

**IROQUOIS INDIAN MUSEUM ARCHAEOLOGY
DEPARTMENT
SUMMARY OF TEST EXCAVATIONS
SMITH GARDEN SITE NO. 35B
2008 FIELD SEASON**

ABSTRACT OF REPORT

The Archaeology Department continued its summer fieldwork on the Smith Garden Site (IIM Site No. 35B) during 2008 with emphasis on opening up test units to the south and east of previously excavated areas. We also opened up three new test units adjoining a unit previously excavated during the 2007 season which had produced a deeply buried fire cracked rock feature containing much charcoal and some chert debitage.

Results from our work during 2008 showed that the previously encountered Middle Woodland period occupation faded out rapidly as we extended our investigations to the east and southeast. There we encountered a deeper buried area containing evidence of Late Archaic and Transitional period occupation. Tentative conclusions from our work during 2008 point to small independent occupation events with no clear separation of cultural periods, and not the continuous layer upon layer separation we had hoped for. Such is archaeology!

Several exploratory test units were dug on a slanted terrace located above and to the west of Carlton Smith's home. This area is referred to as the Smith Terrace Site (IIM Site No. 35C) Results from this work are covered in this report.



SCREENING EXCAVATED SOILS ON SITE 35B

A) BACKGROUND:

During 2006 four test units were opened at a location 98 meters south of Carlton Smith's home on Smith Road. These troweled test units uncovered solid evidence of a Late Middle Woodland occupation with fire cracked rock (FCR) hearths, a great deal of chert debitage, a small amount of "Owasco-like" ceramics and Jack's Reef corner notched and pentagonal projectile points. One test unit produced a possible Snook Kill and a side-notched point pointing to earlier Late Archaic and Transitional period occupations.

During 2007 additional test units surrounding those units opened during 2006 supported this Middle Woodland occupation. This work also uncovered Late Woodland finds as well as Early Woodland and earlier period artifact finds, all based upon our analysis of point typology, pottery seriation, and the various depths at which the artifacts were found. Therefore, our goal in 2008 was to further define these multiple occupations across an extended portion of the tested area to determine if individual occupation zones could be recognized and if we were looking at multiple short-term occupations or longer period usage in this area. Results were mixed and are discussed further in this report.

B) SITE LAYOUT:

(Refer to Figure #1 for a plot of the one-meter units excavated during 2008). We opened up a total of thirteen new one-meter units southeast of our previous excavations and another nine units to the east. In addition, three units to the northwest of our previously excavated units were opened to hopefully uncover more of the FCR feature found during 2007. Our units were surveyed off a secondary bench mark located at 97 meters south of Carlton Smith's home and taken on a magnetic azimuth of 170 degrees to the south of his home. We attempted to excavate each test unit in ten-centimeter lifts, collecting the first 20 centimeters of plow zone in one lift, and then all subsequent lifts in 10-centimeter blocks. All excavated soils were screened through ¼-inch hardware cloth. All depths were measured from the surface of the sod using a string supported on a north-south axis and placed at the east-west midpoint of each test unit.

C) ACKNOWLEDGEMENTS:

Special thanks again go to Carlton Smith and his family for allowing the Department to dig up more of his back yard in the interest of science. We continue to be sheltered from the July sun by the use of Jon Vidulich's tent, which worked well until a late October snowstorm brought it down. Doug Belknap saved us the trouble of hand back-filling our test units by using the Museum's John Deere front loader on a cold November day. Members of Carlton Smith's family continue to financially support the department with regular gifts earmarked for equipment, tools, and radiocarbon dating, and we thank them for these gifts.

Of course, nothing would get done in the field without our small army of hearty volunteers. Our regulars consisted of Jim Chant, Carlton Smith, Tom Anderson, Ginger Boehning and Phil Sheehan with additional help from Packer Randall and Barry Keegan. During the winter months Barry and Sara Keegan and Brendan Dwyer assisted the department in the curation of artifacts collected during our 2008 field

season. The Museum sincerely thanks all of these volunteers for their "blood, sweat, and tears" efforts to make our field work a success. Special thanks are also due my wife, Jane, for providing her pencil sketches of the soapstone pipe bowl and possible Adena point. 35mm photography failed to adequately highlight these two artifacts.

