# Recent Archaeological Investigations near the Native Village of Shaktoolik, Norton Sound, Alaska 

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## APPENDIX 1

This section details the attributes of the twelve generalized house shapes noted at the Shaktoolik Airport site. Similar house shapes are discussed together. Table S1 summarizes data on house sizes, shapes, and the number of houses in each category, and Figure S1 illustrates the generalized shape of each house form to scale.

## HS 1 and 2

For the most part, House Shape (HS) 1 and HS 2 features are generic in form (Fig. S1). They consist of a shallow, square-to-rectangular depression, interpreted as one room, with a visible entrance tunnel distinguishing HS 1. Because of their generic appearance they are difficult to place in time; it is likely that they are late prehistoric or early historic, but further testing is needed to confirm this assumption.

Ten depressions are classified as HS 1 and 10 as HS 2 (Table S1). Those classified as HS 1 averaged 5.5 m in length and 4.0 m in width and were usually $0.2-0.4 \mathrm{~m}$ deep. Examples placed in the HS 2 class were slightly smaller (averaging 4 m in both length and width), probably because they lack a tunnel, and shallower ( $0.0-0.2 \mathrm{~m}$ deep). Features from both groups are scattered across the site but are found mainly on the periphery.

## HS 3 and 4

HS 3 is the second most-numerous house form at the site ( $\mathrm{n}=19$; Table S1, Fig. S1). While these houses usually have square- or rectangular-shaped rooms like the archetypal four-post houses described by Giddings (1957), their entrance tunnel(s) are not in a T-shaped orientation but rather exit through the corners of the house. In terms of dimensions, HS 3 depressions average 7.5 m long, 5.5 m wide, and $0.2-0.4 \mathrm{~m}$ deep. Houses of this type are scattered across the site, and they appear to be associated with HS 4 judging by the style of architecture; tunnel connection configurations are similar, and often HS 3 houses have what appear to be "ventilation" trenches on some of their corners, which are straight trenches too narrow to have served as a tunnel. It is also quite possible that some of the house tunnels are not readily identifiable on the surface.

HS 4 houses are the most frequently occurring form of house $(\mathrm{n}=27)$ and appear across the entire extent of the site (Fig. 3). There is no one universal form-some are large, spanning over $800 \mathrm{~m}^{2}$ with more than 25 rooms, whereas others are considerably smaller with just a few rooms (range: 3 to 29 rooms). These clusters of room depressions connected by tunnels average 19 m in length and 14 m in width. All share the characteristic of having small rectangular or square rooms interconnected with short tunnels. These rooms are visible on the surface because of their depth ( $0.4-0.6 \mathrm{~m}$ ).

## HS 6 and 7

On the basis of their similar room architecture, depth, and what appears to be more recent construction, we believe that HS 6 and 7 are related house types (Table S1, Fig. S1). Both house forms have deep main rooms (at least 0.6 to 0.8 m deep), often with visible remnants of sleeping platforms and a single deep tunnel exiting the room (likely denoting a cold-trap entrance). For HS 6, the structure terminates at the end of the tunnel, whereas for HS 7, the tunnel connects to an entrance foyer or storm shed (Table S1). Thus, HS 6 houses tend to be smaller than HS 7 examples (average $8.5 \times 5.5 \mathrm{~m}$ versus $11 \times 6.5 \mathrm{~m}$ ) owing to the lack of storm sheds.

The majority of HS $6(\mathrm{n}=12)$ and HS 7 houses $(\mathrm{n}=16)$ are located in the northern part of the site. Many of these appear to be isolated instances, but one salient cluster is located near the terminus of the northeast-oriented main beach ridge (Fig. 3). It is possible that these houses were occupied concurrently.

## HS 5, 8, and 9

These three house shapes are grouped together because they likely represent early historical features (Fig. S1). The 11 houses belonging to HS 5 appear to be associated with A-frame style tents. Unfortunately, time did not permit further investigation, but all consist of rectangular-shaped areas of distinctive vegetation (scrub versus grasses), and they are confined to the western side of the site (Fig. 3). While the six HS 8 houses are flat pads as well, unlike the HS 5 style, they appear to have been intentionally flattened to serve as foundations for historical-period style log-cabin structures. Only one depression represents HS 9, located in the site's central mound; it has milled timbers, which

[^0]TABLE S1. House shapes from the Shaktoolik Airport site, identified and classified. See Figure S1 for shapes of the houses. Map numbers refer to plots on Figure 3.

