

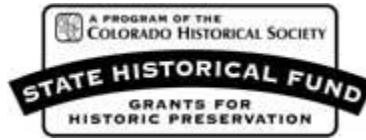
Goodman Point Community Testing: 2010 Annual Report, Montezuma County, Colorado

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Report of 2010 Goodman Point Community Testing, Montezuma County, Colorado

In 2010, the Crow Canyon Archaeological Center conducted the third and final full year of fieldwork for Phase II of the Goodman Point Archaeological Project: Community Center and Cultural Landscape Study (Kuckelman et al. 2004). Phase I of the study, “Goodman Point Pueblo Excavations,” was conducted from 2005 through 2008; it involved test excavations at Goodman Point Pueblo (Site 5MT604), the large village that served as the focal point of a large community in the late A.D. 1200s (Coffey and Kuckelman 2006; Kuckelman and Coffey 2007; Kuckelman et al. 2009). Phase II of the project, “Goodman Point Community Testing,” involves test excavations at multiple smaller sites surrounding the large village, including a variety of habitation sites, an ancient road, and areas that might have been agricultural fields.

Introduction

The 16 sites and additional non-site areas tested as part of Phase II are located in the Goodman Point Ruins Group Unit of Hovenweep National Monument, a 142-acre parcel reserved from homesteading in 1889. This parcel is managed by Hovenweep National Monument and is part of the Southeast Utah Group of the National Park Service (SEUG-NPS). All of Crow Canyon’s work in the Goodman Point Unit is being conducted in partnership with the NPS (see ARPA permit number 05-HOVE-01-ext1 for details of the agreement).

The Goodman Point Unit is located in the central Mesa Verde region (Lipe 1995; Varien 2000; Varien and Wilshusen 2002), which is the most densely settled portion of the northern San Juan archaeological region ([Figure 1](#)). Goodman Point Pueblo, the focus of the first three years of work, and the smaller sites investigated through 2010 are also within the Sand Canyon locality where Crow Canyon has worked for more than 20 years (Lipe 1992; Varien and Wilshusen 2002).

As a part of Phase II we tested 16 habitation and special-use sites within the unit (Kuckelman et al. 2004). Data gathered through this effort will complement information gained through the first phase of the project and will also help produce a more comprehensive occupational history of this large and important ancient community. Testing of the selected sites will also provide data important to understanding the social and environmental adaptations that led to the construction and abandonment of Goodman Point Pueblo.

History of the Unit

The larger “Goodman Point” landform is named after a foreman of the Lacy-Coleman Cattle Company, Henry Goodman, who drove cattle through the Cortez area in the late 1800s but never settled there. The Goodman Point Unit contains some of the first archaeological resources set aside for protection by the federal government. In 1889,

Section 4, Township 36 North, Range 17 West, which contains the Goodman Point Unit, was reserved from homesteading. This action was the result of a recommendation by W. D. Harlan, a U.S. Surveyor General from Denver, Colorado. In 1951, President Harry Truman reduced the size of the protected area to 62 acres within the section and designated this area as part of Hovenweep National Monument. An additional proclamation in 1952 added additional acreage to compose the present unit, now managed by SEUG-NPS. Because the unit has been protected since 1889, many sites on the parcel are in pristine condition (Connolly 1992).

Despite its obvious research potential, no systematic testing had been conducted within the unit prior to the initiation of Crow Canyon's work in 2005. During the past 50 years, NPS archaeologists have visited the unit to monitor its condition, but research has been largely limited to surface collections at Goodman Point Pueblo, including collections by Pinkley in 1951, by McLellan and Hallisey in 1967, and by an unnamed individual in 1969 (Kuckelman et al. 2004).

Archaeologists from Crow Canyon conducted noncollection pottery tallies at Goodman Point Pueblo in 1986. The results of these tallies, combined with the results of an analysis of sherds gathered during previous NPS collections, indicate that there was a limited occupation of the site during the Pueblo II period and a major occupation during the Pueblo III period (Adler 1986). One of the main goals of our research is to refine the chronology of other sites within the unit and to place them in a local and regional context.

As part of a larger survey of the Sand Canyon locality (Adler 1988, 1990, 1992), Crow Canyon archaeologists mapped Goodman Point Pueblo in 1987 using a plane table and alidade. In the same year, they conducted a pedestrian survey of the Goodman Point Unit. This survey focused on residential sites dating from the Pueblo II and III periods, and 17 such sites were recorded as part of this effort. Most of these sites will be tested as part of the current phase of the project.

In 2003, Crow Canyon and the SEUG-NPS conducted a detailed pedestrian survey of the entire 142 acres of the Goodman Point Unit and recorded a total of 42 sites with 56 temporal components (Hovezak et al. 2004). The site density recorded is thus one site per 3.4 acres, or 189 sites per square mile, which is one of the highest recorded densities in the northern San Juan region. The 56 temporal components identified during the survey include four that date from the Basketmaker III period, 15 that are of Pueblo II affiliation, and 23 Pueblo III components (Kuckelman et al. 2004).

From 2005 to 2007, Crow Canyon Archaeological Center compiled a total station map of Goodman Point Pueblo and conducted test excavations at that site (Coffey and Kuckelman 2006; Kuckelman and Coffey 2007; Kuckelman et al. 2009). Testing of Goodman Point Pueblo was completed in 2008, and an interim descriptive report is available online (Kuckelman et al. 2009). Work on Phase II of the project began in 2008 and continued through 2010; the 2010 fieldwork is the subject of this report.

Research Goals and Strategies

The goals of our research in the Goodman Point Unit reflect our multi-faceted approach to historical, anthropological, and methodological issues, as well as our commitment to American Indian interests. The following outline provides an overview of some of the broader questions we are addressing. A more detailed discussion of the research goals and objectives can be found in the research design created specifically for this project (Kuckelman et al. 2004).

The historical research goals we are pursuing include assessing the occupational history of the unit and determining how, when, and why it was depopulated. Anthropological research objectives include examining the settlement ecology of Pueblo farmers in the Mesa Verde region and analyzing how aggregation affects the internal and external organization of communities. Research goals designed to provide information important to American Indian interests include assessing the appropriate methods for studying the relationships between archaeological cultures and modern groups, as well as examining the processes that led to migration from the Mesa Verde region. Lastly, methodological research goals include large-scale goals, such as continuing efforts to produce fine-grained chronologies, and more specific goals, such as the use of petrographic analysis to produce detailed models of intercommunity exchange.

To achieve these ends, Crow Canyon Archaeological Center incorporates field methods and procedures that stress a conservation approach. The specific methods we use in the field can be found in the Crow Canyon Archaeological Center Field Manual (2001). These practices are guided by the principles of conservation archaeology as outlined by Lipe (1974); namely, that most of the deposits on the site will be left intact for future use. Following from this philosophy, only the artifacts on the modern ground surface that are within designated excavation units are collected; all other artifacts are left in place.

We use testing strategies that aim to both address our research goals and follow the ethos of conservation archaeology. The size of excavation units used in each context is intended to expose only portions of individual structures or nonstructures—like middens. These excavation units are then carefully placed to glean the maximum amount of data with minimal impact.

The nature of the remains being investigated, and the type of information desired from specific contexts, also guide the size and placement of test units. To facilitate comparisons between different architectural blocks, statistically comparable data from midden contexts is desirable. Therefore, randomly selected 1-x-1-m test units are placed in areas that appear, from modern ground surface, to possess midden deposits. Additional 1-x-1-m tests units are sometimes placed judgmentally to investigate features or other anomalies present in adjacent units.