D) SITE EXCAVATION WORKPLANS FOR 2008:

Our workplan for the 2008 season was set up to address the following questions:

1. What is the extent of the occupation zones discovered during the 2006-2007 field seasons?
2. Are there other "hot spots" outside of our present excavation area?
3. Can we define soil layers more effectively to highlight (tighten up) occupational zones?
4. Can we find the source of pottery found scattered across the entire excavation?
5. Was pottery made on-site, or are we just finding broken used pottery?
6. Is there evidence of primary reduction of quarried or collected lithics?
7. What is the pH of each soil layer?
8. What is going on in the lowest yellow, clayey soil layer?
9. Can we locate small floral and faunal artifacts from our feature soils via flotation and wet screening?
10. Are there "living floors" connected with the large hearth features?
11. Are there any post molds?
12. Are there recognizable campsites west of Carlton Smith's home on the elevated terraces now called Site 35C?

To address these questions, our workplan consisted of the following activities:

1. Pay close attention to soil types and at what depth they change.
2. Continue opening 1-meter test units east and south of the area opened during the 2007 field season.
3. Carefully manage excavated and screened soils to prevent covering up areas we may wish to excavate later on this field season.
4. Screen all soils through ¼-inch hardware. Screen some feature soils through 1/8-inch hardware cloth or finer sieves in the laboratory.
5. Open several test units remote to our present excavation area to determine the extent of occupation zones.
6. Collect and analyze soils from all major features, and conduct flotation and wet screening as time permits.
7. Look for further evidence of Historic Period occupation via glass trade beads, more soapstone and kaolin pipe fragments and metal objects in the top 30cm.
8. Excavate each test unit down to 95-100cm to insure we don't miss lower buried levels of occupation. Core all completed test units down to the limits of the soil corer.
9. Take samples for pH analysis on each soil level.

E) GENERAL DISCUSSION:

1. Analysis of Flake Scatter:

During our excavations we maintained careful depth control while opening each test unit. Once we removed the top 20cm of plow zone, we dug in 10cm increments and bagged everything from each 10cm lift. All flakes were counted and the composite from each 10cm bag was weighed to obtain a rough idea of flake size. Figure #5A presents a plan view of the two major excavation blocks (Northeastern Block #1 and Southeastern Block #2) with their flake totals for the entire excavated test unit. Figure #5B then lumps together all flakes by 10cm depth ranges for the entire block and presents graphs of the flake concentration as a function of depth range. Block #1 shows that the chip concentrations remain fairly constant across the first 60cm of depth and then rise sharply below 70cm. Block #2 graph shows that the chip concentration rises to a maximum at a depth range of 30-40cm and then drops off as the excavation progressed deeper. It therefore appears that we are dealing with many small occupation activities over a long period of time instead of a few larger occupation events covering a larger area of the site. In other words, we're dealing with a site containing short-term occupations by small groups of people spread over the period encompassing the Late Archaic to Late Woodland periods.

There also appears to be little correlation between locations of flakes found and any corresponding bifacial or unifacial chipped stone tools. Since we expect the site was prone to periodic flooding fairly often we may be dealing with horizontal movement of the smaller flakes in respect to the larger tools remaining in place during flooding.

Flake size tells us a lot about what activities were taking place in these small occupation zones. Tiny (less than 1/2-inch) finishing flakes are found throughout the entire depth of excavation pointing to finishing preforms and retouching worn but finished tools as being the main activity taking place with two exceptions. Primary reduction flakes one-inch and greater are found just below the plow zone and correlate with Late Woodland occupations. Below 70cm we have also encountered these larger flakes in an area that also produces Late Archaic to Early Woodland artifacts. In fact, primary cores and many large flakes are more commonly found down to the very bottom of our excavations (around 100cm below the surface).

2. Features Found:

Many slight color changes were encountered during our excavations, but disappeared rapidly and may have been produced from rodent burrowing or tree root disturbances. We did find a series of fire cracked rock (FCR) hearths, which are further detailed below.

Within the southeast corner of Test Unit 100S-4E a small FCR hearth was discovered at a depth of 54-59cm below the surface. Much of the FCR consisted of fire reddened and broken quartzite creek pebbles. Chert flakes were found in and around this small hearth.

A similar small FCR hearth was found at 59cm below the surface. This feature also contained a small area of dark stained soil to one side. This dark stained soil

area contained many tiny finishing flakes and could have been used as a small dump or abandoned food storage pit.

