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## The Fort Clark Archeology Project, 2000-2001 Historical Archeological Investigations.

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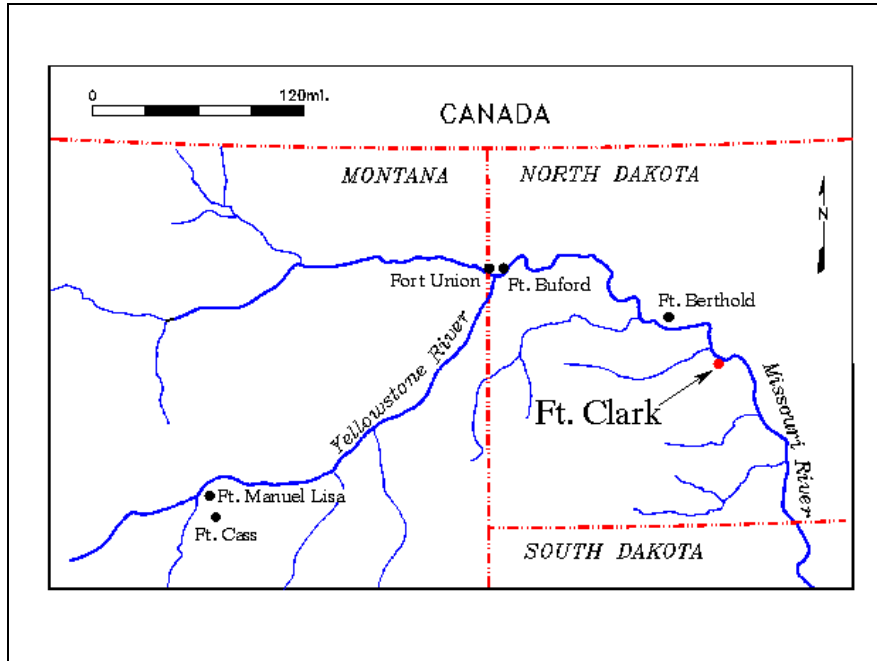
## **The Fort Clark Archeology Project 2000-2001 Historical Archeological Investigations**

by William J. Hunt, Jr.

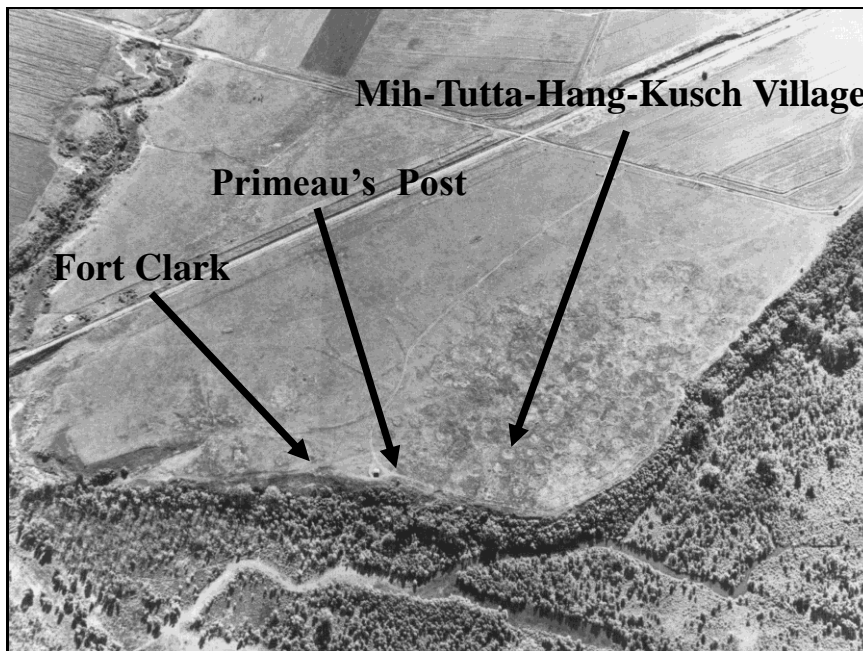
National Park Service, Midwest Archaeological Center, Rm. 474,  
100 Centennial Mall No., Lincoln, NE 68508

This paper was presented at the 59th Annual Plains Anthropological Conference, Lincoln, Nebraska, Nov. 1, 2001.

**Abstract:** Historical archeological work during the summers of 2000 and 2001 has been directed toward development and installation of a series of interpretive panels relating to the history, archeology, and peoples living at Fort Clark. In anticipation of this, investigations in 2000 included small scale testing and large scale geophysical surveys at the village and both trading posts. Fieldwork in 2001 was more focused and utilized geophysical survey data from both years to guide a multi-university field school excavation at Fort Clark. Excavation goals were to clarify the structural history and evolution of the post, discern functional change in one portion of the post through time, recover artifacts for analysis and interpretive exhibition, and generally develop visual and other information sources for visitors and future interpretive panels. Excavations concentrated on a fort-era midden immediately behind the post, the west bastion and palisades, and courtyard. Although artifact recovery was much smaller than expected, the project produced an abundance of feature data which will allow the project excavation goals to be addressed.

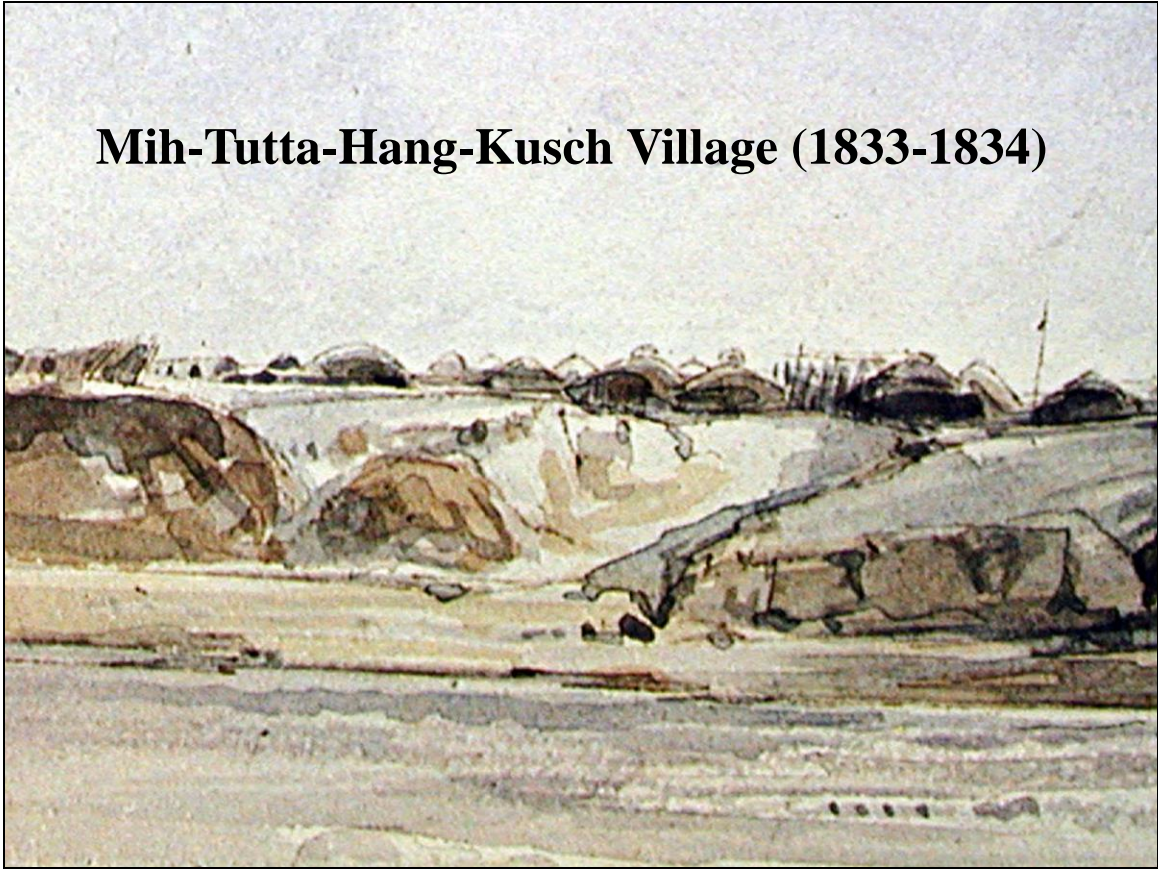


The Fort Clark site is located in Mercer County, in central North Dakota about 60 miles north of Bismarck. The nearest modern towns are Stanton, located about seven and one-half miles northwest of the site, and Washburn which is situated about 14 miles to the east.



The site uniquely incorporates the archeological remains of a Mandan/Arikara earthlodge village (circa 1822-1861), *Mih-tutta-hang-kusch*, and two mid-19th century American fur trade posts, Primeau's Post (circa 1858-1861) and Fort Clark (circa 1830-1860).

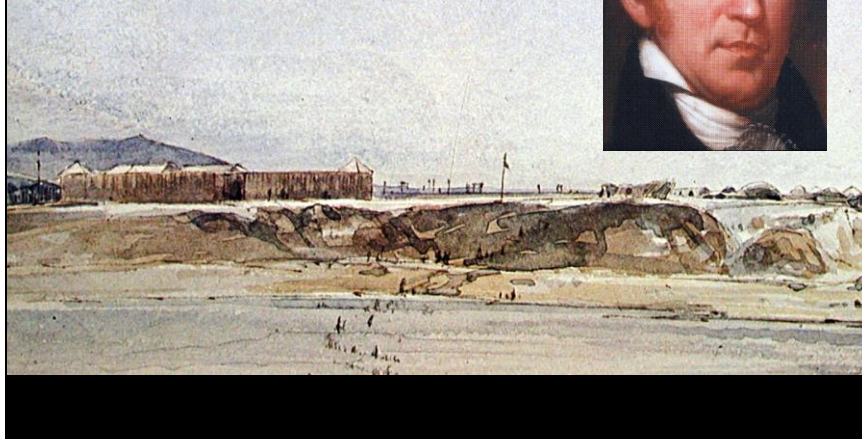
## Mih-Tutta-Hang-Kusch Village (1833-1834)



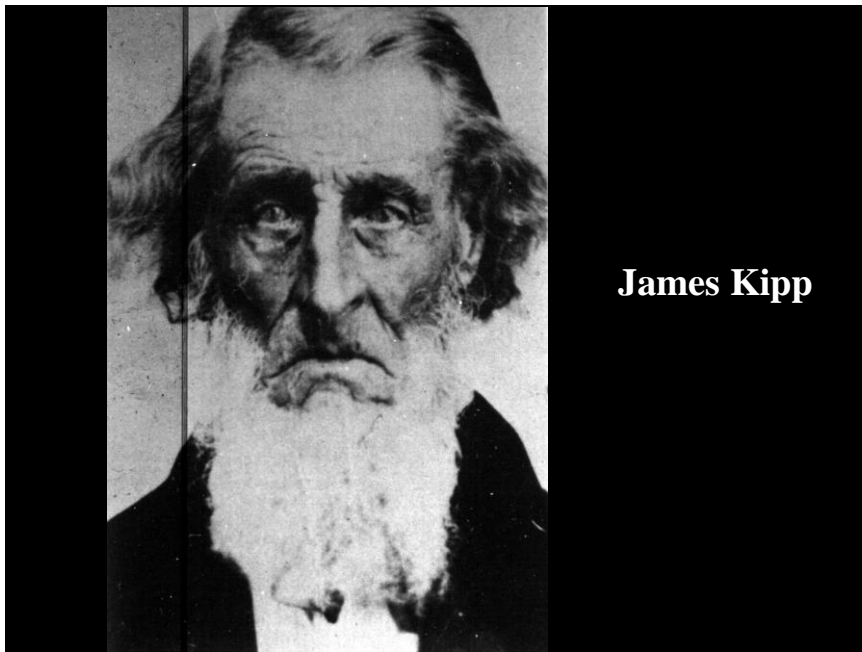
The story of Fort Clark begins in 1822 when the Mandan built a village of earth-covered homes on the bluffs of the west bank of the Missouri River at the confluence of Chardon Creek and Clark's Creek. They called their new home *Mitu'tahakto's* (pronounced me-toot-a-hank-tosh), meaning first village or east village. The Mandan and Hidatsa communities of the Upper Missouri River had been a magnet for intertribal trade for centuries before Europeans or Americans arrived on the scene. Every fall in the historic period, nomadic Indians from the Rocky Mountains, the southern and eastern Plains, and from what is now Canada visited their villages to exchange goods with these corn-growing village Indians. With the arrival of French and English traders into the area, "the Mandans" (as their villages were often called) became the locations for trading goods manufactured in Europe and America.

Thus, it is not surprising that a succession of American trading posts were established near Mih-tutta-hang-kush to exploit the trade of the Mandans, their neighbors the Hidatsas, and the nomadic groups that came to their villages to trade.

**Fort Clark and Mih-Tutta-  
Hang-Kusch Village (1833-1834)**

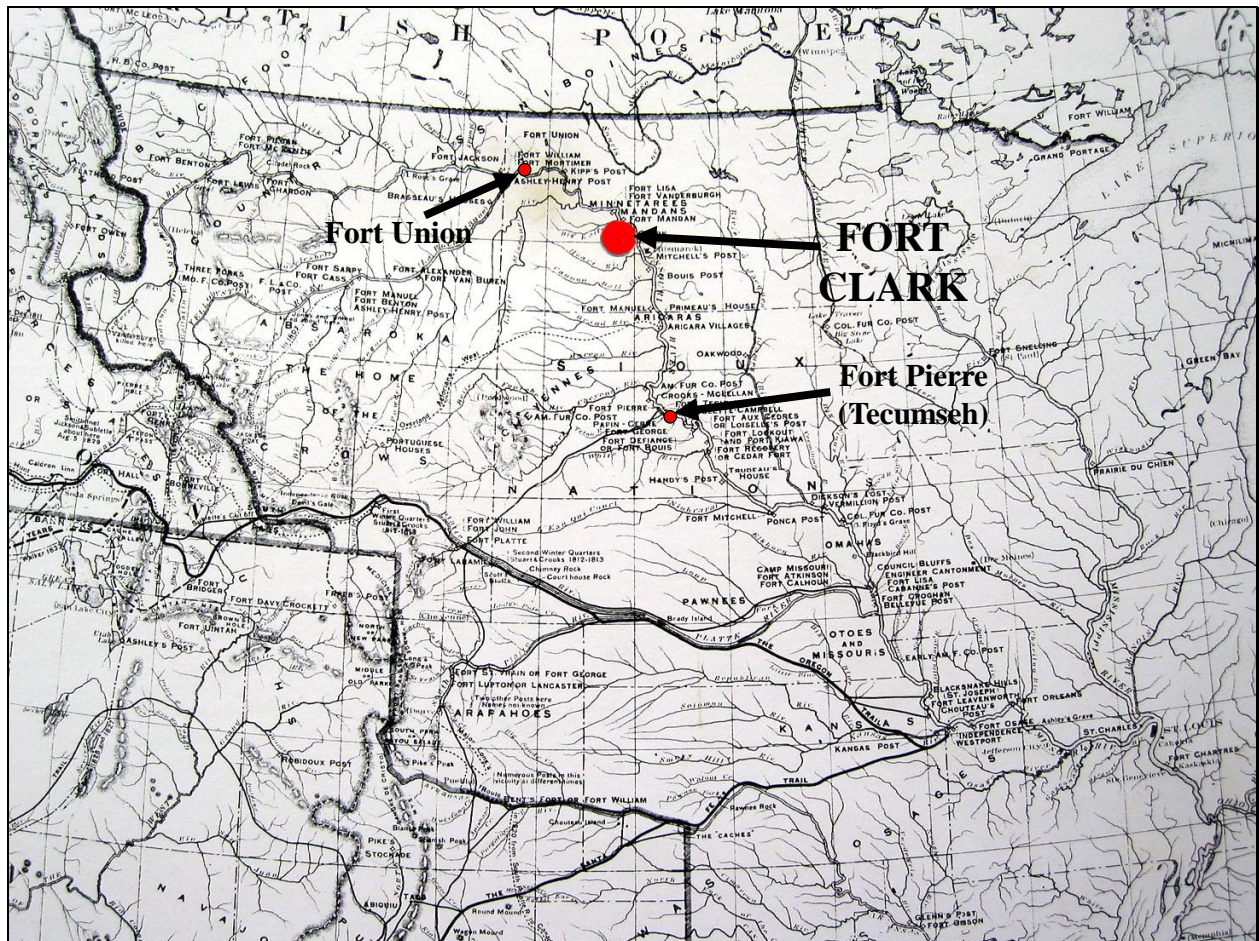


In 1830, the American Fur Co. built a new trading post and named it Fort Clark in honor of former explorer William Clark, who was Superintendent of Indian Affairs at the time.

