

**Archeological Reconnaissance of
Bear Paw Battlefield,
Blaine County, Montana**



National Park Service - Midwest Archeological Center

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Available

Making the report available meets the criteria of 43CFR Part 7, Subpart A, Section 7.18 (a) (1).



Abstract

An archeological reconnaissance was conducted of 1,400 acres within the Bear Paw Battlefield boundary as defined in a recent general management plan. Although a heavy vegetation matte obscured most of the inventory area ground surface, the inventory team was able, by means of Global Positioning System units and a total station transit, to locate and map 36 stone circles, 29 rock cairns, 10 rock alignments, 55 battle-related riflepits, the soldiers' mass grave, an early-twentieth-century trash deposit, a homestead site, 1 battle-related artifact, 66 wooden staked locations related to the 1992 Anderson–English study, and 45 of C. R. Noyes' staked locations. The project correlated the newly mapped data with older digitized maps of known features, sites, and staked locations. The newly mapped locations represent no more than 30 to 40 percent of the known features on the property.

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Contents

Abstract.....	i
Acknowledgments	ii
List of Tables	iv
List of Figures.....	iv
Introduction	1
Field Methods.....	2
Recording	2
Prehistoric and Historic Archeology Background.....	3
Prehistoric–Protohistoric Cultural Sequences in Northern Montana	3
Early Prehistoric Period	3
Middle Prehistoric Period	4
Late Prehistoric Period.....	5
The Protohistoric–Historic Transition.....	5
Prehistoric and Protohistoric Site Types Found During Inventory.....	7
Lithic Scatters.....	7
Stone Circles.....	7
Stone Cairns	7
Rock Alignments.....	8
The Battle Context — A Brief History.....	9
Relic Collecting and Metal Detecting at Bear Paw	11
Battle-Related Features Recorded During the Inventory.....	13
Late Historic Period Artifacts and Features.....	15
General Observations	15
Conclusions and Recommendations.....	17
References Cited.....	19

Tables

1. Summary of artifact types collected at Bear Paw Battlefield.....	12
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Figures

1. Bear Paw Battlefield and the surrounding area	23
2. Bear Paw Battlefield during the inventory work, view to the west	24
3. Plot of sites and features found during the 2000 inventory	25
4. Plot of the Anderson–English stone circles, cairns, rock alignments, and rifle pits	26
5. Andy Anderson standing at a stone circle site he found in 1992	27
6. A stone cairn site used by soldiers during the battle. Anderson and English found army cartridge cases at this locale.....	27
7. Plot of the numbered stakes set by C. R. Noyes	28
8. A portion of Thain White’s Bear Paw battle relic collection on display at the Blaine County Museum, Chinook, Montana	29
9. The Gordon Pouliot Bear Paw battle relic collection, photographed at his home.....	29
10. The Norman Johnson Bear Paw battle relic collection of artillery shell fragments on display at the Blaine County Museum, Chinook, Montana	30
11. A Nez Perce rifle pit located on the east bluff	30
12. An annotated 1930s photograph of Nez Perce shelter pits located in the ravine at the siege area.....	31
13. An annotated 1930s photograph belonging to C. R. Noyes of some of the Nez Perce rifle pits	31
14. A large Nez Perce shelter pit located in the camp area	32
15. A 1930s photograph showing one of the Nez Perce rifle pits on the east bluff.	32
16. An army rifle pit with boulders piled on the military side and overlooking a ravine	33
17. Andy Anderson sitting in an army rifle pit located east of the park boundary	33
18. A 1930s photograph of the army soldiers’ mass grave.....	34
19. The mass grave in its current condition.....	34
20. A plot map of both the 1992 Anderson–English inventory and the 2000 inventory	35

Introduction

Bear Paw Battlefield is situated within the open, moderately rolling prairie country of north-central Montana along and adjacent to a portion of Snake Creek. The battlefield site is situated in the foothills of the north slope of the Bearpaw Mountains and occupies portions of two distinct topographic features. The area where the Nez Perce were camped when attacked by the Fifth Infantry, and the Second and Seventh Cavalries, is on a level, primary terrace of Snake Creek. The prairie edge and surface to the east and west of Snake Creek ranges from 20 to 40 ft above this primary terrace, and on the east it is dissected by several ephemeral drainage systems trending toward the Nez Perce camp locale from the east and southeast. The majority of the battlefield site, and the primary locations where the army took up positions against the Nez Perce, are on this prairie surface above the creek bottom.

Bear Paw Battlefield has been designated a national historical landmark and is protected by the National Park Service (NPS) in cooperation with local and state authorities. Its closest federal administrative ties are with Big Hole National Battlefield, Wisdom, Montana, which is the largest and geographically closest part of the Montana Unit of Nez Perce National Historical Park (Figure 1). The NPS maintains a site manager's office in Chinook, Montana, consistent with the provisions of current legislation and cooperative agreements.

Nez Perce National Historical Park, with its headquarters in Spalding, Idaho, preserves and interprets places that have significance to the culture and history of the Nez Perce Indians, whose Historic period territory ranged over what is now the northwestern United States and adjacent portions of Canada. Administratively one of the most complex parks in the National Park System, Nez Perce National Historical Park oversees operations in 38 units in four states. Five units are owned by the NPS; the others are cooperative efforts involving a variety of land ownership and jurisdiction situations, and Bear Paw Battlefield is one of these cooperative efforts.

As part of its cooperative obligations, the NPS contracted a prehistoric archeological overview and assessment on behalf of Bear Paw Battlefield (Rennie and Brumley 1994) and included the battlefield in a general management plan (National Park Service 1997). The management plan defined a boundary encompassing 1,400 acres, which includes most of the land on which battle-related activities occurred (Figure 2).

Bear Paw Battlefield is open to the public but has access restrictions and minimal visitor accommodations. Much of the battlefield itself is fenced and closed to visitor traffic. A parking area and overlook provide a full view of the battlefield and surrounding scenery, and there is a trail through a portion of the battlefield for a walking tour. Near the parking area are two stone historic marker monuments erected prior to the battlefield's national historical landmark status that present a summary of the historic events transforming the late 1800s Nez Perce encampment into a battlefield.

The fenced central portion of the greater battleground area is managed by the NPS. Around this core area, particularly on the east and south sides, are privately owned lands encompassed by the boundaries defined in the NPS general management plan.

No formal archeological inventories have been conducted of Bear Paw Battlefield or the immediate area. However, the battlefield has been the focus of research and collecting efforts by numerous individuals for many years. Only a few of these collecting efforts are documented. The most extensive collecting efforts were undertaken by the late Thain White of Dayton, Montana; Gordon Pouliot of West Glacier, Montana; and Norman Johnson of Havre, Montana. Their efforts are well documented and constitute a primary data set of the types and quantities of camp and battle debris left on the field after the battle (Scott 1997). Local researchers Leroy "Andy" Anderson of Chinook, Montana, and Paul English of Havre, have also identified rock cairns and rock alignments both within and adjacent to the park boundary, some of which yielded metallic debris when they conducted preliminary metal detecting in the area after the 1991 range fire.

Field Methods

With the help of volunteers, the Midwest Archeological Center (MWAC) conducted a surface reconnaissance inventory between June 5 and 8, 2000, within the boundary defined in the general management plan. The work was limited to visual surface inventory.

Dan Foster of Nez Perce National Historical Park ably guided the crew and maintained interval spacing. The crew was composed of MWAC Archeological Technician Harold Roeker and volunteers Dick Harmon, Kelsey Attenhoffer, Connie Constan, Jim Magara, and David Thorn for the entire period of fieldwork. Jon James of Big Hole National Battlefield and volunteer Tom James assisted in the inventory for two days. Nez Perce National Historical Park Superintendent Doug Youri and Bear Paw Battlefield Site Manager Arthur Currence joined the crew for one day, along with Otis Halfmoon, Kathleen Halfmoon, and Carol High Eagle.

The fieldwork consisted of the crew walking the grounds in a series of parallel transects until the entire park area and adjacent lands within the general management plan (GNP) boundary were covered. Transect spacing depended on vegetation density. Spacing was approximately 3 m in areas with good ground visibility and extended to 10 m between crew members when grass cover was so dense as to obscure the ground surface. Approximately 1,400 acres were covered at a reconnaissance level during this fieldwork. Nearly every area within the management plan boundary was covered with a dense vegetative mat. Small portions of the northwestern or Miles (Napoleon) cannon pit area and some areas east of the park boundary had ground visibility that approached 50 percent, but ground visibility was generally less than 20 percent in most areas. The fieldwork is best characterized as reconnaissance level; that is, only the most obvious features were seen and recorded.

Recording

Standard MWAC archeological data-recording methods were used in each component of the operation as specified below. Individual artifacts were recorded and noted in the electronic data log, and field notes were also used to record the data. Exposed *in situ* artifact specimens and topography were photographed and recorded digitally.

After covering several transects, recording was begun. Each artifact and feature was marked by a pin flag and piece-plotted as follows. A Sokkia total station transit was used to record the features within the park boundary. A Precision Lightweight GPS Receiver (PLGR) was used to record coordinates of features observed outside the park boundary. The transit was set up at a selected grid coordinate marker determined by the PLGR. Distance and azimuth readings for each artifact and feature were recorded in reference to the known grid coordinates.