The major feature found was based upon a continuation of excavations in the Test Unit 97S-3W area of the site. During 2007 a large charcoal-rich FCR feature was uncovered in the northwest corner of TU 97S-2W. During 2008 this area was revisited by opening up three new test units to the north and west of this previously opened test unit. In all three new test units we uncovered a continuation of this large stone hearth as pictured in the photo on Figure #4. This figure also includes a plan view sketch of the rocks, flakes and three round smooth sandstone pebbles (possible pot boilers or bolo stones) making up the entire large hearth feature. Since we found no typable artifacts within this feature, we will have to rely in the future on radiocarbon dating of the carbon samples taken from the feature.

Finally, we encountered a dark area of soil along the very eastern edge of our excavations. Along the eastern edge of three 6E Test Units, the top dark soil appears to “plunge” down to the east and continues to the very depth limit of our excavations. We possibly may have found an ancient stream bank since this dark soil also contained all of the flakes found below 60cm. Since we know that the Schoharie Creek meandered all over the flats for a long period of time, our small campsites may have been located on the very edge of the creek bank at the time these sites were occupied.

3. Artifact Discussion:

Figure #3 lists the ceramics and other tools found during the 2008 field season. Refer to the Figure #7 photo page in the rear of this report showing these artifacts.

As our excavations moved to the south and east, we essentially ran out of Middle and Late Woodland period artifacts and began to see an increase in earlier materials at deeper levels. While a few pieces of Early Late Woodland ceramics appeared, only one Middle Woodland Fox Creek (Artifact #H) point was recovered. An Adena-like stemmed point (Artifact #L) was found at 39cm and a side notched point (Artifact #J) was found just below the plow zone. Both of these artifacts are atypical of points commonly found in the Schoharie Valley, so they may be of a style brought into this area from an outside source. Two classic Orient Fishtail points (Artifacts F&G) probably belong to the Transitional period. A square-base point (Artifact #I), found at 107 cm below the surface is our deepest projectile point fragment found to date and may be a possible Bare Island Late Archaic artifact. As mentioned earlier in this report, projectile points appear to be random finds on this site and do not appear to tie into any specific features found so far. In the future the discovery of more projectile points may help to clarify this mystery.

The pottery samples all appear to belong to the Castle Creek phase of Late Owasco with the possibility that one of the sherds (Artifact #D) may be an early Mohawk Oak Hill sherd. Since the 2008 pottery sample was so small we hope to get a better representative sample of ceramics during 2009 by moving to the north and west where we encountered pottery during the 2007 and 2008 seasons.

Several more fragments of the early 1700s soapstone pipe bowl were found and were reconstructed as shown in the sketch below. A prize will be given for the volunteer who comes up with the base of this pipe! A sketch of the Adena-like stemmed base point is also included here to highlight the chipping patterns.



JHS

Pipe sketch
Artifact "T"



JHS

Adena point sketch
Artifact "L"

4. Matched Artifacts

Figure 6A and Figure 6B list all artifacts matched from the beginning of our excavations in 2006, and plot out those matches in the area excavated. While the majority of matches were found to be from adjoining test units and relatively close in depths, several matches were made from pieces of artifacts wildly spaced horizontally and vertically. A case in point covering a large difference in depth for matching pieces would be the #17 + #18 match and the #19 + #20 match. For these two matched sets the bases were found below 50cm while the edges were found just below the plow zone and above 30cm. On the other hand, the matches were found in adjoining test units, so movement of these two sets was strictly vertical in nature. In addition, the five pieces of the black soapstone pipe bowl were all found above 30cm, but spread across an area of 35 square meters. I think we are witnessing a combination of floodwater lateral movement, and vertical movement from storage or trash pits dug down through earlier occupations and disturbance by rodents and tree roots. Worm activity may play a part in this vertical displacement as well.

5. Site 35C, Smith Terrace Site Testing

A series of five one-meter test units were opened on a terrace west of Carlton Smith's home and located approximately 30 feet above the flood plain to the east. Five test units were located along an east-west base line located on this terrace. Details of this base line and base stake are in our files. We were led to this particular location based upon trowel testing conducted during the latter part of 2007. This initial testing brought up chert debitage found immediately below the

sod layer. No evidence of agricultural disturbance was found. The purpose of this investigation was to determine if any traces of occupation could be found on this terrace which should have provided a flood-free area for occupation.

Results from this work provided a thin mantle of chert debitage underlain with rocky sterile soil below 25cm. Two Levanna projectile points and several biface preforms suggest a Late Woodland period occupation. The discovery of two 6/64" bore kaolin pipe stems suggests a possible Historic period component. Finding traces of occupation here only reinforces our belief that any spot near a body of water offering an elevation above flooding will contain some evidence of human occupation in Schoharie County. We will continue work in this area as time permits.