| House shape | Count | $\begin{aligned} & \begin{array}{l} \text { Length } \\ \text { (nearest } 0.5 \mathrm{~m} \text { ) } \end{array} \\ & \hline \end{aligned}$ | Width (nearest 0.5 m ) | Average depth (nearest 0.2 m ) | Entrance tunnels and rooms | Tunnel orientation (single tunnel houses only) | Cultural affiliation and time period | House numbers and test units (TU) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 10 | Avg: 5.5 m <br> Max: 7.5 m <br> Min: 4.0 m | Avg.: 4.0 m <br> Max. 6.5 m <br> Min. 2.5 m | $0.2-0.4 \mathrm{~m}$ | Tunnels: 1 <br> Rooms: 1 | NE: 1 SE: 6 SW: 1 NW: 1 | - Unknown cultural affiliation <br> - Late prehistoric/early historic? | 1, 33, 40, 82, 100, 121, 128, 130, 131 |
| 2 | 10 | Avg.: 4.0 m <br> Max.: 5.5 m <br> Min.: 3.0 m | Avg.: 4.0 m <br> Max.: 4.5 m <br> Min.: 3.0 m | $0.0-0.2 \mathrm{~m}$ | Tunnels: 0 <br> Rooms: 1 |  | - Unknown cultural affiliation <br> - Late prehistoric/early historic? | 2, 5, 35, 38, 48, 75, 76, 98, 119, 123 |
| 3 | 19 | Avg.: 7.5 m <br> Max.: 14.0 m <br> Min.: 5.0 m | Avg.: 5.5 m <br> Max.: 9.0 m <br> Min.: 3.0 m | $0.2-0.4 \mathrm{~m}$ | $\begin{aligned} & \text { Tunnels: } 1-2 \\ & \text { Rooms: } 1-2 \end{aligned}$ | NE: 1 SE: 6 SW: NW: | - Yupiit <br> - ca. AD 1400-1850 | $\begin{aligned} & 3,4,6,7,20,22,23,36,59,67,78,84,90,92 \text {, } \\ & 96,105,108,111,124 \end{aligned}$ |
| 4 | 27 | Avg.: 19.0 m Max.: 41.0 m Min.: 9 m | Avg.: 14.0 m <br> Max.: 19.0 m <br> Min.: 6.0 m | $0.4-0.6 \mathrm{~m}$ | $\begin{aligned} & \text { Tunnels: } 1-6+ \\ & \text { (avg.: 2.3) } \\ & \text { Rooms: } 3-29 \\ & \text { (avg.: 7.8) } \end{aligned}$ | NE: 2 <br> SE: 3 <br> SW: 5 <br> NW: | - Yupiit <br> - ca. AD 1400-1850 | 8 (TU-O), 24, 27, 28, 30, 45, 46, 58, 63 (TU-J), $64,69,81,83,86,91,95,101,110,112,113$, 114, 115 (TU-C, D), 125, 127, 129, 132, 136 |
| 5 | 11 | Avg.: 6.0 m <br> Max.: 12.0 m <br> Min.: 3.0 m | Avg.: 5.0 m Max.: 7.5 m <br> Min.: 4.0 m | 0.0 m | $\begin{aligned} & \begin{array}{l} \text { Tunnels: } 0-1 \\ \text { (avg.: } 0.4 \text { ) } \\ \text { Rooms: } 1 \end{array} \end{aligned}$ | NE: 3 SE: <br> SW: 1 <br> NW: | - Iñupiat <br> - early 1900s | 9, 10, 11, 50, 51, 52, 53, 54, 55, 56, 80 |
