ANNUAL REVIEW OF CULTURAL RESOURCE INVESTIGATIONS BY THE SAVANNAH RIVER ARCHAEOLOGICAL RESEARCH PROGRAM

FISCAL YEAR 2009

Prepared by
the staff of the

SAVANNAH RIVER
ARCHAEOLOGICAL RESEARCH PROGRAM

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SAVANNAH RIVER ARCHAEOLOGICAL RESEARCH PROGRAM
SOUTH CAROLINA INSTITUTE OF ARCHAEOLOGY AND ANTHROPOLOGY
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MANAGEMENT SUMMARY

The United States Department of Energy-Savannah River Operations Office (DOE) Policy 141.1, *DOE Management of Cultural Resources*, identifies 24 major laws, regulations, executive orders, and guidance that apply to cultural resources management (CRM). Cultural resources include archaeological sites and artifacts, historical structures, and natural resources and sacred objects of importance to American Indians. DOE management responsibilities include identification, evaluation, and protection of archaeological/historical sites, artifact curation, and other mitigation measures.

The Savannah River Archaeological Research Program (SRARP) continued through Fiscal Year 2009 (FY09) with DOE to fulfill a threefold mission of CRM, research, and public education at the Savannah River Site (SRS). This report covers the CRM compliance, research, and outreach activities conducted by the SRARP from August 2008 to August 2009. However, due to DOE security concerns, parts of this report do not contain material (exact project area size, map scales, etc.) typically contained in standard archaeological documents.

In FY09, 2,024 acres of land on the SRS were investigated with 3,670 Shovel Test Pits (STPs) for CRM. This activity entailed 65 field reconnaissance or testing surveys, along with the recording of 38 newly discovered sites. Additionally, 19 previously recorded sites were revisited during FY09, and the site file records were updated. Geographical Information System (GIS) and Global Positioning System (GPS) technology was incorporated into all compliance projects to aid in maintaining and processing survey and site location information. In addition, SRARP staff continued support to DOE Cold War Cultural Resources Management Plan (CRMP) efforts through participation on DOE's Artifact Selection Team and at Heritage Tourism Board meetings.

Research conducted by SRARP personnel was reported in five professional articles and reports published during FY09. The SRARP staff presented research results in twenty-four papers and posters at professional conferences. SRARP personnel peer-reviewed nine articles and manuscripts for publication in professional journals or as books. SRARP archaeological research included eight field survey and excavation programs. Four grants were acquired and three grant proposals were submitted to support both on- and off-site research, and employees served as consultants on sixteen projects in off-site CRM and research activities. The SRARP staff held thirty-seven offices and appointments to committees in various educational, avocational, and professional organizations.

In the area of heritage education, the SRARP continued its activities in FY09 with a full schedule of classroom education, public outreach, and on-site tours. Fifty-nine presentations, displays, and tours were provided for schools, civic groups, and environmental and historical awareness day celebrations. And finally, the SRARP staff chaired or served on nine thesis or dissertation committees, as well as taught four anthropology courses at Augusta State University and the University of South Carolina, Columbia.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

INTRODUCTION

Since 1990, Savannah River Site (SRS) CRM compliance has been based on a programmatic memorandum of agreement (PMOA) among the Department of Energy (DOE), the South Carolina State Historic Preservation Office (SCSHPO), and the Advisory Council on Historic Preservation (ACHP). Through this PMOA, DOE commits to conduct an integrated CRM program at SRS that features research, public outreach, and compliance components. In return, the SCSHPO waves most DOE project-by-project compliance requirements that fall under Section 106 of the National Historic Preservation Act (NHPA) in favor of one annual compliance report. The PMOA also serves to meet general DOE regulatory responsibilities under Section 110 of the NHPA, Archaeological Resources Protection Act (ARPA), Native American Graves Protection and Repatriation Act (NAGPRA), and other CRM laws and regulations.

SRARP provides DOE with the technical expertise that enables DOE to meet its PMOA commitments. The specific elements of the SRARP compliance, research, and outreach effort are identified within a cooperative agreement between DOE and the South Carolina Institute of Archaeology and Anthropology (SCIAA), at the University of South Carolina (USC). The cooperative agreement also allows for compliance work to be performed using an SRS-specific archaeological survey and testing model that reduces compliance costs. The result has been quicker, more cost efficient CRM reviews of individual SRS projects.

The following section (Part I) regarding CRM contains the results of FY09 surveys, in addition to updates on other compliance related activities. According to the PMOA (SRARP 1989:185), annual survey results are provided in summary and tabular form in this report. Detailed information regarding artifact assemblage and environmental data for new and previously recorded sites located during FY09 is available upon request from the SRARP.

Research activities of the SRARP are summarized in Part II and include prehistoric, historic, and geoarchaeologic studies conducted on the SRS and in the surrounding region. An extra-local perspective is necessary for understanding the effects of regional processes on local conditions and, hence, enables the more effective management of the cultural resources on the SRS.

Public education activities of the SRARP are summarized in Part III, which highlights the heritage education program, volunteer excavations, and involvement with avocational archaeological groups. An Appendix at the end of the report lists all professional and public service activities of the SRARP staff.

PART I. CULTURAL RESOURCES MANAGEMENT

RESULTS OF FY09 SITE USE AND TIMBER COMPARTMENT SURVEYS

Keith Stephenson, Robert Moon, Tammy F. Herron

Survey Coverage

Archaeological survey of Site Use Permit Application and Timber Compartment Prescription projects by SRARP staff continued through FY09 according to procedures outlined in 1990 (SRARP 1990:7-17). During FY09, archaeological survey was conducted on 65 proposed projects[1] through the subsurface inspection of 2,024 acres with a total of 3,670 Shovel Test Pits (STPs) excavated. Altogether, 38 new sites were recorded and delineated, and 18 previously recorded sites were revisited during FY09. Based on the level of survey sampling conducted at all new and previously recorded sites, adequate information was not obtained for most sites to allow National Register of Historic Places (NRHP) eligibility determinations. As these sites are due to be impacted by future undertakings, the SRARP will conduct the appropriate level of archaeological investigation to resolve eligibility determinations. Finally, a total of 33 isolated artifact occurrences was recorded during FY09 surveys. Summary information concerning specific aspects of all new and existing sites, as well as isolated artifact occurrences, is provided in Tables 1 - 4. The location of all Site Use Application and Timber Compartment surveys are shown in (Figure 1 and Figure 2).

For the past 20 years, the SRARP has conducted compliance survey according to a predictive locational model for archaeological sites, as established in the Archaeological Resource Management Plan (SRARP 1989:39-54, 71-79). This Management Plan was developed in agreement with the DOE, the SCSHPO, and the ACHP. The predictive model, with refinements, has proven thus far to be a scientifically sound and efficient method with which to locate and manage archaeological resources on the SRS. Additionally, the predictive model is a cost-effective means of conducting survey—especially in times of federal government financial reductions. For these reasons, the development of predictive models is encouraged by regulatory guidance to federal landholders who manage archaeological resources on a daily basis. In this way, the SRARP primarily functions according to the Section 110 Regulatory process. In using the predictive model, the SRARP surveys are meeting the inventory and management responsibilities outlined in Section 110. If the undertaking could potentially impact archaeological sites, the SRARP follows the 106 Regulatory process of intensive, systematic, shovel test survey to delineate and evaluate the significance of any sites present. Then, if an eligible site cannot be avoided, the SRARP mitigates the adverse effect by way of data recovery through the 106 process.

This year, the SCSHPO requested that the SRARP apply a more intensive field method to better define and evaluate archaeological sites on the SRS (C. Cantley,

[1] A field survey project is defined as subsurface inspection for a DOE Site Use Application or all subsurface investigations within a US Forest Service-Savannah River Timber Compartment Prescription.

SCSHPO, to M. J. Brooks, SRARP, letter dated July 22, 2009). The SCSHPO recommends employing a "modified grid approach" rather than a "cruciform pattern of STPs" (see SRARP 1990:15-16 for current procedures on data collection of archaeological sites) with the principle component of the modified grid being the placement of multiple transects perpendicular to a baseline bisecting the central portion of an archaeological site. The SCSHPO further suggests a fixed interval between transect STPs, but yet maintaining flexibility for modification when considering such variables as the perceived size of the site and local geomorphic and landform conditions. As the SCSHPO points out, the results of applying this approach by other agencies have proven extremely beneficial for more accurately defining site boundaries and providing additional data toward assessing site significance. In FY10, the SRARP will implement the use of a modified grid approach for all survey, delineation, and testing of archaeological sites.

Table 1. Data on the Extent, Depth, and Content of New Sites Recorded, FY09.

STATE SITE NUMBER	SURVEY PROJECT	SURVEY METHOD	SITE SIZE (m)	SURF. VIS. (%)	SITE DEPTH (cmbs)	# STPs	POS. STPs	COMPONENTS
38AK980	SU 1918	Intensive	10 x 20	0	0-80	11	3	Unk. Preh.
38AK981	SU 1924	Intensive	10 x 10	0	0-10	9	1	MW
38AL241	Purposive	Recon.	110 x 190	1-25	0-135	30	28	MA-LW.
38BR1229	SU 1927	Intensive	20 x 30	1-25	0-10	9	2	20th cent.
38BR1230	TC 56	Predictive	30 x 40	1-25	0-30	14	3	20th cent.
38BR1231	TC 73	Predictive	10 x 100	0	0-40	18	4	20th cent.
38BR1232	TC 34	Predictive	20 x 30	1-25	0-60	10	3	Unk. Preh.
38BR1233	TC 34	Predictive	40 x 50	1-25	0-70	11	7	Unk. Preh., 20th cent.
38BR1234	TC 34	Predictive	700 x 800	1-25	0-40	8	2	20th cent.
38BR1235	TC 34	Predictive	55 x 65	1-25	0-80	18	11	Unk. Preh., 19th/20th cent.
38BR1236	TC 34	Predictive	10 x 40	0	0-80	10	4	20th cent.
38BR1237	TC 34	Predictive	40 x 150	1-25	0-20	17	5	20th cent.
38BR1238	TC 86	Predictive	75 x 225	1-25	0-100	35	20	Unk. Preh., 20th cent.
38BR1239	TC 86	Predictive	40 x 130	0	0-90	21	11	Unk. Preh.
38BR1240	TC 86	Predictive	20 x 20	1-25	0-60	9	1	Unk. Preh.
38BR1241	TC 47	Predictive	50 x 75	0	0-30	21	6	20th cent.
38BR1242	TC 47	Predictive	65 x 155	0	0-30	16	3	20th cent.
38BR1243	TC 34	Predictive	100 x 110	0	0-80	16	6	Unk. Preh., 20th cent.
38BR1244	TC 34	Predictive	35 x 40	1-25	0-80	12	4	Unk. Preh.
38BR1245	TC 34	Predictive	10 x 30	26-50	0-80	14	3	Unk. Preh.
38BR1246	TC 44	Predictive	10 x 20	0	0-100	10	2	Unk. Preh.
38BR1247	TC 44	Predictive	5 x 10	0	0-80	9	2	Unk. Preh.
38BR1248	TC 63	Predictive	10 x 20	0	0-50	10	2	20th cent.
38BR1249	TC 63	Predictive	5 x 25	1-25	0-30	9	2	Unk. Preh.
38BR1250	TC 63	Predictive	80 x 100	1-25	0-80	22	10	LW, 20th cent.
38BR1251	TC 63	Predictive	60 x 240	0	0-80	35	15	Unk. Preh.
38BR1252	TC 63	Predictive	40 x 185	26-50	0-80	31	10	Unk. Preh.
38BR1253	TC 55	Predictive	80 x 180	0	0-60	33	7	Unk. Preh., 20th cent.
38BR1254	TC 55	Predictive	10 x 95	0	0-60	13	5	Unk. Preh.
38BR1255	TC 55	Predictive	20 x 20	0	0-60	18	4	Unk. Preh.
38BR1256	TC 55	Intensive	30 x 60	51-75	0-70	9	1	Unk. Preh., 20th cent.
38BR1257	TC 62	Predictive	20 x 20	1-25	0-40	10	3	Unk. Preh.
38BR1258	TC 62	Predictive	25 x 85	0	0-40	20	6	Unk. Preh.
38BR1259	TC 50	Intensive	20 x 40	76-100	0-30	12	4	20th cent.
38BR1261	SU 1976	Intensive	10 x 20	1-25	0-90	9	2	Unk. Preh.
38BR1268	Purposive	Recon.	70 x 115	1-25	0-100	13	9	LA, LW

Table 1 (continued). Data on the Extent, Depth, and Content of New Sites Recorded, FY09.

STATE SITE NUMBER	SURVEY PROJECT	SURVEY METHOD	SITE SIZE (m)	SURF. VIS. (%)	SITE DEPTH (cmbs)	# STPs	POS. STPs	COMPONENTS
38BR1269	TC 48	Intensive	30 x 60	0	0-30	22	5	20th cent.
38BR1270	Purposive	Recon.	300 x 350	26-50	na	0	0	EA-Miss.
38BR1271	TC 72	Intensive	x		0-	4	1	20th cent.

Recon. – Reconnaissance
SU – Site Use
STPs – Shovel Test Pits
EA – Early Archaic
MA – Middle Archaic
LA – Late Archaic
EW – Early Woodland
MW – Middle Woodland
LW – Late Woodland
Miss. – Mississippian
Unk. Preh. – Unknown Prehistoric

Table 2. Data on the Extent, Depth, and Content of Site Revisits, FY09.

STATE SITE NUMBER	SURVEY PROJECT	SURVEY METHOD	SITE SIZE (m)	SURF. VIS. (%)	SITE DEPTH (cmbs)	# STPs	POS. STPs	COMPONENTS
38AK66	SU 1890	Purposive	150 x 75	1-25	0-80	31	12	Unk. Preh., 18th cent.
38AK545	SU 1964	Intensive	125 x 80	1-25	0-70	72	25	MA, EW, 19th-20th cent.
38AK557	SU 1918	Predictive	40 x 40	0	50-80	11	3	MA
38AK558	SU 1918	Purposive	90 x 40	0	10-80	18	6	Unk. Preh., 20th cent.
38AK559	SU 1918	Purposive	45 x 30	26-50	50-80	15	3	Unk. Preh.
38AK561	SU 1918	Intensive	100 x 60	0	0-80	19	7	Unk. Preh.
38AK979	SU 1924	Intensive	50 x 20	0	0-80	21	8	LA, EW, LW, Miss. Unk. Hist
38BR62	TC 47	Purposive	500 x 100	0	0-80	46	13	Unk. Preh., 20th cent.
38BR170	TC 86	Predictive	980 x 680	26-50	0-80	13	5	EA, MA, MW, LW, Unk. Hist.
38BR615	TC 55	Predictive	320 x 120	76-100	0-70	50	25	MW, LW, Miss.
38BR705	TC 74	Predictive	95 x 55	1-25	0-40	16	5	20th cent.
38BR789	TC 34	Predictive	75 x 45	1-25	0-50	10	2	20th cent.
38BR824	Opp.	Purposive.	225 80	26-50	Unk.	0	0	20th cent.
38BR876	SU 1959	Purposive	150 x 60	1-25	0-30	7	1	19th/20th cent.
38BR923	TC 46	Predictive	20 x 10	0	70-80	10	2	Unk. Preh.
38BR968	TC 65	Intensive	80 x 40	0	0-60	17	7	LA
39BR998	TC 75	Intensive	40 x 10	1-25	10-40	11	3	Unk. Preh.
38BR1231	TC 73	Intensive	135 x 10	1-25	0	4	1	Unk. Hist.

Recon. – Reconnaissance
SU – Site Use
STPs – Shovel Test Pits
EA – Early Archaic
MA – Middle Archaic
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EW – Early Woodland
MW – Middle Woodland
LW – Late Woodland
Miss. – Mississippian
Unk. Preh. – Unknown Prehistoric
Unk. – Unkown

Table 3. Evaluation of New and Previously Recorded Sites, FY09.

STATE SITE NUMBER	SURVEY PROJECT	SURVEY METHOD	SITE COMPONENTS	SITE INTEGRITY	NRHP ELIGIBILITY	FURTHER WORK
38AK66	SU 1890	Purposive	Unk. Preh., 18th cent.	Poor	Not Eligible	None
38AK545	SU 1964	Intensive	MA, EW, 19th-20th cent.	Moderate	Indeterminate	Testing
38AK557	SU 1918	Predictive	MA	Moderate	Indeterminate	Testing
38AK558	SU 1918	Purposive	Unk. Preh., 19th cent.	Moderate	Indeterminate	Testing
38AK559	SU 1918	Purposive	Unk. Preh.	Poor	Not Eligible	None
38AK561	SU 1918	Intensive	Unk. Preh.	Moderate	Indeterminate	Testing
38AK979	SU 1924	Intensive	LA, EW, LW, Miss. Unk. Hist.	Moderate	Indeterminate	Testing
38AK980	SU 1918	Intensive	Unk. Preh.	Moderate	Not Eligible	None
38AK981	SU 1924	Intensive	MW	Poor	Note Eligible	Testing

Table 3 (continued). Evaluation of New and Previously Recorded Sites, FY09.

STATE SITE NUMBER	SURVEY PROJECT	SURVEY METHOD	SITE COMPONENTS	SITE INTEGRITY	NRHP ELIGIBILITY	FURTHER WORK
38AL241	Purposive	Recon.	MA-LW	Moderate	Indeterminate	Testing
38BR62	TC 47	Purposive	Unk. Preh, 20th cent.	Moderate	Indeterminate	Testing
38BR170	TC 86	Predictive	EA, MA, MW, LW, Unk. Hist.	Moderate	Indeterminate	Testing
38BR615	TC 55	Predictive	MW, LW, Miss.	Moderate	Indeterminate	Testing
38BR705	TC 74	Predictive	19th-20th cent.	Moderate	Indeterminate	Testing
38BR789	TC 34	Purposive	20th cent.	Poor	Not Eligible	None
38BR824	Opp.	Purposive	20th cent.	Moderate	Indeterminate	Testing
38BR876	SU 1959	Purposive	19th/20th cent.	Poor	Not Eligible	None
38BR923	TC 46	Predictive	Unk. Preh.	Moderate	Indeterminate	Testing
38BR968	TC 65	Intensive	LA	Moderate	Indeterminate	Testing
38BR998	TC 75	Intensive	Unk. Preh.	Poor	Not Eligible	None
38BR1229	SU 1927	Intensive	20th cent.	Poor	Not Eligible	None
38BR1230	TC 56	Predictive	20th cent.	Poor	Not Eligible	None
38BR1231	TC 73	Predictive	Unk. Hist.	Poor	Not Eligible	None
38BR1232	TC 34	Predictive	Unk. Preh.	Moderate	Indeterminate	Testing
38BR1233	TC 34	Predictive	Unk. Preh., 20th cent.	Poor	Not Eligible	None
38BR1234	TC 34	Predictive	20th cent.	Poor	Not Eligible	None
38BR1235	TC 34	Predictive	Unk. Preh., 19th/20th cent.	Moderate	Indeterminate	Testing
38BR1236	TC 34	Predictive	20th cent.	Poor	Not Eligible	None
38BR1237	TC 34	Predictive	20th cent.	Moderate	Indeterminate	Testing
38BR1238	TC 86	Predictive	Unk. Preh., 20th cent.	Moderate	Indeterminate	Testing
38BR1239	TC 86	Predictive	Unk. Preh.	Moderate	Indeterminate	Testing
38BR1240	TC 86	Predictive	Unk. Preh.	Poor	Not Eligible	None
38BR1241	TC 47	Predictive	20th cent.	Poor	Not Eligible	None
38BR1242	TC 47	Predictive	20th cent.	Poor	Not Eligible	None
38BR1243	TC 34	Predictive	Unk. Preh., 20th cent.	Moderate	Indeterminate	Testing
38BR1244	TC 34	Predictive	Unk. Preh.	Poor	Not Eligible	None
38BR1245	TC 34	Predictive	Unk. Preh.	Poor	Not Eligible	None
38BR1246	TC 44	Predictive	Unk. Preh.	Poor	Not Eligible	None
38BR1247	TC 44	Predictive	Unk. Preh.	Poor	Not Eligible	None
38BR1248	TC 63	Predictive	20th cent.	Poor	Not Eligible	None
38BR1249	TC 63	Predictive	Unk. Preh.	Poor	Not Eligible	None
38BR1250	TC 63	Predictive	LW, 20th cent.	Moderate	Indeterminate	Testing
38BR1251	TC 63	Predictive	Unk. Preh.	Moderate	Indeterminate	Testing
38BR1252	TC 63	Predictive	Unk. Preh.	Moderate	Indeterminate	Testing
38BR1253	TC 55	Predictive	Unk. Preh., 20th cent.	Poor	Not Eligible	None
38BR1254	TC 55	Predictive	Unk. Preh.	Moderate	Indeterminate	Testing
38BR1255	TC 55	Predictive	Unk. Preh.	Moderate	Indeterminate	Testing
38BR1256	TC 55	Intensive	Unk. Preh., 20th cent.	Moderate	Indeterminate	Testing
38BR1257	TC 62	Predictive	Unk. Preh.	Poor	Not Eligible	None
38BR1258	TC 62	Predictive	Unk. Preh.	Moderate	Indeterminate	Testing
38BR1259	TC 50	Intensive	20th cent.	Poor	Not Eligible	None
38BR1261	SU 1976	Intensive	Unk. Preh.	Moderate	Indeterminate	Testing
38BR1268	Purposive	Recon.	LA, LW	Moderate	Indeterminate	Testing
38BR1269	TC 48	Intensive	20th cent.	Moderate	Indeterminate	Testing
38BR1270	Purposive	Recon.	EA-Miss.	Moderate	Indeterminate	Testing
38BR1271	TC 72	Intensive	20th cent.	Poor	Not Eligible	None

TC - Timber Compartment
SU - Site Use
Opp. – Opportunistic
EA - Early Archaic
MA - Middle Archaic
LA - Late Archaic
EW - Early Woodland
MW - Middle Woodland
LW - Late Woodland
Miss. - Mississippian
Unk. Preh. - Unknown Prehistoric
Unk. Hist. - Unknown Historic

Table 4. Isolated Artifact Occurrences, FY09.

ISOLATED FIND NO.	STPs	COMPONENT	SURVEY PROJECT
AKOCC-126	10	Prehistoric	SU 1918
AKOCC-127	10	Prehistoric	SU 1918
AKOCC-128	10	Prehistoric	SU 1918
AKOCC-129	9	Prehistoric	SU 1918
AKOCC-130	9	Prehistoric	SU 1918
AKOCC-131	9	Prehistoric	SU 1924
AKOCC-132	8	Historic	TC 6
AKOCC-133	9	Historic	SU 1972
AKOCC-134	7	Prehistoric	SU 1972
AKOCC-135	9	Prehistoric	SU 1967
AKOCC-136	9	Prehistoric	SU 1967
BROCC-243	9	Prehistoric	TC 56
BROCC-244	10	Prehistoric	TC 34
BROCC-245	9	Prehistoric	TC 34
BROCC-246	9	Historic	TC 34
BROCC-247	9	Prehistoric	TC 86
BROCC-248	9	Prehistoric	TC 86
BROCC-249	7	Prehistoric	TC 47
BROCC-250	9	Hist., Prehist.	TC 47
BROCC-251	8	Historic	TC 47
BROCC-253	9	Prehistoric	TC 63
BROCC-254	9	Historic	SU 1935
BROCC-255	8	Historic	SU 1935
BROCC-256	9	Prehistoric	TC 55
BROCC-257	8	Prehistoric	TC 55
BROCC-258	7	Prehistoric	TC 55
BROCC-259	9	Historic	TC 74
BROCC-260	9	Historic	TC 48
BROCC-261	6	Historic	TC 72
BROCC-275	6	Historic	TC 70
BROCC-276	7	Historic	TC 70

OCC – Artifact Occurrence
SU – Site Use
TC – Timber Compartment
STD – Timber Stand

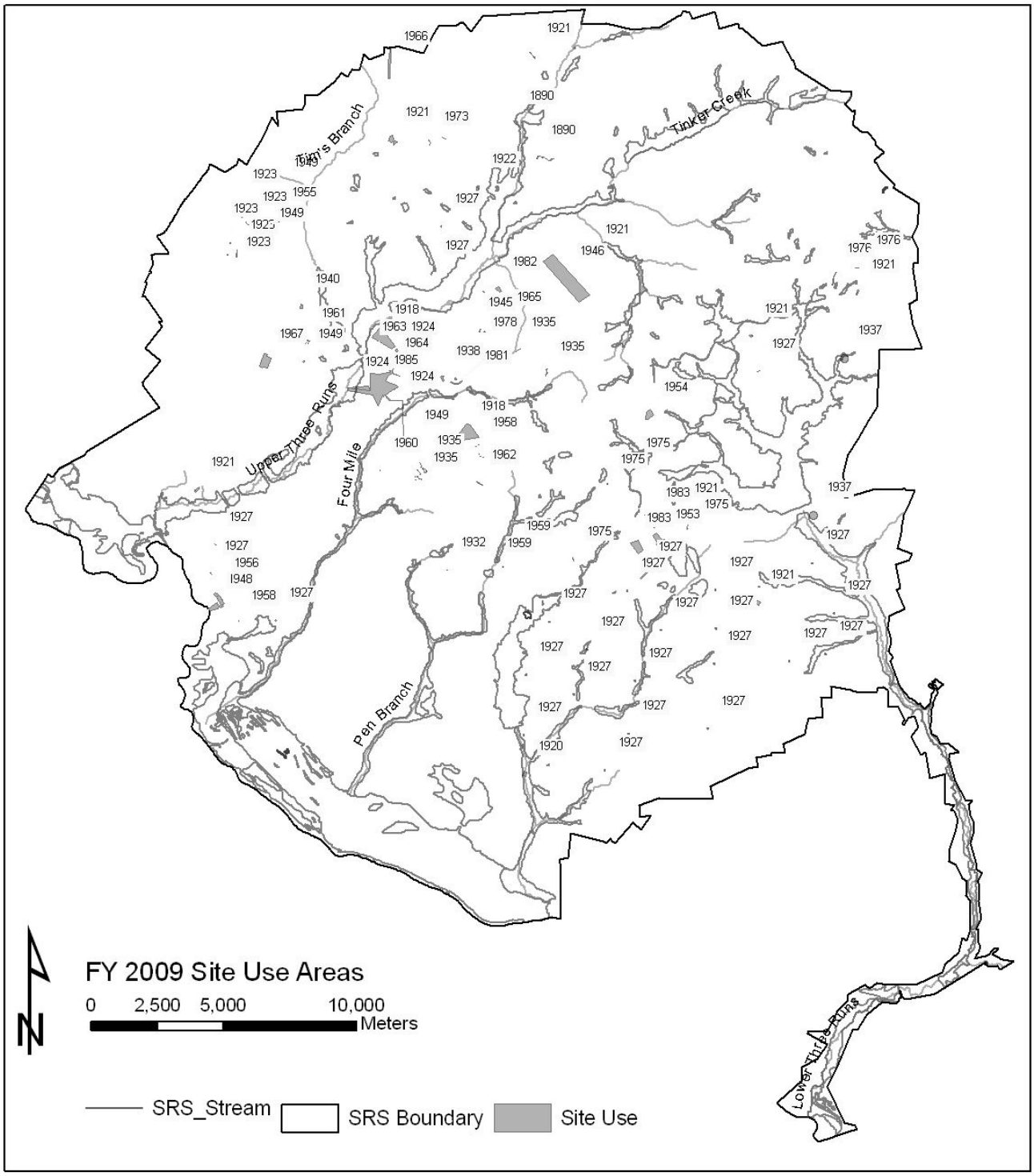


Figure 1. Location of FY09 Site Use project areas on the SRS.

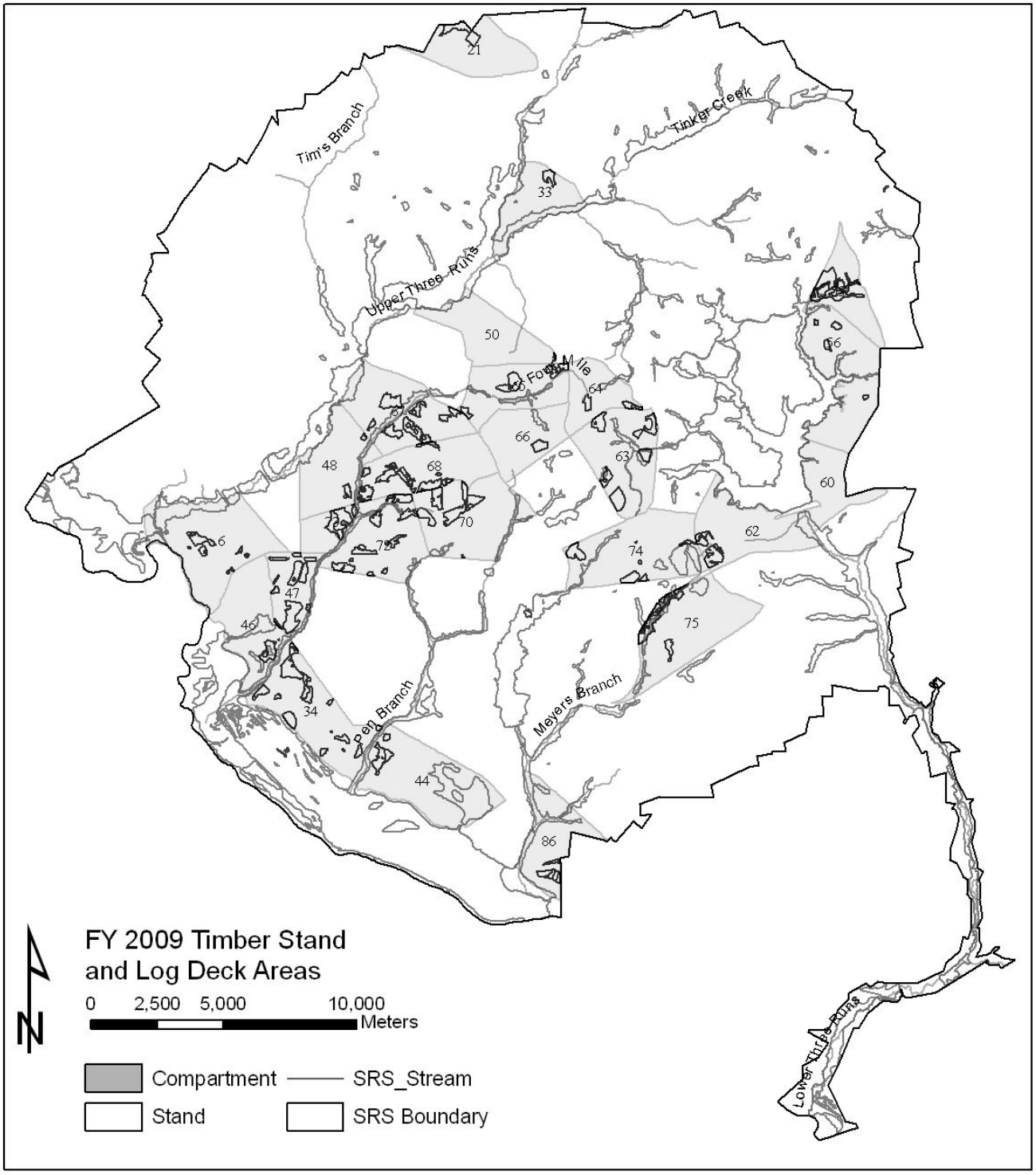


Figure 2. Location of FY09 Timber Compartment project areas on the SRS.

SR-88 Site Use Permit Application Surveys

A total of 51 Site Use Permit Applications was received by the SRARP during FY09. Each Application underwent review by SRARP management for proposed land modification. Of these, 40 required field reconnaissance or archaeological survey in addition to two ongoing field surveys from the previous fiscal year (Table 5). These Site Use projects comprised 144 acres (7.0 percent) of the total survey coverage in FY09.

Table 5. SR-88 Site Use Application Projects, FY09.

PROJECT	TOTAL PROJECT STPs	PROJECT AREA SURVEYED (ac)	NEW SITES	SITE REVISITS
SU Log No. 1890	31	2		38AK66
SU Log No. 1918	43	na	38AK980	38AK557
				38AK558
				38AK559
				38AK561
SU Log Nos. 1924/1985	231	42	38AK981	38AK979
SU Log No. 1927	89	23	38BR1229	
SU Log No. 1928	na	na		
SU Log No. 1932	na	na		
SU Log No. 1933	na	na		
SU Log No. 1935	16	5		
SU Log No. 1937	na	na		
SU Log No. 1938	na	na		
SU Log No. 1940	na	na		
SU Log No. 1944	na	na		
SU Log Nos. 1946/1957	16	1		
SU Log No. 1948	4	1		
SU Log No. 1949	na	na		
SU Log No. 1952	na	na		
SU Log No. 1953	na	na		
SU Log No. 1954	na	na		
SU Log No. 1955	na	na		
SU Log No. 1956	na	na		
SU Log No. 1958	na	na		
SU Log No. 1959	16	2		38BR876
SU Log No. 1960	na	na		
SU Log No. 1961	na	na		
SU Log No. 1962	na	na		
SU Log No. 1963	na	na		
SU Log Nos. 1964/1972/1980	98	20		38AK545
SU Log No. 1966	16	2		
SU Log No. 1967	174	35		
SU Log No. 1969	na	na		
SU Log No. 1971	na	na		
SU Log No. 1974	na	na		
SU Log No. 1975	2	6		
SU Log No. 1976	30	5	38BR1261	
SU Log No. 1977	na	na		
SU Log No. 1978	na	na		
SU Log No. 1979	na	na		
SU Log No. 1981	na	na		
TOTAL	766	144	4	8

na – not applicable

The following summaries describe Site Use projects and survey results during FY09. Certain aspects of archaeological work are standard for all projects. Upon completion of each survey project point data for all STPs as well as all new and previously recorded sites and isolated artifact occurrences are recorded using GPS equipment. Prior to fieldwork, a review of 1951 aerial photographs is conducted to identify standing historic structures at the time of federal acquisition. The SRARP site files are consulted to identify previously recorded cultural resources. All STPs measure 35 x 35 cm and are excavated to a depth of at least 80 cmbs, unless a gravel or clay substratum is encountered. Exceptions to this fieldwork procedure include historic site locations identified from 1951 aerial photographs that are situated in low-probability areas for prehistoric sites (see discussion of Archaeological Sensitivity Zones in SRARP 1989). At these locations, STPs are excavated to just below the plowzone (usually between 20 - 40 cmbs). The reduced depth of STPs on historic sites is justified because late-period historic sites generally lack thick, stratified deposits (Cabak and Inkrot 1997:29-31). The soil from the STPs is sifted through 0.25-in. wire mesh, and artifacts are collected and bagged by provenience.

SU Log No. 1890 – Upper Three Runs North Resource Management Stewardship Plan

This Site Use Permit, issued June 21, 2007 by the United States Forest Service-Savannah River (USFS-SR), proposed management activities to improve forest health and vigor, enhance wildlife habitat, reduce and control forest fuel buildups and improve and maintain the transportation system. Proposed treatments involved intermediate thinning, first thinning, timber regeneration, controlled burning, road construction and reconstruction, and maintenance. Proposed reforestation activities include site preparation, herbicide treatments, and machine/hand planting operations. Archaeological survey of the project areas slated for forest management were conducted and reported in FY05, FY06, and FY07 (SRARP 2005; 2006; 2007).

The current Site Use proposed the construction of two access roads, one in Compartment 19 and the second in Compartment 32 (Figure 3). Review of the SRARP database showed one previously recorded site (38AK66) in the project area. Fieldwork consisted of 31 STPs excavated along transects that followed the proposed road corridors. No positive STPs were encountered in Compartment 32; however, site 38AK66 was relocated in Compartment 19. The site was delineated with a cruciform pattern of STPs and the USRS-SR agreed to reroute the road as originally proposed to completely avoid the site. Thus, there will be no adverse effect to any historic properties by the proposed Site Use action.

SU Log No. 1918 – PCDF Construction Support Area (Laydown Yard)

The description of fieldwork results for SU Log No.1918 in this report is a continuation of that from last fiscal year (see SRARP 2008:15-16). This Site Use Permit, initiated on May 28, 2008 by the Pit Disassembly and Conversion Facility (PDCF) Operations and Maintenance, requested the use of 75 acres near the F-Area complex as a

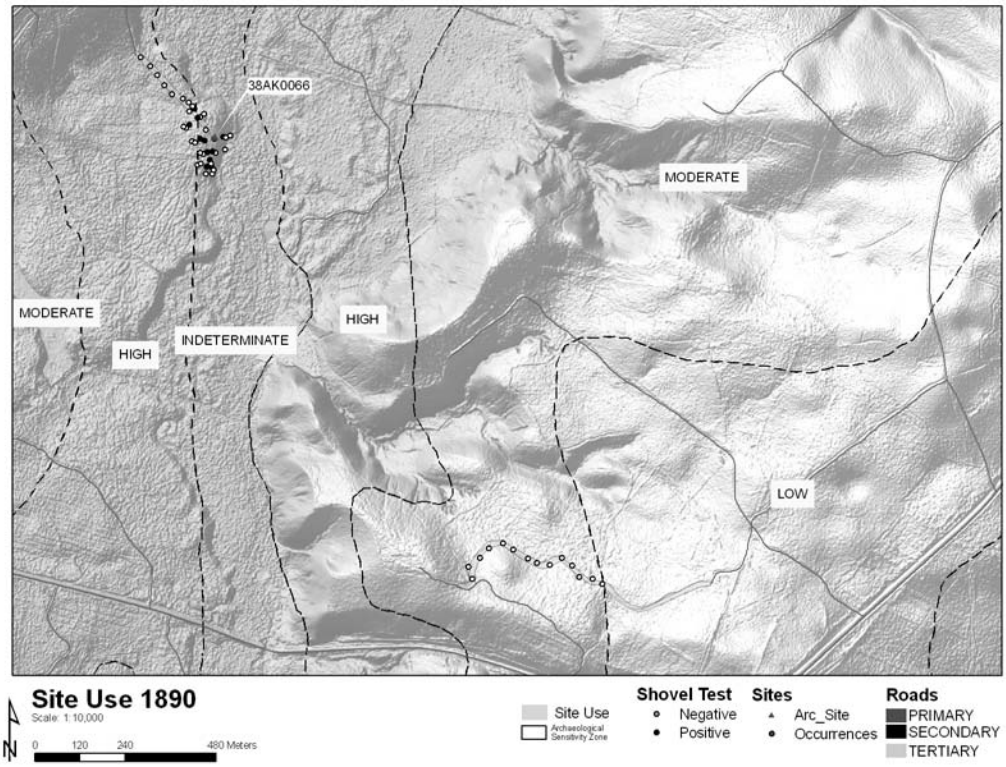


Figure 3. SU Log No. 1890 survey area.

PDCF construction support area (laydown yard). Previous archaeological inspection in the current project area occurred in 1993-1994 (Cabak et al. 1996) and consisted of a survey strategy that targeted specific topographic areas as opposed to intensive survey of the entire landform. This early survey documented five archaeological sites (38AK557, 38AK558, 38AK559, 38AK560, 38AK561) within or immediately adjacent to the current Site Use project area. The proposed land use for this portion of the larger project area surveyed in 1993-1994 was delayed, and these sites have remained intact to date.