Larger units are placed judgmentally in structures and architectural features to collect specific data relevant to the research objectives. In kivas, we locate 2-x-2-m units in the southern portion of observable kiva depressions so that we can expose and document

architectural features typically found in the southern part of a kiva (e.g., pilasters, southern recess, ventilator tunnel, and deflector) and sample the contents of the hearth. By placing excavation units in these locations, we hope to collect data relevant to site architectural patterns, subsistence, kiva-related activities, and abandonment treatments.

Kiva depressions were also systematically probed at each site prior to allocating excavation units. Probing was done with a 1-inch soil probe and individual sediment columns were analyzed and documented by site and depression. Each sample was examined for the presence of charcoal, charred wood, burned sediment, or burned adobe which might indicate significant structural burning in the kiva. Once probing was completed for the entire site, kiva depressions with the best evidence for structural burning were often given priority for testing. Not all kivas with possible evidence of burning were tested. Only 10 kiva 2-x-2-m units for this phase of the project are currently defined in the research design, and overall, few structures with possible evidence of burning were documented.

Targeting burned structures for excavation could admittedly skew data collected, but obtaining tree-ring samples for dating purposes will potentially provide a highly precise means of dating particular structures, architectural blocks, and sites. These data will also probably be important for interpreting portions of the site for which no direct chronometric data are available (e.g., unburned kivas and dismantled roomblocks). In addition, even though burned kivas were given priority for testing, some kivas which produced charcoal and some evidence of burning proved, upon excavation, not to be significantly burned. These structures will provide data from unburned kivas despite intentionally targeting burned structures for testing.

Surface structure, room block north wall, and enclosing wall units are also placed judgmentally. These 1-x-2-m test units are used to expose a variety of architectural elements and cultural deposits. The primary purpose of north wall and enclosing wall units is to document architectural styles and patterns as well as possible occupational sequences; surface structure test units also yield important information concerning structure use and abandonment practices.

A slight strategic difference between the first three years of testing at Goodman Point Pueblo and the current phase of the project is the excavation of some north wall units to include a surface or floor in the interior of structures. This is done to verify that some poorly preserved wall segments exposed are in fact “room” north walls as opposed to some other type of extramural wall, such as an enclosing or retaining wall. The decision to excavate individual north wall units to a floor is based on the preservation, architectural content, and context of each excavation unit; we do not expand north wall units when the portion of the wall exposed is sufficient to determine that it is part of a room or other surface structure. The poorer state of preservation of walls at some sites tested during this phase of the project, compared with walls exposed at Goodman Point Pueblo, is the reason for this modification in strategy.

We used 1-x-3-m units to test architectural spaces in and around the great kiva. These 1-x-3-m test units are situated in order to provide information about the architectural style, date, construction, and use of this large and complex structure. Eleven of these units have been placed in the great kiva depression and in parts of the large berm surrounding the structure. These longer units exposed continuous stratigraphic data crucial for interpreting a structure of this size.

In 2008, we began test excavations in a portion of an ancient road near the Harlan Great Kiva site, called the Goodman Point Belt Loop Road. One 4-x-.5-m test unit and one 2-x-1-m test unit were placed to examine the stratigraphy and artifact assemblage present in the downhill “berm” portion of the road. Though data from these trenches are still being analyzed, these units will hopefully produce data concerning the construction style and age of this important landscape feature. Crow Canyon staff members Jonathan Till and Jamie Merewether have supervised almost of the work related to road testing thus far.

Finally, at one small habitation site, Bluebird House, we used a stratified random-sampling strategy that was first employed by Crow Canyon during the Site Testing Program (part of the larger Sand Canyon Archaeological Project [Varien and Kuckelman 1999]). Specifically, seven sampling strata (roomblock, kiva, courtyard, midden, inner periphery, north outer periphery, and south outer periphery) corresponding to different areas of the site were defined, and 24 randomly selected 1-x-1-m units and one judgmental 1-x-1-m unit were excavated. Different sampling strata received different proportions of this overall total, and one judgmental 1-x-1-m unit was also excavated in the roomblock area. Our goal in employing a random-sampling strategy is to produce data that are directly comparable to the data generated for the 13 habitation sites tested during the Site Testing Program (Kuckelman et al. 2004). This approach should provide data useful in calculating artifact-accumulation rates, which in turn will help us address questions pertaining to the length and continuity of occupation at this site (see Varien and Kuckelman 1999).

All cultural materials and records from the Goodman Point Archaeological Project will be temporarily housed at the research laboratory until analysis and report preparation is completed. These materials will then be transferred to other permanent curation facilities, with artifacts and records going to the Anasazi Heritage Center near Dolores, Colorado.

2010 Goodman Point Community Testing

The 2010 field season began in March, when field staff began mapping sites and probing kiva depressions for evidence of structural burning. Crow Canyon staff supervised participant excavations at the tested sites from April 26 until October 8, and excavation units at all sites, except for the Harlan Great Kiva site, were completed by November 23. The six excavation units remaining in the Harlan Great Kiva site were winterized in November and will be completed in 2011.

Mapping

The first task of the field season was to produce accurate maps of the sites to be tested, which is essential for selecting and setting in excavation units. We mapped each site using a Topcon GT-303 electronic total station surveying instrument and AutoCAD software. The resulting maps provide an accurate visual model that we use to delineate and number architectural blocks, associated midden areas, and sampling units. Architectural blocks, as defined at Crow Canyon, are roomblocks, associated kivas, middens, and extramural areas. Following the convention used for Goodman Point Pueblo, sites with multiple roomblocks were numbered from north to south.

Using numerous instrument-established datums, we mapped kiva depressions, observable wall segments, features, rubble concentrations, and the extent of roomblock rubble for each site. Excavation units were also set in using the total station.

Excavation

[Table 1](#) summarizes, by site and architectural block, the excavation units opened through 2010. The table also specifies which units were completed and which will be continued in 2011. As of November 2010, 266 test pits had been started and 260 were completed. Reference to Table 1 provides a detailed breakdown of these units by site and context.

At the close of the field season, the six excavation units at the Harlan Great Kiva site that were still in progress were protected with a plywood cover and sealed with plastic sheeting. These measures were taken as safety precautions and to protect the units from damage over the winter. Each completed unit was fully documented and backfilled. A layer of moisture and vapor permeable landscaping fabric was placed against all standing architectural surfaces before backfilling. Great care was taken to place rocks gently against exposed architecture and to fill each unit with rocks and sediment removed from that unit. The fill was tamped to reduce settling, and the top of the fill was returned as much as possible to the original appearance of the unit at modern ground surface.

In the following text, 2010 excavations are summarized by site. The number and location of excavation units set in during the season reflects expanded testing within the Goodman Point Unit.

Thunder Knoll

This site is located in the northern part of the Goodman Point Unit. Similar to other sites in this part of the unit, it seems likely that parts of Thunder Knoll and parts of Shields Pueblo were built and occupied during the Pueblo III period. The site has at least five discrete roomblocks, six kiva depressions, and four midden areas ([Figure 2](#)). Thick sage covers the south-trending ridge on which the site is situated, and some historic looting is evident in the midden areas.

Of the 21 units set in at the site, only one kiva unit, in Structure 301, was ongoing in 2010. Work in this structure was completed in the 2010 season. During excavation, a portion of the floor surface, a small floor assemblage, and a portion of a masonry deflector were exposed. Artifacts recovered from the floor of the structure seem to suggest that the kiva was built and occupied during the Pueblo III period, although few artifacts were recovered overall. The roof of the structure does not appear to have been burned upon abandonment, and some decomposing wood noted near the floor surface may suggest some of the roofing material was left in place at the time of abandonment. However, the overall fill pattern represented in the stratigraphic profile may suggest that some of the structural elements were salvaged at the time the kiva was decommissioned or that nearly all of the wooden roofing beams have decomposed.

