

35
12(6")

13(6")

14(6")

15(6")

16(6")

17(6")

~~314~~
~~330~~
~~615~~
~~621~~
~~629~~
~~630~~
~~674~~~~314~~
~~331~~
~~628~~
~~634~~
~~617~~
~~677~~~~332~~
~~640~~
~~641~~
~~676~~
~~680~~~~333~~
~~642~~
~~687~~
~~683~~
~~682~~~~324~~
~~684~~
~~685~~
~~688~~~~335~~
~~689~~
~~691~~
~~692~~

— ?

NOTHING FOR THESE TWO
↓ ↓

18(6")

19(6")

~~690~~ ?
~~693~~ ?
~~694~~ ?~~698~~ ?

5.73

4.5

5(6")

6(6")

7(6")

8(6")

9(6")

10(6")

11(6")

~~20~~~~31~~~~34~~~~247~~~~252~~~~263~~~~267~~~~271~~~~285~~~~295~~~~307~~~~323~~~~343~~~~529~~~~530~~~~533~~~~535~~~~534~~~~535~~~~536~~~~662~~~~210~~~~211~~~~212~~~~251~~~~296~~~~296~~~~308~~~~321~~~~317~~~~537~~~~536~~~~568~~~~663~~~~668~~~~542~~~~543~~~~573~~~~289~~~~297~~~~309~~~~325~~~~547~~~~548~~~~591~~~~559~~~~566~~~~584~~~~665~~~~672~~~~570~~~~288~~~~298~~~~310~~~~326~~~~561~~~~564~~~~574~~~~583~~~~588~~~~596~~~~671~~~~576~~~~299~~~~311~~~~327~~~~572~~~~581-?~~~~590~~~~591~~~~604~~~~610~~~~673~~~~593~~~~300~~~~312~~~~328~~~~589~~~~603~~~~607~~~~609~~~~598~~~~627~~~~675~~~~627~~~~313~~~~329~~~~602~~~~608~~~~616~~~~622~~~~667~~~~581~~~~570~~~~576~~~~593~~~~679~~~~627~~~~653~~~~658~~~~668~~~~669~~~~669~~~~669~~~~669~~~~669~~~~669~~~~669~~~~669~~~~669~~~~669~~~~669~~~~669~~~~669~~~~669~~~~669~~~~669~~

4(6")

29	235	3	154	-291	4	597	4	652
32	239	5	155	-292	2	644	7	654
43	278	10	158	303	11	655	8	659
44	279	35	160	304	13	656	9	661
47	289	37	161	319	14		12	
48	290	36	162	320	15		73	
49	220	38	163	338	16		94	
50	221	39	164	339	17		98	
51	222	40	165	352	18		99	
52	223	42	166	353	19		101	
58	224	41	167	511 ⁵¹²	20		107	
59	225	45	169	508	21		109	
62	301	53	157	510	22		110	
63	302	55	170	512	23		130	
65	317	56	171	653	24		131	
66	318	57	172		25		132	
67	336	60	173	509(?)	26		133	
70	337	61	174		27		134	
76	350	64	175		28		137	
79	351	68	176		54		138	
81	500	72	177		71		139	
83	502	74	178		89		140	
85	504	75	179		90		141	
86	506	77	180		95		142	
87	646	78	181		103		143	
92		80	182		105		144	
96		82	183		108		194	
97		91	184		120		195	
104		93	185		135		196	
106		100	187		136		197	
116		102	189		145		198	
118		111	207		146		199	
117		112	208		147		200	
149		113	213		159		201	
204		114	214		188		202	
205		115	231		266		244	
206		121	237		283		245	
215		122	238		293		246	
216		123	240		305		273	
217		124	241		321		284	
218		125	248		340		294	
219		126	250		343		306	
226		127	253		344		316	
227		128	255		354		322	
228		129	256		513		341	
229		148	257		514		345	
232		150	265		515		523	524
233		151	269		520	521	528	
234		152	270		525		526	
		153	280				527	
			281				531	
			282					

Catalog numbers corresponding to natural levels at the Kings
Hill site, 1972 excavations.

Level	SQ. 8	SQ. 13	SQ. 14
P.Z.	711	696	697
R.F.	---	708	706
D.T.Z.	725	713	715
*M.Z.	---	---	721
M.Z. -1	731	719	
M.Z. -2	739	733	
M.Z. -3	742	736	
M.Z. -4	753	745	
M.Z. -5	764	756	
M.Z. -6	774	760	
M.Z. -7	782	771	
M.Z. -8	790	779	
M.Z. -9	802	793	
M.Z. -10	804	806	
M.Z. -11		809	
M.Z. -12		812	
M.Z. -13		815	
M.Z. -6a		816	
M.Z. -7a		817	
M.Z. -8a		818	
M.Z. -9a		819	
M.Z. -10a		820	

NEW LEVELS

SQ. 5				
	Cat. #	Former Level #	Former Level Depth	New Level Depth
(1)	646	1	12"	12"
(2)	653	2	12"	12"
(3)	655	3	3"	6"
	656	4	3"	
(4)	661	5	3"	6"
	659	6	3"	
(5)	664	7	6"	6"
(6)	666	8	6"	6"
(7)	672	9	6"	6"

SQ. 3

Cat. #	Former Level #	Former Level Depth	New Level Depth
--------	----------------	--------------------	-----------------

SQ. 4

Cat. #	Former Level #	Former Level Depth	New Level Depth
--------	----------------	--------------------	-----------------

(1)	504	1	12"	12"
(2)	510	2	12"	12"
(3)	521 525	3 4	3" 3"	6"
(4)	528 531	5 6	3" 3"	6"
(5)	533 536	7 8	3" 3"	6"
(6)	5568 573	9 10	3" 3"	6"
(7)	580 584	11 12	3" 3"	6"
(8)	588 596	13 14	3" 3"	6"
(9)	604 610	15 16	3" 3"	6"
(10)	617 627	17 18	3" 3"	6"
(11)	667	19	6"	6"
(12)	674	20	6"	6"
(13)	677	21	6"	6"
(14)	680	22	6"	6"
(15)	682	23	6"	6"
(16)	685	24	6"	6"
(17)	691	25	6"	6"
(18)	693	26	6"	6"
(19)	698	27	6"	6"

506	1	12"	12"
512	2	12"	12"
597 644	3 4	3" 3"	6"
652 654	5 6	3" 3"	6"
657 662	7 8	3" 3"	6"
663	9	6"	6"
665	10	6"	6"
671	11	6"	6"
673	12	6"	6"
675	13	6"	6"

NEW LEVEL

1972 EXCAVATION UNITS :
REASSIGNMENT OF CATALOG NUMBERS
WITHIN ARBITRARY LEVELS

Cat. #	SQ. 1		New Level Depth		Cat. #	SQ. 2		New Level Depth
	Former Level #	Former Level Depth				Former Level #	Former Level Depth	
(1) 500	1	12"	12"		502	1	12"	12"
(2) 511	2	12"	12"		508	2	12"	12"
513	3	3"	6"		514	3	3"	6"
(3) 520	4	3"	6"		515	4	3"	6"
524	5	3"	6"		523	5	3"	6"
(4) 527	6	3"	6"		526	6	3"	6"
529	7	3"	6"		530	7	3"	6"
(5) 534	8	3"	6"		535	8	3"	6"
537	9	3"	6"		538	9	3"	6"
(6) 542	10	3"	6"		543	10	3"	6"
547	11	3"	6"		548	11	3"	6"
(7) 559	12	3"	6"		566	12	3"	6"
561	13	3"	6"		574	13	3"	6"
(8) 564	14	3"	6"		583	14	3"	6"
572	15	3"	6"		590	15	3"	6"
(9) 581	16	3"	6"		591	16	3"	6"
589	17	3"	6"		603	17	3"	6"
(10) 599	18	3"	6"		609	18	3"	6"
602	19	3"	6"		616	19	3"	6"
(11) 608	20	3"	6"		622	20	3"	6"
615	21	3"	6"		629	21	3"	6"
(12) 621	22	3"	6"		638	22	3"	6"
628	23	3"	6"		647	23	3"	6"
(13) 634	24	3"	6"					
640	25	3"	6"		676	24	6"	6"
(14) 641	26	3"	6"					
642	27	3"	6"		683	25	6"	6"
(15) 687	28	3"	6"					
(16) 688	29	6"	6"		684	26	6"	6"
(17) 689	30	6"	6"		692	27	6"	6"
(18) 690	31	6"	6"		694	28	6"	6"

NEW LEVEL

12(6")

13(6")

14(6")

15(6")

16(6")

17(6")

314

330

615

621

629

638

674

315

331

628

634

647

677

332

640

641

676

680

333

642

687

683

682

334

684

685

688

335

689

691

692

18(6")

19(6")

690

693

694

698

5(6")	6(6")	7(6")	8(6")	9(6")	10(6")	11(6")
-------	-------	-------	-------	-------	--------	--------

30	210	289	288	299	300	313
31	211	297	298	311	312	329
34	212	309	310	327	328	602
247	251	325	326	572	589	608
252	286	547	561	581	603	616
263	296	548	564	590	607	622
267	308	580	574	591	609	667
271	324	559	583	604	599	
285	347	566	588	610	617	
295	537	584	596	673	675	
307	538	665	671			
323	568	672				
342	663					
347	666					
529	542					
530	543					
533	573					
657						
664						
534						
535						
536						
662						

Catalog numbers corresponding to the arbitrary 6" and 12" levels
at the Kings Hill site (1966 and 1972 excavations)

1 (12")		2 (12")		3(6")		4(6")	
29	235	3	154	291	1	597	4 3 652
32	239	5	155	292	2	644	7 654
43	278	10	158	303	11	655	8 659
44	279	35	160	304	13	656	9 661
47	289	37	161	319	14		12
48	290	36	162	320	15		73
49	220	38	163	338	16		94
50	221	39	164	339	17		98
51	222	40	165	352	18		99
52	223	42	166	353	19		101
58	224	41	167	511	20		107
59	225	45	169	508	21		109
62	301	53	157	510	22		110
63	302	55	170	512	23		130
65	317	56	171	653	24		131
66	318	57	172	509	25		132
67	336	60	173		26		133
70	337	61	174		27		134
76	350	64	175		28		137
79	351	68	176		54		138
81	500-501	72	177		71		139
83	502	74	178		89		140
85	504	75	179		90		141
86	506	77	180		95		142
87	646	78	181		103		143
92		80	182		105		144
96		82	183		108		194
97		91	184		120		195
104		93	185		135		196
106		100	187		136		197
116		102	189		145		198
118		111	207		146		199
117		112	208		147		200
149		113	213		159		201
204		114	214		188		202-23
205		115	231		266		244
206		121	237		283		243
215		122	238		293		246
216		123	240		305		273
217		124	241		321		284
218		125	248		340		294
219		126	250		343		306
226		127	253		344		316
227		128	255		354		322
228		129	256		513		341
229		148	257		514		345
232		150	265		515		523-524
233		151	269		520-521		528
234		152	270		525		526
		153	280				527
			281				531
			282				

Excavation Units : 1966 and depths of each in feet

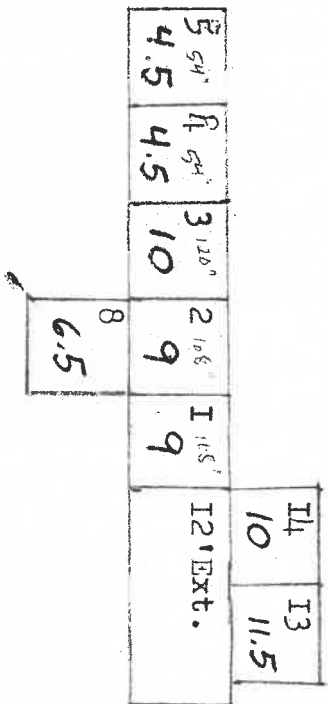
5,200 cubic feet

A	B	C	D	EEE 11' 11" 9.5	FFF 9' 0" 7.5	GGG 12' 2" 6	HHH 10' 0" 5
				EE 4' 5" 4	FF 4' 2" 3.5	GG 2' 4" 2	
A	B	C	D	E	F	G	H
				3 3' 6" 3	4 4' 5" 4	3.5 4' 2" 3.5	.5 6' 0" .5

10 feet

Excavation units; I972 and depths of each unit in feet.

~~1630~~ cubic feet
1625



5'

August 8, 1972

Square 28 8 levels 2,3, and 4 screened and processed S. Holen

Square 23 levels 3,4, and 5 screened and processed N. S. King

Square I E zones I -- 7 All materials retained J. Ludwickson

Square I4 level "Midden Zone" screened and processed M. Ruppert

Note: Square I4 taken down to sterile (see r-Sheets for information)

South wall of square I4 profiled M. Ruppert

August 9, 1972

Square I3 levels 6, 7, 8, 9, 10, 11, 12, and 13 screened and processed
N. S. King

Square 8 levels 5, 6, 7, 8, 9, and 10 screened and processed S. Holen

Square I E Zones 8-25 All materials retained J. Ludwickson

Note: Squares I3, 8, and I E all reached sterile at the levels mentioned
above

Note: Soil samples taken

1. From south wall of Square 3 (sterile soil) all natural levels
2. From east wall of square 8 - all natural levels within the midden zone.
3. From west wall of square I4 - light tan zone with in "recent fill zone"
(see vert. profile)
4. From south wall of square I4 - all natural levels within "midden zone"

Note: Dark area in NW corner of square I3 (possible pit) which has been left standing (see r-sheets for this square) is now being excavated in 6" levels following the same contour as the other levels for this square, soil samples are being taken.

August 11, 1972

v Square I3 Dark area in NW corner of square taken down to sterile (level D IO)

Note : all squares down to ~~to~~ sterile

profiles of west and north walls of square I3 taken

profiles of north, south and east walls of square 8 taken

profile of east wall of square I E taken

August 12, 1972

BACKFILL

will be treated as a single unit. Square 13 will be subdivided - each of the above mentioned units will be divided into 6" arbitrary levels (following the contour of the natural strata) .