Each day's electronic data was downloaded each evening into a laptop computer using the Sokkia MAP software and AutoCAD LT 98 to develop a field map. That data was edited, and AutoCAD LT 98 was used for final map production for this report.

Prehistoric and Historic Archeology Background

Prehistoric–Protohistoric Cultural Sequences in Northern Montana

The following information on the prehistory of the area is borrowed from the Bear Paw Battlefield prehistoric archeological overview prepared by Rennie and Brumley (1994). Their overview and assessment of the region's prehistoric archeology is the best available summary of our current knowledge of the area and poses some excellent research questions. Archeologists working on the Northwestern Plains, which encompasses the project area, have found evidence of human occupation extending back over at least the last 11,000 years. The reader is referred to Frison (1991), Reeves (1969, 1973, 1983), Ruebelmann (1983), Brumley and Dau (1988), Vickers (1986), and Brumley and Rennie (1993) for a thorough discussion of various models developed for interpreting the region's prehistory.

Each chronological phase or cultural complex within the region is defined largely on the basis of one or more distinctive projectile point styles or types. Ceramics appear intermittently within the prehistoric cultural record of the Northwestern Plains including northern Montana during the last 2,000 years; and, where present, they provide a second major criterion for definition of cultural complexes and chronological phases. Relative and absolute dates for these phases and complexes are based on excavation of sites where diagnostic forms have been found in stratified deposits. Organic materials such as bone and charcoal that are associated with various assemblages can be radiocarbon dated, providing approximations of the actual ages of the materials and the relative ages of materials from non-stratified sites. The three major cultural periods and their general defining characteristics are summarized immediately below.

Early Prehistoric Period

Dating from ca. 11,000 to 7,700 years BP, this period contains a number of archeological units characterized by projectile point styles presumably designed for use on a heavy throwing or stabbing spear. Early Prehistoric period complexes recognized in northern Montana include Clovis, Goshen, Agate Basin, Hell Gap, Alberta, Cody, and the Plains/Mountain and/or Foothill Mountain complexes, and the point types of that period are generally variations on lanceolate or stemmed forms. Early Prehistoric or Paleoindian peoples appear to have been primarily big game hunters, with the earliest well-defined groups — Clovis and Goshen — known elsewhere to have hunted a variety of now-extinct animal species including mammoth. Later groups generally relied on early forms of bison as their primary food source. Evidence of stone boiling in the form of water-fractured, fire-cracked rock (FCR) is presently lacking for the Early Prehistoric period. Evidence of Early Prehistoric period people in northern Montana is limited and restricted to widely scattered surface finds that are interpretable only by reference to excavated materials from other regions.

Materials similar to those identified elsewhere in the Northwestern Plains as Clovis and Goshen are represented in northern Montana by an isolated point from northern Blaine County (Deaver 1980) and by points recovered from the surface of four campsites situated within and adjacent to the Bearpaw Mountains in Choteau, Blaine, and Hill Counties (Brumley 1988a). In addition to Clovis, an essentially complete sequence of projectile points characteristic of the other Early Prehistoric period complexes have been recovered at several surface sites throughout the Bearpaw Mountains. Brekke (1970) describes surface finds from an extensive campsite located around a major spring in central Blaine County, just south of the Milk River valley. Materials recovered there include Hell Gap points and point types characteristic of Middle and Late Prehistoric period cultural complexes. Within the Milk River valley to the east of Fort Belknap, Rossillon (1985) notes finding an isolated Paleoindian point she identified as Agate Basin. Ruebelmann (1983) reports an Agate Basin point, and Deaver (1980) reports an Alberta point found on the surface at separate sites in Phillips County to the east of the Little Rockies. No evidence of Early Prehistoric occupation has yet been reported within or near the project area.

Middle Prehistoric Period

Dating from about 8,000 to about 1,300 years BP, this period is characterized by projectile point types presumably designed for use with a spear thrower or atlatl. Major complexes or phases include Mummy Cave, Oxbow, McKean, Pelican Lake, Yonkee, Sandy Creek, and Besant. Cultural groups during this period were predominately bison hunters. However, certain contemporary groups occupying the area of central and southern Montana and Wyoming appear to have developed a more diversified subsistence economy based on hunting a broader spectrum of animal species, as well as gathering and processing wild plant foods. Evidence of stone boiling in the form of water-fractured FCR is abundant throughout both the Middle and Late Prehistoric periods. This evidence appears to reflect a major adaptive change in food processing and storage technologies. Pottery first appears in some Besant phase sites during the latter part of the Middle Prehistoric period.

Early side-notched atlatl points, characteristic of what is identified as the Mummy Cave complex, are well represented in surface finds at a number of site locales within and adjacent to the Bearpaw Mountains (Brumley 1988a, 1988b).

The McKean complex is primarily characterized by the presence of McKean Lanceolate, Duncan, and Hanna atlatl point forms (Wheeler 1952). Another projectile point form referred to as Mallory has been found, on occasion, in McKean complex assemblages from southern Montana to northern Colorado and western Nebraska (Forbis n.d.; Lobdell 1973; Morris et al. 1984; Munson 1990; Reher 1979), but Mallory points are not presently known from northern Montana. From central and southern Montana south, a number of McKean complex sites have produced grinding slabs and rock-lined hearths. These artifacts and features are commonly interpreted as reflecting an increased reliance on plant foods during McKean complex times (Frison 1991; Keyser 1986). Further north on the Canadian Plains, similar evidence is lacking, with McKean peoples predominately hunting bison for subsistence (Brumley 1975, 1978). In northern Montana, McKean Lanceolate, Duncan, and Hanna projectile points are common in surface collections. However, no excavated or dated cultural assemblages have as yet been reported.

The Pelican Lake complex is recognized by most researchers as characterized by atlatl-size, corner-notched projectile points. However, a small number of Pelican Lake assemblages contain a few small corner-notched, arrow-point-size projectiles, suggesting the limited presence, or even full coexistence, of bow-and-arrow technology. The few presently available radiocarbon dates for the Pelican Lake assemblages containing these small points are all from sites situated on the Canadian Plains. These dates are quite early in terms of the overall time span for the Pelican Lake complex, suggesting the atlatl was not just being replaced by the bow, but may have coexisted with it for a long period of time as a minor or secondary weaponry system.

Brumley and Rennie (1993) note a trait dichotomy distinguishing the northern from the southern expressions of McKean, Pelican Lake, and Avonlea complexes and phases. The southern assemblages of these complexes and phases, roughly located southward from central Montana, are characterized by occasional to frequent rock-lined hearths and/or grinding slabs. These traits are absent from the corresponding northern assemblages.

Within the general study area, Davis and Stallcop (1965) report on excavations conducted at the Keaster site (24PH401), a multi-occupation bison kill site located in the south of Phillips County, a short distance west of the Little Rockies. Another poorly known cultural complex referred to as Sandy Creek has been defined by Dyck (1983). Present evidence suggests the Sandy Creek complex to be temporally intermediate and related to both the earlier Oxbow and the later Besant. Sandy Creek is characterized by rather non-descript, side-notched atlatl points which, out of dated contexts, could fit into the range of variation of points found associated with Mummy Cave, Oxbow, and Besant complex assemblages. Such non-descript points are abundant in surface collections from the Bearpaw Mountains (Brumley 1988a, 1988b), and may reflect the presence of this phase within northern Montana.

Particularly abundant in northern Montana during the latter part of the Middle Prehistoric period are materials referable to the Besant complex. The primary diagnostic artifact of the Besant complex is the

atlatl-size, shallow side-notched projectile point. The range of variation in Besant point form is broad and appears to overlap in part with the range of variation for projectile points of the earlier Mummy Cave complex and Sandy Creek phase, to which Besant peoples may have been related (Brumley and Dau 1988; Brumley and Rennie 1993).

Herdegen's Birdtail Butte site (24BL1152) is a small but extensively utilized campsite and bison jump located near the southeast margins of the Bearpaw Mountains. Diagnostic projectile points recovered from the surface in the campsite portion of the site include materials referable to the McKean, Pelican Lake, Besant, Avonlea, and Prairie/Plains complexes of the Middle and Late Prehistoric periods. Test excavations within the bison jump portion of the site revealed a series of 16 stratigraphic units within four meters of sediments.

Small, arrow-point-size versions of Besant projectile points have been found in some late Besant assemblages and are referred to as Samantha points. The presence of these points is believed to reflect late Besant assemblages, when the transition from use of the atlatl to the bow and arrow was taking place. Ceramics have also been found in some Besant assemblages. It appears that ceramics become more frequent in Besant assemblages as one proceeds east toward the Dakotas. In northern Montana, the only Besant ceramic association known is from a surface blowout site along Tiber Reservoir (Brumley n.d.).

Late Prehistoric Period

Dating from ca. 100 AD to historic times, this period is characterized by projectile points clearly intended for use with the bow and arrow. Point forms include a variety of un-notched, stemmed, and notched forms. Bison hunting remained the primary subsistence activity. Evidence of communal bison kills, which involved coordinated efforts by groups of hunters driving animals over cliffs, into corrals, or into natural traps, are present throughout the entire archeological record. They appear, however, to reach a peak in both number and magnitude during the Late Prehistoric period.