Midway House

Midway House is a large habitation site located near Trail Terrace between Shields Pueblo and Goodman Point Pueblo. In all, there are three roomblocks, seven to eight kiva depressions, and three midden areas ([Figure 3](#)). The site was tested in 2010 using 16 excavation units spread across these cultural areas.

Block 100 was tested using one roomblock north wall unit and three midden units. Excavation of the north wall unit did not expose a masonry wall, but it did expose one posthole feature that was covered by redeposited native sediment. This evidence may point to an earlier post-supported structure that was subsequently covered by later construction debris. Decorated pottery recovered from the three midden units excavated in Block 100 seems to indicate an intensive Pueblo III occupation with some type of additional activity during the Pueblo II period.

Excavations in Block 200 yielded data which would also support a Pueblo III occupation of this part of the site. The roomblock north wall unit excavated here exposed parts of two double-coursed masonry walls (walls two stones thick) that framed a surface room. This construction style would suggest a Pueblo III use, although only a basal course and one other vertical course are present. This likely suggests that some of the structural material comprising the room was recycled to build other, later structures nearby. Pottery gathered from the five midden units excavated to the southeast of the block would seem to support a primary Pueblo III use of the block as evidenced by the presence of McElmo and Mesa Verde black-on-white.

Seven excavation units were used to test the most southerly roomblock, Block 300. The foundation of a masonry wall was exposed in one roomblock north wall unit. Only the wide foundation of the north wall, partially built using vertical sandstone rocks, was preserved and all other upper courses were removed or displaced. The other roomblock north wall unit excavated is located along a south-trending protrusion of rubble tied into the main east-west roomblock (see [Figure 3](#)). No structural walls were exposed in this unit, but a posthole and an associated cultural surface appear to suggest that some type of partially covered work area was present in this location. Decorated pottery collected from

all excavation units in Block 300 would support a primary Pueblo III use of the block, with McElmo Black-on-white probably being the most abundant.

Trail Terrace

Trail Terrace is an expansive site situated on a south-trending slope between Goodman Point and Shields pueblos. A site recorded as an ancient trail bisects Trail Terrace and appears to run between those two large centers ([Figure 4](#)). The five units left unfinished at the site from 2009 were completed in 2010, as were two north wall units in Blocks 100 and 200. The spatial location of the site, and artifact data collected so far, seem to suggest a PIII occupation for much of this site.

The north wall unit completed in Block 100 revealed the presence of a single-coursed masonry wall (a wall one stone thick), with only the basal course of the wall still intact. The preservation of this wall stub makes confident inference about original construction difficult, but it seems this wall may represent a Pueblo II construction. At that time single-coursed masonry walls were more typical of roomblock construction. The fact that only the basal course remains may also suggest that the original roomblock was dismantled for building materials that were subsequently used to build other structures.

Excavations along the north wall in Block 200 exposed a double-coursed masonry wall that also displayed only the basal course still intact. This type of wall construction is more typical of post-A.D. 1150 roomblocks, suggesting this room was likely built and occupied later than parts of Block 100. Completion of the four midden units just to the east of the roomblock seems to reinforce this idea, with the majority of the decorated ceramics appearing to date to the Pueblo III period. Most black-on-white sherds observed appear to be McElmo Black-on-white.

One roomblock north wall unit excavated in Block 300 exposed the poorly preserved remnants of a roomblock wall and a very small amount of rubble. One late Pueblo black-on-white sherd found near the floor surface may suggest a Pueblo III use of the structure, and the small amount of rubble recorded (about .1 m³) may also suggest that the structure was salvaged for building materials in ancient times.

Evidence collected so far suggests a Pueblo III occupation for much of Trail Terrace. At least the southern three blocks appear to display remains suggestive of a Pueblo III occupation, and architectural evidence from several roomblock north wall units suggests very extensive dismantling of structures sometime in the Pueblo III period. Artifact data collected from the site appears to point to an intensive A.D. 1150 to A.D. 1250 occupation of the site, suggesting it might correlate more closely with the earlier Shields complex than the later Goodman Point Pueblo complex of the Goodman Point community. These interpretations are tentative, however, and making more precise interpretations will require additional analysis of the recovered materials.

Sage Summit

This multicomponent ancestral Pueblo and historic site lies in the northern part of the Goodman Point Unit on a small sage-covered ridge. The site has a historic artifact scatter in addition to the remains of a Pueblo habitation site; the latter consists of one roomblock, one kiva depression, and two possible midden areas ([Figure 5](#)). The site was tested with six midden units, one roomblock north wall unit, and two other general testing 1-x-1-m units.

The two general testing 1-x-1-m units were excavated in the northeast part of this site to determine the depth of cultural deposits present in a proposed parking lot location. This was done in partnership with the NPS, and these units are in addition to the original research design. A complete surface collection of the proposed area was also completed as part of this project. In both of these excavation units, cultural material was confined to within 10 cm of the modern ground surface, and in general, this portion of the site appears to contain a limited historic and ancient artifact scatter.

Excavations in the ancestral Pueblo portion of the site yielded artifacts and architectural remains suggestive of a Pueblo III use. The roomblock wall exposed in the roomblock north wall unit is actually likely the southern wall of a room to the north. The double-coursed construction of the wall, however, would seem to suggest a post-A.D. 1150 construction for the associated room. McElmo Black-on-white and other late Pueblo decorated pottery appear to dominate the assemblage, reinforcing the idea that the site was occupied most intensively during the Pueblo III period.

Cactus Draw

This ancestral Pueblo habitation site is located near Goodman Point Pueblo. Cultural components include one roomblock, one kiva depression, a possible midden area, a rubble concentration, and a check dam ([Figure 6](#)). Three excavation units were used to test the site during the 2010 field season.

Excavation in the roomblock north wall unit exposed parts of two double-coursed masonry walls. Only two to three vertical courses of masonry were present in the remaining portion of the walls, and very little rubble was removed during excavation. One midden unit was excavated about 10 m south of the kiva depression present at the site, but defining any type of formal midden area was difficult due to a general lack of artifacts on the surface. Probing potential midden areas with a 1-inch soil probe also did not yield additional evidence of a midden. Only a handful of sherds were collected from this midden unit, and almost all decorated pottery collected from the site appears to date to the late Pueblo III period.

At the Cactus Draw site, the combination of very little midden material and incomplete roomblock architecture may suggest that the habitation was either never completed, or occupied very briefly, and then dismantled during the late Pueblo III period. The minimal evidence for a midden might argue that the site was a planned expansion of Goodman

Point Pueblo that was never completed prior to regional migration in the A.D. 1270s and A.D. 1280s.

One check dam was also tested at the site using a 2-x-1-m excavation unit. In general, the check dam appears to have been constructed by piling sandstone rocks in a small drainage that had down-cut almost to bedrock in ancient times. The relationship of this feature to the roomblock architecture is still being studied. The presence of small sandstone chunks and other structural debris, likely from roomblock construction, “capping” parts of the check dam might suggest that the check dam predates the construction of the habitation.

Lupine Ridge

This relatively large and complex site lies near Goodman Point Pueblo, and it seems likely that portions of Lupine Ridge could have been occupied at the same time as the larger pueblo. Understanding how these two sites relate both temporally and culturally will be important in interpreting developments in the late Pueblo occupation of the Goodman Point Unit. Lupine Ridge is an expansive site with approximately 10 to 12 roomblocks, 19 to 20 kiva depressions, and at least 10 midden areas spread across a gentle, south- sloping ridge ([Figure 7](#)).