Fieldwork during FY08 consisted of an intensive survey of the project area to relocate all previously recorded sites, as well as to locate additional sites that may have been missed during the 1993-1994 survey. Fieldwork consisted of 366 STPs (11 positive) excavated on a 30-m grid across the entire project area.

Current fieldwork this fiscal year consisted of an additional 43 STPs (4 positive) excavated along five transects (Figure 4). The survey efforts of FY08 and FY09 resulted in the relocation of the four previously recorded sites (38AK557, 38AK558, 38AK559, 38AK561), as well as the discovery of one new site (38AK980), and five isolated artifact occurrences (AK-OCC-126, AK-OCC-127, AK-OCC-128, AK-OCC-129, AK-OCC-130). Previously recorded site 38AK560 could not be relocated due to the ephemeral nature of cultural deposits.

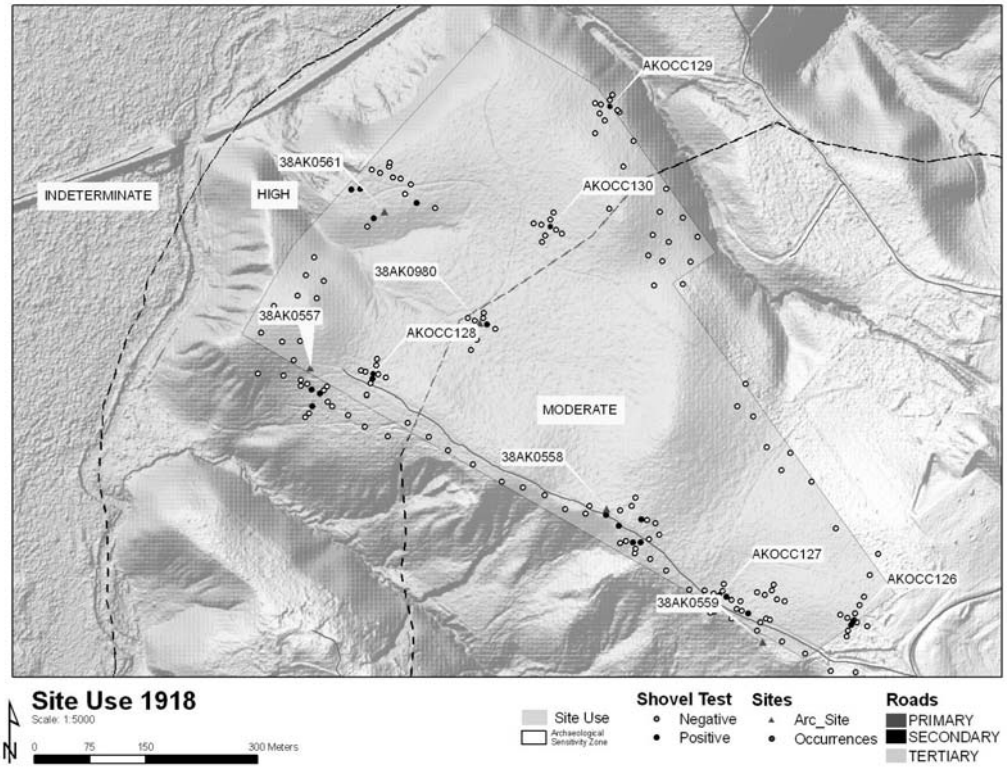


Figure 4. SU Log No. 1918 survey area.

Based on the results of their testing efforts, Cabak and colleagues (1996) submitted recommendations for these sites in their report as follows: site 38AK557 is potentially eligible for nomination to the NRHP; site 38AK558 is not eligible for nomination to the NRHP; site 38AK559 in not eligible for nomination to the NRHP; site 38AK560 is not considered eligible for nomination to the NRHP; site 38AK561 is considered potentially eligible for nomination to the NRHP. To this list we add site 38AK980, which is considered not eligible for nomination to the NRHP based on the ephemeral nature of its prehistoric period flake scatter. The five artifact occurrences have no research potential to contribute to our understanding of the regional prehistory. As such, there will be no adverse effect to these artifact occurrences as a result of the proposed Site Use action.

Regarding sites 38AK557 and 38AK561, SRARP management and DOE Contracting Officer Dennis Ryan met with PDCF personnel to discuss options for avoiding these sites, which are situated in Archaeological Sensitivity Zone 1 along the floodplain margin of Upper Three Runs, during the proposed Site Use action. The most favored option was for the PDCF to withdraw from the project area all land within Archaeological Sensitivity Zone 1. PDCF personnel decided to resubmit the Site Use to reflect a newly proposed project area boundary; however, to date, the SRARP has not received an amended Site Use to this effect.

SU Log Nos. 1924/1985 – Additional Land for Biomass Steam Facility

This Site Use Permit, initiated June 23, 2008 by Infrastructure Support Division (I&S), requested 42 acres of land for installing a drainage pipe line to service the proposed Biomass Steam Facility surveyed by the SRARP during FY08 as shown in (Figure 5) (also see Site Use Log No. 1900 section in SRARP 2008:10-11). Fieldwork consisted of a total of 231 STPs (38 positive) excavated on a 30-m grid across the proposed project area (Figure 6). These survey efforts resulted in the further delineation of previously recorded site 38AK979 as well as the discovery and delineation of new site 38AK981 and the recovery of one isolated artifact (AK-OCC-131). This artifact occurrence holds no research potential to contribute to our understanding of the regional prehistory. Archaeological site 38AK981 is an ephemeral prehistoric lithic and ceramic scatter and holds little research potential to contribute to our understanding of the regional prehistory and as such is not considered eligible for nomination to the NRHP. Thus, there will be no adverse effect to site 38AK981 or isolated occurrence BR-OCC-131as a result of the proposed Site Use action.

Regarding site 38AK979, SRARP management and DOE Contracting Officer Dennis Ryan met with I&S personnel to discuss options for avoiding this site, which is situated in Archaeological Sensitivity Zone 1 along the floodplain margin of Upper Three Runs, during the proposed Site Use action. The most favored option was for the I&S to reduce and confine the project area in Site Use Log 1924 to the bottom margin of the small tributary drainage so that 38AK979 would be completely avoided during the proposed Site Use action. I&S personnel agreed to resubmit an amended Site Use Application (SU Log No. 1985) to reflect this newly proposed project area boundary as shown in Figure 7. Thus, with SU Log No. 1985 as amended and approved, there will be no adverse effect to site 38AK979 by the proposed Site Use action for the Biomass Steam Facility and drainage pipe line corridor.

SU Log No. 1927 – Supplemental Wildlife Food Plots for Fawn Mortality Research

This Site Use Permit, initiated July 29, 2008 by the USFS-SR, proposed installing 23 small, deer food plots, most with a 30-m radius, at various points across the SRS to be used in an ongoing fawn mortality conducted by the USFS-SR (Figure 1). Five food plots were in areas of potential contamination or buried cable lines, which precluded survey in these locations. Fieldwork consisted of 89 STPs (1 positive) excavated along 23 transects, one at each proposed food plots. One new site (38BR1229) was delineated in Plot 6 project area (Figure 8). This site is a small, 20th-century historic period scatter in a power line right-of-way, which has no research potential to contribute to our understanding of the regional history, and is not considered eligible for nomination to the NRHP. As such, there will be no adverse effect to any historic properties as a result of the proposed Site Use action.

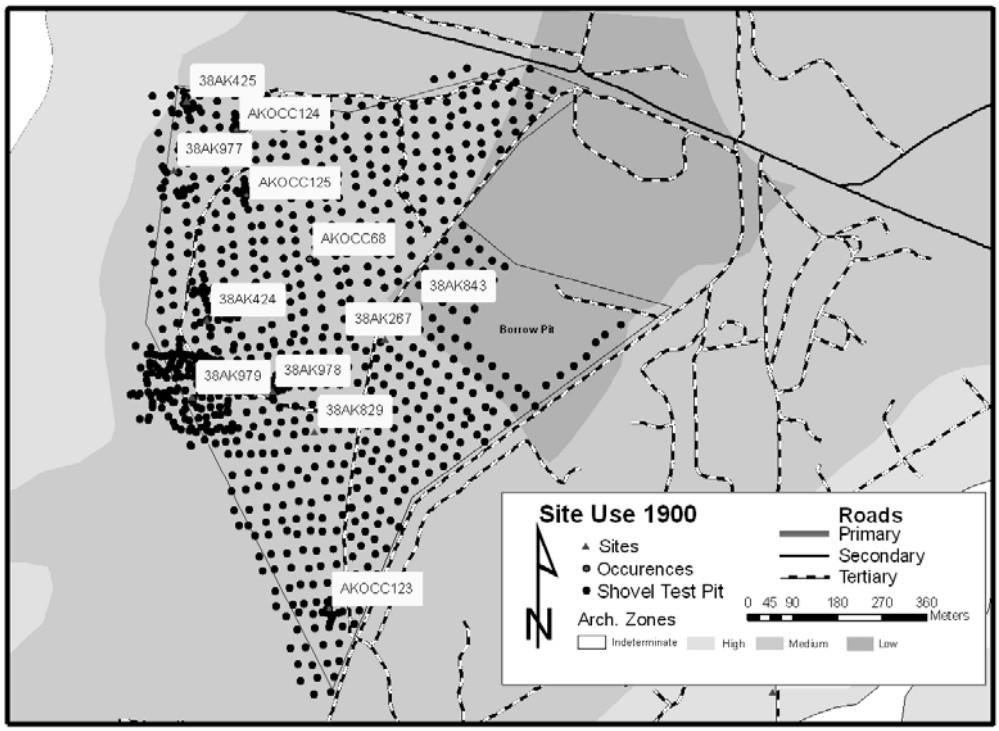


Figure 5. Previous survey for SU Log No. 1900 (from SRARP 2008: Figure 6).

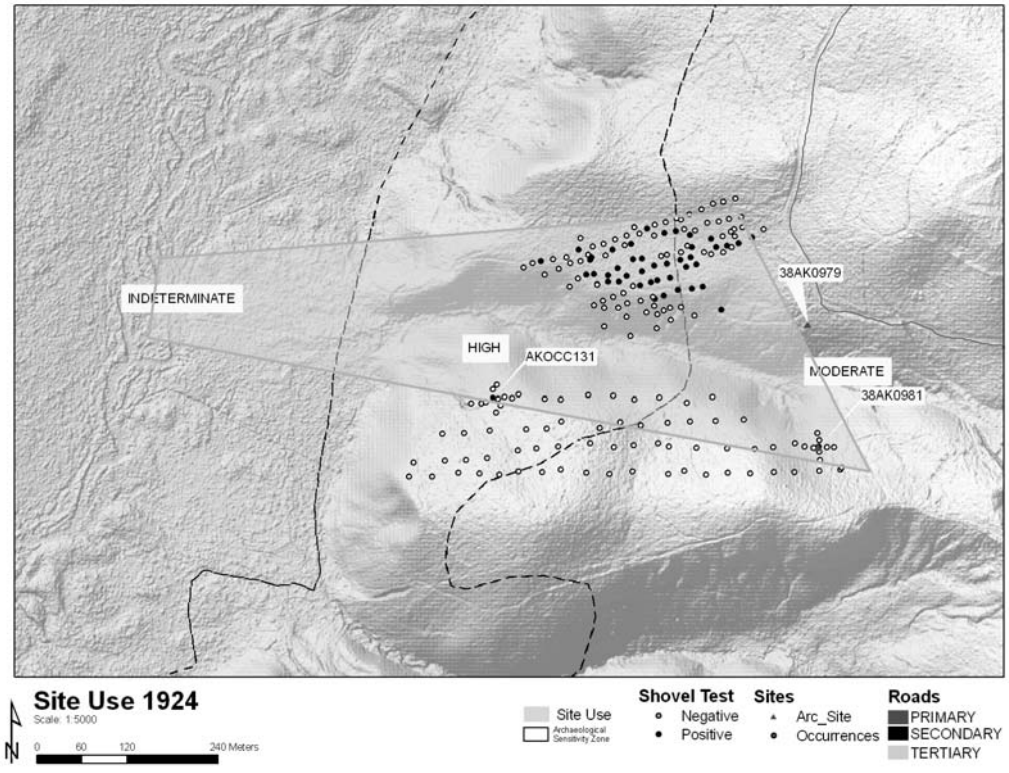


Figure 6. SU Log No. 1924 survey area.

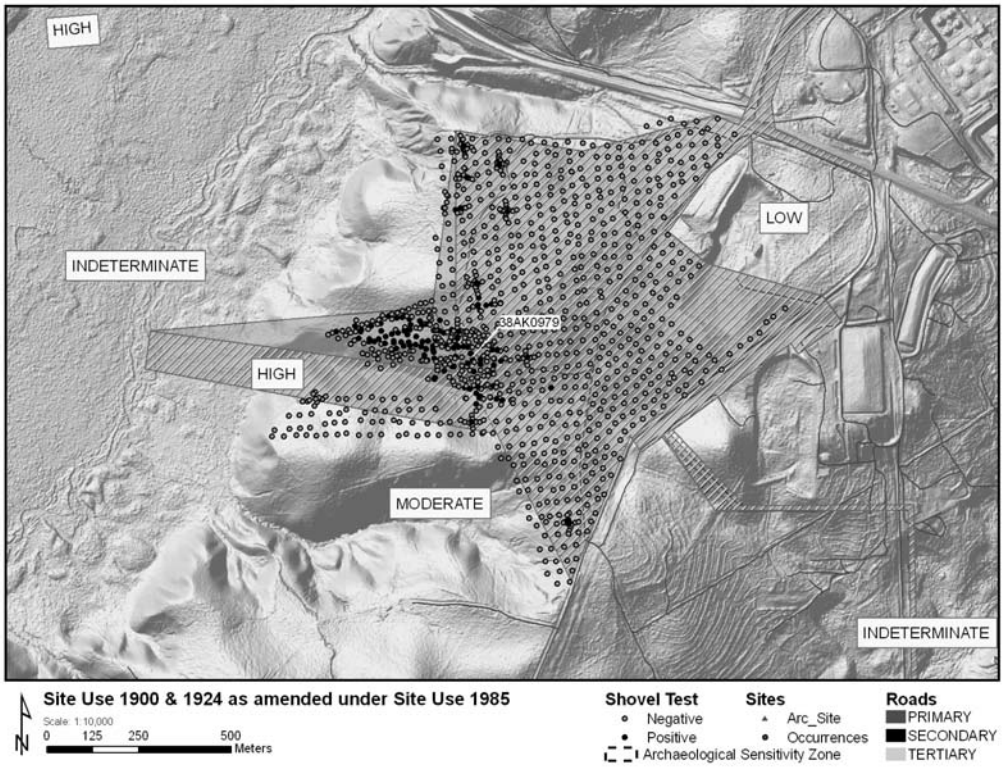


Figure 7. SU Log No. 1985 as amended (hachured lines) to avoid site 38AK979.

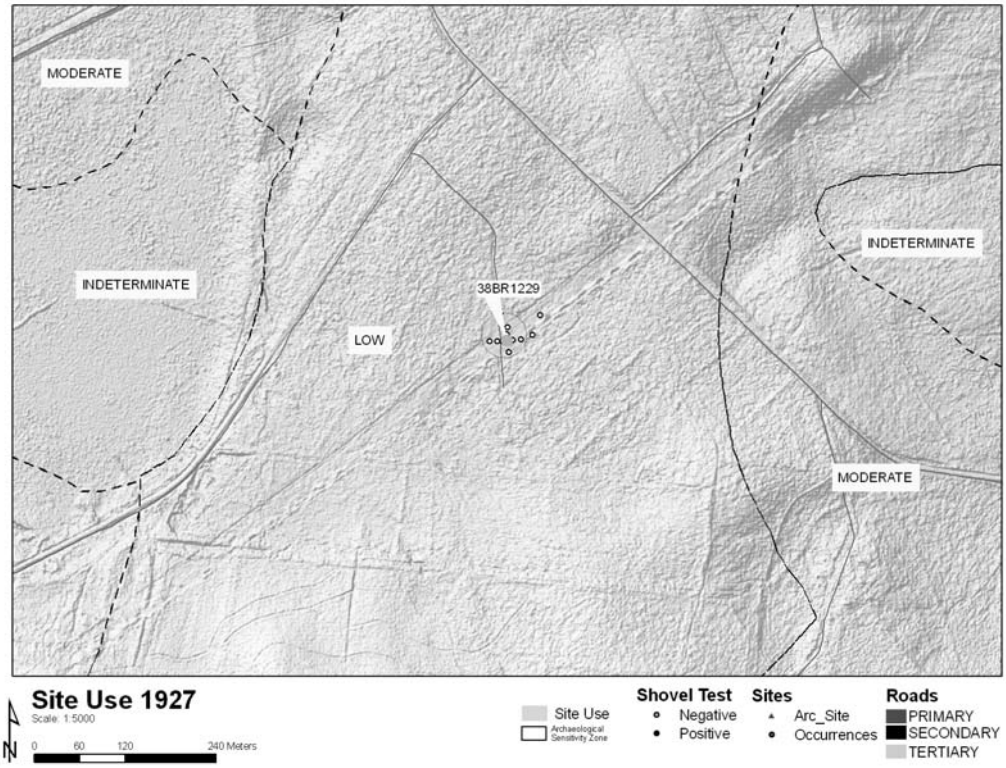


Figure 8. SU Log No. 1927, Deer Food Plot 6 survey area.

SU Log No. 1928 – C-Area Operable Unit Pre-Characterization Investigation

This Site Use Permit, initiated August 6, 2008, proposed the collection and analysis of soil samples from the storm water Outfall unit near C-Reactor to determine appropriate remedial decisions. The area targeted for testing was along an embankment of the Outfall channel. Review of the SRARP database showed no previously recorded sites in the project area. Field reconnaissance determined that the project area had been impacted from past construction activities related to the Outfall unit and embankment. As there was no potential for intact cultural deposits, no further archaeological work was required. Thus, there will be no adverse effect to any historic properties as a result of the proposed Site Use action

SU Log No. 1932 – K-Area Drainage Ditch Extension

This Site Use Permit, initiated August 14, 2008, proposed the expansion and extension of a drainage ditch in K-Area. Review of the SRARP database showed no previously recorded sites in the project area. Field reconnaissance determined that the project area had been impacted from past construction activities relating to K-Area development. Additionally, the location of proposed action contained standing water is adjacent to a retention pond for K-Reactor. The potential for on-site contamination as well as previous land disturbance precluded further archaeological survey.

SU Log No. 1933 – J-Area 13.8KV Electrical Feeders 7A and 7B

This Site Use Permit, initiated September 8, 2008 by Site Infrastructure (SI), proposed the installation of a transmission line along existing roadways to J-Area. Review of the SRARP database showed no previously recorded sites in the project area. Field reconnaissance determined that the project area had been impacted from past SRS construction activities and that a portion of the proposed corridor was adjacent to hazardous waste burial areas. The potential for on-site contamination as well as previous land disturbance precluded further archaeological survey.

SU Log No. 1935 – Four Mile Creek Land Management Plan

This Site Use Permit, initiated September 22, 2008 by the USFS-SR, proposed management activities to improve forest health and vigor, enhance wildlife habitat, reduce and control forest fuel buildups and improve and maintain the transportation system. Proposed treatments involved intermediate thinning, first thinning, timber regeneration, controlled burning, road construction and reconstruction, and maintenance. Proposed reforestation activities include site preparation, herbicide treatments, and machine/hand planting operations. Archaeological survey of the project areas slated for forest management were conducted and reported in FY08 (SRARP 2008).

The current Site Use proposed the construction of an access road, one in Compartment 65 (Figure 9). Review of the SRARP database showed no previously recorded sites in the project area. Fieldwork consisted of 16 STPs (2 positive) excavated along a transect that followed the proposed road corridor. Two isolated artifact finds (BR-OCC-254, BR-

OCC-255) were delineated but these have no research potential to contribute to our understanding of the regional prehistory. As such, there will be no adverse effect to any historic properties as a result of the proposed access road construction.

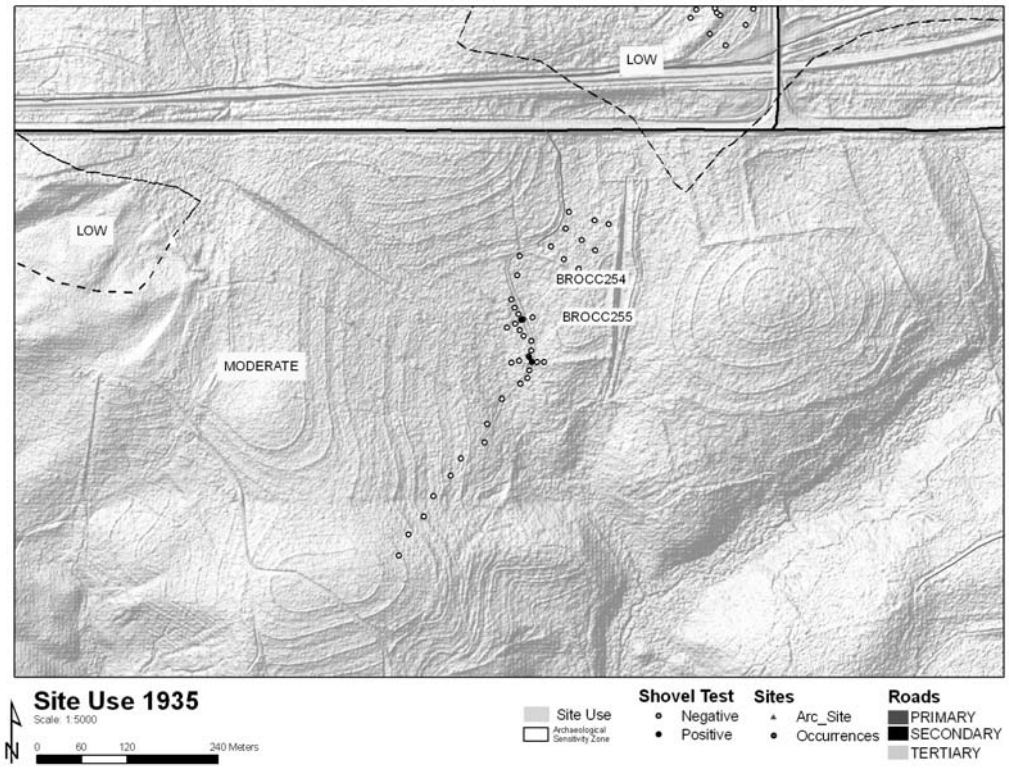


Figure 9. SU Log No. 1935 survey area.

SU Log No. 1937 – Installation of Two Telecommunications Towers

This Site Use Permit, initiated October 6, 2008 by the Department of Energy (DOE), proposed the installation of two telecommunication antennas. Review of the SRARP database showed no previously recorded sites in one of the project areas and two previously recorded sites (38BR756, 39BR757) in the second project area. As of the writing of this fiscal year-end report, DOE has not moved forward with the proposed project, and no archaeological survey has been conducted. At the time DOE reinitiates either the original or an amended site use proposal; archaeological survey will be conducted to inventory all previously recorded and newly discovered sites.

SU Log No. 1938 – Mixed Waste Management Facility Groundwater Southwest Plume Characterization Measures

This Site Use Permit, initiated October 14, 2008 by Area Closure Projects (ACP), proposed expansion of the groundwater transport and distribution system (i.e., sprinkler system) in the Phytoremediation Area. The potential for on-site contamination due to the

experimental nature of the phytoremediation project involving the Southwest tritium plume and the subsurface aquifer, precluded further archaeological survey.

SU Log No. 1940 – Mixed Oxide Fuel Fabrication Facility (MFFF) Support Facilities and Laydown Yards Site

This Site Use Permit, initiated October 20, 2008, proposed the delineation of the footprint boundaries of the MFFF grounds, MFFF support buildings grounds, and laydown yards, and areas within the fenced boundaries of F-Area. Review of the SRARP database showed no previously recorded sites in the project area. Field reconnaissance determined that the project area had been impacted from past SRS construction activities. Thus, no further archaeological work was required for the proposed project footprint delineation.

SU Log No. 1944 – R Area Groundwater Seepline Stations

This Site Use Permit, initiated October 28, 2008, requested the installation of ten sampling wells at five seepline locations along the northwest section of Joyce Branch and six sampling wells at three locations along the southern section of Mill Creek in R-Area to evaluate the volatile organic chemicals (VOCs) and tritium in these areas. The potential for on-site contamination due to the presence of VOCs and tritium along Joyce Branch and Mill Creek precluded further archaeological survey.

SU Log Nos. 1946/1957 – Geotechnical Investigation for Subsurface Soft Zone Determination

This Site Use Permit, initiated on November 11, 2008 by the SRNS-Geotechnical Engineering Dept., requested an approximately 250-ac tract for proposed seismic-testing activities that would occur over a period of six years. The proposed action involves at least twenty soil borings and ten Cone Penetrometer tests to a depth of 180 ft. with additional fieldwork consisting of down-hole seismic tests, surface seismic tests, and possible a deep boring to bedrock. Given the large size of the project area and the duration length of the proposed project, the SRARP consulted with SRNS engineers to develop an archaeological survey schedule that would eventually result in an intensive survey on a 30-m grid of the entire project area so that SRNS seismic testing could occur at random without the potential of impact to cultural or archaeological resources.

A review of the SRARP database showed six previously recorded sites (38AK698, 38AK700, 38AK702, 38BR841, 38BR846, 38BR1037) in the project area. These sites will be completely avoided during any proposed seismic testing by SRNS. SRARP consultation with SRNS resulted in the archaeological survey of four locations slated for seismic testing during this fiscal year. Fieldwork consisted of 4 STPs (0 positive) excavated at each of the four selected locations (Figure 10). Thus, there will be no adverse effect to historic properties from seismic testing in these 4 locations. Intensive archaeological survey will continue throughout the coming fiscal year and all results will be reported in FY10.

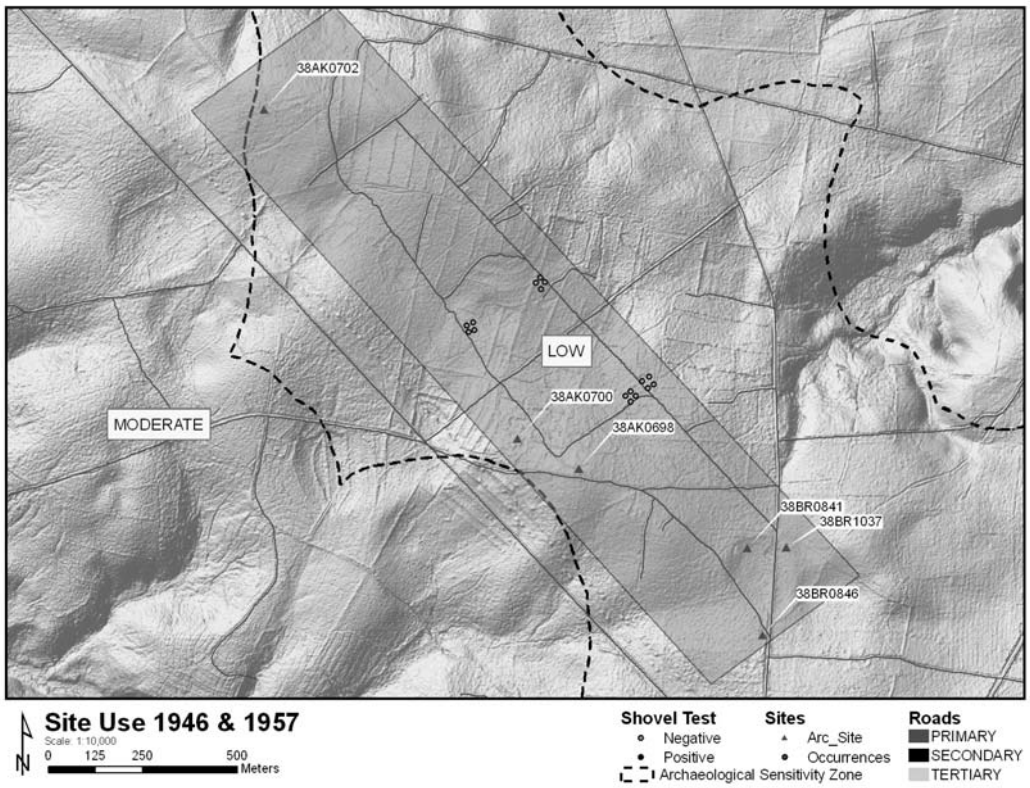


Figure 10. SU Log Nos. 1946/1957 survey area.

SU Log No. 1948 – Canal Dredging for 681-3G

This Site Use Permit, initiated January 26, 2009 by the SI, requested the construction of a basin to receive material form dredging of the canal from the river to the pumphouse where it can dewater for eventual transport elsewhere. Review of the SRARP database showed no previously recorded sites in the project area. Field reconnaissance determined that the project area had been impacted from past SRS construction activities, which precluded further archaeological survey.

SU Log No. 1949 – Vegetal Matter Debris Dumping Areas

This Site Use Permit, initiated on January 26, 2009 by the DOE, proposed seven locations for the dumping of grass trimmings, leaves, and small limbs from pruning shrubs, small trees, and etc. Review of the SRARP database showed no previously recorded sites in the project areas. Field reconnaissance determined that six of the proposed project areas had been impacted from past SRS construction activities, which precluded further archaeological survey. Archaeological survey, consisting of 4 STPs, was conducted at Plot 4 with no recovery (Figure 11). Thus, there will be no adverse effect to any historic properties by the proposed Site Use action.

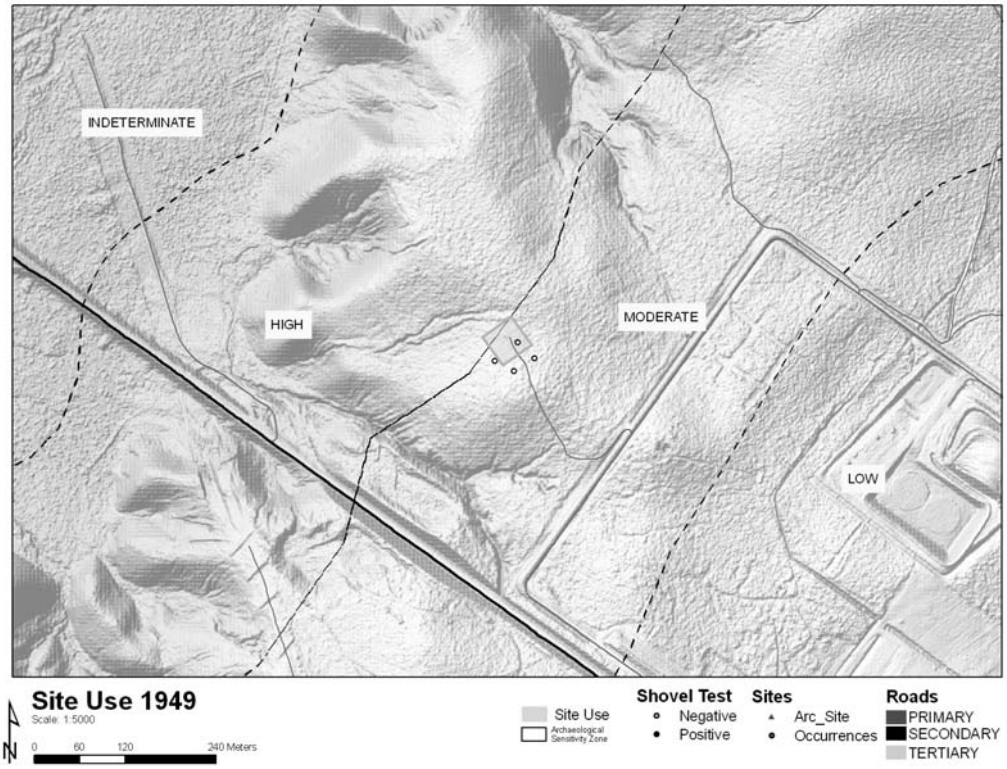


Figure 11. SU Log No. 1949 survey area.

SU Log No. 1952 – USFS-SR Carolina Bay Mitigation Project

This Site Use Permit, initiated February 24, 2009 by the SRFS-SR, proposed the restoration of 16 Carolina bays. Fourteen of the bays were archaeologically surveyed for the previously issued SU Log No. 1327 (SU-92-29-R) (SRARP 1999:4-6). Review of the SRARP database showed no previously recorded sites in the location of the two unsurveyed bays. Field reconnaissance, however, could not determine the location of these bays, which most likely were upland wetlands rather than actual Carolina bays, and as such were superficial landscape features that had suffered damage from historic period agricultural activities to the point of destroying their original wetland composition. This situation precluded further archaeological survey of these upland areas.

SU Log No. 1953 – P-Area Ash Basin and P-007 Outfall Remediation

This Site Use Permit, initiated March 11, 2009 by the ACP, proposed final remediation activities involving the installation of a soil cap over the P-Area ash basin and outfall areas. Review of the SRARP database showed no previously recorded sites in the project area. Field reconnaissance determined that the project area had been impacted from past SRS construction activities and the ash basin area contained hazardous waste. The potential for on-site contamination as well as previous land disturbance precluded further archaeological survey.

SU Log No. 1954 – R-Area Ash Basin Remediation

This Site Use Permit, initiated March 12, 2009 by the ACP, proposed final remediation activities involving the installation of a soil cap over the R-Area ash basin. Review of the SRARP database showed no previously recorded sites in the project area. Field reconnaissance determined that the project area had been impacted from past SRS construction activities and the ash basin area contained hazardous waste. The potential for on-site contamination as well as previous land disturbance precluded further archaeological survey.

SU Log No. 1955 – A-Area Ash Basin Remediation

This Site Use Permit, initiated March 26, 2009 by the ACP, proposed final remediation activities involving the installation of a soil cap over the A-Area ash basin. Review of the SRARP database showed no previously recorded sites in the project area. Field reconnaissance determined that the project area had been impacted from past SRS construction activities and the ash basin area contained hazardous waste. The potential for on-site contamination as well as previous land disturbance precluded further archaeological survey.

SU Log No. 1956 – Supplemental Land for 681-3G Dredging Spoils Material Basin Project

This Site Use Permit, initiated April 6, 2009 by the SRNS, proposed construction of a spoils stockpile to receive old spoils material and for the construction of a percolation area. Review of the SRARP database showed no previously recorded sites in the project area. Field reconnaissance determined that the project area had been impacted from past SRS construction activities and the project area contained hazardous waste as denoted by Orange Ball perimeter markers. The potential for on-site contamination as well as previous land disturbance precluded further archaeological survey.

SU Log No. 1958 – Class 2 Landfill Monitoring Wells

This Site Use Permit, initiated April 27, 2009 by the EPS, proposed the installation of six groundwater monitoring wells at the C&D Landfill and two wells at the 488-4D Landfill. Review of the SRARP database showed no previously recorded sites in the project area. Field reconnaissance determined that the separate project areas had been impacted from past SRS construction activities and contained possible hazardous waste as SRS Landfills. The potential for on-site contamination as well as previous land disturbance precluded further archaeological survey.

SU Log No. 1959 – L-Area Groundwater Monitoring Well Installations

This Site Use Permit, initiated April, proposed the installation of four groundwater monitoring wells adjacent to L-Area. Review of the SRARP database showed no previously recorded sites in the project area. Field reconnaissance determined

that one monitoring well point showing indications of potential contamination, which precluded further archaeological survey at this location. Survey, consisting of a total of 16 STPs (2 positive), was conducted at the other three locations (Figure 12). These efforts resulted in the discovery of one newly recorded site (38BR876). This site will be completely avoided during the placement of the monitoring well. Thus, there will be no adverse effect to any historic properties by the proposed action.

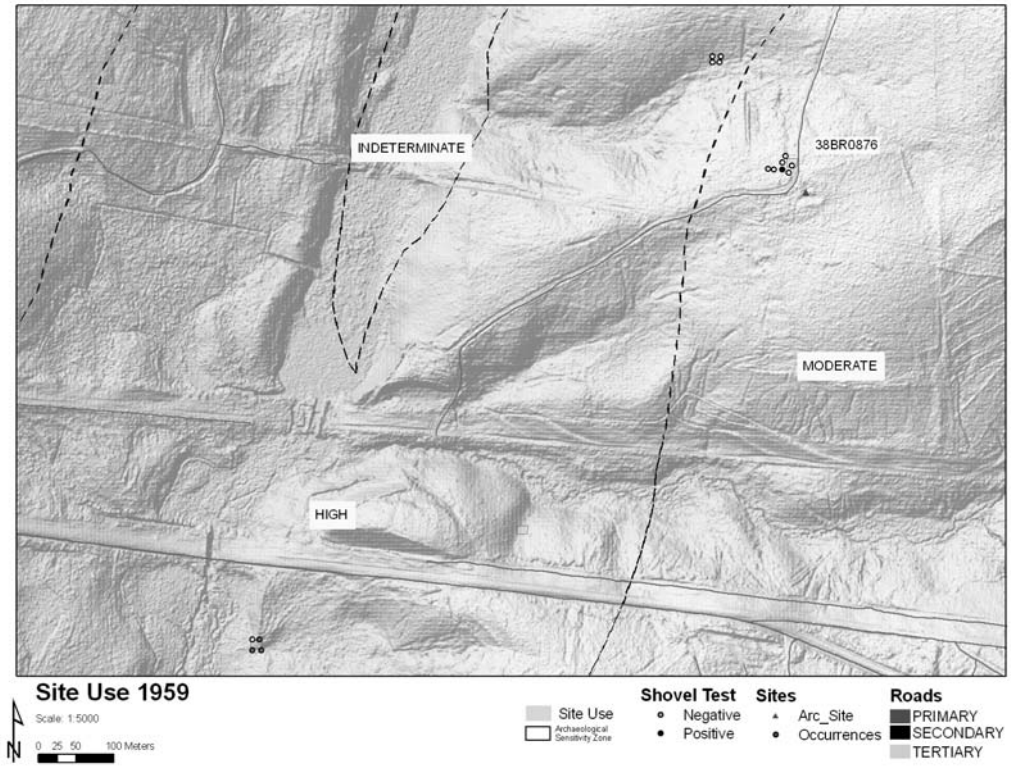


Figure 12. SU Log No. 1959 survey area.

SU Log No. 1960 – C-Area Burning/Rubble Pit

This Site Use Permit, initiated May 5, 2009, proposed the installation of two groundwater monitoring wells in the C-Area Burning/Rubble Pile area. Review of the SRARP database showed no previously recorded sites in the project area. Field reconnaissance determined that the project area had been impacted from past SRS construction activities, which precluded further archaeological survey.

SU Log No. 1961 – ECOD B3 and B5 Removal Action and Confirmatory Characterization

This Site Use Permit, initiated May 6, 2009 by the Soil & Groundwater Closure Project (SGCP), proposed the removal of waste in the ECOD B3 and B5 trenches and the transportation of this material to an appropriate waste facility. Review of the SRARP database showed no previously recorded sites in the project area. Field reconnaissance

determined that the project area had been impacted from past SRS construction activities and contained hazardous waste. The potential for on-site contamination as well as previous land disturbance precluded further archaeological survey.

SU Log No. 1962 – G-Area Oil Seepage Basin Characterization and Closure Action

This Site Use Permit, initiated May 7, 2009 by the SGCP, proposed the closure action of the G-Area Oil Seepage Basin involving sediment dewatering and backfilling of the basin. Review of the SRARP database showed no previously recorded sites in the project area. Field reconnaissance determined that the project area had been impacted from past SRS construction activities and the project area contained hazardous waste as denoted by Orange Ball perimeter markers. The potential for on-site contamination as well as previous land disturbance precluded further archaeological survey.