The Avonlea complex marks the introduction of the bow and arrow as the dominant weaponry system on the Northwestern Plains. The complex is defined largely on the basis of a form of delicate, very well made, side-notched arrow point. Small, well-made corner-notched arrow points referred to by Reeves (1983) as Head-Smashed-In Corner-notched have been found in several Avonlea assemblages, usually occurring in very low frequency or as single specimens. Avonlea materials are abundant in the project area, with sites consisting of both bison kills and campsites. Well-documented Avonlea sites in northern Montana include Timber Ridge (Davis 1966), Three Buttes (Brekke 1969), Lost Terrace (Davis and Fisher 1988), Wahkpa Chu'gn (Davis and Stallcop 1965), Herdegen's Birdtail Butte (Brumley 1990), Henry Smith (Ruebelmann 1988), Fantasy, Beaver Bend, and TRJ (Tratebas and Johnson 1988). Ceramics are reported only from the Fantasy site. Avonlea, because of its frequent occurrence and highly distinctive character, has received considerable attention from researchers both within and outside northern Montana (Davis 1988). It is clearly the best documented cultural complex in northern Montana.

The second Late Prehistoric projectile point complex recognized here is the Prairie/Plains Side-notched complex. Assemblages of this complex are dominated by Prairie/Plains Side-notched point forms (Brumley and Dau 1988), but it should be emphasized that the Prairie/Plains complex encompasses a broad range of cultural variation.

The Protohistoric–Historic Transition

One of the first groups of explorers to examine portions of northern Montana was Lewis and Clark, who viewed the region along the Missouri River valley in May of 1805 and again in July of 1806 (Coues 1965). Then and throughout the Historic period, north-central Montana was occupied principally by the Atsina and Gros Ventres, and secondarily by the Assiniboiné and Blackfoot. Archeological sites known to date to the Protohistoric and Early Historic periods, however, are quite rare in northern Montana. Brumley (1966) and Milne-Brumley (1974) documented historic human burials in the Milk River valley near and north of Havre, and Ann Johnson (1975) described a petroglyph boulder near the Missouri River valley depicting horse hoofprints.

Although archeological investigations within northern Montana began to increase beginning in the 1960s and have contributed to the development and continued refinement of local and regional culture history models, no records of previous professional cultural resources inventories or other studies specifically within the defined Bear Paw Battlefield study area have been identified (Kurtz 1994). However, Passmann (1990) reports on the results of a negative inventory of a proposed stockwater reservoir immediately outside the defined study.

Although as yet not fully documented, in 1992 and in several subsequent years Leroy Anderson, former director of the Blaine County Museum, and amateur archeologist Paul English personally conducted an informal but thorough surface inventory within much of the Bear Paw Battlefield study area. The materials they have identified in that study as being of definite or probable prehistoric age consist solely of surface stone features. Anderson and English have plotted many of the identified surface stone features on field maps. They have recorded the locations of approximately 90 tipi-ring-size stone circles, 25 individual stone cairns, and 9 stone alignments or drive lines. It should be pointed out that none of the materials identified by Anderson and English have yet been formally recorded as defined sites. Further, complete counts of surface stone features within the project area were apparently not taken, and certain features that were of a problematic nature were excluded. The information gathered through the efforts of Anderson and English, however, provide the only available data specific to the study area from which it is possible to make general statements regarding the kinds and quantities of cultural resources that are or may be present.

Prehistoric and Protohistoric Site Types Found During Inventory

Lithic Scatters

Lithic scatters usually consist of limited to extensive quantities of cultural materials largely or totally exposed atop the ground surface. Observed materials most commonly consist of chipped-stone debitage and/or fire-cracked rock (FCR) along with more limited quantities of well-made stone tools and tool fragments. Most lithic scatters within the project region are on stable ground surfaces or exposed in slightly eroded areas; but in the former case at least, they lack stratification, datable organic materials, and diagnostic artifacts.

One piece of FCR was found in association with six pieces of debitage in the northwest corner of the park, UTM coordinates 5360274.2N/632473.3E. The area was covered in moderate to heavy vegetation, and the ground surface could not be fully examined. The few flakes appear to have derived from locally available quartzite and argillite cobbles. Age and function could not be determined.

Stone Circles

Stone circles consisting of locally available unmodified stone are the most common surface features found at archeological sites in northern Montana. Typically, stone circles within northern Montana consist of ovate to roughly circular concentrations of stones ranging from large cobbles to small boulders.

A total of 36 stone circles were found during the field investigations (Figure 3). Fourteen were located in two separate groups in the vicinity of the 12-pound Napoleon cannon pit in the northwestern area of the GMP boundary, approximately 1,000 m northwest of the historic marker monuments. Three were noted immediately west of the cannon pit and are located on gently rolling ground. They are about 2.5 m in diameter, with the circle made up of small to moderate-sized cobbles. The remainder were located on a low rise located between two ravines that drain into an intermittent north-south trending drainage or creek east of the cannon pit feature. These stone circles varied in diameter from 2.5 to 4.5 m. These were also made up of small to moderate-sized cobbles.

Within and east of the park boundary an additional 22 stone circles were noted and recorded. Four are located within the park boundary, north of the foot trail and east of the north bluff. These four stone circles were composed of small to moderate-sized cobbles arranged in a roughly circular formation. Each circle is about 4.5 to 6 m across. During the 2000 inventory, 30 wooden stakes were found and recorded that probably relate to the 1992 Anderson-English inventory conducted after a range fire. Anderson and English, according to their maps, noted at least 52 stone circles and 16 cairns in this same area (Figures 4 and 5). Dense vegetation prevented the crew from determining if the identified wooden stakes represented stone circles, cairns, or other features.

South and east of the Hotchkiss cannon site and extending outside the fenced park boundary, the 2000 inventory effort found and recorded 18 stone circles and 36 wooden stakes. Diameters of the stone circles averaged about 5 m. Most were 4.5 to 6 m in diameter. A few were much larger. One is nearly 8 m in diameter. Anderson and English, according to their mapped locations, recorded 51 stone circles and 16 cairns in the same area.

Stone Cairns

Stone cairns are another type of surface feature common within the project region (Figure 3). Rennie and Brumley (1994) define them as small to large piles of cobbles and boulders. They state that cairns can vary significantly in size — from small ones made of 2 to 3 stones, to massive structures containing several tons of stone. Cairns can be found as separate structures and as elements of larger features such as rock alignments. In addition to having been constructed by historic and prehistoric native peoples, cairns were also constructed by historic Euroamericans, particularly while clearing cultivated lands of stone. In

determining whether specific cairns are associated with the activities of past Native Americans or historic Euroamerican activities, Rennie and Brumley (1994) define four primary characteristics of a cairn:

- (1) the location of the structure in relation to evidence of other prehistoric or historic materials or activities;
- (2) the extent of sodding around the stones comprising a cairn;
- (3) the extent of lichen cover on the exposed surfaces of the stones comprising a cairn; and
- (4) the nature of any associated cultural materials.

The 2000 field investigations noted and recorded 31 rock piles that meet the criteria of cairns. Two rock piles, one at the head of a ravine near the cannon pits and one on the northeast side of the park fence line, are most likely rock rubble piles resulting from recent field-clearing work.

The remaining 29 are small piles of rocks and cobbles scattered over the park's fenced area and to the east of the park fence. Their ages and functions could not be reliably determined from the available evidence. Anderson and English plotted at least 32 cairns in 1991 in the same general areas (Figures 4 and 6).

Rock Alignments

A rock alignment, consisting of a series of cairns and/or a solid line of rocks, is another class of surface stone feature common in northern Montana, according to Rennie and Brumley (1994). Such features are generally interpreted as reflecting past communal ungulate hunting activities by Native Americans.

The current project recorded 10 rock alignments (Figure 3). Three were plotted in the northern fenced area between Death Point of Rocks and the north bluff overlooking the Nez Perce camp to the south. One alignment is on the eastern fence line, crossing the fence at a slight diagonal. It is located on both sides of the eastern fence line. Six rock alignments were recorded east of the fenced area and another on a ridge crest over 1,600 m south-southeast of the historic marker monuments located in the parking area.

Anderson and English identified 12 rock alignments during their inventory within the project area (Figure 4). Ten roughly correlate with the 10 found during the current project work.

The Battle Context — A Brief History

The final battle of the Nez Perce War of 1877 took place in the valley and on the surrounding terraces of Snake Creek. Detailed accounts of the battle are available elsewhere (McWhorter 1986, 1991; Beal 1963; Ege 1982; Brady 1916; Hare 1916; and Greene 1995; among others). For the purposes of this archeological report, only the essentials are presented.

After fighting a number of pitched battles and several skirmishes, the Nez Perce moved north toward Canada. In late September, they halted on Snake Creek north of the Bear Paw Mountains to rest themselves and their weary horses. The Nez Perce had outrun General O. O. Howard's command and believed they were in a position to rest without fear of attack.