In 2008, 20 excavation units were set in at the site, and in 2010, an additional 28 excavation units were exposed across the site. The units placed in 2010 were located in blocks 200, 400, 500, 600, 800, 700, and 1000. As a whole, more excavation units were placed at Lupine Ridge than at any other site during Phase II; all units were completed during the 2010 field season.

Excavation in Block 200 included work in one roomblock north wall unit and five midden units. The roomblock north wall unit did not expose architecture, but did reveal the presence of midden fill which caps the ancient ground surface. Pottery collected from this excavation unit and the other five midden units included mostly late Pueblo types in the decorated assemblage, including McElmo and Mesa Verde black-on-white.

One roomblock north wall unit was excavated in Block 400 but did not expose roomblock architecture. It is possible, given the stratigraphic profile of the unit, that a discrete layer of midden was dumped in a location that was once a roomblock, but at some point in the past, all architectural components of that structure were completely dismantled.

In 2010, five midden units and a roomblock north wall unit were excavated in Block 500. In the north wall unit a poorly preserved portion of a masonry north wall and an interior slab feature were exposed. Very little rubble was removed from the excavation unit, and that, combined with the presence of an internal floor feature, may suggest that the roomblock room was built, used, and then dismantled, with the material reused elsewhere. Pottery collected from the north wall unit and the associated midden units

would seem to suggest that Block 500 was used most intensively during the Pueblo III period, as evidenced by the presence of McElmo and Mesa Verde black-on-white sherds.

The single roomblock north wall unit excavated in Block 600 yielded further evidence of material reuse at the site. Though no intact masonry was recorded in the unit, a trench dug as a foundation or “footer” for a roomblock north wall was exposed. The presence of a wall trench, with nearly all the stone removed, would suggest that a wall had once been present in this location, but that been dismantled at some point in the past. This trench is approximately 34 cm in width, which is wide enough to have seated a double-coursed wall, but the type of masonry used is unknown. Also, pottery collected from the unit would suggest a Pueblo III use of the area, but more detailed analysis of the artifacts is needed before assigning a firm age estimate to the structure.

Two excavation units, placed end to end, were used to test an unusual structure in Block 800. A portion of a double-coursed wall framing the north part of this structure, Structure 803, was exposed in one roomblock north wall unit. An additional 2-x-1-m unit was placed immediately to the south to explore some upright slabs and a single-coursed wall identified during excavation of the north wall unit. From the architecture exposed, it appears that part of the structure was constructed of double-coursed masonry, while other parts of the structure were built using single-coursed masonry and some upright sandstone slabs. Given the relatively robust nature of the north wall, and some late Pueblo black-on-white pottery recovered from both units, it is likely that the structure dates to the Pueblo III period although it displays some construction characteristics that are atypical for a roomblock of that age.

In 2010, a total of seven additional excavation units were placed in Block 700. Five of these units, one roomblock north wall unit and four midden units, were located on the western side of the block, and two midden units were placed in a large, previously tested midden area on the eastern margin of the block. The roomblock north wall unit exposed the southern wall of a poorly preserved room. Only the bottom two to three courses of the wall remained intact and little rubble was removed from the unit overall. This double-coursed masonry wall rested on redeposited native construction material and some midden, suggesting the associated roomblock came after earlier cultural deposits had been laid down in this location.

Pottery collected from all midden units excavated in Block 700 would suggest a large-scale Pueblo III use of the block, with a less intensive use during the Pueblo II period. The excavation of two midden units on the western side of Block 700 revealed the presence of at least one kiva that was covered by later midden material and construction debris. This evidence suggests that earlier Pueblo III and, possibly, Pueblo II architectural components may be buried or “masked” by later cultural deposits in this portion of the site.

A total of five excavation units, including a roomblock north wall unit and four midden units, were used to test Block 1000. The roomblock north wall unit exposed the poorly preserved basal course of a masonry wall. It is likely this basal course once represented a

double-coursed masonry wall that had been salvaged for material sometime in the Pueblo III period.

Excavations in the midden area revealed generally shallow midden deposits containing primarily late Pueblo black-on-white pottery types, including McElmo and Mesa Verde black-on-white. One midden unit southwest of the roomblock area also exposed part of a kiva ventilation tunnel and portions of the ventilation shaft, which were covered with later construction and midden material. Similar to what was recorded in the western part of the Block 700 midden, it appears as if an earlier component, represented by this kiva architecture, was buried by later construction and other cultural debris.

Overall, the occupational history of the Lupine Ridge site appears more complex than many of the sites tested as a part of Phase II. Earlier cultural remains capped by later cultural deposits suggest the site was remodeled at least one or two times during the Pueblo II and Pueblo III periods.

Meadow View

This site is near Goodman Point Pueblo and overlooks a grassy meadow. The surface expression of the site is fairly compact, with only one architectural block defined. Included in this block are at least four kiva depressions and an arcing roomblock rubble mound that appears to curve around the central kivas on the north and west sides to another row of rooms partially framing kivas on the south ([Figure 8](#)). One poorly defined midden may be present just southeast of the rubble mound, although this area is somewhat obscured by heavy vegetation.

We started six excavation units at the site near the end of the 2009 field season and all of these units were completed by the end of 2010. Two midden units were excavated just to the south of roomblock architecture, and two surface structure units, one kiva unit, and one north wall unit were also excavated.

This site displays a higher quantity of very large building stones at the modern ground surface than any other site we have tested as part of Phase II. In fact, the surface signature of the site appears more consistent with that of Goodman Point Pueblo than any other site within the Goodman Point Unit. This may not be surprising given the site's spatial proximity and orientation to the larger village.

Artifacts recovered from the two completed midden units also seem to reinforce the idea that the site was built and occupied at roughly the same time as Goodman Point Pueblo. Almost all the decorated pottery recovered from the midden units appears to be Mesa Verde Black-on-white, and the overall depth of midden deposits appear fairly shallow, approximately 18 to 30 cm deep. Dense wall fall was also removed in the upper fill of these units, suggesting that nearby structures were not extensively salvaged prior to their collapse. This pattern is very similar to what was recorded in some midden areas at Goodman Point Pueblo (Kuckelman et al. 2009).

Roomblock architecture exposed in all architectural test units also appears to support a late Pueblo III construction of much of the site. The north wall unit, which is situated in the northwest part of the roomblock rubble mound, exposed a curving, double-coursed wall that appears to frame an “arcing” room on the northwest corner of the roomblock. The exposed portion of the wall is thick, and the exterior faces of the stones appear to be well-shaped. Given this construction, it is possible this room could be part of a bi-wall room complex similar to those recorded in parts of Goodman Point Pueblo (Kuckelman et al. 2009).

The two surface structure units excavated near the center of the block exposed a portion of one kiva and another surface room. One kiva pilaster, a portion of the kiva bench, the kiva floor, and the kiva cell wall (a square or rectangular masonry wall enclosing the kiva) were uncovered. Some Mesa Verde Black-on-white pottery was recovered from the fill of the structure and all architectural elements exposed would be consistent with a late Pueblo III construction of the kiva.

The structure on the other side of this kiva cell wall is some type of room framing the kiva to the west. Dense wall fall, and some roofing material observed near the floor surface of the structure, would suggest that a small, roofed room once abutted the kiva. The floor surface of that room would have been about the same elevation as the floor of the kiva, which is somewhat unusual. This uncommon building pattern—a kiva adjacent to a deep room—may suggest some type of special use for this kiva-room suite.

