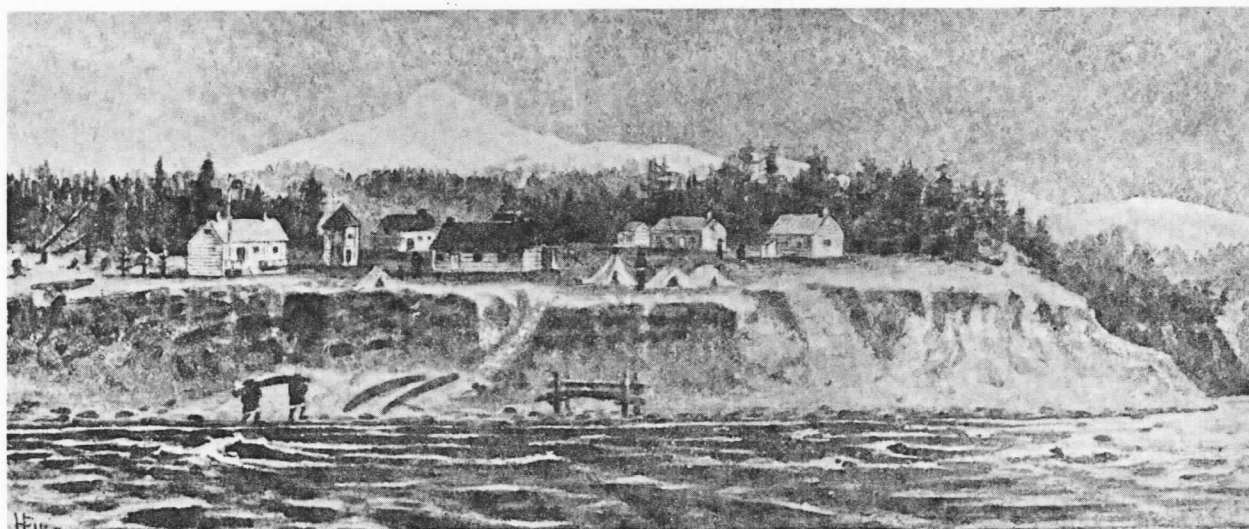


KOLMAKOVSKIY REDOUBT

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KOLMAKOVSKIY REDOUBT

The Ethnoarchaeology of a Russian Fort in Alaska

By Wendell H. Oswalt

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PREFACE

Kolmakovskiy Redoubt, located along the central Kuskokwim River in western Alaska, was founded by the Russian-American Company in 1841. The company's overt purpose was the expansion of its trade in beaver and land-otter pelts harvested by local Eskimos and Indians. This was one of the most remote stations of the Russian-American Company and was its only redoubt deep in the interior. During the Russian era in Alaska, company traders introduced not only Western manufactures but also Russian values and the Russian Orthodox religion to the local Eskimos and Indians. In 1866 the Russians abandoned the redoubt, or fort, in anticipation of the sale of Alaska to the United States, but it was reoccupied by Anglo-American traders from ca. 1870 to 1917. Documentary accounts about the redoubt during its formative years are reasonably useful, but relatively little was written concerning the late Russian era or the Anglo-American period that followed. To obtain more complete data relevant to life at the fort, most of the structural remains were excavated in 1966 and 1967. This report integrates the ethnographic and historical information about the settlement with the archaeological finds.

A second purpose of excavating Kolmakovskiy Redoubt was to plot historic changes in the lives of Eskimos in western Alaska, especially those living along the Kuskokwim River. I began to focus my interest on the people of the Kuskokwim in the early 1950s, and in 1953 I visited the area to collect ethnographic information. I sought to obtain data about the local way of life during the period of direct historic contact and thereby expand on the 1843-44 observations by the Russian ethnographer Lavrentiy A. Zagoskin. It soon was apparent, however, that elderly Eskimos were best informed about life at the turn of the present century and rarely had an interest in the more remote past. Thus I changed the orientation of my fieldwork in 1954 and concentrated on the period around 1900. This ethnohistorical focus was interrupted in 1955-56 by my study of the current life-style in a lower Kuskokwim Eskimo community, the village of Napaskiak (Oswalt 1963b). A few years after completing this project, I located the diaries and letters of the Moravian missionary William H. Weinland, who traveled along the Kuskokwim in 1884 and was a cofounder of the Moravian Mission at Bethel in 1885. This material, preserved in the Weinland Collection at the Huntington Library, San Marino, California, was an obvious core around which to write a study of changing Eskimo life. Supplementing the Weinland data with my field notes from the 1950s, I wrote a book that dealt primarily with Kuskokwim Eskimo culture change from 1884 to 1925 (Oswalt 1963a). By this time I realized the limitations of documentary and published sources, and I knew that local Eskimos could recall little about the pre-1900 period without prods to their memories. I then turned to archaeological methods to broaden the data base about historic changes in Kuskokwim Eskimo culture. One project was the excavation of the central river site of Crow Village, which had been occupied from ca. 1780 to 1910 (Oswalt and VanStone 1967). Elderly Eskimos were able to provide considerable information about the artifacts recovered and made it possible to expand the interpretations of the finds. However, nothing was recovered that could be attributed unquestionably to the Russians, despite the probability that the site was occupied during the entire Russian era.

The excavation of Kolmakovskiy Redoubt was expected to reveal much about the course of

1960s; a similar form was found at Crow Village (Oswalt and VanStone 1967: 39). The five metal spool ends found probably are **film spools for cameras** (Pl. 21 h). Four of the five are ca. 2.5 cm. in diameter, flanged at the base and again at the central opening that is in each instance about 1 cm. wide; pieces of wood still adhere to the metal at the central opening of most specimens. The fifth spool is about 3.2 cm. in diameter and has a central flanged opening about 1 cm. wide.

PERSONAL ADORNMENTS

During the early historic period the most popular and valuable personal adornments may have been "Russian blue beads." Women often wore them suspended from a sinew thread passed through a hole in the nasal septum, or they were hung from the labrets of men or women (Zagoskin 1967: 211). The earliest specific reference to bead preferences is in the report written by Ivanov when he traveled along the central Kuskokwim and lower Yukon rivers in the early 1790s. In a summary of Ivanov's account Davydov (1977: 201-2) noted that the people especially desired white beads. In the Russian-American Company records (CR, v. 3, no. 274, Mar. 13, 1823) an early specific reference to the Kuskokwim notes that azure blue beads should be sent for the trade with these people, presumably those who visited Aleksandrovskiy Redoubt, and for the people of Nunivak Island. In another report (RAC:CS, v. 9, no. 555, Nov. 16, 1832) it was noted that particular types of beads were popular at Nushagak, but they were not identified because samples accompanied the report. We know too that the inventory of trade goods carried by Zagoskin in the early 1840s included diverse types of beads.