F) CONCLUSIONS:

Our 2008 fieldwork carried us south and east of previously excavated test units. By moving in this direction we essentially left behind the Middle and Late Woodland period occupations we had encountered during the 2006 and 2007 seasons. Ceramics thinned out, and most of our artifacts found appear to belong to the Late Archaic through Early Woodland periods. Several more pieces of our black soapstone pipe bowl were found just below the plowzone. These additional fragments allowed reconstruction of this Late Historic artifact. A prize has been offered for the lucky one who finds the base of this pipe!

The preponderance of tiny chert flakes showing up in many small areas within tight depth ranges point to many small one-time tool maintenance activities. Most of the large primary flake (>1-inch flake diameter) clusters appeared in the southeast corner of our excavations and at levels below 60cm, pointing to primary tool manufacture from river cobble cores taking place here.

Evidence of occupation continued below 100cm, but the high water table stopped our efforts at this level. If we experience a dry summer during 2009 we will try to go deeper.

Soil changes and features continue to be very difficult to see or "feel" when trowling down in the test units. While a very definite soil texture and color change appears as we pass the base of the plow zone, changes are much subtler as we progressed through the undisturbed levels of the site. Once below the plow zone the soil consists of a yellowish-brown granular soil, which slowly changes to a lighter yellow fine sandy soil and continues to the bottom of our excavations. Therefore, we have had to rely upon the location of typable artifacts, chert debitage clusters and fire cracked rock concentrations to recognize features such as living floors. We also suspect horizontal shift of some artifacts, probably caused by flooding of this low terrace shortly after an occupation area had been abandoned.

Wet screening of numerous soil samples taken from recognized features have as yet turned up nothing of significance. Hopefully future flotation analysis will provide us with some floral and faunal remains.

We now recognize the difference between areas of primary core reduction as differentiated from tool finishing and repair, based upon the average size of the debitage found.

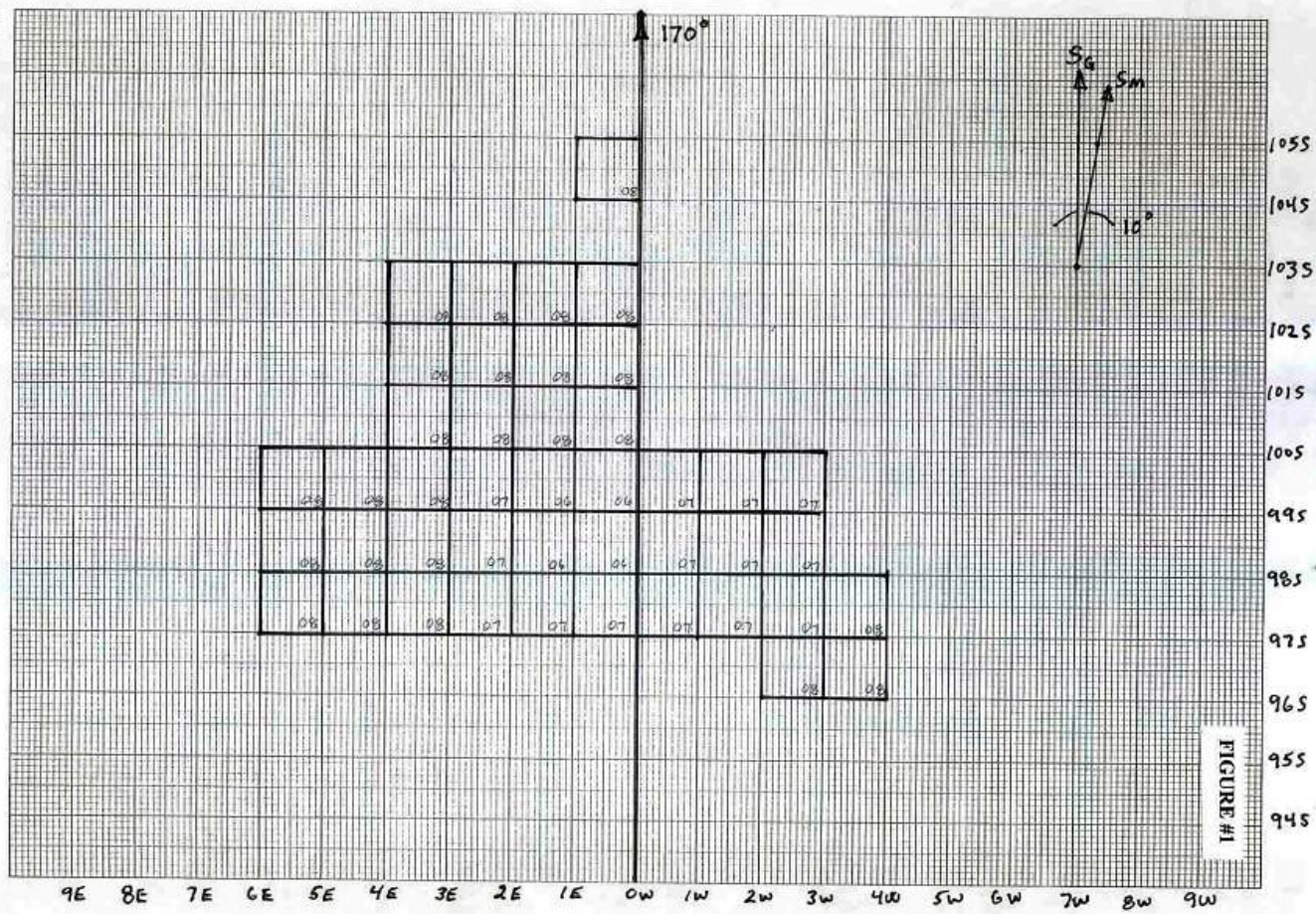
Charcoal samples have been taken from several hearths, and several of these samples will be submitted for radiocarbon analysis, as funds become available.