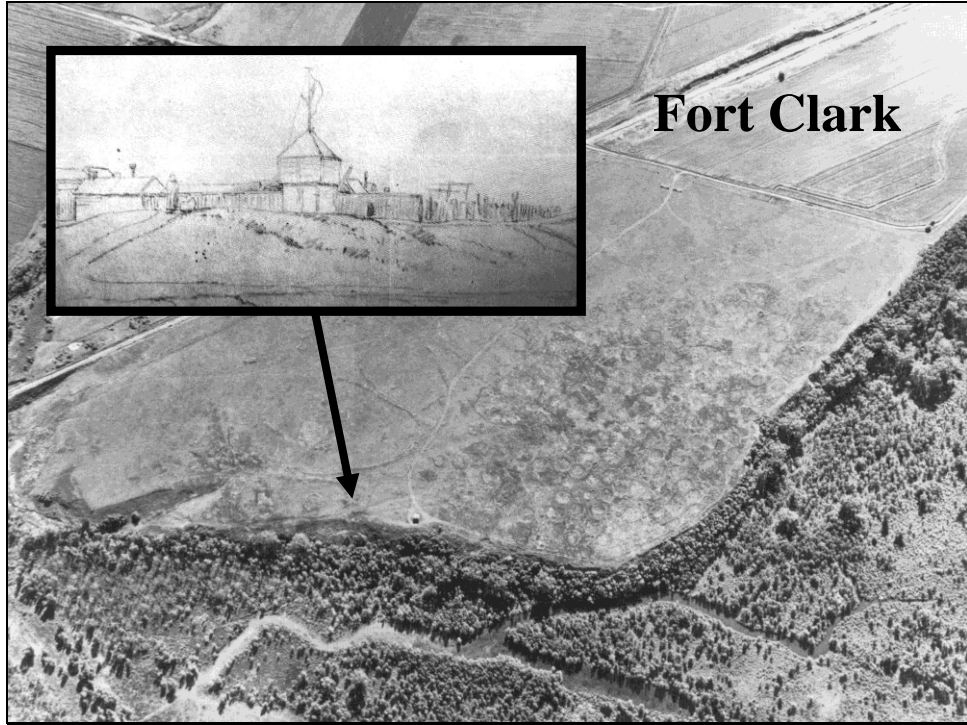


**James Kipp**

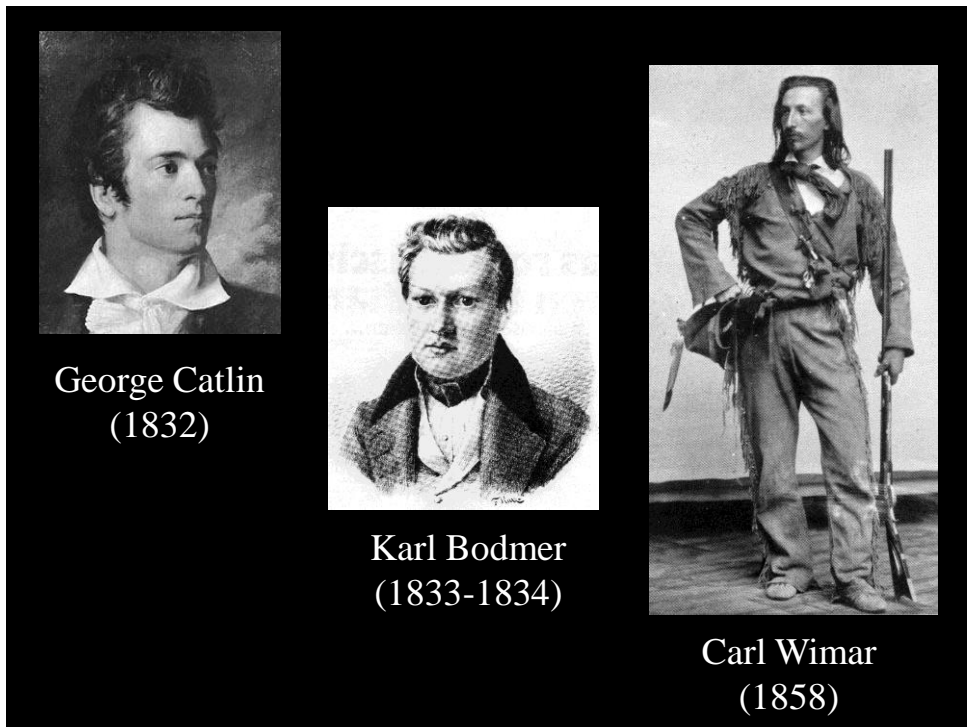
It was built by James Kipp for trade with the *Mitutanka* Mandan Indians living in the earthlodge village located about 250 yd (230 m) northwest of the fort site. Fort Clark also served visiting tribes such as the Hidatsas, Crows, and Dakota Sioux. After the tragic 1837 smallpox epidemic virtually destroyed the Mandans, the Arikaras moved into the village and became Fort Clark's primary trading partner.



Fort Clark was a major trading post of the Upper Missouri Outfit, a division of John Jacob Astor's New York firm the American Fur Company and its St. Louis-based descendants Pratte, Chouteau and Co. (1834-1838), and later, Pierre Chouteau Jr. and Co. (1838-1865). The other major Company trading posts in the region were Fort Pierre, near Pierre, SD, and Fort Union at the mouth of the Yellowstone River near Williston, ND. In addition, there were a significant number of smaller, short-term trading posts and wintering houses scattered along the tributaries of South Dakota, North Dakota, Wyoming, and Montana.



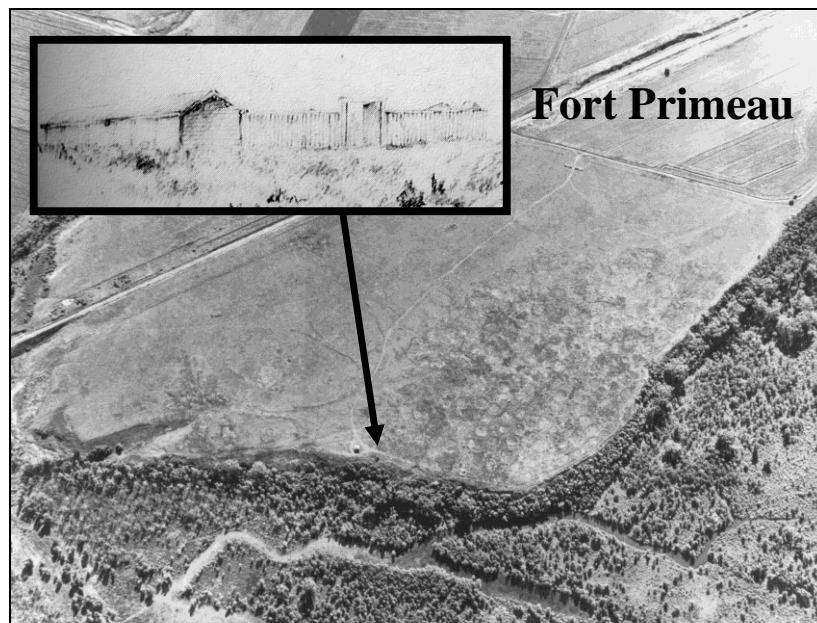
Fort Clark site was a popular stopping place for non-Indian travelers as well.



Among the distinguished visitors to Fort Clark were artists such as George Catlin, Karl Bodmer, and Carl Wimar.

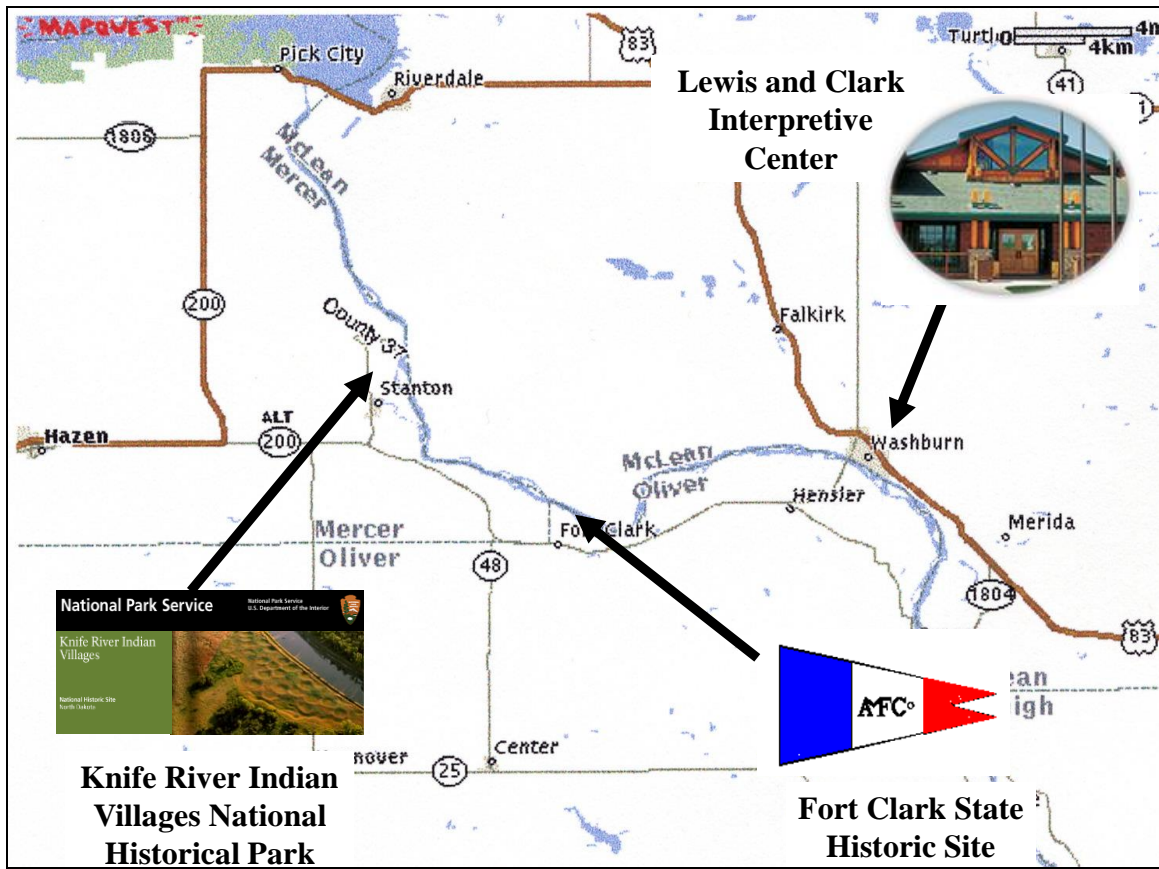


Other visitors included missionaries Fathers Pierre DeSmet, S.J. and Nicholas Point, S.J., and scientists Prince Maximilian of Wied (Germany) and John James Audubon. Many of these visitors commented on the fort, usually in negative terms since it was very rustic and often appeared dilapidated early in the summer when most visitors arrived.



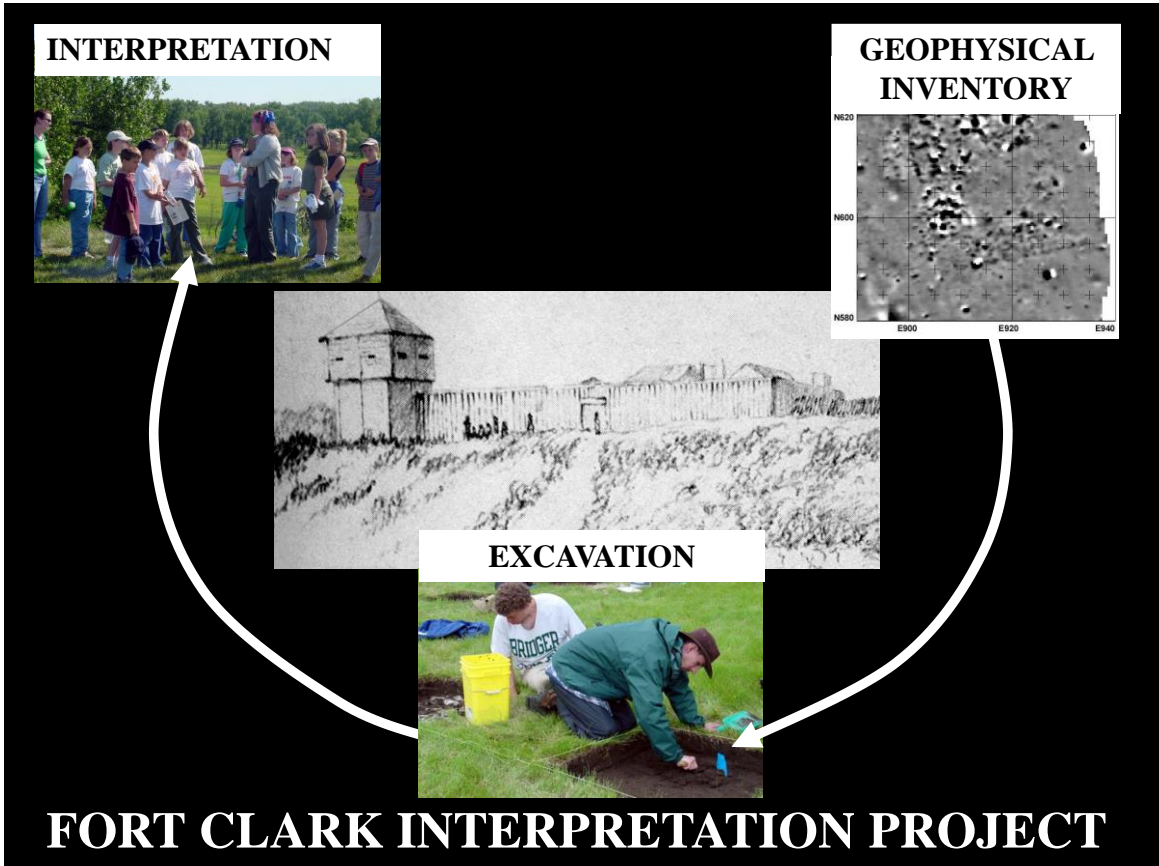
The Company continued to trade here until 1860 when Fort Clark burned and was abandoned. Its employees then moved into Primeau's Post after the Company purchased it from Clark, Primeau and Company. The remains of Primeau's Post lies at the top of the hill between Fort Clark and *Mih-tutta-hang-kusch* Village. The Company deserted Primeau's Post when the Arikara abandoned their village in 1861 to build Star Village near present-day Garrison, ND.





The site as a whole is listed on the National Register of Historic Places as an Archaeological District in 1986. It has also been nominated as a National Historic Landmark (Dill 1990:32).

The Fort Clark Interpretive Project was a by-product of the State of North Dakota's anticipation of a significant increase in visitation of its historic parks during the 2004-2006 Lewis and Clark Bicentennial. Fort Clark State Historic Site is anticipated to receive additional visitation, not only because it is named after one of the leaders of the Corps but because it is situated between two important sites relating to the Lewis and Clark Bicentennial Celebration; i.e., the North Dakota Lewis & Clark Interpretive Center at Washburn and National Park Service's Knife River Indian Villages National Historic Site at Stanton. Unfortunately, the site's facilities are crude and its interpretive signage in poor condition. For this reason, the North Dakota Lewis and Clark Bicentennial Advisory Committee designated Fort Clark State Historic Site as a priority for development and interpretation. The Fort Clark Interpretation Project was born shortly thereafter.



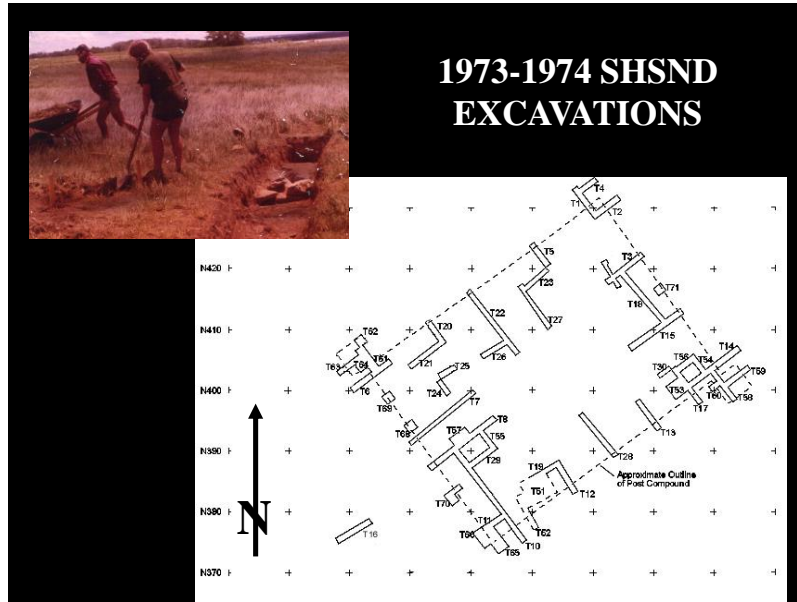
Goals of this project were:

1. Develop an on-site education and interpretive program;
2. Apply state of the art geophysical survey methods focusing on the trading posts, village (lodges, trail and ditch features, plaza and Arikara ceremonial lodge), village margins, and enigmatic anomalies visible on air photos;
3. Conduct eight weeks of excavation (2 weeks in 2000, 6 weeks in 2001) focusing on identification and clarification of the geophysical investigations and other research questions; and, the reason for creating the project in the first place;
4. Utilize historic documentation, geophysical data, and results of this and previous archeological investigations to develop new public interpretation panels for the site covering subjects of site history and archeology.

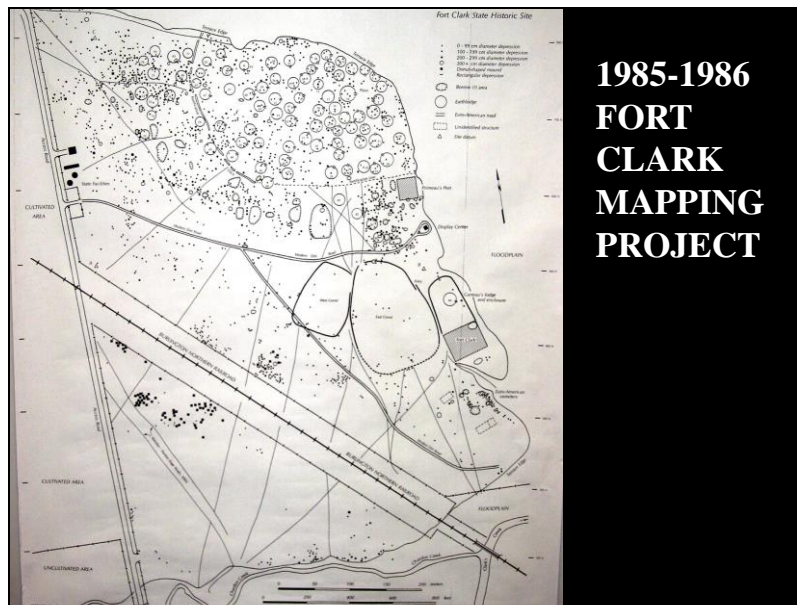


## **2001 CREW, FORT CLARK INTERPRETATION PROJECT**

The project was unusual in that it incorporated scholars, students, and laypersons from broad range of institutions. These include the The Archeo-Imaging Lab at the University of Arkansas; the Departments of Anthropology at the Universities of Kansas, Missouri, Nebraska, and Tennessee; the U.S. National Park Service's Midwest Archeological Center; the State Historical Society of North Dakota; and PaleoCultural Research Group based in Flagstaff, Arizona; and the Smithsonian Institution's National Museum of Natural History and the Department of Anthropology. Public outreach was also an important part of the project. Volunteer excavators from as far away as central Illinois contributed about 760 hours of labor to the project, each spending at least a full week on site at their own expense. Counting labor and cost-of-living, that donation represented more than \$10,000 in savings on the cost of fieldwork.



