Evaluative Testing of 20 Sites in the Powertech (USA) Inc. Dewey-Burdock Uranium Project Impact Areas

Black Hills Archeological Region

Volume 1:
Evaluative Testing Report

by

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Abstract

Evaluative subsurface testing was conducted in the Black Archeological Region for Powertech (USA) Incorporated. The 20 sites selected for testing are located within Custer and Fall River counties, South Dakota. The selected sites are located in portions of the Dewey-Burdock uranium project area that will be impacted by proposed mining and/or construction of plant facilities. The sites tested in Custer County are 39CU251 and 39CU3608 (prehistoric artifact scatters/hearths); 39CU3619 (historic artifact scatter/structures); and 39CU3774 (prehistoric artifact scatter). The sites tested in Fall River County are 39FA96 (prehistoric artifact scatter/hearths/nonfarm ruins/dump/historic campfire); 39FA251 (prehistoric artifact scatter/hearth); 39FA272 (prehistoric lithic scatter); 39FA273, 39FA1908, 39FA1916, and 39FA1944 (prehistoric artifact scatters); 39FA557 (historic cabin remnants); 39FA584 (historic artifact scatter/farmstead); 39FA1869, 39FA1887, and 39FA1898 (prehistoric artifact scatters); 39FA1901 (prehistoric artifact scatter/historic well and artifact scatter); 39FA1905 (historic artifact scatter/depressions); 39FA1907 (prehistoric artifact scatter/historic artifact scatter); and 39FA1941 (prehistoric artifact scatter/hearths).

Based on the results of the evaluative testing, site 39FA1941 meets the specifications for Criterion D and is recommended as eligible for listing in the National Register of Historic Places (NRHP). The remaining 19 sites do not meet Criteria A, B, C, or D and are recommended as not eligible for listing in the NRHP. One individual structure on site 39CU3619, Log Barn-CU02500002, is recommended as eligible for listing on the NRHP by the architectural historian. It is recommended that site 39FA1941 and structure CU02500002 be avoided by mining and plant facilities development impacts. If avoidance is not possible, a data recovery plan should be developed and implemented by the appropriate parties.

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PROJECT OVERVIEW

Description

This report addresses the results of the evaluative testing of 20 sites (39CU251, 39CU3608, 39CU3619, 39CU3774, 39FA96, 39FA251, 39FA272, 39FA273, 39FA557, 39FA584, 39FA1869, 39FA1887, 39FA1898, 39FA1901, 39FA1905, 39FA1907, 39FA1908, 39FA1916, 39FA1941, and 39FA1944). These sites were documented by the Archeology Laboratory, Augustana College (ALAC) during a Level III cultural resources survey undertaken in 2007 (Kruse et. al. 2008); however, evaluative testing was not completed then due to time constraints. The selected sites are located in portions of the Dewey-Burdock uranium project area that will be impacted by proposed mining and/or construction of plant facilities. The primary objective of this investigation was to complete the evaluation of the eligibility status of each of the 20 sites for listing on the National Register of Historic Places (NRHP). These properties were also evaluated in terms of the effect of the undertaking in the resources, and management recommendations have been provided accordingly.

The 20 sites are located in the southern Black Hills in Custer and Fall River counties (Figure 1; Appendix A, Maps A1 and A2) within the Black Hills Archeological Region. The combined area of the four Custer County sites and the 16 Fall River County sites is approximately 335.62 acres. A small portion of site 39FA96 is owned by the United States Department of the Interior, Bureau of Land Management (BLM) (Appendix A, Map A2). The federal portion of site 39FA96 was investigated under Permit for Archeological Investigations number M 102859 and Field Work Authorization number MT-040-M102859-1089 (Appendix B). Fieldwork was conducted by ALAC between September 13 and November 15, 2011.

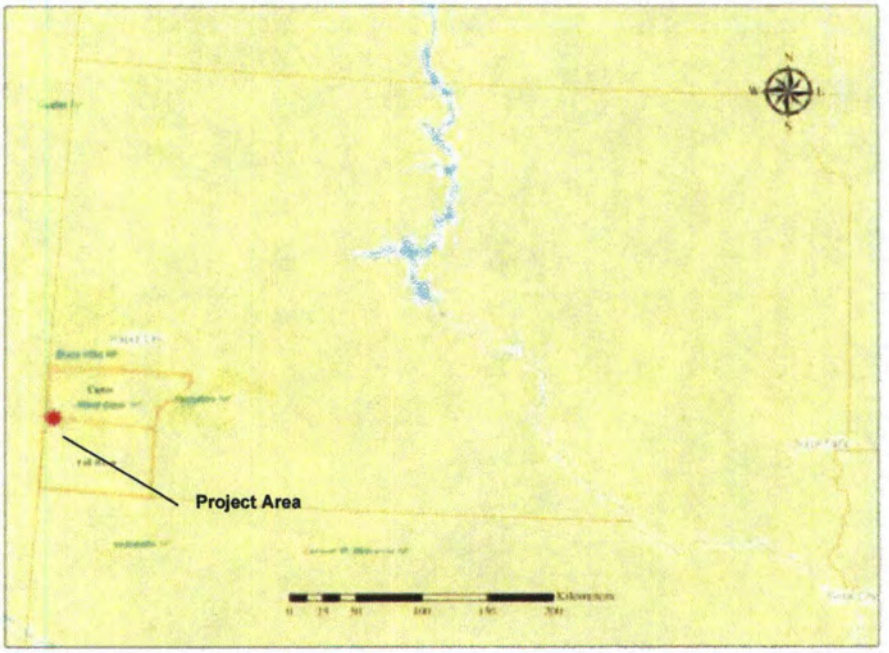


Figure 1. General location of project area in Custer and Fall River counties, South Dakota (adapted from ESRI ArcGIS 9 United States Data and Maps Media Kit 2005).

Personnel

L. Adrien Hannus served as ALAC Principal Investigator for the project. Linda Palmer acted as field director/project manager and as co-author of the report. Jason Kruse was crew chief and co-author of the report. Morgan Tucker, Amy Godsell, Austin Buhta, and Kayla Wiechmann were field crew members. Lynette Rossum conducted technical editing of the report.

Report Framework

This report comprises two volumes. Volume 1 contains the evaluative testing report. Volume 2 contains the report appendices. The appendices have been compiled in a separate volume because they contain information that is considered inappropriate for future public use and/or dissemination.

ENVIRONMENTAL CONTEXT

The project area is located within portions of Custer and Fall River counties within the southern portion of the Black Hills in southwestern South Dakota. The climate within the project area is continental and sub humid, characterized by dramatic shifting of seasonal weather patterns, light levels of precipitation, and extensive wind action (Kruse et al. 2008:2.6). Vegetation in the area consists primarily of short grasses, forbs, shrubs, and sparse Ponderosa pine trees.

A more detailed description of the environmental context for the portion of the southern Black Hills and plains periphery in which the 20 concerned sites are located can be referenced in Kruse et al. (2008). Specific soils mapped in each of the 20 site areas (Ensz 1990; Kalvels 1982) are presented in Table 1.

Table 1. Specific Soil Types Mapped in the Site Areas.

Site #	Specific Soil Name	Slope (%)	Description
39CU251	Grummit-Rock outcrop complex (GrD)	6-15	Shallow, well-drained, moderately sloping and strongly sloping soil intermingled with areas of outcrop; on upland ridges and hills; formed in clayey material weathered from acid shale
	Pierre-Grummit clays (PgC)	2-9	Well-drained, gently sloping and moderately sloping soils on uplands; formed in clayey material weathered from acid shale
	Butche-Rock outcrop complex (BwE)	9-60	Shallow, excessively drained, strongly sloping to very weak soil; formed in material weathered from sandstone with areas of hard sandstone; on side slopes and ridges
39CU3608	Grummit-Rock outcrop complex (GrD)	6-15	Shallow, well-drained, moderately sloping and strongly sloping soil intermingled with areas of outcrop; on upland ridges and hills; formed in clayey material weathered from acid shale
39CU3619	Arvada-Slickspots complex (AsA)	0-3	Deep, well-drained, nearly level and gently sloping soil closely intermingled with Slickspots; on uplands and terraces; Arvada soil formed in clayey and loamy alluvium and colluvium; Slickspots are in depressions and have a light gray surface crust over dense massive clay
	Barnum-Winetti complex(BeB)	0-6	Deep, rarely flooded, nearly level to gently sloping soils; on flood plains and terraces along major creeks; formed in alluvium derived from reddish sandstone, silty shale and other sedimentary rock
	Tilford silt loam	2-6	Deep, well-drained, gently sloping soil; on terraces and

Table 1. (continued)

Site #	Specific Soil Name	Slope (%)	Description
	(TfB)		uplands in the Red Valley; formed in materials weathered from reddish siltstone and silty shale
39CU3774	Butche-Rock outcrop complex (BwE)	9-60	Shallow, excessively drained, strongly sloping to very weak soil; formed in material weathered from sandstone with areas of hard sandstone; on side slopes and ridges
39FA96	Grummit-Snomo clays (GsD)	3-15	Shallow, well-drained, gently sloping to strongly sloping soils in areas on uplands where slopes are long and are rough or broken; formed in material weathered from acid shale
	Kyle clay (KyB)	2-6	Well-drained, gently sloping soil on uplands and terraces; formed in clayey material weathered from calcareous shale
	Pierre-Grummit clays (PgE)	6-25	Well-drained, gently rolling to hilly clay soils in areas on uplands where slopes are rough or broken
	Nunn clay loam (NuA)	0-2	Deep, well-drained, nearly level soil on terraces and uplands
	Nunn clay loam (NuB)	2-6	Deep, well-drained, gently sloping soil on terraces and uplands
	Barnum silt loam (Bc)	0	Deep, well-drained, nearly level soil on flood plains and low terraces along streams and drainage ways; deep drainage channels dissect all areas
	Tilford silt loam (TaB)	2-6	Deep, well-drained gently sloping soil on terraces and uplands
	Lohmiller silty clay loam (Lo)	0	Deep, well-drained, nearly level soil on flood plains that in some areas are dissected by deep channels
	Hisle-Slickspots complex (He)	0	Moderately deep, well-drained nearly level and gently sloping Hisle soil intermingled with Slickspots on uplands and terraces
	Broadhurst clay (BrD)	2-15	Deep, well-drained, gently sloping to strongly sloping soil on alluvial fans and terraces; deep gullies are in many areas
	Satanta loam (ScB)	2-6	Deep, well-drained, gently sloping soil on terraces
35FA251	Zigweid-Nihill complex (ZnE)	6-20	Deep, gently rolling to hilly soils in areas on ridges, fans, and terrace escarpments where slopes are short and convex; in many areas scattered rocks and pebbles are on the surface
	Mathias-Midway-Rock outcrop complex (MmE)	15-30	Areas of well-drained, hilly and steep soils that are closely intermingled with areas of Rock outcrop on mountains
	Pierre-Grummit clays (PgE)	6-25	Well-drained, gently rolling to hilly clay soils in areas on uplands where slopes are rough or broken
	Grummit-Snomo clays (GsD)	3-15	Well-drained, gently sloping to strongly sloping soils in areas on uplands where slopes are long and rough or broken
39FA272	Pierre-Grummit clays (PgE)	6-25	Well-drained, gently rolling to hilly clay soils in areas on uplands where slopes are rough or broken

Table 1. (continued)

Site #	Specific Soil Name	Slope (%)	Description
39FA273	Kyle clay (KyA)	0-2	Deep, well-drained, nearly level soil on uplands and terraces
	Pierre clay (PeB)	2-6	Moderately deep, well-drained, gently sloping soil on uplands
	Hisle-Slickspots complex (He)	0	Moderately deep, well-drained nearly level and gently sloping Hisle soil intermingled with Slickspots on uplands and terraces
39FA557	Tilford silt loam (TaA)	0-2	Deep, well-drained, nearly level soil on terraces and uplands
39FA584	Hisle-Slickspots complex (He)	0	Moderately deep, well-drained nearly level and gently sloping Hisle soil intermingled with Slickspots on uplands and terraces
	Tilford silt loam (TaB)	2-6	Deep, well-drained, gently sloping soil on terraces and uplands
39FA1869	Mathias-Midway-Rock outcrop complex (MmE)	15-30	Areas of well-drained, hilly and steep soils that are closely intermingled with areas of Rock outcrop on mountains
39FA1887	Tilford silt loam (TaB)	2-6	Deep, well-drained, gently sloping soil on terraces and uplands
	Lohmiller silty clay loam (Lo)	0	Deep, well-drained, nearly level soil on flood plains that in some areas are dissected by deep channels
39FA1898	Hisle-Slickspots complex (He)	0	Moderately deep, well-drained nearly level and gently sloping Hisle soil intermingled with Slickspots on uplands and terraces
	Tilford silt loam (TaB)	2-6	Deep, well-drained, gently sloping soil on terraces and uplands
	Barnum silt loam (Bc)	0	Deep, well-drained, nearly level soil on flood plains and low terraces along streams and drainage ways; deep drainage channels dissect all areas
	Kyle clay (KyA)	0-2	Deep, well-drained, nearly level soil on uplands and terraces
39FA1901	Hisle-Slickspots complex (He)	0	Moderately deep, well-drained nearly level and gently sloping Hisle soil intermingled with Slickspots on uplands and terraces
	Nunn clay loam (NuB)	2-6	Deep, well-drained, gently sloping soil on terraces and uplands
	Kyle clay (KyA)	0-2	Deep, well-drained, nearly level soil on uplands and terraces
39FA1905	Kyle clay (KyA)	0-2	Deep, well-drained, nearly level soil on uplands and terraces

Table 1. (continued)

Site #	Specific Soil Name	Slope (%)	Description
39FA1907	Tilford silt loam (TaB) Barnum silt loam (Bc)	2-6 0	Deep, well-drained, gently sloping soil on terraces and uplands Deep, well-drained, nearly level soil on flood plains and low terraces along streams and drainage ways; deep drainage channels dissect all areas
39FA1908	Tilford silt loam (TaB) Barnum silt loam (Bc)	2-6 0	Deep, well-drained, gently sloping soil on terraces and uplands Deep, well-drained, nearly level soil on flood plains and low terraces along streams and drainage ways; deep drainage channels dissect all areas
39FA1916	Mathias-Midway-Rock outcrop complex (MmE)	15-30	Areas of well-drained, hilly and steep soils that are closely intermingled with areas of Rock outcrop on mountains
39FA1941	Grummit-Snomo clays (GsD) Pierre-Grummit clays (PgE) Zigweid-Nihill complex (ZnE) Mathias-Midway-Rock outcrop complex (MmE)	3-15 6-25 6-20 15-30	Well-drained, gently sloping to strongly sloping soils in areas on uplands where slopes are long and rough or broken Well-drained, gently rolling to hilly clay soils in areas on uplands where slopes are rough or broken Deep, gently rolling to hilly soils in areas on ridges, fans, and terrace escarpments where slopes are short and convex; in many areas scattered rocks and pebbles are on the surface Areas of well-drained, hilly and steep soils that are closely intermingled with areas of Rock outcrop on mountains
39FA1944	Grummit-Rock outcrop complex (GrE) Pierre-Grummit clays (PgE)	3-40 6-25	Areas of a shallow, well-drained, gently sloping to steep Grummit soil closely intermingled with areas of shale Rock outcrop on uplands; generally dissected by gullies Well-drained, gently rolling to hilly clay soils in areas on uplands where slopes are rough or broken

CULTURAL CONTEXT

The cultural chronology of the southern Black Hills, including the project area, is most closely associated with that of the Northwestern Plains and Rocky Mountain regions (Figure 2). Although all cultural contexts can potentially be present within the project area, the radiocarbon dates obtained during the current evaluations fall exclusively within the Late Archaic and Late Prehistoric contexts, between 1300 and 2050 radiocarbon years before present (RCYBP) (Appendix C).

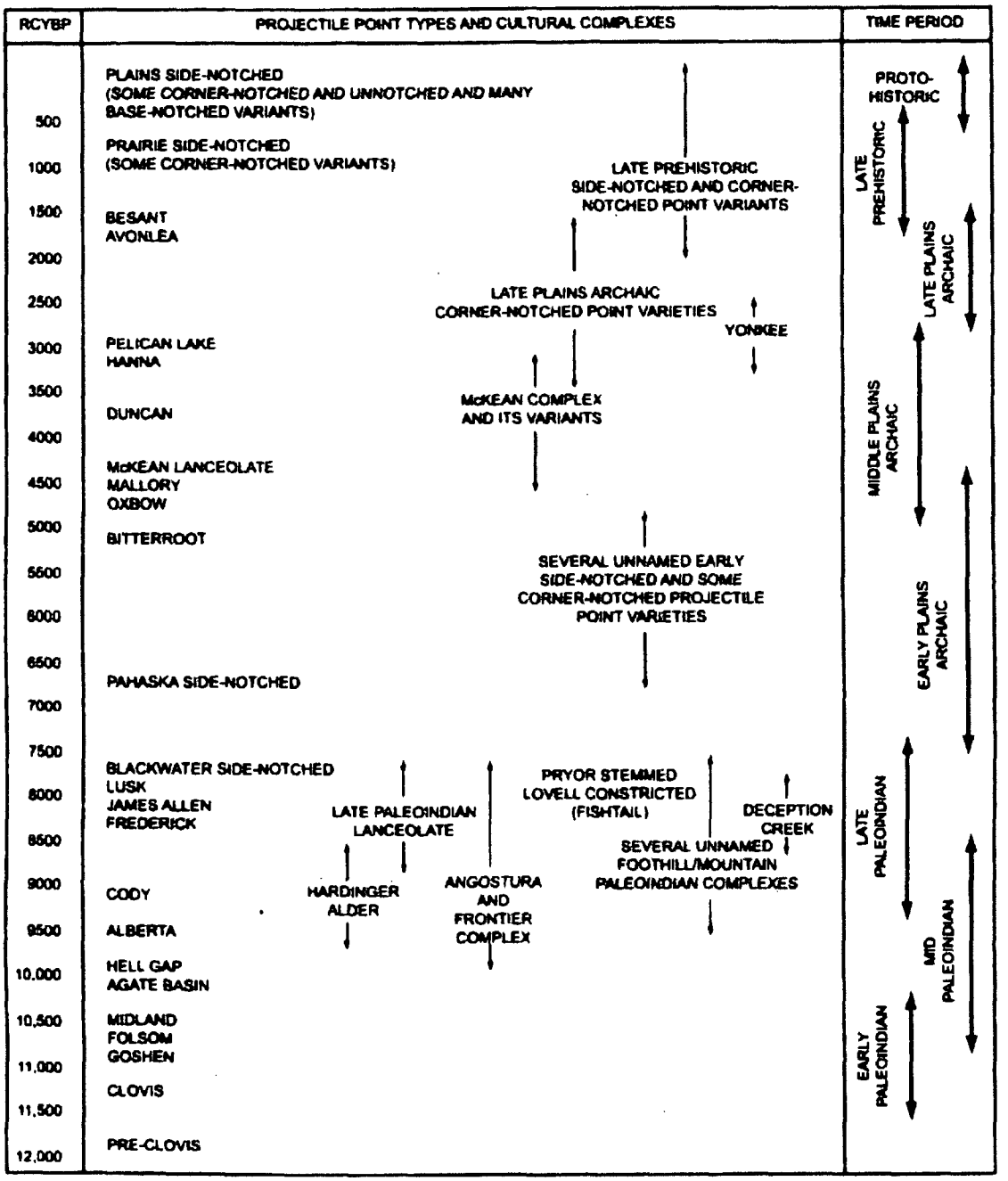


Figure 2. Northwestern Plains and Rocky Mountains chronology (Kornfeld et al. 2010).