August 4, 1972

Square 8 level Plow zone (P.Z.) screened and processed S. Holen

Square 13 level Midden zone 1-1 (M.Z. 1-1) screened and processed S. King

Note: No Recent fill zone in square 8

Note: Square 14 - entire midden zone will be taken out as a single unit.

Note: Squares 13 and 8 - Entire midden zone will be taken out in 6" levels (Disregard former notes stating that Midden zone could be divided into natural strata.) - changes in strata within midden zone are too ambiguous in nature and cannot be seen horizontally.

August 7, 1972

Square 13 level midden zone 1-1 screened and processed N. S. King

Square 8 level midden zone 1-1 screened and processed S. Holen

Note: A one foot extension of the east wall of square 1 will be made All soils will be retained for floatation etc. Only the northern $\frac{1}{2}$ (2 1/2') of the extension will be excavated. This unit will be designated square 1 E.

August 8, 1972 MIDDEN ZONE 1-

Square 8 levels ^{MIDDEN ZONE 1-} 2, 3, and 4 screened and processed S. Holen

Square 13 levels ^{MIDDEN ZONE 1-} 3, 4, and 5 screened and processed N. S. King

Square 1E zones 1, 2, 3, 4, 5, 6, and 7 all soils retained J Ludwickson

Square 14 level midden zone (entire zone) screened and processed M. Ruppert

Note: Square 14 taken down to sterile (see r-sheets for infor.)

Note: south wall of square 14 profiled M. Ruppert

August 1, 1972

Square 13 level P. Z. (plow zone) screened and processed J. Ludwickson
 Square 14 level P. Z. (plow zone) screened and processed M. Ruppert

Vert. profiles Square 3 west wall	J. Ludwickson	S. Holen
Square 3 south wall	"	"
Square 2 east wall	"	"
Square 2 west wall	"	"

Note: Old exploratory trench running through square 13 will be treated as a single and separate unit from this point forward (from the top of "recent fill" to approx. 6" into the midden zone)

August 2, 1972

Square 13 level recent fill (R.F.) screened and processed N. S. King
 Square 14 ~~R.F.~~ level recent fill (R.F.) screened and processed M. Ruppert

Square 8 (see notes of 7-8-72 for location) opened. This square will be treated in the same manner as squares 13 and 14.

Note: datum of square 8 is exactly 18" higher than for squares 1-6.

Note: Natural strat. level "Recent fill" is not present on west wall of square 8 therefor it may be omitted in this square.

Note: A light tan natural strat. was encountered in squares 13 and 14 this level was not present in eastern wall of (vert. profile of 12' extension trench) therefor it was included in "Recent fill". Soil samples will be taken from this level at a later date.

August 3, 1972

Square 13 level dark transitional zone (D.T.Z.) screened and processed
 N.S. King

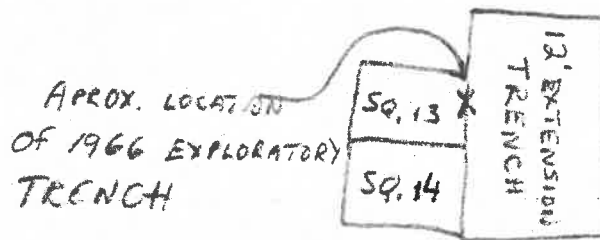
Square 14 level dark transitional zone (D.T.Z.) screened and processed
 M. Ruppert

Square 15 chunked down to sterile at 36" J. Ludwickson

Note: natural strat. level "Midden zone" will be subdivided into Midden zone I and Midden zone II (see profiles and r-sheets)

Note: Square 14 will be chunked through M.Z. I and M.Z. II and each level

Note: Exploratory trench (1966 excavation unit) off. of west wall of 12' extension trench (west wall of 1966 excavation unit square EEE) is visible in vertical profile. This trench extends down to approximately 6" into the "midden zone". This feature will be included in square 13 materials from the first two natural zones and the first 6" of the "midden zone". Materials from square 13 should be interpreted with this consideration in mind.



July 31, 1972

Square 2 level 28 screened and processed, C. Johnson

Square 3 levels 26 and 27 screened and processed, S. Holen

Vert. profile - square 3 east wall S. Holen

Note: two new squares opened - Square 15 is 45 - 50 feet directly south of the north wall of square 1. Square 16 is 110 - 115' directly south of the north wall of square 1.

These two squares will be chunked out in 12" levels, the materials from these squares will not be screened. The purpose of these squares is to obtain vert. profiles and soil samples.

Note: soil samples will be taken from each level of squares 15 and 16.

Note: from this point forward all soil samples will receive cat. #'s.
(samples from north wall^{of sq. 1} did not receive cat. #'s - see vert. profile of that wall for information.)

July 28, 1972

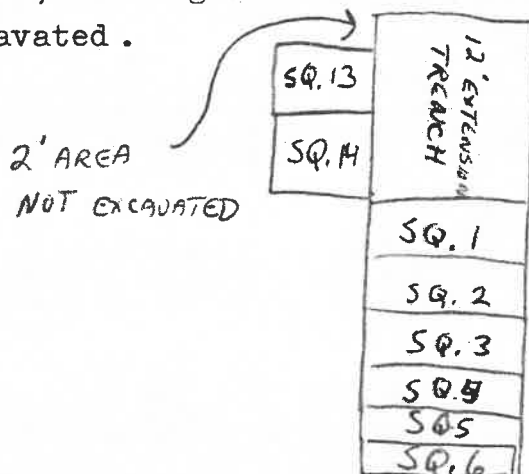
Square 1 levels 28, 29, 30 and 31 screened and processed. C. Johnson

Square 2 levels 26 and 27 screened and processed J. Ludwickson

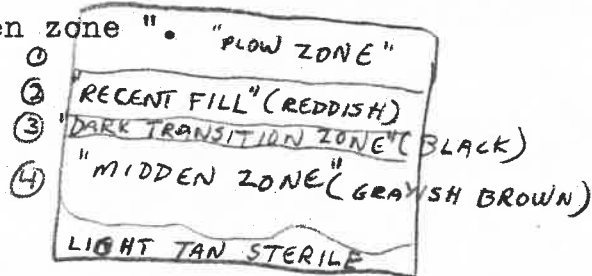
Square 3 levels 24 and 25 screened and processed. S. Holen

Note: Profiles taken from ~~XXXX~~ west wall of 12' extension trench..

Two five foot squares designated squares 13 and 14 will be dropped immediately to the west of ~~SQUARE~~ of 12' extension trench and immediately NW of square 1, leaving a 2' area on the northern edge of 12' extension trench unexcavated.



These two squares will be taken down in natural strat. units. The four units will consist of "Plow zone", "Recent fill", "Dark transition zone", and midden zone".



The first three zones will all be chunked out and treated as a single units. The fourth zone (midden zone) will be excavated in 6" levels

Note: Square 1 - square becomes sterile at a depth of 120" (see r-sheets)

Square 5	"	"	"	"	"	"	"	54"	"	"
Square 4	"	"	"	"	"	"	"	72"	"	"

Note: Datum depths for squares 13 and 14 will be the same as those for squares 1-6 (level lines run continuous for all squares mentioned above) the datum point being the SE corner of square 6.

Note : Numbering system for soil samples from vert. profiles -
 Each vertical profile of each square will be given a Roman numeral
 All soil samples from each profile will be numbered in regular
 notation (ie. I-1 = first sample taken from north wall of square 1)
 all regular numbers will then be plotted photo copies of the profiles,
 thereby giving exact location of each sample.

July 25, 1972

Square ~~2~~ level 2 screened and processed S. Holen

Square 3 levels 19 and 20 screened and processed N. S. King

Square 4 levels 11, 12, and 13 screened and processed S. Holen

Square 5 level 9 screened and processed M. Ruppert

Square 4 - possible pit(s) surrounded by sterile soil on floor.
 Only area believed to be pit excavated in 6" levels. (see r-sheets)

Note: two pits observed in vertical profile of east wall of square 1

Note : square 3 may also contain pit (see r-sheet)

July 26, 1972

Square 3 levels 21, 22, and 23 screened and processed N. S. King

Square 5 vertical profiles of east, west, and south walls taken

Square 4 vertical profiles of east and west walls taken.

West wall of 12' extension trench cleaned M. Ruppert and J. Ludwickson.

July 27, 1972

Square 1 level 28 screened and processed C. Johnson

Square 2 level 25 screened and processed S. Holen

Note : possible pit in NE corner of square 1 is only area in the
 square that is being excavated.

One half day of rain.

A profile will then be taken - soil samples will be taken from the natural levels and sent to Lincoln for chemical analysis.

Note : from this point forward all arbitrary levels will be in 6" intervals.

Square 2 level 22 - last 3" level

Square 3 level 18 - " " "

Square 4 level 8 " " "

Square 5 level 6 " " "

Note ; All materials screened and processed to this point (including today) have been sent to Lincoln.

Note : All cultural materials from the ten foot extension trench will be treated as a single unit.

Note : Catalog error - Due to cat. error the cat. #'s 656 and 657 were duplicated and should have been separately numbered, therefore square 5 level 5 will have the new cat. # 661. Square 4 level 8 will be renumbered as cat. # 662 (see page 35 of catalog).

July 24, 1972

Square 4 levels 9 and 10 screened and processed. S. Holen

Square 5 levels 7 and 8 screened and processed. M. Ruppert

Square 1 - east and west walls profiled. C. Johnson and N. S. King

12' extension trench - soil containing cultural material was encountered in northern 1/3 of trench at a depth of from 7' to 10'. All materials were treated as a single unit and water screened. Materials all came from a single strat. unit to be defined later (" midden level" ?).

Balk between north wall of square 1 and southern wall of 12' extension trench removed.

Soil samples were removed from strat. units of northern wall of square 1 before its destruction (samples for chemical analysis only) samples will be sent to Lincoln with King.

July 20, 1972

J. Oothoudt started excavation of square 4 at level 3. Square 3 will remain at it's present level (level 18).

Note: Square 1 was taken down to level ~~24~~4 (87-90"). The dark brown mottled midden deposit in the NE corner of the square was excavated in ~~three~~ 3" levels to a depth of 99". The light brown (tan) sterile soil was then chunked out from 90-99". This sterile material was then given a cat. # and water screened,

Square 1 levels 24,25,26, and 27 and sterile loess (see notes above)

screened and processed M. Ruppert

Square 2 levels 21, 22, and 23 screened and processed J. Ludwickson.

Square 4 levels 3 and 4 screened and processed J. Oothoudt.

Square 5 level~~x~~ 1 screened and processed M. Ruppert.

July 22, 1972

Square 4 level 8 screened and processed L. Vidlack

Square 5 levels 5 and 6 screened and processed N. S. King

Norht wall of square 1 profiled - N. S. King and M. Ruppert

A ten foot ^{Long}trench 5 feet wide was dropped north of the north wall of square 1. A two foot b^olk was left between the north wall of square 1 and the south wall the trench therefore the north wall of the trench is twelve feet from the north wall of square 1. This trench cuts through square EEE (1966 excavation unit) - the purpose is to expose and profile the west wall of square EEE. The two foot balk will be cut back to aprox. 6" from the north wall of square 1.

July 17, 1972

Square 1 levels 14, 15, And 16; screened and processed, M. Ruppert
 and 14
 Square 2 levels 12 and 13; screened and processed, J. Ludwickson
 and 12
 Square 3 levels 9, 10, and 11; screened and processed, J. Oothoudt

Note : Soil in square 1 continuing light brown mottled (see
 notes July 14, 1972).

July 18, 1972

a probe
 Square 1 revealed that the light brown (tan) soil (see r-sheets)
 represents the sterile bottom of the midden deposit. The deposit
 continues to a depth of aprox. 86" in the NE corner of square 1.
 This square will be taken down three inches below the the deposit
 in the NE corner (89")

Square 2 A probe revealed that the midden deposit extends
 aprox. 16" below present surface of 60" to a depth of 76". Square
 2 will be taken down^{3"} below base of the midden deposit (79")
 Square 3 - A probe revealed midden deposit to a depth of aprox.
 12" below present surface of 54". Square 3 will be taken down
 to depth of 69", 3 inches below base of deposit.

Square 1 levels 17, 18, and 19 screened and processed M. Ruppert
^{5 6 7}
 Square 2 levels 14, 15, and 16 screened and processed J. Ludwickson
^{3 4 5}
 Square 3 levels 12, 13, and 14 screened and processed J. Oothoudt

July 19, 1972

Square 1 levels 20, 21, 22, and 23 screened and processed M. Ruppert
 Square 2 levels 18, 19, and 20 screened and processed J. Ludwickson
 Square 3 levels 16, 17, and 18 screened and processed J. Oothoudt

Note : depth of squares as mentioned in notes of July 18, 1972 may
 be greater than anticipated.

Dark tan (brown) mottled areas mentioned in all r-sheets which moves from east to west with increased depth, is now covering the entire surface of all three squares. It is almost certain that this soil represents the midden deposite. Some (much less than in the reddish tan soil) Euro-American material is present. Most of this material is associated with rodent activity, the rest probably represents natural deposition due to gravity. As depth increases the frequency of this material decreases. If this trend continues it would tend to indicate that the midden deposit is natural and that some stratigraphy is present.

Note: From this point forward all Euro-American material will be plotted on R-sheets

July 14, 1972

Square 1 levels 10, 11, 12, and 13 screened and processed M. Ruppert
 Square 2 levels 10, and 11 screened and processed N. S. King

Note : Level 13 of square 1 contains dark mottled area in northern portion of square grading into light brown mottled in the southern part of the square. (see r-sheets). This could represent a lens within the midden deposit, or an area beneath the deposit.

Walls trimmed as before (see notes 7-11-72)

Note : Radio-carbon samples are now being taken from all levels of all squares.

Radio-carbon sample taken from Square 1, level 3(~~23~~ $23\frac{3}{4}$ "- $28\frac{3}{4}$ " south of north wall, 18"-21" west of east wall, and 26 - $26\frac{3}{4}$ " below datum)

Four hours of rain

Rest of day spent cleaning and scraping walls of squares 1,2,3,and4. Squares 1 and 2 were at a depth of 27", squares 3 and 4 at a depth of 24". Scrapings from each wall of each square were treated as separate units, the dirt was given a cat. # and water screened.