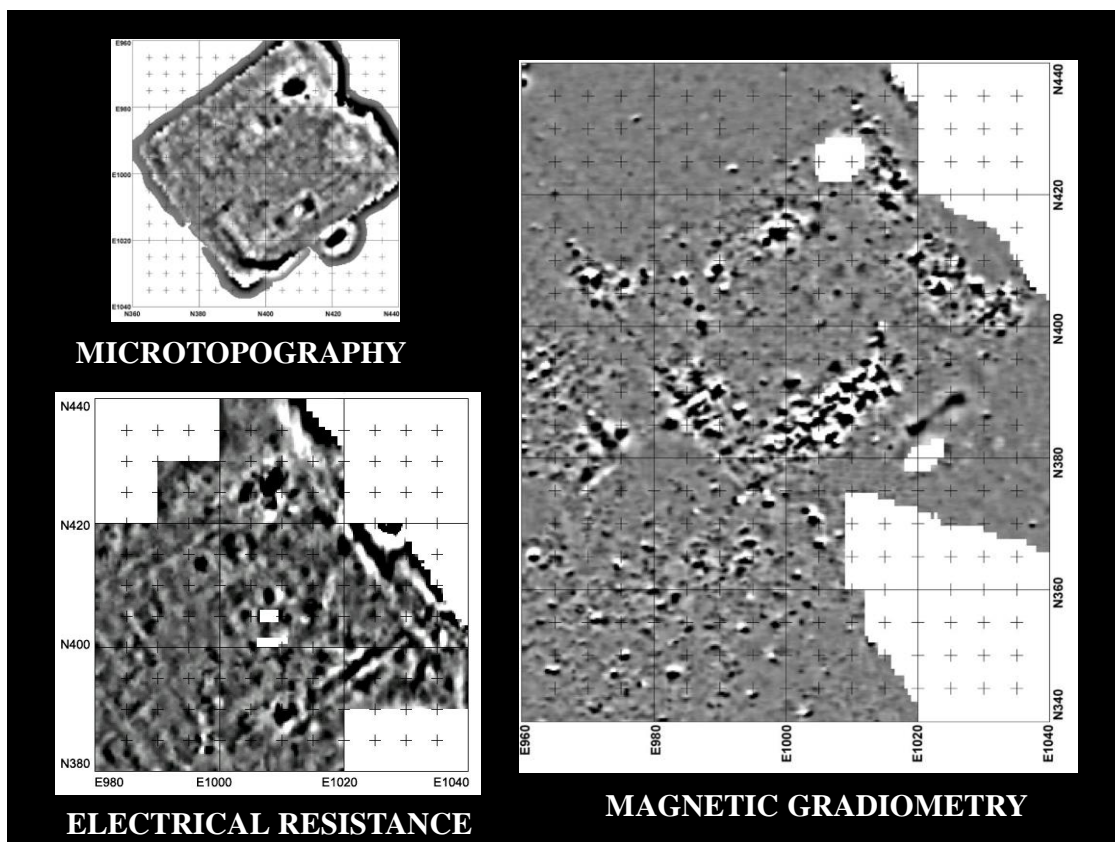
This project was preceded by two earlier investigations, however. The initial investigation of Fort Clark was accomplished in 1973 and 1974 by C.L. Dill, an archeologist with the State Historical Society of North Dakota. Dill excavated forty-nine trenches in the site exploring all portions of the fort save the courtyard and, in the process identified elements of the perimeter palisades and a number of interior structures. Dill typically preserved features in place as he encountered them, a practice which proved very useful to this project.



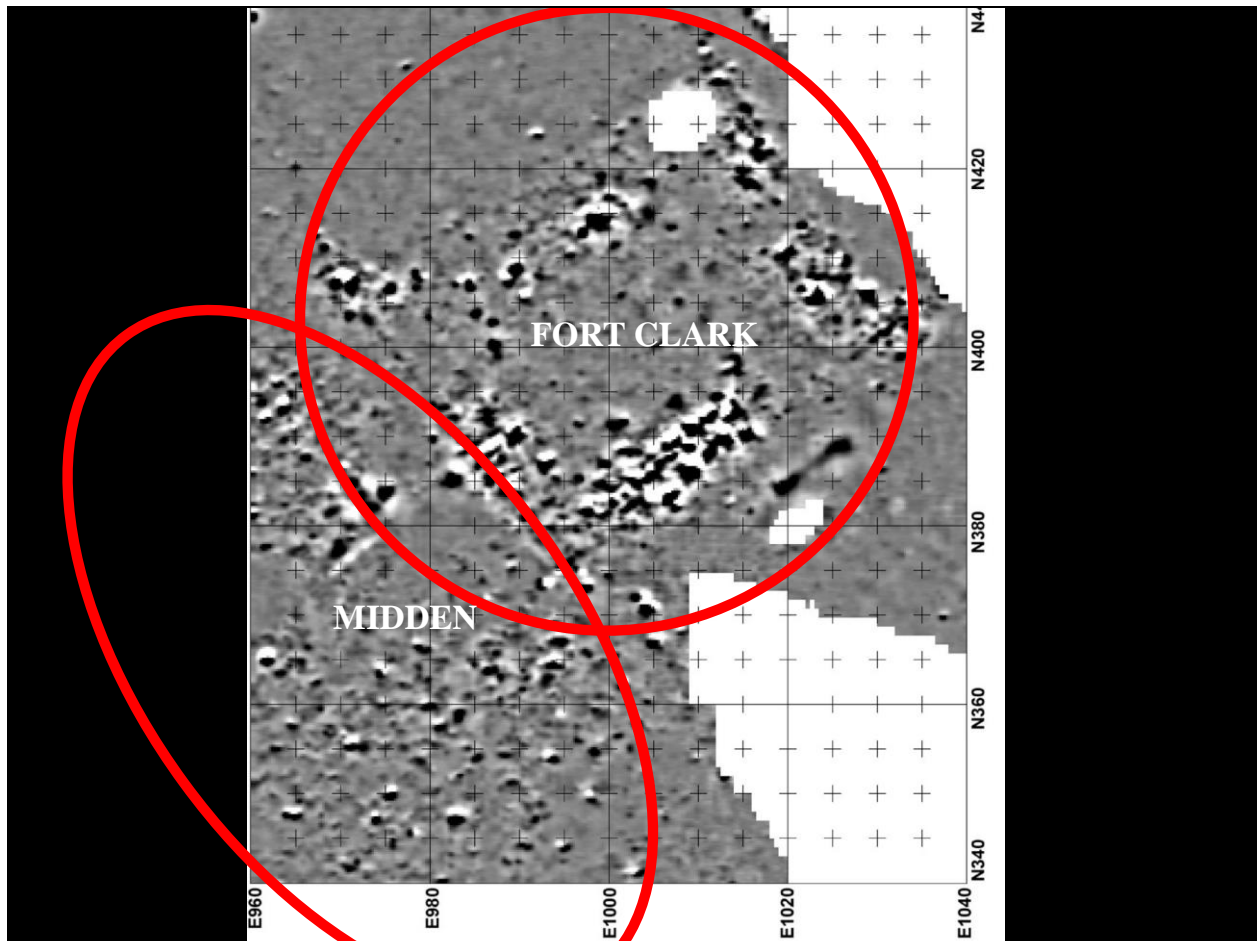
The only other project was a 2-year mapping project directed by Ray Wood in 1985 and 1986. That project combined aerial photography and transit mapping to produce highly detailed maps documenting the location and dimensions of more than 2200 surface features, including 86 earthlodges, hundreds of storage and burial pits, 2 trading posts, as well as EuroAmerican and Native American roads and trails.



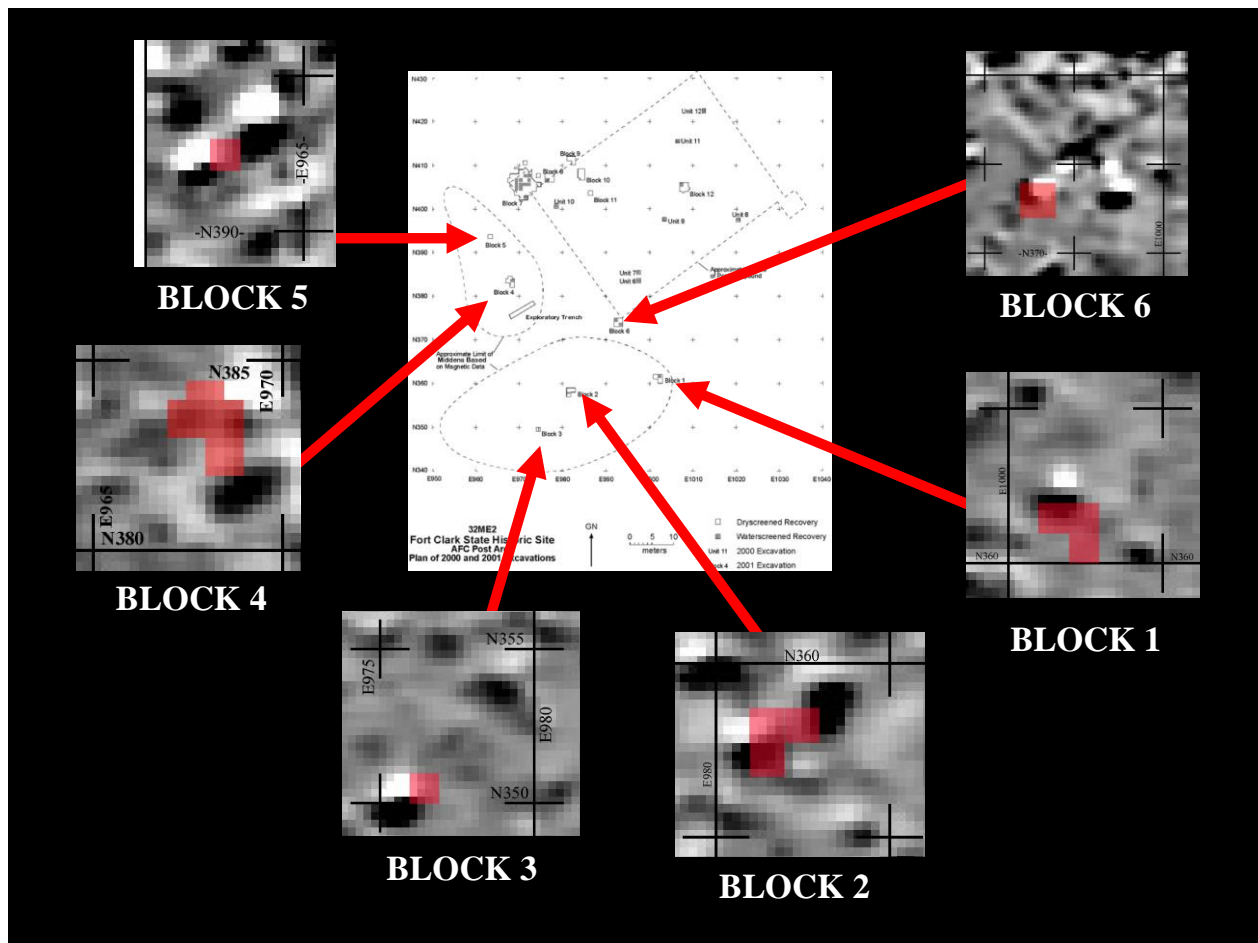
Beginning in 2000, the Fort Clark Interpretation Project's major fieldwork was directed toward completion of a large-scale geophysical survey of the site.



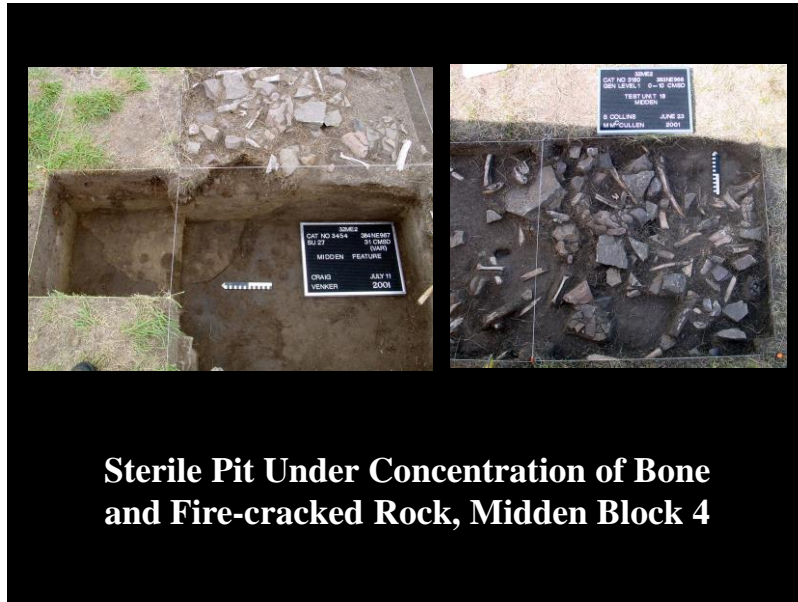
This work, by Ken and JoAnn Kvamme, documented a large swath of the earthlodge village and all of the Fort Clark site using a broad array of investigative methods. The data from these surveys was used to produce large scale maps which could be used to guide the subsequent year's excavations.



In 2001, I came on the project as the primary investigator. My first job was to direct the excavations of a multi-university field school. Work was entirely focused on Fort Clark trading post. Two general areas of the site were examined; the fort itself and a magnetically "lumpy" area southwest of the trading post believed to be a possible fort-era midden. Within the fort, data recovery focused on documenting and clarifying the structural evolution of the post. Outside the post, the goal was to determine whether the area was a midden and, if so, identify changes in dumping locales through time. Both areas exhibit strong magnetic, magnetic susceptibility, and resistance anomalies. Based on this, it seemed likely excavators would encounter many features and artifacts in both locations.

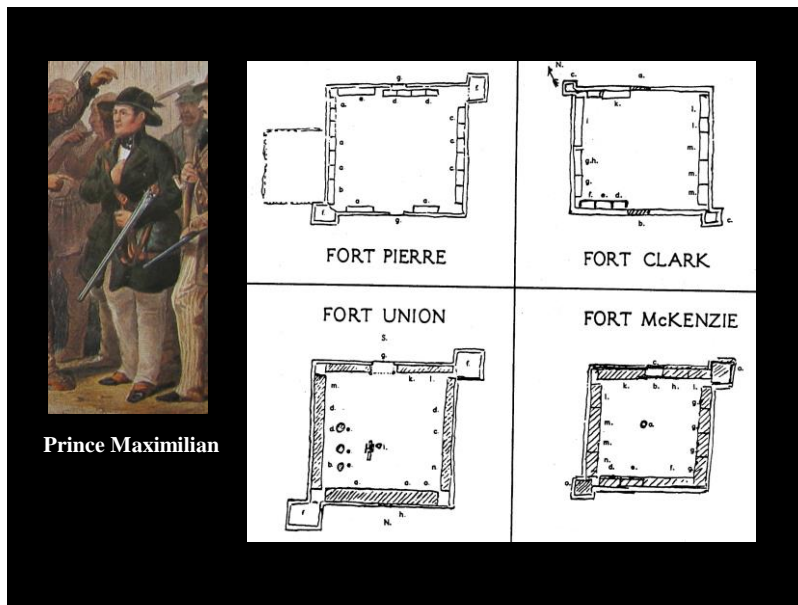


The midden area was explored with fourteen 1 m<sup>2</sup> excavation units in six blocks placed at locations suggested by magnetic anomalies. In three of these, it was concluded that the magnetic anomaly reflected large ash deposits. In one location (Block 6), the anomaly was caused by a chaining pin lost during some previous investigation at the site. In two locations, no cause for the anomaly could be determined.