One kiva unit was excavated in the western part of the roomblock area. This unit exposed a kiva hearth, part of deflector, and more than one meter of the floor surface. No artifacts were recovered from the floor surface, but the fill pattern in the kiva, including approximately 1.4 m³ of sandstone rubble, would suggest that the surrounding surface architecture was substantial and not extensively dismantled at the time the kiva was abandoned. The proximity of this site to Goodman Point Pueblo, coupled with a lack of evidence for material salvage, may suggest that this kiva was in use at the same time that most of Goodman Point Pueblo was occupied.

A late Pueblo III construction and use of the Meadow View site is suggested by the data collected so far. The presence of bi-wall architecture, Mesa Verde Black-on-white pottery, and intact, collapsed surface structures suggest that this site was a contemporary of Goodman Point Pueblo. If true, the position and layout of the site, in tandem with these internal architectural characteristics, may suggest an extradomestic or special function for the site related to the larger pueblo—perhaps a function similar to that served by Block 1600 at Sand Canyon Pueblo (Kuckelman 2007).

South Place

This site is located near Goodman Point Pueblo; the ancestral Pueblo component of the site is comprised of a rubble alignment, a roomblock rubble mound, three possible kiva depressions, and one possible midden area. There are also some historic midden areas within the site boundary. Three excavation units were used to test the site in 2010,

including one roomblock north wall unit, one midden unit, and one architectural sampling 1-x-1-m unit ([Figure 9](#)).

The roomblock north wall unit and the architectural 1-x-1-m unit were used to test the only well-defined rubble mound at the site. These two units exposed parts of two masonry walls—the north and east wall of Structure 104. Approximately 1.4 m² of the floor surface on the interior of the structure was also exposed. Structure 104 was built on top of redeposited native sediment, and the intact portions of both walls displayed double-coursed masonry walls about five courses high. Approximately .23 m³ of rubble was removed from both excavation units, and no decomposing roofing material was observed near the floor surface of the structure. Only a few late Pueblo black-on-white sherds were recovered from near the floor surface.

No definite midden area could be identified at the site despite probing potential midden areas with a 1-inch soil probe. Only a handful of Pueblo artifacts were present on the surface of the site. The single midden unit excavated did not expose midden deposits but, instead, revealed redeposited native sediment that is most likely from the excavation of a nearby kiva.

The architectural remains observed in the roomblock, along with the lack of evidence for a Pueblo-age midden at the site, may suggest a couple of likely use-related scenarios. It seems at the South Place site, as at the Cactus Draw site, the pueblo architecture was either not finished prior to regional abandonment or that the pueblo was built, occupied very briefly, and then partially dismantled late in the Pueblo III period. The fact that the standing walls of the roomblock are higher than those recorded at most other potentially salvaged sites may suggest that some architectural walls were in the process of being built rather than being salvaged. This observation may support the idea that the South Place site was in the process of being built, but was never finished prior to regional migration from the area in the A.D. 1270s and 1280s.

Pinyon Place

This site lies in the western part of the Goodman Point Unit near the Harlan Great Kiva site. Three different architectural blocks, five possible kiva depressions, and four midden areas comprise the primary cultural remains at the site ([Figure 10](#)). Two other sandstone concentrations of unknown age or original function are also located to the southwest of Block 200. The site is situated in fairly dense pinyon and juniper woodland on a slight, south-trending ridge.

In all, 17 excavation units were completed at the site, and the last of these, a kiva unit in Block 300, was finished in the 2010 field season. All of these completed units produced data critical to interpreting Pinyon Place and its relationship to other sites in the Goodman Point Unit.

The kiva unit completed in 2010 exposed a hearth, deflector, southern bench face, floor features, and a small floor artifact assemblage in the southern part of the kiva (Structure

310). A remodeled hearth and a capped floor feature likely suggest an extended use or fairly extensive remodel of the kiva. One pit feature capped by the latest floor surface appears to have once been a large posthole, suggesting the original structure of the kiva was substantially different (e.g., a post-supported pit structure roof instead of a pilaster-supported kiva roof). The few artifacts recovered from near the floor of Structure 310 suggest it may have last been used during the Pueblo II or Pueblo III period, with the assemblage displaying some Mancos and McElmo black-on-white sherds.

Taken as a whole, the architectural and artifact data collected so far from Pinyon Place is largely different than that observed for much of the Goodman Point Unit. Roomblocks made using post and single-coursed masonry construction, as well as early Pueblo II pottery recovered from on or near the associated floor surfaces, likely suggests that parts of Pinyon Place may have been some of the earliest habitations built in the unit after a regional migration from the area in the A.D. 900s (Lipe and Varien 1999). In fact, structures of similar age and construction have been recorded in the region (Martin 1938; Robinson and Harrill 1974), and this building pattern may point to the establishment of an early “pioneer” settlement in the southwest part of the unit. Better defining this early community would be important in understanding the initial construction of the Harlan Great Kiva site, other nearby sites like Bluebird House with similar attributes, and subsequent cultural developments at both Shields and Goodman Point pueblos.

Harlan Great Kiva

The great kiva at the Harlan Great Kiva site is the only known public structure to be tested as a part of Phase II. The surface signature of the site is complex and expansive, displaying one large depression, an extensive berm around that depression, and concentrations of rubble that are likely the remains of surface structures adjacent to the great kiva itself ([Figure 11](#)). Eleven 1-x-3-m units, three surface structure units, one architectural 1-x-1-m unit, and one north wall unit were used to test architectural portions of the site, and 10 midden units were placed in a midden area to the southwest of the great kiva.

More work in seven units within the great kiva interior exposed additional architectural elements in 2010. One new excavation unit set in the northern part of the great kiva exposed a stairway entrance that would have led from a northern antechamber room (Structure 130) outside of the great kiva, down into the great kiva main chamber (Structure 101). The portion of the stairway in the antechamber room displays “steps” which are cut into undisturbed native sediment comprising the floor of that structure. Where the stairway comes down through the northern upper lining wall of the great kiva, the step is constructed of masonry, capped by about 8 to 10 cm of mortar. This masonry step is located in a purposefully constructed and “finished” gap in the upper lining wall, while a wooden beam serves as the southern lip or threshold of the step leading into the great kiva. Exposing this stairway is important for understanding how people entered and exited the great kiva main chamber.

In 2010, we also continued work in the floor vault feature that was exposed in 2009. It is located north of the masonry column in the southeast part of the great kiva. This feature is set into the latest floor surface of the great kiva and is framed by a combination of masonry and mortar—at least on the west and south sides. The top of the feature contained dense rubble that appears to be “fitted” to the margins of the floor vault in places. This could be representative of a formal, intentional capping of the feature when the great kiva was decommissioned.

Under this dense rubble fill, a layer of burned structural debris contained an unusually large piece of burned wood. The specimen is approximately 50 cm long, at least 25 cm wide, and about 8 to 10 cm in thickness. At first inspection the burned wood looks as if it might be part of a purposefully shaped wooden “plank” (i.e., a purposefully thinned, wider than average wooden member). Dr. Karen Adams, an archaeobotanical consultant with Crow Canyon, has looked at some fragments from this specimen and has identified the wood as ponderosa (personal communication). This is fairly unusual given that almost all of the tree-ring samples collected from the Goodman Point Project have been juniper or pinyon. The size of the specimen, its location in the floor vault, and the type of wood used, could suggest this plank once covered part of the floor vault during its use, suggesting the vault may have once been used as a “foot drum” (e.g., by covering the vault and dancing on wooden coverings, a resonating sound could be created similar to that of a drum). We are submitting this specimen for tree-ring dating so hopefully we will learn more about the age and potential use of the specimen.

The completion of two surface structure units just to the south of the great kiva produced information important for understanding different construction episodes at the site. In these units three structures (Structure 120, Structure 145, and Structure 150) were identified or better defined in 2010.

