	NONE	M	NA	BI	VC	O	H	Q,F,B,C	3	N	GNEISS	
7	8	4.5	5.5	6	G	NONE	M	NA	BI	VC	O	H	Q,C,F	3	N	GNEISS	
7	6	3	4	?	G	FEOX	M	NA	BI	VC	O	H	F,B,Q	3	Y	GNEISS	
7	16	7	10	6	G	FEOX	M	5GY5/1	BI	C	O	H	Q,C,F,GN	4	Y	GNEISS	
7	10	5	8	8	G	NONE	M	5GY6/1	BI	C	O	H	Q,F,C	4	N	GNEISS	
7	6	2.5	3.5	6	G	NONE	P	NA	M	VC	O	H	B,Q,F	3	N	GRANITE	
7	12	3.5	4.5	6	G	NONE	P	5GY7/1	M	C	O	H	Q,F,B	5	Y	GRANITE	
7	11	3.5	9	6	G	FEOX	P	5GY6/1	M	C	O	H	Q,F,B	3	N	GRANITE	
7	8	3	5.5	7	G	FEOX	P	5GY7/1	M	C	O	H	F,Q,C,B	4	N	GRANITE	
7	10	4.5	6	6	G	NONE	P	NA	M	M	O	H	Q,C,F,B	3	N	GRANITE	
7	6	3	4	1	F	NONE	P	5GY8/1	M	C	O	H	B,Q,F	3	N	LEUCO GNEISS	
7	14	6.5	8	6	G	NONE	M	5Y8/1	BI	C	O	H	Q,F,C	3	Y	LEUCO GNEISS	
7	6.5	3	4	4	S	FEOX	P	5GY7/1	M	C	O	H	Q,F,B	4	N	LEUCO GRANITE	
7	9	3.5	7	8	G	NONE	P	5Y6/1	M	C	O	H	F,C,Q	3	Y	MONZENITE	
7	9	4	5	4	S	NONE	V	5YR3/1	P	VC/S	O	S	Q,B	5	Y	Q,B PHENO'S/WELDED TUFT	

7	9	4	6	6	G	NONE	P	NA	M	VC	O	H	Q,F,B	3	Y	RED GRANITE	
7	9	4.5	7	5	P	NONE	S	5GY7/1	M	M	O	H	Q	5	N	SANDSTONE	
7	7.5	4.5	6	5	S	NONE	S	5YR7/1	M	M	O	M	Q	5	Y	SANDSTONE	
7	6	3.5	4	6	S	FEOX	S	10YR6/2	M	M	TL	H	Q	4	Y	SANDSTONE	
7	7.5	4	6	8	S	NONE	S	5Y8/1	M	M	O	H	Q	4	N	SANDSTONE	
7	5.5	2	4	2	S	NONE	S	5YR3/1	M	F	O	H	Q	5	N	SANDSTONE	
7	8.5	4.5	7.5	8	S	FEOX	S	5Y8/1	M	M	O	H	Q	5	N	SANDSTONE	
7	22	9.5	13	7	S	FEOX	S	5Y8/1	M	M	TL	H	Q	5	N	SANDSTONE	
7	5	3.5	4	6	S	NONE	S	N1	M	C	O	H	Q	5	Y	SANDSTONE	
7	7	4.5	5	8	S	NONE	S	5GY7/1	M	M	TL	M	Q	5	Y	SANDSTONE	
7	6	4	5	9	S	NONE	S	5Y6/1	M	F	TL	M	Q	5	Y	SANDSTONE	
7	12	3	7	?	S	FEOX	S	5YR8/1	M	M	O	H	Q	4	Y	SANDSTONE	
7	10	3.5	6	?	S	NONE	S	10YR7/2	M	M	O	H	Q	5	Y	SANDSTONE	
7	6.5	3	5	8	S	NONE	S	5Y5/1	M	M	TL	H	Q	5	N	SANDSTONE	
7	8.5	3	6	7	S	NONE	S	5YR8/2	M	M	O	H	Q	5	Y	SANDSTONE	
7	8.5	3	6	7	S	NONE	S	10YR6/4	M	C	TL	H	Q,HEM	4	N	SANDSTONE	
7	5	1	3	5	S	NONE	S	10YR6/2	M	M	TL	H	Q	5	N	SANDSTONE	
7	7.5	4	5	5	S	FEOX	S	5YR5/2	M	F	O	M	Q,HEM	5	N	SANDSTONE	
7	12	5.5	9	8	S	FEOX	S	5GY6/1	M	F	O	H	Q	5	Y	SANDSTONE	
7	7.5	3	5.5	7	S	NONE	S	N6	M	F	O	H	Q	4	N	SANDSTONE	
7	6	2.5	3.5	4	S	NONE	S	5YR7/2	M	F	O	H	Q	4	Y	SANDSTONE	
7	15	8	11	8	S	NONE	S	5Y7/1	M	M	TL	M	Q	5	Y	SANDSTONE	
7	6.5	2	4.5	1	F	NONE	S	10YR6/2	M	M	O	H	Q	5	N	SANDSTONE	
7	11	6	9	7	S	FEOX	S	5Y7/1	M	F	O	M	Q	5	N	SANDSTONE	
7	7	0.5	6	?	S	FEOX	S	N9	M	M	O	H	Q	2	Y	SANDSTONE	
7	11	3.5	8	7	S	FEOX	S	5Y8/1	M	M	O	H	Q	5	N	SANDSTONE	
7	12	4	8	7	S	FEOX	S	5Y8/1	BD	M	O	H	Q	4	N	SANDSTONE	
7	11	5	7	7	S	NONE	S	10YR6/2	M	M	TL	M	Q	5	Y	SANDSTONE	
7	8	4	5	8	S	NONE	S	10YR6/2	BI	M	TL	M	Q	5	N	SANDSTONE	
7	9.5	5	7	9	S	FEOX	S	10YR8/2	M	M	TL	M	Q	5	Y	SANDSTONE	
7	9	3	6.5	?	S	FEOX	S	10YR8/2	M	M	O	H	Q	3	Y	SANDSTONE	

7	11	3	9	?	S	FEOX	S	10R6/2	M	M	O	H	Q	5	Y	SANDSTONE	
7	9	3	4	7	S	FEOX	S	10YR5/2	M	F	O	H	Q	4	N	SANDSTONE	
7	8.5	4.5	7.5	9	S	FEOX	S	5Y6/1	M	F	O	M	Q	5	N	SANDSTONE	
7	6	2	5	8	S	NONE	S	5Y8/1	M	M	TL	H	Q	5	Y	SANDSTONE	
7	10	5	7	7	S	FEOX	S	5Y8/1	M	M	O	H	Q	5	N	SANDSTONE	
7	12	4.5	9	8	S	NONE	S	5YR8/1	M	M	TL	M	Q	5	N	SANDSTONE	
7	5	2.5	4	?	S	FEOX	S	5Y7/1	M	M	TL	H	Q	5	Y	SANDSTONE	
7	7	3.5	5	8	S	FEOX	S	10YR6/2	M	M	O	M	Q	5	Y	SANDSTONE	
7	10	5	7	7	S	FEOX	S	5YR7/2	M	M	TL	M	Q,HEM	5	N	SANDSTONE	
7	7	3.5	6	9	S	FEOX	S	5YR6/1	M	M	O	M	Q	5	Y	SANDSTONE	
7	8.5	4.5	5	8	S	NONE	S	5Y7/1	M	M	TL	M	Q	5	Y	SANDSTONE	
7	8	4.5	6.5	7	S	FEOX	S	5R5/2	M	M	O	M	Q	5	Y	SANDSTONE	
7	9.5	3	6	7	S	FEOX	S	5Y6/1	M	F	O	M	Q	5	Y	SANDSTONE	
7	7.5	4.5	5	5	S	FEOX	S	5YR6/1	M	M	TL	M	Q	5	Y	SANDSTONE	
7	6	3.5	5	8	S	FEOX	MS	5YR4/1	MT	S	O	M	Q	5	N	SILICIFIED TUFT	
7	6	0.5	4	?	S	NONE	MS	N7	MT	S	TL	M	Q	5	Y	SILICIFIED VOLCANIC	
7	6.5	3	5	4	S	FEOX	MS	5YR5/2	MT/V	S	TL	S	?	5	Y	SILICIFIED VOLCANIC	
7	11	5	9	5	G	FEOX	P	NA	M	VC	O	H	F,B,Q	1	N	WEATHERED GRANITE	
7	6	3	3.5	5	G	NONE	P	NA	M	VC	O	H	Q,F,B	1	N	WEATHERED GRANITE	
8	5.5	2	3	6	S	NONE	MS	5YR6/4	MT/V	S	TL	S	?	5	N	?	
8	5.5	2.5	3.5	7	S	NONE	MS	N5	MT/V	VF	TL	M		5	Y	?	
8	8	5.5	6	9	S	NONE	P	N4	M	M	O	H	F,C,B	5	N	?	
8	8.5	3	6	6	G	NONE	P	5GY6/1	M	VC	O	H	Q,F,CHL	3	N	ALTERED GRANITE	
8	9	3	4	6	G	NONE	P	NA	M	VC	O	H	F,Q,CHL,B	3	N	ALTERED GRANITE	
8	10	6	7	5	G	FEOX	M	NA	BI/V	M/C	O	H	Q,F,EPIDOTE,C	4	N	ALTERED PRE-CAMBRIAN	
8	6	3.5	4	7	G	NONE	P	10R6/2	M	M	TL	H	Q,F,B	3	Y	APLITE	
8	8	4	6.5	7	S	FEOX	V	5GY6/1	P	C/S	O	M	B,F	5	Y	B,F PHENO'S/RHYO-DACITE	
8	13	4	9	6	S	FEOX	V	5Y6/1	P	C/VF	O	H	F,Q,B	4	N	B,F,Q PHENO'S/RHYO-DACITE	
8	8	4.5	6	8	P	NONE	V	5R6/4	P	VC/S	O	H	Q,B,F	5	N	B,F,Q PHENO'S/RHYOLITE	
8	8	2	3.5	6	S	FEOX	V	N5	M	VF	O	H	?	2	Y	BASALT	
8	5	2	4	6	P	NONE	V	N4	P	C/VF	O	H	C,F	3	N	BASALT	

8	7	3.5	4.5	8	S	NONE	V	N5	M	F	O	H	?	4	N	BASALT	
8	7	4	6	6	P	NONE	V	N4	P	C/VF	O	H	C	4	Y	C PHENO'S/ANDESITE	
8	10	6	8.5	4	S	FEOX	V	N5	P	VC/VF	O	H	F,C	4	N	C,F PHENO'S/ANDESITE	
8	5.5	3	5	6	S	NONE	V	N3	P	C/VF	O	H	F,C	3	Y	C,F PHENO'S/BASALT	
8	8	2.5	4	6	G	NONE	V	N5	P	C	O	H	F,C	4	Y	C,F PHENO'S/BASALT	
8	5	2.5	2.5	2	P	NONE	V	N4	P	C/VF	O	H	F,C	4	N	C,F PHENO'S/BASALT	
8	5.5	2	2.5	?	S	NONE	V	N5	P	C/VF	O	H	F,C	3	Y	C,F PHENO'S/BASALT	
8	7.5	2.5	4.5	6	S	FEOX	V	N8	P	F/C	O	H	F,C	4	N	C,F PHENO'S/BASALT	
8	18	10	15	8	G	FEOX	V	N5	P	VC/VF	O	H	F,C	3	N	C,F PHENO'S/BASALT	
8	5.5	3	4	2	P	NONE	V	N5	P	C/VF	O	H	F,C	3	N	C,F PHENO'S/BASALT	
8	7.5	2.5	3.5	2	P	NONE	V	N5	P	M/VF	O	H	F,C	5	N	C,F PHENO'S/BASALT	
8	13	5.5	12	6	P	FEOX	V	5Y4/1	P	C/VF	O	H	F,C	3	Y	C,F PHENO'S/BASALT	
8	5	1.5	3.5	6	P	NONE	V	N5	P	C/VF	O	H	F,C	3	N	C,F PHENO'S/BASALT	
8	8	4	6	7	F	NONE	V	5YR5/1	P	C/VF	O	H	F,C,B	3	?	C,F,B PHENO'S/ANDESITE	
8	6	4	5	6	S	FEOX	V	5YR7/1	P	C/VF	O	H	F,C,B	5	N	C,F,B PHENO'S/DACITE	
8	7.5	3	4	6	G	FEOX	P	NA	P	VC/C	O	H	C,Q,F	3	Y	C,Q,F PHENO'S/HORNBLENDE GRANITE	
8	7	3.5	5.5	8	P	NONE	S	5GY6/1	P	M/C	O	H	F,C,Q	3	Y	C,Q,F PHENO'S/VOLCANIC SANDSTONE	
8	9	3	5.5	4	S	FEOX	S	10R7/2	P	M	O	H	C,Q,F	5	N	C,Q,F PHENO'S/VOLCANIC SANDSTONE	
8	7	2	4	6	G	NONE	P	5GY6/1	M	C	O	H	F,C	2	Y	DIORITE	
8	5	1.5	2	4	G	NONE	P	5GY6/1	M	C	O	H	F,C,B	3	Y	DIORITE	
8	10	6	8	5	G	NONE	P	NA	M	VC	O	H	B,F,Q	3	N	DIORITE	
8	13	5	9	4	G	FEOX	P	NA	M	M	O	H	F,B,C	3	N	DIORITE	
8	10	4	8	6	S	NONE	V	5R4/2	P	VC/S	O	M	F	5	Y	F PHENO'S/ANDESITE	
8	5.5	2	3.5	6	S	NONE	V	N5	P	VC/VF	O	M	F	5	Y	F PHENO'S/BASALT	
8	5.5	2.5	4	7	G	NONE	V	5GY6/1	P	C/VF	O	H	F,B	3	Y	F,B PHENO'S/DACITE	
8	15	7	11	7	S	FEOX	V	5GY8/1	P	C/VF	O	H	F,B	5	Y	F,B PHENO'S/DACITE	
8	7.5	3	6	5	G	NONE	V	5GY4/1	P	VC/F	O	H	Q,F	3	Y	F,Q PHENO'S/RHYO-DACITE	
8	10	5	8	7	P	NONE	V	5R6/2	P/BI	C/S	O	M	Q,F,B	5	Y	F,Q,B PHENO'S/WELDED TUFT	
8	5	1.5	3	3	S	NONE	P	N5	M	C	O	H	F,C	4	N	GABBRO	
8	6	3	4	7	G	NONE	P	5GY6/1	M	C	O	H	F,C	4	N	GABBRO	
8	8	3.5	5	6	G	NONE	M	5Y6/1	BI	C	O	H	Q,F,C,MGN	4	Y	GNEISS	

8	6	3.5	4	1	G	NONE	M	NA	BI	VC	O	H	Q,F,GN,C	3	N	GNEISS	
8	8	4	5.5	8	G	NONE	P	NA	M	VC	O	H	Q,F,B	3	N	GRANITE	
8	5	3	3.5	7	G	NONE	P	5GY6/1	M	C	O	H	Q,F,C,B	3	Y	GRANO-DIORITE	
8	8	3	4	?	G	NONE	P	5Y6/1	M	C	O	H	B,Q,F	3	Y	GRANO-DIORITE	
8	8	4	6	7	G	FEOX	P	5Y8/1	M	C	O	H	Q,F,EPIDOTE	3	Y	LEUCO GRANITE	
8	7	2.5	5	8	G	NONE	P	NA	M	M	O	H	F,Q,B	3	Y	LEUCO GRANITE	
8	6	2	4	6	G	NONE	P	5GY6/1	M	C	O	H	F,Q,B	4	N	MONZENITE	
8	10	5	7	7	S	FEOX	P	NA	M	VC	O	H	Q,F,B	3	N	PEGMATITE	
8	7.5	3	4.5	?	P	NONE	P	N2	M	VC	O	H	F,C	3	Y	PYROXENITE	
8	7	3	4	6	G	FEOX	MS	NA	M	VC	TL	H	Q,HEM	3	Y	QUARTZ VEIN	
8	7	2	6	4	S	NONE	S	5Y8/1	M	M	O	H	Q	4	N	SANDSTONE	
8	5.5	2	4	6	S	FEOX	S	10YR6/2	M	M	O	H	Q	4	N	SANDSTONE	
8	8.5	2	5	6	S	FEOX	S	5Y8/1	M	M	O	H	Q	2	Y	SANDSTONE	
8	9	2	4.5	7	S	FEOX	S	5YR8/1	M	M	O	H	Q	4	Y	SANDSTONE	
8	9	4.5	7	8	S	FEOX	S	5YR8/1	M	M	O	H	Q	5	Y	SANDSTONE	
8	9	5	7	7	S	FEOX	S	10YR6/2	M	F	O	M	Q	5	Y	SANDSTONE	
8	5	0.5	4.5	?	S	NONE	S	5GY6/1	M	VF	O	H	Q	3	Y	SANDSTONE	
8	6	3	3	6	S	FEOX	S	10R5/2	M	F	O	M	Q	5	Y	SANDSTONE	
8	5.5	1	3.5	?	S	FEOX	S	10YR4/2	M	F	O	M	Q	5	Y	SANDSTONE	
8	8	4	6.5	8	S	NONE	S	N7	M	M	TL	H	Q	5	Y	SANDSTONE	
8	7	3.5	5	8	S	NONE	S	N8	M	M	TL	H	Q	5	N	SANDSTONE	
8	5	2.5	4	8	S	NONE	S	10YR7/2	M	M	TL	M	Q	5	Y	SANDSTONE	
8	7	3.5	6	6	G	FEOX	S	5YR8/1	M	M	O	M	Q	4	Y	SANDSTONE	
8	6	2.5	3	5	G	NONE	S	5R6/2	M	C	O	H	Q,HEM	4	N	SANDSTONE	
8	10	6	7	8	S	FEOX	S	10YR5/2	M	M	TL	H	Q	5	Y	SANDSTONE	
8	11	5	9	8	S	FEOX	S	5Y8/1	M	M	O	H	Q	3	N	SANDSTONE	
8	6	4	4.5	8	S	NONE	S	5Y8/1	M	M	O	H	Q	4	N	SANDSTONE	
8	7	3	4.5	6	S	NONE	S	N7	M	M	TL	H	Q	5	N	SANDSTONE	
8	6	2.5	3.5	8	S	NONE	S	5Y6/1	M	M	TL	M	Q	5	Y	SANDSTONE	
8	5	2.5	3	7	S	NONE	S	N6	M	F	TL	M	Q,HEM	5	Y	SANDSTONE	
8	6	2.5	4.5	7	S	NONE	S	5YR8/1	M	M	O	H	Q	4	N	SANDSTONE	

8	5	3	4	8	S	NONE	S	5GY7/1	M	M	TL	M	Q,HEM	5	N	SANDSTONE	
8	5	1.5	4	?	F	NONE	S	N7	M	M	O	H	Q	4	Y	SANDSTONE	
8	7	2	4	5	S	FEOX	S	5GY6/1	BD	F	O	M	Q	5	Y	SANDSTONE	
8	10	5	5.5	7	S	FEOX	S	5Y5/1	M	F	O	H	Q	4	N	SANDSTONE	
8	6	2	4.5	5	S	NONE	S	N6	M	M	TL	H	Q	5	Y	SANDSTONE	
8	3.5	4	9.5	6	S	FEOX	S	N6	M	F	O	H	Q	5	N	SANDSTONE	
8	9	4.5	6	8	S	NONE	S	5GY7/1	M	M	TL	H	Q	5	Y	SANDSTONE	
8	10	4	7	7	S	FEOX	S	5Y8/1	M	M	O	M	Q	4	Y	SANDSTONE	
8	5	2.5	2.5	7	S	FEOX	S	10YR6/2	M	F	O	M	Q	5	Y	SANDSTONE	
8	9	5	6	8	S	NONE	S	N7	M	M	TL	H	Q	5	Y	SANDSTONE	
8	6	2.5	4.5	7	S	FEOX	S	10YR8/2	M	M	O	H	Q	4	Y	SANDSTONE	
8	14	6	8.5	8	S	NONE	S	N6	M	S	O	M	Q	5	Y	SANDSTONE	
8	8	3	5	?	S	FEOX	S	5Y8/1	M	M	O	H	Q	4	Y	SANDSTONE	
8	8.5	2.5	4	?	F	NONE	S	5Y5/1	M	F	O	M	Q	5	Y	SANDSTONE	
8	9.5	4	7	5	S	FEOX	S	10YR7/2	M	M	O	M	Q	5	N	SANDSTONE	
8	5	3.5	4	8	S	NONE	S	N7	M	M	TL	H	Q	4	N	SANDSTONE	
8	7	1	2.5	?	S	NONE	S	N9	M	M	O	H	Q	3	Y	SANDSTONE	
8	5	2.5	4	7	S	NONE	S	5Y8/1	M	M	O	H	Q	4	N	SANDSTONE	
8	6	3	4	6	S	BROWN	S	10YR5/2	BD	F	O	H	Q	5	N	SANDSTONE	
8	8	2.5	5	?			S	10YR7/2	M	M	TL	H	Q	4	Y	SANDSTONE W/NO CORETEX	
8	7.5	3	5	6	S	FEOX	MS	10YR5/4-5Y8/1	V	S	O	M	?	5	Y	SILICIFIED TUFT	
8	7.5	2.5	6	4	S	FEOX	MS	N4	BI	S	TL	M	?	5	Y	SILICIFIED VOLCANIC	
8	6	2	4	1	P	FEOX	MS	5YR6/4	MT/V	S	O	M	?	5	N	SILICIFIED VOLCANIC	
8	6	2	3	7	S	NONE	MS	10YR6/2	M	S	O	S	?	5	Y	SILICIFIED VOLCANIC	
8	11	4	5.5	6	P	FEOX	S	5GY6/1	M	C	O	H	Q,F	5	Y	VOLCANIC SANDSTONE	
8	6.5	3	4	6	S	FEOX	V	5Y8/1	BI	S	TL	M	Q	5	N	WELDED TUFT	
9	7	4	5	7	S	NONE	M	NA	M	C	O	H	C,Q,F	4	Y	?	
9	6	2.5	4	4	S	NONE	P	5Y4/1	M	C	O	H	F,Q,B	4	N	?	
9	10	6	8	7	G	NONE	M	NA	M	VC	O	H	Q,C,F	4	Y	?	
9	7	4	5	6	S	BROWN	P	10YR6/2	BI	M	O	H	Q,F,CHL,B,M	2	Y	ALTERED APLITE	
9	27	10	20	4	G	NONE	P	NA	M	VC	O	H	Q,F,EPIDOTE,MTE	3	Y	ALTERED RED GRANITE	

9	6	2.5	3.5	5	S	BLK	P	10YR6/2	M	M	O	H	Q,F	5	N	APLITE	
9	11	4	5.5	4	G	NONE	P	5R6/2	M	C	O	H	Q,F,B	5	Y	APLITE	
9	12	3.5	7.5	8	P	NONE	V	N9	P	C/VF	O	H	B,Q,F	2	N	B,Q,F PHENO'S/LITHIC TUFT	
9	23	11	13	3	S	NONE	V	N4	M	M	O	H	F,C	5	N	BASALT	
9	14	7	13	7	S	FEOX	V	5YR5/2	M	F	O	H	C,F	4	Y	BASALT	
9	6	3	3	7	P	NONE	V	5Y6/1	P	VC/VF	O	M	C,F,B	5	N	C,F,B PHENO'S/ANDESITE	
9	9	2.5	5	7	P	NONE	V	5YR5/2	P	VC/VF	O	H	F,C,B	3	N	C,F,B PHENO'S/DACITE	
9	9	3	8	8	P	NONE	V	10YR4/2	P	C/VF	O	H	F,C,Q	3	N	C,F,Q PHENO'S/RHYO-DACITE	
9	19	12	14	8	G	NONE	P	N7	M	C	O	H	Q,F,C,B	3	Y	DIORITE	
9	10	4	6	6	S	NONE	P	N5	M	C	O	H	B,Q,F	4	N	DIORITE	
9	18	4	8	?	P	NONE	V	5GY5/1	P	C/VF	O	H	F	5	Y	F PHENO'S/TRYCLITE	
9	11	3.5	5	3	S	NONE	M	N5	P	M	O	H	F,C	4	N	GABBRO	
9	18	8	8	8	S	NONE	P	N5	M	C	O	H	F,C	4	N	GABBRO	
9	7	2.5	4.5	?	S	NONE	P	5GY4/1	M	VC	O	H	F,C	3	Y	GABBRO	
9	8.5	6	7	7	G	BROWN	M	NA	BI	C	O	H	Q,F,C,GN	4	N	GNEISS	
9	10	5.5	9.5	9	G	NONE	M	NA	BI	M	O	H	Q,F,B	4	N	GNEISS	
9	16	8	11	5	G	BROWN	M	N5	BI	M	O	H	B,Q,F	4	N	GNEISS	
9	8	2.5	6	3	S	NONE	M	NA	BI	C	O	H	F,Q,C,B	4	N	GNEISS	
9	12	4	8.5	5	S	NONE	M	N5	BI	M	O	H	C,F,Q	5	N	GNEISS	
9	16	5.5	8	5	G	NONE	M	NA	BI	VC	O	H	Q,B,F,GN	3	N	GNEISS	
9	10	4.5	5.5	5	G	NONE	M	NA	BI	VC	O	H	Q,B,F	1	Y	GNEISS	
9	13	4	7	4	G	NONE	M	N5	BI	C	O	H	B,C,Q,F	4	N	GNEISS	
9	8	5	6	8	P	NONE	M	NA	BI	VC	O	H	Q,F,B	3	N	GNEISS	
9	6.5	3	4.5	4	S	NONE	M	N5	BI	M	O	H	Q,F,C,B	4	N	GNEISS	
9	10	3	8	6	G	NONE	M	N3	BI	C	O	H	Q,F,B,C	3	N	GNEISS	
9	7	2	4	2	G	NONE	M	NA	BI	C	O	H	Q,F,C	4	N	GNEISS	
9	7.5	2	5.5	2	G	NONE	M	NA	BI	VC	O	H	C,Q,F	3	N	GNEISS	
9	7	2.5	5	4	G	NONE	M	5YR4/1	BI	C	O	H	B,Q,F,C	4	N	GNEISS	
9	9	2	4.5	3	S	NONE	M	NA	BI	C	O	H	F,C,Q	3	N	GNEISS	
9	12	3.5	5.5	4	G	NONE	M	NA	BI	M	O	H	Q,F,B,C,GN	3	N	GNEISS	
9	8.5	4	6	6	G	NONE	M	NA	BI	C	O	H	Q,F,B	3	N	GNEISS	

9	19	5	12	2	G	NONE	M	NA	BI	VC	O	H	Q,F,C,B	3	Y	GNEISS	
9	10	3.5	6	3	G	NONE	M	NA	BI	C	O	M	F,C,Q	4	N	GNEISS	
9	8	4	6.5	5	G	NONE	M	5YR7/1	BI	C	O	H	Q,F,B	4	Y	GNEISS	
9	9	4	6	4	G	NONE	M	NA	BI	C	O	H	Q,F,C,B	4	N	GNEISS	
9	8.5	2	6.5	4	S	NONE	M	NA	BI	C	O	H	Q,F,C,GN	4	N	GNEISS	
9	12	6.5	10	6	G	NONE	P	NA	M	VC	O	H	Q,F,B,MTE	2	Y	GRANITE	
9	5.5	3	4	2	G	NONE	P	NA	M	VC	O	H	Q,MTE,F	4	N	GRANITE	
9	6	2	3	5	G	NONE	P	NA	M	VC	O	H	Q,B,F	2	N	GRANITE	
9	6.5	2	3	3	S	NONE	P	5YR8/1	M	C	O	H	F,Q,B	3	Y	GRANITE	
9	15	7.5	13	7	G	NONE	P	5YR7/1	M	C	O	H	F,Q,B	3	N	GRANITE	
9	8	4	5	?	G	FEOX	P	NA	M	M	O	H	Q,F,B	2	Y	GRANITE	
9	11	4	7.5	5	P	FEOX	P	5Y6/1	M	C	O	H	Q,F,B	4	N	GRANO-DIORITE	
9	10	4	7	5	S	NONE	P	N5	M	C	O	H	Q,F,B	3	N	GRANO-DIORITE	
9	20	9	12	5	G	NONE	M	5YR8/1	BI	C	O	H	Q,F,B	4	N	LEUCO GNEISS	
9	5.5	2.5	3.5	3	P	NONE	P	5Y8/1	M	VC	O	H	F,Q,CHL,MTE	3	Y	LEUCO GRANITE	
9	8	3	3.5	3	P	NONE	P	N9	M	VC	O	H	Q,F,B	3	N	LEUCO GRANITE	
9	9	5	7	6	G	NONE	P	NA	M	VC	O	H	Q,F,B	4	Y	LEUCO GRANITE	
9	21	9	12	3	G	NONE	M	N5	BI	M	O	H	C,F	4	Y	MAFIC GNEISS	
9	11	4.5	5	8	S	BLK	M	5GY4/1	M	C	O	H	F,C,B	3	Y	METAGABBRO	
9	18	12	15	9	G	NONE	P	NA	M	VC	O	H	Q,F,B	3	N	RED GRANITE	
9	16	9	11	5	G	NONE	P	NA	M	VC	O	H	Q,F,B,CHL	3	N	RED GRANITE	
9	10	5.5	8.5	2	G	NONE	P	NA	M	VC	O	H	Q,F,B,MTE	3	N	RED GRANITE	
9	15	8	12	5	G	NONE	P	5YR6/1	M	C	O	H	Q,F,B	4	Y	RED GRANITE	
9	20	11	16	5	G	NONE	P	NA	M	VC	O	H	Q,F,B	3	N	RED GRANITE	
9	14	7	9.5	3	G	NONE	P	NA	M	VC	O	H	Q,F,B,EPIDOTE	3	N	RED GRANITE	
9	14	5.5	7.5	5	G	NONE	P	NA	M	VC	O	H	F,Q,CHL,MTE	3	N	RED GRANITE	
9	7	2	5.5	4	G	NONE	P	10YR6/2	M	C	O	H	Q,B,F	4	N	RED GRANITE	
9	14	5	9.5	2	G	NONE	P	NA	M	VC	O	H	Q,F,B	2	N	RED GRANITE	
9	7	2	5	2	G	NONE	P	NA	M	VC	O	H	F,Q,B	3	N	RED GRANITE	
9	8	2.5	4.5	2	G	NONE	P	NA	M	VC	O	H	F,Q,B	3	N	RED GRANITE	
9	18	12	14	7	G	NONE	P	NA	M	VC	O	H	Q,B	3	N	RED GRANITE	

9	8.5	2.5	5	4	G	NONE	P	NA	M	VC	O	H	F,Q,B	3	N	RED GRANITE	
9	19	4	10	5	G	NONE	P	5R7/2	M	C	O	H	Q,F,B	3	Y	RED GRANITE	
9	10	3	4.5	?	G	NONE	P	NA	M	VC	O	H	Q,F,B	3	Y	RED GRANITE	
9	14	6	9	6	G	NONE	P	NA	M	VC	O	H	Q,F,MTE	3	Y	RED GRANITE	
9	17	5.5	11	3	P	NONE	P	NA	M	VC	O	H	Q,B,F	4	N	RED GRANITE	
9	6	2	5	5	S	NONE	P	NA	M	C	O	H	Q,B,F	3	Y	RED GRANITE	
9	7	3.5	4.5	4	F	NONE	P	NA	M	VC	O	H	Q,B,F	3	N	RED GRANITE	
9	7	3	5	4	G	NONE	P	NA	M	VC	O	H	Q,F,B	3	N	RED GRANITE	
9	11	4	9	?	G	NONE	P	NA	M	VC	O	H	Q,F,B	3	Y	RED GRANITE	
9	8	4.5	5	5	G	NONE	P	NA	M	VC	O	H	F,Q,B	3	N	RED GRANITE	
9	13	3	4	1	G	NONE	P	NA	M	VC	O	H	F,Q,B	3	N	RED GRANITE	
9	7	2.5	5.5	5	S	NONE	P	NA	M	VC	O	H	Q,F,B	4	Y	RED GRANITE	
9	5	3	4	3	S	NONE	P	NA	M	C	O	H	Q,F,B	4	Y	RED GRANITE	
9	11	5	8	7	G	NONE	P	NA	M	VC	O	H	F,Q,B	3	Y	RED GRANITE	
9	7	7.5	2	1	G	NONE	P	NA	BI	M	O	H	Q,F,B	3	Y	RED GRANITE W/MAFIC ENCLAVE	
9	9	3.5	6.5	5	S	NONE	P	N5-5R8/2	BI	C	O	H	Q,F,B	4	N	RED GRANITE W/MAFIC ENCLAVE	
9	13	5	8.5	3	G	NONE	P	NA	M	VC	O	H	Q,F,B	3	N	RED GRANITE W/MAFIC ENCLAVE	
9	16	6.5	13	6	G	NONE	S	5Y8/1	M	C	O	H	Q,B	3	N	SANDSTONE	
9	7	3	4.5	4	S	NONE	S	5YR8/1	M	M	O	H	Q	3	N	SANDSTONE	
9	9	2	5	3	S	BROWN	S	5YR3/4	M	F	O	H	Q,HEM	4	N	SANDSTONE	
9	5.5	3	4	4	S	BLK	S	10YR6/2	M	M	O	H	Q	4	N	SANDSTONE	
9	9	3.5	7	4	S	NONE	S	N5	M	F	O	H	Q	4	N	SANDSTONE	
9	10	6	8.5	4	S	NONE	S	5Y6/1	M	M	TL	M	Q	5	N	SANDSTONE	
9	6	2.5	3.5	8	S	NONE	S	5Y8/1	M	M	TL	H	Q	5	Y	SANDSTONE	
9	6	3	5	7	S	NONE	S	5R8/2	M	M	O	H	Q,HEM	4	N	SANDSTONE	
9	22	8	17	7	S	FEOX	S	5Y8/1	M	M	O	H	Q	4	Y	SANDSTONE	
9	9	5	6	7	S	NONE	S	N9	M	M	TL	H	Q	4	N	SANDSTONE	
9	8	4	6	8	S	NONE	S	10YR4/2	M	M	O	M	Q	5	N	SANDSTONE	
9	7	3	4.5	8	S	NONE	S	N8	M	M	TL	H	Q	5	N	SANDSTONE	
9	23	6	11	6	G	YELLOW	M	10YR6/2	BI	M	O	H	Q,F,GN,C	1	Y	WEATHERED GNEISS	
9	8	4	6	6	G	BROWN	M	10YR6/2	BI	C	O	H	Q,B,F	2	Y	WEATHERED GNEISS	

9	14	2.5	9	1	G	NONE	M	5YR4/1	BI	C	O	H	Q,C,F	2	N	WEATHERED GNEISS	
9	10	4	5	1	G	NONE	P	NA	M	VC	O	H	F,Q	2	N	WEATHERED RED GRANITE	
10	12	6	7	7	S	FEOX	M	N5	M	VC	O	H	Q,F,GN	3	N	?	
10	8	3.5	6	7	G	BLK	M	5GY4/1	BI	C	O	H	C,F	3	Y	AMPHIBOLITE	
10	8	3	5	5	S	NONE	P	10R7/2	M	M	O	H	Q,F	5	N	APLITE	
10	9	4	5	5	S	NONE	M	5YR8/1	BI	C	O	H	Q,F,HEM	3	N	APLITE	
10	22	11	14	8	S	FEOX	V	5YR4/1	P	C/VF	O	H	F,B,Q	5	N	B,F,Q PHENO'S/RHYO-DACITE	
10	8	4	7	8	S	FEOX	V	N3	P	C/F	O	H	F,C	5	N	C,F PHENO'S/BASALT	
10	7	3	5	8	S	FEOX	V	N4	P	C/VF	O	H	F,C	5	N	C,F PHENO'S/BASALT	
10	9	5	8	8	S	NONE	V	N4	P	C/VF	O	H	C,F	3	N	C,F PHENO'S/BASALT	
10	8	4	5.5	6	S	NONE	V	5GY6/1	P	VC/VF	O	H	C,F,B	4	N	C,F,B PHENO'S/DACITE	
10	6	3	5.5	8	F	NONE	V	5YR4/1	P	C/VF	O	H	C,F,Q	3	Y	C,F,Q PHENO'S/RHYO-DACITE	
10	11	5.5	6	3	G	FEOX	P	5GY7/1	M	C	O	H	B,Q,F	3	N	DIORITE	
10	12	5	8	7	G	BROWN	P	N5	M	C	O	H	B,F	3	N	DIORITE	
10	7	6	6	9	G	NONE	P	NA	M	VC	O	H	Q,C,F,B	3	N	DIORITE	
10	12	5	8	6	S	NONE	V	5R4/2	P	VC/VF	O	H	F	5	N	F PHENO'S/ANDESITE	
10	10	6.5	7.5	6	S	FEOX	V	5YR5/2	P	C/VF	O	M	F,C	4	N	F,C PHENO'S/WEATHERED BASALT	
10	10	4.5	7.5	8	S	NONE	V	N5	P	C/VF	O	H	F,C	5	N	F,C PHENO'S/WELDED LITHIC TUFT	
10	8	2.5	4.5	3	S	NONE	P	N3	M	M	O	H	C,F,B	4	N	GABBRO	
10	7	2.5	5.5	8	S	NONE	P	5YR4/1	M	C	O	H	F,C	4	N	GABBRO	
10	20	7	15	4	G	BROWN	M	NA	BI	C	O	H	Q,F,B	3	N	GNEISS	
10	8	3	7	6	S	BROWN	M	5YR5/1	BI	C	O	H	Q,F,C,B	4	N	GNEISS	
10	17	7	7	6	G	FEOX	M	NA	BI	VC	O	H	Q,F,C,B	3	N	GNEISS	
10	18	9	15	8	G	FEOX	M	N5	BI	C	O	H	Q,F,B	4	Y	GNEISS	
10	16	8	11	6	S	NONE	M	5YR4/1	BI	C	O	H	C,F,Q	4	N	GNEISS	
10	23	11	14	6	S	NONE	M	N6	BI	VC	O	H	F,Q,B	4	N	GNEISS	
10	7	3	4.5	6	G	NONE	M	NA	BI	C	O	H	Q,B,F	5	N	GNEISS	
10	11	4	9	6	S	NONE	M	N5	BI	C	O	H	Q,F,C	4	N	GNEISS	
10	8	2.5	4	6	G	NONE	M	NA	BI	C	O	H	Q,B,F,C	4	Y	GNEISS	
10	15	4	11	4	G	NONE	M	NA	BI	VC	O	H	Q,F,C,B	3	N	GNEISS	
10	8	2.5	6	7	G	NONE	M	NA	BI	VC	O	H	F,Q,C,GN	4	N	GNEISS	

10	9	3.5	7	7	G	NONE	M	NA	BI	VC	O	H	Q,F,C	4	N	GNEISS	
10	8.5	5	6	7	S	NONE	M	N3	BI	C	O	H	Q,B,F,C	4	N	GNEISS	
10	12	5	8	3	G	NONE	M	NA	BD	VC	O	H	Q,F,C	4	N	GNEISS	
10	9	3	6	4	G	NONE	M	5Y4/1	BI	C	O	H	Q,C,F	3	N	GNEISS	
10	12	4	7	5	G	NONE	M	N5	BI	C	O	H	Q,B,F	5	N	GNEISS	
10	7	3	4	4	G	NONE	M	NA	BI	C	O	H	F,Q,B,C	4	N	GNEISS	
10	11	6	6	6	G	NONE	M	NA	BI	VC	O	H	Q,F,C,B	3	Y	GNEISS	
10	7	2	6.5	?	G	NONE	M	5YR8/1	BI	C	O	H	Q,F,B	3	Y	GNEISS	
10	7	2	5	2	S	NONE	M	N6	BI	M	O	H	Q,B	4	N	GNEISS	
10	11	3.5	8.5	3	G	NONE	P	NA	M	VC	O	H	Q,F,C,B	3	N	GRANITE	
10	10	5	6	4	G	NONE	P	NA	M	VC	O	H	F,Q,B	3	N	GRANITE	
10	7	3	5	6	G	NONE	P	NA	M	VC	O	H	Q,B,F	3	N	GRANITE	
10	8.5	3	6	7	G	NONE	P	NA	M	VC	O	H	Q,B,F,M	3	N	GRANITE	
10	7	2.5	4	3	G	NONE	P	NA	M	VC	O	H	Q,F,C	4	N	HORNBLENDE GRANITE	
10	6	4	4.5	6	S	NONE	P	5GY8/1	M	M	O	H	Q,F,C,B	3	Y	LEUCO GRANITE	
10	11	3.5	5	3	S	NONE	P	5YR7/1	M	C	O	H	F,Q	4	N	LEUCO GRANITE	
10	9.5	4	5	4	G	NONE	P	5Y6/1	M	C	O	H	Q,F,C	3	N	LEUCO GRANITE	
10	5.5	3	3.5	5	S	NONE	P	5Y8/1	M	C	O	H	Q,F,B	3	N	LEUCO GRANITE	
10	7	3.5	4.5	7	S	NONE	S	5YR4/1	M	C	O	H	Q,C,F	3	N	LITHIC TUFT	
10	13	7	10	7	S	NONE	S	N4	M	M	O	H	Q,F,C	5	N	LITHIC TUFT	
10	11	4	8	3	S	NONE	P	5GY6/1	M	C	O	H	Q,F,B,CHL	4	N	MONZENITE	
10	8	4	5	6	S	BROWN	P	NA	M	VC	O	H	Q,F,B	3	N	RED GRANITE	
10	10	5	6	6	G	FEOX	P	NA	M	VC	O	H	Q,F,EPIDOTE,MTE	3	N	RED GRANITE	
10	10	3	5	3	S	NONE	P	NA	M	VC	O	H	F,Q,EPIDOTE,MTE	3	N	RED GRANITE	
10	21	12.58.5	12	5	G	NONE	P	NA	M	VC	O	H	F,Q,B	3	N	RED GRANITE	
10	13	6	9	5	G	NONE	P	NA	M	VC	O	H	Q,F,B	1	N	RED GRANITE	
10	15	6	10	3	G	NONE	P	NA	M	VC	O	H	Q,F,B	3	Y	RED GRANITE	
10	11	6	8	4	S	NONE	P	NA	M	VC	O	H	B,Q,F	3	N	RED GRANITE	
10	14	7	10	4	G	NONE	P	NA	M	VC	O	H	Q,F,MTE,EPIDOTE	3	N	RED GRANITE	
10	7	3.5	5	5	G	NONE	P	NA	M	VC	O	H	F,Q,B	3	N	RED GRANITE	
10	10	5	8	3	G	NONE	P	NA	P	VC	O	H	Q,F,B	3	N	RED GRANITE	

10	17	6	9	3	S	NONE	P	NA	M	VC	O	H	Q,F,B	3	N	RED GRANITE	
10	9	4	5	5	G	NONE	P	NA	M	VC	O	H	Q,F,B	3	N	RED GRANITE	
10	7	3	5	7	G	NONE	P	NA	M	C	O	H	Q,F,B	3	N	RED GRANITE	
10	7.5	2.5	6	3	G	NONE	P	NA	M	VC	O	H	Q,B,F	3	N	RED GRANITE	
10	11	2.5	5	3	G	NONE	P	NA	M	VC	O	H	B,Q,F	3	N	RED GRANITE	
10	8.5	3	5	6	G	NONE	P	NA	M	VC	O	H	B,F,Q	3	Y	RED GRANITE	
10	6.5	2	4.5	3	G	NONE	P	NA	M	C	O	H	Q,F,B	3	N	RED GRANITE	
10	8	4	5.5	6	G	NONE	P	NA	M	VC	O	H	Q,F,B	3	Y	RED GRANITE	
10	13	14	7.5	5	G	NONE	P	NA	M	VC	O	H	Q,F,B	3	N	RED GRANITE W/MAFIC ENCLAVE	
10	7.5	3.5	5	7	S	NONE	V	5YR4/1	P	C/S	O	H	Q,B,F	5	N	RHYOLITE	
10	6.5	4	5	6	S	NONE	S	5Y8/1	M	M	TL	H	Q	5	N	SANDSTONE	
10	9	4.5	7	6	S	NONE	S	N5	M	F	O	H	Q	5	N	SANDSTONE	
10	8	4	5	5	S	FEOX	S	10YR7/2	M	M	O	H	Q	4	N	SANDSTONE	
10	6.5	2.5	4	5	S	NONE	S	5Y8/1	M	M	O	H	Q	4	N	SANDSTONE	
10	6.5	2.5	5	4	S	FEOX	S	5GY4/1	M	F	O	M	Q	5	N	SANDSTONE	
10	8.5	4	7	8	S	NONE	S	10YR8/2	M	M	O	H	Q	4	N	SANDSTONE	
10	8	5	5.5	8	S	NONE	S	N7	M	M	O	M	Q	5	N	SANDSTONE	
10	5	3	4	9	S	NONE	S	N6	M	M	TL	H	Q	5	N	SANDSTONE	
10	11	5	8	6	S	NONE	S	N7	M	M	O	H	Q	4	N	SANDSTONE	
10	9.5	3.5	8.5	6	S	NONE	S	5Y8/1	M	M	O	H	Q	5	N	SANDSTONE	
10	12	7.5	8	7	S	NONE	S	N5	M	F	O	H	Q	5	N	SANDSTONE	
10	9	3.5	5.5	3	S	NONE	S	5YR4/1	M	F	O	H	Q	3	N	SANDSTONE	
10	7.5	3	5.5	5	S	FEOX	S	N4	M	F	O	H	Q	5	N	SANDSTONE	
10	6	3	4	7	S	NONE	S	5Y7/1	M	M	O	H	Q	5	N	SANDSTONE	
10	5.5	3.5	4	6	S	NONE	S	N7	M	M	TL	M	Q,HEM	5	N	SANDSTONE	
10	6	3	5	7	S	NONE	S	5YR8/1	M	M	O	H	Q	4	N	SANDSTONE	
10	11	4	6	7	S	NONE	S	5Y8/1	M	M	O	H	Q	5	Y	SANDSTONE	
10	9	2.5	5	5	S	NONE	S	10YR8/2	M	M	TL	H	Q	5	N	SANDSTONE	
10	7.5	2	6	3	S	FEOX	S	10YR6/2	M	M	O	H	Q	5	N	SANDSTONE	
10	5	2.5	4	7	S	NONE	S	5YR6/1	M	M	TL	M	Q	5	N	SANDSTONE	
10	6.5	2.5	4.5	4	S	NONE	S	5Y6/1	M	M	O	H	Q	5	N	SANDSTONE	

10	6.5	2.5	4	6	S	NONE	S	10YR6/2	M	M	O	M	Q	5	N	SANDSTONE	
10	8	3.5	5	8	S	NONE	S	5YR6/1	M	M	O	H	Q	5	N	SANDSTONE	
10	6	2.5	3.5	6	S	NONE	S	N8	M	M	TL	H	Q	5	N	SANDSTONE	
10	12	6	9	7	P	FEOX	M	NA	BI	VC	O	H	Q,F,B	2	N	WEATHERED GNEISS	
10	13	5.5	9	7	G	FEOX	M	NA	BI	C	O	H	Q,B,F	1	N	WEATHERED GNEISS	
10	7.5	2.5	6	4	G	FEOX	M	10YR4/2	BI	C	O	H	Q,F,C	2	N	WEATHERED GNEISS	
10	8	4	7	6	G	FEOX	P	NA	M	VC	O	H	Q,F,B	1	N	WEATHERED GRANITE	
10	8	4	5	7	G	FEOX	P	NA	M	VC	O	H	F,Q,B	1	Y	WEATHERED GRANITE	
10	9	4	7	5	G	NONE	P	NA	M	VC	O	H	Q,F,B	1	N	WEATHERED RED GRANITE	
11	12	5	6	7	G	NONE	M	5Y4/1	M	M	O	H	B,F,Q	4	N	?	
11	12	5	7	2	F	NONE	M	NA	M	VC	O	H	F,C,Q	3	N	?	
11	7	3.5	6	8	S	NONE	V	5YR4/1	P	C/S	O	H	Q,F,B	4	Y	B,F,Q PHENO'S/RHYO-DACITE	
11	6	2.5	4.5	8	P	NONE	V	N3	M	S	O	H	?	5	N	BASALT	
11	17	8	15	8	P	NONE	V	5YR4/1	P	VC/VF	O	H	C,F	3	N	C,F PHEN0'S/BASALT	
11	18	6	10	7	S	NONE	V	5YR7/1	P	C/VF	O	H	C,F	5	N	C,F PHENO'S/ANDESITE	
11	7	3	6	7	G	NONE	V	N4	P	C/S	O	H	F,C	4	N	C,F PHENO'S/ANDESITE	
11	8.5	4	4.5	7	S	NONE	V	N3	P	C/VF	O	H	F,C	5	N	C,F PHENO'S/BASALT	
11	9	4	7	8	S	NONE	V	5R5/2	P	C/VF	O	H	C,F	4	N	C,F PHENO'S/BASALT	
11	9	4	6	7	P	NONE	V	5YR2/1	P	C/VF	O	H	F,C	3	N	C,F PHENO'S/BASALT	
11	17	8	9	9	S	NONE	V	5YR4/1	P	M/VF	O	H	F,C	5	N	C,F PHENO'S/BASALT	
11	9.5	2.5	6	2	G	NONE	P	N3	M	C	O	H	Q,C,F	3	N	DIORITE	
11	30	14	20	7	P	NONE	V	N4	P	VC/VF	O	H	F	3	N	F PHENO'S/BASALT	
11	10	5	7	5	S	NONE	V	5YR5/2	P	VC/S	O	H	F,C,Q	4	Y	F,C,Q PHENO'S/RHYOLITE	
11	12	3.5	7	4	S	NONE	P	N5	M	C	O	H	F,C	4	Y	GABBRO	
11	25	8	10	4	G	NONE	M	NA	BI	C	O	H	Q,F,B,C	3	N	GNEISS	
11	8	3	7	7	G	NONE	M	NA	BI	C	O	H	Q,F,C,B	2	Y	GNEISS	
11	20	8	18	7	G	NONE	M	5Y8/1	BI	C	O	H	Q,F,C,GN	4	N	GNEISS	
11	14	5	10	7	G	NONE	M	NA	BI	VC	O	H	C,Q,F,GN	4	N	GNEISS	
11	15	7	12	7	S	NONE	M	5Y4/1	BI	C	O	H	Q,C,F,GN	4	N	GNEISS	
11	8.5	3.5	5	7	S	NONE	M	NA	BI	C	O	H	Q,F,C,B	4	N	GNEISS	
11	9	4	7	4	S	NONE	M	NA	BI	VC	O	H	Q,F,B	4	N	GNEISS	

11	8	2	6	7	G	NONE	M	N5	BI	C	O	H	Q,F,B	4	N	GNEISS	
11	32	10	20	7	G	NONE	M	NA	BI	VC/M	O	H	Q,B,F	2	N	GNEISS	
11	9	4.5	7	7	S	NONE	M	NA	BI	C	O	H	Q,F,C,GN	4	N	GNEISS	
11	10	3	6	4	G	NONE	M	NA	BI	C	O	H	Q,C,F	4	N	GNEISS	
11	9	4.5	6	5	S	NONE	M	NA	BI	C	O	H	F,Q,B,C	4	N	GNEISS	
11	18	6	14	3	G	NONE	M	NA	BI	C	O	H	Q,F,B,C	4	N	GNEISS	
11	21	8.5	13	7	G	NONE	M	NA	BI	VC	O	H	B,Q,F	3	N	GNEISS	
11	11	7	9.5	5	G	NONE	M	NA	BI	C	O	H	Q,F,B,C,GN	4	N	GNEISS	
11	8	4.5	5.5	7	G	NONE	M	NA	BI	C	O	H	Q,F,B	4	N	GNEISS	
11	19	6	12	9	S	NONE	M	NA	BI	C	O	H	Q,F,C	5	N	GNEISS	
11	9	5	6.5	4	S	NONE	M	NA	BI	C	O	H	Q,F,B,C	4	N	GNEISS	
11	13	5	7	3	G	NONE	M	NA	BI	C	O	H	Q,F,B	3	N	GNEISS	
11	18	6	14	3	G	NONE	M	5Y6/1	BI	C	O	H	C,B,Q,F	3	N	GNEISS	
11	11	5	8.5	6	S	NONE	M	NA	BI	C	O	H	Q,F,C	4	N	GNEISS	
11	12	4	6	6	S	NONE	M	10YR4/2	BI	C	O	H	Q,F,B,C	4	N	GNEISS	
11	10	5	7	8	S	NONE	M	NA	BI	C	O	H	Q,C,F	4	N	GNEISS	
11	12	3.5	7	3	S	NONE	M	NA	BI	C	O	H	Q,F,C,B	4	N	GNEISS	
11	7	4	5	5	G	NONE	M	N4	BI	C	O	H	Q,C,F	4	N	GNEISS	
11	8	2.5	5	7	S	NONE	M	NA	BI	VC	O	H	B,Q,M,C	4	N	GNEISS	
11	16	8	10	7	G	NONE	M	NA	M	VC	O	H	Q,F,B,C	4	N	GNEISS	
11	14	7	10	3	G	NONE	M	NA	BI	VC	O	H	B,Q,F,C	4	N	GNEISS	
11	7	4	5	9	S	NONE	M	5GY4/1	BI	C	O	H	Q,C,F	4	N	GNEISS	
11	11	5	7	6	G	NONE	M	NA	BI	VC	O	H	Q,C,B	4	N	GNEISS	
11	17	5	14	7	G	FEOX	M	NA	BI	VC	O	H	C,Q,F,GN	2	Y	GNEISS	
11	10	4	6.5	6	G	NONE	M	NA	BI	C	O	H	B,Q,F	4	N	GNEISS	
11	19	8	11	5	S	NONE	M	5YR8/1	BI	VC	O	H	Q,F,B	3	N	GNEISS	
11	12	5	9	8	G	NONE	M	NA	BI	VC	O	H	C,B,Q,F	4	N	GNEISS	
11	16	5.5	10	6	G	NONE	M	NA	BI	VC	O	H	Q,F,B	4	Y	GNEISS	
11	16	7	11	7	G	NONE	M	NA	BI	VC	O	H	Q,F,B,C	3	N	GNEISS	
11	7	2.5	5	7	S	NONE	P	5YR4/1	M	C	O	H	Q,F,B	3	N	GRANO-DIORITE	
11	17	5	10	7	G	NONE	P	N6	M	C	O	H	Q,F,B	3	N	GRANITE	

11	19	9	18	6	G	NONE	P	NA	M	VC	O	H	Q,F,B	1	N	GRANITE	
11	14	5	9	8	G	FEOX	P	NA	M	C	O	H	Q,C,F	4	N	GRANO-DIORITE	
11	8	4	6	7	G	NONE	P	5YR6/1	M	C	O	H	Q,F,B	4	N	GRANO-DIORITE	
11	13	7	8	?	P	NONE	P	5Y8/1	M	C	O	H	Q,F,B	4	Y	LEUCO GRANITE	
11	18	8	11	?	P	NONE	P	5YR8/1	M	C	O	H	Q,F,B	3	Y	LEUCO GRANITE	
11	13	7	8	?	S	NONE	P	5YR8/1	M	M	O	H	Q,F,B	3	Y	LEUCO GRANITE	
11	21	9	15	7	S	NONE	S	10YR6/2	P	VC/M	O	H	Q,F,B,C	5	N	Q,F,B,C PHENO'S/VOLCANIC SANDSTONE	
11	10	4	6	8	S	FEOX	?	N8	M	VC	TL	S	Q,FEOX	5	N	QUARTZ W/FEOX	
11	8	2.5	5	4	G	NONE	P	NA	M	VC	O	H	Q,B,F	3	N	RED GRANITE	
11	27	9	20	7	G	NONE	P	NA	M	VC	O	H	B,Q,F	3	N	RED GRANITE	
11	14	7	10	4	G	NONE	P	NA	M	VC	O	H	F,Q,B	3	N	RED GRANITE	
11	10	4.5	7	4	G	NONE	P	NA	M	VC	O	H	Q,B,F	3	N	RED GRANITE	
11	10	4.5	6	7	G	NONE	P	NA	M	VC	O	H	Q,F,B	3	Y	RED GRANITE	
11	12	4.5	7	3	G	NONE	P	10YR6/2	M	C	O	H	Q,F,B	4	N	RED GRANITE	
11	8	4.5	6	6	G	FEOX	P	NA	M	C	O	H	Q,F,B	3	N	RED GRANITE	
11	8	4.5	5.5	5	S	FEOX	P	NA	M	VC	O	H	Q,F,B	3	N	RED GRANITE	
11	19	6	14	6	G	NONE	P	5R6/2	M	C	O	H	B,Q,F	3	N	RED GRANITE	
11	12	5	7.5	7	G	NONE	P	NA	M	C	O	H	Q,F,B	4	N	RED GRANITE	
11	19	6	6	3	G	NONE	P	NA	M	VC	O	H	Q,F,B	3	N	RED GRANITE	
11	8	4	7	6	G	NONE	P	NA	M	VC	O	H	Q,F,B	3	N	RED GRANITE	
11	9	4.5	4.5	3	G	NONE	P	NA	M	VC	O	H	Q,F,B	3	N	RED GRANITE	
11	11	3	6.5	3	S	NONE	P	NA	M	VC	O	H	Q,F,B	3	N	RED GRANITE	
11	17	5	10	4	G	NONE	P	5YR8/1	M	C	O	H	Q,F,B	3	N	RED GRANITE	
11	18	9	13	5	G	NONE	P	NA	M	VC	O	H	F,Q,B	3	Y	RED GRANITE	
11	7.5	3.5	5	7	G	NONE	P	NA	M	VC	O	H	Q,F	1	Y	RED GRANITE	
11	12	5	10	7	S	NONE	P	NA	M	VC	O	H	Q,F,B	3	N	RED GRANITE	
11	22	11	15	8	G	NONE	P	NA	BI	VC	O	H	Q,F,B,C	3	N	RED GRANITE W/MAFIC ENCLAVE	
11	10	3	9	3	G	NONE	P	NA	BI	VC	O	H	Q,F,B	3	N	RED GRANITE W/MAFIC ENCLAVE	
11	6.5	3	5	6	S	BLK	P	NA	M	VC	O	H	Q,F,B,C	3	N	RED GRANITE W/MAFIC ENCLAVE	
11	22	7.5	8	6	G	NONE	P	NA	M	VC	O	H	Q,F,B	3	N	RED GRANITE W/MAFIC ENCLAVE	
11	7.5	4	6	9	G	NONE	P	NA	M	VC	O	H	Q,B,F	3	N	RED GRANITE W/MAFIC ENCLAVE	

11	15	9	12	6	G	NONE	P	NA	M	VC	O	H	Q,F,B	3	N	RED GRANITE W/MAFIC ENCLAVE	
11	18	10	13	7	G	NONE	P	NA	BI	VC	O	H	Q,F,B	2	N	RED GRANITE W/MAFIC ENCLAVE	
11	11	6	7	6	S	NONE	S	5YR7/2	M	M	O	H	Q	4	Y	SANDSTONE	
11	14	4	7	4	S	NONE	S	N3	M/V	F	O	H	Q	5	N	SANDSTONE	
11	10	3	6.5	5	S	NONE	S	N5	M	F	O	H	Q	5	N	SANDSTONE	
11	12	5.5	9.5	3	S	NONE	S	5GY6/1	M	M	TL	M	Q	5	N	SANDSTONE	
11	8	3	5	6	S	NONE	S	N8	M	M	TL	H	Q	4	Y	SANDSTONE	
11	9	2.5	6	6	S	NONE	S	5GY4/1	M	F	O	H	Q	5	N	SANDSTONE	
11	5.5	2.5	4.5	8	S	NONE	S	N8	M	M	O	M	Q	5	N	SANDSTONE	
11	6.5	3.5	4.5	7	S	NONE	S	5Y7/1	M	F	O	M	Q	5	N	SANDSTONE	
11	10	4	7.5	6	S	NONE	S	5Y8/1	M	M	O	H	Q	4	N	SANDSTONE	
11	10	4.5	7	8	S	NONE	S	10YR7/2	M	M	O	H	Q	5	N	SANDSTONE	
11	8	5	5	5	S	NONE	S	5Y8/1	M	M	O	M	Q	5	Y	SANDSTONE	
11	13	7	9	3	G	NONE	M	NA	BI	VC	O	H	Q,F,C	1	N	WEATHERED GNEISS	
11	9	4	6.5	5	G	NONE	P	NA	M	VC	O	H	Q,F,B	1	Y	WEATHERED GRANITE	
11	9	4.5	7	2	G	NONE	P	NA	M	VC	O	H	Q,F,B	2	N	WEATHERED RED GRANITE	
12	14	4	8	5	P	NONE	MS	5R6/2	MT/V	S	O	M	?	5	N	SILICIFIED VOLCANIC	11
12	8	3	6	7	F	NONE	MS	N8	MT/V	S	TL	S	?	5	N	SILICIFIED VOLCANIC	17
12	13	10	12	4	F	NONE	MS	N9	MT	S	TL	S	?	5	N	SILICIFIED VOLCANIC	24
12	11	6.5	7	5	P	NONE	MS	5YR8/1	MT	S	O	S	?	5	N	SILICIFIED VOLCANIC	82
12	5.5	3	4	5	S	FEOX	V	N8	BI	S	O	M	?	5	N	WELDED TUFT	80
13	5.5	3.5	4	5	S	NONE	MS	5YR8/1	BI/V	S	O	M	?	5	N	SILICIFIED VOLCANIC	3
13	8	4	6.5	8	P	NONE	MS	5YR4/1	MT	S	O	M	?	5	N	SILICIFIED VOLCANIC	7
13	6	3.5	5	7	S	NONE	MS	5Y6/1	M	S	O	M	?	5	N	SILICIFIED VOLCANIC	31
13	6.5	3.5	5	6	S	NONE	MS	10YR6/2	BI	S	O	S	?	5	N	SILICIFIED VOLCANIC	35
13	11	5	7	4	F	NONE	MS	N8	BI	S	TL	S	?	5	N	SILICIFIED VOLCANIC	44
13	10	4	7	1	P	NONE	MS	N7	MT	S	TL	S	?	5	N	SILICIFIED VOLCANIC	50
13	6	4	5	7	S	NONE	MS	5YR7/1	M	S	TL	M	?	5	N	SILICIFIED VOLCANIC	68
13	7	4	6.5	6	P	NONE	MS	10YR7/2	MT	S	TL	M	?	5	N	SILICIFIED VOLCANIC	70
14	8	5	5.5	8	P	FEOX	MS	10YR8/2	MT	S	TL	S	?	5	N	?	8
14	8	3.5	5	7	S	FEOX	MS	5GY8/1	BI	S	TL	M	?	5	Y	?	9

14	6	3	4.5	1	S	NONE	MS	10YR4/2	MT	S	O	S	?	5	Y	?	13
14	6	2.5	4.5	7	S	FEOX	MS	N5	V	S	TL	M	?	5	N	?	13
14	5	2.5	3.5	6	S	FEOX	MS	5YR6/4	MT	S	O	M	?	5	N	?	15
14																ARTIFACT	44
14	9.5	4.5	7	6	P	NONE	MS	N7	MT	S	TL	M	?	5	Y	BRECCIA (SILICIFIED)	20
14	5	2.5	3	8	S	NONE	V	5Y4/1	P	C/S	TL	M	F PHENO'S/?	5	N	DACITE	52
14	5	1	3.5	6	S	FEOX	V	10YR6/2	M	S	TL	M	?	5	Y	SILICIFIED VOLCANIC	1
14	31	14	18	7	S	FEOX	MS	N6	MT	S	TL	M	?	5	N	SILICIFIED VOLCANIC	5
14	6.5	3	4.5	5	S	FEOX	MS	5Y6/1	MT	S	TL	S	?	5	N	SILICIFIED VOLCANIC	10
14	7	4.5	5.5	7	P	NONE	MS	10YR4/2	MT	S	TL	S	?	5	N	SILICIFIED VOLCANIC	12
14	7	3.5	5	8	S	FEOX	MS	10YR6/2	MT	S	TL	S	?	5	Y	SILICIFIED VOLCANIC	16
14	5	3	4	7	S	NONE	MS	5YR6/1	MT	S	TL	S	?	5	N	SILICIFIED VOLCANIC	22
14	9	3.5	6.5	7	P	FEOX	MS	5YR5/2	V/MT	S	O	M	?	5	Y	SILICIFIED VOLCANIC	24
14	5	2.5	3	7	S	FEOX	MS	N4	MT	S	O	S	?	5	N	SILICIFIED VOLCANIC	29
14	5.5	3	3.5	7	S	NONE	MS	5GY4/1	M	S	TL	M	?	5	N	SILICIFIED VOLCANIC	29
14	5	2.5	2.5	6	S	NONE	MS	N4	MT	S	TL	S	?	5	N	SILICIFIED VOLCANIC	33
14	7	1.5	4	7	S	NONE	MS	10YR6/2	M	S	TL	S	?	5	N	SILICIFIED VOLCANIC	35
14	7	3	6	7	S	FEOX	MS	5YR6/1	MT	S	TL	M	?	5	N	SILICIFIED VOLCANIC	37
14	7.5	3	5	6	P	FEOX	MS	10YR6/2	MT	S	O	S	?	5	N	SILICIFIED VOLCANIC	39
14	5	1	2	4	S	NONE	MS	10YR6/2	MT	S	O	M	?	5	Y	SILICIFIED VOLCANIC	48
14	5	2.5	4	7	S	FEOX	MS	5YR7/2	MT	S	TL	S	?	5	N	SILICIFIED VOLCANIC	53
14	5	2	3	6	S	NONE	MS	5YR6/1	MT	S	TL		?	5	N	SILICIFIED VOLCANIC	58
14	7	3	6	7	P	FEOX	MS	10YR6/2	MT	S	TL	S	?	5	N	SILICIFIED VOLCANIC (UNWORKABLE)	38
14	6	4	5	6	S	FEOX	V	10YR6/2	M	S	TL	M	?	5	Y	VOLCANIC	2
15	10	4.5	6.5	6	S	NONE	MS	5R4/2	MT	S	TL	M	?	5	Y	?	
15	6	2	4	6	S	NONE	M	5Y5/1	M	C	O	H	Q,F,C	4	Y	?	
15	10	3.5	6	7	S	NONE	P	5GY7/1	BI	C	O	H	Q,EPIDOTE	4	N	ALTERED GRANITE	
15	8	4.5	5.5	7	S	NONE	P	5YR6/1	M	C	O	H	F,Q,B	3	N	APLITE	
15	5.5	2.5	4	6	S	BLK	V	10YR6/2	P	C/S	O	M	Q,F,B	5	N	B,F,Q PHENO'S/RHYO-DACITE	
15	6.5	1.5	6	5	S	NONE	V	5Y6/1	P	C/VF	O	H	F,Q,B	4	Y	B,F,Q PHENO'S/RHYO-DACITE	
15	10	4.5	4.5	6	S	NONE	V	10YR6/2	P	VC/S	O	M	Q,F,B	5	Y	B,F,Q PHENO'S/RHYOLITE	