More detailed information concerning the culture history for the portion of the southern Black Hills and plains periphery in which the 20 concerned sites are located can be referenced in Kruse et al. (2008).

REVIEW OF PRIOR CULTURAL RESOURCE STUDIES

The 20 sites evaluated during the current phase of testing were revisited or documented during the 2007 ALAC survey of Powertech (USA) Incorporated's proposed Dewey-Burdock uranium project locality (Kruse et al. 2008). A comprehensive literature search and records review of the entire project area, including the localities of the sites currently selected for evaluative testing, was completed on April 11, 2007 by Michael R. Fosha, Assistant State Archaeologist, South Dakota State Historical Society, Archaeological Research Center (ARC). The results of that study can be referenced in Kruse et al. (2008). Numerous sites documented in the 2007 survey (Kruse et al. 2008) lie within a one-mile radius of each of the 20 sites evaluated (Table 2).

Table 2. Sites Located within a One-Mile Radius of the Twenty Evaluated Sites.*

Evaluation Site #	Sites Within One-Mile Radius (General Categories)		
	Prehistoric	Historic	Prehistoric/Historic (Multicomponent)
39CU251	39CU451, 39CU3615, 39CU3621, 39CU3623, 39CU3624, 39CU3773, 39CU3774, 39CU3775, 39CU3776, 39CU3779, 39CU3780, 39CU3781, 39CU3782, 39FA273, 39FA1876, 39FA1881, 39FA1906	39CU3619	39CU3622
39CU3608	39CU271, 39CU459, 39CU460, 39CU463, 39CU464, 39CU530, 39CU532, 39CU556, 39CU557, 39CU559, 39CU2000, 39CU3564, 39CU3565, 39CU3570, 39CU3573, 39CU3574, 39CU3575, 35CU3590, 39CU3592, 39CU3593, 39CU3594, 39CU3597, 39CU3596, 39CU3598, 39CU3600, 39CU3601, 39CU3605, 39CU3606, 39CU3607, 39CU3609, 39CU3610, 39CU3611, 39CU3612, 39CU3613, 39CU3620, 39CU3771, 39CU3772, 39CU3783		39CU531
39CU3619	39CU251, 39CU451, 39CU459, 39CU3600, 39CU3601, 39CU3602, 39CU3604, 39CU3605, 39CU3606, 39CU3614, 39CU3620, 39FA272, 39FA583, 39FA584, 39FA1860, 39FA1862, 39FA1863, 39FA1865, 39FA1876, 39FA1897, 39FA1898, 39FA1901, 39FA1903, 39FA1904, 39FA1905, 39FA1906, 39FA1907, 39FA1908	39FA557	39CU3622, 39FA1902
39CU3774	39CU451, 39CU583, 39CU3562, 39CU3563, 39CU3615, 39CU3621, 39CU3623, 39CU3624, 39CU3773, 39CU3775, 39CU3776, 39CU3779, 39CU3780, 39CU3781, 39CU3782, 39FA1881	39CU3622	39FA1896
39FA96	39FA1859, 39FA1860, 39FA1875, 39FA1883, 39FA1884, 39FA1885, 39FA1886, 39FA1887, 39FA1888, 39FA1889, 39FA1890, 39FA1891, 39FA1892, 39FA1897, 39FA1898, 39FA1900, 39FA1908, 39FA1938, 39FA1940, 39FA1942, 39FA1943	39FA1882, 39FA2000	39FA1901, 39FA1902, 39FA1907
39FA251	39FA269, 39FA272, 39FA1868, 39FA1869, 39FA1870, 39FA1880, 39FA1910, 39FA1912, 39FA1913, 39FA1915, 39FA1916, 39FA1917, 39FA1920, 39FA1922, 39FA1924, 39FA1925, 39FA1926, 39FA2927, 39FA1928, 39FA1929, 39FA1932, 39FA1941, 39FA1944	39FA778	39FA96, 39FA1923
39FA272	39FA251, 39FA269, 39FA1868, 39FA1869, 39FA1875, 39FA1880, 39FA1883, 39FA1884, 39FA1891, 39FA1892, 39FA1912, 39FA1916, 39FA1917, 39FA1918, 39FA1920, 39FA1922, 39FA1924, 39FA1925, 39FA1929, 39FA1932, 39FA1934, 39FA1936, 39FA1941	39FA778	39FA1896, 39FA1902, 39FA1923

Table 2. (continued)

Evaluation Site #	Sites Within One-Mile Radius (General Categories)		
	Prehistoric	Historic	Prehistoric/Historic (Multicomponent)
39FA273	39CU251, 39CU451, 39CU3615, 39CU3663, 39FA273, 39FA583, 39FA584, 39FA1875, 39FA1880, 39FA1876, 39FA1878, 39FA1885, 39FA1886, 39FA1887, 39FA1891, 39FA1892, 39FA1897, 39FA1898, 39FA1903, 39FA1905, 39FA1906, 39FA1908	39CU3619, 39FA557, 39FA778	39FA96, 39FA1896, 39FA1901, 39FA1902, 39FA1907
39FA557	39CU451, 39CU459, 39CU532, 39CU556, 39CU3600, 39CU3601, 39CU3602, 39CU3604, 39CU3605, 39CU3606, 39CU3607, 39CU3615, 39CU3617, 39CU3620, 39CU3783, 39FA273, 39FA583, 39FA584, 39FA1859, 39FA1860, 39FA1862, 39FA1863, 39FA1865, 39FA1876, 39FA1885, 39FA1887, 39FA1897, 39FA1898, 39FA1900, 39FA1903, 39FA1904, 39FA1905, 39FA1906, 39FA1908	39CU3619	39FA96, 39FA1896, 39FA1901, 39FA1902, 39FA1907
39FA584	39CU251, 39CU451, 39CU459, 39CU556, 39CU1906, 39CU3600, 39CU3601, 39CU3604, 39CU3607, 39CU3714, 39CU3615, 39CU3617, 39CU3618, 39CU3620, 39FA273, 39FA583, 39FA1859, 39FA1860, 39FA1862, 39FA1863, 39FA1865, 39FA1876, 39FA1885, 39FA1886, 39FA1887, 39FA1897, 39FA1898, 39FA1903, 39FA1904, 39FA1905, 39FA1906, 39FA1908	39CU3619, 39FA557	39FA96, 39FA1896, 39FA1901, 39FA1902, 39FA1907
39FA1869	39FA251, 39FA269, 39FA272, 39FA1868, 39FA1870, 39FA1871, 39FA1872, 39FA1878, 39FA1880, 39FA1910, 39FA1915, 39FA1916, 39FA1917, 39FA1920, 39FA1922, 39FA1924, 39FA1925, 39FA1926, 39FA1927, 39FA1928, 39FA1941, 39FA1944	39FA778	39FA1923
39FA1887	39FA273, 39FA557, 39FA583, 39FA584, 39FA1859, 39FA1860, 39FA1862, 39FA1863, 39FA1865, 39FA1875, 39FA1883, 39FA1884, 39FA1885, 39FA1886, 39FA1887, 39FA1888, 39FA1889, 39FA1890, 39FA1891, 39FA1892, 39FA1897, 39FA1898, 39FA1900, 39FA1903, 39FA1904, 39FA1905, 39FA1906, 39FA1908, 39FA1938, 39FA1942, 39FA1943	39FA2000	39FA96, 39FA1896, 39FA1901, 39FA1902, 39FA1907
39FA1898	39CU3604, 39FA557, 39FA1859, 39FA1860, 39FA1862, 39FA1863, 39FA1865, 39FA1875, FA1878, 39FA1885, 39FA1886, 39FA1887, 39FA1890, 39FA1891, 39FA1900, 39FA1892, 39FA1897, 39FA1901, 39FA1904, 39FA1908	39CU3619, 39FA584, 39FA778, 39FA2000	39FA96, 39FA1896, 39FA1901, 39FA1907

Table 2. (continued)

Evaluation Site #	Sites Within One-Mile Radius (General Categories)		
	Prehistoric	Historic	Prehistoric/Historic (Multicomponent)
39FA1901	39CU451, 39CU3600, 39CU3604, 39CU3615, 39CU3617, 39FA273, 39FA557, 39FA583, 39FA1860, 39FA1862, 39FA1863, 39FA1865, 39FA1875, 39FA1876, 39FA1878, 39FA1885, 39FA1887, 39FA1891, 39FA1892, 39FA1897, 39FA1900, 39FA1903, 39FA1904, 39FA1905, 39FA1906, 39FA1908	39CU3619, 39FA584, 39FA778,	39FA96, 39FA1896, 39FA1907,
39FA1905	39CU451, 39CU3615, 39CU3617, 39FA273, 39FA557, 39FA583, 39FA1875, 39FA1876, 39FA1878, 39FA1885, 39FA1886, 39FA1887, 39FA1891, 39FA1892, 39FA1897, 39FA1898, 39FA1900, 39FA1903, 39FA1904, 39FA1905, 39FA1906, 39FA1908	39CU3619, 39FA584, 39FA778	39FA96, 39FA1896, 39FA1901, 39FA1902, 39FA1907
39FA1907	39CU451, 39CU3604, 39CU3617, 39FA273, 39FA557, 39FA583, 39FA1860, 39FA1862, 39FA1863, 39FA1865, 39FA1875, 39FA1876, 39FA1885, 39FA1886, 39FA1887, 39FA1889, 39FA1890, 39FA1891, 39FA1892, 39FA1897, 39FA1898, 39FA1900, 39FA1903, 39FA1904, 39FA1905, 39FA1906, 39FA1943	39CU3619, 39FA584, 39FA1882, 39FA2000	39FA96, 39FA1896, 39FA1901, 39FA1902, 39FA1907,
39FA1908	39CU451, 39CU3600, 39CU3601, 39CU3604, 39CU3615, 39CU3617, 39CU3783, 39FA557, 39FA583, 39FA1859, 39FA1860, 39FA1862, 39FA1863, 39FA1865, 39FA1875, 39FA1885, 39FA1887, 39FA1890, 39FA1891, 39FA1892, 39FA1897, 39FA1898, 39FA1900, 39FA1903, 39FA1904, 39FA1905	39CU3619, 39FA584, 39FA2000	39FA96, 39FA1896, 39FA1901, 39FA1902, 39FA1907
39FA1916	39FA251, 39FA269, 39FA272, 39FA1868, 39FA1869, 39FA1870, 39FA1875, 39FA1878, 39FA1880, 39FA1910, 39FA1912, 39FA1915, 39FA1917, 39FA1918, 39FA1920, 39FA1922, 39FA1924, 39FA1925, 39FA1926, 39FA1927, 39FA1928, 39FA1929, 39FA1932, 39FA1934, 39FA1941, 39FA1944	39FA778	39FA1896, 39FA1923
39FA1941	39FA251, 39FA269, 39FA272, 39FA1868, 39FA1869, 39FA1870, 39FA1872, 39FA1874, 39FA1876, 39FA1880, 39FA1881, 39FA1910, 39FA1913, 39FA1915, 39FA1916, 39FA1917, 39FA1920, 39FA1922, 39FA1928, 39FA1944	39FA778	39FA1896, 39FA1902, 39FA1923
39FA1944	39FA251, 39FA269, 39FA272, 39FA1870, 39FA1868, 39FA1869, 39FA1880, 39FA1910, 39FA1912, 39FA1913, 39FA1915, 39FA1916, 39FA1917, 39FA1918, 39FA1920, 39FA1924, 39FA1925, 39FA1926, 39FA1927, 39FA1928, 39FA1929, 39FA1932, 39FA1934, 39FA1941	39FA778	39FA1896

*Only those sites documented within the boundaries of the 2007 Powertech (USA) Incorporated's Dewey-Burdock proposed uranium project survey are represented.

METHODOLOGY

Fieldwork Methods

Prior to the fieldwork, a general evaluation plan was prepared by ALAC and presented to Powertech (USA) Inc., the Nuclear Regulatory Commission (NRC), the South Dakota State Historical Society Archaeological Research Center (ARC), and the South Dakota State Historic Preservation Office (SHPO). The proposed evaluation plan was approved. The general plan indicated that the 20 individual sites were to be tested using varying numbers of shovel tests and formal excavation units. The number, size, and spacing of test units per site were based on factors such as size of the site, presence and quantity of recorded features, location and density of surface scatters, type of landform, and degree of soil erosion.

The surface of each site was initially reexamined with informal (not parallel) zigzag transects. Surface artifact inventories were not recorded unless a diagnostic artifact was observed and collected, or artifacts were observed beyond the previously recorded site boundaries.

The test units were excavated by shovel-skimming and/or trowel based on the presence or absence of surface features and the density of cultural materials. The matrix was screened through 1/4-inch hardware mesh. All recovered subsurface cultural materials, with the exception of large quantities of fire-cracked rock (FCR) from hearth features, were bagged and transported to ALAC for analysis. The screened matrix was used to backfill each completed test unit.

Prehistoric hearth features were documented at sites 39CU251, 39CU3608, 39FA96, 39FA251, and 39FA1941. In order to standardize surface descriptions of hearth features, the following categories were assigned:

- Intact:
  a. The feature has not been exposed to surface erosion (e.g., buried and discovered using soil probe or subsurface tests).

b. The feature has been exposed at ground surface, but the FCR and feature fill have not been affected by erosion.

- Partially deflated:
  a. The feature exhibits deflation on the surface resulting in a concentration of FCR and charcoal or charcoal-stained fill on or near the surface.
  b. Soil probes indicate that some FCR is still intact subsurface.
- Completely deflated:
  a. Surface exhibits widely scattered area of FCR (typically 1-m-diameter or greater).
  b. Soil probes do not indicate any FCR concentration subsurface.
  c. No charcoal or charcoal-stained fill is present at the surface.

A percentage of degradation cannot be applied to the surface evidence of hearth features or through probing a buried feature. The only means for applying a percentage to the completeness of an intact hearth would be to cross-section or excavate each feature. Nearly every hearth feature in the region has experienced some degree of deflation over the years since abandonment, and the features likely initially varied in size (diameter and depth) and construction. It would, therefore, be nearly impossible to develop an accurate, meaningful percentage of degradation scale.

A sample of the documented hearth features on each of these sites was cross-sectioned. The recovered hearth fill was bagged as flotation samples and transported to ALAC for processing. The tested hearth features were planned and photographed prior to, during, and following excavation. The FCR recovered from each tested feature was counted, and the size range and types of lithic material were documented. The FCR was not collected; it was used to backfill the corresponding cross-sectioned features.

Mapping of the test unit locations, features or artifacts not previously documented, and other pertinent site data was accomplished using a Trimble (Pro XT) with 1-3 m accuracy. Site overviews, test units, and features were documented with digital photographs. Daily notes were recorded in field notebooks by the field director, crew chief, and the crew members.

Laboratory Methods

Recovered cultural materials were washed in plain water. The materials were then sorted into categories (per provenience) and cataloged.

Soil samples, primarily consisting of hearth fill, were processed by bucket flotation utilizing five-gallon buckets and water. The soil samples were divided into manageable portions and poured into the buckets. The buckets were filled with water and the soil/water mixture was stirred. The light fraction material was skimmed into a fine mesh material (<.25 mm). The heavy fraction was left at the bottom of the bucket and then water screened through 1/8-inch hardware mesh. The light and heavy fraction materials were thoroughly air dried, re-bagged, and labeled. Finally, each sample was sorted into categories (Figure 3); the roots and non-cultural materials were discarded. The artifacts were then cataloged (Figure 4; Appendix D).

Figure 3. Work study students and staff sorting flotation materials.

Figure 4. Archeological technician, Amy Godsell, cataloging faunal material.

The ARC, Rapid City, South Dakota, will be the permanent repository for the artifacts, records, and photographic materials associated with this project provided the landowners give their consent to donate the artifacts. If consent is not obtained, the artifacts will be returned to the landowners. No cultural materials were collected from the portion of site 39FA96 located on BLM land

Report Preparation

Updated site forms were prepared. Scaled plans/profiles drawn in the field were converted to electronic drawings using ArcGIS® 9 and were then edited. All field notes were typed. A photo accession number was obtained from ARC and added to typed photologs. Photographs were renumbered to match the electronic photolog numbers. Background information, site descriptions/evaluations, and recommendations were written. Illustrative materials and radiocarbon dating results were inserted into the text. The appendices were assembled. The draft report was then edited and corrections made prior to submission.

NATIONAL REGISTER OF HISTORIC PLACES EVALUATION

Evaluation Criteria

Evaluation of the significance of the historic/prehistoric archeological sites is based on the following established criteria of eligibility as set forth in the NRHP:

> The quality of significance in American history, architecture, archaeology, and culture is present in districts, sites, buildings, structures, and objects of state and local importance that possess integrity of location, design, setting, materials, workmanship, feeling, and association, and:
>
> A) That are associated with events that have made a significant contribution to the broad patterns of our history; or
>
> B) That are associated with the lives of persons significant in our past; or
>
> C) That embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or

D) That have yielded, or may be likely to yield, information important in prehistory or history (NPS 1991:37).