To summarize, our first two years of fieldwork on this site points to multiple short-time campsite usage by small bands of people stretching over a 3,000 year period from the Late Archaic period to the Historic period. We have found a strong presence of Late Owasco with ceramics and Jack's Reef projectile points. Several Levanna points and possible Oak Hill ceramics hint of a Late Woodland presence. Meadowood points and a small amount of corded pottery belong to the Early Woodland period. Orient fishtail points suggest the Transitional period while several notched points point to a Late Archaic period presence.

Our plans for the 2009 season are to continue excavating this area, but shift our activities slightly to the north. This approach will hopefully let us see if the present small campsite model continues, fades out, or if it changes to more permanent settlements as experienced at the Smith Barn Site 36C found just north of Carlton Smith's home.



James M. Smith



ARTIFACT COUNT SUMMARY BY TEST UNIT LOCATION

SITE 35B; 2008 EXCAVATION SEASON													
TEST UNIT LOCATION	POINT TIPS & BASES	SQUARE PREFORMS	BIFACES	PEBBLES	UTILIZED FLAKES	HAMMERS, ANVILS, & ABRAIDERS	SCRAPERS	PROJECTILE POINTS	CHERT CORES	POT SHARDS	BONE FRAGS.	CHERT FLAKES	OTHERS AND NOTES
96S-2W						1						104	FEATURE 35B-08-01 FCR HEARTH
96S-3W	1			5						1		106	FEATURE 35B-08-01 FCR HEARTH
97S-3W				2								128	FEATURE 35B-08-01 FCR HEARTH
97S-4E	1				1	1	1	2	1			628	ORIENT AND SIDE-NOTCHED POINTS
97S-5E	1	1	1	2			1		1	3		350	GRAVER, SOAPSTONE PIPE FRAGMENT
97S-6E			1						1	4		144	SOAPSTONE PIPE FRAGMENT
98S-4E	7			1			1		1	3		1554	
98S-5E	1			1	1	1			1	12		1312	NUT
98S-6E			1	1						6		321	
98S-4E	1		1		1		1					854	NUT
99S-5E				1						2		403	FOX CREEK POINT BASE
99S-6E			1							1		73	
100S-1E	3		2	2					1	2		520	
100S-2E	3	1		1		3	1		1			814	ANVIL AND NUTTING STONE AND KAOLIN PIPE BOWL FRAGMENT
100S-3E			3							2		1126	SOAPSTONE PIPE FRAGMENT
100S-4E			2		1							842	FEATURE 35B-08-02 FCR HEARTH
101S-1E	1	1		1		1	1					314	ANVIL AND BIFACIAL SCRAPER
101S-2E	1		1	1				1		1	1	328	ORIENT POINT
101S-3E	1			1			1		1			366	DRILL TIP
101S-4E	2						2		1	1		462	CASTLE CREEK RIM SHERD
102S-1E			1	1				1		1		228	UNTYPABLE POINT
102S-2E				2		1	1					92	
102S-3E				2								289	
102S-4E			2	1				1	1	2		449	DRILL
104S-1E									5			234	
	23	3	16	25	4	8	10	5	15	41	1	12140	File: SMU/Reports/Site 35B-Artifact Count by TP-2008