SU Log No. 1963 – Remove Four Poles from F-Area 13.8Kv Feeder Line

This Site Use Permit, initiated May 13, 2009, proposed the removal of four poles from F-Area 13.8Kv Feeder line. Review of the SRARP database showed no previously recorded sites in the project area. Field reconnaissance determined that the project area had been impacted from past SRS construction activities, which precluded further archaeological survey.

SU Log Nos. 1964, 1972, 1980 – F-Area MOX Project Laydown Yard

These Site Use Permits, initiated May 19, 2009 for SU Log 1964, June 11, 2009 for SU Log 1972, and July 8, 2009 for SU Log 1980 by the SRNS, request a total of 98 acres for the proposed construction of a laydown yard for the MOX facility project. The second two Site Use requests amended adjacent and/or overlapping tracts of land to the originally proposed action. The adjoining land tracts are shown in Figure 13 as a single project area.

Previous survey in the project area occurred during 1993-1994 in conjunction with the E-Area survey (Cabak et al. 1996) when site 38AK545 was recorded and delineated. More recently, an 11-acre survey was conducted in Timber Compartment 49 prior to clearcutting (SRARP 2007:24-24). Fieldwork consisted of 27 STPs excavated at 30-m intervals along 7 transects (Figure 14). As these efforts resulted in only negative STPs, and no further archaeological work was conducted in the project area.

Current fieldwork consisted of the excavation of a total of 98 STPs (7 positive) along 17 transects on separate 30-m grids for Site Use 1964 and 1972 (note: SU Log 1980 was a combination of portions of the former two Site Use project areas, and so no further survey was required for this Site Use Application). These efforts resulted in the relocation and re-delineation of previously recorded site 38AK545 as well as the discovery of two isolated artifact occurrences (AK-OCC-133, AK-OCC-134). Site 38AK545 will be completely avoided during the construction and use of the proposed

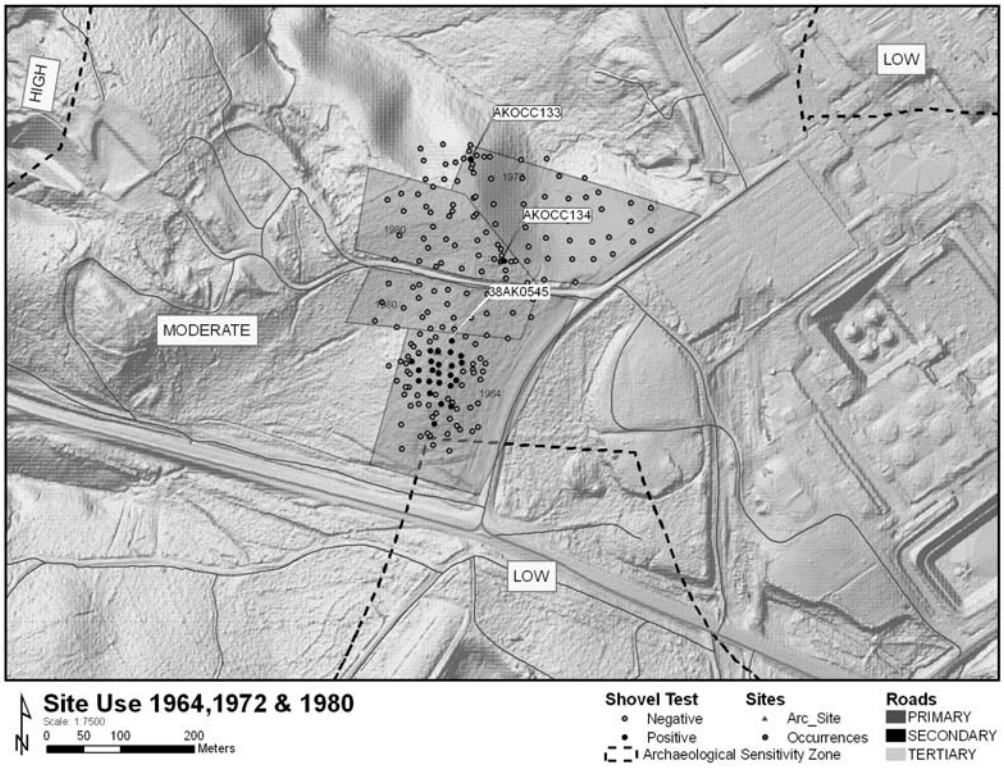


Figure 13. SU Log Nos. 1964/1972/1980 survey area.

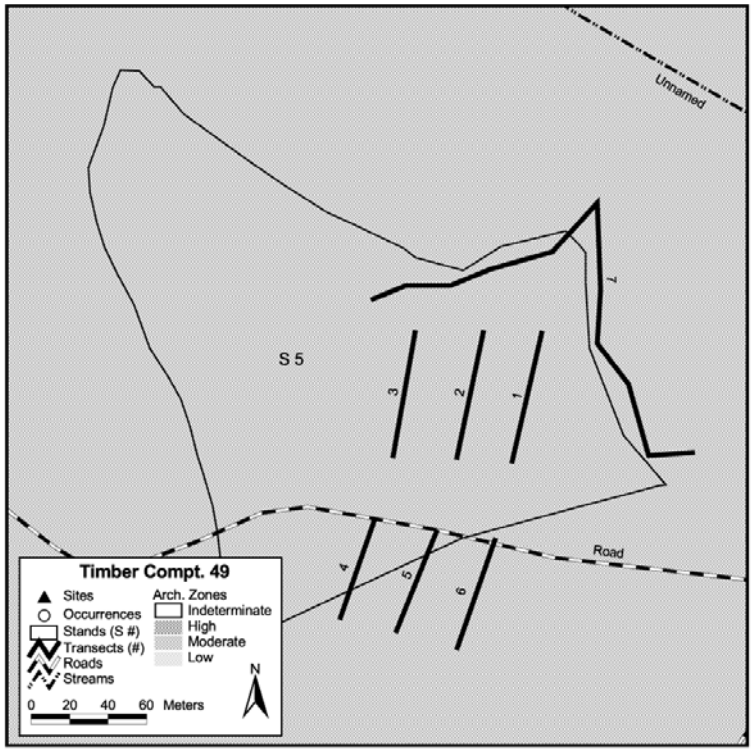


Figure 14. Previous survey in Site Use project area (from SRARP 2007: Figure 21).

laydown yard. Thus, there will be no adverse effect to this archaeological site by the proposed action. The two artifact occurrences have no research potential to contribute to our understanding of the regional prehistory. As such, there will be no adverse effect to any historic properties as a result of the proposed MOX project laydown yard construction.

SU Log No. 1966 – New Ellenton Barricade Lane Modifications to Road 2

This Site Use Permit, initiated May 28, 2009 by the SI, proposed the construction of an additional lane as well as new shoulder along Road 2 into the SRS at the New Ellenton barricade to alleviate rush-hour congestion. Review of the SRARP database showed one previously recorded site (38AK755) in the project area see (SRARP 2006:14). This site was documented during survey and testing for Site Use Log 1849 (Figure 15). Site 38AK755 was determined potentially eligible for nomination to the NRHP. The proposed action for Site Use Log 1849 apparently was terminated and the current Site Use Log 1966 supercedes this previous Site Use Application.

Fieldwork for the current Site Use request consisted of 16 STPs (0 positive) excavated along a single transect through the portion of the project area that had not been subjected to previous survey (Figure 16). As all STPs were negative, no further archaeology testing was required for this project. Site 38AK755 will be completely avoided during road construction. Thus, there will be no adverse effect to any historic properties as a result of the proposed Site Use action.

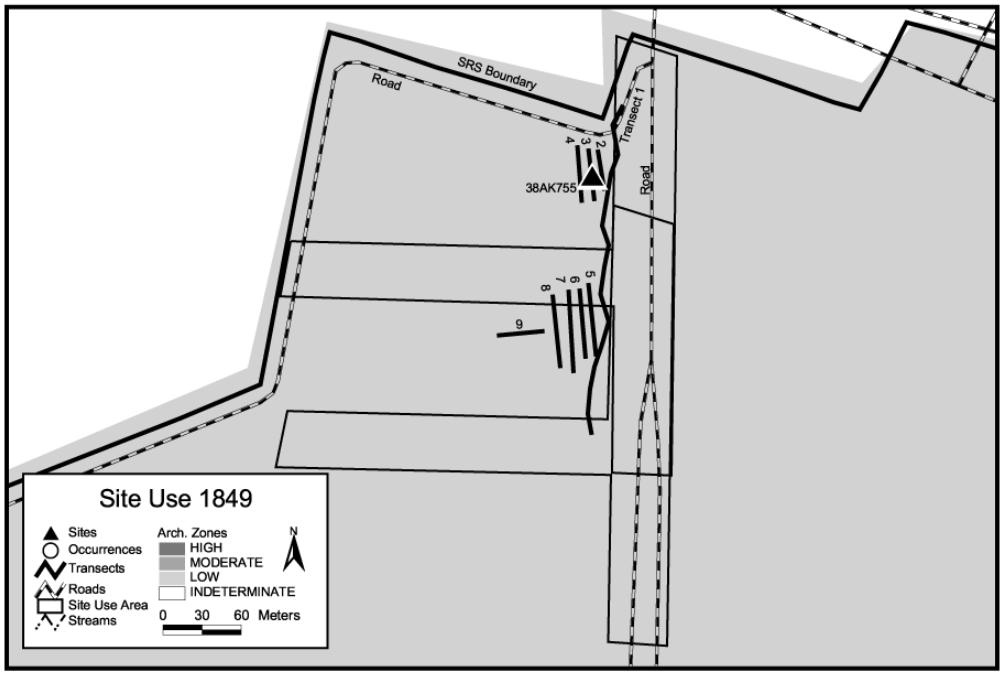


Figure 15. Previous survey for SU Log No. 1849 survey area showing location of site 38AK755 (from SRARP 2006: Figure 8).

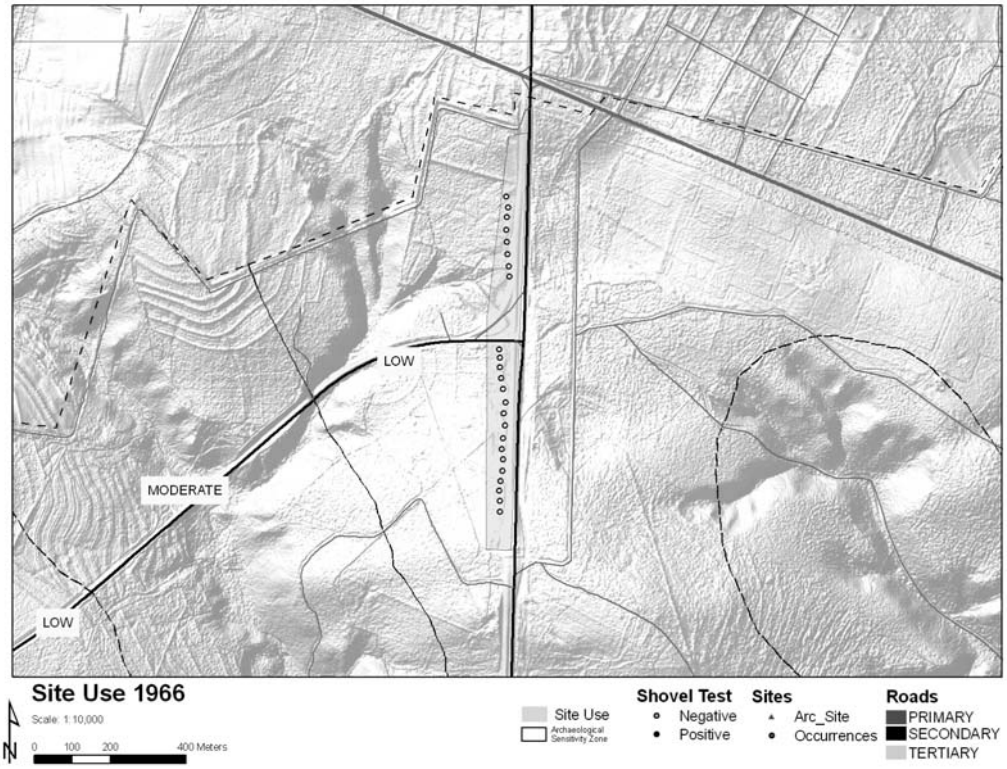


Figure 16. SU Log No. 1966 survey area.

SU Log No. 1967 – Supplemental Land for New B-Area Infrastructure Shops

This Site Use Permit, initiated June 1, 2009 by Site Services (SS), requested a 35-ac tract for the proposed construction of infrastructure shop facilities with associated roads and parking in B-Area. Review of the SRARP database showed no previously recorded sites in the project area. Fieldwork consisted a 174 STPs (2 positive) excavated along 18 transects on a 30-m grid (Figure 17). These efforts resulted in the location of two isolated artifact finds (AK-OCC-135, AK-OCC-136). These two artifact occurrences have no research potential to contribute to our understanding of the regional prehistory. Thus, there will be no adverse effect to any historic properties as a result of the proposed Site Use action.

SU Log No. 1969 – 681-3G Dredging Spoils Material Basin Project

This Site Use Permit, initiated June 8, 2009 by the SRNS, proposed the construction of a spoils stockpile to receive old spoils material and the creation of a percolation area. Review of the SRARP database showed no previously recorded sites in the project area. Field reconnaissance determined that the project area had been impacted from past SRS construction activities, which precluded further archaeological survey.

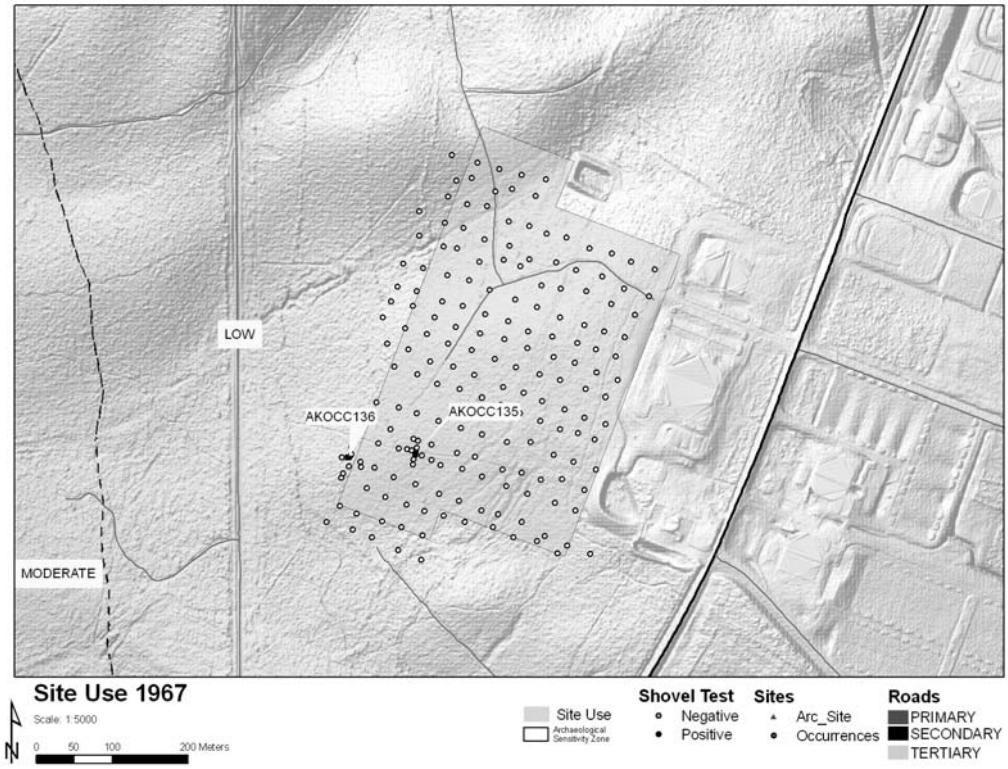


Figure 17. SU Log No. 1967 survey area.

SU Log No. 1971 – G-Area Oil Seepage Basin Characterization and Closure Action, Amendment 1

This Site Use Permit, initiated June 10, 2009 by the ACP, proposed the closure action of the G-Area Oil Seepage Basin involving sediment dewatering and backfilling of the basin. This amendment to the original Site Use (see SU Log No. 1962 above) adds additional characterization areas. Review of the SRARP database showed no previously recorded sites in the project area. Field reconnaissance determined that the project area had been impacted from past SRS construction activities, which precluded further archaeological survey.

SU Log No. 1974 – Timber Salvage Operation in Compartment 21

This Site Use Permit, initiated June 15, 2009 by the USFS-SR, proposed the a timber salvage operation in Compartment 21, Stands 8, 9, and 21, to remove dead and dying trees resulting from tornado damage. This proposed action would reduce potential insect and disease outbreaks and prevent dangerous levels of fire fuels from accumulating. Compartment 21 is primarily situated in Archaeological Sensitivity Zone 3 and so SRARP fieldwork consisted solely of Log Deck survey. For details see Timber Compartment 21 in Timber Compartment Prescriptions section below.

SU Log No. 1975 – Steel Creek Resource Management Plan

This Site Use Permit, initiated June 18, 2009 by the USFS-SR, proposed management activities to improve forest health and vigor, enhance wildlife habitat, reduce and control forest fuel buildups and improve and maintain the transportation system. Proposed treatments involved intermediate thinning, first thinning, timber regeneration, controlled burning, road construction and reconstruction, and maintenance. Proposed reforestation activities include site preparation, herbicide treatments, and machine/hand planting operations. Archaeological survey of the project areas slated for forest management were conducted and documented in this fiscal year-end report (see below under Timber Compartment Prescription section).

The current Site Use Application proposed the construction of eight secondary, access roads, four of which are spurs of less that 30 m in existing right-of-ways for primary roads, one in a railroad right-of-way, one is a power line right-of-way, one in another previously disturbed area, and proposed Road No. 74-36.2 in an undisturbed area of Timber Compartment 74 (Figure 18). Review of the SRARP database showed no previously recorded sites in the project area. Fieldwork consisted of 6 STPs (0 positive) excavated along a transect that followed the proposed road corridor. As all STPs were negative, no further archaeology testing was required for this project as there will be no adverse effect to any historic properties as a result of the proposed Site Use action.

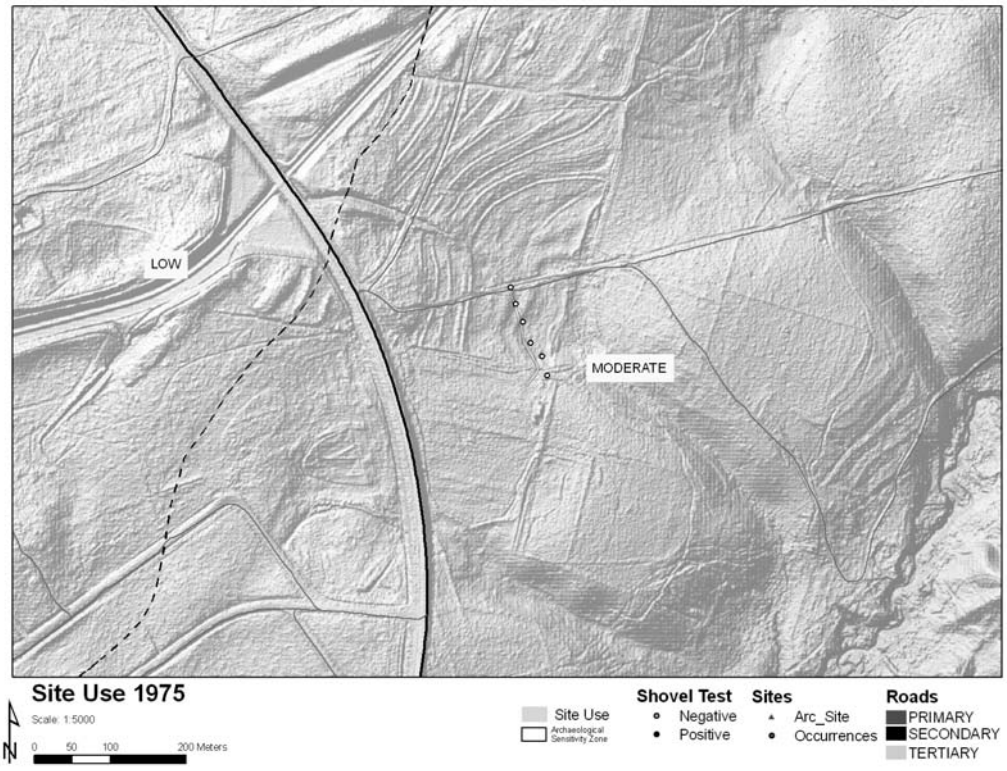


Figure 18. SU Log No. 1975 survey area.

SU Log No. 1976 – Timber Compartment 55 Salvage Operation

This Site Use Permit, initiated June 22, 2009 by the USFS-SR, proposed a timber salvage operation, site preparation, and regeneration of longleaf pine in Compartment 55 to remove dying and dead trees resulting from a prescribed fire in Compartment 21. Archaeological survey of the project areas slated for forest management were conducted and documented in this fiscal year-end report (see below under Timber Compartment Prescription section).

The Site Use Application proposed the construction of two secondary roads. Review of the SRARP database showed no previously recorded sites in the project area. Fieldwork consisted of 30 STPs (1 positive) excavated along two transects that followed each road corridor (Figure 19). One new site (38BR1261) was delineated and recorded during survey. Consultation with USFS-SR personnel resulted in an agreement to terminate the road 100 m from the site to avoid any potential impacts to 38BR1261. Thus, through complete avoidance of site 38BR1261 by the USFS-SR, there will be no adverse effect any historic properties as a result of the proposed Site Use action regarding secondary road construction.

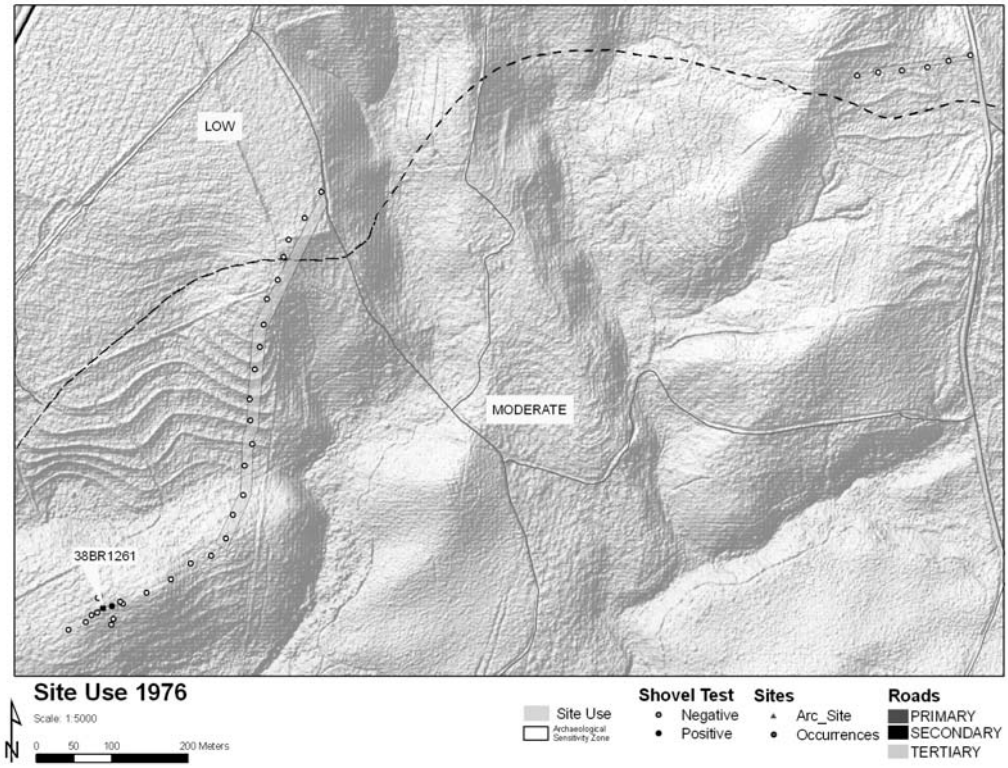


Figure 19. SU Log No. 1976 survey area.

SU Log No. 1977 – Supplemental Land for Stockpiling Soil in P-Area, Amendment 1

This Site Use Permit, initiated June 24, 2009, proposed final remediation activities involving the installation of a soil cap over the P-Area ash basin and outfall

areas. This amendment to the original Site Use (see SU Log No. 1952 above) adds additional area for stockpiling soil. Review of the SRARP database showed no previously recorded sites in the project area. Field reconnaissance determined that the project area had been impacted from past SRS construction activities and the ash basin area contained hazardous waste. The potential for on-site contamination as well as previous land disturbance precluded further archaeological survey.

SU Log No. 1978 – Tritium NW Site Development

This Site Use Permit, initiated June 24, 2009, proposed the construction of two buildings northwest of the Tritium Area in what was previously used as laydown areas for several recent Tritium projects. Review of the SRARP database showed no previously recorded sites in the project area. Field reconnaissance determined that the project area had been impacted from past SRS construction activities, which precluded further archaeological survey.

SU Log No. 1979 – R Area Groundwater Monitoring Well Installations

This Site Use Permit, initiated July 7, 2009, proposed the installation of up to nine groundwater monitoring wells located in R-Area to monitor the VOCs and tritium in the local groundwater aquifer. Review of the SRARP database showed no previously recorded sites in the project area. Field reconnaissance determined that the project area had been impacted from past SRS construction activities and that R-Area contained hazardous and radioactive waste. The potential for on-site contamination as well as previous land disturbance precluded further archaeological survey.

SU Log No. 1981 – Laydown Yards for H-4 Waste Facility Basin Concrete Work in E-Area

This Site Use Permit, initiated July 21, 2009, requested use of specified project areas a laydown storage yards in E-Area. Review of the SRARP database showed no previously recorded sites in the project area. Field reconnaissance determined that the project area had been impacted from past SRS construction activities and proposed project areas contained hazardous and radioactive waste. The potential for on-site contamination as well as previous land disturbance precluded further archaeological survey.

Timber Compartment Prescriptions

The USFS-SR is the most extensive land user on the SRS, as this agency's primary function is one of research and forest management in support of silvicultural practices. Each year, the USFS-SR issues its list of Timber Compartment Prescriptions indicating those areas on the SRS where timber management activities are scheduled to occur. As a policy, the USFS-SR issues this list two to three years before the planned thinning or harvesting is scheduled, at which time a Site Use Application request is submitted detailing all proposed timber management actions. Employing these pre-Site Use Prescriptions, the SRARP identifies areas that must be surveyed prior to any land-use activities. Because of the lead-time provided by way of this process, the SRARP has the opportunity to locate and evaluate all resources within the area of proposed land use at least one year in advance of the Site Use Application. Finally, the USFS-SR, in consultation with the SRARP, insures that all archeological sites deemed significant for research potential are avoided completely during the development of secondary roads and timber loading decks. Additionally, all historic and prehistoric sites with potential research significance are avoided completely during harvesting activities. As a result, all adverse effects to historic properties are mitigated through avoidance.

The SRARP management reviews each Timber Compartment Prescription to determine the level of survey required for each Timber Stand slated for timbering. The review process involves determining the potential for archaeological resources in each Timber Stand. This is accomplished by applying the predictive locational model of site discovery developed by the SRARP for management of cultural resources on the SRS (SRARP 1989). Information from the SRS site files, previous survey records, and historic documentation are also incorporated into the review process to insure that all resources are located and previous survey efforts are not duplicated. The following summaries describe Timber Compartment projects and survey results during FY09. Surveys of Log Decks and Timber Stands were conducted in 24 Timber Compartments, which involved 1,880 acres (93.0 percent) of the total survey area coverage in FY09. Table 6 provides a listing by Timber Compartment of all sites investigated.

Certain aspects of archaeological work are standard for all projects. Upon completion of each survey project point data for all STPs as well as all new and previously recorded sites and isolated artifact occurrences are recorded using GPS equipment. Prior to fieldwork, a review of 1951 aerial photographs is conducted to identify standing historic structures at the time of federal acquisition. The SRARP site files are consulted to identify previously recorded cultural resources. All STPs measure 35 x 35 cm and are excavated to a depth of at least 80 cmbs, unless a gravel or clay substratum is encountered. Exceptions to this fieldwork procedure include historic site locations identified from 1951 aerial photographs that are situated in low-probability areas for prehistoric sites (see discussion of Archaeological Sensitivity Zones in SRARP 1989). At these locations, STPs are excavated to just below the plowzone (usually between 20 - 40 cmbs). The reduced depth of STPs on historic sites is justified because late-period historic sites generally lack thick, stratified deposits (Cabak and Inkrot 1997:29-31). The soil from the STPs is sifted through 0.25-in. wire mesh, and artifacts are collected and bagged by provenience.

Table 6. Timber Compartment Prescription and Log Deck Surveys, FY09.

PROJECT	PROJECT STPs	PROJECT AREA SURVEYED (ac)	NEW SITES	SITE REVISITS
Timber Comp. 6				
Stands 10/142/180	26	13		
Stand 69	8	4		
Stand 77	9	5		
Stand 169	11	5		
TOTAL	54	27		
Timber Comp. 21				
Stands 8/21	27	3		
TOTAL	27	3		
Timber Comp. 33				
Stand 5	18	1		
TOTAL	18	1		
Timber Comp. 34				
Stands 2/69	44	112	38BR1236	38BR772
			38BR1237	
Stands 4/62	20	34		
Stand 11	9	48		
Stands 14/34/72	44	66	38BR1243	
Stand 23	16	19		38BR789
Stands 39/74	27	23		
Stand 43	7	8		
Stand 44	9	7	38BR1233	
Stand 45	7	5	38BR1234	
Stand 47	8	11	38BR1235	
Stand 53	6	2	38BR1232	
Stand 75	19	2	38BR1244	
			38BR1245	
TOTAL	219	337	9	2
Timber Comp. 44				
Stand 7	7	12	38BR1247	
Stands 10/44	56	87	38BR1246	
TOTAL	63	99	2	
Timber Comp. 46				
Stands 23/51	38	8		38BR923
TOTAL	38	8		1
Timber Comp. 47				
Stands 2/4/8/9/24/27/41	129	128		38BR62
Stand 13/34	14	21	38BR1242	
Stand 18/38	42	130	38BR1241	
TOTAL	185	279	2	1
Timber Comp. 48				
Stand 42/66	30	3	38BR1269	
TOTAL	30	3	1	
Timber Comp. 50				
Stand 58	9	1	38BR1259	
TOTAL	9	1	1	
Timber Comp. 55				
Stands 6/10/23	81	131		
Stands 7/9/10	59	33	38BR1253	38BR615
			38BR1254	
			38BR1255	
Stand 10	33	4	38BR1256	
TOTAL	173	168	4	1
Timber Comp. 56				
Stand 35	19	17		
Stand 43	12	5	38BR1230	
Stand 76	9	5		
Stand 97	22	16		
TOTAL	62	43	1	

Table 6 (continued). Timber Compartment Prescription and Log Deck Surveys, FY09.

PROJECT	PROJECT STPs	PROJECT AREA SURVEYED (ac)	NEW SITES	SITE REVISITS
Timber Comp. 60				
Stand 29	18	5		
Stand 31	24	5		
TOTALS	42	10		
Timber Comp. 62				
Stand 17	28	44	38BR1257	
			38BR1258	
Stand 20	32	91		
TOTAL	60	135	2	
Timber Comp. 63				
Stand 10	10	3		
Stand 19	10	33		
Stand 28	15	33	38BR1252	
Stand 35	16	14	38BR1248	
Stand 36	24	44	38BR1249	
			38BR1250	
			38BR1251	
Stand 63	20	82		
TOTAL	95	209	5	
Timber Comp. 64				
Stands 12/27	45	5		
TOTAL	45	5		
Timber Comp. 65				
Stand 10	18	2		
Stand 31	54	6		
Stand 81	9	1		
TOTAL	81	9		
Timber Comp. 66				
Stand 28	18	2		
TOTAL	18	2		
Timber Comp. 67				
Stands 35/39/52/74/83/98/100/ 102/108	107	12		
TOTAL	107	12		
Timber Comp. 68				
Stands 2/5/7/9/10/11/13/19/20/ 46/56/93/103	180	20		
TOTAL	180	20		
Timber Comp. 70				
Stands 4/6/8/40/83/84/91/94	81	9		
TOTAL	81	9		
Timber Comp. 72				
Stands 16/19/33/39/67/77/94/ 96/112/113	153	17	38BR1271	
TOTAL	153	17	1	
Timber Comp. 73				
Stands 5/7/9/11	54	6		38BR1231
Stand 11	18	49	38BR1231	
TOTAL	72	55	1	1
Timber Comp. 74				
Stand 1	31	68		
Stand 56/72	21	61		
Stand 84	5	12		
Stand 108/112	37	220		38BR705
TOTAL	94	361		1
Timber Comp. 75				
Stands 31/35/36/37/38/61/96	73	5		38BR998
TOTAL	73	5		1

Table 6 (continued). Timber Compartment Prescription and Log Deck Surveys, FY09.

PROJECT	PROJECT STPs	PROJECT AREA SURVEYED (ac)	NEW SITES	SITE REVISITS
Timber Comp. 86				
Stand 9	20	13	38BR1238	
			38BR1239	
Stands 15/18/19	16	37	38BR1240	38BR170
Stand 20	4	12		
TOTAL	40	62	3	1
TOTAL	**2,030**	**1,880**	**32**	**9**

Timber Compartment 6

Archaeological survey in Compartment 6 involved subsurface inspection within Stands 10, 69, 77, 142, 169, and 180 totaling 27 acres slated for clearcutting (Figure 20 – Figure 23). Review of the SRARP database showed no previously recorded sites in the project area. Fieldwork consisted of 54 STPs (1 positive) excavated along six separate transects. These survey efforts resulted in the recovery of one isolated artifact (BR-OCC 132). This isolated artifact holds no research potential to contribute to an understanding of the regional prehistory. Thus, there will be no adverse effect to any historic properties as a result of the proposed USFS-SR management action for Compartment 6.

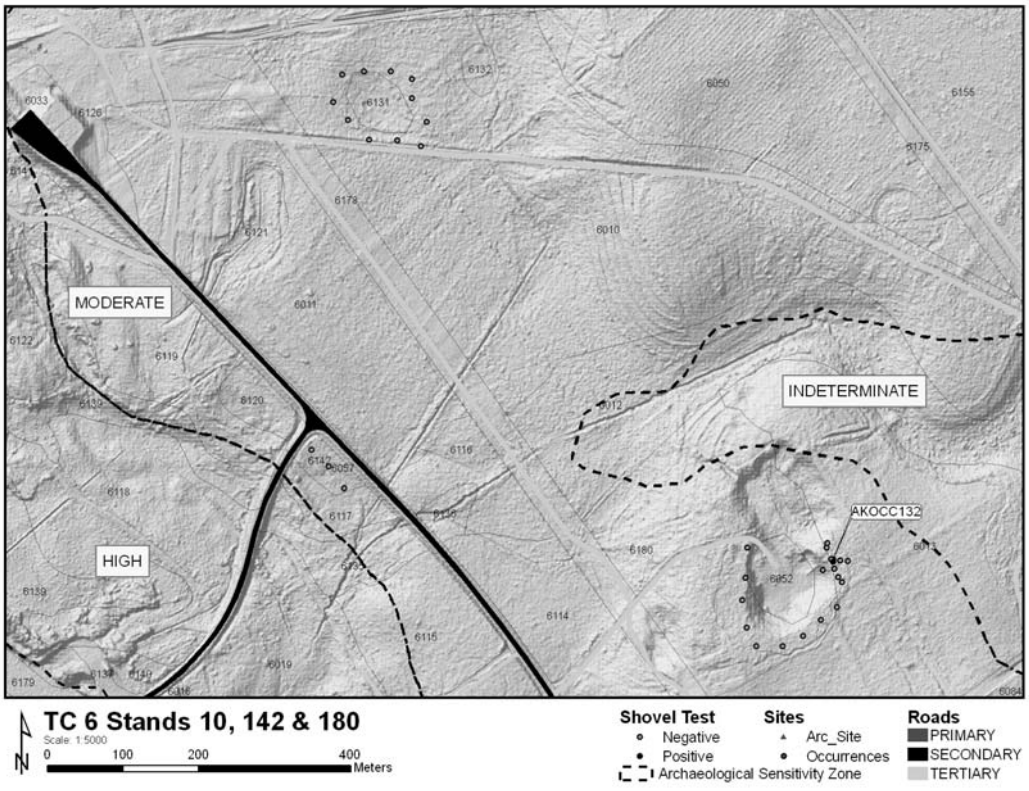


Figure 20. Timber Compartment 6, Stands 10, 142, and 180 survey area.

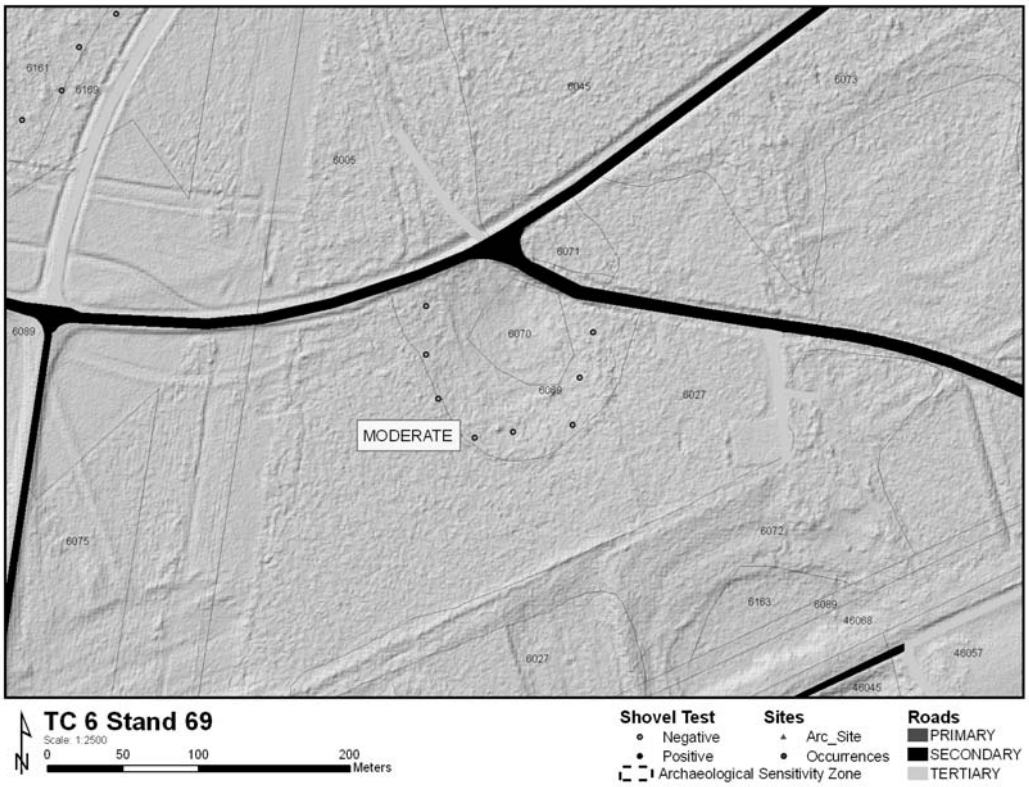


Figure 21. Timber Compartment 6, Stand 69 survey area.