Criterion D is regarded as the most appropriate for the evaluation of archeological sites, which lack association with specific events (Criterion A) and significant individuals (Criterion B), and do not represent distinctive characteristics (Criterion C). While the Black Hills are recognized as a sacred area by Native American tribes, the archeological sites discussed in this report at present lack the documentation to qualify individually as Traditional Cultural Properties (TCPs).

In order to be eligible for listing in the NRHP under Criterion D, a site must have yielded, or have demonstrated the potential to yield, important information that contributes to our understanding of prehistory or history. To demonstrate this potential, the site must display on the surface, or produce through subsurface testing, evidence that it contains specific datasets that can be used to answer specific, important research questions (Deaver and Peterson 1999).

To be listed in the NRHP, a property must not only be shown to be significant under the National Register criteria, but must also have integrity. The National Register criteria recognize seven aspects or qualities (location, design, setting, materials, workmanship, feeling, association) that define integrity. For properties eligible under Criterion D, setting and feeling may not have direct bearing on the property's ability to yield information. Evaluation of integrity will focus primarily on location, design, materials, and sometimes workmanship (NPS 1990).

Overview

Twenty sites were selected for evaluative testing based on their location in areas expected to be heavily impacted by Powertech (USA) Incorporated's proposed mining and construction activities. The evaluative testing was initiated on September 13, 2011. The twenty sites, which were documented but not tested in the ALAC survey of 2007 (Kruse et al. 2008), were revisited and evaluated (Appendix A, Maps A1 and A2). The sites are summarized in Table 3. The respective updated site forms are presented in Appendix E. The sites are all located

within the Black Hills Archeological Region. A detailed description of each site was presented in Kruse et al. (2008). Summarized site descriptions, including any changes to the previously recorded information, descriptions of the evaluative fieldwork, and interpretations and NRHP eligibility recommendations per site, are provided below.

Table 3. Archeological Sites Evaluated.

Site Number	Cultural Affiliation	Site Type	County	NRHP Recommendation
39CU251	Native American	Artifact scatter Hearth	Custer	Not eligible
39CU3608	Native American	Artifact scatter Hearth	Custer	Not eligible
39CU3619	Euroamerican	Artifact scatter Structures	Custer	Not eligible as archeological site One eligible structure
39CU3774	Native American	Artifact scatter	Custer	Not eligible
39AFA96	Native American Euroamerican	Artifact scatter Hearth Nonfarm ruins Historic campfire	Fall River	Not eligible
39FA251	Native American	Artifact scatter Hearth	Fall River	Not eligible
39FA272	Native American	Artifact scatter	Fall River	Not eligible
39FA273	Native American	Artifact scatter	Fall River	Not eligible
39FA557	Euroamerican	Historic cabin remnants	Fall River	Not eligible
39FA584	Euroamerican	Artifact scatter Farmstead	Fall River	Not eligible
39FA1869	Native American	Artifact scatter	Fall River	Not eligible
39FA1887	Native American	Artifact scatter	Fall River	Not eligible
39FA1898	Native American	Artifact scatter	Fall River	Not eligible
39FA1901	Native American Euroamerican	Artifact scatter Artifact scatter Well	Fall River	Not eligible
39FA1905	Euroamerican	Artifact scatter Depressions	Fall River	Not eligible
39FA1907	Native American Euroamerican	Artifact scatter Artifact scatter	Fall River	Not eligible
39FA1908	Native American	Artifact scatter	Fall River	Not eligible
39FA1916	Native American	Artifact scatter	Fall River	Not eligible
39FA1941	Native American	Artifact scatter Hearth	Fall River	Eligible
39FA1944	Native American	Artifact scatter	Fall River	Not eligible

SITE 39CU251

Site Number: 39CU251
Site Type: Artifact scatter, hearth
Cultural Affiliation: Native American (Middle-Late Archaic/Woodland)
Subsurface Testing: 16 shovel tests; 1 1-x-1-m unit

Landscape Position: Ridge top

Landowner: Private
NRHP Evaluation: Not eligible
Site Condition: Disturbed

Date Tested: 10/14/11, 11/14/11 and 11/15/11
Map Reference: A2

Site Description

Site 39CU251 (Figures 5 and 6) was initially documented (Sigstad and Jolley 1975) as a scatter of lithic debris exposed on the surface of several adjacent ridges above an intermittent stream. The site was relocated by ALAC in 2007 (Kruse et al. 2008) and found to be more extensive than originally observed. An intact hearth was also recorded at that time. Vegetation in the site area consisted of grass, sage and prickly pear at the time of the evaluation. Ground surface visibility averaged 40 percent. Two diagnostic projectile points previously documented at site 39CU251 were attributed to styles associated with the Middle Archaic and Late Archaic/Plains Woodland time periods.

Evaluation Field Work

Reexamination of the site surface indicated that most of the hilltop is severely eroded due to wind and sheet wash. No diagnostic materials were noted on the site surface. Thicker soil in the saddle portion of the site is likely the result of redeposition due to sheet wash erosion. Sixteen shovel tests (ST1-ST16) were excavated along the higher elevations of the site area in locations that showed the most potential for intact soils (Figure 6). The profiles of the shovel tests are presented in Table 4.

Although the shallow soils in the excavated tests are comparable to those of the Grummit-Rock complex soil type (Ensz 1990) mapped in the site area (see Table 1), they exhibit severe deflation and redeposition across the site. The subsurface tests indicate a highly disturbed setting, with borrowing and grading on the western half of the site and deflation on the eastern half. No uniform buried soil deposit was encountered in the tests. Several shovel tests terminated in, or were excavated through, layers of mottled shale/gravels, gypsum

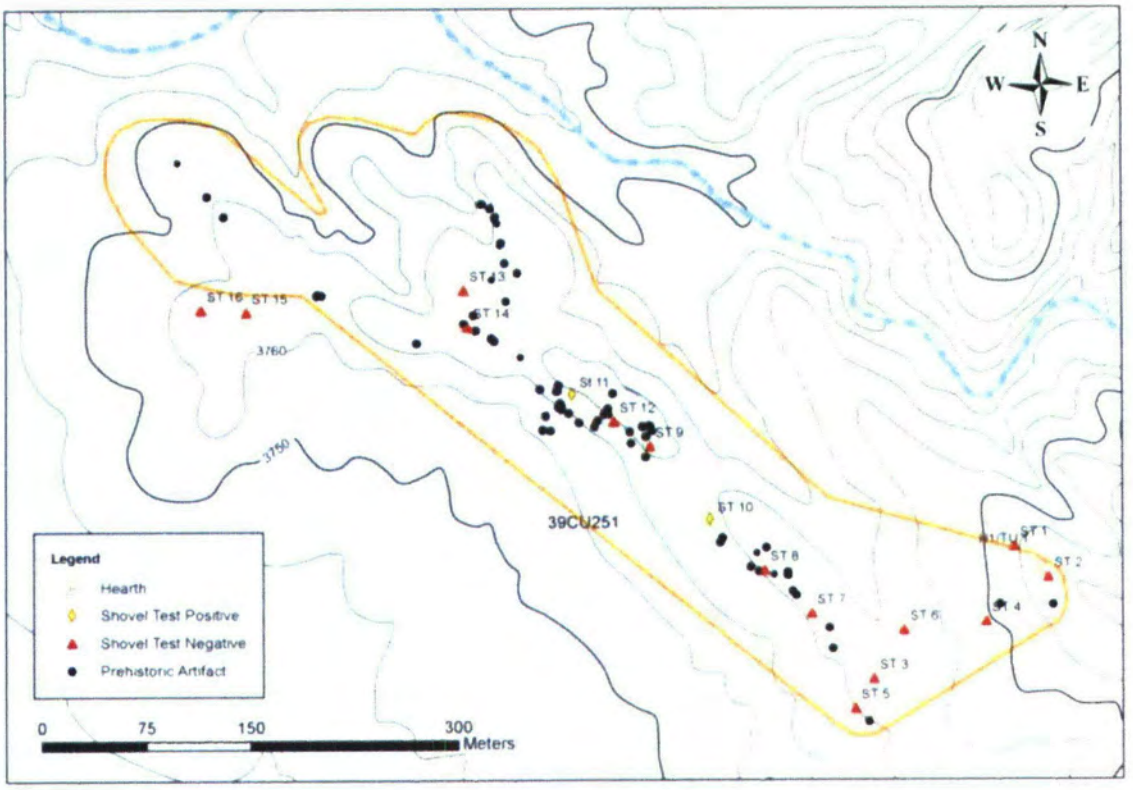


Figure 6. Plan map of site 39CU251, showing feature and test locations.

Table 4. Shovel Test Soil Profiles, Site 39CU251.

Shovel Test #	Diameter (cm)	Level	Depth (cmbs)	Soil Description	Munsell	Cultural Material
1	40	1	0-26	Silt with large amounts of deteriorated gypsum and shale	10YR 4/2	No
		2	26-50	Silt	10YR 4/3	No
2	40	1	0-9	Silt; blocky structure, large amounts of gravel	10YR 5/4	No
		2	9-20	Clayey silt with calcium carbonates	10YR 7/3	No
		3	20-52	Silt with large amounts of calcium carbonates	10YR 8/1	No
3	40	1	0-4	Clayey silt	10YR 3/2	No
		2	4-50	Very hard clay with desiccation cracks	10YR 3/2	No
4	40	1	0-10	Silt	10YR 3/4	No
		2	10-50	Silt and dense gravel	10YR 5/2	No
5	40	1	0-22	Clayey silt with unsorted gravels	10YR 4/4	No
		2	22-27	Clayey silt with unsorted gravels	10YR 4/6	No
		3	27-50	Shale and clay	10YR 2/1	No
6	40	1	0-10	Silt	10YR 3/4	No
		2	10-20	Silty clay; calcium carbonates	10YR 3/3	No
		3	20-50	Clay; strong prismatic structure, large amounts of calcium carbonates	10YR 3/6	No
7	40	1	0-14	Clayey silt	10YR 3/3	No
		2	14-20	Silty clay	10YR 5/1	No
		3	20-50	Hard silty clay; strong prismatic structures, calcium carbonates	10YR 4/2	No
8	40	1	0-12	Silt	10YR 3/4	No
		2	12-34	Shale and gravel	10YR 3/4	No
9	40	1	0-7	Clayey silt with unsorted gravels	10YR 4/2	No
		2	7-50	Clayey silt with unsorted gravels, calcium carbonates	10YR 4/2	No

Table 4. (continued)

Shovel Test #	Diameter (cm)	Level	Depth (cmbs)	Soil Description	Munsell	Cultural Material
10	40	1	0-8	Silt	10YR 3/4	Yes (0-10 cmbs)
		2	8-20	Silty clay mottled with shale, calcium carbonates	10YR 4/4	
		3	20-50	Silty clay; prismatic structure, gravels throughout, calcium carbonates	10YR 4/2	No
11	40	1	0-11	Silt	10YR 3/4	Yes (0-16 cmbs)
		2	11-50	Silt with some calcium carbonates	10YR 6/4-5/4	
12	40	1	0-12	Silt	10YR 5/4	No
		2	12-50	Hard silt; prismatic structure, calcium carbonates	10YR 6/4	No
13	40	1	0-9	Clayey silt	10YR 3/3	No
		2	9-36	Clay mottled with iron-stained silt	10YR 3/3 10YR 5/8	No
		3	36-50	Silt with dense gypsum	10YR5/2	No
14	40	1	0-14	Clayey silt	10YR 3/3	No
		2	14-20	Silty clay	10YR 5/1	No
		3	20-50	Hard silty clay, prismatic structure, calcium carbonates	10YR 4/2	No
15	40	1	0-10	Clayey silt with some gravel	10YR 3/3	No
		2	10-50	Silty clay with shale pockets and unsorted gravel, calcium carbonates	10YR 3/2	No
16	40	1	0-9	Silt	10YR 4/6	No
		2	9-32	Clayey silt, prismatic structure	10YR 5/4	No
		3	32-50	Mottled clay, dense calcium carbonates	10YR 5/1 10YR 5/4	No

Table 5. Artifacts Recovered from Shovel Tests, Site 39CU251.

ST#	Count	Artifact Type	Material	Colors
10	1	Scraper	Chalcedony	White and purple
11	1	Tertiary flake	Chalcedony	Light brownish gray
11	1	Shatter	Chalcedony	Light brownish gray

One partially deflated hearth (H1) was documented on site 39CU251 (see Figure 6). A scaled plan was drawn of the exposed surface of H1 (Figures 7 and 8). The exposed surface

measured 60 cm north-south x 90 cm east-west, with approximately 60 FCR visible. A 1-x-1-m excavation unit (TU1) was established to cross-section H1. The surface of the unit was trowel- skimmed to a maximum depth of 5 cmbs until the perimeter of the hearth was defined (Figures 9 and 10). The fill was removed from the south half of the feature and a profile was drawn of the cross-section wall (Figures 11 and 12). Larger pieces of FCR were tightly packed in the center of hearth with medium to smaller pieces less concentrated around the perimeter. Pockets of charcoal were recovered between and under the FCR. Cultural materials recovered from the fill soil samples are summarized in Table 6. The approximately 200 FCR removed from the south half of H1 were not collected. These FCR consisted of limestone and a few sandstone, and ranged in size from 2-24 cm (maximum length).

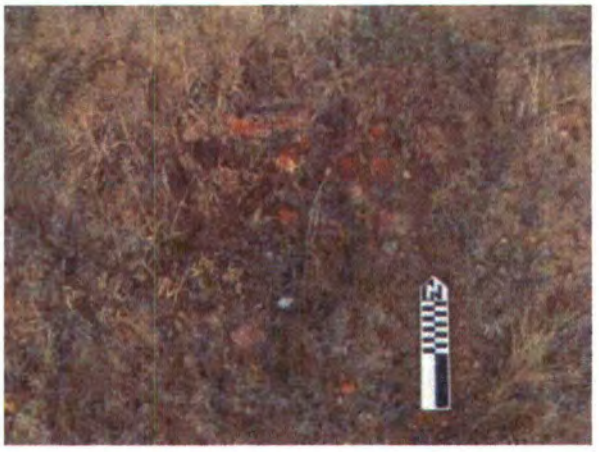


Figure 7. View of top of H1, site 39CU251, facing north.

Figure 8. Plan of top of H1, site 39CU251.

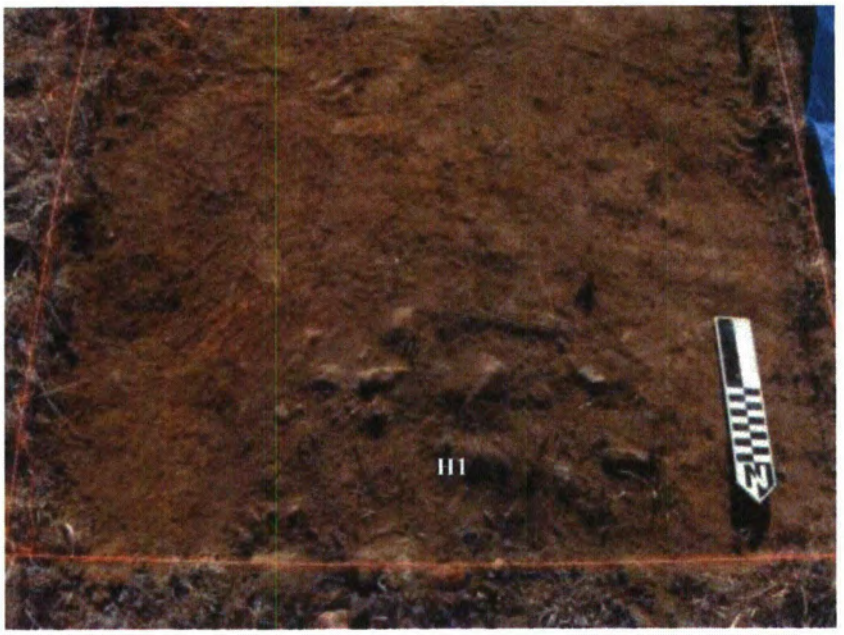


Figure 9. View of defined outline of top of south half of H1, TU1, site 39CU251, facing south.

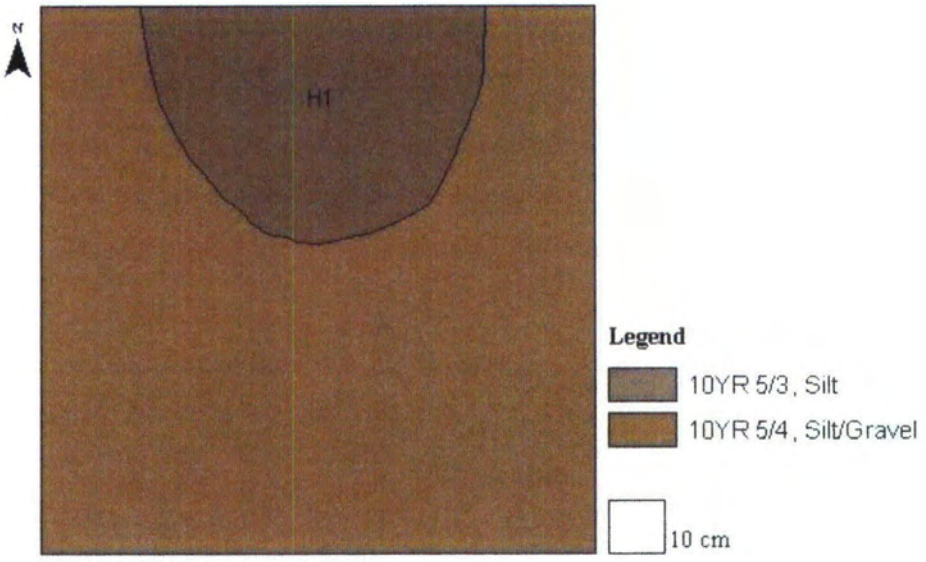


Figure 10. Plan of outline of top of south half of H1, TU1, site 39CU251.

Figure 11. View of cross-section profile of H1 in TU1, site 39CU251, facing north.