The Nez Perce were unaware that Colonel Nelson A. Miles was searching for them with an expedition composed of two companies of the Second Cavalry, three of the Seventh, four of the Fifth Infantry mounted on captured Sioux horses, two unmounted Fifth Infantry companies, a 1.65-inch (37-mm) Hotchkiss cannon, a 12-pound Napoleon cannon, and an attendant supporting wagon train.

During the morning hours of September 30, Miles began an attack on the Nez Perce village, which lay in a shallow crescent-shaped valley. High bluffs and terraces dominated the valley. Miles deployed Companies F and H, Second Cavalry, to capture the horse herd. These companies moved north and west. Their movements were further west than intended, but they succeeded in capturing most of the herd. Company G of the Second pursued some Nez Perce who escaped the camp, and engaged them about five miles north of Bear Paw Battlefield.

Companies A, D, and K, Seventh Cavalry, attacked the village from the south side but were repulsed with significant losses. Several charges were made by the army during the day. Mounted elements of the Fifth Infantry moved along the village's eastern bluffs and engaged the Nez Perce. Nez Perce losses were only about 22 killed, but the casualties were costly to the small Nez Perce force. They used the terrain effectively and dug rifle pits to provide cover for the warriors; and they effectively held their ground, only giving way slightly to the ever-tightening circle of soldiers.

By evening Miles had effectively encircled the village, although White Bird and about 50 other Nez Perce escaped and finally reached haven in Canada. Since Miles could not destroy or capture the village without additional significant losses, he brought up the artillery and bombarded the camp. Skirmishing from rifle pits continued for the next three days, with neither side making any headway.

Howard arrived with his command on October 3 and the stalemate was broken. Chief Joseph surrendered his band on October 5. The Nez Perce suffered 25 killed and at least 46 wounded. The army had 23 killed and 45 wounded. At least one, and possibly two, wounded later died. Of the soldier dead, all but four were Seventh Cavalrymen. The soldier dead were buried on the field, on the terrace south of the village site. The remains were later exhumed and moved to Custer National Cemetery. The Nez Perce dead were also buried on the field and probably remain there today.

Relic Collecting and Metal Detecting at Bear Paw

Relic collecting at Bear Paw Battlefield has been a local recreational activity for at least 40 years according to several local informants, including Andy Anderson, Paul English, Gordon Pouliot, and seasonal Park Ranger Jim Magara. Perhaps one of the first persons to undertake examination and documentation of the battle's physical evidence was L. V. McWhorter. McWhorter's interest in the Nez Perce Campaign is legendary. Accompanying battle participants, primarily Nez Perce, McWhorter ventured to the various battlefields of 1877 and recorded the memories of the participants. McWhorter, using wooden stakes, marked many of the sites and features pointed out to him by the then-elderly participants. Copies of McWhorter's maps and notes are on file at Big Hole National Battlefield and the Midwest Archeological Center. In 1935 and 1936, C. R. Noyes mapped the staked locations with chain and transit (Figure 7). Noyes produced the first truly accurate map of the field with the primary landscape denoted as well as the locations staked by McWhorter and the Nez Perce battle participants. Copies of C. R. Noyes' map are on file at Big Hole National Battlefield and the Midwest Archeological Center.

It is well known that Bear Paw Battlefield was a ripe area for finding relics related to the battle. Incidental and serious collectors ranged over the site for many years. Unfortunately, most of these efforts have gone undocumented. Fortunately, there are several notable exceptions (Table 1).

Thain White visited and extensively researched and collected the site from the late 1950s through at least 1975 (Figure 8). White relied heavily on the Noyes map for his collection efforts. He transcribed Noyes' survey notes, thus saving them for current research efforts, and he transcribed many of McWhorter's notes related to battle incidents. Copies are on file at Big Hole National Battlefield and the Midwest Archeological Center. Gordon Pouliot (personal communication July 23, 1994) indicated he had metal-detected the area with White. Both produced reasonably extensive documentation of their finds, and copies are on file at Big Hole National Battlefield and the Midwest Archeological Center, but their documentation focuses on artifact descriptions rather than original locations. While this information is not as precise as we might wish it by today's standards, it nevertheless remains very good documentation of their collection efforts and finds. This is particularly true of White's collection. White loaned his collection to a now-defunct museum in Spokane, Washington. When the collection was transferred to the Cheney-Cowles Museum, and subsequently returned to White, many artifacts were missing.

O. W. Judge, another avid collector, found many items on the battlefield in 1962. White took the trouble to document the Judge collection of Bear Paw artifacts, and copies of White's documentation are on file at Big Hole National Battlefield and the Midwest Archeological Center. White recorded these finds with the same consistency as he had recorded his own collecting efforts. Thus, White's documentation remains a primary resource in determining the types and quantities of artifacts associated with the battlefield commonly found during the era he collected. The remaining artifacts from Bear Paw Battlefield are now on loan and displayed at the Blaine County Museum, thanks to the diligent efforts of Andy Anderson.

Gordon Pouliot also has an extensive collection of Bear Paw Battlefield material, which is still in his possession (Figure 9). At least a portion of his collection is displayed in an outbuilding on his property. The Pouliot material duplicated the White collection, although included among the artifacts are a large group of crushed .45-70 cartridge cases, all smashed in the same manner. It is suspected these are army cases probably crushed by soldiers obeying orders to keep the Nez Perce from capturing them for reloading ammunition.

Another collector of the 1960s and early 1970s was Norman Johnson. Johnson also documented his find locales, and a copy of his documentation is on file at the Midwest Archeological Center. Most of his collection is on display in the Blaine County Museum in Chinook (Figure 10).

Leroy "Andy" Anderson is another avid Bear Paw researcher and park supporter. He, Paul English, and a few others began a metal detector and visual inventory of the battlefield and surrounding area after a range fire in 1991. They, too, have documented their find locations, and copies of their notes and map are

on file at Bear Paw Battlefield and the Midwest Archeological Center. The map is included as part of the Rennie and Brumley (1994) prehistoric overview. Among their finds are .45-70 cartridge cases and tin cans. The cans and cartridge cases were found outside the boundary fence when they were staking the various features found after the fire. Most cartridge cases are .45-70 Benet primed. Both short- and long-crimp internally primed cases are present. There are two externally primed with slightly convex heads in Anderson's collection that may postdate the battle. The can tops and one body may be from the battle period. They are all hole-in-top with heavy solder. Two are rectangular meat can types, but all are small. The round type may be a size 2 or 2½.

Table 1. Summary of artifact types collected at Bear Paw Battlefield.

Artifact Type	White Collection	Pouliot Collection	Johnson Collection	Anderson–English Collection	Total
.44 Henry Cartridges	—	1	—	—	1
.44 Henry Cartridge Cases	15	26	3	1	45
.44-40 Cartridges	1	—	—	—	1
.44-40 Cartridge Cases	13	—	—	—	13
.44 Bullets	8	5	—	—	13
.45-70 Cartridges	16	9	8	—	33
.45-70 Cartridge Cases	410	200+	108	18	736+
.45-70 Benet Primers	14	—	—	—	14
.45-70 Bullets	278	75+	67	2	422+
.45 Colt Cartridges	9	6	1	—	16
.45 Colt Cases	13	9	—	—	22
.45 Colt Bullets	5	4	—	—	9
.50-70 Cartridges	4	—	—	—	4
.50-70 Cartridge Cases	7	11	2	—	20
.50-70 Bullets	8	2	1	—	11
Miscellaneous Bullets and Balls	—	14	1	—	15
Miscellaneous Cartridge Cases	5	2	4	2	11
Lead Fragments	20	—	1	—	21
12-Pound Cannon Shell Fragments	2	4	2	—	8
Bormann Fuses	2	—	—	—	2
Canister Balls	106	22	9	—	137
1.65" Hotchkiss Shell Fragments	13	7	9	—	29
1.65" Hotchkiss Fuse Fragments	2	2	1	—	5
1.65" Hotchkiss Brass Band Fragments	11	2	4	—	17
Miscellaneous Artifacts	28	43	20+	9	100+
Total					1706+

Battle-Related Features Recorded During the Inventory

The battlefield has a number of currently visible features associated with the battle, and some are marked and interpreted. Riflepits are present and easily seen on all portions of the battlefield.

The current project recorded 55 depressions that appear to fit the criteria for riflepits or shelter pits, perhaps more properly called hasty entrenchments. Thirty-two of the depressions or hasty entrenchments were found and recorded in the village area and on the ridges above the village site (Figures 11–14). Thirteen were recorded in six locales south and east of the army positions, with most outside the current park boundary fence (Figures 15–17), and 10 were recorded about 1,000 m west of the village area.

These latter 10 are the cannon emplacement and associated riflepits used by the artillery crew and its protective force during the bombardment of the Nez Perce village during the battle (Figure 3). The 12-pound Napoleon cannon emplacement is a large pit with eight riflepits located north and south of the large pit. The arrangement is linear. A single isolated pit is located 160 m northeast of the main cannon emplacement (Figure 3). This pit may be a picket post or possibly the second emplacement of the 1.65-inch Hotchkiss cannon.