| 6 | 12 | Avg.: 8.5 m <br> Max.: 14.0 m <br> Min.: 5.0 m | Avg.: 5.5 m Max.: 7.5 m in.: 4.0 m | $0.6-0.8 \mathrm{~m}$ | Tunnels: 1 <br> Rooms: 1 | NE: 3 SE: 5 SW: 3 | - Iñupiat <br> - ca. 1850 -early 1900 s | $\begin{aligned} & \text { 14, 15, 32, } 34 \text { (TU-Q), 37, 39, 43, 49, 65, 68, } \\ & 79,94 \end{aligned}$ |
| 7 | 16 | Avg.: 11.0 m <br> Max.: 15.0 m <br> Min.: 8.0 m | Avg.: 6.5 m <br> Max.: 7.5 m <br> Min.: 4.0 m | $0.6-0.8 \mathrm{~m}$ | Tunnels: 1 <br> Rooms: 2 | NE: 3 SE: 7 SW: 3 NW: 3 | - Iñupiat <br> - ca. 1850 -early 1900 s | $\begin{aligned} & 16,17,18,19,21,29,31,41,44,47,61,77 \\ & \text { (TU-H), 88, 93, 104, 133 } \end{aligned}$ |
| 8 | 6 | Avg.: 6.0 m <br> Max.: 14.0 m <br> Min.: 3.5 m | Avg.: 4.5 m <br> Max.: 8.0 m <br> Min.: 3.0 m | $0.0-0.2 \mathrm{~m}$ | Tunnels: 0 <br> Rooms: 1-3 <br> (avg.: 1.3) | n/a | - Iñupiat <br> - 1900-1930s | 25, 57, 62, 66 (TU-E), 73, 74 |
| 9 | 1 | 6 m | 5.5 m | 0.6 m | Tunnels: 0 <br> Rooms: 1 | n/a | - Unknown cultural affiliation <br> - ca. early 1900 s | 72 |
| 10 | 11 | $\begin{aligned} & \text { Avg.: } 10.5 \mathrm{~m} \\ & \text { Max.: } 15.0 \mathrm{~m} \\ & \text { Min.: } 5.5 \mathrm{~m} \end{aligned}$ | Avg.: 7.0 m <br> Max.: 8.0 m <br> Min.: 3.5 m | $0.2-0.4 \mathrm{~m}$ | $\begin{aligned} & \text { Tunnels: } 0-2 \\ & \text { (avg.: 1.1) } \\ & \text { Rooms: } 2 \end{aligned}$ | NE: 2 <br> SE: 1 <br> SW: 1 <br> NW: 1 | - Unknown cultural affiliation <br> - possibly early Nukleet | $\begin{aligned} & 85,97,102,103,109,116,117,118(\mathrm{TU}-\mathrm{G}), \\ & 119,120,122,126,135 \end{aligned}$ |
| 11 | 2 | Avg.: 12.0 m <br> Max.: 14.5 m <br> Min.: 9 m | Avg.: 9.0 m <br> Max.: 9.5 m <br> Min.: 8 m | $0.4-0.6 \mathrm{~m}$ | Tunnels: 0 <br> Rooms: 1 | n/a | - Nukleet <br> - ca. AD 1200-1400 | 87 (TU-K), 99 (TU-I, P) |
| 12 | 3 | Avg.: 10.0 m <br> Max.: 12.5 m <br> Min.: 6.5 m | Avg.: 5 m <br> Max.: 7 m <br> Min.: 4.5 m | $0.6-0.8 \mathrm{~m}$ | Tunnels: 1 <br> Rooms: 2 | NE: <br> SE: <br> SW: 2 <br> NW: 1 | - Unknown cultural affiliation <br> - possibly early Thule | 106, 107 (TU-M), 134 (TU-B) |
| $\begin{aligned} & 0 \\ & \text { (not cl } \end{aligned}$ | ${ }_{\text {bble) }}^{8}$ | Avg.: 6.5 m <br> Max.: 11.5 m <br> Min.: 2.0 m | Avg.: 4.5 <br> Max.: 8.0 m <br> Min.: 2.0 m | n/a | n/a | n/a | - Unknown cultural affiliation/age | 12, 13, 26, 42, 89, 60, 71, 103 |