Comparatively few references note how beads were worn in later years along the Kuskokwim. We may assume that they were most popular as parka trimming and as decorations hung from earrings. In 1884 Weinland did comment about the beadwork worn by a young Ohagamiut girl who was pampered by her parents. She had a cap covered with various colored beads; from the sides hung wide, ribbon-like strings of beads that reached below her waist and folded back again, with the ends attached to a plate at her breast covered with beads and brass buttons. She also wore a beaded skin belt with empty brass cartridges hanging from it (WC, diary, July 1, 1884).

In addition to beads we know that other items of personal adornment were traded into the region. In the early 1840s Zagoskin (1967: 161-2) included an assortment of bells, bracelets, brooches, buttons, dentalium shells, earrings, and rings in his inventory of goods.

Beads from the structures numbered 2431; most of them are either "seed" or "pound" beads. Seed beads are so named because of their small size and seem to have been sold by the string, while pound beads usually were sold by weight. Beads ranging from .15 to .26 cm. in diameter are classed as seed beads; pound beads range from .28 to .75 cm. in diameter. Large seed and small pound beads seldom overlap, which suggests that the size difference is meaningful. They are either opaque or translucent, and the colors tend to grade into one another either because of the manufacturing process or soil conditions affecting them after they were lost. The miscellaneous category of beads includes examples of large and small beads that are usually spheroid or subcylindrical in outline, but beads of these shapes were scarce at the site.

In levels attributed to the Russian era, opaque white pound beads were recovered far more often (472 examples) than any other types. These were followed in number by opaque blue seed beads (134), then by dark red pound beads with black centers (75), and finally pale to dark blue

pound beads (72). The most plentiful bead types represented in the Anglo-American era levels are white pound beads (356), white seed beads (217), blue seed beads (124), and red pound beads with black centers (80). The beads from Kolmakovskiy are discussed at length in Chapter 11 with special reference to their distribution in the foundations, and comparisons are drawn with bead frequencies from other historic sites in southwestern Alaska.

Two small brass **finger rings** apparently were for babies (Pl. 22 a); another ring with a white stone setting was probably for a man (Pl. 22 c). The latter is the only item of personal adornment from a Russian level apart from beads. A fourth ring with the setting missing appears to be a woman's ring (Pl. 22 b). The only **brooch** has a lavender-colored stone fitted into an engraved brass mounting (Pl. 22 e), and a small wire **bracelet** has the letters "BABY" engraved on four heart-shaped brass dangles (Pl. 22 g). A painted piece of porcelain appears to have been from a **religious pendant** (Pl. 22 k). Found on the beach at Kolmakovskiy was an ivory **labret** with a human face carved on the outer surface (Pl. 22 d); this artifact probably is older than any of the finds at the site itself.

GROOMING

Three pieces of **rubber combs** were recovered. Two have coarse teeth on one side; the third has fine teeth on both sides and an 1851 Goodyear patent date.

CLOCKS AND WATCHES

Parts of timepieces were found but only in the more recent levels. One **watch face** (S-E-2) has Arabic numbers (Pl. 22 f); another (S-E-1) has Roman numerals (Pl. 22 h). Both appear similar to those illustrated in turn-of-the-century merchandise catalogs.

TOBACCO COMPLEX

Tobacco was available from Siberia before direct Russian contact. It was taken as snuff or chewed by men and women, or was smoked in pipes by men. To prepare snuff, leaf tobacco was shredded, dried, pounded into a powder, and sifted. Snuff was kept in a small box and inhaled through a bird-bone tube into one nostril and then the other. Leaf tobacco to be chewed was shredded and then mixed with the ash of birch fungus. The quids usually were prepared by women and chewed slightly to blend the ingredients; the pellets then were placed in small quid boxes for later use. Chewing tobacco was held in the cheek, and the juice was usually swallowed. Smoking tobacco was shredded and placed in a small bag. Pipe bowls made from stone or metal were attached to stems usually made of wood. A tuft of fur was placed in the bottom of the bowl, and the tobacco was packed on top. The tobacco was lighted, and the smoke was inhaled with a deep breath that was held as long as possible (Nelson 1899: 271-85).

Pipes are represented by both stems and bowls. On the upper face of one curved **rubber pipe stem** the letters "C.P.F." are impressed inside an oval, with the words "CHESTERFIELD" below and "SOLID RUBBER" on the underside (Pl. 22 i); C.P.F. stands for the Colossal Pipe Factory founded in 1851 and owned by Kaufmann Brothers and Bondy, Inc. (Kelley 1954: 68). Two other pipe stems are made of bakelite. The first experimental production of bakelite was by Leo H. Baekeland in 1907, and by 1910 the Bakelite Company was marketing items of this material (Leyson 1945: 67). There are two bowls from **elbow brier pipes**, and found in a Russian level was a **clay pipe stem** fragment with the letters "McDOUGA . . . ASCOW" intact

CHAPTER 10

Trade Goods

Russian traders presumably were welcomed by most Eskimos and Indians along the Kuskokwim because they made trade goods locally available. The long trip to Aleksandrovskiy Redoubt for Western imports was largely a thing of the past in the late 1830s, and the people no longer were dependent on Siberian sources or Russian stations along Cook Inlet for Western manufactures. However, in spite of the efforts of Russian-American Company agents to expand the inland trade in southwestern Alaska, the records convey the impression that imported goods were neither varied nor abundant. The same is true to a lesser extent for the Anglo-American period before about 1890. Perhaps a major contribution of these traders, Russian and American alike, was that they managed and intensified the exchange of local products on a wider and more dependable basis than had prevailed in aboriginal times.

It certainly seems that a very limited selection of manufactured trade products was available at the Kuskokwim stations and other northern ones throughout most of the Russian era. For example, Zagoskin (1967: 102) wrote of the St. Michael station in the early 1840s, "The trade between the natives and the fort is limited to their demands for tobacco, European iron and copper products, and a small number of manufactured trifles." Kolmakovskiy Redoubt in December, 1843, had "practically no trade goods" (Zagoskin 1967: 208), and the next year the inventory also was limited. "Owing to the difficulties of transportation the quantity of European goods traded is negligible, and the biggest turnover is in native products, such as deerskins, thongs, tanned sealskins, and fats" (Zagoskin 1967: 255). Much the same conditions prevailed in 1861; Illarion listed only a few manufactured items in addition to the nonlocal products such as seal blubber and sealskins being traded (DRHA, v. 2: 93). This pattern continued into the Anglo-American era. In the federal census of 1890 (Porter 1893: 253) we find, "A considerable part of the fur trade in this region [the Kuskokwim] is carried on by first purchasing oil and blubber of the poverty-stricken coast tribes who have no furs, and then exchanging these articles with the inhabitants of the upper river for marten, otter, fox and bear skins."