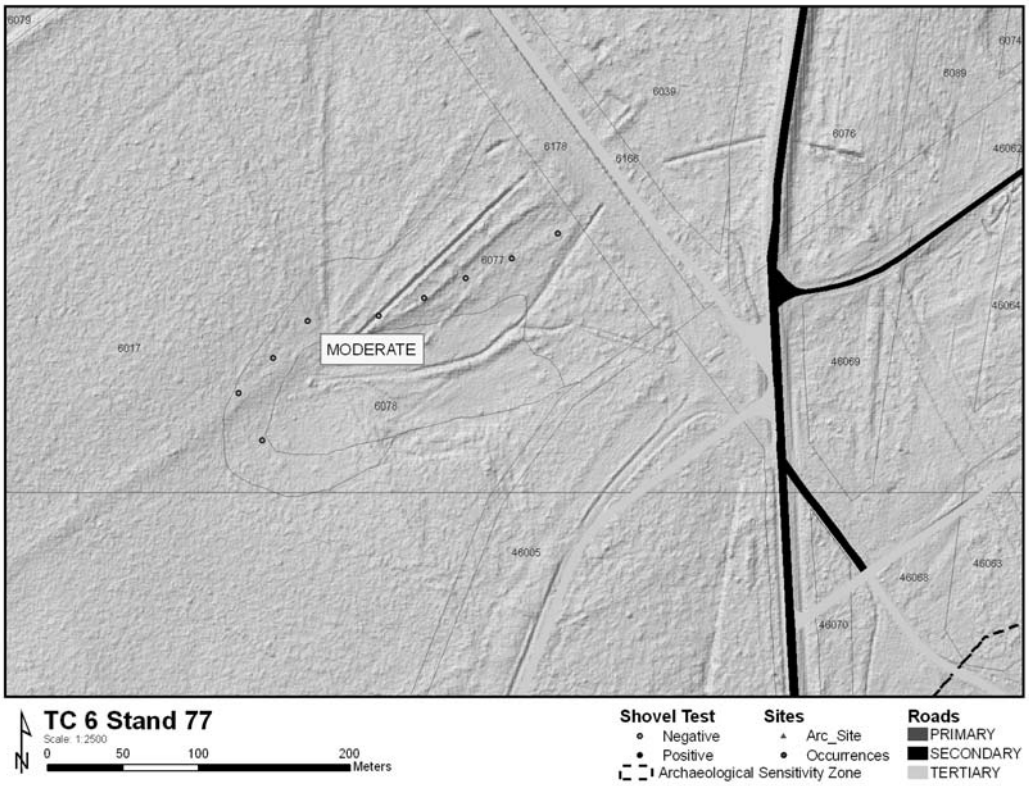


Figure 22. Timber Compartment 6, Stand 77 survey area.

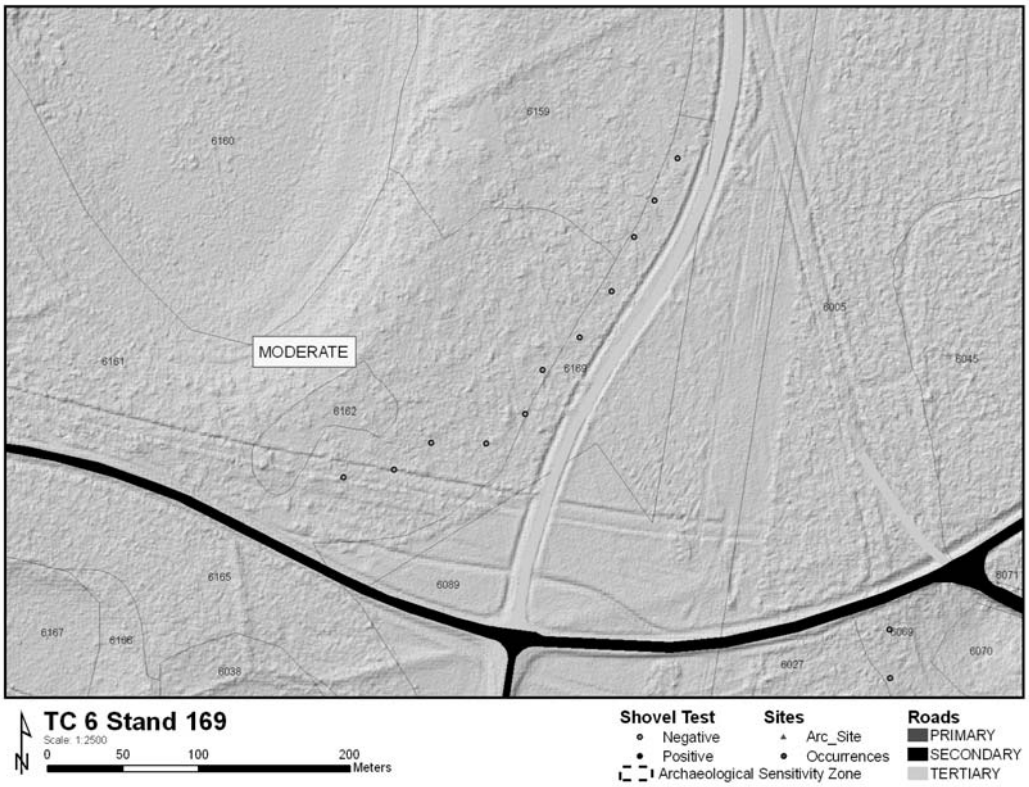


Figure 23. Timber Compartment 6, Stand 169 survey area.

Timber Compartment 21

Archaeological survey in Compartment 21 involved subsurface inspection of three proposed Log Decks totaling 1 acre each in extent in Stands 8 and 21 (Figure 24). Review of the SRARP database showed no previously recorded sites in the project area. Fieldwork consisted of 27 STPs (0 positive) excavated on a 30-m grid at each Log Deck location. As these survey efforts resulted in only negative STPs, no further archaeological work was required. Thus, there will be no adverse effect to any historic properties as a result of the proposed USFS-SR management action for Compartment 21.

Timber Compartment 33

Archaeological survey in Compartment 33 involved subsurface inspection of two proposed Log Decks totaling 1 acre each in extent in Stand 5 (Figure 25). Review of the SRARP database showed no previously recorded sites in the project area. Fieldwork consisted of 18 STPs (0 positive) excavated on a 30-m grid at each Log Deck location. As these survey efforts resulted in only negative STPs, no further archaeological work was required. Thus, there will be no adverse effect to any historic properties as a result of the proposed USFS-SR management action for Compartment 33.

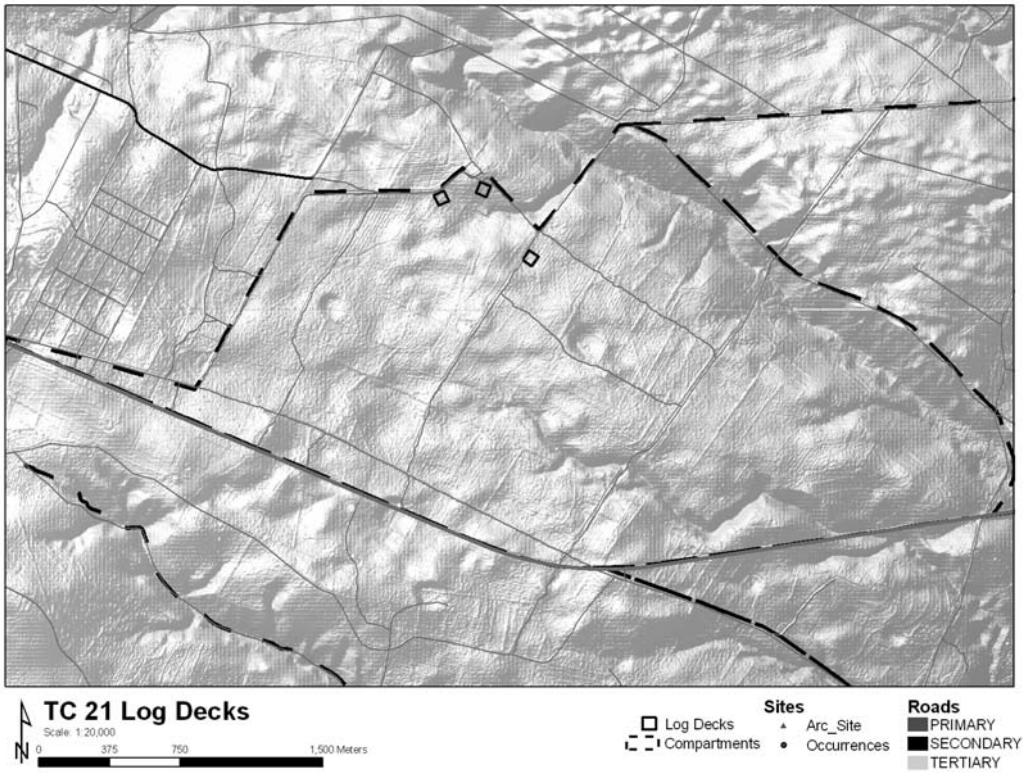


Figure 24. Timber Compartment 21, Stands 8 and 21 survey area.

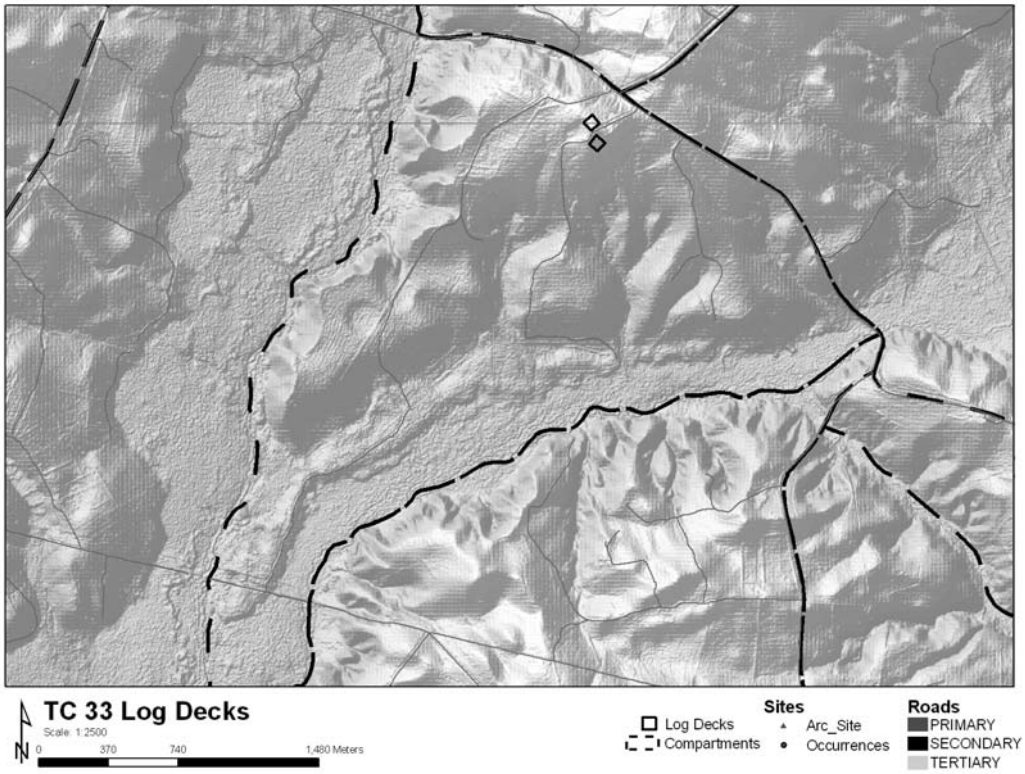


Figure 25. Timber Compartment 33, Stand 5 survey area.

Timber Compartment 34

Archaeological survey in Compartment 34 involved subsurface inspection within Stands 2, 4, 11, 14, 23, 34, 39, 43, 44, 45, 47, 53, 69, 72, 74, and 75 totaling 337 acres slated for clearcutting. Review of the SRARP database showed two previously recorded sites (38BR772, 38BR376, 38BR789) in the project area. Fieldwork consisted of 219 STPs (15 positive) excavated along 12 separate transects (Figure 26 – Figure 37). Previously recorded site 38BR376 could not be relocated during survey of Stand 75. Otherwise, these survey efforts resulted in the relocation and delineation of 38BR772 and 38BR789 as well as the discovery and delineation of nine new sites (38BR1232, 38BR1233, 38BR1234, 38BR1235, 38BR1236, 38BR1237, 38BR1243, 38BR1244, 38BR1245) and the recovery of three isolated artifacts (BR-OCC-244, BR-OCC-245, BR-OCC-246). All sites will be avoided completely during current timbering activities. The three isolated artifacts have no research potential to contribute to an understanding of the history or prehistory of the region. Thus, there will be no adverse effect to any historic properties as a result of the proposed USFS-SR management action for Compartment 34.

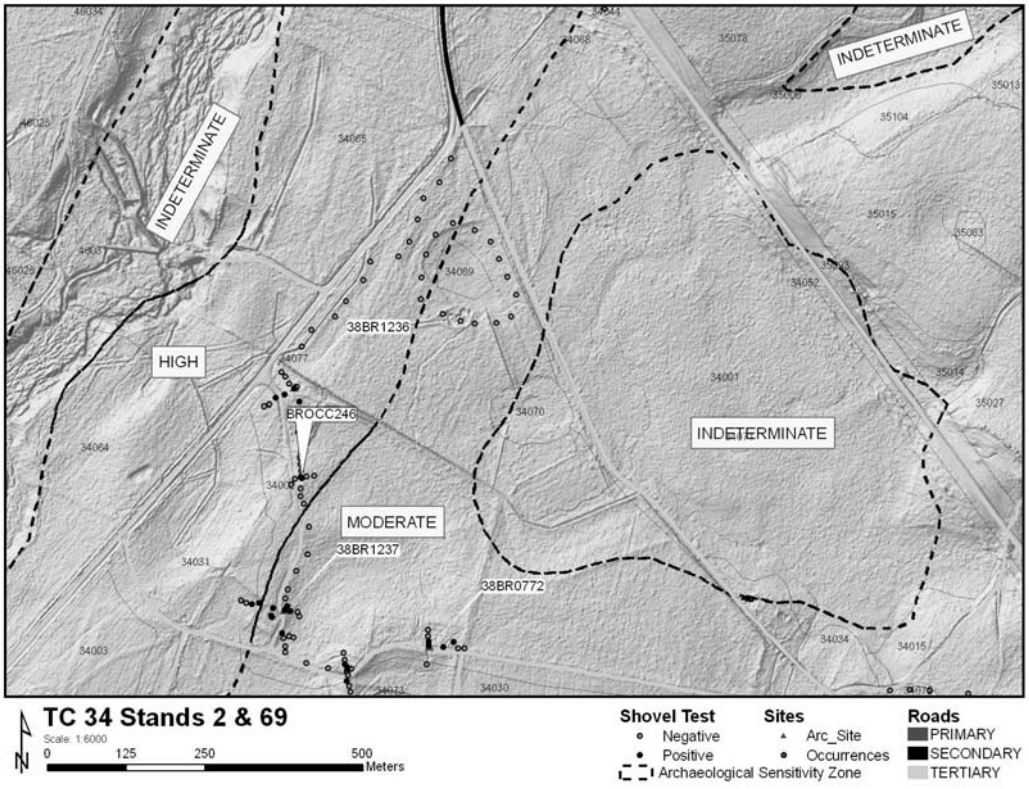


Figure 26. Timber Compartment 34, Stands 2 and 69 survey area.

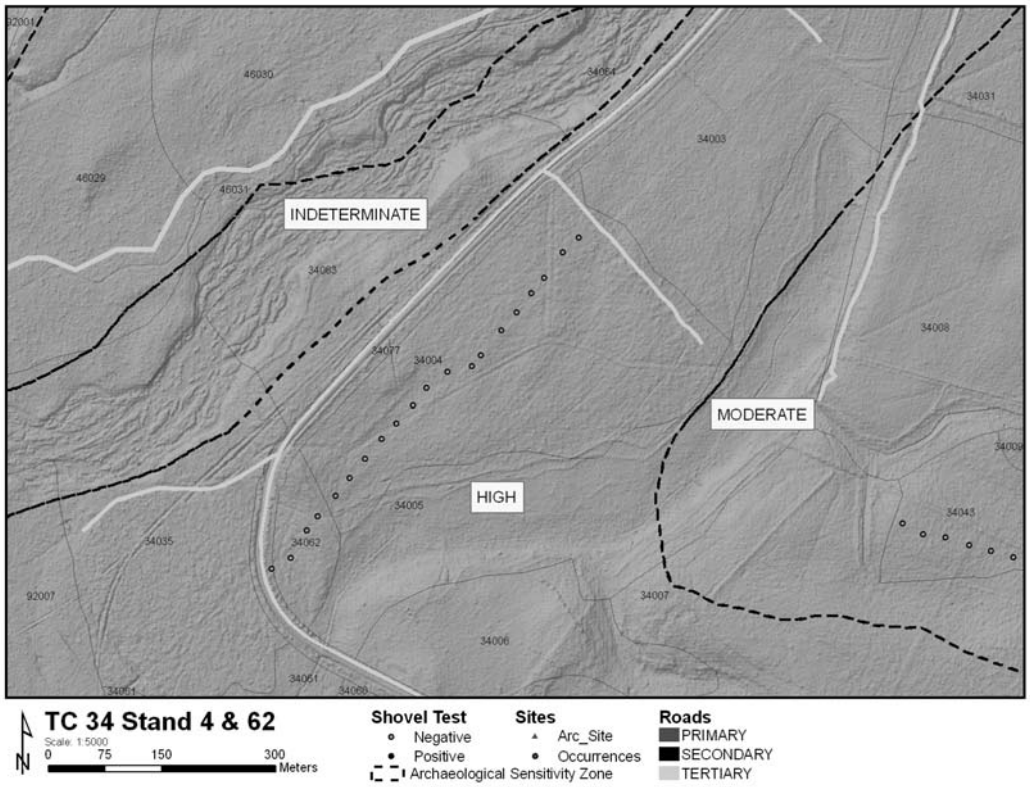


Figure 27. Timber Compartment 34, Stands 4 and 62 survey area.

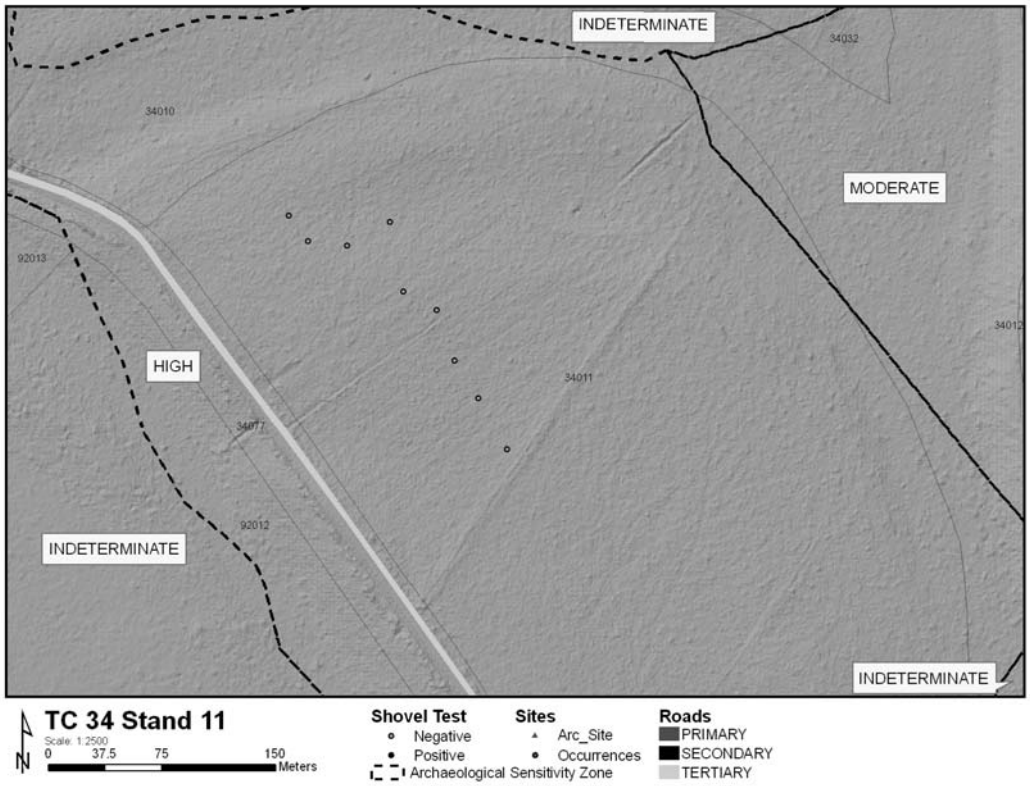


Figure 28. Timber Compartment 34, Stands 11 survey area.

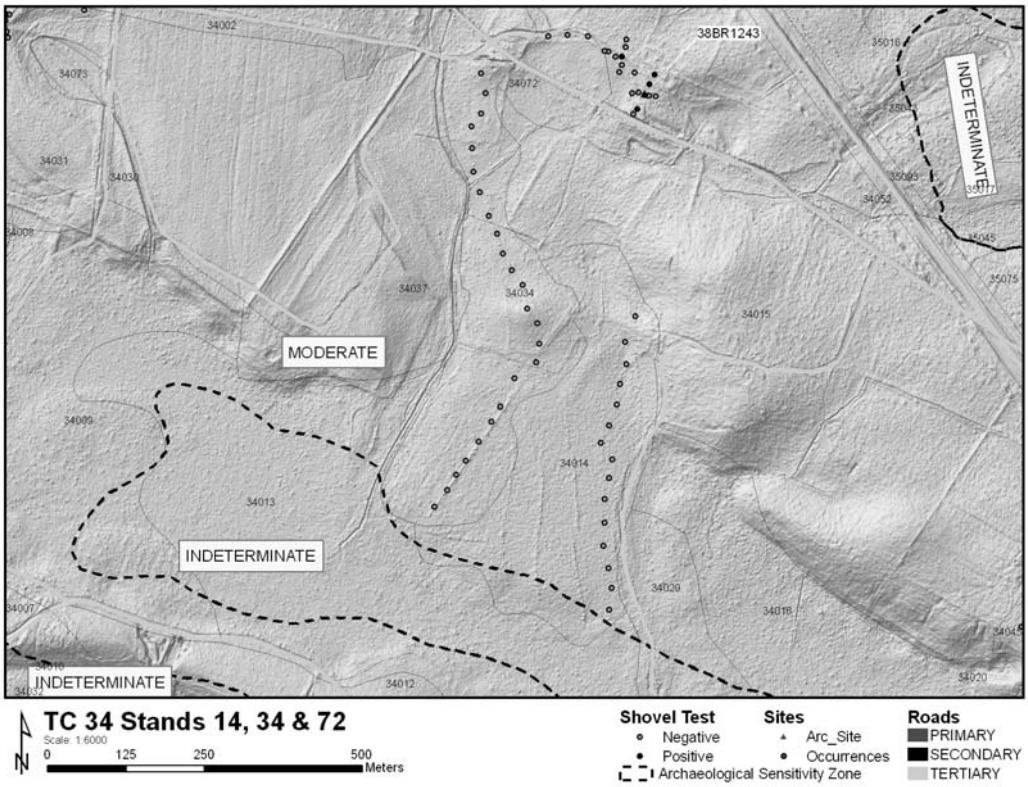


Figure 29. Timber Compartment 34, Stands 14, 34, and 72 survey area.

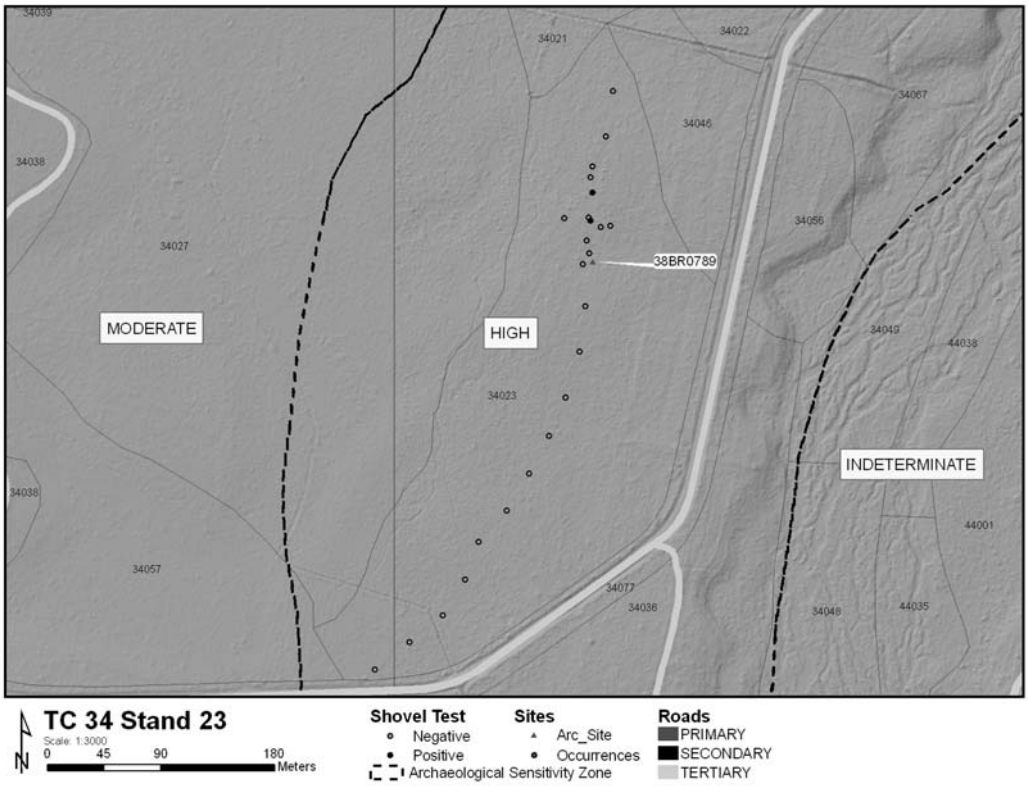


Figure 30. Timber Compartment 34, Stand 23 survey area.

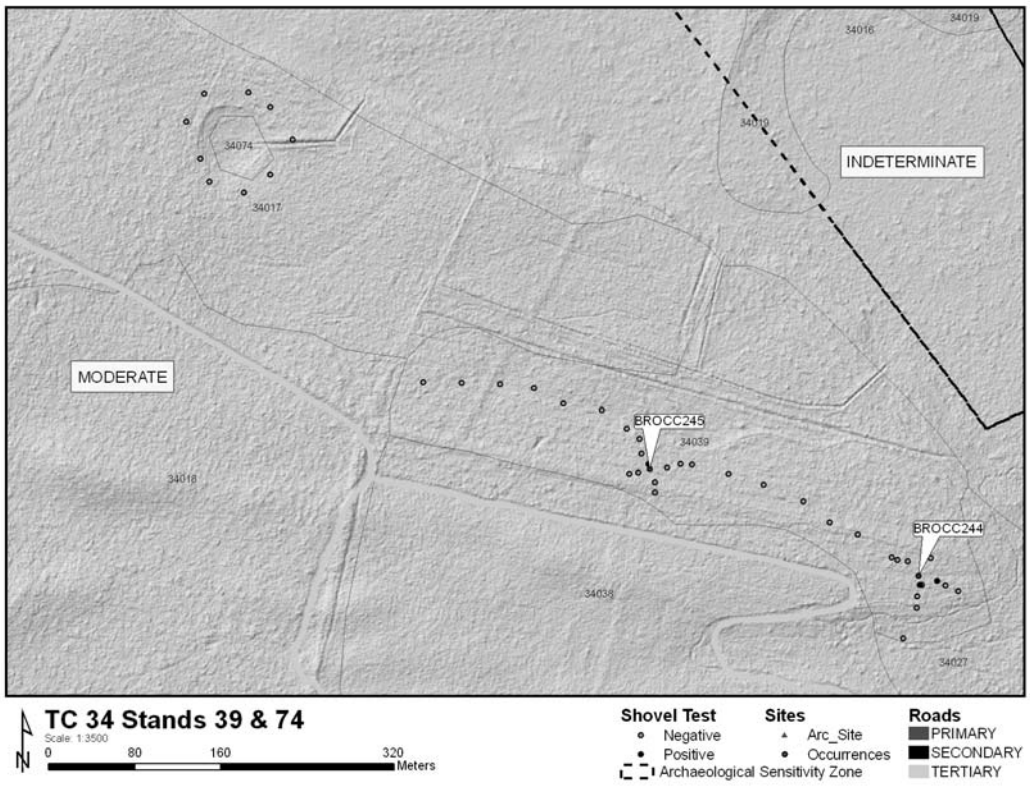


Figure 31. Timber Compartment 34, Stands 39 and 74 survey area.

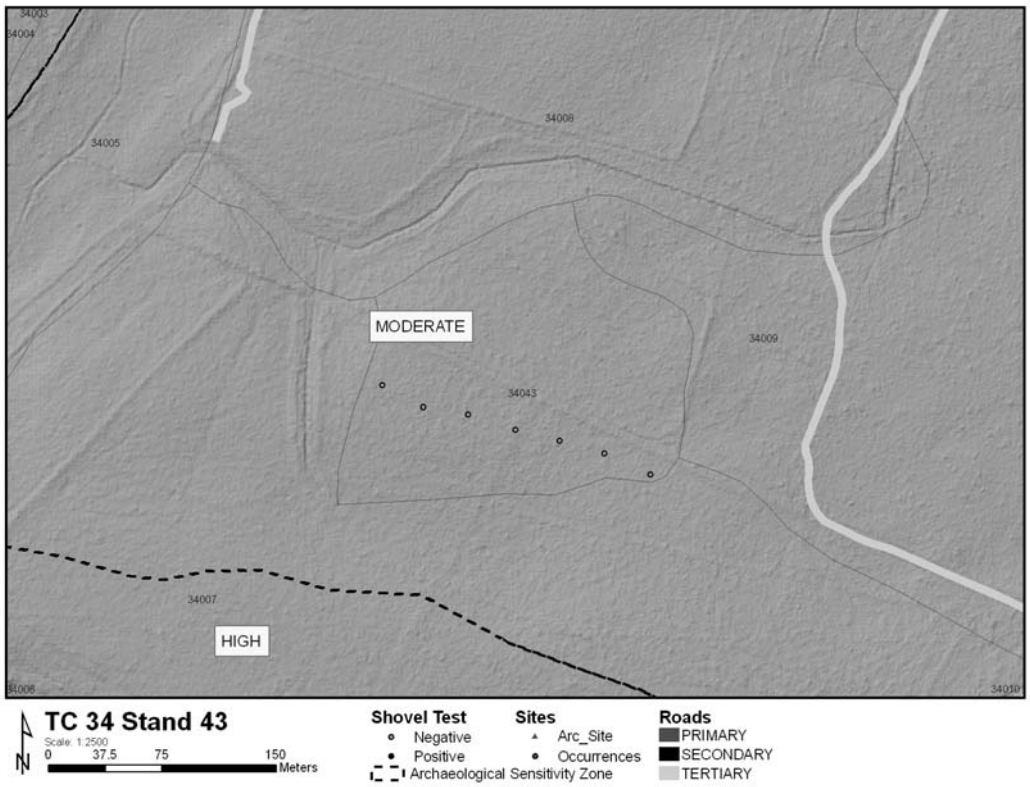


Figure 32. Timber Compartment 34, Stand 43 survey area.

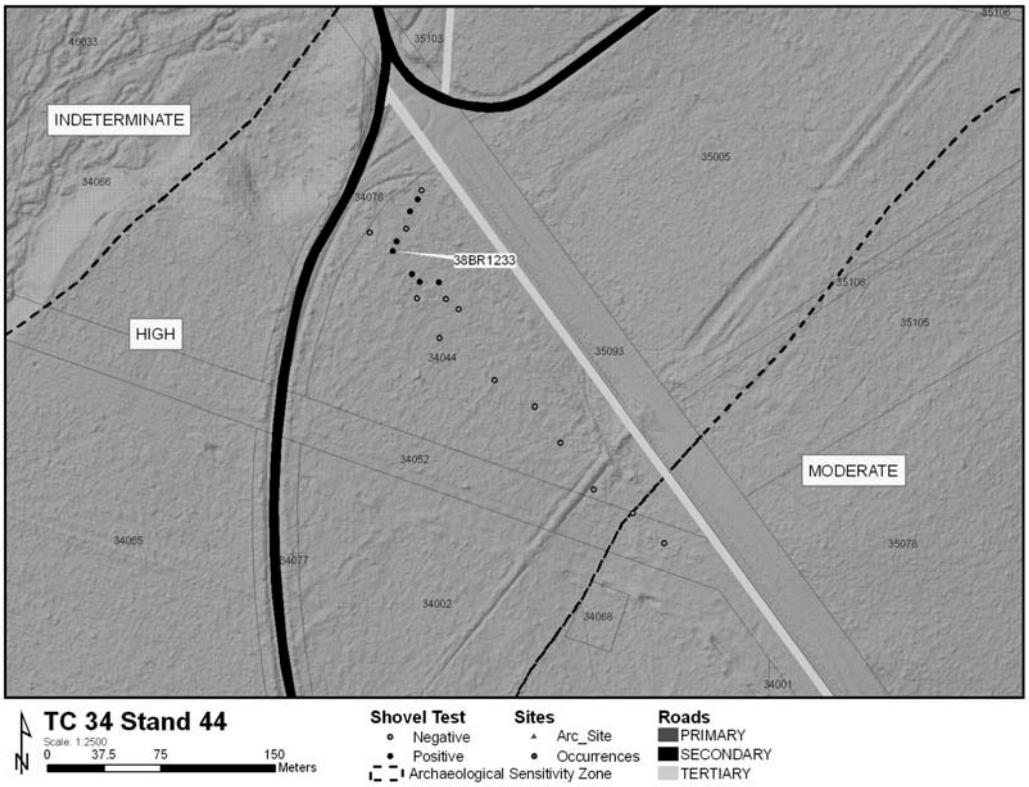


Figure 33. Timber Compartment 34, Stand 44 survey area.

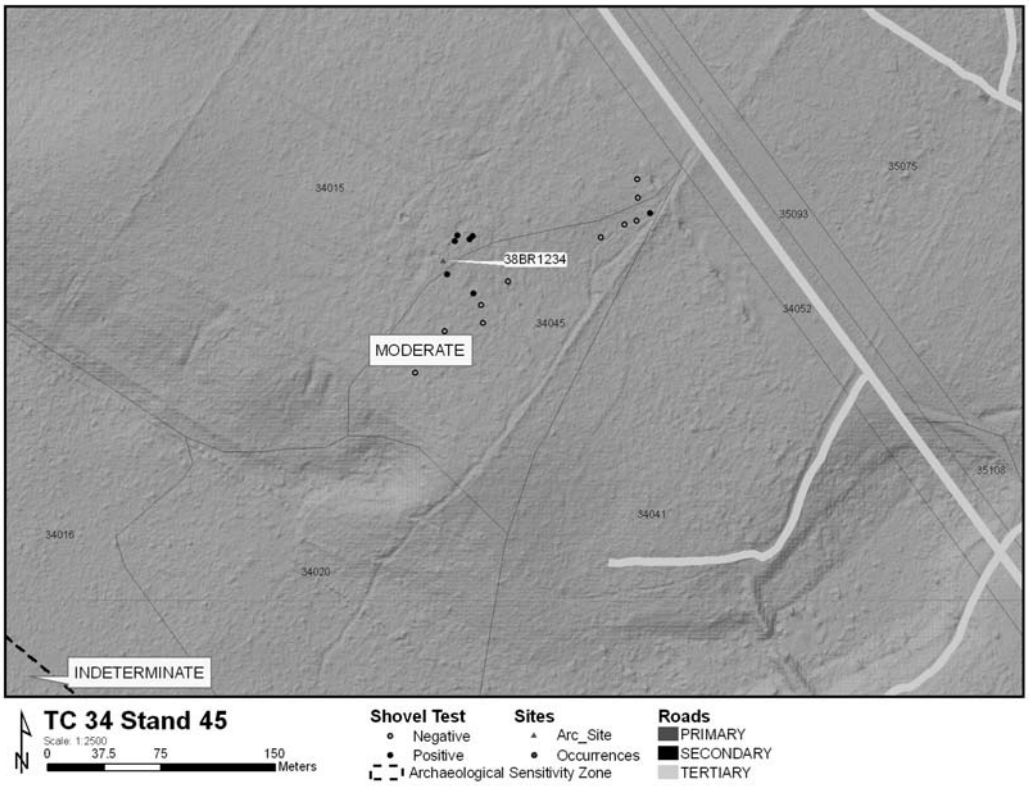


Figure 34. Timber Compartment 34, Stand 45 survey area.

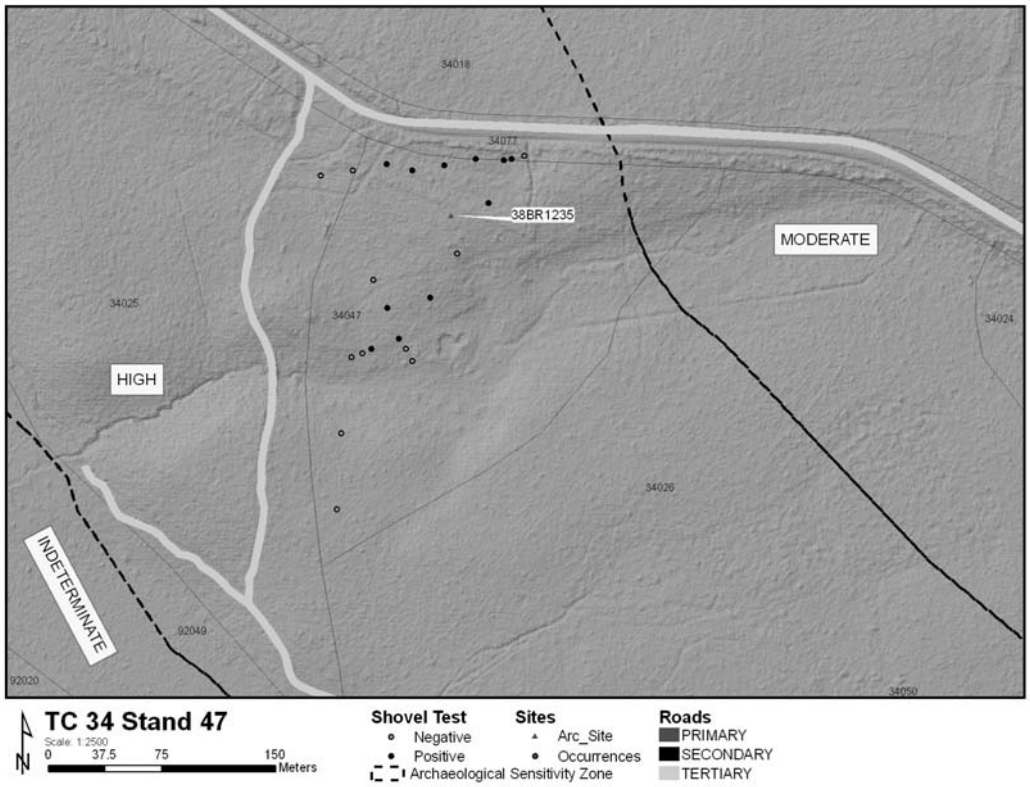


Figure 35. Timber Compartment 34, Stand 47 survey area.