July 12, 1972

Square 1, levels 4,5, and 6	water screened and processed.	E. Hoke
" 2, " 4, 5, and 6 "	" " "	M. Ruppert
" 3, " 3, 4, and 5 "	" " "	S. King

Stone slab and dirt supporting it, water screened and processed. Materials treated as one unit, encountered at level 2, processed at ~~XX~~ base of level 4.

Y

Leveled strings on squares 1, 2, 3, 4, 5, and 6 replaced with nylon cord.

July 13, 1972

Note: All radio-carbon samples will be given a separate cat. #.

Square 1 levels 7,8, and 9	screened and processed.	E. Hoke
" 2 " 7,8, and 9 "	" " "	.M. Ruppert
" 3 " 6,7, and 8 "	" " "	.S. King

#'S for artifacts found during excavation will be issued upon request of the excavator.

July 10, 1972

Square 2, level 2 was excavated by T. Thiessen

Square 2 level 2 " " " J. Ludwickson

Square 3 Level 2 " " " L. Vidlak

The settling pool was cleaned in aprox. 30 min.

Square 4, level 1 was completed by N. S. King, square 4, level 2 was also started by King.

Square 1, level 2	(12" deep)	-----	screened and processed
" 2	" 2	" "	" " "
" 3	" 2	" "	" " "
" 4	" 1	" "	" " "

Processed materials (cat. #s 500, 502, 503, 504, 506, 507, 508, 510, and 511), sent to Lincoln with T. Thiessen.

NOTE : Datum depths for all squares are measured from southeast corner of square 6.

July 11, 1972

Square 1, level 3 (3" deep) excavated by E. Hoke

Square 2, level 3 " " " M. Ruppert

Square 4, level 2 (12" deep) " " S. King

The sod has been stripped from Squares 1, 2, 3, 4, 5, & 6.

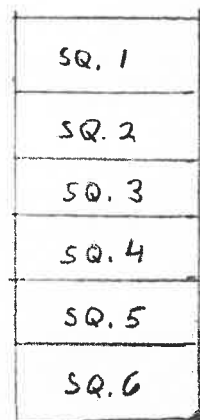
Construction has begun for the settling basin for water screening.

July 9, 1972

The lines have been leveled for Squares 1, 2, 3, 4, 5, & 6.

The Datum point point is the southeast corner of of Square 6.

(String is flush with ground. AT THIS POINT)



Line is flush with the ground
and all the lines run level
with this point.

*

Window screening (1/16 mesh) is being placed on three park service screens. Levels 1 and 2 of all the squares will be chunked out and water screened. Levels 1 and 2 will each be 12" deep. All succeeding levels will be skimmed with trowel and will be 3 " deep.

Square 1, level 1 is being excavated by Tom Theissen; Square 2, Level 1 is being excavated by John Ludwickson; Square 3, level 1 is being excavated by Lea Vidlak; and Square 4, level 1 is being excavated by Prudence Sadler and Kay Sargent.

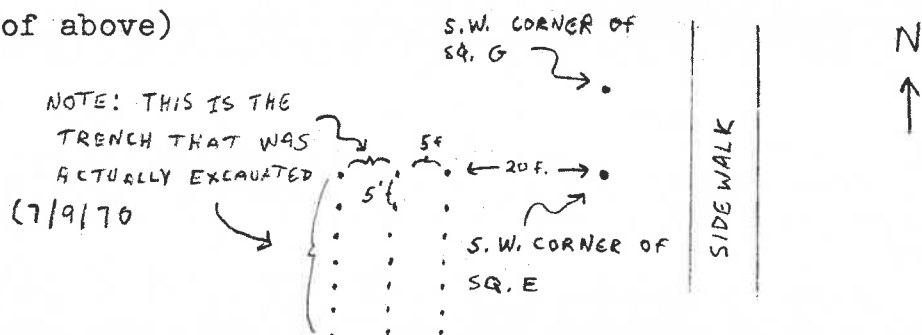
Square 4, Level 2 has been begun by John Ludwickson.

Square 1, Square 2, and Square 3 have been screened and processed.

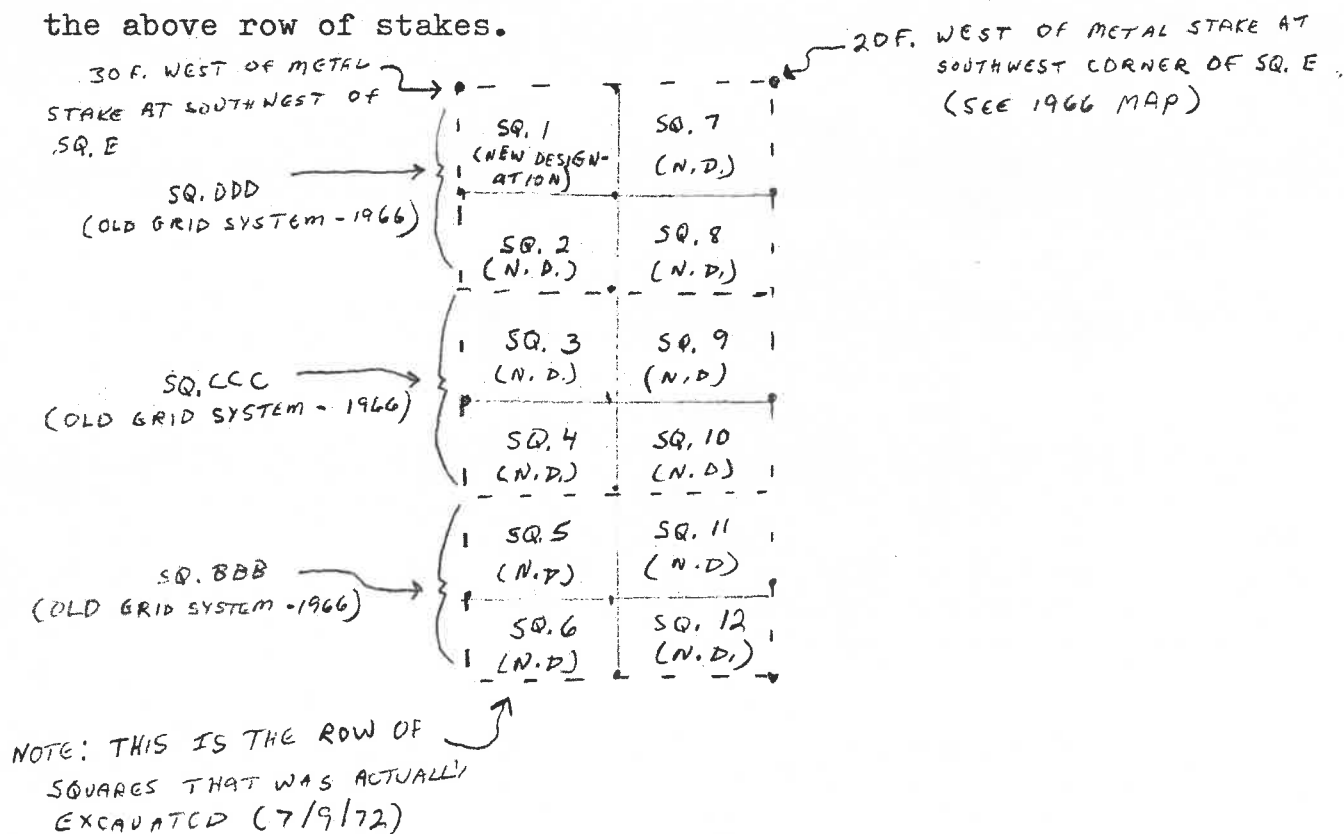
Change in Cataloging System---formerly there were issued two catalog numbers per provenience---I.E. Square 1, level 1 recieved #'S 500 & 501--the first # representing materials which have been water screened; the second # representing artifacts pulled out durring excavation. Now only one number will be issued, additional

July 8, 1972

Two metal stakes were uncovered six feet west of the side walk. The stakes represent the southeast corners of Squares E and Square G. The stakes are being place at a right angle to the metal stake representing the southeast corner of square E. These stakes are being placed at 20' west and 25' west of the metal stake. These two stakes will represent the northern wall of five foot wide trench. The trench will run in a north-south direction for 30' and will be subdivided into 5' intervals. (See map, 1966) (~~NOTE~~ - (Note-Trench actually excavated is 5' west of above)



Another row of stakes is being added 30 feet west of the metal stake at the southeast corner of square E parallel to the above row of stakes.



An Analysis of Pottery
from the King's Hill Site

23BN1

Square FFF

Levels 1-15

Pat Woodbury

August 4, 1971

The King's Hill site is located slightly northwest of St. Joseph, Missouri on the east side of the Missouri River. The area surrounding this site is composed of low to fairly high river bluffs with grassy plains found further away from the river. The general area and the fact that bison herds are known to have roamed over this area in earlier times suggests a life style in which the main occupation is hunting with the possibility of small scale horticulture, gathering, and fishing on the side. The identity of the inhabitants of the King's Hill site is still in question. They almost definitely belong to the Oneota Aspect and are believed to be a Siouan tribe of the Dhegiha branch.

Most of those who have studied the King's Hill site attribute it to the Kansa Indians. The first documented Kansa village stood at the junction of Independence Creek and the Missouri River, on the present site of Doniphan, Kansas. They were discovered here in 1723 by La Renaudière. This is about sixteen miles south of the King's Hill site which is believed to have been occupied some time around the late 1650's. There is also fairly good evidence that the Fanning site across the river from King's Hill is a Kansa site. It is possible that the Osage Indians could have occupied King's Hill but they seem to have roamed over the area more to the east and south and don't

appear to have come much farther north on the Missouri than the Osage River.

King's Hill pottery follows almost exactly the generalized characteristics of Oneota pottery. These include shell tempered pottery; globular jars with constricted necks and vertical or flaring rims; decorations limited to the upper body and shoulder and consisting of groups of trailed or smoothed-over trailed lines, often in association with punctate elements. They also have lip decorations of punctate units, notches, or finger impressions.

The pottery is very similar to that found at the Fanning site and described by Waldo Wedel.¹ Manufacturing techniques seem to be the same, as do many of the decorative motifs. One difference appears in types of handles. According to Wedel, Fanning has strap, loop and lug handles with no evidence of riveted handles and no cases in which the strap handles are connected to the lip. At King's Hill there are several instances of riveted handles as well as strap handles attached to the lip. However there are no loop or lug handles. Decorations also differ but most of these could be local variations of the same theme. Wedel does not give much mention to painted vessels or interior decoration of any kind, as found at King's Hill. In general, Fanning seems to be slightly more advanced in pottery manufacture and

¹Waldo Wedel, An Introduction to Kansas Archeology, (Washington: United States Government Printing Office; 1959) pp. 145-150.

decoration. However, since I have only studied one square, I cannot give a complete picture of the King's Hill pottery tradition.

The most creative period for King's Hill potter's occurs from levels 7 through 11, or from 36 to 66 inches below the surface, each level 6 inches deep. It is these levels which contain the greatest number of sherds for each category--decorated, plain, with and without handles. Levels 8 and 9 are especially productive and usually contain those sherds which are rare at other levels--particularly those with the more complex decorations.

In analyzing this pottery, height measurements of the rims were taken on the inside of the jar from the neck to the lip. Diameters were measured by placing the lip on a template marked off in concentric circles 10 millimeters apart. I have divided the potsherds into two categories; King's Hill Plain and King's Hill Decorated.

King's Hill Plain

Body sherds: 4,196 specimens; Rim sherds: 116 specimens; Handle fragments: 32 specimens; Total: 4,244.

Paste:

Tempering: Shell seems to be the most common, if not the only tempering material used. It is usually seen in thin, flat particles up to 2 mm. in diameter and seldom over 4 or 5 mm. It is used sparingly to abundantly.

Exposed edges and sometimes surfaces often have thin, flat cavities where shell particles have been leached out.

Texture: The texture runs from medium to fine with the sherds usually well-compacted. Breaks are clean, there being little tendency to crumble. Several of the rimsherds, usually the smaller vessels are split along a line parallel to the surface.

Hardness: Most of the sherds have a hardness of about 3.5-4. They range, however, from around 2 to nearly 5.

Color: The inner surfaces are usually either tan or gray. The exterior surfaces range from a tan or copperish color to a very dark gray. There are also numerous orange firing clouds.

Method of manufacture: There is no evidence of coiling. I was unable to ^{what} what the method of manufacture was.

Surface Finish: The exterior surfaces are usually well smoothed with 180 sherds attaining a polish. The interior surfaces appear to be smoothed only as much as might occur during the manufacturing process.

Form:

Vessel shape: The most common and probably typical vessel shape is that of a globular jar with a rounded base, constricted neck, outflared rim, and strap handles.

Vessel size: The greatest number of rimsherds (92 specimens) have diameters between 100 and 130 mm. with almost as many (87 specimens) having diameters between 80 and 100 mm. However they range from two with 10-20 mm. diameters to

seventeen with diameters of between 130-150 mm. and eleven with diameters of over 150 mm.

Rim: The rims are almost all of the straight out-flaring or outcurving variety. However, there are ten rimsherds from vessels which seem to have vertical rims with no neck constriction. Six of these are from levels 8 and 9 or from 42-54 inches below the surface. Most have finger notches on or just below the lip. This has given a wavy appearance to the rims of two of them (see illustrations). Four of these sherds, all from level 9, also have red or reddish-orange paint applied to the lip or interior. In size, these vertical rimsherds fall within 60-200 mm., seeming to center around 140-160 mm., with lip thicknesses ranging from 5-10 mm., making them generally larger than the more common sherds.

Most of the more common type of sherds have rim heights within the 35-50 mm. range but the variety extends from about about 5 mm. to over 60 mm. Rims are almost all 4-8 mm. thick, ranging from one at 2 mm. in level 8, to six with thicknesses of over 9 mm.