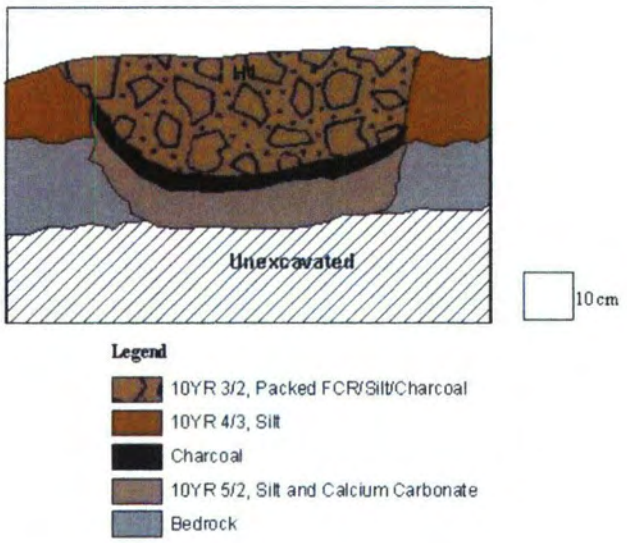


Figure 12. Cross-section profile of H1 in TU1, site 39CU251.

Table 6. Artifacts Recovered from Processed H1 Fill Samples, Site 39CU251.

Count	Artifact Type	Material	Weight (grams)	Comments
4	Unidentifiable bone		.3	Heavy fraction
13	Unidentified seeds		.2	Heavy fraction
1	Sample	FCR	3355.4	Heavy fraction
1	Sample	Charcoal	14.0	Heavy fraction
1	Sample	Gravel	5705.3	Heavy fraction

A sample of charcoal from the H1 feature fill was submitted for radiocarbon dating to the Illinois State Geological Survey. It yielded an AMS radiocarbon date of 1310 ± 70 B.P. (Appendix C; ISGS# 6869). This date calibrates (Reimer et al. 2009; Stuiver and Reimer 1993) to an age range, at two sigma, of A.D. 613-A.D. 883. This falls within the Late Prehistoric time period (see Figure 2).

Interpretation and Recommendations

Site 39CU251 represents a sparse surface lithic scatter and a single hearth. The site area is severely deflated and evidences redeposition of sheet wash sediments. A portion of the site also reflects impacts from gravel quarrying. The single documented hearth was cross-sectioned and a datable sample of charcoal was recovered. The radiocarbon date falls within the Late Prehistoric time period. Two projectile points previously documented from the site indicate both Middle Archaic and Late Archaic/Woodland components. Although based on a limited number of diagnostic artifacts and a single date, these indicators suggest a multicomponent site that was in use over an extended period of time.

The NRHP eligibility status of site 39CU251 is considered under Criterion D of the NRHP (NPS 1991:37). The site has lost its stratigraphic context due to severe erosion and land alteration and, therefore, lacks integrity of *location.* The deflated nature of the landform on which the site is located, the displacement and redeposition of the eroded soil, and the results of the test excavations indicate an extremely low potential for intact cultural deposits or additional features. The site also lacks integrity of *materials* and *association* and cannot yield data on changing subsistence patterns in the region, as floral and faunal materials are not preserved in context with cultural artifacts. The single hearth feature has been documented with scale drawings and photographs. The hearth has been investigated with an excavation unit, and the fill has been collected and processed. Seeds recovered from the hearth fill are not charred and likely represent recent intrusions. The recovered faunal remains are unidentifiable fragments. The remaining half of the feature is unlikely to produce significant information beyond that already recovered. All of these factors suggest that the site does not possess the potential to yield information capable of addressing specific research questions that would further our understanding of prehistoric cultures in the area.

Site 39CU251 does not satisfy the specifications set forth in Criterion D of the NRHP (NPS 1991:37). ALAC recommends that this site be considered not eligible for listing in the NRHP. No further archeological work is recommended.

SITE 39CU3608

Site Number: 39CU3608
Site Type: Artifact Scatter, hearth
Cultural Affiliation: Native American
Subsurface Testing: 2 shovel tests; 1 cut bank profile; 1 1-x1-m unit
Landscape Position: Ridge slope

Landowner: Private
NRHP Evaluation: Not Eligible
Site Condition: Disturbed
Date Tested: 9-29-2011

Map Reference: A1

Site Description

Site 39CU3608 (Figures 13 and 14) was documented in Kruse et al. (2008) as a very sparse artifact scatter and a single intact hearth. Vegetation in the site area consists of sparse grass, sage brush, and prickly pear. Ground surface visibility averages 50 percent. No diagnostic artifacts were previously documented at this site.

Figure 13. Overview of site 39CU3608, facing southeast.

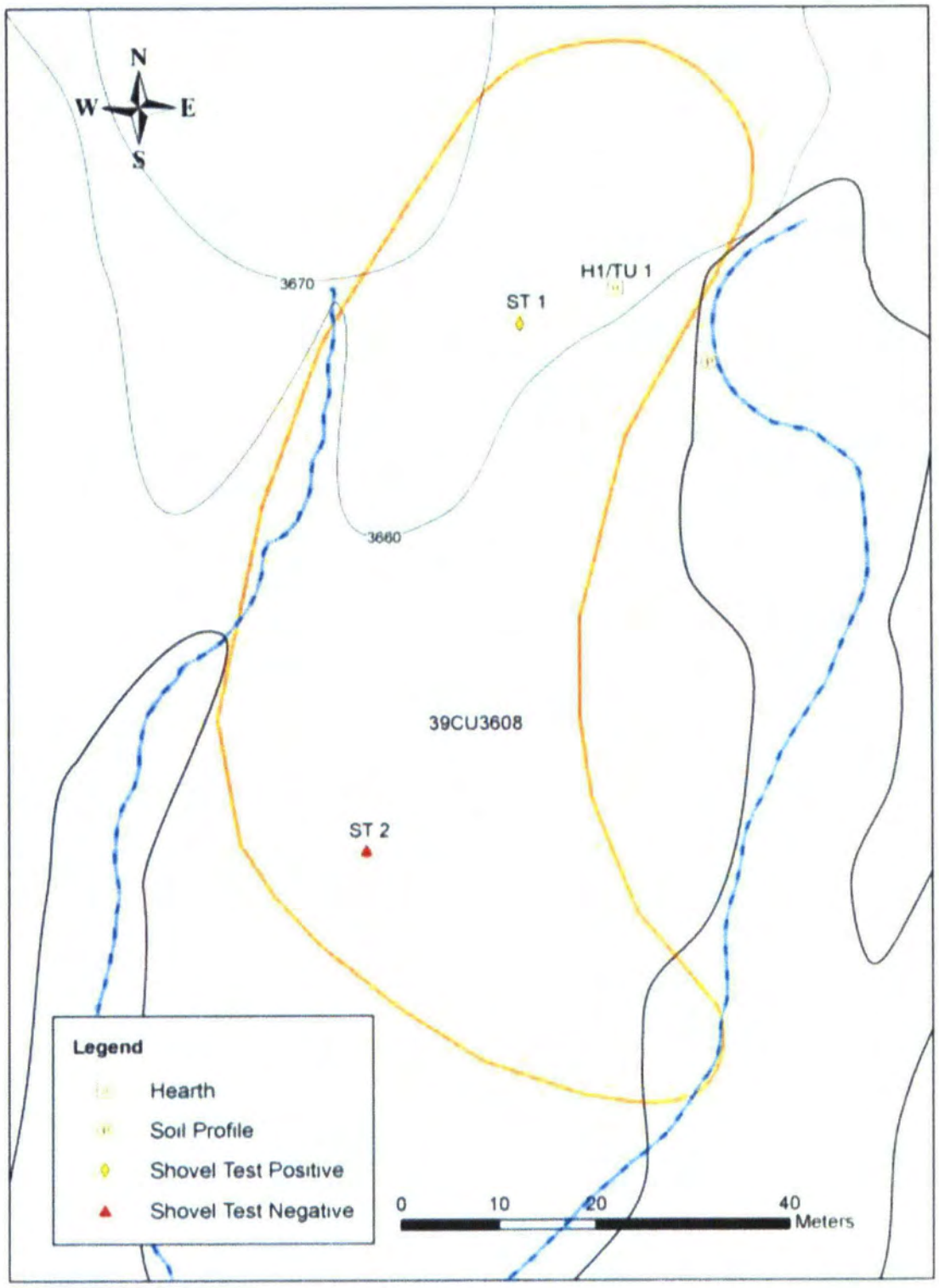


Figure 14. Plan map of site 39CU3608, showing feature, test, and cut bank soil profile locations.

Evaluation Field Work

Reexamination of the surface indicated that the site is severely eroded to gravel and shale exposures. No diagnostic artifacts were observed on the site surface. Two shovel tests (ST1 and ST2) were excavated and one cut bank soil profile (Figure 15) was documented (see Figure 14). The soil profiles of the shovel tests and cut bank are presented in Table 7.

Figure 15. Cut bank soil profile, site 39CU3608, facing west.

Table 7. Shovel Test and Cut Bank Soil Profiles, Site 39CU3608.

Shovel Test #	Diameter (cm)	Level	Depth (cmbs)	Soil Description	Munsell	Cultural Material
1	40	1	0-8	Pedogenically altered shale silt	10YR 3/2	Yes (0-19 cmbs)
		2	8-45	Cemented shale derived clay with shale fragments; dense calcium carbonates/iron concretions	10YR 2/1	

Table 7. (continued)

Shovel Test #	Diameter (cm)	Level	Depth (cmbs)	Soil Description	Munsell	Cultural Material
2	40	1	0-3	Pedogenically altered shale silt	10YR 3/2	No
		2	3-34	Cemented shale derived clay with shale fragments; large amounts of calcium carbonates/iron concretions	10YR 2/1	No
		3	34-48	Shale derived clay/silt with sand	10YR 2/1	No
Cut bank 1	NA	1	0-14	Shale, silt, clay	10YR 3/2	No
		2	14-17	Thin band of fine-medium grained gravel mixed with shale and silt	10YR 3/2-3/3	No
		3	17-49	Silt, clay, large amount of deteriorated shale, calcium carbonates/iron concretions	10YR 2/2	No
		4	49+	Cemented unsorted coarse large gravels, shale, and clay	10YR 2/2	No

Shovel testing was limited at this site due to the extensive amount of erosion that has occurred on the landscape. The vast majority of the site area has been destroyed by seasonal flooding and runoff. The remnants of the hearth contain clayey silt which was likely held in place by the compact FCR and later silted in by alluvial processes. The hearth also appears to have been partially excavated into the cemented, shale-derived clay layer. No intact soil horizons were observed during the testing. The shovel tests revealed a very eroded and scoured surface resulting in cemented pedogenically altered shale derived deposits and high energy flood deposits, as demonstrated in the cut bank profile. The one artifact (tertiary flake, brownish gray chert) recovered in a shovel test (ST1) was from near the surface and in redeposited shale matrix. It is highly unlikely that any buried intact cultural features exist at this site.

One hearth (H1) was documented on site 39CU3608 (see Figure 14). A scaled plan was drawn of the exposed surface of H1 (Figures 16 and 17). A 1-x-1-m excavation unit (TU1) was established to cross-section H1 (Figure 18). The surface of the unit was trowel skimmed to a maximum depth of 7 cmbs until the perimeter of the hearth was defined (Figures 19 and 20). The fill was removed from the west half of the feature, and a profile was drawn of the cross-section wall (Figures 21 and 22). The hearth fill under the FCR was very hard-packed

clay stained black with charcoal, but contained very few actual charcoal fragments. Cultural materials recovered from the fill soil samples are summarized in Table 8. Approximately 290 FCR removed from the west half of H1 were not collected. The FCR consisted primarily of limestone and ranged in size from 1-17 cm (maximum length).

Figure 16. View of surface of H1, site 39CU3608, facing north.

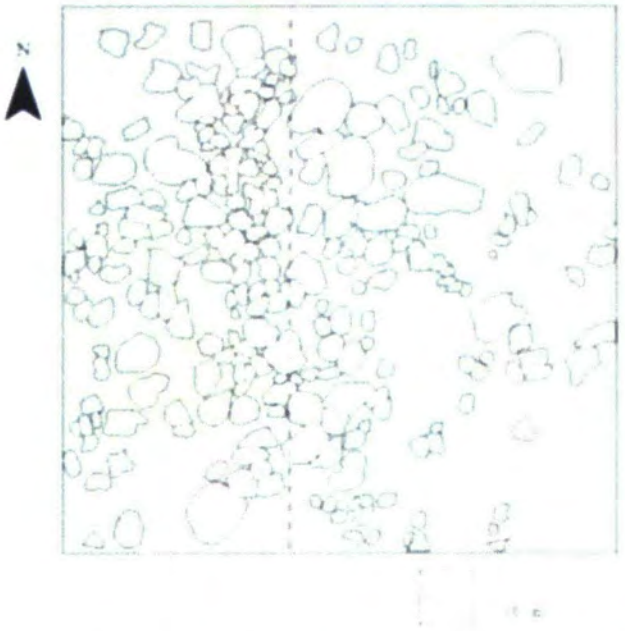


Figure 17. Plan of surface of H1, site 39CU3608.

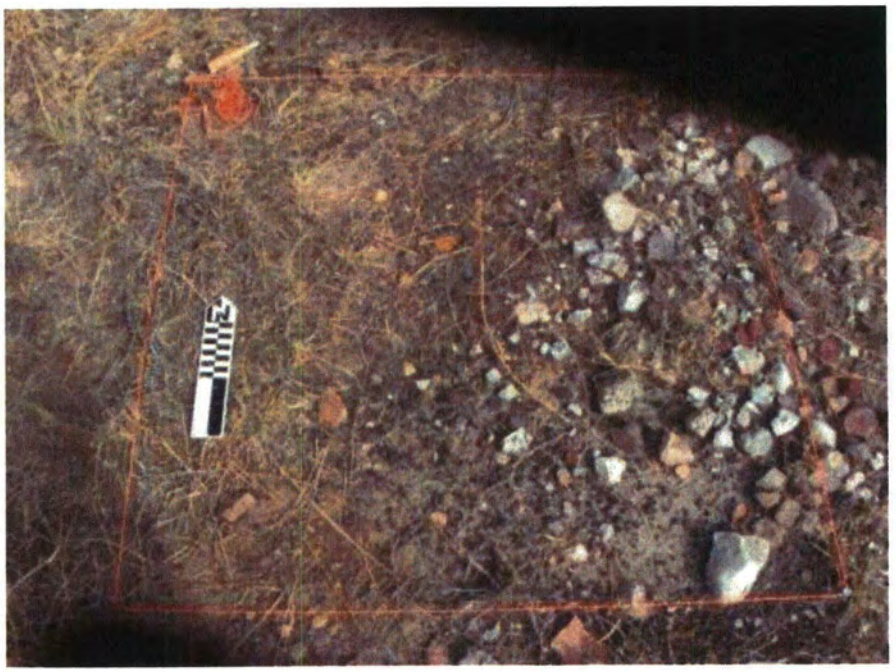


Figure 18. View of excavation unit, west half of H1, TU1, site 39CU3608, facing north.

Figure 19. View of defined outline of top of west half of H1 at 7 cmbs, TU1, site 39CU3608, facing north.

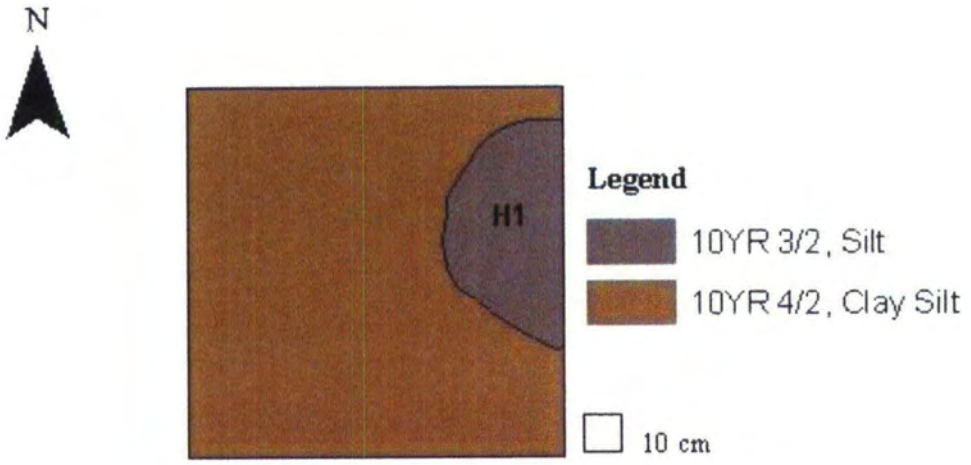


Figure 20. Plan of defined outline of top of west half of H1, site 39CU3608.

Figure 21. View of cross-section profile of H1 in TU1, site 39CU3608, facing east.

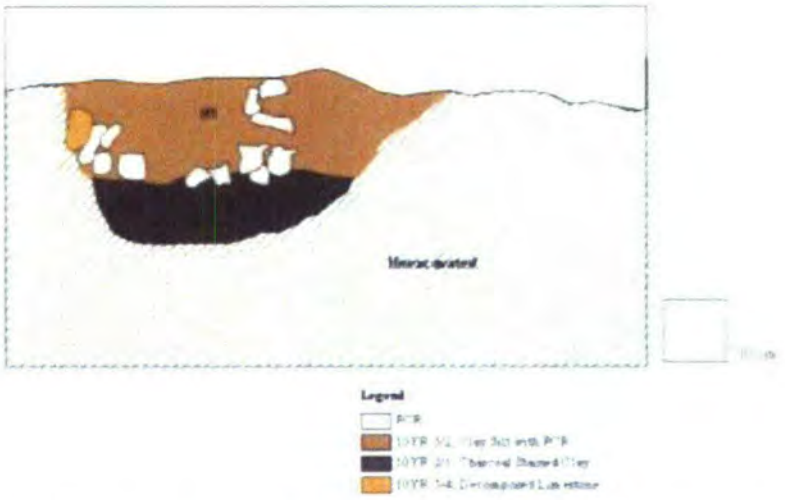


Figure 22. Cross-section profile of H1 in TU1, site 39CU3608.

Table 8. Artifacts Recovered from Processed H1 Fill Samples, Site 39CU3608.