15	8.5	2.5	6	6	S	FEOX	V	N5	P	C/VF	O	H	F	4	Y	BASALT	
15	11	3	9.5	6	P	NONE	V	N6	BI	VF	O	H	F	3	Y	BASALTIC TUFT	
15	10	5	8	8	P	NONE	V	5R4/1	P	VC/S	TL	M	C,F	5	Y	C,F PHENO'S/ANDESITE	
15	7	3	4	7	S	FEOX	V	10R6/2	P	C/VF	O	H	F,C	4	Y	C,F PHENO'S/ANDESITE	
15	7.5	5.5	4.5	8	S	NONE	V	N4	P	C/VF	O	H	F,C	5	N	C,F PHENO'S/BASALT	
15	9.5	6	7	?	S	FEOX	V	5YR4/1	P	C/VF	O	H	F,C	4	Y	C,F PHENO'S/BASALT	
15	7.5	2.5	6	7	S	FEOX	V	N3	P	C/VF	O	H	F,C	3	N	C,F PHENO'S/BASALT	
15	10	3.5	7	7	S	YELLOW	V	5Y6/1	P	VC/VF	O	H	F,C	4	Y	C,F PHENO'S/BASALT	
15	6	3	4	6	G	NONE	V	N3	P	M/VF	O	H	F,C	3	N	C,F PHENO'S/BASALT	
15	5.5	4	5	5	P	NONE	V	5YR6/1	P	C/F	O	H	F,C	3	N	C,F PHENO'S/DACITE	
15	9	3.5	5	?	P	NONE	V	5YR6/1	BI/P	C/VF	O	H	C,F	2	Y	C,F PHENO'S/TUFT	
15	9	2.5	5	?	S	FEOX	V	5YR5/2	P	C/VF	O	H	F,C,B	3	Y	C,F,B PHENO'S/ANDESITE	
15	9	3	5.5	?	P	NONE	V	5R6/1	BI/P	C/VF	O	H	C,Q,F	2	Y	C,Q,F PHENO'S/TUFT	
15	5	2.5	4	7	S	FEOX	S	10YR6/2	P	C/M	O	H	F,C,Q	4	Y	C,Q,F PHENO'S/VOLCANIC SANDSTONE	
15	5.5	3	3.5	6	S	NONE	P	NA	M	VC	O	H	C,F,Q,B	3	Y	DIORITE	
15	12	4	7.5	7	G	FEOX	P	5Y6/1	M	C	TL	H	Q,F,B	5	Y	DIORITE	
15	16	7	8	7	G	NONE	P	5GY6/1	M	C	O	H	Q,F,B	3	Y	DIORITE	
15	7	3	5	7	G	NONE	P	5GY6/1	M	C	O	H	F,C,Q	4	N	DIORITE	
15	6.5	5	5	7	S	NONE	P	5GY6/1	M	C	O	H	C,F,Q,B	5	Y	DIORITE	
15	7	2	3.5	6	S	NONE	P	NA	M	C	O	H	Q,C,F	3	Y	DIORITE	
15	11	7.5	10	7	S	NONE	V	5GY5/1	P	C/VF	O	H	F	4	Y	F PHENO'S/ANDESITE	
15	6	4	4.5	7	P	NONE	V	5R6/2	P	C/VF	O	H	F	4	Y	F PHENO'S/ANDESITE	
15	5.5	2.5	3	5	S	NONE	V	N4	P	VC/S	O	M	F	5	Y	F PHENO'S/ANDESITE	
15	7	2.5	4	6	S	NONE	V	N3	P	C/VF	O	H	F	5	N	F PHENO'S/BASALT	
15	8.5	3	5.5	8	G	FEOX	V	5YR4/1	P	C/VF	O	H	F	4	Y	F PHENO'S/BASALT	
15	11	8	11	8	S	NONE	V	5GY6/1	P	C/VF	O	H	F,B	5	Y	F,B PHENO'S/DACITE	
15	8	4.5	6	7	G	NONE	V	5YR4/1	P	VC/VF	O	H	F,B	5	Y	F,B PHENO'S/DACITE	
15	6	2.5	4.5	7	F	NONE	V	5YR6/2	P	C/VF	O	H	F,C,B,Q	3	Y	F,C,B,Q PHENO'S/RHYO-DACITE	
15	11	4	9	7	F	NONE	V	N3	P/V	S/C	O	H	F,Q	5	N	F,Q PHENO'S/ALTERED RHYOLITE	
15	6	3	4	6	S	NONE	P	5GY4/1	M	C	O	H	F,C	4	Y	GABBRO	
15	7.5	3	4	6	G	NONE	P	NA	M	VC	O	H	F,C	3	N	GABBRO	

15	7.5	1.5	5.5	6	G	NONE	P	5Y6/1	M	M	O	H	F,C	3	N	GABBRO	
15	6.5	3	4.5	?	S	NONE	M	NA	BI	VC	O	H	Q,C,F	3	Y	GNEISS	
15	7.5	2.5	7	4	G	FEOX	M	NA	BI	VC	O	H	Q,B,F,C	4	Y	GNEISS	
15	9	4.5	5.5	8	G	NONE	M	5GY4/1	BI	C	O	H	Q,F,C,GN	5	N	GNEISS	
15	8	4	4.5	7	P	NONE	M	NA	BI	C	O	H	Q,F,GN,B	4	Y	GNEISS	
15	5.5	3.5	4	7	G	NONE	P	NA	M	VC	O	H	Q,F,EPIDOTE	3	Y	GRANITE	
15	7.5	2.5	3	5	G	NONE	P	NA	M	VC	O	H	F,C,Q,B	3	N	GRANITE	
15	6	1.5	4	?	S	NONE	P	N6	M	C	O	H	Q,F,B	3	Y	GRANITE	
15	6	2.5	4	7	S	NONE	P	NA	M	VC	O	H	Q,B,F	4	N	GRANO-DIORITE	
15	7	3	4	6	S	NONE	P	5Y6/1	M	C	O	H	Q,F,B	3	N	GRANO-DIORITE	
15	7.5	2	5	5	S	NONE	P	5GY6/1	M	C	O	H	Q,B,F	5	N	LEUCO GRANITE	
15	6	3.5	4	6	S	NONE	P	N7	M	M	O	H	Q,F,B	3	Y	LEUCO GRANITE	
15	7	3.5	4	6	S	NONE	MS	10R4/2	MT/P	S/C	O	S	Q	5	N	Q PHENO'S/SILICIFIED VOLCANIC	
15	11	6	6.5	8	S	NONE	?	N8	M	VC	TL	H	Q	5	N	QUARTZ VEIN	
15	6	3	5	6	F	NONE	P	NA	M	VC	O	H	Q,F,B	3	Y	RED GRANITE	
15	10	6.5	7	6	S	NONE	P	NA	M	VC	O	H	Q,F,B	3	N	RED GRANITE	
15	6	2	6.5	6	S	NONE	S	5Y8/1	M	M	O	H	Q	5	N	SANDSTONE	
15	7.5	3	7	8	S	FEOX	S	5YR7/2	M	M	O	H	Q	5	N	SANDSTONE	
15	12	3	8	7	S	NONE	S	5GY7/1	M	F	O	H	Q	5	N	SANDSTONE	
15	8.5	3	6	8	S	NONE	S	5Y6/1	M	M	O	H	Q	5	N	SANDSTONE	
15	8.5	3	5	7	S	NONE	S	10YR6/2	M	F	O	H	Q	3	N	SANDSTONE	
15	9.5	4.5	6.5	7	S	NONE	S	N8	M	M	TL	H	Q	5	N	SANDSTONE	
15	8.5	3	6	8	S	FEOX	S	5Y6/1	M	M	O	H	Q	5	N	SANDSTONE	
15	5	3	4.5	8	S	NONE	S	5Y8/1	M	M	O	H	Q	3	N	SANDSTONE	
15	6	2.5	5	6	S	NONE	S	5YR6/1	M	M	O	H	Q,HEM	4	Y	SANDSTONE	
15	7	2.5	5	7	S	NONE	S	5Y6/1	M	F	O	H	Q	4	N	SANDSTONE	
15	5	3	3.5	8	S	NONE	S	5Y8/1	M	M	O	H	Q	4	N	SANDSTONE	
15	11	3	8	7	S	NONE	S	5Y8/1	M	M	TL	M	Q	5	N	SANDSTONE	
15	6	3	4.5	5	S	NONE	S	5Y8/1	M	M	O	H	Q	4	N	SANDSTONE	
15	7.5	2	4	8	S	NONE	S	5Y6/1	M	F	O	H	Q	5	Y	SANDSTONE	
15	12	5	11	8	S	NONE	S	N8	BI	M	TL	H	Q	5	N	SANDSTONE	

15	14	5	13	8	S	NONE	S	5GY6/1	M	F	O	H	Q,HEM	5	N	SANDSTONE	
15	6	3	4.5	8	S	NONE	S	5GY4/1	M	M	TL	H	Q	5	N	SANDSTONE	
15	6.5	3	5	8	S	NONE	S	5Y8/1	M	M	O	H	Q	5	N	SANDSTONE	
15	14	5.5	11	8	S	NONE	S	5GY6/1	M	M	TL	H	Q	5	Y	SANDSTONE	
15	7	2.5	6	7	S	NONE	S	5Y4/1	M	F	O	M	Q	4	N	SANDSTONE	
15	5.5	3	4	7	S	NONE	S	5Y6/1	M	M	TL	M	Q	5	N	SANDSTONE	
15	7	2.5	6.5	8	S	FEOX	S	5Y6/1	M	M	O	H	Q,HEM	5	N	SANDSTONE	
15	8	3.5	7	7	S	NONE	S	5YR6/1	M	M	TL	H	Q	5	N	SANDSTONE	
15	6	4.5	5	9	S	FEOX	S	5R6/2	M	M	O	M	Q,HEM	5	N	SANDSTONE	
15	6	2.5	5	7	S	NONE	S	5Y6/1	M	F	O	H	Q	5	N	SANDSTONE	
15	6.5	5	5.5	5	S	FEOX	S	5YR4/1	M	M	O	H	Q	4	Y	SANDSTONE	
15	8	3	6.5	8	S	NONE	S	5Y8/1	M	M	O	H	Q	5	N	SANDSTONE	
15	6	2.5	4.5	7	S	NONE	S	5Y8/1	M	M	O	H	Q,HEM	4	N	SANDSTONE	
15	12	6	8	8	S	NONE	S	N6	M	M	TL	H	Q	5	N	SANDSTONE	
15	6.5	4	6	8	S	NONE	S	5YR6/1	M	M	TL	H	Q	5	N	SANDSTONE	
15	7	2	5	?	G	NONE	S	N4	M	F	O	H	Q	4	Y	SANDSTONE	
15	8	4	7	8	S	NONE	S	5Y8/1	M	M	O	H	Q	5	N	SANDSTONE	
15	6	4	5	8	S	NONE	S	5Y6/1	M	M	TL	H	Q	5	Y	SANDSTONE	
15	9	3.5	7	6	S	NONE	S	5Y6/1	M	M	O	M	Q	5	Y	SANDSTONE	
15	5.5	2	4	7	S	NONE	S	10YR6/2	M	F	O	H	Q	5	N	SANDSTONE	
15	6	3	3.5	7	S	FEOX	S	5Y8/1	M	M	O	H	Q	3	Y	SANDSTONE	
15	7	3	3.5	7	S	NONE	S	5Y7/1	M	M	O	H	Q	5	N	SANDSTONE	
15	6	2.5	5	8	S	NONE	S	5Y8/1	M	M	TL	H	Q	5	N	SANDSTONE	
15	6	2	4	6	S	YELLOW	S	10YR8/2	M	M	O	H	Q	2	N	SANDSTONE	
15	7.5	2	4	7	G	NONE	S	5GY8/1	M	M	O	H	Q	4	N	SANDSTONE	
15	15	4	8	8	S	NONE	S	5Y6/1	M	M	O	H	Q	5	Y	SANDSTONE	
15	5.5	2.5	4	4	P	NONE	MS	5Y6/1	M	S	TL	M	?	5	Y	SILICIFIED VOLCANIC	
15	5.5	3	4	7	G	NONE	V	N8	BD	F	O	H	?	2	Y	TUFT	
15	9.5	4	5.5	?	P	FEOX	V	5YR6/1	M	VF	O	H	Q,F,HEM	1	Y	TUFT	
15	5.5	2.5	5	7	S	NONE	S	5Y4/1	M	M	O	H	F,Q	5	Y	VOLCANIC SANDSTONE	
15	7.5	3	6.5	7	S	NONE	P	5GY4/1	M	VC	O	H	F,C	3	N	WEATHERED GABBRO	

16	11	4	5	6	S	NONE	MS	5Y6/1	MT/P	S/C	TL	M	?	5	N	?	
16	6	3	5.5	6	F	NONE	P	NA	M	VC	TL	H	Q,EPIDOTE,F	5	Y	ALTERED LEUCO GRANITE	
16	7	4	5	8	S	FEOX	V	N4	M	M	O	H	F,C	3	N	ANDESITE	
16	8	3.5	4.5	5	S	NONE	V	N6	M	M	O	H	F	3	N	ANDESITE	
16	10	4.5	5	6	S	NONE	P	5R6/2	M	M	O	H	Q,F	5	N	APLITE	
16	18	6	9	6	S	NONE	V	5GY6/1	P	VC/VF	O	H	Q,F,B	5	N	B,F,Q PHENO'S/RHYO-DACITE	
16	8	4	5	8	S	NONE	V	5YR4/1	P	VC/VF	O	H	Q,F,B	4	N	B,F,Q PHENO'S/RHYO-DACITE	
16	15	5	6	6	S	NONE	V	NA	P	C/VF	O	H	Q,F,B	2	N	B,F,Q PHENO'S/RHYO-DACITE	
16	6.5	3	5.5	8	G	NONE	V	5Y8/1	P	C/F	O	H	F,Q,B	3	Y	B,F,Q PHENO'S/RHYOLITE	
16	15	9	10	6	P	NONE	V	NA	P	VC/VF	O	H	Q,B,F	2	Y	B,Q,F PHENO'S/TUFT	
16	6.5	2	4.5	6	S	NONE	V	N4	M	VF	O	H	F	5	N	BASALT	
16	6.5	3	6	7	S	FEOX	V	5Y4/1	P	C/VF	O	H	C	4	Y	C PHENO'S/BASALT	
16	6.5	2	5.5	7	G	NONE	V	5YR4/1	P	VC/VF	O	H	C	4	N	C PHENO'S/BASALT	
16	9	3.5	5	7	G	NONE	V	5YR4/1	P	VC/VF	O	H	F,C	5	Y	C,F PHENO'S/ANDESITE	
16	10	2	6	7	S	FEOX	V	5YR4/1	P	C/VF	O	H	C,F	5	Y	C,F PHENO'S/BASALT	
16	6	4	5	9	S	NONE	V	N4	P	C/VF	O	H	C,F	5	Y	C,F PHENO'S/BASALT	
16	7	3.5	4.5	6	S	NONE	V	N3	P	C/S	O	H	C,F	5	Y	C,F PHENO'S/BASALT	
16	9	3	7	7	S	NONE	V	N4	P	C/VF	O	H	F,C	5	Y	C,F PHENO'S/BASALT	
16	7	3.5	4	8	S	NONE	V	5YR4/1	P	C/VF	O	H	C,Q	5	Y	C,Q PHENO'S/BASALT	
16	9.5	4	6	7	S	NONE	V	5YR6/1	P	C/F	O	H	C,Q,F	5	Y	C,Q,F PHENO'S/WELDED TUFT	
16	11	5.5	6	7	G	NONE	P	NA	M	VC	O	H	F,C,Q	3	Y	DIORITE	
16	9	5	7	8	G	NONE	P	NA	M	VC	O	H	Q,B,F	3	N	DIORITE	
16	8.5	3.5	4	8	G	NONE	V	5YR4/1	P	VC/VF	O	H	F,B	3	Y	F,B PHENO'S/ANDESITE	
16	11	4.5	8	7	S	NONE	V	5GY4/1	P	VC/VF	O	H	F,B	5	N	F,B PHENO'S/DACITE	
16	8	2.5	4	?	S	NONE	V	5GY4/1	P	C/VF	O	H	F,B	3	Y	F,B PHENO'S/DACITE	
16	13	6	8	3	P	NONE	V	5R6/2	P	VC/VF	O	H	F,C,B	2	Y	F,C,B PHENO'S/RHYO-DACITE	
16	6	2	5	7	P	FEOX	P	5GY4/1	M	C	O	H	F,C	3	N	GABBRO	
16	8	3	5	7	S	NONE	P	N4	M	VC	O	H	F,C	4	N	GABBRO	
16	8	3.5	4.5	7	S	NONE	P	5GY4/1	M	C	O	H	F,C	4	N	GABBRO	
16	9	3	6.5	?	G	NONE	M	NA	BI/P	C	O	H	Q,F,GN,B	4	Y	GNEISS	
16	7.5	3	4.5	6	S	NONE	M	NA	BI/P	VC	O	H	F,Q,C	4	N	GNEISS	

16	7	3.5	5	6	S	NONE	M	NA	BI	VC	O	H	Q,C,F	3	N	GNEISS	
16	8.5	5	5	7	S	NONE	P	5GY8/1	M	C	O	H	F,Q,B	3	N	GRANITE	
16	8	4	4	3	P	NONE	P	NA	M	C	O	H	Q,F,B	3	Y	GRANITE	
16	18	8	8.5	8	S	FEOX	P	5Y6/1	M	VC	O	H	Q,F,B	3	N	GRANO-DIORITE	
16	6.5	2.5	4	5	S	FEOX	P	5GY6/1	M	C	O	H	Q,F,B	3	Y	GRANO-DIORITE	
16	6	2.5	5.5	6	S	NONE	P	NA	M	C	O	H	Q,F,B	3	Y	LEUCO GRANITE	
16	9	3	6.5	7	S	NONE	P	5Y8/1	M	M	O	H	Q,F,B	5	N	LEUCO GRANITE	
16	6	2	4.5	6	S	NONE	V	5GY6/1	P	VC/VF	O	H	Q,F	5	Y	Q,F PHENO'S/DACITE	
16	5	3.5	4	7	P	FEOX	V	5YR8/1	P	VC/S	O	H	Q,F	3	N	Q,F PHENO'S/RHYOLITE	
16	9	5	6.5	7	G	FEOX	MS	5Y6/1	P	C/S	O	H	Q,PYRITE,F	5	N	Q,PY,F PHENO'S/SILICIFIED RHYOLITE	
16	6.5	2	3.5	6	S	NONE	P	NA	M	VC	O	H	F,Q,B	3	N	RED GRANITE	
16	13	6	9	8	S	NONE	S	5Y6/1	M	F	O	H	Q	5	Y	SANDSTONE	
16	8.5	2.5	6.5	7	S	NONE	S	5Y6/1	M	M	TL	M	Q	5	Y	SANDSTONE	
16	11	8	9.5	9	S	NONE	S	5YR7/1	M	M	O	H	Q	4	N	SANDSTONE	
16	12	5	8	8	S	NONE	S	5Y6/1	M	M	O	H	Q	4	Y	SANDSTONE	
16	10	4	5.5	7	S	FEOX	S	5YR6/1	M	M	O	H	Q	5	N	SANDSTONE	
16	11	5	6.5	7	S	NONE	S	10YR6/1	M	M	O	H	Q	5	N	SANDSTONE	
16	8	4	7.5	7	S	NONE	S	N5	M	F	O	H	Q	5	Y	SANDSTONE	
16	6	2.5	4	7	S	NONE	S	N6	M	F	O	M	Q	5	N	SANDSTONE	
16	6	3	4	5	S	FEOX	S	5YR6/1	M	M	O	H	Q	5	N	SANDSTONE	
16	5	2	4.5	7	S	FEOX	S	5Y6/1	M	M	O	H	Q	5	N	SANDSTONE	
16	6	4	5	9	S	NONE	S	5Y6/1	M	M	TL	M	Q	5	N	SANDSTONE	
16	9	6	7.5	7	S	NONE	S	5Y8/1	M	M	O	H	Q	5	N	SANDSTONE	
16	8	4	5.5	7	S	FEOX	S	N5	M	F	O	H	Q	5	Y	SANDSTONE	
16	12	6	8.5	6	S	NONE	S	5R4/2	M	F	O	M	Q	5	N	SANDSTONE	
16	6.5	3	5.5	7	S	YELLOW	S	5Y8/1	M	M	O	H	Q	3	Y	SANDSTONE	
16	8	3	5	8	S	NONE	S	5Y6/1	M	M	O	M	Q	5	N	SANDSTONE	
16	6	2.5	3.5	7	S	NONE	S	N7	M	M	TL	H	Q	5	N	SANDSTONE	
16	13	4.5	8	7	S	FEOX	S	N6	M	F	O	H	Q	5	N	SANDSTONE	
16	15	3	8.5	7	S	FEOX	S	5Y8/1	M	M	O	H	Q	4	Y	SANDSTONE	
16	6	2	5.5	?	S	NONE	S	N6	M	F	O	H	Q	5	Y	SANDSTONE	

16	10	4	5	8	S	FEOX	S	N7	M	M	TL	H	Q	5	Y	SANDSTONE	
16	7.5	3	4.5	7	S	NONE	S	5YR6/1	M	F	O	H	Q	4	Y	SANDSTONE	
16	5.5	1.5	3.5	8	S	FEOX	S	5GY8/1	M	M	O	H	Q	5	N	SANDSTONE	
16	15	5	8	8	S	FEOX	S	5Y6/1	BI	M	O	H	Q	5	Y	SANDSTONE	
16	7.5	4.5	5	8	S	NONE	S	5Y8/1	M	M	O	H	Q	5	N	SANDSTONE	
16	9	4.5	6	7	S	NONE	S	N5	M	F	O	M	Q	5	Y	SANDSTONE	
16	6	2.5	5	6	P	YELLOW	S	5Y8/1	M	M	O	H	Q	2	Y	SANDSTONE	
16	8.5	2	6.5	7	S	FEOX	S	5Y6/1	M	F	O	H	Q	5	Y	SANDSTONE	
16	7	3	6	7	S	NONE	S	5Y8/1	M	M	O	H	Q	4	N	SANDSTONE	
16	7	3	5.5	8	S	NONE	S	5Y8/1	M	M	O	H	Q	5	N	SANDSTONE	
16	9	5	7	5	P	NONE	S	N5	M	F	O	H	Q	4	Y	SANDSTONE	
16	13	4	10	7	S	NONE	S	N7	M	M	TL	H	Q	5	N	SANDSTONE	
16	13	4	10	7	S	NONE	S	5Y8/1	M	M	O	H	Q	4	Y	SANDSTONE	
16	5.5	2	4	7	S	NONE	S	5Y6/1	M	M	O	H	Q	5	N	SANDSTONE	
16	6	2.5	4	7	S	NONE	S	5Y6/1	M	M	TL	M	Q	5	N	SANDSTONE	
16	5	2.5	3	8	S	NONE	S	5Y6/1	M	M	O	H	Q	5	Y	SANDSTONE	
16	8.5	4	6	7	S	NONE	S	5YR4/1	M	M	O	H	Q	5	N	SANDSTONE	
16	8	2.5	4	7	S	NONE	S	5Y6/1	M	M	TL	H	Q	5	Y	SANDSTONE	
16	15	8	10	6	S	NONE	S	N5	M	M	O	M	Q	5	N	SANDSTONE	
16	7	4	4	6	S	FEOX	S	5Y8/1	M	M	O	H	Q	5	N	SANDSTONE	
16	8	5	7	9	S	NONE	S	10YR6/2	M	M	TL	M	Q	5	N	SANDSTONE	
16	5.5	2	4.5	8	S	NONE	S	N5	M	F	O	H	Q	4	N	SANDSTONE	
16	6.5	3	3.5	7	S	NONE	S	5Y6/1	M	F	O	M	Q	5	Y	SANDSTONE	
16	7	2.5	6	7	S	NONE	S	5R6/2	M	F	O	M	Q	5	N	SANDSTONE	
16	7	3.5	4.5	6	S	NONE	S	N5	M	M	TL	H	Q	4	Y	SANDSTONE	
16	7	3.5	4	7	S	NONE	S	5Y8/1	M	M	O	H	Q	5	Y	SANDSTONE	
16	8	4	5	5	S	FEOX	MS	10YR5/4	MT/P	S/C	O	S	?	5	Y	SILICIFIED VOLCANIC	
16	6	3.5	4.5	5	S	NONE	MS	5GY6/1	M	S/C	TL	H	F,HEM	5	Y	SILICIFIED VOLCANIC	
16	7	4	5	5	S	NONE	MS	5YR2/2	MT/P	S/C	O	S	?	5	Y	SILICIFIED VOLCANIC	
16	6	1	4	?	S	NONE	MS	5Y6/1	M	S/C	O	H	?	5	Y	SILICIFIED VOLCANIC	
16	9	4	7.5	7	P	FEOX	MS	10YR4/2	MT/P	S	TL	S	?	5	Y	SILICIFIED VOLCANIC	

16	7.5	4	6	4	S	NONE	S	N5	M	S	TL	M	Q	5	N	SILTSTONE	
16	8	5	5.5	7	S	NONE	S	N6	M	S	O	M	Q	5	N	SILTSTONE	
16	7	4	5	7	S	NONE	S	N5	M	S	TL	H	Q	5	N	SILTSTONE	
16	17	8.5	14	8	S	NONE	S	10R8/2	M	C	O	H	Q,F,C,HEM	5	N	VOLCANIC SANDSTONE	
16	8	3.5	6.5	7	S	NONE	S	N4	M	M	O	H	Q,F	5	N	VOLCANIC SANDSTONE	
16	8	6	6	7	S	NONE	P	5GY8/1	M	C	TL	H	Q,F,EPIDOTE	3	N	WEATHERED LEUCO GRANITE	
16	6.5	2.5	3.5	5	G	NONE	V	5Y6/1	BI	S	O	M	?	5	N	WELDED TUFT	
17	6	3	4.5	?	S	FEOX	MS	5R6/2	MT/P	S	TL	S	?	5	Y	?	57
17	7	4	6	6	S	FEOX	MS	5YR5/2	MT/P	S	O	M	?	5	N	?	75
17	6	3.5	4	5	S	NONE	MS	N8	BI	S	TL	M	?	5	N	SILICIFIED VOLCANIC	1
17	11	5	8.5	6	S	FEOX	MS	5R6/2	M	S	TL	H	?	5	N	SILICIFIED VOLCANIC	2
17	8	3.5	7.5	8	S	FEOX	MS	5YR5/2	V/MT	S	TL	M	?	5	N	SILICIFIED VOLCANIC	2
17	5	2.5	4	8	S	FEOX	MS	10YR7/4	V/MT	S	TL	S	?	5	Y	SILICIFIED VOLCANIC	3
17	5	2	3	?	S	FEOX	MS	10YR6/2	M	S	TL	S	?	5	Y	SILICIFIED VOLCANIC	5
17	5.5	2	4	2	S	NONE	MS	10YR4/2	MT/P	S	O	S	?	5	Y	SILICIFIED VOLCANIC	6
17	5.5	2.5	3.5	?	S	FEOX	MS	10YR4/2	MT/P	S	TL	M	?	5	Y	SILICIFIED VOLCANIC	38
17	5.5	2.5	3	6	S	NONE	MS	10YR8/2	MT/P	S	TL	M	?	5	Y	SILICIFIED VOLCANIC	50
17	6	4	5	6	S	NONE	MS	N7	BI	S	TL	M	?	5	N	SILICIFIED VOLCANIC	54
17	5.5	2.5	3.5	4	S	NONE	MS	N8	M	S	TL	M	?	5	N	SILICIFIED VOLCANIC	62
17	5.5	2	4	6	S	NONE	MS	5YR6/1	MT/P	S	TL	S	?	5	N	SILICIFIED VOLCANIC	66
17	6	2	4	7	S	FEOX	MS	10YR6/2	MT/P	S	O	M	?	5	N	SILICIFIED VOLCANIC	69
17	6.5	3	5	6	S	FEOX	MS	5B7/1	MT/P	S	TL	M	SULFIDE	5	N	SILICIFIED VOLCANIC	72
17	5.5	3	3.5	?	P	NONE	MS	10YR8/2	MT/P	S	TL	S	?	5	Y	SILICIFIED VOLCANIC	86
17	6.5	2.5	3	7	S	NONE	MS	5GY6/1	M	S	TL	M	?	5	N	SILICIFIED VOLCANIC	87
17	8	3	6	5	S	FEOX	MS	N8	MT/P	S	TL	H	?	5	N	SILICIFIED VOLCANIC (UNWORKABLE)	71
18	5	2	4.5	6	S	NONE	MS	5YR5/2	MT	S	TL	S	?	5	Y	?	
18	5	1.5	2.5	?	S	NONE	P	5GY7/1	M	C	O	H	Q,F,CHL,C	3	Y	ALTERED DIORITE	
18	5	2	4.5	7	S	NONE	P	NA	M	VC	O	H	Q,F,EPIDOTE,B	3	Y	ALTERED GRANITE	
18	7	2.5	4	8	G	NONE	P	NA	V/M	VC	O	H	Q,F,B,EPIDOTE	3	N	ALTERED RED GRANITE	
18	5	1.5	4	3	S	NONE	P	10YR6/2	M	C	TL	H	Q,F	5	N	APLITE	
18	6	3	3.5	8	S	NONE	V	10R6/2	P	VC/S	O	H	Q,F,B	5	N	B,F,Q PHENO'S/RHYO-DACITE	

18	5	2.5	3.5	8	S	NONE	V	5YR4/1	M	C/VF	O	H	C,F	3	N	BASALT	
18	7.5	3	6	2	F	NONE	V	N5	M	VF	O	H	F	3	N	BASALT	
18	5.5	3.5	4.5	8	S	NONE	V	N5	M	VF	O	H	?	3	Y	BASALT	
18	5.5	2	5	?	S	NONE	V	5R4/2	M	VF	O	H	?	4	Y	BASALT	
18	5.5	3	4.5	8	S	NONE	V	N3	P	C/VF	O	H	C	3	Y	C PHENO'S/BASALT	
18	5.5	3	5	8	S	NONE	V	5YR6/1	P	C/VF	O	H	F,C	5	N	C,F PHENO'S/ANDESITE	
18	7	2	3.5	6	G	NONE	V	5GY6/1	P	VC/VF	O	H	F,C	5	N	C,F PHENO'S/ANDESITE	
18	7	1.5	4	6	S	NONE	V	5YR4/1	P	C/VF	O	H	F,C	4	N	C,F PHENO'S/BASALT	
18	6	3	4	8	S	NONE	V	5YR4/1	P	C/VF	O	H	C,F	5	Y	C,F PHENO'S/BASALT	
18	6	2.5	4	7	G	NONE	V	5YR4/1	P	VC/VF	O	H	F,C	4	N	C,F PHENO'S/BASALT	
18	6.5	3.5	4.5	7	S	NONE	V	N5	P	VC/VF	O	H	F,C	5	N	C,F PHENO'S/BASALT	
18	6.5	3	3.5	7	S	NONE	V	5YR6/1	P	C/VF	O	H	F,C	4	Y	C,F PHENO'S/BASALT	
18	6.5	2	4	5	S	NONE	V	5GY6/1	P	VC/F	O	H	C,F	5	Y	C,F PHENO'S/DACITE	
18	8	5	5	7	S	NONE	V	5R6/2	P	C/VF	O	H	F,C,Q	5	Y	C,F,Q PHENO'S/RHYO-DACITE	
18	5.5	2	4.5	7	S	NONE	V	N4	P	C/VF	O	H	Q,C,F	4	N	C,Q PHENO'S/BASALT	
18	7	3	4.5	7	S	NONE	S	5YR6/1	P	VC/M	O	H	C,Q,F	4	Y	C,Q,F PHENO'S/VOLCANIC SANDSTONE	
18	6.5	2.5	4.5	7	S	NONE	P	5GY6/1	M	C	O	H	Q,F,C,B	4	N	DIORITE	
18	5.5	2.5	4	5	S	NONE	P	5GY8/1	M	C	O	H	Q,F,B,C	3	N	DIORITE	
18	6	3	4.5	6	S	NONE	P	5GY6/1	M	C	O	H	C,Q,F	3	Y	DIORITE	
18	5	3	4	6	G	NONE	P	NA	M	VC	O	H	Q,C,F	4	Y	DIORITE	
18	7	1.5	5	7	S	NONE	P	5GY6/1	M	C	O	H	Q,C,F	3	Y	DIORITE	
18	6.5	3	3	?	S	NONE	P	5GY6/1	M	C	O	H	Q,F,B	3	Y	DIORITE	
18	5.5	2	4	5	S	NONE	P	NA	M	VC	O	H	F,C,Q	3	Y	DIORITE	
18	5.5	2	4	6	G	NONE	P	5GY6/1	M	C	O	H	F,Q,B	3	Y	DIORITE	
18	6	2.5	5.5	7	G	NONE	P	5Y6/1	M	C	O	H	Q,F,B	3	N	DIORITE	
18	5	1.5	4	?	S	NONE	V	N5	P	VC/VF	O	H	F	4	Y	F PHENO'S/ANDESITE	
18	5.5	3	3	7	S	NONE	V	5YR4/1	P	VC/VF	O	H	F	3	N	F PHENO'S/BASALT	
18	6	2	3	5	S	NONE	V	5GY6/1	P	C/VF	O	H	F,B	4	N	F,B PHENO'S/DACITE	
18	12	5.5	9	6	S	NONE	P	5GY7/1	M	C	O	H	F,C	4	Y	GABBRO	
18	5.5	2.5	3	6	S	NONE	P	5GY6/1	M	C	O	H	F,C	5	Y	GABBRO	
18	6.5	1.5	5	6	S	BLK	P	5GY6/1	M	C	O	H	F,C	4	N	GABBRO	

18	5	1.5	3.5	6	G	NONE	P	NA	M	VC	O	H	Q,F	3	N	GABBRO	
18	5	2.5	3	5	S	NONE	P	5Y6/1	M	C	O	H	F,C	3	Y	GABBRO	
18	6	2.5	3.5	6	S	NONE	P	5GY5/1	M	C	O	H	F,C	4	N	GABBRO	
18	9	3.5	4	7	S	NONE	P	5GY6/1	M	C	O	H	F,C	4	Y	GABBRO	
18	5.5	2.5	2.5	3	S	NONE	P	N5	M	C	O	H	F,C	3	N	GABBRO	
18	5.5	2	4	5	S	NONE	P	5GY6/1	M	C	O	H	F,C	5	N	GABBRO	
18	5	2	3.5	4	G	NONE	P	N5	M	C	O	H	F,C	4	N	GABBRO	
18	5	2.5	3	7	S	NONE	M	NA	BI	C	O	H	Q,F,B	3	N	GNEISS	
18	7	2	5	7	S	NONE	M	NA	BI	C	O	H	Q,F,C,B	3	N	GNEISS	
18	5.5	3	3	4	S	NONE	M	NA	BI	VC	O	H	Q,F,C	3	Y	GNEISS	
18	5	1.5	4	?	G	NONE	M	NA	BI	VC	O	H	Q,C,F	3	Y	GNEISS	
18	5.5	2.5	2.5	6	S	NONE	M	NA	BI	VC	O	H	Q,F,C,B	4	Y	GNEISS	
18	5.5	3	3	7	S	NONE	P	5GY8/1	M	C	O	H	Q,F,B	3	Y	GRANO-DIORITE	
18	9	3	4.5	5	G	NONE	P	NA	M	C	O	H	C,F,Q,B	3	Y	GRANO-DIORITE	
18	5	2.5	4	8	S	NONE	P	NA	M	VC	O	H	C,B,Q,F	3	N	GRANO-DIORITE	
18	6	3	4	8	S	NONE	P	NA	M	VC	O	H	Q,F,B	3	Y	GRANO-DIORITE	
18	6	2.5	3.5	7	S	NONE	P	5Y8/1	M	C	O	H	F,Q,B	4	N	LEUCO GRANITE	
18	5	1	4	5	S	NONE	P	5GY8/1	M	C	O	H	F,Q,MUSC.,CHL	3	N	LEUCO GRANITE	
18	5.5	1.5	4	4	S	NONE	P	5Y8/1	M	C	O	H	Q,F,B	3	N	LEUCO GRANITE	
18	8	1.5	5	4	S	NONE	S	N6	M	F	O	H	Q	5	Y	LIMEY SANDSTONE	
18	6.5	2.5	3.5	6	S	NONE	MS	N5	MT/P	C/S	O	H	Q	4	N	Q PHENO'S/SILICIFIED VOLCANIC	
18	6	1.5	4	7	S	NONE	V	5GY6/1	P	VC/VF	O	H	Q,F	5	N	Q,F PHENO'S/DACITE	
18	5	3	4.5	6	S	NONE	?	N8	M	VC	TL	H	Q	5	N	QUARTZ	
18	5	2	3	?	S	NONE	P	NA	M	VC	O	H	Q,F,B	3	Y	RED GRANITE	
18	5.5	2	3.5	5	S	NONE	S	5Y6/2	M	F	O	H	Q	4	N	SANDSTONE	
18	6	2	4	6	S	NONE	S	5Y6/1	M	M	TL	H	Q	5	N	SANDSTONE	
18	7	2.5	4	7	S	NONE	S	5GY6/1	M	M	TL	M	Q	5	N	SANDSTONE	
18	7.5	1.5	3.5	?	S	NONE	S	5YR4/1	M	F	O	H	Q,HEM	5	Y	SANDSTONE	
18	5.5	3	3.5	7	S	NONE	S	5Y7/1	M	F	O	M	Q	5	N	SANDSTONE	
18	7.5	5	6	7	S	NONE	S	N5	M	F	O	H	Q	5	N	SANDSTONE	
18	5.5	2.5	4	6	S	NONE	S	5Y6/1	M	M	TL	H	Q	5	N	SANDSTONE	

18	6	2.5	5	7	S	NONE	S	5YR6/1	M	M	O	H	Q	4	N	SANDSTONE	
18	7	3	4.5	7	S	NONE	S	5YR6/1	M	M	O	H	Q	5	N	SANDSTONE	
18	5	1.5	3.5	8	S	NONE	S	5Y6/1	M	M	TL	H	Q	5	Y	SANDSTONE	
18	5	3	4	8	S	NONE	S	5Y8/1	M	M	TL	H	Q	5	N	SANDSTONE	
18	7	1.5	2	4	S	NONE	S	N5	M	F	O	H	Q	4	N	SANDSTONE	
18	6	2.5	4.5	6	S	NONE	S	5Y6/1	M	F	O	H	Q	4	Y	SANDSTONE	
18	7	3	3.5	?	S	NONE	S	5YR6/2	M	F	O	M	Q	5	Y	SANDSTONE	
18	8	2	4	6	S	NONE	S	5Y6/1	M	M	O	H	Q	3	N	SANDSTONE	
18	5.5	1.5	3	?	S	NONE	S	5YR6/1	M	M	TL	H	Q	4	Y	SANDSTONE	
18	7	2	4.5	6	S	NONE	S	5GY6/1	M	F	O	H	Q	4	Y	SANDSTONE	
18	5	2	3	6	S	NONE	S	5GY6/1	M	F	O	H	Q	4	N	SANDSTONE	
18	7	2.5	6	6	S	NONE	S	5G8/1	M	F	O	H	Q	4	Y	SANDSTONE	
18	5	2.5	3	7	S	NONE	S	5GY6/1	M	M	TL	H	Q	5	N	SANDSTONE	
18	6	1.5	4	5	S	NONE	S	5YR6/1	M	M	O	H	Q,B,F,C	3	N	SANDSTONE	
18	5	2	3	6	S	NONE	S	5Y6/1	M	M	TL	H	Q	5	N	SANDSTONE	
18	6	2	5	5	S	FEOX	S	10YR7/2	M	M	O	H	Q	3	Y	SANDSTONE	
18	7	2.5	3.5	3	S	NONE	S	5YR6/2	M	M	O	H	Q,F,B	3	N	SANDSTONE	
18	5.5	2	4.5	7	S	NONE	S	5YR6/1	M	F	O	M	Q	4	Y	SANDSTONE	
18	7.5	3	6.5	6	S	NONE	S	5YR6/1	M	F	O	M	Q	5	Y	SANDSTONE	
18	6.5	1.5	4	?	S	NONE	S	10YR6/2	M	M	O	H	Q	3	Y	SANDSTONE	
18	7	2.5	4	?	S	NONE	S	5Y6/1	M	F	O	H	Q	5	Y	SANDSTONE	
18	6	2	4	?	S	NONE	S	10YR7/2	M	M	O	H	Q	5	Y	SANDSTONE	
18	6	2	3.5	6	S	NONE	S	5YR4/1	M	F	O	M	Q	5	N	SANDSTONE	
18	6	2	3.5	5	S	NONE	S	5Y6/1	M	M	O	H	Q	5	Y	SANDSTONE	
18	7	2	3.5	7	S	NONE	S	10YR6/2	M	M	TL	H	Q	5	N	SANDSTONE	
18	5	3.5	4	7	S	NONE	S	5Y8/1	M	M	O	H	Q	4	Y	SANDSTONE	
18	5	2	3.5	5	S	NONE	S	5Y8/1	M	M	O	H	Q	4	Y	SANDSTONE	
18	8	3	5.5	?			S	5GY7/1	M	M	TL	H	Q	5	Y	SANDSTONE W/NO CORETEX	
18	7.5	2	3	?	G	NONE	M	NA	BI	C	O	H	Q,B,F	2	Y	SCHIST	
18	5.5	3	4	?	P	FEOX	MS	10YR6/2	MT/P	S	TL	S	?	5	Y	SILICIFIED VOLCANIC	
18	10	2.5	6	?	F	NONE	MS	NA	MT	S	TL	M	?	5	Y	SILICIFIED VOLCANIC (UNWORKABLE)	

18	5.5	2	3.5	?	G	NONE	S	5YR4/1M	M	M	O	H	Q,F,C	3	Y	VOLCANIC SANDSTONE	
19	5.5	1	4	5	G	NONE	P	5Y6/1	M	C	O	H	F,C,EPIDOTE	2	Y	ALTERED GABBRO	
19	13	5	8	7	G	FEOX	P	NA	M	VC	O	H	Q,F,B,EPIDOTE	3	Y	ALTERED GRANITE	
19	5	2.5	3	6	S	NONE	P	NA	M	VC	O	H	Q,EPIDOTE,F,B	3	Y	ALTERED GRANITE	
19	13	6	8	7	S	NONE	V	5Y6/1	P	VC/VF	O	H	F,B	4	Y	B,F PHENO'S/RHYO-DACITE	
19	8	3	6	6	G	NONE	V	NA	P	VC/F	O	H	F,Q,B	4	Y	B,F,Q PHENO'S/RHYO-DACITE	
19	8.5	3	6	7	P	NONE	V	5GY4/1	M	VC	O	H	F	4	N	BASALT	
19	15	8	11	?	F	NONE	V	5YR5/1	P	C/VF	O	H	F,C	4	Y	C,F PHENO'S/ANDESITE	
19	26	11	21	5	G	BLK	V	N5	P	C/F	O	H	F,C	4	N	C,F PHENO'S/ANDESITE	
19	7	4	5	7	P	NONE	V	N3	P	C/VF	O	H	F,C	3	N	C,F PHENO'S/BASALT	
19	6.5	2	5	?	S	NONE	V	5GY6/1	P	C/VF	O	H	C,F	4	Y	C,F PHENO'S/BASALT	
19	5.5	3	3.5	7	P	NONE	V	N3	P	C/VF	O	H	F,C	3	N	C,F PHENO'S/BASALT	
19	8.5	4	7	7	P	NONE	V	N5	P	C/VF	O	H	F,C	4	Y	C,F PHENO'S/BASALT	
19	8	0.5	5	?	S	NONE	V	5Y6/1	P	C/VF	O	H	F,C	3	Y	C,F PHENO'S/BASALT	
19	11	4	7.5	8	P	NONE	V	5YR6/1	P	C/F	O	H	F,C,Q	5	N	C,F,Q PHENO'S/RHYO-DACITE	
19	15	6	11	7	S	NONE	P	5GY6/1	M	M	O	H	Q,F,B	4	Y	DIORITE	
19	12	4	10	5	G	NONE	P	NA	M	C	O	H	Q,F,C,B	4	Y	DIORITE	
19	18	8	14	6	G	FEOX	P	NA	M	C	O	H	C,F,Q	4	N	DIORITE	
19	8	2.5	5	6	G	NONE	P	NA	M	VC	O	H	Q,F,B	3	Y	DIORITE	
19	9.5	5	6.5	5	G	NONE	P	NA	M	C	O	H	F,B,Q	4	Y	DIORITE	
19	5.5	2	3.5	3	G	NONE	P	5GY4/1	M	C	O	H	B,Q,F	3	N	DIORITE	
19	8	3	5.5	6	G	NONE	P	NA	M	VC	O	H	Q,F,B	3	Y	DIORITE	
19	13	5	6.5	5	G	NONE	P	NA	M	VC	O	H	Q,B,F,C	4	N	DIORITE	
19	17	5	8	5	S	NONE	V	N5	P	C/VF	O	H	F	5	N	F PHENO'S/ANDESITE	
19	7	4.5	6	5	S	BLK	V	5GY6/1	P	VC/VF	O	H	F	4	Y	F PHENO'S/BASALT	
19	12	4	9.5	5	S	NONE	V	5GY6/1	P	C/F	O	H	F	5	N	F PHENO'S/BASALT	
19	7.5	1.5	4	?	S	NONE	V	N5	P	C/VF	O	H	F	4	Y	F PHENO'S/BASALT	
19	10	2.5	4	?	G	NONE	V	N6	P	C/VF	O	H	F	4	Y	F PHENO'S/BASALT	
19	10	4	8	5	S	NONE	V	N5	P	VC/F	O	H	F	4	Y	F PHENO'S/BASALT	
19	6	3	3.5	4	S	NONE	V	5GY6/1	P	C/VF	O	H	F	4	N	F PHENO'S/DACITE	
19	6	2	4	?	G	NONE	V	N6	P	VC/VF	O	H	F	3	Y	F PHENO'S/DACITE	

19	13	4.5	7	5	S	NONE	V	5GY6/1	P	VC/VF	O	H	F,B	5	Y	F,B PHENO'S/DACITE	
19	9.5	4	5	6	G	NONE	V	5GY5/1	P	VC/F	O	H	F,B	3	Y	F,B PHENO'S/DACITE	
19	7	2.5	6	?	P	NONE	V	5YR7/1	P	C/F	O	H	F,B,HEM	3	Y	F,B,HEM PHENO'S/RHYO-DACITE	
19	13	4	11	5	S	NONE	P	5GY6/1	M/P	VC/C	O	H	F,C	4	Y	F,C PHENO'S/GABBRO	
19	10	3	6.5	6	S	NONE	S	N7	M	M	TL	H	Q	5	Y	FLAKED SANDSTONE	
19	7.5	2.5	5.5	7	S	NONE	S	5Y7/1	M	M	TL	M	Q	5	Y	FLAKED SANDSTONE	
19	6	1.5	4	5	S	NONE	P	5GY6/1	M	C	O	H	F,C	4	Y	GABBRO	
19	7	2.5	3.5	?	S	NONE	P	5GY6/1	M	C	O	H	F,C	2	Y	GABBRO	
19	6	2.5	4	?	G	NONE	M	NA	BI	VC	O	H	F,C,B	3	Y	GNEISS	
19	26	15	18	7	G	NONE	M	NA	BI	VC	O	H	Q,F,B,C	3	Y	GNEISS	
19	11	5	9.5	7	G	NONE	P	NA	M	VC	O	H	B,Q,F	3	Y	GRANITE	
19	5.5	1.5	5	6	G	NONE	P	NA	M	VC	O	H	Q,F,B	3	Y	GRANITE	
19	6	2.5	2.5	?	G	NONE	P	NA	M	VC	O	H	Q,F,B	3	Y	GRANITE	
19	10	5	6	6	G	NONE	P	NA	M	VC	O	H	Q,F,C	3	Y	GRANITE	
19	6.5	2	4.5	?	G	NONE	P	NA	M	VC	O	H	Q,F,B	3	Y	GRANITE	
19	7	3	4	5	G	NONE	P	N5	M	VC	O	H	Q,F,C	4	Y	GRANITE W/MAFIC ENCLAVE	
19	8	3	5	?			P	NA	M	C	O	H	C,F,Q,B	3	Y	GRANITE W/NO CORETEX	
19	9	3	7	?			P	NA	M	VC	O	H	Q,F,B	3	Y	GRANITE W/NO CORETEX	
19	12	3	11	7	G	NONE	P	NA	M	VC	O	H	Q,F,B,C	3	Y	GRANO-DIORITE	
19	14	5.5	8	6	G	FEOX	P	NA	M	VC	O	H	Q,F,B	3	N	GRANO-DIORITE	
19	8	3	5	6	G	NONE	P	NA	M	VC	O	H	Q,F,C	3	N	GRANO-DIORITE	
19	8.5	3.5	6	6	G	NONE	P	NA	M	VC	O	H	C,F,Q	3	Y	GRANO-DIORITE	
19	6	3	5	?	G	NONE	P	NA	M	VC	O	H	Q,F,B	3	Y	GRANO-DIORITE	
19	8	3	6	?			P	5YR7/1	M	C	O	H	F,Q,B	2	Y	LEUCO GRANITE W/NO CORETEX	
19	17	6	10	5	S	NONE	M	10YR6/2	M	M	O	H	Q	4	Y	QUARTZITE	
19	10	5	6	?	G	NONE	P	NA	M	VC	O	H	Q,F,B	3	Y	RED GRANITE	
19	8	3.5	4.5	6	G	NONE	P	NA	M	VC	O	H	F,Q	2	Y	RED GRANITE	
19	7	3.5	5	?	G	NONE	P	NA	M	VC	O	H	Q,F,B	3	Y	RED GRANITE	
19	10	5	7	7	G	NONE	P	NA	M	VC	O	H	Q,F,B	3	Y	RED GRANITE	
19	6	2.5	4	?	G	NONE	P	NA	M	VC	O	H	Q,F,B	3	Y	RED GRANITE	
19	5.5	1.5	3.5	?	G	NONE	P	NA	M	VC	O	H	Q,F,B	3	Y	RED GRANITE	

19	5	2	4	?	G	NONE	P	NA	M	VC	O	H	B,F,Q	3	Y	RED GRANITE	
19	19	10	10	5	S	NONE	S	5Y8/1	M	M	O	H	Q	4	N	SANDSTONE	
19	5.5	1.5	3	?	F	NONE	S	5GY4/1	M	F	O	H	Q	3	Y	SANDSTONE	
19	10	4	9.5	7	S	NONE	S	N6	M	M	TL	H	Q	5	Y	SANDSTONE	
19	13	7	10	8	S	NONE	S	N6	M	M	O	H	Q	5	Y	SANDSTONE	
19	14	5	10	5	S	NONE	S	5R6/2	M	M	O	M	Q	5	Y	SANDSTONE	
19	9	2	8	?	S	NONE	S	5Y6/1	M	M	O	H	Q	5	Y	SANDSTONE	
19	5.5	1.5	4	2	F	NONE	S	N5	M	F	O	H	Q	3	N	SANDSTONE	
19	29	12	16	5	S	NONE	S	5Y8/1	M	M	TL	M	Q	5	N	SANDSTONE	
19	11	5	7	4	S	FEOX	S	N8	M	M	TL	H	Q	5	N	SANDSTONE	
19	7	2.5	3	?	S	NONE	S	10YR6/2	M	M	TL	H	Q	5	Y	SANDSTONE	
19	6.5	2.5	5	4	S	NONE	S	5GY6/1	M	F	O	H	Q	4	N	SANDSTONE	
19	12	2.5	7	7	S	NONE	S	N9	M	M	O	H	Q	4	Y	SANDSTONE	
19	12	5.5	7	?	S	NONE	S	10YR6/2	M	M	O	M	Q	5	Y	SANDSTONE	
19	6	1.5	4.5	5	S	NONE	S	5GY5/1	M	F	O	H	Q	4	Y	SANDSTONE	
19	11	4	7	7	S	NONE	S	N8	M	M	TL	H	Q	4	Y	SANDSTONE	
19	8	2.5	5	?	S	NONE	S	N7	M	M	TL	H	Q	5	Y	SANDSTONE	
19	7.5	3	6.5	6	S	FEOX	S	10YR6/2	M	M	O	H	Q,HEM	4	N	SANDSTONE	
19	9.5	3.5	8	5	S	FEOX	S	N7	M	M	TL	M	Q	5	N	SANDSTONE	
19	7	3	4.5	6	S	NONE	S	N7	M	M	O	H	Q	5	N	SANDSTONE	
19	9	5	6	8	S	FEOX	S	10YR7/2	M	M	TL	H	Q	5	N	SANDSTONE	
19	7	1	4.5	6	S	FEOX	S	10YR7/2	M	M	TL	H	Q	4	Y	SANDSTONE	
19	8.5	3	4	6	S	NONE	S	5Y7/1	M	M	O	H	Q	5	Y	SANDSTONE	
19	8.5	3	6	?	S	FEOX	S	N8	M	M	TL	H	Q	4	Y	SANDSTONE	
19	8	1.5	5.5	4	S	NONE	S	5Y8/1	BI	M	TL	H	Q	4	Y	SANDSTONE	
19	12	5	8	6	S	NONE	S	N8	M	M	TL	M	Q	5	N	SANDSTONE	
19	7	2.5	4	?	S	NONE	S	5Y6/1	M	M	O	H	Q	4	Y	SANDSTONE	
19	7.5	2	3	?	S	NONE	S	5YR6/1	M	M	TL	H	Q	5	Y	SANDSTONE	
19	6.5	2	4	?	S	NONE	S	N4	M	F	O	H	Q	4	Y	SANDSTONE	
19	7	3	4	6	S	NONE	S	5Y8/1	M	M	TL	M	Q	5	Y	SANDSTONE	
19	12	4	8	6	S	NONE	S	5Y5/1	M	F	O	H	Q	5	Y	SANDSTONE	

19	6	2.5	3.5	5	S	NONE	S	N4	M	F	TL	H	Q	5	N	SANDSTONE	
19	10	6	7	6	S	FEOX	S	5Y8/1	M	M	TL	H	Q	4	Y	SANDSTONE	
19	12	5	9	8	S	NONE	S	5Y8/1	M	M	TL	H	Q	5	N	SANDSTONE	
19	9	3	5	5	G	FEOX	MS	10YR8/2	MT	S	TL	M	?	5	Y	SILICIFIED VOLCANIC	
19	8	3.5	7	6	S	BLK	S	5GY6/1	M	M	O	H	Q,C,F	3	Y	VOLCANIC SANDSTONE	
19	8	3	6.5	5	G	NONE	P	NA	M	C	O	H	F,Q,CHLORITE	2	N	WEATHERED AND ALTERED RED GRANITE	
19	10	3	7.5	4	G	BLK	M	NA	BI	VC	O	H	Q,F,B	2	Y	WEATHERED GNEISS	
19	13	5	7	6	P	FEOX	M	5YR6/1	BI	C	O	H	Q,F,B	3	Y	WEATHERED GNEISS	

Appendix C: Lithic Analysis Spreadsheet Code Descriptions

ST	Site – Either Quebrada Jaguay (QJ) or Quebrada Tacahuay (QT)
F#	Arbitrary number assigned to each individual lithic artifact. Each piece gets its own separate number.
Unit	Provenience.
Nivel	Level artifact was recovered from.
M/G	Muestra or Grab sample 4M=1/4" Muestra, 4G=1/4" General, 16M=1/16" Muestra, 16G=1/16" General, 46=1/4" and 1/16" combined.
LA1	Length of axis 1 (mm). Axis 1 runs along the length of the flake, beginning at the platform, and running along to the bulb of percussion to the termination. This measurement is only taken for complete flakes. With a flake fragment or piece of shatter, the longest measurement possible will be recorded. Also, no LA2 will be recorded.
LA2	Length of axis 2 (mm). Axis 2 runs perpendicular to axis 1 and could be referred to as "width". This measurement is taken at the point perpendicular to axis 1 which has the greatest length. With a flake fragment or a piece of shatter, this measurement will not be taken (only the LA1 measurement will be taken).
Wt.	Weight of the individual lithic fragment (g).
WF	Whole Flake. Defined as a flake which has a platform, bulb of percussion, and is not broken on the distal end.
BF	Broken Flake. Defined as a flake which has a platform, as well as a bulb of percussion, but is broken at the distal end.
FF	Flake Fragment. Defined as a flake without a platform present. However, with a flake fragment, the bulb of percussion can still be recognized.
SH	Shatter. No bulb of percussion or platform is visible on the lithic piece.

EP> Exterior Platform Angle (In Degrees). Angle of the intersection of the platform surface and the length of the flake. The platform surface represents one axis, and the central plane of the flake represents the second axis (this plane is best visualized by dividing the flake between its dorsal and ventral surfaces).

PL Platform Length (mm). This measurement is taken on the platform surface of the flake. It is the distance on the platform surface between the edge of the platform nearest the dorsal surface of the flake and the edge of the platform nearest the ventral surface of the flake. Also, the measurement is taken at the widest point along this line.

PW Platform width (mm). Also taken on the platform surface of the flake. This measurement is perpendicular to the measurement taken for platform length. This measurement is taken at the widest portion of the platform surface.

NC Flake contains no cortex on its dorsal surface.

<C Flake contains under 50% cortex on its dorsal surface.

>C Flake contains greater than 50% cortex on its dorsal surface.

DSC Dorsal surface platform preparation in the form of chipping.

GPE Shows evidence of platform grinding or abrasion on the edge of the platform nearest the dorsal surface of the flake.

FP Faceted platform. Platforms with one or more flake scars.

DSF The presence of two or more flake scars (facets) on the dorsal surface of the flake.

RT Rock type. Named rock types include numbers 3 (quartz), 2, 4, 13 (metasomatic [MS]), 5 (sandstone), 10 (basalt), 12 (petrified wood), and also ob (obsidian).