The inventory of goods introduced by the Russians at Kuskokwim posts and at other northern stations from 1818 through 1844 does not appear to have accommodated preferences by the local clientele. The same items usually appear on different lists irrespective of the region or the people involved. The imports often were items that could not be sold in the south and were shipped north labeled as "trade goods for the savages" (Zagoskin 1967: 247). The earliest lengthy inventory of trade goods was compiled by Zagoskin (1967: 161-2) as he prepared for a trip along the Yukon River in 1843. Included were 20 funts (1 funt equals 0.9 lb. or 0.41 kg.) of tobacco and 11 funts of glass beads—white, red, and black; 80 strings of steel-blue beads; 517 dentalium shells; 400 needles; 75 copper tinker bells; 24 pairs of earrings with enamel-covered glass pendants; 40 small bells; 22 copper rings; 20 naval uniform buttons; 10 hollow buttons; 9 scrapers; 6 pairs of bronze earrings; 8 Aleut hatchets; 6 tin pipes; 6 horn combs; 4 flints, probably strike-a-lights; 4 Yakut long-stemmed pipes; 4 Yakut knives; 3 pairs of copper

bracelets; 3 small mirrors; and 2 pairs of iron bracelets. The most remarkable characteristic of this inventory is the nonutilitarian purpose served by most of the items. The only useful item listed in significant quantity was needles.

In the Russian-American Company records tobacco was infrequently mentioned, as is true for trade items in general. The importance of tobacco, however, appears to have been great. For example, in late December, 1861, a special sled was sent from Kolmakovskiy to St. Michael for flour and tobacco (ID, Dec. 28, 1861), and in early March the following year another sled was dispatched there for the same purpose. Illarion wrote, "It is impossible to achieve anything with the savages if there is no tobacco. Tobacco to a savage is the same as bread is to a Russian" (ID, Mar. 1, 1862).

Beads appear to have been the trade item most desired after tobacco. From the trader's point of view they must have been an ideal item for exchange. Beads were cheap and so compact that large quantities could be transported easily; they were not readily breakable, and they could be bartered individually or by the thousand. The major problem was to have available the most desired colors and shapes. A clear indication that luxury goods were an important part of the trade is reflected in the value of a variety of clear, greenish-blue bead. In the vicinity of St. Michael in the early 1840s a flawless matched pair was worth three to four caribou skins, and along the Kuskokwim it would be worth about ten beaver skins (Zagoskin 1967: 101).

The 1842 trade inventory by Zagoskin (1967: 82, 285, fn. 7) included tobacco, dentalium shells, and "large red and white beads" as the principal items. He possibly meant red beads with white centers, although he may have intended to refer to separate red and white beads. Elsewhere he mentioned additional types of beads traded in northern Alaska. Included were colored glass bugle beads, "blue tubular and round beads," "white and black beads," black beads, "white and red beads," "red and white glass beads," "black and white beads," and red ones (Zagoskin 1967: 106, 114, 145, 148, 149, 168, 170, 246, 247, 280).

Another group of trade items often appeared under the heading of "trifles," "other trade goods," or "etc." These were manufactures other than beads intended for personal use or adornment. The entries sometimes were very general and at other times were highly specific, which makes it impossible to isolate overlapping categories. Among the items similar to those mentioned in previous lists but not cited in specific terms were smooth, red copper bracelets; brass earrings; rings of copper or wire; iron armbands embossed with copper; and mirrors with paper frames (Zagoskin 1967: 102, 155, 170, 246, 263, 293, fn. 49).

One specific item of clothing included in trading inventories was the large Tlingit Indian cape. These were embroidered with various patterns; one was described as made from black broadcloth and bordered with a pattern of red crosses. These capes were popular particularly among the Upper Kuskokwim Indians. Other items of clothing specifically mentioned in trading inventories or bartered on an individual basis were calico or quilted shirts, "English" shirts, parka covers of cotton ticking, and cloth dresses, caps, trousers, and shoes (Zagoskin 1967: 149, 185, 196, 269, 301, fn. 104).

The list of utensils included a generalized category of copper and iron items and a cast-iron grouping, broken down more specifically as iron or sheet-iron kettles, pitchers and ladles, copper jugs, and copper tankards (Zagoskin 1967, 114, 116, 184, 246, 247). The only other forms mentioned but not cited in the previous text are the Yenisei ax and Tungus spear (Zagoskin 1967: 246, 294, fn. 56).

CHAPTER 11

Chronology and Comparisons

One of the principal reasons for digging at Kolmakovskiy was to distinguish between Russian and Anglo-American artifacts on the basis of their locations in excavated structures. In addition, it was hoped that the historic lists of Russian trade goods could be expanded. As the collection was described in Chapters 5, 6, and 7, comments often were made about whether particular finds could be attributed to the Russian or Anglo-American period. The time has come to summarize the chronology of the buildings and to draw comparisons with material found in contemporaneous Eskimo and Indian sites in southwestern Alaska.

The foundations dug at Kolmakovskiy are listed in Table I, and a time span is assigned to each excavation unit. The particular years attributed to a foundation, its level or levels, have been based largely on dates in documents or publications. Statements by the local people and "dated" artifacts were secondary sources for the chronology. Eskimos often have a difficult time remembering dates, and the dates of artifact types, referenced in Chapters 5-7 or in Appendix I, are not especially reliable guides to the age of the levels with which they are associated. For instance, a Goodyear rubber button with an 1851 patent date could have been used for many years, and rubber buttons bearing this date apparently were made long after 1851. Because the purposes served by two structures are in doubt, their dating, which is based on written references about their functions, must necessarily be inconclusive. We know that a "priest's" house and a "prayer" house existed, but whether these were the foundations identified as S-I and S-K respectively is not certain.

When an attempt is made to distinguish between Russian and Anglo-American era imports, the finds from only certain structures and particular levels are helpful. The artifacts from buildings S-A and S-B are set aside because each excavation has only one level. Likewise the finds from buildings occupied only during the Anglo-American era are not pertinent (S-D, S-E, S-G, and S-H). The debris from five foundations is associated with the Russian era; these are level 1 in S-C, S-F, and S-J plus levels 1 and 2 in S-I and S-K. These levels are attributed to Russian occupation not only because they were the deepest in Russian-era structures, but they rarely included the clearly Anglo-American debris that was abundant in higher levels and in other foundations (e.g., cartridges, wire nails, and double-seamed tin cans). In the lowest or Russian level of the creole barracks (S-J-1), a .44 caliber rimfire cartridge probably is intrusive; no other cartridges were found in this level or in the level above it. Likewise a bitters bottle from S-J-1 of a form made for Dr. J. Hostetter beginning in 1857 may be intrusive. Nearly all of the finds from the lowest level in the Eskimo barracks (S-F-1) represent the Russian era, but there are two clear exceptions. One is an ironstone sherd with an 1880-1900 potter's mark, and the other is a wire nail that probably was made after 1880. We might also suspect that the three rimfire .44 caliber cartridges found there are intrusive. Other finds in S-F-1 are attributed to the Russians because they are similar to, or nearly identical with, artifacts found in other Russian levels.

