

Nebraska State Historical Society and River Basin Surveys Research at Medicine Creek Lake, 1946–1948

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Medicine Creek Reservoir was completed in 1949. It was built primarily to control destructive flooding, both on Medicine Creek and in the Republican River drainage, and also as part of the Frenchman-Cambridge Irrigation Project, administered by the Bureau of Reclamation (Reclamation). Although there were important archaeological investigations along Medicine Creek as early as 1931 (Roper, Chapter 8, this volume), most archaeological research there has been done in response to construction and subsequent management of the reservoir. Salvage in the Medicine Creek valley was one of the first archaeological projects of the Smithsonian Institution's River Basin Survey (RBS).

Work done at Medicine Creek has contributed greatly to the definition of at least three cultural units. The work by the University of Nebraska State Museum (UNSM) identified what was then called the Frontier complex (see the papers by Frankforter, Davis, Bamforth, and Knudson, this volume). These are the only late Paleoindian sites found in the area. UNSM also identified important new paleontological resources. The Keith site and other Woodland sites were excavated in 1947 and 1948, providing much of the information used to define the Keith focus (Kivett 1953:133–135). The wealth of data provided by the many houses excavated by the Nebraska State Historical Society (NSHS) and RBS in the late 1940s has provided much of the basis for defining the Upper Republican phase, although that name was used as early as 1933 (Strong 1933a:278).

River Basin Survey at Medicine Creek

In the mid-1940s more than 100 reservoirs were scheduled for construction in the United States. The National Park Service (NPS) en-

tered into agreements with Reclamation and the Corps of Engineers for NPS to survey recreational resources at the proposed reservoirs (Roberts 1952:351-352). NPS interpreted this to include survey and recovery of archaeological resources. At the same time, the Smithsonian Institution and the archaeological community in general were becoming very concerned at "the prospect of losing a very large part of its basic materials" to the flood control and reclamation program of the federal government (Wedel 1947:1). The Smithsonian and NPS had a series of conferences on the subject, and they agreed to cooperate in finding and recovering archaeological and paleontological resources at the proposed reservoirs. Wedel (1947:1) stated, "Only prompt action, carefully planned, fully coordinated throughout the region involved, and executed on a scale commensurate with the basic program of basin development, will enable us to salvage the information needed to reconstruct the prehistory of the region." A memorandum of understanding was signed in August of 1945, and as its part, the Smithsonian formed the River Basin Survey in the fall of 1945. The Missouri Basin was chosen as the first area of study "because of its importance to American Archeology in general, and since very little was known about its broader manifestations" (Roberts 1952:352). Funds were allotted for the project by Reclamation, through the NPS. Reclamation funding amounted to \$20,000 in 1946 and \$40,000 in 1947 (Wedel 1947). The first fieldwork by the RBS was in July 1946, when Waldo Wedel traveled to the University of Nebraska, Lincoln, and established the first field office at the university's Laboratory of Anthropology, in the basement of Love Memorial Library (Wedel 1947:11). Soon after the Lincoln office was established, three parties of two men each made a rapid reconnaissance of 28 Reclamation and five Corps of Engineers reservoirs. As part of this effort in August 1946, Marvin Kivett and J. Mett Shippee spent eight days looking for archaeological sites in the proposed Medicine Creek Reservoir area. They found 14 Upper Republican sites and one Woodland site, which encouraged a return to Medicine Creek for further investigation in 1947 (Kivett 1947, 1948).

Excavations

In the spring of 1947 an NSHS crew led by A. T. Hill began excavations at a Woodland site, 25FT18 (the Keith site), and at Upper Republican sites 25FT16, 25FT28, and 25FT30. In September, October, and early November an RBS crew led by Marvin Kivett continued the project, working at 25FT17, which had both Woodland and Upper Republican components. They also worked jointly with NSHS at 25FT39 (Kivett



9.1. Workers excavating at House 5, 25FT13. Initial phases of dam construction are in progress in the background.

and Metcalf 1997:2). The two agencies worked in cooperation, but NSHS funded its own work. Reclamation provided additional aid for this research by supplying transportation, equipment, and workers. Archaeological crews at Medicine Creek included as many as 15 to 20 men, mostly provided by Reclamation.