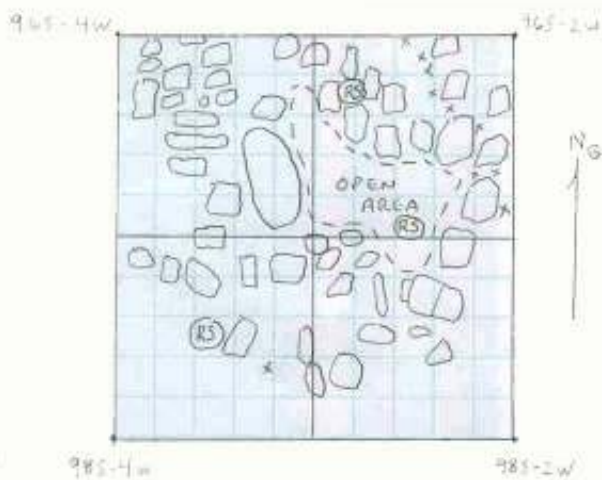
SUMMARY OF CERAMICS DATA FROM SITE 35B-08							
2008 SEASON							
SHERD #	SHERD TYPE	DESIGN CLASSIFICATION	TEST UNIT	DEPTH IN CMS,	COLOR OUTSIDE	COLOR INSIDE	TEMPER CODE (note 1)
A	Thick Body	Punctate Lines and Hatch Marks	98S-4E	96	Redish Brown	Brown	CBC
B	Rim	Owasco Corded (?)	101S-4E	30	Redish Brown	Gray	CWG
C	Thin Body	Corded, Incised Castle Creek (?)	100S-4E	20-24	Gray	Gray	FBC
D	Thin Body	Corded, Oak Hill (?)	98S-5E	44	Brown	Dark Brown	FBC
E	Thin Body	Corded, Incised Castle Creek (?)	99S-4E	40-50	Brown	Brown	FBC
Note 1:							
CBC = Coarse, Black, Crystalline Temper							
FBC = Fine, Black, Crystalline Temper							
CWG = Coarse, White, Granular Temper							
Compiled 5/11/09							
File: Site 35B-08-Ceramic & Artifact Summary 2008.xls							
SITE 35B: 2008 FIELD SEASON							
TYPABLE PROJECTILE POINTS AND OTHER MAJOR ARTIFACTS							
BY TEST UNIT AND DEPTH							
ARTIFACT #	PROJECTILE POINT TYPE	TEST UNIT	DEPTH IN CM.	ARTIFACT #	OTHER ARTIFACTS	TEST UNIT	DEPTH IN CM.
F	Orient Point	101S-2E	60	M	Bifacial Scraper	101S-0W	57
G	Orient Point	97S-4E	48	N	Triangular Preform	100S-3E	36
H	Fox Creek Point Base	99S-5E	50	O	Ovate Knife	100S-1E	35
I	Square Stemmed Base	99S-4E	107	P	Oval Knife	99S-5E	40
J	Side Notched Point	101S-4E	28	Q	Preform	99S-2E/4E	51-57
K	Side Notched Point	97S-4E	50	R	Preform (2 Pieces)	100/101S-1/2E	61-63
L	Adena-Base Stemmed F	102S-1E	39	S	Jasper Graver/Scraper	97S-3E	22
				T	Soapstone Pipe Bowl	(Note 2.)	Less than 35
Note 2:							
Item #T found in many pieces across the site.							

Figure #3

FIGURE #4



**SOUTHWEST VIEW OF FCR FEATURE
LOCATED AT 97S-3W.
SITE 35B**



**PLAN VIEW OF FCR HEARTH FEATURE
SITE 35B
LOCATED IN TU 97S-3W
DEPTH= 68-70cmbs**

**RS = PEBBLE LOCATIONS
x x x = FLAKE LOCATIONS**

DEBITAGE SCATTER BY EXCAVATED BLOCK AND DEPTH RANGES

BLOCK #1: NORTHEASTERN NINE TEST UNITS		BLOCK #2: SOUTHEASTERN TWELVE TEST UNITS	
DEPTH RANGE	TOTAL FLAKES	DEPTH RANGE	TOTAL FLAKES
0-20 cm.	355	0-20 cm.	215
20-30	315	20-30	1051
30-40	692	30-40	1589
40-50	778	40-50	1478
50-60	796	50-60	1118
60-70	907	60-70	275
70+	1996	70+	nd