Count	Artifact Type	Material	Color
1	Tertiary flake	Chert	Brownish gray
1	Unidentifiable bone	Bone	
1	Sample-FCR		
1	Sample-charcoal		
1	Sample-gravel		

Interpretation and Recommendations

Site 39CU3608 represents a very sparse surface lithic scatter and a single hearth. The surface of the site is eroded to gravel and shale. The hearth was cross-sectioned, and a datable sample of charcoal was recovered. No diagnostic artifacts have been recovered from the site surface or in subsurface tests.

The NRHP eligibility status of site 39CU3608 is considered under Criterion D of the NRHP (NPS 1991:37). The integrity of the site has been severely compromised by erosion. The deflated nature of the landform on which the site is located and the results of the test excavations indicate an extremely low potential for intact cultural deposits or additional features; therefore, the site has lost stratigraphic context and lacks integrity of *location*. No faunal or floral materials are preserved on the site in association with cultural artifacts (lack of integrity of *materials* and *association*). The single hearth feature has been documented

with scale drawings and photographs. The hearth has been investigated with an excavation unit, and the fill has been collected and processed. Materials recovered from the fill do not yield significant data on subsistence patterns in the area. The remaining half of the feature is unlikely to produce information beyond that already recovered. No diagnostic artifacts have been documented from this site. These factors suggest that the site does not possess the potential to yield significant information, beyond a single date, capable of addressing specific research questions that would further our understanding of prehistoric cultures in the area.

Site 39CU3608 does not satisfy the specifications set forth in Criterion D of the NRHP (NPS 1991:37). ALAC recommends that this site be considered not eligible for listing in the NRHP. No further archeological work is recommended.

Site 39CU3619

Site Number: 39CU3619
Site Type: Farmstead, historic artifact scatter

Cultural Affiliation: Euroamerican
Subsurface Testing: NA
Landscape Position: Terrace

Landowner: Private
NRHP Evaluation: Not eligible as archeological site; one structure eligible
Site Condition: Disturbed
Date Tested: 11-14-2011
Map Reference: A2

Site Description

Site 39CU3619 was documented by ALAC in 2007 (Kruse et al. 2008) as an abandoned Euroamerican farmstead consisting of nine standing and partially collapsed buildings, nine non-structural features, and an associated historic artifact scatter. Vegetation in the site area consists of short grass and scrub brush. Ground surface visibility averaged 30 percent.

Interpretation and Recommendations

The site surface is eroded and any features on the site are, therefore, visible at the surface and were previously recorded. The site surface was reexamined, and no additional features or diagnostic materials were noted. Cultural materials present on the surface are randomly scattered and lack integrity of *association* with particular structural remains. Due to the surface deflation and lack of additional surface materials, no subsurface tests were conducted. There is very low potential for buried, intact archeological cultural deposits on the site that would yield data significant to addressing research questions regarding

farmsteads in the area in the early-to-mid-1900s beyond the temporal data previously recorded.

As an archeological site, 39CU3619 lacks physical integrity and has extremely low information potential. The eligibility of the site, therefore, cannot be justified under Criterion D of the NRHP (NPS 1991:37). ALAC recommends that this site be considered not eligible for listing in the NRHP. No further archeological work is recommended.

However, since site 39CU3619 consists primarily of structural remains, it was previously recommended by Jason Haug, State Historic Preservation Office, South Dakota State Historical Society, that structures on the site be evaluated by an architectural historian. This evaluation was completed by Shelley McCafferty, architectural historian, assisted by Whitney Hensley. Their report is presented in Appendix F.

The structural evaluation report recommends that the site is not eligible as an historic district. One individual structure, a log barn (CU02500002), is recommended as eligible for listing in the NRHP as an individual structure. If this structure cannot be avoided by impacts of the uranium project, it is recommended that a mitigation plan be developed by the concerned parties/agencies and implemented.

Site 39CU3774

Site Number: 39CU3774
Site Type: Artifact scatter
Cultural Affiliation: Native American
Subsurface Testing: 7 shovel tests
Landscape Position: Ridge slope

Landowner: Private
NRHP Evaluation: Not eligible
Site Condition: Disturbed
Date Tested: 11-14-2011
Map Reference: A2

Site Description

Site 39CU3774 (Figures 23 and 24) was documented in Kruse et al. (2008) as an extensive, dispersed prehistoric lithic scatter. The site area exhibits the effects of severe wind and water erosion. Vegetation in the site area consists of conifers interspersed with juniper, prickly pear, and short grass. Ground surface visibility averaged 60 percent at the time of the site evaluation. No diagnostic artifacts were previously documented at this site.

Table 9. Shovel Test Soil Profiles, Site 39CU3774.

Shovel Test #	Diameter (cm)	Level	Depth (cmbs)	Soil Description	Munsell	Cultural Material
1	40	1	0-11	Clayey silt with medium amount of cobble and gravels	10YR 4/6-3/6	No
		2	11-40	Mottled hard clay with fragments of bedrock	10YR 4/4 10YR 5/6	No
2	40	1	0-12	Clayey silt	10YR 3/6-4/6	No
		2	12-42	Clayey silt	10YR 3/6-4/6	No
		3	42+	Shale	10YR 5/2	No
3	40	1	0-15	Silt	10YR 5/6	No
		2	15-29	Hard silty clay with few large gravels	10YR 5/4	No
		3	29-38	Hard silty clay, heavily mottled; shale at base	10YR 5/6	No
4	40	1	0-13	Silt with gravel	10YR 4/6	No
		2	13-37	Hard clay with shale and gravel	10YR 5/4	No
		3	37+	Bedrock		No
5	40	1	0-18	Silt	10YR 5/6	No
		2	18-36	Silt; bedrock at base	10YR 5/6	No
6	40	1	0-8	Silt	10YR 5/6	No
		2	8-30	Shale mottled with silt; bedrock at base	10YR 5/6	No
7	40	1	0-8	Silt	2.5Y 5/2	No
		2	8-24	Silt with gravel, shale, bedrock fragments	2.5Y 5/2	No

Subsurface test profiles exhibit very little intact soil and heavily mottled clays and bedrock fragments, especially on the upper slopes. This suggests that most of the soils have been mechanically displaced or removed. It is highly unlikely that any buried intact cultural features remain in this area. The top of the landscape on which this site is located appears to have been leveled for machinery access in the past. Subsequent exposure to erosion has also had a significant impact on the site area, resulting in deep cuts and deflated areas. No

diagnostic cultural materials were observed on the surface or recovered from the subsurface tests.

Interpretation and Recommendations

Site 39CU3774 represents a sparse surface lithic scatter. The site has been mechanically altered through grading and quarrying and also exhibits severe erosion (lack of integrity of *location*). No cultural materials were recovered from the subsurface tests. No diagnostic artifacts are documented from the site.

The NRHP eligibility status of site 39CU3774 is considered under Criterion D of the NRHP (NPS 1991:37). The site has produced no diagnostic artifacts and cannot be evaluated within a specific historic context. The integrity of the site has been severely compromised by grading, quarrying, and erosion. The results of the test excavations indicate an extremely low potential for intact cultural deposits or features. All of these factors suggest that the site does not possess the potential to yield information capable of addressing specific research questions that would further our understanding of prehistoric cultures in the area.

Site 39CU3774 does not satisfy the specifications set forth in Criterion D of the NRHP (NPS 1991:37). ALAC recommends that this site be considered not eligible for listing in the NRHP. No further archeological work is recommended.

Site 39FA96

Site Number: 39FA96
Site Type: Occupation (hearths), artifact scatter, nonfarm ruins
Cultural Affiliation: Paleoindian, Archaic, Woodland, Late Prehistoric, Euroamerican
Subsurface Testing: 44 shovel tests; 20 1-x-1-m units

Landowner: Private and BLM
NRHP Evaluation: Not eligible
Site Condition: Disturbed

Date Tested: 10-26-2011 to 10-31-2011 and 11-9-2011 to 11-11-2011

Landscape Position: Hill top/slope

Map Reference: A2

Site Description

Site 39FA96 (Figures 25-28) was initially recorded as a Euroamerican farmstead in the 1970s (Sigstad and Jolley 1975). ALAC revisited the site in 2007 (Kruse et al. 2008) and expanded the site boundaries to encompass 16 new cultural locales and an additional six previously

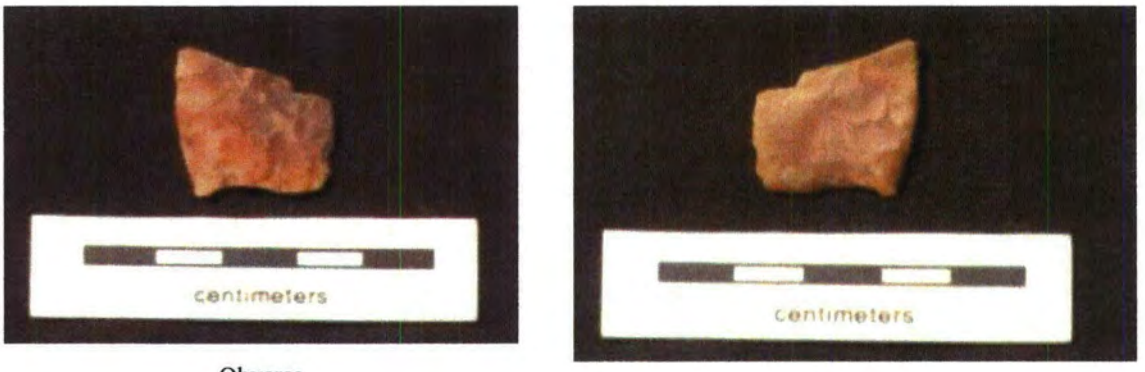
Figure 31. View of tree stump on exposed bedrock, site 39FA96, facing east.

Evaluation Field Work

Reexamination of the site surface resulted in the location or relocation of 68 hearths and the previously recorded historic non-farm ruins. The site measures approximately 1,040 m N-S x 1,165 m E-W. Due to its large size, the site has been divided into eight concentrations (Area 1-Area 8) for descriptive purposes (see Figure 28). A total of 44 shovel tests was excavated in portions of the site that had some potential for intact soils (see Figure 28). The hearths, excavation units, and shovel test profiles are described in the individual area discussions, below.

Site 39FA96, Area 1

Two projectile points were recovered during reexamination of the surface of Area 1. These have been identified as a Late Paleoindian point base fragment (Figure 32) and a Late Prehistoric, nearly complete, corner-notched point (Figure 33). A more detailed description of the projectile points is provided in Appendix G.



Obverse

Reverse

Figure 32. Late Paleoindian projectile point recovered from the surface of Area 1, site 39FA96.

Figure 33. Late Prehistoric corner-notched point recovered from the surface of Area 1, site 39FA96.

Eleven shovel tests were excavated in Area 1 in portions of the landscape with some potential for intact soil (Figure 34). The shovel tests are described in Table 10. The test results indicate that all of Area 1 is severely deflated. Only one shovel test (ST20w) was positive for cultural materials. A quartzite end scraper (Figure 35) and a quartzite tertiary flake were recovered from 0-11 cmbs in ST20w.

Twenty-four hearths are documented in Area 1 (Figures 36-40). No photo was taken of H23, which was completely deflated. No trace of H24, recorded in 2007, was found in 2011. General surface descriptions of the hearths are provided in Table 11.

Table 10. Shovel Test Soil Profiles, Area 1, Site 39FA96.

Shovel Test #	Diameter (cm)	Level	Depth (cmbs)	Soil Description	Munsell	Cultural Material
1	40	1	0-19	Clayey silt; shale throughout	10YR 5/2	No
2	40	1	0-32	Silt with shale fragments	10YR 4/4	No
3	40	1	0-9	Very fine silt	10YR 3/2-3/3	No
		2	9-50	Silt with unsorted gravels; all shale at base	10YR 4/3	No
4	40	1	0-14	Silt with shale fragments	10YR 5/4	No
		2	14-55	Shale derived clayey silt	10YR 5/4	No
5	40	1	0-4	Silt loam	10YR 4/3	No
		2	4-39	Silt	2.5Y 5/2	No
		3	39+	Shale	10YR 5/2	No
6	40	1	0-12	Silt with some shale fragments	10YR 5/4	No
		2	12-50	Clayey silt with rock	10YR 5/2	No
7	40	1	0-6	Soft silt	10YR 4/3	No
		2	6-50	Shale-derived silt with large cobble	2.5Y 5/2	No
8	40	1	0-4	Silt with shale fragments	10YR 5/4	No
		2	4-50	Shale-derived silt with some small cobbles; shale fragments throughout	10YR 3/2	No
9	40	1	0-6	Clayey silt	10YR 3/2-3/3	No
		2	6-50	Clayey silt with thick root matting	10YR 4/2	No
20w	40	1	0-11	Clayey silt with few gravels	10YR 3/3	Yes
		2	11-35	Clayey silt with few gravels	10YR 3/3	No
		3	35-48	Mottled shale and shale clay with fragments of bedrock	10YR 5/4	No
		4	48+	Shale	10YR 5/2	No
21w	40	1	0-24	Clayey silt with few gravels	10YR 3/2	No
		2	24-60	Shale silt with shale fragments	10YR 4/2	No
		3	60+	Shale silt with shale fragments and gravel	10YR 4/2	No

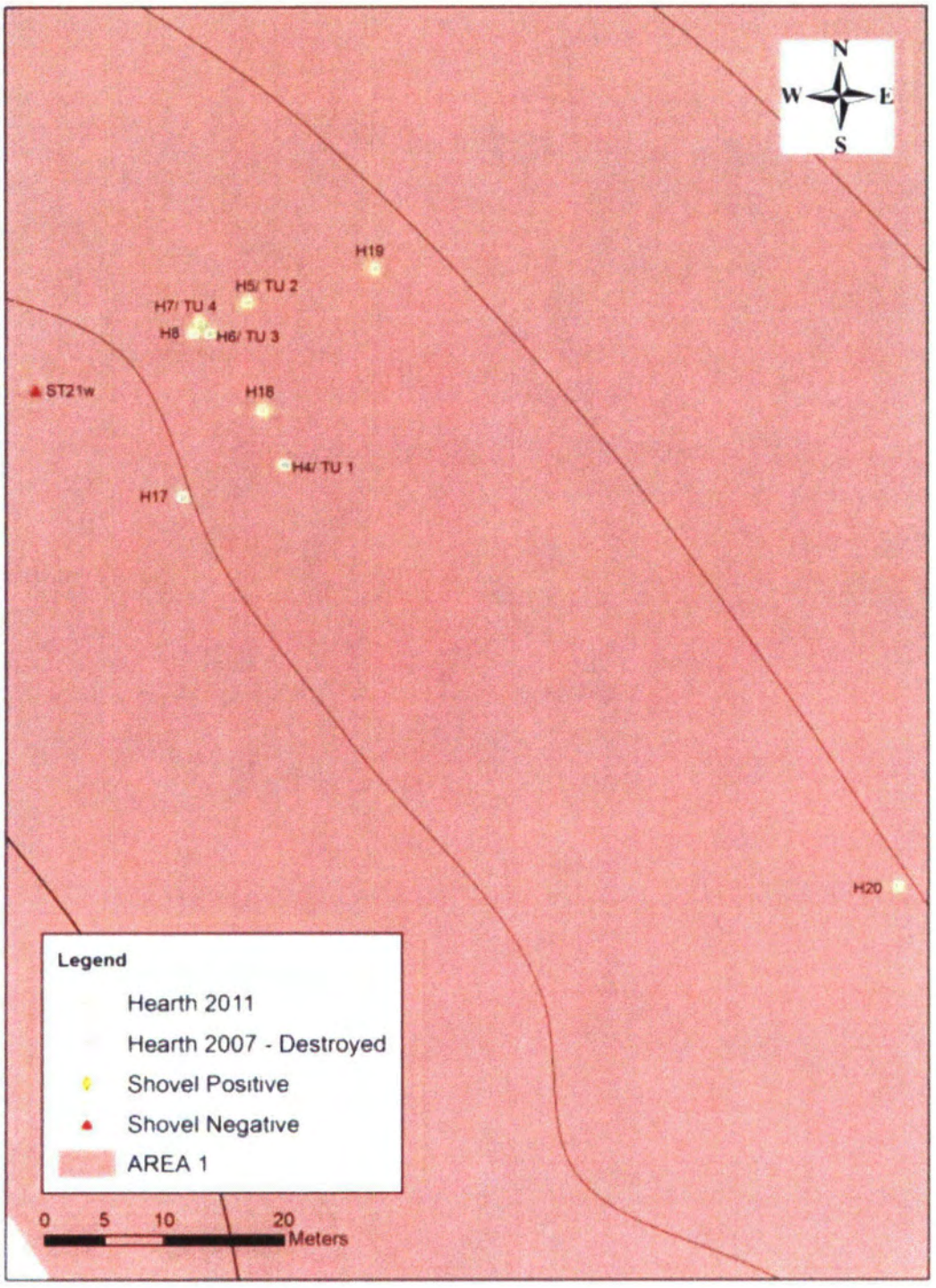


Figure 37. Plan map of south portion of Area 1, site 39FA96, showing hearth, excavation unit, and shovel test locations.