The 13 hasty entrenchments found south and east of the village area are uniquely situated. One is at the head of a ravine south of the fenced boundary (Figure 16), three are along the margins of the southeast coulee near the southeast fence corner, two are on a bench and ridge above the southeast coulee, two are on the margins of the next coulee north, three others are on the margins of a large coulee that overlooks the village, and finally, two entrenchments are found north of the large coulee that looks down on the village area. These riflepits are situated so they overlook the logical routes of movement to and from the village. It is likely these depressions are hasty entrenchments placed in strategic locations to thwart any Nez Perce trying to leave or enter the village via cover provided by the coulees.

When entrenchments are mentioned in the Indian Wars literature, they are often referred to as hastily dug entrenchments, quickly dug, a mound of earth thrown up for protection, or a shallow riflepit. Such statements leave the impression of haphazard construction to meet an immediate and life-threatening need. They also convey a feeling of unpreparedness on the part of those constructing the earthwork — a lack of familiarity, training, or knowledge of the purpose or use of a earthwork, beyond that of turning a few bullets in the immediate engagement. None of this could be further from the truth.

The common perception of military engagements in the west is one of a running fight between antagonists or hit-and-run tactics of Indians versus the Euroamerican encroacher. A review of the historic literature relating to the Indian Wars era demonstrates that various types of earthworks were used in combat situations between Native Americans and Euroamericans. An interesting sidelight is that Native Americans did construct and utilize several types of entrenchments in much the same manner as the Euroamerican combatants. Limited archeological investigation (Bray 1958; Scott 1994) of earthworks in the trans-Mississippi West demonstrates that the earthworks constructed by Euroamericans, specifically soldiers, were not hasty or haphazard as is the common perception. They were constructed according to procedure outlined in various military guides of the period.

The American classic, and one that guided the construction of earthworks in the Mexican War and the Civil War, is D. H. Mahan's 1836 *A Complete Treatise on Field Fortification, with the General Outlines of the Principles Regulating the Arrangement, the Attack, and the Defense of Permanent Works*. Hasty fortifications were defined as those constructed so that troops could take better advantage of the opportunities of natural cover (Mahan 1847). Nevertheless, hasty entrenchments were not to be the rule. American and, for that matter, European military thought was dominated by the concept of massed frontal assault. The use of entrenchments was to play a defensive role.

Dennis Mahan's treatise on field fortifications was uniquely American in that it recognized that most American wars would be fought by militia and only the few regulars would be the most disciplined. If

defense was necessary, then the militia could build and occupy field fortifications strong enough to resist the enemy's frontal assault until a well-organized counterassault could displace them (Hagerman 1965).

Not until the latter part of the nineteenth century did military theorists begin to formalize the concept of small-unit tactics. Small-unit movement, essentially at the squad level, was introduced in Emory Upton's 1872 *Infantry Tactics*, but these were only mechanical movements, not fighting tactics.

Unfortunately, the army published few formal field manuals for small units before the beginning of the twentieth century. However, a number of practical guides for officers were privately published throughout the century to bridge the gap left by the lack of official guidance available outside the West Point classroom. One of the most-used guides was Captain Edward Farrow's *Mountain Scouting*. Farrow was an instructor at West Point when he wrote his practical guide in 1881. He had seen active field service during the Nez Perce campaign of 1877 and was with Howard when he arrived at the Big Hole. Farrow (1881:243) noted, "The history of all battles of late years has shown the expediency of making use of natural shelter or constructing field entrenchment's."

Military manuals of the early twentieth century are more structured than Farrow's instructions, but they describe essentially the same procedure for digging rifle pits and trenches in the face of the enemy. Moss (1918:385–387) is a good example of such a work, and provides some clear definitions of the purpose of such works.

Moss (1918:385) states that the object of field fortifications are twofold: first, to increase the fighting power of the troops by enabling the soldier to use his weapons with the greatest possible effect; and second, to protect the soldier against the enemy's fire. While the military objective might be stated in that order, the doughboy might have reversed the priority order.

Although written nearly forty years after Farrow's 1881 publication, the Moss description of entrenchment methods and types is very similar. It can be argued that rifle pits or hasty entrenchments, those meant to be constructed in the face of the enemy, did not change in type or need. Even the World War II "foxhole" as described in the manuals of that period does not differ significantly in purpose or construction from that advocated by Farrow in 1881.

The strong similarity in size and construction method of the archeological examples of rifle pits at Fort Dilts (Hauray 1989), Big Hole National Battlefield (Scott 1994), the Reno-Benteen defense site (Bray 1958), and Bear Paw Battlefield to the methods of entrenchment described in the period manuals emphasizes that the term hasty entrenchment does not mean haphazard. Hasty entrenchments were a real type of earthwork that were constructed in a prescribed manner. Organized forces requiring hasty entrenchments to be dug in the presence of the enemy were trained and disciplined, and thus dug their hasty entrenchments in the manner in which they had been trained.

The Nez Perce rifle pits are more irregular in outline than the known army rifle pits. Such differences probably reflect the different cultural practices of the two combatant groups, and could be the subject of further archeological investigation and interpretation.

Another prominent feature on the field is the site of the army's mass grave (Figures 18–19). The burials were removed many years ago, but the pit or trench is still very visible. Fragments of human bone, army uniform buttons, boots, and items of equipment are reported to have been found in the excavated trench and in the backdirt pile over the years according to Andy Anderson and seasonal Park Ranger Jim Magara. This location was mapped during the current project.

Only one battle-era artifact was seen and recorded during the field investigations. This is a .45-caliber 405-grain lead bullet. The bullet had been fired from a .45-caliber Springfield army rifle or carbine. The bullet was found, and left in place, on the south-facing slope of a ravine about 680 m north of the historic marker monuments.

Late Historic Period Artifacts and Features

Two late-nineteenth- or early-twentieth-century trash dumps, two dugouts, and a single isolated ceramic fragment were recorded during the fieldwork. The ceramic fragment was found near the park's southeast corner, but outside the boundary. It is a fragment of white ironstone.

A trash dump or trash scatter containing miscellaneous metal and portions of a ceramic figurine were located south of the park boundary fence near the highway, approximately 650 m south-southwest of the historic marker monuments.

A second trash scatter associated with two dugouts cut into a ravine sideslope was recorded 530 m northwest of the historic marker monuments. The trash scatter contained a variety of metal and glass, and the glass was from bottle and jars. The diagnostic material, scattered over a 50-m area on the flat above the ravine, dated to the early twentieth century, certainly the first quarter of the century.

One dugout was immediately west of the trash scatter. It was an irregularly shaped, but roughly rectangular depression about 8 m long east to west and 4 m wide north to south. This may have been the site of a shed or root cellar. The second depression was cut into a south-facing bank of the ravine as it curved from north to northwest. The depression is about 20 m long east to west and 8 m wide north to south. This may have been the site of a domestic structure, possibly a house.

General Observations

The Anderson–English work in 1992 recorded 147 possible features, exclusive of rifle pits (Figure 4). These possible features included 103 stone circles, 32 cairns, and 12 rock alignments. The 2000 archeological inventory recorded 36 stone circles, 29 cairns, 10 rock alignments or portions thereof, and 66 wooden stake locations (Figure 3). The stake locations had such dense vegetation covering the area that the feature the stake marked could not be discerned. Exclusive of the stake locations and rifle pits, the 2000 project recorded 75 features, and it recorded 51 percent of the features found by Anderson and English after the 1991 range fire. If the stake locations are factored in, then the 2000 project found 141 locations, exclusive of rifle pits, or 96 percent of the 1992 Anderson–English find locations. Since the vegetation was too dense to identify the stake locations in 2000, it is more appropriate to say that only 51 percent of the 1991 features were relocated (Figure 20).

Anderson and English recorded 18 possible rifle pit locations in 1991, but they did not record any rifle pits in the Nez Perce village area. Instead, their rifle pit locations are in the southeast area of the park and outside the boundary. The 2000 project recorded 46 rifle pits, most of which are in the village area. Excluding the village rifle pits, the 2000 project recorded 12 rifle pits around the park and east and south of the boundary. While there is some correlation between the two projects' rifle pit locations, it is general at best (Figure 20). For instance, the current project did not record as many rifle pits near the southeast corner as Anderson and English did, 3 versus 12, respectively. The differences may be due to several factors. One is the change in the density of the vegetation between 1991 and 2000. A second difference is the unwillingness of this author to call every subtle depression a rifle pit, if it does not meet any other criteria for hasty entrenchments, such as a definitive earth berm or rocks placed more on the firing side than the other.

C. R. Noyes mapped the L. V. McWhorter stake locations in 1935 and 1936. According to the map, Noyes placed 153 stakes around the field indicating the locations of rifle pits, Nez Perce tepee sites, and various other features and locales associated with the battle. The staked locations were replaced by numbered, metal-capped rebar several years ago. Those metal stakes were cut down and set flush with the ground in 1998. The 2000 visual inventory found only 45 of the Noyes–McWhorter staked sites, or a little over 29 percent, since the thick grass prevented the team from seeing most of the staked locations. If metal detectors had been employed to find the locations, there is little doubt that many more would have been found.