Lip: The lips are usually rounded, often thinned almost to a point. Some are flattened and smoothed. The flattening is often seen with vessels which have implement-made notches.

Handles: First I should say that I have included the handle fragments, which have broken off of their vessels with the plain pottery for discription. Of those vessels with attached handles, more are plain than are decorated.

Nearly all the handles from this site are of the strap variety. Although one or two come close to the definition of loop handles, they seem to have been manufactured the same way as the strap handles and are more circular merely due to the smaller sizes of the vessels they appear on. There is no evidence at all of lug handles as described by Wedel. The handles appear to have been attached first at the top, either to the lip (4 specimens) or, more commonly, 6-12 mm. below the lip on the rim, and then molded or pinched into the upper shoulder of the body. There are also five rimsherds, all from 70 to 100 mm. in diameter, which have drilled holes, presumably for riveted handles. These holes are usually from about 30-45 mm. below the lip and are on vessels with fairly high rims.

The strap handles are of two forms; (a) the tapered strap, of which there are 29 specimens. These are wider at the top than at the bottom. And (b) The straight-sided strap, of which there are 21 specimens. These are of fairly equal width all the way down. The straight-sided type are usually longer than the tapered kind.

Decoration: The only decoration on the plain pottery is that on the lips and handles of vessels otherwise devoid of markings. Twenty-eight of the handles have one, two, or three trailed finger lines running vertically their entire length. Eighteen are without any decoration and 3 have horizontally trailed lines across their bases. There is one handle with horizontal rows of punctations--

each row alternating the direction in which these point. (See illustrations). This handle could possibly belong to the decorated group, but there is not enough of the sherd to tell whether or not there is any other decoration.

Lip decoration is almost entirely notches apparently made with the finger tip (111 specimens). There are also 5 sherds having finger tip notches with finger nail marks in the middle. Otherwise, there are 31 rimsherds with implement made notches and 21 with punctations of some sort. The punctations seem to be made either with some sharp object giving sharp, acute holes or often with what appears to be the end of a stick, giving a round hole with a rough convex bottom. There are 109 sherds with no lip decoration at all.

King's Hill Decorated:

Body sherds: 457; Rimsherds: 68; Total: 525.

Paste: Same as Plain

Surface Finish: Same as Plain

Form: In general the decorated sherds are made in the same shapes as are the plain vessels. Exceptions are those which are decorated with trailed lines apparently made with the finger.

Handles: There are 11 decorated vessels which have or show evidence of having handles. Of these, only 4 actually have the handle still attached. These handles are all of the straight-sided type with three being attached below

the lip and 1 connected to the lip. The 3 attached below the lip are all decorated with vertical finger lines as are most of the plainware handles. The remaining handle is marked by horizontal rows of short diagonal dashes, each row alternating the direction of the diagonal.

The vessel of this handle has implement-made diagonal lip notches and has diagonal dashes on its shoulder. The 7 other vessels with evidence of handles are divided between 2 with molded handles attached below the lip, 2 with molded handles connected to the lip and 3 with riveted handles about 40 mm. below the lip. All but 2 of the decorated vessels with handles are located in levels 8-10 or from 42-60 inches below the surface.

The other 2 are found in levels 3 and 6.

Decoration: Decorations consist of trailed (205 specimens), smoothed-over trailed (101 specimens), incized (11 specimens), cord marked (2 specimens), fabric marked (1 specimen) and excized (1 specimen).^{lines} Widths vary from narrow (.5-1.5mm.), medium, which is most commonly used, (1.5-3 mm.), and wide (3-5 mm.). Trailed lines also consist of those lines made by drawing the finger across the pot. The major lines of most of the decorations are diagonal, running from the neck of the vessel over the rounded shoulder, but not usually continuing as far as the base. The lines are usually about 3.5-5 mm. apart.

Diagonal lines are often seen in sets of one direction running into rows of the opposite diagonal

direction to form chevrons. Long diagonals of one direction are also commonly connected for their entire length by shorter diagonals of a different direction.

Horizontal lines are also very common, especially at the conjunction of the rim and shoulder. On many vessels with horizontal lines around the neck, these appear to be the only decorative markings. This, however, is mostly guesswork, as very few examples are large enough to give an accurate picture of the entire pot. Otherwise horizontal lines are usually part of a more complex motif. They are often used to connect a series of diagonal lines which lay in one direction with a series going the opposite direction. A number of sherds are marked with horizontal lines made with the fingernail. There is usually at least one fairly complete horizontal line on these vessels, with other fingernail markings randomly placed, parallel to the main line or lines. It is as if the decorator missed while making his lines. There are several cases in which several rows of horizontal lines run into several rows of vertical lines and are continued on the other side. In one instance, at level 7, vertical and horizontal narrow incized lines form a grid pattern (see illustration).

Finger trailed lines are usually vertical although sometimes diagonal. They are found more commonly on the larger sherds. In most cases they are the only decoration, circling the entire jar. In one instance, 2 diagonal finger trailed lines meet in a point under a molded handle with

2 vertical finger lines. (see illustration).

Dashes and punctations are almost always found in connection with other decoration. Punctations are found on 17 sherds. In 2 of these cases they are the only decoration. Generally, punctations appear in single columns between two rows of either vertical or diagonal lines. Rounder punctations seem to be preferred over the sharper variety, and they are more often in the company of trailed lines than smoothed-over trailed.

There are 14 sherds which have dashes. On 4 of these the dashes are the only decoration. On 1 of these sherds, from level 7, the dashes form a chevron (see illustration). In the other instances where dashes are present, they appear in a single column between 2 rows, or more commonly, in horizontal rows of vertical dashes. They are often used to fill the inside of a chevron. Most of the dashes are medium to narrow in width, 5-7 mm. in length and are in conjunction with trailed rather than smoothed-over trailed lines.

Curvilinear lines are present in a few instances, although there are no completed circles. Most of the lines have rounded and blunt ends, however there are many with squared off ends, particularly on those sherds with more elaborate motifs.

There are 3 sherds which might possibly suggest contact with some other culture. These are 2 cord-marked sherds from levels 1 and 3 and what appears to be a fabric-marked sherd from level 6. The cord-marked especially

represent possible outside influence since they appear fairly close together during the later phases of King's Hill occupation.

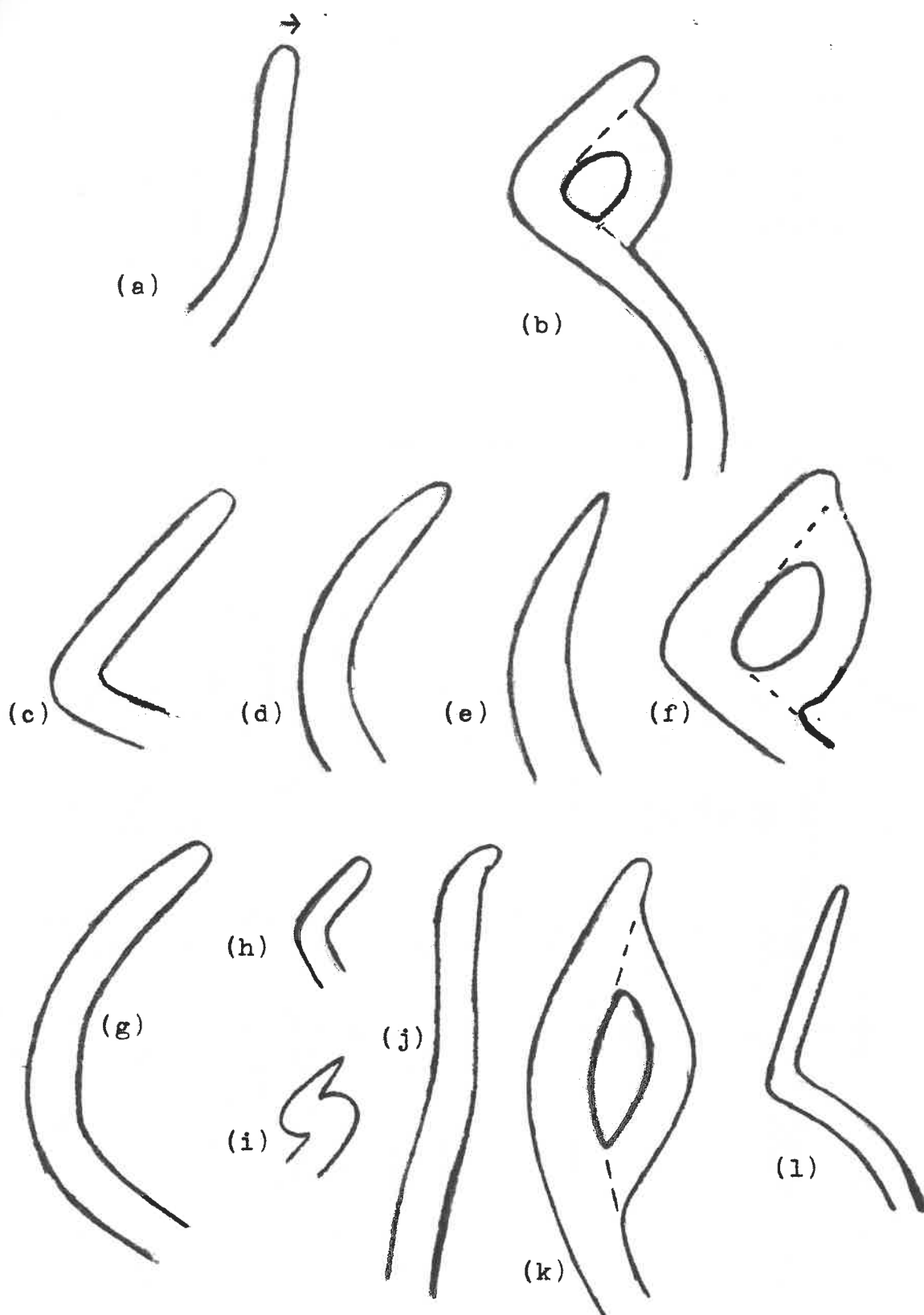
Lip decoration consists of finger-tip notches (26 specimens), implement-made notches (11 specimens) and punctations (5 specimens). Twenty-six of the rimsherds have undecorated lips

Although most of the sherds have lines of some sort on their interiors, probably from manufacture, there are 13 bodysherds which appear to have been deliberately lined. Nine of these also have red paint on the inner side. All are medium to narrow in width. Three are smoothed-over trailed lines while the other ten are trailed.

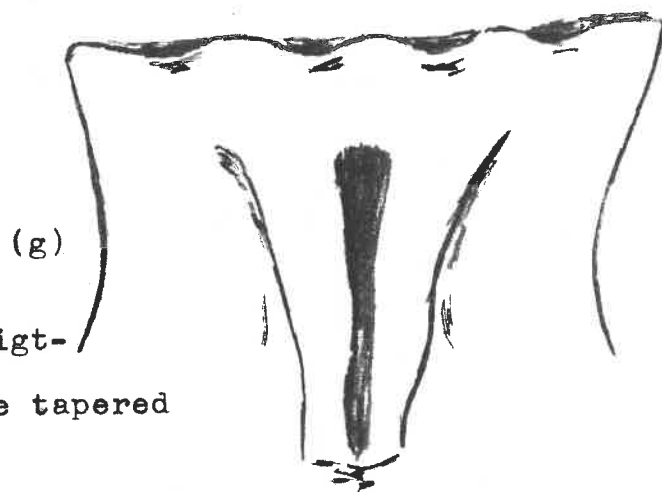
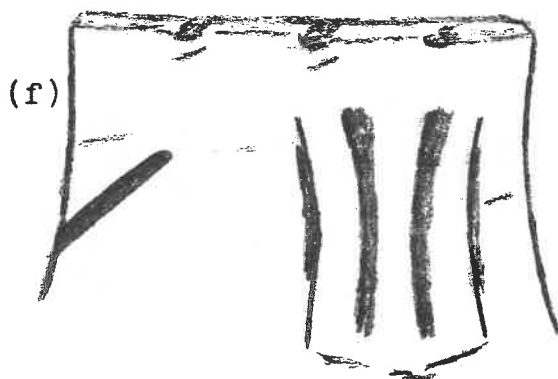
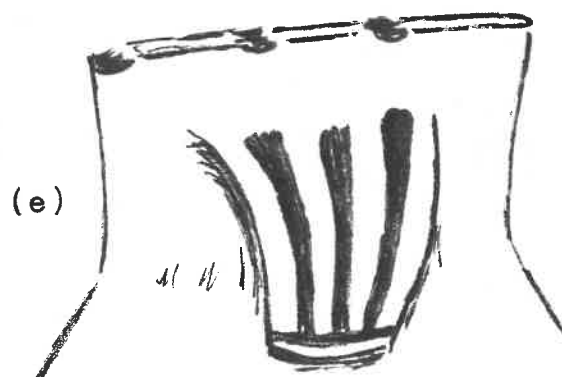
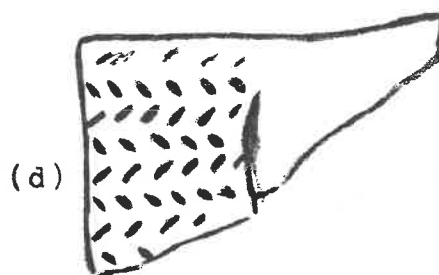
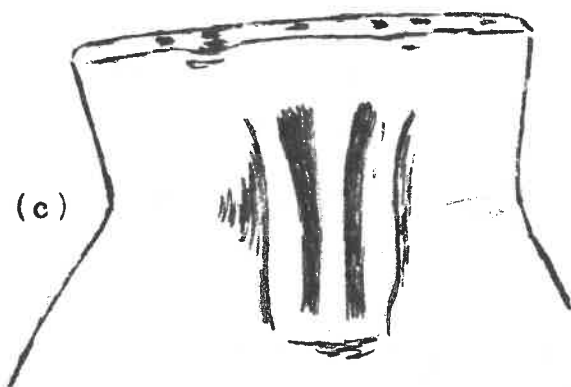
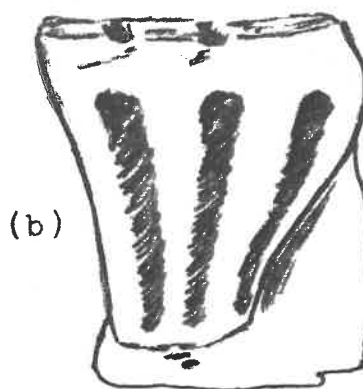
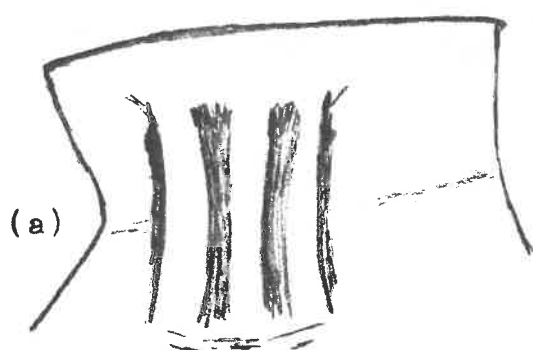
I have included under the decorated category those sherds which have what appears to be red or reddish-orange paint. There are 185 vessels which have red paint on the interior and in some cases the lip. These sherds are all without other decoration except, in many cases, lip notches or punctations. This includes 26 which have polished exteriors. There are also 24 sherds with red interiors which also have lined motifs on their exteriors. Trailed and smoothed-over trailed lines are almost equally represented among these sherds, with 1 sherd having incized lines. Vessels with red paint on the exterior are much less common. There are only 7 altogether. Two of these have red paint as the only decoration. The other 5 are divided into 4 with trailed lines and 1 with smoothed-over trailed lines. Red exteriors seem

to be fairly limited to the smaller pots and usually those with more complex motifs.