FIG. S1. Generalized shapes of house depressions at the Shaktoolik Airport Site, to scale. Numbers refer to HS forms.
suggest that the last structure built over the depression was constructed in the 20th century.

## HS 10

HS 10 houses consist of two rooms (depressions) that share at least one entrance tunnel, which is in either a T-shaped or a linear arrangement (Fig. S1). Eleven structures conform to this shape, and they average 10.5 m in length, 7 m in width, and $0.2-0.4 \mathrm{~m}$ in depth (Table S1). Overall, these houses are rather generic, except that they tend to be more angular and blocky than the HS 4 style. These features are located south of the central core area, with several examples in a single row along a lower beach ridge. Their alignment suggests that these particular houses may have been occupied contemporaneously, and most of those visible are oriented to the west.

HS 11
The two depressions attributed to HS 11 are large rectangular structures with raised berms (Fig. S1). One of these structures, House 99, is particularly large, measuring $9 \times 13 \mathrm{~m}$, with house wall remnants or berms that rise more than a meter from the surrounding ground surface (Table S1). This feature immediately stood out during our first visit to the site in 2013 because its size and shape match ethnographic descriptions for men's houses, qasgiq or karigi structures (e.g., Nelson, [1889] 1983:245-247). See main text for more discussion.

## HS 12

The three houses categorized as HS 12 each had one room with a long entrance tunnel that had what appeared to be a perpendicular spur (Fig. S1). We refer to them as "Thulelike" because of all the 134 houses recorded at the site, they have the most in common with houses associated with the Thule farther north on the Seward Peninsula (Giddings and Anderson, 1986; Darwent, et al., 2013). Unfortunately, all three of these houses are located in an area of regular flooding and thus organic preservation is poor.