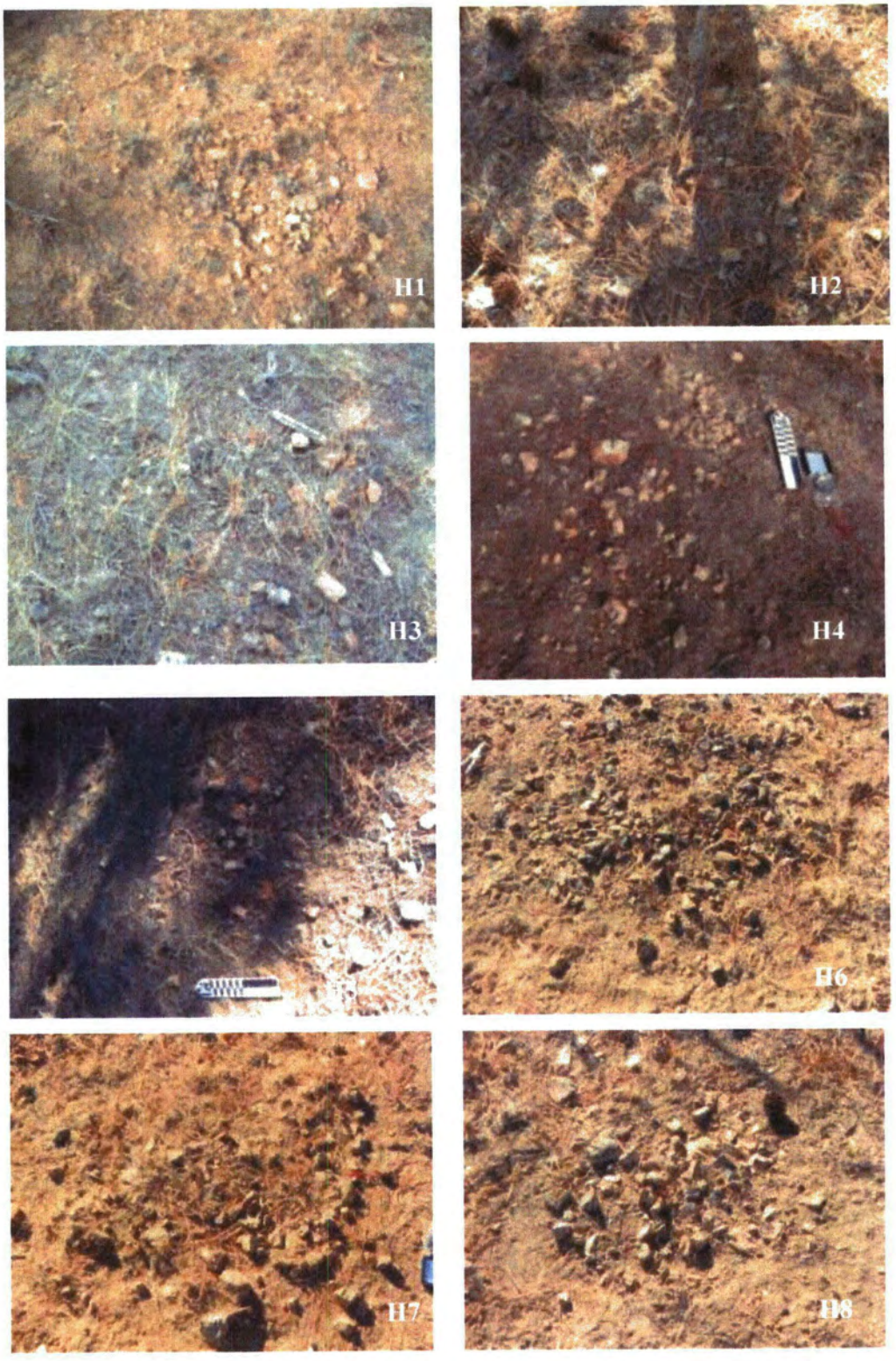


Figure 38. View of surface of hearths H1-H8, Area 1, site 39FA96.

Figure 39. View of surface of hearths H9-H16, Area 1, site 39FA96.

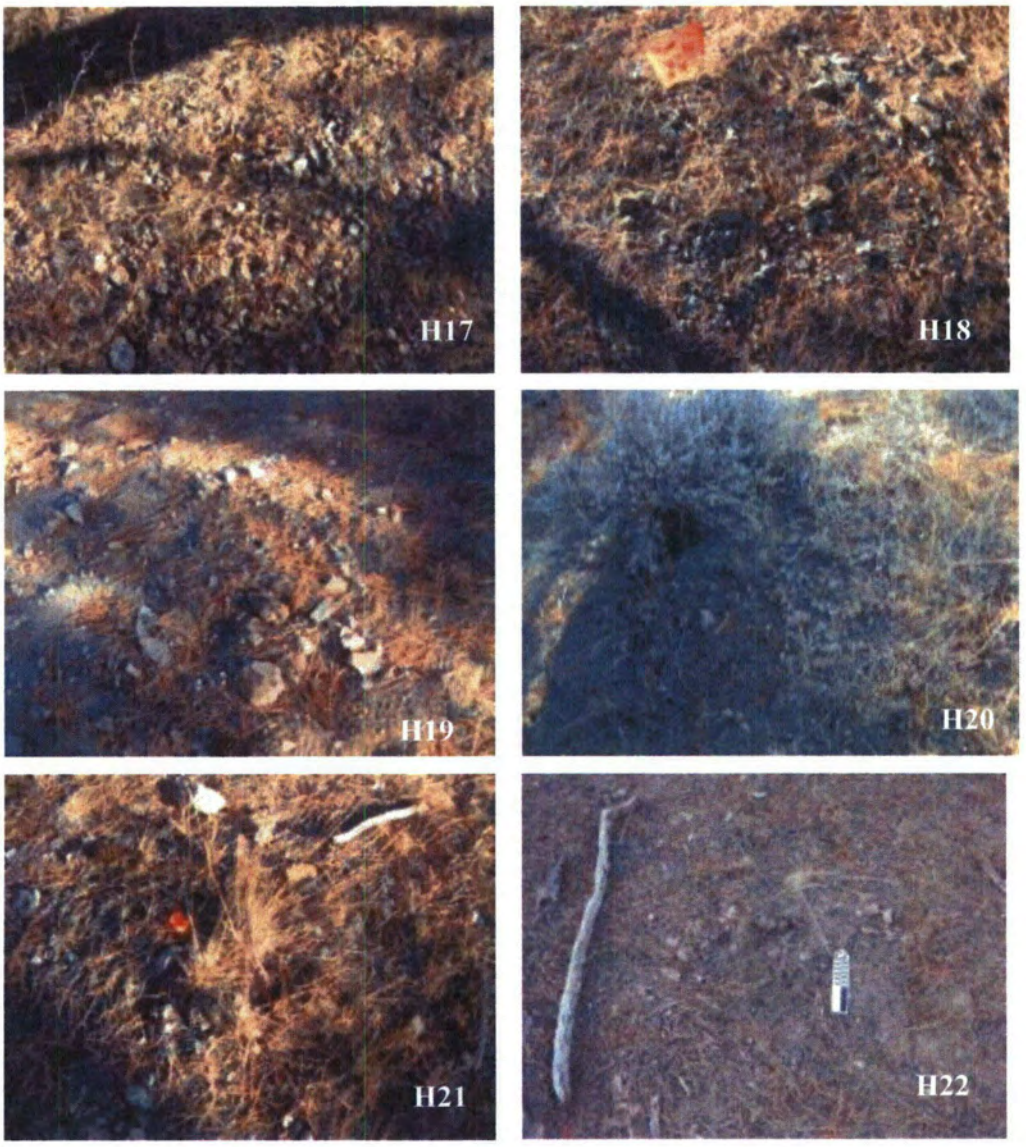


Figure 40. View of surface of hearths H17-H22, Area 1, site 39FA96.

Table 11. Description of Exposed Hearth Surfaces in Area 1, Site 39FA96.

Hearth	Diameter (cm NS-EW)	# FCR Exposed	Type FCR	Condition	Figure #
H1	97-90	120+	Limestone	Partially deflated/scattered down slope	Figure 38
H2	75-60	50+	Limestone	Partially deflated/scattered	Figure 38
H3	100-100	180+	Limestone	Partially deflated/scattered (cross-sectioned)	Figure 38
H4	100-100	550+	Limestone	Partially deflated/scattered down slope (cross-sectioned)	Figure 38
H5	80-70	40+	Limestone	Partially deflated (cross-sectioned)	Figure 38

Table 11. (continued)

Hearth	Diameter (cm NS-EW)	# FCR Exposed	Type FCR	Condition	Figure #
H6	100-90	220+	Limestone	Partially deflated (cross-sectioned)	Figure 38
H7	100-100	80+	Limestone	Partially deflated (cross-sectioned)	Figure 38
H8	90-75	100+	Limestone	Partially deflated/scattered down slope	Figure 38
H9	100-76	50+	Limestone	Partially deflated	Figure 39
H10	100-83	120+	Limestone	Partially deflated (base remnant)	Figure 39
H11	70-95	90+	Limestone	Partially deflated (cross-sectioned)	Figure 39
H12	110-100	200+	Limestone	Partially deflated	Figure 39
H13	50-40	20+	Limestone	Partially deflated (cross-sectioned)	Figure 39
H14	97-62	20+	Limestone	Partially deflated/slumped to south down slope (excavated)	Figure 39
H15	100-100	360+	Limestone	Partially deflated /base remnant (cross-sectioned)	Figure 39
H16	50-50	40+	Limestone	Completely deflated to base stain	Figure 39
H17	85-72	230+	Limestone	Completely deflated; slumped down slope	Figure 40
H18	184-133	180+	Limestone	Completely deflated	Figure 40
H19	73-81	80+	Limestone	Partially deflated/charcoal base on shale	Figure 40
H20	110-98	120+	Limestone	Partially deflated; sagebrush growing in fill	Figure 40
H21	60-66	60+	Limestone	Partially deflated	Figure 40
H22	68-98	50+	Limestone	Completely deflated/slumped to north	Figure 40
H23	70-54	50+	Limestone	Completely deflated to base on shale	
H24				Completely deflated since documented in 2007; no trace found	

A 1-x-1-m excavation unit (TU4) was established to cross-section H3 in the north portion of Area 1 (see Figure 36). The hearth was partially deflated and washing down the slope of an erosion cut. A plan was drawn of the exposed surface of the hearth (Figure 41).The fill was removed from the south half of the feature and a plan was drawn (Figure 42). The profile was cleaned by trowel along the cross-section wall and was drawn (Figures 43 and 44). Cultural materials recovered from the fill soil samples are summarized in Table 12.

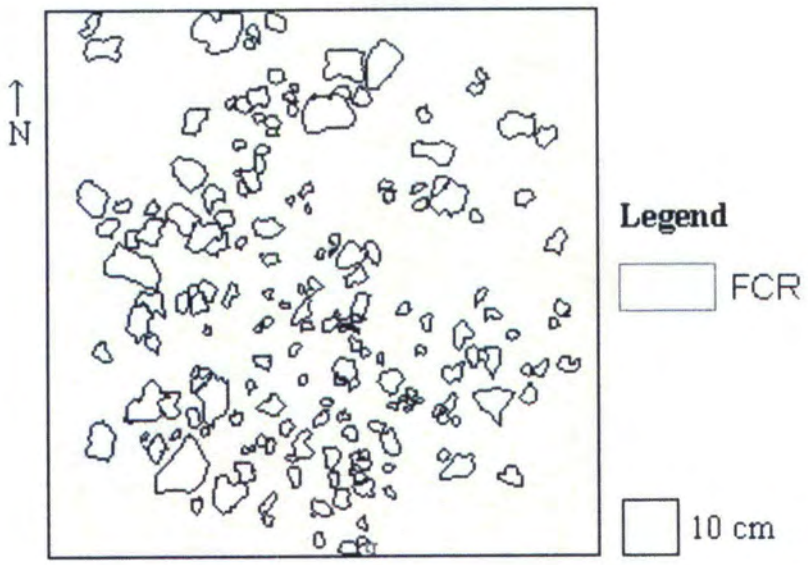


Figure 41. Plan of surface of H3, Area 1, site 39FA96.

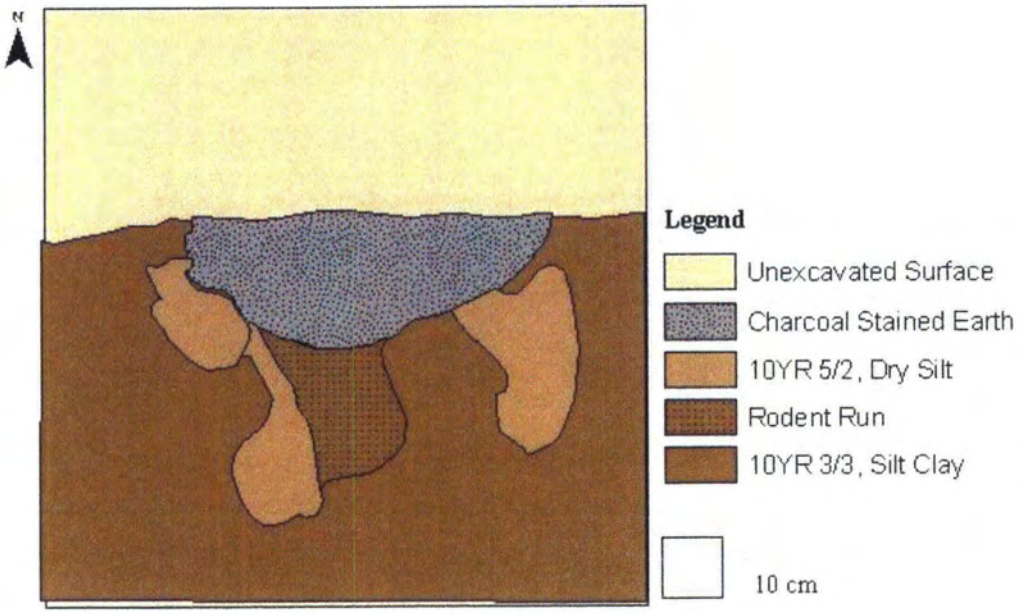


Figure 42. Plan of excavated south half of H3, Area 1, site 39FA96.

Figure 43. View of excavated south half of unit and cross-section profile of H3, Area 1, site 39FA96, facing south.

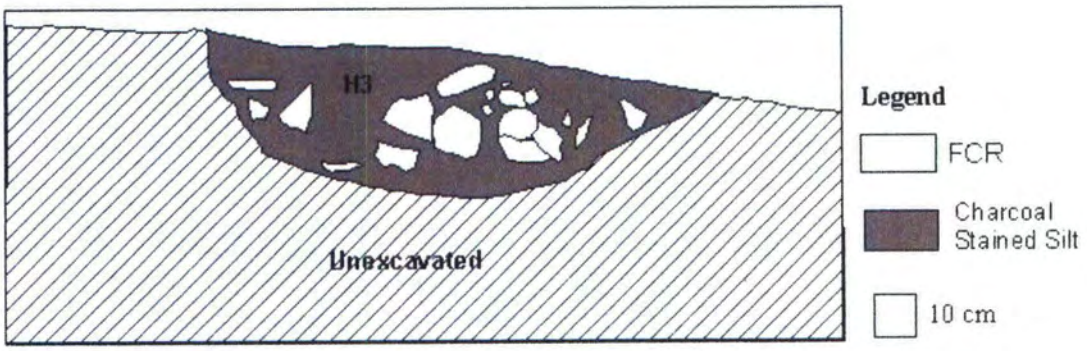


Figure 44. Cross-section profile of H3, Area 1, site 39FA96, facing north.

Table 12. Artifacts Recovered from Processed H3 Fill Samples, Area 1, Site 39FA96.

Count	Artifact Type	Material	Color
3	Tertiary flake	Quartzite	Light gray
1	Sample-FCR	Limestone	
2	Sample-seeds		
1	Sample-charcoal	Charcoal	Black
1	Sample-gravel		
1	Sample-unidentifiable bone fragments		

A scaled plan was drawn of the exposed surface of hearth H4 in the south portion of Area 1 (Figures 37, 38 and 45; Table 11). A 1-m-x-1-m excavation unit (TU1) was established to cross-section H4. The perimeter of the hearth was defined (Figures 46 and 47). The fill was removed from the east half of the feature, and a profile was drawn of the cross-section wall (Figures 48 and 49). Cultural materials recovered from the fill soil samples are summarized in Table 13. Approximately 1600 FCR removed from the east half of H4 were not collected. The FCR was limestone and ranged in size from 1 to 10 cm (maximum length).

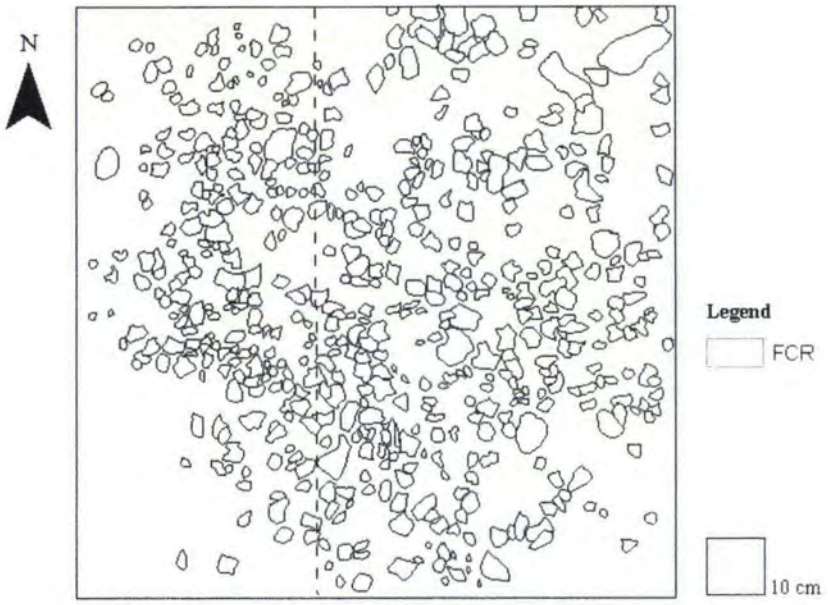


Figure 45. Plan of the top of H4, Area 1, site 39FA96.

Figure 46. View of defined perimeter of east half of H4 in TU1, Area 1, site 39FA96, facing west.

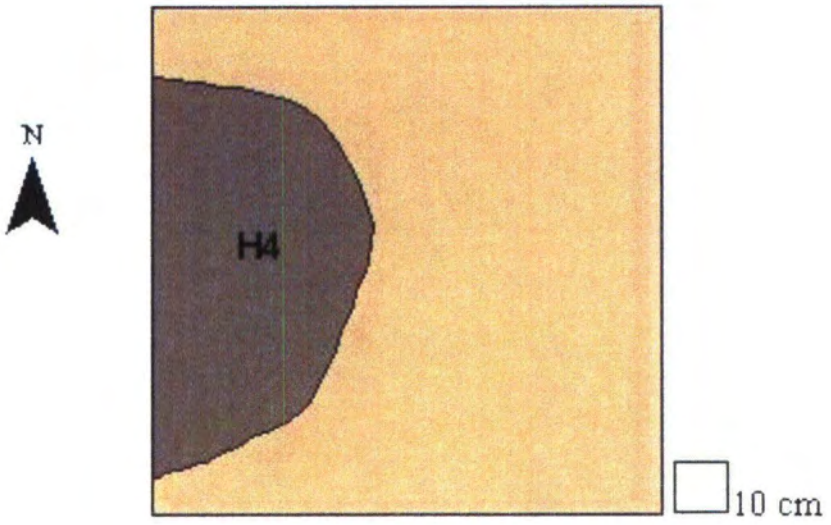


Figure 47. Plan of H4 east half perimeter in Area 1, site 39FA96.