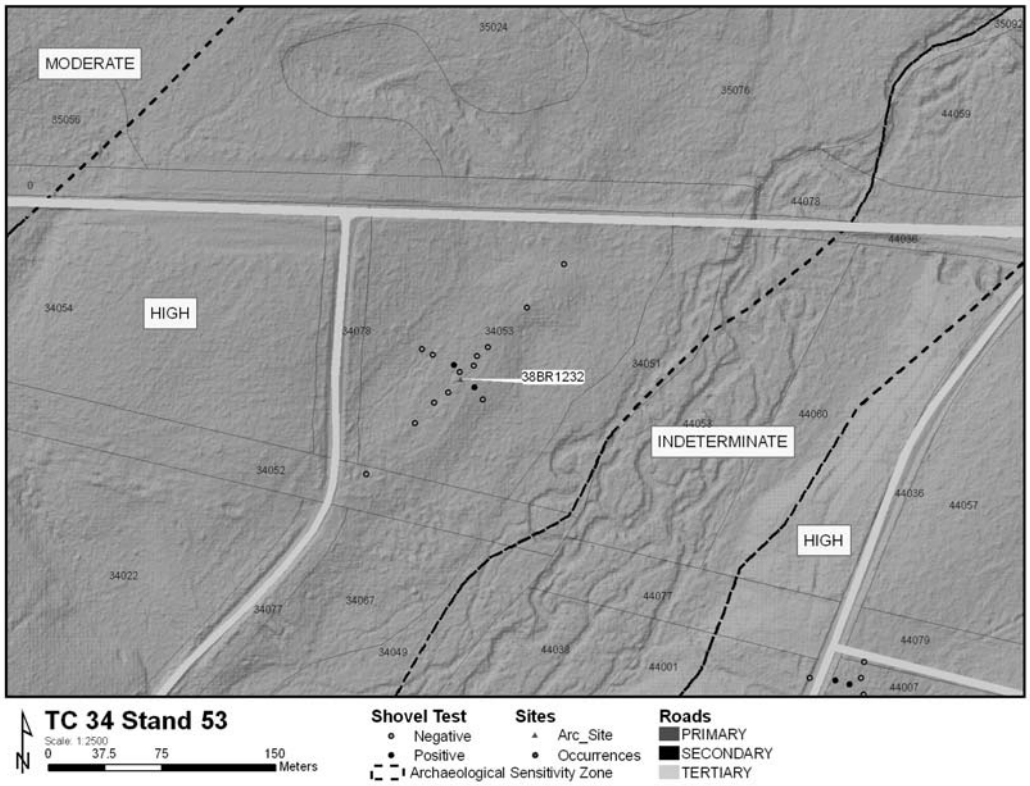


Figure 36. Timber Compartment 34, Stand 53 survey area.

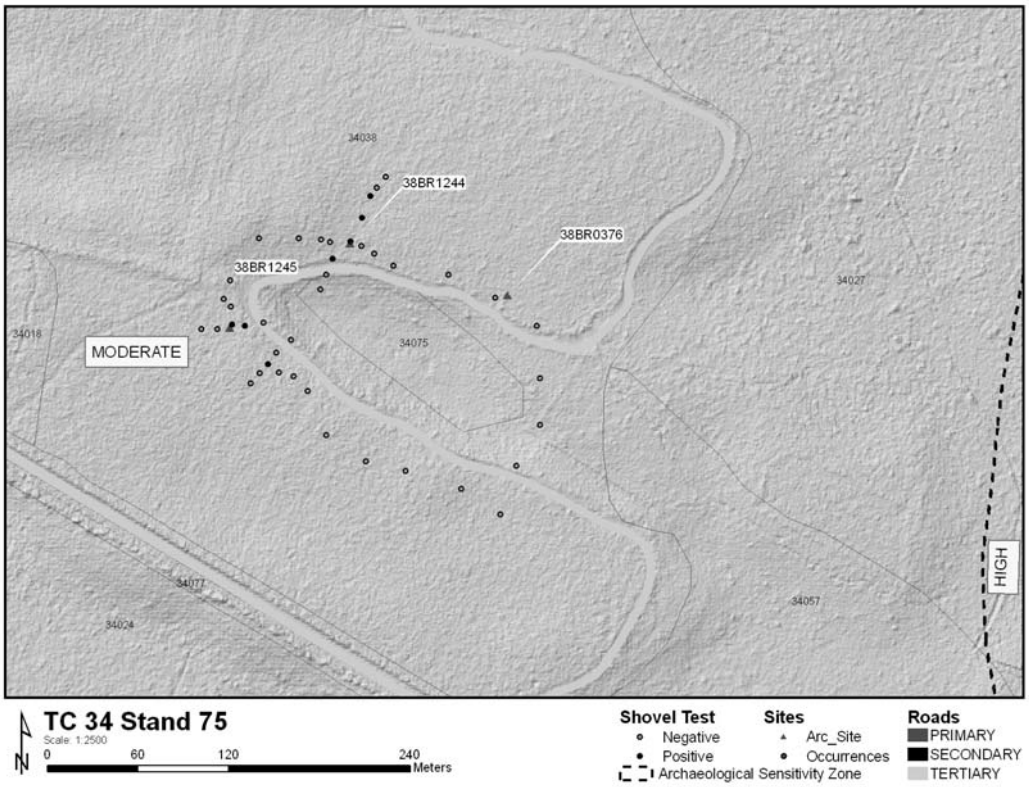


Figure 37. Timber Compartment 34, Stand 75 survey area.

Timber Compartment 44

Archaeological survey in Compartment 44 involved subsurface inspection within Stands 7, 1, and 44 totaling 99 acres slated for clearcutting. Review of the SRARP database showed no previously recorded sites in the project area. Fieldwork consisted of 63 STPs (2 positive) excavated along 4 separate transects (Figure 38 and Figure 39). These survey efforts resulted in the discovery and delineation of two new sites (38BR1243, 38BR1244). These two sites will be avoided completely during current timbering activities. Thus, there will be no adverse effect to any historic properties as a result of the proposed USFS-SR management action for Compartment 44.

Timber Compartment 46

Archaeological survey in Compartment 46 involved subsurface inspection within Stands 23 and 51 totaling 8 acres slated for clearcutting. Review of the SRARP database showed one previously recorded site (38BR923) in the project area. Fieldwork consisted of 38 STPs (1 positive) excavated along 3 separate transects (Figure 40). These survey efforts resulted in the relocation and delineation of previously recorded site 38BR923. This site will be avoided completely during current timbering activities. Thus, there will be no adverse effect to any historic properties as a result of the proposed USFS-SR management action for Compartment 46.

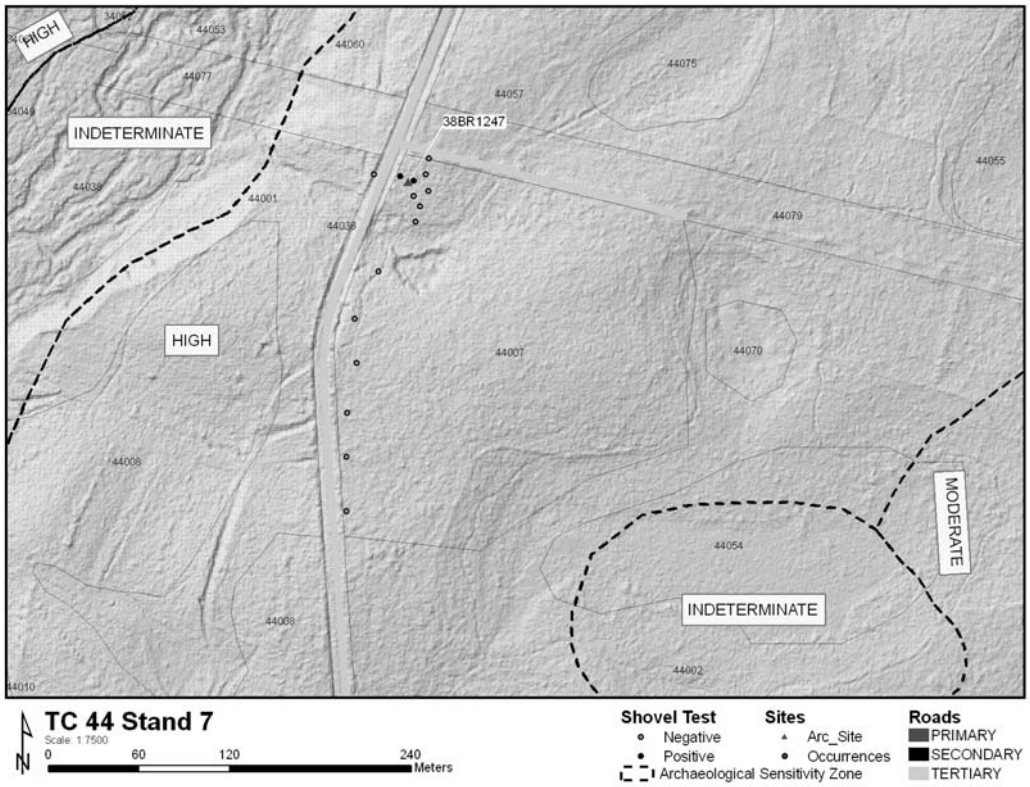


Figure 38. Timber Compartment 44, Stand 7 survey area.

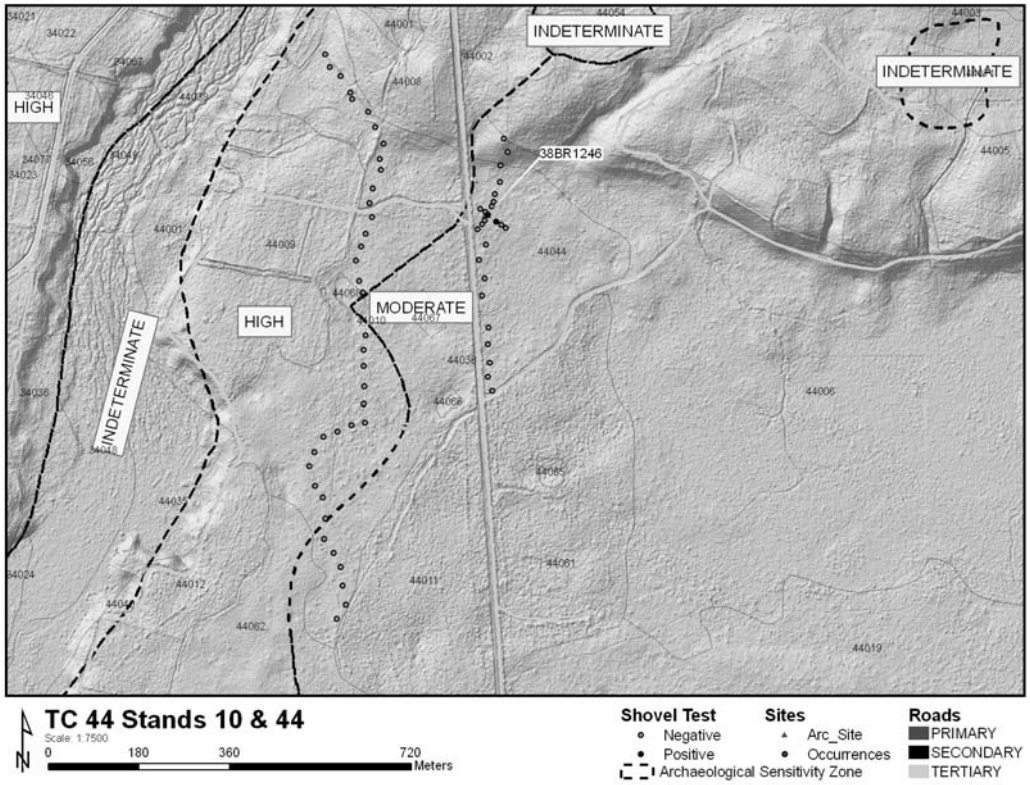


Figure 39. Timber Compartment 44, Stands 10 and 44 survey area.

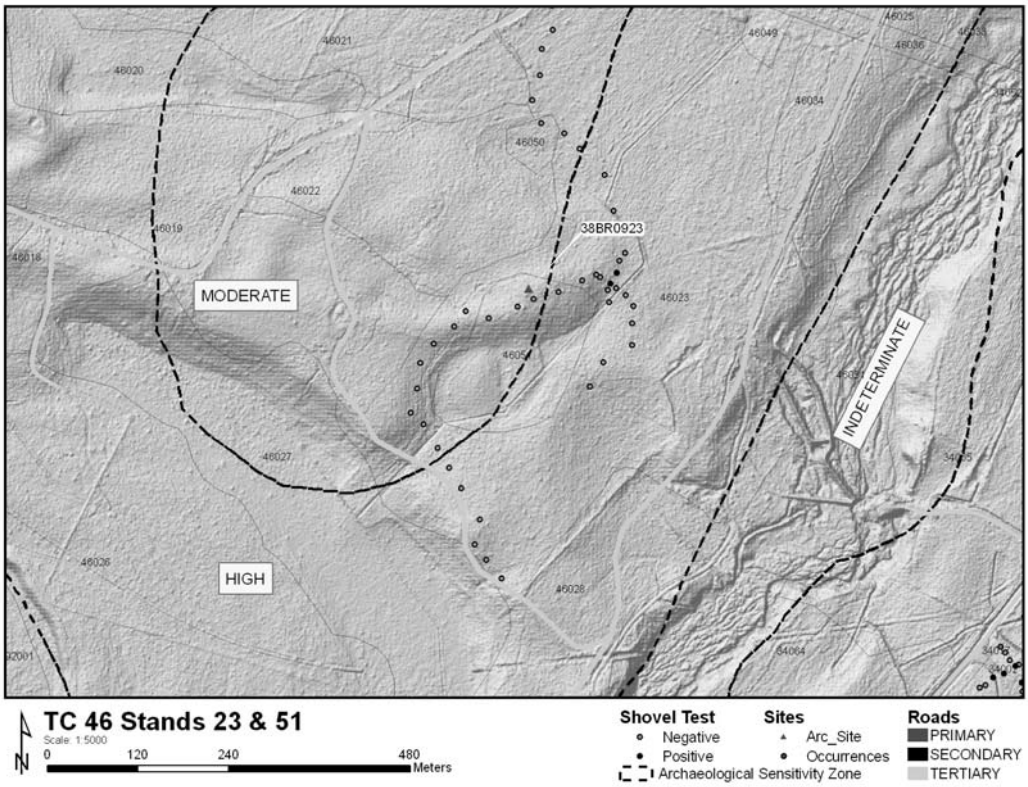


Figure 40. Timber Compartment 46, Stands 23 and 51 survey area.

Timber Compartment 47

Archaeological survey in Compartment 47 involved subsurface inspection within Stands 2, 4, 8, 9, 13, 18, 24, 27, 34, 38, and 41 totaling 279 acres slated for clearcutting. Review of the SRARP database showed one previously recorded site (38BR62) in the project area. Fieldwork consisted of 185 STPs (11 positive) excavated along 11 separate transects (Figure 41 – Figure 43). These survey efforts resulted in the relocation and delineation of previously recorded site 38BR923 as well as the discovery and delineation of two new sites (38BR1241, 38BR1242), and the recovery of three isolated artifacts (BR-OCC-249, BR-OCC-250, BR-OCC-251). All sites will be avoided completely during current timbering activities. The three isolated artifacts have no research potential to contribute to an understanding of the history or prehistory of the region. Thus, there will be no adverse effect to any historic properties as a result of the proposed USFS-SR management action for Compartment 47.

Timber Compartment 48

Archaeological survey in Compartment 48 involved subsurface inspection of three proposed Log Decks totaling 1 acre each in extent in Stands 42 and 66. Review of the SRARP database showed no previously recorded sites in the project area. Fieldwork consisted of 30 STPs (4 positive) excavated on a 30-m grid at each Log Deck location (Figure 44). These survey efforts resulted in the discovery and delineation of one new

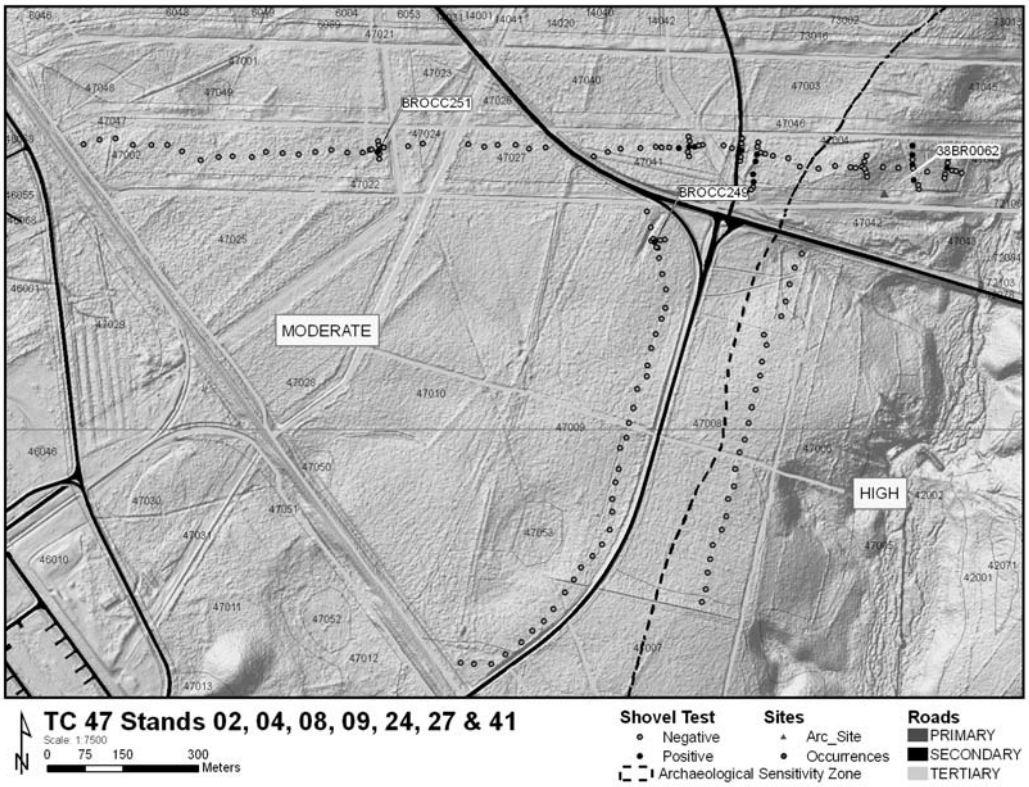


Figure 41. Timber Compartment 47, Stands 2, 8, 9, 24, 27, 41, 44, and 47 survey area.

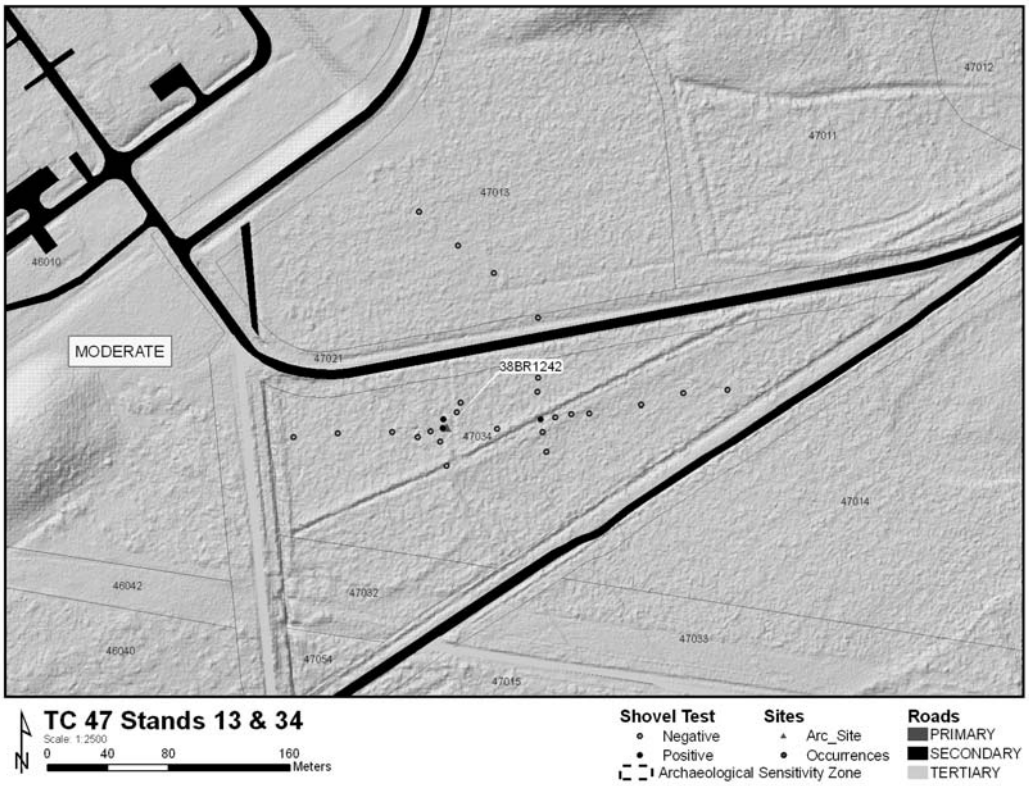


Figure 42. Timber Compartment 47, Stands 13 and 34 survey area.

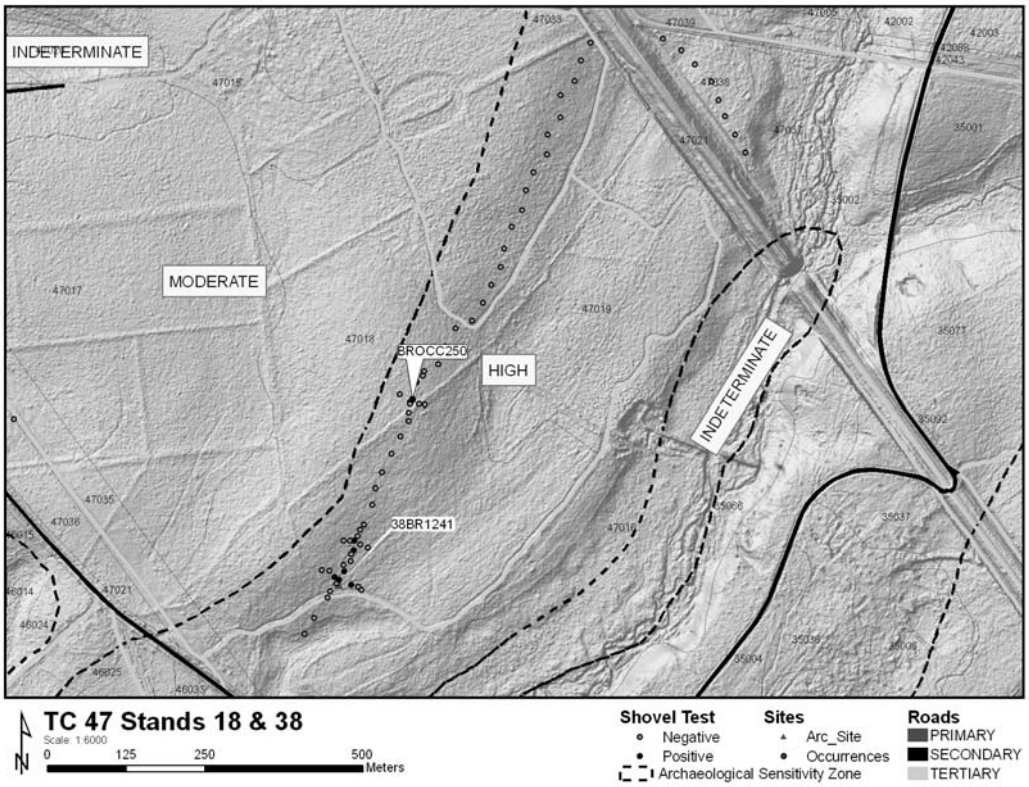


Figure 43. Timber Compartment 47, Stands 18 and 38 survey area.

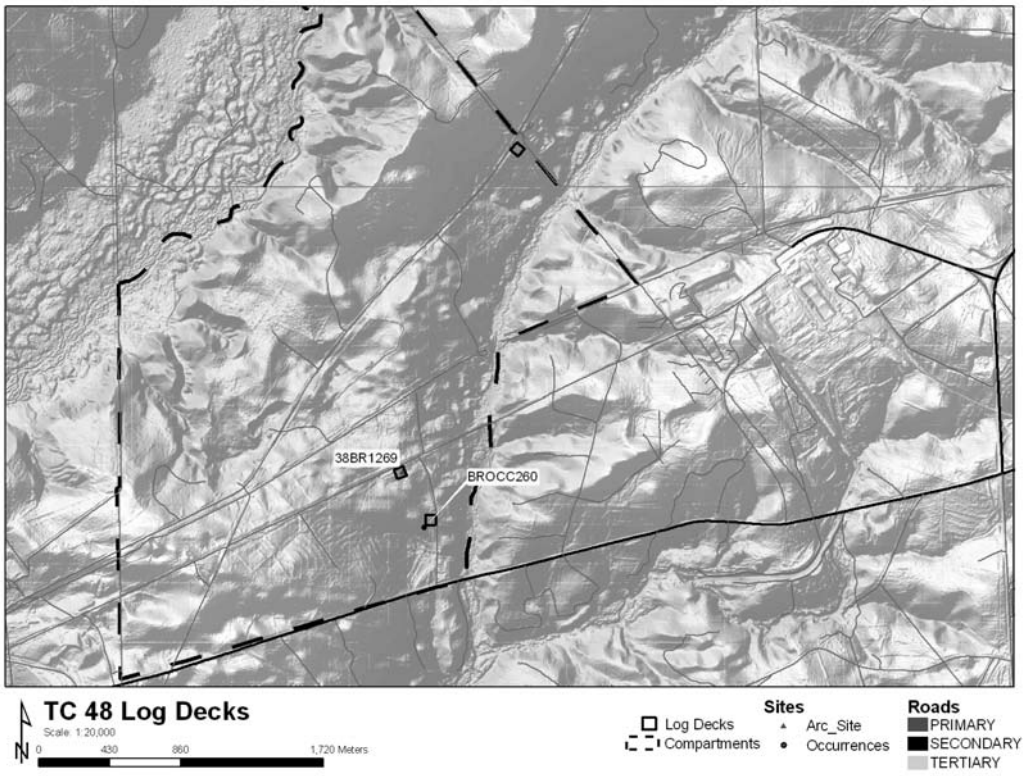


Figure 44. Timber Compartment 48, Stands 42 and 66 survey area.

site (38BR1269) and the recovery of one isolated artifact (BR-OCC-260). The USFS-SR relocated the Log Deck so that site 38BR1269 will be avoided completely during current timbering activities. The isolated artifact has no research potential to contribute to an understanding of the history of the region. Thus, there will be no adverse effect to any historic properties as a result of the proposed USFS-SR management action for Compartment 48.

Timber Compartment 50

Archaeological survey in Compartment 50 involved subsurface inspection of one proposed Log Deck totaling 1 acre in extent in Stand 58. Review of the SRARP database showed no previously recorded sites in the project area. Fieldwork consisted of 9 STPs (1 positive) excavated on a 30-m grid (Figure 45). This survey effort resulted in the discovery and delineation of one new site (38BR1259). The USFS-SR relocated the Log Deck so that site 38BR1259 will be avoided completely during current timbering activities. Thus, there will be no adverse effect to any historic properties as a result of the proposed USFS-SR management action for Compartment 50.

Timber Compartment 55

Archaeological survey in Compartment 50 involved subsurface inspection of three proposed Log Decks totaling 1 acre each in extent in Stand 10 as well as subsurface inspection within Stands 6, 7, 9, 10, and 23 totaling 164 acres slated for clearcutting.. Review of the SRARP database showed one previously recorded site (38BR615) in the project area. Fieldwork consisted of 173 STPs (20 positive) excavated on a 30-m grid at each Log Deck location and along 14 single transects in the proposed Stands for clearcutting (Figure 46 - Figure 47). These survey efforts resulted in the relocation and delineation of previously recorded site 38BR615 as well as the discovery and delineation of four new sites (38BR1253, 38BR1254, 38BR1255, 38BR1256), and the recovery of three isolated artifacts (BR-OCC-256, BR-OCC-257, BR-OCC-258). The USFS-SR relocated the Log Deck so that site 38BR1256 will be avoided completely during current timbering activities. Additionally, all other new and previously recorded sites documented during this survey will be completely avoided during the proposed timbering activities. The three artifact occurrences hold no research potential to contribute to an understanding of the history of the region. Thus, there will be no adverse effect to any historic properties as a result of the proposed USFS-SR management action for Compartment 55.

Timber Compartment 56

Archaeological survey in Compartment 56 involved subsurface inspection within Stands 35, 43, 76, and 97 totaling 43 acres slated for clearcutting. Review of the SRARP database showed no previously recorded sites in the project area. Fieldwork consisted of 62 STPs (2 positive) excavated along 8 separate transects (Figure 48 – Figure 51). These survey efforts resulted in the discovery and delineation of one new site (38BR1230),

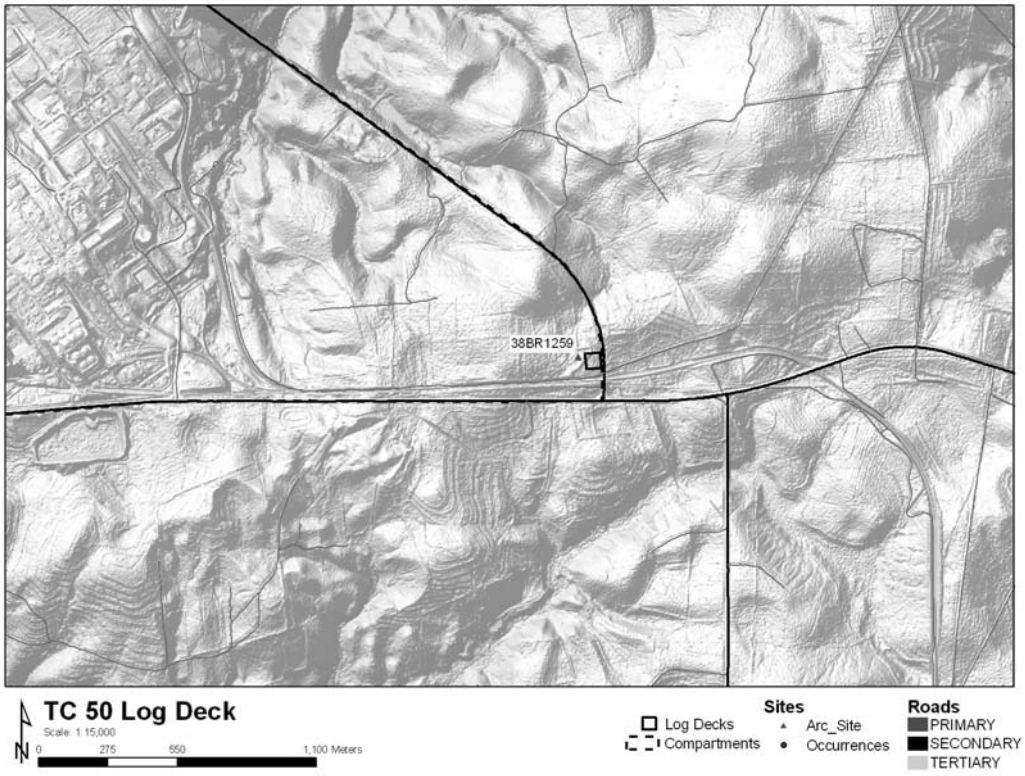


Figure 45. Timber Compartment 50, Stand 58 survey area.

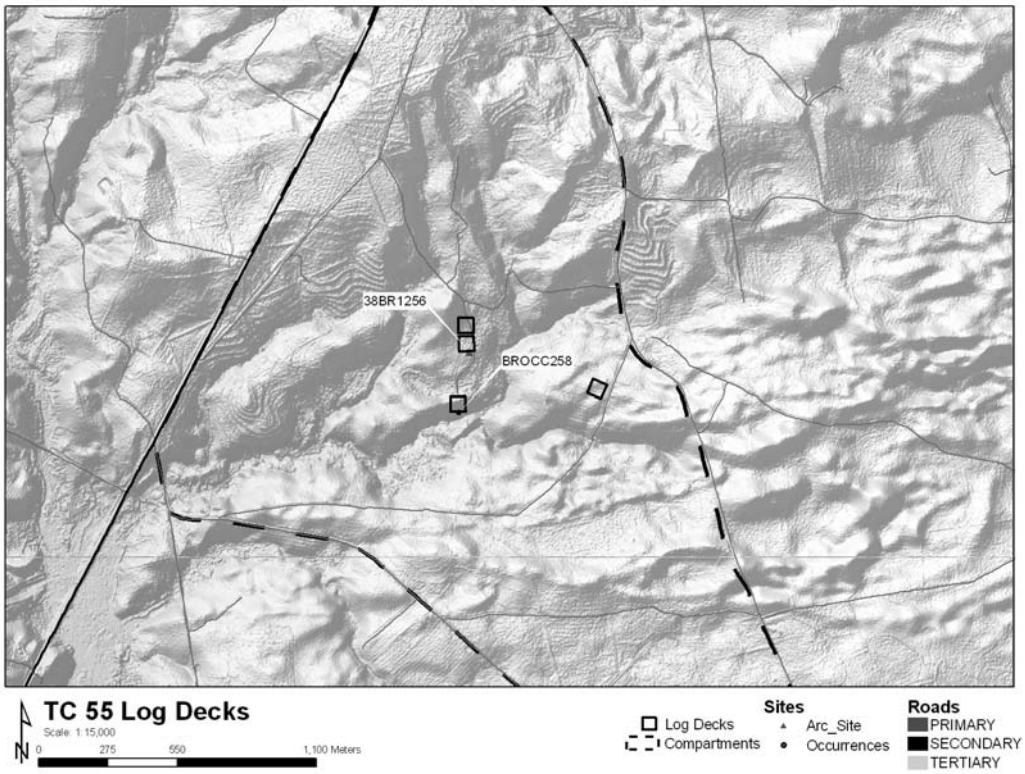


Figure 46. Timber Compartment 55, Stand 10 survey area.

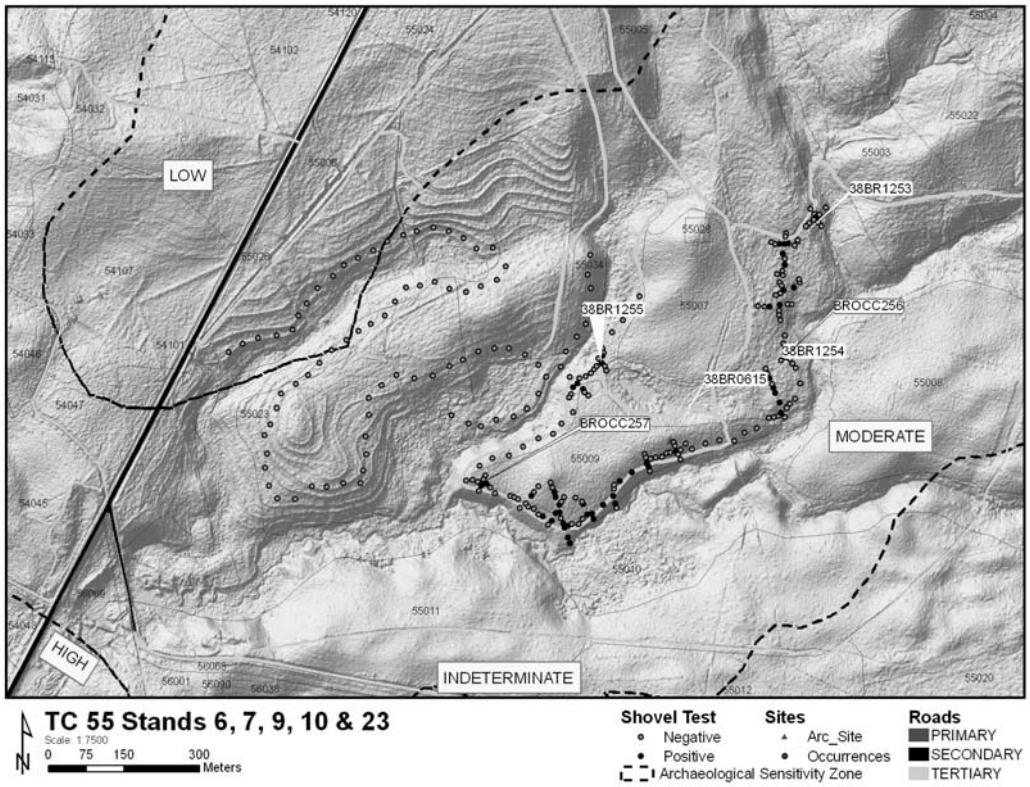


Figure 47. Timber Compartment 55, Stands 6, 7, 9, 10, and 23 survey area.

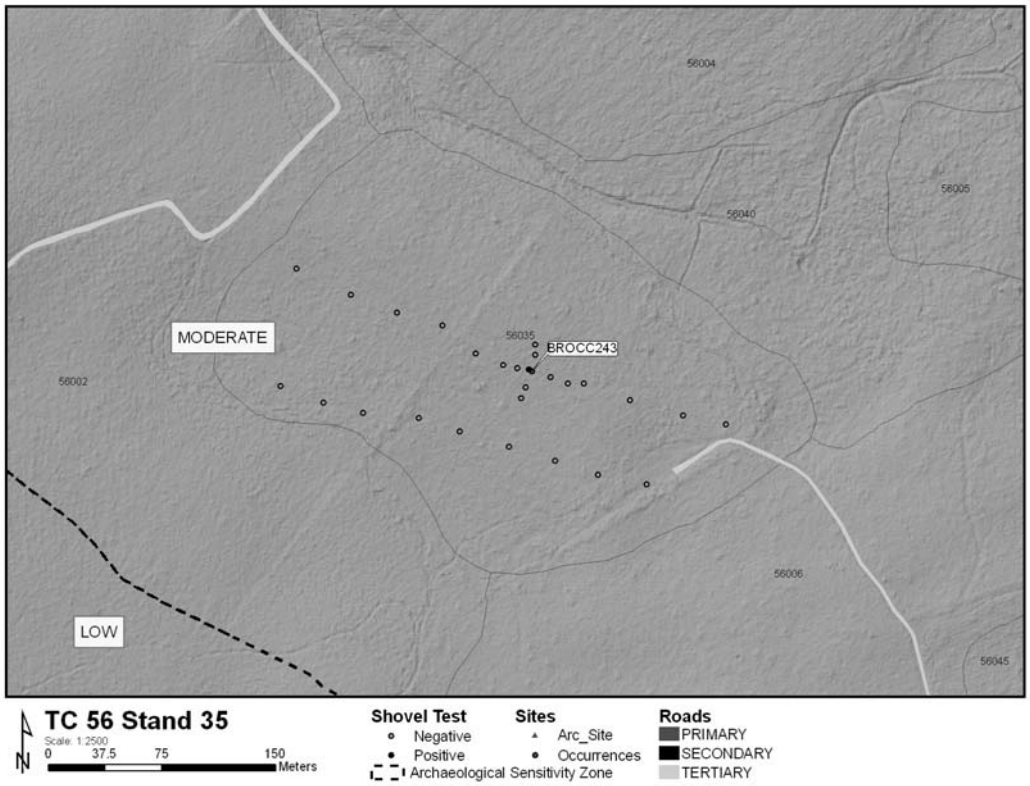


Figure 48. Timber Compartment 56, Stand 35 survey area.