## REFERENCES

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TABLE S2. Artifacts recovered from test units A (Nukleet/Yup'ik midden), C (House 115; prehistoric, possibly Yup'ik), D (House 115; prehistoric, possible Yup'ik), E (House 66; late Yup'ik midden to historic house), G (House 118; early Nukleet house?), H (Inupiat house foyer; mid-1800s to 1900), I (House 99; early Nukleet qasgiq), J (House 63; Nukleet/Yup'ik midden to historic Yup'ik house), K (House 87; prehistoric), M (House 106; prehistoric), N (outside House 103; prehistoric), O (House 8; prehistoric, possibly Yup'ik), and P (House 99; Nukleet men's house) at the Shaktoolik Airport site. Artifacts were not recovered from units B, F, and L.

|  | A | C | D | E | G | H | I | J | K | M | N | O | P |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| CERAMIC: |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Base sherd | - | - | - | 5 | - | 1 | - | 16 | - | - | - | - | - |
| Body sherd | 25 | - | - | 140 | 22 | 54 | 3 | 463 | 20 | 6 | 4 | 10 | 10 |
| Rim sherd | 1 | - | - | 23 | - | 2 | - | 30 | - | - | 1 | - | 1 |
| Ceramic fragment (<1 cm) | 44 | - | 1 | 127 | 75 | 27 | - | 368 | 11 | 5 |  | 38 | 12 |
| FOSSILS: |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Mammoth | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Worked ivory object | - | - | - | - | - | - | - | 2 | - | - | - | - | - |
| Debitage | - | - | - | 1 | 1 | 1 | - | 2 | - | - | - | - | 6 |
| HISTORIC: |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Cloth: |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Cut felt | - | - | - | 1 | - | - | - | - | - | - | - | - | - |
| Glass: |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Bead | - | - | - | 5 | - | 7 | - | 13 | - | - | - | - | - |
| Bottle glass shard | - | - | - | - | - | 1 | - | 3 | - | - | - | - | - |
| Metal: |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Metal container (Iron) | - | - | - | 4 | - | - | - | - | - | - | - | - | - |
| Metal fragment (Iron) | - | - | - | 4 | - | 4 | - | - | - | - | - | - | - |
| Wood: |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Milled lumber | - | - | - | 1 | - | - | - | - | - | - | - | - | - |
| OSSEOUS: <br> Antler: |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Arrowhead | - | - | - | 4 | - | - | - | - | - |  | - | - | - |
| Arrow, Fish barb | - | - | - | - | - | - | - | - | - | - | - | - | 1 |
| Awl/Punch | - | - | - | 1 | - | - | - | 3 | - | - | - | - | 5 |
| Box part | - | - | - | 1 | - | - | - | - | - | - | - | - | - |
| Comb | - | - | - | - | - | 1 | - | - | - | - | - | - | - |
| Decorative object | - | - | - | - | - | - | - | - | - | - | - | - | 1 |
| Fish hook | - | - | - | 2 | - | - | - | 1 | - | - | - | - | 3 |
| Fish-spear component | - | - | - | 1 | - | - | - | 3 | - | - | - | - | 3 |
| Fishing-line weight | - | - | - | - | - | - | - | - | - | - | - | - | 1 |
| Float nozzle | - | - | - | - | - | - | - | - | - | - | - | - | 3 |
| Gouge | - | - | - | - | - | - | - | - | - | - | - | - | 1 |
| Handle | - | - | - | 1 | - | - | - | - | - | - | - | - | - |
| Handle, beaver-tooth knife | - | - | - | - | - | - | - | - | - | - | - | - | 1 |
| Handle, composite knife | - | - | - | - | - | - | - | 1 | - | - | - | - | - |
| Handle, knife socket | - | - | - | - | - | - | - | - | - | - | - | - | 1 |
| Harpoon head | - | - | - | - | - | - | - | - | - | - | - | - | 1 |
| Harpoon head, sealing dart | - | - | - | 1 | - | - | - | 2 | - | - | - | - | - |
| Harpoon foreshaft | - | - | - | - | - | - | - | 1 | - | - | - | - | - |
| Harpoon socket | - | - | - | 1 | - | - | - | - | - | - | - | - | - |
| Needle | - | - | - | - | - | - | - | 1 | - | - | - | - | 1 |
| Peg | - | - | - | 1 | - | - | - | - | - | - | - | - | 2 |
| Pendant | - | - | - | 1 | - | - | - | , | - | - | - | - | - |
| Pick head | - | - | - | - | - | - | - | 1 | - | - | - | - | - |
| Pressure flaker | - | - | - | 1 | - | - | - | 1 | - | - | - | - | - |
| Scraper, small | - | - | - | - | - | - | - | - | - | - | - | - | 1 |
| Square button | - | - | - | - | - | - | - | - | - | - | - | - | 1 |
| Worked antler object | - | - | - | 5 | - | - | - | 9 | - | - | - | - | 14 |
| Blank | 1 | - | - | 1 | - | - | - | 2 | - | - | - | - | 2 |
| Debitage | 1 | - | - | 71 | - | - | - | 19 | - | - | 1 | - | 339 |
| Bone: |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Awl/Punch | - | - | - | 2 | - | - | - | - | - | - | - | - | 1 |
| Blank | - | - | - | - | - | - | - | - | - | - | - | - | 1 |
| Bodkin | - | - | - | - | - | - | - | 1 | - | - | - | - | - |
| Drill cap | - | - | - | - | - | - | - | 1 | - | - | - | - | - |
| Harpoon foreshaft | - | - | - | - | - | - | - | 1 | - | - | - | - | - |
| Gorge | - | - | - | - | - | - | - | 1 | - | - | - | - | 1 |
| Peg | - | - | - | - | - | - | - | 1 | - | - | - | - | - |
| Pendant | - | - | - | - | - | - | - | - | - | - | - | - | 1 |
| Polished tooth | - | - | - | - | - | - | - | - | - | - | - | - | 1 |
| Snow goggles | - | - | - | 1 | - | - | - | - | - | - | - | - | - |
| Worked bone object | - | - | - | 3 | - | - | - | 1 | - | - | - | - | 3 |
| Debitage | - | - | - | 12 | 3 | 5 | - | 33 | - | - | - | - | 90 |