Figure 48. View of cross-section profile of H4, Area 1, site 39FA96, facing west.

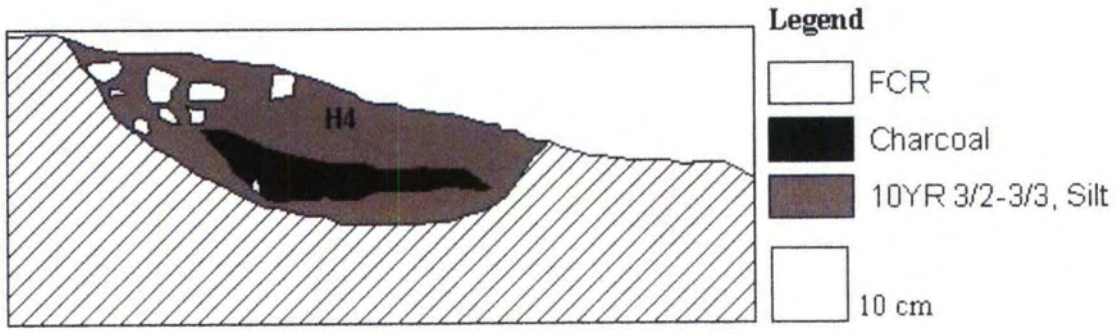


Figure 49. Cross-section profile of H4 in west wall of TU1, Area 1, site 39FA96.

Table 13. Artifacts Recovered from Processed H4 Fill Samples, Area 1, Site 39FA96.

Count	Artifact Type	Material
1	Sample-FCR	Limestone
2	Sample-charcoal	
1	Sample-gravel	

A scaled plan was drawn of the exposed surface of hearth H5 in the south portion of Area 1 (Figures 37, 38 and 50; Table 11). A 1-x-1-m excavation unit (TU2) was established to cross-section H5. The perimeter of the hearth was defined (Figures 51 and 52). The fill was removed from the south half of the feature and a profile was drawn of the cross-section wall (Figures 53 and 54). Cultural materials recovered from the fill soil samples are summarized in Table 14. Approximately 315 FCR removed from the south half of H5 were not collected. The FCR was limestone, and ranged in size from 2 to 11 cm (maximum length).

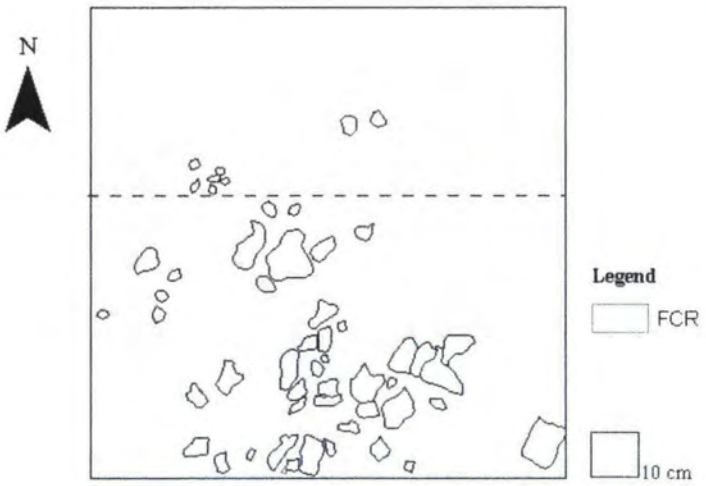


Figure 50. Plan of top of H5, Area 1, site 39FA96.

Figure 51. View of H5 in TU2 at 8-10 cmbs, Area 1, site 39FA96, facing south.

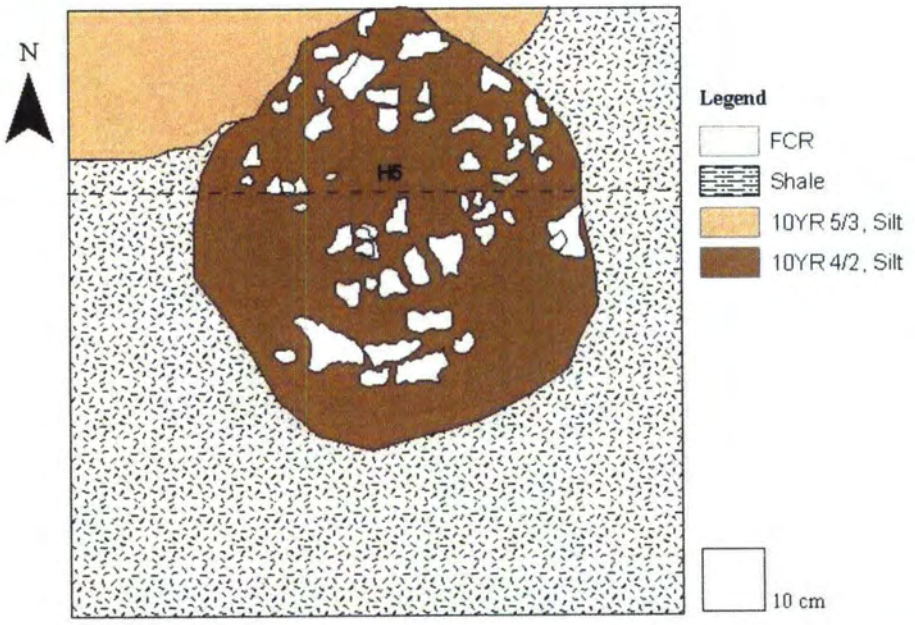


Figure 52. Plan of H5 perimeter at 8-10 cmbs in TU2, Area 1, site 39FA96.

Figure 53. View of cross-section profile of H5 in TU2, Area 1, site 39FA96, facing north.

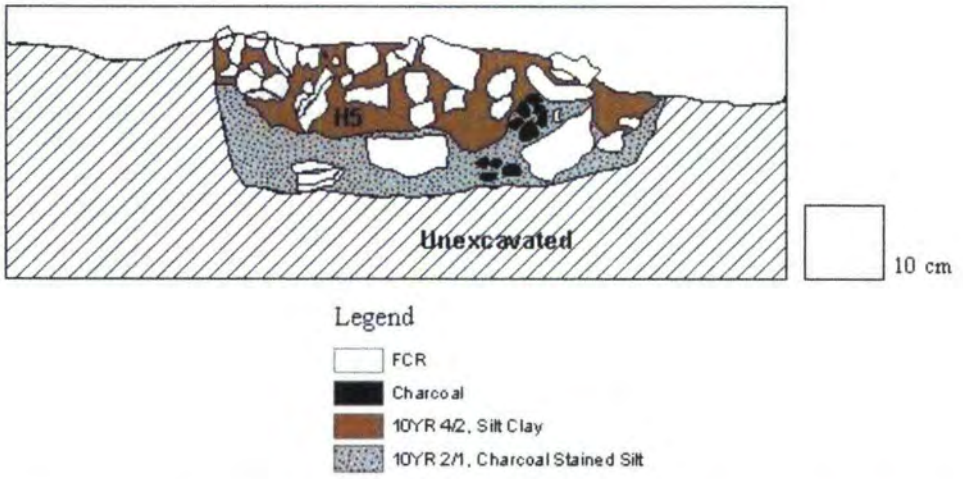


Figure 54. Cross-section profile of H5 in north wall of TU2, Area 1, site 39FA96.

Table 14. Artifacts Recovered from Processed H5 Fill Samples, Area 1, Site 39FA96.

Count	Artifact Type	Material
6	Unidentifiable bone	
2	Unidentified seeds	
1	Sample-FCR	Limestone
5	Sample-charcoal	
1	Sample-gravel	

Scaled plans were drawn of the exposed surfaces of H6-H8, a cluster of adjacent hearths in the south portion of Area 1(Figures 37, 38, and 55-57; Table 11). A 1-m-x-1-m excavation unit (TU3) was established to cross-section H6. The perimeter of the hearth was defined (Figures 58-59). The fill was removed from the south half of the feature, and a profile was drawn of the cross-section wall (Figures 60 and 61). The profile suggests that H6 represents the truncated base of a hearth feature. Cultural materials recovered from the fill soil samples are summarized in Table 15. Approximately 250 FCR removed from the south half of H6 were not collected. The FCR was limestone, and ranged in size from 2 to 8 cm (maximum length).

Figure 55. View of cluster of three hearths (H6-H8), Area 1, site 39FA96, facing south.

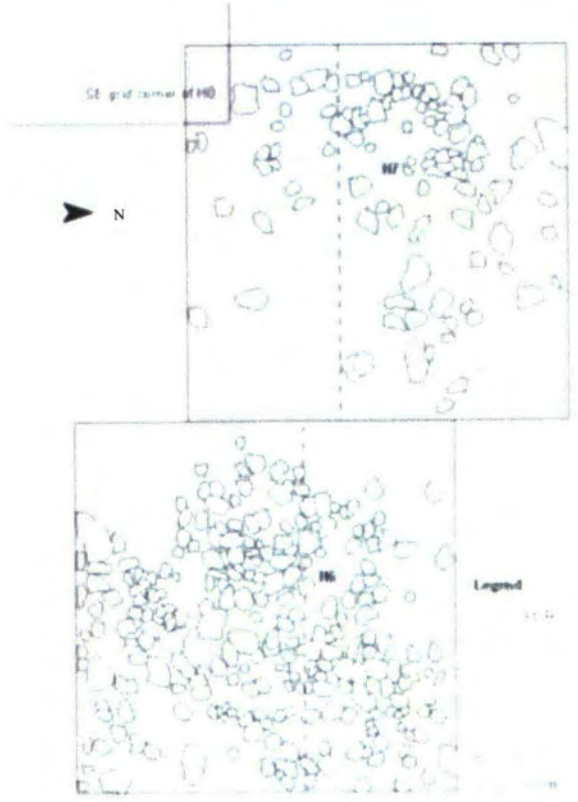


Figure 56. Plan of the top of H6 and H7, Area 1, site 39FA96.

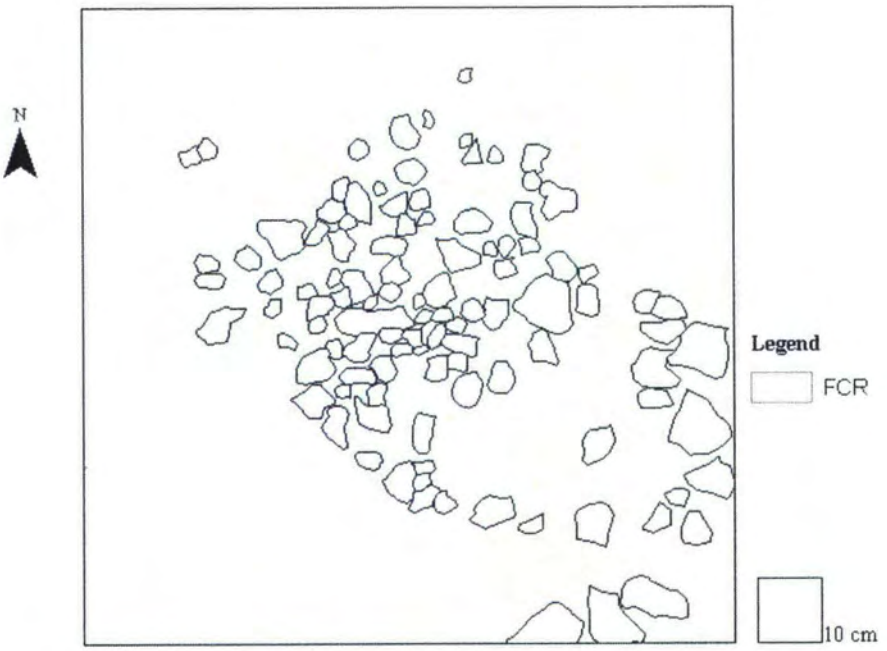


Figure 57. Plan of the top of H8, Area 1, site 39FA96.

Figure 58. View of defined perimeter of south half of H6 in TU3, Area 1, site 39FA96, facing north.

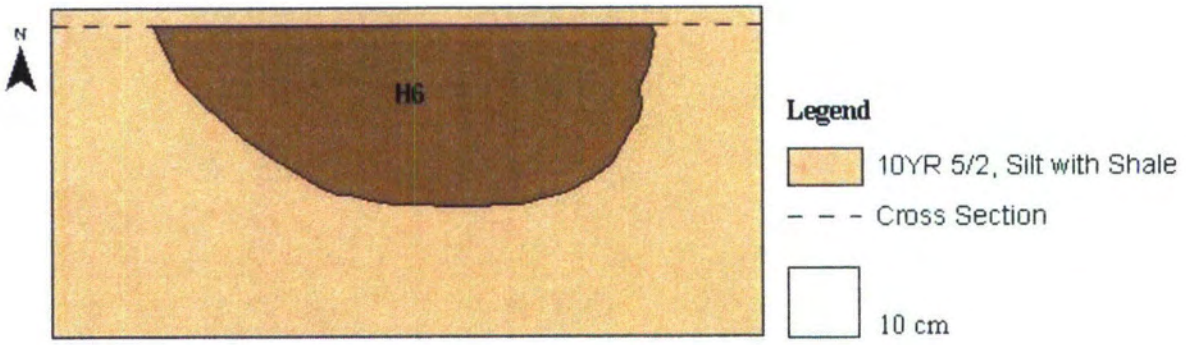


Figure 59. Plan of defined perimeter of south half of H6 in TU3, Area 1, site 39FA96.

Figure 60. View of cross-section profile of H6, Area 1, site 39FA96, facing north.

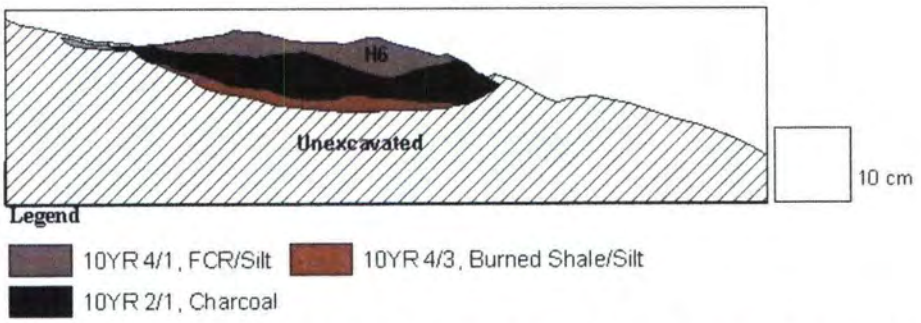


Figure 61. Cross-section profile of H6 in north wall of TU3, Area 1, site 39FA96.

Table 15. Artifacts Recovered from Processed H6 Fill Samples, Area 1, Site 39FA96.

Count	Artifact Type	Material
1	Sample-burned bone	
1	Sample-FCR	Limestone
1	Sample-charcoal	
1	Sample-gravel	

A 1-x-1-m excavation unit (TU4) was established to cross-section H7 directly adjacent to the west of H6 (see Figures 37, 38, 55, and 56). The perimeter of the hearth was defined (Figures 62 and 63).

The fill was removed from the south half of the feature and a profile was drawn of the cross-section wall (Figures 64 and 65). Cultural materials recovered from the fill soil samples are summarized in Table 16. Approximately 250 FCR removed from the south half of H7 were not collected. The FCR was limestone, and ranged in size from 2 to 20 cm (maximum length).

Figure 62. View of defined perimeter of H7 in TU4, Area 1, site 39FA96, facing north.

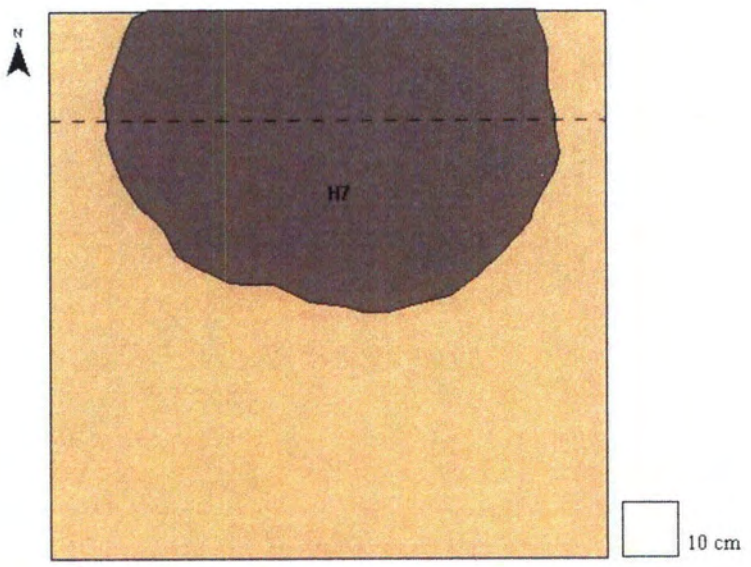


Figure 63. Plan of H7 perimeter in TU4, Area 1, site 39FA96.

Figure 64. View of cross-section profile of H7 in TU4, Area 1, site 39FA96, facing north.

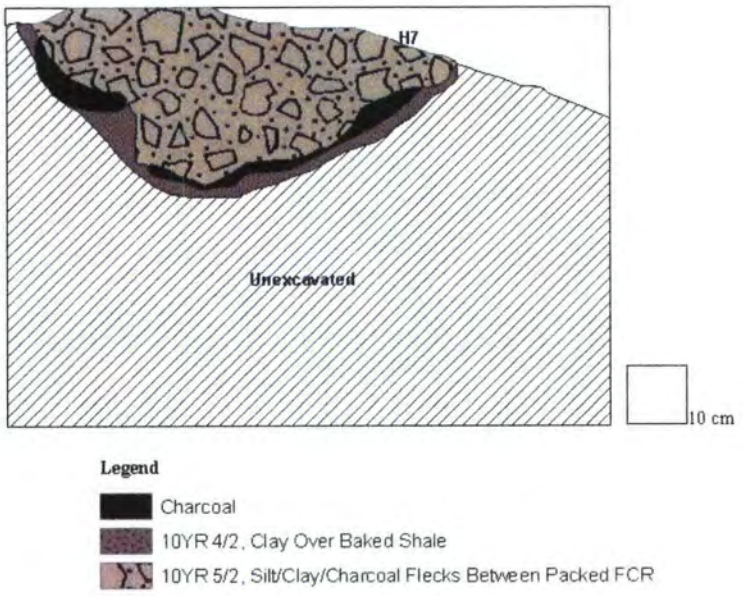


Figure 65. Cross-section profile of H7 in north wall of TU4, Area 1, site 39FA96.