Table 1. Occupation spans for the levels in excavated structures.

Structure	Level(s)	Approximate span of deposit	Notes
Store (S-A)	1	1841-1917	
Blockhouse (S-B)	1	1841-1917	
	2,3	1880-1917	
Kashim (S-C)	1	1843-1860	
	2,3	1891-1917	
Bathhouse No. 2 (S-D)	1	1850-1890	midden
Old Andrew's house (S-E)	1,2,3	1898-1917	
	2,3	1870-1917	
Eskimo barracks (S-F)	1	1842-1866	
Separe house (S-G)	1	1881-1917	
Bathhouse No. 1 (S-H)	1	1870-1880	
	3,4	1870-1917	midden
Priest's house (S-I)	1,2	1863-1866	
	4	1891-1917	
	2,3	1870-1890	
Creole barracks (S-J)	1	1842-1866	
Prayer house (S-K)	1,2	1847-1860	

The artifacts analyzed from the structures, and a few others from either the tests or random finds, number about 10,650 specimens. Of this total about 2500 are associated with the Russian era; they are listed in Appendix II. Nearly two-thirds of the Russian-era specimens are either beads (865) or ironstone sherds (809). If these 2500 finds are correctly attributed to the 15 years of Russian occupation (1841-66), then the average number of objects recovered for each year represented is 167; of this total about 112 finds are either beads or ironstone sherds. Beads and ironstone clearly dominate the Russian-era finds at Kolmakovskiy, and this helps explain why these imports were often found at contemporaneous Eskimo sites in southwestern Alaska.

The Anglo-American era (ca. 1870-1917) is represented by about 8125 finds, about half of which are either pieces of ironstone (2623) or beads (1567). Thus the average number of finds per year was about 173, and of this total about 89 were either beads or ironstone sherds. Again this is not a very impressive yearly average considering that Kolmakovskiy was a major Anglo-American trading station along the Kuskokwim. It is surprising that the yearly average of specimens deposited was about the same during the Russian and Anglo-American periods.

It certainly appears that a great deal, possibly even most, of the trade goods arriving at Sitka during the Russian era did not come from Russia. Access from European Russia by ship, or across Siberia and then by ship to Sitka, was long and costly. As Howard I. Kushner (1975) conveys so well, the Russian-American Company depended heavily on non-Russian sources for supplies during most of its existence. In 1803 Boston merchants arranged to supply the company with food, goods, and skilled artisans, and the pattern expanded until it was interrupted by the War of 1812 (Kushner 1975: 7-8). This arrangement was resumed soon after the war, and by the 1830s numerous vessels from the United States were trading along the Northwest Coast.

The Russians did their best to restrict Anglo-American trade with Indians, but the company continued to depend on these traders for supplies. Also in the 1830s growing numbers of Yankee whalers began frequenting the Northwest Coast. In 1842 at least 30 of these ships operated in the Bering Sea. During 1845 about 260 Anglo-American whalers invaded Russian American waters and were destroying the company trade monopoly (Kushner 1975: 81-90).

A second major source of supplies for the Russians was the Hudson's Bay Company. As these companies competed for the Northwest Coast trade, a major dispute arose in 1836. Russian-American Company employees entered Hudson's Bay Company territory in violation of an 1825 convention, and the Hudson's Bay Company pressed a claim against its rival. The settlement reached in 1840 granted the Hudson's Bay Company a 10-year lease to trade along the mainland of much of southeastern Alaska. The company further agreed to act as a transport agent for shipping trade goods from England to the Russians at Sitka and to provide them with food and merchandise. The Hudson's Bay Company, however, was unable to supply the Russians with as much food as agreed. San Francisco merchants contributed to Alaskan trading activities before and after the California gold rushes of the late 1840s. In fact the American-Russian Commercial Company was founded there in 1851. Nonetheless, the Hudson's Bay Company lease continued to be modified and renewed Hudson's Bay Company lease continued to be modified and renewed until Alaska was sold in 1867 (Kushner 1975: 79-80, 119-20, 130; Rich 1960: v. 3: 650-5).

By the time Alaska was purchased by the United States there is good reason to believe that the Russian-American Company inventory at Sitka included a great deal that was non-Russian. The list of goods purchased there in 1867 by San Francisco merchants is long and varied (Appendix IV). Included are anvils, diamonds, cans of milk, Parisian perfumes, scythes, stove blackening, wines, and about 375 other categories of merchandise. Judging from the references cited previously it would appear that many items were made in England or in the United States.

Most of the nearly 2500 finds at Kolmakovskiy attributed to the Russian era are factory-made imports, few of which are recognized as distinctly Russian (Appendix II). These manufactures could have been produced by any number of European or American industrialized technologies. The non-Russian origin of the ironstone is especially clear, and it represents about a third of the "Russian" collection. A single porcelain sherd has a Russian potter's mark. It also is noteworthy that the packaged, faceted blue beads in a Russian-American Company warehouse at Sitka in 1867 are reported to be marked "Brussels" (Woodward 1965: 9), and presumably at least some of the other beads stored there were made in Belgium.

To help gauge the early impact on Kuskokwim Eskimo material culture, an all-inclusive inventory of Russian trade goods was compiled (Appendix III). Included are finds from Kolmakovskiy, items cited by Zagoskin, and goods mentioned in Russian-American Company records; the company references and those of Zagoskin to trade items are cited in Chapter 10. The specific listings in Appendix III are not mutually exclusive because Russian-era records about apparel and beads cannot be reconciled fully with what was found in the excavations. Furthermore, Russian imports such as window frames, glass, and putty presumably were not trade items. Unfortunately we have no adequate record about the quantities of goods imported. Zagoskin's lists that include numbers and weights are dominated by beads, but this may be because one of his goals was exploration, not trading, and he needed to travel light. If the finds at Kolmakovskiy are any indication of quantities received, then beads and ironstone tableware

dominated. However, their high rate of recovery probably conveys a false impression; beads no doubt were readily lost, and ironstone presumably broke rather easily into numerous sherds.