TABLE S2. Artifacts recovered from test units A (Nukleet/Yup'ik midden), C (House 115; prehistoric, possibly Yup'ik), D (House 115; prehistoric, possible Yup'ik), E (House 66; late Yup'ik midden to historic house), G (House 118; early Nukleet house?), H (Inupiat house foyer; mid-1800s to 1900), I (House 99; early Nukleet qasgiq), J (House 63; Nukleet/Yup'ik midden to historic Yup'ik house), K (House 87; prehistoric), M (House 106; prehistoric), N (outside House 103; prehistoric), O (House 8; prehistoric, possibly Yup'ik), and P (House 99; Nukleet men's house) at the Shaktoolik Airport site. Artifacts were not recovered from units B, F, and L-continued:

|  | A | C | D | E | G | H | I | J | K | M | N | O | P |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Ivory: |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Arrowhead | - | - | - | 1 | - | - | - | 1 | - | - | - | - | - |
| Awl | - | - | - | - | - | - | - | - | - | - | - | - | 6 |
| Bodkin | - | - | - | - | - | - | - | - | - | - | - | - | 1 |
| Bracelet link | - | - | - | - | - | - | - | - | - | - | - | - | 1 |
| Carving, seal head | - | - | - | - | - | - | - | 1 | - | - | - | - | - |
| Chisel bit | - | - | - | - | - | - | - | - | - | - | - | - | 1 |
| Fish hook | - | - | - | 1 | - | - | - | - | - | - | - | - | 1 |
| Fish-spear component | - | - | - | - | - | - | - | - | - | - | - | - | 2 |
| Float nozzle | - | - | - | - | - | - | - | - | - | - | - | - | 2 |
| Handle, composite knife | - | - | - | - | - | - | - | 1 | - | - | - | - | - |
| Harpoon blank | - | - | - | - | - | - | 1 | - | - | - | - | - | - |
| Harpoon finger rest | - | - | - | - | - | - | - | - | - | - | - | - | 1 |
| Labret | - | - | - | - | - | 1 | - | - | - | - | - | - | - |
| Needle | - | - | - | - | - | - | - | 1 | - | - | - | - | 1 |
| Ornament | - | - | - | - | - | - | - | 1 | - | - | - | - | - |
| Toggle | - | - | - | - | - | - | - | - | - | - | - | - | 1 |
| Worked ivory object | - | - | - | - | - | - | - | 1 | - | - | - | - | 7 |
| Preform | - | - | - | - | - | - | - | - | - | - | - | - | 1 |
| Debitage | - | - | - | 9 | - | 1 | - | 8 | - | - | - | - | 116 |
| Whale bone: |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Drilled whale bone object | - | - | - | 1 | - | - | - | - | - | - | - | - | - |
| Sled runner | - | - | - | 2 | - | - | - | - | - | - | - | - | - |
| Wedge | - | - | - | 1 | - | - | - | - | - | - | - | - | - |
| Whale bone gaming piece with wooden pegs | - | - | - | 1 | - | - | - | - | - | - | - | - | - |
| Worked whale bone object | - | - | - | 1 | - | - | - | - | - | - | - | - | 1 |
| Debitage | - | - | - | 1 | - | - | - | 2 | - | - | - | - | 1 |
| STONE: <br> Amber: |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Bead | - | - | - | - | - | - | - | - | - | - | - | - | 1 |
| Basalt: |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Adze bit | - | - | - | - | - | - | 1 | - | - | - | - | - | - |
| Biface | - | - | - | - | 1 | - | 1 | 1 | - | - | - | - | - |
| Core | - | - | - | - | - | - | 1 | - | - | - | - | - | - |
| Graver | - | - | - | - | 1 | - | - | - | - | - | - | - | - |
| Groundstone object | - | - | - | 1 | - | - | 1 | - | - | - | - | - | - |
| Retouched flake | - | - | - | - | - | - | - | 1 | - | - | - | - | - |
| Used flake | - | - | - | - | - | - | 4 | 1 | - | - | - | - | - |
| Debitage | - | - | - | 8 | 20 | 2 | 65 | 12 | 1 | - | - | - | 17 |
| Chert/Chalcedony: |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Biface | 1 | - | - | - | - | - | - | - | - | - | - | - | - |
| Core | - | - | - | 1 | - | - | - | - | - | - | - | - | 1 |
| Drill | - | - | - | - | - | - | - | - | 1 | - | - | - | - |
| Scraper | - | - | - | - | 1 | - | - | - | - | - | - | - | - |
| Retouched flake | - | - | - | - | - | 2 | - | - | - | - | - | - | - |
| Used flake | - | - | - | - | - | - | 2 | - | - | - | - | - | - |
| Debitage | - | 1 | - | 4 | 4 | 2 | 26 | 4 | 2 | - | - | - | 10 |
| Local river stone: |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Abrading stone | - | - | - | - | - | - | - | 3 | - | - | - | - | - |
| Adze | - | - | - | - | - | - | 1 | - | - | - | - | - | - |
| Biface | - | - | - | - | - | - | - | - | - | - | - | 1 | - |
| Bola stone? | - | - | - | 2 | - | - | - | 1 | - | - | - | - | - |
| Groundstone object | - | - | - | - | - | - | - | 1 | - | - | - | - | 1 |
| Hammerstone | - | - | - | 4 | 1 | - | - | - | - | - | - | - | - |
| Net-weight stone | - | - | - | - | - | - | - | 5 | - | - | - | - | - |
| Scraper | - | - | - | - | - | - | 1 | - | - | - | - | - | 1 |
| Skin smoother | - | - | - | 1 | - | - | - | - | - | - | - | - | - |
| Spokeshave | - | - | - | - | - | - | - | - | - | - | - | - | 1 |
| Uniface | - | - | - | - | - | - | 1 | - | - | - | - | - | - |
| Whetstone | - | - | - | 3 | - | - | - | - | - | - | - | - | - |
| Used flake | - | - | - | - | - | 1 | 6 | 1 | - | - | 1 | - | - |
| Debitage | - | - | - | 4 | 16 | 2 | 109 | 36 | 1 | 2 | - | - | 46 |