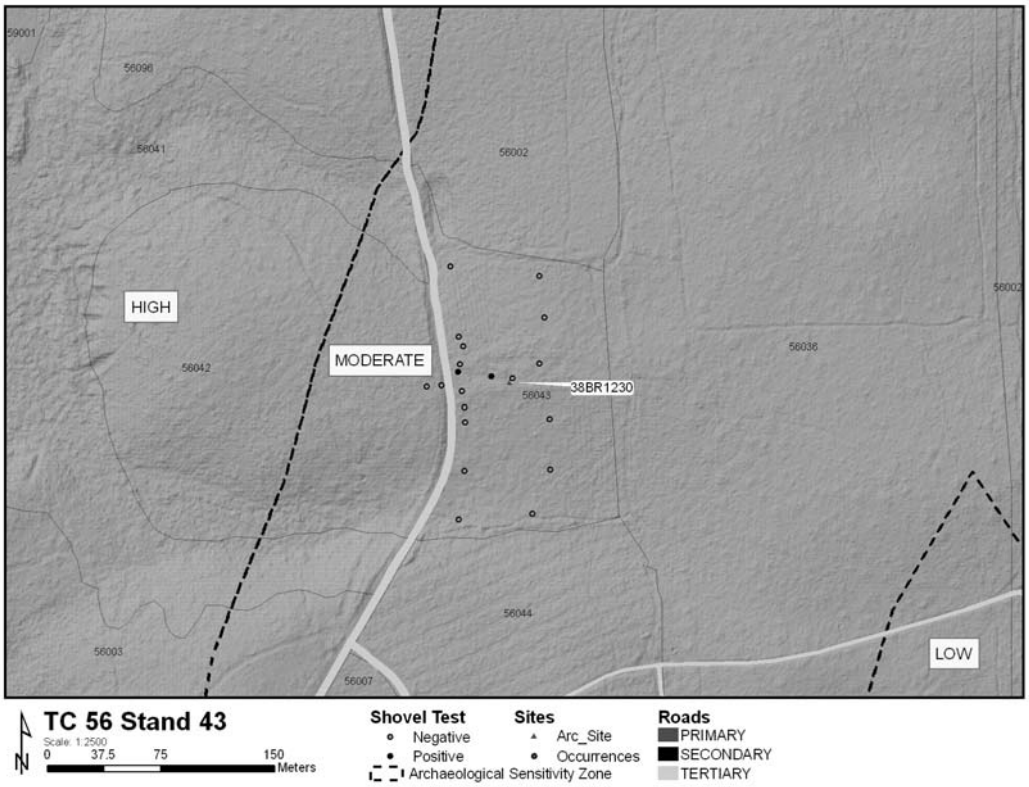


Figure 49. Timber Compartment 56, Stand 43 survey area.

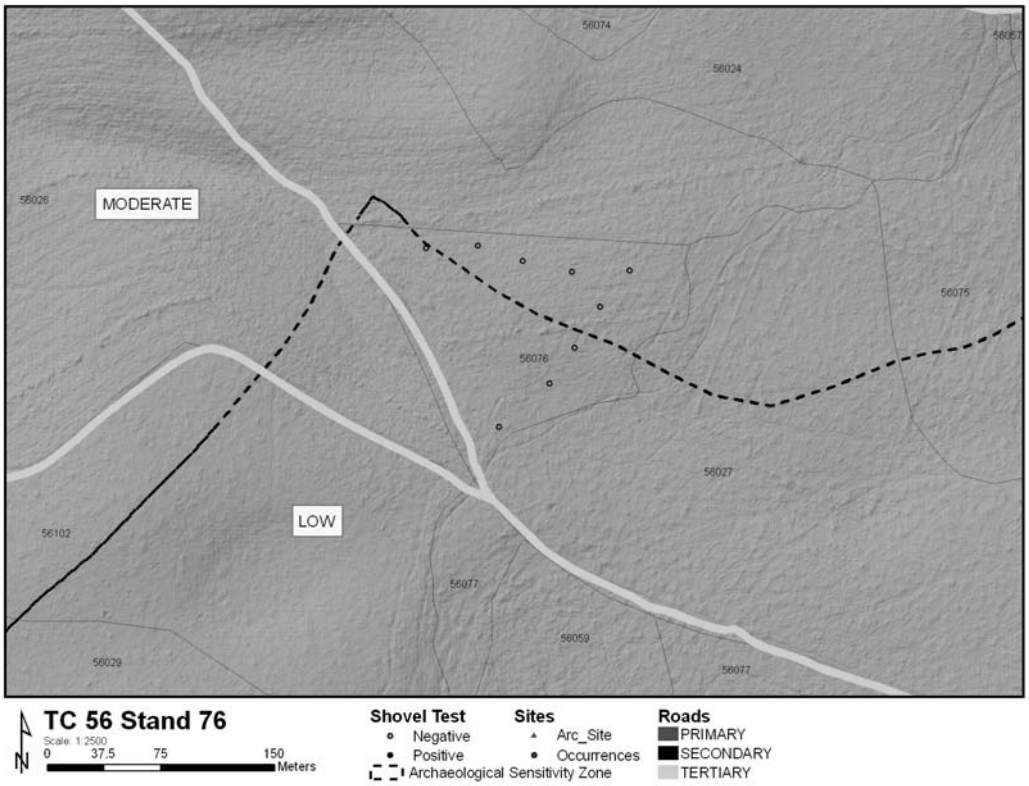


Figure 50. Timber Compartment 56, Stand 76 survey area.

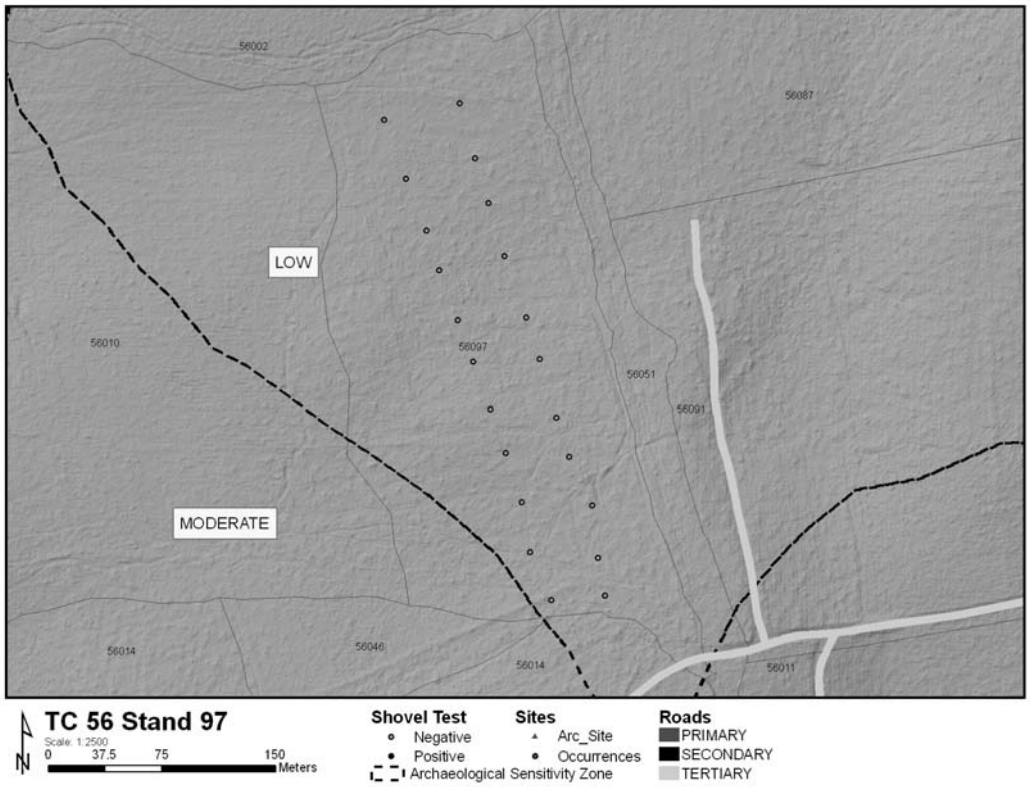


Figure 51. Timber Compartment 56, Stand 97 survey area.

and the recovery of one isolated artifact (BR-OCC-243). Site 38BR1230 will be avoided completely during current timbering activities. The artifact occurrence holds no research potential to contribute to an understanding of the regional prehistory. Thus, there will be no adverse effect to any historic properties as a result of the proposed USFS-SR management action for Compartment 56.

Timber Compartment 60

Archaeological survey in Compartment 60 involved subsurface inspection within Stands 29 and 17 totaling 10 acres slated for clearcutting. Review of the SRARP database showed no previously recorded sites in the project area. Fieldwork consisted of 42 STPs (0 positive) excavated along 4 separate transects (Figure 52 and Figure 53). As these survey efforts resulted in only negative STPs, no further archaeological work was required. Thus, there will be no adverse effect to any historic properties as a result of the proposed USFS-SR management action for Compartment 60.

Timber Compartment 62

Archaeological survey in Compartment 62 involved subsurface inspection within Stands 17 and 20 totaling 135 acres slated for clearcutting. Review of the SRARP database

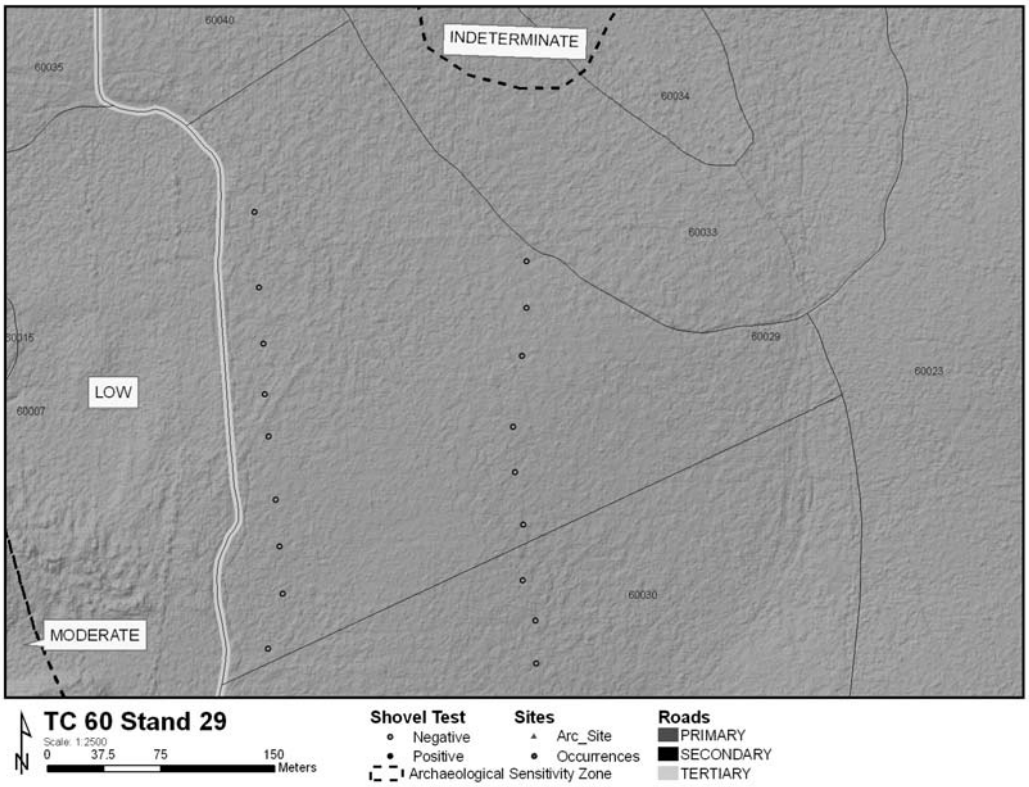


Figure 52. Timber Compartment 60, Stand 29 survey area.

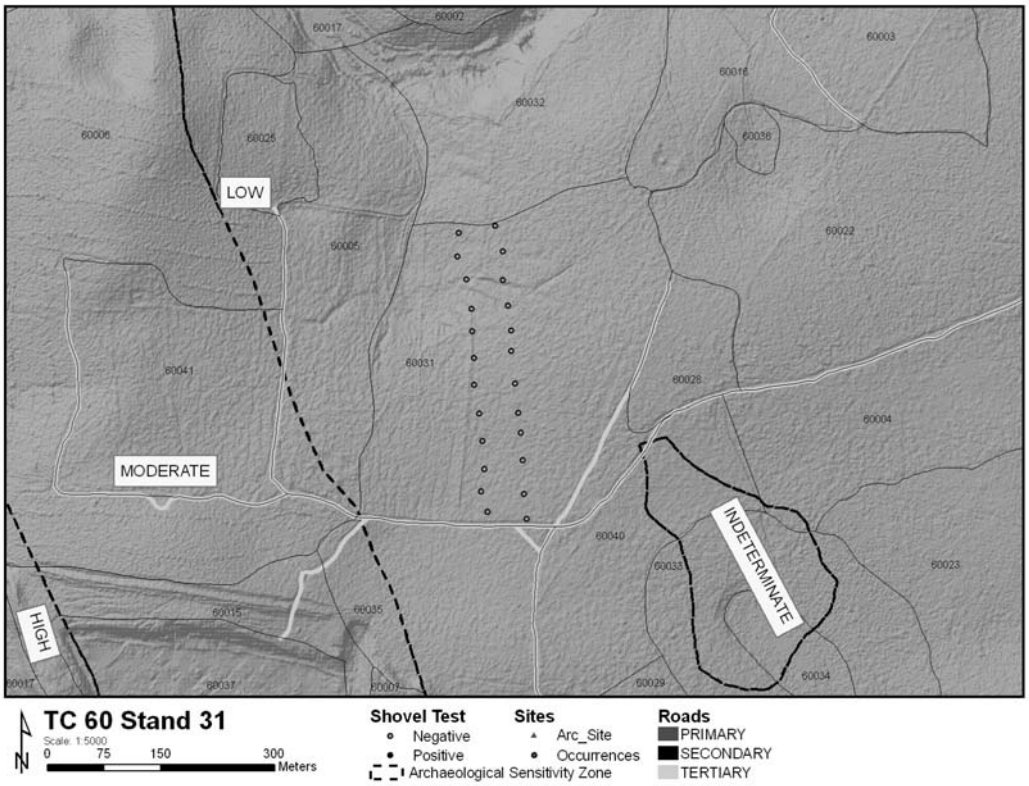


Figure 53. Timber Compartment 60, Stand 31 survey area.

showed no previously recorded sites in the project area. Fieldwork consisted of 60 STPs (3 positive) excavated along 2 separate transects (Figure 54 and Figure 55). These survey efforts resulted in the discovery and delineation of two new sites (38BR1257, 38BR1258). These will be avoided completely during current timbering activities. Thus, there will be no adverse effect to any historic properties as a result of the proposed USFS-SR management action for Compartment 62.

Timber Compartment 63

Archaeological survey in Compartment 63 involved subsurface inspection within Stands 10, 19, 28, 35, 36, and 63 totaling 209 acres slated for clearcutting. Review of the SRARP database showed no previously recorded sites in the project area. Fieldwork consisted of 95 STPs (17 positive) excavated along 6 separate transects (Figure 56 – Figure 60). These survey efforts resulted in the discovery and delineation of five new sites (38BR1248, 38BR1249, 38AK1250, 38AK1251, 38AK1252) and the recovery of one isolated artifact (BR-OCC-253). All five sites will be avoided completely during current timbering activities. The artifact occurrence holds no research potential to contribute to an understanding of the regional prehistory. Thus, there will be no adverse effect to any historic properties as a result of the proposed USFS-SR management action for Compartment 63.

Timber Compartment 64

Archaeological survey in Compartment 64 involved subsurface inspection of five proposed Log Decks totaling 1 acre each in extent in Stands 12 and 27. Review of the SRARP database showed no previously recorded sites in the project area. Fieldwork consisted of 45 STPs (0 positive) excavated on a 30-m grid at each Log Deck location (Figure 61). As these survey efforts resulted in only negative STPS, no further archaeological work was required. Thus, there will be no adverse effect to any historic properties as a result of the proposed USFS-SR management action for Compartment 64.

Timber Compartment 65

Archaeological survey in Compartment 65 involved subsurface inspection of nine proposed Log Decks totaling 1 acre each in extent in Stands 10, 31, and 81. Review of the SRARP database showed no previously recorded sites in the project area. Fieldwork consisted of 81 STPs (0 positive) excavated on a 30-m grid at each Log Deck location (Figure 62). As these survey efforts resulted in only negative STPS, no further archaeological work was required. Thus, there will be no adverse effect to any historic properties as a result of the proposed USFS-SR management action for Compartment 65.

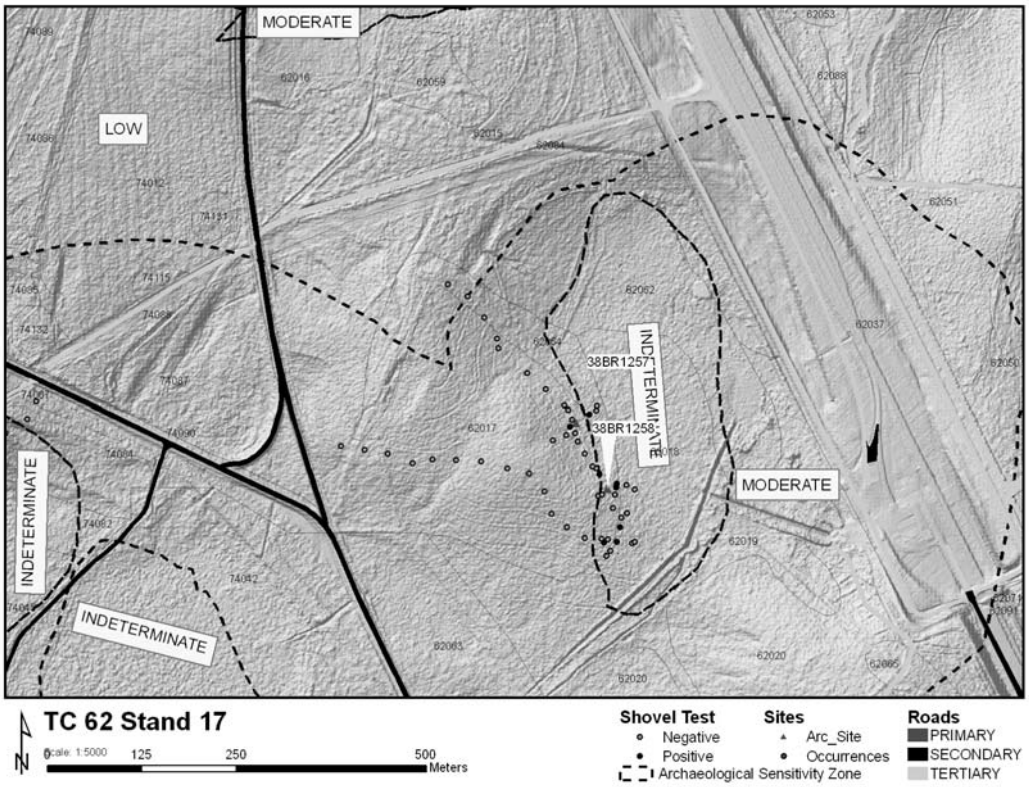


Figure 54. Timber Compartment 62, Stand 17 survey area.

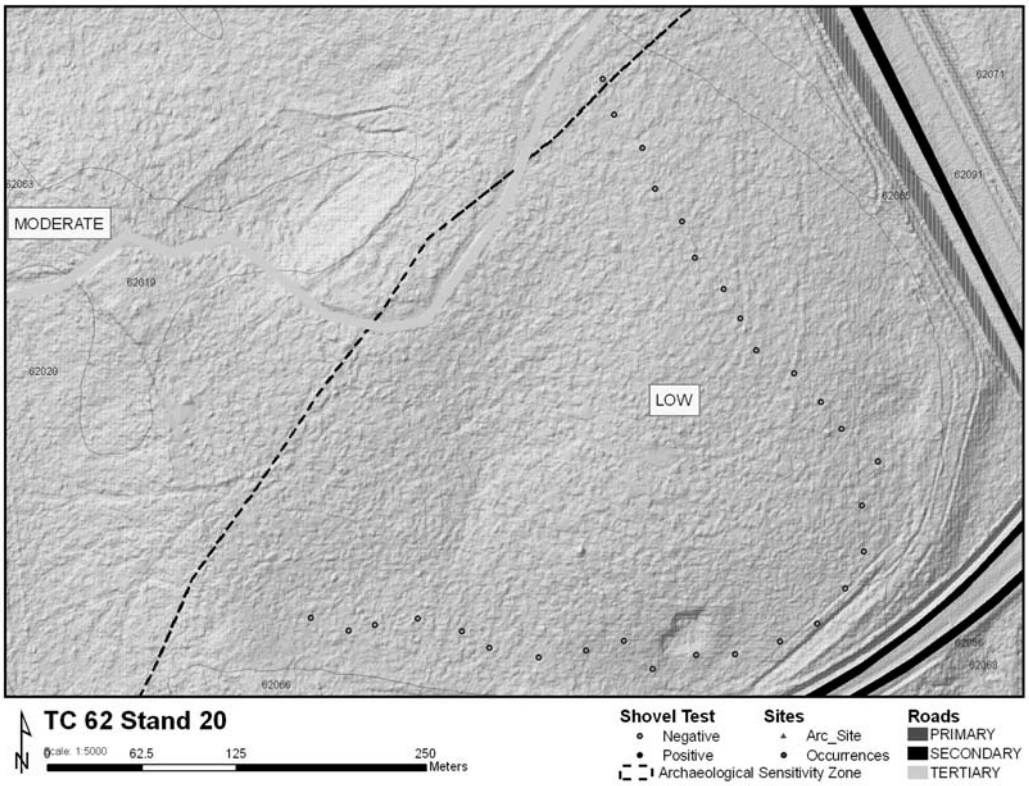


Figure 55. Timber Compartment 62, Stand 20 survey area.

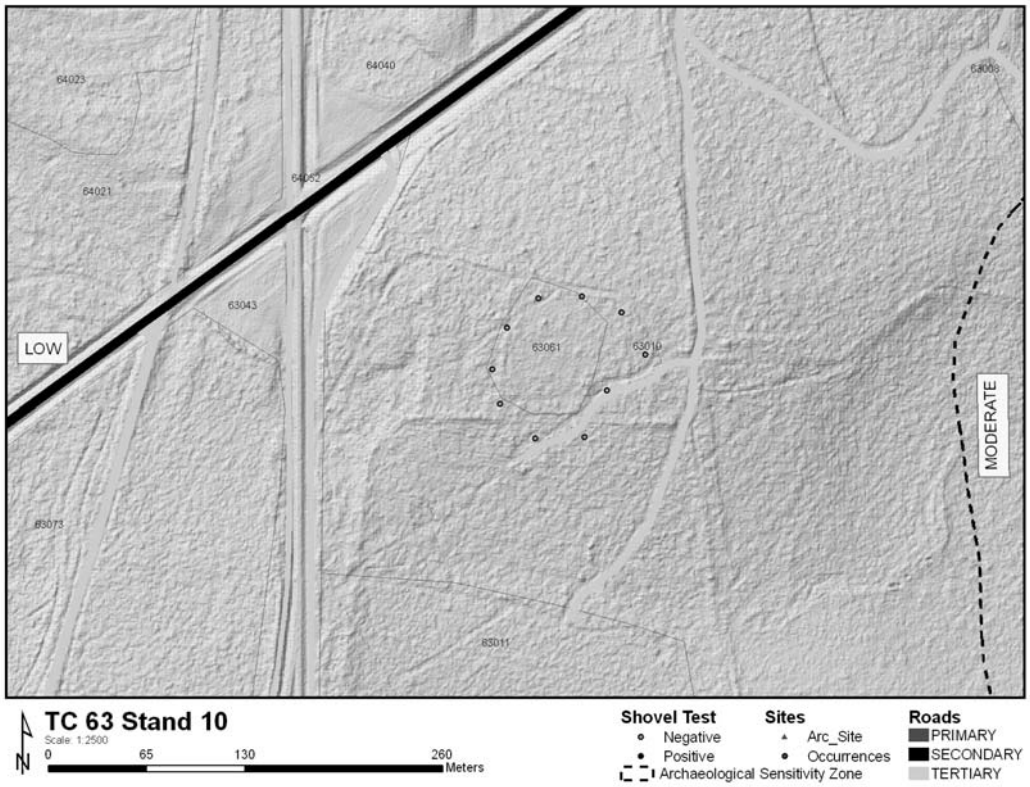


Figure 56. Timber Compartment 63, Stand 10 survey area.

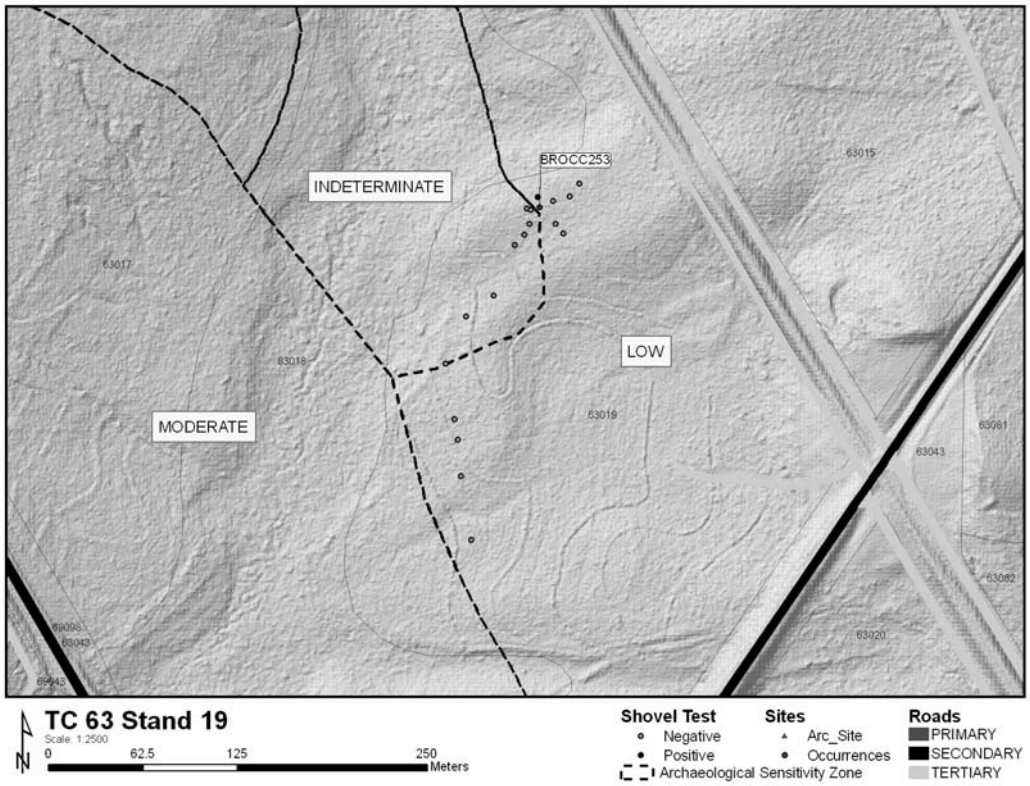


Figure 57. Timber Compartment 63, Stand 19 survey area.

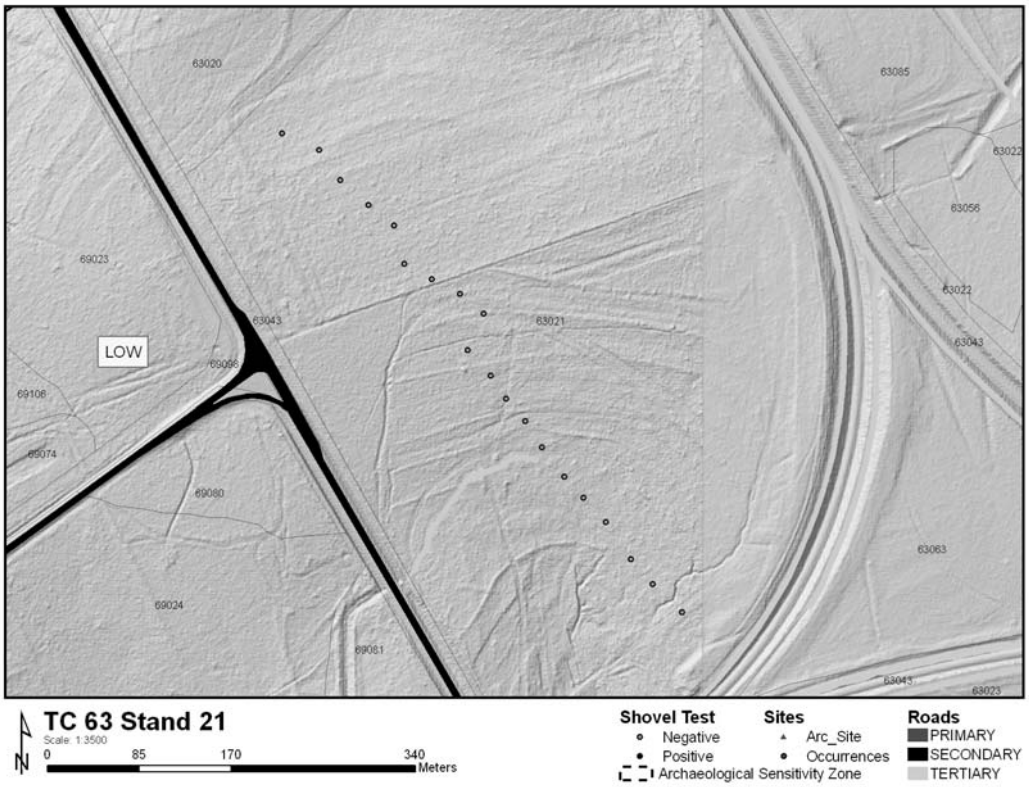


Figure 58. Timber Compartment 63, Stand 21 survey area.

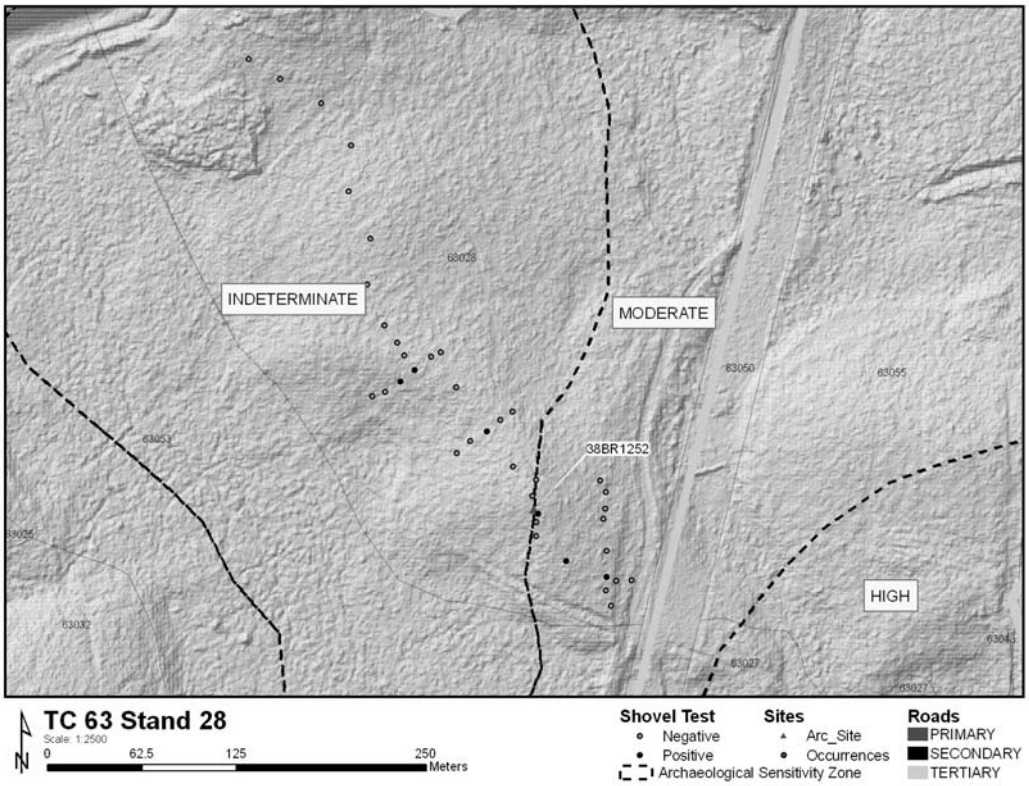


Figure 59. Timber Compartment 63, Stand 28 survey area.

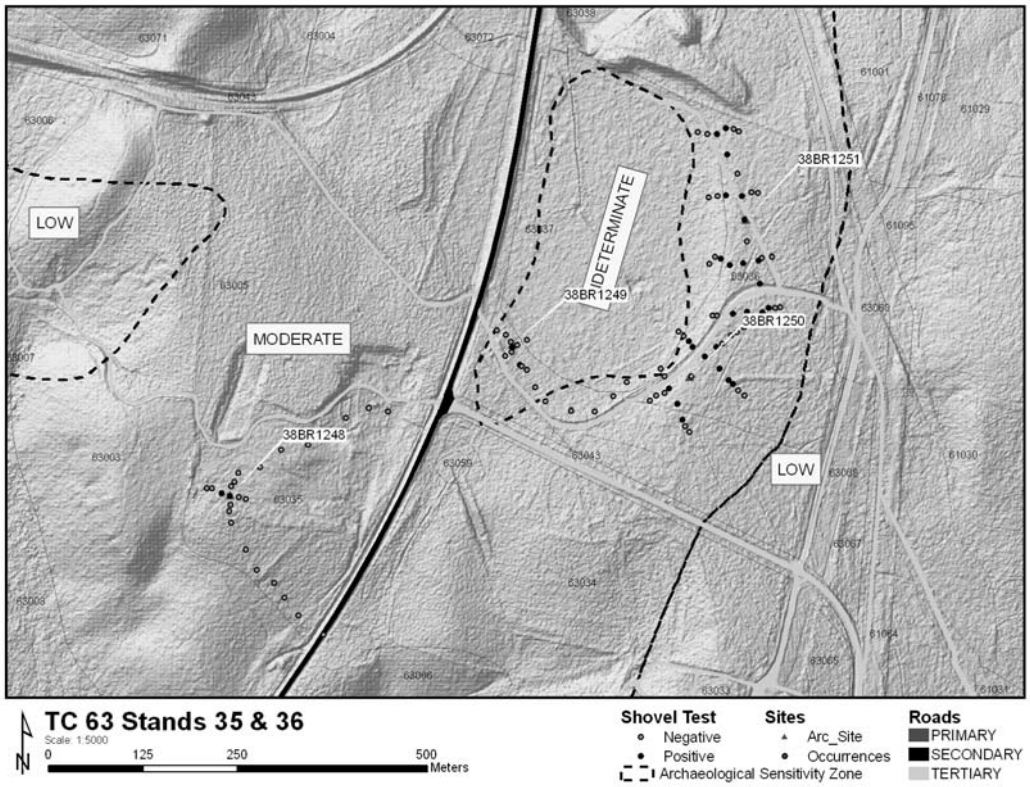


Figure 60. Timber Compartment 63, Stands 35 and 36 survey area.

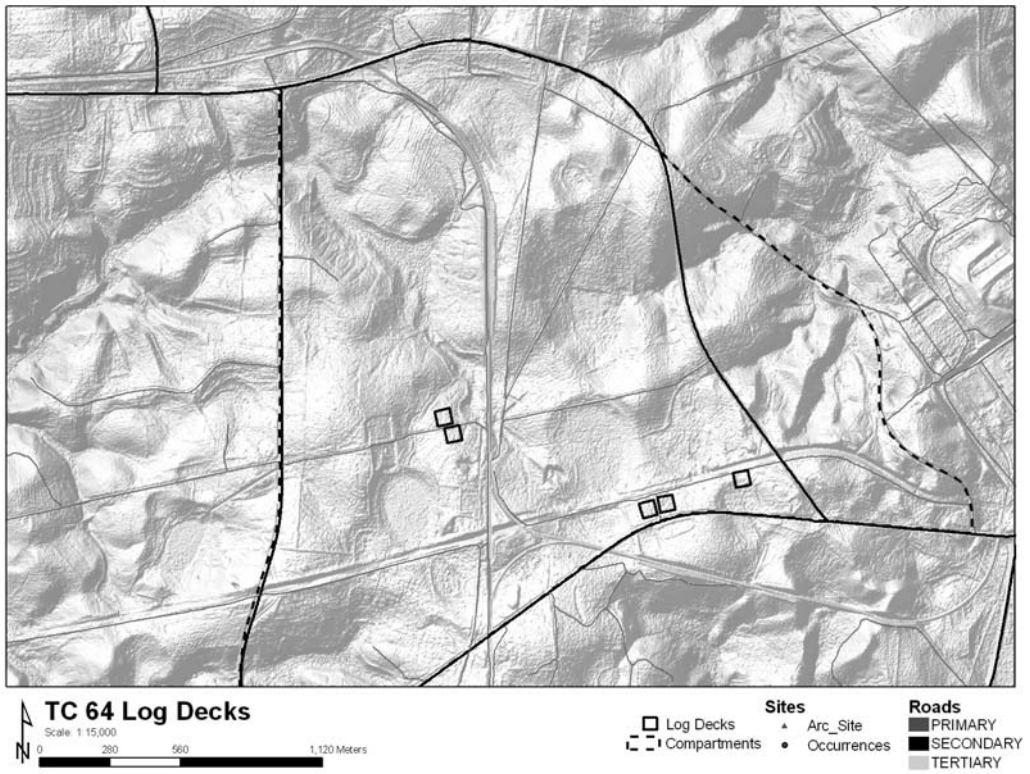


Figure 61. Timber Compartment 64, Stands 12 and 27 survey area.

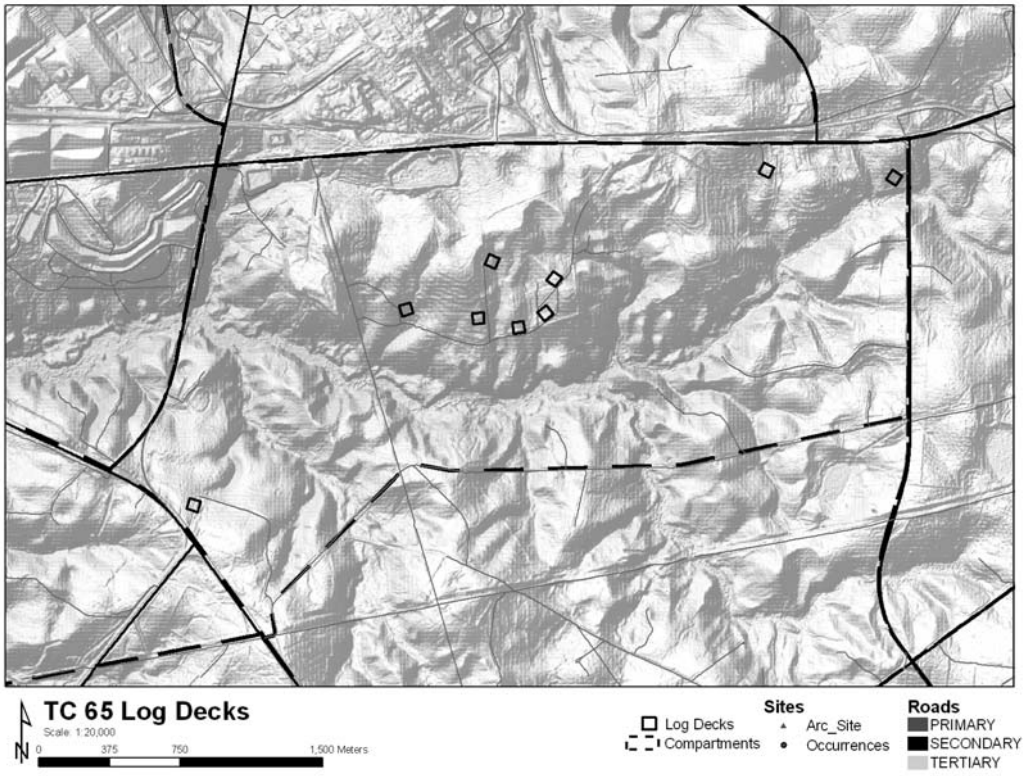


Figure 62. Timber Compartment 65, Stands 10, 31, and 81 survey area.