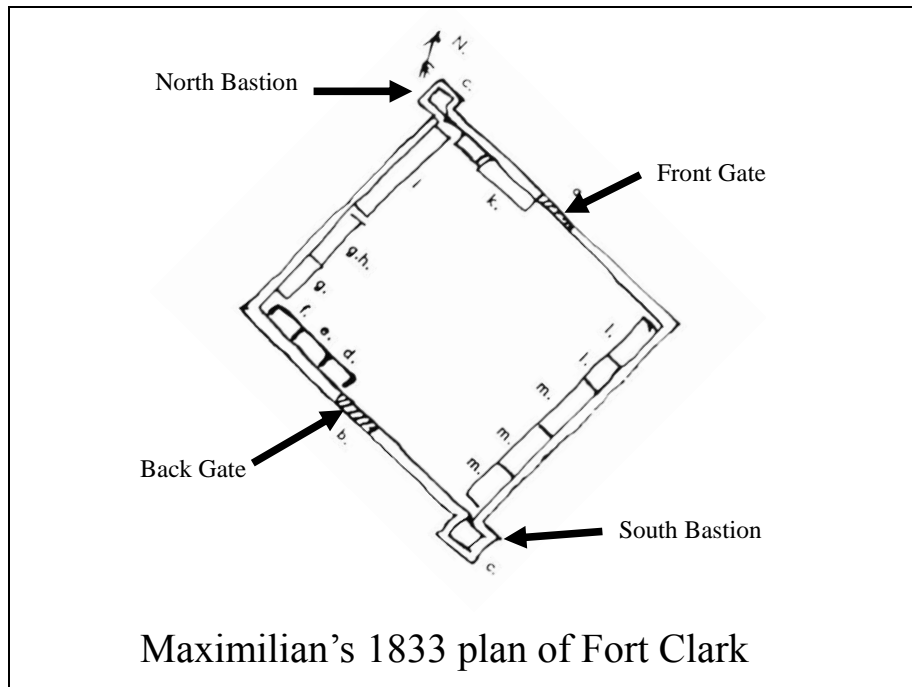
**Sterile Pit Under Concentration of Bone and Fire-cracked Rock, Midden Block 4**

The work did demonstrate the area was used for garbage disposal, however. One location in particular had a large concentration of bone, clearly debris from a few meals. We discovered our only feature here, a small basin-shaped pit. This occurred below the bone bed and contained no artifacts. In general, we found artifact densities in the midden area far below our original expectations. This and the general lack of temporally diagnostic prevented us from reaching our goal of identifying changes in dumping locales through time.

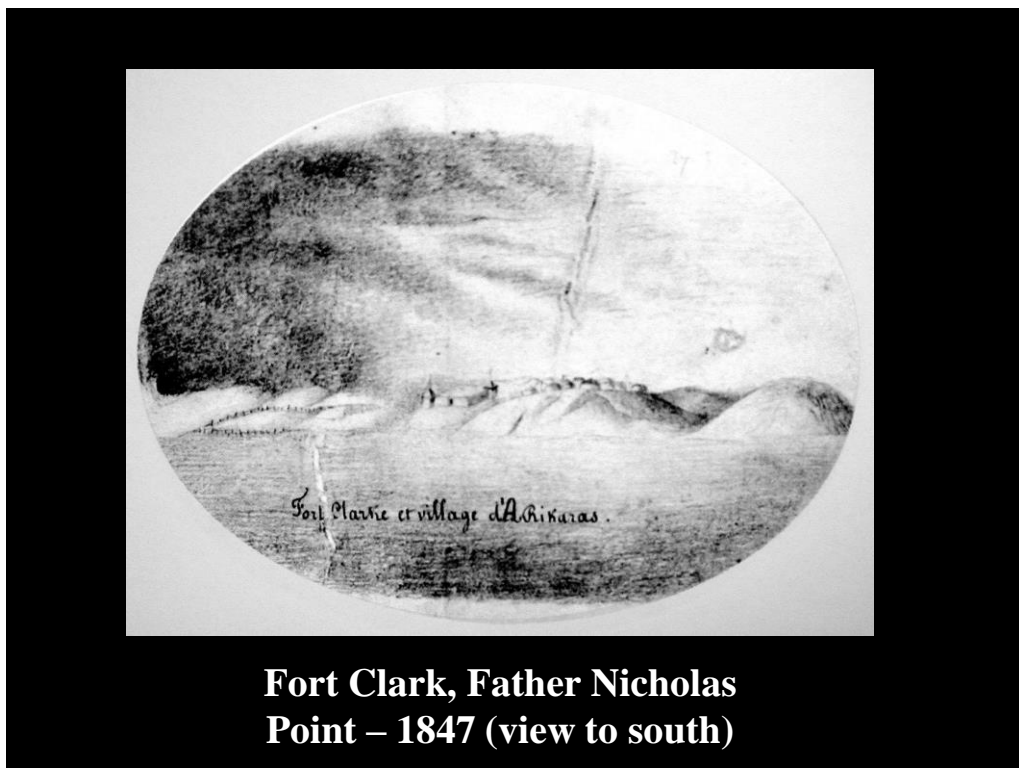


Inside the trading post, excavations focused on clarifying the Fort Clark's structural evolution. Contemporary historical journals and illustrations of the post provide some clues. The earliest detailed description of Fort Clark is in the 1833-1834 journals of Prince Maximilian Wied von Neuviad, a German naturalist studying the northern plains Indians. During his journey, Maximilian documented every fort he visited including Fort Clark.

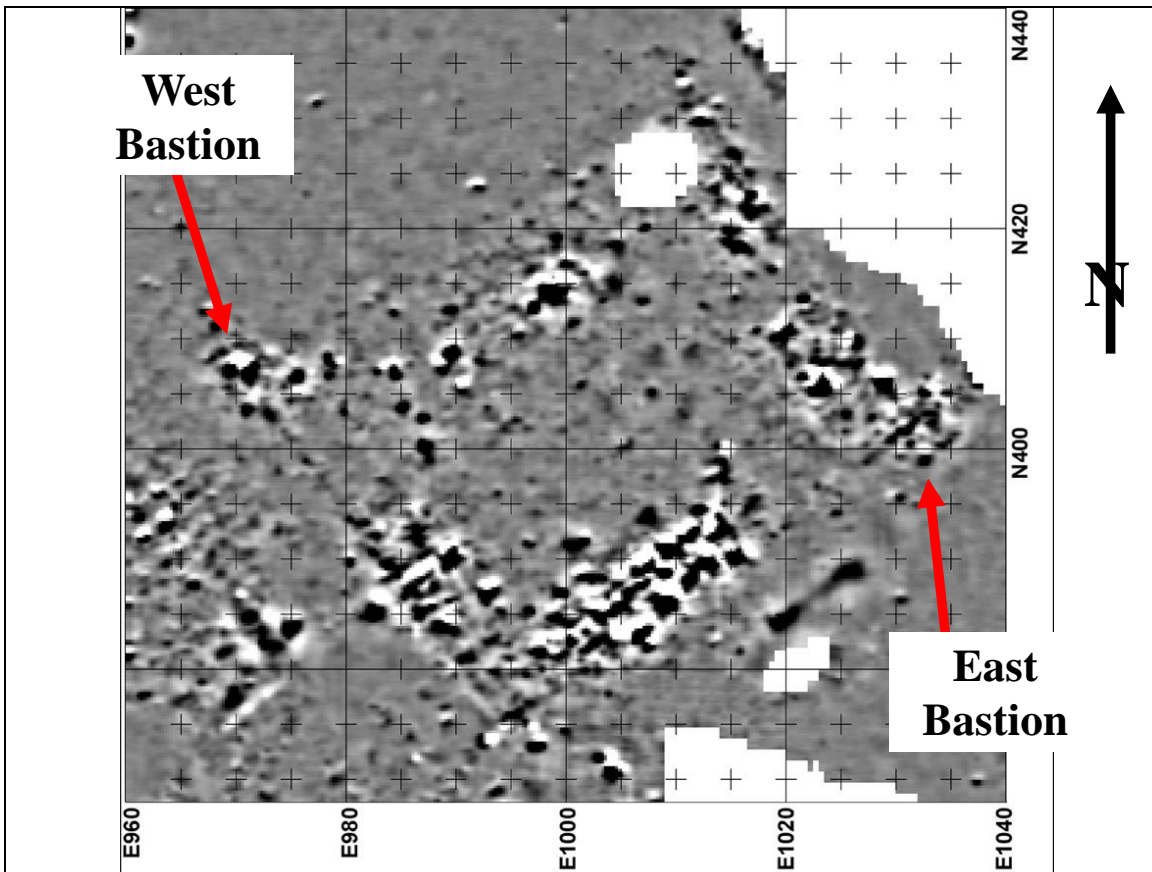




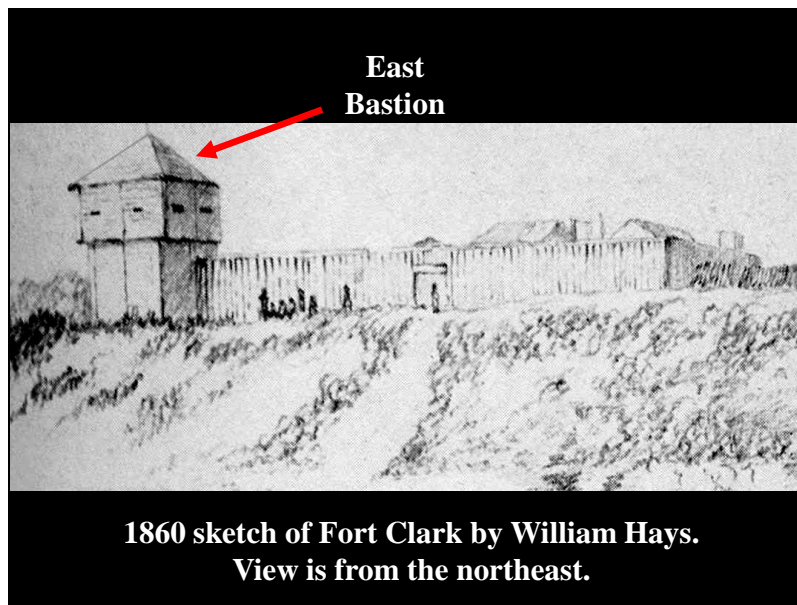
His planview sketch of the fort shows bastions on the north and south corners and gates in the southwest and northeast walls.



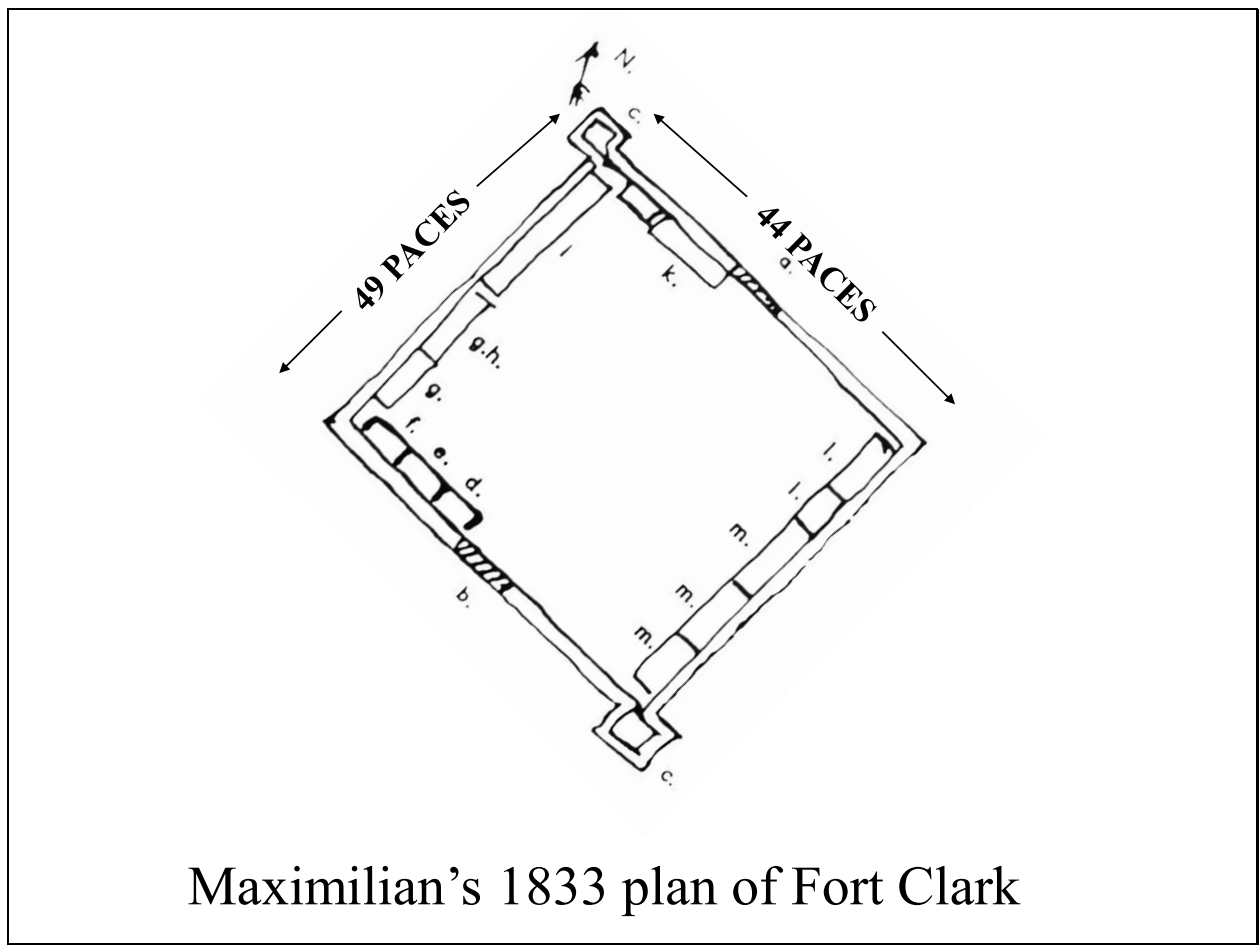
Later illustrations show the gates in the same position but the bastion location is altered. An 1847 illustration by Father Nicolas Point shows bastions at the east and west corners.



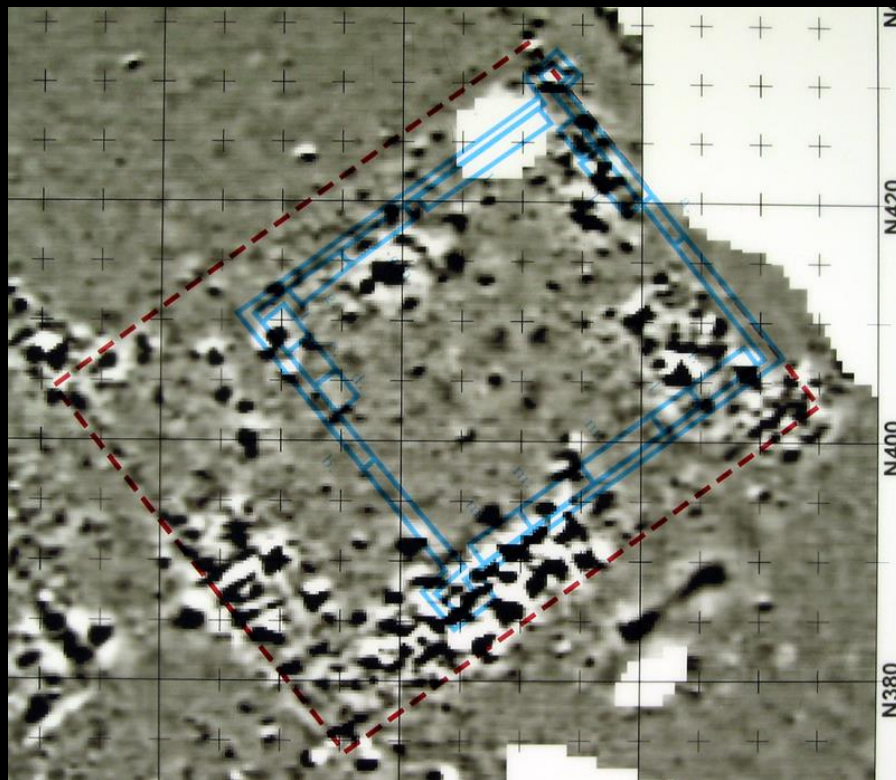
The configuration illustrated by Point is supported by the Kvamme's geomagnetic map of the site.



And in a case of "similar but different," an 1860 William Hays sketch made just before Fort Clark burned indicates the post had a single bastion at the east corner.



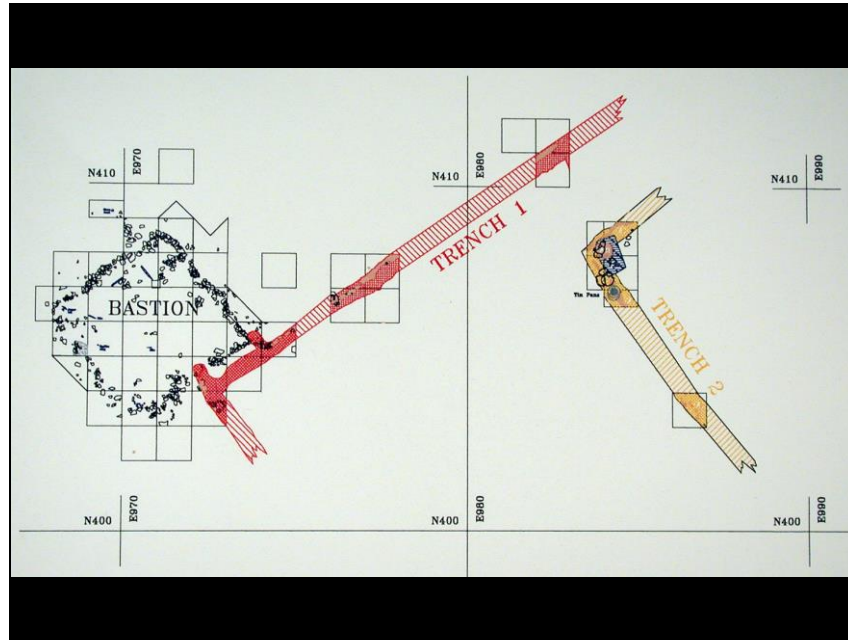
There is also an apparent change in the post's overall size through time. Maximilian described the size of the post as 44 paces wide and 49 paces deep. Unfortunately, he doesn't tell us the length of his pace. Excavation at Fort Union, however, identified elements of the small trading post that existed during Maximilian's visit. Although he described it as 84 paces square, the perimeter of the post proved to be rectangular -- 54 m (178 ft) wide and 60 m (198 ft) deep. From this, the length of Maximilian's pace was determined to be 64-71 cm or an average of 68 cm. Using this pace length, the 1833 Fort Clark was about 110 ft long and 98 ft wide.