Conclusions and Recommendations

Bear Paw Battlefield is well known; physical evidence of the battle has been collected by the various metal detectorists, and some of these collecting efforts have been documented. Copies of various notes and collections descriptions are on file at Big Hole National Battlefield, Bear Paw Battlefield, and the Midwest Archeological Center. The McWhorter stake locations as depicted on the Noyes map were digitized using AutoCAD in 1994 (Scott 1995). The 2000 inventory used a total station transit and a GPS unit to map the locations of all field finds. Using Noyes survey stations, several of which were recorded during the 2000 inventory, as registration points in the AutoCAD map, the 2000 data was imported to a copy of the 1994 digitized version. The correlation between the points is not perfect: there is a relatively consistent error between the digitized Noyes stake locations and those Noyes stakes mapped in 2000. That error is about 13 meters between the digitized version and the 2000 version. There is a greater error observed between the Anderson–English digitized locations and the 2000 mapped locations of the same features. We believe the error between the digitized Noyes locations and the 2000 mapped Noyes stakes is due to the standard error commonly found in digitizing data from photocopied maps rather than the original map and to the use of the only available USGS 7.5-minute quadrangle maps which are over 20 years old, as well as to minor errors on the original map and minor registration errors in the digitizing. These can be rectified with further detailed mapping of the site at some point in the future.

The differences between the Anderson–English locations and those same features mapped in 2000 are relatively straightforward. Anderson and English used the available orthophoto map of the area on which they plotted their finds' sites by eyeball. Without clear and easily defined reference points, some error in plotting occurred. The differences between the 1991 data and the 2000 mapped data are noticeable but not extreme. The 2000 mapped data are the more precise.

Regardless of the accuracy in the 2000 mapping, one is struck by the significantly lower numbers of features found and recorded by the current effort than those of previous efforts. Compared to the Anderson–English 1991 work, the 2000 team only found 51 percent of those features. Even allowing for inter-observer error, this is a significant difference. While the 2000 team did find 96 percent of the Anderson–English staked locales, the dense grass growth since 1991 obscured our ability to determine what was at most of those staked locations.

The effect of the dense grass growth is doubly noted when comparing the known Noyes stake locations versus those recorded in 2000. Only 29 percent could be found by visual inventory. The dense vegetation matte confounded our ability to effectively find the previously known sites and features. We estimate that the 2000 inventory found and recorded, at best, only 30 to 40 percent of the known sites and features within the Bear Paw GMP boundary. For this reason the 2000 inventory effort can only be considered a reconnaissance level at best. It is also for this reason that no site forms were generated for this project. Since only 30 or 40 percent of the known features were relocated, it was determined that any site forms generated would be full of error and imprecision that would bias future recording efforts. The data generated for this project should be considered an initial recording effort and be used as baseline data for future inventory and recording efforts.

One recommendation resulting from this inventory is that detailed mapping of Bear Paw Battlefield's sites and features should continue as opportunities permit. The 2000 inventory and mapping is incomplete due to the thick vegetation matte. As prescribed burns are done or the vegetation matte is reduced by other means, mapping and feature recording should be done as soon as possible.

At least one conclusion can be drawn from the previous and current work concerning the distribution of hasty entrenchments or rifle pits. It is patently obvious that some rifle pits were placed at strategic positions overlooking several deep coulees that could be used for escape or other movements. The shape of the rifle pits found in these locations is relatively regular and the orientation is generally toward the Nez Perce positions. It is reasonable to assume that these are army rifle pits placed by design to prevent the Nez Perce from escaping the cordon that was thrown up around them during the battle. As such, their

placement is the physical reality of, and provides some additional insight into, the strategy and tactics employed by Nelson Miles and his officers.

Nez Perce and army rifle pits appear different in construction and design. In interpreting cultural differences in warfare the rifle pits offer a unique opportunity to explain what constituted appropriate cover for combatants reared in different cultures. Several rifle pit features are readily visible and conveniently located adjacent to the current interpretive trail. These features could be archeologically excavated to ascertain their construction techniques. They could be compared to one another to determine cultural differences in construction and further compared to rifle pits from other battles to expand our understanding of how different cultures built and used rifle pits.

Bear Paw Battlefield has yielded many artifacts to collectors and earlier researchers. Those extant documented collections form a core of physical evidence on the battle. They also demonstrate the research potential of the *in situ* artifacts. The battlefield has yielded and undoubtedly still contains patterned data that can be extracted, analyzed, and interpreted using available archeological techniques and theory. The battlefield should be systematically metal-detected to recover that patterned information at some point in the future when all parties can agree to the procedure. The *in situ* data coupled with additional analysis of the extant collection has a very high potential to reveal details of the battle not recorded in the historic record, and to yield new insights about the battle and its participants.

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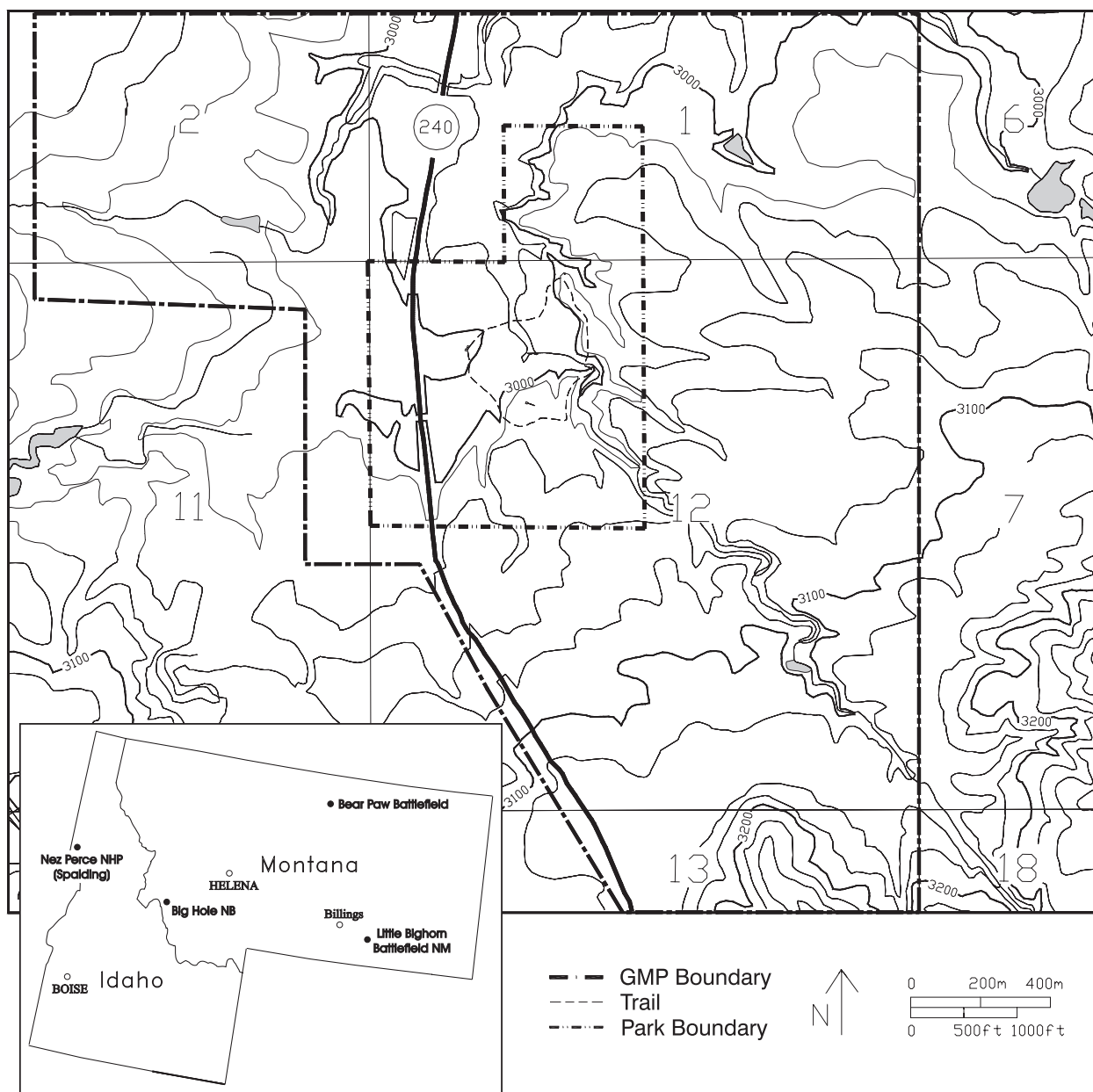


Figure 1. Bear Paw Battlefield and the surrounding area.



Figure 2. Bear Paw Battlefield during the inventory work, view to the west.