Both the RBS and the NSHS had crews working at the reservoir from the end of March through August 1948. RBS focused on sites such as 25FT13, 25FT16, 25FT17, and 25FT70, which were in the direct path of dam construction or just upstream (Figure 9.1). These were also the main sites where mechanized excavation was used (Kivett 1949). The mechanical stripping was done primarily with Reclamation equipment, which was on hand for dam construction. The RBS also excavated other sites within the maximum pool level, including 25FT14, 25FT29, and 25FT36. NSHS worked on sites that were primarily at higher elevations or farther up the reservoir because they were not federally funded and were less affected by immediate construction needs. Sites excavated by NSHS included 25FT19, 25FT20, 25FT22, 25FT28, and 25FT30. Heavy equipment was used in exposing some of these

NSHS sites, but it was primarily neighboring farmers who provided the equipment. Both agencies cooperated to excavate sites 25FT16 and 25FT39 (Kivett and Metcalf 1997:5–6). Altogether the two agencies excavated portions of 12 of the 14 Upper Republican sites recorded in 1946, with a total of 48 houses and many middens and other features being excavated. Reclamation surveyors performed land surveys and created contour maps of the reservoir, showing the relative location of all archaeological sites. Waldo Wedel also visited the project and flew over many of the sites in a small plane to get aerial photos of the excavations.

Somewhat overlapping the time of these excavations was a series of excavations by the UNSM (Davis and Schultz 1952), which focused exclusively on Paleoindian and paleontological sites in the reservoir area. These sites were primarily in the vicinity of Lime Creek. This research took place from 1946 to 1952, under the leadership of C. Bertrand Schultz and W. D. Frankforter (1948), Preston Holder and Joyce Wike (1949), and E. Mott Davis (1953a, 1962). All work at the reservoir from 1946 to 1952 was research directly related to construction of the Medicine Creek Dam.

Archaeological Methods

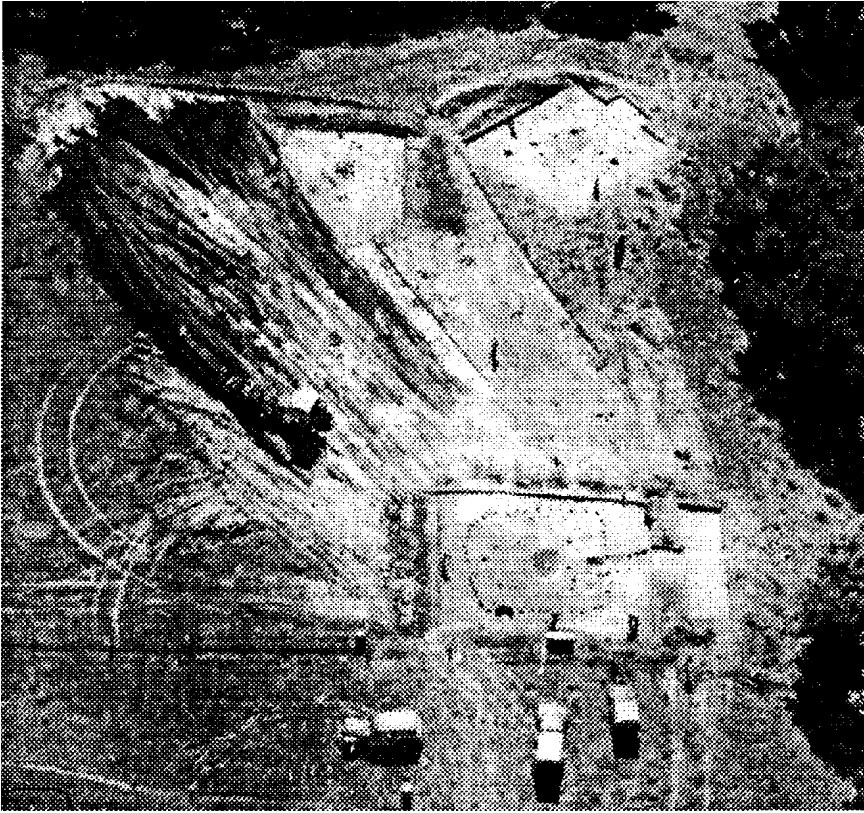
The excavations into Woodland and Upper Republican sites at Medicine Creek were described by Kivett and Metcalf (1997). That work will not be repeated here, but a few points on the methods used are worth emphasizing. Medicine Creek Reservoir is in an area of low population density with little public land. Federal reservoirs are important to archaeological research in the area because they are the only large areas that have been extensively examined. Funding for excavation on private land is often difficult to procure, so the federal reservoirs also provide a large percentage of the excavated sites in this area.