Appendix D: Lithic Analysis Data

Table D.1. Lithic Analysis Data

ST	F#	Unit	Nivel	M/G	LA1	LA2	Wt.	WF	BF	FF	SH	EP>	PL	PW	NC	<C	>C	GPD	GPT	FP	BTF	RT
QJ	55	II3A	N1	4M	22.5		3				1				1							5
QJ	56	II3A	N1	4M	27.5		4.7				1					1						5
QJ	57	II3A	N1	4M	12.5		0.9				1				1							13
QJ	58	II3A	N1	4M	12.5		0.2			1					1							13
QJ	59	II3A	N1	4M	12.5	17.5	0.7		1			?	1.4	5.2	1			1	1		1	2
QJ	60	II3A	N1c	16G	12.5		0.1				1				1							5
QJ	61	II3A	N1c	16G	7.5		0.1				1				1							2
QJ	62	II3A	N1c	16G	7.5	2.5	<0.1		1			?	0.6	3.1	1						1	2
QJ	63	II3A	N1c	16G	7.5	7.5	<0.1		1			55	1.2	4.8	1							12
QJ	64	II3A	N1c	16G	17.5		0.3				1					1						12
QJ	65	II3A	N1c	4G	7.5	17.5	0.3		1			25	2.1	8.0	1						1	10
QJ	66	II3A	N1c	4G	22.5		1.6				1					1						2
QJ	67	II3A	N1c	4G	12.5		0.1				1						1					12
QJ	68	II3A	N1c	4G	22.5		0.8				1					1						?
QJ	69	II3A	N1c	4G	17.5		0.6			1						1						4
QJ	70	II3A	N1c	4G	12.5		0.3			1					1							2
QJ	71	II3A	N1c	4G	7.5		0.2			1					1							4
QJ	72	II3A	N1c	4G	12.5		0.4				1				1							2
QJ	73	II3A	N1c	4G	17.5		0.4				1				1							10
QJ	74	II3A	N1c	4G	12.5		0.2				1				1							10
QJ	75	II3A	N1c	16M	2.5	2.5	<0.1		1			70	0.8	3.4	1							2
QJ	76	II3A	N1c	16M	7.5	7.5	<0.1	1				65	1.0	3.0	1			1		1	1	2
QJ	77	II3A	N1c	16M	12.5		0.1				1				1							10
QJ	78	II3A	N1c	16M	2.5	2.5	<0.1				1				1							?
QJ	79	II3A	N1c	16M	12.5		0.2				1						1					8
QJ	80	II3A	N1c	16M	7.5		<0.1				1				1							12
QJ	81	II3A	N1c	16M	12.5	2.5	0.1	1				?	0.7	2.3	1						1	2
QJ	82	II3A	N1c	16M	7.5		<0.1				1				1							2
QJ	83	II3A	N1c	16M	2.5	2.5	<0.1	1				50	0.5	2.9	1							2
QJ	84	II3A	N1c	16M	2.5	2.5	<0.1	1				75	1.0	2.7	1							10
QJ	85	II3A	N1c	16M	2.5		<0.1				1				1							?
QJ	86	II3A	N1c	16M	2.5		<0.1			1					1							10
QJ	87	II3A	N1c	16M	2.5		<0.1			1					1							2
QJ	88	II3A	N1c	16M	7.5	7.5	0.1	1				?	1.5	4.4			1					?
QJ	89	II3A	N1c	16M	7.5		0.1				1				1							5
QJ	90	II3A	N1c	16M	7.5		<0.1				1				1							?
QJ	91	II3A	N1c	16M	7.5		<0.1				1				1							10
QJ	92	II3A	N1c	16M	7.5		<0.1				1				1							10
QJ	93	II3A	N1c	16M																		
QJ	94	II3A	N1c	16M	2.5		<0.1				1				1							10
QJ	95	II3A	N1c	16M	2.5	2.5	<0.1	1				?	1.2	3.1			1					10
QJ	96	II3A	N1c	16M	7.5		<0.1				1				1							12
QJ	97	II3A	N1c	16M	7.5		<0.1				1				1							3
QJ	98	II3A	N1c	16M	7.5	2.5	<0.1		1			?	0.7	1.6	1						1	2
QJ	99	II3A	N1c	16M	7.5	7.5	<0.1		1			50	1.1	3.6	1			1		1	1	2
QJ	100	II3A	N1c	16M	7.5		<0.1				1				1							12
QJ	101	II3A	N1c	16M																		
QJ	102	II3A	N1c	16M	7.5	2.5	<0.1		1			?	1.5	3.8		1					1	2
QJ	103	II3A	N1c	16M																		
QJ	104	II3A	N1c	16M	7.5	2.5	<0.1	1				?	1.3	3.2		1						2
QJ	105	II3A	N1c	16M	2.5	7.5	0.1	1				?	1.6	3.7	1						1	10
QJ	106	II3A	N1c	16M	7.5		<0.1				1				1							2

QJ	107	II3A	N1c	16M	7.5	2.5	<0.1	1				50	1.5	3.6			1					10
QJ	108	II3A	N1c	16M	2.5	2.5	<0.1					?	0.7	2.2								12
QJ	109	II3A	N1c	16M	7.5		<0.1				1				1							2
QJ	110	II3A	N1c	16M																		
QJ	111	II3A	N1c	16M	2.5	2.5	<0.1		1			80	1.2	2.9	1							14
QJ	112	II3A	N1c	16M	2.5		<0.1				1				1							2
QJ	113	II3A	N1c	4M	17.5		0.2				1				1							2
QJ	114	II3A	N1c	4M	17.5		1.2				1				1							2
QJ	115	II3A	N1c	4M	22.5	17.5	1.1	1				90	1.6	5.6	1							2
QJ	116	II3A	N1c	4M	17.5		0.4				1				1							2
QJ	117	II3A	N1c	4M	7.5		0.2				1					1						12
QJ	118	II3A	N1c	4M	12.5		0.4				1					1						2
QJ	119	II3A	N1c	4M	12.5		0.3				1				1							2
QJ	120	II3A	N1c	4M	7.5	12.5	0.2	1				45	1.0	3.1	1						1	14
QJ	121	II3A	N1c	4M	12.5	12.5	0.7		1			40	2.6	9.5		1			1			14
QJ	122	II3A	N1ii	16M	7.5		<0.1			1					1							2
QJ	123	II3A	N1ii	16M	7.5		<0.1				1				1							2
QJ	124	II3A	N1ii	16M	7.5	2.5	<0.1	1				?	0.7	1.6	1							2
QJ	125	II3A	N1ii	16M	7.5	2.5	<0.1	1				70	0.8	2.4	1						1	2
QJ	126	II3A	N1ii	16M	2.5		<0.1			1					1							2
QJ	127	II3A	N1ii	16M	2.5		<0.1			1							1					4
QJ	128	II3A	N1ii	16M	2.5		<0.1			1					1							?
QJ	129	II3A	N1ii	16M	7.5		<0.1			1							1					12
QJ	130	II3A	N1ii	16M	2.5	7.5	<0.1		1			45	1.5	5.6	1							2
QJ	131	II3A	N1ii	16M	7.5		<0.1				1				1							?
QJ	132	II3A	N1ii	16M	7.5	7.5	0.1		1			85	1.0	2.1	1						1	2
QJ	133	II3A	N1ii	16M	7.5		<0.1				1				1							2
QJ	134	II3A	N1ii	16M	7.5	2.5	<0.1	1				?	0.8	2.2	1							2
QJ	135	II3A	N1ii	16M	2.5		<0.1				1				1							10
QJ	136	II3A	N1ii	16M	7.5		0.1				1				1							8
QJ	137	II3A	N1ii	16M	2.5		<0.1				1				1							13
QJ	138	II3A	N1ii	16M	2.5		<0.1				1				1							10
QJ	139	II3A	N1ii	16M	7.5		<0.1				1				1							?
QJ	140	II3A	N1ii	16M	2.5	2.5	<0.1	1				70	1.1	3.4	1							2
QJ	141	II3A	N1ii	16M	7.5		0.1				1				1							4
QJ	142	II3A	N1ii	4?	37.5	17.5	8.3		1			60	7.4	15.4		1						10
QJ	143	II3A	N1ii	4?	12.5		0.1			1					1							2
QJ	144	II3A	N1ii	4?	12.5	12.5	0.3		1			65	1.0	2.8	1							12
QJ	145	II3A	N1ii	4?	12.5	12.5	0.4	1				55	2.1	7.8	1			1	1	1	1	14
QJ	146	II3A	N1ii	4?	12.5		0.5			1					1						1	4
QJ	147	II3A	N1ii	4?	12.5		0.6				1				1							14
QJ	148	II3A	N1ii	4?	12.5		0.3			1						1						2
QJ	149	II3A	N1ii	4?	17.5		1				1				1							5
QJ	150	II3A	N1ii	16G	12.5		0.3				1				1							3
QJ	151	II3A	N1ii	16G	12.5		0.1		1			?			1							4
QJ	152	II3A	N1ii	16G	7.5	7.5	0.1	1				70	1.0	1.9	1						1	14
QJ	153	II3A	N1ii	16G	17.5		0.2				1				1							2
QJ	154	II3A	N1ii	16G	7.5		0.1				1				1							12
QJ	155	II3A	N1ii	16G	7.5	7.5	<0.1	1				?	0.7	2.3	1						1	2
QJ	156	II3A	N1ii	16G	7.5		<0.1				1				1							5
QJ	157	II3A	N1ii	16G	7.5	7.5	<0.1	1				?	0.6	2.7	1							2
QJ	158	II3A	N1ii	16G	7.5		<0.1				1				1							2
QJ	159	II3A	N1ii	16G	7.5	7.5	<0.1	1				75	0.9	2.9	1						1	2

QJ	160	II3A	N1ii	16G	2.5	7.5	<0.1	1				65	1.5	2.8	1							4
QJ	161	II3A	N1ii	16G	7.5	7.5	<0.1		1			60	1.1	2.6	1							14
QJ	162	II3A	N1ii	16G	7.5		<0.1			1					1							12
QJ	163	II3A	N1ii	16G	7.5		<0.1				1				1							14
QJ	164	II3A	N1ii	16G	2.5		<0.1				1				1							2
QJ	165	II3A	N1ii	16G	2.5	2.5	<0.1		1			65	0.9	2.3	1						1	2
QJ	166	II3A	N1ii	16G	12.5		0.1				1				1							2
QJ	167	II3A	N1ii	16G	2.5	7.5	<0.1		1			70	1.4	4.8	1							2
QJ	168	II3A	N1ii	16G																		
QJ	169	II3A	N1ii	16G	2.5	2.5	<0.1	1				?	0.6	2.4	1							2
QJ	170	II3A	N1ii	16G	12.5		0.1				1				1							2
QJ	171	II3A	N1ii	16G	7.5	2.5	<0.1	1				?	0.7	1.5	1							14
QJ	172	II3A	N1ii	16G																		
QJ	173	II3A	N1ii	16G	7.5		<0.1				1				1							4
QJ	174	II3A	N1ii	16G	7.5		<0.1				1				1							12
QJ	175	II3A	N1ii	16G	12.5		0.1				1						1					12
QJ	176	II3A	N1ii	16G	2.5		<0.1			1					1							2
QJ	177	II3A	N1ii	16G	7.5		<0.1				1				1							?
QJ	178	II3A	N1ii	16G	7.5		0.1				1					1						3
QJ	179	II3A	N1ii	16G	2.5		<0.1				1				1							14
QJ	180	II3A	N1ii	16G	7.5	7.5	0.1		1			70	1.2	2.8	1					1	1	4
QJ	181	II3A	N1ii	16G	2.5		<0.1				1				1							9
QJ	182	II3A	N1ii	16G	2.5		<0.1				1				1							2
QJ	183	II3A	N1ii	4M	12.5	17.5	1.3		1			85	5.3	14.5		1						2
QJ	184	II3A	N1ii	4M	12.5		0.2			1						1						2
QJ	185	II3A	N1ii	4M	12.5		0.6				1				1							3
QJ	186	II3A	N1ii	4M	7.5		0.4			1						1						2
QJ	187	II3A	N1ii	4M	12.5		0.3				1				1							10
QJ	188	II3A	N1ii	4M	7.5		0.2			1					1						1	12
QJ	189	II3A	N1ii	4M	12.5	17.5	1.7	1				65	3.7	14.5		1		1				2
QJ	190	II3A	N1ii	4M	7.5	12.5	0.2		1			?	0.9	4.1	1			1	1		1	12
QJ	191	II3A	N1ii	4M	12.5		0.5				1				1							14
QJ	192	II3A	N1ii	4M	12.5		0.2				1				1							4
QJ	193	II3A	N1ii	4M	17.5		1.3				1				1							10
QJ	194	II3A	N1ii	4G	17.5		0.5				1					1						13
QJ	195	II3A	N1ii	4G	12.5		0.3			1					1							3
QJ	196	II3A	N1ii	4G	7.5	12.5	0.2	1				?	0.9	4.5	1					1	1	2
QJ	197	II3A	N1ii	4G	12.5		0.2			1					1						1	12
QJ	198	II3A	N1ii	4G	22.5		1.6				1				1							7
QJ	199	II3A	N1ii	4G	22.5		5				1					1						4
QJ	200	II3A	N1ii	4G	12.5		0.1				1				1							?
QJ	201	II3A	N1ii	4G	12.5		0.1				1				1							4
QJ	202	II3A	N1ii	4G	12.5		0.4			1					1							2
QJ	203	II3A	N1ii	4G	27.5		0.9				1				1							4
QJ	204	II3A	N1ii	4G	7.5		0.1			1					1							4
QJ	205	II3A	N1ii	4G	7.5		0.1				1				1							4
QJ	206	II3A	N1ii	4G	7.5		0.1				1				1							4
QJ	207	II3A	N1ii	4G	12.5		0.1				1				1							2
QJ	208	II3A	N1ii	4G	12.5		0.1				1				1							2
QJ	209	II3A	N1ii	4G	12.5		0.1			1					1							12
QJ	210	II3A	N1ii	4G	22.5	12.5	1.3	1				60	1.6	3.4		1						4
QJ	211	II3A	N1ii	4G	17.5	12.5	0.6		1			45	1.2	4.6	1						1	2
QJ	212	II3A	N1ii	4G	12.5	12.5	0.4		1			75	2.4	5.3		1						12

QJ	213	II3A	N1ii	4G	17.5		0.7			1					1							10
QJ	214	II3A	N1ii	4G	12.5		0.1				1				1							4
QJ	215	II3A	N1ii	4G	7.5	7.5	0.1		1			75	2.1	8.2	1							?
QJ	216	II3A	N1ii	4G	12.5		0.3				1				1							10
QJ	217	II3A	N1ii	4G	17.5		0.6				1						1					3
QJ	218	II3A	E28ii	16M	7.5		0.1				1				1							2
QJ	219	II3A	E28ii	16M																		
QJ	220	II3A	E28ii	16M	7.5		0.2			1					1							12
QJ	221	II3A	E28ii	16M	7.5		0.1			1					1							2
QJ	222	II3A	E28ii	16M	7.5	7.5	0.1		1			?	0.7	2.1	1						1	2
QJ	223	II3A	E28ii	16M	12.5		0.1				1				1							12
QJ	224	II3A	E28ii	16M	2.5		<0.1				1				1							10
QJ	225	II3A	E28ii	16M	12.5		0.1				1				1							?
QJ	226	II3A	E28ii	16M	7.5		<0.1				1				1							10
QJ	227	II3A	E28ii	16M																		
QJ	228	II3A	E28ii	4M	27.5		2.9			1					1							10
QJ	229	II3A	E28ii	4M	17.5		1.2				1				1							7
QJ	230	II3A	E28ii	4M	12.5		0.1				1				1							2
QJ	231	II3A	E28ii	4M	12.5		0.3			1					1							2
QJ	232	II3A	E28ii	4M	12.5		0.2				1				1							4
QJ	233	II3A	E28ii	4M	12.5		0.2			1					1						1	2
QJ	234	II3A	E28ii	4M	7.5	7.5	0.1	1				?	1.2	2.6	1						1	2
QJ	235	II3A	E28ii	4M	7.5		0.1				1				1							14
QJ	236	II3A	E28ii	4M	32.5		3.4				1				1							3
QJ	237	II3A	E28ii	4M	17.5		0.9			1					1							2
QJ	238	II3A	E28ii	4M	7.5		0.1			1					1							2
QJ	239	II3A	E28ii	4M																		
QJ	245	II3B	N1	16G	7.5		0.1			1					1							2
QJ	246	II3B	N1	16G	2.5	7.5	0.1		1			?	0.8	2.9	1			1	1	1	1	12
QJ	248	II3B	N1	16G	12.5		0.1				1				1							2
QJ	249	II3B	N1	16G	7.5	2.5	0.1		1			75	0.5	1.8	1							?
QJ	250	II3B	N1	16G	7.5	7.5	0.1	1				35	2.1	7.8			1					5
QJ	251	II3B	N1	16G	2.5		<0.1				1					1						5
QJ	252	II3B	N1	16G	22.5		0.3				1				1							2
QJ	253	II3B	N1	16G	7.5		<0.1				1				1							11
QJ	254	II3B	N1	16G	7.5	7.5	0.1	1				85	1.2	1.9			1					?
QJ	255	II3B	N1	16G	12.5		0.1			1					1						1	2
QJ	256	II3B	N1	16G	7.5		0.1				1				1							14
QJ	257	II3B	N1	16G	7.5		0.1				1				1							5
QJ	258	II3B	N1	16G	7.5		<0.1				1				1							2
QJ	259	II3B	N1	16G	12.5		0.1			1					1							2
QJ	260	II3B	N1	16G	7.5		0.1				1				1							2
QJ	261	II3B	N1	16G	7.5		<0.1				1				1							12
QJ	262	II3B	N1	16G	7.5		<0.1				1				1							2
QJ	264	II3B	N1	16G	7.5		<0.1				1				1							?
QJ	265	II3B	N1	16M	7.5	7.5	0.1	1				30	1.7	5.0			1					2
QJ	266	II3B	N1	16M	7.5	7.5	0.1	1				30	1.9	8.3	1							2
QJ	267	II3B	N1	16M	7.5		0.1				1				1							?
QJ	268	II3B	N1	16M	7.5	7.5	0.1		1			?	0.6	1.6	1			1		1	1	2
QJ	269	II3B	N1	16M	7.5		0.2				1				1							3
QJ	270	II3B	N1	16M	7.5	2.5	<0.1	1				?	0.7	2.1		1		1	1		1	2
QJ	271	II3B	N1	16M	7.5		0.1				1				1							5
QJ	272	II3B	N1	16M	2.5		<0.1				1				1							2

QJ	273	II3B	N1	16M	2.5		<0.1				1				1							2
QJ	274	II3B	N1	16M	7.5		<0.1				1					1						2
QJ	278	II3B	N1	16M	7.5	7.5	<0.1		1			?	0.5	2.6	1							12
QJ	283	II3B	N1	16M	7.5		0.1				1				1							?
QJ	284	II3B	N1	16M	7.5		0.1			1					1							10
QJ	286	II3B	N1	16M	7.5		<0.1			1					1							2
QJ	287	II3B	N1	16M	7.5		0.1				1				1							12
QJ	288	II3B	N1	16M	12.5		0.1				1				1							2
QJ	290	II3B	N1	4G	17.5		0.3				1				1							10
QJ	291	II3B	N1	4G	22.5	12.5	0.9	1				60	1.3	2.4	1							8
QJ	292	II3B	N1	4G	12.5		0.4			1						1						2
QJ	294	II3B	N1	4G	22.5		0.9				1				1							12
QJ	295	II3B	N1	4G	17.5		0.4			1					1							2
QJ	296	II3B	N1	4G	12.5		0.4				1					1						5
QJ	297	II3B	N1	4G	7.5	7.5	0.1	1				55	2.1	3.8		1						9
QJ	298	II3B	N1	4G	12.5		0.2				1				1							12
QJ	299	II3B	N1	4G	7.5	12.5	0.2	1				?	1.2	1.2	1							2
QJ	300	II3B	N1	4G	12.5		0.2			1					1							10
QJ	301	II3B	N1	4G	17.5		0.4				1				1							5
QJ	302	II3B	N1	4G	17.5		0.8			1					1						1	2
QJ	303	II3B	N1	4G	12.5		0.4				1						1					2
QJ	304	II3B	N1	4G	12.5	17.5	0.6		1			80	2.5	8.9	1							3
QJ	305	II3B	N1	4G	12.5		0.2				1				1							2
QJ	306	II3B	N1	4G	12.5		0.3				1					1						5
QJ	307	II3B	N1	4G	22.5		2.6			1							1					10
QJ	309	II3B	N1	4G	12.5		0.1				1				1							10
QJ	310	II3B	N1	4G	12.5		0.7			1					1							12
QJ	311	II3B	N1	4G	22.5		4.4			1							1					7
QJ	312	II3B	N1	4M	12.5		0.4				1					1						2
QJ	313	II3B	N1	4M	7.5		0.4				1					1						3
QJ	314	II3B	N1	4M	17.5		1.1				1						1					2
QJ	315	II3B	N1	4M	17.5		2.3				1				1							3
QJ	316	II3B	N1	4M	12.5		0.4				1				1							5
QJ	317	II3B	N1	4M	17.5		1.4				1				1							12
QJ	318	II3B	N1	4M	7.5		0.1				1					1						12
QJ	319	II3B	N1	4M	7.5		0.1			1					1							2
QJ	320	II3B	N1	4M	12.5		0.7				1					1						5
QJ	321	II3B	N1	4M	22.5		0.6			1					1							4
QJ	322	II3B	N1b	16G	2.5		<0.1			1					1							12
QJ	324	II3B	N1b	16G	7.5		<0.1			1					1							2
QJ	325	II3B	N1b	16G	7.5		<0.1				1				1							5
QJ	327	II3B	N1b	16G	7.5		0.1			1					1							2
QJ	329	II3B	N1b	16G	7.5		0.1			1					1							14
QJ	340	II3B	N1b	16G	7.5		0.1				1				1							5
QJ	342	II3B	N1b	16G	2.5	2.5	<0.1	1				45	0.8	2.6	1			1			1	4
QJ	343	II3B	N1b	16G	7.5		0.2				1					1						2
QJ	344	II3B	N1b	16G	2.5	7.5	0.1	1				70	1.4	7.2	1					1		2
QJ	345	II3B	N1b	16G	7.5		<0.1			1					1							3
QJ	346	II3B	N1b	16G	7.5		<0.1				1				1							2
QJ	347	II3B	N1b	16G	7.5		0.2				1				1							14
QJ	348	II3B	N1b	16G	7.5	2.5	<0.1		1			65	1.2	3.5	1			1	1	1	1	2
QJ	349	II3B	N1b	16G	7.5		<0.1				1				1							2
QJ	350	II3B	N1b	16G	7.5		<0.1			1					1							2

QJ	351	II3B	N1b	16G	7.5		<0.1				1				1							3
QJ	352	II3B	N1b	4G	77.5	37.5	38	1				70	8.8	13.4	1							5
QJ	353	II3B	N1b	4G	32.5	17.5	5.7		1			85	7.4	18.4		1						5
QJ	355	II3B	N1b	4G	12.5		0.4			1					1							2
QJ	356	II3B	N1b	4G	12.5	7.5	0.1		1			35	1.3	4.1	1							10
QJ	357	II3B	N1b	4G	7.5		0.2			1					1							4
QJ	358	II3B	N1b	4G	12.5	7.5	0.5		1			90	4.0	8.4	1							14
QJ	359	II3B	N1b	4G	12.5		0.4				1				1							?
QJ	360	II3B	N1b	4G	12.5		0.2			1					1							4
QJ	361	II3B	N1b	4G	7.5	7.5	0.1	1				80	1.1	4.0	1			1	1			12
QJ	362	II3B	N1b	4G	7.5	12.5	0.5		1			55	4.2	11.3	1					1	1	2
QJ	363	II3B	N1b	4G	17.5		0.9				1				1							2
QJ	364	II3B	N1b	4G	12.5		0.3				1				1							12
QJ	365	II3B	N1b	4G	7.5	7.5	0.1		1			65	1.0	3.4	1						1	4
QJ	366	II3B	N1b	4G	12.5		0.6				1					1						4
QJ	367	II3B	N1b	4G	17.5	7.5	0.2		1			85	1.1	2.1		1		1	1			4
QJ	368	II3B	N1b	4G	12.5		0.2			1					1							2
QJ	369	II3B	N1b	4G	12.5		0.1			1					1						1	2
QJ	370	II3B	N1b	4G	12.5	12.5	0.5		1			70	2.2	7.2	1					1		2
QJ	371	II3B	N1b	4G	7.5		0.2				1				1							14
QJ	372	II3B	N1b	4G	7.5		0.2				1				1							12
QJ	373	II3B	N1b	4G	7.5	7.5	0.1		1			40	1.2	3.7	1							10
QJ	374	II3B	N1b	16M	7.5		<0.1				1				1							2
QJ	375	II3B	N1b	16M	7.5		<0.1			1					1							2
QJ	376	II3B	N1b	16M	7.5		<0.1			1					1							2
QJ	377	II3B	N1b	16M	7.5		<0.1				1				1							2
QJ	378	II3B	N1b	16M	2.5		<0.1				1				1							3
QJ	379	II3B	N1b	16M	7.5	7.5	0.1	1				70	2.0	6.0	1							10
QJ	380	II3B	N1b	16M	2.5	2.5	<0.1	1				55	0.8	2.2	1			1		1	1	2
QJ	381	II3B	N1b	16M	2.5		<0.1			1					1							12
QJ	382	II3B	N1b	16M	2.5	7.5	<0.1		1			?	0.6	3.3	1			1	1			10
QJ	383	II3B	N1b	16M	7.5		0.1				1					1						2
QJ	384	II3B	N1b	16M	7.5		<0.1				1				1							10
QJ	385	II3B	N1b	16M	7.5	7.5	0.1		1			45	0.8	3.9			1					12
QJ	386	II3B	N1b	16M	7.5		<0.1				1				1							12
QJ	388	II3B	N1b	16M	2.5		<0.1				1				1							?
QJ	389	II3B	N1b	16M	2.5	2.5	<0.1	1				40	0.7	2.2	1							12
QJ	390	II3B	N1b	16M	2.5	7.5	<0.1	1				?	0.7	1.5	1					1	1	12
QJ	391	II3B	N1b	16M	2.5		<0.1				1				1							13
QJ	392	II3B	N1b	16M	2.5		<0.1				1				1							3
QJ	393	II3B	N1b	16M	7.5		<0.1				1				1							12
QJ	394	II3B	N1b	16M	2.5		<0.1				1				1							14
QJ	395	II3B	N1b	16M	2.5		<0.1				1				1							3
QJ	396	II3A	N1ii	16M	7.5		<0.1			1					1							ob
QJ	397	II3A	N1ii	16G	7.5	7.5	0.1	1				75	1.2	2.0	1						1	ob
QJ	398	II3A	N1c	16M	7.5		<0.1			1					1							ob
QJ	399	II3B	N1b	16M	2.5	2.5	<0.1		1			70	1.8	4.8	1						1	ob
QJ	400	II3B	N2b	4M	7.5	7.5	0.1	1				30	1.2	2.9			1				1	ob
QJ	401	II3B	N2b	16G	7.5		0.1			1					1							ob
QJ	402	II3B	N2b	16G	2.5		<0.1			1					1							ob
QJ	403	II3B	N2c2c2	4G	2.5		<0.1				1				1							ob
QJ	404	II3B	N2c2c2	4G	2.5		0.1			1					1							ob
QJ	405	II3B4D	E30b	4M	12.5		0.2			1					1						1	ob

QJ	406	II3B	E35i	16M	2.5		<0.1			1					1							ob
QJ	407	II3B	E35i	16M	2.5	2.5	<0.1	1				?	0.5	2.1	1							ob
QJ	408	II3B	E35i	16M	2.5		<0.1			1					1						1	ob
QJ	409	II3B	E35i	16M	2.5		<0.1			1					1							ob
QJ	410	II3C	N1	16M	7.5		<0.1			1					1						1	ob
QJ	411	II3C	N1c	4G	7.5		0.2				1				1							ob
QJ	412	II3D	N1	46G	7.5		0.1			1					1							ob
QJ	413	II3D	N1	46G	7.5	2.5	<0.1	1				60	1.0	2.0	1					1	1	ob
QJ	414	II3D	N2b	4M	22.5		1			1						1						ob
QJ	415	II3D	N2b	16G	2.5	2.5	<0.1		1			70	1.0	3.7	1						1	ob
QJ	416	II3D	N2b	16G	7.5		0.1				1				1							ob
QJ	417	II3D	N2b	16G	7.5		0.1				1				1							ob
QJ	418	II3D	N2b	16G	2.5		<0.1				1				1							ob
QJ	419	II3D	N2c2c2	16G	12.5	2.5	<0.1	1				?	1.0	3.1	1			1	1			ob
QJ	420	II3D	N2c2c2	16G	7.5	2.5	0.1		1			50	0.7	1.6	1							ob
QJ	421	II3D	N2c4	16M	7.5		0.1				1				1							ob
QJ	422	II3D	E40i	16M	7.5		0.1				1				1							ob
QJ	423	II4C	N1c	16M	2.5		<0.1			1					1							ob
QJ	424	II3A	N2ci	16G	12.5		0.1				1				1							ob
QJ	425	II5B	N2ci2	4G	12.5	12.5	0.7	1				90	3.6	6.8		1		1				ob
QJ	426	II5B	N2ci2	16M	2.5	2.5	<0.1		1			80	0.8	2.5	1					1	1	ob
QJ	427	II5D	N2	4M	22.5		1			1						1						ob
QJ	428	II5D	E26	4G	27.5	17.5	1.5	1				55	2.1	5.3	1			1	1	1	1	ob
QJ	429	II5AD	N2b2bi	46?	12.5		0.2			1					1							ob
QJ	430	II5AD	N2b2bi	46?	7.5	7.5	0.1	1				40	1.6	4.8	1			1				ob
QJ	431	II6D	E52	16M	7.5		<0.1				1				1							ob
QJ	432	II6D	E52	16M	7.5	7.5	<0.1	1				?	0.6	3.5	1						1	ob
QJ	433	II6D	E53	16M	7.5		<0.1				1				1							ob
QJ	434	II8A	E65	16M	7.5		<0.1			1					1							ob
QJ	435	II8A	E65	16M	7.5		<0.1			1					1							ob
QJ	436	II8C	E26	16G	7.5	7.5	<0.1	1				85	1.4	3.6	1						1	ob
QJ	437	II8C	E26	4G	12.5	12.5	0.1		1			90	0.8	2.9	1						1	ob
QJ	438	II8C	E57b	4M	12.5		0.1			1					1							ob
QJ	439	II8C	E59	16M	2.5		<0.1				1				1							ob
QJ	440	II8C	E59b2	16M	2.5		<0.1			1					1							ob
QJ	441	II7B	NLS	4G	12.5	12.5	0.3	1				20	1.9	4.0	1			1	1			ob
QJ	442	II3A	N2b	4G	7.5	7.5	0.1	1				60	1.9	6.5	1							ob
QJ	443	II4C	N2c2c2	16M	7.5		0.1				1				1							ob
QJ	444	II4C	E80	16M	7.5		0.1				1				1							ob
QJ	445	II8C	E59b3	16M	2.5		<0.1				1				1							ob
QJ	446	II4AB	E39	4M	12.5		0.2			1					1							ob
QJ	447	II4AB	E39	16M	7.5		0.1			1					1							ob
QJ	448	II4C	N2bi	4M	12.5		0.4				1				1							ob
QJ	449	II5D	N2	16M	7.5	2.5	<0.1	1				?	0.9	3.7	1							ob
QJ	450	II6D	E31i	4M	12.5		0.1			1					1						1	ob
QJ	451	II3B	N1b	4G	12.5	12.5	0.4	1				70	4.6	11.0	1			1				4
QJ	452	II3B	N1b	4M	37.5	52.5	24.9	1				70	9.7	37.6		1		1				8
QJ	453	II3B	N1b	4M	12.5		0.3				1				1							14
QJ	454	II3B	N1b	4M	12.5	12.5	0.3		1			25	0.9	2.9	1				1	1		2
QJ	455	II3B	N2b	4M	7.5		<0.1				1				1							2
QJ	456	II3B	N2b	4M	17.5	22.5	1.8		1			65	2.8	6.0	1			1				5
QJ	457	II3B	N2b	4M	7.5	12.5	0.3		1			55	4.2	13.2	1							2
QJ	458	II3B	N2b	4M	12.5		0.4				1				1							3

QJ	459	II3B	N2b	4M	7.5	7.5	0.1	1				70	0.5	1.6	1			1	1		1	2
QJ	460	II3B	N2b	4M	12.5		0.2				1				1							2
QJ	461	II3B	N2b	4M	17.5		1.1				1					1						2
QJ	462	II3B	N2b	16M	7.5		0.1				1					1						2
QJ	463	II3B	N2b	16M	2.5		<0.1				1				1							10
QJ	464	II3B	N2b	16M	2.5	2.5	<0.1	1				40	1.0	2.5	1							2
QJ	465	II3B	N2b	16M	2.5		<0.1				1				1							2
QJ	466	II3B	N2b	16M	2.5		<0.1				1				1							2
QJ	467	II3B	N2b	16M	7.5		<0.1				1				1							3
QJ	468	II3B	N2b	16M	7.5		0.1				1				1							10
QJ	469	II3B	N2b	16M	7.5		<0.1				1				1							5
QJ	470	II3B	N2b	16G	12.5		0.1			1					1							2
QJ	471	II3B	N2b	16G	12.5		0.2				1					1						2
QJ	472	II3B	N2b	16G	12.5		0.1			1					1							2
QJ	473	II3B	N2b	16G	12.5		0.2				1					1						2
QJ	474	II3B	N2b	16G	7.5		<0.1				1				1							2
QJ	475	II3B	N2b	16G	7.5		0.1				1				1							?
QJ	476	II3B	N2b	16G	2.5		<0.1				1				1							2
QJ	477	II3B	N2b	16G	2.5		<0.1				1				1							3
QJ	478	II3B	N2b	16G	7.5		<0.1				1				1							2
QJ	479	II3B	N2b	16G	2.5		<0.1				1				1							2
QJ	480	II3B	N2b	16G	2.5		<0.1				1				1							2
QJ	481	II3B	N2b	16G	2.5		<0.1				1				1							2
QJ	482	II3B	N2b	16G	2.5		<0.1				1					1						2
QJ	483	II3B	N2b	16G	7.5		<0.1				1				1							2
QJ	484	II3B	N2b	16G	2.5		<0.1				1				1							2
QJ	485	II3B	N2b	16G	7.5		0.1				1					1						5
QJ	486	II3B	N2b	16G	7.5	7.5	0.1	1				?	0.6	1.3	1			1		1	1	2
QJ	487	II3B	N2b	16G	7.5		<0.1				1					1						2
QJ	488	II3B	N2b	4M	17.5	17.5	1.4	1				75	4.6	15.4	1			1				2
QJ	489	II3B	N2b	4M	12.5		0.6				1					1						2
QJ	490	II3B	N2b	4M	17.5	12.5	0.7	1				70	2.1	4.2		1						12
QJ	491	II3B	N2b	4M	12.5		0.5				1						1					2
QJ	492	II3B	N2b	4M	7.5		0.1			1					1							2
QJ	493	II3B	N2b	4M	7.5	7.5	0.2	1				45	2.4	9.1	1							12
QJ	494	II3B	N2b	4M	12.5		0.9				1					1						2
QJ	495	II3B	N2b	4M	17.5	17.5	0.8	1				40	3.1	11.9	1							10
QJ	496	II3B	N2b	4M	17.5		0.4				1				1							10
QJ	497	II3B	N2b	4M	17.5	12.5	1.4	1				50	5.6	13.9			1					2
QJ	498	II3B	N2b	16M	7.5		<0.1			1					1							10
QJ	500	II3B	N2b	16M	2.5		<0.1				1				1							2
QJ	501	II3B	N2b	16M	7.5		0.1				1				1							5
QJ	502	II3B	N2b	16M	7.5		0.1				1				1							2
QJ	503	II3B	N2b	16M	7.5		<0.1				1				1							12
QJ	504	II3B	N2b	16M	2.5		<0.1				1				1							12
QJ	505	II3B	N2b	16M	2.5	2.5	<0.1		1			85	0.6	2.4	1							2
QJ	506	II3B	N2b	16M	7.5		<0.1				1				1							2
QJ	507	II3B	N2b	16G	7.5		0.1			1					1							12
QJ	508	II3B	N2b	16G	12.5		0.3				1				1							14
QJ	509	II3B	N2b	16G	7.5		<0.1				1				1							2
QJ	510	II3B	N2b	16G	7.5		<0.1				1				1							2
QJ	511	II3B	N2b	16G	7.5		0.1				1				1							2
QJ	512	II3B	N2b	16G	2.5		<0.1				1				1							10

QJ	513	II3B	N2b	16G	2.5		<0.1			1					1							2
QJ	514	II3B	N2b	16G	7.5		0.1				1					1						2
QJ	515	II3B	N2b	16G	7.5		<0.1			1					1							2
QJ	516	II3B	N2b	16G	7.5		<0.1				1				1							2
QJ	517	II3B	N2b	16G	7.5	2.5	0.1	1				80	2.3	6.0	1							?
QJ	518	II3B	N2b	16G	7.5		<0.1				1				1							?
QJ	519	II3B	N2b	16G	7.5		0.1				1					1						2
QJ	520	II3B	N2b	16G	2.5		<0.1				1				1							2
QJ	521	II3B	N2b	4M	32.5		10.1				1						1					7
QJ	522	II3B	N2b	4M	17.5		0.4				1				1							10
QJ	523	II3B	N2b	4M	12.5		0.3				1					1						10
QJ	524	II3B	N2b	4M	17.5		1.3				1					1						8
QJ	525	II3B	N2b	4M	12.5		0.7				1				1							7
QJ	526	II3B	N2b	4M	12.5		0.3				1				1							10
QJ	527	II3B	N2b	4M	7.5		0.3				1				1							10
QJ	528	II3B	N2b	4M	17.5		0.6				1				1							?
QJ	529	II3B	N2b	4M	37.5	17.5	5.7	1				65	5.9	15.9	1							2
QJ	530	II3B	N2b	4M	12.5	7.5	0.2	1				85	2.8	6.5	1							2
QJ	531	II3B	N2b	4M	17.5		0.7				1				1							2
QJ	532	II3B	N2b	4M	12.5		0.6				1					1						2
QJ	533	II3B	N2b	4M	22.5		1.3				1				1							2
QJ	534	II3B	N2b	4M	7.5	12.5	0.3		1			70	0.8	8.0	1			1	1			2
QJ	535	II3B	N2b	4M	12.5		0.2				1				1							2
QJ	536	II3B	N2b	4M	12.5		0.1				1				1							2
QJ	537	II3B	N2b	4M	12.5	7.5	0.5	1				50	4.6	8.2		1						2
QJ	538	II3B	N2b	4G	7.5	12.5	0.2		1			75	2.6	8.3	1					1		10
QJ	539	II3B	N2b	4G																		
QJ	540	II3B	N2b	4G	12.5		0.4				1					1						2
QJ	541	II3B	N2b	4G	22.5	22.5	1.7		1			45	1.5	4.2	1					1	1	2
QJ	542	II3B	N2b	4G	17.5		1.5				1				1							2
QJ	543	II3B	N2b	4G	12.5		0.6				1						1					12
QJ	544	II3B	N2b	4G	7.5		0.1				1				1							?
QJ	545	II3B	N2c2c2	4G	17.5		0.6				1				1							7
QJ	546	II3B	N2c2c2	4G	17.5	12.5	0.8		1			70	0.8	2.8		1		1				2
QJ	547	II3B	N2c2c2	4G	7.5	7.5	0.1		1			65	0.7	1.8	1							2
QJ	548	II3B	N2c2c2	4G	22.5		3.8				1						1					2
QJ	549	II3B	N2c2c2	4G	7.5	12.5	0.3		1			85	1.5	7.9	1			1		1		2
QJ	550	II3B	N2c2c2	4G	12.5		0.2				1				1							2
QJ	551	II3B	N2c2c2	4G	12.5		0.2				1				1							2
QJ	552	II3B	N2c2c2	4G	12.5		0.1			1					1							2
QJ	553	II3B	N2c2c2	4G	7.5		0.1			1					1							2
QJ	554	II3B	N2c2c2	4G	7.5		0.1				1				1							4
QJ	555	II3B	N2c2c2	16M	7.5	12.5	0.1	1				?	0.9	10.1	1							2
QJ	556	II3B	N2c2c2	16M	2.5		<0.1				1				1							2
QJ	557	II3B	N2c2c2	16M	7.5		<0.1				1				1							2
QJ	558	II3B	N2c2c2	16M	2.5	7.5	<0.1	1				70	1.4	4.4	1			1				2
QJ	559	II3B	N2c2c2	16M	2.5		<0.1				1				1							2
QJ	560	II3B	N2c2c2	16M	2.5		<0.1				1				1							3
QJ	561	II3B	N2c2c2	16M	7.5		<0.1				1				1							2
QJ	562	II3B	N2c2c2	16M	2.5		<0.1			1					1							2
QJ	563	II3B	N2c2c2	4M	27.5		3.8				1						1					12
QJ	564	II3B	N2c2c2	4M	12.5		0.3			1					1							2
QJ	565	II3B	N2c2c2	4M	17.5		0.8			1						1						12

QJ	566	II3B	N2c2c2	4M	12.5		0.2				1					1						4
QJ	567	II3B	N2c2c2	4M	12.5		0.1			1					1							12
QJ	568	II3B	N2c2c2	4M	17.5		0.9				1						1					2
QJ	569	II3B	N2c2c2	4M	12.5		0.3				1					1						2
QJ	570	II3B	N2c2c2	4M	12.5	12.5	0.3		1			85	1.5	7.0		1				1		2
QJ	571	II3B	N2c2c2	4M	7.5		0.1			1					1							2
QJ	572	II3B	N2c2c2	4M	7.5		<0.1		1			?	0.9	3.4	1			1	1			2
QJ	573	II3B	N2c2c2	4M	12.5		0.1				1						1					2
QJ	574	II3B	N2c2c2	4M	7.5		0.1				1				1							2
QJ	575	II3B	N2c2c2	4M	12.5		0.1				1				1							14
QJ	576	II3B	N2c2c2	4M	12.5		0.1				1				1							2
QJ	577	II3B	N2c2c2	4M	12.5		0.1				1				1							2
QJ	578	II3B	N2c2c2	4M	7.5	7.5	0.2	1				85	2.9	10.7	1					1		2
QJ	579	II3B	N2c2c2	4M	7.5		0.1				1				1							2
QJ	580	II3B	N2c2c2	4M	12.5		0.2				1				1							14
QJ	581	II3B	N2c2c2	4M	7.5	7.5	0.1	1				75	1.1	7.3	1							2
QJ	582	II3B	N2c2c2	4M	7.5		0.1				1				1							2
QJ	583	II3B	N2c2c2	4M	17.5		0.3				1				1							2
QJ	584	II3B	N2c2c2	4M	17.5		0.6				1				1							2
QJ	585	II3B	N2c2c2	4M	12.5		0.1				1				1							2
QJ	586	II3B	N2c2c2	4M	17.5		1.6			1						1						2
QJ	587	II3B	N2c2c2	4M	22.5		1.9			1					1							2
QJ	588	II3B	N2c2c2	4M	7.5		0.1			1					1							2
QJ	589	II3B	N2c2c2	4M	17.5		0.9			1					1							2
QJ	590	II3B	N2c2c2	4M	12.5		0.9				1					1						2
QJ	591	II3B	N2c2c2	4M	7.5		0.1				1				1							2
QJ	592	II3B	N2c2c2	4M	12.5		0.5				1				1							2
QJ	593	II3B	N2c2c2	4M	32.5		1.5				1				1							10
QJ	594	II3B	N2c2c2	4M	7.5	7.5	0.2	1				55	1.9	7.2	1			1			1	10
QJ	595	II3B	N2c2c2	4M	17.5		0.5			1					1							5
QJ	596	II3B	N2c2c2	4M	7.5		0.2				1				1							2
QJ	597	II3B	N2c2c2	4M	12.5		0.1			1					1						1	12
QJ	598	II3B	N2c2c2	4M	7.5		0.3				1				1							5
QJ	599	II3B	N2c2c2	4M	12.5		0.6				1				1							5
QJ	600	II3B	N2c2c2	16M	12.5		0.1				1				1							2
QJ	601	II3B	N2c2c2	16M	7.5	12.5	0.1	1				65	1.8	6.5	1			1	1	1		2
QJ	602	II3B	N2c2c2	16M	7.5		0.1				1				1							2
QJ	603	II3B	N2c2c2	16M	7.5		<0.1				1				1							10
QJ	604	II3B	N2c2c2	16M	2.5		<0.1				1				1							10
QJ	605	II3B	N2c2c2	16M	2.5	2.5	<0.1	1				55	1.3	3.2	1					1		2
QJ	606	II3B	N2c2c2	16M	2.5	2.5	<0.1		1			85	1.0	4.3	1				1			2
QJ	607	II3B	N2c2c2	16M	7.5		<0.1				1				1							2
QJ	608	II3B	N2c2c2	16M	2.5		<0.1				1				1							2
QJ	609	II3B	N2c2c2	16M	2.5		<0.1			1					1							2
QJ	611	II3B	N2c2c2	16M	2.5	2.5	<0.1	1				?	0.6	2.1	1							2
QJ	612	II3B	N2c2c2	16M	2.5	7.5	<0.1		1			45	1.1	3.2	1			1			1	2
QJ	613	II3B	N2c2c2	16M	7.5	7.5	0.1		1			40	0.8	3.0	1			1				12
QJ	614	II3B	N2c2c2	16M	2.5	2.5	<0.1	1				?	0.5	1.8	1							12
QJ	615	II3B	N2c2c2	16M	7.5		<0.1				1				1							2
QJ	616	II3B	N2c2c2	16M	7.5		<0.1				1					1						2
QJ	617	II3B	N2c2c2	16M	7.5		<0.1				1				1							2
QJ	618	II3B	N2c2c2	16M	2.5		<0.1				1						1					2
QJ	619	II3B	N2c2c2	16M	2.5	2.5	<0.1	1				60	1.4	3.3	1			1				2

QJ	620	II3B	N2c2c2	16M	7.5		<0.1				1				1							14
QJ	621	II3B	N2c2c2	16M	7.5		<0.1			1					1							2
QJ	622	II3B	N2c2c2	16M	7.5		<0.1				1				1							14
QJ	623	II3B	N2c2c2	16M	2.5	7.5	<0.1		1			85	1.1	5.8	1							?
QJ	624	II3B	N2c2c2	16M	7.5		0.1				1					1						4
QJ	625	II3B	N2c2c2	16M	2.5	7.5	0.1	1				45	1.5	5.3	1							2
QJ	626	II3B	N2c2c2	16G	7.5		0.1				1					1						5
QJ	627	II3B	N2c2c2	16G	2.5	7.5	0.1		1			90	1.4	5.0		1						5
QJ	628	II3B	N2c2c2	16G	2.5		<0.1				1				1							2
QJ	629	II3B	N2c2c2	16G	7.5		<0.1				1				1							14
QJ	630	II3B	N2c2c2	16G	2.5	2.5	<0.1		1			?	0.3	1.8	1							2
QJ	631	II3B	N2c2c2	16G	2.5		<0.1				1				1							2
QJ	633	II3B	N2c2c2	16G	2.5		<0.1				1				1							2
QJ	634	II3B	N2c2c2	16G	7.5		0.1				1				1							2
QJ	635	II3B	N2c2c2	16G	7.5		<0.1				1					1						2
QJ	636	II3B	N2c2c2	16G	7.5		<0.1				1				1							2
QJ	637	II3B	N2c2c2	16G	7.5		0.1				1				1							2
QJ	638	II3B	N2c2c2	16G	2.5		<0.1				1				1							2
QJ	639	II3B	N2c2c2	16G	7.5	2.5	<0.1	1				55	0.8	2.0	1			1		1	1	2
QJ	640	II3B	N2c2c2	16G	2.5		<0.1				1				1							12
QJ	641	II3B	N2c2c2	16G	2.5		<0.1				1				1							2
QJ	642	II3B	N2c2c2	16G	12.5		<0.1				1				1							12
QJ	643	II3B	N2c2c2	16G	2.5		<0.1				1				1							3
QJ	644	II3B	N2c2c2	16G	7.5		<0.1			1					1						1	12
QJ	645	II3B	N2c2c2	16G	2.5	7.5	<0.1		1			?	1.3	1.1		1						2
QJ	646	II3B	N2c2c2	16G	2.5		<0.1				1				1							2
QJ	647	II3B	N2c2c2	16G	7.5		<0.1				1				1							4
QJ	648	II3B	N2c2c2	16G	2.5		<0.1				1					1						2
QJ	649	II3B	N2c2c2	16G	7.5		<0.1				1				1							2
QJ	650	II3B	N2c2c2	4M	17.5		1.7				1					1						4
QJ	651	II3B	N2c2c2	4M	7.5		0.1			1						1						4
QJ	652	II3B	N2c2c2	4M	22.5	17.5	1.5	1				60	1.5	4.1	1			1				2
QJ	653	II3B	E27	4M	7.5	12.5	0.1	1				30	2.4	7.6		1						4
QJ	654	II3B	E27	4M	12.5	12.5	0.3		1			55	1.1	3.8	1			1			1	12
QJ	655	II3B	E27	4M	12.5		0.1			1					1							2
QJ	666	II3B	E27	4M	12.5		0.8				1				1							2
QJ	667	II3B	E27	4M	7.5		0.4				1				1							2
QJ	668	II3B	E27	4M	22.5		0.5			1					1							2
QJ	669	II3B	E27	4M	17.5	7.5	0.4	1				55	1.2	3.7	1			1			1	2
QJ	670	II3B	E27	4M	12.5		0.6				1				1							3
QJ	671	II3B	E27	16M	7.5		<0.1				1				1							4
QJ	672	II3B	E27	16M	7.5		0.1				1				1							2
QJ	673	II3B	E27	16M	7.5		0.1				1				1							3
QJ	674	II3B	E34	16M																		
QJ	675	II3B	E34	4M	12.5		0.2				1				1							10
QJ	676	II3B	E34	4M	12.5		0.1			1					1							2
QJ	677	II3B	E34	4M	12.5		0.9				1				1							2
QJ	678	II3B	E34	4M	7.5		0.1				1				1							2
QJ	679	II3B	E34	4M	7.5		0.1				1				1							2
QJ	680	II3B	E34	4M	12.5		0.2				1				1							2
QJ	681	II3B	E34	4M	7.5		0.1															
QJ	682	II3B	E34	4M	7.5		0.3				1				1							3
QJ	741	II3B	E35i	16M	7.5		<0.1			1					1						1	2

QJ	742	II3B	E35i	16M	2.5		<0.1				1				1							10
QJ	743	II3B	E35i	16M	2.5		<0.1				1				1							10
QJ	744	II3B	E35i	16M	7.5		<0.1			1					1						1	2
QJ	745	II3B	E35i	16M	2.5		<0.1			1					1							2
QJ	746	II3B	E35i	16M	2.5		<0.1			1					1							2
QJ	747	II3B	E35i	16M	7.5		<0.1			1					1							2
QJ	748	II3B	E35i	16M	2.5		<0.1				1				1							10
QJ	749	II3B	E35i	16M	2.5	7.5	<0.1	1				70	0.6	5.3	1							2
QJ	750	II3B	E35i	16M	2.5		<0.1				1				1							2
QJ	751	II3B	E35i	16M	2.5		<0.1		1			?			1							2
QJ	752	II3B	E35i	16M	2.5	2.5	<0.1	1				70	0.8	3.1	1							10
QJ	753	II3B	E35i	16M	2.5		<0.1				1				1							10
QJ	754	II3B	E35i	16M	2.5	2.5	<0.1			1					1							2
QJ	755	II3B	E35i	16M	2.5	2.5	<0.1	1				40	1.0	2.1	1						1	4
QJ	756	II3B	E35i	16M	2.5		<0.1				1				1							12
QJ	758	II3B	E35ib	4M	17.5	22.5	2.3		1			90	3.2	9.2			1					4
QJ	759	II3B	E35ib	4M	22.5		0.6				1					1						2
QJ	760	II3B	E35ib	4M	12.5		0.2				1				1							2
QJ	761	II3B	E35ib	4M	12.5		0.3				1				1							4
QJ	762	II3C	N1	4M	32.5		7.6				1				1							7
QJ	763	II3C	N1	4M	17.5		1.3				1					1						2
QJ	764	II3C	N1	4M	7.5	7.5	0.2		1			?	1.4	5.9	1				1		1	2
QJ	765	II3C	N1	4M	7.5	12.5	0.3	1				80	2.6	9.1						1		2
QJ	766	II3C	N1	4M	12.5	7.5	0.2	1				55	1.4	3.0	1				1	1	1	2
QJ	767	II3C	N1	4M	17.5		2				1						1					2
QJ	768	II3C	N1	4M	12.5		0.7				1					1						2
QJ	769	II3C	N1	4M	7.5		0.3				1						1					5
QJ	770	II3C	N1	4M	22.5		3				1						1					2
QJ	771	II3C	N1	4M	12.5	12.5	0.3	1				70	0.9	6.0	1						1	4
QJ	772	II3C	N1	4M	7.5	7.5	0.2	1				90	2.2	6.9			1					10
QJ	775	II3C	N1	16M	7.5		0.1		1			?			1						1	12
QJ	776	II3C	N1	16M	2.5	2.5	<0.1	1				25	2.0	2.9		1		1	1	1		6
QJ	777	II3C	N1	16M	2.5	7.5	0.1	1				65	2.5	7.3	1			1			1	14
QJ	778	II3C	N1	16M	7.5		<0.1				1				1							2
QJ	779	II3C	N1	16M	2.5	2.5	<0.1		1			85	1.2	2.5	1					1	1	14
QJ	780	II3C	N1	16M	2.5		<0.1			1						1					1	12
QJ	781	II3C	N1	16M	7.5		0.1				1				1							7
QJ	782	II3C	N1	16M	2.5	2.5	<0.1		1			45	1.4	3.5	1					1	1	2
QJ	783	II3C	N1	16M	7.5		0.1			1					1						1	2
QJ	784	II3C	N1	16M	2.5	2.5	<0.1	1				?	1.1	2.6	1						1	2
QJ	785	II3C	N1	16M	2.5		<0.1			1					1						1	2
QJ	786	II3C	N1	16M	2.5		<0.1				1				1							3
QJ	787	II3C	N1	16M	2.5		<0.1			1					1						1	2
QJ	788	II3C	N1	16M	7.5		<0.1				1				1							2
QJ	823	II3C	N1c	16G	17.5		0.3				1				1							2
QJ	824	II3C	N1c	16G	12.5	7.5	0.2	1				65	1.1	3.1	1			1			1	2
QJ	825	II3C	N1c	16G	12.5		0.2				1				1							14
QJ	826	II3C	N1c	16G	7.5		0.1			1					1						1	10
QJ	827	II3C	N1c	16G	2.5		<0.1				1				1							12
QJ	828	II3C	N1c	16G	2.5		<0.1				1				1							3
QJ	829	II3C	N1c	16G	7.5		<0.1			1					1						1	2
QJ	830	II3C	N1c	16G	7.5	7.5	<0.1	1				?	0.9	2.5	1			1			1	2
QJ	831	II3C	N1c	16G	7.5		<0.1				1				1							10

QJ	832	II3C	N1c	16G	2.5		<0.1				1					1						2
QJ	833	II3C	N1c	16G	2.5	7.5	<0.1	1				75	1.2	5.0	1					1		2
QJ	834	II3C	N1c	16G	7.5		0.1			1					1						1	2
QJ	835	II3C	N1c	16G	7.5		0.1			1					1						1	2
QJ	836	II3C	N1c	16G	7.5		0.1				1				1							4
QJ	837	II3C	N1c	16G	12.5		0.2				1					1						12
QJ	838	II3C	N1c	16G	2.5		<0.1			1					1							2
QJ	839	II3C	N1c	16G	7.5		<0.1			1					1						1	2
QJ	840	II3C	N1c	16G	7.5		<0.1				1					1						2
QJ	841	II3C	N1c	16G	7.5		0.2			1					1						1	4
QJ	842	II3C	N1c	16G	7.5		<0.1			1					1							2
QJ	843	II3C	N1c	16G	2.5	7.5	0.1	1				70	2.4	8.0			1					3
QJ	844	II3C	N1c	16G	2.5	7.5	<0.1	1				?	0.5	3.7	1						1	12
QJ	845	II3C	N1c	16G	7.5		<0.1			1					1						1	2
QJ	846	II3C	N1c	16G	12.5		0.1			1					1						1	4
QJ	847	II3C	N1c	16G	7.5		0.1			1					1						1	12
QJ	848	II3C	N1c	16G	7.5		<0.1				1				1							2
QJ	849	II3C	N1c	16G	7.5		<0.1			1					1						1	12
QJ	850	II3C	N1c	16G	7.5		0.1				1				1							2
QJ	851	II3C	N1c	16G	12.5		0.1				1				1							12
QJ	852	II3C	N1c	16G	7.5		0.1			1						1					1	4
QJ	853	II3C	N1c	16G	7.5		0.1			1					1						1	2
QJ	854	II3C	N1c	16G	12.5		0.1			1					1						1	2
QJ	855	II3C	N1c	16G	7.5	7.5	0.1	1				75	2.1	8.0		1						5
QJ	856	II3C	N1c	16G																		
QJ	857	II3C	N1c	16G	2.5	2.5	<0.1	1				?	0.3	3.1	1						1	12
QJ	858	II3C	N1c	16G	7.5		0.1			1					1						1	2
QJ	859	II3C	N1c	16G	7.5		0.1			1					1						1	2
QJ	860	II3C	N1c	16G	7.5		0.1				1				1							2
QJ	861	II3C	N1c	16G	7.5		0.1				1				1							5
QJ	862	II3C	N1c	16G	7.5	2.5	<0.1	1				55	1.8	4.1	1							12
QJ	863	II3C	N1c	16G	7.5		0.1				1				1							2
QJ	864	II3C	N1c	16G	7.5	7.5	0.1	1				75	1.0	3.1	1							2
QJ	865	II3C	N1c	16G	7.5		0.2				1				1							5
QJ	866	II3C	N1c	16G	7.5		0.1			1					1						1	2
QJ	867	II3C	N1c	16G	2.5		<0.1				1				1							12
QJ	868	II3C	N1c	16M	7.5		0.1				1				1							10
QJ	869	II3C	N1c	16M	7.5		0.2										1					2
QJ	870	II3C	N1c	16M	7.5	7.5	0.1	1				55	1.4	4.8	1							2
QJ	871	II3C	N1c	16M	2.5	7.5	<0.1	1				?	0.9	2.2	1							2
QJ	872	II3C	N1c	16M	2.5		<0.1			1					1						1	2
QJ	873	II3C	N1c	16M	2.5		<0.1				1				1							10
QJ	874	II3C	N1c	16M	2.5		<0.1				1				1							10
QJ	875	II3C	N1c	16M	7.5		<0.1			1					1							12
QJ	876	II3C	N1c	16M	2.5	7.5	0.1	1				90	2.2	5.2	1						1	4
QJ	877	II3C	N1c	16M	7.5		<0.1				1					1						4
QJ	878	II3C	N1c	4M	7.5	12.5	0.3		1			70	2.0	9.7	1					1		10
QJ	879	II3C	N1c	4M	12.5	17.5	0.7	1				60	2.6	13.9				1				10
QJ	880	II3C	N1c	4M	12.5		0.4				1					1						10
QJ	881	II3C	N1c	4M	27.5		3.1				1				1							2
QJ	882	II3C	N1c	4M	12.5		0.2			1					1						1	2
QJ	883	II3C	N1c	4M	17.5	7.5	0.8	1				75	3.9	7.1		1					1	3
QJ	884	II3C	N1c	4M	17.5		0.2			1					1						1	2

QJ	885	II3C	N1c	4M	22.5		0.9				1					1						5
QJ	886	II3C	N1c	4M	7.5		0.2				1						1					2
QJ	887	II3C	N1iii	4M	7.5	12.5	0.2	1				85	2.1	6.7	1			1	1	1	1	14
QJ	888	II3C	N1iii	4M	12.5		0.3				1				1							5
QJ	889	II3C	N1iii	4M	7.5		0.1				1						1					2
QJ	890	II3C	N1iii	4M	17.5		0.6				1				1							5
QJ	891	II3C	N1iii	4M	7.5		0.1				1						1					14
QJ	892	II3C	N1iii	4M	17.5	7.5	0.6	1				90	3.9	5.1	1						1	3
QJ	893	II3C	N1iii	4M	7.5	7.5	0.1	1				70	2.3	6.7	1							4
QJ	894	II3C	N1iii	4M	12.5		0.3			1					1						1	4
QJ	895	II3C	N1iii	4M	37.5	22.5	5.2		1			65	5.0	14.0	1							10
QJ	896	II3C	N1iii	16M	12.5	7.5	0.1	1				65	1.4	3.7	1						1	2
QJ	897	II3C	N1iii	16M	2.5		<0.1				1				1							10
QJ	898	II3C	N1iii	16M	2.5		<0.1				1				1							14
QJ	899	II3C	N1iii	16M	2.5	2.5	<0.1	1				45			1							2
QJ	900	II3C	N1iii	16M	7.5		<0.1			1					1						1	14
QJ	901	II3C	N1iii	16M	7.5		<0.1			1					1						1	2
QJ	902	II3C	N1iii	16M	2.5		<0.1				1				1							10
QJ	903	II3C	N1iii	16M	7.5		<0.1			1					1						1	12
QJ	904	II3C	N1iii	16M	7.5	2.5	<0.1	1				90	2.0	4.1	1			1	1		1	12
QJ	905	II3C	N1iii	16M																		
QJ	906	II3C	N2b	16M	12.5		0.2				1				1							2
QJ	907	II3C	N2b	16M	7.5		0.1				1				1							14
QJ	908	II3C	N2b	16M																		
QJ	909	II3C	N2b	16M	7.5	2.5	0.1	1				80	1.2	5.1	1						1	12
QJ	910	II3C	N2b	16M	7.5		<0.1				1				1							10
QJ	911	II3C	N2b	16M	2.5		<0.1				1				1							3
QJ	912	II3C	N2b	16M	2.5	2.5	<0.1	1				50	1.5	4.7	1			1				4
QJ	913	II3C	N2b	16M	7.5		<0.1				1				1							14
QJ	914	II3C	N2b	4G	7.5		0.2				1				1							2
QJ	915	II3C	N2b	4G	7.5	12.5	0.4		1			40	2.2	9.8	1			1	1		1	2
QJ	916	II3C	N2b	4G	17.5		0.3			1					1							2
QJ	917	II3C	N2b	4G	12.5		0.5		1			?					1					2
QJ	918	II3C	N2b	4G	12.5		0.4				1				1							3
QJ	919	II3C	N2b	4G	7.5	7.5	0.1		1			85	0.7	6.8	1						1	2
QJ	920	II3C	N2b	4G	12.5		0.1			1					1						1	2
QJ	921	II3C	N2b	4G	7.5		0.3				1				1							14
QJ	922	II3C	N2b	4G	7.5	7.5	0.1		1			?	1.1	5.5	1						1	2
QJ	923	II3C	N2b	4G	7.5		<0.1			1					1						1	2
QJ	924	II3C	N2b	4G	12.5		0.1				1				1							2
QJ	925	II3C	N2b	4G	2.5	7.5	<0.1	1				?	0.9	2.8	1			1			1	2
QJ	926	II3C	N2b	4G	12.5		0.1			1					1						1	2
QJ	927	II3C	N2b	4G	7.5		0.2				1						1					14
QJ	928	II3C	N2b	4G	12.5	7.5	0.1	1				80	2.2	5.0	1			1			1	2
QJ	929	II3C	N2b	4G	17.5	17.5	1.1			1					1						1	2
QJ	930	II3C	N2b	4G	22.5		1.3				1				1							5
QJ	931	II3C	N2b	4G	37.5	22.5	8.1	1				50	10.2	16.9			1					2
QJ	932	II3C	N2b	4G	37.5	22.5	4.5	1				45	8.5	15.2	1			1			1	10
QJ	933	II3C	N2b	4G	27.5	32.5	5.7	1				90	7.5	23.4	1						1	8
QJ	934	II3C	N2b	4G	37.5		3.4				1				1							8
QJ	935	II3C	N2b	4G	7.5	12.5	0.3		1			50	1.7	4.9	1			1	1	1	1	4
QJ	936	II3C	N2b	4G	22.5	27.5	6.7		1			75	3.6	10.6	1							4
QJ	937	II3C	N2b	4G	17.5	7.5	0.4	1				35	2.9	11.3	1							10

QJ	938	II3C	N2b	4G	12.5		0.4				1				1							10
QJ	939	II3C	N2b	4G	12.5		0.3				1				1							10
QJ	940	II3C	N2b	4G	7.5	2.5	0.1	1				?	1.0	2.5	1			1			1	4
QJ	941	II3C	N2b	4G	17.5		0.7				1					1						10
QJ	942	II3C	N2b	16G	7.5		0.1			1						1					1	2
QJ	943	II3C	N2b	16G																		
QJ	944	II3C	N2b	16G	2.5	2.5	<0.1		1			85	0.7	4.7	1							2
QJ	945	II3C	N2b	16G	2.5		<0.1				1				1							2
QJ	946	II3C	N2b	16G	7.5		0.1			1					1						1	2
QJ	947	II3C	N2b	16G	7.5	7.5	0.1	1				75	1.3	6.7	1							4
QJ	948	II3C	N2b	16G	7.5	2.5	<0.1	1				60	1.4	5.1	1						1	2
QJ	949	II3C	N2b	16G	7.5		0.1				1				1							2
QJ	950	II3C	N2b	16G	2.5	7.5	0.1		1			80	1.5	3.3	1						1	2
QJ	951	II3C	N2b	16G	7.5		<0.1				1				1							2
QJ	952	II3C	N2b	16G	12.5		<0.1			1					1							12
QJ	953	II3C	N2b	16G	7.5		0.1			1					1						1	2
QJ	954	II3C	N2b	16G	2.5	2.5	<0.1	1				80	1.5	4.1	1							2
QJ	955	II3C	N2b	16G	7.5		0.1			1					1							2
QJ	956	II3C	N2b	16G	2.5	2.5	<0.1	1				?	0.6	1.8	1							2
QJ	957	II3C	N2b	16G	7.5	7.5	<0.1		1			?	0.9	2.6	1			1			1	12
QJ	958	II3C	N2b	16G	7.5		<0.1			1					1						1	2
QJ	959	II3C	N2b	16G	7.5	7.5	0.2		1			90	1.6	4.1	1			1			1	2
QJ	960	II3C	N2b	16G	7.5	7.5	<0.1	1				?	0.7	2.7	1							2
QJ	961	II3C	N2b	16G	7.5		<0.1				1					1						2
QJ	962	II3C	N2b	16G	7.5		<0.1				1				1							2
QJ	963	II3C	N2b	16G	7.5		<0.1				1				1							2
QJ	964	II3C	N2b	16G	2.5		<0.1				1				1							14
QJ	965	II3C	N2b	16G																		
QJ	966	II3C	N2b	16G																		
QJ	967	II3C	N2b	16G	7.5		0.2			1					1						1	2
QJ	968	II3C	N2b	4G	27.5	27.5	2.5			1					1							2
QJ	969	II3C	N2b	4G	17.5	17.5	1.3	1				60	3.0	11.3	1			1			1	2
QJ	970	II3C	N2b	4G	22.5		0.3			1					1						1	2
QJ	971	II3C	N2b	4G	7.5	12.5	0.3		1			80	2.1	4.1	1			1	1		1	2
QJ	972	II3C	N2b	4G	7.5	7.5	0.1	1				75	2.1	9.8	1							14
QJ	973	II3C	N2b	4G	7.5		<0.1				1				1							2
QJ	974	II3C	N2b	4G	12.5	7.5	0.3		1			90	1.8	4.7	1						1	10
QJ	975	II3C	N2b	16G	7.5	2.5	0.1	1				85	1.7	3.3	1						1	3
QJ	976	II3C	N2b	16G	12.5		0.1				1				1							2
QJ	977	II3C	N2b	16G	2.5		<0.1				1				1							2
QJ	978	II3C	N2b	16G	2.5	2.5	<0.1		1			45	1.3	2.9	1			1	1		1	2
QJ	979	II3C	N2b	16G	7.5	2.5	<0.1	1				85	1.5	3.1	1							12
QJ	980	II3C	N2b	4M	12.5	12.5	0.2	1				90	2.4	6.4		1			1		1	2
QJ	981	II3C	N2b	4M	7.5	12.5	0.2	1				75	3.2	7.9	1					1		2
QJ	982	II3C	N2b	4M	17.5		0.3			1					1						1	12
QJ	983	II3C	N2b	4M	12.5	7.5	0.6	1				75	7.7	10.5	1							5
QJ	984	II3C	N2b	4M	17.5	17.5	1.4	1				85	3.3	13.2	1						1	10
QJ	985	II3C	N2b	4M	12.5		0.2				1				1							10
QJ	986	II3C	N2b	4M	12.5	17.5	0.6	1				35	1.7	7.9	1			1				10
QJ	990	II3C	N2c+2c2	4G	12.5	12.5	0.4	1				60	2.8	10.9	1			1		1	1	2
QJ	991	II3C	N2c+2c2	4G	7.5	7.5	0.1		1			90	1.4	4.3	1			1				2
QJ	996	II3C	N2c+2c2	16M	2.5	7.5	<0.1	1				40	1.3	4.8	1						1	2
QJ	997	II3C	N2c+2c2	16M	7.5		0.1			1					1						1	2

QJ	998	II3C	N2c+2c2	16M	7.5	2.5	<0.1		1			?	0.4	1.5		1					1	2
QJ	999	II3C	N2c+2c2	16M	2.5	7.5	<0.1	1				90	1.2	6.8	1							12
QJ	1000	II3C	N2c+2c2	16M	7.5		0.1			1						1						2
QJ	1001	II3C	N2c+2c2	16M	7.5		<0.1			1						1						2
QJ	1002	II3C	N2c+2c2	16M	7.5	2.5	<0.1	1				60	1.0	4.1	1							14
QJ	1003	II3C	N2c+2c2	16M	7.5	7.5	<0.1	1				85	1.0	4.6	1							4
QJ	1004	II3C	N2c+2c2	16M	7.5		<0.1				1				1							2
QJ	1005	II3C	N2c+2c2	16M	2.5	7.5	<0.1	1				50	1.5	6.6	1			1				10
QJ	1006	II3C	N2c+2c2	16M	2.5	2.5	<0.1		1			?	0.9	2.4	1			1				2
QJ	1007	II3C	N2c+2c2	16M	2.5		<0.1				1				1							10
QJ	1008	II3C	N2c+2c2	16M	2.5	2.5	<0.1	1				90	0.8	5.0	1							4
QJ	1009	II3C	N2c+2c2	16M	2.5		<0.1			1					1						1	2
QJ	1010	II3C	N2c+2c2	16M	2.5		<0.1				1				1							2
QJ	1011	II3C	N2c+2c2	16M	7.5		0.1				1				1							10
QJ	1012	II3C	N2c+2c2	16M	7.5	2.5	<0.1	1				?	1.2	2.0	1			1	1		1	2
QJ	1013	II3C	N2c+2c2	4M	12.5	7.5	0.2	1				25	1.8	4.2	1			1			1	2
QJ	1014	II3C	N2c+2c2	4M	12.5		0.1			1					1						1	2
QJ	1015	II3C	N2c+2c2	4M	7.5	7.5	0.5		1			85	1.8	4.8	1				1		1	2
QJ	1016	II3C	N2c+2c2	4M	7.5		0.3			1					1							2
QJ	1017	II3C	N2c+2c2	4M	7.5		0.1			1					1						1	2
QJ	1018	II3C	N2c+2c2	4M	2.5	7.5	0.1	1				60	1.9	5.5	1			1		1	1	2
QJ	1019	II3C	N2c+2c2	4M	12.5	12.5	0.4		1			70	1.1	3.7	1						1	12
QJ	1020	II3C	N2c+2c2	4M	7.5		<0.1			1					1						1	2
QJ	1021	II3C	N2c+2c2	4M	7.5	7.5	0.1	1				25	3.0	8.5	1				1			2
QJ	1022	II3C	N2c+2c2	4M	7.5	7.5	1	1				?	2.3	10.0	1							4
QJ	1023	II3C	N2c+2c2	4M	7.5	7.5	0.1	1				60	1.8	6.0	1					1		4
QJ	1024	II3C	N2c+2c2	4M	7.5		0.5				1				1							4
QJ	1025	II3C	N2c+2c2	4M	7.5	12.5	0.2	1				45	1.6	4.5	1							4
QJ	1026	II3C	N2c+2c2	16G	7.5	2.5	<0.1	1				60	1.6	3.0	1							2
QJ	1027	II3C	N2c+2c2	16G	7.5		<0.1				1				1							2
QJ	1028	II3C	N2c4	4G	7.5	7.5	0.1		1			80	0.9	2.0	1							4
QJ	1029	II3C	N2c4	16G	7.5		0.2				1				1							4
QJ	1030	II3C	N2c4	16M	2.5	7.5	<0.1		1			55	1.0	5.4	1						1	2
QJ	1031	II3C	N2c4	16M	2.5		<0.1			1					1						1	2
QJ	1032	II3C	N2c4	4M	22.5		3				1						1					4
QJ	1033	II3C	N2c4	4M	17.5		1.1				1						1					2
QJ	1034	II3C	N2c4	4M	7.5	7.5	0.3			1						1						2
QJ	1035	II3C	N2c4	4M	12.5	7.5	0.1	1				80	1.4	3.6	1						1	2
QJ	1036	II3C	N2c4	4M	12.5	12.5	0.8		1			75	4.6	11.9	1					1	1	2
QJ	1037	II3C	N2c4	4M	7.5		0.1			1					1						1	2
QJ	1038	II3C	N2c4	4M	12.5		0.3				1					1						4
QJ	1039	II3C	N2c4	4M	7.5	7.5	0.1		1			?	0.7	3.4	1							2
QJ	1040	II3C	N2c4	4M	7.5	12.5	0.1	1				80	0.6	2.2	1					1	1	2
QJ	1041	II3C	N2c4	4M	7.5	12.5	<0.1		1			70	1.1	4.7	1							4
QJ	1042	II3C	N2c4	4M	12.5	7.5	0.2	1				?	1.3	4.7	1				1		1	2
QJ	1043	II3C	N2c4	4M	12.5		0.6				1					1						5
QJ	1044	II3C	N2c4	4M	22.5		0.9				1				1							4
QJ	1045	II3C	E42	4M	42.5		2.7			1					1						1	2
QJ	1046	II3C	E42	4M	17.5		0.7			1						1					1	2
QJ	1047	II3C	E42	4M	12.5		0.3			1					1						1	2
QJ	1048	II3C	E42	4M	17.5		0.2			1					1						1	2
QJ	1049	II3C	E42	4M	7.5	7.5	0.3		1			?	1.3	4.2	1			1			1	2
QJ	1050	II3C	E42	4M	7.5	12.5	0.2	1				70	2.2	6.4	1			1				2