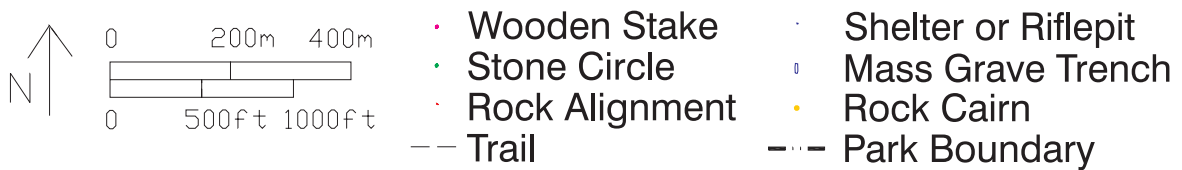
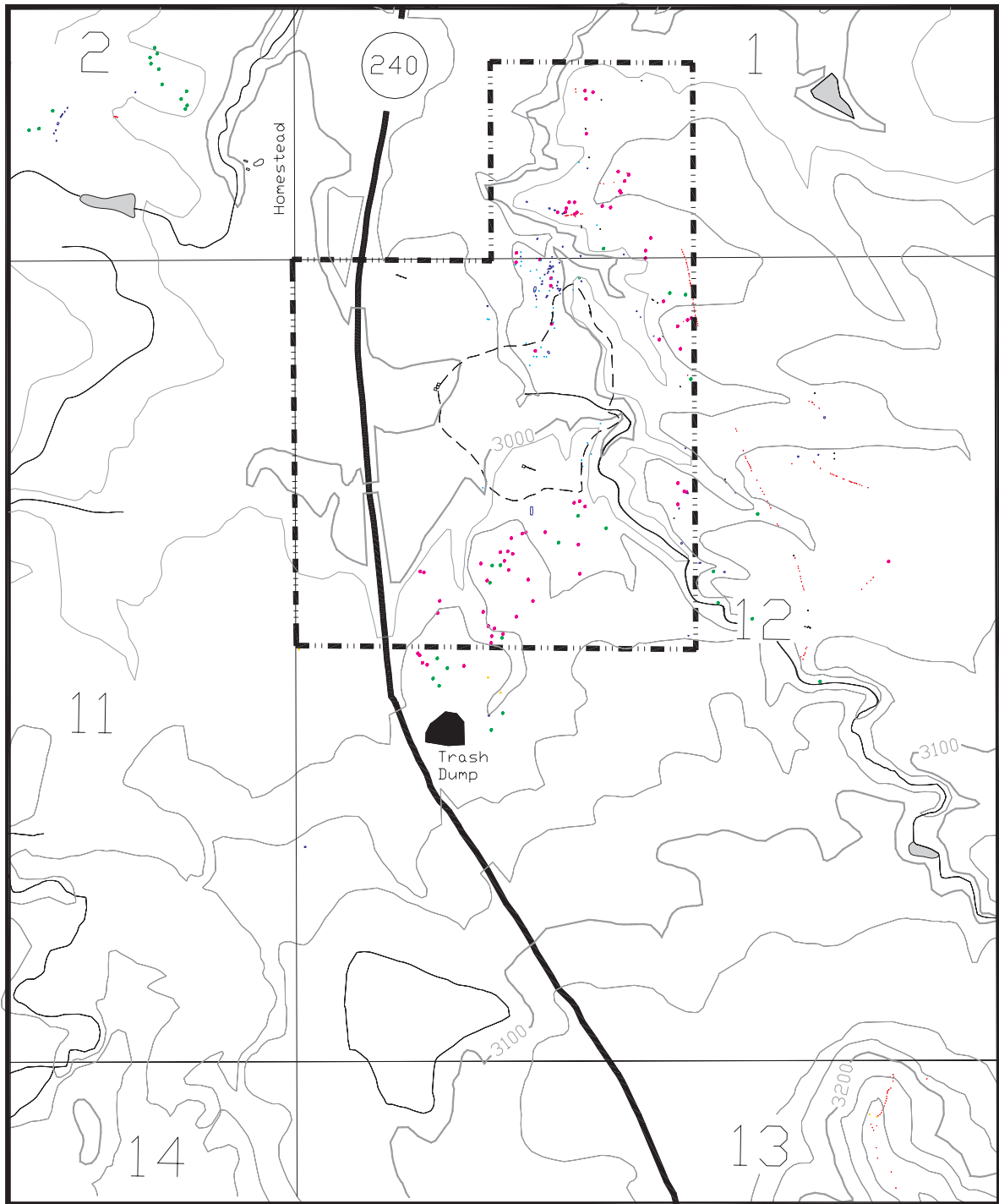


Figure 3. Plot of sites and features found during the 2000 inventory.

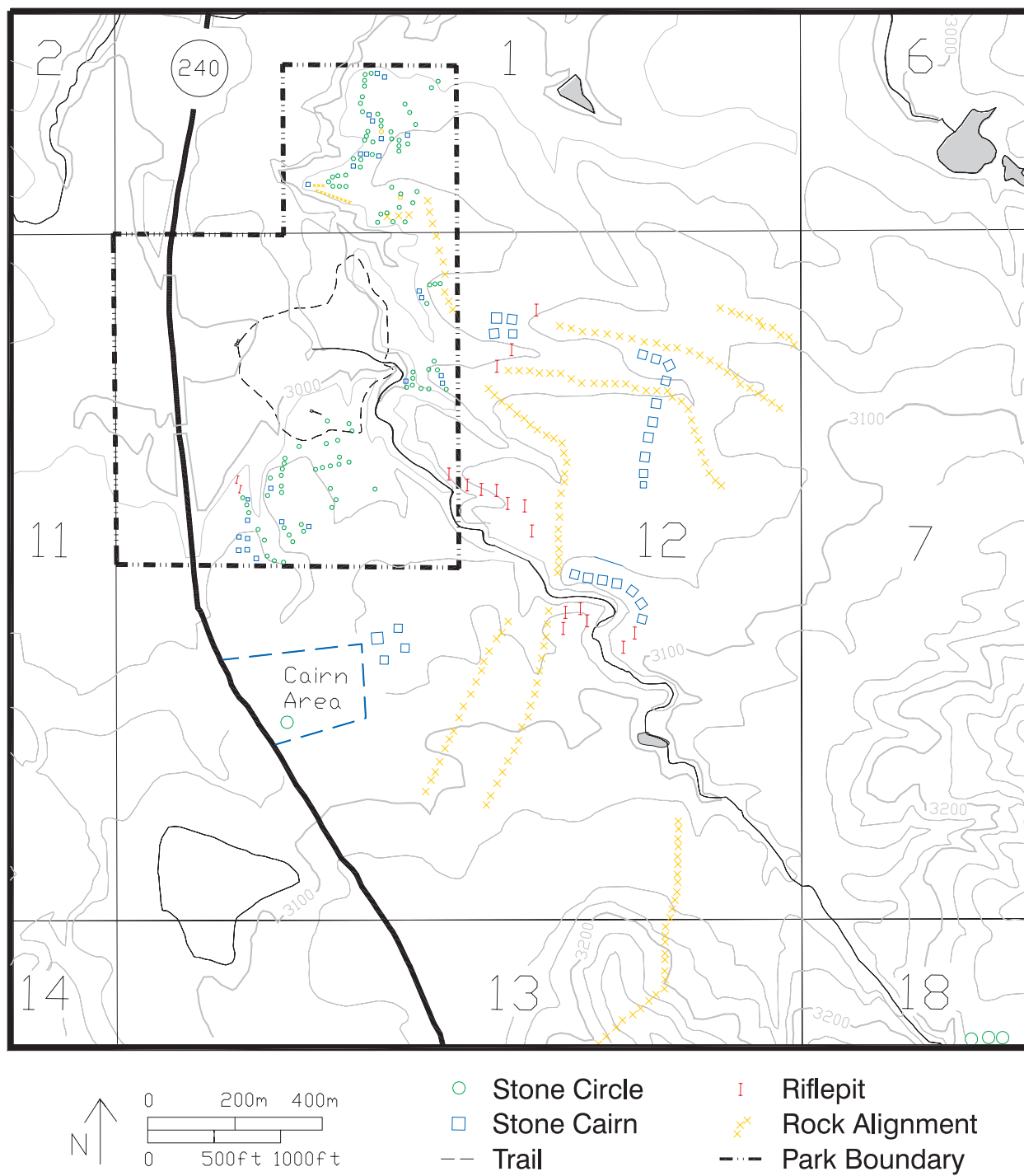


Figure 4. Plot of the Anderson-English stone circles, cairns, rock alignments, and riflepits.



Figure 5. Andy Anderson standing at a stone circle site he found in 1992.



Figure 6. A stone cairn site used by soldiers during the battle. Anderson and English found army cartridge cases at this locale.