Timber Compartment 66

Archaeological survey in Compartment 66 involved subsurface inspection of two proposed Log Decks totaling 1 acre each in extent in Stand 28. Review of the SRARP database showed no previously recorded sites in the project area. Fieldwork consisted of 18 STPs (0 positive) excavated on a 30-m grid at each Log Deck location (Figure 63). As these survey efforts resulted in only negative STPS, no further archaeological work was required. Thus, there will be no adverse effect to any historic properties as a result of the proposed USFS-SR management action for Compartment 66.

Timber Compartment 67

Archaeological survey in Compartment 67 involved subsurface inspection of 12 proposed Log Decks totaling 1 acre each in extent in Stands 35, 39, 52, 74, 83, 98, 100, 102, and 108. In the original Log Deck prescription, 19 Log Deck locations were proposed, but 7 of these in Stand 35 (located in the central sector of Compartment 67) were determined by the SRARP to be in a potentially contaminated area, and so these were not subjected to survey. Review of the SRARP database showed no previously recorded sites in the project area. Fieldwork consisted of 107 STPs (0 positive) excavated on a 30-m grid at each of the 12 Log Deck locations (Figure 64). As these survey efforts resulted in only negative STPS, no further archaeological work was required. Thus, there will be no adverse effect to any historic properties as a result of the proposed USFS-SR management action for Compartment 67.

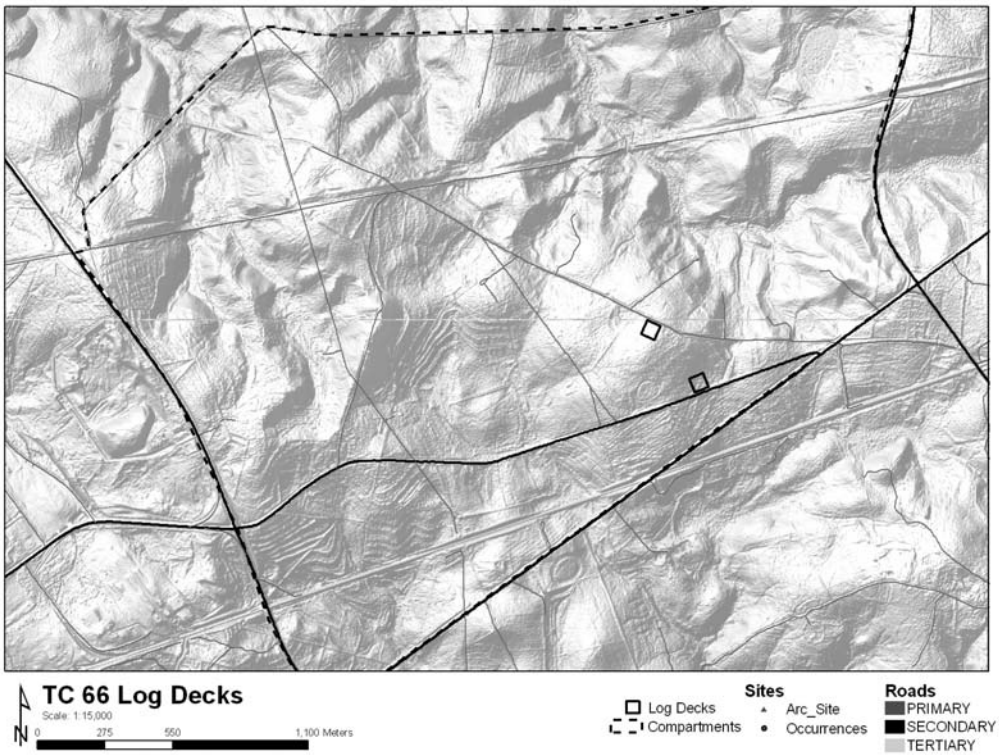


Figure 63. Timber Compartment 66, Stand 28 survey area.

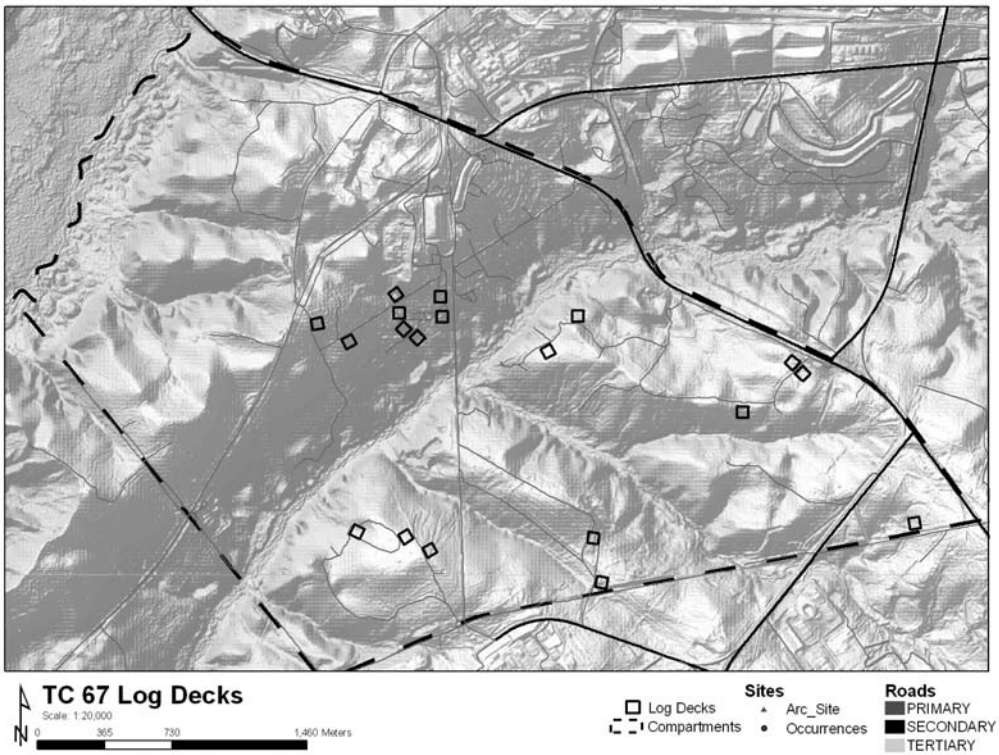


Figure 64. Timber Compartment 67, Stands 35, 39, 52, 74, 83, 98, 100, 102, and 108 survey area.

Timber Compartment 68

Archaeological survey in Compartment 68 involved subsurface inspection of 20 proposed Log Decks totaling 1 acre each in extent in Stands 2, 5, 7, 9, 10, 11, 13, 19, 20, 46, 56, 93, and 103. In the original Log Deck prescription, 24 Log Deck locations were proposed, but SRARP personnel determined during field reconnaissance that 4 of these were in areas of previous disturbance due to past SRS activities, and these were not subjected to survey. Review of the SRARP database showed no previously recorded sites in the project area. Fieldwork consisted of 180 STPs (0 positive) excavated on a 30-m grid at each of the 20 Log Deck locations (Figure 65). As these survey efforts resulted in only negative STPS, no further archaeological work was required. Thus, there will be no adverse effect to any historic properties as a result of the proposed USFS-SR management action for Compartment 68.

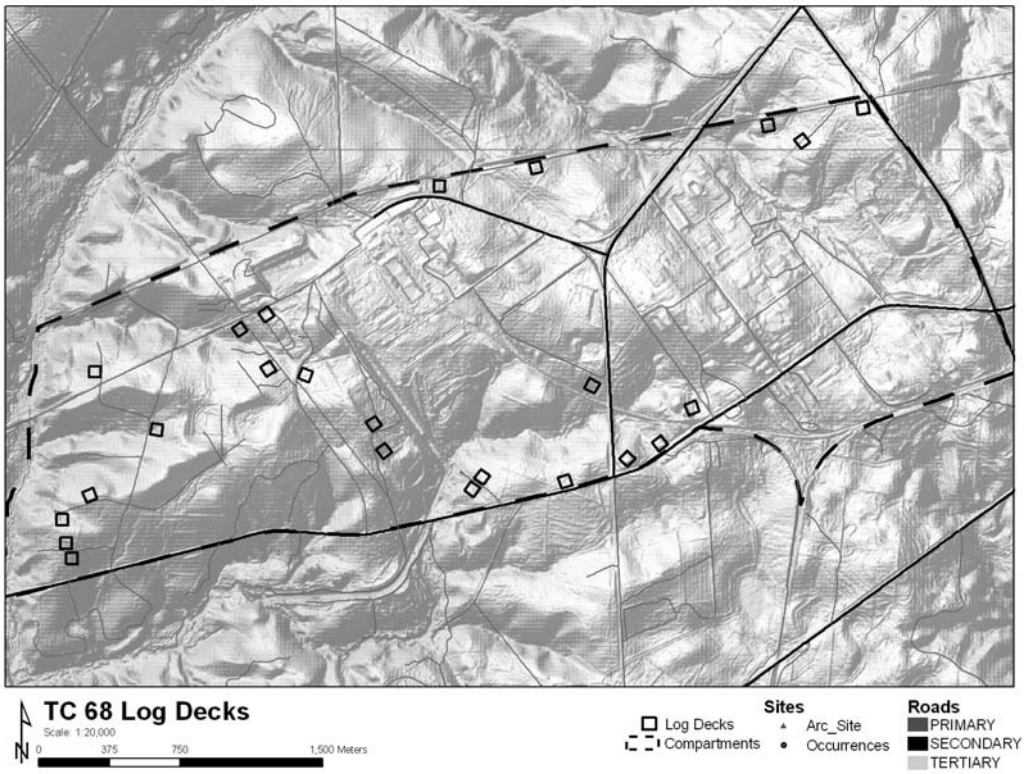


Figure 65. Timber Compartment 68, Stands 2, 5, 7, 9, 10, 11, 13, 19, 20, 46, 56, 93, and 103 survey area.

Timber Compartment 70

Archaeological survey in Compartment 70 involved subsurface inspection of 9 proposed Log Decks totaling 1 acre each in extent in Stands 4, 6, 8, 40, 83, 84, 91, and 94. In the original Log Deck prescription, 10 Log Deck locations were proposed, but SRARP personnel determined during field reconnaissance that one of these was in an area of previous disturbance due to past SRS activities, and was not subjected to survey.

Review of the SRARP database showed no previously recorded sites in the project area. Fieldwork consisted of 81 STPs (2 positive) excavated on a 30-m grid at each of the 9 Log Deck locations (Figure 66). These survey efforts resulted in the recovery of two isolated artifacts (BR-OCC-275, BR-OCC-276). These artifact occurrences hold no research potential to contribute to an understanding of the history of the region. Thus, there will be no adverse effect to any historic properties as a result of the proposed USFS-SR management action for Compartment 70.

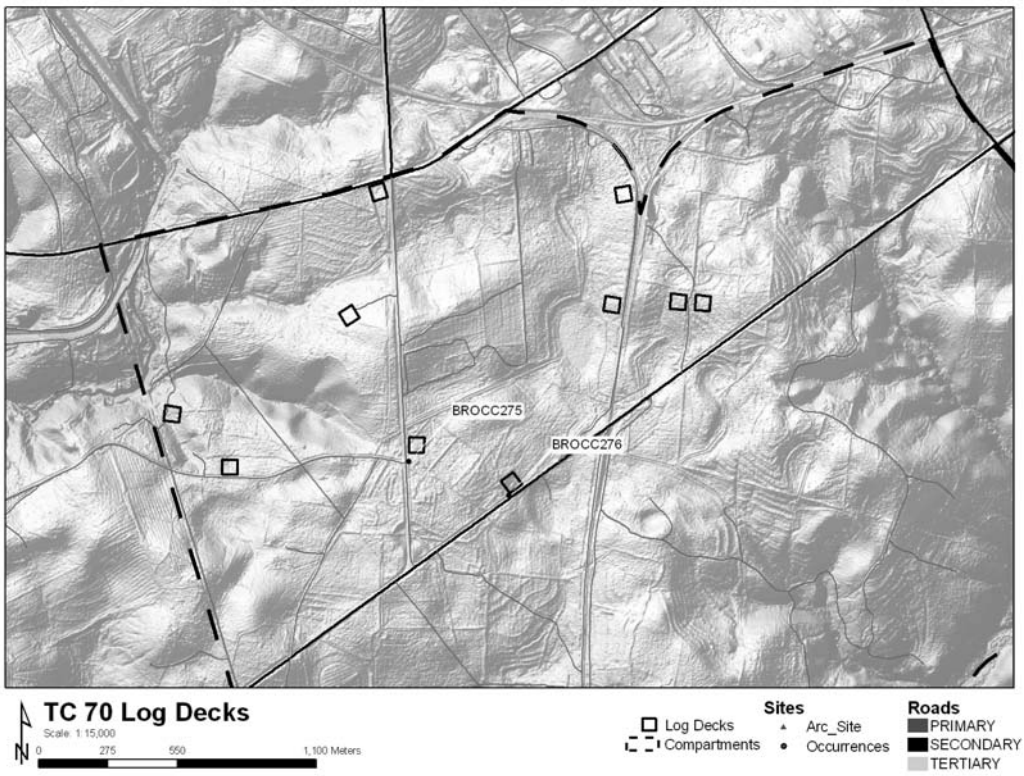


Figure 66. Timber Compartment 70, Stands 4, 6, 8, 40, 83, 84, 91, and 94 survey area.

Timber Compartment 72

Archaeological survey in Compartment 72 involved subsurface inspection of 17 proposed Log Decks totaling 1 acre each in extent in Stands 16, 19, 33, 39, 67, 77, 94, 96, 112, and 113. Review of the SRARP database showed no previously recorded sites in the project area. Fieldwork consisted of 153 STPs (2 positive) excavated on a 30-m grid at each of the Log Deck locations (Figure 67). These survey efforts resulted in the discovery and delineation of one new site (38BR1271) and the recovery of one isolated artifacts (BR-OCC-261). Site 38BR1271 will be avoided completely during current timbering activities. The artifact occurrence holds no research potential to contribute to an understanding of the history of the region. Thus, there will be no adverse effect to any historic properties as a result of the proposed USFS-SR management action for Compartment 72.

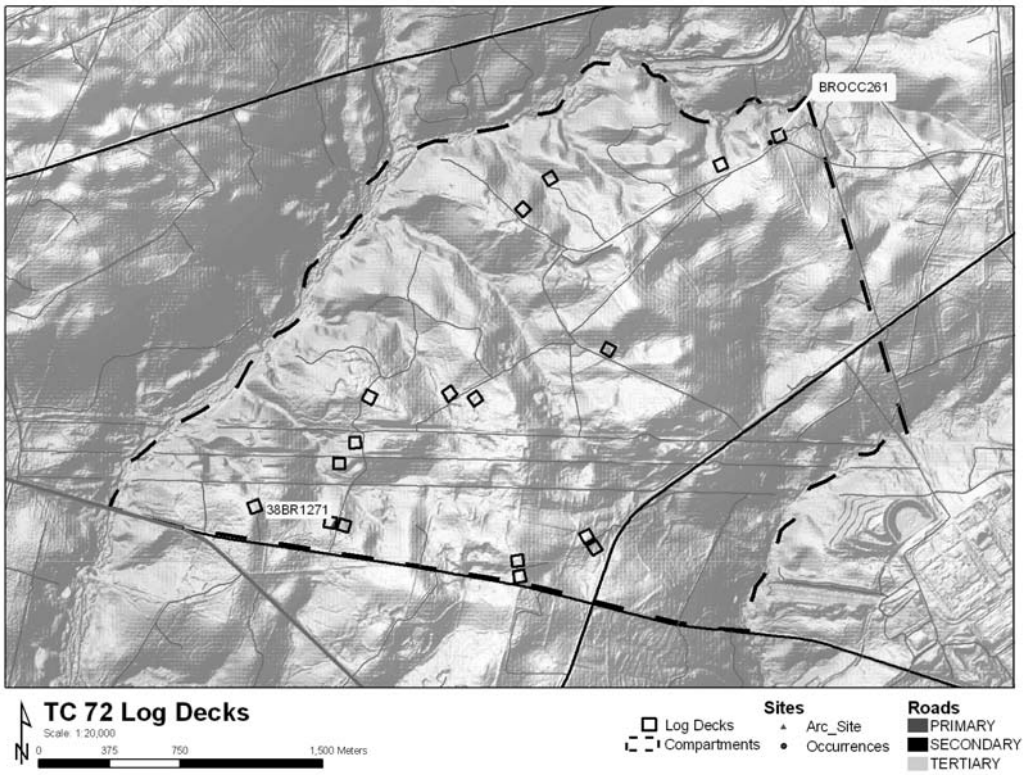


Figure 67. Timber Compartment 72, Stands 16, 19, 33, 39, 67, 77, 94, 96, 112, and 113 survey area.

Timber Compartment 73

Archaeological survey in Compartment 73 involved subsurface inspection of 6 proposed Log Decks totaling 1 acre each in extent in Stands 5, 7, 9, and 11 as well as subsurface inspection within Stand 11 totaling 164 acres slated for clearcutting. In the original Log Deck prescription, 10 Log Deck locations were proposed, but SRARP personnel determined during field reconnaissance that one of these was in an area of previous disturbance due to past SRS activities, and was not subjected to survey. Review of the SRARP database showed no previously recorded site in the project area. Fieldwork consisted of 72 STPs (3 positive) excavated on a 30-m grid at each of the 6 Log Deck locations and along 1 single transects in the proposed Stand for clearcutting (Figure 68 and Figure 69). These survey efforts resulted in the discovery and delineation of one new site (38BR1231) as well as the relocation and re-delineation of site 38BR1231 to ensure its location relative to the proposed Log Deck project area. The USFS-SR relocated the Log Deck so that site 38BR1231 will be avoided completely during current timbering activities. Thus, there will be no adverse effect to any historic properties as a result of the proposed USFS-SR management action for Compartment 73.

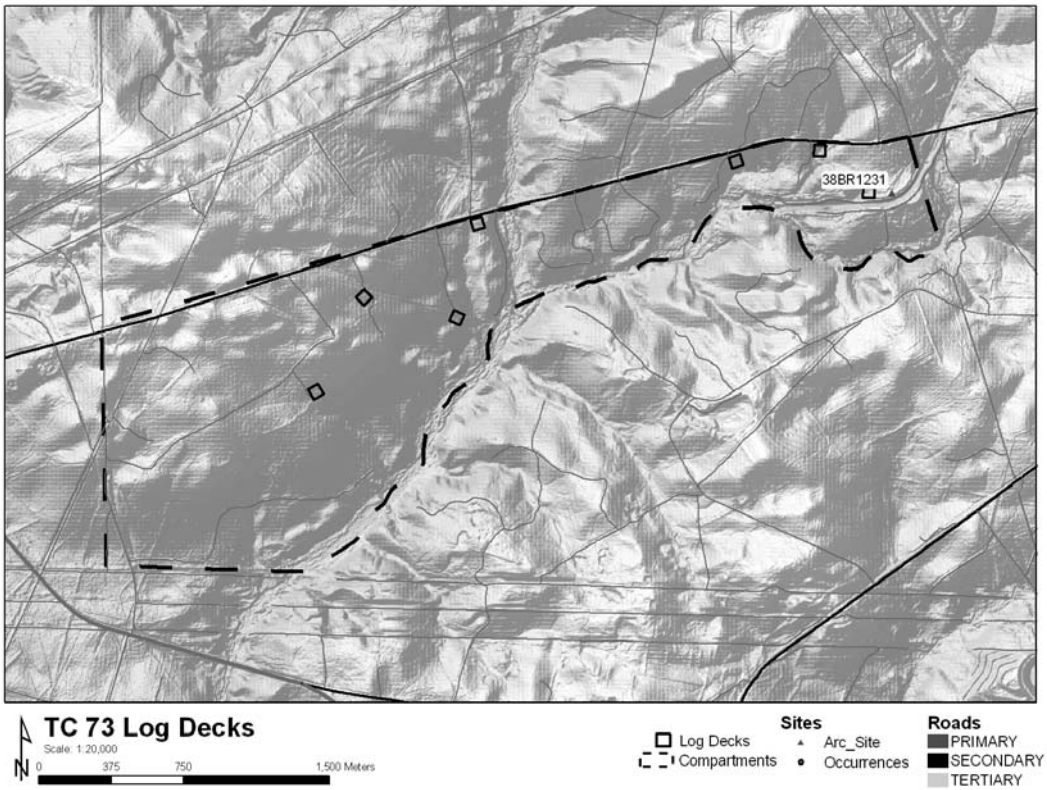


Figure 68. Timber Compartment 73, Stands 5, 7, 9, and 11 survey area.

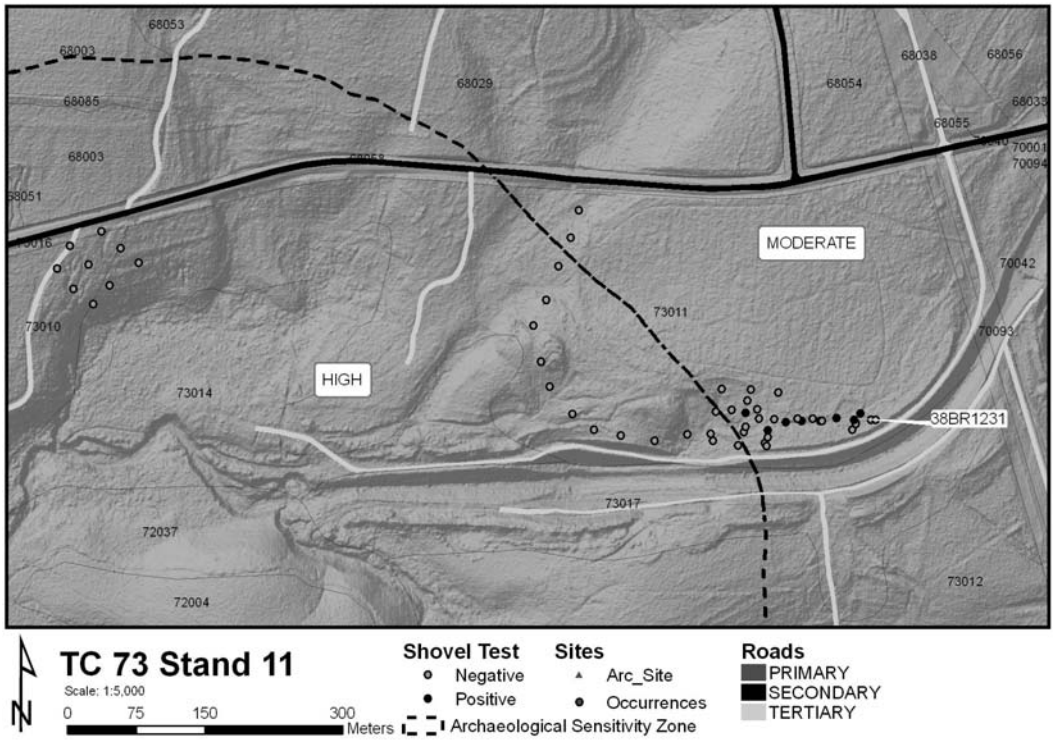


Figure 69. Timber Compartment 73, Stand 11 survey area.

Timber Compartment 74

Archaeological survey in Compartment 74 involved subsurface inspection within Stands 1, 56, 72, 84, 108, and 112 totaling 361 acres slated for clearcutting. Review of the SRARP database showed two previously recorded sites (38BR704, 38BR705) in the project area. Previously recorded site 38BR704 could not be relocated during survey of Stand 108. Fieldwork consisted of 94 STPs (3 positive) excavated along 7 single transects (Figure 70 – Figure 73). These survey efforts resulted in the relocation and delineation of previously recorded site 38BR705 and the recovery of one isolated artifact (BR-OCC-259). Site 38BR705 will be avoided completely during current timbering activities. The artifact occurrence holds no research potential to contribute to an understanding of the history of the region. Thus, there will be no adverse effect to any historic properties as a result of the proposed USFS-SR management action for Compartment 74.

Timber Compartment 75

Archaeological survey in Compartment 75 involved subsurface inspection of 5 proposed Log Decks totaling 1 acre each in extent in Stands 31, 35, 36, 37, 38, 61, and 96. In the original Log Deck prescription, 7 Log Deck locations were proposed, but SRARP personnel determined during field reconnaissance that two of these were in areas of previous disturbance due to past SRS activities, and these were not subjected to survey. Review of the SRARP database showed one previously recorded site (38BR998) in the project area. Fieldwork consisted of 73 STPs (1 positive) excavated on a 30-m grid at each of the 5 Log Deck locations (Figure 74). These survey efforts resulted in the relocation and delineation of previously recorded site 38BR998, which will be avoided completely during current timbering activities. Thus, there will be no adverse effect to any historic properties as a result of the proposed USFS-SR management action for Compartment 75.

Timber Compartment 86

Archaeological survey in Compartment 74 involved subsurface inspection within Stands 9, 15, 18, 19, and 20 totaling 62 acres slated for clearcutting. Review of the SRARP database showed one previously recorded sites (38BR170) in the project area. Fieldwork consisted of 62 STPs (10 positive) excavated along 3 single transects (Figure 75 – Figure 76). These survey efforts resulted in the relocation and delineation of previously recorded site 38BR170 as well as the discovery and delineation of three new sites (38BR1238, 38BR1239, 38BR1240) and the recovery of two isolated artifacts (BR-OCC-247, 38BR248). All of the new and previously recorded sites will be avoided completely during current timbering activities. The two artifact occurrences hold no research potential to contribute to an understanding of the history of the region. Thus, there will be no adverse effect to any historic properties as a result of the proposed USFS-SR management action for Compartment 86.

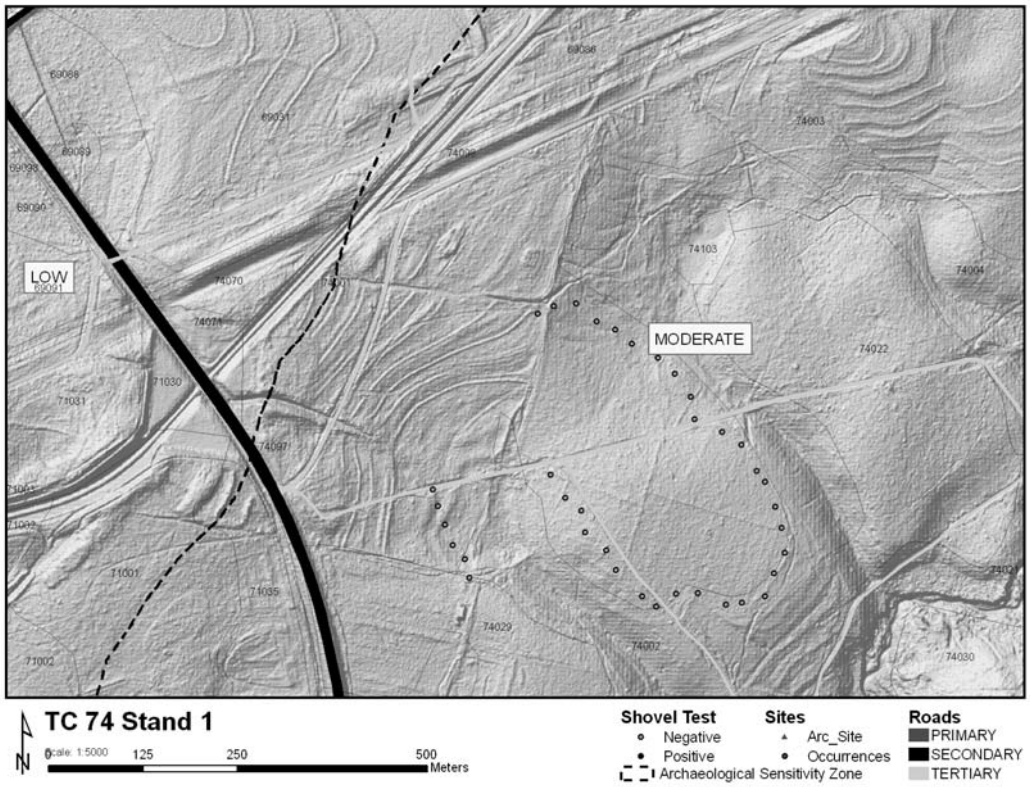


Figure 70. Timber Compartment 74, Stand 1 survey area.

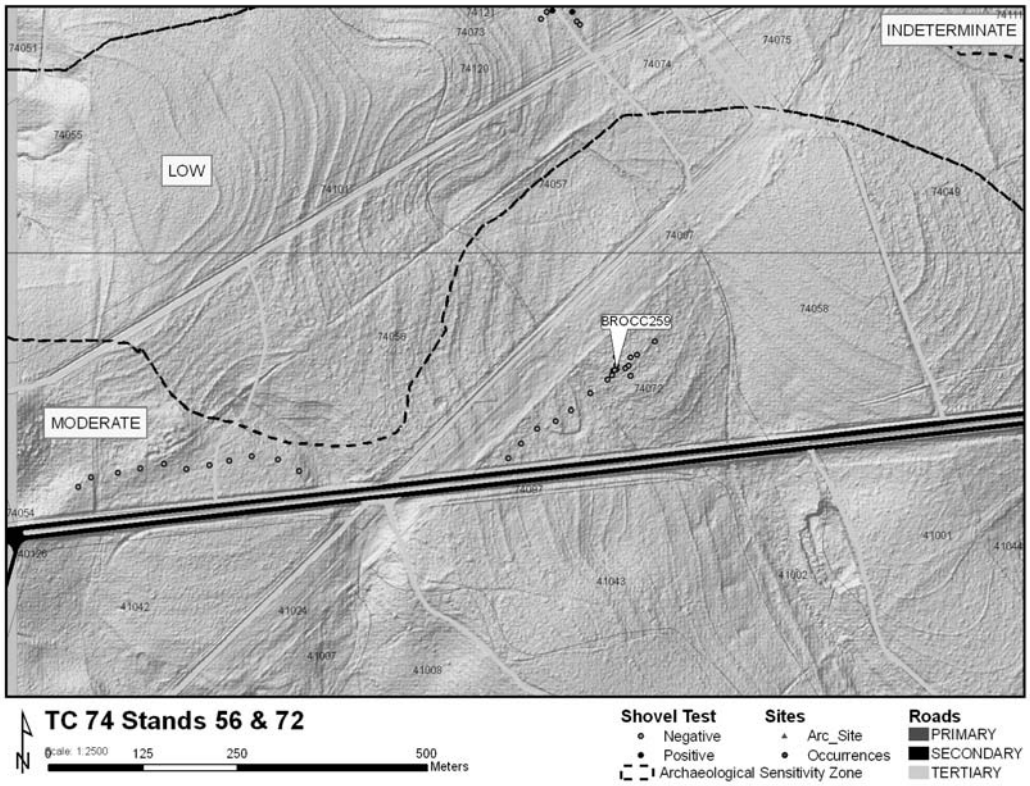


Figure 71. Timber Compartment 74, Stands 56 and 72 survey area.

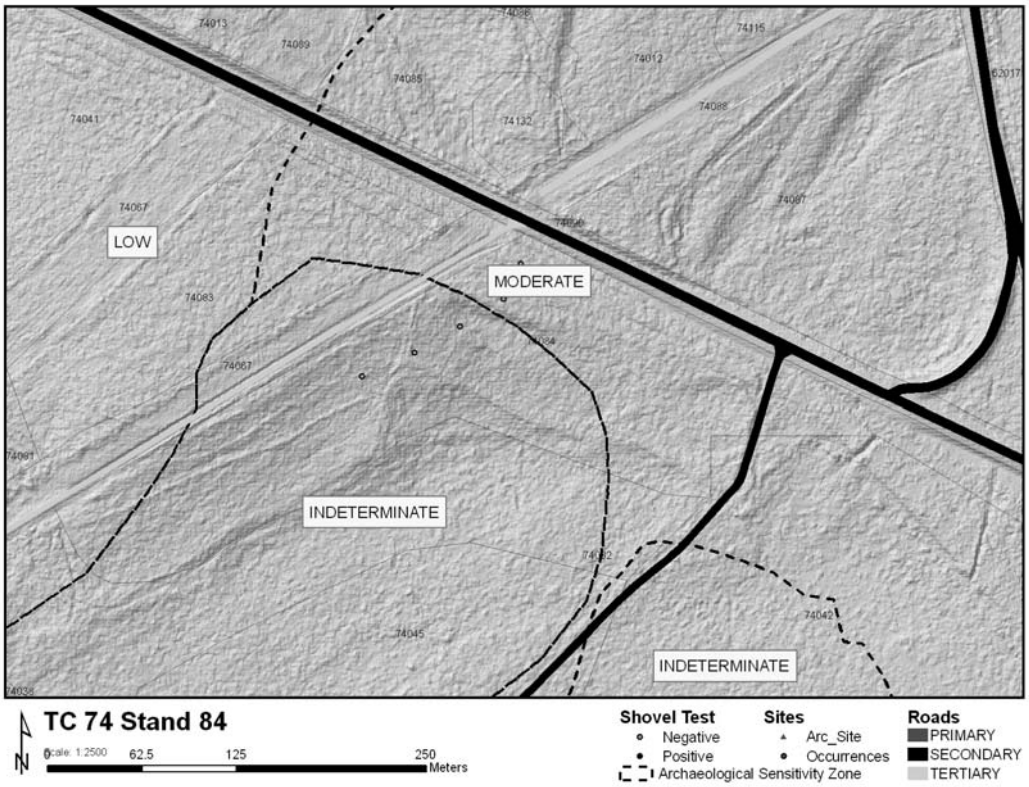


Figure 72. Timber Compartment 74, Stand 84 survey area.

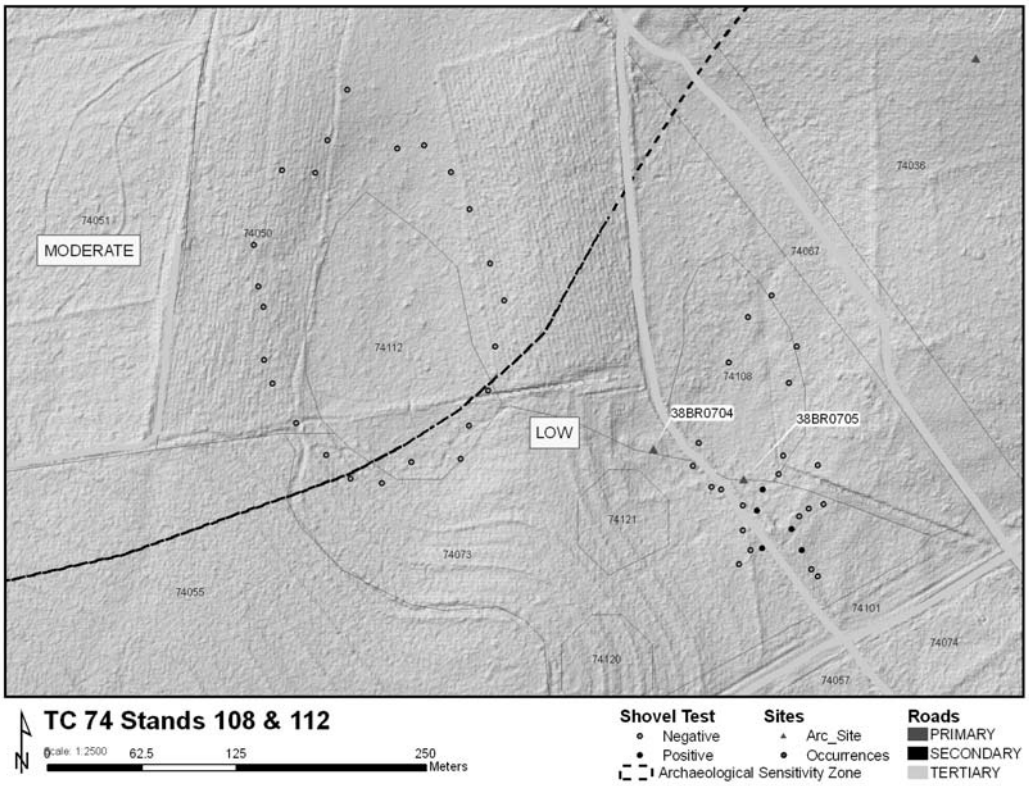


Figure 73. Timber Compartment 74, Stands 108 and 112 survey area.

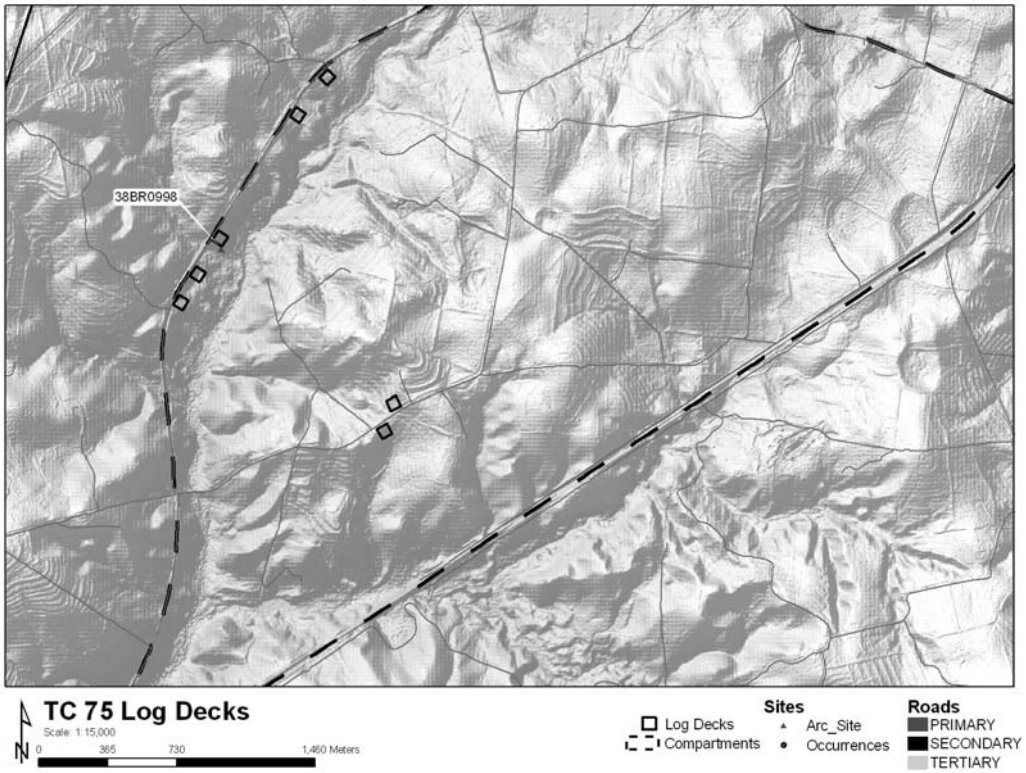


Figure 74. Timber Compartment 75, Stands 31, 35, 36, 37, 38, 61, and 96 survey area.