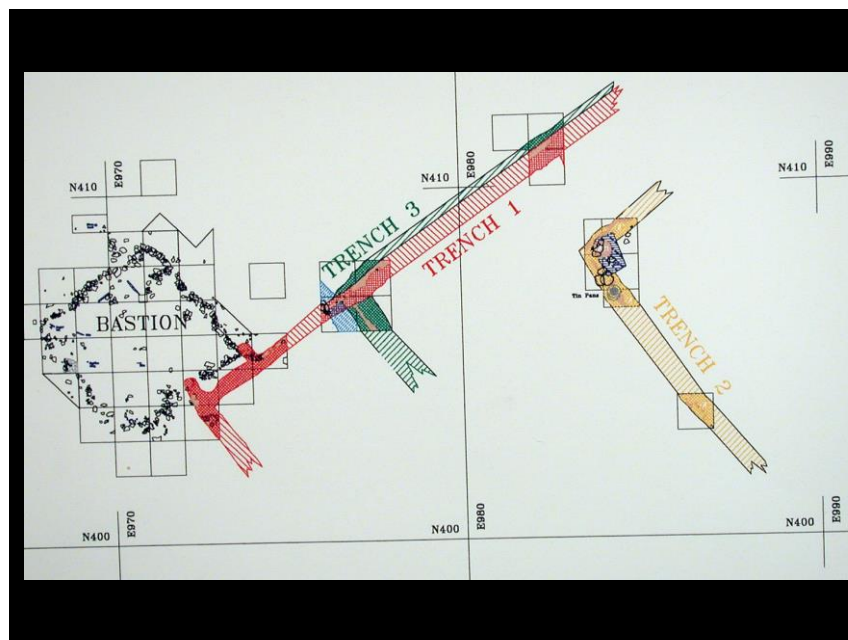
Maximilian's post plan (blue) scaled out over the boundary of the trading post suggested by the magnetic map of the post.

Using this scale and overlaying Maximilian's plan over the site's geomagnetic map we find the post suggested by the latter is much larger; about 160 ft long and 128 ft wide; that is, 50 ft deeper and 30 ft wider than suggested by Maximilian's dimensions. This is strong evidence for that Fort Clark was rebuilt and expanded after Maximilian's departure. There doesn't appear to be a corresponding anomaly at the back wall of Maximilian's Fort Clark. There is a likely linear anomaly, however, only a few meters west in the approximate location of a trench identified at this location in 1973. Although Dill interpreted this as a wall trench for a possible building, it might actually reflect the position of the 1833 fort's rear palisade.

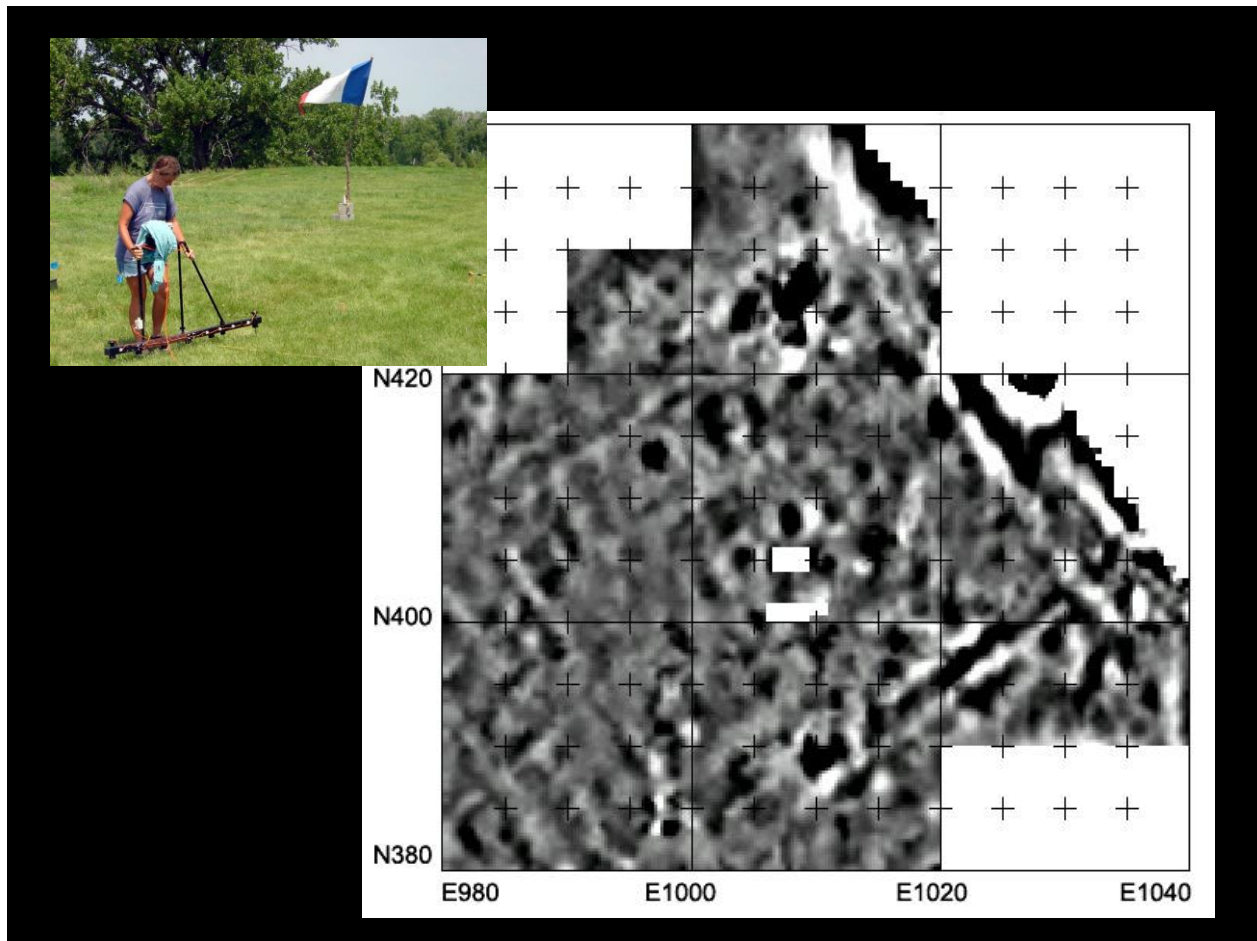
Based on the apparent changes in post size and bastion position, my investigation focused on documenting structural changes at Fort Clark. Since we only had 6 weeks, I decided to focus on the post's west corner where I expected features marking two construction events - an original post palisade and the palisade and a palisade that replaced it. The situation, however, proved to be somewhat more complex.



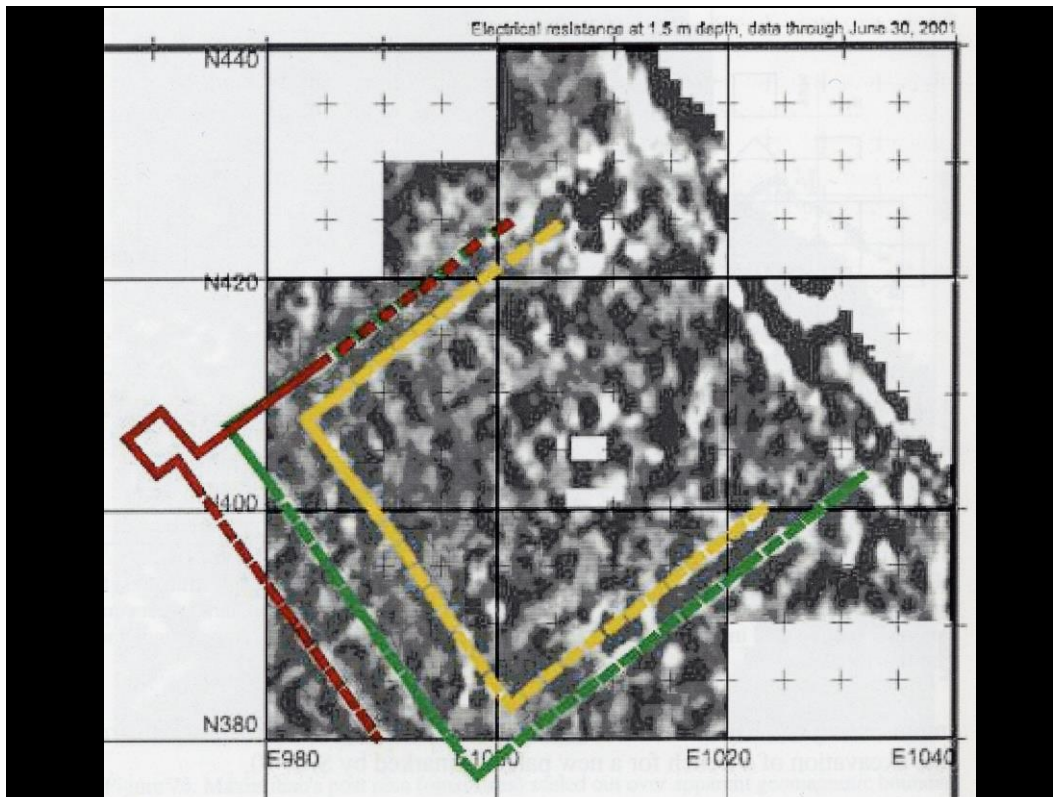
Early in the fieldwork, the two palisade trenches I had expected were identified: Trench 1, oriented northwest to southeast and Trench 2, a northeast-southwest trench inside the first feature. This was as I expected.



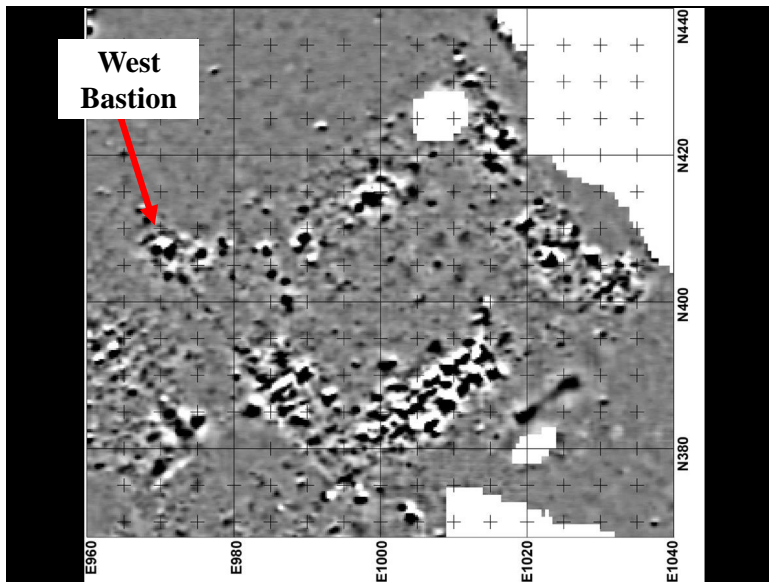
With expansion of the excavation along the projected route of Trench 1, however, there was an unexpected discovery: another deep trench paralleling Trench 2 and intersecting Trench 1 at a right angle. At first, this feature (Trench 3) appeared to join Trench 1 but with additional exploration, it was shown to cross Trench 1, turn to the northwest, and then parallel Trench 1. This new trench was interpreted as an intermediate construction event representing a palisade corner intruded upon and disrupted by the last construction event, the excavation of Trench 1 for a new palisade.



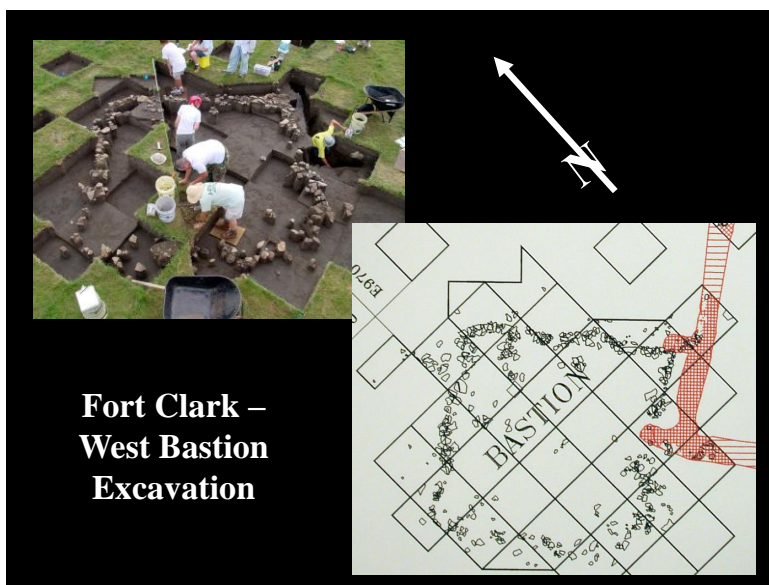
This interpretation was bolstered by geophysical data collected immediately before this discovery. As we were digging, JoAnn Kvamme was conducting a new resistance survey of the fort looking for deep features. So, the same morning we found the two overlapping trenches, Ken Kvamme gave me a map showing deep linear resistance anomalies. This clearly shows three trenches at the west or back side of the fort. From the excavation and resistance datasets, I interpret the sequence of events to be as follows:



The west corner of the first post constructed on site circa 1830 is represented by Trench 2. The greater portion of this fort appears on the Kvamme's resistance map. The northwest palisade may be seen for another 21 m before it disappears off the map. The southwest arm of this palisade trench appears to terminate in a corner here at which point it appears to parallel the northwest palisade for at least 28 m. A portion of the northeast palisade may also be visible. If so, all four sides of the earliest manifestation of Fort Clark are visible. This interpretation suggests the first post was about 30.5 m (100 ft) wide) or only 60 cm (2 ft) wider than the size estimated using Maximilian's paced dimensions. The rear palisade of the second fort, represented by Trench 3, was situated 5.7 m (18.7 ft) southwest of the first and the northwest palisade was only 3.2 m (10 ft) outside Trench 2. On the resistance map, it extends from about N380 E995 for about 27 m where it continues past the edge of the map. Another apparent trench on the resistance map may represent the opposite side wall. If so, the intermediate fort would have been about 36.5 m (120 ft) wide. I was unable to determine which of the trenches at the front of the post is associated with the intermediate Fort Clark. Two contemporary bits of information are available which suggest the date for Fort Clark's expansion. That this may not have happened by 1843 is suggested by the comments of John James Audubon during his brief visit to the post. He noted, "The fort is in poor condition, roofs leaking, etc." By 1847, however, the post has certainly experienced some major reconstruction as shown by comparisons of Father Point's illustration of that year with earlier drawings which demonstrates a change in bastion position by that date. I therefore estimate the expansion took place circa 1843-1847. Trench 1 represents Fort Clark as it appeared in its final configuration. The rear palisade, represented by Trench 1 and a short segment on the Kvamme's resistance map, was 5.4 m (about 18 ft) away from the river. This expansion appears to have been to the rear rather than on the sides as Trench 1 follows the route of Trench 3, on the northwest side and probably on the southeast side as well. The front of the fort may occur at a resistance anomaly, possibly representing an outermost trench. If so, the fort was 52.3 m (172 ft) deep. The width would have been the same as the intermediate Fort Clark; that is 36.5 m (120 ft). Given a 10 year life-span for the intermediate fort's cottonwood palisade, I estimate this second and final expansion of Fort Clark to have taken place sometime in the late 1850s, perhaps less than 5 years before the trading post burned to the ground.



A large effort went to excavating the post's west bastion.



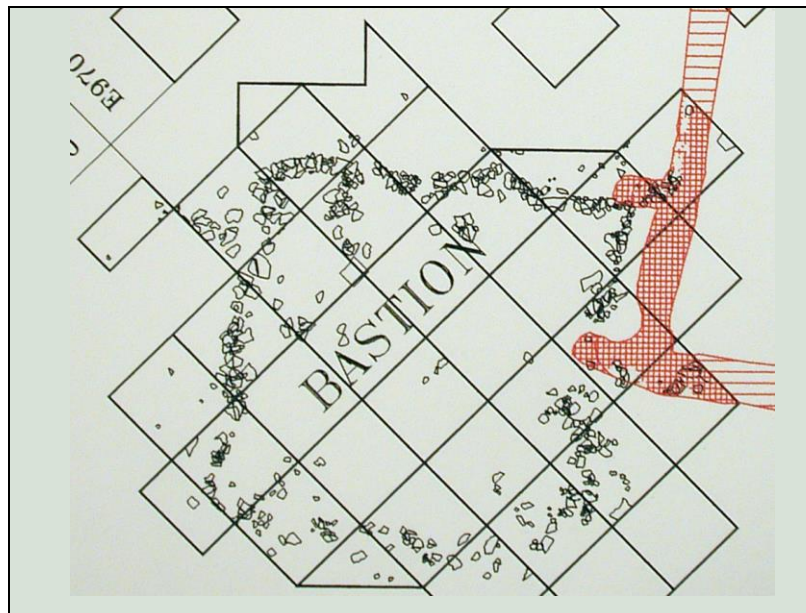
**Fort Clark –  
West Bastion  
Excavation**

Excavation of the west bastion showed it to be square and fairly small with exterior dimensions of only 4.4 m (14 ft). Assuming 12 in square timbers were used to build the walls, the interior space would have been about 12 ft. The bastion foundation also suggested some unusual construction techniques were used in this final expansion of the post. I really hesitate to call the odd stone alignments a foundation because it was entirely composed of one to two layers of very small and unmortared sandstone. This extremely weak construction indicates the alignments were not intended to support a heavy building like a massive timber bastion. Rather, the assemblage of stones was more likely intended to help level and support a timber foundation for the structure as it was being built. It is likely that the ultimate weight of the building simply pushed the stones right into the ground. A gap in the distribution of palisade posts immediately next to the bastion suggested the position of the entrance.