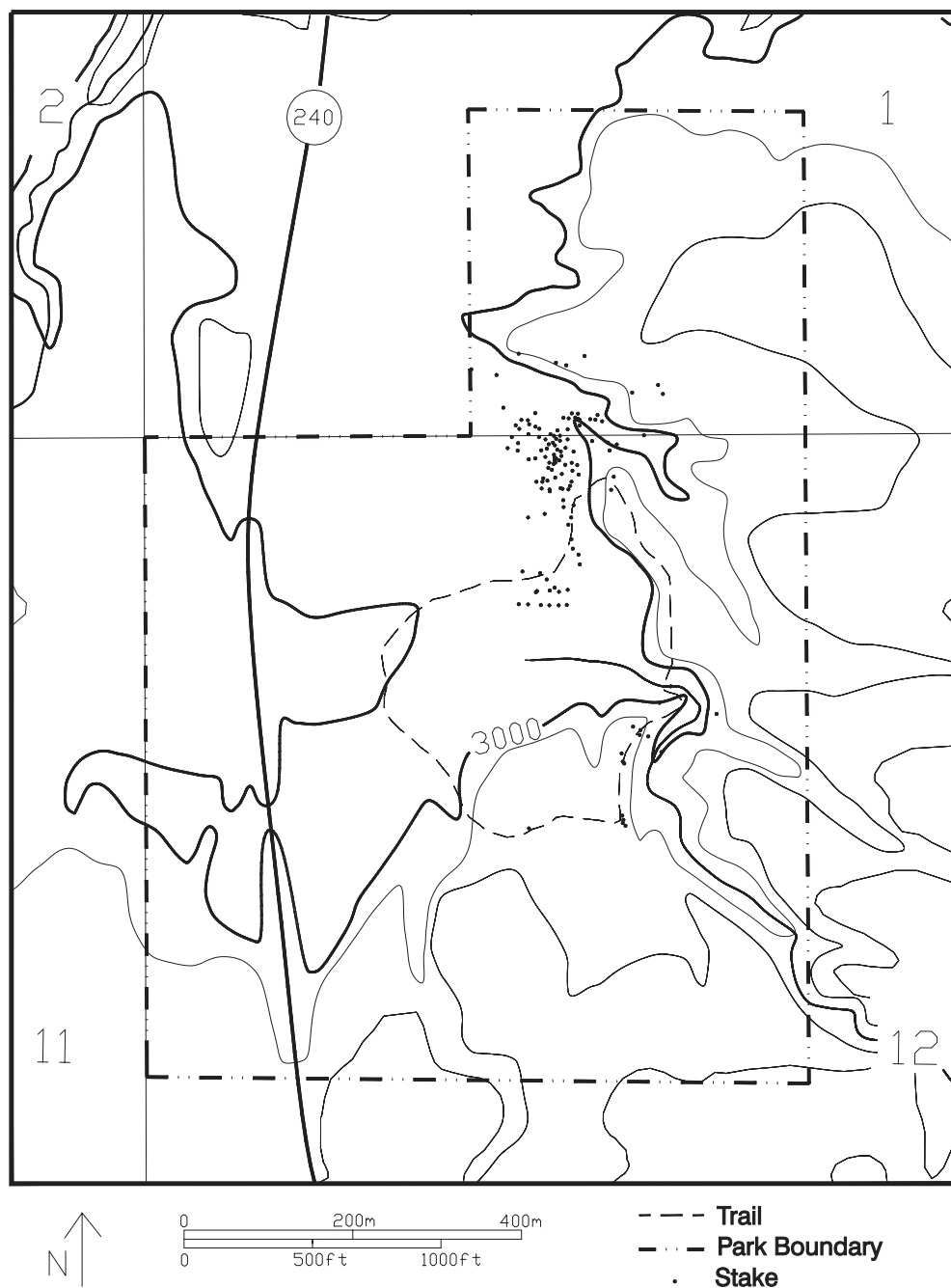


Figure 7. Plot of the numbered stakes set by C. R. Noyes.



Figure 8. A portion of Thain Whites's Bear Paw battle relic collection on display at the Blaine County Museum, Chinook, Montana.



Figure 9. The Gordon Pouliot Bear Paw battle relic collection, photographed at his home.



Figure 10. The Norman Johnson Bear Paw battle relic collection of artillery shell fragments on display at the Blaine County Museum, Chinook, Montana.



Figure 11. A Nez Perce rifle pit located on the east bluff.



Figure 12. An annotated 1930s photograph of Nez Perce shelter pits located in the ravine at the siege area.



Figure 13. An annotated 1930s photograph belonging to C. R. Noyes of some of the Nez Perce rifle pits.



Figure 14. A large Nez Perce shelter pit located in the camp area.



Figure 15. A 1930s photograph showing one of the Nez Perce rifle pits on the east bluff.



Figure 16. An army riflepit with boulders piled on the military side and overlooking a ravine.



Figure 17. Andy Anderson sitting in an army riflepit located east of the park boundary.



Figure 18. A 1930's photograph of the army soldiers' mass grave.



Figure 19. The mass grave in its current condition.

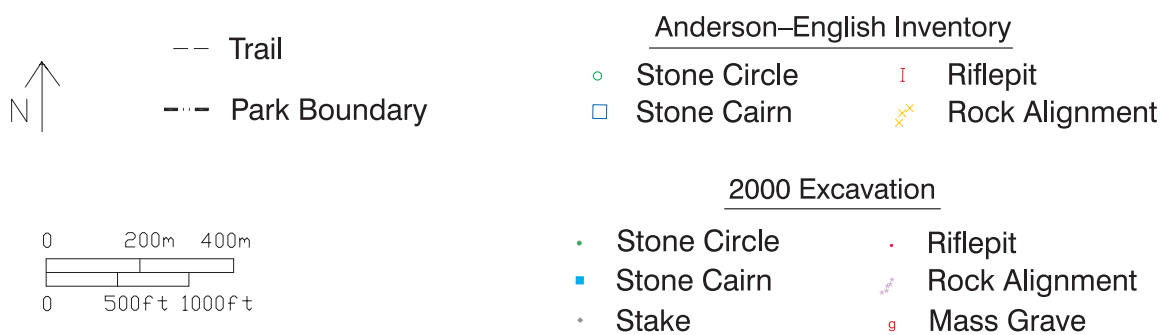
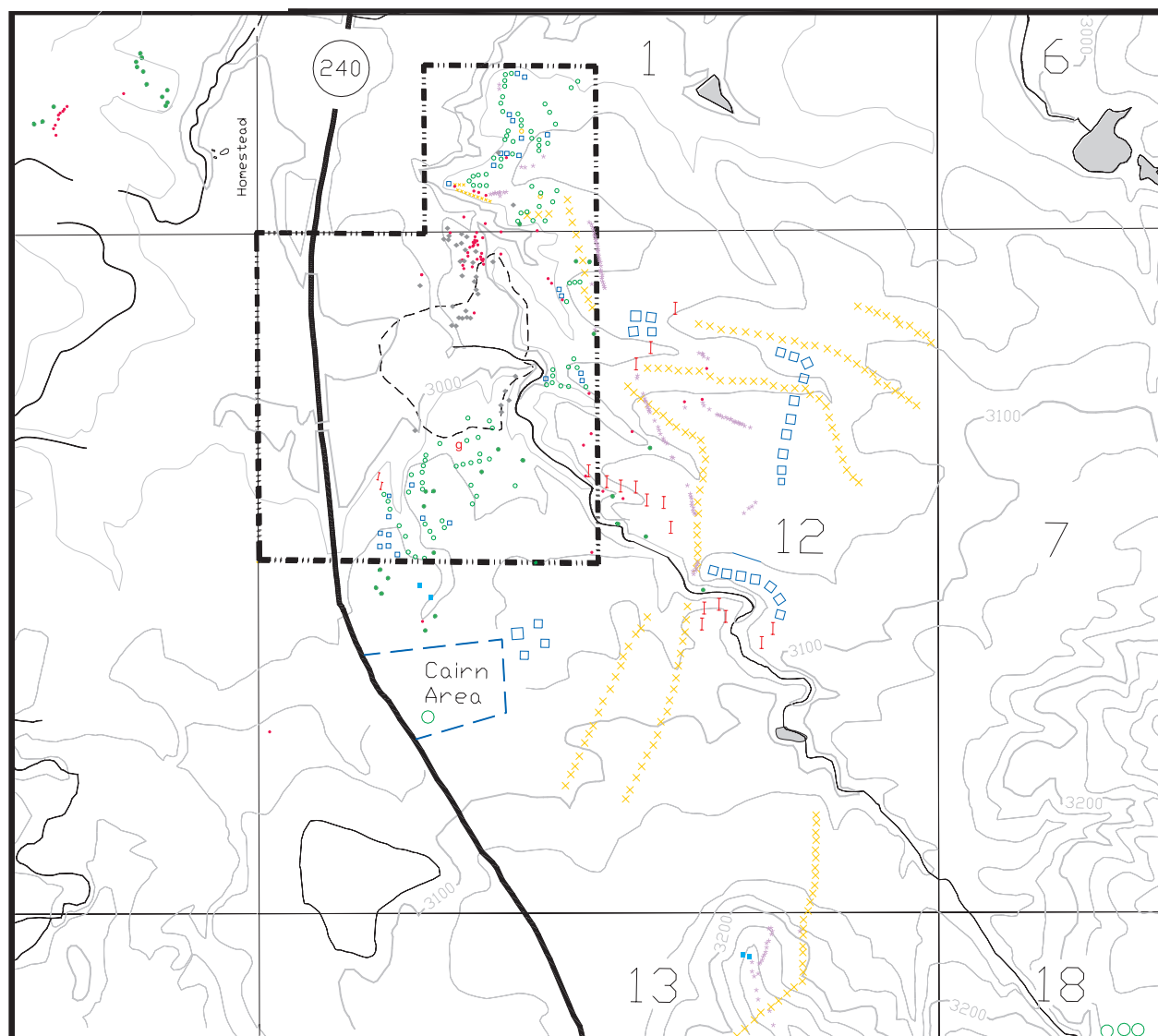


Figure 20. A plot map of both the 1992 Anderson-English inventory and the 2000 inventory.

