

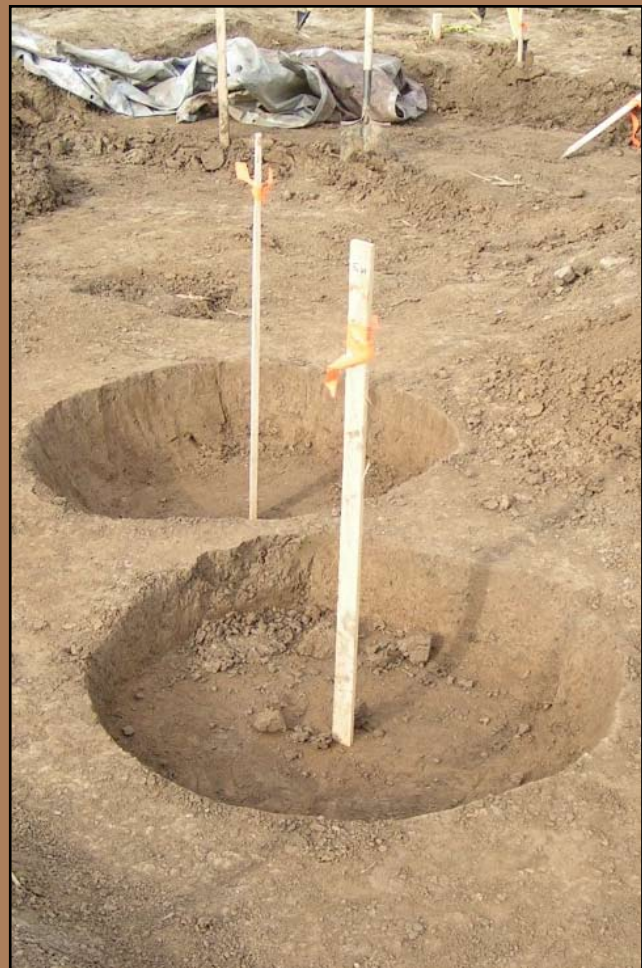
# Missouri Archaeology



Site 23CH348 is a prehistoric archaeological site located on a high terrace overlooking the Chariton River in Chariton County, Missouri. The portion of site 23CH348 located in the Keystone Pipeline Project corridor was excavated prior to construction in order to recover information concerning the prehistoric Native American occupation of north-central Missouri that would have otherwise been lost.

Over a four-week period in early 2009, a team of archaeologists from American Resources Group, Ltd., identified and excavated 34 prehistoric features scattered along the narrow project corridor crossing the edge of the site. Features are large pits that were dug by the prehistoric occupants of a site for cooking, food storage, and, ultimately, for disposing of refuse before being back-filled (the circular depressions shown in the photograph to the right are examples of some of the features excavated at site 23CH348). Because pit features often contain discarded artifacts, food remains, and charcoal suitable for radiocarbon dating, they are similar to time capsules that are capable of yielding a wealth of information on the prehistoric past for which no written records exist.

Archaeological excavations at site 23CH348 resulted in the recovery of nearly 15,000 cultural items, including stone tools, stone-tool manufacturing debris, potsherds, animal bone, antler, and carbonized plant remains. The detailed analysis of the materials recovered at the site have provided researchers with information concerning the age of the site, its season of occupation, and the material culture and diet of the site occupants.

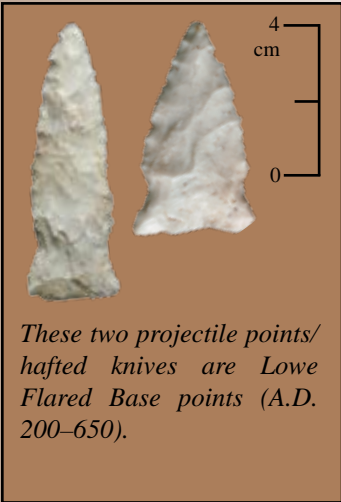


Although there is evidence that site 23CH348 was first occupied over 10,000 years ago, the primary occupation at the site occurred from A.D. 260–620 during a time archaeologists call the Middle to Late Woodland periods. The remains from features also indicate the site was occupied year-round. From the location of the site, groups made hunting and gathering forays to exploit a diversity of plant and animal resources from the nearby river, sloughs, and ox-bow lakes, as well as from the upland forests and surrounding prairies. It is also likely the people at the site tended gardens on the fertile terrace soils. Although no evidence of permanent houses, in the form of post holes, was identified, it is likely these features are present in the unexcavated portions of the site lying outside the pipeline project corridor.