The investigations at Medicine Creek were a remarkable accomplishment and have been a tremendous source of knowledge about the area's prehistory, but they do have their limitations. First among these would be that the excavations were done during very hurried salvage operations. This means that much of the excavation was done with shovels. Although they had highly experienced supervisors, most members of the excavation crews were laborers who had little previous archaeological training. Whereas some sites were mechanically stripped, allowing the identification of features well beyond the house walls, some nearby excavations extended only inches beyond the identified

house walls. The latter excavations clearly did not include isolated features outside of the house or associated work areas. This inconsistency would almost certainly skew the resulting data when they were compared to more thoroughly excavated sites at Medicine Creek or elsewhere. Recent experience at sites 25FT22, 25FT30, and 25FT39 also indicates that those sites have additional houses that were not evident and/or were not excavated in the 1940s. In 1990 the author found the clay packed floor of what appeared to be an unexcavated entryway and associated cache pit eroding from a high cutbank at 25FT30. Although most of the feature had already caved off into the lake, this would indicate that at least one house was missed at that site. Donna Roper also has excavated an additional house at 25FT22 and other features at the two neighboring sites (Roper, Chapter 11, this volume). It will probably never be known just what percentage of features may have been left unexcavated at these sites. Much of the land at these sites has eroded into the reservoir during the ensuing years, so it is impossible to go back and reexamine many of these sites. This type of uncertainty could cause significant flaws in studies comparing the number of houses and type of activities at each site.

These sites also were not as pristine as might be implied by the impressive collections recovered there. Kivett and others have told the author that local collectors competed actively for the artifacts at some of the sites. Sites sometimes were found with potholes dug into cache pits or hearths before the professionals started excavating or after a brief absence of the archaeological crew during excavation. Local collectors have shown the author some very impressive artifacts recovered "from the back dirt after the archaeological crews had quit on the site." In spite of the detailed maps of internal house patterns, agricultural plowing that often intruded into the floor of the house had damaged many of the houses. Photos taken during excavation show house floors so shallow in plowed fields that it is amazing that so much was still recoverable.

Finally, in conversations with the author, Kivett pointed out on several occasions the danger of using the sites as defined at Medicine Creek as meaningful units to analyze the actual occupation of the area. These sites were at least partially defined simply for convenience during excavation. For instance, land ownership at the time determined that archaeologists had permission to work on some land before they got to other land that was just across a fence. Some examples include 25FT70, which could easily have been divided into one Woodland and two Upper Republican sites, or sites 25FT30, 25FT22, and 25FT39,



9.2. Aerial photo by Waldo Wedel showing mechanical stripping and excavations at 25FT70.

which form a more or less continuous occupation along the same terrace. At 25FT22 Houses 1 and 2 are close together, but House 3 is just as far from them as are the nearest houses in 25FT30. House 3 is also only a little farther from the nearest houses in 25FT39 than it is from Houses 1 and 2 at 25FT22.

Some very innovative methods were used during this early work at the reservoir. Probably foremost was the use of heavy power equipment to expose sites, as necessitated by the rush to complete excavations before reservoir construction. The schedule for reservoir construction had to be shortened because of destructive flooding in June 1947. This mechanical stripping allowed much more rapid uncovering and definition of cultural features (Kivett 1948; Wedel 1951). It was also discovered that the heavy equipment, which seemed so potentially destruc-

tive to underlying archaeological deposits, actually allowed a much better understanding of the extent and relative locations of the features. It revealed many additional features that would have been missed had these methods not been used. A much better understanding of relationships within the site was obtained when low altitude aerial photography was added to the mix by Wedel (Figure 9.2). Although use of heavy equipment appeared at first to be an expedient trade-off, it was soon revealed as both more efficient and more thorough than traditional methods. The method has since been used on large construction projects throughout the country.

Conclusion

In areas where there is little funding for archaeological research, federal reservoirs like Medicine Creek can have a major influence on the archaeological knowledge and development of new methods. This project provides an excellent example because of the heavy concentration of archaeological sites and the diversity of periods represented. This combination allowed the work at the reservoir to provide key information for defining cultural units and the opportunity for pioneering methods. Medicine Creek has also provided an example of the value of close cooperation of various agencies, which have shared goals. From 1946 to 1950 RBS, NSHS, UNSM, and Reclamation were able to work together closely to complete a very large amount of research in a very limited time frame. Most of these gains would not have been possible if not for the provisions of federal cultural resource protection laws.