In general, the Russians did not cater to the preferences of Kuskokwim region customers, possibly because the traders lacked close control over the stocks received from English and Anglo-American merchants. However, they did stock some native items known to be desirable in aboriginal trade, such as Aleut hatchets, Tlingit capes, Yakut knives, and Yenisei axes; and they do seem to have introduced a wide range of clothing materials and garments in response to local Eskimo tastes, although this was influenced in part by company attempts to discourage people from using trade skins for clothing. Only in one case, with beads, are the Russians known to have inventoried forms that were popular in southwestern Alaska. As VanStone (1970: 99) has noted in another context, this pattern contrasts with the situation in other areas of North America where particular manufactures were made for the aboriginal trade.

Numerous tools and utensils are cited in the inventory of goods traded (Appendix III), but we do not know how important they were. Judging from the finds at Kolmakovskiy, containers and tools of an Eskimo style but with metal blades were used widely at the fort, probably reflecting the dominance of Eskimos as workmen there.

* * *

The artifacts from Kolmakovskiy indicate what forms were used and probably traded at this Russian redoubt and Anglo-American trading post for about 75 years. These finds are most effectively compared with the remains from five roughly contemporaneous Eskimo and Indian sites in southwestern Alaska, the most significant being Crow Village, located only about 30 miles (48.2 km.) down the Kuskokwim from the fort. Crow Village presumably was a comparatively new village when it first was reported in the early 1790s (Davydov 1977: 201), and it was abandoned about 1910 (Oswalt and VanStone 1967: 6-7). The Nushagak site is located along the south shore of upper Nushagak Bay adjacent to Aleksandrovskiy Redoubt; this redoubt appears to have been destroyed when a cannery was built at the same locale. The excavated houses at Nushagak were occupied from about 1819 to 1910 by Aglegmiut, and perhaps by Kuskokwim Eskimos (VanStone 1972: 6, 16, 84). Kiatagmiut, Nushagak River Eskimos, lived at Akulivikchuk along the central course of the Nushagak River during most of the nineteenth century (VanStone 1970: 13-5, 103-4). The Tikchik site, along the Tikchik River that drains into the Nushagak River, was occupied from the early 1800s to 1900 (VanStone 1968: 229-30, 324). The Eskimos who lived there possibly, if not probably, were migrants from the Kuskokwim (VanStone 1968: 228-9). The final site of interest is along Lake Clark and was occupied by Tanaina Indians from about 1800 to 1910 (VanStone and Townsend 1970: 147). The Kijik site stands apart from the others not only because it was an Indian village, but because its trading ties led to Cook Inlet stations. These posts apparently were better stocked than those of the Bering Sea drainages during the Russian era, and this was clearly the case near the turn of the century (VanStone 1968: 320-1).

Kolmakovskiy probably was not occupied as long as most of these sites, but a great deal more was found at the fort. One reason is that preservation was better at Kolmakovskiy than at the sites farther south, where permafrost typically was more sporadic and the annual thaw layer deeper; however, conditions for artifact preservation were the same at Crow Village as at

Kolmakovskiy. Judging from all the industrial manufactures found at the fort, it seems that the Russians, and to a lesser extent Anglo-American traders, were able to import considerable amounts of goods to the station. Yet comparatively little of the material culture represented at the fort occurs in the Eskimo villages. For example, in the creole barracks (S-J) at Kolmakovskiy about 1425 sherds of ironstone were recovered, but a total of about 925 sherds was found in all the Eskimo sites combined. One reason for the difference in the recovery rate for ironstone may be that while it was available and regularly used at the fort, it was not considered desirable by village-dwelling Eskimos. The Eskimos who lived in the Eskimo barracks (S-F) at the fort used many types of ironstone. Furthermore, judging from the frequency of non-Indian pottery at Kijik (1092 sherds), it was popular among these Indians, who apparently had greater access to trade goods than the people represented at the Eskimo sites considered. Alternatively ironstone may have been desired by village Eskimos but was so costly that they were able to purchase only a few pieces. Perhaps the latter conjecture is more reasonable if only because ironstone was plentiful in the Eskimo barracks at Kolmakovskiy and at Kijik.

Each of the four Eskimo sites dates from the nineteenth century, but it is doubtful that all of the houses excavated in a particular site were occupied at the same time. Each site includes some houses with few trade goods and others with many. The differences between the number of imported items in these houses may reflect the economic means or conservatism of the residents or it may mean that a house with little trade goods was inhabited earlier than one where the goods were plentiful. These alternatives, and the inability to date the houses precisely, make it difficult to draw close comparisons with the finds attributed to the Russians at Kolmakovskiy. The problem is compounded because the Alaska Commercial Company apparently traded Russian-era goods stored at Sitka during the early Anglo-American period.

The comparison of artifacts from Kolmakovskiy with those from the other sites begins with beads and ironstone because these finds are well represented in all the sites. From Russian-era accounts about Kolmakovskiy it is known that the kashim (S-C) was a hostelry for customers, while one barracks was for Eskimo employees (S-F) and the other was for creole workers (S-J). Historic records suggest that Ingalik Indians from the Yukon may have most often stayed in the kashim. The Eskimo barracks appears to have usually housed Aglegmiut men from the Nushagak married to Kuskokwim Eskimo women. Male creole employees living in the creole barracks possibly were married to other creoles or perhaps more often to Aglegmiut women.

A wide range of beads was found in the Russian levels of these three foundations, and the most common types are recorded in Table II. Presumably beads of different sizes and colors were available to all clients, and the economic means as well as the preferences of women determined which types were purchased. White pound beads were popular everywhere but especially among women in the creole barracks. Presumably these creole or Aglegmiut women were the most affluent women at the fort, and the prevalence of white beads in the creole barracks would mean that white was the most expensive and the most preferred color for beads. Kuskokwim Eskimos seem to have been partial to dark red pound beads with black centers and to those in shades of blue. Kuskokwim women also seem to have preferred white seed beads; seed beads in various shades of blue were more popular among creole or Aglegmiut women.

A comparison of the distribution of Russian-era beads at Kolmakovskiy with those from the above-mentioned Eskimo and Indian sites should reveal a similar emphasis, especially if bead

preferences continued into the Anglo-American era. Aglemiut and possibly Kuskokwim Eskimo women at Nushagak (VanStone 1972: 61-2) seem to have preferred blue seed beads (215 from a total of 458), which also was true for the presumed Aglemiut women living at Kolmakovskiy. Among the Tanaina Indians at Kijik (VanStone and Townsend 1970: 92-4), white beads dominated (1229 bead total, 707 white) as was equally true, but not as impressively, for the Ingalik Indians trading at Kolmakovskiy. Kuskokwim Eskimos at Crow Village (Oswalt and VanStone 1967: 58) apparently were partial to white beads (416 beads, 250 white), as were the Eskimos at Tikchik (407 beads, 267 white), who possibly were Kuskokwim Eskimos (VanStone 1968: 293-5); at the Kiatagmiut village of Akulivikchuk (VanStone 1970: 83-5) we also find that white beads dominated (537 total, 360 white). Thus it appears that there were widespread preferences for beads of a particular color among Eskimos and Indians in western Alaska. These data also indicate that beads of different types and colors, as well as other trade goods, were made available to all the Eskimo clients of the Russian-American Company.