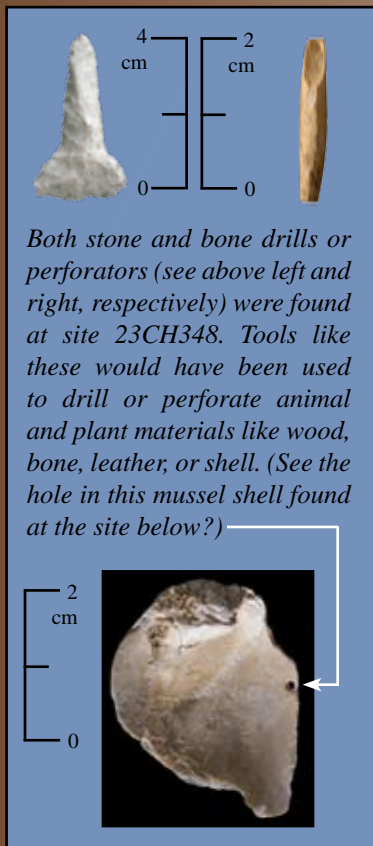


*These two projectile points/hafted knives are, from left to right, a Raddatz Side Notched point (6000–2500 B.C.) and a Terminal Archaic Barbed Cluster point (1300–200 B.C.).*

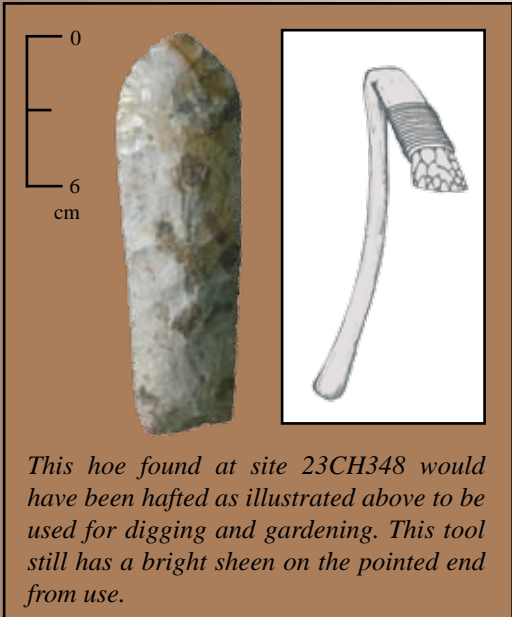
Prehistoric cultural groups are distinguished primarily by reference to two classes of artifacts: ceramic vessels and projectile points/hafted knives. Pottery and projectile points can be separated into types on the basis of distinctive stylistic attributes, and the recovery of these types from datable contexts allows archaeologists to assign these artifact types to specific temporal and cultural periods. The projectile points/hafted knives shown in the photographs on the left and right are examples of the many temporally diagnostic point types recovered at site 23CH348. The shapes of tools can also indicate the types of work they were used to perform, such as the drilling and digging tools illustrated in the photographs below.



*These two projectile points/hafted knives are Lowe Flared Base points (A.D. 200–650).*

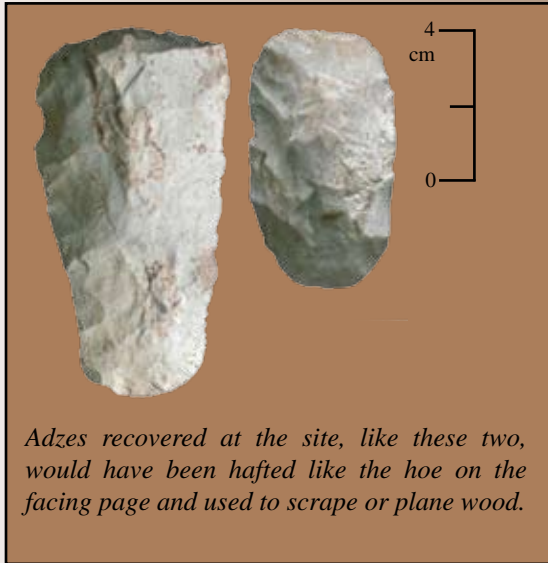


*Both stone and bone drills or perforators (see above left and right, respectively) were found at site 23CH348. Tools like these would have been used to drill or perforate animal and plant materials like wood, bone, leather, or shell. (See the hole in this mussel shell found at the site below?)*