Table 16. Artifacts Recovered from Processed H7 Fill Samples, Area 1, Site 39FA96.

Count	Artifact Type	Material	Color
2	Tertiary flake	Chert	Dusky red
2	Tertiary flake	Chalcedony	Light yellowish brown
1	Sample-unidentifiable bone		
1	Unidentifiable bone, burned		
1	Sample-unidentified floral seeds		
1	Sample-FCR	Limestone	
1	Sample-charcoal		Black
1	Sample-gravel		

A scaled plan was drawn of the exposed surface of hearth H11 in the central portion of Area 1 (Figures 36, 39 and 66; Table 11). A 1-m-x-1-m excavation unit was established to cross-section H11. The perimeter of the hearth was defined (Figures 67-69). The fill was removed from the west half of the feature, and a profile was drawn of the cross-section wall (Figures

70-71). Cultural materials recovered from the fill soil samples are summarized in Table 17. Approximately 345 FCR removed from the west half of H11 were not collected. The FCR was limestone, and ranged in size from 2 to 13 cm (maximum length).

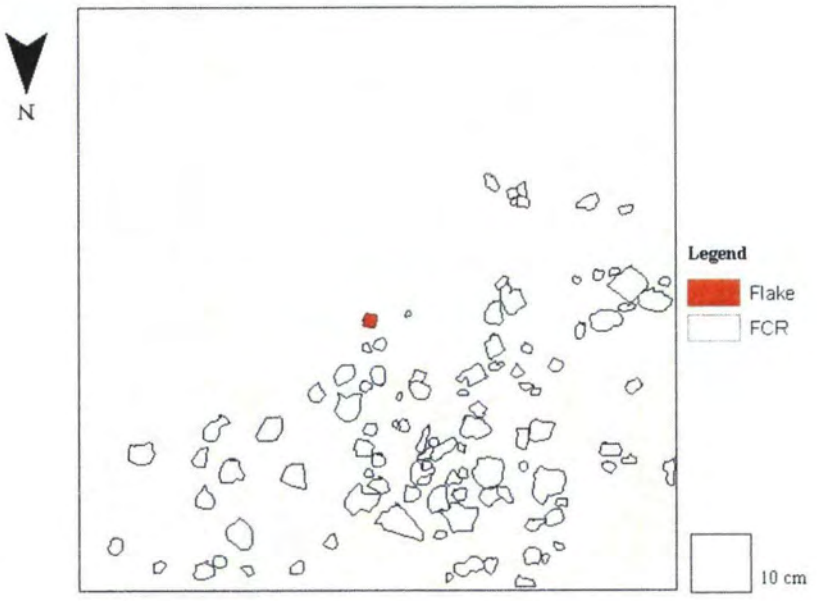


Figure 66. Plan of the top of H11, Area 1, site 39FA96.

Figure 67. View of defined perimeter of west half of H11, Area 1, site 39FA96, facing southwest.

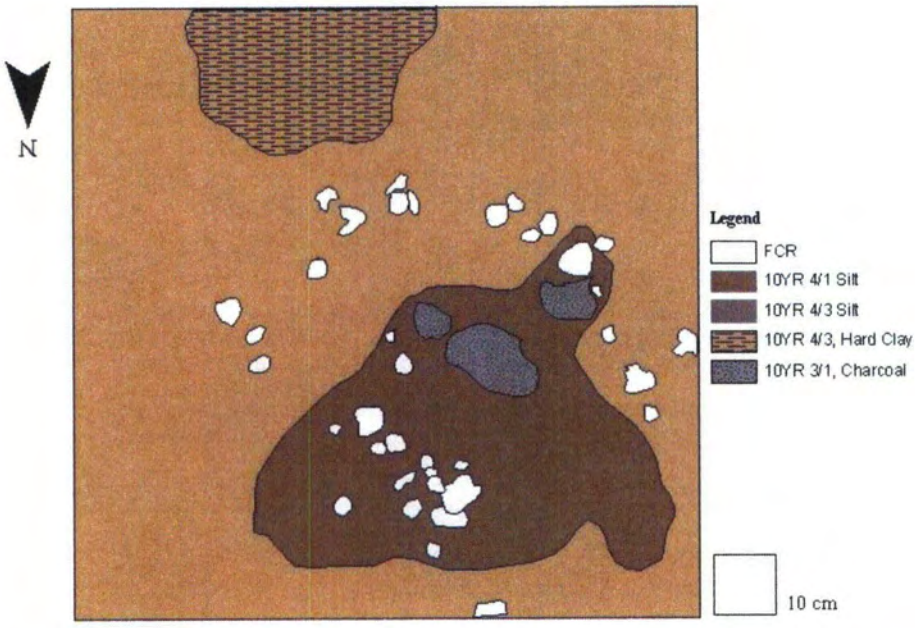


Figure 68. Plan of H11 perimeter at cleared surface, Area 1, site 39FA96.

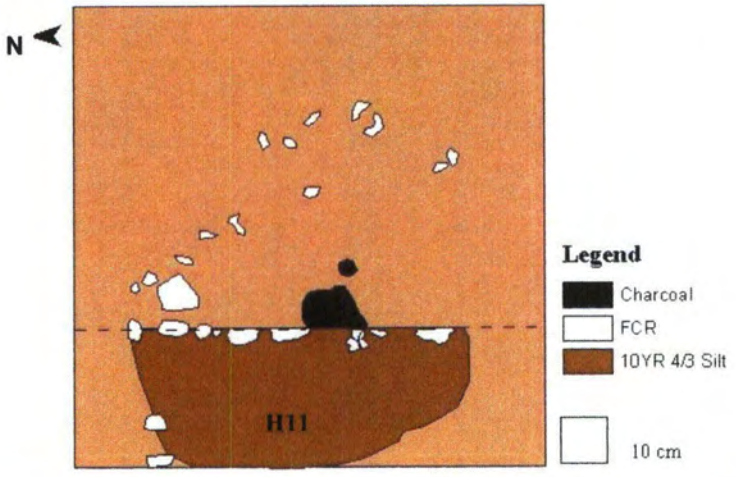


Figure 69. Plan of top of H11 exposed during excavation of cross-section, Area 1, site 39FA96.

Figure 70. View of cross-section profile of H11, Area 1, site 39FA96, facing east.

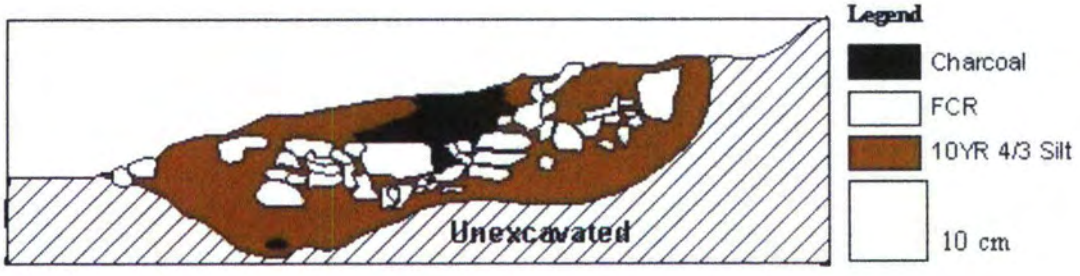


Figure 71. Cross-section profile of H11, Area 1, site 39FA96.

Table 17. Artifacts Recovered from Processed H11 Fill Samples, Area 1, Site 39FA96.

Count	Artifact Type	Material	Colors
1	Tertiary flake	Chert	Light gray
1	Sample-FCR	Limestone	
1	Sample-charcoal		Black
1	Sample-gravel		

Hearth H13 is in the central portion of Area 1 (Figures 36 and 39; Table 11). Very little of the hearth was visible at the surface. A 1-x-1-m excavation unit was established to encompass the estimated hearth location. The loose soil covering the unit was excavated to a

maximum depth of 6 cmbs. The outline of the hearth was defined (Figures 72 and 73). A cross-section line was then established at 45 cm south of the north edge of the unit. The fill was removed from the north half of the feature and a profile was drawn of the cross-section wall (Figures 74 and 75). Approximately 110 FCR removed from the north half of H13 were not collected. The FCR was limestone, and ranged in size from 2 to 8 cm (maximum length). The excavation of the fill and the profile suggested that the cross-section line did not cross the center of the hearth and cut only a few cm into the north edge of the hearth. The remainder of the feature was then cross-sectioned across the approximate center with a north-south line. The fill from west of the line was excavated. A profile was drawn (Figures 76 and 77). Cultural materials recovered from the fill soil samples are summarized in Table 18. Approximately 50 FCR removed from the north half of H13 were not collected. The FCR was limestone, and ranged in size from 2 to 15 cm (maximum length) with the majority being larger than 6 cm (maximum length).

Figure 72. View of H13 with loose topsoil removed, Area 1, site 39FA96, facing north.

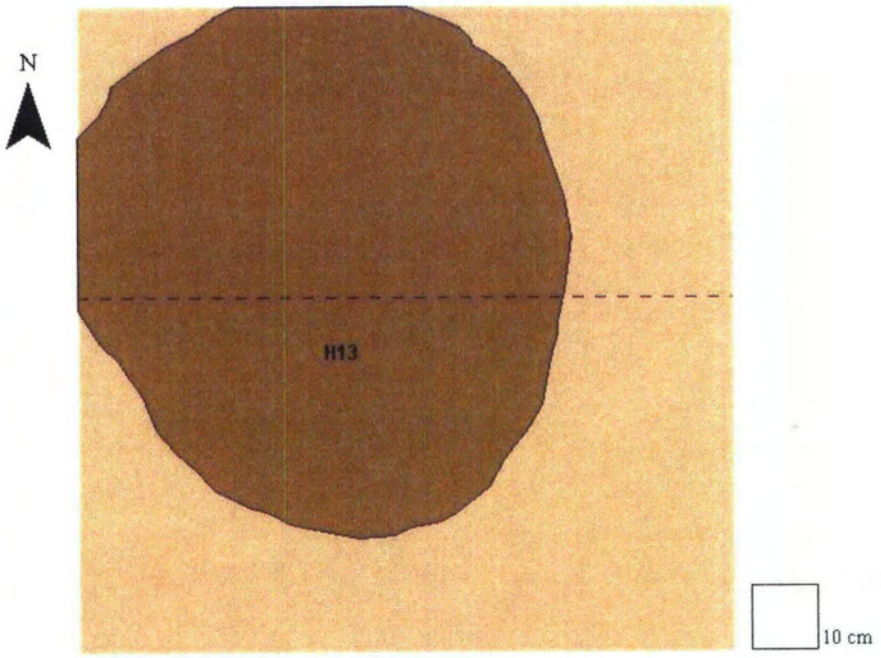


Figure 73. Plan of H13 perimeter, Area 1, site 39FA96.

Figure 74. View of cross-section profile of north half of H13, Area 1, site 39FA96, facing south.

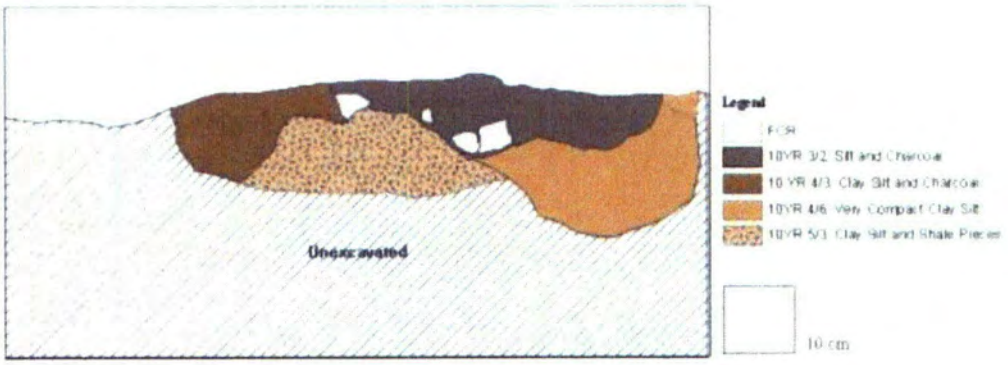


Figure 75. Cross-section profile of H13, Area 1, site 39FA96.

Figure 76. View of cross-section profile of southwest quarter of H13, Area 1, site 39FA96, facing east.

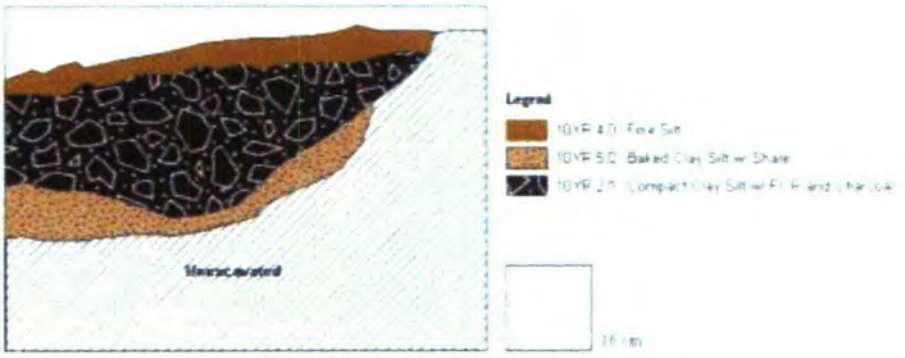


Figure 77. Profile of north-south cross-section wall, H13, Area 1, site 39FA96.

Table 18. Artifacts Recovered from Processed H13 Fill Samples, Area 1, Site 39FA96.

Count	Artifact Type	Material	Color
		N ½	
1	Shatter	Chert	Light gray and weak red
6	Unidentifiable Bone		
1	Sample-FCR	Limestone	
1	Sample-charcoal		Black
1	Sample-gravel		
		SW ¼	
1	Sample-FCR	Limestone	
1	Sample-charcoal		Black
1	Sample-gravel		

A scaled plan was drawn of the exposed surfaces of H15 in the central portion of Area 1 (Figures 36, 39, and 78; Table 11). A 1-m-x-1-m excavation unit was established to expose the top of the H15 stain (Figures 79 and 80). A cross-section line was established. The fill was removed from the east half of the feature, and a profile was drawn of the cross-section wall (Figures 81 and 82). The profile suggests that H15 represents the truncated base of a hearth feature. Cultural materials recovered from the fill soil samples are summarized in Table 19. Approximately 500 FCR removed from the south half of H15 were not collected. The FCR was limestone, and ranged in size from 1 to 26 cm (maximum length).

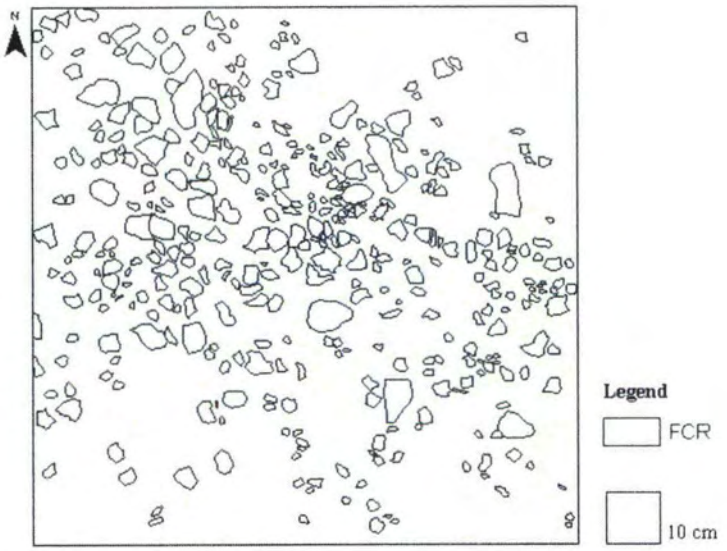


Figure 78. Plan of the top of H15, Area 1, site 39FA96.

Figure 79. View of defined perimeter of east half of H15, Area 1, site 39FA96, facing west.

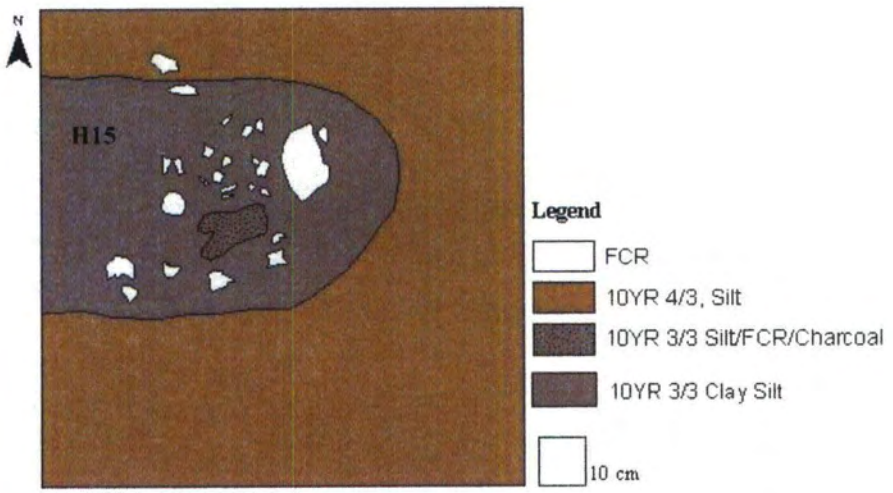


Figure 80. Plan of defined perimeter of east half of H15, Area 1, site 39FA96.

Figure 81. View of cross-section profile of H15, Area 1, site 39FA96, facing west.

Figure 84. Plan map of Area 2, site 39FA96, showing hearth and shovel test locations.