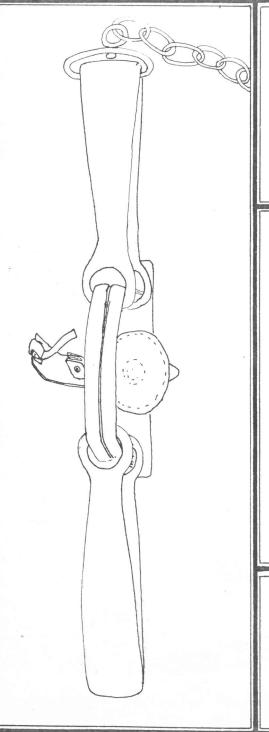
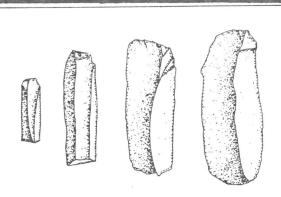
# **KETTLE FALLS:**

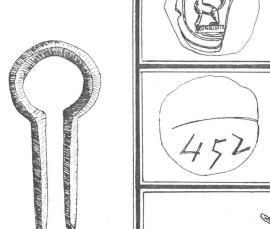
1977

DAVID H. CHANCE
JENNIFER V. CHANCE

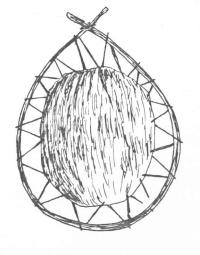
Appendices by James O'Neill & Craig Henry











## KETTLE FALLS: 1977

## SALVAGE ARCHAEOLOGY IN AND BESIDE LAKE ROOSEVELT

by

David H. Chance Jennifer V. Chance

Appendices by

James O'Neill Craig Henry

UNIVERSITY OF IDAHO ANTHROPOLOGICAL RESEARCH MANUSCRIPTS SERIES, NO. 53

Laboratory of Anthropology

University of Idaho

Moscow



Fig. 35. The dark fill at left in this profile cleaned with compressed air is original, undisturbed fill, its top marks the year 1825. To its right is the pit fill of Feat. 176, the hole for the northwest corner posts of the second and third stores. A layer of daub about 15 cm thick caps the original surface, and most of the daub layer also caps the post hole fill. Vertical cut in the daub marks 88x/222y; view northwest. The inverted V of darker pit fill at right may mark a reinsertion of the post, but this was not determined in the field.

A plot of the beads from the site of the Store (Fig. 36) shows that the trading room of the Store was probably the west room, if divided into three rooms, as was the final version (Chance 1972). The west room, the one closest to the Fur House and Indian Hall, seems the better choice; it is the only room with two windows (Fig. 37). Even more basic, the number of beads from the site itself suggests that the trading itself took place in this Store. While this is historically documented to a slight extent, and may appear to be a truism; it is actually something that needed a firmer corroboration. The fact that the trading was apparently done in the same building that most of the trade goods were housed prompts the reflection that customers were brought close to the stock of merchandise and furs instead of being held at arms length, at a safe distance. This is not so surprising because the Company doubtless wanted the Indian or free trapper from the Rockies to view the wealth that might be his in exchange for furs.

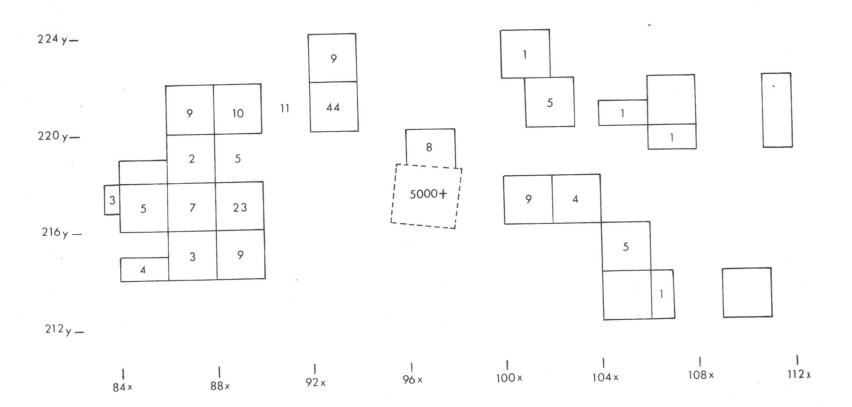


Fig. 36.