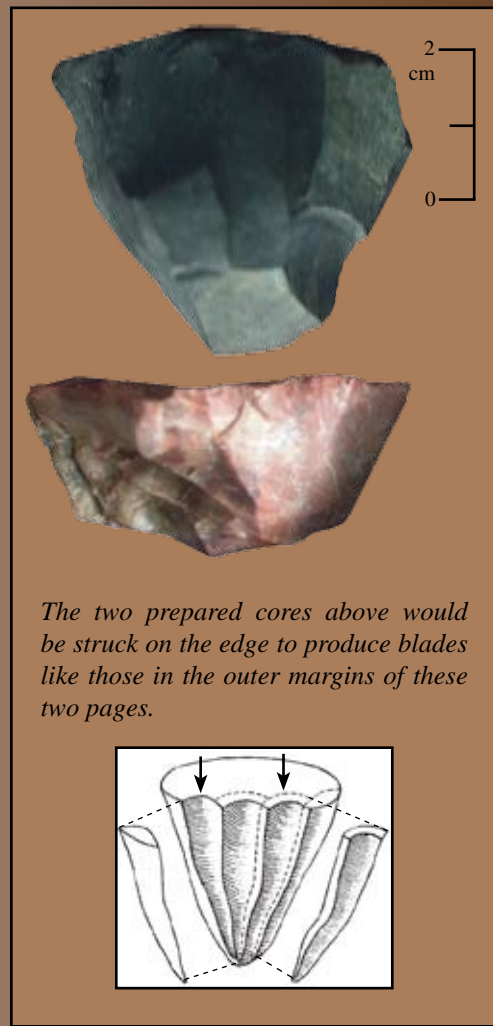


*This hoe found at site 23CH348 would have been hafted as illustrated above to be used for digging and gardening. This tool still has a bright sheen on the pointed end from use.*

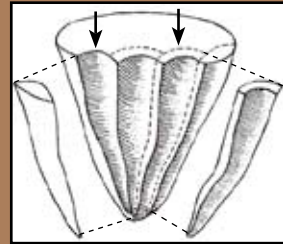
The occupants of site 23CH348 utilized a stone-tool technology that allowed them to produce flake tools whenever they needed them. This technique, called prepared core technology, begins with a nodule of chert, which is a type of stone that can be flaked. First, the nodule is shaped into a cone and one end is cleaved off to make a flattened surface. Then, the core is placed with the flat side up and struck on the edge of the flat surface. This results in a long narrow, parallel-sided flake, or a blade, being detached from the core. Multiple blades can be detached from a core in a circular or spiral fashion as it is whittled down (see right). Over 120 blades like those shown in the outer margins of these two pages were recovered at site 23CH348. (The blades illustrated are full size.)



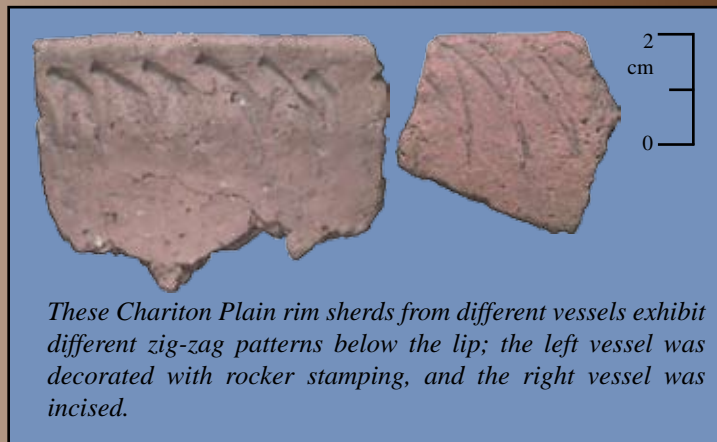
*Adzes recovered at the site, like these two, would have been hafted like the hoe on the facing page and used to scrape or plane wood.*



*The two prepared cores above would be struck on the edge to produce blades like those in the outer margins of these two pages.*



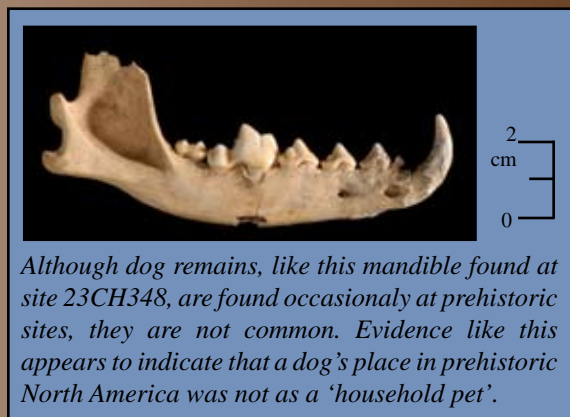
Most pottery types recovered at the site are defined as Chariton Plain and Pike-Baehr-like, the latter named from type sites in the Illinois River valley. Decorations on these types of pottery are related to pottery discovered at contemporary Native American sites across the region, especially along the Big Bend area of the Missouri River; this suggests that the occupants of site 23CH348 were part of a larger trade network where goods and ideas flowed among multiple groups.