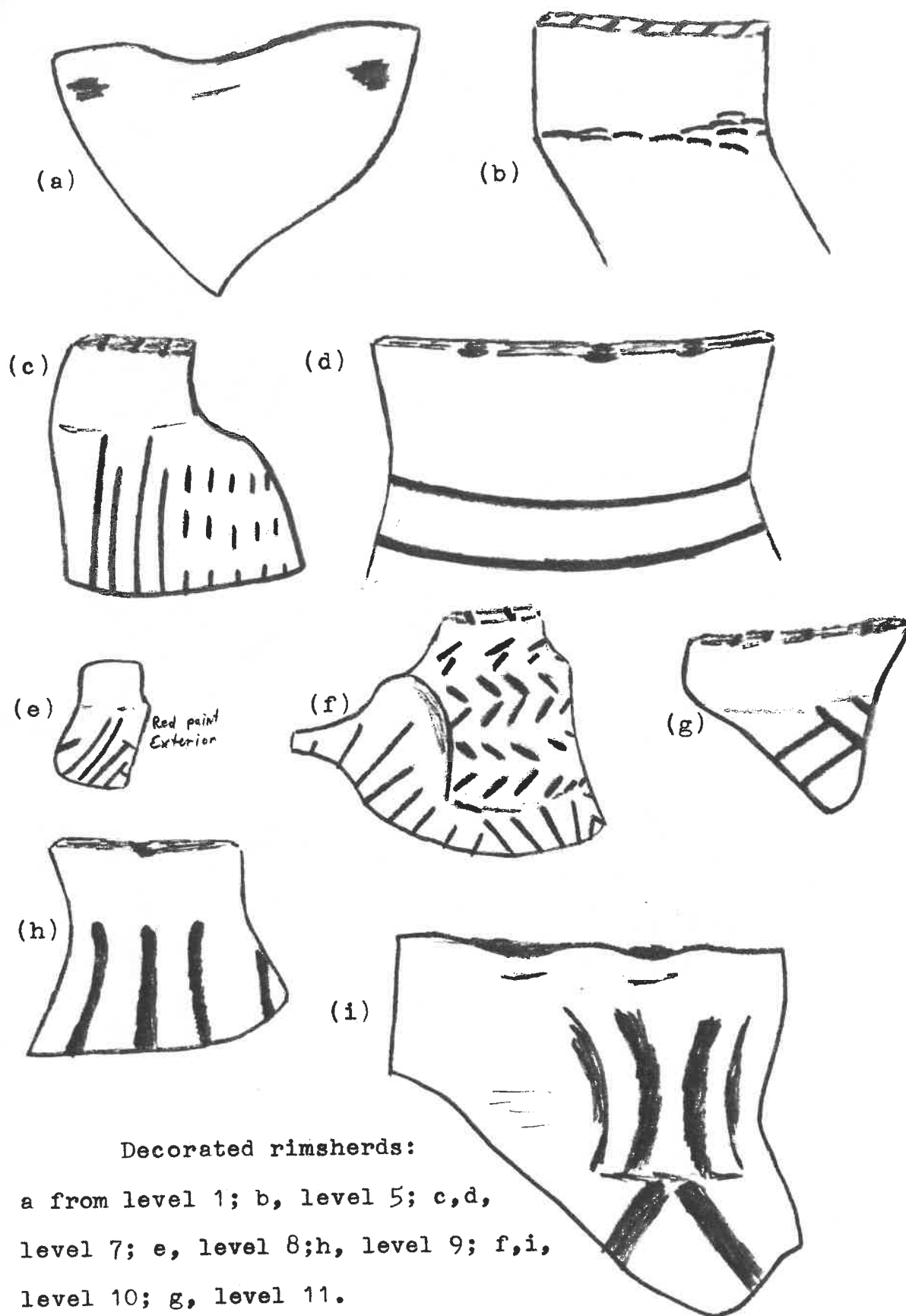
From all the evidence, I am inclined to agree that the Kansa Indians were the inhabitants of the King's Hill site. The pottery, in any event, seems to have been made, if not by the Kansa, then by a people with very similar customs and techniques.

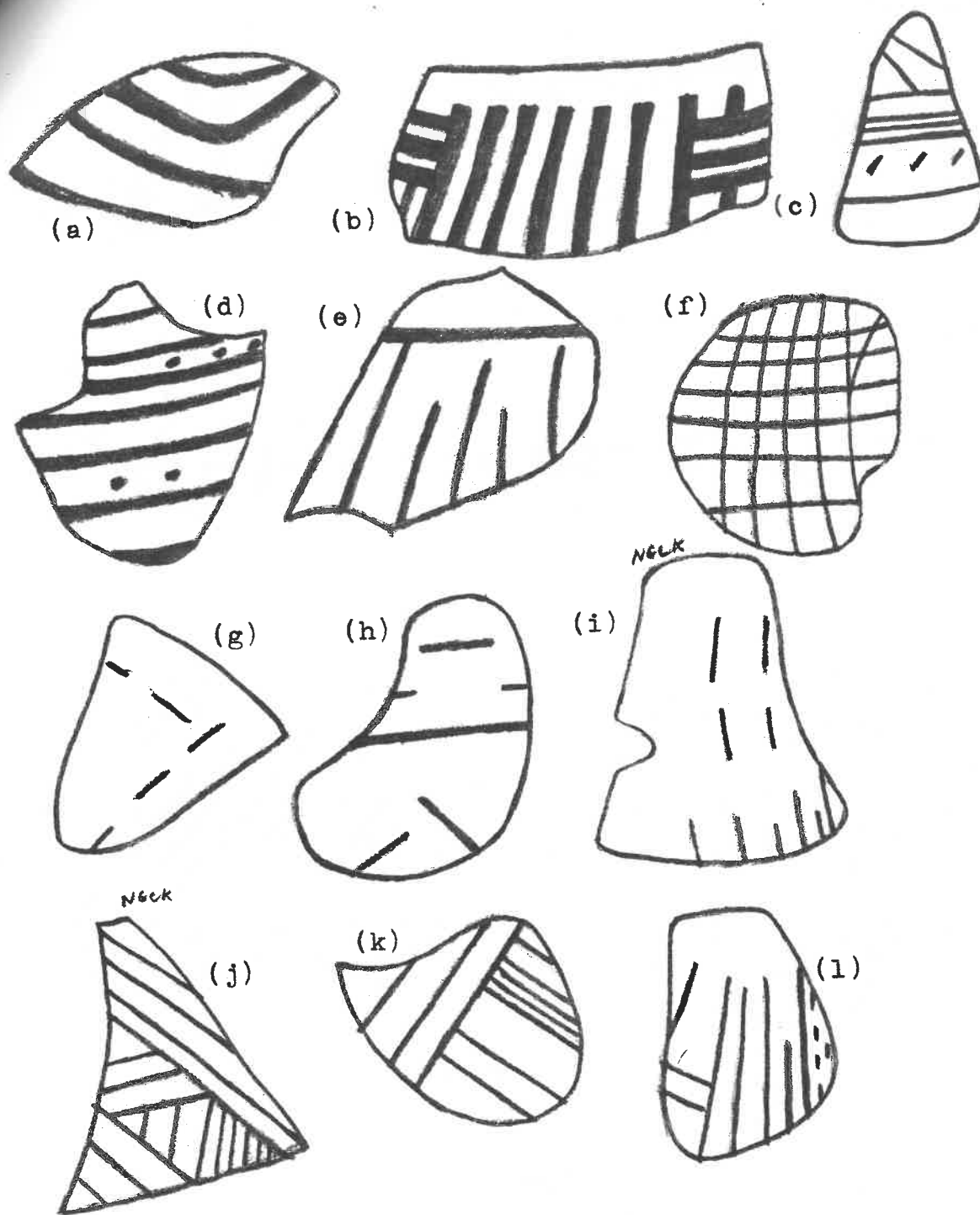


Rimsherd profiles

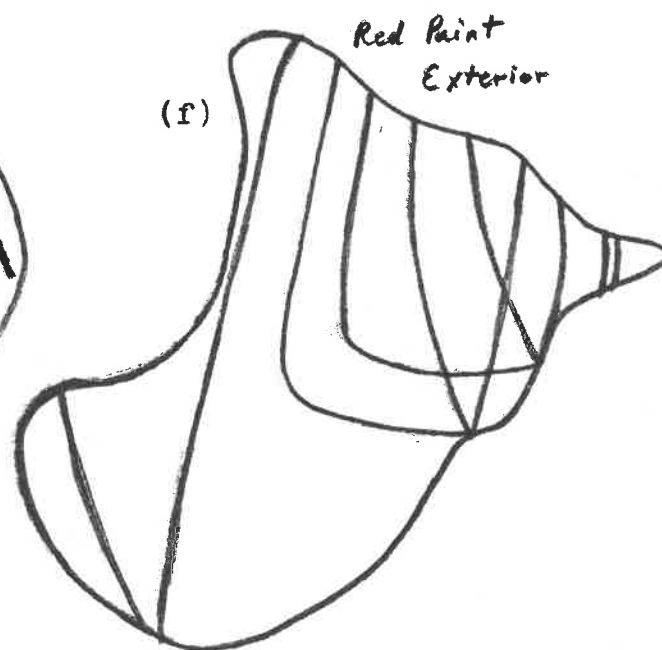
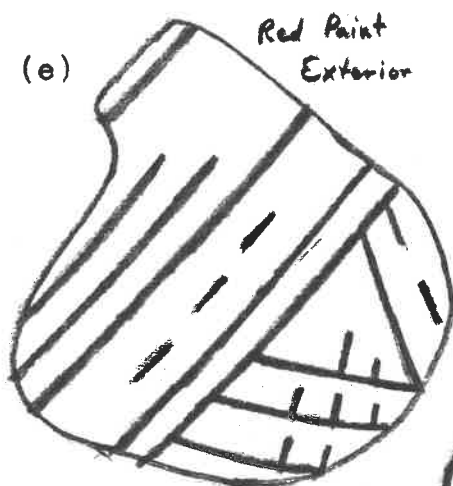
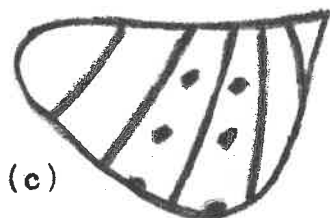
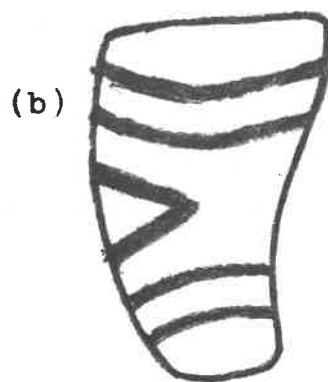
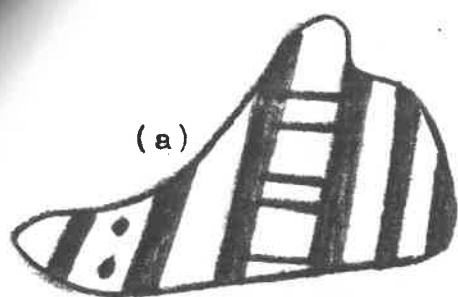


A, c, d, and f are straight-sided handles. B, e, and g are tapered handles.





Decorated bodysherds: a, level 4; b, d, level 5;
e, level 6; c, f, g-i, level 7; j-l, level 8.



Decorated bodysherds: a,b, level 9; c-e, level 10;
f, level 12.

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Wedel, Waldo, An Introduction to Kansas Archeology, Smithsonian Institution, Bureau of American Ethnology, Bulletin 174, (Washington: United States Government Printing Office, 1959).

KING HILL POTTERY

Jayne o. Lyons

This study deals with the ceramic complex from the King Hill site, 23EN1. Only the data recovered during the 1972 season will be reported upon. The site itself is located in the southern portion of St. Joseph, Missouri on a high bluff overlooking the Missouri River flood plain. It was discovered in the spring of 1966 by R. B. Aker. The St. Joseph Public Museum then rented the area in order to save the site from farther destruction due to construction of roads, houses and other projects. The first exploration began in the same summer under the direction of Dr. Dale R. Henning. It involved 13 ten foot by ten foot squares and two narrow trenches.