**Table II. Distribution of Russian-era beads from the Kashim (S-C),
Eskimo barracks (S-F), and Creole barracks (S-J).**

	Kashim	Barracks	
		Eskimo	Creole
Beads, opaque			
pound			
white	106	127	171
dark red, black centers	12	48	12
blue shades	22	38	11
seed			
white	4	32	21
blue shades	4	39	81

The decorated ironstone sherds at Kolmakovskiy in Russian levels of the barracks and kashim differed widely in their distribution. Of the 31 types with designs, 10 occur in the kashim and are represented by 29 sherds; 16 types and 172 sherds are from the Eskimo barracks; 22 types are from the creole barracks and include 325 sherds. Perhaps fewer types were found in the kashim because people stayed there only temporarily and thus day-to-day domestic debris was not likely to accumulate in this building. It might also be that fewer pieces of ironstone were broken in the kashim because a vessel fell on an earthen rather than on a plank floor. Thirteen types of ironstone with the same designs were recovered in the Eskimo and creole barracks, but many more sherds were found in the creole barracks. The reason for the larger number in the creole barracks is debatable. Perhaps the residents there were more careless with their ironstone, but a more likely reason is that the greater affluence of the creoles led to the ownership of more ironstone.

A comparison of the decorated ironstone from Kolmakovskiy with that from the four Eskimo and one Indian sites demonstrates that more types were traded at the redoubt than were found in the excavations there. Of the transfer print designs only the willow pattern was recovered from all the sites. Of the 14 other homogeneous types with transfer prints (each represented by six or more sherds at Kolmakovskiy), two were found at Akulivikchuk (types 4 and 10) and one was found at Crow Village (type 14). Heterogeneous transfer print types (each represented by

fewer than six sherds at Kolmakovskiy) were found in all the other sites. The higher frequency of heterogeneous types recovered shows that ironstone with many additional transfer print designs must have been traded at Kolmakovskiy and presumably at Nushagak. The same was true of ironstone with stamped designs.

Published and documentary sources suggest that the Russians did not make a major impact on the technoeconomic lives of the Eskimos in southwestern Alaska. The company agents failed to introduce successful new means for obtaining the prime source of food, fish, especially salmon, judging from company records and statements about fishing by Illarion and Zagoskin. The only known successful innovation in fishing activities was introduced in the Anglo-American era before the turn of the century. Twine served as a more lasting material than either rawhide or inner bark for making fish nets; however, it is not known how widely available it was at that time.

When VanStone (1970: 97-8) compared the lists of unmodified trade goods recovered from Akulivikchuk, Crow Village, and Tikchik, he noted that about the same number of categories was represented at each site, in spite of the better preservation at Crow Village. Thus the people at these settlements seem to have been subject to about the same degree of Russian and Anglo-American influence during the nineteenth century. This appears to have been true despite the nearness of Crow Village to Kolmakovskiy, the fact that Akulivikchuk was not very far from Aleksandrovskiy, and the comparative isolation of Tikchik. Although the data from the Eskimo site at Nushagak, adjacent to Aleksandrovskiy, are not as full as for the other sites, the patterning is the same.

VanStone (1970: 98) has suggested that few Western imports were found at the Eskimo sites because the occupants were strongly conservative. He bases this conclusion on a comparison of finds from the Eskimo villages of Akulivikchuk, Crow Village, and Tikchik with those from the Tanaina Indian site at Kijik. He points out that the Indians were drawn deeply into the fur trade and as a result had abandoned nearly all of their aboriginal material culture. By contrast, the contemporaneous Eskimos along the Kuskokwim and Nushagak rivers became only marginal participants in the fur trade, a condition reflected in the number of traditional artifacts that prevailed in their inventories throughout the nineteenth century.

If the Kuskokwim and Nushagak Eskimos were "conservative," which seems to have been the case, there must have been good reasons. The most likely justification is that they were not intense participants in the fur trade because it had comparatively little to offer them. Although diverse European products may have been available at Kolmakovskiy, the prices apparently were always high and resupply was not always reliable. This is not meant to imply that the trade there was sporadic, quite to the contrary. The major commodities exchanged there throughout the latter half of the nineteenth century were coastal and interior products imported to exchange for local products. This emphasis continued through both Russian and Anglo-American traders judging from the written sources. The ultimate failure of the Russians to dramatically alter the economic lives of Kuskokwim Eskimos may be attributed to the inability of Russian-American Company agents to introduce more efficient fishing techniques, their reluctance to trade firearms on a widescale basis, and the influence of the smallpox epidemic that wiped out over half of the people just before the redoubt was founded.

Marble (Pl. 21 i) 1(E-1)

Doll's head frag., ceramic (Pl. 21 d) 1(J-4)

ADULT DIVERSION

Poker chips, pieces (Pl. 21 e) 2(G), 2(E-1)

Chess figures, spruce (Pl. 21 k, l, n) 1(E-3), 2(J-1)

Checker, spruce (Pl. 21 m) 1(F-1)

Film spools for cameras (Pl. 21 h) 1(E-1), 4(E-2)

PERSONAL ADORNMENTS

Beads (dia. in cm.)

pound, spheroid to sub-cylindrical

opaque

white, .29-.75

6(A), 8(B), 106(C-1), 66(C-2), 13(C-3),
40(D-1), 9(D-2), 12(E-1), 8(E-3), 127(F-1)
110(F-2), 7(F-3), 2(G), 2(H), 12(I-1)

red, dark; center black; .29-.55

10(I-2), 40(I-3), 6(I-4), 171(J-1),
29(J-2), 6(J-3), 21(J-4), 16(K-1), 1(K-2)
2(A), 12(C-1), 4(C-2), 10(D-1),
48(F-1), 55(F-2), 5(F-3), 1(I-1), 12(J-1),
4(J-2), 2(K-1)

blue, pale to dark; .28-.59

22(C-1), 11(C-2), 10(D-1), 1(D-2), 4(E-1)
1(E-3), 38(F-1), 16(F-2), 3(F-3), 1(I-1),
11(J-1), 3(J-2), 1(J-3), 1(J-4)

milky, .4-.48

1(C-1), 28(C-2), 5(C-3), 18(D-2), 6(E-1),
31(F-2), 1(G), 1(J-1), 2(K-1)