*These Chariton Plain rim sherds from different vessels exhibit different zig-zag patterns below the lip; the left vessel was decorated with rocker stamping, and the right vessel was incised.*



*These two rim sherds from separate vessels have notched rims. The sherd on the left is cordmarked with a diagonal pattern, while the one on the right exhibits rocker stamping.*



*Although dog remains, like this mandible found at site 23CH348, are found occasionally at prehistoric sites, they are not common. Evidence like this appears to indicate that a dog's place in prehistoric North America was not as a 'household pet'.*





Keystone Pipeline construction in North Dakota.

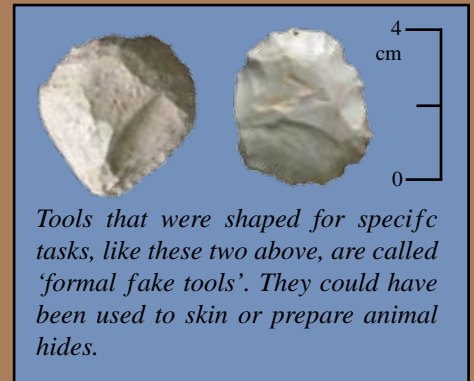
The Keystone Pipeline is 2,151 miles long and transports 590,000 barrels of crude oil per day from Hardisty, Alberta to markets in the Midwestern United States at Wood River and Patoka, Illinois, as well as to Cushing, Oklahoma (for more information visit TransCanada's website: ([www.transcanada.com/keystone.html](http://www.transcanada.com/keystone.html))). The excavation conducted at site 23CH348 was carried out by American Resources Group, Ltd. (ARG), of Carbondale, Illinois. The excavations were conducted in order to fulfill the requirements of Section 106 of the National Historic Preservation Act of 1966, the Archaeological and Historical Preservation Act of 1974, and Title 36 of the Code of Federal Regulations, all of which exist to protect our collective cultural heritage in the United States. Because site 23CH348 extended into the proposed pipeline corridor, the portion of the

site that would have been disturbed by construction was excavated by ARG in the winter of 2009. With the exception of cultural material found in association with human remains discovered in several of the features, all cultural material encountered during excavation was collected for study. All human remains and associated material were preserved in place, and their avoidance was ensured through archaeological monitoring during the subsequent construction of the pipeline. After the materials recovered during excavation were catalogued and analyzed by archaeologists, zoologists, and botanists, a technical report was prepared to document and preserve the history of the site.



Items for personal use were discovered at site 23CH348. This is part of a gorget made of smoothed hematite. Gorgets were worn around the neck for personal adornment.

The archaeological excavations at site 23CH348 have opened a window into the lives of the prehistoric people living in north-central Missouri more than 1,500 years ago. The cultural material recovered at the site has provided archaeologists with information on the way people lived and interacted in this region during this time period, although the reconstruction of activities occurring at site 23CH348 is limited by the limited scope of the excavations. Most of the site was not affected by pipeline construction, so excavation of only a small portion of the site was necessary.



Tools that were shaped for specific tasks, like these two above, are called 'formal flake tools'. They could have been used to skin or prepare animal hides.

The information derived from the Keystone Pipeline Project excavations at site 23CH348 represent an important part of our cultural heritage that would have been lost without the support provided by TransCanada. Today the unexcavated portion of the site is being protected by the property owner.