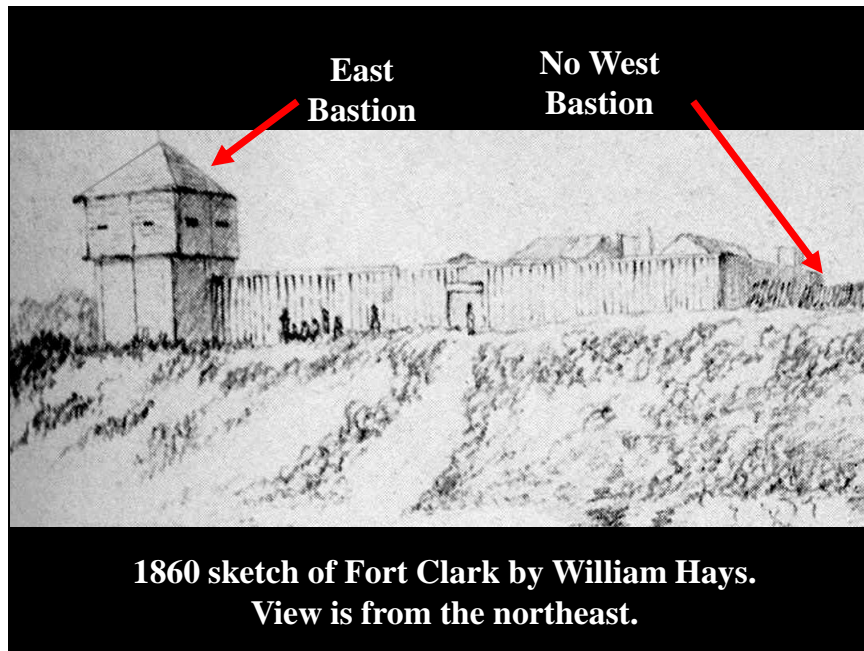




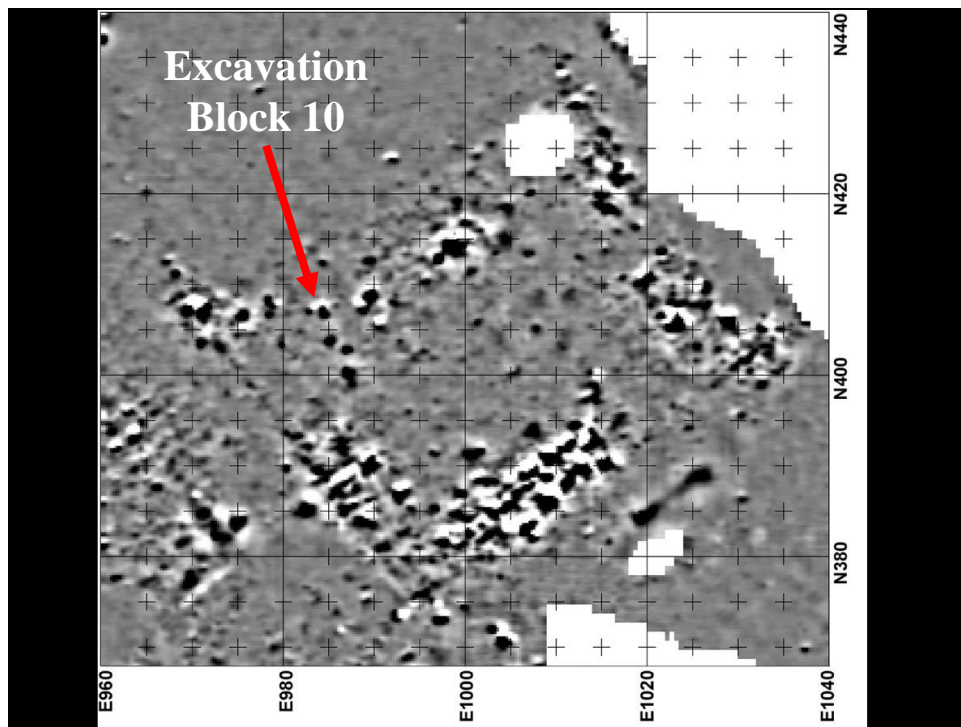
Another odd thing about the bastion was its lack of integration into the palisade as is seen in most trading posts. A good example of this is the bastion excavated at Fort Union where the palisades butt into and were integrated into the bastion walls.



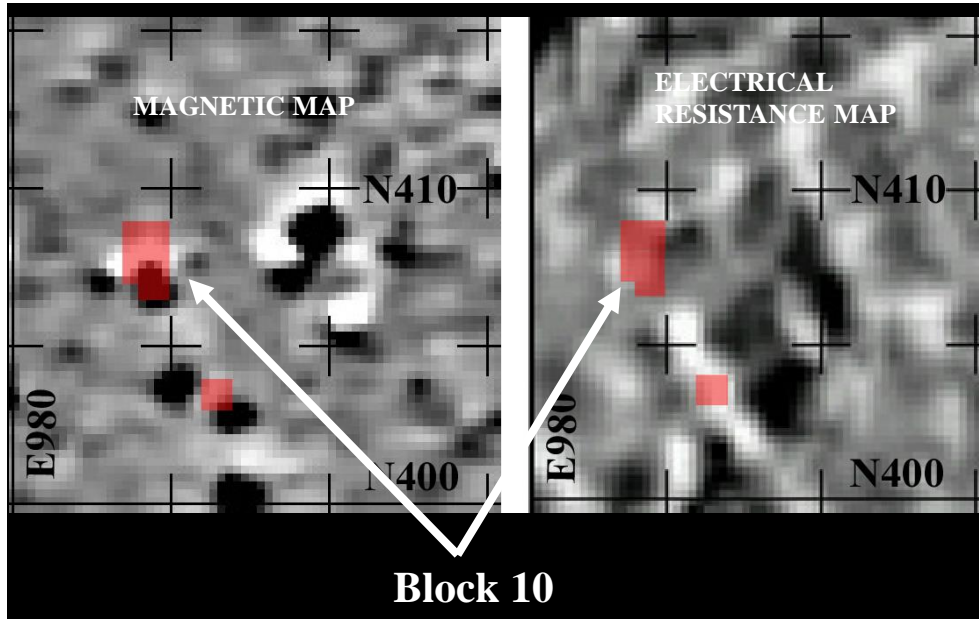
At Fort Clark, however, the bastion sat entirely separate from the palisade. Two strange trench extensions between the palisade and the bastion may have been a means of accommodating sequential rather than simultaneous construction of the palisades and bastion. I believe the palisade was built first with the bastion built afterwards next to the palisade. The palisade pickets immediately adjacent to the bastion were then removed to allow access to that structure and the gap between the structures was bridged by digging extensions from the existing palisade trench and inserting a few additional pickets to connect the palisade to the bastion at the center of its southeast wall and east corner.



Documentary evidence suggests this bastion was short lived. Created with the last palisade rebuilding/expansion in the mid-to-late 1850s, the structure was certainly gone within a few short years. This is demonstrated by William Hays 1860 sketch of the post. While the east bastion remained standing in 1860, there is no sign of a bastion on the west corner.



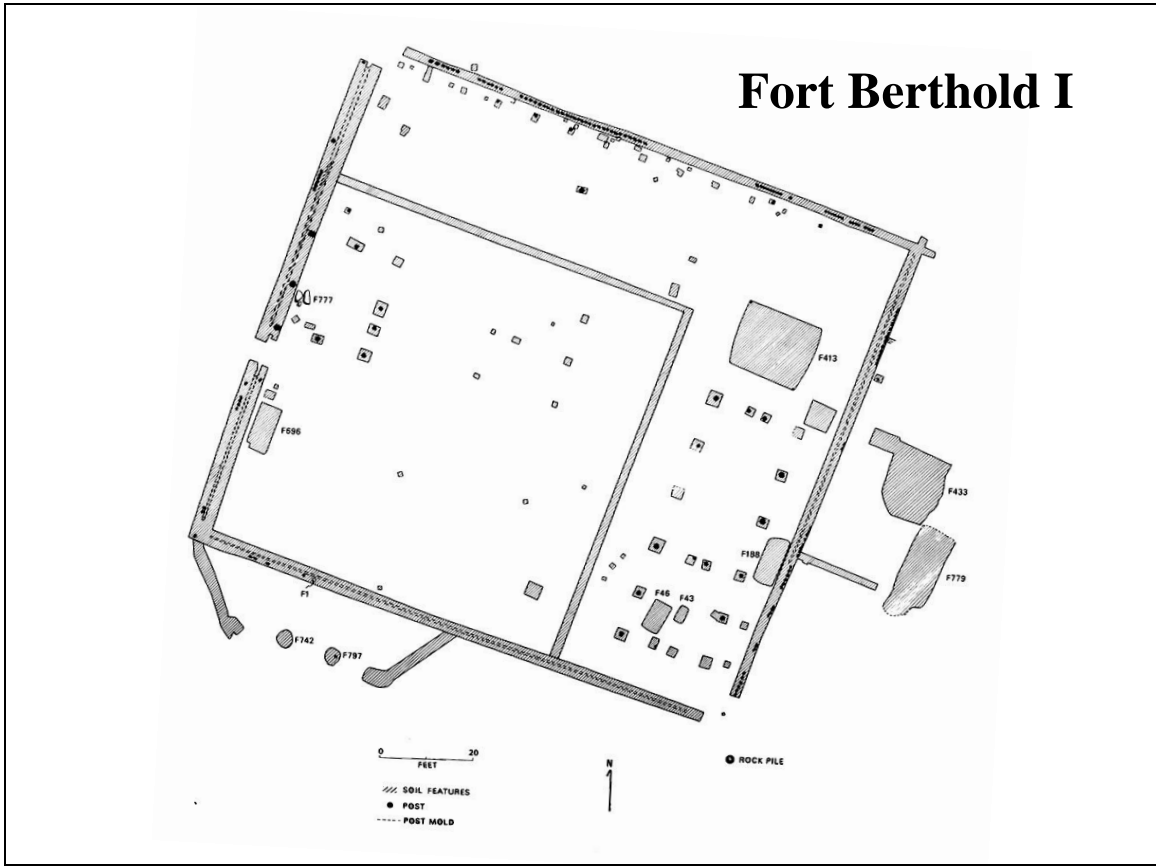
Excavation inside the trading post encountered two interesting features associated with magnetic anomalies.



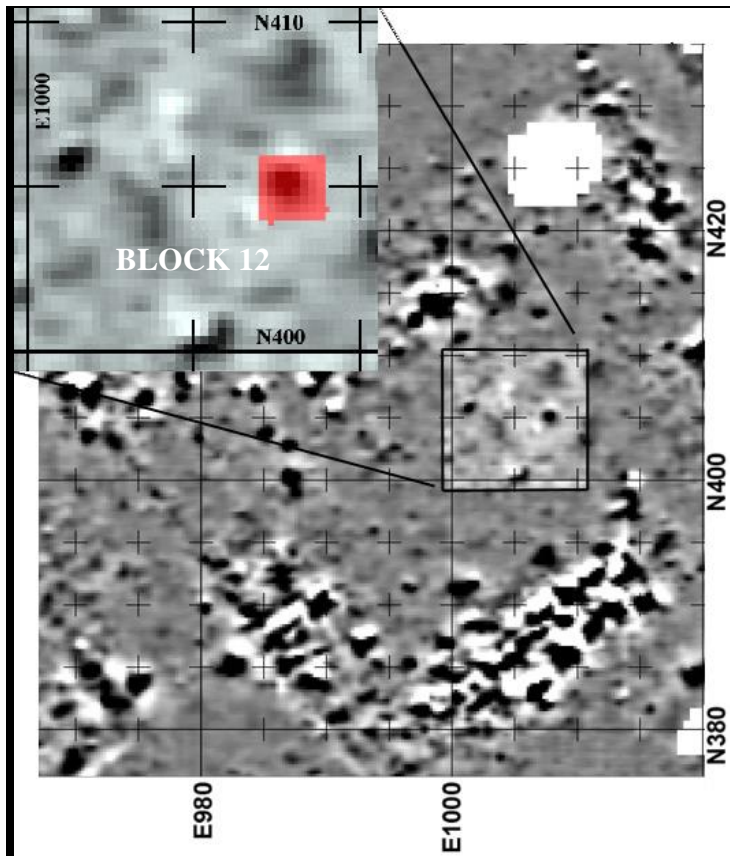
One of these was encountered in Block 10 during the investigation of Trench 2, the first Fort Clark palisade trench. This shows the position of Block 10 (over trench 2 corner) with respect to magnetic and resistance anomalies at the west corner of the post.



This feature penetrated through the trench at the palisade's west corner. The pit had vertical sides, was 1.3 m (4.2 ft) long, 72 cm (2.4 ft) wide, and was 1.22 m (4 ft) deep. A 50 cm (1.6 ft) post had been raised in the north corner of the pit. There were virtually no artifacts in the pit fill.



This pit is reminiscent of square and rectangular pits identified at Fort Berthold I in 1954 although those at Fort Berthold were only about half this pit's size. Berthold rectangular pits were commonly arranged in rectangular patterns and interpreted as building footings. This suggests the possibility that the large pit and post at Fort Clark had a similar function and, if so, it may be only one of a number of such features in this area of the post. Its intrusion into and through part of the original palisade trench indicates it was created sometime during or after the first rebuilding and expansion of the post; that is, after circa 1843-1847.

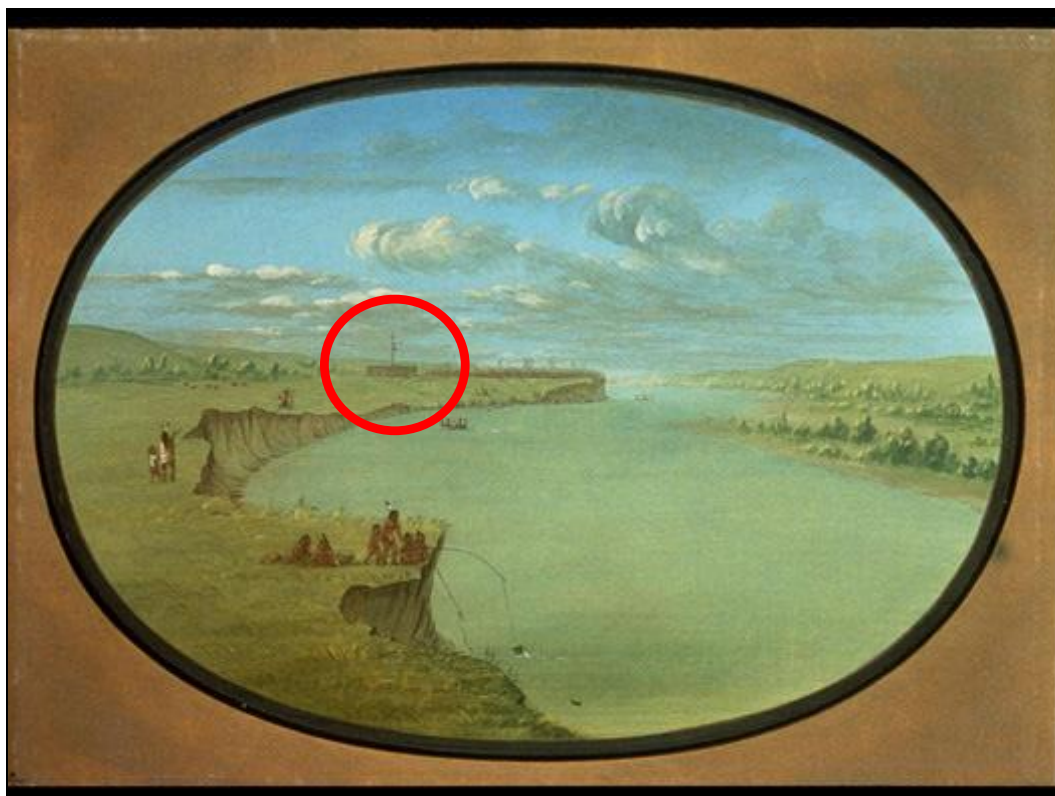
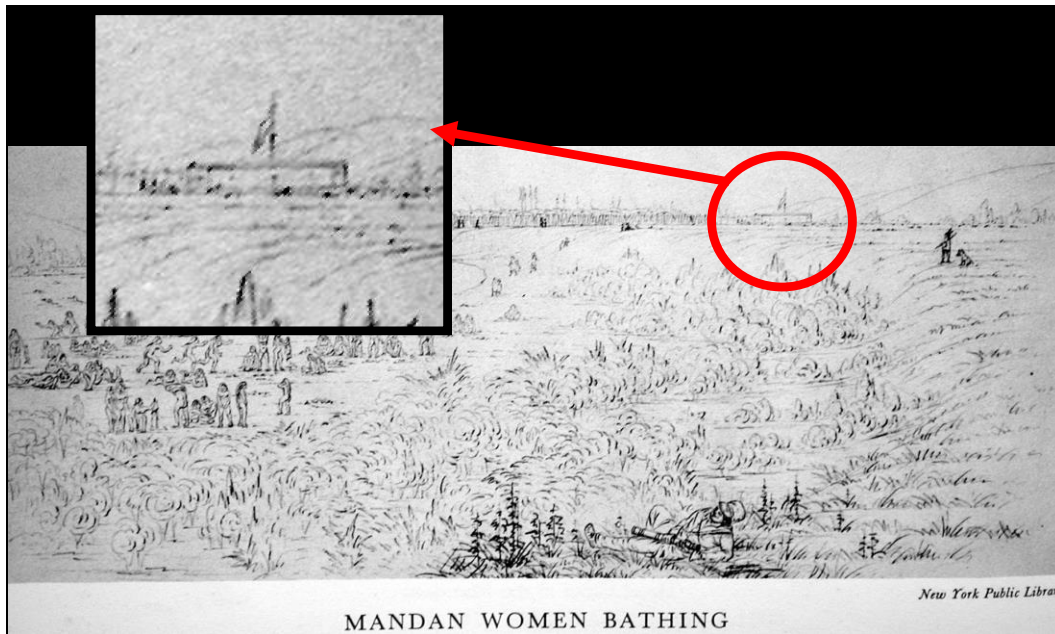