black, .33-.64

1(C-1), 1(D-2), 1(E-1), 1(E-3), 3(F-1),
4(F-2), 2(G), 1(J-1)

blue, glossy; .51-.61

6(E-1), 1(F-3), 3(I-3)

green, dark; .28-.39

1(C-1), 2(D-1), 1(E-3), 3(F-1), 1(F-2)
1(I-1)

blue, pale, glossy; .47-.49

2(E-1)

pink, .41

2(E-1)

translucent

red, white center; .36-.62

3(C-1), 19(C-2), 4(C-3), 3(D-2), 1(E-1),
6(E-3), 4(F-1), 23(F-2), 2(F-3)

red, .36-.62

1(C-2), 1(F-1), 1(I-3), 1(I-4), 8(J-1),
4(J-2), 1(K-2)

blue, .29-.58

1(I-2), 1(I-3), 6(J-1), 1(J-2), 1(K-1)

colorless, .31

1(F-1), 1(J-1)

amber, .36

1(F-2)

green, dark; .33

1(F-2)

seed, spheroid

opaque

white, .16-.23

1(B), 4(C-1), 53(C-2), 7(D-2), 16(E-1),
3(E-3), 32(F-1), 97(F-2), 4(F-3), 11(G)
3(H), 5(I-3), 2(I-4), 21(J-1), 9(J-2),
2(J-3), 4(J-4)

blue, .18-.25

1(A), 2(B), 1(C-1), 25(C-2), 1(C-3), 6(D-2),
16(E-1), 3(E-3), 19(F-1), 42(F-2), 7(F-3),
3(G), 1(I-2), 10(I-3), 2(I-4), 80(J-1),
31(J-2), 2(J-3), 4(J-4), 2(K-2)

blue, dark; .16-.22

3(C-1), 24(C-2), 1(D-2), 4(E-1), 1(E-3),
20(F-1), 74(F-2), 1(G), 1(J-1), 5(J-2)
1(C-1), 33(C-2), 1(C-3), 4(D-2), 1(E-1),
1(E-3), 12(F-2), 1(G), 3(J-1), 7(J-2),
1(J-4)

violet, .17-.23

3(D-3), 24(E-1), 23(G)

yellow, bright; .16-.26

2(D-2), 11(E-1), 3(F-1), 6(F-2), 7(G),
1(J-1)

green, light; .19-.21

7(E-1)

milky, .19-.25

5(C-2), 1(E-1)

yellow, light; .16-.18

4(C-2), 2(J-1)

black, .21-.26

2(C-2)

red, dark; .21-.22

1(D-1), 1(E-1)

red, dark; black center; .23

1(F-1)

gray, milky; .26

1(C-1)

translucent

red, white center; .18-.24

82(C-2), 1(D-2), 15(E-1), 3(F-1), 14(F-2),
5(G), 1(J-1), 4(J-2)

red, .18-.24

24(C-2), 1(E-1), 2(F-1), 5(F-2), 2(G)

colorless, .17-.21

17(C-2), 1(I-3)

blue, .17-.24

1(I-3), 9(J-1), 6(J-2), 1(J-3)

green, dark; .27-.19

7(C-2), 1(I-4)

green, pale; .21-.22

2(F-1), 1(F-2), 1(I-4)

amber, .19

1(C-2)

miscellaneous

spheroid, large

blue, opaque; .63-1.15

2(B), 2(C-1), 1(C-2), 4(E-1), 3(F-1),
1(I-3), 1(I-4), 2(J-1)

blue, translucent; .91-1.1

2(E-1)

yellow, opaque; .99-1.15

1(F-1), 1(J-1)

blue, opaque; 2 joined: .8

1(F-1)

white, opaque; .76

1(E-1)

red, translucent; .79

1(I-4)

subcylindrical

red, white center; .41-.47

1(C-1), 2(E-1), 1(E-3), 1(F-2), 1(J-4)

colorless, .39-.41

5(D-2)

cut, faceted blue; .49-.75

1(C-3), 1(D-1), 1(E-1), 2(J-4)

wood, ca. 2.1

1(I-2), 1(K-1)

white & blue, marbled; .76-.88

1(E-1), 1(F-1)

blue, opaque; .48

1(C-3)

white, opaque; 1.6

1(E-1)

spheroid, small	
white, opaque with painted red & green lines; .25-.32	1(E-3), 7(F-1), 1(F-2), 1(I-3), 1(K-2)

Rings (internal dia. in cm.)

brass, 1.1, 1.3 (Pl. 22 a)	1(C-2), 1(C-3)
stone, setting	
white, 1.9 (Pl. 22 c)	1(J-1)
missing, 1.6 (Pl. 22 b)	1(F-3)

Brooch , brass with lavender stone set (Pl. 22 e)	1(E-1)
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Bracelet , brass; "BABY" (Pl. 22 g)	1(I-4)
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Religious pendant , painted porcelain (Pl. 22 k)	1(I-3)
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Labret , ivory (Pl. 22 d)	1(Kol. beach)
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GROOMING

Rubber combs

coarse teeth, 1-sided	2(E-1)
fine teeth, 2-sided, "MR. COMB C9 GOODYEAR 1851 EXTRA QUALITY"	1(E-1)

Hairnet , twisted & knotted grass cord	1(C-1)
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CLOCKS & WATCHES

Watches

outer frames	1(E-1), 2(E-2)
faces (Pl. 22 f, h)	1(E-1), 1(E-2)
housing	1(I-4)

Clocks

back	1(I-4)
bell	1(I-4)
misc. parts	numerous (E-2)

TOBACCO COMPLEX

Pipes

stems	
rubber	2(E-1), 1(G)
"C.P.F. CHESTERFIELD SOLID RUBBER" (Pl. 22 l)	1(F-2)
bakelite	2(E-1)
clay, "McDOUGA....ASCOW" (Pl. 22 j)	1(C-1)
bowl, elbow brier	1(E-1), 1(F-2)

APPENDIX II

Artifacts from Kolmakovskiy Redoubt Attributed to the Russian Era.