This release and the preservation of our nation's cultural heritage was made possible by the cooperation of these private businesses and state agencies:



United States  
Department of  
State  
Bureau of Oceans  
and International  
Environmental  
and Scientific  
Affairs



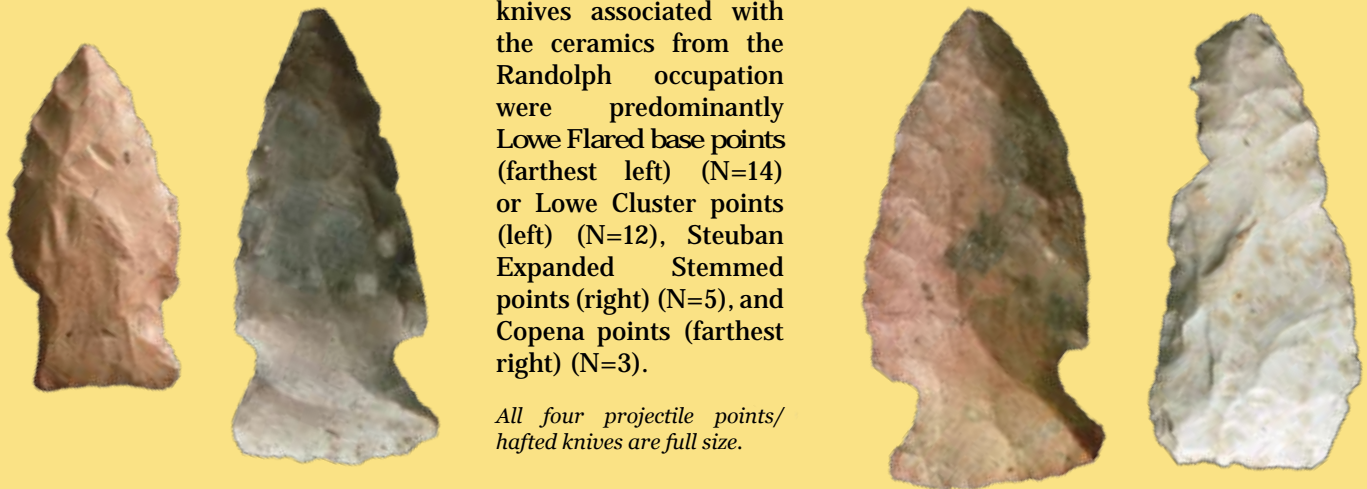
American Resources  
Group, Ltd.  
Carbondale, Illinois



The artifact assemblage from site 23Ch348 indicates a wide range of activities associated with a residential base camp or village. Hunting, fishing, processing and cooking food—such as meat, nuts, and other plant materials—making and maintaining stone tools, wood working, and making pottery all took place at this site. It is also quite probable that gardening occurred at the site. Chipped-stone drills and scrapers, as well as bone awls, suggest perishable items made from animal and plant materials were also being made, such as animal hides for shelters and clothing and plant fibers for weaving baskets, matting and clothing. There is substantial evidence for repeated, seasonal or year-round occupation of site 23CH348 due to the heavy accumulation of artifacts, the presence of midden deposits, and the high density of features. It is possible that shallow postholes from structures were obscured within the midden stain, and evidence of houses may be present elsewhere in unexcavated portions of the site.

## Lithics

A total of 7,252 lithic items was recovered at site 23CH348, including 275 pounds of cracked rock, 3,358 chipped-stone artifacts (tools, flake debris, and thermal shatter), and 26 ground stone artifacts. Flake debris indicated mostly tool maintenance and use, suggesting primary manufacturing of bifaces and preforms occurred elsewhere. Most of the artifacts and debris are made from locally available Burlington chert, and heat-treatment of this white chert is often indicated by red hues.



Projectile points/hafted knives associated with the ceramics from the Randolph occupation were predominantly Lowe Flared base points (farthest left) (N=14) or Lowe Cluster points (left) (N=12), Steuban Expanded Stemmed points (right) (N=5), and Copena points (farthest right) (N=3).

*All four projectile points/hafted knives are full size.*

Flake blades (N= 127) were also frequently associated with these point types and ceramics. Other stone tools included drills, scrapers, adzes, a hoe, and ground stone tools such as hammerstones, nutstones, pestles, and celts.

## Human Remains

Fragmentary remains of human skeletons were found in four features:

- One feature contained the remains of a face-down skull, a partial pelvis, and a femur. What is interesting about these human remains is that there was a dog skull, a turtle shell, and human fingers buried above them.
- A fragment of a single leg bone was found beneath several slabs of limestone.
- A skull fragment was found in a large deep pit.
- Fragments of a knee cap and eye socket were found in a pit mixed with various animal bones.



*This dog skull, along with a turtle shell and human fingers, appears to have been placed intentionally above a person buried face down below.*

None of the features containing human remains appeared to be complete, primary burials. Excavation was discontinued in the areas where these four features were located; upon discovery of human remains, these four features were left intact and their original content was reinterred. Pipeline construction was monitored to ensure no impact occurred to these features. These actions were taken in accordance with the Native American Graves Protection and Repatriation Act (NAGPRA).