QJ	1051	II3C	E42	4M	12.5		1.3			1					1						1	12
QJ	1052	II3C	E42	4M	7.5		0.1				1				1							4
QJ	1053	II3C	E42	4M	2.5	2.5	<0.1		1			?	1.3	3.3	1				1		1	2
QJ	1054	II3C	E42	4M	2.5	2.5	<0.1	1				55	0.7	1.6	1							2
QJ	1055	II3C	E45	4M	22.5	17.5	1.7	1				40	2.7	10.2	1			1	1	1	1	2
QJ	1056	II3C	E45	4M	22.5		2.2			1						1					1	2
QJ	1057	II3C	E45	4M																		
QJ	1058	II3C	E45	4M	12.5		0.4			1						1					1	2
QJ	1059	II3C	E45	4M	7.5		0.1			1					1						1	2
QJ	1060	II3C	E45	4M	7.5		0.1			1					1						1	2
QJ	1061	II3C	E45	4M	7.5		0.3				1				1							14
QJ	1062	II3C	E45	4M	7.5		0.1			1						1					1	2
QJ	1063	II3C	E45	4M	17.5	22.5	1.3	1				75	3.6	13.9	1						1	10
QJ	1064	II3C	E45	16M	2.5	2.5	<0.1	1				90	0.9	5.0		1						2
QJ	1065	II3C	E45	16M	2.5		<0.1			1					1						1	2
QJ	1066	II3C	E45	16M	2.5	2.5	<0.1	1				75	0.7	2.1	1							2
QJ	1067	II3C	E45	16M	2.5	2.5	<0.1		1			35	1.0	2.6	1						1	2
QJ	1068	II3C	E45	16M	2.5		<0.1				1				1							2
QJ	1069	II3C	E45	16M	7.5		<0.1			1					1						1	12
QJ	1070	II3C	E45	16M	7.5	2.5	<0.1	1				50	1.6	3.6	1						1	2
QJ	1071	II3C	E45	16M	7.5		<0.1				1				1							2
QJ	1072	II3C	E45	16M	7.5		0.2				1				1							2
QJ	1073	II3C	E45	16M	12.5	2.5	0.1	1				?	1.2	3.2		1						2
QJ	1074	II3C	E45	16M	7.5	12.5	<0.1	1				75	1.4	3.6	1						1	2
QJ	1075	II3C	E45	16M	2.5		<0.1			1					1						1	2
QJ	1076	II3C	E45	16M	7.5	2.5	<0.1		1			?	0.7	2.6	1				1		1	2
QJ	1077	II3C	E45	16M	7.5		<0.1				1				1							2
QJ	1078	II3C	E45	16M	2.5	7.5	<0.1	1				90	1.4	5.9	1							2
QJ	1079	II3C	E45	16M	7.5	7.5	<0.1	1				75	0.6	4.8	1							2
QJ	1080	II3C	E49	16M	2.5	2.5	<0.1		1			?	0.5	2.3	1							2
QJ	1081	II3C	E49	16M	2.5		<0.1				1				1							2
QJ	1082	II3C	E49	16M	2.5		<0.1				1				1							2
QJ	1083	II3C	E49	4M	27.5	12.5	0.8	1				85	1.6	3.6	1			1	1		1	2
QJ	1084	II3C	E50	16M	2.5	7.5	<0.1	1				70	0.7	3.9	1							2
QJ	1085	II3C	E50	16M	2.5	2.5	<0.1	1				50	1.1	1.7	1							2
QJ	1086	II3C	E50	16M	7.5	2.5	<0.1		1			70	1.0	4.8	1						1	2
QJ	1087	II3C	E50	4M	17.5	22.5	1.4		1			40	1.6	4.8	1			1	1	1	1	12
QJ	1088	II3C	E51	16M	2.5		<0.1				1				1							2
QJ	1089	II3C	E51	16M	7.5		<0.1			1					1						1	2
QJ	1090	II3C	E51	4M	17.5		0.3			1					1							2
QJ	1091	II3C	E51	4M	12.5	7.5	0.2	1				60	1.9	4.2	1						1	2
QJ	1332	II3B	E28+28i	16G	12.5		0.1				1				1							12
QJ	1333	II3B	E28+28i	16G	7.5	7.5	<0.1	1				65	1.2	3.4	1			1			1	2
QJ	1334	II3B	E28+28i	16G	2.5	2.5	<0.1	1				45	1.9	4.2	1					1	1	2
QJ	1335	II3B	E28+28i	16G	2.5	7.5	<0.1		1			?	0.4	1.3	1							2
QJ	1336	II3B	E28+28i	16G	7.5		<0.1			1					1						1	2
QJ	1337	II3B	E28+28i	16G	12.5	7.5	0.2	1				45	3.8	7.2	1			1			1	2
QJ	1338	II3B	E28+28i	16G	7.5		<0.1				1				1							2
QJ	1339	II3B	E28+28i	16G	7.5		<0.1				1				1							2
QJ	1340	II3B	E28+28i	4G	12.5		0.2			1					1						1	10
QJ	1341	II3B	E28+28i	4G																		2
QJ	1342	II3B	E28+28i	4G	12.5	7.5	0.2		1			75	2.2	7.0	1			1			1	12
QJ	1343	II3B	E28+28ii	16G	7.5	2.5	<0.1		1			?	1.0	2.1	1			1			1	14

QJ	1344	II3B	E28+28ii	16G	7.5		0.1				1						1					2
QJ	1345	II3B	E28+28ii	16G	7.5	2.5	<0.1	1				60	0.9	1.5	1						1	2
QJ	1346	II3B	E28+28ii	16G	2.5	7.5	0.1		1			75	1.9	4.2	1			1			1	2
QJ	1347	II3B	E28+28ii	16G	7.5	7.5	<0.1		1			?	0.8	1.7	1						1	2
QJ	1348	II3B	E28+28ii	16G	7.5		0.1				1					1						2
QJ	1349	II3B	E28+28ii	16G	12.5		0.1				1					1						2
QJ	1350	II3B	E28+28ii	16G	7.5		<0.1				1				1							2
QJ	1351	II3B	E28+28ii	16G	7.5	7.5	0.1		1			75	2.0	3.9	1						1	2
QJ	1352	II3B	E28+28ii	16G	2.5		<0.1				1				1							2
QJ	1353	II3B	E28+28ii	16G	12.5		0.1				1				1							10
QJ	1354	II3B	E28+28ii	16G	2.5		<0.1				1				1							2
QJ	1355	II3B	E28+28ii	16G	2.5	2.5	<0.1	1				35	1.1	2.8	1							2
QJ	1356	II3B	E28+28ii	16G	7.5		<0.1			1					1						1	2
QJ	1357	II3B	E28+28ii	16G	7.5		0.1				1				1							2
QJ	1358	II3B	E28+28ii	16G	7.5	7.5	0.2		1			85	2.1	4.4		1						2
QJ	1359	II3B	E28+28ii	16G	2.5	7.5	0.1		1			40	1.2	5.0	1			1	1	1	1	12
QJ	1360	II3B	E28+28ii	16G	7.5	7.5	0.1	1				70	2.5	7.8	1						1	2
QJ	1361	II3B	E28+28ii	16G	2.5	7.5	<0.1		1			?	0.6	3.6	1							2
QJ	1362	II3B	E28+28ii	16G	7.5		<0.1				1				1							2
QJ	1363	II3B	E28+28ii	16G	7.5	2.5	<0.1	1				55	1.1	3.5	1						1	4
QJ	1364	II3B	E28+28ii	16G	2.5		<0.1				1				1							10
QJ	1365	II3B	E28+28ii	16G	7.5	2.5	<0.1	1				?	0.8	2.5	1						1	2
QJ	1366	II3B	E28+28ii	16G	2.5	7.5	<0.1	1				70	1.0	2.0	1						1	2
QJ	1367	II3B	E28+28ii	16G	7.5		0.1				1				1							2
QJ	1368	II3B	E28+28ii	16G	7.5		<0.1				1				1							2
QJ	1369	II3B	E28+28ii	16G	2.5		<0.1				1				1							2
QJ	1370	II3B	E28+28ii	4G	32.5	32.5	6.1	1				65	6.3	15.8	1			1			1	10
QJ	1371	II3B	E28+28ii	4G	7.5		0.4				1				1							10
QJ	1372	II3B	E28+28ii	4G	7.5	7.5	0.1	1				70	1.7	8.7	1			1		1		10
QJ	1373	II3B	E28+28ii	4G	12.5		0.1			1					1						1	4
QJ	1374	II3B	E28+28ii	4G	17.5		0.6				1				1							7
QJ	1375	II3B	E28+28ii	4G	22.5		0.8			1						1					1	4
QJ	1376	II3B	E28+28ii	4G	7.5	12.5	0.1		1			?	0.8	2.2	1						1	2
QJ	1377	II3B	E28+28ii	4G	12.5	12.5	1		1			75	3.9	12.5	1			1			1	9
QJ	1378	II3B	E28+28ii	4G	12.5		0.1				1				1							2
QJ	1379	II3B	E28+28ii	16G	7.5		<0.1			1					1						1	ob
QJ	1384	II3B	E69bi	4M	22.5		0.7				1					1						12
QJ	1385	II3B	E69bi	4M	12.5		0.3			1							1					2
QJ	1386	II3B	E69bi	4M	17.5		0.8			1					1						1	2
QJ	1387	II3B	E69bi	4M	12.5		0.1			1					1						1	2
QJ	1388	II3B	E69bi	4M	7.5	12.5	0.1	1				85	1.2	2.6	1							2
QJ	1389	II3B	E69bi	4M	12.5		0.3				1				1							5
QJ	1390	II3B	E69bi	16M	7.5		<0.1				1				1							10
QJ	1391	II3B	E69bi	16M	7.5		0.1				1				1							10
QJ	1392	II3B	E69bi	16M	12.5		0.2				1					1						4
QJ	1393	II3B	E69bi	16M	7.5		0.1			1					1						1	2
QJ	1394	II3B	E69bi	16M	7.5	12.5	0.1	1				70	1.9	9.8	1							2
QJ	1395	II3B	E69bib	4M	12.5		0.1			1					1						1	12
QJ	1396	II3B	E69bib	4M	12.5		0.2			1					1						1	14
QJ	1397	II3B	E69bib	16M	7.5		<0.1			1					1						1	2
QJ	1398	II3B	E69bib	16M	12.5		0.1				1				1							2
QJ	1399	II3B	E69bib	16M	2.5	2.5	<0.1	1				45	1.0	4.5	1			1	1		1	2
QJ	1400	II3B	E69bib	16M	7.5	2.5	<0.1	1				85	1.0	5.0		1						2

QJ	1401	II3B	E82	4M	12.5		0.1			1					1						1	2
QJ	1402	II3B	E82	4M	17.5	12.5	0.8		1			75	4.3	5.8	1			1	1		1	2
QJ	1403	II3B	E82	4M	12.5	22.5	1	1				?	1.0	8.5	1			1			1	2
QJ	1404	II3B	E82	4M	12.5		0.1			1					1						1	2
QJ	1405	II3B	E82	4M	12.5		0.3				1						1					2
QJ	1406	II3B	E82	16M	7.5		<0.1			1					1						1	10
QJ	1407	II3B	E82	16M																		
QJ	1408	II3B	E82	16M	7.5		0.1				1				1							2
QJ	1409	II3B	E82	16M	7.5		0.1				1						1					2
QJ	1410	II3B	E83	4M	12.5		0.1				1				1							2
QJ	1411	II3B	E83	4M	12.5	12.5	0.3	1				90	1.1	9.2	1			1		1	1	2
QJ	1412	II3B	E83	4M	12.5	7.5	0.4		1			70	3.6	8.0	1						1	5
QJ	1413	II3B	E83	4M	7.5		0.3				1				1							3
QJ	1414	II3B	E83	16M	7.5		0.1				1				1							2
QJ	1415	II3B	E83	16M	2.5		<0.1				1				1							2
QJ	1416	II3B	E89	4M	22.5		0.9			1					1						1	2
QJ	1417	II3B	E89	16M	7.5	7.5	0.1		1			60	1.1	2.9	1			1	1		1	4
QJ	1418	II3B	E89	16M	7.5		<0.1				1				1							10
QJ	1419	II3B	E89	16M	7.5		<0.1			1					1						1	2
QJ	1420	II3B	E89	16M	7.5		0.1				1				1							2
QJ	1421	II3B	E86	4M	22.5	17.5	0.7	1				?	0.8	7.6	1			1			1	12
QJ	1422	II3B	E86	4M	12.5	7.5	0.1	1				35	1.0	3.7	1			1	1		1	2
QJ	1423	II3B	E86	4M	12.5		0.5				1				1							14
QJ	1424	II3B	E86	4M	7.5	7.5	<0.1	1				85	1.6	5.2	1					1		2
QJ	1425	II3B	E87	4M	22.5		1				1					1						2
QJ	1426	II3B	E87	4M	22.5		0.9				1					1						2
QJ	1427	II3B	E87	4M	7.5		0.1				1				1							2
QJ	1428	II3B	E87	4M																		2
QJ	1429	II3B	E88	4M	32.5	22.5	6.1	1				90	4.2	14.0	1						1	10
QJ	1430	II3B	E88	4M	12.5		0.1			1							1					12
QJ	1431	II3B	E88	4M	12.5	12.5	0.3	1				80	0.9	13.0	1					1		2
QJ	1432	II3B	E88	4M	12.5		0.2			1					1						1	2
QJ	1433	II3B	E88	4M	12.5		0.1			1					1						1	2
QJ	1434	II3B	E88	4M	17.5		0.2			1					1						1	2
QJ	1435	II3B	E88	4M	7.5	12.5	0.2		1			?	0.7	7.0	1						1	12
QJ	1436	II3B	E88	4M	7.5		0.2				1				1							14
QJ	1437	II3B	E88	4M	12.5	7.5	0.1	1				90	2.7	3.2	1				1		1	12
QJ	1438	II3B	E88	16M	12.5		0.2			1					1						1	10
QJ	1439	II3B	E88b	4M	7.5		0.1			1					1						1	2
QJ	1440	II3B	E88b	4M	17.5	7.5	0.3	1				?	0.9	5.5	1						1	2
QJ	1441	II3B	E88b	4M	12.5	12.5	0.2	1				85	1.1	2.8	1				1		1	2
QJ	1443	II3B	E28+28i	16G	2.5		<0.1				1				1							2
QJ	1444	II3A	N1+1b	4G	22.5		1.1			1					1							2
QJ	1445	II3A	N1+1b	16G	7.5	7.5	0.1	1				70	3.3	5.2	1						1	2
QJ	1446	II3A	N1+1b	16G	7.5	12.5	0.2	1				?	2.1	1.9	1							2
QJ	1447	II3A	N1+1b	16G	7.5	7.5	<0.1	1				?	0.7	3.5	1			1			1	14
QJ	1448	II3A	N1+1b	16G	7.5		0.1				1				1							14
QJ	1449	II3A	N1+1b	16G	7.5		<0.1			1					1							2
QJ	1450	II3A	N2b	4G																		2
QJ	1451	II3A	N2b	4G	7.5	17.5	0.7	1				90	2.5	11.2	1			1			1	2
QJ	1452	II3A	N2b	4G	12.5		0.6			1					1						1	2
QJ	1453	II3A	N2b	4G	7.5	12.5	0.1	1				?	0.7	2.0	1							2
QJ	1454	II3A	N2b	4G	12.5	12.5	0.3	1				80	1.2	3.0	1				1		1	2

QJ	1455	II3A	N2b	4G	7.5		0.1			1					1						1	13
QJ	1456	II3A	N2b	4G	17.5		0.7				1				1							10
QJ	1457	II3A	N2b	4M	22.5		2.2				1				1							10
QJ	1458	II3A	N2b	4M	17.5		1.1				1				1							10
QJ	1459	II3A	N2b	4M	12.5		0.2				1				1							10
QJ	1460	II3A	N2b	4M	12.5		0.2				1				1							10
QJ	1461	II3A	N2b	4M																		
QJ	1462	II3A	N2b	4M	22.5	12.5	1.3		1			70	1.7	7.8	1						1	2
QJ	1463	II3A	N2b	4M	32.5	27.5	10.4	1				70			1					1	1	2
QJ	1464	II3A	N2b	4M	7.5	7.5	0.2		1			55	1.5	4.4	1			1	1	1	1	2
QJ	1465	II3A	N2b	4M	27.5		0.7			1					1						1	2
QJ	1466	II3A	N2b	4M	12.5	12.5	0.4	1				75	2.5	7.9	1			1			1	2
QJ	1467	II3A	N2b	4M	7.5		0.1				1				1							2
QJ	1468	II3A	N2b	4M	7.5		0.6				1				1							2
QJ	1469	II3A	N2b	4M	12.5	12.5	0.3	1				75	2.2	6.3	1							2
QJ	1470	II3A	N2b	16M	7.5	7.5	0.1		1			80	1.3	4.5	1							20
QJ	1471	II3A	N2b	16M	7.5		0.2				1					1						2
QJ	1472	II3A	N2b	16M	7.5		0.1			1					1						1	2
QJ	1473	II3A	N2b	16M	7.5		<0.1		1			?			1						1	2
QJ	1474	II3A	N2b	16M	7.5		0.1			1					1						1	2
QJ	1475	II3A	N2b	16M	7.5		0.1				1				1							2
QJ	1476	II3A	N2b	16G	2.5		<0.1				1				1							14
QJ	1477	II3A	N2b	16G	7.5	2.5	0.1	1				85	1.6	3.9	1					1	1	2
QJ	1478	II3A	N2b	16G	7.5	7.5	<0.1	1				70	1.1	5.6	1					1		2
QJ	1479	II3A	N2b	16G	7.5		0.1			1					1						1	4
QJ	1480	II3A	N2b	16G	7.5		0.1				1				1							14
QJ	1481	II3A	N2b	16G	2.5	7.5	<0.1	1				?	0.5	6.5	1					1		2
QJ	1482	II3A	N2b	16G	2.5		<0.1				1				1							3
QJ	1483	II3A	N2b	16G	2.5	7.5	0.1	1				55	1.4	3.9	1					1	1	2
QJ	1484	II3A	N2b	16G	7.5	7.5	0.1		1			80	1.2	2.9	1						1	2
QJ	1485	II3A	N2b	16G	2.5	2.5	<0.1	1				40	2.2	4.0	1						1	4
QJ	1486	II3A	N2b	16G	7.5		<0.1				1				1							2
QJ	1487	II3A	N2b	16G	7.5		0.1				1				1							2
QJ	1488	II3A	N2b	16G	7.5		0.1			1					1						1	2
QJ	1489	II3A	N2b	16G	2.5		<0.1			1					1							14
QJ	1490	II3A	N2b	4G	42.5	37.5	26.8		1			90	2.9	15.3			1					2
QJ	1491	II3A	N2b	4G	17.5	17.5	2		1			85	4.4	11.3		1					1	4
QJ	1492	II3A	N2b	4G	7.5		0.1			1						1						2
QJ	1493	II3A	N2b	4G	12.5		0.5			1					1						1	2
QJ	1494	II3A	N2b	4G	12.5		0.5			1					1						1	2
QJ	1495	II3A	N2b	4G	22.5	22.5	2.9	1				70	2.0	6.2		1					1	2
QJ	1496	II3A	N2b	4G	32.5		6.9				1					1						10
QJ	1497	II3A	N2b	4G	12.5		0.1				1				1							10
QJ	1498	II3A	N2b	4G	12.5		0.2				1					1						2
QJ	1499	II3A	N2b	4G	12.5		0.4			1					1						1	2
QJ	1500	II3A	N2b	4G	12.5		0.3				1				1							10
QJ	1501	II3A	N2b	4G	12.5	7.5	0.2	1				80	1.0	2.1	1							2
QJ	1502	II3A	N2b	4G	22.5	17.5	1.4	1				90	1.9	4.1	1						1	2
QJ	1503	II3A	N2b	4G																		2
QJ	1504	II3A	N2b	4G	17.5		0.6			1					1						1	2
QJ	1505	II3A	N2b	4G	22.5		0.8				1					1						2
QJ	1506	II3A	N2b	4G	12.5	22.5	1.3		1			70	7.2	20.0		1				1		2
QJ	1507	II3A	N2b	4G	7.5		0.1				1				1							2

QJ	1508	II3A	N2b	4G	7.5	17.5	1.1		1			35	6.6	19.3	1						1	2
QJ	1509	II3A	N2b	4G	22.5		0.6			1					1						1	2
QJ	1510	II3A	N2b	4G	12.5	12.5	0.2	1				75	1.6	5.4		1					1	2
QJ	1511	II3A	N2b	4G	7.5	12.5	0.1	1				75	0.8	8.9	1			1				2
QJ	1512	II3A	N2b	4G	12.5	12.5	0.3	1				35	1.5	4.4	1					1	1	2
QJ	1513	II3A	N2b	4G	12.5		0.3			1					1						1	2
QJ	1514	II3A	N2b	4G	12.5	12.5	0.4		1			90	2.5	4.6	1						1	4
QJ	1515	II3A	N2b	4G	12.5	7.5	0.1	1				85	1.6	2.8	1							4
QJ	1516	II3A	N2b	4G	12.5		0.2			1					1						1	2
QJ	1517	II3A	N2b	4G	12.5	7.5	0.2		1			75	1.3	3.0	1			1			1	2
QJ	1518	II3A	N2b	4G	12.5		0.4			1						1					1	12
QJ	1519	II3A	N2b	4G	12.5	7.5	0.4		1			?	1.4	3.2	1			1	1	1	1	2
QJ	1520	II3A	N2b	4G	12.5	7.5	0.4		1			70	1.1	3.2	1			1			1	2
QJ	1521	II3A	N2b	4G	22.5	27.5	2.4	1				85	3.8	20.9	1						1	2
QJ	1522	II3A	N2b	4G	7.5		0.1				1				1							12
QJ	1523	II3A	N2b	4G	12.5		0.3				1						1					4
QJ	1524	II3A	N2b	4G	7.5		0.3				1						1					4
QJ	1525	II3A	N2c+2c2	16M	7.5		0.2				1				1							2
QJ	1526	II3A	N2c+2c2	16M	12.5		0.1			1					1						1	2
QJ	1527	II3A	N2c+2c2	16M	7.5		0.2				1				1							10
QJ	1528	II3A	N2c+2c2	16M	2.5	7.5	0.1		1			75	1.8	5.4	1			1	1	1	1	2
QJ	1529	II3A	N2c+2c2	16M	7.5		<0.1				1				1							2
QJ	1530	II3A	N2c+2c2	16M	7.5		0.1				1				1							3
QJ	1531	II3A	N2c+2c2	16M	7.5		<0.1				1					1						2
QJ	1532	II3A	N2c+2c2	16M	2.5	2.5	<0.1		1			55	0.9	3.5	1							10
QJ	1533	II3A	N2c+2c2	16M	2.5		<0.1				1				1							3
QJ	1534	II3A	N2c+2c2	16M	2.5	2.5	<0.1	1				90	2.3	5.0	1							2
QJ	1535	II3A	N2c+2c2	16M	2.5	2.5	<0.1		1			35	0.5	2.1	1				1		1	2
QJ	1536	II3A	N2c+2c2	16M	7.5		0.1				1				1							2
QJ	1537	II3A	N2c+2c2	16M	7.5		<0.1				1				1							10
QJ	1538	II3A	N2c+2c2	16M	2.5		<0.1				1				1							2
QJ	1539	II3A	N2c+2c2	16M	7.5		<0.1				1					1						2
QJ	1540	II3A	N2c+2c2	16M	7.5		<0.1			1					1						1	2
QJ	1541	II3A	N2c+2c2	16M	7.5	7.5	<0.1	1				45	0.8	4.2	1							2
QJ	1542	II3A	N2c+2c2	16M	2.5		0.1				1						1					4
QJ	1543	II3A	N2c+2c2	16M	7.5		0.1				1				1							5
QJ	1544	II3A	N2c+2c2	16M	2.5	7.5	<0.1	1				?	0.7	6.2	1					1		2
QJ	1545	II3A	N2c+2c2	16M	2.5		<0.1			1					1						1	2
QJ	1547	II3A	N2c+2c2	16G	22.5		0.4			1					1						1	2
QJ	1548	II3A	N2c+2c2	16G	7.5		0.1				1				1							2
QJ	1549	II3A	N2c+2c2	16G	7.5		0.1				1				1							10
QJ	1550	II3A	N2c+2c2	16G	7.5		0.1			1					1						1	2
QJ	1551	II3A	N2c+2c2	16G	7.5		<0.1			1					1						1	2
QJ	1552	II3A	N2c+2c2	16G	7.5	2.5	<0.1		1			?	0.8	2.8	1				1	1	1	2
QJ	1553	II3A	N2c+2c2	16G	7.5		<0.1			1					1						1	2
QJ	1554	II3A	N2c+2c2	16G	7.5		0.1				1				1							4
QJ	1555	II3A	N2c+2c2	16G	7.5	7.5	0.1	1				80	2.2	6.7	1						1	2
QJ	1556	II3A	N2c+2c2	16G	7.5		<0.1				1					1						2
QJ	1557	II3A	N2c+2c2	16G	7.5	7.5	<0.1	1				?	0.9	3.5	1			1				2
QJ	1558	II3A	N2c+2c2	16G	7.5		0.1				1				1							2
QJ	1559	II3A	N2c+2c2	16G	2.5		0.1				1				1							4
QJ	1560	II3A	N2c+2c2	16G	7.5		0.1				1				1							2
QJ	1561	II3A	N2c+2c2	16G	7.5		<0.1			1					1							2

QJ	1562	II3A	N2c+2c2	16G	7.5		0.1				1				1							2
QJ	1563	II3A	N2c+2c2	16G	7.5		<0.1			1					1						1	2
QJ	1564	II3A	N2c+2c2	16G	7.5	2.5	<0.1	1				?	0.6	2.5	1			1			1	2
QJ	1565	II3A	N2c+2c2	16G	7.5		0.1			1					1						1	2
QJ	1566	II3A	N2c+2c2	16G	7.5		<0.1				1				1							2
QJ	1567	II3A	N2c+2c2	16G	2.5	2.5	<0.1		1			45	0.9	3.2	1							2
QJ	1568	II3A	N2c+2c2	16G	7.5		0.2				1				1							2
QJ	1569	II3A	N2c+2c2	16G	7.5	2.5	0.1		1			70	2.8	4.5		1					1	2
QJ	1570	II3A	N2c+2c2	16G	7.5	7.5	<0.1	1				90	1.5	4.5	1							2
QJ	1571	II3A	N2c+2c2	16G	7.5		<0.1				1				1							2
QJ	1572	II3A	N2c+2c2	16G	7.5		<0.1				1				1							2
QJ	1573	II3A	N2c+2c2	16G	2.5	7.5	0.1		1			75	1.4	4.3	1					1	1	2
QJ	1574	II3A	N2c+2c2	16G	2.5	2.5	<0.1		1			75	1.0	1.9	1						1	4
QJ	1575	II3A	N2c+2c2	16G	7.5		0.1				1					1						2
QJ	1576	II3A	N2c+2c2	16G	2.5	2.5	<0.1	1				?	0.6	1.3	1							2
QJ	1577	II3A	N2c+2c2	16G	7.5		<0.1				1				1							2
QJ	1578	II3A	N2c+2c2	16G	7.5		0.1				1				1							2
QJ	1579	II3A	N2c+2c2	16G	7.5		<0.1			1					1						1	2
QJ	1580	II3A	N2c+2c2	16G	2.5		<0.1			1					1							2
QJ	1581	II3A	N2c+2c2	16G	2.5		<0.1				1				1							2
QJ	1582	II3A	N2c+2c2	16G	7.5		<0.1			1					1						1	2
QJ	1583	II3A	N2c+2c2	16G	7.5		<0.1				1				1							2
QJ	1584	II3A	N2c+2c2	16G	7.5		0.2				1				1							2
QJ	1585	II3A	N2c+2c2	16G	7.5		<0.1			1					1							2
QJ	1586	II3A	N2c+2c2	16G	7.5		<0.1				1				1							2
QJ	1587	II3A	N2c+2c2	16G	7.5		<0.1			1					1						1	2
QJ	1588	II3A	N2c+2c2	16G	7.5		<0.1			1					1						1	2
QJ	1589	II3A	N2c+2c2	16G	7.5		<0.1			1					1						1	2
QJ	1590	II3A	N2c+2c2	16G	2.5	2.5	<0.1		1			70	1.4	3.2	1				1		1	2
QJ	1591	II3A	N2c+2c2	16G	7.5		<0.1			1						1					1	2
QJ	1592	II3A	N2c+2c2	16G	7.5		0.1				1				1							2
QJ	1593	II3A	N2c+2c2	16G	12.5		<0.1			1					1						1	2
QJ	1594	II3A	N2c+2c2	16G	2.5	2.5	<0.1	1				80	0.6	1.4	1							14
QJ	1595	II3A	N2c+2c2	16G	7.5		<0.1				1				1							12
QJ	1596	II3A	N2c+2c2	16G	7.5		<0.1				1				1							2
QJ	1597	II3A	N2c+2c2	4M	27.5	27.5	6.5	1				70	11.6	21.5	1						1	2
QJ	1598	II3A	N2c+2c2	4M	17.5	22.5	0.7	1				45	1.6	18.7	1					1	1	2
QJ	1599	II3A	N2c+2c2	4M	17.5	22.5	1.2		1			90	2.7	7.8			1					2
QJ	1600	II3A	N2c+2c2	4M	22.5		1.4			1						1						2
QJ	1601	II3A	N2c+2c2	4M	7.5	7.5	0.3	1				90	5.0	10.0	1						1	2
QJ	1602	II3A	N2c+2c2	4M	17.5	12.5	0.5	1				50	1.5	3.4	1			1	1	1	1	2
QJ	1603	II3A	N2c+2c2	4M	12.5	17.5	1.5		1			65	5.1	15.0	1			1			1	2
QJ	1604	II3A	N2c+2c2	4M	12.5	12.5	0.2		1			45	1.9	7.7	1					1		2
QJ	1605	II3A	N2c+2c2	4M	12.5		0.2			1						1					1	12
QJ	1606	II3A	N2c+2c2	4M	7.5		0.1			1					1							10
QJ	1607	II3A	N2c+2c2	4M	7.5		0.1				1				1							12
QJ	1608	II3A	N2c+2c2	4M	7.5	7.5	0.1	1				?	0.3	4.9	1							2
QJ	1609	II3A	N2c+2c2	4M	12.5		0.1				1				1							2
QJ	1610	II3A	N2c+2c2	4M	17.5	7.5	0.3	1				90	1.8	5.1	1			1	1		1	2
QJ	1611	II3A	N2c+2c2	4M	7.5	7.5	0.2	1				45	2.1	4.7	1						1	2
QJ	1612	II3A	N2c+2c2	4M	12.5		0.5				1						1					2
QJ	1613	II3A	N2c+2c2	4M	12.5	12.5	0.4		1			70	1.8	7.9	1						1	2
QJ	1614	II3A	N2c+2c2	4M	12.5	7.5	0.1			1					1						1	4

QJ	1615	II3A	N2c+2c2	4M	7.5		0.2				1				1							2
QJ	1616	II3A	N2c+2c2	4M	7.5		0.1			1					1						1	2
QJ	1617	II3A	N2c+2c2	4M	7.5	7.5	0.1	1				?	0.9	3.4	1						1	4
QJ	1618	II3A	N2c+2c2	4G	17.5	27.5	2.4	1				90	4.1	13.5	1					1		12
QJ	1619	II3A	N2c+2c2	4G	32.5		2.1			1					1						1	2
QJ	1620	II3A	N2c+2c2	4G	17.5		3.5				1				1							3
QJ	1621	II3A	N2c+2c2	4G	12.5		0.4			1						1					1	2
QJ	1622	II3A	N2c+2c2	4G	17.5		0.5			1					1						1	2
QJ	1623	II3A	N2c+2c2	4G	17.5		0.5			1					1						1	2
QJ	1624	II3A	N2c+2c2	4G	17.5	12.5	0.6		1			?	0.9	4.6	1						1	2
QJ	1625	II3A	N2c+2c2	4G	7.5		0.1			1					1						1	2
QJ	1626	II3A	N2c+2c2	4G	7.5		0.1			1					1						1	2
QJ	1627	II3A	N2c+2c2	4G	12.5		0.2				1				1							2
QJ	1628	II3A	N2c+2c2	4G	7.5	7.5	0.1		1			70	0.6	2.2	1						1	2
QJ	1629	II3A	N2c+2c2	4G	17.5	12.5	0.8		1			?	1.3	2.2	1			1	1		1	2
QJ	1630	II3A	N2c+2c2	4G	17.5		0.4				1				1							5
QJ	1631	II3A	N2c+2c2	4G	27.5		2.9				1				1							7
QJ	1632	II3A	N2c+2c2	4G	12.5		0.4				1				1							10
QJ	1633	II3A	N2c+2c2	4G	12.5	17.5	0.5	1				20	2.6	12.3	1			1	1		1	10
QJ	1634	II3A	N2c+2c2	4G	7.5	22.5	0.3	1				?	0.6	6.2	1			1			1	10
QJ	1635	II3A	N2c+2c2	4G	12.5		0.2			1					1							10
QJ	1636	II3A	N2c+2c2	4G	12.5		0.2			1					1						1	2
QJ	1637	II3A	N2c+2c2	4G	7.5	12.5	0.2		1			55	1.1	5.3	1			1	1		1	2
QJ	1638	II3A	N2c+2c2	4G	7.5	7.5	0.1	1				50	1.3	6.0	1			1				2
QJ	1639	II3A	N2c+2c2	4G	17.5		1.1				1					1						2
QJ	1640	II3A	N2c+2c2	4G	17.5	12.5	0.7		1			75	2.0	5.0	1			1		1	1	2
QJ	1641	II3A	N2c+2c2	4G	12.5	12.5	0.5	1				90	3.1	6.8	1						1	4
QJ	1642	II3A	N2c+2c2	4G	12.5		0.5			1							1					4
QJ	1643	II3A	N2c+2c2	4G	22.5		0.7			1					1						1	2
QJ	1644	II3A	N2c+2c2	4G	12.5		0.2			1					1						1	2
QJ	1645	II3A	N2c+2c2	4G	17.5	17.5	1.6		1			55	1.9	9.5	1			1		1	1	4
QJ	1646	II3A	N2c+2c2	4G	17.5	22.5	1.1	1				75	1.8	21.6	1					1	1	2
QJ	1647	II3A	N2c+2c2	4G	12.5		0.2			1					1						1	2
QJ	1648	II3A	N2c+2c2	4G	12.5		0.4				1				1							2
QJ	1649	II3A	N2c+2c2	4G	22.5		0.5				1				1						1	4
QJ	1650	II3A	N2c+2c2	4G	7.5		<0.1				1				1							2
QJ	1651	II3A	N2c+2c2	4G	12.5	7.5	0.2	1				35	2.2	4.5	1			1	1	1	1	2
QJ	1652	II3A	N2c+2c2	4G	12.5	22.5	0.9		1			80	1.2	4.9	1			1	1		1	2
QJ	1653	II3A	N2c+2c2	4G	17.5		1.1				1				1							3
QJ	1654	II3A	N2c+2c2	4G	22.5		0.4			1					1						1	2
QJ	1655	II3A	N2c+2c2	4G	7.5		0.1				1				1							2
QJ	1656	II3A	N2c+2c2	4G	12.5	7.5	0.1	1				?	0.6	3.9	1							2
QJ	1657	II3A	N2c+2c2	4G	7.5	7.5	0.1	1				85	1.7	5.4	1					1	1	2
QJ	1658	II3A	N2c+2c2	4G	17.5		0.4				1				1							12
QJ	1659	II3A	N2c+2c2	4G	7.5	7.5	0.1	1				85	2.0	4.6	1						1	4
QJ	1660	II3A	E68	16G	12.5	12.5	0.2	1				65	1.8	6.2	1					1	1	2
QJ	1661	II3A	E68	16G	7.5		<0.1			1					1						1	2
QJ	1662	II3A	E68	16G	7.5	7.5	0.1		1			?	1.0	3.5	1			1			1	2
QJ	1663	II3A	E68	16G	7.5		<0.1				1				1							2
QJ	1664	II3A	E68	16G	7.5		<0.1			1						1					1	2
QJ	1665	II3A	E68	16G	7.5		<0.1				1					1						2
QJ	1666	II3A	E68	16G	7.5		0.1				1				1							2
QJ	1667	II3A	E68	16G	2.5		<0.1			1					1							2

QJ	1668	II3A	E68	16G	7.5	2.5	<0.1	1				55	0.6	2.3	1							2
QJ	1669	II3A	E68	16G	2.5		<0.1			1					1						1	12
QJ	1670	II3A	E68	16G	2.5		<0.1				1				1							2
QJ	1671	II3A	E68	16G	2.5	2.5	<0.1	1				80	0.7	3.9	1							2
QJ	1672	II3A	E68	16G	7.5		<0.1				1				1							2
QJ	1673	II3A	E68	16G	2.5	7.5	<0.1		1			40	1.4	5.0	1						1	2
QJ	1674	II3A	E68	16G																		
QJ	1675	II3A	E68	16G	2.5		<0.1				1				1							2
QJ	1676	II3A	E68	16M	2.5	12.5	0.1	1				35	0.9	2.9	1			1			1	2
QJ	1677	II3A	E68	16M	7.5		<0.1				1				1							2
QJ	1678	II3A	E68	16M	7.5		<0.1				1						1					4
QJ	1679	II3A	E68	16M	2.5		<0.1				1				1							2
QJ	1680	II3A	E68	16M	2.5	2.5	<0.1	1				?	0.5	3.4	1			1			1	2
QJ	1681	II3A	E68	16M	2.5	7.5	<0.1	1				70	2.0	4.7	1						1	2
QJ	1682	II3A	E68	16M	7.5		<0.1				1					1						2
QJ	1683	II3A	E68	16M	7.5		<0.1			1					1						1	2
QJ	1684	II3A	E68	16M																		
QJ	1685	II3A	E68	16M	7.5		0.1				1				1							2
QJ	1686	II3A	E68	16M	2.5		<0.1				1				1							2
QJ	1687	II3A	E68	16M	2.5	2.5	<0.1	1				60	0.7	5.3	1							2
QJ	1688	II3A	E68	16M	2.5		<0.1				1				1							4
QJ	1689	II3A	E68	16M	2.5		<0.1			1					1						1	2
QJ	1690	II3A	E68	16M																		
QJ	1691	II3A	E68	16M	2.5	2.5	<0.1	1				?	0.5	1.6	1							2
QJ	1692	II3A	E68	16M	7.5		<0.1			1					1						1	2
QJ	1693	II3A	E68	16M	7.5	7.5	0.1		1			90	1.0	3.0	1			1			1	2
QJ	1694	II3A	E68	16M	2.5	7.5	0.1		1			85	1.4	4.6	1					1	1	2
QJ	1695	II3A	E68	16M	7.5		0.1				1					1						2
QJ	1696	II3A	E68	16M	7.5		<0.1				1				1							2
QJ	1697	II3A	E68	16M	7.5		<0.1				1				1							2
QJ	1698	II3A	E68	16M	2.5		<0.1				1				1							2
QJ	1699	II3A	E68	16M	2.5		<0.1				1				1							2
QJ	1700	II3A	E68	16M	2.5		<0.1				1				1							2
QJ	1701	II3A	E68	16M	2.5		<0.1				1				1							2
QJ	1702	II3A	E68	16M	2.5		<0.1				1				1							2
QJ	1703	II3A	E68	16M	2.5		<0.1				1				1							2
QJ	1704	II3A	E68	16M	2.5	7.5	<0.1		1			?	0.6	2.1	1							2
QJ	1705	II3A	E68	16M	7.5	2.5	<0.1	1				50	0.4	1.7	1							2
QJ	1706	II3A	E68	16M	7.5		<0.1			1					1						1	2
QJ	1707	II3A	E68	16M	2.5		<0.1				1				1							2
QJ	1708	II3A	E68	16M	2.5		<0.1				1				1							2
QJ	1709	II3A	E68	16M	2.5		<0.1				1				1							5
QJ	1710	II3A	E68	16M	7.5		<0.1				1				1							2
QJ	1711	II3A	E68	16M	2.5		<0.1				1				1							2
QJ	1712	II3A	E68	16M	7.5		<0.1				1					1						2
QJ	1713	II3A	E68	16M	2.5	2.5	<0.1		1			55	1.1	2.6	1						1	2
QJ	1714	II3A	E68	16M	7.5		<0.1				1				1							2
QJ	1715	II3A	E68	16M	2.5	2.5	<0.1		1			?	0.9	2.8	1						1	2
QJ	1716	II3A	E68	16M	7.5		<0.1			1					1						1	2
QJ	1717	II3A	E68	16M	7.5		<0.1			1					1							2
QJ	1718	II3A	E68	16M	2.5	2.5	<0.1	1				70	1.0	2.6	1							2
QJ	1719	II3A	E68	4M	12.5	7.5	0.3		1			80	2.3	5.5	1						1	2
QJ	1720	II3A	E68	4M	22.5	17.5	0.8	1				55	1.5	3.8	1			1			1	2

QJ	1721	II3A	E68	4M	12.5	12.5	0.2		1			75	1.8	4.5	1							2
QJ	1722	II3A	E68	4M	17.5		0.2				1				1							10
QJ	1723	II3A	E68	4M	22.5		0.5			1					1						1	2
QJ	1724	II3A	E68	4M	7.5	12.5	0.3		1			80	1.3	3.6	1					1	1	2
QJ	1725	II3A	E68	4M	12.5		0.1				1				1							2
QJ	1726	II3A	E68	4M	17.5		0.3				1				1							2
QJ	1727	II3A	E68	4M	12.5		<0.1				1				1							2
QJ	1728	II3A	E68	4M	7.5		<0.1			1					1						1	2
QJ	1729	II3A	E68	4M	32.5	22.5	4.1		1			90	3.1	5.0	1						1	2
QJ	1730	II3A	E68	4M																		2
QJ	1731	II3A	E68	4M	7.5		<0.1			1					1						1	2
QJ	1732	II3A	E68	4M	7.5		0.2				1				1							2
QJ	1733	II3A	E68	4M	17.5		0.2				1				1							2
QJ	1734	II3A	E68	4M	22.5	12.5	0.9	1				50	2.6	5.9		1		1	1		1	2
QJ	1735	II3A	E68	4M	7.5	12.5	0.1	1				70	1.0	8.7	1					1		4
QJ	1736	II3A	E68	4M	17.5		0.7			1						1					1	2
QJ	1737	II3A	E68	4M	12.5		0.1				1					1						2
QJ	1738	II3A	E68	4M	12.5		0.1			1					1						1	2
QJ	1739	II3A	E68	4M	22.5	17.5	1.9	1				65	3.2	9.0	1			1			1	2
QJ	1740	II3A	E68	4M	17.5		0.5			1					1						1	2
QJ	1741	II3A	E68	4M	37.5	17.5	3.7		1			75	3.2	5.0	1			1			1	2
QJ	1742	II3A	E68	4M	22.5		0.9			1					1						1	2
QJ	1743	II3A	E68	4M																		
QJ	1744	II3A	E68	4M	12.5	12.5	1		1			90	2.8	4.5		1					1	2
QJ	1745	II3A	E68	4M	27.5	27.5	1.7	1				90	3.2	14.1	1			1	1		1	2
QJ	1746	II3A	E68	4M	12.5		0.4			1					1						1	2
QJ	1747	II3A	E68	4M	17.5		1.5				1				1							2
QJ	1748	II3A	E68	4M	7.5		0.1				1				1							2
QJ	1749	II3A	E68	4M	17.5		0.3			1					1						1	2
QJ	1750	II3A	E68	4M	17.5		0.2				1				1							2
QJ	1751	II3A	E68	4M	17.5	32.5	4.1	1				80	7.9	33.4	1				1	1	1	2
QJ	1752	II3A	E68	4M	17.5		0.3			1					1						1	2
QJ	1753	II3A	E68	4M	7.5	12.5	0.2	1				70	2.2	6.9	1							4
QJ	1754	II3A	E68	4M	27.5		1.4			1					1						1	2
QJ	1755	II3A	E68	4M	27.5	12.5	0.9	1				90	3.1	5.8		1					1	2
QJ	1756	II3A	E68	4M	12.5	12.5	0.4	1				85	2.1	11.1	1					1	1	2
QJ	1757	II3A	E68	4M	12.5		0.2			1					1						1	2
QJ	1758	II3A	E68	4M	12.5	12.5	0.2	1				65	0.8	3.4	1						1	2
QJ	1759	II3A	E68	4M	7.5		0.1				1				1							2
QJ	1760	II3A	E68	4M	7.5		0.1				1				1							2
QJ	1761	II3A	E68	4M	12.5		0.2				1					1						4
QJ	1762	II3A	E68	4M	12.5		0.3			1						1					1	2
QJ	1763	II3A	E68	4M	12.5		0.1				1				1							2
QJ	1764	II3A	E68	4M	7.5		0.1				1				1							2
QJ	1765	II3A	E68	4M	7.5		0.2				1					1						2
QJ	1766	II3A	E68	4M	7.5	12.5	0.1	1				?	0.9	3.3	1			1			1	12
QJ	1767	II3A	E68	4M	27.5		4				1				1							4
QJ	1768	II3A	E68	4M	17.5		0.5			1					1						1	2
QJ	1769	II3A	E68	4M	12.5		0.2			1					1						1	2
QJ	1770	II3A	E68	4M	52.5		35.2				1				1							7
QJ	1771	II3A	E68	4M																		
QJ	1772	II3A	E69	4M	12.5		0.2			1					1						1	2
QJ	1773	II3A	E69	4M	12.5		0.2			1					1						1	2

QJ	1774	II3A	E69	4M	7.5	7.5	0.1		1			65	0.8	2.0	1			1			1	2
QJ	1775	II3A	E69	4M	7.5		0.1				1				1							4
QJ	1776	II3A	E69	4M	7.5	12.5	0.4	1				80	2.0	9.9			1			1		4
QJ	1777	II3A	E69	16M																		
QJ	1778	II3A	E69	16M																		
QJ	1779	II3A	E69	16M	2.5		<0.1				1				1							3
QJ	1780	II3A	E69	16M	7.5		0.1				1				1							3
QJ	1781	II3A	E69	16M	2.5		<0.1				1				1							2
QJ	1782	II3A	E69	16M	7.5		0.1				1				1							10
QJ	1783	II3A	E69	16M	2.5	2.5	<0.1		1			60	0.9	2.6	1							2
QJ	1784	II3A	E69	16M	2.5		<0.1			1					1						1	5
QJ	1785	II3A	E70	4M	7.5		<0.1				1				1							2
QJ	1786	II3A	E70	4M	12.5	7.5	0.2	1				75	2.5	5.0	1						1	2
QJ	1787	II3A	E70	16M	7.5		0.1				1				1							2
QJ	1788	II3A	E70	16M	7.5		<0.1				1				1							10
QJ	1789	II3A	E70	16M	7.5		0.1				1				1							10
QJ	1790	II3A	E71	16M	7.5		<0.1				1				1							2
QJ	1791	II3A	E71	16M	2.5		<0.1				1				1							2
QJ	1792	II3A	E72	4M	17.5	22.5	0.8	1				55	1.6	4.1		1					1	2
QJ	1793	II3A	E72	4M	17.5		1.2				1				1							3
QJ	1794	II3A	E72	4M	17.5		0.1			1					1						1	2
QJ	1795	II3A	E72	4M	7.5		<0.1			1					1						1	12
QJ	1796	II3A	E72	16M	7.5		0.1				1				1							5
QJ	1797	II3A	E72	16M																		
QJ	1798	II3A	E72	16M	2.5		<0.1				1				1							2
QJ	1799	II3A	E75	16M	2.5		<0.1				1				1							10
QJ	1800	II3A	E75	16M																		
QJ	1801	II3A	E75	16M	2.5	2.5	<0.1		1			70	1.1	3.7	1						1	2
QJ	1802	II3A	E75	16M	7.5		<0.1			1					1						1	2
QJ	1803	II3A	E75	16M	7.5		<0.1				1				1							2
QJ	1804	II3A	E75	16M																		
QJ	1805	II3A	E75	16M	2.5		<0.1				1				1							2
QJ	1806	II3A	E75	16M	2.5		<0.1				1				1							2
QJ	1807	II3A	E75	16M	2.5		<0.1				1				1							2
QJ	1808	II3A	E75	16M	2.5	7.5	0.1		1			60	1.4	6.3	1					1	1	2
QJ	1809	II3A	E75	16M	2.5		<0.1				1				1							2
QJ	1810	II3A	E75	16M	2.5		<0.1				1				1							2
QJ	1811	II3A	E75	16M	2.5		<0.1				1				1							2
QJ	1812	II3A	E76	4M	32.5		1.9				1				1						1	2
QJ	1813	II3A	E76	4M	12.5		0.3			1					1						1	2
QJ	1814	II3A	E76	4M	7.5	12.5	0.3		1			55	3.3	8.3	1			1	1	1	1	2
QJ	1815	II3A	E76	4M	12.5		0.2				1				1							2
QJ	1816	II3A	E76	4M	12.5		0.2			1							1				1	12
QJ	1817	II3A	E76	4M	12.5		0.3				1					1						4
QJ	1818	II3A	E76	4M	7.5	12.5	0.1		1			45	2.6	9.8	1			1			1	10
QJ	1819	II3A	E76	16M																		
QJ	1820	II3A	E76	16M																		
QJ	1821	II3A	E76	16M	7.5	7.5	<0.1	1				55	1.2	2.7	1			1	1		1	2
QJ	1822	II3A	E76	16M	2.5	7.5	<0.1		1			55	1.0	2.1	1						1	2
QJ	1823	II3A	E76	16M	7.5		0.1			1					1						1	2
QJ	1824	II3A	E76	16M	7.5		<0.1				1				1							2
QJ	1825	II3A	E76	16M																		2
QJ	1826	II3A	E76	16M	2.5		<0.1			1					1						1	2

QJ	1827	II3A	E76	16M	2.5		<0.1				1				1							2
QJ	1828	II3A	E76	16M	2.5		<0.1	1				80	1.0	3.4	1							2
QJ	1829	II3A	E76	16M	2.5		<0.1				1					1						2
QJ	1830	II3A	E76	16M	2.5		<0.1				1				1							2
QJ	1831	II3A	E76	16M	7.5	7.5	<0.1	1				?	0.8	1.8	1						1	2
QJ	1832	II3A	E76	16M	2.5	7.5	<0.1	1				75	0.7	2.5	1							2
QJ	1833	II3A	E76	16M	7.5		<0.1			1					1						1	2
QJ	1834	II3A	E76	16M	7.5		0.1				1					1						2
QJ	1835	II3A	E76	16M	2.5		<0.1				1				1							2
QJ	1836	II3A	E76	16M	2.5		<0.1				1				1							2
QJ	1837	II3A	E76	16M	2.5		<0.1				1				1							2
QJ	1838	II3A	E77	16M	2.5	7.5	<0.1		1			70	2.1	4.7	1				1			2
QJ	1839	II3A	E77	16M	2.5	7.5	0.1	1				65	1.5	4.5	1						1	10
QJ	1840	II3A	E77	16M																		
QJ	1841	II3A	E77	16M	2.5		<0.1				1				1							2
QJ	1842	II3A	E77	16M	7.5		<0.1			1					1						1	2
QJ	1843	II3A	E77	16M	7.5	2.5	<0.1	1				60	0.9	2.9	1			1			1	4
QJ	1844	II3A	E77	16M	2.5	2.5	<0.1	1				?	0.6	1.7	1							2
QJ	1845	II3A	E77	16M	2.5		<0.1				1				1							2
QJ	1846	II3A	E77	16M	2.5		<0.1				1				1							2
QJ	1847	II3A	E77	16M	2.5		<0.1				1				1							2
QJ	1848	II3A	E77	16M	2.5		<0.1				1				1							2
QJ	1849	II3A	E77	4M	32.5	27.5	3.9	1				40	2.8	11.5			1					2
QJ	1850	II3A	E77	4M	7.5	7.5	0.1	1				60	0.8	1.7	1			1			1	2
QJ	1851	II3A	E77	4M	12.5		0.3				1					1						10
QJ	1852	II3A	E79	16M	7.5		0.1				1				1							2
QJ	1853	II3A	E79	16M	7.5		<0.1			1					1						1	4
QJ	1854	II3A	E79	16M	2.5		<0.1			1						1					1	4
QJ	1855	II3A	E79	16M	2.5		<0.1				1				1							2
QJ	1856	II3A	E79	16M	2.5	7.5	<0.1	1				90	1.1	1.8	1				1		1	2
QJ	1857	II3A	E79	16M	2.5	7.5	<0.1	1				?	0.5	2.3	1							2
QJ	1858	II3A	E79	16M	2.5	2.5	<0.1	1				?	0.8	2.5	1			1	1		1	2
QJ	1859	II3A	E79	16M	2.5		<0.1				1				1							2
QJ	1860	II3A	E79	4M	12.5	7.5	0.2	1				75	0.7	2.5	1						1	4
QJ	1861	II3A	E79	4M																		2
QJ	1862	II1D	NLS	4?	27.5		4.6				1					1						2
QJ	1863	II1D	NLS	4?	27.5		3.9				1					1	1					2
QJ	1864	II1D	NLS	4?	27.5		1.9				1					1						2
QJ	1865	II1D	NLS	4?	22.5		1.5				1				1							2
QJ	1866	II1D	NLS	4?	17.5		1.4				1					1						2
QJ	1867	II1D	NLS	4?	7.5	7.5	0.1	1				20	2.7	4.6				1			1	2
QJ	1868	II1D	NLS	4?	17.5		2.2				1					1						2
QJ	1869	II1D	NLS	4?	12.5		0.4				1				1							2
QJ	1870	II1D	NLS	4?	12.5	12.5	1	1				70	4.5	14.1	1						1	2
QJ	1871	II1D	NLS	4?	17.5		0.9			1					1						1	4
QJ	1872	II1D	N1	4M	22.5		1.7				1					1						10
QJ	1873	II1D	N1	4M	17.5		0.7			1					1						1	2
QJ	1874	II1D	N1	4M	12.5		0.3				1				1							2
QJ	1875	II1D	N1b	16M	7.5		0.1				1				1							2
QJ	1876	II1D	N1b	16M	2.5	7.5	0.1	1				85	1.6	10.7	1							3
QJ	1877	II1D	N1b	16M																		
QJ	1878	II1D	N1b	4?	37.5		7.4			1					1							2
QJ	1879	II1D	N1b	4?	32.5		9.8				1						1					2

QJ	1880	II1D	N1b	4M	27.5	32.5	3.8		1			55	2.5	15.5	1			1	1	1	1	10
QJ	1881	II1D	N1b	4M	17.5		1.3				1				1							10
QJ	1882	II1D	N1b	4M																		
QJ	1883	II1D	N1b	4M	27.5		2				1					1						2
QJ	1884	II1D	N1b	4G	42.5		22.7				1					1						2
QJ	1885	II1D	N1b	4G	22.5		1.6				1						1					12
QJ	1886	II1D	N1b	4G	27.5		4.2				1				1							2
QJ	1887	II1D	N1b	4G	22.5		1.7			1					1						1	2
QJ	1888	II1D	N1b	4G	17.5		0.7				1						1					5
QJ	1889	II1D	N1b	4G	7.5		0.4				1				1							3
QJ	1890	II1D	N1b	4G	7.5	7.5	0.2	1				?	1.4	5.5		1					1	2
QJ	1891	II1D	N1b	4G	22.5		0.7			1						1					1	2
QJ	1892	II1D	N1b	4G	17.5		0.7				1				1							16
QJ	1893	II1D	N1b	4G	12.5		0.3			1					1						1	2
QJ	1894	II1D	N1b	4G	7.5		0.1			1					1							4
QJ	1895	II1D	N1b	4G	12.5		0.1				1				1							4
QJ	1896	II1D	N1b	4G	7.5		0.2			1					1						1	12
QJ	1897	II1D	N1c	16M	7.5		0.1			1					1							2
QJ	1898	II1D	N1c	16M	7.5		0.2				1				1							3
QJ	1899	II1D	N1c	16M	7.5		0.1				1					1						2
QJ	1900	II1D	N1c	16M	2.5	2.5	<0.1	1				80	0.8	4.7	1							2
QJ	1901	II1D	N1c	16M	7.5		<0.1				1				1							2
QJ	1902	II1D	N1c	4G	27.5		2.8				1				1							10
QJ	1903	II1D	N1c	4G	17.5	22.5	1.8	1				75	5.6	20.4		1						4
QJ	1904	II1D	N1c	4G	17.5		0.9				1				1							10
QJ	1905	II1D	N1c	4G	17.5	12.5	0.7	1				45	1.1	3.0	1			1	1	1	1	12
QJ	1906	II1D	N1c	4G	12.5	7.5	0.3	1				75	1.9	5.5	1							10
QJ	1907	II1D	N1c	4G	12.5		0.2				1				1							10
QJ	1908	II1D	N1c	4G	12.5	7.5	0.5	1				70	2.7	5.9	1						1	4
QJ	1909	II1D	N1c	4G	12.5		0.2			1					1						1	12
QJ	1910	II1D	N1c	4G	22.5	7.5	0.4	1				85	2.1	6.1	1					1	1	12
QJ	1911	II1D	N1c	4G	12.5		0.4				1				1							11
QJ	1912	II1D	N1c	4G	7.5		0.2			1					1							11
QJ	1913	II1D	N1c	4G	7.5		0.2			1					1						1	11
QJ	1914	II1D	N1c	4G	12.5		0.5			1						1					1	2
QJ	1915	II1D	N1c	4G	7.5	12.5	0.5		1			65	3.6	11.6		1		1			1	2
QJ	1916	II1D	N1c	4G	17.5		1.1			1						1					1	2
QJ	1917	II1D	N1c	4G	12.5	7.5	0.4	1				70	2.4	5.4	1						1	2
QJ	1918	II1D	N1c	4G	12.5		0.2			1					1						1	2
QJ	1919	II1D	N1c	4G	17.5		0.3				1					1						2
QJ	1920	II1D	N1c	4G	7.5		0.2			1					1						1	2
QJ	1921	II1D	N1c	4G																		
QJ	1922	II1D	N1c	16G	12.5		0.2			1					1						1	2
QJ	1923	II1D	N1c	16G																		
QJ	1924	II1D	N1c	16G	7.5	7.5	0.1	1				?	0.8	1.2	1							2
QJ	1925	II1D	N1c	4M	22.5	22.5	3.3	1				75	9.4	23.6	1						1	10
QJ	1926	II1D	N1c	4M	22.5	7.5	1.5		1			60	6.3	9.6	1			1			1	12
QJ	1927	II1D	N1c	4M	32.5	7.5	0.9	1				20	5.4	13.0		1					1	12
QJ	1928	II1D	N1c	4M	17.5	12.5	1.4		1			60	6.0	11.3	1						1	4
QJ	1929	II1D	N1c	4M	12.5		0.3				1				1							14
QJ	1930	II1D	N1c	4M	12.5	17.5	0.4	1				75	2.0	3.4	1			1	1	1	1	2
QJ	1931	II1D	N1c	4M																		
QJ	1932	II1D	N1c	4M	22.5		0.8			1					1						1	14

QJ	1933	II1D	N1c	4M	22.5		0.5				1						1					2
QJ	1934	II1D	N1c	4M	12.5		0.3				1				1							14
QJ	1935	II1D	N1c	4M	32.5		2.7				1				1							2
QJ	1936	II1D	N1c	4M	12.5		0.4			1					1						1	2
QJ	1937	II1D	N1c	4M	27.5	27.5	3	1				80	4.9	18.8	1			1			1	2
QJ	1938	II1D	N1c	4M	22.5	7.5	0.4		1			75	2.6	8.0	1						1	2
QJ	1939	II1D	N1c	4M	12.5		0.5				1				1							3
QJ	1940	II1D	N1c	4M	27.5	22.5	2		1			90	2.2	6.2	1			1	1		1	2
QJ	1941	II1D	N2	4M	7.5	7.5	0.1	1				85	2.2	5.3	1				1			2
QJ	1942	II1D	N2	4M	7.5	12.5	0.2	1				85	1.7	5.7	1						1	2
QJ	1943	II1D	N2	4M	27.5		1.7				1				1							2
QJ	1944	II1D	N2	4M	7.5	7.5	0.2		1			40	1.4	4.2	1			1	1		1	2
QJ	1945	II1D	N2	4M	12.5		0.2			1					1						1	2
QJ	1946	II1D	N2	4M	17.5	7.5	0.4	1				85	1.9	4.3	1			1			1	2
QJ	1947	II1D	N2	4M	7.5	7.5	0.2		1			55	2.9	8.7	1						1	14
QJ	1948	II1D	N2	4M	7.5	7.5	0.2		1			75	2.4	7.9	1					1		2
QJ	1949	II1D	N2	4M	7.5	12.5	0.1	1				60	1.3	4.2	1					1	1	2
QJ	1950	II1D	N2	4M	12.5	7.5	0.1	1				75	2.2	7.4	1					1	1	12
QJ	1951	II1D	N2	4M	27.5	17.5	1.7	1				75	5.3	11.3		1					1	12
QJ	1952	II1D	N2	4M	22.5		1.5			1					1						1	4
QJ	1953	II1D	N2	4M	12.5		0.2				1				1							10
QJ	1954	II1D	N2	4M	17.5		0.6			1					1						1	2
QJ	1955	II1D	N2	4M																		
QJ	1956	II1D	N2	4M	17.5		0.3				1					1						5
QJ	1957	II1D	N2	16M	12.5		0.3				1				1							14
QJ	1958	II1D	N2	16M	2.5	7.5	<0.1	1				45	2.2	8.1	1							2
QJ	1959	II1D	N2	16M	7.5		0.1				1				1							2
QJ	1960	II1D	N2	16M	7.5		<0.1				1				1							2
QJ	1961	II1D	N2	16M	7.5		<0.1				1					1						12
QJ	1962	II1D	N2	16M	7.5	7.5	0.1	1				55	1.4	5.7	1							2
QJ	1963	II1D	N2	16M	7.5	7.5	<0.1	1				?	1.2	2.1	1							2
QJ	1964	II1D	N2	16M	2.5		<0.1			1						1					1	12
QJ	1965	II1D	N2	16M																		
QJ	1966	II1D	N2	16M	2.5		<0.1				1				1							3
QJ	1967	II1D	N2	16M	2.5		0.1				1				1							3
QJ	1968	II1D	N2	16M	2.5	7.5	<0.1		1			?	0.7	1.6	1						1	2
QJ	1969	II1D	N2	16M																		
QJ	1970	II1D	N2b	4M	17.5	17.5	0.8	1				90	4.0	11.9	1					1	1	2
QJ	1971	II1D	N2b	4M	22.5	17.5	1	1				35	8.5	16.9	1			1			1	2
QJ	1972	II1D	N2b	4M	32.5	17.5	1.4	1				?	0.8	6.5	1				1		1	2
QJ	1973	II1D	N2b	16M	7.5		0.1				1				1							3
QJ	1974	II1D	N2b	16M	7.5		0.1			1					1						1	2
QJ	1975	II1D	N2b	16M	7.5		<0.1				1				1							2
QJ	1976	II1D	N2c	16M	7.5		0.1			1					1						1	12
QJ	1977	II1D	N2c	16M	7.5	2.5	<0.1	1				75	0.9	2.4	1						1	12
QJ	1978	II1D	N2c	16M	7.5	7.5	<0.1		1			?	1.4	3.6		1		1				12
QJ	1979	II1D	N2c	16M	7.5	7.5	<0.1	1				?	0.8	3.5	1				1			2
QJ	1980	II1D	N2c	16M	7.5		<0.1			1					1						1	2
QJ	1981	II1D	N2c	16M	7.5		0.1				1				1							2
QJ	1982	II1D	N2c	16M	7.5	7.5	<0.1	1				85	0.8	2.6		1		1			1	14
QJ	1983	II1D	N2c	16M	7.5		0.1				1						1					2
QJ	1984	II1D	N2c	16M	7.5		<0.1			1						1						12
QJ	1985	II1D	N2c	16M	7.5		<0.1			1					1						1	12

QJ	1986	II1D	N2c	16M	7.5	7.5	<0.1					80	1.1	4.0	1						1	2
QJ	1987	II1D	N2c	16M	7.5	7.5	<0.1	1				?	0.8	2.4	1						1	2
QJ	1988	II1D	N2c	16M	7.5		<0.1			1					1							3
QJ	1989	II1D	N2c	16M	7.5		<0.1			1					1						1	2
QJ	1990	II1D	N2c	16M	2.5		<0.1				1				1							2
QJ	1991	II1D	N2c	16M	7.5		0.1	1				80	1.3	6.0	1							3
QJ	1992	II1D	N2c	16M	7.5		0.1			1					1						1	4
QJ	1993	II1D	N2c	16M	2.5	7.5	<0.1	1				?	0.5	2.0	1							2
QJ	1994	II1D	N2c	16M	2.5		<0.1				1				1							2
QJ	1995	II1D	N2c	4G	12.5		0.1			1					1						1	2
QJ	1996	II1D	N2c	4G	37.5		5.5			1					1						1	2
QJ	1997	II1D	N2c	4G	47.5		12.6				1						1					12
QJ	1998	II1D	N2c	4G	42.5		8.8				1					1						2
QJ	1999	II1D	N2c	4G	32.5		10.5				1						1					2
QJ	2000	II1D	N2c	4G	22.5	22.5	1.7	1				55	3.6	20.8	1					1	1	2
QJ	2001	II1D	N2c	4G	22.5		1.4			1					1						1	2
QJ	2002	II1D	N2c	4G	17.5	22.5	2.5	1				60	10.6	24.5	1			1		1		2
QJ	2003	II1D	N2c	4G	17.5	17.5	1.4	1				75	3.9	9.5		1		1		1	1	2
QJ	2004	II1D	N2c	4G	22.5		1.1				1				1							3
QJ	2005	II1D	N2c	4G	27.5	17.5	1.3	1				80	2.0	9.4	1			1		1	1	2
QJ	2006	II1D	N2c	4G	27.5	22.5	4.5	1				60	7.5	11.5			1					2
QJ	2007	II1D	N2c	4G	17.5		0.4			1					1						1	2
QJ	2008	II1D	N2c	4G	12.5	2.5	0.1	1				?	1.2	2.7	1						1	2
QJ	2009	II1D	N2c	4G	12.5		0.2			1					1						1	2
QJ	2010	II1D	N2c	4G	12.5		0.3			1					1						1	2
QJ	2011	II1D	N2c	4G	12.5		0.3			1					1						1	2
QJ	2012	II1D	N2c	4G	12.5	12.5	0.4	1				80	2.0	6.3	1			1	1		1	2
QJ	2013	II1D	N2c	4G	17.5	7.5	0.5	1				85	1.1	3.2			1					2
QJ	2014	II1D	N2c	4G	12.5	22.5	0.6	1				75	1.5	8.7	1			1		1	1	2
QJ	2015	II1D	N2c	4G	12.5	17.5	0.8		1			60	2.1	9.1	1					1	1	2
QJ	2016	II1D	N2c	4G	12.5	17.5	1.1	1				80	2.3	6.2	1			1	1	1	1	2
QJ	2017	II1D	N2c	4G	12.5	12.5	0.2	1				55	1.4	5.7	1						1	2
QJ	2018	II1D	N2c	4G	12.5		0.4			1					1						1	2
QJ	2019	II1D	N2c	4G	22.5		1.7				1					1						4
QJ	2020	II1D	N2c	4G	32.5		2.4				1					1						12
QJ	2021	II1D	N2c	4G	22.5	17.5	1.2	1				90	2.4	5.4		1					1	12
QJ	2022	II1D	N2c	4G	17.5		0.6				1				1							12
QJ	2023	II1D	N2c	4G	22.5		1.7			1					1						1	2
QJ	2024	II1D	N2c	4G	22.5	12.5	0.8	1				75	1.3	4.4	1						1	12
QJ	2025	II1D	N2c	4M	12.5	7.5	0.2	1				?	1.2	4.2	1			1			1	2
QJ	2026	II1D	N2c	4M	7.5	7.5	0.2	1				90	3.1	6.5	1							2
QJ	2027	II1D	N2c	4M	17.5		0.4				1					1						12
QJ	2028	II1D	N2c	4M	12.5	12.5	0.4		1			35	1.3	6.3	1				1		1	14
QJ	2029	II1D	N2c	4M	7.5	17.5	0.5		1			75	3.3	6.5	1			1			1	14
QJ	2030	II1D	N2c	4M	12.5		0.2			1					1						1	2
QJ	2031	II1D	N2c	4M																		
QJ	2032	II1D	N2c	4M	27.5		2.8			1							1					2
QJ	2033	II1D	N2c	4M	37.5		7.8				1				1							5
QJ	2034	II1D	N2c	4M	22.5		2.1				1					1						2
QJ	2035	II1D	N2c	4M	22.5		0.7				1				1							10
QJ	2036	II1D	N2c	4M	12.5		0.5			1					1						1	12
QJ	2037	II1D	N2c	4M	12.5		0.2			1					1						1	10
QJ	2038	II1D	N2c	4M	27.5	17.5	2.1	1				90	2.1	3.8		1						2