Table 27. Glass bead frequencies from Feature 136, the Store cellar, 45-ST-97, Fort Colvile, 1977.

	φ.							_	Drawn B	eads				d)			c					"Fa	ience"	Bead	3
Level	Stratum	Blue		White		T. Blue	dP	T. Green		Lilac	Pink	Green	Black	T. White	Yellow	Red	T. Brown	Total	de	Green		T. Gree		Total	
1		65	. 289	96	.427	8	.036	27	.12	1								197	.876		•				
2		94	.260	154	.425	28	.077	51	.141		1							328	.906	1	.003			1	
3		44	.143	139	.451	28	.091	58	.188									269	.873						
4		35	.164	100	.467	12	.056	24	.112			1	1					173	.808	1	.005			1	.005
2																									<del></del> 1910
5		12	.128	38	.404	12	.128	12	.128									74	.780						
6		10	.167	30	.50	4	.067	7	.117									51	.850						
7		10	.303	13	.394	2	.061							1				26	.788						
8	2B & 3	6	.261	6	.261			5	.217									17	.739	1	.044			1	.044
8	3	20	.25	27	.338	6	.075	10	.125						1			64	.800						
9		13	.134	23	.237	15	.155	22	.227									73	.753	1	.010			1	.010
.0 & 11	3	101	.163	357	.577	30	.049	75	.121				2		1			566	.914	3	.005			3	.005
10	3 & 4	79	.177	213	.478	26	.058	22	.049	1		1						342	.767	4	.009			4	.009
																				-					Upper
11	4	172	.178	657	.682	14	.015	66	.069							1		910	.944	6	.006			6	.006
12 & 13		71	.143	302	.609	4	.008	76	.153			1						454	.915	11	.022	9	.018	20	.040
	4 & 5	129	.137	622	.659	19	.020	155	.164			2	!		2			929	.984	2	.002			2	.002
otals																		4473	.901					39	.008