Stratigraphically, the earliest and lowest of these structures is Structure 150. This masonry structure is located immediately south of the southern upper lining wall of the great kiva; it is truncated on its north side by the latest construction of the southern upper lining wall of the great kiva. The masonry that defines the western edge of the feature “steps down” from south to north and is a minimum of six courses high on the southern end and a maximum of nine courses high on the northern end. This masonry is seated on undisturbed native sediment which also steps down to the north with roughly excavated “steps” that get progressively deeper to the north. Given this construction, it seems likely that the structure once served as a stairway entrance that provided access to the great kiva interior from the south. This entrance was subsequently sealed off by later construction of the southern wall of the great kiva, effectively blocking the entryway.

Another structure, Structure 120, is built on top of fill that covers Structure 150. Built outside of the great kiva, Structure 120 is a surface structure which has a plaster face on the southern and eastern sides. First recognized in 2008, much of the roofing material for this structure was burned, and that burned fill was capped by construction of a later structure, Structure 145. Tree-ring samples collected from the burned roof-fall stratum of Structure 120 have yielded dates which are suggestive of a circa A.D. 1149 construction.

As a result, Structure 150, which underlies Structure 120, must be earlier than this—suggesting the great kiva was in use prior to A.D. 1149, but it had a different configuration.

Structure 145, the structure built on top of Structure 120, appears to date later than A.D. 1149 because it is resting on top of the burned structural debris that produced those dates. The eastern wall of Structure 145 is built using double-coursed masonry and is at most four courses high. This building pattern would also be suggestive a post-A.D. 1150 construction. Some of the wall stones were almost visible from the modern ground surface, and very little rubble was removed from fill above or around these stones. Roughly shaped, large basal stones are all that remain of the southern wall, suggesting that the structure was either never completed, or that nearly all of the stone was salvaged in ancient times. The evidence from Structures 120, 150, and 145 would suggest at least three construction episodes for this part of the site—likely spanning both the Pueblo II and Pueblo III periods.

In 2009, the uppermost and latest floor surface used in the great kiva was exposed. In 2010, more of this floor surface was exposed in ongoing units. Several black-on-white and corrugated sherds were point located on this surface, which slopes slightly downward from the southern upper lining wall to the north. Several tree-ring samples were also collected from near the floor surface, but all specimens were small and were collected from a very shallow stratum of burned structural debris in contact with the floor.

Some of the tree-ring samples collected from this thin stratum of burned material in the 2008 and 2009 field seasons have been analyzed by the Tree-Ring Laboratory in Tucson. Though not all of the samples have been analyzed, preliminary dates produced so far suggest the final use of the great kiva occurred sometime around A.D. 1250. These terminal dates for the structure seem to extend the use life later than the majority of the artifact assemblage would indicate (e.g., few sherds of Mesa Verde Black-on-white), but would fit with some models of local population movement. For instance, terminal use in the early A.D. 1250s would fit with the model that people in the nearby area moved to the Goodman Point Pueblo site and constructed a great kiva there, sometime in the late A.D. 1250s or early A.D. 1260s (Kuckelman et al. 2009).

Excavations beneath the latest floor surface of the great kiva suggest a complex and lengthy use history for the great kiva itself, and for the site as a whole. In an excavation unit just to the west of the large masonry column, three additional floor surfaces were recorded underneath the latest floor surface. Materials recorded in contact with these earlier floor surfaces include a projectile point, an abalone pendant, and several beads. In addition to these artifacts, thin deposits of burned material and sandstone debris associated with these surfaces suggest several episodes of remodeling within the great kiva interior during its use.

In 2010, another pit structure was identified beneath the lowest of these great kiva floor surfaces. Two floor surfaces were documented approximately 35 to 40 cm beneath the basal courses of the large masonry column on the great kiva interior. These floor surfaces

correspond to this earlier post-supported pit structure. Both surfaces are very uniform and display at least one posthole and a sealed floor feature. The floor artifacts collected so far would suggest a Pueblo II use of the structure, and the size of the posthole (the posthole is approximately 30 cm in diameter) appears to be more consistent with a smaller, domestic pit structure than an early, post-supported great kiva. It is possible more excavation will take place in 2011 to better define this structure, but overall, current evidence suggests it may be smaller than the great kiva, and may, in fact, be a Pueblo II pit structure that predates great kiva architecture at the site.

Monsoon House

Monsoon House is a relatively large and architecturally complex site in the western portion of the Goodman Point Unit. The site is comprised of four different architectural blocks with nine to 10 kiva depressions, at least seven midden areas, and four rubble scatters ([Figure 12](#)). In the research proposal, this site was selected to receive six 1-x-2-m units to investigate the architectural style present in Block 200—a substantial roomblock rubble mound that appears not to have been extensively dismantled in the past, and which might include a central plaza area defined by enclosing walls.

Fourteen additional excavation units were placed at the site in 2010. These additional units were north wall and midden units placed in Blocks 100, 200, and 400. All excavation units at the site were completed in 2010.

In Block 100, one roomblock north wall unit, one 2-x-1-m unit placed in a kiva, and four midden units were completed in 2010. The roomblock north wall unit exposed parts of two double-coursed masonry walls. Both walls displayed three to four vertical courses of intact masonry and very little rubble overall. About .17 m³ of small diameter sandstone debris was removed from this unit. The construction style of the walls and the amount of rubble removed appears to suggest a Pueblo III use of the roomblock. Portions of this roomblock were likely dismantled at some point in the past.

Work in the 2-x-1-m unit placed in the kiva (Structure 103) yielded data important to understanding the occupational history of this block, and perhaps, its relationship to Block 200. The structure had burned at the time of abandonment and many tree-ring samples were collected from this roof-fall stratum. The floor of the kiva displayed portions of a hearth, subfloor vent, and an interesting floor assemblage. Very few subfloor vents have been recorded in kivas in the Goodman Point Unit, and overall, comparatively few have been recorded in the region. The subfloor vent in Structure 103 contained parts of two Mesa Verde Black-on-white mugs, one of which is about half of a “stirrup mug,” i.e., a purposefully built double mug where two mugs are joined by dual handles. The presence of these artifacts in the vent may suggest a middle-to-late Pueblo III use of the kiva, and the presence of the subfloor vent may also suggest the retention of an earlier, fairly uncommon, building style.

The four midden units completed in Block 100 during 2010 are located southeast of the main roomblock architecture. All four units displayed dense, but relatively shallow,

midden deposits, and the decorated pottery recovered would seem to suggest a Pueblo III occupation. In some of these units, midden deposits are separated by a thin stratum of redeposited native sediment and other structural debris, suggesting Block 100 may have been remodeled at least once during its use life.

In 2010, nine excavation units were completed in Block 200: one enclosing wall unit, one roomblock north wall, one surface structure, one kiva unit, and five midden units. Architectural units completed at the site appear to suggest a long history of use for Block 200 and support initial ideas about an unusual construction style for this block (Hovezak et al. 2004). Excavations in both the north wall unit and the surface structure unit exposed double-coursed masonry walls consistent with a Pueblo III construction. Underneath these wall segments, both units yielded evidence of earlier cultural activity including midden deposits (some about 50 cm in depth) and an earlier wall foundation. The earlier wall foundation was exposed in the north wall unit and is comprised of vertical tabular sandstone chunks; the width of the foundation appears to suggest it was constructed for a single-coursed masonry wall. This may suggest that surface architecture was present at the site at least during the Pueblo II and Pueblo III periods.