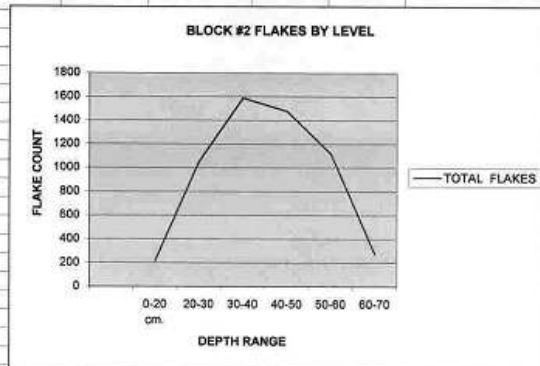
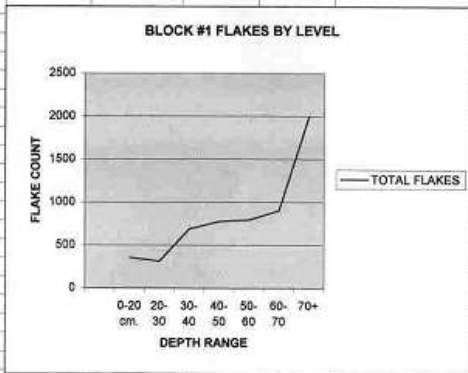


FIGURE #5B

FIGURE # 6A

						FIGURE #
ARTIFACT MATCHES BY LOCATION						
Revised 5/10/09		File: Site 35B Digs/Artifact Matches by Location				
MAP LOCATOR	CAT. NO.	ITEM	DEPTH IN CM.	LOCATION	DATE OF FIND	FINDER
1	AS-920	Biface	48	98.80S-0.85W	7/14/07	TOM ANDERSON
2	AS-926	Biface Edge	42	98.23S-1.21W	8/1/07	FRED STEVENS
3	AS-967	Tip	35-50	TU-98S-2E	10/3/07	CARLTON SMITH
4	AS-973	Square Base	52	98.47S-2.30E	10/10/07	TOM ANDERSON
5	AS-913	Midsection	62	97.36S-0.45E	7/7/07	FRED STEVENS
6	AS-952	Midsection	53-60	TU-97S-2E	9/20/07	JIM CHANT
7	AS-940	Base	45	97.70S-0.82E	8/21/07	BARRY KEEGAN
8	AS-293	Tip	0-15	TU-99S-2E	5/10/06	JIM CHANT
9	AS-964	Base	49	TU-98S-3E	10/3/07	FRED STEVENS
10	AS-866	Tip	45	TU-99S-2E	7/25/06	PHIL SHEEHAN
11	AS-957	Base	55	TU-99S-3E	9/29/07	TOM ANDERSON
12	AS-921	Pipe Bowl Frag.	Wall Cleaning	TU-98S-2E	7/14/07	FRED STEVENS
13	AT-145	Pipe Bowl Frag	5	99.37S-4.70E	5/7/08	JIM CHANT
14	AS-918	Pipe Bowl Frag	30	98.38S-0.68W	7/14/07	TOM ANDERSON
15	AT-230	Pipe Bowl Frag	22	101.00S-2.14E	9/13/08	FRED STEVENS
16	AT-151	Pipe Bowl Frag	31	TU-97S-6E	5/17/08	CARLTON SMITH
17	AS-927	Pentagonal Base	52	98.40S-1.07W	8/1/07	FRED STEVENS
18	AS-296	Edge	29	99.36S-1.30E	5/10/06	PHIL SHEEHAN
19	AS-916	Pentagonal Base	67	98.77S-0.23E	7/7/07	JON VIDULICH
20	AS-294	Edge	27	99.38S-1.30E	5/10/06	PHIL SHEEHAN
21	AT-170	Tip	86	98.06S-3.56E	6/3/08	TOM ANDERSON
22	AT-212	Square Base	64	99.82S-3.95E	8/23/08	TOM ANDERSON
23	AT-20	Tip	57	98.83S-3.60E	8/20/08	TOM ANDERSON
24	AT-873	Square Base	51	97.13S-1.54E	8/9/06	PHIL SHEEHAN
25	AT-210	Biface	40	99.60S-4.42E	8/23/08	JIM CHANT
26	AT-232	Edge	29	100.61S-2.12E	9/13/08	FRED STEVENS
27	AT-215	Tip	61	TU-100S-1E	8/22/08	TOM ANDERSON
28	AT-245	Square Base	63	101.83S-1.82E	10/8/08	FRED STEVENS
29	AT-168	Mid-Section	80	TU-98S-4E	6/3/08	TOM ANDERSON
30	AT-206	Tip	97	TU-98S-4E	8/20/08	FRED STEVENS