QJ	2039	II1D	N2c	4M	7.5	12.5	0.2	1				70	1.2	5.2	1				1		1	4
QJ	2040	II1D	N2c	4M	17.5		0.3				1					1						2
QJ	2041	II1D	N2c	4M	27.5	27.5	1.9	1				45	1.6	5.7	1			1			1	2
QJ	2042	II1D	N2c	4M	12.5		0.5			1					1						1	2
QJ	2043	II1D	N2c	4M	17.5	12.5	1.3	1				75	2.0	4.5		1					1	2
QJ	2044	II1D	N2c	4M	12.5	32.5	1.8	1				75	2.1	11.0		1				1	1	2
QJ	2045	II1D	N2c	4M	12.5		0.5				1				1							14
QJ	2046	II1D	N2c	4M	12.5		0.3			1					1						1	2
QJ	2047	II1D	N2c	4M	7.5	12.5	0.1		1			55	0.8	6.5	1							4
QJ	2048	II1D	N2c	4M	7.5	12.5	0.2		1			45	2.0	8.2	1						1	2
QJ	2049	II1D	N2c	4M	7.5		0.2			1							1					3
QJ	2050	II1D	N2c	16G	12.5		0.1			1					1						1	2
QJ	2051	II1D	N2c	16G	7.5	7.5	0.1		1			?	1.2	2.2	1						1	12
QJ	2052	II1D	N2c	16G	17.5		0.3				1					1						12
QJ	2053	II1D	N2c2	4M	7.5	12.5	0.2	1				?	1.5	5.6		1		1			1	2
QJ	2054	II1D	N2c2	4M	12.5		0.2			1					1						1	2
QJ	2055	II1D	N2c2	4M	17.5	17.5	0.5		1			70	1.9	4.2							1	2
QJ	2056	II1D	N2c2	4M	27.5		1.1			1					1						1	2
QJ	2057	II1D	N2c2	4M	12.5		0.5			1					1						1	2
QJ	2058	II1D	N2c2	4M	12.5	7.5	0.1	1				?	0.9	2.0		1					1	2
QJ	2059	II1D	N2c2	4M	7.5	12.5	0.3		1			90	1.3	4.2	1						1	2
QJ	2060	II1D	N2c2	4M	12.5		0.7				1					1						2
QJ	2061	II1D	N2c2	4M	7.5	7.5	0.2	1				85	2.0	3.4	1			1				12
QJ	2062	II1D	N2c2	4M	12.5		0.3			1					1						1	2
QJ	2063	II1D	N2c2	4M	17.5		1.3				1				1							2
QJ	2064	II1D	N2c2	4M	17.5		1.2			1					1						1	2
QJ	2065	II1D	N2c2	4M	17.5	12.5	1	1				55	1.7	5.8	1					1	1	2
QJ	2066	II1D	N2c2	4M	12.5		0.4			1					1							3
QJ	2067	II1D	N2c2	4M	17.5	12.5	0.9	1				70	2.2	17.9	1			1			1	5
QJ	2068	II1D	N2c2	4M	27.5		4.5				1					1						5
QJ	2069	II1D	N2c2	4M	32.5		11.8				1					1						5
QJ	2070	II1D	N2c2	4M	12.5	12.5	0.3	1				55	1.5	5.8	1			1	1	1	1	2
QJ	2071	II1D	N2c2	4M	17.5	17.5	1.6	1				70	2.7	4.3	1						1	2
QJ	2072	II1D	N2c2	4M	27.5	17.5	3.4	1				90	4.3	10.3	1					1	1	2
QJ	2073	II1D	N2c2	4M	27.5		5.5				1					1						12
QJ	2074	II1D	N2c2	4M	27.5	17.5	1.1	1				75	1.1	3.7	1						1	12
QJ	2075	II1D	N2c2	4M	32.5		5.8				1					1						12
QJ	2076	II1D	N2c2	4M	12.5	12.5	0.3		1			90	1.9	4.3	1						1	12
QJ	2077	II1D	N2c2	4M	22.5		1			1					1						1	12
QJ	2078	II1D	N2c2	4M	22.5	12.5	0.7	1				50	2.5	8.3	1					1	1	2
QJ	2079	II1D	N2c2	16M	7.5		0.2			1					1						1	12
QJ	2080	II1D	N2c2	16M	7.5		<0.1			1					1						1	12
QJ	2081	II1D	N2c2	16M	7.5	2.5	0.3	1				?	0.5	3.4			1					2
QJ	2082	II1D	N2c2	16M	12.5		0.2				1						1					12
QJ	2083	II1D	N2c2	16M	7.5		0.1			1					1						1	2
QJ	2084	II1D	N2c2	16M	7.5	7.5	0.1	1				30	1.9	7.8	1					1	1	2
QJ	2085	II1D	N2c2	16M	7.5		<0.1				1				1							12
QJ	2086	II1D	N2c2	16M	7.5	2.5	<0.1	1				?	0.6	2.2		1					1	2
QJ	2087	II1D	N2c2	16M	12.5	7.5	0.1	1				85	1.1	1.8	1						1	2
QJ	2088	II1D	N2c2	16M	7.5		0.1			1					1						1	12
QJ	2089	II1D	N2c2	16M	2.5	7.5	<0.1	1				65	2.2	4.8		1						12
QJ	2090	II1D	N2c2	16M	7.5	7.5	0.1	1				75	0.9	4.4	1					1	1	2
QJ	2091	II1D	N2c2	16M	2.5		<0.1			1					1							ob

QJ	2092	II1D	N2c2	16M	7.5		0.1				1				1							10
QJ	2093	II1D	N2c2	16M	7.5		<0.1			1					1						1	2
QJ	2094	II1D	N2c2	16M	2.5		<0.1				1				1							3
QJ	2095	II1D	N2c2	16M	7.5		0.1			1					1						1	2
QJ	2096	II1D	N2c2	16M	7.5		<0.1			1					1						1	12
QJ	2097	II1D	N2c2	16M	2.5	2.5	<0.1	1				90	2.8	6.3	1							3
QJ	2098	II1D	N2c2	16M	12.5		0.1				1				1							12
QJ	2099	II1D	N2c2	16M	7.5	7.5	0.1	1				60	0.9	2.9	1						1	12
QJ	2100	II1D	N2c2	16M	7.5		<0.1			1					1						1	2
QJ	2101	II1D	N2c2	16M	2.5	7.5	<0.1			1					1							2
QJ	2102	II1D	N2c3	4M	42.5	22.5	10.3	1				80	5.1	14.5	1			1		1	1	2
QJ	2103	II1D	N2c3	4M	37.5		4.7			1						1					1	2
QJ	2104	II1D	N2c3	4M	22.5	27.5	2.8		1			60	6.9	15.1	1			1				12
QJ	2105	II1D	N2c3	4M	27.5		0.8			1					1						1	12
QJ	2106	II1D	N2c3	4M	22.5		3.5			1					1						1	12
QJ	2107	II1D	N2c3	4M	37.5	17.5	1.9		1			90	1.8	4.7	1				1		1	12
QJ	2108	II1D	N2c3	4M	22.5	17.5	1.3	1				75	1.1	3.9	1				1		1	12
QJ	2109	II1D	N2c3	4M	32.5		2.3			1					1						1	12
QJ	2110	II1D	N2c3	4M	32.5		3.4				1						1					12
QJ	2111	II1D	N2c3	4M	17.5	17.5	0.8		1			60	2.2	5.0	1				1	1	1	12
QJ	2112	II1D	N2c3	4M	22.5		0.6			1					1						1	12
QJ	2113	II1D	N2c3	4M	17.5	17.5	1.3			1					1						1	12
QJ	2114	II1D	N2c3	4M	22.5		0.4			1						1					1	12
QJ	2115	II1D	N2c3	4M	12.5		0.3				1				1							12
QJ	2116	II1D	N2c3	4M	22.5	12.5	0.7	1				85	1.4	2.2	1						1	12
QJ	2117	II1D	N2c3	4M	22.5	12.5	0.9	1				75	3.7	8.1	1					1	1	12
QJ	2118	II1D	N2c3	4M	12.5		0.3				1					1						12
QJ	2119	II1D	N2c3	4M	12.5	12.5	0.2		1			85	1.2	3.9	1						1	12
QJ	2120	II1D	N2c3	4M	32.5	32.5	5.7									1					1	12
QJ	2121	II1D	N2c3	4M	22.5		1.6			1						1						12
QJ	2122	II1D	N2c3	4M	17.5	7.5	0.6	1				90	2.4	8.0		1					1	12
QJ	2123	II1D	N2c3	4M	12.5		0.3			1					1						1	12
QJ	2124	II1D	N2c3	4M	17.5	17.5	0.8		1			75	1.3	3.6	1				1		1	12
QJ	2125	II1D	N2c3	4M	12.5	7.5	0.2	1				75	1.2	6.5	1							12
QJ	2126	II1D	N2c3	4M	17.5	12.5	0.7		1			50	1.0	3.6	1				1		1	12
QJ	2127	II1D	N2c3	4M	17.5		0.5			1					1						1	12
QJ	2128	II1D	N2c3	4M	12.5		0.4			1					1						1	12
QJ	2129	II1D	N2c3	4M	12.5		0.5				1				1							12
QJ	2130	II1D	N2c3	4M	7.5	7.5	0.1	1				75	1.6	7.5	1					1	1	12
QJ	2131	II1D	N2c3	4M	12.5		0.3			1					1						1	12
QJ	2132	II1D	N2c3	4M	17.5		1.3				1				1							10
QJ	2133	II1D	N2c3	4M	17.5	12.5	0.6	1				80	2.2	7.6	1				1	1	1	12
QJ	2134	II1D	N2c3	4M	12.5		0.5				1					1						12
QJ	2135	II1D	N2c3	4M	12.5	12.5	0.3		1			80	2.2	3.0	1						1	12
QJ	2136	II1D	N2c3	4M	12.5		0.2				1				1							12
QJ	2137	II1D	N2c3	4M	7.5	7.5	0.2	1				60	1.4	7.3	1						1	12
QJ	2138	II1D	N2c3	4M	17.5		1				1					1						12
QJ	2139	II1D	N2c3	4M	12.5		0.2			1					1						1	12
QJ	2140	II1D	N2c3	4M	12.5	12.5	0.5	1				40	4.3	14.5			1			1		4
QJ	2141	II1D	N2c3	4M	7.5		0.1			1					1						1	12
QJ	2142	II1D	N2c3	4M	7.5		0.1			1						1					1	12
QJ	2143	II1D	N2c3	4M	12.5		0.2			1						1						12
QJ	2144	II1D	N2c3	4M	7.5		0.2			1					1						1	12

QJ	2145	II1D	N2c3	4M	17.5		0.5			1						1						2
QJ	2146	II1D	N2c3	4M	12.5	7.5	0.3	1				85	3.0	5.5	1					1	1	2
QJ	2147	II1D	N2c3	4M	12.5		0.2			1					1						1	2
QJ	2148	II1D	N2c3	4M	17.5		0.7			1					1						1	2
QJ	2149	II1D	N2c3	4M	17.5	12.5	1	1				80	3.1	8.5	1						1	2
QJ	2150	II1D	N2c3	4M	7.5	12.5	0.3		1			85	1.6	5.6	1			1	1		1	2
QJ	2151	II1D	N2c3	4M	12.5	12.5	0.6	1				55	3.7	14.4		1						2
QJ	2152	II1D	N2c3	4M	7.5		0.1			1					1						1	2
QJ	2153	II1D	N2c3	4M	7.5	7.5	0.4		1			75	3.4	7.5	1				1		1	2
QJ	2154	II1D	N2c3	4M	12.5		0.2			1					1						1	2
QJ	2155	II1D	N2c3	4M	12.5	7.5	0.2	1				?	0.7	8.5	1			1			1	2
QJ	2156	II1D	N2c3	4M	12.5		0.2			1					1						1	2
QJ	2157	II1D	N2c3	4M	7.5		0.2				1						1					12
QJ	2158	II1D	N2c3	4M	17.5	7.5	0.5	1				?	0.7	5.9	1						1	2
QJ	2159	II1D	N2c3	4M	32.5		1.6			1					1						1	2
QJ	2160	II1D	N2c3	4M	17.5	27.5	1.6	1				75	1.4	8.3			1					2
QJ	2161	II1D	N2c3	4M	32.5		1.7			1						1						2
QJ	2162	II1D	N2c3	4M	37.5	27.5	4.7	1				80	1.2	8.9	1			1			1	2
QJ	2163	II1D	N2c3	4M	12.5	22.5	1.3		1			45	2.4	8.3		1		1	1	1	1	2
QJ	2164	II1D	N2c3	4M	27.5		1.2			1						1					1	2
QJ	2165	II1D	N2c3	4M	7.5	12.5	0.4		1			?	0.9	5.4		1			1		1	2
QJ	2166	II1D	N2c3	4M	17.5	22.5	1.5		1			70	1.8	4.9	1			1		1	1	2
QJ	2167	II1D	N2c3	4M	22.5	12.5	0.8	1				70	1.9	4.0	1			1			1	2
QJ	2168	II1D	N2c3	4M	17.5	12.5	1.6		1			50	3.3	10.1		1			1	1	1	2
QJ	2169	II1D	N2c3	4M	17.5		0.3			1						1					1	2
QJ	2170	II1D	N2c3	4M	17.5	17.5	2	1				70	5.7	16.3	1						1	2
QJ	2171	II1D	N2c3	4M	12.5	17.5	0.8	1				?	1.6	8.7		1		1			1	2
QJ	2172	II1D	N2c3	4M	7.5	12.5	0.5		1			45	1.5	7.6	1			1		1	1	4
QJ	2173	II1D	N2c3	4M	12.5	22.5	1.4		1			80	1.2	6.8		1					1	2
QJ	2174	II1D	N2c3	4M	22.5		2.4				1						1					3
QJ	2175	II1D	N2c3	4M	22.5		0.9				1				1							2
QJ	2176	II1D	N2c3	4M	17.5	12.5	0.8	1				90	3.8	9.8		1					1	2
QJ	2177	II1D	N2c3	4M	17.5	22.5	1.3	1				75	3.8	10.7		1					1	2
QJ	2178	II1D	N2c3	4M	17.5		1			1							1					2
QJ	2179	II1D	N2c3	4M	12.5	17.5	0.5	1				?	1.6	8.5	1			1			1	2
QJ	2180	II1D	N2c3	4M	27.5		1			1					1							2
QJ	2181	II1D	N2c3	4M	17.5		0.4			1						1					1	2
QJ	2182	II1D	N2c3	4M	22.5		1.4			1						1					1	2
QJ	2183	II1D	N2c3	4M	22.5		0.8			1							1					14
QJ	2184	II1D	N2c3	4M	12.5		0.7				1						1					2
QJ	2185	II1D	N2c3	4M	7.5	7.5	0.2		1			?	1.0	3.0	1						1	2
QJ	2186	II1D	N2c3	4M	7.5		0.2				1				1							2
QJ	2187	II1D	N2c3	4M	7.5		0.2				1				1							2
QJ	2188	II1D	N2c3	4M	12.5	12.5	0.1	1				?	1.0	6.8	1							12
QJ	2189	II1D	N2c3	4M	22.5	12.5	1.4		1			85	0.9	3.1		1					1	2
QJ	2190	II1D	N2c3	4M	7.5		0.1			1					1						1	2
QJ	2191	II1D	N2c3	4M	7.5		0.1			1						1					1	2
QJ	2192	II1D	N2c3	4M	12.5	17.5	0.7	1				70	1.3	4.8		1					1	2
QJ	2193	II1D	N2c3	4M	17.5		0.5			1					1						1	2
QJ	2194	II1D	N2c3	4M	17.5		0.6				1				1							2
QJ	2195	II1D	N2c3	4M	17.5		1			1					1						1	2
QJ	2196	II1D	N2c3	4M	27.5		1.7			1					1							3
QJ	2197	II1D	N2c3	4M	12.5	12.5	0.3	1				?	1.1	5.6	1						1	2

QJ	2198	II1D	N2c3	4M	32.5		1.8			1					1						1	2
QJ	2199	II1D	N2c3	4M	12.5	12.5	0.3				1				1							2
QJ	2200	II1D	N2c3	4M	12.5		0.5			1					1						1	4
QJ	2201	II1D	N2c3	4M	17.5	7.5	0.5		1			90	2.8	6.0	1						1	2
QJ	2202	II1D	N2c3	4M	17.5	12.5	0.8		1			55	3.4	5.8		1						2
QJ	2203	II1D	N2c3	4M	12.5		0.1				1					1						2
QJ	2204	II1D	N2c3	4M	7.5	12.5	0.6	1				80	4.0	12.2		1						2
QJ	2205	II1D	N2c3	4M	7.5		0.2				1				1							12
QJ	2206	II1D	N2c3	4M	12.5		0.1			1						1					1	2
QJ	2207	II1D	N2c3	4M	7.5		0.1			1					1						1	12
QJ	2208	II1D	N2c3	4M	7.5		0.1				1				1							2
QJ	2209	II1D	N2c3	4M	12.5		0.1			1					1						1	2
QJ	2210	II1D	N2c3	4M	12.5		0.3				1					1						2
QJ	2211	II1D	N2c3	4M	17.5		0.4				1				1							3
QJ	2212	II1D	N2c3	4M	7.5		0.1				1				1							2
QJ	2213	II1D	N2c3	4M	12.5		0.4			1					1						1	4
QJ	2214	II1D	N2c3	4M	17.5		0.1				1				1							2
QJ	2215	II1D	N2c3	4M	7.5		0.1				1				1							12
QJ	2216	II1D	N2c3	4M	12.5		0.4				1				1							2
QJ	2217	II1D	N2c3	4M	7.5		0.1			1					1							2
QJ	2218	II1D	N2c3	4M	12.5		0.4				1				1						1	2
QJ	2219	II1D	N2c3	16M	7.5		<0.1				1				1							2
QJ	2220	II1D	N2c3	16M	7.5		<0.1				1				1							12
QJ	2221	II1D	N2c3	16M	12.5		0.1			1					1						1	2
QJ	2222	II1D	N2c3	16M	7.5		0.1				1				1							3
QJ	2223	II1D	N2c3	16M	12.5		0.2				1					1						12
QJ	2224	II1D	N2c3	16M	7.5		0.3				1				1							3
QJ	2225	II1D	N2c3	16M	7.5		<0.1			1						1					1	2
QJ	2226	II1D	N2c3	16M	7.5		<0.1			1					1							12
QJ	2227	II1D	N2c3	16M	12.5	2.5	0.1	1				65	0.6	1.5	1						1	2
QJ	2228	II1D	N2c3	16M	7.5		0.1				1				1							2
QJ	2229	II1D	N2c3	16M	12.5		0.1			1					1						1	12
QJ	2230	II1D	N2c3	16M	7.5		0.1			1					1						1	12
QJ	2231	II1D	N2c3	16M	2.5	7.5	<0.1	1				75	1.3	5.3	1							2
QJ	2232	II1D	N2c3	16M	2.5	2.5	<0.1	1				?	0.6	1.5	1							2
QJ	2233	II1D	N2c3	16M	7.5		<0.1			1					1						1	2
QJ	2234	II1D	N2c3	16M	7.5		<0.1			1					1						1	12
QJ	2235	II1D	N2c3	16M	7.5		0.1				1				1							2
QJ	2236	II1D	N2c3	16M	7.5		0.2				1				1							2
QJ	2237	II1D	N2c3	16M	7.5	2.5	<0.1	1				?	0.9	1.9	1						1	2
QJ	2238	II1D	N2c3	16M	7.5		0.1				1				1							12
QJ	2239	II1D	N2c3	16M	7.5		0.1			1					1						1	2
QJ	2240	II1D	N2c3	16M	7.5		0.1				1				1							2
QJ	2241	II1D	N2c3	16M	7.5		0.1				1				1							12
QJ	2242	II1D	N2c3	16M	2.5		<0.1			1					1						1	12
QJ	2243	II1D	N2c3	16M	2.5	7.5	0.1		1			?	1.1	2.4	1			1				2
QJ	2244	II1D	N2c3	16M	7.5		<0.1				1					1						2
QJ	2245	II1D	N2c3	16M	7.5		0.1			1					1						1	2
QJ	2246	II1D	N2c3	16M	7.5	2.5	0.1	1				90	1.6	2.2	1						1	2
QJ	2247	II1D	N2c3	16M	2.5		<0.1				1				1							2
QJ	2248	II1D	N2c3	16M	2.5	2.5	<0.1	1				85	1.1	3.6	1							2
QJ	2249	II1D	N2c3	16M	7.5		0.3				1					1						4
QJ	2250	II1D	N2c3	16M	2.5		<0.1			1					1						1	2

QJ	2251	II1D	N2c3	16M	7.5	2.5	<0.1	1				90	1.0	3.0	1						1	12
QJ	2252	II1D	N2c3	16M	2.5		<0.1				1				1							2
QJ	2253	II1D	N2c3	16M	7.5	12.5	0.1	1				?	1.2	5.4	1						1	2
QJ	2254	II1D	N2c3	16M	2.5		<0.1				1				1							2
QJ	2255	II1D	N2c3	16M	7.5		0.1			1					1						1	12
QJ	2256	II1D	N2c3	16M	2.5	2.5	<0.1	1				85	1.0	2.1	1						1	12
QJ	2257	II1D	N2c3	16M	7.5		0.1				1				1							2
QJ	2258	II1D	N2c3	16M	2.5	7.5	0.1	1				?	0.8	3.6	1			1				2
QJ	2259	II1D	N2c3	16M	7.5		0.1			1						1						12
QJ	2260	II1D	N2c3	16M	7.5		<0.1				1				1							2
QJ	2261	II1D	N2c3	16M	7.5		<0.1				1				1							2
QJ	2262	II1D	N2c3	16M	7.5		<0.1			1					1						1	2
QJ	2263	II1D	N2c3	16M	7.5		<0.1			1					1							12
QJ	2264	II1D	N2c3	16M	2.5	2.5	<0.1	1				80	1.2	4.3	1						1	2
QJ	2265	II1D	N2c3	16M	2.5		0.1				1					1						2
QJ	2266	II1D	N2c3	16M	2.5		<0.1				1				1							2
QJ	2267	II1D	N2c3	16M	7.5	2.5	<0.1	1				30	0.8	2.7	1							2
QJ	2268	II1D	N2c3	16M	2.5		0.1	1				55	2.7	4.0	1							4
QJ	2269	II1D	N2c3	16M	7.5		0.1				1					1						2
QJ	2270	II1D	N2c3	16M	7.5		<0.1			1					1						1	12
QJ	2271	II1D	N2c3	16M	2.5	2.5	<0.1	1				?	0.8	1.7	1							12
QJ	2272	II1D	N2c3	16M	7.5		<0.1				1				1							2
QJ	2273	II1D	N2c3	16M	7.5	7.5	0.1	1				85	0.9	4.7	1							2
QJ	2274	II1D	N2c3	16M	2.5		<0.1				1				1							2
QJ	2275	II1D	N2c3	16M	7.5		0.1			1					1						1	12
QJ	2276	II1D	N2c3	16M	7.5		0.1				1					1						2
QJ	2277	II1D	N2c3	16M	7.5		<0.1			1					1						1	12
QJ	2278	II1D	N2c3	16M	2.5		<0.1				1					1						2
QJ	2279	II1D	N2c3	16M	2.5	7.5	0.1		1			70	1.2	5.3	1						1	2
QJ	2280	II1D	N2c3	16M	2.5	2.5	<0.1	1				80	1.8	2.9	1						1	12
QJ	2281	II1D	N2c3	16M	2.5	2.5	<0.1		1			55	1.6	4.4	1				1		1	2
QJ	2282	II1D	N2c3	16M	2.5	2.5	<0.1		1			?	0.9	2.7	1				1			2
QJ	2283	II1D	N2c3	16M	2.5	2.5	<0.1		1			?	1.0	3.8	1							2
QJ	2284	II1D	N2c3	16M	7.5		0.2				1				1							3
QJ	2285	II1D	N2c3	16M	7.5		<0.1			1					1						1	2
QJ	2286	II1D	N2c3	16M	7.5		<0.1			1					1						1	2
QJ	2287	II1D	N2c3	16M	7.5	2.5	<0.1	1				60	2.4	5.0	1						1	12
QJ	2288	II1D	N2c3	16M	7.5		0.1				1				1							3
QJ	2289	II1D	N2c3	16M	7.5		<0.1				1				1							2
QJ	2290	II1D	N2c3	16M	7.5		<0.1			1					1						1	2
QJ	2291	II1D	N2c3	16M	7.5		<0.1			1					1							2
QJ	2292	II1D	N2c3	16M	7.5	7.5	0.1	1				60	1.7	4.0	1						1	12
QJ	2293	II1D	N2c3	16M	2.5		<0.1				1				1							2
QJ	2294	II1D	N2c3	16M	7.5		<0.1				1				1							2
QJ	2295	II1D	N2c3	16M	7.5		<0.1			1					1						1	12
QJ	2296	II1D	N2c3	16M	7.5		<0.1			1					1						1	2
QJ	2297	II1D	N2c3	16M	7.5		<0.1			1					1							12
QJ	2298	II1D	N2c3	16M	7.5		<0.1				1					1						2
QJ	2299	II1D	N2c3	16M	2.5		<0.1				1				1							2
QJ	2300	II1D	N2c3	16M	2.5	2.5	<0.1	1				?	1.1	3.4	1							2
QJ	2301	II1D	N2c3	16M	7.5		0.1			1					1						1	2
QJ	2302	II1D	N2c3	16M	7.5		<0.1			1					1						1	12
QJ	2303	II1D	N2c3	16M	7.5		<0.1				1				1							2

QJ	2304	II1D	N2c3	16M	2.5		<0.1				1				1							2
QJ	2305	II1D	N2c3	16M	7.5		<0.1				1				1							12
QJ	2306	II1D	N2c3	16M	2.5		<0.1				1				1							2
QJ	2307	II1D	N2c3	16M	2.5	7.5	<0.1		1			70	1.3	4.3	1							2
QJ	2308	II1D	N2c3	16M	7.5		<0.1				1				1							2
QJ	2309	II1D	N2c3	16M	7.5		<0.1			1					1							2
QJ	2310	II1D	N2c3	16M	7.5		<0.1				1				1							2
QJ	2311	II1D	N2c3	16M	2.5	2.5	<0.1		1			80	0.9	2.5	1							2
QJ	2312	II1D	N2c3	16M	7.5		<0.1				1				1							2
QJ	2313	II1D	N2c3	16M	7.5		<0.1				1					1						2
QJ	2314	II1D	N2c3	16M	7.5		0.1				1						1					2
QJ	2315	II1D	N2c3	16M	2.5	7.5	0.1		1			?	0.6	2.2	1			1				2
QJ	2316	II1D	N2c3	16M	7.5		<0.1				1				1							2
QJ	2317	II1D	N2c3	16M	2.5		<0.1				1				1							2
QJ	2318	II1D	N2c3	16M	2.5		<0.1				1						1					2
QJ	2319	II1D	N2c3	16M	7.5		<0.1			1					1						1	2
QJ	2320	II1D	N2c3	16M	7.5		<0.1			1					1							12
QJ	2321	II1D	N2c3	16M	2.5		<0.1				1				1							2
QJ	2322	II1D	N2c3	16M	7.5	2.5	<0.1	1				?	0.7	2.0	1						1	2
QJ	2323	II1D	N2c3	16M	12.5		0.1				1				1							2
QJ	2324	II1D	N2c3	16M	2.5		<0.1				1				1							2
QJ	2325	II1D	N2c3	16M	7.5		<0.1			1					1						1	12
QJ	2326	II1D	N2c3	16M	7.5		<0.1			1					1						1	2
QJ	2327	II1D	N2c3	16M	7.5		<0.1				1				1							2
QJ	2328	II1D	N2c3	16M	2.5		<0.1				1				1							2
QJ	2329	II1D	N2c3	16M	7.5		<0.1				1					1						2
QJ	2330	II1D	N2c3	16M	2.5		<0.1			1					1						1	2
QJ	2331	II1D	N2c3	16M	7.5		<0.1				1				1							2
QJ	2332	II1D	N2c3	16M	7.5		<0.1			1					1						1	12
QJ	2333	II1D	N2c3	16M	2.5	2.5	<0.1	1				?	0.5	1.8	1							12
QJ	2334	II1D	N2c3	16M	7.5		<0.1				1				1							2
QJ	2335	II1D	N2c3	16M	2.5	2.5	<0.1	1				50	1.2	2.4	1						1	2
QJ	2336	II1D	N2c3	16M	7.5		<0.1			1					1						1	2
QJ	2337	II1D	N2c3	16M	12.5		0.2			1					1						1	2
QJ	2338	II1D	N2c3	16M	12.5		0.1				1				1							12
QJ	2339	II1D	N2c3	16M	7.5		<0.1				1				1							2
QJ	2340	II1D	N2c3	16M	7.5		<0.1				1				1							2
QJ	2341	II1D	N2c3	16M	2.5	7.5	0.1	1				80	1.9	5.3	1				1		1	2
QJ	2342	II1D	N2c3	16M	7.5		<0.1				1					1						2
QJ	2343	II1D	N2c3	16M	7.5		0.1			1					1						1	12
QJ	2344	II1D	N2c3	16M	7.5	2.5	0.1	1				90	2.3	3.6	1				1		1	2
QJ	2345	II1D	N2c3	16M	7.5		<0.1			1					1						1	2
QJ	2346	II1D	N2c3	16M	7.5	2.5	0.1	1				70	1.9	4.9	1					1		2
QJ	2347	II1D	N2c3	16M	12.5		<0.1				1					1						2
QJ	2348	II1D	N2c3	16M	7.5	7.5	0.1		1			60	1.6	4.3	1			1			1	12
QJ	2349	II1D	N2c3	16M	7.5		0.1			1					1						1	12
QJ	2350	II1D	N2c3	16M	7.5		0.1			1					1						1	12
QJ	2351	II1D	N2c3	16M	7.5		<0.1				1				1							12
QJ	2352	II1D	N2c3	16M	12.5		0.1			1					1						1	2
QJ	2353	II1D	N2c3	16M	7.5		<0.1			1					1						1	12
QJ	2354	II1D	N2c3	16M	2.5		<0.1				1				1							2
QJ	2355	II1D	N2c3	16M	2.5		<0.1				1				1							3
QJ	2356	II1D	N2c3	16M	7.5	2.5	0.1	1				80	3.0	4.3	1					1		2

QJ	2357	II1D	N2c3	16M	7.5		<0.1			1					1						1	2
QJ	2358	II1D	N2c3	16M	7.5		<0.1				1				1							2
QJ	2359	II1D	N2c3	16M	2.5	2.5	<0.1	1				?	1.0	3.7	1						1	2
QJ	2360	II1D	N2c3	16M	7.5		0.1				1				1							2
QJ	2361	II1D	N2c3	16M	7.5		<0.1				1				1							12
QJ	2362	II1D	N2c3	16M	7.5		0.1			1					1						1	12
QJ	2363	II1D	N2c3	16M	2.5		<0.1			1					1						1	12
QJ	2364	II1D	N2c3	16M	7.5		<0.1				1				1							12
QJ	2365	II1D	N2c3	16M	7.5		<0.1				1				1							2
QJ	2366	II1D	N2c3	16M	7.5		<0.1				1				1							2
QJ	2367	II1D	N2c3	16M	7.5		<0.1			1					1							3
QJ	2368	II1D	N2c3	16M	7.5	7.5	0.2	1				85	2.4	4.5	1						1	2
QJ	2369	II1D	N2c3	16M	7.5		<0.1				1				1							2
QJ	2370	II1D	N2c3	16M	2.5		<0.1				1				1							2
QJ	2371	II1D	N2c3	16M	7.5		0.1				1				1							2
QJ	2372	II1D	N2c3	16M	2.5		<0.1			1					1						1	2
QJ	2373	II1D	N2c3	16M	7.5		<0.1			1					1						1	2
QJ	2374	II1D	N2c3	16M	2.5	2.5	<0.1		1			?	1.0	1.9	1							2
QJ	2375	II1D	N2c3	16M	7.5		0.1				1				1							3
QJ	2376	II1D	N2c3	16M	2.5		<0.1				1				1							2
QJ	2377	II1D	N2c3	16M	2.5		<0.1				1				1							2
QJ	2378	II1D	N2c3	16M	7.5		<0.1				1				1							2
QJ	2379	II1D	N2c3	16M	7.5		0.1				1						1					2
QJ	2380	II1D	N2c3	16M	2.5		<0.1				1				1							2
QJ	2381	II1D	N2c3	16M	12.5	2.5	0.2	1				80	1.8	3.1	1							2
QJ	2382	II1D	N2c3	16M	7.5		<0.1				1				1							2
QJ	2383	II1D	N2c3	16M	7.5		<0.1				1					1						12
QJ	2384	II1D	N2c3	16M	2.5		<0.1				1				1							12
QJ	2385	II1D	N2c3	16M	12.5		0.2			1					1						1	2
QJ	2386	II1D	N2c3	16M	7.5		<0.1				1				1							2
QJ	2387	II1D	N2c3	16M	7.5		<0.1			1					1						1	2
QJ	2388	II1D	N2c3	16M	7.5		<0.1				1				1							12
QJ	2389	II1D	N2c3	16M	7.5		<0.1				1				1							12
QJ	2390	II1D	N2c3	16M	2.5		<0.1			1						1					1	2
QJ	2391	II1D	N2c3	16M	2.5		<0.1				1				1							2
QJ	2392	II1D	N2c3	16M	2.5	7.5	0.1		1			?	0.9	4.5	1						1	12
QJ	2393	II1D	N2c3	16M	2.5	2.5	<0.1	1				20	1.2	2.4	1							2
QJ	2394	II1D	N2c3	16M	7.5		<0.1				1						1					2
QJ	2395	II1D	N2c3	16M	2.5		<0.1				1				1							2
QJ	2396	II1D	N2c3	16M	7.5		<0.1			1						1					1	2
QJ	2397	II1D	N2c3	16M	7.5		<0.1			1					1						1	2
QJ	2398	II1D	N2c3	16M	7.5	7.5	0.1		1			?	0.5	1.0	1							12
QJ	2399	II1D	N2c3	16M	7.5		0.1			1					1						1	2
QJ	2400	II1D	N2c3	16M	2.5		<0.1				1				1							2
QJ	2401	II1D	N2c3	16M	7.5		<0.1			1					1						1	2
QJ	2402	II1D	N2c3	16M	7.5	2.5	<0.1	1				75	0.8	1.5	1						1	2
QJ	2403	II1D	N2c3	16M	7.5		<0.1				1					1						2
QJ	2404	II1D	N2c3	16M	7.5		<0.1				1				1							2
QJ	2405	II1D	N2c3	16M	7.5		0.1			1						1					1	2
QJ	2406	II1D	N2c3	16M	7.5		<0.1				1				1							2
QJ	2407	II1D	N2c3	16M	7.5		<0.1			1					1						1	12
QJ	2408	II1D	N2c3	16M	12.5	2.5	<0.1	1				?	0.8	2.2	1				1		1	12
QJ	2409	II1D	N2c3	16M	2.5		<0.1				1				1							2

QJ	2410	II1D	N2c3	16M	7.5		<0.1			1					1						1	12
QJ	2411	II1D	N2c3	16M	7.5		<0.1				1				1							2
QJ	2412	II1D	N2c3	16M	7.5		0.2				1						1					2
QJ	2413	II1D	N2c3	16M	7.5		0.1			1					1						1	2
QJ	2414	II1D	N2c3	16M	7.5		<0.1				1				1							2
QJ	2415	II1D	N2c3	16M	2.5		<0.1				1				1							2
QJ	2416	II1D	N2c3	16M	7.5		<0.1			1					1						1	12
QJ	2417	II1D	N2c3	16M	7.5		0.1				1				1							2
QJ	2418	II1D	N2c3	16M	7.5	2.5	<0.1	1				65	0.9	2.8	1						1	2
QJ	2419	II1D	N2c3	16M	7.5		<0.1				1					1						2
QJ	2420	II1D	N2c3	16M	7.5		0.1				1				1							2
QJ	2421	II1D	N2c3	16M	2.5	2.5	<0.1	1				85	0.9	2.0	1							2
QJ	2422	II1D	N2c3	16M	2.5		<0.1				1				1							12
QJ	2423	II1D	N2c3	16M	7.5	2.5	<0.1	1				?	0.7	1.2	1						1	2
QJ	2424	II1D	N2c3	16M	7.5		<0.1				1				1							12
QJ	2425	II1D	N2c3	16M	7.5		0.1				1				1							12
QJ	2426	II1D	N2c3	16M	2.5	7.5	<0.1	1				70	1.2	2.7	1					1		2
QJ	2427	II1D	N2c3	16M	7.5	7.5	<0.1	1				?	0.5	4.4	1							12
QJ	2428	II1D	N2c3	16M	7.5	2.5	0.1		1			?	0.9	3.4	1			1			1	2
QJ	2429	II1D	N2c3	16M	2.5		<0.1				1				1							2
QJ	2430	II1D	N2c3	16M	2.5		<0.1			1					1						1	2
QJ	2431	II1D	N2c3	16M	12.5		0.1				1							1				2
QJ	2432	II1D	N2c3	16M	7.5		<0.1				1				1							2
QJ	2433	II1D	N2c3	16M	7.5	7.5	<0.1	1				?	0.7	3.9	1							2
QJ	2434	II1D	N2c3	16M	7.5		0.1			1					1							2
QJ	2435	II1D	N2c3	16M	7.5		<0.1			1					1						1	2
QJ	2436	II1D	N2c3	16M	7.5		<0.1				1				1							2
QJ	2437	II1D	N2c3	16M	2.5	2.5	<0.1		1			?	0.7	2.6	1						1	12
QJ	2438	II1D	N2c3	16M	7.5		0.1				1				1							2
QJ	2439	II1D	N2c3	16M	7.5	2.5	0.1		1			75	1.2	2.8	1							12
QJ	2440	II1D	N2c3	16M	7.5		0.1				1				1							12
QJ	2441	II1D	N2c3	16M	7.5	2.5	<0.1	1				70	1.5	3.4	1						1	12
QJ	2442	II1D	N2c3	16M	7.5		0.1			1					1						1	2
QJ	2443	II1D	N2c3	16M	2.5		<0.1				1					1						2
QJ	2444	II1D	N2c3	16M	7.5		<0.1				1				1							2
QJ	2445	II1D	N2c3	16M	2.5		<0.1				1				1							2
QJ	2446	II1D	N2c3	16M	7.5		0.1				1					1						2
QJ	2447	II1D	N2c3	16M	7.5	7.5	0.1		1			85	0.6	2.3	1							2
QJ	2448	II1D	N2c3	16M	7.5		0.1			1					1						1	12
QJ	2449	II1D	N2c3	16M	7.5		0.3				1				1							2
QJ	2450	II1D	N2c3	16M	7.5		<0.1				1				1							2
QJ	2451	II1D	N2c3	16M	12.5		0.1				1				1							12
QJ	2452	II1D	N2c3	16M	7.5		<0.1				1				1							2
QJ	2453	II1D	N2c3	16M	7.5	7.5	0.2		1			60	1.5	4.4		1				1		2
QJ	2454	II1D	N2c3	16M	2.5		<0.1				1				1							2
QJ	2455	II1D	N2c3	16M	7.5	7.5	<0.1	1				75	0.8	4.5	1							12
QJ	2456	II1D	N2c3	16M	2.5	2.5	<0.1	1				50	1.4	2.4	1						1	2
QJ	2457	II1D	N2c3	16M	2.5	7.5	0.2		1			85	2.9	6.3	1				1	1	1	2
QJ	2458	II1D	N2c3	16M	7.5		0.1				1				1							12
QJ	2459	II1D	N2c3	16M	12.5		0.1			1					1						1	12
QJ	2460	II1D	N2c3	16M	7.5		0.2				1				1							3
QJ	2461	II1D	N2c3	16M	7.5		0.2			1					1						1	2
QJ	2462	II1D	N2c3	16M	7.5		<0.1			1					1						1	12

QJ	2463	II1D	N2c3	16M	7.5		0.1			1					1						1	2
QJ	2464	II1D	N2c3	16M	7.5		0.2			1					1						1	2
QJ	2465	II1D	N2c3	16M	7.5		0.1			1					1						1	12
QJ	2466	II1D	N2c3	16M	7.5		0.1				1						1					12
QJ	2467	II1D	N2c3	16M	12.5		0.1				1				1							2
QJ	2468	II1D	N2c3	16M	7.5	7.5	0.1		1			85	1.7	4.8	1					1	1	12
QJ	2469	II1D	N2c3	16M	7.5		0.1				1						1					12
QJ	2470	II1D	N2c3	16M	7.5		0.2				1					1						2
QJ	2471	II1D	N2c3	16M	2.5		<0.1				1				1							3
QJ	2472	II1D	N2c3	16M	7.5		<0.1				1				1							2
QJ	2473	II1D	N2c3	16M	7.5		<0.1			1					1						1	2
QJ	2474	II1D	N2c3	16M	2.5		<0.1				1				1							2
QJ	2475	II1D	N2c3	16M	7.5		<0.1				1				1							12
QJ	2476	II1D	N2c3	16M	7.5		0.1			1					1						1	2
QJ	2477	II1D	N2c3	16M	2.5		<0.1			1					1						1	2
QJ	2478	II1D	N2c3	16M	7.5		<0.1				1				1							12
QJ	2479	II1D	N2c3	16M	7.5		0.3				1				1							2
QJ	2480	II1D	N2c3	16M	2.5	2.5	<0.1	1				?	0.5	0.7	1							2
QJ	2481	II1D	N2c3	16M	7.5		0.1				1					1						2
QJ	2482	II1D	N2c3	16M	2.5		<0.1			1					1							2
QJ	2483	II1D	N2c3	16M	12.5		0.2				1				1							2
QJ	2484	II1D	N2c3	16M	2.5		<0.1				1				1							12
QJ	2485	II1D	N2c3	16M	7.5		0.1				1				1							12
QJ	2486	II1D	N2c3	16M	7.5		0.1			1					1						1	12
QJ	2487	II1D	N2c3	16M	2.5		<0.1				1				1							2
QJ	2488	II1D	N2c3	16M	7.5		<0.1				1				1							2
QJ	2489	II1D	N2c3	16M	2.5	7.5	0.1	1				?	0.9	5.6	1							12
QJ	2490	II1D	N2c3	16M	2.5	2.5	<0.1	1				80	0.6	3.6	1							2
QJ	2491	II1D	N2c3	16M	7.5	2.5	0.1	1				85	1.1	2.3	1						1	2
QJ	2492	II1D	N2c3	16M	2.5		<0.1				1				1							2
QJ	2493	II1D	N2c3	16M	2.5	2.5	<0.1	1				?	0.5	2.0	1							2
QJ	2494	II1D	N2c3	16M	7.5		<0.1				1				1							2
QJ	2495	II1D	N2c3	16M	7.5		<0.1			1					1						1	2
QJ	2496	II1D	N2c3	16M	2.5		<0.1				1				1							14
QJ	2497	II1D	N2c3	16M	7.5		<0.1				1				1							2
QJ	2498	II1D	N2c3	16M	12.5		0.2				1					1						12
QJ	2499	II1D	N2c3	16M	7.5		<0.1				1				1							12
QJ	2500	II1D	N2c3	16M	12.5		0.4				1				1							12
QJ	2501	II1D	N2c3	16M	2.5	2.5	<0.1	1				?	0.8	2.5	1							12
QJ	2502	II1D	N2c3	16M	7.5		0.1				1				1							2
QJ	2503	II1D	N2c3	16M	2.5		<0.1				1				1							2
QJ	2504	II1D	N2c3	16M	12.5		0.1				1				1							12
QJ	2505	II1D	N2c3	16M	12.5		0.1			1					1						1	12
QJ	2506	II1D	N2c3	16M	7.5	7.5	0.1	1				10	2.0	8.0	1			1				12
QJ	2507	II1D	N2c3	16M	7.5	2.5	<0.1	1				80	1.5	2.8		1					1	2
QJ	2508	II1D	N2c3	16M	7.5	7.5	<0.1	1				?	0.5	5.0	1							2
QJ	2509	II1D	N2c3	16M	12.5		0.2				1				1							12
QJ	2510	II1D	N2c3	16M	7.5		0.1			1					1						1	2
QJ	2511	II1D	N2c3	16M	7.5	2.5	<0.1	1				?	1.0	2.8		1						2
QJ	2512	II1D	N2c3	16M	7.5		0.1			1						1					1	12
QJ	2513	II1D	N2c3	16M	7.5		<0.1				1				1							2
QJ	2514	II1D	N2c3	16M	2.5		<0.1				1				1							2
QJ	2515	II1D	N2c3	16M	7.5		0.1				1					1						12

QJ	2516	II1D	N2c3	16M	7.5	2.5	0.1	1				65	1.8	3.8	1					1		2
QJ	2517	II1D	N2c3	16M	7.5		0.1			1					1						1	2
QJ	2518	II1D	N2c3	16M	2.5		<0.1				1				1							2
QJ	2519	II1D	N2c3	16M	2.5		<0.1				1				1							2
QJ	2520	II1D	N2c3	16M	2.5		<0.1				1				1							12
QJ	2521	II1D	N2c3	16M	7.5		<0.1				1				1							2
QJ	2522	II1D	N2c3	16M	12.5	7.5	0.1	1				?	0.7	2.3	1							12
QJ	2523	II1D	N2c3	16M	2.5		0.1			1					1						1	12
QJ	2524	II1D	N2c3	16M	7.5		<0.1				1				1							2
QJ	2525	II1D	N2c3	16M	2.5		<0.1				1				1							2
QJ	2526	II1D	N2c3	16M	2.5		<0.1				1				1							3
QJ	2527	II1D	N2c3	16M	7.5		<0.1				1				1							12
QJ	2528	II1D	N2c3	16M	12.5		0.1				1					1						12
QJ	2529	II1D	N2c3	16M	12.5	7.5	<0.1	1				?	0.7	2.4	1						1	12
QJ	2530	II1D	N2c3	16M	2.5	2.5	<0.1	1				80	1.0	2.7	1						1	12
QJ	2531	II1D	N2c3	16M	7.5		<0.1				1				1							14
QJ	2532	II1D	N2c3	16M	7.5		0.1				1				1							2
QJ	2533	II1D	N2c3	16M	7.5		<0.1				1				1							2
QJ	2534	II1D	N2c3	16M	2.5	7.5	<0.1		1			60	1.5	7.3	1				1		1	12
QJ	2535	II1D	N2c3	16M	7.5	7.5	0.1	1				90	0.9	2.4	1						1	2
QJ	2536	II1D	N2c3	16M	7.5		<0.1				1				1							14
QJ	2537	II1D	N2c3	16M	7.5		<0.1				1				1							2
QJ	2538	II1D	N2c3	16M	7.5	7.5	<0.1	1				70	0.8	3.8	1							12
QJ	2539	II1D	N2c3	16M	2.5	2.5	<0.1	1				80	2.0	5.0	1				1		1	2
QJ	2540	II1D	N2c3	16M	7.5		<0.1				1				1							2
QJ	2541	II1D	N2c3	16M	7.5		<0.1				1				1							2
QJ	2542	II1D	N2c3	16M	7.5		<0.1			1					1						1	2
QJ	2543	II1D	N2c3	16M	7.5		0.1			1						1					1	2
QJ	2544	II1D	N2c3	16M	12.5		<0.1				1					1						2
QJ	2545	II1D	N2c3	16M	7.5		<0.1				1				1							2
QJ	2546	II1D	N2c3	16M	2.5	7.5	<0.1	1				55	1.0	2.5	1					1		12
QJ	2547	II1D	N2c3	16M	7.5		0.1				1					1						2
QJ	2548	II1D	N2c3	16M	2.5	2.5	<0.1	1				?	0.7	1.0	1							2
QJ	2549	II1D	N2c3	16M	7.5		0.1				1					1						2
QJ	2550	II1D	N2c3	16M	7.5		0.1				1						1					2
QJ	2551	II1D	N2c3	16M	7.5	7.5	<0.1	1				?	0.7	2.6	1						1	12
QJ	2552	II1D	N2c3	16M	7.5		<0.1				1				1							12
QJ	2553	II1D	N2c3	16M	7.5		<0.1				1				1							12
QJ	2554	II1D	N2c3	16M	7.5		<0.1			1					1						1	12
QJ	2555	II1D	N2c3	16M	7.5	2.5	0.1	1				80	1.7	3.7	1						1	12
QJ	2556	II1D	N2c3	16M	7.5		0.1			1					1							2
QJ	2557	II1D	N2c3	16M	7.5		0.1			1					1						1	2
QJ	2558	II1D	N2c3	16M	7.5		<0.1				1				1							2
QJ	2559	II1D	N2c3	16M	7.5	7.5	0.1		1			70	0.8	2.3	1						1	12
QJ	2560	II1D	N2c3	16M	2.5		<0.1				1					1						2
QJ	2561	II1D	N2c3	16M	2.5		<0.1			1					1						1	12
QJ	2562	II1D	N2c3	16M	2.5	7.5	<0.1	1				65	1.3	3.9	1							2
QJ	2563	II1D	N2c3	16M	2.5		<0.1				1				1							2
QJ	2564	II1D	N2c3	16M	7.5		<0.1				1				1							2
QJ	2565	II1D	N2c3	16M	12.5	7.5	0.1	1				?	0.8	2.8	1						1	12
QJ	2566	II1D	N2c3	16M	7.5		<0.1				1				1							2
QJ	2567	II1D	N2c3	16M	7.5		<0.1				1				1							2
QJ	2568	II1D	N2c3	16M	7.5		<0.1				1				1							12

QJ	2569	II1D	N2c3	16M	2.5	2.5	0.1	1				50	2.7	4.7	1				1	1	1	2
QJ	2570	II1D	N2c3	16M	7.5		<0.1				1				1							2
QJ	2571	II1D	N2c3	16M	7.5		<0.1				1					1						2
QJ	2572	II1D	N2c3	16M	7.5		<0.1				1				1							12
QJ	2573	II1D	N2c3	16M	7.5		<0.1		1			?	0.4	4.3	1						1	12
QJ	2574	II1D	N2c3	16M	2.5	7.5	0.1	1				75	1.3	6.6	1					1	1	12
QJ	2575	II1D	N2c3	16M	2.5		<0.1				1				1							3
QJ	2576	II1D	N2c3	16M	2.5		<0.1				1				1							12
QJ	2577	II1D	N2c3	16M	7.5		<0.1				1				1							2
QJ	2578	II1D	N2c3	16M	2.5		<0.1				1				1							2
QJ	2579	II1D	N2c3	16M	7.5		<0.1			1					1						1	12
QJ	2580	II1D	N2c3	16M	7.5		<0.1			1					1						1	12
QJ	2581	II1D	N2c3	16M	7.5		<0.1			1					1						1	12
QJ	2582	II1D	N2c3	16M	7.5		<0.1			1					1						1	12
QJ	2583	II1D	N2c3	16M	7.5		<0.1				1				1							2
QJ	2584	II1D	N2c3	16M	7.5		<0.1				1				1							2
QJ	2585	II1D	N2c3	16M	7.5	7.5	<0.1	1				?	0.4	1.3	1						1	12
QJ	2586	II1D	N2c3	16M	7.5		<0.1			1					1						1	12
QJ	2587	II1D	N2c3	16M	7.5		<0.1			1					1						1	12
QJ	2588	II1D	N2c3	16M	7.5		<0.1				1				1							2
QJ	2589	II1D	N2c3	16M	2.5	7.5	<0.1		1			?	0.7	5.4	1						1	12
QJ	2590	II1D	N2c3	16M	2.5	2.5	<0.1	1				50	1.2	3.5	1						1	12
QJ	2591	II1D	N2c3	16M	2.5	2.5	<0.1				1				1							2
QJ	2592	II1D	N2c3	16M	7.5	2.5	0.1	1				75	3.3	2.9		1					1	12
QJ	2593	II1D	N2c3	16M	2.5	7.5	<0.1	1				?	0.6	3.6	1							2
QJ	2594	II1D	N2c3	16M	12.5		0.1				1				1							2
QJ	2595	II1D	N2c3	16M	12.5	7.5	0.1	1				85	0.8	5.6	1						1	2
QJ	2596	II1D	N2c3	16M	7.5		0.1				1				1							2
QJ	2597	II1D	N2c3	16M	2.5		<0.1			1					1						1	2
QJ	2598	II1D	N2c3	16M	7.5		<0.1				1				1							12
QJ	2599	II1D	N2c3	16M	7.5		0.1				1					1						2
QJ	2600	II1D	N2c3	16M	2.5		<0.1				1				1						1	12
QJ	2601	II1D	N2c3	16M	7.5		<0.1			1					1						1	12
QJ	2602	II1D	N2c3	16M	2.5		<0.1				1				1							2
QJ	2603	II1D	N2c3	16M	7.5		<0.1				1				1							12
QJ	2604	II1D	N2c3	16M	2.5		<0.1			1					1						1	2
QJ	2605	II1D	N2c3	16M	7.5		<0.1				1				1							2
QJ	2606	II1D	N2c3	16M	7.5		0.1				1				1							2
QJ	2607	II1D	N2c3	16M	7.5		<0.1				1				1							2
QJ	2608	II1D	N2c3	16M	7.5		<0.1			1					1						1	2
QJ	2609	II1D	N2c3	16M	7.5	7.5	0.1		1			?	0.8	1.9	1						1	12
QJ	2610	II1D	N2c3	16M	2.5		<0.1				1				1							3
QJ	2611	II1D	N2c3	16M	7.5		<0.1				1						1					2
QJ	2612	II1D	N2c3	16M	7.5		<0.1				1				1							2
QJ	2613	II1D	N2c3	16M	2.5		<0.1				1				1							2
QJ	2614	II1D	N2c3	16M	7.5		<0.1			1					1						1	2
QJ	2615	II1D	N2c3	16M	2.5		<0.1				1				1							2
QJ	2616	II1D	N2c3	16M	2.5		<0.1			1					1							2
QJ	2617	II1D	N2c3	16M	7.5		<0.1				1				1							2
QJ	2618	II1D	N2c3	16M	7.5		<0.1				1				1							2
QJ	2619	II1D	N2c3	16M	7.5	2.5	<0.1	1				70	0.9	2.9	1						1	2
QJ	2620	II1D	N2c3	16M	2.5		<0.1				1					1						2
QJ	2621	II1D	N2c3	16M	2.5	2.5	<0.1	1				?	0.5	2.2	1						1	2

QJ	2622	II1D	N2c3	16M	7.5		<0.1				1				1							2
QJ	2623	II1D	N2c3	16M	7.5		<0.1				1				1							2
QJ	2624	II1D	N2c3	16M	7.5		<0.1			1					1						1	2
QJ	2625	II1D	N2c3	16M	2.5		<0.1				1				1							3
QJ	2626	II1D	N2c3	16M	7.5		<0.1				1					1						2
QJ	2627	II1D	N2c3	16M	7.5	7.5	0.1	1				80	1.5	5.5	1			1			1	12
QJ	2628	II1D	N2c3	16M	2.5		<0.1				1				1							2
QJ	2629	II1D	N2c3	16M	7.5		0.1				1				1							12
QJ	2630	II1D	N2c3	16M	2.5	2.5	<0.1	1				80	1.4	3.6	1						1	2
QJ	2631	II1D	N2c3	16M	7.5		<0.1	1				?	1.1	2.3	1							2
QJ	2632	II1D	N2c3	16M	2.5		<0.1				1				1							2
QJ	2633	II1D	N2c3	16M	7.5		<0.1				1				1							2
QJ	2634	II1D	N2c3	16M	7.5		<0.1			1					1							2
QJ	2635	II1D	N2c3	16M	7.5		<0.1			1					1						1	2
QJ	2636	II1D	N2c3	16M	12.5		0.1				1				1							12
QJ	2637	II1D	N2c3	16M	2.5	2.5	<0.1	1				55	1.9	4.5	1						1	12
QJ	2638	II1D	N2c3	16M	7.5		<0.1			1					1						1	2
QJ	2639	II1D	N2c3	16M	2.5		<0.1				1				1							2
QJ	2640	II1D	N2c3	16M	2.5		<0.1				1				1							2
QJ	2641	II1D	N2c3	16M	7.5		<0.1				1				1							2
QJ	2642	II1D	N2c3	16M	7.5		<0.1			1					1						1	2
QJ	2643	II1D	N2c3	16M	7.5		<0.1				1				1							12
QJ	2644	II1D	N2c3	16M	7.5		0.1				1						1					2
QJ	2645	II1D	N2c3	16M	7.5		<0.1				1				1							2
QJ	2646	II1D	N2c3	16M	2.5	7.5	<0.1	1				?	1.1	6.2	1						1	2
QJ	2647	II1D	N2c3	16M	7.5		<0.1				1				1							12
QJ	2648	II1D	N2c3	16M	7.5	2.5	<0.1	1				65	1.0	2.0	1						1	2
QJ	2649	II1D	N2c3	16M	2.5		<0.1				1				1							12
QJ	2650	II1D	N2c3	16M	2.5		<0.1				1				1							2
QJ	2651	II1D	N2c3	16M	2.5		<0.1			1					1						1	2
QJ	2652	II1D	N2c3	16M	7.5		<0.1			1					1						1	2
QJ	2653	II1D	N2c3	16M	7.5	2.5	<0.1	1				75	1.0	3.7	1					1		12
QJ	2654	II1D	N2c3	16M	2.5		<0.1				1				1							12
QJ	2655	II1D	N2c3	16M	2.5		<0.1				1				1							2
QJ	2656	II1D	N2c3	16M	2.5		<0.1				1				1							2
QJ	2657	II1D	N2c3	16M	2.5		<0.1				1				1							2
QJ	2658	II1D	N2c3	16M	7.5		<0.1				1				1							2
QJ	2659	II1D	N2c3	16M	2.5		<0.1			1					1						1	2
QJ	2660	II1D	N2c3	16M	2.5		<0.1				1				1							2
QJ	2661	II1D	N2c3	16M	2.5		<0.1			1					1						1	12
QJ	2662	II1D	N2c3	16M	7.5		<0.1			1					1						1	2
QJ	2663	II1D	N2c3	16M	2.5		<0.1				1				1							2
QJ	2664	II1D	N2c3	16M	7.5		<0.1				1				1							2
QJ	2665	II1D	N2c3	16M	7.5		<0.1				1				1							12
QJ	2666	II1D	N2c3	16M	2.5	2.5	<0.1	1				40	0.8	2.8	1						1	4
QJ	2667	II1D	N2c3	16M	2.5		<0.1				1				1							2
QJ	2668	II1D	N2c3	16M	2.5	2.5	<0.1	1				70	1.2	3.4	1						1	2
QJ	2669	II1D	N2c3	16M	7.5		<0.1				1				1							2
QJ	2670	II1D	N2c3	16M	2.5		<0.1				1				1							2
QJ	2671	II1D	N2c3	16M	2.5	2.5	<0.1	1				?	1.0	3.1	1						1	2
QJ	2672	II1D	N2c3	16M	2.5		<0.1				1				1							2
QJ	2673	II1D	N2c3	16M	7.5		<0.1				1				1							12
QJ	2674	II1D	N2c3	16M	2.5		<0.1			1					1						1	2

QJ	2675	II1D	N2c3	16M	7.5		<0.1				1				1							12
QJ	2676	II1D	N2c3	16M	2.5		<0.1			1					1						1	12
QJ	2677	II1D	N2c3	16M	2.5		<0.1				1				1							2
QJ	2678	II1D	N2c3	16M	2.5		<0.1				1				1							2
QJ	2679	II1D	N2c3	16M	2.5	7.5	<0.1	1				90	1.2	2.6	1						1	2
QJ	2680	II1D	N2c3	16M	2.5	2.5	<0.1	1				?	0.5	3.4	1							2
QJ	2681	II1D	N2c3	16M	2.5		0.1				1				1							2
QJ	2682	II1D	N2c3	16M	2.5		0.1				1				1							2
QJ	2683	II1D	N2c3	16M	2.5		<0.1			1					1						1	2
QJ	2684	II1D	N2c3	16M	2.5		<0.1			1					1						1	12
QJ	2685	II1D	N2c3	16M	7.5		<0.1				1				1							2
QJ	2686	II1D	N2c3	16M	2.5		<0.1				1					1						12
QJ	2687	II1D	N2c3	16M	2.5		<0.1				1				1							2
QJ	2688	II1D	N2c3	16M	2.5		<0.1				1				1							2
QJ	2689	II1D	N2c3	16M	2.5		<0.1				1				1							2
QJ	2690	II1D	N2c3	16M	2.5		<0.1			1					1							2
QJ	2691	II1D	N2c3	16M	7.5		<0.1				1				1							2
QJ	2692	II1D	N2c3	16M	7.5		<0.1				1					1						2
QJ	2693	II1D	N2c3	16M	2.5		<0.1				1				1							2
QJ	2694	II1D	N2c3	16M	2.5		<0.1				1				1							2
QJ	2695	II1D	N2c3	16M	2.5		<0.1				1				1							2
QJ	2696	II1D	N2c3	16M	2.5		<0.1				1				1							2
QJ	2697	II1D	N2c3	16M	2.5	2.5	<0.1	1				?	0.6	2.3	1						1	12
QJ	2698	II1D	N2c3	16M	2.5	7.5	0.1		1			70	1.8	2.6	1						1	2
QJ	2699	II1D	N2c3	16M	7.5		<0.1				1				1							2
QJ	2700	II1D	N2c3	16M	2.5		<0.1			1					1						1	2
QJ	2701	II1D	N2c3	16M	7.5		<0.1			1					1						1	12
QJ	2702	II1D	N2c3	16M	7.5	2.5	<0.1	1				45	0.9	2.3	1							2
QJ	2703	II1D	N2c3	16M	7.5		<0.1				1				1							2
QJ	2704	II1D	N2c3	16M	2.5		<0.1				1				1							2
QJ	2705	II1D	N2c3	16M	7.5		<0.1				1				1							2
QJ	2706	II1D	N2c3	16M	7.5		<0.1				1				1							12
QJ	2707	II1D	N2c3	16M	2.5	2.5	<0.1	1				?	0.6	1.6	1							2
QJ	2708	II1D	N2c3	16M	7.5	2.5	<0.1	1				80	1.4	2.0		1					1	2
QJ	2709	II1D	N2c3	16M	2.5	2.5	<0.1			1					1						1	2
QJ	2710	II1D	N2c3	16M	2.5		<0.1				1				1							2
QJ	2711	II1D	N2c3	16M	7.5		<0.1				1				1							2
QJ	2712	II1D	N2c3	16M	7.5	2.5	<0.1	1				?	0.7	2.3	1							2
QJ	2713	II1D	N2c3	16M	2.5		<0.1			1					1						1	2
QJ	2714	II1D	N2c3	16M	2.5		<0.1				1				1							2
QJ	2715	II1D	N2c3	16M	2.5		<0.1				1				1							2
QJ	2716	II1D	N2c3	16M	2.5		<0.1				1				1							2
QJ	2717	II1D	N2c3	16M	2.5	2.5	<0.1	1				?	0.5	0.7	1							2
QJ	2718	II1D	N2c3	16M	2.5	2.5	<0.1		1			?	0.7	1.8	1							2
QJ	2719	II1D	N2c3	16M	2.5		<0.1			1					1						1	2
QJ	2720	II1D	N2c3	16M	2.5		<0.1				1				1							2
QJ	2721	II1D	N2c3	16M	2.5		<0.1				1				1							2
QJ	2722	II1D	N2c3	16M	7.5		<0.1				1				1							12
QJ	2723	II1D	N2c3	16M	2.5		<0.1			1					1						1	2
QJ	2724	II1D	N2c3	16M	2.5		<0.1				1				1							2
QJ	2725	II1D	N2c3	16M	2.5		<0.1				1				1							2
QJ	2726	II1D	N2c3	16M	2.5		<0.1				1				1							2
QJ	2727	II1D	N2c3	16M	2.5		<0.1				1				1							ob