A deep stratified trash deposit or midden was revealed, which filled an old erosion ditch to a depth of nearly ten feet. A large collection of pottery, stone and bone tools, small European trade goods and quantities of floral and faunal remains were recovered. The amount and the quality of the remains as well as the similarities to other sites warranted more work in the site.

The second excavation was done during the 1972 season, backed by a National Science Foundation grant. Ten 5 foot by 5 foot squares were dug. Three of which were excavated in natural stratigraphic units. The others were subdivided by six inch arbitrary levels within the natural levels. In order to recover as much data as possible all materials from the excavations were passed through a one sixteenth inch water screen. Four natural levels were discerned: 1) the plow zone, the upper most natural level, usually about twelve inches thick; 2) the recently disturbed zone, that showed a great variation in depth and contained both prehistoric and recent debris; 3) the dark transitional zone, three to four inches thick, representing a buried soil horizon; and 4) the midden zone which varied from one to six feet thick. (see maps)

2

✓
10/11/14
Fanning
✓

✓
✓

✓ ✓
✓

✓
✓

✓
✓
✓

Physical Description:

Paste: Method of Manufacture- This category is better defined by what is missing than what is present, there is no evidence for coiling, which would show as loops of clay laid one on top the other; there is no evidence of "slab" building which would show especially at the points of juncture where two "slabs" come together as a joint or seam. None of the vessals have seams on the exterior that would indicate molding so about the only technique left is the paddle and anvil method. This process involves first pinching out a rough form from a lump of clay and then putting an anvil especially shaped for the purpose inside. A paddle is then employed to thin the walls and shape the pot. Marks from this paddling are sometimes left on the exterior of the vessal. a few of the body sherds from this sample displayed marks of this type, especially on the neck region. Also, marks appear on the interior that testify to the use of some tool to thin the walls after the pot was formed. These marks run the length of the sherd, like longitude lines on the earth. A mussel shell may have been the tool employed for this process since it is found in abundance on the site, and the shell would have fit nicely into the hand.

Temper: Crushed mussel shell was used exclusively for temper. There are four sherds that are gritt tempered, but they were not manufactured on the site since they differ in surface treatment, hardness and decoration. The shell was crushed before it was incorporated in the clay and may have been leached or burned also. (Henning, 163:69) The reason for this is that the unprocessed shell has a tendency to explode while being fired. (Rado, 23:69) The use of shell lowers the firing temperature, an important consideration to the primitive potter with no kiln, and acts as a flux to reduce the chance of cracking or distorting during drying and firing. (Rado, 36:69) The size

4

the temper ranged from 1.8mm to 5.5mm approximately with no more than 10-20% shell to clay.

Texture: The exterior and interior of most vessels are rough, bits of temper jut out from the matrix and bumps and ridges are common. In cross section there are air bubbles and the clay is in layers both due to the little amount of time spent in wedging and forming.

Hardness: All the sherds fit someplace between 2 and 3 on Moh's scale of hardness, which is really rather soft. This condition shows that the pots were fired at a low temperature and the final product fragile. (Which may account for the 5539 body sherds!) There is no difference in hardness between decorated and plain sherds.

Color: There is quite a range of color not only from sherd to sherd but also from one area of a sherd to another. The exterior may show a uniform grey/black due to exposure to fire and smoke. Occasionally patches of orange occur on the exterior due to reduction during firing. The majority of the sherds are buff in color, 2.5TR 5/4-6/6, with the interior a bit lighter. The cross section shows a grey color or slightly darker than the fired surfaces. A reddish slip or paint is present on some sherds, 10R 3/6. This slip is usually applied continuously to the exterior although two vessels show slip applied in bands or strips.

Surface Finish: At the beginning of the study an attempt was made to separate polished from plain surfaces. As it progressed it became apparent that there was not a clear cut line between the two. Very few sherds possess a "true" polish consciously manufactured by the potter. Some possess a polish due to smoke darkening but is more realistic to look at the ceramics on a continuum, with plain and polished being the two ends and the majority of the sherds falling in between. Perhaps it would be well to call to mind

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most of the data represents only a small part of a whole vessel and it was the vessel that was important to the maker, not the fragments left to the archeologist.

Two different sorts of slip are found in the collection. The more obvious of the two is the reddish slip applied to the exterior of the vessel. This slip was applied after the vessel was formed and dried to some extent so that there was no mixing of the clays. The slip may be more like a paint, since it was impossible to determine if the pigment was applied before or after firing. The pigment was evenly distributed on the vessel and dense enough to cover the clay beneath. The second kind of slip found on the sherds is a "mechanical" slip formed while the pot was being manufactured. This occurred when the exterior was being smoothed after the vessel was shaped. A thin veil of clay was spread across the surface by a wet hand that was removing lumps and bumps in the final smoothing. This thin veil is visible in cross section, the application was not uniform and therefore implies an unconscious effort vs. the conscious effort of the red slip. ✓

Decoration: The most commonly encountered form of decoration on this pottery is line decoration. The lines were produced by pulling a tool across the moist surface of a the vessel, this is referred to as "trailing" (Hemming 167-69:69) These trailed lines were generally set parallel to one another in groups or blocks. These blocks were oriented diagonally on the vessels to form an opposed line design. Occasionally chevrons were part of the design or other geometric forms like triangles or diamonds. The shoulder area was used almost exclusively for this sort of decoration. Another element incorporated into this form of decoration is the punctate. Punctations were placed in the space between two lines or at the beginning of a set of lines near the neck of the vessel. Sometimes they were used alone in rows and tears to produce a design. Usually these marks were smoothed over to make the de- ✓

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appear less crude but on the same vessel can be found both smoothed and unsmoothed areas, showing again sloppiness and lack of time spent on the pot.

The most complete vessel in the collection displays a design incorporating opposed diagonal lines, two cheverens and one diamond with a "bird foot" inside, formed from three intersecting lines. The lip of this vessel is decorated with evenly spaced round impressions. This vessel testifies to the fact that a number of elements were used in the total design of a vessel, the shoulder and lip being the most used areas. As with the pottery of the southwest these designs might be associated with migration tales, clan mythology or other aspects of the non-material world of the maker.

The second most commonly encountered form of decoration is the slip technique. As discussed before there are two kinds of slipping, the one used for decorating is the non-mechanical red slip. This slip was applied evenly on the exterior of the pot. From the data recieved from the rims it appears that those pots decorated with red slip are significantly different from the rest of the collection. Generally these rims are lower and the diameter of the oriface smaller than the non-slip rims, implying an over all smaller vessel. Two of the rims are from vessels that have considerably thinner walls, they are also decorated in a unique manner with bands of slip on the exterior. They also have a vertical rim profile and may represent bowls traded into the area.

Only six body sherds represent the last decorative technique to be discussed, cordmarking. Since these are so rare and differ in temper and color also, they were not manufactured on the site but were brought in. The marks are the result of the exterior being hit with a paddle wrapped with twine or cord while still moist. The marks are then either left as decoration or partially smoothed over after the vessel is formed.

handles:

Handles: Seventy three handles are in the collection, twenty eight are attached to vessels and forty four are not associated with vessels. The usual number of handles per vessel is two, set opposite of each other, and attached to the vessel below the lip. Two handle forms are found, one with non-expanding parallel sides and one with non-parallel sides that decrease in width from top to bottom. The first form, the loop handle, was produced by rolling the clay into the desired shape and then attaching it to the pot. The second form, the pulled handle, was produced by attaching a lump of clay to the pot which was then pulled downward until the desired shape was produced and then it was attached to the body of the vessel, this method produces the non-parallel sides. (Rado 210:69)

Both shapes were embellished with decoration. The most common is the presence of two or three parallel lines produced by running the fingers down the length of the handle while it was still moist. Twenty seven are marked in this manner. Four are marked with chevrons, three are marked with punctations and seven are smoothed over trailed line decorated.

Form:

Lip: Three kinds of lip form are represented in the collection; flattened, rounded and tapering. The rounded and tapering show both plain lips and decorated lips. The flattened lips are rare, only nine are present, and all are decorated with oblique tool impressions placed on the top flattened area of the lip. Sixty four lips have wide round impressions that appear to have been made with a finger, all on the rim-lip margin. Thirty-five have narrower impressions apparently made with a small tool instead of a finger, also on the rim-lip margin. Seventeen have punctations for decoration, little bumps of clay in the depression show that the tool used was hollow. Eleven have a dense coat of red slip on the lip, rim and remaining

terior. Two are fingernail marked, evenly spaced around the rim-lip margin of the vessel. Two rims are from miniature vessels, both plain, but with trailed line decorated bodies. There are nine rims that just don't fit with the rest, four have tool marks on the interior lip margin of the vessel, one is cordmarked, one is flattened with two nodes attached to the body just below the lip. Two have pulled, rolled and decorated rims, called collared, and the last has very deep narrow tool marks in the lip. Lip thickness ranges from 1.6mm to 7.8mm with a mean of 4.8mm.

Rims: A total of 368 rims were examined. Of this group 311 were measurable 57 were unmeasurable due to leaching, breakage, and old age. Enough heck is attached to 157 rims to make some judgement about their profile. Nine rims are just plain aberrant, with no shown relation to the others in the collection.

There are two observable categories of rim profiles, high and low. In between these two end points are vessels that are transitional. The groups are based on the actual height of the rim and the probable relation of rim to body size, determined by neck thickness, orifice diameter and general appearance of the rim. Two subgroups make up the "high" category, those with rounded lips and gentle outcurving profiles and those with tapering rims and outflaring profiles. These groupings are not neat, there are just too many vessels that are impossible to consistently assign to one group or another. The computer data attached to this report show how difficult it is to find traits that will adequately separate these rims.

Only nine rims decorated with red slip seem to form a "true" group. They are all low, rounded lip and outcurving rims with red slip on the exterior. Their orifice size suggests that they may have come from smaller pots.

Body: The vessels appear to have been generally globular in form with rounded bases and constricted necks. The slope from neck to shoulder was

the slope from shoulder to base. Orifice diameter ranged from 4.6mm to 15.2mm with a mean of 20.5mm, neck thickness ranged from 4.6mm to 15.2mm with a mean of 8.8mm, outer rim height ranged from 11.2mm to 64.6mm with a mean of 28.6mm, and inner rim height ranged from 11.5mm to 69.1mm with a mean of 32.3mm.

Others: The only thing left to describe are twenty-two sherds that all possess partial or complete drill holes. They are all basically round in shape, some of them have smoothed margins showing they were ground into their present shape. Both decorated and plain sherds were treated in this manner. The holes were added to the sherd after it was fired and most likely after it came off a vessel. They could have been used for a variety of things but there is not any evidence to show their true function, some guesses: beads, dress ornaments, fishing weights or spindle weights used in weaving.

(14DPL) and King Hill (23BN1)

"the Fanning and King's Hill sites, located on opposite sides of the Missouri, appear to be closely related. Each is located on a high hilltop and there is great similarity in the kinds of artifacts recovered. If the similarities between the Fanning and King's Hill sites are correctly drawn, both components are probably locations utilized by the Kansa Indians."

(Henning 344:69)

Comparative studies are a valuable tool in discovering relationships between archeological sites. Sometimes it's easy to forget that those stones or those pot sherds you've been sweating over were really made by folks and those folks have a history and what you are doing can help give that history to them.

The Fanning ceramic complex was described by Waldo Wedal (144-152:59). His sample is comprised of 2,026 sherds, of which 1,340 are body sherds, 632 are rim fragments and 54 are handle fragments. From his discussion it appears that the two sites are indeed similar. Both sites have shell tempering almost exclusively, King Hill 100% and Fanning 95%. Both share a similar vessel shape with a rounded base, constricted neck and general globular form. Handles were found at both sites and they resemble each other in form, decoration and placement on the vessel. At Fanning 90% of the handles are attached below the lip and King Hill 75% are attached below the lip. At both sites verticle rims are rare and the outcurving rim is the most common. The rounded form of lip is most common to both.

The main differences lie in the fact that the Fanning vessels appear to have been better made, they are harder, 2 to 5 with 3.5 being the most common. They have a finer texture as if more time was spent in the wedging process to reduce air pockets. They display a true polish with a horizontal striae left by a smoothing instrument and finally the percentage of decoration is higher than King Hill, again impling more time spent in making the

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cessal. Of the body sherds 15% show decoration at Fanning while only 9% show it at King Hill. Fanning rims are 60-70% decorated and King Hill are 44%. Even though there is this difference in amount of decoration the motifs are very much alike. Both sites have the blocks of parallel lines opposed to each other. But more important both sites have in their motifs a single vertical row of shallow punctates between two trailed lines. This attribute was singled out by Wedel (1968:59) to characterize the individuality of Fanning ceramics.

From the data it appears that the ceramics are indeed very similar. So it is safe to say that the two sites are related, both are a part of the Oneota tradition and most likely both are remains of Kansa Indian living areas. It will be interesting to see if the other reports on the artifacts from King Hill show the same strong relationship.

discussion:

The study of ceramics can be a valuable aid to the archeologist interested in establishing relationships and making their data available to others for comparison. But that is by no means the only way to approach the problem. What is so interesting about ceramics is the fact that the medium of clay can reflect some aspects of ^{the} non-material world the way no other artifact category can. The decoration, the amount of time spent on a vessel, the standards of what is a "good" pot, these things reflect what the makers were thinking of when they made their vessels. The energy and vitality of a culture is captured in their art and making pots is art. The amount of individual freedom can be discerned from the amount of variation in pottery forms and decoration. Social change can be traced through the pottery stratigraphy of a site. If there is a great deal of change the culture that produced that pottery might be under a great deal of stress with values and standards of behavior in flux. If the pottery remains the same it might reflect a stable, secure society with strict codes of behavior and values.

Another area open to investigation through pottery is discovering "energy units", or the cultural ecology. Who makes the pottery, how much time is spent in making each pot? Could the culture have supported craft specialists? All these questions are of interest and of value for with this approach so much more can be said about the function of the pots as well as the culture that made them.