FIGURE # 6B

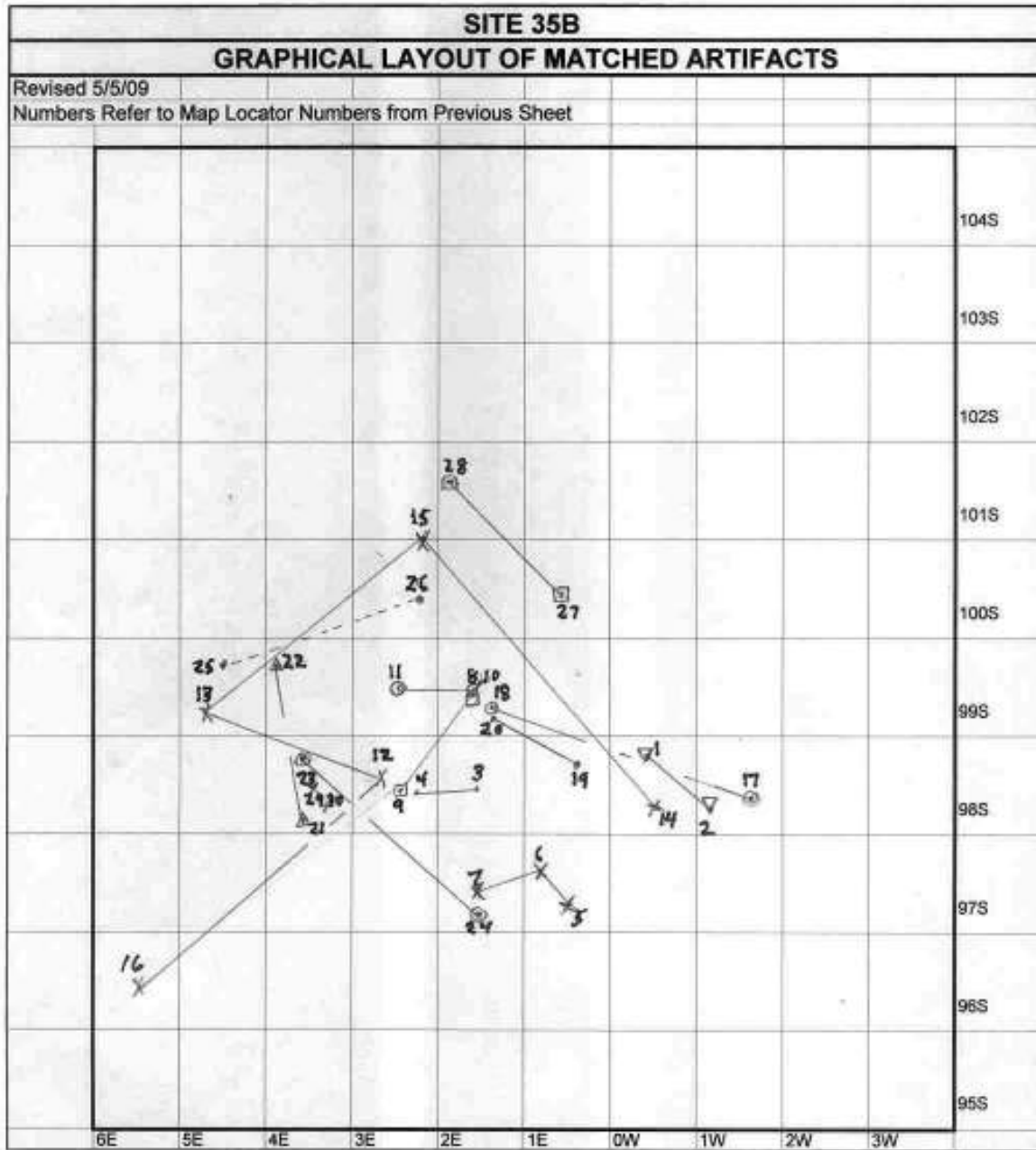


FIGURE #7
ARTIFACT PHOTOS