QJ	2728	II1D	N2c3	16M	2.5	2.5	<0.1	1				?	0.5	1.3	1						1	2
QJ	2729	II1D	N2c3	16M	7.5		<0.1			1					1						1	2
QJ	2730	II1D	N2c3	16M	7.5		<0.1				1				1							2
QJ	2731	II1D	N2c3	16M	7.5		<0.1				1				1							2
QJ	2732	II1D	N2c3	16M	2.5		<0.1			1					1						1	2
QJ	2733	II1D	N2c3	16M	7.5		<0.1			1					1							2
QJ	2734	II1D	N2c3	16M	2.5	2.5	<0.1	1				80	1.2	1.6	1							2
QJ	2735	II1D	N2c3	16M	2.5	7.5	<0.1	1				?	0.5	3.1	1							12
QJ	2736	II1D	N2c3	16M	7.5		<0.1				1				1							2
QJ	2737	II1D	N2c3	16M	7.5		<0.1				1				1							2
QJ	2738	II1D	N2c3	16M	2.5		<0.1				1				1							2
QJ	2739	II1D	N2c3	16M	7.5		<0.1				1				1							2
QJ	2740	II1D	N2c3	16M	7.5		<0.1				1				1							12
QJ	2741	II1D	N2c3	16M	2.5	2.5	<0.1		1			?	0.7	2.0	1						1	2
QJ	2742	II1D	N2c3	16M	7.5		<0.1				1				1							2
QJ	2743	II1D	N2c3	16M	7.5		<0.1				1				1							2
QJ	2744	II1D	N2c3	16M	7.5		<0.1				1				1							2
QJ	2745	II1D	N2c3	16M	2.5		<0.1				1				1							2
QJ	2746	II1D	N2c3	16M	17.5		0.2			1					1						1	12
QJ	2747	II1D	N2c3	16M	2.5	2.5	<0.1	1				75	0.7	2.6	1							2
QJ	2748	II1D	N2c3	16M	2.5	2.5	<0.1	1				?	0.7	1.9	1						1	2
QJ	2749	II1D	N2c3	16M	7.5		<0.1				1				1							2
QJ	2750	II1D	N2c3	16M	7.5		<0.1				1				1							2
QJ	2751	II1D	N2c3	16M	7.5		<0.1				1				1							2
QJ	2752	II1D	N2c3	16M	2.5		<0.1				1				1							2
QJ	2753	II1D	N2c3	16M	7.5		0.1			1					1						1	12
QJ	2754	II1D	N2c3	16M	7.5		<0.1			1					1						1	2
QJ	2755	II1D	N2c3	16M	7.5		<0.1			1					1						1	2
QJ	2756	II1D	N2c3	16M	7.5		<0.1			1					1						1	2
QJ	2757	II1D	N2c3	16M	7.5		<0.1			1					1						1	2
QJ	2758	II1D	N2c3	16M	2.5		<0.1			1					1						1	12
QJ	2759	II1D	N2c3	16M	7.5		<0.1			1					1						1	12
QJ	2760	II1D	N2c3	16M	2.5		<0.1				1				1							2
QJ	2761	II1D	N2c3	16M	7.5		0.1			1					1						1	4
QJ	2762	II1D	N2c3	16M	2.5		<0.1				1				1							2
QJ	2763	II1D	N2c3	16M	2.5		<0.1				1				1							2
QJ	2764	II1D	N2c3	16M	7.5		<0.1				1				1							2
QJ	2765	II1D	N2c3	16M	2.5		<0.1				1				1							2
QJ	2766	II1D	N2c3	16M	2.5		<0.1				1				1							2
QJ	2767	II1D	N2c3	16M	7.5		<0.1				1				1							12
QJ	2768	II1D	N2c3	16M	2.5		<0.1			1					1						1	2
QJ	2769	II1D	N2c3	16M	2.5		<0.1				1				1							2
QJ	2770	II1D	N2c3	16M	2.5		<0.1	1				?	0.5	0.7	1							2
QJ	2771	II1D	N2c3	16M	7.5		<0.1				1				1							2
QJ	2772	II1D	N2c3	16M	2.5		<0.1			1					1							2
QJ	2773	II1D	N2c3	16M	7.5		<0.1				1				1							12
QJ	2774	II1D	N2c3	16M	7.5		<0.1				1				1							2
QJ	2775	II1D	N2c3	16M	2.5		<0.1				1				1							2
QJ	2776	II1D	N2c3	16M	2.5		<0.1				1				1							2
QJ	2777	II1D	N2c3	16M	7.5	2.5	<0.1		1			?	0.9	3.0	1						1	12
QJ	2778	II1D	N2c3	16M	2.5	2.5	<0.1	1				?	0.6	3.3	1						1	12
QJ	2779	II1D	N2c3	16M	2.5		<0.1				1				1							2
QJ	2780	II1D	N2c3	16M	2.5		<0.1				1				1							2

QJ	2781	II1D	N2c3	16M	2.5		<0.1				1				1							2
QJ	2782	II1D	N2c3	16M	2.5	2.5	<0.1	1				?	0.7	1.9	1							2
QJ	2783	II1D	N2c3	16M	2.5	2.5	<0.1	1				?	0.7	1.5	1							2
QJ	2784	II1D	N2c3	16M	2.5		<0.1				1				1							2
QJ	2785	II1D	N2c3	16M	2.5		<0.1				1				1							2
QJ	2786	II1D	N2c3	16M	2.5		<0.1			1					1						1	2
QJ	2787	II1D	N2c3	16M	2.5		<0.1			1					1						1	2
QJ	2788	II1D	N2c3	16M	2.5	2.5	<0.1	1				?	0.7	2.2	1							2
QJ	2789	II1D	N2c3	16M	2.5		<0.1				1				1							2
QJ	2790	II1D	N2c3	16M	2.5		<0.1				1				1							2
QJ	2791	II1D	N2c3	16M	2.5		<0.1				1				1							2
QJ	2792	II1D	N2c3	16M	2.5		<0.1			1					1						1	ob
QJ	2793	II1D	N2c3	16M	2.5		<0.1			1					1						1	12
QJ	2794	II1D	N2c3	16M	2.5	2.5	<0.1	1				?	0.5	0.8	1							2
QJ	2795	II1D	N2c3	16M	2.5		<0.1			1					1						1	2
QJ	2796	II1D	N2c3	16M	2.5		<0.1				1				1							2
QJ	2797	II1D	N2c3	16M	2.5		<0.1				1				1							2
QJ	2798	II1D	N2c3	16M	2.5		<0.1				1				1							2
QJ	2799	II1D	N2c3	16M	2.5		<0.1				1				1							2
QJ	2800	II1D	N2c3	16M	2.5		<0.1				1				1							2
QJ	2801	II1D	N2c3	16M	2.5		<0.1				1				1							2
QJ	2802	II1D	N2c3	16M	2.5		<0.1				1				1							2
QJ	2803	II1D	N2c3	16M	2.5		<0.1				1				1							2
QJ	2804	II1D	N2c3	16M	7.5	2.5	<0.1	1				70	0.7	2.0	1						1	2
QJ	2805	II1D	N2c3	16M	2.5		<0.1				1				1							2
QJ	2806	II1D	N2c3	16M	2.5		<0.1				1				1							2
QJ	2807	II1D	N2c3	16M	2.5		<0.1				1				1							2
QJ	2808	II1D	N2c3	16M	2.5		<0.1				1				1							2
QJ	2809	II1D	N2c3	16M	2.5		<0.1				1				1							2
QJ	2810	II1D	N2c3	16M	2.5		<0.1				1				1							2
QJ	2811	II1D	N2c3	16M	2.5		<0.1				1				1							2
QJ	2812	II1D	N2c3	16M	2.5		<0.1				1				1							2
QJ	2813	II1D	N2c3	16M	2.5		<0.1				1				1							2
QJ	2814	II1D	N2c3	16M	2.5		<0.1				1				1							2
QJ	2815	II1D	N2c3	16M	2.5		<0.1				1				1							2
QJ	2816	II1D	N2c3	16M	2.5		<0.1			1					1						1	2
QJ	2817	II1D	N2c3	16M	2.5		<0.1			1					1							2
QJ	2818	II1D	N2c3	16M	2.5		<0.1				1				1							2
QJ	2819	II1D	N2c3	16M	2.5		<0.1				1				1							2
QJ	2820	II1D	N2c3	16M	2.5		<0.1				1				1							2
QJ	2821	II1D	N2c3	16M	2.5		<0.1				1				1							2
QJ	2822	II1D	N2c3	16M	7.5	2.5	<0.1	1				?	0.5	2.5	1						1	2
QJ	2837	II1D	N2c3	16G	7.5	7.5	0.1	1				?	1.4	4.8	1						1	12
QJ	2838	II1D	N2c3	16G	2.5	2.5	<0.1	1				65	1.2	4.8	1							2
QJ	2839	II1D	N2c3	16G	7.5		0.1			1					1						1	5
QJ	2840	II1D	N2c3	16G	2.5		<0.1				1				1							12
QJ	2841	II1D	N2c3	16G	7.5	7.5	<0.1	1				40	0.7	1.9	1						1	2
QJ	2842	II1D	N2c3	16G	2.5	2.5	<0.1	1				85	1.2	2.0		1						12
QJ	2843	II1D	N2c3	16G	2.5	7.5	<0.1	1				70	1.0	4.2	1			1				12
QJ	2844	II1D	N2c3	16G	7.5		0.1			1					1						1	12
QJ	2845	II1D	N2c3	16G	7.5		<0.1			1					1						1	2
QJ	2846	II1D	N2c3	16G																		12
QJ	2847	II1D	N2c3	16G	7.5		0.1				1				1							2

QJ	2848	II1D	N2c3	16G	7.5		0.1			1					1						1	2
QJ	2849	II1D	N2c3	16G	7.5		0.1			1					1						1	12
QJ	2850	II1D	N2c3	16G	7.5		<0.1			1					1						1	12
QJ	2851	II1D	N2c3	16G	7.5		<0.1				1				1							2
QJ	2852	II1D	N2c3	16G	7.5	2.5	<0.1	1				70	0.8	1.5	1				1		1	12
QJ	2853	II1D	N2c3	16G	7.5		0.1				1				1							2
QJ	2854	II1D	N2c3	16G	7.5		<0.1			1					1						1	12
QJ	2855	II1D	N2c3	16G	7.5	7.5	<0.1	1				?	0.5	1.9	1						1	12
QJ	2856	II1D	N2c3	16G	2.5		<0.1				1				1							2
QJ	2857	II1D	N2c3	16G	7.5		<0.1			1					1						1	12
QJ	2858	II1D	N2c3	16G	7.5	7.5	0.1	1				?	0.7	1.8	1						1	2
QJ	2859	II1D	N2c3	16G	7.5		0.1				1					1						12
QJ	2860	II1D	N2c3	16G	7.5	7.5	0.1	1				50	1.7	4.2	1			1	1	1	1	12
QJ	2861	II1D	N2c3	16G	12.5		0.1			1					1						1	12
QJ	2862	II1D	N2c3	16G	7.5		0.1			1					1						1	12
QJ	2863	II1D	N2c3	16G	7.5	7.5	0.1		1			?	1.7	3.5	1			1	1		1	12
QJ	2864	II1D	N2c3	16G	7.5		0.1			1					1							12
QJ	2865	II1D	N2c3	16G	7.5		<0.1			1					1						1	12
QJ	2866	II1D	N2c3	16G	2.5		<0.1			1					1						1	12
QJ	2867	II1D	N2c3	16G	7.5	2.5	0.1		1			50	1.3	3.4	1					1		12
QJ	2868	II1D	N2c3	16G	7.5		<0.1				1					1						12
QJ	2871	II1D	N2c3	4G	27.5	27.5	1.7	1				90	4.1	17.8	1			1			1	12
QJ	2872	II1D	N2c3	4G	17.5	27.5	2.9		1			40	2.7	7.5	1			1	1	1	1	12
QJ	2873	II1D	N2c3	4G	12.5	17.5	0.8		1			?	0.9	6.5	1			1	1	1	1	12
QJ	2874	II1D	N2c3	4G	22.5		0.6			1					1						1	12
QJ	2875	II1D	N2c3	4G	12.5	12.5	0.3		1			65	2.8	8.9	1					1		12
QJ	2876	II1D	N2c3	4G	12.5		0.5				1						1					12
QJ	2877	II1D	N2c3	4G	12.5		0.2				1				1							12
QJ	2878	II1D	N2c3	4G	12.5		0.2			1					1						1	12
QJ	2879	II1D	N2c3	4G	22.5	12.5	1	1				60	2.9	8.7		1						ss
QJ	2880	II1D	N2c3	4G	12.5		0.2			1					1						1	12
QJ	2881	II1D	N2c3	4G	17.5		0.3				1				1							12
QJ	2882	II1D	N2c3	4G	7.5	7.5	0.1	1				75	1.9	6.5	1						1	12
QJ	2883	II1D	N2c3	4G	17.5	7.5	0.4	1				50	1.4	3.8	1				1		1	12
QJ	2884	II1D	N2c3	4G	12.5		0.1				1				1							12
QJ	2885	II1D	N2c3	4G	12.5		0.1				1				1							12
QJ	2886	II1D	N2c3	4G	7.5	12.5	0.2		1			?	1.0	2.6	1						1	12
QJ	2887	II1D	N2c3	4G	7.5	12.5	0.2	1				?	0.8	1.8	1			1			1	12
QJ	2888	II1D	N2c3	4G	12.5		0.1			1					1						1	12
QJ	2889	II1D	N2c3	4G	7.5		0.2				1				1							12
QJ	2890	II1D	N2c3	4G	7.5	7.5	0.1		1			?	0.7	3.5	1						1	12
QJ	2891	II1D	N2c3	4G	17.5		0.3			1					1						1	12
QJ	2892	II1D	N2c3	4G	27.5		4				1				1							10
QJ	2893	II1D	N2c3	4G	22.5		3				1						1					2
QJ	2894	II1D	N2c3	4G	22.5		1.1			1					1						1	2
QJ	2895	II1D	N2c3	4G	27.5	27.5	3.6		1			75	1.8	8.7	1			1			1	2
QJ	2896	II1D	N2c3	4G	42.5	22.5	3.3	1				?	0.9	21.7	1							2
QJ	2897	II1D	N2c3	4G	22.5		0.4			1					1						1	2
QJ	2898	II1D	N2c3	4G	12.5		0.6			1								1				2
QJ	2899	II1D	N2c3	4G	7.5	12.5	0.2		1			?	0.7	2.2	1						1	2
QJ	2900	II1D	N2c3	4G	17.5		0.4				1					1						2
QJ	2901	II1D	N2c3	4G	7.5	7.5	0.1	1				?	0.6	2.8	1							2
QJ	2902	II1D	N2c3	4G	17.5		0.5			1					1						1	2

QJ	2903	II1D	N2c3	4G	17.5		0.3			1					1						1	2
QJ	2904	II1D	N2c3	4G	17.5	7.5	0.4	1				55	1.5	5.5		1		1	1	1	1	2
QJ	2905	II1D	N2c3	4M	22.5	22.5	4.1	1				60	7.5	23.4	1						1	2
QJ	2906	II1D	N2c3	4M	22.5		1			1						1					1	2
QJ	2907	II1D	N2c3	4M	37.5		1.5			1						1					1	2
QJ	2908	II1D	N2c3	4M	32.5		2.6			1							1					2
QJ	2909	II1D	N2c3	4M	27.5		1.8			1					1						1	2
QJ	2910	II1D	N2c3	4M	27.5		1.4			1						1					1	2
QJ	2911	II1D	N2c3	4M	22.5		0.8	1				60	4.0	13.1		1			1	1	1	2
QJ	2912	II1D	N2c3	4M	12.5	7.5	0.3	1				50	2.2	10.0	1					1		12
QJ	2913	II1D	N2c3	4M	32.5		1.4				1				1							2
QJ	2914	II1D	N2c3	4M	12.5	12.5	0.6		1			75	1.7	7.6	1				1		1	2
QJ	2915	II1D	N2c3	4M	12.5	7.5	0.1		1			?	0.7	4.4	1			1			1	2
QJ	2916	II1D	N2c3	4M	27.5		1.8				1						1					2
QJ	2917	II1D	N2c3	4M	22.5	22.5	2		1			80	3.5	10.0	1							3
QJ	2918	II1D	N2c3	4M	12.5	22.5	0.9		1			75	4.0	8.5		1		1		1	1	2
QJ	2919	II1D	N2c3	4M	17.5		0.4			1					1						1	2
QJ	2920	II1D	N2c3	4M	12.5	17.5	0.3	1				?	1.0	7.1	1			1				2
QJ	2921	II1D	N2c3	4M	12.5	12.5	0.5	1				55	5.0	12.9	1			1		1	1	2
QJ	2922	II1D	N2c3	4M	12.5		0.2			1					1						1	2
QJ	2923	II1D	N2c3	4M	7.5	7.5	0.1		1			80	1.5	4.5	1						1	2
QJ	2924	II1D	N2c3	4M	17.5		0.6				1				1							14
QJ	2925	II1D	N2c3	4M	7.5		0.1			1					1							2
QJ	2926	II1D	N2c3	4M	7.5		0.1			1					1						1	2
QJ	2927	II1D	N2c3	4M	7.5	12.5	0.3		1			90	1.4	3.4	1						1	2
QJ	2928	II1D	N2c3	4M	12.5		0.3			1					1						1	2
QJ	2929	II1D	N2c3	4M	17.5	12.5	0.8	1				60	4.4	14.7			1			1	1	2
QJ	2930	II1D	N2c3	4M	17.5		0.5			1					1						1	2
QJ	2931	II1D	N2c3	4M	7.5	7.5	0.1	1				80	1.4	7.5	1							2
QJ	2932	II1D	N2c3	4M	12.5		0.1			1					1						1	2
QJ	2933	II1D	N2c3	4M	12.5		0.2			1							1					2
QJ	2934	II1D	N2c3	4M	7.5		0.1			1					1						1	12
QJ	2935	II1D	N2c3	4M	7.5		0.2			1					1							12
QJ	2936	II1D	N2c3	4M	7.5	7.5	0.1	1				35	3.1	9.6	1					1	1	4
QJ	2937	II1D	N2c3	4M	12.5		0.1				1				1							2
QJ	2938	II1D	N2c3	4M	7.5	7.5	0.1		1			75	1.4	4.9	1							2
QJ	2939	II1D	N2c3	4M	7.5		0.1			1					1						1	2
QJ	2940	II1D	N2c3	4M	7.5	12.5	0.2		1			80	3.2	8.5	1					1		2
QJ	2941	II1D	N2c3	4M	7.5		0.1			1					1						1	2
QJ	2942	II1D	N2c3	4M	12.5		0.9				1						1					2
QJ	2943	II1D	N2c3	4M	12.5	7.5	0.3		1			?	1.9	5.3	1						1	2
QJ	2944	II1D	N2c3	4M	12.5		0.2				1				1							2
QJ	2945	II1D	N2c3	4M	7.5	12.5	0.1	1				?	1.1	6.1		1		1			1	2
QJ	2946	II1D	N2c3	4M	17.5		1.3				1				1							2
QJ	2947	II1D	N2c3	4M	22.5		1.2				1						1					2
QJ	2948	II1D	N2c3	4M	22.5		1.1				1						1					2
QJ	2949	II1D	N2c3	4M	7.5	12.5	0.2	1				65	1.2	6.2	1					1	1	2
QJ	2950	II1D	N2c3	4M	7.5	7.5	0.1	1				?	1.2	2.5	1						1	2
QJ	2951	II1D	N2c3	4M	7.5		<0.1				1				1							2
QJ	2952	II1D	N2c3	4M	7.5	7.5	0.1	1				?	0.4	5.3	1						1	2
QJ	2953	II1D	N2c3	4M	12.5		0.1				1				1							12
QJ	2954	II1D	N2c3	4M	7.5		<0.1			1					1							2
QJ	2955	II1D	N2c3	4M	12.5		0.2				1				1							3

QJ	2956	II1D	N2c3	4M	7.5		0.2			1					1						1	2
QJ	2957	II1D	N2c3	4M	12.5		0.2			1					1						1	2
QJ	2958	II1D	N2c3	4M	12.5		0.3				1				1							2
QJ	2959	II1D	N2c3	4M	12.5	7.5	0.3	1				75	2.2	7.9	1			1		1	1	2
QJ	2960	II1D	N2c3	4M	7.5	7.5	0.2	1				55	2.9	7.2	1							4
QJ	2961	II1D	N2c3	4M	7.5		0.2			1						1						2
QJ	2962	II1D	N2c3	4M	12.5		0.3				1					1						2
QJ	2963	II1D	N2c3	4M	7.5		0.1			1					1							2
QJ	2964	II1D	N2c3	4M	17.5		0.5				1				1							2
QJ	2965	II1D	N2c3	4M	7.5	7.5	0.1	1				35	1.4	3.1	1				1			2
QJ	2966	II1D	N2c3	4M	12.5		0.3				1					1						2
QJ	2967	II1D	N2c3	4M	12.5		0.1				1				1							12
QJ	2968	II1D	N2c3	4M	7.5		<0.1				1				1							2
QJ	2969	II1D	N2c3	4M	12.5		0.2			1					1						1	2
QJ	2970	II1D	N2c3	4M	17.5	7.5	0.2	1				?	0.8	3.7	1							2
QJ	2971	II1D	N2c3	4M	12.5		0.3			1					1						1	12
QJ	2972	II1D	N2c3	4M	7.5		0.3			1							1					2
QJ	2973	II1D	N2c3	4M	12.5		0.3			1					1						1	2
QJ	2974	II1D	N2c3	4M	17.5		0.4				1					1						2
QJ	2975	II1D	N2c3	4M	12.5	7.5	0.2	1				75	2.1	6.2	1						1	2
QJ	2976	II1D	N2c3	4M	7.5		0.2				1				1							3
QJ	2977	II1D	N2c3	4M	12.5		0.4				1					1						2
QJ	2978	II1D	N2c3	4M	12.5	7.5	0.1	1				60	1.3	5.2	1						1	2
QJ	2979	II1D	N2c3	4M	7.5		0.1				1				1							2
QJ	2980	II1D	N2c3	4M	12.5		0.2			1					1						1	2
QJ	2981	II1D	N2c3	4M	12.5		0.1			1					1						1	12
QJ	2982	II1D	N2c3	4M	7.5		0.2				1						1					2
QJ	2983	II1D	N2c3	4M	7.5		0.4				1				1							12
QJ	2984	II1D	N2c3	4M	12.5	7.5	0.2	1				?	1.2	3.0		1						2
QJ	2985	II1D	N2c3	4M	7.5	7.5	0.1		1			85	1.8	5.4	1				1		1	2
QJ	2986	II1D	N2c3	4M	7.5		0.1			1					1						1	12
QJ	2987	II1D	N2c3	4M	7.5	7.5	0.2		1			70	1.8	6.5	1				1		1	12
QJ	2988	II1D	N2c3	4M	7.5		0.1				1				1							2
QJ	2989	II1D	N2c3	4M	12.5		0.1				1				1							12
QJ	2990	II1D	N2c3	4M	12.5	7.5	0.2	1				?	1.0	2.8	1						1	2
QJ	2991	II1D	N2c3	4M	7.5	2.5	0.1	1				45	1.5	3.9	1							12
QJ	2992	II1D	N2c3	4M	7.5		0.2				1					1						2
QJ	2993	II1D	N2c3	4M	12.5		0.2			1					1						1	12
QJ	2994	II1D	N2c3	4M	7.5	7.5	0.1	1				?	0.8	3.2	1						1	2
QJ	2995	II1D	N2c3	4M	12.5		0.2				1				1							2
QJ	2996	II1D	N2c3	4M	7.5	7.5	0.1	1				80	1.1	4.7	1						1	2
QJ	2997	II1D	N2c3	4M	12.5	7.5	0.2	1				85	2.3	7.1	1				1	1	1	2
QJ	2998	II1D	N2c3	4M	12.5	7.5	0.3		1			?	1.0	3.4	1						1	2
QJ	2999	II1D	N2c3	4M	7.5	7.5	0.1	1				75	1.5	4.3	1							12
QJ	3000	II1D	N2c3	4M	7.5		0.1			1					1						1	12
QJ	3001	II1D	N2c3	4M	12.5		0.2			1						1						2
QJ	3002	II1D	N2c3	4M	7.5	7.5	0.2		1			45	2.7	6.5			1					2
QJ	3003	II1D	N2c3	4M	7.5	12.5	0.1	1				75	0.9	2.1	1							2
QJ	3004	II1D	N2c3	4M	12.5		0.7				1						1					2
QJ	3005	II1D	N2c3	4M	7.5		<0.1				1				1							12
QJ	3006	II1D	N2c3	4M	7.5		0.2				1				1							2
QJ	3007	II1D	N2c3	4M	7.5		0.1				1				1							2
QJ	3008	II1D	N2c3	4M	7.5	12.5	0.3		1			85	1.5	4.3	1			1		1	1	2

QJ	3009	II1D	N2c3	4M	12.5		0.1				1					1							2
QJ	3010	II1D	N2c3	4M																			2
QJ	3011	II1D	N2c3	4M	37.5	37.5	7.3		1			80	7.3	15.6	1			1			1		2
QJ	3012	II1D	N2c3	4M	42.5		13.6				1						1						2
QJ	3013	II1D	N2c3	4M	22.5	22.5	3.7		1			55	3.0	12.7		1			1		1		2
QJ	3014	II1D	N2c3	4M	32.5	22.5	6.9	1				80	8.8	18.9		1				1	1		3
QJ	3015	II1D	N2c3	4M	22.5	27.5	3.5		1			60	2.6	8.2	1			1	1		1		2
QJ	3016	II1D	N2c3	4M	7.5		0.1				1				1								2
QJ	3017	II1D	N2c3	4M	7.5	7.5	0.1	1				?	0.8	2.7	1				1		1		2
QJ	3018	II1D	N2c3	4M	12.5		0.2			1					1						1		2
QJ	3019	II1D	N2c3	4M	12.5		0.1			1					1						1		12
QJ	3020	II1D	N2c3	4M	12.5		0.1			1					1						1		12
QJ	3021	II1D	N2c3	4M	7.5		0.2			1					1						1		12
QJ	3022	II1D	N2c3	4M	17.5		0.2				1				1								12
QJ	3023	II1D	N2c3	4M	7.5		0.5				1						1						12
QJ	3024	II1D	N2c3	4M	7.5	7.5	0.2		1			?	0.5	5.0	1			1			1		12
QJ	3025	II1D	N2c3	4M	12.5		0.2			1					1						1		12
QJ	3026	II1D	N2c3	4M	12.5		0.2				1					1							12
QJ	3027	II1D	N2c3	4M	12.5		0.2			1					1						1		12
QJ	3028	II1D	N2c3	4M	12.5	12.5	0.2		1			?	1.2	5.1	1						1		12
QJ	3029	II1D	N2c3	4M	12.5	7.5	0.3		1			?	1.1	2.8	1						1		12
QJ	3040	II1D	N2c3	4M	7.5		0.2			1					1						1		12
QJ	3041	II1D	N2c3	4M	12.5	12.5	0.3	1				70	1.0	6.1	1								12
QJ	3042	II1D	N2c3	4M	17.5		0.4			1					1								12
QJ	3043	II1D	N2c3	4M	12.5		0.2			1					1						1		12
QJ	3044	II1D	N2c3	4M	17.5	12.5	0.4	1				?	0.9	8.1	1						1		12
QJ	3045	II1D	N2c3	4M	17.5	12.5	0.3	1				75	1.4	6.9	1								12
QJ	3046	II1D	N2c3	4M	22.5		0.6				1				1								12
QJ	3047	II1D	N2c3	4M	12.5	7.5	0.2		1			75	3.7	7.8	1			1		1	1		12
QJ	3048	II1D	N2c3	4M	22.5	12.5	0.6		1			80	1.9	2.8	1						1		12
QJ	3049	II1D	N2c3	4M	12.5		0.3			1					1						1		12
QJ	3050	II1D	N2c3	4M	27.5		0.5				1				1								12
QJ	3051	II1D	N2c3	4M	12.5		0.6				1					1							12
QJ	3052	II1D	N2c3	4M	17.5		0.4				1					1							12
QJ	3053	II1D	N2c3	4M	12.5		0.2			1					1						1		12
QJ	3054	II1D	N2c3	4M	17.5	12.5	0.4			1					1						1		12
QJ	3055	II1D	N2c3	4M	22.5	12.5	1.1	1				75	4.6	10.0		1		1			1		12
QJ	3056	II1D	N2c3	4M	12.5		0.5			1						1					1		12
QJ	3057	II1D	N2c3	4M	22.5		0.5			1					1						1		12
QJ	3058	II1D	N2c3	4M	12.5	12.5	0.8		1			90	1.7	8.0	1			1	1	1	1		12
QJ	3059	II1D	N2c3	4M	32.5	22.5	1.5		1			?	0.8	3.4	1						1		12
QJ	3060	II1D	N2c3	4M	37.5	17.5	3.2	1				50	1.5	5.8			1		1				12
QJ	3061	II1D	N2c3	4M	42.5	22.5	4.7	1				35	2.0	11.5	1			1	1	1	1		12
QJ	3062	II1D	N2c3	4M	22.5		2.3			1					1						1		12
QJ	3063	II1D	N2c3	4M	27.5		2.8				1						1						12
QJ	3064	II1D	N2c3	4M	22.5	7.5	0.7		1			70	0.9	5.7	1						1		12
QJ	3065	II1D	N2c3	4M	22.5		1.5			1					1						1		12
QJ	3066	II1D	N2c3	4M	22.5	22.5	3	1				90	7.5	15.5		1					1		12
QJ	3067	II1D	N2c4	16M	7.5	2.5	0.1	1				?	0.6	2.4	1						1		12
QJ	3068	II1D	N2c4	16M	7.5		0.1			1					1						1		12
QJ	3069	II1D	N2c4	16M	2.5		0.1				1				1								3
QJ	3070	II1D	N2c4	16M	7.5		<0.1			1					1						1		12
QJ	3071	II1D	N2c4	16M	2.5		<0.1			1					1						1		2

QJ	3072	II1D	N2c4	16M	2.5		<0.1			1					1						1	2
QJ	3073	II1D	N2c4	16M	7.5		<0.1				1				1							2
QJ	3074	II1D	N2c4	16M	7.5	2.5	<0.1	1				?	1.0	2.2	1						1	12
QJ	3075	II1D	N2c4	16M	7.5		<0.1			1						1						2
QJ	3076	II1D	N2c4	16M	7.5		<0.1			1					1						1	3
QJ	3077	II1D	N2c4	16M	7.5		0.1			1						1					1	2
QJ	3078	II1D	N2c4	16M	2.5		<0.1			1					1						1	2
QJ	3079	II1D	N2c4	16M	2.5	2.5	0.1	1				55	0.8	3.1	1						1	2
QJ	3080	II1D	N2c4	16M	7.5		0.1			1					1							12
QJ	3081	II1D	N2c4	16M	2.5	2.5	<0.1	1				?	0.3	2.9	1							2
QJ	3082	II1D	N2c4	16M	7.5		<0.1				1				1							2
QJ	3083	II1D	N2c4	16M	7.5		<0.1				1				1							2
QJ	3084	II1D	N2c4	16M	2.5	7.5	<0.1	1				?	0.8	6.8	1							2
QJ	3086	II1D	N2c4	4M	42.5		15			1							1					12
QJ	3087	II1D	N2c4	4M	32.5		2.5			1						1					1	12
QJ	3088	II1D	N2c4	4M	27.5		1.3				1						1					2
QJ	3089	II1D	N2c4	4M	22.5	12.5	1.2	1				65	3.4	5.9	1			1			1	12
QJ	3090	II1D	N2c4	4M	12.5		0.3				1				1							12
QJ	3091	II1D	N2c4	4M	12.5		0.2			1					1						1	2
QJ	3092	II1D	N2c4	4M	17.5	12.5	2.7	1				75	7.7	7.9		1		1			1	2
QJ	3093	II1D	N2c4	4M	12.5		0.3			1					1						1	12
QJ	3094	II1D	N2c4	4M	7.5	12.5	0.2		1			?	0.9	5.0	1				1		1	12
QJ	3095	II1D	N2c4	4M	17.5		0.6			1					1						1	2
QJ	3096	II1D	N2c4	4M	27.5		1.8			1						1					1	2
QJ	3097	II1D	N2c4	4M	22.5		0.6				1				1							2
QJ	3098	II1D	N2c4	4M	17.5	12.5	0.4	1				40	1.2	4.2	1			1			1	2
QJ	3099	II1D	N2c4	4M	12.5	17.5	0.7		1			50	1.6	6.5		1				1	1	2
QJ	3100	II1D	N2c4	4M	17.5		1.8				1				1							3
QJ	3101	II1D	N2c4	4M	7.5		<0.1				1					1						2
QJ	3102	II1D	N2c4	4M	12.5		0.2			1					1						1	2
QJ	3103	II1D	N2c4	4G	22.5	32.5	5.2	1				80	9.9	26.9		1		1	1	1	1	2
QJ	3104	II1D	N2c4	4G	27.5	22.5	4.1	1				40	5.7	20.1	1			1			1	3
QJ	3105	II1D	N2c4	4G	17.5		0.4				1					1						2
QJ	3106	II1D	N2c4	4G	22.5		1.3			1					1							3
QJ	3107	II1D	N2c4	4G	7.5		0.1				1				1							2
QJ	3108	II1D	N2c4	4G	12.5		0.1				1				1							2
QJ	3109	II1D	N2c4	4G	17.5	17.5	1.6		1			80	1.3	6.6		1					1	2
QJ	3110	II1D	N2c4	4G	12.5	17.5	0.6		1			50	1.7	7.8	1			1		1	1	2
QJ	3111	II1D	N2c4	4G	17.5		1.2			1					1						1	2
QJ	3112	II1D	N2c4	4G	7.5	7.5	0.1		1			35	2.7	4.8		1					1	2
QJ	3113	II1D	N2c4	4G	17.5		0.4				1				1							2
QJ	3114	II1D	N2c4	4G	7.5		0.2				1				1							14
QJ	3115	II1D	N2c4	4G	7.5	12.5	0.4		1			60	4.0	12.7	1					1		2
QJ	3116	II1D	N2c4	4G	7.5	12.5	0.1		1			?	0.7	6.7	1							2
QJ	3117	II1D	N2c4	4G	12.5		<0.1			1					1						1	2
QJ	3118	II1D	N2c4	4G	7.5	7.5	0.2		1			40	2.0	5.4	1				1		1	14
QJ	3119	II1D	N2c4	4G	7.5	7.5	0.1	1				90	1.1	5.3	1							2
QJ	3120	II1D	N2c4	4G	7.5	12.5	0.2	1				80	2.9	8.9		1						2
QJ	3121	II1D	N2c4	4G	12.5	2.5	0.3			1					1							12
QJ	3122	II1D	N2c4	4G	7.5	12.5	0.1	1				75	2.4	4.6	1							12
QJ	3123	II1D	N2c4	16G	7.5		<0.1				1				1							12
QJ	3124	II1D	N2c4	16G	7.5	2.5	<0.1	1				70	0.8	2.5	1						1	2
QJ	3125	II1D	N2c4	16G	7.5		<0.1				1				1							12

QJ	3126	II1D	N2c4	16G	12.5		0.1			1					1						1	2
QJ	3127	II1D	N2c4	16G	7.5		<0.1			1					1						1	2
QJ	3128	II1D	N2c4	16G	7.5		<0.1			1					1							2
QJ	3129	II1D	N2c4	16G	2.5		<0.1				1				1							2
QJ	3130	II1D	N2c4	16G	7.5	7.5	<0.1	1				?	0.4	5.2	1							2
QJ	3131	II1D	N2c4	16G																		
QJ	3132	II1D	N2d	4M	12.5	17.5	0.3	1				90	1.9	9.2	1							12
QJ	3133	II1D	N2d	4M	17.5		0.8			1					1							10
QJ	3134	II1D	N2d	4M	7.5		0.2				1				1							11
QJ	3135	II1D	N2d	4M	7.5		0.2				1						1					2
QJ	3136	II1D	E4i	16M	7.5		<0.1			1					1						1	12
QJ	3137	II1D	E4i	16M	7.5	2.5	0.1	1				70	1.0	2.8	1					1	1	12
QJ	3138	II1D	E4i	16M	2.5		<0.1			1					1						1	2
QJ	3139	II1D	E4i	16M	7.5	7.5	<0.1	1				?	0.7	5.4	1						1	12
QJ	3140	II1D	E4i	16M	12.5		0.1				1					1						12
QJ	3141	II1D	E4i	16M	2.5	7.5	0.1		1			90	1.0	5.6	1							12
QJ	3142	II1D	E4i	16M	7.5	7.5	0.2		1			80	0.8	2.5	1						1	2
QJ	3143	II1D	E4i	16M	12.5		0.1			1					1						1	12
QJ	3144	II1D	E4i	16M	7.5		<0.1			1					1						1	12
QJ	3145	II1D	E4i	16M	7.5		<0.1			1					1						1	12
QJ	3146	II1D	E4i	16M	12.5		0.1				1					1						12
QJ	3147	II1D	E4i	16M	12.5		0.1			1					1						1	2
QJ	3148	II1D	E4i	16M	2.5		<0.1			1					1						1	12
QJ	3149	II1D	E4i	16M	7.5		0.1			1					1						1	2
QJ	3150	II1D	E4i	16M	2.5	2.5	0.1		1			?	0.7	4.6	1				1			12
QJ	3151	II1D	E4i	16M	12.5		0.1			1					1						1	12
QJ	3152	II1D	E4i	16M	7.5	7.5	0.1	1				90	1.8	5.5	1				1	1		12
QJ	3153	II1D	E4i	16M	2.5		<0.1				1				1							2
QJ	3154	II1D	E4i	16M	7.5		<0.1				1				1							12
QJ	3155	II1D	E4i	16M	12.5		0.1			1					1						1	2
QJ	3156	II1D	E4i	16M	12.5		0.1				1				1							12
QJ	3157	II1D	E4i	16M	7.5		<0.1			1					1						1	2
QJ	3158	II1D	E4i	16M	7.5		<0.1				1				1							2
QJ	3159	II1D	E4i	16M	7.5	7.5	0.1		1			?	0.8	4.6	1							12
QJ	3160	II1D	E4i	16M	2.5	7.5	0.1		1			80	1.0	6.4	1							2
QJ	3161	II1D	E4i	16M	7.5		0.1				1				1							2
QJ	3162	II1D	E4i	16M	7.5		0.1				1				1							12
QJ	3163	II1D	E4i	16M	7.5		<0.1				1				1							12
QJ	3164	II1D	E4i	16M	7.5	7.5	0.1		1			70	1.3	4.4	1							12
QJ	3165	II1D	E4i	16M	12.5		<0.1				1				1							2
QJ	3166	II1D	E4i	16M	7.5	7.5	0.1	1				?	0.8	4.2	1							2
QJ	3167	II1D	E4i	16M	7.5		0.1				1				1							12
QJ	3168	II1D	E4i	16M	7.5		0.1				1				1							12
QJ	3169	II1D	E4i	16M	7.5		<0.1				1				1							12
QJ	3170	II1D	E4i	16M	7.5		<0.1				1				1							12
QJ	3171	II1D	E4i	16M	7.5		<0.1			1							1				1	12
QJ	3172	II1D	E4i	16M	7.5	2.5	<0.1	1				55	2.1	3.5	1							12
QJ	3173	II1D	E4i	16M	7.5		<0.1			1					1						1	12
QJ	3174	II1D	E4i	16M	7.5		<0.1				1				1							2
QJ	3175	II1D	E4i	16M	2.5	7.5	<0.1		1			75	1.4	5.2	1							12
QJ	3176	II1D	E4i	16M	7.5		<0.1				1				1							12
QJ	3177	II1D	E4i	16M	7.5		<0.1				1				1							12
QJ	3178	II1D	E4i	16M	7.5		<0.1				1				1							12

QJ	3179	II1D	E4i	16M	7.5		<0.1			1					1						1	12
QJ	3180	II1D	E4i	16M	7.5		<0.1				1				1							12
QJ	3181	II1D	E4i	16M	7.5		<0.1			1					1						1	ob
QJ	3182	II1D	E4i	16M	12.5		<0.1			1					1						1	12
QJ	3183	II1D	E4i	16M	7.5	2.5	0.1		1			80	1.0	2.7	1			1			1	12
QJ	3184	II1D	E4i	16M	7.5		<0.1				1						1					12
QJ	3185	II1D	E4i	16M	7.5		<0.1				1				1							2
QJ	3186	II1D	E4i	16M	7.5	7.5	0.1		1			?	0.7	3.2	1							12
QJ	3187	II1D	E4i	16M	7.5		<0.1				1				1							12
QJ	3188	II1D	E4i	16M	7.5		<0.1			1					1						1	12
QJ	3189	II1D	E4i	16M	7.5		<0.1				1				1							12
QJ	3190	II1D	E4i	16M	7.5		<0.1			1					1							2
QJ	3191	II1D	E4i	16M	2.5		<0.1				1				1							12
QJ	3192	II1D	E4i	16M	7.5	7.5	<0.1		1			?	0.5	1.9	1						1	12
QJ	3193	II1D	E4i	16M	7.5	7.5	0.1	1				80	1.0	3.8	1						1	2
QJ	3194	II1D	E4i	16M	7.5		<0.1			1					1						1	12
QJ	3195	II1D	E4i	16M	7.5	7.5	<0.1	1				55	1.6	6.3	1				1		1	12
QJ	3196	II1D	E4i	16M	7.5		<0.1			1					1						1	12
QJ	3197	II1D	E4i	16M	7.5	7.5	<0.1	1				80	0.9	3.9	1							12
QJ	3198	II1D	E4i	16M	7.5		<0.1			1					1						1	12
QJ	3199	II1D	E4i	16M	7.5		0.1				1				1							12
QJ	3200	II1D	E4i	16M	7.5		<0.1				1				1							12
QJ	3201	II1D	E4i	16M	7.5	7.5	<0.1			1					1						1	12
QJ	3202	II1D	E4i	16M	7.5		<0.1				1				1							2
QJ	3203	II1D	E4i	16M	7.5		<0.1				1				1							2
QJ	3204	II1D	E4i	16M	7.5		<0.1			1					1							12
QJ	3205	II1D	E4i	16M	2.5		<0.1				1				1							12
QJ	3206	II1D	E4i	16M	7.5		0.1			1					1							12
QJ	3207	II1D	E4i	16M	7.5		<0.1				1				1							12
QJ	3208	II1D	E4i	16M	7.5		<0.1			1					1						1	12
QJ	3209	II1D	E4i	16M	7.5	2.5	<0.1	1				40	1.2	3.3	1						1	12
QJ	3210	II1D	E4i	16M	7.5		<0.1			1					1						1	12
QJ	3211	II1D	E4i	16M	7.5	7.5	0.1		1			?	0.6	2.4	1			1			1	12
QJ	3212	II1D	E4i	16M	2.5		<0.1				1				1							12
QJ	3213	II1D	E4i	16M	2.5		<0.1				1				1							2
QJ	3214	II1D	E4i	16M	2.5		<0.1				1				1							2
QJ	3215	II1D	E4i	16M	2.5		<0.1			1					1						1	ob
QJ	3216	II1D	E4i	16M	2.5		<0.1			1					1						1	ob
QJ	3217	II1D	E4i	16M	7.5		<0.1				1				1							2
QJ	3218	II1D	E4i	16M	7.5		<0.1			1					1						1	12
QJ	3219	II1D	E4i	16M	7.5		<0.1			1					1						1	12
QJ	3220	II1D	E4i	16M	2.5	2.5	<0.1	1				?	0.5	2.5	1							2
QJ	3221	II1D	E4i	16M	7.5		0.1				1					1						3
QJ	3222	II1D	E4i	16M	2.5		<0.1				1				1							12
QJ	3223	II1D	E4i	16M	2.5	2.5	<0.1				1				1							12
QJ	3224	II1D	E4i	16M	2.5		<0.1				1				1							12
QJ	3225	II1D	E4i	16M	7.5		<0.1				1				1							2
QJ	3226	II1D	E4i	16M	2.5		<0.1				1				1							2
QJ	3227	II1D	E4i	16M	2.5		<0.1				1				1							12
QJ	3228	II1D	E4i	16M	2.5		<0.1				1				1							12
QJ	3229	II1D	E4i	16M	7.5		0.1			1					1						1	12
QJ	3230	II1D	E4i	16M	7.5	7.5	<0.1	1				50	1.3	6.7	1							12
QJ	3231	II1D	E4i	16M	2.5		<0.1				1				1							2

QJ	3232	II1D	E4i	4M	47.5	32.5	8.2	1				75	2.8	16.9	1						1	2
QJ	3233	II1D	E4i	4M	22.5	22.5	2.9	1				70	7.5	15.4		1		1	1	1	1	2
QJ	3234	II1D	E4i	4M	27.5	12.5	0.7	1				60	1.5	5.6	1				1		1	2
QJ	3235	II1D	E4i	4M	22.5		0.3				1					1						4
QJ	3236	II1D	E4i	4M	12.5		0.1			1					1						1	12
QJ	3237	II1D	E4i	4M	17.5		0.5			1						1					1	12
QJ	3238	II1D	E4i	4M	17.5		0.5			1					1						1	12
QJ	3239	II1D	E4i	4M	2.5	7.5	0.1		1			70	1.2	6.0	1			1			1	12
QJ	3240	II1D	E4i	4M	12.5		0.3			1					1						1	12
QJ	3241	II1D	E4i	4M	12.5		0.2			1					1						1	12
QJ	3242	II1D	E4i	4M	7.5		0.1			1					1						1	12
QJ	3243	II1D	E4i	4M	7.5		0.1				1				1							12
QJ	3244	II1D	E4i	4M	12.5	7.5	0.1	1				75	2.1	4.4	1				1		1	12
QJ	3245	II1D	E4i	4M	12.5		0.2				1				1							12
QJ	3246	II1D	E4i	4M	7.5	7.5	0.2		1			65	1.2	4.3		1						12
QJ	3247	II1D	E4i	4M	22.5		0.5				1					1						12
QJ	3248	II1D	E4i	4M	27.5		0.8			1					1						1	2
QJ	3249	II1D	E4i	4M	7.5		0.1			1					1						1	2
QJ	3250	II1D	E4i	4M	7.5		0.1				1				1							2
QJ	3251	II1D	E4i	4M	12.5		0.2			1					1						1	2
QJ	3252	II1D	E4i	4M	32.5		4.9				1				1							2
QJ	3253	II1D	E4i	4M	42.5		3			1					1						1	2
QJ	3254	II1D	E4i	4M	12.5	7.5	0.2		1			?	1.0	2.0	1						1	12
QJ	3255	II1D	E4i	4M	12.5		0.2				1				1							2
QJ	3256	II1D	E4i	4M	7.5	7.5	0.1	1				75	0.8	3.4	1							12
QJ	3257	II1D	E4i	4M	17.5	12.5	0.5	1				65	1.8	5.4	1			1		1	1	12
QJ	3258	II1D	E4i	4M	7.5		0.1			1					1						1	12
QJ	3259	II1D	E4i	4M	12.5		0.2			1						1					1	4
QJ	3260	II1D	E4i	4M	12.5		<0.1				1				1							12
QJ	3261	II1D	E4i	4M	12.5		0.1				1				1							12
QJ	3262	II1D	E4i	4M	22.5		0.8			1						1					1	2
QJ	3263	II1D	E4i	4M	22.5		3.2			1							1					2
QJ	3264	II1D	E4i	4M	7.5		0.1				1				1							5
QJ	3265	II1D	E4i	4M	17.5	7.5	0.2	1				?	1.0	0.9	1						1	2
QJ	3266	II1D	E4i	4M	12.5	7.5	0.4	1				55	2.5	7.6	1			1		1	1	11
QJ	3267	II1D	E4i	4M	22.5		0.9				1				1							2
QJ	3268	II1D	E4i	4M	12.5		0.1			1					1						1	12
QJ	3269	II1D	E4i	4M	12.5		0.2				1				1							2
QJ	3270	II1D	E4i	4M	12.5	17.5	0.5	1				70	1.9	6.5	1			1		1	1	12
QJ	3271	II1D	E4i	4M	7.5		0.1			1					1						1	2
QJ	3272	II1D	E5	16M	7.5		0.2				1				1							2
QJ	3273	II1D	E5	16M	12.5		0.1				1				1							2
QJ	3274	II1D	E5	16M	7.5	2.5	<0.1	1				60	1.1	2.3	1							14
QJ	3275	II1D	E5	4M	17.5		1				1				1							2
QJ	3276	II1D	E5	4M	12.5		0.2				1				1							2
QJ	3277	II1D	E5	4M	12.5	17.5	1.2		1			90	3.0	5.4	1			1			1	2
QJ	3278	II1D	E5	4M	7.5	17.5	0.3		1			40	1.2	5.0	1			1			1	2
QJ	3279	II1D	E5	4M	12.5	7.5	0.3	1				70	2.0	6.6		1					1	2
QJ	3280	II1D	E5	4M	12.5		0.3				1				1							2
QJ	3281	II1D	E5	4M	32.5	32.5	4.7	1				70	2.2	9.3	1			1		1	1	2
QJ	3282	II1D	E5	4M	12.5		0.9				1						1					12
QJ	3283	II1D	E5	4M	17.5		0.4				1				1							2
QJ	3284	II1D	E5	4M	22.5		1.3			1							1				1	12

QJ	3285	II1D	E5	4M	32.5		1.8			1					1						1	4
QJ	3286	II1D	E5	4M	12.5		0.2			1					1						1	12
QJ	3287	II1D	E5	4M	12.5		0.2			1					1							12
QJ	3288	II1D	E5b	16M	7.5		<0.1			1					1						1	2
QJ	3289	II1D	E5b	16M	7.5		<0.1				1				1							12
QJ	3290	II1D	E5b	16M	2.5	7.5	0.1		1			80	0.8	5.7	1							2
QJ	3291	II1D	E5b	16M	7.5		<0.1				1				1							2
QJ	3292	II1D	E5b	16M	2.5	2.5	<0.1	1				45	0.7	1.8	1						1	2
QJ	3293	II1D	E5b	16M	2.5	7.5	0.1		1			45	1.1	4.4	1					1		2
QJ	3294	II1D	E5b	16M																		
QJ	3295	II1D	E5b	16M	2.5		<0.1			1					1						1	2
QJ	3296	II1D	E5b	16M	7.5		<0.1			1					1						1	2
QJ	3297	II1D	E5b	16M	2.5		<0.1			1					1						1	2
QJ	3298	II1D	E5b	16M	7.5		<0.1			1					1						1	2
QJ	3299	II1D	E5b	16M																		
QJ	3300	II1D	E5b	16M	7.5		<0.1				1				1							2
QJ	3301	II1D	E5b	16M	12.5		0.1				1				1							2
QJ	3302	II1D	E5b	16M	7.5	7.5	0.1	1				?	0.8	3.2	1							12
QJ	3303	II1D	E5b	16M	2.5	2.5	<0.1	1				65	1.3	2.3	1						1	2
QJ	3304	II1D	E5b	16M	7.5		0.1			1					1						1	2
QJ	3305	II1D	E5b	16M	7.5		0.1				1						1					12
QJ	3306	II1D	E5b	16M	12.5	7.5	0.1	1				75	1.1	2.5	1							12
QJ	3307	II1D	E5b	16M	7.5		0.1			1					1							12
QJ	3308	II1D	E5b	16M	7.5		0.1				1				1							2
QJ	3309	II1D	E5b	16M																		
QJ	3310	II1D	E5b	16M	7.5		<0.1				1				1							2
QJ	3311	II1D	E5b	16M	7.5		0.1				1				1							2
QJ	3312	II1D	E5b	16M	7.5		0.1			1					1							12
QJ	3313	II1D	E5b	16M	7.5		<0.1				1				1							12
QJ	3314	II1D	E5b	16M	2.5	2.5	<0.1		1			90	1.3	4.3	1							2
QJ	3315	II1D	E5b	16M	2.5		<0.1				1				1							12
QJ	3316	II1D	E5b	16M	2.5		<0.1				1				1							2
QJ	3317	II1D	E5b	16M	12.5		0.1			1							1					2
QJ	3318	II1D	E5b	16M	7.5		<0.1				1				1							2
QJ	3319	II1D	E5b	16M	2.5		<0.1				1				1							12
QJ	3320	II1D	E5b	16M																		
QJ	3321	II1D	E5b	16M	7.5		<0.1				1				1							2
QJ	3322	II1D	E5b	16M	7.5		<0.1				1				1							2
QJ	3323	II1D	E5b	16M	7.5	2.5	0.1	1				90	1.8	3.3		1					1	2
QJ	3324	II1D	E5b	16M	2.5		<0.1				1				1							12
QJ	3325	II1D	E5b	16M	7.5		<0.1			1					1						1	2
QJ	3326	II1D	E5b	16M																		
QJ	3327	II1D	E5b	16M	2.5		<0.1				1				1							2
QJ	3328	II1D	E5b	16M	2.5		<0.1				1				1							3
QJ	3329	II1D	E5b	16M	12.5	7.5	0.1	1				75	1.2	3.4	1			1			1	2
QJ	3330	II1D	E5b	16M	2.5		<0.1				1				1							12
QJ	3331	II1D	E5b	16M	7.5		<0.1			1					1						1	2
QJ	3332	II1D	E5b	16M	2.5		<0.1				1				1							12
QJ	3333	II1D	E5b	16M	7.5		0.1				1				1							4
QJ	3334	II1D	E5b	16M	7.5	7.5	0.1		1			60	1.2	3.0	1			1			1	2
QJ	3335	II1D	E5b	16M	7.5		0.1				1				1							5
QJ	3336	II1D	E5b	16M	2.5	12.5	0.1	1				70	0.7	6.3	1							12
QJ	3337	II1D	E5b	16M	2.5	2.5	<0.1		1			85	1.2	4.0	1						1	2

QJ	3338	II1D	E5b	16M	7.5	7.5	<0.1	1				?	0.7	2.4	1						1	12
QJ	3339	II1D	E5b	16M	2.5		<0.1				1				1							2
QJ	3340	II1D	E5b	16M	2.5		<0.1				1				1							2
QJ	3341	II1D	E5b	16M	2.5	2.5	<0.1	1				60	0.7	2.9	1							2
QJ	3342	II1D	E5b	16M	7.5	2.5	<0.1	1				?	0.7	1.7	1						1	2
QJ	3343	II1D	E5b	16M	2.5		<0.1				1				1							2
QJ	3344	II1D	E5b	16M	7.5		<0.1			1					1						1	2
QJ	3345	II1D	E5b	16M																		
QJ	3346	II1D	E5b	16M	7.5		<0.1			1					1						1	2
QJ	3347	II1D	E5b	16M	2.5	7.5	<0.1	1				75	1.0	3.0	1				1			2
QJ	3348	II1D	E5b	16M	7.5		<0.1				1				1							2
QJ	3349	II1D	E5b	16M	7.5		<0.1			1					1						1	12
QJ	3350	II1D	E5b	16M	2.5	2.5	<0.1	1				?	0.5	1.5	1							12
QJ	3351	II1D	E5b	16M	2.5		<0.1	1				?	0.4	0.6	1						1	2
QJ	3352	II1D	E5b	16M	2.5		0.1				1				1							2
QJ	3353	II1D	E5b	16M	7.5	7.5	0.1		1			60	1.3	3.0	1			1	1		1	4
QJ	3354	II1D	E5b	16M	7.5		<0.1				1				1							12
QJ	3355	II1D	E5b	16M	2.5		<0.1				1				1							2
QJ	3356	II1D	E5b	16M	7.5	2.5	<0.1	1				75	1.2	2.8	1						1	12
QJ	3357	II1D	E5b	16M	7.5	7.5	<0.1	1				90	1.3	1.7	1							2
QJ	3358	II1D	E5b	16M	7.5		<0.1				1				1							12
QJ	3359	II1D	E5b	16M	2.5	2.5	<0.1	1				70	2.2	4.3	1						1	12
QJ	3360	II1D	E5b	16M	2.5		<0.1			1					1						1	12
QJ	3361	II1D	E5b	16M	2.5	2.5	<0.1	1				?	0.4	1.4	1						1	14
QJ	3362	II1D	E5b	16M	7.5		<0.1			1					1						1	12
QJ	3363	II1D	E5b	16M	2.5		<0.1				1				1							2
QJ	3364	II1D	E5b	16M	2.5	7.5	<0.1		1			?	0.8	1.3	1						1	2
QJ	3365	II1D	E5b	16M	2.5	7.5	<0.1	1				75	2.2	5.5	1						1	2
QJ	3366	II1D	E5b	16M	7.5		0.2				1				1							2
QJ	3367	II1D	E5b	16M	2.5		<0.1			1					1						1	2
QJ	3368	II1D	E5b	16M	2.5		<0.1				1				1							3
QJ	3369	II1D	E5b	16M	2.5		<0.1				1				1							12
QJ	3370	II1D	E5b	16M	7.5		<0.1				1				1							12
QJ	3371	II1D	E5b	16M																		
QJ	3372	II1D	E5b	16M	2.5	2.5	<0.1	1				75	1.0	3.0	1						1	12
QJ	3373	II1D	E5b	16M	7.5		<0.1			1					1						1	2
QJ	3374	II1D	E5b	16M	2.5		<0.1				1				1							2
QJ	3375	II1D	E5b	16M	2.5		<0.1				1				1							2
QJ	3376	II1D	E5b	16M	2.5		<0.1				1				1							2
QJ	3377	II1D	E5b	16M	7.5		0.1			1					1							3
QJ	3378	II1D	E5b	16M	7.5		<0.1			1					1						1	2
QJ	3379	II1D	E5b	16M	2.5	2.5	<0.1		1			?	0.6	1.3	1							2
QJ	3380	II1D	E5b	16M	7.5		<0.1				1				1							2
QJ	3381	II1D	E5b	16M	7.5		<0.1				1				1							2
QJ	3382	II1D	E5b	16M	7.5		<0.1				1				1							2
QJ	3383	II1D	E5b	16M	2.5		<0.1				1				1							3
QJ	3384	II1D	E5b	16M	7.5		<0.1				1				1							14
QJ	3385	II1D	E5b	16M	2.5		<0.1				1				1							2
QJ	3386	II1D	E5b	16M	2.5	2.5	<0.1		1			55	0.8	2.4	1							2
QJ	3387	II1D	E5b	16M	7.5		<0.1				1				1							12
QJ	3388	II1D	E5b	16M	2.5		<0.1				1				1							2
QJ	3389	II1D	E5b	16M	7.5		<0.1				1				1							2
QJ	3390	II1D	E5b	16M	2.5		<0.1				1				1							2

QJ	3391	II1D	E5b	16M	7.5	2.5	<0.1	1				50	0.6	2.8	1						1	2
QJ	3392	II1D	E5b	16M	2.5		<0.1			1					1						1	3
QJ	3393	II1D	E5b	16M	7.5	2.5	<0.1	1				?	0.6	2.0	1						1	2
QJ	3394	II1D	E5b	16M	2.5		<0.1			1					1							2
QJ	3395	II1D	E5b	16M	2.5		<0.1				1				1							2
QJ	3396	II1D	E5b	16M	2.5	2.5	<0.1		1			?	0.4	1.9	1						1	2
QJ	3397	II1D	E5b	16M																		
QJ	3398	II1D	E5b	16M	2.5		<0.1			1					1						1	2
QJ	3399	II1D	E5b	16M	2.5		<0.1				1				1							3
QJ	3400	II1D	E5b	16M	2.5		<0.1				1				1							3
QJ	3401	II1D	E5b	16M	2.5		<0.1				1				1							2
QJ	3402	II1D	E5b	16M	2.5	2.5	<0.1	1				?	0.5	2.5	1							2
QJ	3403	II1D	E5b	16M	2.5		<0.1				1				1							12
QJ	3404	II1D	E5b	16M	2.5		<0.1				1				1							2
QJ	3405	II1D	E5b	16M	2.5	2.5	<0.1	1				?	0.4	1.7	1						1	2
QJ	3406	II1D	E5b	16M	2.5	2.5	<0.1	1				75	1.1	2.8	1						1	12
QJ	3407	II1D	E5b	16M	2.5		<0.1				1				1							2
QJ	3408	II1D	E5b	16M	2.5		<0.1				1				1							2
QJ	3409	II1D	E5b	16M	2.5		<0.1				1				1							2
QJ	3410	II1D	E5b	16M	2.5	7.5	<0.1	1				85	1.0	5.7		1					1	12
QJ	3411	II1D	E5b	16M	2.5	7.5	<0.1	1				90	0.8	3.9	1							2
QJ	3414	II1D	E5b	4M	7.5	12.5	0.1		1			75	1.5	3.5	1						1	12
QJ	3415	II1D	E5b	4M	7.5		0.1			1					1							12
QJ	3416	II1D	E5b	4M	12.5		0.3				1						1					2
QJ	3417	II1D	E5b	4M	12.5		0.2			1						1					1	2
QJ	3418	II1D	E5b	4M	7.5	7.5	0.1		1			55	2.3	6.9	1					1	1	12
QJ	3419	II1D	E5b	4M	7.5		0.1				1				1							2
QJ	3420	II1D	E5b	4M	12.5		0.2			1					1						1	2
QJ	3421	II1D	E5b	4M	12.5		0.3				1				1							2
QJ	3422	II1D	E5b	4M	12.5		0.2			1					1							2
QJ	3423	II1D	E5b	4M	12.5	12.5	0.3	1				70	1.9	6.0	1			1			1	12
QJ	3424	II1D	E5b	4M	12.5	12.5	0.3	1				40	3.4	13.9	1					1	1	12
QJ	3425	II1D	E5b	4M	17.5		1	1				?	0.8	6.1		1		1			1	2
QJ	3426	II1D	E5b	4M	17.5	7.5	0.1	1				?	1.3	3.4	1			1	1		1	12
QJ	3427	II1D	E5b	4M	12.5		0.2				1				1							2
QJ	3428	II1D	E5b	4M	12.5	7.5	0.1	1				45	1.4	4.8	1				1	1	1	2
QJ	3429	II1D	E5b	4M	7.5		<0.1			1					1						1	2
QJ	3430	II1D	E5b	4M	12.5		0.1				1				1							2
QJ	3431	II1D	E5b	4M	7.5		0.1			1					1							4
QJ	3432	II1D	E5b	4M	7.5	12.5	0.1		1			60	1.5	6.0	1							4
QJ	3433	II1D	E5b	4M	7.5		0.1				1					1						12
QJ	3434	II1D	E5b	4M	7.5	7.5	0.1	1				?	0.6	6.3	1			1			1	2
QJ	3435	II1D	E5b	4M	7.5		0.1			1					1							2
QJ	3436	II1D	E5b	4M	12.5		0.1			1					1							2
QJ	3437	II1D	E5b	4M	7.5	7.5	0.1	1				55	1.2	4.2	1			1			1	2
QJ	3438	II1D	E5b	4M	7.5		0.1				1				1							2
QJ	3439	II1D	E5b	4M	12.5		0.3			1					1						1	4
QJ	3440	II1D	E5b	4M	12.5		0.4			1							1					2
QJ	3441	II1D	E5b	4M	12.5	17.5	0.3		1			60	1.4	4.8	1				1	1	1	12
QJ	3442	II1D	E5b	4M	12.5		0.1			1					1						1	2
QJ	3443	II1D	E5b	4M	32.5		1.4				1						1					12
QJ	3444	II1D	E5b	4M	17.5		0.2			1						1					1	12
QJ	3445	II1D	E5b	4M	7.5		0.1				1				1							12

QJ	3446	II1D	E5b	4M	7.5		0.1				1				1							2
QJ	3447	II1D	E5b	4M	27.5		5.4				1					1						2
QJ	3448	II1D	E5b	4M	22.5		2.1			1					1							3
QJ	3449	II1D	E5b	4M	7.5	12.5	0.6		1			85	2.0	6.2	1			1		1	1	2
QJ	3450	II1D	E5b	4M	17.5		0.3			1					1						1	12
QJ	3451	II1D	E5b	4M	12.5		0.3			1					1						1	2
QJ	3452	II1D	E5b	4M	22.5	12.5	1.4	1				?	1.1	7.7	1			1			1	2
QJ	3453	II1D	E5b	4M	7.5		0.1				1				1							14
QJ	3454	II1D	E5b	4M	12.5	17.5	0.9		1			90	4.5	9.3	1							4
QJ	3455	II1D	E5b	?	32.5		4.4			1						1					1	2
QJ	3456	II1D	E5b	?	27.5		3.1				1				1							2
QJ	3457	II1D	E5b	?	32.5	22.5	2.8		1			75	2.0	7.7	1			1	1	1	1	2
QJ	3458	II1D	E5b	?	22.5		0.8				1					1						2
QJ	3459	II1D	E5b	?	12.5	12.5	0.8	1				75	1.8	4.0	1						1	12
QJ	3460	II1D	E5b	?	12.5		0.3				1				1							2
QJ	3461	II1D	E5b	?	12.5		0.7				1					1						2
QJ	3462	II1D	E5b	?	22.5		1.3			1					1						1	2
QJ	3463	II1D	E5b	?	12.5		0.5			1					1						1	2
QJ	3464	II1D	E5b	?	22.5	12.5	0.6	1				65	1.8	5.1	1					1	1	2
QJ	3465	II1D	E5b	?	22.5		0.9				1				1						1	2
QJ	3466	II1D	E5b	?	12.5		0.1			1					1						1	2
QJ	3467	II1D	E5b	?	22.5	27.5	2.2		1			80	2.5	7.1	1						1	2
QJ	3468	II1D	E5b	?	22.5		1.1				1					1						2
QJ	3469	II1D	E5b	?	17.5		0.2			1					1						1	2
QJ	3470	II1D	E5b	?	17.5		0.7				1				1							2
QJ	3471	II1D	E5b	?	12.5	12.5	0.5	1				80	1.5	9.4	1					1	1	2
QJ	3472	II1D	E5b	?	22.5	17.5	1.6	1				70	2.9	11.0		1						2
QJ	3473	II1D	E5b	?	17.5		0.3			1					1						1	12
QJ	3474	II1D	E5b	?	17.5	17.5	0.7		1			80	1.3	2.7	1						1	2
QJ	3475	II1D	E5b	?	37.5	22.5	5.2	1				70	1.7	9.6			1			1		2
QJ	3476	II1D	E5bi	16M	7.5		0.1				1				1							2
QJ	3477	II1D	E5bi	16M	7.5		<0.1			1					1						1	12
QJ	3478	II1D	E5bi	16M	12.5		0.1				1					1						2
QJ	3479	II1D	E5bi	16M	12.5		<0.1	1				70	1.0	2.5	1						1	2
QJ	3480	II1D	E5bi	16M	7.5	7.5	0.1	1				?	0.9	2.1	1			1			1	2
QJ	3481	II1D	E5bi	16M	7.5		<0.1			1					1						1	14
QJ	3482	II1D	E5bi	16M	7.5		<0.1			1					1						1	12
QJ	3483	II1D	E5bi	16M	12.5		0.1			1					1						1	12
QJ	3484	II1D	E5bi	16M	7.5	7.5	0.1	1				?	1.5	3.3	1						1	2
QJ	3485	II1D	E5bi	16M	7.5		<0.1				1				1							2
QJ	3486	II1D	E5bi	16M	12.5		0.1			1							1					12
QJ	3487	II1D	E5bi	16M	7.5		<0.1				1					1						4
QJ	3488	II1D	E5bi	16M	7.5	7.5	<0.1	1				?	0.6	3.1	1							2
QJ	3489	II1D	E5bi	16M	7.5		0.1			1					1						1	12
QJ	3490	II1D	E5bi	16M	2.5		<0.1				1				1							3
QJ	3491	II1D	E5bi	16M	7.5		<0.1				1				1							2
QJ	3492	II1D	E5bi	16M	7.5	2.5	<0.1	1				?	1.2	3.5	1						1	2
QJ	3493	II1D	E5bi	16M	7.5		0.1				1				1							12
QJ	3494	II1D	E5bi	16M	7.5		<0.1				1					1						2
QJ	3495	II1D	E5bi	16M	7.5		<0.1				1				1							2
QJ	3496	II1D	E5bi	16M	7.5		0.1			1					1						1	2
QJ	3497	II1D	E5bi	16M	7.5		<0.1				1				1							12
QJ	3498	II1D	E5bi	16M	2.5		<0.1			1					1						1	12