Drawn and cut beals (faceted)   Cornaline d'Allepo   Wound Beads   Faceted   Faceted	Table 2/	continu	ea.																									
1				I	orawr	n and	cut	bead	s (f	acete	d)			Cornal	line	d'Alle	еро					lound	Bea	ıds				
2 5 .014 5 .014 8 .022 13 .036 21 .058 3 .008 4 .011 7 .019 362 .073 3 8 .026 8 .026 10 .032 10 .032 20 .065 9 .029 2 .007 11 .036 308 .062 4 12 .056 1 .005 13 .061 10 .047 9 .042 19 .089 3 .014 1 .005 4 .019 8 .037 214 .043	Level	Stratum	. B1	<sub>dl</sub> o	. Gr	œ		de		œ		ФP	Red on White	de	Red on Green	cas.	Total	do	Blue Opaque	% White	pi	dР		dio.	Total	do	Total	ø
3 8 .026 8 .026 10 .032 10 .032 20 .065 9 .029 2 .007 11 .036 308 .062 4 12 .056 1 .005 13 .061 10 .047 9 .042 19 .089 3 .014 1 .005 4 .019 8 .037 214 .043  1910 5 3 .032 . 3 .032 5 .053 5 .053 10 .106 5 .053 2 .021 7 .075 94 .019 6 3 .05 3 .05 3 .05 1 .017 1 .017 2 .033 3 .05 1 .017 4 .067 60 .012 7 2 .061 2 .061 2 .061 2 .061 2 .061 1 .030 2 .061 3 .091 33 .007 8 28 63 3 1 .044 1 .044 3 .13 3 .13 1 .044 1 .044 23 .005 8 3 4 .05 4 .05 4 .05 5 .063 9 .113 2 .025 1 .013 3 .038 80 .016 9 9 9 .093 9 .093 6 .062 3 .031 9 .093 3 .031 2 .021 5 .052 97 .020 10 6 11 3 11 .018 11 .018 10 .016 25 .040 35 .057 1 .002 3 .005 4 .007 619 .125 10 3 6 4 20 .045 1 .002 21 .047 53 .119 25 .056 78 .175 1 .002 9 .009 11 .011 964 .194  12 6 13 4 1 .002 1 .002 1 .002 6 .012 7 .014 7 .014 5 .010 14 .028 496 .100  4 6 5 1 .001 1 .001 1 .001 3 .003 4 .004 7 .007 3 .003 2 .002 5 .005 944 .190	1		1	.004							1	.004	11	.049	6	.027	17	.076	4	.018			6	.027	10	.044	225	.045
4 12 .056 1 .005 13 .061 10 .047 9 .042 19 .089 3 .014 1 .005 4 .019 8 .037 214 .043  1910  5 3 .032 . 3 .032 5 .053 5 .053 10 .106 5 .053 2 .021 7 .075 94 .019  6 3 .05 3 .05 1 .017 1 .017 2 .033 3 .05 1 .017 4 .067 60 .012  7 2 .061 2 .061 2 .061 2 .061 2 .061 1 .030 2 .061 3 .091 33 .007  8 28 6 3 1 .044 1 .044 3 .13 3 .13 1 .044 1 .044 23 .005  8 3 4 .05 4 .05 4 .05 5 .063 9 .113 2 .025 1 .013 3 .038 80 .016  9 9 .093 9 .093 6 .062 3 .031 9 .093 3 .031 2 .021 5 .052 97 .020  10 6 11 3 11 .018 1 .018 11 .018 10 .016 25 .040 35 .057 1 .002 3 .005 4 .007 619 .125  10 3 6 4 20 .045 1 .001 1 .001 13 .011 18 .019 8 .008 26 .027 2 .002 9 .009 11 .011 964 .194  12 6 13 4 1 .002 1 .002 1 .002 6 .012 7 .014 7 .014 5 .010 14 .028 496 .100  4 6 5 1 .001 1 .001 3 .003 4 .004 7 .007 3 .003 2 .002 5 .005 944 .190  Totals	2		5	.014							5	.014	8	.022	13	.036	21	.058	3	.008			4	.011	7	.019	362	.073
1910  5	3		8	.026							8	.026	10	.032	10	.032	20	.065	9	.029			2	.007	11	.036	308	.062