Excavations in the kiva unit in Block 200 produced data which may reinforce an extended use of the site. Similar to the kiva tested in Block 100, this kiva (Structure 204) also displayed a subfloor vent—in addition to a vent tunnel, a portion of the hearth, remnants of a deflector, and a modest floor assemblage. The roof of this kiva was also burned at the time of abandonment, and this roof-fall stratum yielded numerous tree-ring samples that will be submitted for dating. Some Mesa Verde Black-on-white sherds recovered from near the floor surface suggests this kiva may have been used until the middle Pueblo III period, and a remodeled southern recess area suggests the kiva was refurbished at least once during its use life.

Data collected from the midden units excavated in Block 200 seem very comparable to that collected from Block 100. Most of the diagnostic white ware pottery appears to be Pueblo III in age, including sherds of McElmo and Mesa Verde black-on-white. Lesser amounts of Cortez and Mancos black-on-white recovered from these same middens may also support a Pueblo II use of portions of Block 200.

The single surface structure unit excavated in Block 300 yielded architectural evidence suggestive of a possible tower-kiva complex in this part of the site. A curving, double-coursed masonry wall segment was exposed in the unit, and this wall appears to represent the remains of a single, large, circular surface structure associated with a kiva depression. A maximum of eight vertical courses of masonry are intact in the arcing wall, and approximately .24 m³ of rubble was removed from the unit during excavation. It seems likely this lone circular structure would fit most definitions of a “tower,” and the spatial association with a kiva might suggest Block 300 is comprised of one of the only tower-kiva complexes recorded in the Goodman Point Unit.

In 2010, four additional units were excavated in Block 400, including one roomblock north wall unit, one 1-x-1-m architectural unit, and two midden units. The architectural

units excavated in the block seem to support evidence seen in other parts of the site which suggest an extended use.

The roomblock north wall unit and the architectural 1-x-1-m unit were placed end to end in the north central part of the Block 400 architecture. These units exposed parts of two double-coursed masonry walls framing a likely Pueblo III room (Structure 412). A maximum of three vertical courses were preserved in the exterior face of the north wall, and only .17 m³ of rubble was removed during the excavation of both units. The combination of little rubble and few vertical courses of the wall left intact may suggest some dismantling or salvage of building materials in ancient times.

Cultural fill and midden material extends about 35 cm beneath the basal course of the north wall of Structure 412. This fill appears to be primarily midden material, mixed with some construction fill primarily comprised of redeposited native sediment. Underneath this cultural material lies the basal course or foundation of another wall. This wall would have been built prior to the construction of Structure 412. Though only the basal portion of the wall is preserved, it is possible the wall represented by this foundation was once constructed with either single- or double-coursed masonry—perhaps the north wall of a Pueblo II roomblock.

Two additional midden units were excavated southwest of Block 400 in 2010. Both of these midden units yielded shallow, but dense, midden deposits that appear to contain both Pueblo II and Pueblo III decorated ceramics. In fact, more Pueblo II diagnostic sherds, including Cortez and Mancos black-on-white were noted from this midden than several other midden areas tested at the site. This may suggest a more robust Pueblo II use of this part of the site compared with other blocks to the north.

Goodman Point Belt Loop Road

The Goodman Point Belt Loop Road is an expansive landscape feature that appears to be spatially associated the Harlan Great Kiva site and other sites in the area. This ancient road appears to follow a roughly arcing trajectory, perhaps physically linking the great kiva to habitation sites that were part of the larger community.

Two units were completed at this site in 2010. The units are situated in the road itself and in a slight downhill “berm” that parallels the course of the main road. One 4-x-.5-m unit and one 2-x-1-m unit were excavated to look at the stratigraphy present in this section of the road and to collect any artifacts that might help to date the construction of the feature.

Very few artifacts of any kind were collected from these units, and the stratigraphic data are somewhat ambiguous. Inspection of the unit profiles by Dr. Kirk Anderson, a geoarchaeological consultant with Crow Canyon, suggests part of the downhill berm may be redeposited native sediment from excavating part of the roadway and dumping the “spoil” material onto the accompanying berm. Several sediment and pollen samples were collected from various places in the profile of these units, and hopefully, further analysis

of these samples will produce more confident inferences about the road profile and the nature of road construction.

Additional Field Work

Field work in 2010 entailed the continuation of two important additional field studies. These studies, outlined in the following sections, should produce data that will complement and enhance information gathered through our test excavations. Hopefully, these studies will help examine archaeological, environmental, and ecological variables relevant to understanding the communities that once resided in the Goodman Point Unit.

General Field Testing

A total of seven field excavation units were completed in non-site areas throughout the Goodman Point Unit in 2010. The purpose of excavating these units was to gather data relevant to studying potential agricultural fields situated on the landscape surrounding recorded habitations. Numerous sediment, carbon dating, and pollen samples were collected from these excavation units, and these samples will hopefully produce data important to understanding the effective environment supporting the ancient community at Goodman Point.

Two of these units were placed based on the remote-sensing work that was completed in 2009. William Volf, of the Natural Resources Conservation Service (NRCS), volunteered his time, equipment, and expertise to conduct several remote-sensing transects and one large remote-sensing grid using two highly sophisticated instruments. The primary tools used in this effort were an electricity-resistance meter and a device called a magnetometer. These high-tech instruments locate subsurface archaeological remains by shooting a low-voltage electrical current through the ground (the RM-15 Resistance Meter) and by recognizing magnetic anomalies that could indicate the presence of buried structures and features (the FM-256 Fluxgate Gradiometer).

Most of the remote sensing done in 2009 focused on a relatively open area just west of Goodman Point Pueblo. This tract of land is part of a larger expanse located in the center of the Goodman Point Unit which displays relatively few habitation sites—perhaps because it was used as a field location for extended periods in ancient times. In all, we completed three 20-m transects across linear landscape features as well as one 20-x-40-m grid in an open meadow that might be a potential field location.

Both units placed from the remote-sensing work are situated in the meadow near the confluence of two linear anomalies recognized in both the magnetic and resistivity data. Excavation in these units revealed the presence of a large, slab-lined, thermal feature and a small number of buried sherds outside of the feature. The very precise placement of the slabs framing the feature, as well as the depth, may suggest it was once used for storage of some kind and was later converted to a thermal feature. No artifacts, other than charcoal, were collected from the feature itself, making accurate age estimates difficult. Though the feature recognized through the remote sensing did not turn out to be a check

dam or other obvious agricultural feature, the remote sensing did aid in placing the units intended to explore cultural remains in an area which is difficult to assess.

One type of sediment represented in the profile of these two units is different than that observed in any other unit excavated as a part of Phase II. Preliminary analysis of this sediment by Dr. Anderson suggests this grayish, clay-rich sediment likely has a high organic matter content, and it also looks as if it might be indicative of a higher water table. These characteristics suggest that this stratum may be representative of a “wet meadow” soil, where relatively mesic conditions are present periodically. Pollen and sediment analyses should help to better define what this soil might mean in terms of potential agricultural productivity in this area just west of Goodman Point Pueblo.

Aside from the two excavation units placed through the remote-sensing effort, five other units were excavated to look for evidence of ancient fields. These units were placed across three different soils types (Gladel-Pulpit, Cahona-Pulpit, and Wetherill Loam, as defined by the NRCS) and in different topographic areas near temperature monitors (see next section). Soil samples, pollen samples, and some burned materials were collected from these units, and some samples of this burned material have been sent off for dating purposes. In several of these units, burned material was collected from about 25 to 30 cm beneath later sediments. Though the exact nature of this burned lens is yet to be determined, it is possible that this zone may represent a buried cultural horizon—possibly associated with cultural activity like field clearing. Hopefully, further analyses of these samples will produce data which can help to address some of these questions.