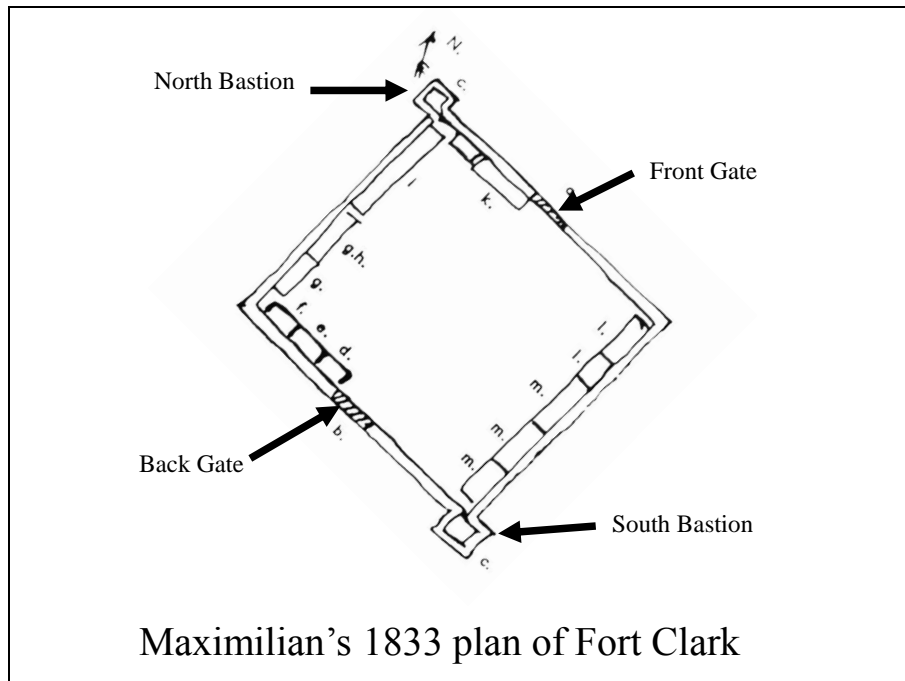
My curiosity about a magnetic anomaly in the center of the fort courtyard surrounded by a pentagonal assemblage of similar anomalies led to an unplanned excavation in the courtyard and discover of the second large rectangular pit. The anomaly position, between the front and back gates of the post, is the typical for flagpoles at fur trade and military posts.



Excavation showed it to be the reflection of another large rectangular pit almost identical in size to the pit 20 m further west. This pit, though, was somewhat bath-tub shaped with a large post at the center edge of the pit rather than in the corner.

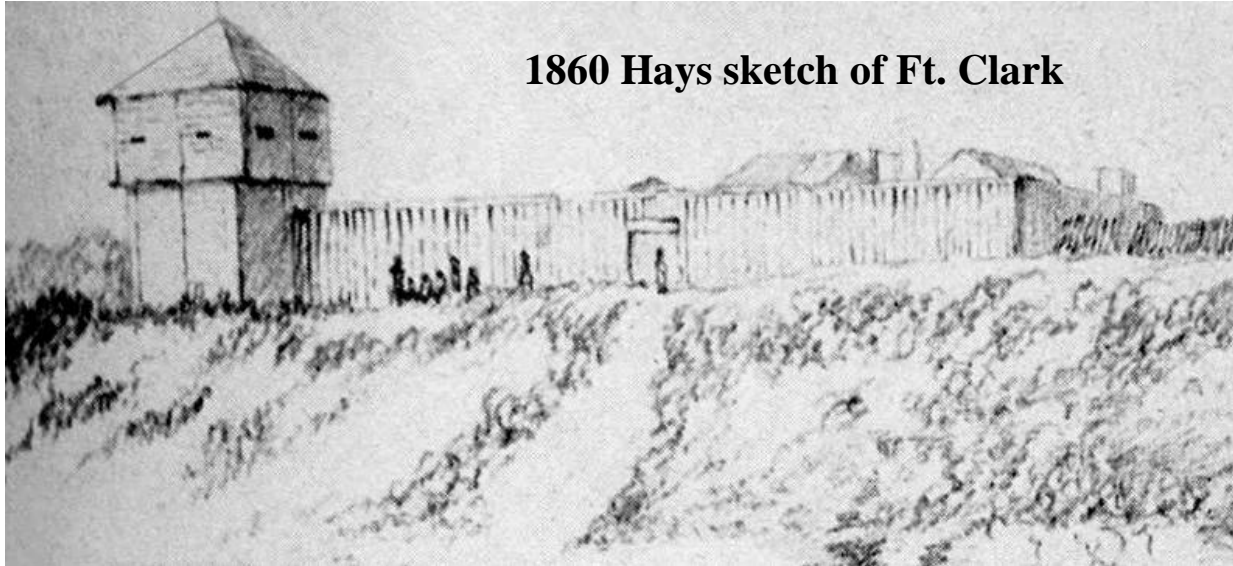
If this marks the position of a flagpole, when would it have been installed? A number of contemporary documents may relate to this question. The famous western artist George Catlin visited the site for a short time in 1832. Two of his drawings show Fort Clark from a great distance with an apparent flagpole at its center.





The journal of Prince Maximilian and illustrations by his artist Karl Bodmer reflect the conditions at the post during their 1833-1834 stay. Maximilian never mentions a flagpole nor does he show it in his fort plan even though he noted and illustrated flagpoles at other trading posts he visited. As well, Karl Bodmer never illustrated a flagpole inside the post in his sketches or paintings although he may have included a flagpole inside a fenced area east of the post.

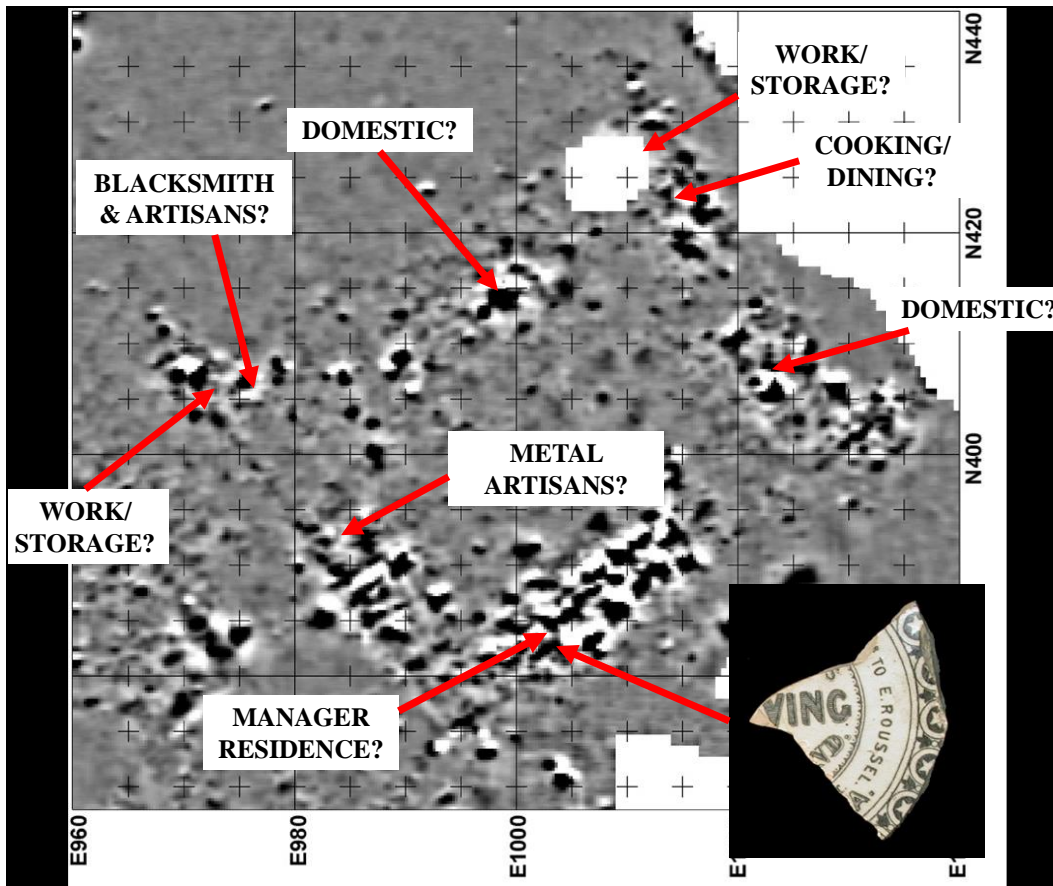




Another document which may relate to the flagpole is the 1834-1839 journal of Francis Chardon, one of Fort Clark's early managers. On Monday, June 15, 1835, Chardon entered the cryptic comment: "Planted the Flag Staff - and hoisted the flag in Honour of General Jackson." However, later images by Point (1847) and views drawn just before Fort Clark burned in 1858, 1859, and 1860 by Carl Wimar and William Hays show no flagpole in the courtyard.

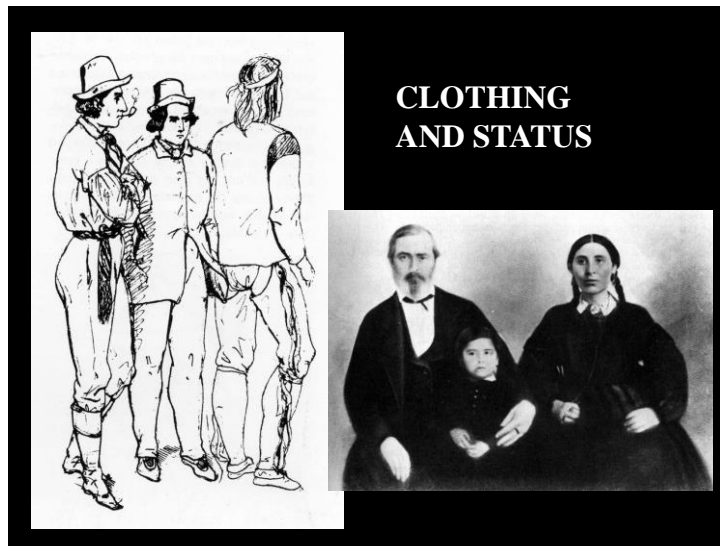
In sum, the large pit and post at the center of the fort's courtyard may be the remnant of a very early Fort Clark flagpole. If we believe Catlin's images, it dates prior to 1833. If it was created in 1835, as suggested by Chardon's journal, the pole was certainly gone by Father Nicholas Point's visit in 1847 suggesting it existed for only a decade or so. At present, the exact date of the pole's existence remains unresolved and, as there were no diagnostic datable artifacts recovered from the pit fill to help with this problem, its chronological position is likely to remain unresolved.





Aside from the numerous features, there were about 1000 objects (other than beads and bone) recovered from the Fort Clark site. Artifacts were examined in an attempt to infer potential use/function areas within the trading post. I tentatively concluded that domestic structures or living areas may have existed in the front quarter (northeast side) of the post and on the right quarter (northwest side) of the post. Low densities of personal items suggest the north and west corners of the post were used as work or storage areas. A pot lid, the cap of a luxury product container, was recovered from the south corner of the fort. This suggests the location may have been that of the fort manager's residence, fort store, or fort storeroom. Traditional fort plans support the first conclusion. The large number of food-related artifacts at the front of the fort suggests it may contain the employee dining area with a structure on the right side of the main entrance being the best bet for this.

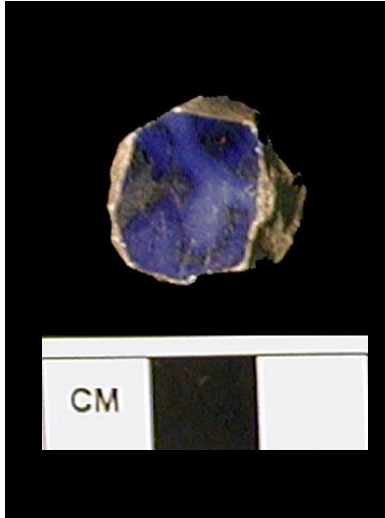
Gun parts, horseshoes, small hand tools, and anvil tools recovered from the space inside the fort's west corner indicate that may be the location of the post's blacksmith shop and perhaps the work areas for other artisans as well. Activities suggested by these objects include small scale metal fabrication, woodworking, gun repair, ammunition manufacture, repair of wagons, horse shoeing, and other maintenance activities. Scrap or waste ferrous metal densities support this interpretation but also suggest the possibility of metal working at the back (southwest interior side) of the fort.



Clothing worn at Fort Clark and other Upper Missouri trading posts served as markers of wealth and status. High status traders tended to wear EuroAmerican clothing. Lower status workers often wore predominantly leather clothing, occasionally with some fabric clothing additions. This latter style of dress is less obvious archeologically than the layers of manufactured clothing higher status individuals wore. As well, Native Americans often utilized some manufactured clothing elements (such as buttons) but rarely if ever used them other than for personal decoration/adornment.



If one can assume that buttons recovered from Fort Clark were from EuroAmerican clothing, then a variety of high status clothing is represented indirectly in the archeological record. Buttons of shell, ferrous metal, cuprous metal, ceramic, and bone are of sizes suggested for use on pants, shirts, vests, and overcoats. These were largely utilized on men's clothing although one cuprous button with a floral motif stamped on the front is of a type commonly used on women's dresses of the Civil War era. Perhaps this was from a dress worn by the wife or daughter of a high status fur company employee. Suspenders are suggested by a buckle. An American made military cuff button of the type used on an army dragoon coat sleeve may reflect the dress of an Indian visitor. Military surplus coats were often given as ready-made "Chief's coats," presents to important people who came to the post to trade. Home manufacture and/or repair of clothing was indicated through the recovery of numerous sewing items including straight pins, scissors, and thimble.



There is little information or evidence for how people passed their personal time at Fort Clark. A few ceramic discs were recovered.

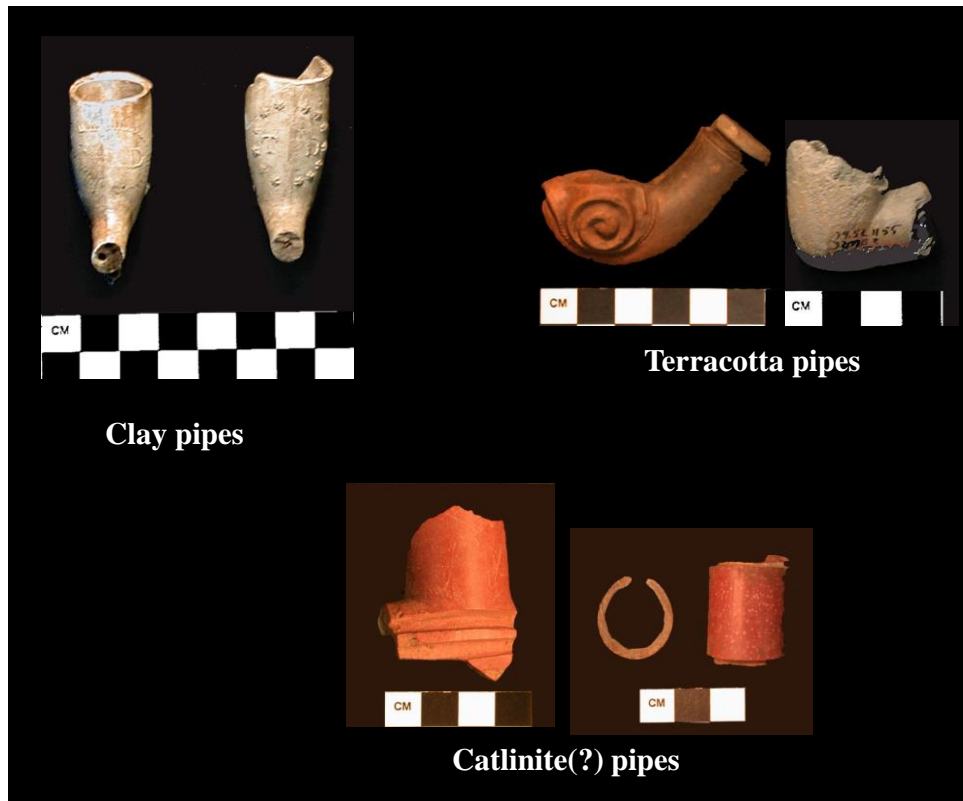


The Fort Clark specimens were similar to the much larger number of discs from Fort Union.



These suggest checkers or a version of the plum pit gambling game may have been played. These might have been similar to those seen in this 1848 Seth Thomas painting of Chippewa Indians playing checker.