5 3 .032 . 3 .032 5 .053 5 .053 10 .106 5 .053 2 .021 7 .075 94 .019 6 3 .05 3 .05 1 .017 1 .017 2 .033 3 .05 1 .017 4 .067 60 .012 7 2 .061 2 .061 2 .061 2 .061 1 .030 2 .061 3 .091 33 .007 8 2B & 3 1 .044 1 .044 3 .13 3 .13 1 .044 1 .044 23 .005 8 3 4 .05 4 .05 4 .05 5 .063 9 .113 2 .025 1 .013 3 .038 80 .016 9 9 .093 9 .093 9 .093 6 .062 3 .031 9 .093 3 .031 2 .021 5 .052 97 .020 10 & 11 3 11 .018 1 .018 11 .018 10 .016 25 .040 35 .057 1 .002 3 .005 4 .007 619 .125 10 3 & 4 20 .045 1 .002 21 .047 53 .119 25 .056 78 .175 1 .002 3 .005 4 .007 619 .125 11 4 10 .010 1 .001 11 .011 18 .019 8 .008 26 .027 2 .002 9 .009 11 .011 964 .194 12 & 13 4 1 .002 1 .002 1 .002 6 .012 7 .014 7 .014 5 .010 14 .028 496 .100  Totals	4		12	.056	1	.005					13	.061	10	.047	9	.042	19	.089	3	.014	1	.005	4	.019	8	.037	214	.043
6 3 .05 3 .05 1 .017 1 .017 2 .033 3 .05 1 .017 4 .067 60 .012 7 2 .061 2 .061 2 .061 2 .061 2 .061 1 .030 2 .061 3 .091 33 .007 8 2B & 3 1 .044 1 .044 3 .13 3 .13 1 .044 1 .044 23 .005 8 3 4 .05 4 .05 4 .05 5 .063 9 .113 2 .025 1 .013 3 .038 80 .016 9 9 .093 9 .093 6 .062 3 .031 9 .093 3 .031 2 .021 5 .052 97 .020 10 & 11 3 11 .018 1 .018 10 .016 25 .040 35 .057 1 .002 3 .005 4 .007 619 .125 10 3 & 4 20 .045 1 .002 21 .047 53 .119 25 .056 78 .175 1 .002 1 .002 446 .090  Upper Floor  11 4 10 .010 1 .001 11 .011 18 .019 8 .008 26 .027 2 .002 9 .009 11 .011 964 .194  12 & 13 4 1 .002 1 .002 1 .002 6 .012 7 .014 7 .014 5 .010 14 .028 496 .100  4 & 5 1 .001 1 .001 3 .003 4 .004 7 .007 3 4 .003 2 .002 5 .005 944 .190.								- 44																				1910
7	5		3	.032	ų.						3	.032	5	.053	5	.053	10	.106	5	.053			2	.021	7	.075	94	.019
8 28 6 3 1 .044 1 .044 3 .13 3 .13 1 .044 1 .044 23 .005  8 3 4 .05 4 .05 4 .05 5 .063 9 .113 2 .025 1 .013 3 .038 80 .016  9 9 .093 9 .093 9 .093 6 .062 3 .031 9 .093 3 .031 2 .021 5 .052 97 .020  10 6 11 3 11 .018 11 .018 10 .016 25 .040 35 .057 1 .002 3 .005 4 .007 619 .125  10 3 6 4 20 .045 1 .002 21 .047 53 .119 25 .056 78 .175 1 .002 1 .002 446 .090  11 4 10 .010 1 .001 11 .011 18 .019 8 .008 26 .027 2 .002 9 .009 11 .011 964 .194  12 6 13 4 1 .002 1 .002 1 .002 6 .012 7 .014 7 .014 5 .010 14 .028 496 .100  4 6 5 1 .001 1 .001 3 .003 4 .004 7 .007 3 .003 2 .002 5 .005 944 .190	6		3	.05							3	.05	1	.017	1	.017	2	.033	3	.05			1	.017	4	.067	60	.012
8 3 4 .05 4 .05 4 .05 5 .063 9 .113 2 .025 1 .013 3 .038 80 .016 9 9 .093 9 .093 6 .062 3 .031 9 .093 3 .031 2 .021 5 .052 97 .020 10 & 11 3 11 .018 11 .018 10 .016 25 .040 35 .057 1 .002 3 .005 4 .007 619 .125 10 3 & 4 20 .045 1 .002 21 .047 53 .119 25 .056 78 .175 1 .002 1 .002 446 .090  Upper  Totals  1 .001 1 .001 3 .003 4 .004 7 .007 3 .003 2 .002 5 .005 944 .190	7		2	.061							2	.061			2	.061	2	.061	1	.030			2	.061	3	.091	33	.007