QJ	3499	II1D	E5bi	16M	7.5	7.5	0.1	1				80	0.8	6.1	1			1				2
QJ	3500	II1D	E5bi	16M	7.5	7.5	<0.1	1				?	0.9	5.8	1							2
QJ	3501	II1D	E5bi	16M	2.5		<0.1				1				1							3
QJ	3502	II1D	E5bi	16M	7.5		<0.1			1					1						1	12
QJ	3503	II1D	E5bi	16M	7.5		0.1			1					1						1	12
QJ	3504	II1D	E5bi	16M	2.5		<0.1				1				1							3
QJ	3505	II1D	E5bi	16M	12.5		0.1			1					1						1	12
QJ	3506	II1D	E5bi	16M																		
QJ	3507	II1D	E5bi	16M	2.5	2.5	<0.1	1				?	0.9	3.3	1							2
QJ	3508	II1D	E5bi	16M	7.5	7.5	0.1	1				75	0.9	1.6	1						1	2
QJ	3509	II1D	E5bi	16M	2.5	7.5	0.1	1				70	3.1	8.0	1							2
QJ	3510	II1D	E5bi	16M	7.5		0.1				1				1							2
QJ	3511	II1D	E5bi	16M	2.5		<0.1				1				1							12
QJ	3512	II1D	E5bi	16M	2.5	2.5	<0.1	1				?	0.7	2.3	1							2
QJ	3513	II1D	E5bi	16M	7.5		<0.1				1				1							2
QJ	3514	II1D	E5bi	16M	2.5		<0.1				1				1							2
QJ	3515	II1D	E5bi	16M	7.5		<0.1			1					1						1	2
QJ	3516	II1D	E5bi	16M	2.5		<0.1			1					1						1	2
QJ	3517	II1D	E5bi	16M	2.5		<0.1				1				1							2
QJ	3518	II1D	E5bi	16M	7.5		0.1			1					1						1	2
QJ	3519	II1D	E5bi	16M	7.5		0.1				1					1						2
QJ	3520	II1D	E5bi	16M	7.5		0.1			1					1						1	2
QJ	3521	II1D	E5bi	16M	2.5		<0.1				1				1							2
QJ	3522	II1D	E5bi	16M	12.5		<0.1				1				1							2
QJ	3523	II1D	E5bi	16M	12.5		<0.1			1					1						1	2
QJ	3524	II1D	E5bi	16M	7.5		<0.1			1					1						1	2
QJ	3525	II1D	E5bi	16M	2.5		<0.1				1				1							2
QJ	3526	II1D	E5bi	16M	7.5		<0.1				1				1							14
QJ	3527	II1D	E5bi	16M	2.5		<0.1				1				1							2
QJ	3528	II1D	E5bi	16M	7.5		0.1			1					1						1	2
QJ	3529	II1D	E5bi	16M	2.5	7.5	0.1	1				75	2.1	7.0	1					1		2
QJ	3530	II1D	E5bi	16M	2.5		<0.1				1					1						3
QJ	3531	II1D	E5bi	16M	7.5	2.5	<0.1		1			65	1.0	3.1	1							2
QJ	3532	II1D	E5bi	16M	7.5		<0.1			1					1						1	2
QJ	3533	II1D	E5bi	16M	2.5		<0.1				1					1						2
QJ	3534	II1D	E5bi	16M	7.5		0.1			1					1						1	2
QJ	3535	II1D	E5bi	16M	2.5	2.5	<0.1	1				?	0.8	3.7	1						1	2
QJ	3536	II1D	E5bi	16M	2.5		<0.1				1				1							12
QJ	3537	II1D	E5bi	16M	7.5	7.5	0.1	1				60	2.1	3.5	1						1	2
QJ	3538	II1D	E5bi	16M	7.5	2.5	<0.1	1				?	0.8	3.3	1						1	2
QJ	3539	II1D	E5bi	16M	2.5		<0.1				1				1							2
QJ	3540	II1D	E5bi	16M	2.5		<0.1				1				1							2
QJ	3541	II1D	E5bi	16M																		
QJ	3542	II1D	E5bi	16M	12.5		0.1				1				1							2
QJ	3553	II1D	E5bi	4M	42.5		4.6			1					1						1	2
QJ	3554	II1D	E5bi	4M	12.5	17.5	0.8		1			55	1.1	3.7	1			1	1		1	2
QJ	3555	II1D	E5bi	4M	37.5		7.3			1					1						1	4
QJ	3556	II1D	E5bi	4M	27.5		5.1				1					1						12
QJ	3557	II1D	E5bi	4M	32.5		4.2				1					1						12
QJ	3558	II1D	E5bi	4M	17.5	17.5	1	1				60	5.1	11.8		1					1	12
QJ	3559	II1D	E5bi	4M	12.5	22.5	1.1		1			80	1.9	4.5		1					1	2
QJ	3560	II1D	E5bi	4M	12.5		0.3				1					1						12
QJ	3561	II1D	E5bi	4M	7.5		0.3			1					1							3

QJ	3562	II1D	E5bi	4M	12.5		0.2			1					1						1	2
QJ	3563	II1D	E5bi	4M	22.5	12.5	1.1	1				80	2.0	7.0	1			1			1	2
QJ	3564	II1D	E5bi	4M	12.5		0.1			1					1						1	2
QJ	3565	II1D	E5bi	4M	12.5	12.5	0.4		1			75	2.3	5.9	1				1	1	1	2
QJ	3566	II1D	E5bi	4M	12.5	7.5	0.2		1			?	1.2	6.7	1						1	2
QJ	3567	II1D	E5bi	4M	17.5	7.5	0.4		1			80	0.8	2.2	1						1	2
QJ	3568	II1D	E5bi	4M	27.5		3			1					1						1	2
QJ	3569	II1D	E5bi	4M	27.5		1.7			1						1					1	2
QJ	3570	II1D	E5bi	4M	32.5		2.7				1					1						12
QJ	3571	II1D	E5bi	4M	22.5		1.2			1						1						2
QJ	3572	II1D	E5bi	4M	17.5		2.4			1					1							2
QJ	3573	II1D	E5bi	4M	32.5		7.6				1						1					2
QJ	3574	II1D	E5bi	4M	37.5		4.8			1						1						12
QJ	3575	II1D	E5bi	4M	12.5		0.3			1						1						2
QJ	3576	II1D	E5bi	4M	7.5		0.2			1					1							2
QJ	3577	II1D	E5bi	4M	7.5		0.1			1					1						1	12
QJ	3578	II1D	E5bi	4M	12.5	7.5	0.3	1				65	1.4	4.4	1					1		12
QJ	3579	II1D	E5bi	4M	7.5	12.5	0.1	1				65	1.0	2.9	1						1	12
QJ	3580	II1D	E5bi	4M	7.5		0.2			1					1						1	2
QJ	3581	II1D	E5bi	4M	17.5		1.4				1					1						12
QJ	3582	II1D	E5bi	4M	12.5		0.5				1						1					12
QJ	3583	II1D	E5bi	4M	17.5	17.5	0.6	1				90	3.1	9.1	1					1	1	12
QJ	3584	II1D	E5bi	4M	7.5	7.5	0.1	1				70	1.3	3.2	1			1				2
QJ	3585	II1D	E5bi	4M	12.5		0.3			1					1						1	2
QJ	3586	II1D	E5bi	4M	32.5		4.2				1				1							2
QJ	3587	II1D	E5bi	4M	12.5	7.5	0.2	1				65	1.4	3.4		1					1	12
QJ	3588	II1D	E5bi	4M	12.5		0.2			1					1						1	12
QJ	3589	II1D	E5bi	4M																		
QJ	3590	II1D	E5bi	4M	22.5	12.5	0.9		1			?	1.3	4.5	1			1	1		1	12
QJ	3591	II1D	E5bi	4M	17.5		1.6				1					1						4
QJ	3592	II1D	E5bi	4M	17.5	7.5	0.4	1				?	1.7	6.5	1						1	12
QJ	3593	II1D	E5bi	4M	12.5	17.5	1.4		1			25	2.0	8.1	1			1	1		1	12
QJ	3594	II1D	E5bi	4M	27.5	17.5	1.4		1			40	1.8	5.8	1			1	1	1	1	2
QJ	3595	II1D	E5bi	4M	17.5		1.4				1				1							2
QJ	3596	II1D	E5bi	4M	27.5	12.5	0.5	1				?	0.9	6.1	1						1	2
QJ	3597	II1D	E5bi	4M	22.5		0.8			1						1					1	2
QJ	3598	II1D	E5bi	4M	17.5	12.5	0.4		1			?	1.3	2.0	1						1	2
QJ	3599	II1D	E5bi	4M	17.5		1.5				1				1							2
QJ	3600	II1D	E5bi	4M	17.5	17.5	1.2		1			?	1.3	11.0		1		1	1		1	2
QJ	3601	II1D	E5bi	4M	22.5		0.6			1					1						1	2
QJ	3602	II1D	E5bi	4M	12.5	7.5	0.4	1				90	1.3	3.8	1						1	2
QJ	3603	II1D	E5bi	4M	12.5		0.2			1					1						1	2
QJ	3604	II1D	E5bi	4M	12.5		0.2			1					1						1	2
QJ	3605	II1D	E5bi	4M	12.5		0.2			1					1						1	2
QJ	3606	II1D	E5bi	4M	17.5		0.5			1					1						1	12
QJ	3607	II1D	E5bi	4M	7.5	12.5	0.3	1				35	2.2	9.5	1							2
QJ	3608	II1D	E5bi	4M	17.5		0.3				1				1							12
QJ	3609	II1D	E5bi	4M	7.5		0.2			1					1						1	12
QJ	3610	II1D	E5bi	4M	17.5		0.4				1				1							12
QJ	3611	II1D	E5bi	4M	12.5	12.5	0.3	1				?	1.0	2.1	1						1	2
QJ	3612	II1D	E5bi	4M	7.5		0.1			1					1						1	2
QJ	3613	II1D	E5bi	4M	12.5	7.5	0.3	1				40	1.1	3.3	1			1			1	2
QJ	3614	II1D	E5bi	4M	17.5		0.2			1						1					1	2

QJ	3615	II1D	E5bi	4M	12.5		0.3			1					1						1	2
QJ	3616	II1D	E5bi	4M	12.5	7.5	0.2		1			50	1.2	2.2	1						1	2
QJ	3617	II1D	E5bi	4M	22.5		0.9			1					1						1	2
QJ	3618	II1D	E5bi	4M	12.5		0.6				1					1						2
QJ	3619	II1D	E5bi	4M	12.5		0.4				1				1							3
QJ	3620	II1D	E5bi	4M	17.5		0.5				1				1							2
QJ	3621	II1D	E5bi	4M	17.5		0.4			1					1						1	2
QJ	3622	II1D	E5bi	4M	12.5		0.1				1				1							2
QJ	3623	II1D	E5bi	4M	7.5	7.5	0.1	1				70	1.6	5.4	1			1		1	1	2
QJ	3624	II1D	E5bi	4M	7.5	7.5	0.1		1			80	1.7	4.4	1				1		1	2
QJ	3625	II1D	E5bi	4M	12.5		0.1				1				1							2
QJ	3626	II1D	E5bi	4M	12.5		0.3			1					1						1	2
QJ	3627	II1D	E5bi	4M	7.5	7.5	<0.1	1				75	1.2	5.0	1					1	1	2
QJ	3628	II1D	E5bi	4M	7.5		0.3				1				1							2
QJ	3629	II1D	E5bi	4M	17.5		0.6				1				1							2
QJ	3630	II1D	E5bi	4M	17.5		0.2			1					1						1	4
QJ	3631	II1D	E5bi	4M	7.5		0.1			1					1						1	12
QJ	3632	II1D	E5bi	4M	7.5	12.5	0.3	1				35	1.8	16.2	1			1		1	1	14
QJ	3633	II1D	E5bi	4M	12.5		0.2			1					1							12
QJ	3634	II1D	E5bi	?	57.5		10.7				1						1					12
QJ	3635	II1D	E5bi	?	17.5		0.7			1						1					1	12
QJ	3636	II1D	E5bi	?	27.5		3.8			1					1							2
QJ	3637	II1D	E5bi	?	37.5		5.9				1					1						2
QJ	3638	II1D	E5bi	?	17.5	12.5	1.5		1			55	4.3	13.2			1	1				2
QJ	3639	II1D	E5bi	?	17.5	17.5	1.4	1				50	2.6	8.0	1			1		1	1	2
QJ	3640	II1D	E5bi	?	27.5		2.8				1						1					2
QJ	3641	II1D	E5bi	?	12.5		0.1				1				1							2
QJ	3642	II1D	E5bi	?	12.5	7.5	0.4		1			90	2.4	5.1		1					1	2
QJ	3643	II1D	E5bi	?	7.5	7.5	0.2	1				75	3.0	8.8	1					1	1	2
QJ	3644	II1D	E5bi	?	12.5	12.5	0.2		1			75	1.0	7.1	1							2
QJ	3645	II1A	N1b	16G	2.5		<0.1				1				1							ob
QJ	3646	II1A	N2	4G	7.5	7.5	0.4		1			?	1.3	6.8		1		1	1		1	ob
QJ	3647	II1A	N2	4G	12.5	7.5	0.3		1			?	0.7	5.0	1			1			1	ob
QJ	3648	II1A	N2	4G	7.5	7.5	0.1	1				?	0.5	6.5	1			1	1	1	1	ob
QJ	3649	II1A	N2b	16G	7.5		<0.1			1					1						1	ob
QJ	3650	II1B	N1b	16M	7.5		<0.1				1				1							ob
QJ	3651	II1B	N1c	16G	2.5	2.5	<0.1		1			?	1.0	2.2	1				1		1	ob
QJ	3652	II1B	N2c	4G	7.5		0.1				1				1							ob
QJ	3653	II1B	N2d	4G	12.5		0.8			1						1					1	ob
QJ	3654	II1C	N1b	4G	7.5		0.1			1						1					1	ob
QJ	3655	II1C	N2	16G	7.5		<0.1				1				1							ob
QJ	3656	II1C	E5bi	?	22.5		0.9			1					1						1	ob
QJ	3657	II1C	E5bii	16G	2.5	2.5	<0.1	1				?	0.8	2.9	1							ob
QJ	3658	II1D	N1c	4M	7.5	7.5	0.1		1			?	0.8	3.6	1			1	1		1	ob
QJ	3659	II1D	N2c	16G	7.5		0.1				1				1							ob
QJ	3660	II1D	N2c2	4M	17.5	7.5	0.4	1				45	1.7	6.4	1			1		1	1	ob
QJ	3661	II1D	N2c2	4M	7.5		0.1				1				1							ob
QJ	3662	II1D	N2c4	16G	7.5		0.1				1				1							ob
QJ	3663	II1D	N2c4	16G	7.5		<0.1			1					1						1	ob
QJ	3664	II1D	E5b	?	12.5		0.4				1				1							ob
QJ	3665	II1C	N2c2	4M	17.5		0.5			1					1						1	ob
QJ	3666	II2B	N2c3	16M	7.5	7.5	0.1		1			55	1.3	3.1	1			1			1	ob
QJ	3667	II2B	N2c3	16M	2.5		<0.1				1				1							ob

QJ	3668	II2B	N2c3	16M	7.5		0.1			1					1						1	ob
QJ	3669	II2B	N2c3	16M	7.5		<0.1			1					1						1	ob
QJ	3670	II2B	N2c3	16M	2.5		<0.1			1					1						1	ob
QJ	3671	II2B	N2c3	16M	7.5		<0.1			1					1						1	ob
QJ	3672	II2B	N2c3	16M	7.5		<0.1			1					1						1	ob
QJ	3673	II2B	N2c4	16M	12.5		0.1				1				1							ob
QJ	3674	II2B	E16	16M	7.5		0.1				1				1							ob
QJ	3675	II2B	E16	16M	7.5		0.1				1				1							ob
QJ	3676	II2B	E16	16M	7.5		0.1			1					1						1	ob
QJ	3677	II2B	E16	16M	7.5		0.1			1						1					1	ob
QJ	3678	II2B	E16	16M	7.5	7.5	0.1		1			?	0.7	1.9	1						1	ob
QJ	3679	II2B	E16	16M	12.5		<0.1				1				1							ob
QJ	3680	II2B	E16	16M	7.5		<0.1			1					1						1	ob
QJ	3681	II2B	E16	16M	7.5		<0.1				1				1							ob
QJ	3682	II2B	E16	16M	7.5		<0.1				1				1						1	ob
QJ	3683	II2B	E16	16M	2.5		<0.1			1					1						1	ob
QJ	3684	II2B	E16	16M	2.5		<0.1				1				1							ob
QJ	3685	II2B	E16	16M	2.5		<0.1				1				1							ob
QJ	3686	II2B	E16	16M	2.5		<0.1				1				1							ob
QJ	3687	II2B	E16	16M	2.5		<0.1				1				1							ob
QJ	3688	II2B	E16	16M	2.5		<0.1				1				1							ob
QJ	3689	II2B	E16	16M	2.5		<0.1				1				1							ob
QJ	3690	II2B	E16	16M	2.5		<0.1				1				1							ob
QJ	3691	II2B	E16	16M	2.5		<0.1				1				1							ob
QJ	3692	II2B	E16	16M	2.5		<0.1				1				1							ob
QJ	3693	II2B	E16	16M	2.5		<0.1				1				1							ob
QJ	3694	II2B	E16	16M	2.5		<0.1				1				1							ob
QJ	3695	II2B	E16	16M	2.5		<0.1				1				1							ob
QJ	3696	II2B	E16	16M	2.5		<0.1				1				1							ob
QJ	3697	II2B	E16	16M	2.5		<0.1				1				1							ob
QJ	3698	II2B	E16	16M	2.5		<0.1				1				1							ob
QJ	3699	II2B	E16	16M	2.5		<0.1				1				1							ob
QJ	3700	II2B	E16	16M	2.5		<0.1				1				1							ob
QJ	3701	II2B	E16	16M	2.5		<0.1				1				1							ob
QJ	3702	II2B	E16	16M	2.5		<0.1				1				1							ob
QJ	3703	II2B	E16	16M	2.5		<0.1				1				1							ob
QJ	3704	II2B	E16	16M	7.5		<0.1				1					1						ob
QJ	3705	II2B	E16	16M	2.5		<0.1			1					1						1	ob
QJ	3706	II2B	E16	16M	2.5		<0.1			1					1						1	ob
QJ	3707	II2B	E16	16M	2.5	2.5	<0.1	1				?	0.6	1.0	1						1	ob
QJ	3708	II2B	E16	16M	2.5	2.5	<0.1	1				70	1.3	2.9	1							ob
QJ	3709	II2B	E16	16M	2.5	2.5	<0.1	1				?	0.6	1.8	1							ob
QJ	3710	II2B	E16	16M	2.5	2.5	<0.1	1				?	0.4	1.5	1							ob
QJ	3711	II2B	E16	16M	2.5	2.5	<0.1	1				?	0.4	1.3	1							ob
QJ	3712	II2B	N2d	16M	7.5		<0.1				1				1							ob
QJ	3713	II2B	N4c	16M	2.5		<0.1				1				1							ob
QJ	3714	II2B	N4c	16M	7.5		<0.1				1				1							ob
QJ	3715	II2B	N4c	16M	7.5		<0.1			1					1							ob
QJ	3716	II1C	N2c	16M	2.5		<0.1			1					1						1	ob
QJ	3717	II1C	N2c	16M	2.5	2.5	<0.1		1			?	0.6	2.0	1				1		1	ob
QJ	3718	II1C	N2c2	16M	2.5	7.5	<0.1		1			?	0.6	2.1	1				1		1	ob
QJ	3719	II1C	E5bii	16M	7.5	7.5	<0.1		1			?	1.0	2.2	1						1	ob
QJ	3720	II1C	E5bii	16M	7.5		0.1				1				1							ob

QJ	3721	II1D	N2c	16M	7.5		<0.1			1					1							ob
QJ	3722	II1D	N2c3	16M	7.5	2.5	<0.1	1				?	1.1	1.6	1			1	1		1	ob
QJ	3723	II1D	N2c3	16M	7.5	7.5	0.1	1				45	0.9	2.4	1			1	1	1	1	ob
QJ	3724	II1D	N2c3	16M	7.5		<0.1				1				1							ob
QJ	3725	II1D	N2c3	16M	2.5		<0.1			1					1						1	ob
QJ	3726	II1D	N2c3	16M	2.5	2.5	<0.1	1				?	0.6	1.3	1						1	ob
QJ	3727	II1D	N2c3	16M	7.5		<0.1			1					1						1	ob
QJ	3728	II1D	N2c3	16M	2.5		<0.1				1				1							ob
QJ	3729	II1D	N2c3	16M	2.5		<0.1			1					1						1	ob
QJ	3730	II1D	N2c3	16M	2.5		<0.1				1				1							ob
QJ	3731	II1D	N2c4	16M	7.5	2.5	<0.1	1				55	1.4	2.9	1						1	ob
QJ	3732	II1D	N2c4	16M	2.5		0.1			1					1						1	ob
QJ	3733	II1D	N2c4	16M	2.5	2.5	<0.1	1				?	0.6	1.4	1						1	ob
QJ	3734	II1D	E5b	16M	7.5		0.1			1					1						1	ob
QJ	3735	II1D	E5b	16M	7.5	7.5	0.1	1				?	1.1	3.6	1							ob
QJ	3736	II1D	E5b	16M	7.5		<0.1				1				1							ob
QJ	3737	II1D	E5b	16M	7.5		<0.1				1				1							ob
QJ	3738	II1D	E5b	16M	7.5		<0.1				1					1						ob
QJ	3739	II1D	E5b	16M	2.5		<0.1			1					1						1	ob
QJ	3740	II1D	E5b	16M	7.5	2.5	<0.1	1				55	0.9	2.3	1					1	1	ob
QJ	3741	II1D	E5b	16M	7.5		<0.1			1					1						1	ob
QJ	3742	II1D	E5b	16M	7.5	2.5	<0.1			1					1						1	ob
QJ	3743	II1D	E5b	16M	2.5		<0.1			1					1						1	ob
QJ	3744	II1D	E5b	16M	2.5		<0.1				1				1							ob
QJ	3745	II1D	E5b	16M	2.5		<0.1			1					1						1	ob
QJ	3746	II1D	E5b	16M	2.5		<0.1			1					1						1	ob
QJ	3747	II1D	E5bi	16M	7.5		0.1			1					1						1	ob
QJ	3748	II1D	E5bi	16M	7.5		0.1			1					1						1	ob
QJ	3749	II1D	E5bi	16M	7.5		<0.1			1					1						1	ob
QJ	3750	II1D	E5bi	16M	7.5		0.1			1					1						1	ob
QJ	3751	II1D	E5bi	16M	12.5	7.5	0.1	1				?	0.6	3.2	1						1	ob
QJ	3752	II1D	E5bi	16M	7.5	7.5	<0.1	1				60	0.9	2.5	1			1	1		1	ob
QJ	3753	II1D	E5bi	16M	7.5		0.1				1				1							ob
QJ	3754	II1D	E5bi	16M	7.5		0.1			1					1						1	ob
QJ	3755	II1D	E5bi	16M	2.5		<0.1			1					1						1	ob
QJ	3756	II1D	E5bi	16M	12.5		0.1			1					1						1	ob
QJ	3757	II1D	E5bi	16M	7.5		0.1			1					1						1	ob
QJ	3758	II1D	E5bi	16M	7.5	2.5	<0.1	1				?	0.8	2.2	1			1			1	ob
QJ	1090b	II3C	NLS	?	22.5	7.5	0.4	1				?	1.0	3.4	1						1	2
QJ	1091b	II3C	NLS	?	7.5	7.5	0.1		1			70	1.2	3.3	1						1	14
QJ	1780b	II3A	E73	4M	7.5	17.5	0.5		1			50	2.6	9.3	1						1	2
QJ	1781b	II3A	E73	4M	12.5		0.4			1							1					4
QJ	1782b	II3A	E73	16M	7.5		0.1				1				1							2
QJ	1783b	II3A	E73	16M	2.5		<0.1				1				1							2
QJ	1784b	II3A	E74	4M	12.5		0.1			1					1						1	2
QJ	1785b	II3A	E74	4M	17.5		0.3				1				1							2
QJ	1786b	II3A	E74	4M	12.5		0.1			1					1						1	2
QJ	1787b	II3A	E74	4M	7.5		0.1				1					1						2
QJ	1788b	II3A	E74	16M	2.5		<0.1				1				1							10
QJ	1789b	II3A	E74	16M	2.5		<0.1				1				1							2
QJ	1790b	II3A	E74	16M	7.5		<0.1				1				1							2
QJ	1791b	II3A	E74	16M	2.5		<0.1				1				1							2
QJ	1792b	II3A	E74	16M	2.5		<0.1				1				1							2

QJ	1793b	II3A	E74	16M	2.5		<0.1				1				1							2
QJ	1794b	II3A	E75	16M	2.5		<0.1				1				1							2
QJ	1795b	II3A	E75	16M	2.5		<0.1				1				1							2
QJ	1796b	II3A	E75	16M	2.5		<0.1				1				1							5
QJ	1797b	II3A	E75	16M	2.5		<0.1				1				1							2
QJ	1798b	II3A	E75	16M	2.5		<0.1	1				25	1.9	4.4	1						1	2
QJ	1799b	II3A	E73	4M	37.5		9.1				1					1						2
QJ	917b	II3C	N2b	4G	17.5		0.4			1					1						1	2
QJ	918b	II3C	N2b	4G	17.5	12.5	0.8	1				90	4.1	7.3	1						1	2
QJ	I -606	I3B	N1a	4G	12.5	7.5	0.3	1				35	2.3	5.4	1			1	1		1	9
QJ	I-1	I1A	N1b	4M	27.5		2.3			1					1						1	4
QJ	I-10	I1A	N1	4G	22.5		1.3			1					1						1	2
QJ	I-100	I1A	N3	4G	7.5	7.5	0.1	1				35	1.3	5.7	1			1			1	10
QJ	I-101	I1A	N3	4G	12.5		0.3			1					1						1	10
QJ	I-102	I1A	N3	4G	22.5		0.7			1					1							10
QJ	I-103	I1A	N3	4G	22.5		1.7				1				1							7
QJ	I-104	I1A	N3	4G	7.5	7.5	0.1	1				65	?	?	1			1	1		1	4
QJ	I-105	I1A	N3	4G	7.5	12.5	0.4		1			90	2.9	9.2	1							10
QJ	I-106	I1A	N3	4G	12.5		0.2			1					1						1	10
QJ	I-107	I1A	N3	4G	12.5		0.2			1					1							15
QJ	I-108	I1A	N3	4G	17.5	12.5	0.9		1			70	4.3	14.4		1				1	1	8
QJ	I-109	I1A	N3	4G	7.5		<0.1			1					1							10
QJ	I-11	I1A	N1	4G	7.5		0.1				1				1							15
QJ	I-110	I1A	N3	4G	17.5		0.9				1				1							4
QJ	I-111	I1A	N3	4G	12.5	12.5	0.4	1				85	1.6	?		1						12
QJ	I-112	I1A	N3	4G	12.5		0.3			1					1						1	12
QJ	I-113	I1A	N3	4G	12.5		0.2				1					1						8
QJ	I-114	I1A	N3	4G	12.5		0.1			1					1						1	12
QJ	I-115	I1A	N3	4G	17.5		0.4			1					1						1	2
QJ	I-116	I1A	N3	4G	7.5		0.2			1					1						1	2
QJ	I-117	I1A	N3	4G	7.5	7.5	0.2	1				80	2.7	4.9	1						1	3
QJ	I-118	I1A	N3	4G	12.5		0.4				1				1							2
QJ	I-119	I1A	N3	4G	22.5		1.2			1					1						1	2
QJ	I-12	I1A	N1	4G	12.5		0.4				1					1					1	12
QJ	I-120	I1A	N3	4G	12.5		1.3				1				1							2
QJ	I-121	I1A	N3	4G	7.5		0.1				1				1							13
QJ	I-122	I1A	N3	4G	22.5		0.5			1						1						14
QJ	I-123	I1A	N3	4G	12.5		0.3				1				1							12
QJ	I-124	I1A	N3	4G	17.5		0.3				1					1						2
QJ	I-125	I1A	N3	4G	12.5		0.5			1						1					1	2
QJ	I-126	I1A	N3	4G	17.5		0.5				1					1						2
QJ	I-127	I1A	N3	4G	17.5		0.1			1					1						1	2
QJ	I-128	I1A	N3	4G	12.5		0.5			1					1						1	2
QJ	I-129	I1A	N3	4G	7.5		0.1				1					1						2
QJ	I-13	I1A	N1	4G	27.5	17.5	1.9		1			?	1.4	4.2	1			1	1	1	1	4
QJ	I-130	I1A	N3	4G	12.5		0.4				1				1							14
QJ	I-131	I1A	N3	4G	12.5	12.5	0.4	1				40	2.7	7.2	1						1	2
QJ	I-132	I1A	N3	4G	17.5		0.3				1					1						2
QJ	I-133	I1A	N3	4G	17.5		1.1				1					1						2
QJ	I-134	I1A	N3	4G	27.5		5				1				1							2
QJ	I-135	I1A	N3	4G	27.5		1.5			1					1						1	2
QJ	I-136	I1A	N3	4G	17.5	17.5	1.4	1				?	4.2	16.2			1					5
QJ	I-137	I1A	N3	4G	12.5		0.3				1				1							3

QJ	I-138	I1A	N3	4G	7.5		0.2				1				1							8
QJ	I-139	I1A	N3	4G	12.5	17.5	1.3	1				80	4.6	12.3			1			1		4
QJ	I-14	I1A	N1	4G	27.5	27.5	3.9	1				?	1.5	5.1		1		1	1	1	1	2
QJ	I-140	I1A	N3	4G	32.5		5.5				1					1						5
QJ	I-141	I1A	N3	4G	12.5		0.4			1					1						1	2
QJ	I-142	I1A	N3	4G	27.5	17.5	1.4	1				70	2.9	7.2	1			1			1	2
QJ	I-143	I1A	N3	4G	17.5		0.9			1					1						1	4
QJ	I-144	I1A	N3	4G	7.5	17.5	0.5	1				75	1.8	16.8	1						1	2
QJ	I-145	I1A	N3	4G	17.5		0.8			1						1					1	2
QJ	I-146	I1A	N3	4G	22.5		1.5				1					1						7
QJ	I-147	I1A	N3	4G	12.5		0.3				1				1							15
QJ	I-148	I1A	N3	4G	7.5		0.3				1				1							3
QJ	I-149	I1A	N3	4G	12.5		1				1				1							3
QJ	I-15	I1A	N1	4G	17.5		1.7			1					1						1	2
QJ	I-150	I1A	N3	4G	17.5		12.5	1				75	2.5	5.9		1					1	4
QJ	I-151	I1A	N3	4G	17.5		1.8				1				1							7
QJ	I-152	I1A	N3	4G	17.5		1				1				1							10
QJ	I-153	I1A	N3	4G	7.5	17.5	0.4		1			75	3.7	12.7	1			1				10
QJ	I-154	I1A	N3	4G	7.5	7.5	0.1	1				55	1.0	4.4	1			1			1	10
QJ	I-155	I1A	N3	4G	12.5		0.2				1				1							10
QJ	I-156	I1A	N3	4G	12.5		0.4			1					1							10
QJ	I-157	I1A	N3	4G	17.5		1.6				1				1							4
QJ	I-158	I1A	N3	4G	22.5		1.3			1							1					12
QJ	I-159	I1A	N3	4G	22.5	17.5	1.2	1				?	?	?		1		1	1		1	12
QJ	I-16	I1A	N1	4G	22.5	22.5	2		1			90	1.6	8.8	1					1		10
QJ	I-160	I1A	N3	4G	12.5		0.4			1					1						1	12
QJ	I-161	I1A	N3	4G	12.5	12.5	0.5	1				?	?	?	1			1	1	1	1	15
QJ	I-162	I1A	N3	4G	27.5		2.8			1						1						7
QJ	I-163	I1A	N3	4G	12.5		0.2				1				1							2
QJ	I-164	I1A	N3	4G	17.5		0.3				1				1							2
QJ	I-165	I1A	N3	4G	12.5		0.4				1				1							3
QJ	I-166	I1A	N3	4G	12.5		0.3				1				1							3
QJ	I-167	I1A	N3	4G	12.5		0.6				1				1							2
QJ	I-168	I1A	N3	4G	32.5		2.4				1				1							4
QJ	I-169	I1A	N3	4G	27.5		3.8				1				1							2
QJ	I-17	I1A	NLS	?	27.5		2.6				1					1						11
QJ	I-170	I1A	N3	4G	12.5		0.6				1					1						2
QJ	I-171	I1A	N3	4G	12.5		0.5			1					1						1	2
QJ	I-172	I1A	N3	4G	12.5	17.5	0.5	1				85	1.8	9.6		1		1				2
QJ	I-173	I1A	N3	4G	7.5		0.5				1				1							4
QJ	I-174	I1A	N4	4M	12.5		0.6				1					1						14
QJ	I-175	I1A	N4	4G	12.5		0.1			1					1							14
QJ	I-176	I1A	N4	4G	17.5	17.5	0.5	1				?	0.9	11.0	1			1	1			2
QJ	I-177	I1A	N4	4G	7.5	7.5	0.1	1				85	1.1	2.1	1			1			1	2
QJ	I-178	I1A	N4	4G	17.5		1.5			1						1						14
QJ	I-179	I1A	N4	4G																		
QJ	I-18	I1A	NLS	?	12.5	17.5	0.7		1			80	2.9	13.2	1			1		1		9
QJ	I-180	I1A	N4	4G	7.5		0.3			1					1						1	10
QJ	I-181	I1A	N4	4G	7.5		0.3				1				1							16
QJ	I-182	I1C	NLS	?	27.5		3				1				1							10
QJ	I-183	I1C	NLS	?	17.5		1.1				1					1						10
QJ	I-184	I1C	NLS	?	17.5		0.9				1				1							17
QJ	I-185	I1C	N1	4G	22.5	27.5	5.5		1			80	7.2	23.3		1		1			1	5

QJ	I-186	I1C	N1b	4M	32.5	37.5	16.3	1				90	6.2	15.4			1	1				5
QJ	I-187	I1C	N1b	4M	17.5		0.6			1							1					5
QJ	I-188	I1C	N1b	4M	17.5		1			1							1					5
QJ	I-189	I1C	N1b	4M	12.5	12.5	0.7	1				50	5.6	11.1	1							2
QJ	I-19	I1A	NLS	?	22.5		1.8				1					1						5
QJ	I-190	I1C	N1b	4M	12.5		0.4			1					1						1	10
QJ	I-191	I1C	N1b	4G	27.5		1.5			1					1						1	10
QJ	I-192	I1C	N1b	4G	22.5		0.9			1					1							10
QJ	I-193	I1C	N1b	4G	17.5		1.3				1						1					5
QJ	I-194	I1C	N1b	4G	17.5		1			1						1						2
QJ	I-195	I1C	N1b	4G	12.5	7.5	0.3		1			?	1.2	3.2					1		1	12
QJ	I-196	I1C	N1b	4G	17.5		0.6			1						1					1	2
QJ	I-197	I1C	N1b	4G	17.5		0.3			1					1							12
QJ	I-198	I1C	N1b	4G	22.5		1.6				1					1						5
QJ	I-199	I1C	N1b	4G	12.5	7.5	0.3	1				70	0.9	4.6		1			1		1	2
QJ	I-2	I1A	N1b	4G	22.5		2.3			1						1						5
QJ	I-20	I1A	NLS	?	17.5		0.3				1					1						14
QJ	I-200	I1C	E2	4M	22.5	17.5	1.7	1				75	1.0	3.1	1						1	2
QJ	I-201	I1C	E2	4M	32.5	22.5	5.6	1				90	5.2	8.4			1					5
QJ	I-202	I1C	E2	4M	12.5	7.5	0.3		1			85	1.9	3.6		1					1	4
QJ	I-203	I1C	E2	4M	12.5		0.7			1					1						1	3
QJ	I-204	I1C	E2	4M	22.5		1.8			1					1							10
QJ	I-205	I1C	E2	4M	27.5		1.3				1				1							10
QJ	I-206	I1D	NLS	?	22.5	17.5	1.3	1				85	1.2	2.2			1	1			1	12
QJ	I-207	I1D	NLS	?	27.5	22.5	4.6	1				75	6.1	13.8		1					1	10
QJ	I-208	I1D	NLS	?	17.5		0.7				1				1							10
QJ	I-209	I1D	NLS	?	37.5		3.9				1					1						18
QJ	I-21	I1A	NLS	?	17.5		1.1				1				1							10
QJ	I-210	I1D	NLS	?	32.5		5.1			1					1						1	5
QJ	I-211	I4A	N1a	16M	12.5		0.1				1				1							3
QJ	I-212	I4A	N1a	4G	22.5	12.5	0.5	1				50	1.8	9.0	1			1		1	1	12
QJ	I-213	I4A	N1a	4G	7.5	22.5	0.9		1			85	3.0	12.5	1			1		1	1	4
QJ	I-214	I4A	N1a	4G	37.5		4.9			1					1						1	18
QJ	I-215	I4A	N1a	4G	17.5		0.9			1					1						1	14
QJ	I-216	I4A	N1a	4G																		
QJ	I-217	I4A	N1a	4G	17.5		0.3			1					1						1	14
QJ	I-218	I4A	N1a	4G	7.5	7.5	0.1	1				?	0.7	4.0	1				1		1	12
QJ	I-219	I4A	N1a	4G	22.5		1.1				1				1							7
QJ	I-22	I1A	NLS	?	12.5		0.4				1				1							10
QJ	I-220	I4A	N1a	4G	17.5		2			1							1					5
QJ	I-221	I4A	N1a	4G	12.5		0.7				1					1						2
QJ	I-222	I4A	N1a2	16G	7.5		0.1				1				1							5
QJ	I-223	I4A	N1a2	16G	2.5	7.5	0.1		1			40	0.9	2.8	1						1	4
QJ	I-224	I4A	N1a2	4G	32.5		8.5				1				1							18
QJ	I-225	I4A	N1a2	4G	7.5	7.5	0.1	1				?	0.6	4.6	1							13
QJ	I-226	I4A	N1a2	4G	27.5		2.3				1				1							7
QJ	I-227	I4A	N1a2	4M	42.5	37.5	13.9		1			70	7.9	26.8	1			1				18
QJ	I-228	I4A	N1a2	4M	22.5		1.5				1				1							2
QJ	I-229	I4A	N1a2	4M	7.5		0.2				1				1							5
QJ	I-23	I1A	N2	4G	27.5	22.5	6.6		1			85	12.8	16.3		1					1	2
QJ	I-230	I4A	N1d	4M	7.5		0.1				1				1							2
QJ	I-231	I4A	N1d	4M	12.5		0.4				1				1							18
QJ	I-232	I4A	N1d	4M	12.5		0.1				1				1							18

QJ	I-233	I4A	N1d	4M	7.5		<0.1				1				1							18
QJ	I-234	I4A	N1c	4M	12.5		0.8				1				1							2
QJ	I-235	I4A	N1c	4G	17.5		0.7			1					1						1	4
QJ	I-236	I4A	N1ci	4M	17.5	22.5	1.1	1				85	2.8	18.1	1					1		2
QJ	I-237	I4A	N1ci	4M	12.5	17.5	0.4	1				90	3.3	16.0		1						18
QJ	I-238	I4A	N1c2	4M	12.5	12.5	0.7	1				75	3.0	9.5	1			1			1	2
QJ	I-239	I4A	N1c2	4M	12.5	22.5	0.8	1				80	2.8	10.8	1						1	5
QJ	I-24	I1A	N2	4G	27.5	17.5	2.3		1			55	6.0	12.5	1			1			1	5
QJ	I-240	I4A	N1c2	4M	47.5		16.4				1					1						18
QJ	I-241	I4A	N1c2	4M	17.5		0.5			1					1						1	10
QJ	I-242	I4A	N1c2	4M	12.5		0.4				1					1						13
QJ	I-243	I4A	N1c2	4G	17.5		0.7			1					1							2
QJ	I-244	I4A	N1d	4G	37.5	17.5	7.2		1			90	7.5	?		1		1			1	18
QJ	I-245	I4A	N1d	4G	22.5		1.1				1						1					5
QJ	I-246	I4A	N1e	16M	17.5		0.2				1				1							3
QJ	I-247	I4A	N1e	16M	7.5		0.1			1					1							15
QJ	I-248	I4A	N1e	16M	2.5	2.5	<0.1	1				?	0.8	2.4	1				1		1	2
QJ	I-249	I4A	N1e	4G	17.5		0.5			1					1						1	2
QJ	I-25	I1A	N2	4G	12.5		0.3			1					1						1	2
QJ	I-250	I4A	N1e	4G	12.5		0.4			1					1							15
QJ	I-251	I4A	N1e	4G	12.5		0.6				1					1						2
QJ	I-252	I4A	N1e	4G	7.5		0.1				1				1							18
QJ	I-253	I4A	N1e	4G	17.5		3.8				1				1							2
QJ	I-254	I4A	N1e	4G	7.5		0.1			1					1						1	14
QJ	I-255	I4A	N1e	4G	17.5		0.8				1				1							16
QJ	I-256	I4A	N1e	4M	32.5		6.5			1							1					5
QJ	I-257	I4A	N1e	4M	17.5		1.1				1				1							5
QJ	I-258	I4A	N1e	4M	17.5		0.8				1				1							5
QJ	I-259	I4A	N1e	4M	17.5		1.2				1						1					2
QJ	I-26	I1A	N2	4G	12.5		0.3				1				1							2
QJ	I-260	I4A	N1e	4M	17.5		12.5	1				70	2.1	12.0	1					1	1	14
QJ	I-261	I4A	N1e	4M	17.5		0.4			1					1						1	18
QJ	I-262	I4A	N1e	4M	7.5	12.5	0.2	1				80	2.8	10.8	1					1	1	4
QJ	I-263	I4A	N1e	4M	17.5	27.5	2.6	1				75	5.7	26.0		1						17
QJ	I-264	I4A	N1f	4M	12.5	12.5	0.5	1				60	1.7	4.8	1						1	2
QJ	I-265	I4A	N1f	4M	12.5		0.3			1					1						1	2
QJ	I-266	I4A	N1f	4M	7.5	17.5	0.5	1				75	1.6	6.4	1							18
QJ	I-267	I4A	N1f	4M	12.5		0.3				1				1							18
QJ	I-268	I4A	N1f	4M	12.5		1.2				1					1						13
QJ	I-269	I4A	E4	16M	7.5		0.1				1				1							3
QJ	I-27	I1A	N2	4G	12.5		0.3				1				1							5
QJ	I-270	I2B	NLS	4G	42.5	37.5	23.1	1				70	14.0	40.6		1					1	18
QJ	I-271	I2B	NLS	4G	32.5		6.3			1						1					1	18
QJ	I-272	I2B	NLS	4G	32.5		3.8			1					1						1	18
QJ	I-273	I2B	NLS	4G	7.5	17.5	0.8		1			50	3.8	15.7	1							18
QJ	I-274	I2B	NLS	4G	17.5		0.7				1					1						18
QJ	I-275	I2B	NLS	4G	27.5	27.5	5.2	1				80	6.9	30.4		1				1	1	2
QJ	I-276	I2B	N1	4G	27.5	17.5	1.8	1				75	3.7	14.9	1			1		1	1	2
QJ	I-277	I2B	N1	4G	12.5		0.3				1				1							3
QJ	I-278	I2B	N1	4G	47.5		7.4			1					1						1	18
QJ	I-279	I2D	N1a	16G	7.5		0.1		1			50	1.8	5.4	1						1	4
QJ	I-28	I1A	N2	4G	7.5		0.1				1				1							4
QJ	I-280	I2B	N1b	4G	42.5	17.5	5.9	1				85	4.1	12.2	1						1	5

QJ	I-281	I2B	N1b	4G	27.5		6.1				1				1							3
QJ	I-282	I2B	N1b	4G	17.5		0.5			1						1					1	2
QJ	I-283	I2B	N1b	4G	47.5		9.9				1					1						5
QJ	I-284	I2B	N1b	4G	17.5		1	1				55	4.4	8.1	1			1		1	1	2
QJ	I-285	I2B	N1b	4M	32.5		7.9				1				1							10
QJ	I-286	I2B	N1b	4G																		
QJ	I-287	I2B	N1b	16M	2.5	12.5	0.1		1			35	2.8	7.3	1			1	1	1	1	2
QJ	I-288	I2B	N1b2	16M	12.5		0.1			1					1						1	2
QJ	I-289	I2B	N1b2	4M	22.5		2				1				1							2
QJ	I-29	I1A	N2	4G	22.5		9				1				1							3
QJ	I-290	I2B	N1b2	16M	2.5	2.5	<0.1	1				65	0.8	4.0	1			1			1	4
QJ	I-291	I2B	N2a	4M	22.5	17.5	2.9	1				90	7.5	14.0			1	1		1	1	11
QJ	I-292	I2B	N2a	4M	12.5	12.5	1.1	1				55	2.1	5.4	1			1	1		1	14
QJ	I-293	I2B	N2a	4M	12.5	12.5	0.6		1			80	1.5	5.3	1					1	1	2
QJ	I-294	I2B	N2a	4M	7.5		0.4				1				1							3
QJ	I-295	I2B	N2b	4G	32.5	12.5	3.4		1			85	2.5	6.8	1					1	1	2
QJ	I-296	I2B	N1b2	4G	22.5		3.2				1				1							5
QJ	I-297	I2B	N1b2	4G	7.5	7.5	0.3		1			55	2.6	6.5							1	2
QJ	I-298	I2B	N1b2	4G	27.5		3.2				1					1						5
QJ	I-299	I2B	N1b2	4G	12.5		0.6			1					1						1	4
QJ	I-3	I1A	N1b	4G	7.5		0.1			1					1						1	12
QJ	I-30	I1A	N2	4G	22.5		2				1				1							16
QJ	I-300	I2B	N1b2	4G	22.5		3.6				1					1						5
QJ	I-301	I2B	N1b2	4G	32.5		9.5				1				1							10
QJ	I-302	I2B	N1b2	4G	12.5	17.5	0.7	1				75	3.9	13.9		1					1	12
QJ	I-303	I2B	N1b2	4G	17.5		1				1				1							15
QJ	I-304	I2B	N1b2	4G	12.5		0.3				1				1							4
QJ	I-305	I2B	N2c	4M	47.5		6.2			1					1						1	10
QJ	I-306	I2B	N2c	4M	7.5		0.3			1					1						1	6
QJ	I-307	I2B	N2c	4M	7.5	12.5	0.4		1			85	1.3	2.1	1				1		1	14
QJ	I-308	I2B	N2c	4M	7.5		0.3				1				1							3
QJ	I-309	I2B	N2e	4M	22.5	12.5	3.5		1			90	9.4	9.1	1			1				5
QJ	I-31	I1A	N2	4G	17.5		1.6				1					1						16
QJ	I-310	I2B	N2e	4M	22.5		2.2			1					1							5
QJ	I-311	I2B	N2e	4M	17.5		0.6				1				1							4
QJ	I-312	I2B	N2e	4M	17.5		0.8			1					1						1	12
QJ	I-313	I2B	N2e	4M	7.5	7.5	0.4		1			70	1.8	6.3	1			1			1	15
QJ	I-314	I2B	N2e	4M	12.5		0.3			1					1							3
QJ	I-315	I2B	N2e	4M	12.5	7.5	0.3	1				60	2.4	6.5	1						1	6
QJ	I-316	I2B	N2e	4M	27.5		3.7			1					1						1	19
QJ	I-317	I2B	N2e	4M	7.5		0.2			1						1						14
QJ	I-318	I2B	N2c	4G	32.5		6.4				1				1							9
QJ	I-319	I2B	N2c	4G																		
QJ	I-32	I1A	N2	4G	12.5		0.4				1				1							2
QJ	I-320	I2B	N2c	4G	7.5	7.5	0.2		1			70	1.1	4.0	1						1	2
QJ	I-321	I2B	N2d	4G	17.5		0.7			1					1						1	14
QJ	I-322	I2B	N2d	4G	12.5		0.4			1					1						1	4
QJ	I-323	I2B	N2d	4G	12.5	7.5	0.5	1				35	3.1	5.3	1			1	1	1	1	6
QJ	I-324	I2B	N2d	4M	22.5		1			1					1						1	2
QJ	I-325	I2B	N2d	4M	22.5		1			1						1					1	2
QJ	I-326	I2B	N2d	4M	17.5		0.9			1					1							2
QJ	I-327	I2B	N2d	4M	17.5		1.1			1					1						1	5
QJ	I-328	I2B	N2d	4M	22.5		0.9				1				1							9

QJ	I-329	I2B	N2d	4M	17.5		0.7		1			75	3.2	8.3	1			1		1	1	14
QJ	I-33	I1A	N2	4G	27.5		5.3				1				1							16
QJ	I-330	I2B	N2d	4M	17.5		0.8				1					1						2
QJ	I-331	I2B	N2d	4M	27.5		3.5				1				1							3
QJ	I-332	I2B	N2d	4M	12.5		0.3				1					1						2
QJ	I-333	I2B	N2d	4M	12.5		0.5				1				1							2
QJ	I-334	I2B	N2d	16M	2.5		<0.1			1					1						1	2
QJ	I-335	I2B	N2e	16M	2.5		<0.1			1					1							12
QJ	I-336	I2B	N2e	16M	7.5		0.1				1				1							11
QJ	I-337	I2B	N3	16M	7.5	7.5	<0.1	1				50	1.2	5.1	1							2
QJ	I-338	I2B	N3	16M	7.5		0.1				1				1							2
QJ	I-339	I2B	N3	4G	17.5		0.9			1					1						1	10
QJ	I-34	I1A	N2	4G	27.5		3.7				1				1							16
QJ	I-340	I2B	N3	4G	17.5		0.3				1				1							4
QJ	I-341	I2B	N3	4G	22.5	22.5	1.3	1				70	5.5	11.4	1						1	5
QJ	I-342	I2B	N3	4G	12.5	17.5	17.5	1				75	8.2	20.0	1			1			1	3
QJ	I-343	I2B	N3	4G	12.5		0.3			1					1						1	2
QJ	I-344	I2B	N3	4G	7.5	12.5	0.3	1				70	3.0	8.8		1		1				5
QJ	I-345	I2B	N3	4G	7.5		0.2				1					1						14
QJ	I-346	I2B	N3	4M	17.5	22.5	5.2	1				80	5.8	16.5	1			1			1	5
QJ	I-347	I2B	N3	4M	22.5	17.5	1.1	1				65	3.3	11.0	1					1		2
QJ	I-348	I2B	N3	4M	27.5	17.5	1.6	1				85	2.2	8.4	1			1			1	2
QJ	I-349	I2B	N3	4M	12.5		0.7				1				1							3
QJ	I-35	I1A	N2	4G	37.5		7.1				1				1							7
QJ	I-350	I2B	N3	4M	22.5		0.6			1					1						1	2
QJ	I-351	I2B	N3	4M	12.5		0.2			1					1						1	3
QJ	I-352	I2B	N3	4M	12.5		0.3			1					1						1	3
QJ	I-353	I2B	N3	4M	7.5	7.5	0.2	1				75	2.2	8.4	1						1	3
QJ	I-354	I2B	N3	4M	17.5		0.4				1				1							2
QJ	I-355	I2B	N3	4M	12.5	12.5	0.3	1				75	2.3	7.8	1				1			2
QJ	I-356	I2B	N3	4M	17.5		0.8				1				1							2
QJ	I-357	I2B	N3	4M	7.5		0.2				1					1						3
QJ	I-358	I2B	N3	4M	12.5		0.2				1				1							3
QJ	I-359	I2B	N3	4M	12.5	12.5	0.6	1				90	3.7	8.6		1		1			1	4
QJ	I-36	I1A	N2	4G	27.5	22.5	3.1	1				?	1.3	5.1			1					5
QJ	I-360	I2B	N3	4M	7.5	12.5	0.2		1			35	2.7	5.9	1						1	10
QJ	I-361	I2B	N3b	16G	12.5		0.1			1					1						1	4
QJ	I-362	I2B	N3b	16G	7.5		0.1				1				1							3
QJ	I-363	I2B	N3b	16M	2.5		<0.1				1				1							2
QJ	I-364	I2B	N3b	16M	7.5	2.5	<0.1	1				?	0.4	2.5	1						1	4
QJ	I-365	I2B	N3b	16M	7.5		0.2				1				1							6
QJ	I-366	I2B	N3b	4M	17.5		0.3				1				1							10
QJ	I-367	I2B	N3b	4M	12.5		0.2				1				1							10
QJ	I-368	I2B	N3b	4M	17.5		0.5			1						1					1	12
QJ	I-369	I2B	N3b	4M	12.5		0.5				1						1					15
QJ	I-37	I1A	N2	4G	37.5		8.5				1				1							7
QJ	I-370	I2B	N3b	4M	17.5	12.5	0.7		1			55	1.4	3.7	1				1		1	2
QJ	I-371	I2B	N3b	4M	12.5	17.5	1		1			85	3.2	7.0	1					1	1	14
QJ	I-372	I2B	N3b	4M	12.5	22.5	1.7	1				75	6.4	16.3	1			1		1		5
QJ	I-373	I2B	N3b	4M	12.5		0.4				1				1							4
QJ	I-374	I2B	N3b	4M	12.5	12.5	0.4		1			70	1.7	8.4		1		1				2
QJ	I-375	I2B	N3b	4M	12.5		0.7				1					1						2
QJ	I-376	I2B	N3b	4M	12.5		0.8			1						1						2

QJ	I-377	I2B	N3b	4M	7.5		0.2				1				1							5
QJ	I-378	I2B	N3b	4M	12.5		0.2				1				1							3
QJ	I-379	I2B	N3b	4M	7.5	7.5	0.1	1				80	1.3	3.3	1				1			2
QJ	I-38	I1A	N2	4G	37.5		4.6				1						1					10
QJ	I-380	I2B	N3b	4M	12.5		0.2				1					1						5
QJ	I-381	I2B	N3b	4M	7.5		0.1			1					1							5
QJ	I-382	I2B	N3b	4M	12.5		0.2			1					1							12
QJ	I-383	I2B	N3b	4M																		
QJ	I-384	I2B	N3b	4G																		
QJ	I-385	I2B	N3b	4G	12.5		1.6				1				1							2
QJ	I-386	I2B	N3b	4G	17.5	17.5	1.4		1			90	1.2	4.7	1			1			1	2
QJ	I-387	I2B	N3b	4G	17.5		1.3				1				1							14
QJ	I-388	I2B	N3b	4G	7.5		0.3				1				1							3
QJ	I-389	I2B	N3b	4G	22.5		2.3	1				75	7.9	13.4	1					1	1	5
QJ	I-39	I1A	N2	4G	7.5	7.5	0.1		1			?	0.5	4.3	1						1	4
QJ	I-390	I2B	N3b	4G	12.5		0.4				1				1							3
QJ	I-391	I2B	N3b	4G	17.5	7.5	0.5	1				30	1.6	3.4	1			1			1	2
QJ	I-392	I2B	N3b	4G	22.5	7.5	0.9	1				80	2.0	6.2	1			1			1	2
QJ	I-393	I2B	N3b	4G	12.5		0.1			1					1						1	2
QJ	I-394	I2B	N3b	4G	12.5		0.4			1					1						1	12
QJ	I-395	I2B	N3b	4G	22.5		1.5				1					1						2
QJ	I-396	I2B	N3b	4G	7.5	12.5	0.4		1			85	1.7	10.3	1					1		4
QJ	I-397	I2B	N3b	4G	7.5		0.1				1					1						14
QJ	I-398	I2B	N3b	4G	12.5		0.3				1				1							10
QJ	I-399	I2B	N3c	16M	7.5		0.1			1					1							3
QJ	I-4	I1A	N1	4M	12.5		1.5				1				1							10
QJ	I-40	I1A	N2	4G	7.5		0.1				1				1							10
QJ	I-400	I2B	N3c	4M	12.5		0.4			1					1							9
QJ	I-401	I2B	N3c	4M	7.5		0.3			1					1						1	6
QJ	I-402	I2B	N3c	4M	12.5		0.7			1					1						1	3
QJ	I-403	I2B	N3c	4M	7.5		0.2				1				1							10
QJ	I-404	I2B	N3c	4M	12.5		0.2			1					1						1	2
QJ	I-405	I2B	N3c	4M	7.5	12.5	0.3	1				75	0.5	2.1	1			1			1	14
QJ	I-406	I2B	N3c	4M	7.5		0.3			1					1						1	14
QJ	I-407	I2B	N4a	4G	37.5	32.5	15.1	1				85	9.8	28.2		1		1			1	2
QJ	I-408	I2B	N4a	4G	42.5		7.6				1				1							5
QJ	I-409	I2B	N4a	16M	7.5		<0.1			1						1					1	2
QJ	I-41	I1A	N2	4G	17.5		1.9			1					1							10
QJ	I-410	I2B	N4a	4M	52.5	32.5	25.8	1				70	6.7	14.5	1			1			1	2
QJ	I-411	I2B	N4a	4M	12.5		0.7				1				1							13
QJ	I-412	I2B	N4a	4M	7.5		0.2			1					1						1	2
QJ	I-413	I2B	N4a	4M	7.5		0.2			1					1						1	2
QJ	I-414	I2B	N4a	4M	12.5		1				1					1						10
QJ	I-415	I2B	N4a	4M	7.5		0.2				1				1							5
QJ	I-416	I2B	N4a	4M	12.5	12.5	0.8	1				75	2.3	4.9	1						1	20
QJ	I-417	I2B	N4a	4M	7.5		0.3				1				1							16
QJ	I-418	I2B	N4b	4G	17.5		1.1			1					1						1	3
QJ	I-419	I2B	N4b	4G	17.5		0.5			1					1						1	13
QJ	I-42	I1A	N2	4G	17.5		0.7			1					1						1	10
QJ	I-420	I2B	N4b	4G	17.5	12.5	0.5		1			70	1.5	6.8	1			1			1	2
QJ	I-421	I2B	N4b	4G	12.5	7.5	0.4	1				85	2.1	4.3	1							3
QJ	I-422	I2B	N4b	4G	12.5		0.3			1					1						1	2
QJ	I-423	I2B	N4b	4G	12.5	7.5	0.2		1			75	1.5	3.9		1			1	1	1	2

QJ	I-424	I2B	N4b	4G	7.5		0.4				1				1							3
QJ	I-425	I2B	N4b	4G	12.5		0.7			1					1						1	14
QJ	I-426	I2B	N4b	4G	12.5		0.4				1					1						2
QJ	I-427	I2B	N4b	4G	17.5		0.6				1				1							16
QJ	I-428	I2B	N4b	4G	7.5	12.5	0.3		1			40	2.5	7.7	1						1	10
QJ	I-429	I2B	N4b	4G	7.5	7.5	0.1	1				?	0.6	2.6	1						1	2
QJ	I-43	I1A	N2	4G	17.5	7.5	0.4		1			75	1.1	?	1			1				10
QJ	I-430	I2B	N4b	16G	7.5		0.1				1				1							2
QJ	I-431	I2B	N4b	16G	7.5	12.5	0.1	1				85	0.7	2.8	1			1				2
QJ	I-432	I2B	N4b	16G	7.5		0.1				1				1							3
QJ	I-433	I2B	N4b	4M	22.5		1.4			1					1						1	10
QJ	I-434	I2B	N4b	4M																		
QJ	I-435	I2B	N4b	4M	12.5	12.5	0.3	1				60	0.9	6.1	1			1		1	1	4
QJ	I-436	I2B	N4b	4M	22.5	12.5	0.9	1				90	2.5	4.6	1			1			1	2
QJ	I-437	I2B	N4b	4M	12.5		0.4				1				1							2
QJ	I-438	I2B	N4b	4M	17.5	7.5	0.4	1				80	2.2	5.9			1				1	2
QJ	I-439	I2B	N4b	4M	7.5		0.4				1				1							2
QJ	I-44	I1A	N2	4G	17.5		0.9				1				1							10
QJ	I-440	I2B	N4b	4M	42.5	12.5	3.6	1				90	3.9	6.7		1		1			1	2
QJ	I-441	I2B	N4b	4M	22.5		1			1					1						1	12
QJ	I-442	I2B	N4c	16M	7.5		0.1				1				1							3
QJ	I-443	I2B	N4c	16M	7.5		<0.1				1				1							2
QJ	I-444	I2B	N4c	16M	12.5		0.1			1					1						1	ob
QJ	I-445	I2B	N4c	16M	2.5		<0.1				1				1							14
QJ	I-446	I2B	N4c	16M	2.5	7.5	0.1	1				75	0.9	2.3	1						1	2
QJ	I-447	I2B	N4c	16M	7.5		<0.1			1					1						1	4
QJ	I-448	I2B	N4c	16M	2.5	7.5	<0.1		1			70	0.8	2.0	1						1	20
QJ	I-449	I2B	N4c	4G	12.5		0.2			1					1						1	14
QJ	I-45	I1A	N2	4G	17.5	7.5	0.3	1				75	1.3	5.1	1			1			1	10
QJ	I-450	I2B	N4c	16G	7.5		<0.1				1				1							12
QJ	I-451	I2B	N4c	16G	7.5		0.1				1				1							4
QJ	I-452	I2B	N4c	4M	12.5	12.5	0.3		1			80	1.2	4.8	1			1			1	14
QJ	I-453	I2B	N4c	4M	7.5		0.2				1				1							14
QJ	I-454	I2B	N4c	4M	7.5	7.5	0.2	1				?	0.4	3.7	1						1	4
QJ	I-455	I2B	N4c	4M	12.5		0.3			1					1						1	8
QJ	I-456	I2B	N4d	4G	12.5		0.2				1				1							2
QJ	I-457	I2B	E5	4M	32.5	17.5	5.9	1				70	6.6	18.5			1	1				9
QJ	I-458	I2B	E5	4M	17.5		0.9				1				1							2
QJ	I-459	I2B	E5	4M	12.5		0.5			1						1					1	19
QJ	I-46	I1A	N2	4G	7.5		0.2				1				1							10
QJ	I-460	I2B	E5	4M	7.5	7.5	0.2		1			?	0.8	2.6	1			1	1		1	2
QJ	I-461	I2B	E5	4M	17.5		0.7			1						1					1	12
QJ	I-462	I2B	E5	4M	12.5		0.6				1					1						2
QJ	I-463	I2B	E5	4M	22.5		0.7				1				1							10
QJ	I-464	I2B	E5	4M	12.5	7.5	0.3		1			25	3.1	6.1	1						1	10
QJ	I-465	I2B	E5	4M	7.5		<0.1				1				1							10
QJ	I-466	I2B	E6	16M	7.5	2.5	0.1	1				35	1.1	2.9	1			1			1	12
QJ	I-467	I2B	E6	4M	17.5		0.6				1				1							10
QJ	I-468	I2B	E6	4M	12.5		0.2				1				1							2
QJ	I-469	I2B	E6	4M	12.5		0.2			1					1						1	2
QJ	I-47	I1A	N2	4G	7.5		0.1				1				1							10
QJ	I-470	I2B	E6	4M	17.5		0.4		1			?			1						1	2
QJ	I-471	I2B	E6	4M	17.5	22.5	1.8	1				75	4.4	19.9	1					1	1	9

QJ	I-472	I2B	E6	4M	12.5		1				1					1						2
QJ	I-473	I2B	E6	4M	27.5		2.5				1						1					5
QJ	I-474	I2B	E6	4M	12.5		0.4				1				1							4
QJ	I-475	I2B	E6	4M	7.5		0.1				1				1							3
QJ	I-476	I2B	E6	4M	7.5		0.3				1				1							3
QJ	I-477	I2B	E6	4M	27.5		8.9				1				1							3
QJ	I-478	I2D	N2c	4M	27.5	22.5	5.4	1				85	6.6	17.7			1	1		1	1	5
QJ	I-479	I2D	N2c	4M	22.5		2.1				1				1							5
QJ	I-48	I1A	N3	16G	12.5		0.3				1				1							14
QJ	I-480	I2D	N2c	4M	17.5	7.5	0.4	1				75	0.9	2.6		1					1	4
QJ	I-481	I2D	N2c	4M	12.5		0.4			1					1						1	2
QJ	I-482	I2D	N2c	4M	7.5		0.3				1				1							3
QJ	I-483	I2D	N2c	4M	7.5		0.2				1					1						12
QJ	I-484	I2D	N1b	4G	32.5		7.3				1				1							10
QJ	I-485	I2D	N1b	4G	27.5		1.8				1					1						18
QJ	I-486	I2D	N1b	4G	12.5		0.4				1				1							4
QJ	I-487	I2D	N1b	4M	17.5		0.8				1				1							3
QJ	I-488	I2D	N1b	4M	22.5		1.8			1						1					1	2
QJ	I-489	I2D	N1b	16M	7.5		0.1				1				1							2
QJ	I-49	I1A	N3	16G	12.5		0.2				1				1							14
QJ	I-490	I2D	N1b	16M	7.5		0.1				1				1							5
QJ	I-491	I2D	N1a	16M	2.5		<0.1			1					1						1	4
QJ	I-492	I2D	N1a	16M	2.5	7.5	<0.1	1				?	0.4	1.6	1			1	1		1	12
QJ	I-493	I2D	N1a	16M	7.5	2.5	<0.1	1				80	0.8	1.6	1						1	4
QJ	I-494	I2D	N2c	4G																		2
QJ	I-495	I2D	N2c	4G	22.5	17.5	3.2		1			90	3.5	11.2	1			1	1		1	2
QJ	I-496	I2D	N2c	4G	22.5		0.8			1					1						1	10
QJ	I-497	I2D	N2c	4G	12.5		0.5				1				1							14
QJ	I-498	I2D	N2c	4G	7.5		0.2				1					1						2
QJ	I-499	I2D	N2c	4G	22.5		3.1				1				1							10
QJ	I-5	I1A	N1	4M	7.5	12.5	0.4		1			85	4.0	12.5	1					1	1	2
QJ	I-50	I1A	N3	16G	12.5		0.1				1				1							2
QJ	I-500	I2D	N2c	4G	12.5	12.5	0.3	1				30	1.2	3.2	1			1			1	10
QJ	I-501	I2D	N2c	4G	12.5		0.7			1					1						1	2
QJ	I-502	I2D	N2c	4G	12.5		0.2			1					1						1	2
QJ	I-503	I2D	N2c	4G	12.5		0.5				1					1						14
QJ	I-504	I2D	N2c	4G	12.5		0.2				1				1							15
QJ	I-505	I2D	N2c	4G	7.5		0.2				1				1							2
QJ	I-506	I2D	N2c	4G	7.5		0.3				1				1							14
QJ	I-507	I2D	N2c	4G	7.5	7.5	0.2		1			85	0.8	2.7	1				1	1	1	12
QJ	I-508	I2D	N2c	4G	7.5	12.5	0.4		1			?	1.2	2.4	1			1	1		1	4
QJ	I-509	I2D	N2d	4G	17.5		1.6				1					1						4
QJ	I-51	I1A	N3	16G	7.5		0.1			1					1						1	6
QJ	I-510	I2D	N2d	4G	7.5	12.5	0.8		1			70	4.0	9.8	1			1		1	1	10
QJ	I-511	I2D	N2d	4G	12.5	7.5	0.2	1				60	2.2	6.5		1					1	4
QJ	I-512	I2D	N2d	4G	7.5		0.2				1				1							12
QJ	I-513	I2D	N2d	4G	12.5		0.4				1				1							3
QJ	I-514	I2D	N2d	4G	12.5	7.5	0.2	1				80	2.4	9.2	1							19
QJ	I-515	I2D	N2d	4M	17.5		1.3				1					1						2
QJ	I-516	I2D	N3a	16M	17.5		<0.1			1					1						1	3
QJ	I-517	I2D	N3a	4G	22.5		1			1					1						1	2
QJ	I-518	I2D	N3a	4G	12.5	7.5	0.4		1			?	0.7	2.9	1			1	1		1	12
QJ	I-519	I2D	N3a	4M	32.5	12.5	3		1			80	4.2	8.2	1			1		1	1	2