Temperature Monitoring

In 2010, a series of monitors continued to collect temperature data in various locations within the Goodman Point Unit. These electronic monitors record very precise temperature data and can operate unaided for months at a time. The monitors were placed in 2008 on upland south slopes, on upland north slopes, on drainage hillsides, and in drainage bottoms, to collect data reasonably representative of the topographic variability present on the landscape.

The purpose of these monitors is to collect long term temperature data for various parts of the unit that could have once been agricultural fields. The goal is to have them in place for at least three years. Data collected will be studied for patterns of temperature variation which might point to certain areas of the unit being more or less favorable for agriculture. Length of frost-free periods and number of corn growing-degree days will likely be some of the variables studied in order to examine the agricultural potential of different locations within the unit. This temperature data will hopefully be combined with other environmental and ecological data to study potential agricultural productivity in areas where ancient farmers may have grown crops.

Summary and Interpretations

The 2010 field season in the Goodman Point Unit was very productive in obtaining data relevant to research goals. The construction of high resolution maps of the tested sites, documentation of individual excavation units, artifact data, photos, and the stratigraphic information recorded provide a solid foundation for interpreting the occupational history and chronology of sites tested this past field season.

Some important observations relating to our research goals were made at the Harlan Great Kiva site in 2010. Among these was the documentation of additional surface structures around the great kiva. The three structures documented in the southern berm area (Structures 120, 145, and 150) provide firm stratigraphic evidence of at least three construction or remodeling episodes spanning the Pueblo II and Pueblo III periods. Multiple episodes of remodeling indicate that the great kiva was an important community structure for generations of people in the Goodman Point community, and may suggest this structure tethered people to each other and to a place for over 100 years.

Other structures and features important to understanding the overall construction and use of the great kiva were documented in 2010. The documentation of a stair-step entryway leading into the great kiva from an antechamber room to the north is important for understanding how people accessed the great kiva. Specific architectural features like this entryway, the masonry column, and the floor vault provide data that can be compared to other contemporary and later great kivas tested in the region (e.g., the Morefield Great Kiva at Mesa Verde and the great kiva (Structure 1213) at Goodman Point Pueblo [Kuckelman 2007, McLellan 1969]). These comparisons will be important for trying to assess aspects of regional and local identity through time.

Thin, burned deposits resting on the latest floor surface seem to suggest that great kiva main chamber was not covered by a robust roof when it was decommissioned. This might argue for a partial, or perhaps, almost completely dismantled roof during the latest use of the great kiva. Tree-ring samples collected from these thin deposits inside the great kiva itself suggest the final use of the structure likely took place around A.D. 1250. Other tree-ring samples and stratigraphic data collected from structures adjacent to the great kiva suggest the site was being used as a great kiva prior to A.D. 1149. An earlier post-supported pit structure (Structure 152) was identified beneath the lowest floor surface of the great kiva, and the presence of this structure may suggest the site was initially a Pueblo II habitation that was later converted to a great kiva.

Further work at two of the largest habitation sites tested as a part of Phase II, Lupine Ridge and Monsoon House, point to extended or recurring occupations of some sites through time. The superposition of structures on top of each other, some of which were apparently later dismantled, suggests people may have resided in some places within the Goodman Point Unit longer than others. In general, sites with more evidence of remodeling seem to be located near persistent community architecture, like the Harlan Great Kiva site, or near other important sites like Shields and Goodman Point pueblos. A more detailed analysis of the data should help to produce patterns of residence through

time which will help create a more comprehensive view of the settlement history within the unit.

Potentially important observations regarding material reuse continued to be made in 2010. Several of the roomblock north walls and surface structures tested revealed the presence of very little building stone, shallow cultural deposits, and, in some cases, formal, prepared surfaces associated with remnant wall foundations. The amount of rubble recovered from these test units, and the height of preserved architecture, seems to vary by site, perhaps suggesting differing degrees of material reuse through time. This could suggest that extensive salvaging did take place at very precise times in the ancient past—likely occurring on a large scale at least during the Pueblo III period.

Excavations completed as part of the field testing effort should also produce data important to understanding how ancestral Pueblo farmers made a living on the landscape. Radiocarbon samples collected from burned material buried by later sediments may help us understand when people first began modifying the local landscape—perhaps for agriculture. Analysis of soil samples should also provide information about nutrient levels and other characteristics that would have been important for agriculturalists.

Public Involvement

In 2010, a large and diverse segment of the interested public benefitted from Crow Canyon's research as part of Goodman Point community testing. The excavation portion of the project involved 543 participants, including school-age children through adults. Numerous formal tours given as part of single-day programs, as part of non-excavation school curriculum, or as part of other Crow Canyon sponsored activities, resulted in at least 800 additional individuals learning about sites within the Goodman Point Unit. In all, at least 1,343 people were informed about the prehistory of the Goodman Point Unit as part of 2010 field season.

This figure reflects Crow Canyon's commitment to involving diverse segments of the interested public in our research and also demonstrates public interest in the ancient past of the Mesa Verde region. Such a broad research and education effort could not have been possible without the cooperative partnership between Crow Canyon and the NPS.

American Indian Involvement

During the 2010 field season, American Indian individuals and groups participated in fieldwork in the Goodman Point Unit. Students from the Navajo and Yakima tribes participated in summer camps, and individuals from the pueblos of Santa Clara, Acoma, and Cochiti, as well as people from the Navajo and Ute Mountain Ute tribes, visited the sites where we were working.

As part of a ongoing cooperative effort between Crow Canyon and American Indian consultants, the Pueblo Farmer Project continued in 2010. Meetings held in May and October served as venues for planting and harvesting crops which were located in various

fields on the Crow Canyon campus. This cooperative effort was initially outlined in the research proposal for the Goodman Point Unit (Kuckelman et al. 2004), and information gathered will hopefully result in both educational curriculum for native students and data which can be used to model agricultural productivity in the area. Crow Canyon staff members Paul Ermigiotti, Marjorie Connolly, and Mark Varien have worked closely with representatives of several tribes on this project. The continued consultation and involvement of American Indian groups throughout the Goodman Point Project demonstrates Crow Canyon Archaeological Center's dual commitment to archaeological field research and its concern with facilitating communication and input from American Indian peoples regarding the study of the region's past.

Potential Plans for 2011

All excavation units, except for six units at the Harlan Great Kiva site, were completed during the 2010 field season. These six unfinished units were purposefully left open to facilitate some final documentation and to allow for the possibility of additional excavation in these specific units. Excavations in these units would be undertaken to better define the earlier pit structure (Structure 152) that is located beneath the floor of the great kiva and to collect artifacts from the floor surface. These artifacts might help determine when the structure was built and used. Discussions are currently ongoing with the NPS regarding the timing and extent of any additional work in the structure that will be completed in 2011.

Research Field Personnel, 2010 Field Season

Grant Coffey, supervisory archaeologist
Steve Copeland, research archaeologist
Kathy Mowrer, osteological consultant
William Volf (NRCS), remote-sensing consultant
Elizabeth Orchard, research intern
Caitlin Sommer, research intern
Krystina Mucha, research intern
Laura Buchanan, research intern

Additional Personnel, 2010 Field Season

Fumi Arakawa
April Baisan
Jill Blumenthal
Josephina Chang-Order
Paul Ermigiotti
Rebecca Hammond
Kristin Kuckelman
Jamie Merewether
Scott Ortman
Shirley Powell

Others Who Worked or Volunteered at tested sites, 2010 Field Season

Bob Bernhart
Chris Goetze (NPS)
Corky Hays (NPS)
Ted Kieffer
Chris Nickel (NPS)
Dale Pratt

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