9 9 .093 9 .093 6 .062 3 .031 9 .093 3 .031 2 .021 5 .052 97 .020  10 & 11 3 11 .018 1 .018 10 .016 25 .040 35 .057 1 .002 3 .005 4 .007 619 .125  10 3 & 4 20 .045 1 .002 21 .047 53 .119 25 .056 78 .175 1 .002 1 .002 446 .090  Upper Floor  11 4 10 .010 1 .001 11 .011 18 .019 8 .008 26 .027 2 .002 9 .009 11 .011 964 .194  12 & 13 4 1 .002 1 .002 1 .002 6 .012 7 .014 7 .014 5 .010 14 .028 496 .100  4 & 5 1 .001 1 .001 3 .003 4 .004 7 .007 3 .003 2 .002 5 .005 944 .190	8	2B & 3	1	.044							1	.044	3	.13			3	.13	1	.044					1	.044	23	.005
10 & 11	8	3	4	.05							4	.05	4	.05	5	.063	9	.113	2	.025			1	.013	3	.038	80	.016
10 3 & 4 20 .045 1 .002 21 .047 53 .119 25 .056 78 .175 1 .002 1 .002 446 .090  Upper Floor  11 4 10 .010 1 .001 11 .011 18 .019 8 .008 26 .027 2 .002 9 .009 11 .011 964 .194  12 & 13 4 1 .002 1 .002 1 .002 6 .012 7 .014 7 .014 5 .010 14 .028 496 .100  4 & 5 1 .001 1 .001 3 .003 4 .004 7 .007 3 .003 2 .002 5 .005 944 .190  Totals	9		9	.093							9	.093	6	.062	3	.031	9	.093	3	.031			2	.021	5	.052	97	.020
Upper  11  4  10  .010  1  .001  11  .011  18  .019  8  .008  26  .027  2  .002  9  .009  11  .011  964  .194  12 & 13  4  1  .002  1  .002  1  .002  6  .012  7  .014  7  .014  5  .010  14  .028  496  .100  4 & 5  1  .001  1  .001  3  .003  4  .004  7  .007  3  .003  2  .002  5  .005  944  .190  Totals  94  .019  265  .053	10 & 11	3	11	.018							11	.018	10	.016	25	.040	35	.057	1	.002			3	.005	4	.007	619	.125
11 4 10 .010 1 .001 11 .011 18 .019 8 .008 26 .027 2 .002 9 .009 11 .011 964 .194  12 & 13 4 1 .002 1 .002 1 .002 6 .012 7 .014 7 .014 5 .010 14 .028 496 .100  4 & 5 1 .001 1 .001 3 .003 4 .004 7 .007 3 .003 2 .002 5 .005 944 .190  Totals 94 .019 265 .053 94 .019	10	3 & 4	20	.045					1	.002	21	.047	53	.119	25	.056	78	.175	1	.002							446	.090
11 4 10 .010 1 .001 11 .011 18 .019 8 .008 26 .027 2 .002 9 .009 11 .011 964 .194  12 & 13 4 1 .002 1 .002 1 .002 6 .012 7 .014 7 .014 5 .010 14 .028 496 .100  4 & 5 1 .001 1 .001 3 .003 4 .004 7 .007 3 .003 2 .002 5 .005 944 .190  Totals 94 .019 265 .053			_										-						-								-	
12 & 13			1,0	010		-	,				.,	011	10	010	0	000	26	027	1	002			a	009	11	011	964	
4 6 5 1 .001 1 .001 3 .003 4 .004 7 .007 3 .003 2 .002 5 .005 944 .190  Totals 94 .019 265 .053 94 .019							1																					
Totals 94 .019 265 .053 94 .019	12 & 13																											
	Totals	4 6 5	1	.001									3	.003	**					.003			-					e et TiTir
Grand total 4965		otal									94	.019					203	.055									4965	