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Computer Data:

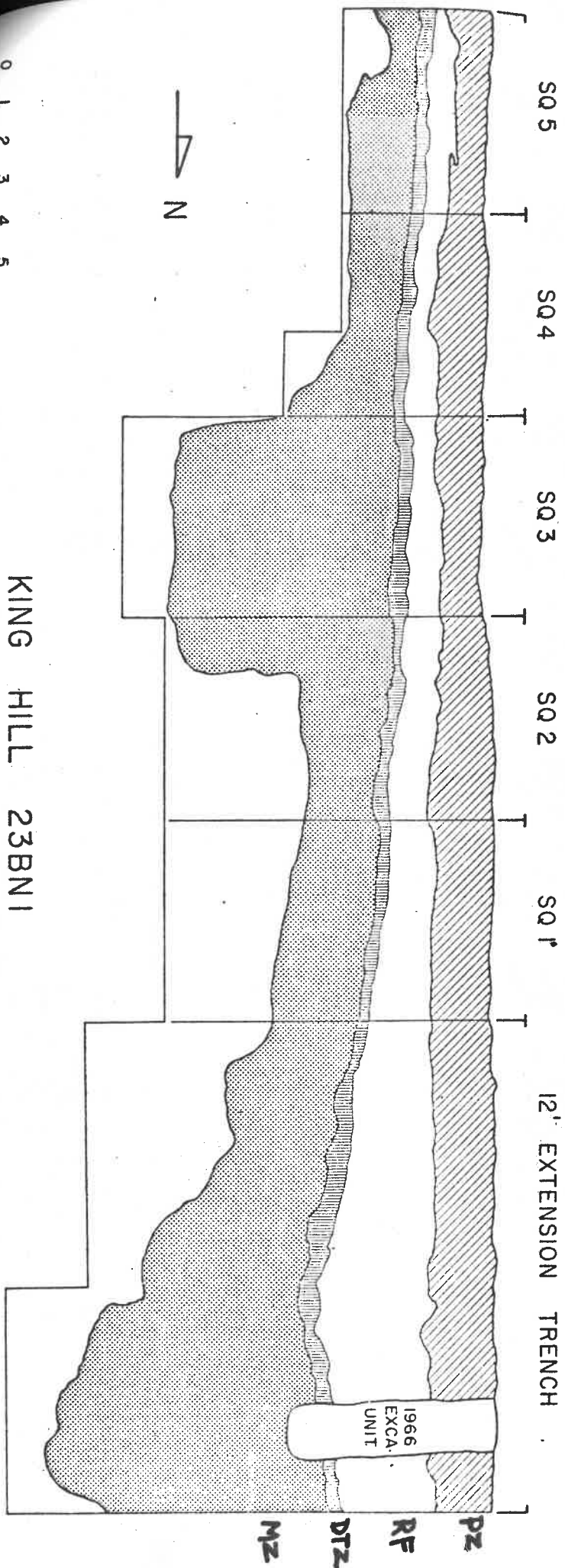
The following programs were run by David Teter using the SPSS statistical package. An attempt at defining groupings and discovering correlations was made. Unfortunately nothing came of the effort. Page 19 has a scatter gram that show a really great correlation, but it is between the inner and outer rim height! At least this proves that if there were any other relationships they would have shown up on the scatter grams.

The second group of tables are descriptive statistics that include mean, mode, and median for each variable recorded on the data cards. The absolute and relative frequencies were also computed for each rim variable. These statistics might prove valuable for comparative studies in the future.

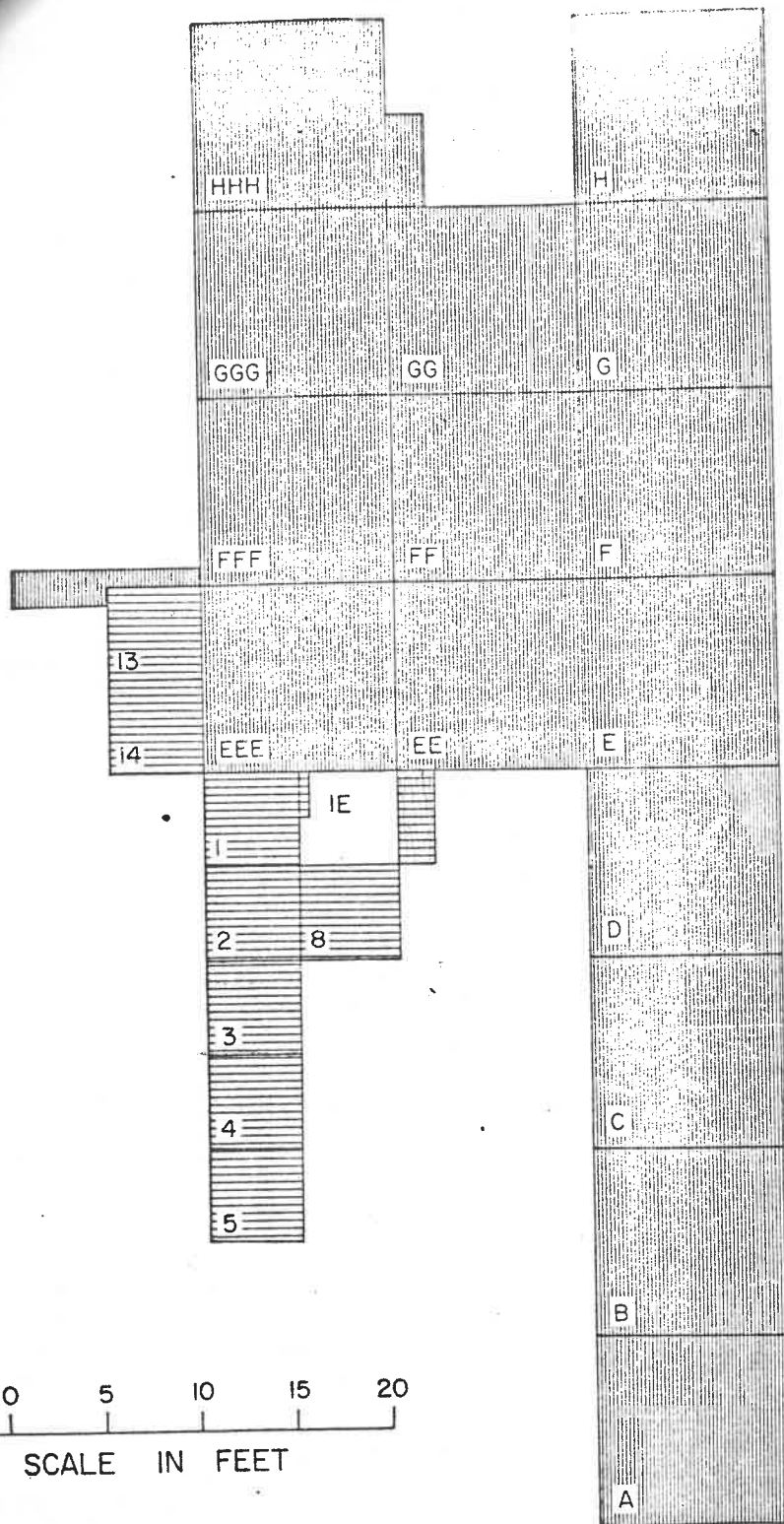
One of the factors that might have influenced the failure of the scatter grams was the fact that the programs were run with data that was not collected with the idea of using a computer. This sort of problem is what computer specialists run into everyday and can make a difference in what is learned from the computer.



KING HILL 23BN1 VERTICAL PROFILE - WEST WALL



PZ = Plow Zone
RF = Recent Fill
DTZ = Dark Transitional Zone



5 0 5 10 15 20
SCALE IN FEET



1966

EXCAVATIONS

1972

EXCAVATIONS



TOTALS OF BODY SHEED DISTRIBUTION

MODIFIED*

TOTAL

191	19	210
255	36	291
86	11	97
64	14	78
81	10	91
79	11	90
137	14	191
74	12	86
129	14	143
79	13	92
52	6	58
(SQ 1,2,3 only)		
47	4	51
59	112	71
89	10	99
52	5	57
68	5	73
40	14	44
50	6	56
22	1	23
56	6	62
104	8	112
73	3	76
17	5	22
134	20	154
59	8	67
-	-	-
10	-	10
-	-	-
-	1	1
2	-	2
1	-	-
-	-	-

SQ 8,13,14

PZ	361	37	398
RF	273	36	309
DTZ	212	26	238
MZ	1820	155	1975

TOTALS INCLUDING WALLS

TOTAL PLAIN 4988

TOTAL MODIFIED* 523

*

TRAILED	338
PENCTATIONS	9
CORDMARKED	6
RED SLIP	170

		SQ 2		SQ 3		SQ 4		SQ 5	
	11	80	2	23	1	13	-	7	1
	10	48	6	56	8	67	10	37	2
	1	13	-	16	3	33	5	11	2
	13	13	1	19	5	19	4	-	-
	19	-	-	35	4	23	5	4	1
	26	18	2	21	7	-	-	14	1
	13	45	3	51	6	13	-	15	1
	18	28	4	17	3	11	1	-	-
	20	30	6	38	2	39	2	2	2
	23	14	-	28	7	14	2	-	-
	36	-	-	11	1	5	2	-	-
	24	16	1	7	1				
	19	23	7	17	2				
	34	44	4	11	1				
	41	11	1	-	-				
	19	44	1	5	3				
	9	19	1	12	2				
	7	33	5	10	-				
	3	-	-	19	1				
	2	54	4	-	-				
	5	41	6	58	2				
	3	6	1	64	2				
	3	14	5	-	-				
	24	55	15	77	5				
	1	24	4	34	4				
	-	-	-	-	-				
	-	10	-	-	-				
	-	-	-	-	-				
	-	-	-	-	1				
	-	-	-	-	-				
	2	-	-	-	-				
	1	-	-	-	-				
	-	-	-	-	-				
	SQ 8	SQ 13		SQ 14					
PZ	169	111	8	81	6				
RF	-	214	28	59	3				
DTZ	49	128	15	35	3				
MZ	31	197	18	477	41				
	56	220	11						
	52	124	12						
	23	171	9						
	15	167	8						
	23	141	3						
	5	72	1						
	1	11	-						
		13	2						
		2	-						
		15	-						
		4	-						

DISTRIBUTION OF BODY SHERDS BY
LEVELS*****PLAIN ON THE LEFT
MODIFIED ON THE RIGHT

PLATE I: examples of trailed line decoration, B shows parallel lines,
E shows cheverons and parallel lines, the others show
opposed diagonals

PLATE II: examples of trailed line decoration, A-D show cheverons,
B and C are narrow lines, E shows parallel lines and
the geometric shape of a diamond

PLATE III: examples of punctation, A shows the use of punctations alone,
B-G show the use of trailed lines with punctations, E
shows the punctations placed just off the neck

All illustrated sherds are from the shoulder area
and are natural size.

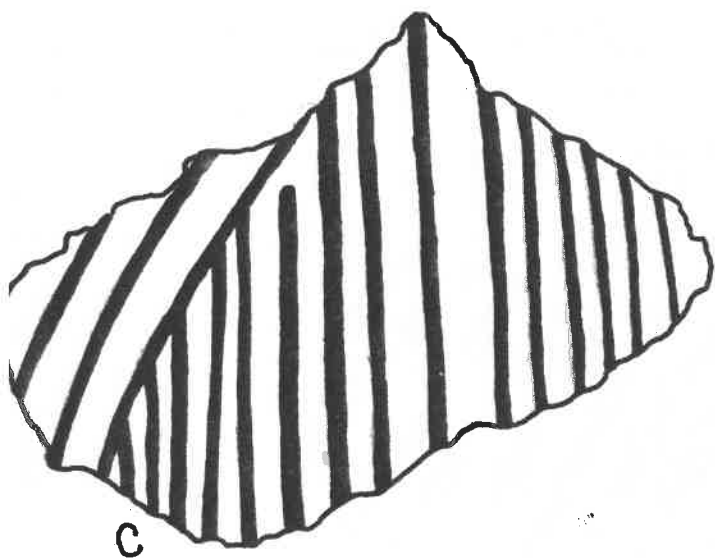
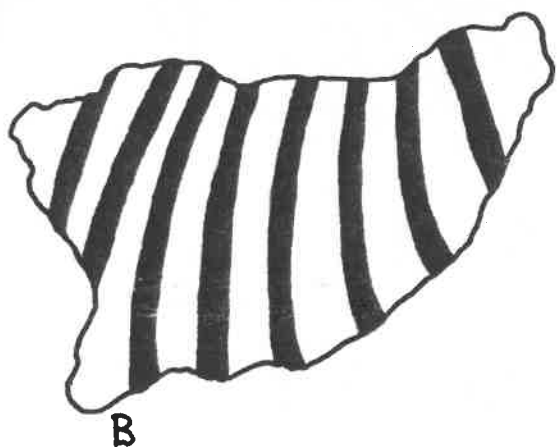
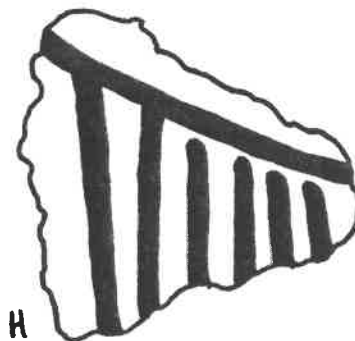
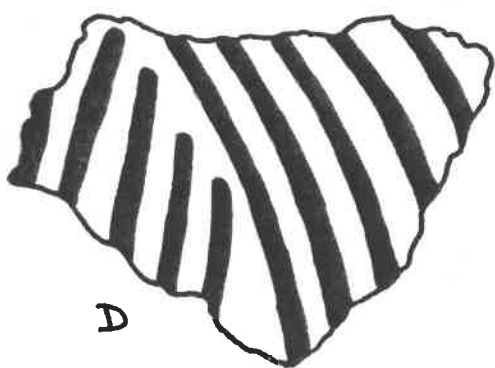
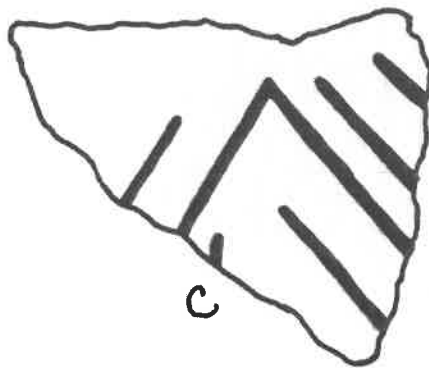