TABLE S2. Artifacts recovered from test units A (Nukleet/Yup'ik midden), C (House 115; prehistoric, possibly Yup'ik), D (House 115; prehistoric, possible Yup'ik), E (House 66; late Yup'ik midden to historic house), G (House 118; early Nukleet house?), H (Inupiat house foyer; mid-1800s to 1900), I (House 99; early Nukleet qasgiq), J (House 63; Nukleet/Yup'ik midden to historic Yup'ik house), K (House 87; prehistoric), M (House 106; prehistoric), N (outside House 103; prehistoric), O (House 8; prehistoric, possibly Yup'ik), and P (House 99; Nukleet men's house) at the Shaktoolik Airport site. Artifacts were not recovered from units B, F, and L-continued:

|  | A | C | D | E | G | H | I | J | K | M | N | O | P |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Metamorphic: |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Adze, splitting | - | - | - | - | - | - | - | 1 | - | - | - | - | 1 |
| Blank | - | - | - | - | - | 2 | - | - | - | - | - | - | 1 |
| Bola stone? | - | - | - | - | - | - | 1 | - | - | - | - | - | - |
| Debitage | - | - | - | 1 | - | 1 | 15 | 5 | - | - | - | - | 196 |
| Net-weight stone | - | - | - | 1 | - | - | - | 1 | - | - | - | - | - |
| Retouched flake | - | - | - | - | - | - | 1 | - | - | - | - | - | - |
| Used flake | - | - | - | - | - | - | - | - | - | - | - | - | 1 |
| Whetstone | - | - | - | 2 | - | - | - | - | - | - | - | - | - |
| Nephrite: |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Debitage | - | - | - | - | - | - | 2 | - | - | - | - | - | - |
| Obsidian: |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Debitage | - | - | - | - | - | 1 | 3 | 4 | - | - | - | - | - |
| Scraper | - | - | - | - | 1 | - | - | - | - | - | - | - | - |
| Ochre: |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Ochre fragment | - | - | - | - | - | 1 | - | - | - | - | - | - | 9 |
| Pumice: |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Abrading stone | - | - | - | - | - | - | - | - | - | - | - | - | 1 |
| Shaft smoother | - | - | - | - | - | - | - | - | - | - | - | - | 1 |
| Debitage | - | - | - | - | - | - | - | - | - | - | - | - | 1 |
| Unmodified pebble | - | - | - | - | - | - | 1 | - | - | - | - | - | - |
| Pyrite: |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Pyrite fragment | - | - | - | - | - | - | - | - | - | - | - | - | 6 |
| Quartz: |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Net weight stone | - | - | - | - | - | - | 1 | - | - | - | - | - | - |
| Core | - | - | - | 1 | - | - | - | - | - | - | - | - | - |
| Used flake | - | - | - | - | - | - | - | - | - | - | - | 1 | 2 |
| Debitage | - | - | - | 1 | - | - | 2 | 1 | - | - | - | - | 5 |
| Slate: |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Biface | - | - | - | - | 2 | - | 1 | 1 | - | - | - | - | 3 |
| Blank/core | - | - | - | - | - | - | - | - | 1 | - | - | - | - |
| Cutting board | - | - | - | 1 | - | - | - | - | - | - | - | - | - |
| Endblade, harpoon | - | - | - | - | - | - | 3 | 1 | - | - | - | 1 | 5 |
| Graver | - | - | - | - | - | - | 1 | - | - | - | - | - | - |
| Groundstone tool | - | - | - | 1 | 1 | - | - | - | 1 | - | - | - | - |
| Knife | - | - | - | 1 | 1 | - | - | - | - | - | - | - | - |
| Knife with lashing hole | - | - | - | 2 | - | - | - | - | - | - | - | - | - |
| Lance head | - | - | - | 1 | - | - | - | - | - | - | - | - | - |
| Rock saw | - | - | - | 1 | - | 1 | - | - | - | - | - | - | - |
| Scraper | - | - | - | - | 1 | 1 | 1 | - | - | - | 1 | - | - |
| Slate blade fragment | 2 | - | - | 1 | 4 | - | 2 | 10 | 1 | - | - | - | 2 |
| Ulu | - | - | - | - | 2 | 2 | 1 | 3 | - | - | - | 1 | 1 |
| Ulu blank, biface | - | - | - | - | 1 | - | 1 | - | - | - | - | - | - |
| Ulu, miniature | - | - | - | 1 | - | - | - | - | - | - | - | - | - |
| Uniface | - | - | - | - | 1 | - | - | - | - | - | - | - | - |
| Whetstone | - | - | - | 2 | - | 1 | 1 | 4 | - | - | - | 1 | - |
| Retouched flake | - | - | - | - | 1 | - | 1 | 1 | - | - | 1 | - | 4 |
| Used flake | - | - | - | - | - | - | 1 | 4 | - | - | - | 1 | 2 |
| Debitage | 3 | - | - | 22 | 12 | 5 | 200 | 54 | 13 | - | 1 | 2 | 195 |
| Volcanic: |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Adze | - | - | - | - | 1 | - | - | - | - | - | - | - | - |
| Groundstone tool | - | - | - | 1 | 1 | - | - | - | - | - | - | - | - |
| Hammerstone | - | - | - | 2 | - | 1 | - | 1 | 1 | - | - | - | - |
| Net-weight stone | - | - | - | - | - | 1 | - | - | - | - | - | - | - |
| Scraper/chopper | - | - | - | - | - | - | 1 | - | - | - | - | - | - |
| Whetstone | - | - | - | - | - | 1 | - | - | - | - | - | - | - |
| Debitage | - | - | - | - | - | - | 6 | 1 | - | - | - | - | - |

TABLE S2. Artifacts recovered from test units A (Nukleet/Yup'ik midden), C (House 115; prehistoric, possibly Yup'ik), D (House 115; prehistoric, possible Yup'ik), E (House 66; late Yup'ik midden to historic house), G (House 118; early Nukleet house?), H (Inupiat house foyer; mid-1800s to 1900), I (House 99; early Nukleet qasgiq), J (House 63; Nukleet/Yup'ik midden to historic Yup'ik house), K (House 87; prehistoric), M (House 106; prehistoric), N (outside House 103; prehistoric), O (House 8; prehistoric, possibly Yup'ik), and P (House 99; Nukleet men's house) at the Shaktoolik Airport site. Artifacts were not recovered from units B, F, and L-continued:

|  | A | C | D | E | G | H | I | J | K | M | N | O | P |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Sandstone: |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Abrading stone | 1 | - | - | 5 | 2 | 1 | 6 | 18 | 1 | - | - | 1 | 2 |
| Blank | - | - | - | - | - | - | - | - | - | - | - | 1 | - |
| Chopper | - | - | - | - | - | - | - | 1 | - | - | - | - | - |
| Groundstone object | - | - | - | 2 | - | - | - | - | - | - | - | - | 1 |
| Hammerstone | - | - | - | - | - | 1 | 1 | 2 | - | - | - | - | - |
| Maul | - | - | - | - | - | - | - | - | - | - | - | - | 1 |
| Net-weight stone | - | - | - | - | 1 | - | - | 1 | - | - | - | - | 1 |
| Raw material | - | - | - | 1 | - | - | - | - | - | - | - | - | - |
| Rock saw | - | - | - | 1 | - | - | - | - | - | - | - | - | - |
| Scraper | - | - | - | 2 | - | - | - | 1 | - | - | - | - | - |
| Spokeshave | - | - | - | - | - | - | - | 1 | - | - | - | - | - |
| Whetstone | - | - | - | 4 | - | 1 | - | 2 | - | 1 | - | - | 1 |
| Used flake | 1 | - | - | 3 | - | - | 7 | 2 | - | - | - | - | 8 |
| Retouched flake | - | - | - | 1 | - | - | - | - | - | - | 1 | - | 1 |
| Blank | - | - | - | 1 | - | - | - | 1 | - | - | - | - | - |
| Debitage | - | - | - | 10 | - | 11 | 1 | 47 | - | - | 1 | - | 27 |
| Silicified slate: |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Biface | - | - | - | - | - | - | - | 1 | - | - | - | - | - |
| Pick | - | - | - | 1 | - | - | - | - | - | - | - | - | - |
| Scraper | - | - | - | - | - | - | - | - | - | - | - | - | 1 |
| Used flake | - | - | - | - | - | - | - | - | - | - | - | - | 1 |
| Debitage | - | - | - | 1 | - | - | - | - | - | 1 | - | - | 3 |
| WOOD: |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Bark: |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Bark fragment | - | - | - | 38 | 5 | - | 3 | 51 | - | - | - | - | 50 |
| Worked bark | - | - | - | 3 | - | - | - | 3 | - | - | - | - | - |
| Spoon | - | - | - | - | - | - | 1 | - | - | - | - | - | - |
| Wood: |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Arrowhead | - | - | - | 3 | - | - | - | - | - | - | - | - | - |
| Awl | - | - | - | 1 | - | - | - | 2 | - | - | - | - | - |
| Bow part | - | - | - | 2 | - | - | - | 1 | - | - | - | - | - |
| Bowl | - | - | - | 1 | - | - | - | 1 | - | - | - | - | - |
| Box part | - | - | - | 2 | - | - | - | - | - | - | - | - | - |
| Chisel | - | - | - | 1 | - | - | - | 1 | - | - | - | - | - |
| Harpoon dart foreshaft | - | - | - | 2 | - | - | - | 1 | - | - | - | - | - |
| Harpoon dart shaft | - | - | - | 1 | - | - | - | - | - | - | - | - | - |
| Drilled wood object with wood peg | - | - | - | 1 | - | - | - | - | - | - | - | - | - |
| Flat board with grass lashing | - | - | - | 1 | - | - | - | - | - | - | - | - | - |
| Kayak deck beam | - | - | - | 1 | - | - | - | - | - | - | - | - | - |
| Labret | - | - | - | - | - | - | - | 1 | - | - | - | - | - |
| Net float | - | - | - | 2 | - | - | - | - | - | - | - | - | - |
| Net shuttle | - | - | - | 1 | - | - | - | - | - | - | - | - | - |
| Peg | - | - | - | 3 | - | - | - | 2 | - | - | - | - | - |
| Plank | - | - | 1 | - | - | - | - | - | - | - | - | - | - |
| Platter | - | - | - | 1 | - | - | - | - | - | - | - | - | - |
| Projectile point | - | - | - | - | - | - | 1 | - | - | - | - | - | - |
| Rod | - | - | - | - | - | - | - | - | - | - | - | - | 2 |
| Shaft | - | - | - | 25 | - | - | - | 24 | - | - | - | - | 3 |
| Shim/wedge | - | - | - | 2 | - | - | - | 1 | - | - | - | - | - |
| Skin scraper | - | - | - | 1 | - | - | - | - | - | - | - | - | - |
| Sled component | - | - | - | 2 | - | - | - | - | - | - | - | 1 | - |
| Snare component | - | - | - | 2 | - | - | - | 1 | - | - | - | - | - |
| Snowshoe component | - | - | - | 3 | - | - | - | 1 | - | - | - | - | - |
| Spoon | - | - | - | - | - | - | - | 1 | - | - | - | - | - |
| Stake | - | - | - | 1 | - | - | - | 1 | - | - | - | - | - |
| Toggle | - | - | - | 1 | - | - | - | 1 | - | - | - | - | - |
| Toy/story knife | - | - | - | 1 | - | - | - | - | - | - | - | - | - |
| Ulu handle | - | - | - | - | - | - | - | 1 | - | - | - | - | - |
| Wick trimmer | - | - | - | 5 | - | - | - | 3 | - | - | - | - | - |
| Worked wood object | - | - | - | 31 | - | - | - | 44 | - | - | - | 1 | 4 |
| Worked wood fragment | - | - | - | 104 | - | - | - | 44 | - | - | - | - | 21 |


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