into the fur trade occupation there which extended from 1810 to 1826. Better than 95% of the Spokane House beads were light blue opaque beads with a higher proportion of wound beads than we have seen at Fort Colvile. Interestingly, though many of the beads are in fact drawn, their predominant blue color matches that of the wound beads, as if they were perhaps European copies of what we believe are Chinese wound beads.

Very noticeable in the lower floor of the cellar were rather large green beads we have called "faience" because they seem to have been formed of a molded paste. They are crumbly and almost white and quite crystalline in their interiors. Roderick Sprague (personal communication) is of the opinion that they are actually a drawn glass bead of poor quality that does not stand up well to acid erosion. This may very well be true, but uncorroded examples are not present in the cellar collection. It could be that this was a low-quality green bead brought in during the 1830s when green beads were in high demand but short supply (Barker 1948).

It is very apparent that the stratigraphically lowest beads of the cellar do not at all match the samples recovered at Spokane House, so we can believe without hesitation that the cellar of the store does not go with the earliest version of the building on the site. But since they are clearly earlier than the 1858 reconstruction by a substantial amount, we have here good evidence for a reconstruction in the 1830s.

While the bead samples from each level of the cellar probably have a high degree of randomness about them it seems that some varieties only start to show when the sample size approaches a thousand. That suggests that a random sample of 100 beads would not reveal a number of types. The reason probably lies in the large number of varieties of beads and perhaps less in the original abundance of the commodity. The latter would affect sampling because something like beads could be grabbed and traded by the handful with the ever-present risk of a massive spill. The possible application of this to lithic or ceramic analyses is that the further we subdivide a collection into varieties, the larger the sample must be for useful comparisons with others.

The beads from Spokane House, in addition to the ceramics and the largely unpublished documentary data suggest that the North West Company enjoyed a much more significant trade link with China than did the Hudson's Bay Company. Most Chinese items on H.B.C. invoices appear without an overhead charge meaning that they were almost certainly all holdovers of old merchandise inherited from the North West Company in 1821. So while Chinese items do not furnish much of a time marker on a presence and absence basis in the Pacific Northwest, their abundance certainly does. The reasons for this change constitute a large subject beyond our scope here, but one possible reason may be that the North West Company of Montreal may have been much less restrained by the British East Indian Company's theoretical monopoly over British trade with China. Another cause might lie in the much better access to European trade goods by a London based Company compared to one centered in Canada, even though the latter obtained much if not most of its trading stock in Britain.

Table 34. Glass bead returns at Fort Colvile, 45 ST 97, in 1977.

Operation:	Cellar 3	Structure 3	7	31	32	Surface	Surface W of fort
				342			
Wound:	42	7				3	
Blue Translucent blue	40	8				3	
White	2	0					
Translucent white	2	1					
White Olive pit	1	1					1
white office pic	-						
Drawn:							
White	2786	297	12	1	2	2	
Blue	932	125	4		2		1
Translucent green	671	35					
Translucent blue	239	26					
Black	6	3					
Red	3	1					
Green	2						
Translucent white	1	1	1				
Lilac	2	1					
Yellow	1	2					
Pink (?)	1	1					
Translucent brown	1						
Drawn and Faceted		1.4					
Translucent blue	90	14					
Translucent red	1	1					
Translucent white	4	1					
Blue	1						
Translucent brown	1						
Mandrel pressed:							
Translucent red	1						
Red		1					
Black		1					
"Faience"							
green	43	2					
Cornaline d'Aleppo	7.5.4	10		,			
Red on white	154	10					
Red on brown	145	14					
Totals	5166	552	17	1	4	5	2
Grand Total 5746							

### 6. WORK ON OTHER SITES

South Dune (45-ST-119)

The west area of the South Dune site was re-opened to permit more work on the house believed to be early historic in age. The new area opened, just northwest of the work of 1976, revealed a situation more complex than seen before (Table 43). Burned posts were found that may belong to the historic occupation, but we now think that some of the features attributed to the house in 1976 were actually earlier than that. Thus, the unexpectedly early radiocarbon assay on one of the hearths of 1976 was probably correct. Our final conclusion at the end of the fieldwork this year was that there is both a late prehistoric and a historic occupation somewhat intermingled, and that we can no longer make a good case for a depressed floor to accompany the historic occupation there. But we do seem to have at least two burned posts to probably associate with the historic occupation. It seems now fairly certain that the historic occupation here is from the period up to ca. 1835, based largely on the predominantly wound blue "Canton" beads. That it follows 1825 seems also certain because of the iron which seems to be waste from a blacksmith shop, perhaps Operation 8 at the early fort.

In the east area of 45-ST-119 we again collected all eroding artifacts (Table 44) and also secured the bottom of a hearth with much carbon at or near the A/C horizon boundary (Table 19) which is the source of a mysterious component characterized by large, serrated, leaf-shaped points or knives of black argillite. This compoment, also evident in the west area, was found to be characterized by a living floor (Fig. 67) consisting mainly of fire-cracked rock.