QJ	I-52	I1A	N3	16G	7.5		0.1				1				1							6
QJ	I-520	I2D	N3a	4M	22.5	17.5	2.3		1			80	4.8	14.0	1						1	2
QJ	I-521	I2D	N3a	4M																		2
QJ	I-522	I2D	N3a	4M	12.5	17.5	0.6		1			70	1.8	7.5	1					1	1	2
QJ	I-523	I2D	N3a	4M	7.5	12.5	0.3	1				75	0.9	4.4	1						1	2
QJ	I-524	I2D	N3a	4M	17.5		0.9				1				1							14
QJ	I-525	I2D	N3a	4M	17.5	22.5	1.9	1				75	6.6	15.8		1					1	5
QJ	I-526	I2D	N3b	16M	7.5		0.1				1				1							5
QJ	I-527	I2D	N3b	16M	2.5		0.1				1				1							?
QJ	I-528	I2D	N3b	16M	7.5		0.1				1				1							2
QJ	I-529	I2D	N3b	16M	7.5		<0.1				1				1							3
QJ	I-53	I1A	N3	16G	7.5		0.1			1					1							10
QJ	I-530	I2D	N3b	4G	12.5		0.3				1					1					1	2
QJ	I-531	I2D	N3b	4G	12.5		0.8				1				1							2
QJ	I-532	I2D	N3b	4M	12.5		0.3				1				1							14
QJ	I-533	I2D	N3b	4M	17.5		1				1				1							5
QJ	I-534	I2D	N3b	4M	12.5		0.5				1				1							5
QJ	I-535	I2D	N3b	4M	12.5		0.3				1				1							2
QJ	I-536	I2D	N3b	4M	7.5	7.5	0.2	1				70	2.5	8.8	1						1	2
QJ	I-537	I2D	N3b	4M	12.5		0.1			1					1						1	2
QJ	I-538	I2D	N3b	4M	12.5		0.2				1				1							5
QJ	I-539	I2D	N3b	4M	7.5		0.2				1				1							3
QJ	I-54	I1A	N3	4M	12.5		0.2			1					1							10
QJ	I-540	I2D	N3b	4M	12.5		0.4			1						1					1	2
QJ	I-541	I2D	N4a	16M	7.5		0.1				1				1							2
QJ	I-542	I2D	N4a	16M	7.5		<0.1				1				1							2
QJ	I-543	I2D	N4a	16M	2.5		<0.1			1					1						1	2
QJ	I-544	I2D	N4a	16M	2.5		<0.1				1				1							2
QJ	I-545	I2D	N4a	4M	27.5	22.5	4	1				80	2.4	11.6		1		1			1	2
QJ	I-546	I2D	N4a	4M																		2
QJ	I-547	I2D	N4a	4M	22.5	17.5	2.8		1			85	1.7	4.8		1		1			1	4
QJ	I-548	I2D	N4a	4M	12.5		1.3				1					1						2
QJ	I-549	I2D	N4a	4M	12.5		0.7				1					1						2
QJ	I-55	I1A	N3	4M	12.5	7.5	0.3		1			30	3.7	?	1			1				10
QJ	I-550	I2D	N4a	4M	27.5		0.9				1				1							3
QJ	I-551	I2D	N4b	4M	22.5		1.5			1						1					1	2
QJ	I-552	I2D	N4b	4M	12.5		0.5				1				1							2
QJ	I-553	I2D	N4b	4M	12.5		0.2			1					1							14
QJ	I-554	I2D	N4b	4M	7.5	7.5	0.1		1			?	0.7	3.9	1			1	1		1	2
QJ	I-555	I2D	N4b	4M	7.5		0.1				1				1							2
QJ	I-556	I2D	N4b	4M	7.5	7.5	<0.1	1				85	1.6	6.7	1					1		2
QJ	I-557	I2D	N4b	4M	17.5		0.8				1				1							10
QJ	I-558	I2D	N4b	16M	7.5		<0.1				1				1							2
QJ	I-559	I2D	N4b	16M	7.5		<0.1				1					1						2
QJ	I-56	I1A	N3	4M	7.5		0.1			1					1							10
QJ	I-561	I2D	N4b	4G	12.5		0.2			1					1							2
QJ	I-562	I2D	N4b	4G	12.5		0.3			1					1						1	2
QJ	I-563	I2D	N4b	4G	12.5	12.5	0.2	1				70	1.6	5.3	1			1			1	11
QJ	I-564	I2D	N4b	4G	12.5	7.5	0.1	1				65	1.4	4.1	1			1		1		2
QJ	I-565	I2D	N4b	4G	7.5	12.5	0.2	1				60	1.4	5.7	1						1	2
QJ	I-566	I2D	N4b	4G	12.5		0.2				1				1							10
QJ	I-567	I2D	N4b	4G	7.5	17.5	0.3		1			50	1.7	8.4	1							10
QJ	I-568	I2D	E2	4M	37.5		5.1			1						1					1	2

QJ	I-569	I2D	E2	4M	17.5		1.1			1						1					1	14
QJ	I-57	I1A	N3	4M	7.5	12.5	0.1		1			30	0.9	4.3	1			1			1	10
QJ	I-570	I2D	E2	4M	17.5		1.1				1				1							3
QJ	I-571	I2D	E2	4M	22.5		3.1				1				1							4
QJ	I-572	I2D	E2	4G	7.5	7.5	0.1		1			?	0.7	2.8		1					1	12
QJ	I-573	I2D	E5	4M	22.5		0.8			1					1						1	2
QJ	I-574	I2D	E5	4M	17.5	22.5	1.6	1				80	2.3	7.9	1			1		1	1	2
QJ	I-575	I2D	E5	4M	7.5		0.2				1				1							14
QJ	I-576	I2D	E5	4M	12.5		0.9				1				1							3
QJ	I-577	I2D	E5	4M	22.5		1.8			1					1						1	5
QJ	I-578	I2D	E5	4M	22.5		1.4				1						1					4
QJ	I-579	I2D	E5	4M	12.5	12.5	0.4	1				60	3.2	11.0	1							10
QJ	I-58	I1A	N3	4M	12.5		0.5				1					1						8
QJ	I-580	I2D	E5	4M	12.5		0.4				1				1							14
QJ	I-581	I2D	E5	16M	7.5	2.5	0.1		1			70	1.8	5.2	1			1			1	2
QJ	I-582	I2D	E6	4M	22.5	22.5	3	1				80	10.1	21.9	1					1	1	5
QJ	I-583	I2D	E6	4M	17.5		1.3			1					1						1	10
QJ	I-584	I2D	E6	16M	2.5	7.5	0.1	1				70	0.9	6.5	1						1	2
QJ	I-585	I2D	E6	16M	7.5	2.5	0.1	1				80	0.8	5.3	1							2
QJ	I-586	I2D	E7	4M	22.5		1.6				1				1							3
QJ	I-587	I2D	E8	4M	17.5	27.5	2.7	1				70	5.2	26.6	1			1	1	1	1	2
QJ	I-588	I2D	E8	4M	17.5		2.3				1					1						2
QJ	I-589	I2D	E8	4M	12.5		0.5				1						1					5
QJ	I-59	I1A	N3	4M	17.5		0.6			1					1							7
QJ	I-590	I2D	E8	16M	7.5		<0.1			1					1						1	2
QJ	I-591	I2D	E8	16M	2.5	2.5	<0.1	1				?	0.5	2.0	1						1	12
QJ	I-592	I2D	N1b	4M	12.5		0.5				1				1							2
QJ	I-593	I2D	N2d	4G	22.5		2.4				1					1						?
QJ	I-594	I3B	NLS	4G	42.5		30.5				1				1							10
QJ	I-595	I3B	NLS	4G	17.5		1.6				1				1							10
QJ	I-596	I3B	N1a	16M	7.5		0.1				1				1							5
QJ	I-597	I3B	N1a	4G	62.5	37.5	25.6	1				80	13.2	35.4	1					1	1	7
QJ	I-598	I3B	N1a	4G	12.5	17.5	1.1		1			?	3.5	10.6			1	1	1	1	1	12
QJ	I-599	I3B	N1a	4M	12.5		0.5				1					1						12
QJ	I-6	I1A	N1	4M	12.5		0.2			1					1							7
QJ	I-60	I1A	N3	4M	12.5		0.4				1				1							15
QJ	I-600	I3B	N1a	16G	7.5	2.5	<0.1	1				?	1.0	2.5	1							11
QJ	I-601	I3B	N1a	4G	52.5	32.5	9.7			1					.	1						5
QJ	I-602	I3B	N1a	4G	27.5	7.5	1.3	1				85	2.8	6.3	1							5
QJ	I-603	I3B	N1a	4G	47.5		24.5			1					1							5
QJ	I-604	I3B	N1a	4G	7.5	17.5	1.6		1			85	6.5	13.3		1		1			1	5
QJ	I-605	I3B	N1a	4G	22.5	12.5	2.4	1				75	6.5	11.1		1						10
QJ	I-607	I3B	N1a	4G	7.5		0.2				1				1							5
QJ	I-608	I3B	N1a	4G	22.5	7.5	0.5	1				90	2.5	5.7	1							5
QJ	I-609	I3B	N1a	4G	12.5		0.5				1					1						5
QJ	I-61	I1A	N3	4M	12.5		0.8				1				1							10
QJ	I-610	I3B	N1a	4G	12.5	2.5	0.4	1				35	2.3	4.5	1						1	5
QJ	I-611	I3B	N1a2	16M	7.5		<0.1				1				1							2
QJ	I-612	I3B	N1a2	16M	27.5		2.9				1						1					5
QJ	I-613	I3B	N1a2	4G	82.5	72.5	154.6	1				75	26.3	63.5	1					1	1	5
QJ	I-614	I3B	N1a2	4G	32.5		7.5				1					1						5
QJ	I-615	I3B	N1a2	4G	12.5		0.7				1				1							2
QJ	I-616	I3B	N1a2	4G	22.5		1.8				1				1							5

QJ	I-617	I3B	N1a2	4G	22.5		1.6			1						1					1	5
QJ	I-618	I3B	N1a2	4G	17.5	12.5	0.7	1				85	3.1	11.8	1						1	3
QJ	I-619	I3B	N1a2	4G	17.5		0.7				1					1						2
QJ	I-62	I1A	N3	4M	12.5		0.2				1				1							15
QJ	I-620	I3B	N1b	4G	17.5	22.5	2.1		1			?	0.6	11.3	1							5
QJ	I-621	I3B	N1b	4G	67.5		7.1				1						1					5
QJ	I-622	I3B	N1b	4G	37.5	47.5	22.3	1				70	11.4	29.6	1			1			1	5
QJ	I-623	I3B	N1b	16G	12.5		0.1				1				1							5
QJ	I-624	I3B	N1b	16G	7.5		<0.1				1				1							14
QJ	I-625	I3B	N1b	16G	12.5		0.2				1				1							3
QJ	I-626	I3B	N1b	16G	7.5	2.5	<0.1	1				75	2.9	5.7	1							5
QJ	I-627	I3B	N1b	16G	7.5		0.1				1					1						5
QJ	I-628	I3B	N1b	16G	7.5		<0.1				1				1							5
QJ	I-629	I3B	N1b	16G	2.5		<0.1				1				1							5
QJ	I-63	I1A	N3	4M	12.5	12.5	0.4		1			45	2.2	4.9	1			1			1	15
QJ	I-630	I3B	N1b	16G	2.5		<0.1				1				1							5
QJ	I-631	I3B	N1b	4G	32.5	17.5	3.5	1				70	5.7	20.6		1						5
QJ	I-632	I3B	N1b	4G	27.5	17.5	5.8	1				90	8.6	16.2		1		1			1	5
QJ	I-633	I3B	N1b	4G	12.5	12.5	1.1		1			80	7.8	12.4		1						5
QJ	I-634	I3B	N1b	4G	12.5		0.7				1					1						5
QJ	I-635	I3B	N1b	4G	12.5		0.3				1				1							5
QJ	I-636	I3B	N1b	4G	17.5		0.7			1					1							5
QJ	I-637	I3B	N1b	4G	17.5	12.5	0.7	1				75	4.7	12.6	1			1		1	1	2
QJ	I-638	I3B	N1b	4M	17.5		0.5			1					1						1	2
QJ	I-639	I3B	N1b	4M	12.5	12.5	0.4	1				60	3.4	11.1	1					1	1	2
QJ	I-64	I1A	N3	4M	22.5		1			1					1							10
QJ	I-640	I3B	N1b	4M	27.5	32.5	3	1				90	2.9	11.4	1							18
QJ	I-641	I3B	N1b	4M	32.5		2.7			1						1					1	4
QJ	I-642	I3B	N1b	4M	17.5	12.5	1.1	1				70	6.2	14.1		1		1			1	5
QJ	I-643	I3B	N1b	4M	22.5		2.1			1					1						1	5
QJ	I-644	I3B	N1b	4M	17.5		0.6			1					1							5
QJ	I-645	I3B	N1b	4M	17.5		0.4				1				1							5
QJ	I-646	I3B	N1b	4M	12.5		0.3				1					1						5
QJ	I-647	I3B	N1b	4M	12.5	7.5	0.2	1				80	1.8	3.9	1						1	5
QJ	I-648	I3B	N1b	4M	42.5		34.9				1						1					5
QJ	I-649	I3B	N1b	4M	12.5	12.5	0.4	1				50	2.5	7.9	1							5
QJ	I-65	I1A	N3	4M	22.5		0.4				1				1							10
QJ	I-650	I3B	N1b	4M	12.5		0.4			1					1						1	5
QJ	I-651	I3B	N1b	4M	32.5		3.6				1					1						5
QJ	I-652	I3B	N1b	4M	12.5	12.5	0.5	1				85	2.3	9.1	1						1	18
QJ	I-653	I3B	N1b	4M	12.5		0.5				1				1							5
QJ	I-654	I3B	N1b	4M	17.5		1.5				1					1						16
QJ	I-655	I3B	N1b	4M	22.5	22.5	3.8	1				80	5.5	14.6		1					1	5
QJ	I-656	I3B	N1b	4M	37.5		9.3				1					1						16
QJ	I-657	I3B	N1b	4M	17.5		0.7				1						1					5
QJ	I-658	I3B	N1b	4M	12.5		0.6				1				1							10
QJ	I-659	I3B	N1b	4M	7.5		0.1				1				1							5
QJ	I-66	I1A	N3	4M	7.5		0.2			1							1					5
QJ	I-660	I3B	N1b	4M	12.5		0.6				1				1							20
QJ	I-661	I3B	N1b	4M	27.5		4.5				1				1							7
QJ	I-662	I3B	N1b	4M	57.5		28.5				1				1							10
QJ	I-663	I3B	N1b	4M	7.5	7.5	0.1	1				?	1.3	8.2	1			1				5
QJ	I-664	I3B	N1c	16M	2.5		<0.1				1				1							16

QJ	I-665	I3B	N1c	4M	27.5	17.5	2.2	1				75	6.4	10.0		1					1	5
QJ	I-666	I3B	N1c	4M	27.5	17.5	4.5		1			90	8.8	19.5		1					1	5
QJ	I-667	I3B	N1c	4M	12.5		0.3				1						1					5
QJ	I-668	I3B	N1c	4M	7.5		0.4				1				1							5
QJ	I-669	I3B	N1c	4M	12.5	7.5	0.5	1				65	3.3	6.4	1			1			1	2
QJ	I-67	I1A	N3	4M	17.5		1.1				1				1							7
QJ	I-670	I3B	N1d	4M	17.5		0.8				1						1					14
QJ	I-671	I3B	N1d	4M	12.5		0.4				1				1							2
QJ	I-672	I3B	N1d	4M	12.5	12.5	0.5	1				75	2.6	4.9	1			1			1	2
QJ	I-673	I3B	N1d	4M	17.5	12.5	0.6		1			50	1.7	6.8	1			1	1	1	1	12
QJ	I-674	I3B	N1d	4M	7.5	12.5	0.4	1				75	2.8	6.9	1					1	1	2
QJ	I-675	I3B	N1d	4M	7.5		0.2				1				1							2
QJ	I-676	I3B	N1d	4M	27.5		1.4				1				1							10
QJ	I-677	I3B	N1d	4M	17.5		0.8				1					1						10
QJ	I-678	I3B	N1d	4M	7.5		0.2				1				1							5
QJ	I-679	I3B	N1d	4M	17.5		0.5				1				1							7
QJ	I-68	I1A	N3	4M	12.5		0.7				1				1							7
QJ	I-680	I3B	N1d	16M	7.5		0.3				1				1							2
QJ	I-681	I3B	N1d	4G	17.5		0.8			1					1							5
QJ	I-682	I3B	N1d	4G	12.5	17.5	0.7	1				60	2.6	6.8	1			1				20
QJ	I-683	I3B	N1d	4G	12.5		0.5				1				1							7
QJ	I-684	I3B	N1e	16M	2.5	2.5	0.1	1				?	0.8	1.2		1		1				14
QJ	I-685	I3B	N1e	16M	7.5		0.1				1				1							?
QJ	I-686	I3B	N1e	16M	7.5		<0.1				1				1							14
QJ	I-687	I3B	N1e	16M	7.5		0.1			1					1							5
QJ	I-689	I3B	N1e	4M	72.5	52.5	41.5	1				90	12.0	?			1					5
QJ	I-69	I1A	N3	4M	12.5	7.5	0.3	1				55	2.2	5.7	1			1	1		1	4
QJ	I-690	I3B	N1e	4M	37.5		7.3				1					1						5
QJ	I-691	I3B	N1e	4M	17.5		0.9				1				1							5
QJ	I-692	I3B	N1e	4M	17.5		0.7				1				1							5
QJ	I-693	I3B	N1e	4M	7.5	7.5	0.4		1			70	3.7	9.6		1					1	5
QJ	I-694	I3B	N1e	4M	12.5		0.6				1					1						5
QJ	I-695	I3B	N1e	4M	12.5		0.2				1				1							5
QJ	I-696	I3B	N1e	4M	7.5	12.5	0.2	1				80	2.3	7.9		1					1	5
QJ	I-697	I3B	N1e	4M	27.5	12.5	1.4	1				90	3.7	7.9	1			1			1	5
QJ	I-698	I3B	N1e	4M	17.5		2.2				1					1						5
QJ	I-699	I3B	N1e	4M	7.5	17.5	0.3	1				90	2.4	18.5	1							5
QJ	I-7	I1A	N1	4M	12.5		0.6				1				1							3
QJ	I-70	I1A	N3	4M	12.5	12.5	0.3		1			?	1.0	3.0	1				1		1	13
QJ	I-700	I3B	N1e	4M	12.5		0.1				1				1							5
QJ	I-701	I3B	N1e	4M	12.5		0.2			1					1						1	18
QJ	I-702	I3B	N1e	4M	7.5		0.3				1				1							16
QJ	I-703	I3B	N1e	4M	7.5		0.1				1					1						5
QJ	I-704	I3B	N1e	4M	7.5		0.1			1					1							5
QJ	I-705	I3B	N1e	4M	12.5		0.4				1					1						5
QJ	I-706	I3B	N1e	4M	22.5	27.5	4.1	1				85	7.9	28.5		1		1				10
QJ	I-707	I3B	N1f	4G	22.5	32.5	6.3		1			55	3.5	21.2	1							2
QJ	I-708	I3B	N1f	4G	27.5		3.8				1					1						5
QJ	I-709	I3B	N1f	4G	32.5		3.7				1						1					5
QJ	I-71	I1A	N3	4M	12.5		0.5		1			?				1					1	2
QJ	I-710	I3B	N1f	4G	17.5		1.5				1				1							18
QJ	I-711	I3B	N1f	4G	17.5	17.5	1.2	1				90	5.3	14.0	1			1			1	2
QJ	I-712	I3B	N1f	4M	42.5	57.5	49.6	1				90	10.1	38.2		1					1	5

QJ	I-713	I3B	N1f	4M	17.5		0.6				1				1							5
QJ	I-714	I3B	N1f	4M	12.5		0.2			1					1							5
QJ	I-715	I3B	N1f	4M	12.5		0.3				1				1							5
QJ	I-716	I3B	N1f	4M	17.5		0.5				1				1							3
QJ	I-717	I3B	N1f	4M	17.5	7.5	0.6		1			80	3.7	8.1		1		1				5
QJ	I-718	I3B	N1f	4M	12.5		0.6				1				1							14
QJ	I-719	I3B	N1f	16M	7.5		0.1			1					1						1	2
QJ	I-72	I1A	N3	4M	7.5	7.5	0.2		1			80	2.1	6.4	1						1	3
QJ	I-720	I3B	N1f	16M	2.5		<0.1				1				1							5
QJ	I-721	I3B	N2d	16M	7.5		0.1				1				1							4
QJ	I-722	I3B	N2d	16M	7.5		<0.1			1					1						1	4
QJ	I-723	I3B	N2d	16M	7.5		0.1				1				1							2
QJ	I-724	I3B	N2di	4M	22.5	17.5	1.2	1				35	2.3	6.8	1			1	1	1	1	2
QJ	I-725	I3B	N2di	4M	12.5		0.8				1				1							3
QJ	I-726	I3B	N3a	16M	7.5		<0.1				1				1							2
QJ	I-727	I3B	N3b	4M	17.5		0.7				1				1							14
QJ	I-728	I3B	N3b	4M	12.5		0.2				1					1						2
QJ	I-729	I3B	N3b	4M	17.5		0.2			1					1							2
QJ	I-73	I1A	N3	4M	22.5		0.9				1				1							2
QJ	I-730	I3B	N3b	4M	7.5		0.2			1					1						1	2
QJ	I-731	I3B	N3b	4M	12.5	7.5	0.1		1			?	1.0	2.1	1						1	2
QJ	I-732	I3B	E2	4 M	12.5	17.5	1.2		1			80	2.3	4.8		1					1	4
QJ	I-733	I3B	E2	4 M	17.5		0.8				1				1							4
QJ	I-734	I3B	E2	4 M	22.5		1.3			1					1							18
QJ	I-735	I3B	E2	4 M	27.5		3.5			1							1					4
QJ	I-736	I3B	E2	4 M	12.5		0.5				1				1							18
QJ	I-737	I3B	E2	4 M	27.5		0.8				1				1							18
QJ	I-738	I3B	E2	4 M	12.5		0.3				1				1							10
QJ	I-739	I3B	E2	4 M	12.5	12.5	0.3		1			80			1						1	2
QJ	I-74	I1A	N3	4M	12.5	7.5	0.3		1			35	1.7	7.1	1						1	2
QJ	I-740	I3B	E2	4 M	12.5		0.5				1					1						2
QJ	I-741	I3B	E2	4 M	12.5		0.3				1					1						12
QJ	I-742	I3B	E2	4 M	12.5		0.2				1				1							5
QJ	I-743	I3B	E2	4 M	7.5		0.2				1				1							2
QJ	I-744	I3B	E2	4 M	12.5		0.6				1					1						14
QJ	I-745	I3B	E2	4 M	32.5		3.1				1						1					5
QJ	I-746	I3B	E2	4M	57.5		66.2				1					1						5
QJ	I-747	I3B	E2	4M	72.5	47.5	32.3	1				75	4.9	9.0		1					1	5
QJ	I-748	I3B	E9	4M																		14
QJ	I-749	I3B	E9	4M	12.5		0.2			1						1					1	2
QJ	I-75	I1A	N3	4M	12.5		0.6				1				1							2
QJ	I-750	I3B	E9	4M	12.5		0.1			1						1					1	4
QJ	I-751	I3B	E9	16M	7.5		<0.1				1				1							14
QJ	I-752	I4B	NLS	4M	22.5		1.8				1					1						18
QJ	I-753	I4B	N1	4M	32.5		8.5				1					1						5
QJ	I-754	I4B	N1	4M	27.5		3.2				1				1							5
QJ	I-755	I4B	N1	4M	17.5		0.9				1					1						5
QJ	I-756	I4B	N1	4M	12.5		0.2			1					1						1	2
QJ	I-757	I4B	N1	4M	7.5		0.2				1					1						2
QJ	I-758	I4B	N1	4M	7.5	7.5	0.2		1			75	2.9	3.8	1			1	1		1	4
QJ	I-759	I4B	N1	4G	52.5		21.1			1						1					1	18
QJ	I-76	I1A	N3	4M	12.5	12.5	1.4	1				75	7.8	14.9	1						1	3
QJ	I-760	I4B	N1	4G	27.5		3.6				1						1					10

QJ	I-761	I4B	N1	4G	27.5		4.3				1				1							7
QJ	I-762	I4B	N1	4G	7.5	12.5	0.3	1				75	2.7	7.8	1						1	2
QJ	I-763	I4B	N1a	4G	52.5	32.5	18.5	1				80	12.8	22.3		1					1	5
QJ	I-764	I4B	N1a	4G	12.5	12.5	0.3	1				75	2.0	8.6	1					1	1	2
QJ	I-765	I4B	N1a	4G	17.5		0.6			1					1						1	2
QJ	I-766	I4B	N1a	4G	12.5		0.3				1				1							5
QJ	I-767	I4B	N1b	4G	22.5	22.5	4.8	1				70	5.2	22.8	1			1			1	4
QJ	I-768	I4B	N1b	4G	17.5		3.3				1						1					5
QJ	I-769	I4B	N1b	4G	17.5		1.6				1					1						2
QJ	I-77	I1A	N3	4M	7.5	7.5	0.3		1			75	1.6	5.6	1				1		1	2
QJ	I-770	I4B	N1b	4G	12.5		0.2			1					1							14
QJ	I-771	I4B	N1b	4G	22.5	17.5	1.1	1				?	1.0	6.1	1						1	2
QJ	I-772	I4B	N1b	4G	12.5	22.5	0.9	1				60	1.5	9.2	1						1	10
QJ	I-773	I4B	N1b	4G	22.5	22.5	1.9		1			65	2.9	7.8	1						1	2
QJ	I-774	I4B	N1b	4G	12.5		0.3			1					1						1	14
QJ	I-775	I4B	N1b	4G	22.5		1.2			1					1						1	2
QJ	I-776	I4B	N1b	4G	12.5		0.3				1					1						5
QJ	I-777	I4B	N1b	4G	7.5		0.1				1				1							16
QJ	I-778	I4B	N1b	4G	17.5		0.5			1						1					1	2
QJ	I-779	I4B	N1b	4G	12.5		0.4				1				1							10
QJ	I-78	I1A	N3	4M	7.5		0.2				1				1							13
QJ	I-780	I4B	N1b	4G	7.5	7.5	0.2		1			?	1.7	4.1	1			1	1		1	12
QJ	I-781	I4B	N1b	4G	12.5	27.5	2	1				80	6.1	19.6	1					1	1	2
QJ	I-782	I4B	N1b	4G	7.5		0.3			1					1						1	2
QJ	I-783	I4B	N1b	4G	7.5		0.2				1				1							2
QJ	I-784	I4B	N1b	4G																		12
QJ	I-785	I4B	N1b	4M	17.5		0.5			1							1					4
QJ	I-786	I4B	N1b	4M	22.5	12.5	1	1				70	1.6	3.7	1						1	5
QJ	I-787	I4B	N1b	4M	12.5		0.3				1				1							4
QJ	I-788	I4B	N1b	4M	12.5		0.8				1				1							2
QJ	I-789	I4B	N1b	16M	7.5		<0.1			1					1						1	2
QJ	I-79	I1A	N3	4M	12.5		0.3				1				1							2
QJ	I-790	I4B	N1b	16M	7.5		0.1				1				1							5
QJ	I-791	I4B	N1b	16M	7.5		0.2				1				1							4
QJ	I-792	I2B	N1b	4G	7.5	7.5	0.2	1				?	1.1	3.2	1						1	ob
QJ	I-793	I2B	N4a	4G																		ob
QJ	I-794	I2B	N4b	16G	2.5	7.5	0.1		1			?	0.6	3.6	1				1		1	ob
QJ	I-795	I2B	N4b	16G	7.5		<0.1			1					1						1	ob
QJ	I-796	I2D	N2c	4M	7.5		0.2				1				1							ob
QJ	I-797	I2D	N2d	4G	7.5		0.1			1					1						1	ob
QJ	I-798	I2D	N4a	4M	7.5		0.1				1				1							ob
QJ	I-799	I2D	N4b	4M	7.5		0.1				1				1							ob
QJ	I-8	I1A	N1	4M																		
QJ	I-80	I1A	N3	4M	12.5		0.8				1					1						2
QJ	I-800	I1C	N1b	4G	12.5		0.2			1					1						1	ob
QJ	I-801	I1D	NLS	?																		ob
QJ	I-802	I1D	NLS	4G	12.5	7.5	0.4		1			?	1.1	2.7	1						1	ob
QJ	I-803	I2B	E5	4M	12.5		0.6			1					1						1	ob
QJ	I-804	I4A	N1e	16M	2.5	7.5	<0.1		1			?	1.0	2.3	1				1		1	ob
QJ	I-81	I1A	N3	4M	7.5	7.5	0.1	1				?	0.9	3.1	1				1		1	2
QJ	I-82	I1A	N3	4M	7.5	12.5	0.4	1				?	?	?	1				1	1		12
QJ	I-83	I1A	N3	4M	7.5		0.2			1					1						1	2
QJ	I-84	I1A	N3	4M	22.5		2.5			1							1					3

QJ	I-85	I1A	N3	4M	17.5	22.5	1.1	1				?	0.9	4.8	1				1		1	2
QJ	I-86	I1A	N3	4M	32.5	17.5	4.5	1				75	4.4	14.9	1			1		1	1	2
QJ	I-87	I1A	N3	4M	37.5		10.7				1					1						2
QJ	I-88	I1A	N3	4M	22.5		1.5			1					1						1	12
QJ	I-89	I1A	N3	4M	22.5		1.8				1				1							3
QJ	I-9	I1A	N1	4M	27.5		3.6				1						1					5
QJ	I-90	I1A	N3	4G	17.5		0.5				1					1						17
QJ	I-91	I1A	N3	4G	12.5		0.2				1				1							10
QJ	I-92	I1A	N3	4G	7.5	12.5	0.1		1			20	1.6	7.4	1						1	10
QJ	I-93	I1A	N3	4G	7.5	17.5	0.8		1			35	1.7	5.5	1			1			1	10
QJ	I-94	I1A	N3	4G	12.5		0.3			1					1							10
QJ	I-95	I1A	N3	4G	27.5		2.1				1				1							10
QJ	I-96	I1A	N3	4G	12.5		0.2			1					1							10
QJ	I-97	I1A	N3	4G	12.5	7.5	0.2		1			80	1.5	4.5	1							10
QJ	I-98	I1A	N3	4G	12.5		0.1				1				1							10
QJ	I-99	I1A	N3	4G	12.5	7.5	0.2		1			30	1.8	5.7	1			1			1	10
QT	1	97-P3A/08			7.5		0.1			1					1							DB
QT	2	97-P3A/08			7.5		0.1				1				1							DB
QT	3	98-P1A-08			12.5	7.5	0.2		1			20	0.8	2.0	1			1			1	P
QT	4	97-P3A/08			12.5		0.2				1				1			1				DB
QT	5	98-P1A-08			7.5	7.5	0.1	1				20	0.7	3.9	1							P
QT	6	97-P3A/08			2.5		<0.1			1					1							DB
QT	7	98-SQ1A-U8			7.5	2.5	<0.1	1				25	0.8	2.1	1			1			1	P
QT	8	98-P1A-08			12.5	12.5	0.2		1			25	2.3	7.0	1			1		1	1	LB
QT	9	98-P1A-08			2.5	7.5	<0.1		1			25	1.7	7.3	1							LB
QT	10	97-P3A/08			2.5		<0.1				1				1							W
QT	11	97-P3A/08			7.5		0.2				1				1							DB
QT	12	97-P3A/08			12.5		0.4				1				1							DB
QT	13	97-P3A/08			7.5		0.2				1				1							DB
QT	14	97-P3A/08			2.5		<0.1				1				1							DB
QT	15	98-P1A-08			17.5	12.5	0.4		1			25	2.2	5.0	1			1			1	P
QT	16	97-P3A/08			7.5		0.1			1					1							DB
QT	17	97-P3A/08			7.5		0.1				1				1							DB
QT	18	97-P3A/08			12.5		0.9				1				1							DB
QT	19	98-P1A-08			7.5	7.5	<0.1	1				25	1.1	2.6	1						1	P
QT	20	98-SQ1-U8			27.5	17.5	1	1				30	1.0	6.4	1			1			1	W
QT	21	98-SQ1A-U8			7.5	2.5	<0.1	1				30	2.0	5.7	1							P
QT	22	98-P1A-08			12.5	7.5	0.1	1				30	1.1	4.0	1			1				P
QT	23	98-SQ1-U8			27.5		<0.1			1					1							W
QT	24	98-P1A-08			12.5	17.5	0.3	1				30	1.7	7.3	1							P
QT	25	98-SQ1-U8			17.5	17.5	0.6	1				35	1.3	7.5	1			1			1	P
QT	26	98-SQ1-U8			2.5	2.5	<0.1	1				35	1.0	2.7	1							W
QT	27	98-SQ1-U8																				
QT	28	98-SQ1-U8																				
QT	29	98-SQ1-U8																				
QT	30	98-SQ1-U8																				
QT	31	98-SQ1-U8			7.5		<0.1				1				1							W
QT	32	98-SQ1-U8			7.5		<0.1				1				1							W
QT	33	98-SQ1-U8			7.5		<0.1				1				1							LB
QT	34	98-SQ1-U8			2.5		<0.1				1				1							W
QT	35	98-SQ1-U8			2.5		<0.1				1				1							W
QT	36	98-SQ1-U8			2.5		<0.1				1				1							W
QT	37	98-P1A-08			7.5	7.5	0.1		1			35	1.2	3.3	1						1	P

QT	38	98-SQ6-U8A																			
QT	39	98-SQ6-U8A																			
QT	40	98-SQ6-U8A																			
QT	41	98-SQ6-U8A																			
QT	42	98-SQ6-U8A																			
QT	43	98-SQ6-U8A																			
QT	44	98-SQ6-U8A																			
QT	45	98-P1A-08		2.5	7.5	0.1		1			35	2.4	10.1	1			1		1	1	LB
QT	46	98-P1A-08		7.5	2.5	0.1	1				35	1.6	5.5	1							P
QT	47	98-P1A-08		2.5	7.5	<0.1		1			40	0.8	2.9	1						1	LB
QT	48	98-SQ1A-U8		12.5	12.5	0.3		1			45	1.5	4.1	1					1	1	P
QT	49	98-SQ6-U8A		2.5	2.5	<0.1				1				1							W
QT	50	98-SQ6-U8A		2.5	2.5	<0.1				1				1							LB
QT	51	98-SQ6-U8A		2.5	2.5	<0.1				1				1							LB
QT	52	98-SQ6-U8A		2.5	2.5	<0.1				1				1							LB
QT	53	98-SQ6-U8A		7.5		0.1			1					1							P
QT	54	98-SQ?-U8		12.5		0.4				1				1							W
QT	55	98-SQ1-U8		12.5		<0.1				1				1							P
QT	56	98-SQ1-U8		7.5		<0.1			1					1							W
QT	57	98-SQ1-U8		7.5		<0.1			1					1							W
QT	58	98-SQ1-U8		2.5		<0.1			1					1							W
QT	59	98-SQ1A-U8		7.5	2.5	<0.1		1			45	0.9	2.8	1			1			1	P
QT	60	98-SQ1A-U8		7.5	7.5	0.1		1			45	1.2	3.4	1			1			1	LB
QT	61	98-SQ1A-U8		7.5	7.5	<0.1		1			45	0.5	3.2	1			1			1	P
QT	62	98-SQ1-U8		2.5		<0.1				1				1						1	W
QT	63	98-SQ1-U8																			
QT	64	98-SQ1-U8																			
QT	65	98-P1A-08		12.5	12.5	0.5		1			45	2.0	4.6	1			1			1	P
QT	66	98-SQ1-U8																			
QT	67	98-SQ1-U8																			
QT	68	98-P1A-08		7.5	7.5	0.1		1			45	1.5	3.4	1						1	P
QT	69	98-SQ1A-U8		7.5	7.5	<0.1		1			50	1.4	3.5	1			1			1	P
QT	70	98-SQ1A-U8																			
QT	71	98-SQ1A-U8																			
QT	72	98-SQ1A-U8																			
QT	73	98-SQ1A-U8																			
QT	74	98-SQ1A-U8																			
QT	75	98-SQ1A-U8																			
QT	76	98-SQ1A-U8																			
QT	77	98-SQ1A-U8																			
QT	78	98-SQ1A-U8																			
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QT	80	98-SQ1A-U8																			
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QT	309	98-SQ1A-U8																			
QT	310	98-SQ1A-U8																			
QT	311	98-SQ1A-U8		2.5	2.5	<0.1		1			50	1.2	3.9	1						1	P
QT	312	98-SQ1A-U8		12.5		0.1				1				1						1	P
QT	313	98-SQ1A-U8		12.5		0.1				1				1						1	P
QT	314	98-SQ1A-U8		12.5		0.1				1				1						1	P
QT	315	98-SQ1A-U8		17.5		0.5			1					1						1	P
QT	316	98-SQ1A-U8		17.5		0.6			1					1						1	P
QT	317	98-SQ1A-U8		12.5		0.1				1				1							P
QT	318	98-SQ1A-U8		7.5	2.5	<0.1		1			50	0.7	2.3	1						1	P
QT	319	98-P1A-08		7.5	7.5	<0.1	1				50	1.2	4.3	1			1			1	P
QT	320	98-P1A-08		2.5	2.5	<0.1		1			50	1.1	3.7	1						1	P
QT	321	98-SQ1A-U8		12.5		0.3				1				1						1	P
QT	322	98-P1A-08		7.5	12.5	0.1	1				50	1.8	6.5	1					1		P
QT	323	98-P1A-08		7.5	7.5	0.1		1			50	0.9	2.0	1						1	P
QT	324	98-SQ1A-U8		12.5		0.1				1				1						1	P
QT	325	98-SQ1A-U8		7.5		0.1				1				1						1	P
QT	326	98-SQ1A-U8		12.5		0.1				1				1						1	P
QT	327	98-SQ1A-U8		17.5		0.1				1				1						1	P
QT	328	98-SQ1A-U8		12.5		0.1				1				1						1	P
QT	329	98-SQ1A-U8		12.5		0.2				1				1							P
QT	330	98-SQ1A-U8		12.5		0.1				1				1							P
QT	331	98-SQ1A-U8		12.5		0.2				1						1					P
QT	332	98-SQ1A-U8		12.5		0.1				1				1							P
QT	333	98-SQ1A-U8		2.5		<0.1				1				1							P
QT	334	98-SQ1A-U8		12.5		0.1				1				1						1	P
QT	335	98-SQ1A-U8		7.5		0.1				1				1							P
QT	336	98-SQ1A-U8		12.5		0.1				1				1						1	P
QT	337	98-SQ1A-U8		7.5		<0.1				1				1							LB
QT	338	98-SQ1A-U8		7.5		<0.1				1				1							P
QT	339	98-SQ1A-U8		12.5		<0.1				1				1						1	P
QT	340	98-SQ1A-U8		7.5		0.1				1				1							P
QT	341	98-P3A-08		32.5	32.5	4.7	1				50	2.5	7.0		1					1	P
QT	342	98-SQ1A-U8		12.5		<0.1				1				1							P
QT	343	98-SQ1A-U8		2.5	2.5	<0.1		1			55	0.9	3.3		1				1		P
QT	344	98-P1A-08		7.5	7.5	<0.1	1				55	1.8	6.3	1					1	1	P
QT	345	98-SQ1A-U8		7.5		<0.1			1					1							P
QT	346	98-P1A-08		2.5	7.5	0.1		1			55	2.2	8.0	1			1			1	P
QT	347	98-P1A-08		7.5	7.5	0.1	1				55	1.7	4.8	1							LB
QT	348	98-P3A-08		2.5	7.5	0.1	1				55	1.7	7.9	1							P
QT	349	98-P1A-08		72.5	37.5	13.4	1				60	3.4	8.5	1			1			1	P
QT	350	98-SQ1A-U8		7.5	7.5	0.1		1			65	2.7	7.5	1					1	1	P
QT	351	98-SQ1A-U8		7.5		<0.1				1				1							P
QT	352	98-SQ1A-U8		7.5		<0.1				1					1						P
QT	353	98-SQ1A-U8		7.5		<0.1				1					1						P
QT	354	98-SQ1A-U8		12.5		0.1				1				1						1	LB
QT	355	98-SQ1A-U8		2.5		<0.1				1				1							P

QT	356	98-SQ1A-U8		7.5	7.5	0.1	1				65	1.8	5.1	1						1	P
QT	357	98-SQ1A-U8		12.5		0.1				1				1						1	P
QT	358	98-SQ1A-U8		7.5		<0.1				1				1							P
QT	359	98-SQ1A-U8		7.5		<0.1			1							1					P
QT	360	98-SQ1A-U8		7.5		0.1				1				1							LB
QT	361	98-SQ1A-U8		7.5		<0.1				1				1							DB
QT	362	98-SQ1A-U8		2.5	2.5	<0.1	1				65	0.8	1.0	1						1	P
QT	363	98-SQ1A-U8		7.5		<0.1				1				1							P
QT	364	97-P3A/08		2.5	2.5	<0.1	1				70	1.2	5.0	1							DB
QT	365	98-SQ1-U8		2.5	2.5	<0.1		1			70	0.9	1.7	1			1			1	W
QT	366	98-SQ1-U8		2.5	2.5	<0.1	1				70	0.5	2.1	1						1	W
QT	367	98-SQ1A-U8		12.5		<0.1				1				1						1	P
QT	368	98-SQ1A-U8		7.5		0.1				1					1						P
QT	369	98-SQ1A-U8		7.5		<0.1				1					1						P
QT	370	98-SQ1A-U8		7.5	7.5	0.1	1				70	2.6	6.6	1						1	P
QT	371	98-SQ1A-U8		7.5		<0.1				1				1							P
QT	372	98-SQ1A-U8		2.5	2.5	<0.1	1				70	1.7	3.6	1					1		P
QT	373	98-SQ1A-U8		7.5		<0.1				1				1							P
QT	374	98-SQ1A-U8		7.5	7.5	0.1	1				70	1.6	5.6	1					1		P
QT	375	98-SQ1A-U8		2.5		<0.1				1					1						P
QT	376	98-P1A-08		7.5	7.5	0.1		1			70	0.9	5.6	1						1	P
QT	377	98-SQ1A-U8		7.5		<0.1				1				1							P
QT	378	98-SQ1A-U8		7.5		<0.1				1					1						LB
QT	379	98-SQ1A-U8		7.5		0.1				1						1					P
QT	380	98-SQ1A-U8		7.5		<0.1				1					1						P
QT	381	98-SQ1A-U8		7.5		<0.1				1				1						1	DB
QT	382	98-P1A-08		7.5	7.5	0.1		1			70	1.8	6.0	1					1	1	P
QT	383	98-SQ1A-U8		7.5		<0.1				1				1						1	P
QT	384	98-SQ1A-U8		7.5		<0.1				1				1							LB
QT	385	98-SQ1A-U8		7.5		<0.1			1					1						1	P
QT	386	98-SQ1A-U8		7.5		0.1				1				1						1	P
QT	387	98-P1A-08		22.5	17.5	0.6	1				70	1.4	3.1	1						1	P
QT	388	98-SQ1A-U8		2.5		<0.1				1				1							P
QT	389	98-SQ1A-U8		7.5		<0.1				1				1							P
QT	390	98-P1A-08		17.5		0.3		1			70	1.3	5.0		1						DB
QT	391	98-P1A-08		7.5		<0.1		1			70	1.0	3.7	1						1	P
QT	392	97-P1/01		17.5	27.5	4.1		1			75	5.3	16.6		1						W
QT	393	97-P3A/08		52.5	27.5	19.5		1			75	3.6	24.3	1			1				P
QT	394	98-SQ1A-U8		2.5		<0.1				1					1					1	P
QT	395	98-SQ1A-U8		7.5		<0.1				1				1							P
QT	396	98-SQ6-U8A		2.5	2.5	<0.1	1				75	0.8	2.8	1			1				W
QT	397	98-SQ1A-U8		7.5		<0.1				1				1							DB
QT	398	98-SQ1A-U8		7.5	7.5	0.1		1			75	1.2	2.4	1			1			1	P
QT	399	98-SQ1A-U8		7.5		<0.1				1				1							P
QT	400	98-SQ1A-U8		7.5		<0.1				1				1							P
QT	401	98-SQ1A-U8		7.5		<0.1				1				1						1	P
QT	402	98-SQ1A-U8		7.5		<0.1				1					1						P
QT	403	98-SQ1A-U8		2.5		<0.1				1				1							W
QT	404	98-SQ1A-U8		2.5		<0.1				1				1							LB
QT	405	98-P1A-08																			
QT	406	98-P1A-08																			
QT	407	98-P1A-08																			
QT	408	98-P1A-08																			

QT	409	98-P1A-08																			
QT	410	98-P1A-08																			
QT	411	98-P1A-08																			
QT	412	98-P1A-08																			
QT	413	98-P1A-08																			
QT	414	98-P1A-08																			
QT	415	98-P1A-08																			
QT	416	98-P1A-08																			
QT	417	98-P1A-08																			
QT	418	98-P1A-08																			
QT	419	98-P1A-08																			
QT	420	98-P1A-08																			
QT	421	98-P1A-08																			
QT	422	98-P1A-08																			
QT	423	98-P1A-08																			
QT	424	98-P1A-08																			
QT	425	98-P1A-08																			
QT	426	98-P1A-08																			
QT	427	98-P1A-08																			
QT	428	98-P1A-08																			
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QT	432	98-P1A-08																			
QT	433	98-P1A-08																			
QT	434	98-P1A-08																			
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QT	446	98-P1A-08																			
QT	447	98-P1A-08																			
QT	448	98-P1A-08																			
QT	449	98-P1A-08																			
QT	450	98-P1A-08																			
QT	451	98-P1A-08																			
QT	452	98-P1A-08		22.5		0.7			1					1							P
QT	453	98-P1A-08		17.5		0.5			1						1						P
QT	454	98-P1A-08		17.5		0.3				1				1							P
QT	455	98-SQ1A-U8		12.5	7.5	0.1	1				75	2.3	7.2	1						1	P
QT	456	98-SQ1A-U8		12.5	7.5	0.1	1				75	0.7	3.8	1							P
QT	457	98-P1A-08		12.5		<0.1				1				1							P
QT	458	98-P1A-08		12.5		<0.1				1					1					1	P
QT	459	98-P1A-08		2.5	7.5	<0.1	1				75	1.2	5.3	1							P
QT	460	98-P1A-08		7.5	2.5	<0.1		1			75	0.9	3.1	1						1	P
QT	461	98-P1A-08		12.5	7.5	0.2		1			75	1.0	2.5	1						1	DB

QT	462	98-P1A-08		7.5		<0.1				1				1							P
QT	463	98-P1A-08		7.5		<0.1				1				1						1	W
QT	464	98-P1A-08		2.5		<0.1				1				1							P
QT	465	97-P3A/08		47.5	32.5	18.2	1				80	8.1	26.0	1			1				W
QT	466	98-P1A-08		2.5		<0.1				1				1							P
QT	467	98-P1A-08																			
QT	468	98-P1A-08																			
QT	469	98-P1A-08																			
QT	470	98-P1A-08																			
QT	471	98-P1A-08																			
QT	472	98-P1A-08																			
QT	473	98-P1A-08																			
QT	474	98-P1A-08																			
QT	475	98-P1A-08																			
QT	476	98-P1A-08																			
QT	477	98-P1A-08																			
QT	478	98-P1A-08																			
QT	479	98-P1A-08																			
QT	480	98-P1A-08																			
QT	481	98-P1A-08																			
QT	482	98-P1A-08																			
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QT	511	98-P1A-08																			
QT	512	98-P1A-08																			
QT	513	98-P1A-08																			
QT	514	98-P1A-08		17.5		0.6			1					1						1	LB

QT	515	98-P1A-08		12.5		0.2				1				1							LB
QT	516	98-P1A-08		12.5		0.1				1				1						1	LB
QT	517	98-P1A-08		7.5		0.1				1				1						1	LB
QT	518	98-SQ1-U8		7.5	7.5	0.1	1				80	1.4	8.1	1							DB
QT	519	98-SQ1A-U8		7.5	7.5	0.1	1				80	1.5	3.6	1			1	1		1	P
QT	520	98-P1A-08		17.5		0.1				1				1						1	P
QT	521	98-P1A-08		7.5		0.1				1				1							LB
QT	522	98-SQ1A-U8		12.5	7.5	0.2		1			80	0.9	2.5	1						1	P
QT	523	98-SQ1A-U8		2.5	7.5	0.1		1			80	1.1	2.9	1			1				P
QT	524	98-P1A-08		2.5		<0.1				1				1							P
QT	525	98-P1A-08		7.5		<0.1				1				1						1	P
QT	526	98-P1A-08		7.5		<0.1				1				1							P
QT	527	98-P1A-08		7.5		<0.1				1				1							P
QT	528	98-P1A-08																			
QT	529	98-P1A-08																			
QT	530	98-P1A-08																			
QT	531	98-P1A-08																			
QT	532	98-P1A-08																			
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QT	539	98-P1A-08																			
QT	540	98-P1A-08																			
QT	541	98-P1A-08																			
QT	542	98-P1A-08		7.5		0.2			1					1						1	P
QT	543	98-P1A-08		12.5		0.1				1				1						1	P
QT	544	98-P1A-08		17.5	17.5	0.6	1				80	2.9	6.8	1			1		1	1	P
QT	545	98-P1A-08		7.5		<0.1				1				1							W
QT	546	98-P1A-08																			
QT	547	98-P1A-08																			
QT	548	98-P1A-08																			
QT	549	98-P1A-08																			
QT	550	98-P1A-08																			
QT	551	98-P1A-08																			
QT	552	98-P1A-08		7.5	2.5	0.1	1				80	2.1	7.1	1						1	P
QT	553	98-P1A-08		7.5	27.5	1.4		1			85	3.5	13.7	1							P
QT	554	98-P1A-08		7.5		<0.1				1				1							P
QT	555	98-P1A-08		12.5		<0.1				1				1						1	P
QT	556	97-P3A/08		7.5	7.5	0.1	1				?	0.6	2.2	1							DB
QT	557	97-P3A/08		7.5	7.5	<0.1	1				?	0.6	2.1	1			1				W
QT	558	98-P1A-08		2.5		<0.1				1				1							P
QT	559	97-P3A/08		2.5	2.5	<0.1	1				?	0.3	1.3	1			1			1	LB
QT	560	98-P1A-08																			
QT	561	98-P1A-08																			
QT	562	98-P1A-08																			
QT	563	98-P1A-08																			
QT	564	98-P1A-08																			
QT	565	98-P1A-08																			
QT	566	97-P3A/08		2.5	2.5	<0.1	1				?	1.1	2.5	1						1	LB
QT	567	98-P3A-08																			

QT	568	98-P3A-08																			
QT	569	98-P4-08		7.5		<0.1				1				1							P
QT	570	98-P1A-08																			
QT	571	97-P3A/08		2.5	2.5	<0.1		1			?	0.7	3.1	1			1				LB
QT	572	98-P1A-08																			
QT	573	98-P1A-08																			
QT	574	97-P3A/08		22.5	22.5	3		1			?	1.6	2.9	1			1	1			DB
QT	575	98-SQ1-U8		42.5	42.5	10.5		1			?	1.9	12.7		1		1		1	1	P
QT	576	98-P1A-08																			
QT	577	98-P1A-08																			
QT	578	98-P1A-08																			
QT	579	98-P1A-08																			
QT	580	98-P1A-08																			
QT	581	98-P1A-08																			
QT	582	98-P1A-08																			
QT	583	98-P1A-08																			
QT	584	98-P1A-08																			
QT	585	98-P1A-08																			
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QT	617	98-P1A-08																			
QT	618	98-P1A-08																			
QT	619	98-P1A-08																			
QT	620	98-P1A-08																			

QT	621	98-P1A-08																			
QT	622	98-P1A-08																			
QT	623	98-P1A-08																			
QT	624	98-P1A-08																			
QT	625	98-P1A-08																			
QT	626	98-P1A-08																			
QT	627	98-P1A-08																			
QT	628	98-P1A-08																			
QT	629	98-P1A-08																			
QT	630	98-P1A-08																			
QT	631	98-P1A-08																			
QT	632	98-P1A-08																			
QT	633	98-P1A-08																			
QT	634	98-P1A-08																			
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QT	991	98-P1A-08																			

QT	992	98-P1A-08																			
QT	993	98-P1A-08																			
QT	994	98-SQ6-U8A		2.5	2.5	<0.1	1				?	0.6	1.1	1						1	W
QT	995	98-SQ6-U8A		2.5	7.5	<0.1	1				?	0.6	4.1	1						1	W
QT	996	98-P1A-08		12.5		0.2				1				1							P
QT	997	98-P1A-08		12.5		0.1				1				1						1	P
QT	998	98-SQ6-U8A		2.5	2.5	<0.1	1				?	0.4	2.4	1							W
QT	999	98-P1A-08		17.5		0.7				1				1						1	P
QT	1000	98-P1A-08		12.5		0.3			1					1						1	P
QT	1001	98-SQ1-U8		2.5	2.5	<0.1		1			?	0.5	1.1	1			1				W
QT	1002	98-P1A-08		32.5		0.9				1				1						1	LB
QT	1003	98-SQ1-U8		2.5	2.5	<0.1	1				?	0.5	1.0	1			1				W
QT	1004	98-P1A-08		12.5		0.1				1				1						1	P
QT	1005	98-SQ1-U8		2.5	2.5	<0.1	1				?	0.3	1.4	1							W
QT	1006	98-P1A-08		12.5		<0.1				1				1							LB
QT	1007	98-SQ1A-U8		7.5	7.5	0.1		1			?	0.8	2.6	1						1	P
QT	1008	98-P1A-08		12.5		0.1				1				1						1	LB
QT	1009	98-SQ1A-U8		17.5	7.5	0.3	1				?	1.0	1.3	1			1			1	P
QT	1010	98-P1A-08		7.5		<0.1				1				1							P
QT	1011	98-P1A-08		12.5		<0.1				1				1						1	P
QT	1012	98-P1A-08		12.5		0.1				1				1						1	P
QT	1013	98-SQ1A-U8		7.5	7.5	<0.1	1				?	0.8	2.2	1			1			1	P
QT	1014	98-P1A-08		12.5		0.1			1					1						1	P
QT	1015	98-P1A-08		7.5		0.1				1					1						P
QT	1016	98-SQ1A-U8		7.5	12.5	0.1		1			?	1.1	3.4	1			1			1	P
QT	1017	98-P1A-08		7.5		0.1				1				1						1	P
QT	1018	98-P1A-08		17.5		0.3			1					1							P
QT	1019	98-SQ1A-U8		12.5	2.5	<0.1	1				?	1.0	1.8	1			1	1		1	P
QT	1020	98-P1A-08		7.5		0.1				1				1						1	P
QT	1021	98-P1A-08		7.5		<0.1				1				1							P
QT	1022	98-SQ1A-U8		7.5	2.5	<0.1	1				?	0.5	1.0	1						1	P
QT	1023	98-P1A-08		12.5		0.2				1				1						1	DB
QT	1024	98-P1A-08		12.5		<0.1				1				1						1	P
QT	1025	98-SQ1A-U8		7.5	7.5	<0.1	1				?	0.8	3.4	1					1		P
QT	1026	98-SQ1A-U8		7.5	2.5	<0.1	1				?	0.7	1.8	1							P
QT	1027	98-P1A-08		12.5		0.2				1				1							LB
QT	1028	98-P1A-08		12.5		0.2				1				1						1	P
QT	1029	98-SQ1A-U8		7.5	2.5	<0.1	1				?	0.5	1.3	1							P
QT	1030	98-P1A-08		7.5		0.1				1				1							P
QT	1031	98-P1A-08		12.5		0.1				1				1						1	LB
QT	1032	98-P1A-08		12.5	7.5	0.1		1			?	1.0	5.4	1			1		1	1	LB
QT	1033	98-P1A-08		7.5	12.5	0.1		1			?	1.3	3.2	1				1			P
QT	1034	98-P1A-08		12.5		0.2				1						1					P
QT	1035	98-P1A-08		7.5		0.1				1				1							P
QT	1036	98-P1A-08		7.5		<0.1				1				1							P
QT	1037	98-P1A-08		7.5		<0.1				1				1							P
QT	1038	98-P1A-08		7.5	2.5	<0.1	1				?	0.7	2.6	1			1			1	P
QT	1039	98-P1A-08		12.5		<0.1				1				1							P
QT	1040	98-P1A-08		7.5		0.1				1				1							P
QT	1041	98-P3A-08		7.5	2.5	0.1	1				?	0.7	1.5	1						1	P
QT	1042	98-P1A-08		7.5		<0.1				1				1							P
QT	1043	98-P1A-08		12.5		<0.1				1				1						1	DB
QT	1044	98-P1A-08		7.5	7.5	0.2		1			?	1.0	4.1	1						1	P

QT	1045	98-P1A-08		7.5		<0.1				1				1							LB
QT	1046	98-P1A-08		7.5		<0.1				1				1							P
QT	1047	98-P1A-08		7.5		<0.1				1				1						1	P
QT	1048	98-P1A-08		7.5		<0.1				1				1							P
QT	1049	98-P1A-08		7.5		<0.1				1				1							P
QT	1050	98-P1A-08		2.5		<0.1				1				1							P
QT	1051	98-P1A-08		7.5		<0.1				1				1							P
QT	1052	98-P1A-08		7.5		<0.1				1				1							P
QT	1053	98-P3A-08		32.5		3.6				1				1							P
QT	1054	98-P1A-08		7.5	7.5	0.1		1			?	1.6	5.6	1			1			1	P
QT	1055	98-P3A-08																			
QT	1056	98-P3A-08																			
QT	1057	98-P1A-08		7.5	7.5	0.1		1			?	1.3	2.7	1			1			1	P
QT	1058	98-P3A-08		2.5		<0.1			1					1							P
QT	1059	98-P3A-08		7.5		<0.1				1				1							P
QT	1060	98-P3A-08		7.5	7.5	0.1	1				?	1.2	1.8	1						1	P

Appendix E: QJ-280 Tool Descriptions

Table E.1. QJ-280 Tool Descriptions

Frag. #	Provenience	Unif.	U.F.	Bif.	B.W.	Comments
I-158	I1A-N3 (TP)		1			Petrified Wood. Utilized edge on previous flake scar. More than 50% cortex. Broken on three sides. Edge angle of 15 deg.
I-569	I2D-E2(EHII)		1			MS-mottled. Less than 50% cortex. Potlid fractures. Broken on two sides. Edge angle of 45 deg.
I-319	I2B-N2c(EHI)			1		MS/Possibly Petrified Wood. No cortex. Biface Fragment. Edge is finely worked. Could have been a finished piece. Not diagnostic. Edge angle of 30 deg.
I-521	I2D-N3a(TP)				1	MS. Less than 50% cortex. Moderately modified on one side and very minimally modified on the other. One edge is very steep with many hinge fractures. Very crude. Edge angle of 40 deg.
I-488	I2D-N1b(EHII)	1				MS. Less than 50% cortex. Uniface Fragment with edge damage. Edge angle of 50 deg.
1730	II3A-E68(TP)	1				MS. No Cortex. Uniface Fragment. Unusual fracture (or break)-has morphology of a large flake. Finely worked. Edge angle of 50 deg.
I-384	I2B-N3b(TP)			1		MS. No cortex. Finely worked. Broken along both lateral margins (or along the tip and the base for alternate explanation). Base could be stemmed. If this is the case, the "tip" of biface is concave and finely worked. Or, this same area could be a notch. This piece is difficult to orient. Potentially diagnostic. Edge angle of 35 deg.
773	II3C-N1(TP)			1		MS. No cortex. Finished point. Finely worked. Diagnostic. Stemmed base. Possible resharpened working edge. Edge angle of 30 deg.
774	II3C-N1(TP)			1		MS. No cortex. Biface possibly broken during manufacture. Wavy edge. Not finely retouched. Not diagnostic. Edge angle of 40 deg.
I-134	I1A-N3(TP)	1				MS. No cortex. Retouched and used along one margin. Other sides are all broken off. Edge angle of 55 deg.
I-784	I4B-N1B(EHII)	1				Petrified Wood. No Cortex. Crude uniface. Surface facets could simply be from before piece was removed from core. Use wear along one margin only. Opposite margin is partially broken off. Edge angle of 30 deg.

Frag. #	Provenience	Unif.	U.F.	Bif.	B.W.	Comments
I-368	I2B-N3b(TP)		1			Petrified wood. Less than 50% cortex.Utilized along entire edge of one margin and partially along adjacent margine. Opposite margin is broken off. Edge angle of 40 deg.
I-900	I3B-N2d(EHI)	1				MS. Less than 50% cortex. Utilized and retouched around entire perimeter of tool. Uniface made on a whole flake. Edge angle of 35 deg.
4000	II4B-N1I(TP)			1		Fine grained basalt. No cortex. Biface possibly broken during manufacture (has a wavy margin). One of the lateral margins is completely broken off. Potentially diagnostic. Edge angle of 55 deg.
I-794	I2B-N4a(TP)			1		Obsidian. No cortex. Possibly a stem, broken on proximal and distal margins. Edge angle of 35 deg.
I-494	I2D-N2c(EHI)	1				MS. Less than 50% cortex. Working edge along one margin only. Along steep areas of working edge, there are many step fractures. Edge angle of 45 deg.
212	II3A-E79(TP)			1		MS. No cortex. Tiny fragment. Wavy edge. Crude. Not diagnostic. Edge angle of 40 deg.
195	II3A-N2b(TP)			1		MS. No cortex. Fragment with morphology of a broken flake. Finely worked. Edge angle of 50 deg.
I-748	I3B-E9(EHI)			1		MS. No Cortex. Broken on three sides. Finely worked along in-tact margin. Edge angle of 45 deg.
I-383	I2B-N3b(TP)			1		MS. No Cortex. Either a base (most likely) or a tip (less likely-would not be very pointed) of a bifacial projectile point. If this is a base, it could be diagnostic, and would be similar to frag. #773. Edge angle of 30 deg.
I-646	I2D-N4a(TP)			1		MS. No cortex. Very crude biface fragment. Broken on two sides. Not diagnostic. Edge angle of 35 deg.
731	II3B-E35ITP			1		MS. No cortex. Small fragment. Edge angle of 40 deg.
I-598	I3B-N1a(EHII)		1			Petrified wood. Greater than 50% cortex. Broken flake with platform still in tact. Use wear along one of the lateral edges of the flake. Edge angle of 25 deg.

Frag. #	Provenience	Unif.	U.F.	Bif.	B.W.	Comments
I-382	I2B-N3b(TP)			1		Petrified wood. No cortex. Could be the tip or a corner of a point. Could have been in production (and broken). One of the margins has been brought up on one side of the point for possible flake removals across the surface. Edge angle of 45 deg.
1463	II3A-N2b(TP)		1			MS. No cortex. Utilized broken flake. Edge damage present on one margin only. Platform displays dorsal surface faceting. Edge angle of 50 deg.
2031	II1D-N2c(TP)			1		MS. Less than 50% cortex. Biface possibly broken during early reduction. One margin has been brought up on one side of the point for possible flake removals across the surface. Very crude. Edge angle of 60 deg.
1450	II3A-N2b(TP)				1	MS. No cortex. Bifacially modified flake/crude biface. Proximal and distal ends broken off. Edge angle of 55 deg.
2846	II1D-N2c3(TP)			1		Petrified wood. No cortex. Small tip of a serrated biface. Finely worked. Edge angle of 30 deg.
968	II3C-N2b(TP)		1			MS. No cortex. Utilized flake fragment. Use-wear along one margin only. Other margin is broken off. Edge angle of 40 deg.
1931	II1D-N1c(TP)		1			MS. Less than 50% Cortex. Utilized flake frag. Use-wear along one margin only. Other margins are broken off. Edge angle of 55 deg.
1341	II3B-E28+28I(TP)			1		MS. No cortex. Heavily modified on one side and minimally modified on the other. Proximal and distal ends are broken off. Edge angle of 50 deg.
3636	II1D-E5bi(TP)		1			MS. No cortex. Utilized flake frag. Use-wear along one margin only. Other margins are broken off. Edge angle of 25 deg.
	IV1A-Surf.			1		MS. No cortex. Crude biface. Edge angle of 45 deg.
I-901	I2B-N1b(EHII)			1		MS. No cortex. Rounded base of a stemmed? point. Finely worked and retouched. Edge angle of 55 deg.
I-902	I2B-N2b(EHI)		1?			MS. No cortex. Possible utilized broken flake. Difficult to tell if edge damage is from use flakes. Edge angle of 40 deg.

Frag. #	Provenience	Unif.	U.F.	Bif.	B.W.	Comments
3589	II1D-E5bi(TP)			1		Petrified Wood. Less than 50% coretex. Finely worked biface margin fragment. Not diagnostic. Edge angle of 40 deg.
4004	II6C-N1(TP)	1				MS. Greater than 50% cortex. Uniface made on a flake. Minor edge working with use-wear present. Both margins of flake were utilized and are in-tact. Proximal and distal ends of flake are not present. Edge angle of 45 deg.
4005	II3A-N2b(TP)					MS. Less than 50% cortex. Possibly was a piece of shatter. Flaked into a drill. All 3 dimensions are large. Width and height are roughly equal. Could not draw. No edge angle.

BIOGRAPHY OF THE AUTHOR

Benjamin R. Tanner was born in 1976 in Orlando, Florida. He was raised in Palatka and Tallahassee, Florida and graduated from Leon High School in 1994. After his first year of college, he spent half a year in Alaska where he worked in the fishing industry. He completed his undergraduate degree at Florida State University and finished with a B.S. in Anthropology in 1999.

In the Fall of 1999, he entered the graduate program in the Institute for Quaternary and Climate Studies at the University of Maine in order to obtain a Master's degree. His research in this program is focused on prehistoric archaeology. He has worked as a Research Assistant for Dr. Daniel H. Sandweiss at the University of Maine and has also participated in two field seasons of research in Peru as a member of the Quebrada Jaguay Archaeological Project. He has also participated in a conservation/GIS project for Deer Isle, Maine with Roger Hooke for the Island Heritage Trust. While attending the University of Maine, he was married to Wendy S. Richard on Dec. 23, 1999.

Benjamin is a candidate for the Master of Science degree in Quaternary and Climate Studies from the University of Maine in August, 2001.