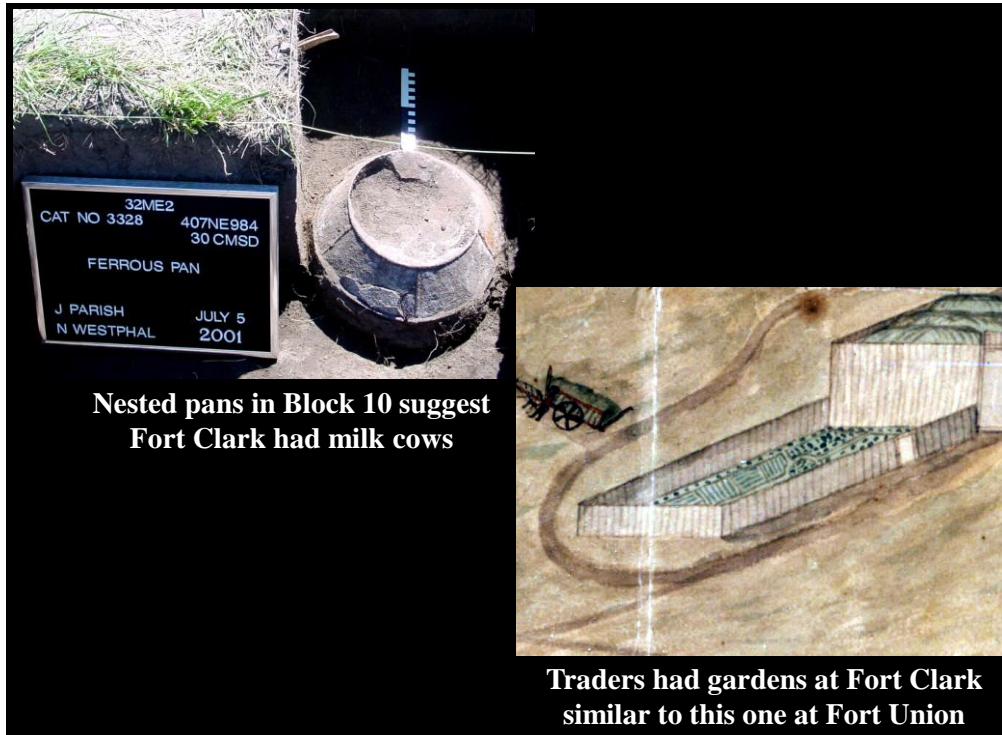
Evidence for alcoholic beverages is not common as most of this product would have been imported in barrels for personal use only. Otherwise, it was illegal to import alcohol into the territories due to past abuses in the trade. There is some indication of bottled beverages such as whiskey, ale, wine and champagne near the end of the fort's occupation. Its likely that bottled beverages were beyond the means of lower status workers, however.



Of course, the indulgence most prominently utilized at all trading post employees was tobacco. Pipe fragments were the most commonly recovered item from archeological investigations. Kaolin or white ball pipes were decorated with a variety of designs and were largely imported from England. Terracotta pipes were relatively rare. These were probably made in the eastern United States with one specimen with the curled device on its side from an unidentified manufactory in Europe. A few fragments of lead inlaid red stone pipes were recovered as well. While these were often made by the Native Americans, EuroAmerican quarried stone at what is now Pipestone National Monument, Minnesota, manufacturing pipes and pipe blanks in quantity for the trade by the late 1850s.



Food is always an important item and workers in the bison robe trade were well known for prodigious appetites. Bone from Fort Clark indicate its residents ate bullhead catfish, ducks and geese, sandhill cranes, and trumpeter swans from the river and meander loop lakes; cottontail, deer, elk, and passenger pigeons from the woody margins of the river; jackrabbit, sharptail grouse or prairie chicken, antelope, and bison from the upland prairies. Dogs were common at the post and were certainly eaten by traders upon occasion. "Large dog/wolfe" and "small dog/coyote" occur in the faunal collection. Other domestic food animals at Fort Clark include cattle, pigs, and chickens.



**Nested pans in Block 10 suggest Fort Clark had milk cows**

**Traders had gardens at Fort Clark similar to this one at Fort Union**

Recovery of two nested milk pans indicates the presence of milk cows at Fort Clark, an activity supported by entries in Chardon's journal:

*Saturday 22 [September 1835] -- Breakfasted between day light and Sun up – Morning cloudy and windy – Started three carts back to the Sioux camp after meat about 6 O Clock, A.M. some thunder in the fore part of the day and a fieu drops of rain – considerable shower at one P.M - - Frost, yesterday & day before – Afternoon warm and calm and pleasant – Dave (the cook) had great trouble milking his cow – (Chardon 1932: 44)*

Traders also had gardens in the summer grew a variety of vegetables including peas, corn, beans, and potatoes. The trading post's spring inventories indicate they contained boxes of assorted garden seeds for planting as soon as warm weather would allow. Fort Clark's occupants also traded with the Indians for beans, squash, and corn. Wild plant food included chokecherry, wild plum, wild grape, wild rose hips, and snowberry.

We found squash seeds and peach pits associated with fort-era artifacts and features in the midden area southwest of the trading post. The squash may have come from nearby Mandan, Hidatsa, or Arikara gardens. Peaches, however, were one of many luxury edibles shipped upriver in small quantities on company boats to meet the desires of those lucky enough to afford them. Other delicacies which occasionally found their way to the traders' dining tables included bushels of fresh fruit, boxes of raisins, barrels of dried apples, cheese, loaves of Cuban brown sugar, molasses, Young Hyson green tea from China, and Havana coffee. All these and more are listed in the Upper Missouri Outfit inventories.



Some were shipped to the post in glass bottles and one such container, a Gothic bottle, was represented by a single shard of glass from the fort midden area. The complete bottle would have looked something like this one from the Steamboat Bertrand.



Artifacts reflecting food storage, cooking, and dining were recovered in small quantities. These included stoneware storage jars, probably made in the United States; tin milk pans, yellow ware ceramics, and a skillet handle for processing and cooking; tinware bowls and cups for the tables of the common workers; china dishes and tea sets made in Staffordshire, England with hand painted designs for those of modest means and with printed designs in red, dark blue, brown, green and black for the higher status company employees. One small two-pronged fork found in the fort midden southwest of Fort Clark is probably typical of eating utensils one would find at the fort's dining tables. The scarcity of stoneware at both Forts Union and Clark suggests that food processing and subsequent storage (other than for commercial purposes where barrels were used) was a rare or nonexistent activity at fur trading posts.





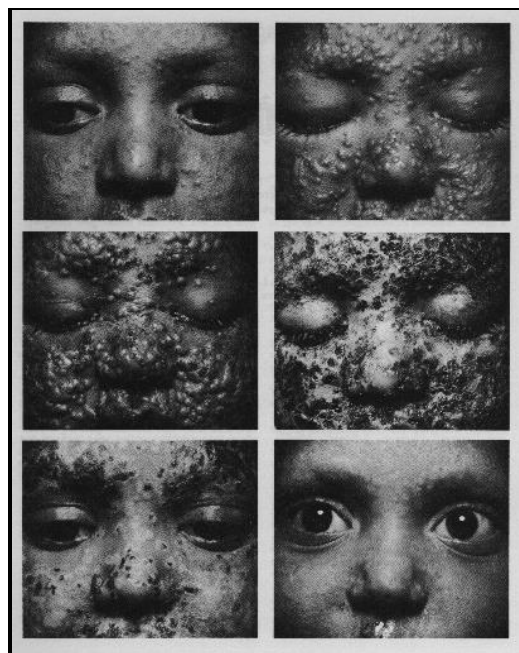
Sanitation, or the lack thereof, seems to be a common factor at American trading posts on the Upper Missouri. At Fort Clark, piles of bone and other refuse lay all around the fort as well as the Native American houses. Further, there has been no evidence for privies at Fort Clark to date. Archeological data from numerous American Fur Co. posts provides the surprising information that privies were rarely used by fur traders. Privies discovered at Fort Union were created only in the 1860s and appear to correspond with a short military occupation at that post. No such military occupation occurred at Forts Clark and Primeau.



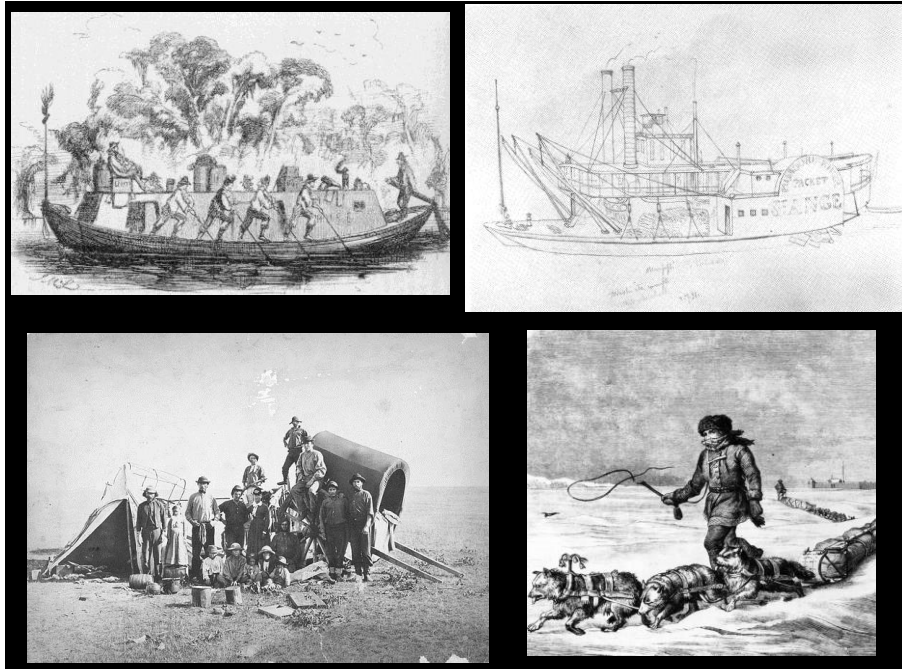
The lack of sanitation at Fort Clark is reflected in the huge population of Norwegian rats that infested this post and the neighboring village. In his journal, fort manager Francis Chardon kept a monthly and annual tally. For example, he notes on February 28, 1836: "Killed 89 Rats this month -- total 1423." The archeological record clearly reflects this abundance of rats. With 54 percent of the recovered Ft. Clark micromammals being Norway rat remains, ideal conditions for the Norway rat clearly prevailed at Fort Clark.



With poor sanitation often comes disease and Fort Clark saw its share. The most infamous event was the 1837 smallpox epidemic. The disease arrived aboard the steamboat *St. Peters* on June 19. (The *St. Peters* was probably similar to a more famous Missouri River steamboat illustrated here, *Yellow Stone*).



Cases began to appear among the Mandan by mid-July, and among the Hidatsa later that month. The illness appeared suddenly, and its victims died quickly, often in a matter of a few hours. By September Chardon reported that “the number of Deaths up to the Present is very near five hundred, The Mandan are all cut off, except 23 young and Old Men.” The plague continued to devastate the Mandan until they moved to their winter village in the bottomlands a few miles downstream. The mortality eventually was calamitous; although no exact figures exist, many estimates suggest that no more than about 125 individuals survived the event, a loss of about ninety percent of their population.



The means of transportation used by fort occupants was varied. Travel to and from "civilization" at St. Louis was generally water using dugout canoes, keel boats, and steamboats. At the fort, most typically, one would see people moving about on foot, by horse or oxen drawn cart, or on horseback. In the winter, one might witness travel by dog-drawn sled.



A few artifacts associated with land-based transportation were recovered. Not surprisingly, all are related to the use of the horse. These include a harness snap and roller buckle, harness trace chains, and trace hook. The round eye of the iron terrets guided the path of the harness or reins and were probably elements of a cart harness or single harness (used on a horse for drawing a wagon). A pair of metal bars recovered from the bastion are from a wagon of the type used prior to the Civil War. In fact, most recovered objects suggest use of carts or wagons. A pair of metal bars recovered from the bastion are from a wagon of the type used prior to the Civil War. Of course the animals had to be fed and maintained and, appropriately, fragments of scythes, hay forks, and horseshoes were recovered.



Firearms were, of course, necessary for personal protection, protection of the fort and its contents, as well as for hunting. Their use is commonly referred to in Chardon's journal. The post records (orders for goods, delivery invoices, and annual store inventories) list a large variety of weapons from pistols to cannons on hand for sale and in use at Fort Clark. The few gun parts recovered archeologically were from a Northwest trade gun or military shoulder arm, a light shoulder arm or pistol, and a large civilian sporting arm such as a musket or shotgun. Both percussion and flintlock lock weapons were used at the fort. Gunflints from Fort Clark are of sizes suitable for use with carbines or muskets, horse pistol or light shoulder arm, and a pocket pistol or small caliber rifle. Percussion caps were of sizes suitable for use with pistols and rifles. Ammunition was in the form of loose ammunition rather than cartridges and was made at the fort as well as imported from St. Louis in final form. Shot sizes suggest they were intended for use was with trade muskets, rifles, and large caliber military weapons.



The availability of wood was one of the prime considerations for considering where to build a trading post. Numerous tool fragments reflect woodworking at the post. Logging and rough shaping of timber or large pieces of wood is suggested by the recovery of a light to extra light weight Kentucky pattern axe. Smaller scale woodworking is reflected by a variety of worn and broken tools including wood chisels, files, wood auger, gimlet, awls, screwdriver, and a homemade wedge.



Trading was obviously the reason for the Fort Clark's existence and, while nothing related to the processing and shipment of furs and robes was recovered, fragments of durable trade goods are well represented in the archeological collection. Artifacts reflect trade muskets and ammunition, gunflints, brass tacks, glass trade beads, traps, copper bracelets and finger rings, ear rings bobs, tinkler cones, and fish hooks, among other things. Among the more numerous objects in the collection are glass trade beads with 9160 beads recovered. Considerable variation was noted in bead colors as well in the bead varieties and bead sizes. One interesting conclusion of the bead study was that the bead collection from Fort Clark is probably derived from the latter part of the site's occupation. This conformed with conclusions drawn by a separate analysis of the EuroAmerican artifacts.

# FORT CLARK IN THE INTERNATIONAL FUR TRADE

Fort Clark State Historic Site



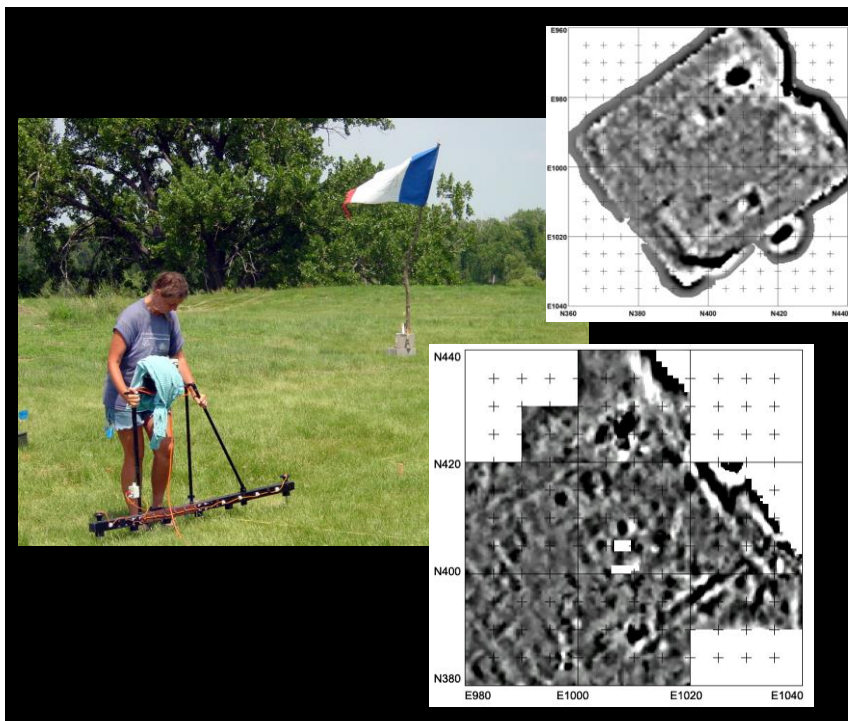
FORT CLARK was a small but important post in the American Fur Co. (AMF) empire but only a minute element within an immense international fur and hide trade. Its cycle of trade incorporated Native Americans of the northern plains, American traders and manufacturers, its 60 posts and New York, British businessmen and a variety of European manufacturing companies.



Points of origin for archeological objects recovered at Fort Clark which were traded and used at the post include such domestic sources as New York City (Robery Hyslop, firearm lockplate); Philadelphia, Pennsylvania (Dr. Jayne's medicines, Eugene Roussel's shaving cream); Lancaster, Pennsylvania (Henry E. Leman?, firearms); Missouri (lead, firearms); Waterbury, Connecticut (military button); eastern United States (military surplus weapons, cut nails, terracotta pipes; stoneware vessels; yellow ware and redware kitchen ceramics; bone, china, and shell buttons; pocket knife, whiskey and ale). Many other goods objects were acquired from European sources via New York and St. Louis. These sources include Staffordshire, England (ceramic tablewares from the John Ridgway, E.C. Challinor, and Edward Challinor & Co., and other unidentified potteries); England (kaolin pipes, percussion caps, gunflints, brass buttons); Birmingham, England (wood and metalworking tools); France (gunflints, champagne and wine, and probably kaolin pipes); Spain (wine); Belgium (firearm parts); Italy (glass beads); and Bohemia (glass beads, terracotta pipe).



In sum, all of us that were fortunate to be involved in the Fort Clark Interpretive Project. We learned a lot about the site's history.



We discovered the benefits of utilizing geospatial inventory for planning excavations.



The artifacts told me a few things about the people who lived at Fort Clark



and its archeological features revealed previously unknown and large scale architectural changes at the site.





I was very fortunate to be able to work with a team of dedicated scientists such as Dr. W. Raymond Wood (University of Missouri-Columbia), Dr. Kenneth Kvamme and JoAnn Kvamme (University of Arkansas-Fayetteville), State Historical Society of North Dakota (SHSND) Deputy State Historic Preservation Officer and Historic Preservation Division Director Fern Swenson, and SHSND Chief Archeologist Paul R. Picha. We were also blessed with a group of enthusiastic students and volunteers. I guess you could say that we all really got into our work.



I just hope you get the chance, if you haven't already, to have a similar experience in the near future. Thank you.