#### China Bend (45-ST-65)

A large collection (Table 45) was made in Area B of the China Bend site and four borings were made in the site to see if undamaged material exists below the deflation layer. We found only one place remaining with material that can be excavated. That conclusion was shown to be greatly premature by the work of 1978. It is clear that we chose the wrong places to bore.

But, we could on the basis of the 1977 work state that the site lay unoccupied for a very long time during which there was deposition of sand. After being ignored, quite suddenly the site became the focus of intensive use, probably during the Takumakst period. The site was used as a major manufacturing station for the primary reduction of brown argillite cores. It was also the largest hunting camp known in Lake Roosevelt for big game.

Also noteworthy at this site were the numbers of brown argillite macroblades and two cryptocrystalline macroblades. We found no microblades or microcores for blades. We look upon this particular inclination to produce crude blades or lamellar flakes as not being a full blown blade industry, notwithstanding the fairly good quality of the two cryptocrystalline macroblades. We have seen this industry before, in deposits of Takumakst and Sinaikst periods, but nowhere have we seen the blades as numerous as at Table 43. Statistical breakdown of the South Dune Site 45-ST-119W, 1977.

Stratum	4	3	2	Surface
LITHIC MATERIALS				
QUARTZITE SLAB ARTIFACTS				
Knives		2		2
Choppers				2
Worked slab*		2		1
COBBLE ARTIFACTS Core				1
OTHER MATERIALS				
Biface				
Argillite			1	
Brown Black			-	1
Core				
Argillite Gray				1
Used flakes				
Argillite				
Brown		2		
Gray	1			
CC		1	1	
Worked flake*				
CC				1
Biface (slate)				1
Pestle (igneous)				1
Ochre		1		
HISTORIC ARTIFACTS				
Glass Beads				
Light Blue (drawn)		15		
Light Blue (wound)		7		1
White (drawn)		2		
Green (drawn)		1		
Blue-Green (wound)		1		
Light Turquoise (wound)		1		
Vessel glass				1
Clear		1		5
Olive Green		_		1
Green Light Blue				1
Ceramics				
Earthenware				2
Plainware				3 6
Blue Transferware				0
Misc. Materials			1	
Chain link		2	-	
Container fragments File		1		
Nails		2		1
Square (wrought)		2	*	2
Pipe stem			1	-
Scrap (non-ferrous) Strap		1		,
Window glass		1	1	1
GRAND TOTAL ARTIFACTS	1	41	5	29
FAUNA		_		
Bone		2		
Teeth		2		

<sup>\*</sup> does not appear in any artifact totals

LITHIC MATERIALS		Cores	
		Argillite	
QUARTZITE SLAB ARTIFACTS		Brown	4
Knives	7	Black	1
Choppers	4	Gray	1
Core	2		
Scraper	4	Used Flakes	
Hammers	1	Argillite	_
Used slabs	5	Brown	5
Picks	2	Black	4
Worked slabs*	7	Gray	3
		CC	3
COBBLE ARTIFACTS			
Used spall	2	Pipe(stone)	1
OTHER MATERIALS		HISTORIC ARTIFACTS	
Protectile points		Beads	
Argillite		Blue (D&C faceted)	1
Black	3	White (D&C faceted)	1
CC	2		
		Vessel glass	
Scrapers		Brown	1
Argillite		Dark olive green	2
Brown	3		
Black	1	Ceramics	,
Gray	2	Earthenware	
CC	1	Plainware	2
		Blue transferware	1
Bifaces		Flow-blue transferware	1
Argillite			
Gray	1	OTHER MATERIALS	
		Bateau bolt	1
Punch		Shot	1
Argillite			
Brown	1	TOTAL ARTIFACTS	74

Fauna	
Bone	3
Teeth	4
Shell	1

<sup>\*</sup> does not appear in any artifact totals

CC is cryptocrystalline silica