Protective Network

APPAREL:

fabrics: woolens of simple and basket weaves, twill, serge, serge banding, gabardine; cotton, longcloth and corded; felt, knit woolen stocking, silk

footwear: boot or shoe; hand-stitched and/or machine-stitched uppers with or without metal eyelets; machine-made wood pegs in sole or lift; hand-sewn sole; hobnails, heeled or heelless turned footwear; moccasins, mukluks

buttons: white ceramic, 4-holed plain, molded face or painted; horn, molded zinc, ivory

BUILDING MATERIALS: window glass, common cut nails, clinching nails, roofing nails, spikes, bricks

STOVES: pipe collar

Procurement Network

SLEDS: narrow and wide whale bone shoes, wide antler shoe, spruce shoe, iron shoe, wood shoe pegs

BOATS: baydara ribs, baydarka rib and manhole ring support, crutch-handle paddle

SNOWSHOE: crosspiece

BACK PACKING: chest board

FISH NETS: antler weights, bark and spruce floats

ABORIGINAL WEAPONS: barbed harpoon dart with iron end blade, bird spear side prongs, leister prongs, barbed arrowheads, self and sinew-backed bows

FIREARMS: musket ball, spruce ramrod, gun dragon, English-style gun flint, strike-a-light made from gun flint, powder canisters

CONTAINERS, PACKAGING AND STORAGE: birch-bark baskets; twined grass bag; barrel hoops, staves and head or bottom; wood boxes with metal reinforcement straps; bark plugs for sealskin pokes; hole-in-top tin cans; kerosene cans; can with snap-down top; can fragments; bottles with clear to green or blue tinge glass; "beer" bottles; jug and wine bottles; "whiskey" bottle; pickle or preserve bottle with bead-finish lip and blue tint; patent medicine bottle, burnt glass fragment.

Maintenance Network

TOOLS: end-bladed knife with wood handle, awl with wood or antler handle, awl of antler, bone chisel, drills, drill bearing hand hold, wood maul, whetstones, grindstones, wood and antler wedges, metal-bladed wood chisel, fire drill board and shaft, ivory needlecase, cutting boards, thread spool, shoe lasts

UTENSILS: spruce food bowls, dippers, spoon, ladle and spatulas; cast-iron kettles

FIBERS: twined grass matting, checker woven grass, burlap

CORDAGE: braided grass, spruce splints, twisted grass

TOYS: spruce bows, arrows, storyknives, bull-roarer, sled runners

ADULT DIVERSION: chess figures, checker

PERSONAL ADORNMENT:

pound beads

opaque: white, red with black centers, blue, milky, black, green

translucent: red with white centers, red, blue, colorless

seed beads

opaque: white, blue, pink, yellow, red with black center, milky gray

translucent: red with white centers, red, blue, green

miscellaneous beads: large, spheroid opaque blue; large spheroid opaque yellow; subcylindrical red with white center; wooden; marbled blue and white; white opaque with painted green lines
ring with white stone setting
hairnet of grass cord

TOBACCO COMPLEX: clay pipe stem, tobacco box lid, birch fungus for chewing tobacco mixture

CLAY PRODUCTS:

ironstone sherds

plain

transfer prints: types 1, 3, 4, 5, 8, 9, 10, 11, 12, 15, 16, 17, 18, 19

hand-painted designs: types 20, 21, 22, 23

stamped designs: types 24, unnumbered, 25, 26, 27, 28

stamped & hand-painted designs: types 29, 30, 31

stoneware bottles and crocks, glazed tableware, semiporcelain,
unidentified potter's marks, Eskimo lamp sherd

ASSORTED GLASS: lamp chimneys, lamp bases, milk glass, bottle with molded vertical grooves, water glass, clear bowl top, mirror frag., sunglasses lens

RESIDUAL FINDS: wooden pieces, toggle bars, spruce spool, strap metal, metal castings, sheet metal, leather cuttings, leather mending pieces, stamped metal; worked antler, sheet mica, sheet lead, ivory, whale bone; metal washers, wire, corks, metal ring, ivory carving, paint spatula, birch twig switch, metal eye, toothed metal clamp, wadded moss ball, antler reinforcing strip, mollusk shell

APPENDIX III

Russian-era trade goods introduced to western Alaska based on all sources.

Protective Network

APPAREL:

- garment materials: calico, canvas, cotton longcloth and corded, felt, heavy soldier cloth, gabardine, Romanov canvas, silk, simple and basket weave woolens, tent cloth, twill, serge, serge banding, wild goat skins, woolen blankets
- garments: calico, cotton, quilted, and English shirts; caps, cloth dresses, parka covers of cotton ticking, Tlingit capes, trousers
- footwear: woolen knit stockings, moccasins, boots and shoes (hand-stitched and/or machine-stitched uppers with or without metal eyelets; machine-made wood pegs in sole or lift; hand-sewn sole; hobnails), heeled or heelless turned footwear
- buttons: white ceramic 4-holed plain, molded face or painted; horn, molded zinc

BUILDING MATERIALS: clinching nails, common cut nails and spikes

Procurement Network

SLEDS: iron shoes

ABORIGINAL WEAPONS: iron for harpoon dart blade

FIREARMS: muskets, lead, flints, powder canisters

CONTAINERS: barrels with metal hoops; wood boxes with metal reinforcement strips; hole-in-top tin cans; kerosene cans, cans with snap-on-tops; bottles, "beer," burnt glass sherds, clear to blue tinge, jug, patent medicine, pickle or preserve, "whiskey," wine

FOODS AND BEVERAGES: grains and tea

OTHER: Tungus spears

Maintenance Network

TOOLS: Aleut hatchets, drills, metal-bladed wood chisels, metal for knife blades, needles, scrapers, spool for thread, strike-a-lights, Yakut knives, Yenisei axes

UTENSILS: cast-iron kettles, copper jugs, copper tankards, ladles, pitchers, sheet-iron kettles

FIBERS: burlap

PERSONAL ADORNMENT:

beads: black, "black and white," "blue tubular and round," bugle, "large red and white," red, "red and white," steel blue, white, "white and black," "white and red"

pound beads

opaque: black, blue, green, milky, red with black center, white

translucent: blue, colorless, red, red with white center

seed beads

opaque: blue, milky gray, pink, red with black centers, white, yellow

translucent: blue, green, red, red with white centers

miscellaneous beads: large spheroid opaque blue or yellow, subcylindrical

red with white center, marbled blue and white, white opaque with painted green lines

earrings: brass, bronze, enamel-covered glass pendants

rings: copper, white stone set, wire

bracelets: copper, iron, smooth red copper

miscellaneous: copper tinker bells, dentalium shells, hollow buttons, iron armbands embossed with copper, naval uniform buttons, small bells

GROOMING: horn combs, mirrors

TOBACCO COMPLEX: tobacco, tin pipes, clay pipe, Yakut long-stemmed pipes

CLAY PRODUCTS:

ironstone: plain, transfer prints, hand-painted designs, stamped & hand-painted designs

stoneware bottles and crocks

semiporcelain

ASSORTED GLASS: bottle with molded vertical grooves, clear glass bowl top, lamp chimney and base,
milk glass, sunglasses lenses from bottle glass, water glass

RESIDUAL: corks; metal castings, clamp, eye, rings, sheets, stamped strap, washers, wire; sheet lead and
sheet mica