PLATE I

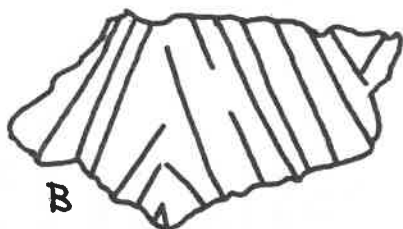




A



C

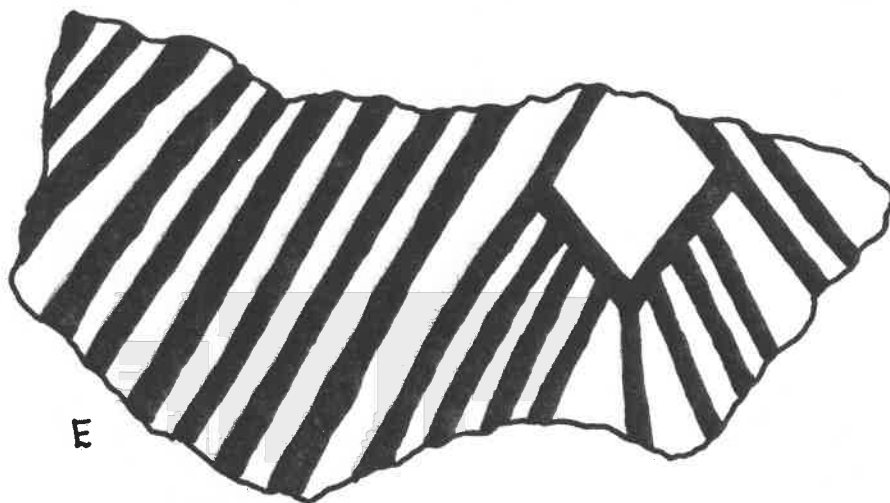


B

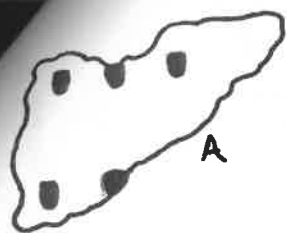


D

PLATE II



E



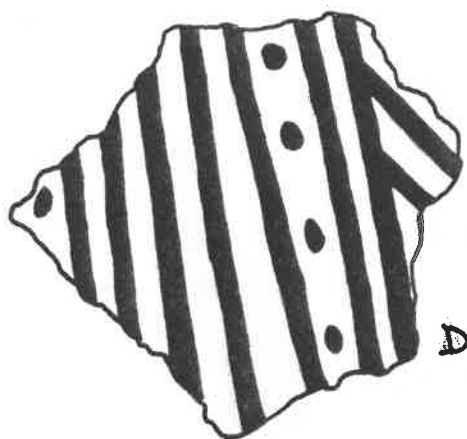
A



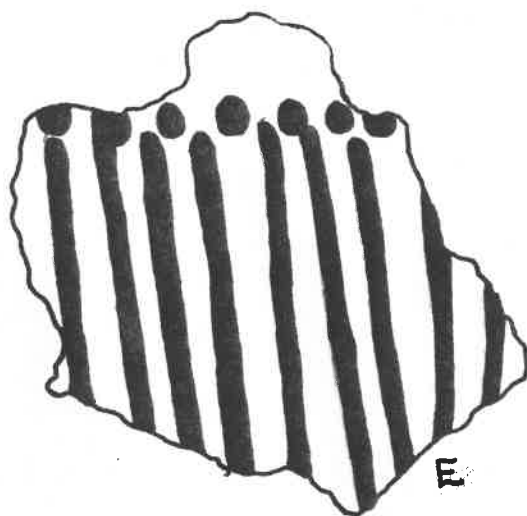
B



C



D

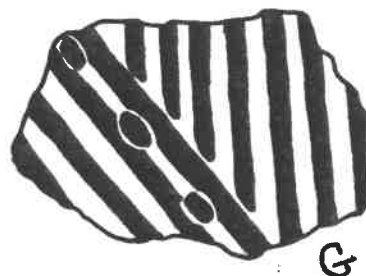


E

PLATE III



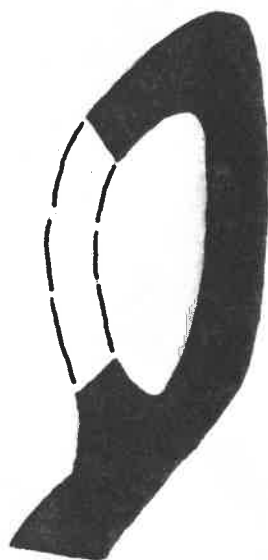
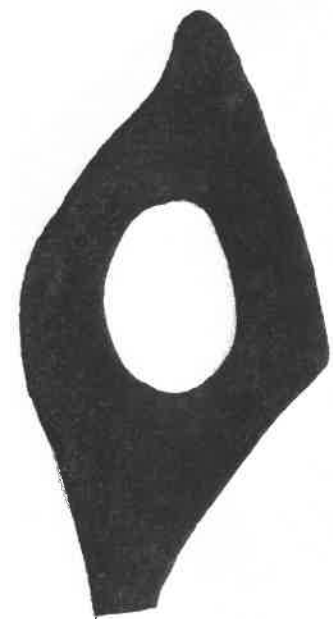
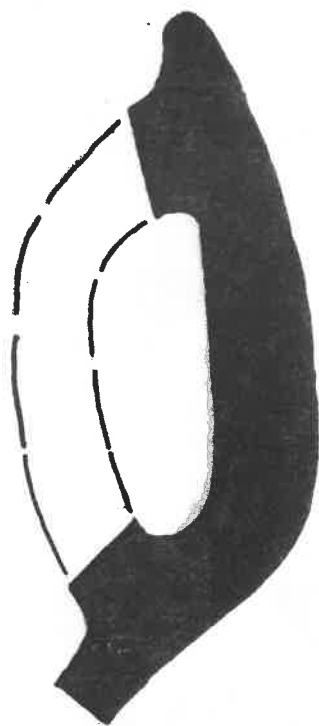
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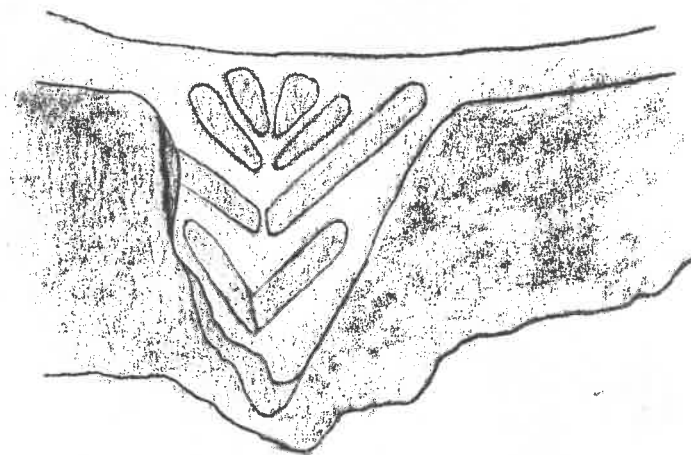
G



HIGH OUT-CURVING
ROUND LIP RIMS



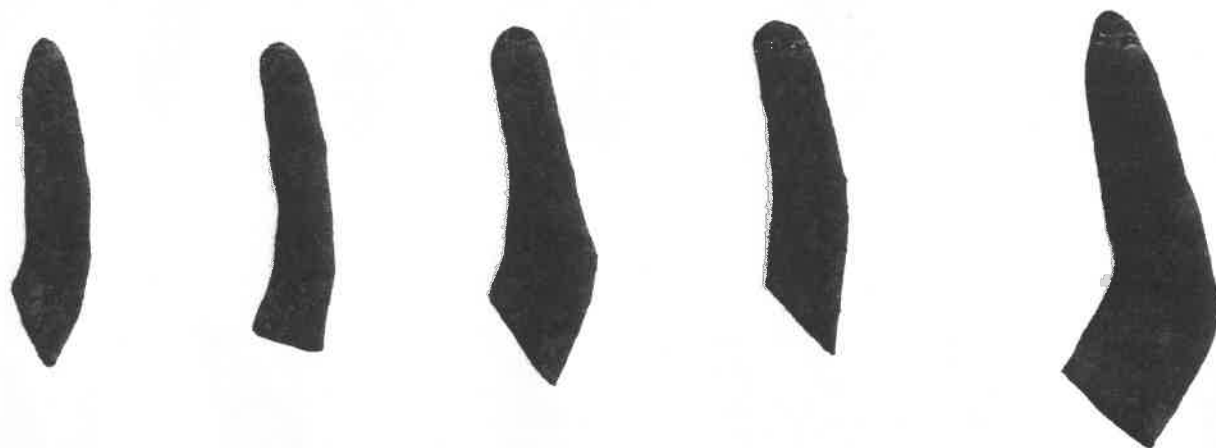
TOP VIEW SHOWING DECORATION
ON HANDLE



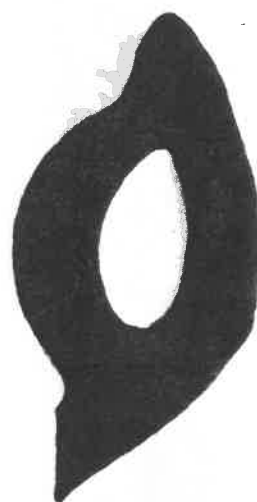
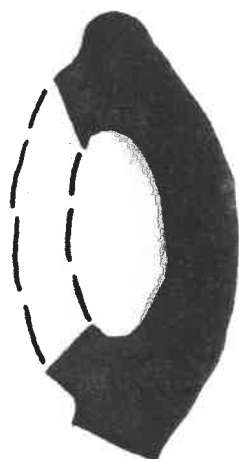
HIGH OUT CURVING
ROUND LIP RIMS WITH HANDLES

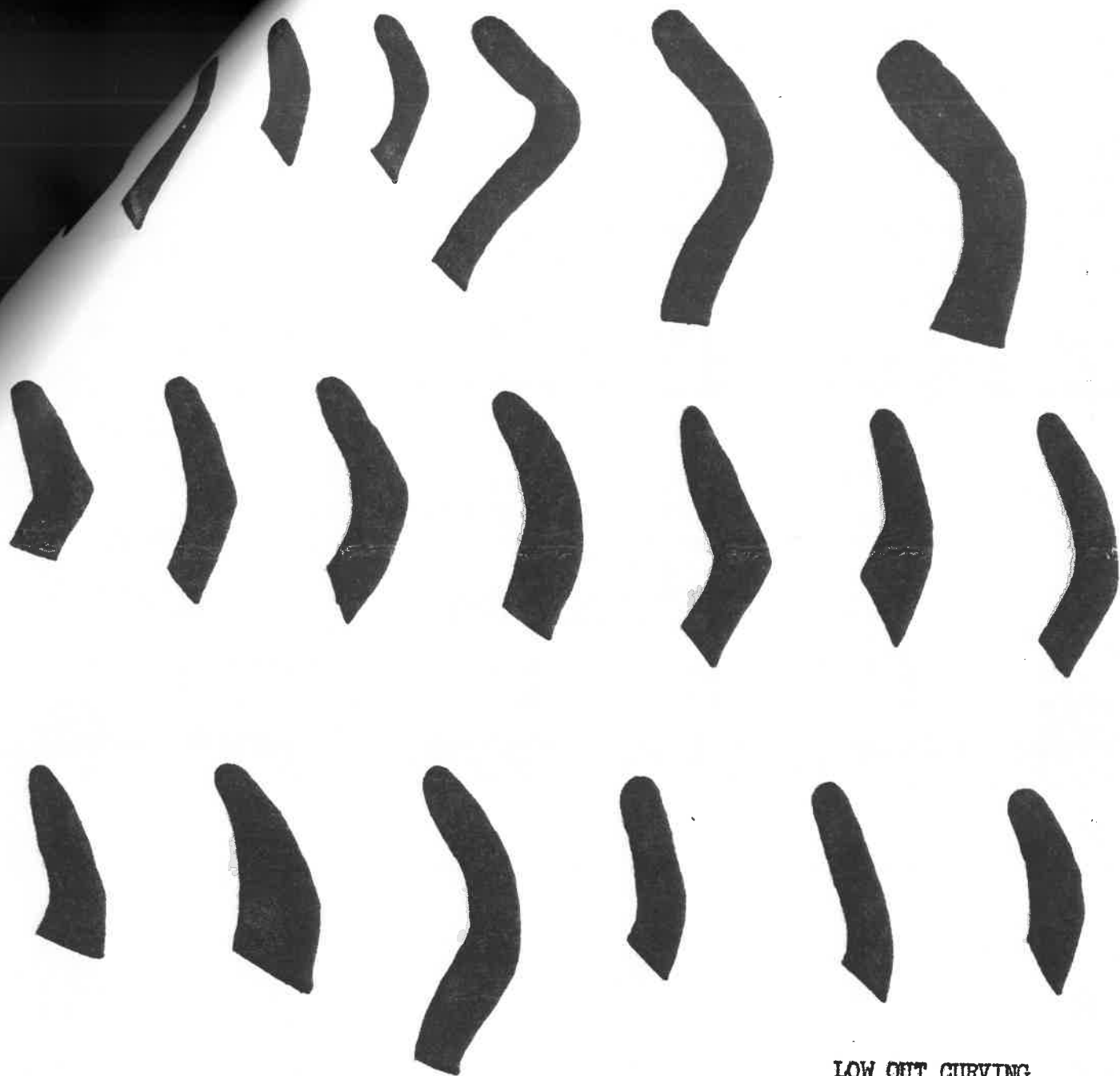


OUT FLARING TAPERING LIP RIMS



TRANSITIONAL ROUND LIP
RIMS





LOW OUT CURVING
ROUND LIP RIMS



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