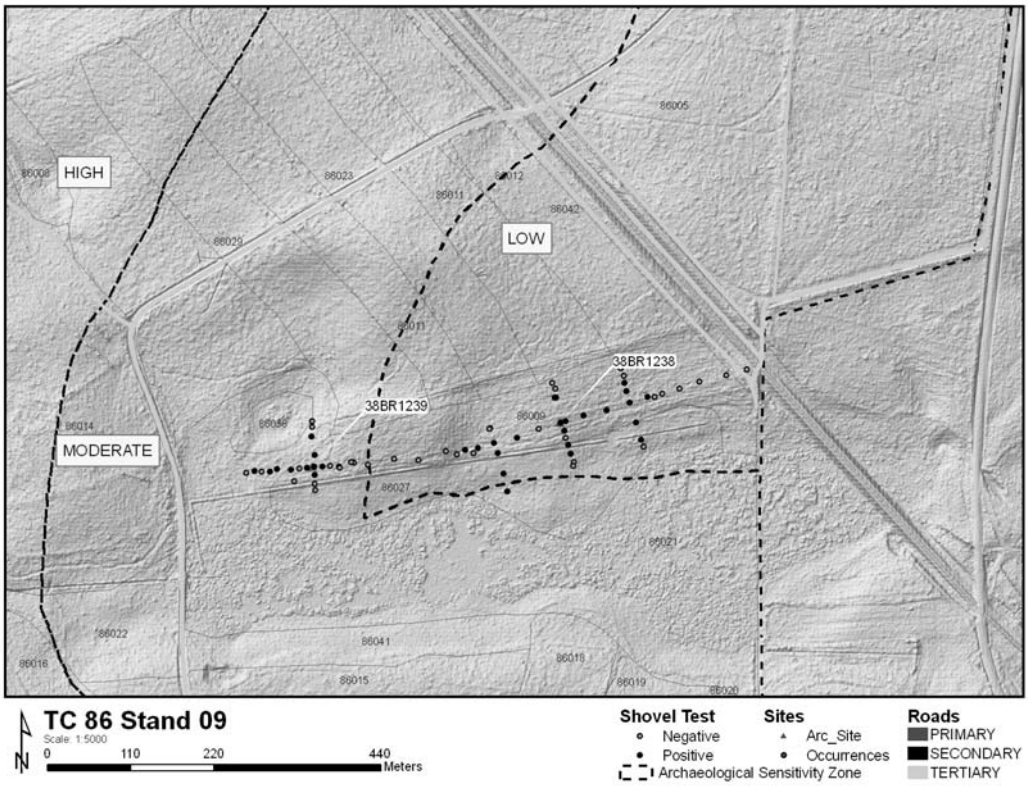


Figure 75. Timber Compartment 86, Stand 9 survey area.

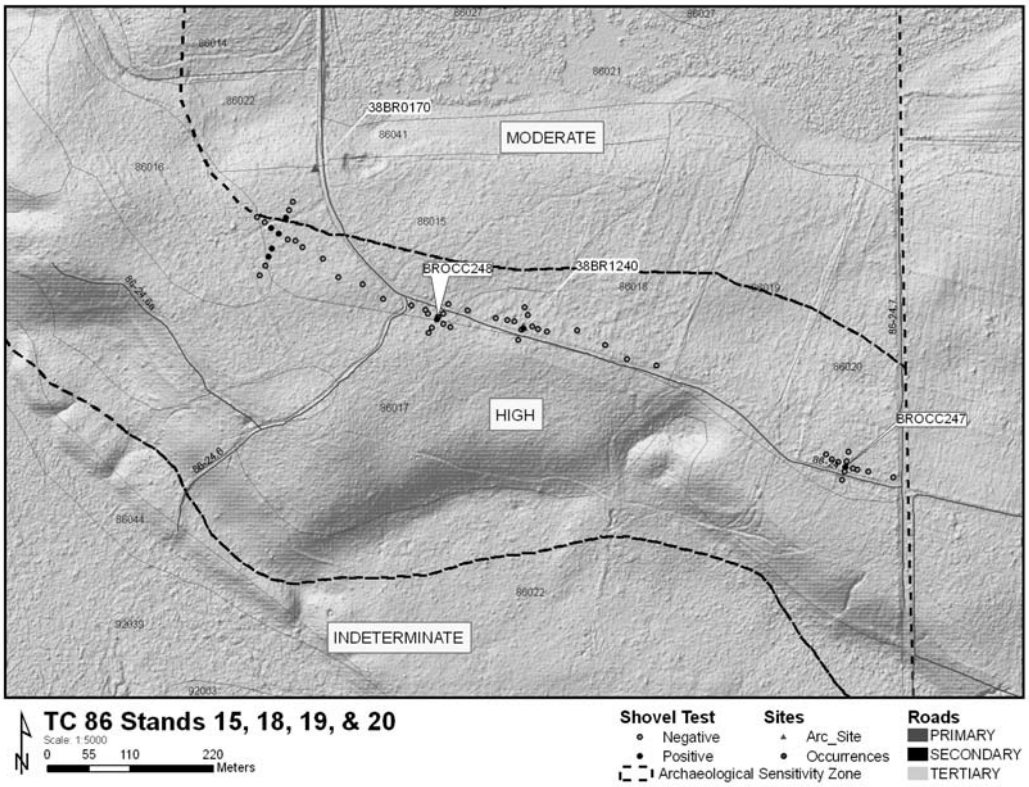


Figure 76. Timber Compartment 86, Stands 15, 18, 19, and 20 survey area.

Survey Results

Table 7 summarizes the results of FY09 compliance survey. Altogether, the SRARP investigated 56 archaeological sites this fiscal year. Thirty-eight of these are newly recorded, and 18 are revisits to previously recorded sites. Additionally, two previously recorded sites (38AK560, 38BR376, 38BR704) could not be relocated during FY09 surveys. Of the total sites investigated during FY08, 26 are considered not eligible for inclusion in the NRHP. The remaining 30 sites have been assigned an indeterminate status, and each will be avoided by DOE contractors. In the event that any of these sites are threatened, further testing will be conducted to make a determination of eligibility. Thirty-three isolated artifact occurrences were also recorded during FY09. Isolated finds are considered to hold low research potential. As such, there will be no adverse effects to these ephemeral resources through DOE related activities. Summary data for new and existing sites are provided in Tables 1 and 2. Evaluations of these sites are provided in Table 3. Finally, a tabulation of isolated artifact occurrences by project type is provided in Table 4.

The SRARP surveyed a total of 2,025 acres in FY09 for 42 Site Use Permits and 25 Timber Compartment Prescriptions. One hundred forty-four acres (7.0 percent) of the total area surveyed involved Site Use Permit projects. An additional 1,881 acres (93.0 percent) of the total area surveyed for all projects in FY09 involved Timber Compartment

Stands slated for harvesting or Log Deck use. Altogether, 3,670 STPs were excavated during FY09 surveys with 508 of these producing artifacts.

Section 110 of the Regulatory process requires an inventory of all cultural resources on public lands. As of this report, the SRARP has surveyed approximately 63,428 acres (32.8%) out of a total of 193,276 (97.4%) of SRS acreage suitable for survey (i.e., excluding SRS wetlands and developed areas, which altogether comprise 198,344 acres or 310 sq. mi.). These efforts have resulted in the inventory of 1,878 sites (922 prehistoric, 484 historic, and 472 with both prehistoric/historic components) recorded to date.

Table 7. Summary of FY09 Survey Results.

Site Use Application Surveys	40
Timber Compartment Prescription Surveys	25
Total STPs Excavated	3,670
Total Positive STPs Excavated	476
Total Area Surveyed (acres)	2,024
New Sites	38
Site Revisits	18
Isolated Artifact Occurrences	33

CURATION COMPLIANCE ACTIVITIES

Tammy F. Herron

As a result of the analysis of artifacts recovered through daily compliance activities and the analysis of artifacts recovered during excavations conducted at 38AK469 and 38AL11, 7,002 artifacts have been curated over the course of the past fiscal year. Compliance related excavations conducted throughout the year account for 2,006 of these artifacts. Analysis of artifacts from 38AK469, also known as Flamingo Bay, totaled 2,690 artifacts. Through the efforts of Volunteer Jill Trefz, the primary analysis of artifacts recovered from 38AL11, the Lawton site, totaled 2,306 this fiscal year. Counts for daub and botanical remains were not included in the primary analysis of artifacts from 38AL11. Mrs. Trefz spent many hours analyzing fired clay from 38AL11 which resulted in a total weight of 178 kilograms of daub.

Staff members continued data entry for the Master Baseline Database (MBD), which houses the artifact summary sheets recorded for each provenience and level assigned; however, there is still a small backlog of data to be entered. Due to this fact and some glitches in the curation section of the Master Baseline Database, an accurate count of the number of artifacts housed in the Central Curation Facility cannot be given but is rather estimated to be approximately 1.5 million. The SRARP contracted with Environmental Systems Research Institute, Inc. (ESRI) to create a database integrating the compliance, curation, and GIS/GPS data into one efficient package to better aid the SRARP in future management issues; however, we are still struggling with ESRI to obtain a working product devoid of computer glitches.

Dedicated curation space, or the lack thereof, has become a major issue at the SRARP. Currently, the Central Curation Facility houses 660 boxes of artifacts in a climate controlled area. Of note, is the fact that 711 boxes of artifacts are currently being stored outside of the Central Curation Facility due to a lack of storage space. Boxes of artifacts are stored wherever possible in the offices of staff members, under tables and desks, in corners, and stacked as high as feasibly possible in some areas. We even used a little ingenuity by making a table out of stacked boxes. These practices, however, are in violation of 36CFR79—leaving the artifacts more susceptible to theft and damage from a lack of environmental control, as well as creating a safety hazard in some instances due to the height of the stacked boxes and the location of the stacks. The need for an increase in dedicated curation space continues to be a primary concern of the program.

THE SRARP ARCHAEOLOGICAL GEOGRAPHIC INFORMATION SYSTEM

J. Christopher Gillam

The SRARP archaeological Geographic Information System (GIS) in FY09 involved ongoing use of the SRARP GeoDatabase with ArcGIS 9.2. The archaeological point coverage was updated and errors from previous records were corrected. The site-wide survey coverage and associated database were added to the list of GIS resources with assistance from SRARP staff. The SRARP staff continues updating the curation and site files databases as new data are collected from the field and began research on new database products for future use by the SRARP.

MANAGEMENT OF COLD WAR-ERA CULTURAL RESOURCES

Robert Moon

The SRARP continued its involvement with the SRS Cold War Artifact Selection Team. Members occasionally meet to discuss ongoing activities that relate to the legacy of SRS from the Cold War. We have also worked closely with the SRS Heritage Foundation on the development of an historic walking trail through the old town of Ellenton. The Heritage Foundation has spearheaded the drive to make the former town of Ellenton available for public tours. While the SRARP occasionally conducts tours of Ellenton, the Heritage Foundation seeks to establish either a guided or self-guided tour of the site, as well as regular hours that the area would be available for public access. Additionally, the Heritage Foundation is seeking grant funding for site preparation, trail markers, and signage along the tour route.

LOWER THREE RUNS SURVEY OF SITE LOOTING

Christopher Thornock

In 2009, personnel from the Savannah River Ecology Lab (SREL) conducted a study examining public trespassing and use of Lower Three Runs creek. In addition to hunting and fishing, public use of Lower Three Runs also involved the looting of

prehistoric archaeological sites on SRS property. An SREL contact reported four locations of archaeological site disturbance to the SRARP (Figure 77); three sites that had experienced recent looting and one site on which the property adjoining SRS had recently been clear-cut, exposing a large amount of prehistoric material. Each of these sites was inspected by SRARP personnel as reported below.

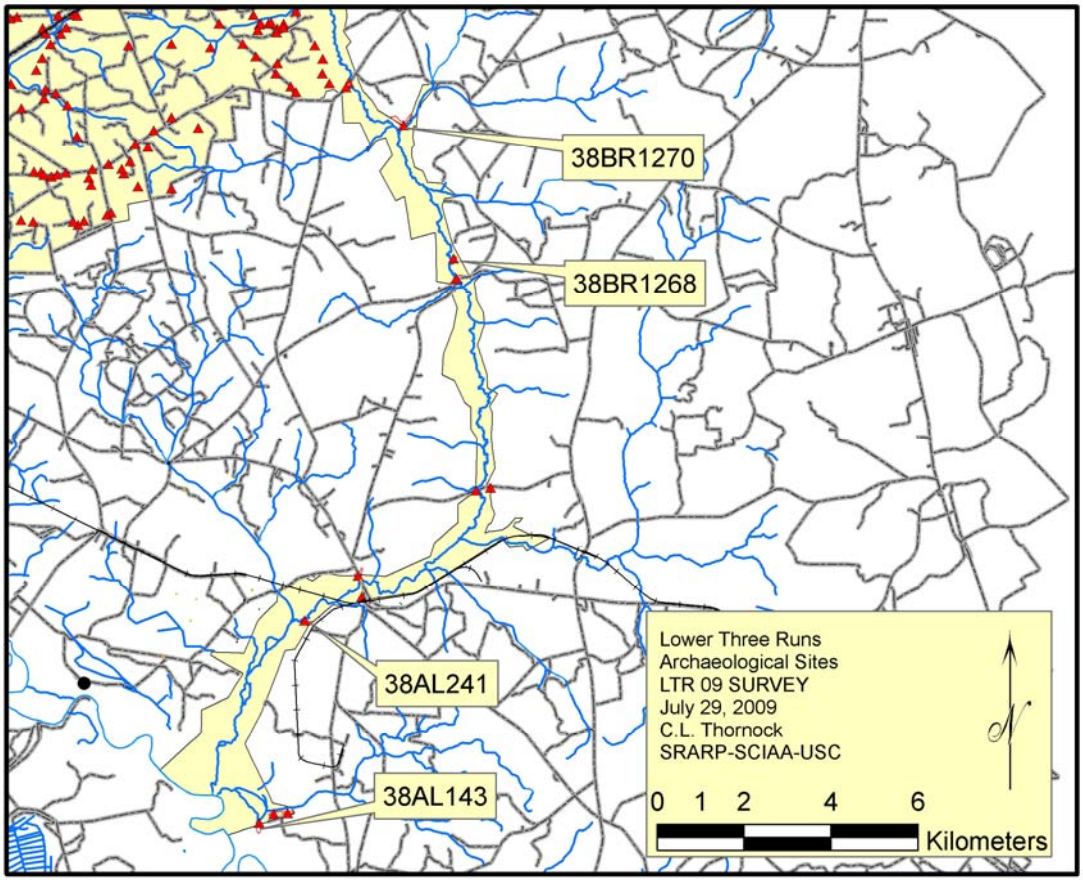


Figure 77. Location of identified looted sites along Lower Three Runs.

Site 38AL241

In April of 2005, the Clariant Site Manager contacted SRARP about trespassing and looting of an archaeological site on SRS property. The site manager then showed SRARP archaeologists and SRS security personnel the location along the Lower Three Runs where the looting was taking place. SRARP personnel recorded a GPS point for the site, and designated the site 38AL241 (SRARP 2005).

In 2009, when SREL personnel reported looting at the same location, the SRARP responded by surveying site 38AL241 and reassessing the damage to the archaeological deposits (Figure 78). Site 38AL241 sits on a raised peninsula in the Lower Three Runs floodplain that provides a dry-land access to the creek. Thirty STPs were excavated

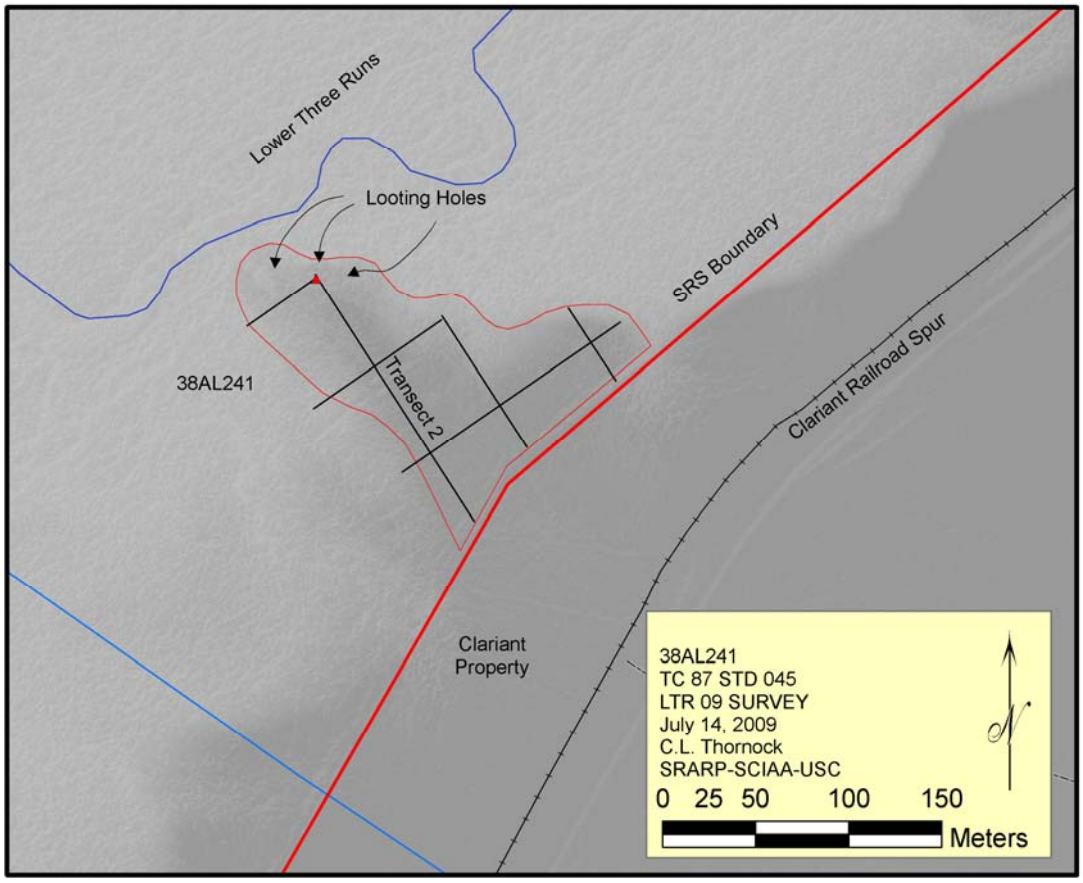


Figure 78. Location of Site 38AL241.

across the site on a grid revealing that the entire peninsula exhibited evidence of prehistoric occupation. The dense cultural deposits, over a meter deep, were concentrated most heavily on the northern tip of the peninsula, adjacent to Lower Three Runs, and suggest an Archaic through Late Woodland occupation. Not coincidentally, the highest concentration of looting holes also occurred on the northern tip. In addition to mapping the shovel-tests, site boundaries, and topographic features, the locations of the looter holes were also mapped and can be found in the site folder.

Despite the looting activity, the majority of the site appears to be intact. It also appears that no further looting activities have occurred since the events reported in the 2005 Annual Report. As part of this project, a yellow sign indicating the presence of a federally protected archaeological site was posted at the site, along the road, next to the most heavily disturbed area in hopes of deterring any future looting activity.

Site 38BR1268

Site 38BR1268 sits on a peninsula that extends into the floodplain and provides a dry-land access to the Lower Three Runs (Figure 79). Thirteen shovel tests pits were placed across the landform in cruciform. The cultural deposits, up to a meter deep,

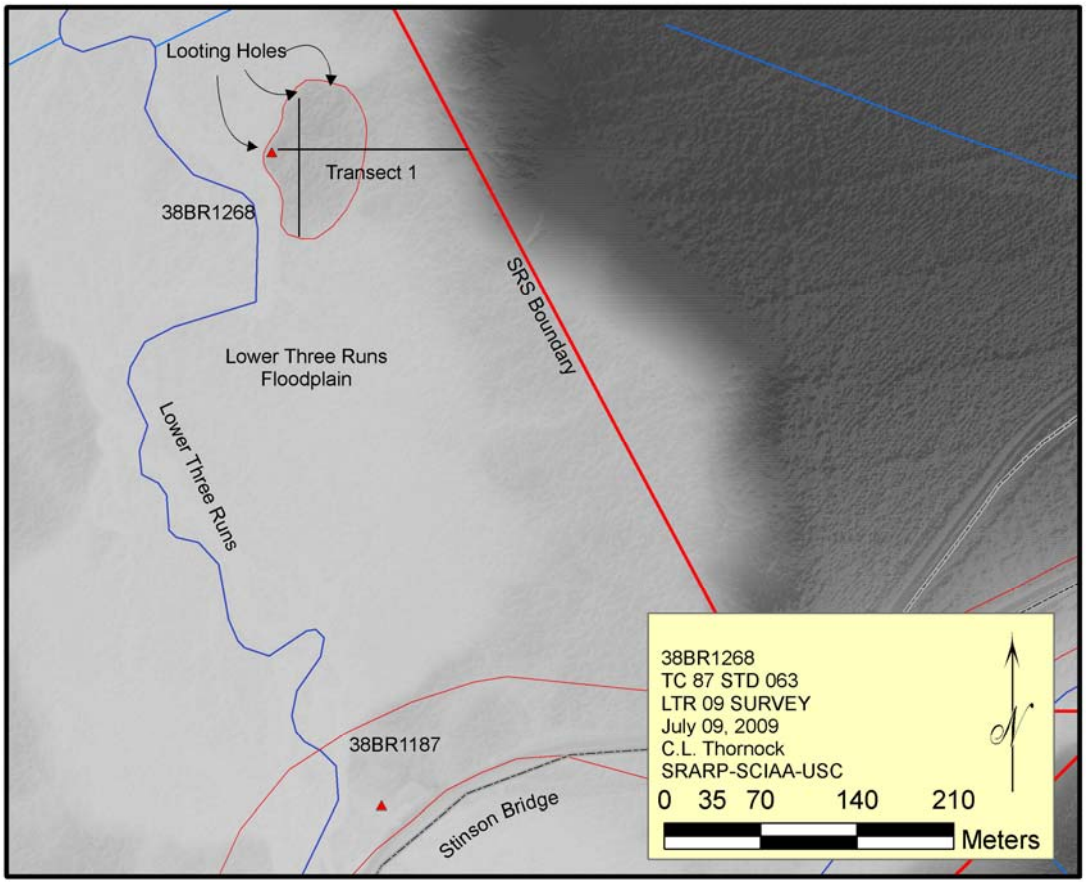


Figure 79. Location of Site 38BR1268.

suggest an Archaic and Woodland occupation. In addition to mapping the shovel-tests, site boundaries, and topographic features, the locations of the looter holes were also mapped and can be found in the site folder.

Looting at the site appears to have occurred over many years. The looters have been systematically exploring the bluff edge. The oldest identified looting holes appear on the bluff edge overlooking the floodplain on the northeastern margin of the site. Over time, the looters progressed along the bluff edge westward, with the most recent holes located on the western most point of the peninsula. Despite the pockmarked bluff edge, the majority of the site is probably intact. As part of this project, a yellow sign indicating the presence of a federally protected archaeological site was posted at the site next to the most heavily disturbed area in hopes of deterring future looting activity.

Site 38BR1270

The Patterson Mill Branch site (38BR1270; Figure 80), does not appear to have been looted (in the sense of private citizens digging holes on federal land) although collection of surface artifacts by hunters has undoubtedly occurred over the years. At some point in history, probably around the time SRS procured the land along Lower

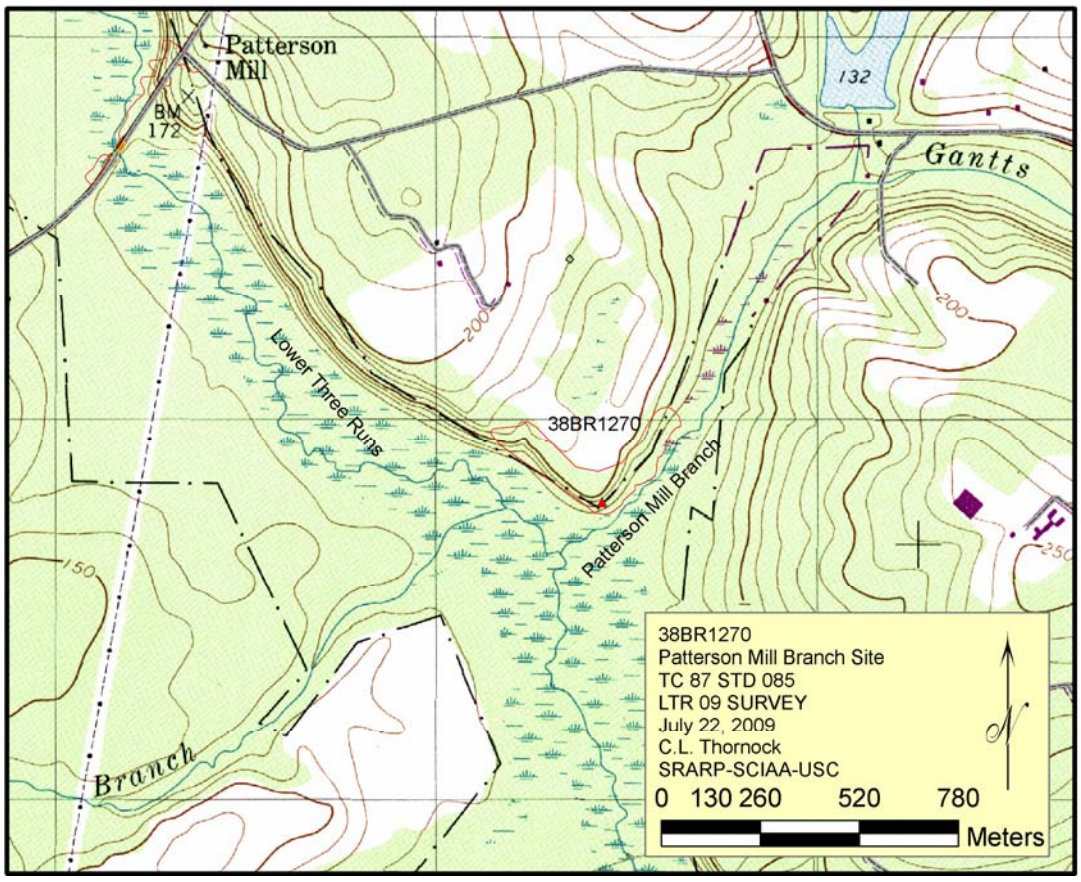


Figure 80. Location of Site 38BR1270.

Three Runs (1950s), a ditch was dug along the SRS boundary possibly as a fire break or to clarify the property line. Portions of the ditch sidewall are quite steep in places and over 1 m high. Thornock visited the site in January, 2009 and observed stone tools, debitage, and pottery eroding out of the ditch wall. He also noticed large amounts of deer corn scattered along the property line. It would not be unlikely for a hunter to walk the ditch, drop deer corn, and collect artifacts.

During his January visit, Thornock noted that the trees had recently been clear cut on the property bordering SRS. When he returned in July, 2009, the clear cut area had been plowed into an agricultural field and a newly created dirt road ran along the property boundary. Seven hundred meters of prehistoric surface scatter was exposed in the road. Diagnostic artifacts ranged from Archaic through Mississippian.

No shovel testing was conducted at this site, on or off SRS property, so the extent of the damage is unknown. On the neighboring property, tree removal and plowing damaged the site but to what extent is unclear. On SRS property, the site is probably intact but, considering the landform, the vast majority of the archaeological site has to be located on the neighboring property. Given the vast quantities of archaeological material located in the road and field of the neighboring property, it is highly unlikely that the portion of the archaeological site located on SRS property is in danger of future looting.

Site 38AL143

The Big Pine Tree site (38AL143) is a lithic site that straddles the boundary of SRS and Clariant property along Smith Lake (Figure 81). The site is considered potentially eligible for the National Register of Historic Places because of the relatively deep and undisturbed high density of artifacts. The close proximity to the Allendale chert quarries make it valuable for studying the use of the quarries and the chert reduction processes.

In May 2009, Chris Moore, while conducting public outreach at the nearby Topper Site, toured 38AL143 and observed the damage caused by very recent looting activity. He thought that the site was probably accessed by boat. The looters dug into the banks of the site and destroyed an area of about 6 square meters, near a SRS boundary survey marker, on SRS property.

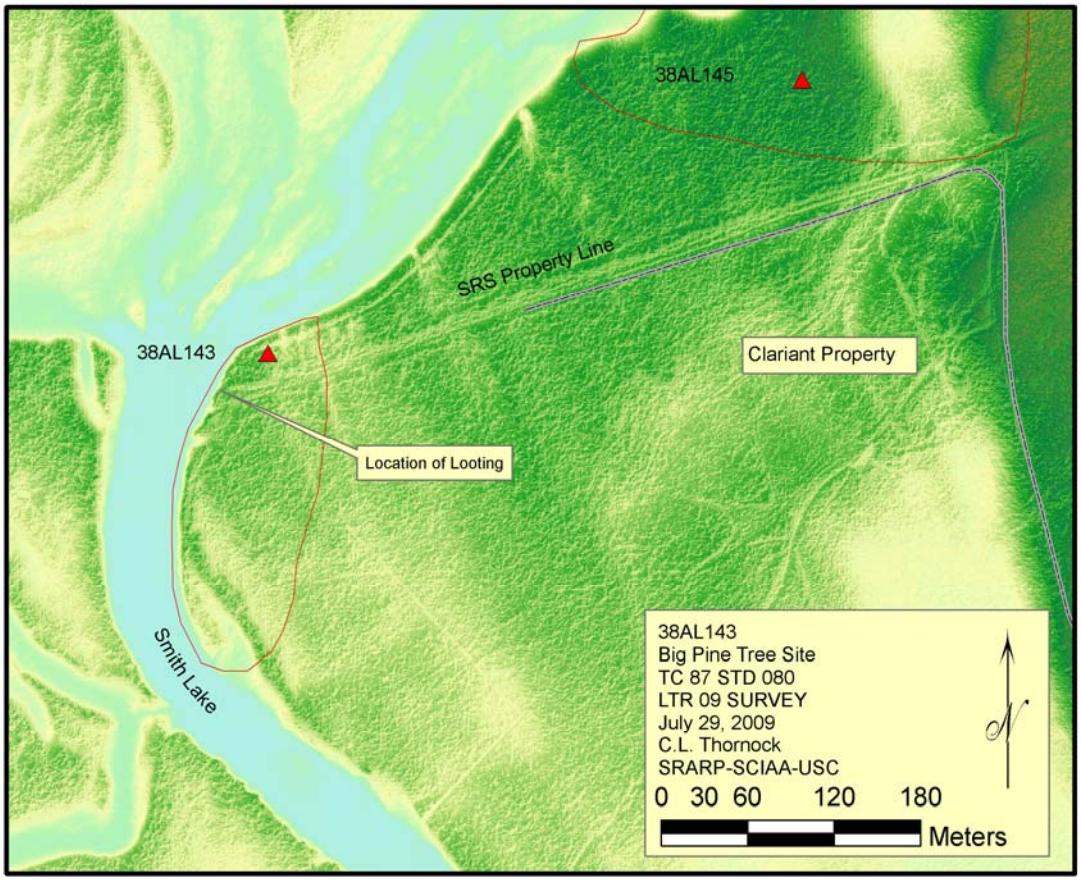


Figure 81. Location of Site 38AL143.

Conclusions

The protection of federally owned archaeological sites is more difficult along Lower Three Runs, due to its remote location, than on other areas of the SRS. The extensive, unpatrolled property boundary along this stream provides ample opportunities

for unrestricted public utilization of this geographically unique section of SRS. Part of the problem may be that because Lower Three Runs does not receive the same level of security protection as the main body of SRS, the public may assume that it is acceptable to trespass and utilize that strip of land. Looting of archaeological resources and other activities along Lower Three Runs may not pose a threat to national security; however, the unauthorized acquisition of archaeological resources occurring on SRS property is a federal crime and attempts should be made by DOE to stop the practice.

The Antiquities Act of 1906 established that archaeological materials acquired from public lands are public resources and should be controlled and managed by the federal government. This act makes unauthorized excavation of archaeological materials on federal land a violation of law. In response to increased commercial looting in the 1970s, Congress passed the Archaeological Resources Protection Act (ARPA) which made the looting and vandalizing of federally protected archaeological sites a felony punishable by fines and/or jail time. In addition, section 470ee(c) of ARPA makes interstate trafficking of illegally obtained archaeological materials a felony; considering that many SRS archaeological sites are in proximity to the state line and are possibly being looted by boat, it is quite possible that this trafficking law is also being violated.

The SRARP recognizes that the monitoring of trespassers on Lower Three Runs may not warrant the same amount of time and resources afforded to other aspects of security in the central portions of SRS. However, as primary consults to DOE, the SRARRP has provided suggestions to inhibit future looting activities. Site 38AL241, which had been looted repeatedly before 2005, does not appear to have been looted since that time. This may be a result of the limited actions taken by SRARP and SRS security in 2005. The SRS property boundary was better defined, old SRS property boundary signs were replaced, and archaeological samples were collected by the SRARP. It is possible that returning looters, noticing the amount of SRS activity that had taken place since their last visit, may have chosen not to loot that particular site any further for fear of government repercussions. Sites 38AL143 and 38BR1268, however, do appear to have been looted recently. The greatest deterrent against trespassing on Lower Three Runs would be to make SRS security personnel presence evident in the area. The archaeological sites mentioned in this report are not easily accessible by motor vehicle so looters are most likely parking their cars at access points along Lower Three Runs and hiking in to loot. SRARP management feels that occasional monitoring of Lower Three Runs access points for parked vehicles and occasional helicopter flyovers along the length of the creek may be enough of a deterrent to keep looters and other trespassers off SRS property.

When considering what coarse of action to take regarding the past disturbance to the archaeological sites mentioned, the SRARP recommends leaving the sites as they are currently. Once a portion of an archaeological site has been disturbed, it cannot be restored again and filling in the looter holes with back-dirt from the archaeological site would likely cause additional damage to previously undisturbed contexts. If DOE chooses to stabilize the sites by filling the looter holes, the SRARP recommends they be filled with white sand from off site, so as not to further disturb the archaeological context.

However, we do not think that the backfilling option is an appropriate use of time or resources, especially given that the problem will persist until appropriate security measures are implemented.

DOE COMPLIANCE SHORTFALLS AND FUTURE REQUIREMENTS

Adam King and Tammy F. Herron

Overall, the DOE's record of compliance with CRM legislation has been excellent with the expert technical guidance of the SRARP. There is, however, one exception to this which concerns the curation of DOE archaeological collections. Because of the nature of the facilities provided by DOE, full compliance with 36CFR79 has never been achieved. This regulation requires that all federally-owned archaeological collections and associated documents be housed in a facility that has sufficient space for extant collections and meets stated requirements for security, environmental controls, and fire suppression. As was reported in the SRARP Annual Reports for FY93 through FY07, as well as in the SRARP appraisal of 1994 (DOE 1994) and the SRARP report to DOE (Brooks and Forehand 2002), Building 760-11G, which houses the SRARP, continues to be out of compliance with 36CFR79. Areas of DOE noncompliance include dedicated curation space, security, and environmental controls required by 36CFR79. The curation space, as it is currently configured, is not large enough to house existing artifact and document collections and cannot accommodate future additions that will be created by ongoing CRM activities. Also, cleaning and additional repairs to the roof were made due to the previous leaks in Room 14, and a portion of the rear of the building was flooded again in July due to an ineffective drainage system behind the building.

For the DOE to be in compliance with 36CFR79 and meet growing space needs for the archaeological collection, the SRARP needs access to a facility with at least 3,500 sq. ft. of floor area that meets established regulatory requirements for security, climate control, and fire suppression. Because easy access to artifact and document collections is essential for efficient long-term management of SRS cultural resources, it is imperative that this facility be located in close proximity to the SRARP administrative offices. Not only will the dedication of appropriate facilities bring DOE into compliance with federal regulations, it will also insure that DOE's extensive investment in its archaeological collection is protected. DOE made a concerted effort to address this problem in FY05 by conducting a study to select an existing building on the SRS to house not only the SRARP and DOE's archaeological artifacts, but also the Cold War Era artifacts and associated curation staff.

June1, 2006, the *Building 315-M Modification Scope of Work* was signed. This document outlines two scenarios for converting Building 315-M into the SRS Curation Facility. Case A converts building 315-M into a 36CFR79 compliant facility by providing 3,600 sq. ft. of artifact storage for SRARP artifacts and 12,200 sq. ft. for Cold War artifacts. Three offices and an analysis area/working curation room would be incorporated to house personnel associated with the Cold War History Program, while offices for the SRARP personnel would continue to be housed in Building 760-11G. In

addition to the aforementioned arrangement, Case B would provide housing and work areas for SRARP personnel, including a primary analysis area, a file/map storage area, equipment storage and maintenance areas, 2 secondary analysis areas, 2 wet labs, and 12 new offices. Engineers and design teams are still in the process of determining design elements and cost estimates regarding both scenarios.

SAFETY COMPLIANCE

George L. Wingard

During FY09, the SRARP continued compliance with federal and state regulations governing human health and safety. As Director of Safety, George Wingard shared with the staff a variety of topic pertaining to their health and safety at meetings held throughout the year. The topics included:

October	Safety Short titled *Cold and Flu*
January	Safety Short titled *Back Safety*
February	Material Safety Data Sheets
March	Safety Short titled *Cumulative Trauma Disorder*
May	Safety Short titled *Working in the Heat*
July	Safety Short titled *Outdoor Safety*
August	Assorted Safety Topics

PART II. RESEARCH

RESEARCH ABSTRACTS

Geomorphological Analysis of the Mathis Lake Sand Rim: Implications for Late Quaternary Site Formation Processes at Carolina Bays

Andrew H. Ivester, Eric C. Poplin, and Mark J. Brooks

Poster presented at the 65th Annual Meeting of the Southeastern Archaeological Conference, Charlotte, NC

and

Poster presented at the 39th Annual Meeting of the Archaeological Society of South Carolina, Columbia, SC

Recent investigation of 38AK862 on the east rim of Mathis Lake, Aiken County, SC permits the reconstruction of the evolution of this landform. Sponsored by the SC Department of Transportation, this project examined changes in the bay rim through time. The rim was affected by Late Paleoindian through Late Archaic Occupations of the site, and by environmental and climate changes. Sedimentary and dating analyses have yielded a chronology of site formation processes. Implications for other sites throughout the region are explored through comparisons with past research at similar sites in other portions of the South Carolina Coastal Plain.

Empirical Modeling of Cultural Landscapes and their Environmental Impact

J. Christopher Gillam

Neolithisation and Landscape: Proceedings of the 2008 NEOMAP International Workshop, Junzo Uchiyama, Kati Lindström, Carlos Zeballos, and Keisuke Makibayashi (eds.), Research Institute for Humanity and Nature, Kyoto

and

Keynote Address at the Neolithisation and Landscape: NEOMAP International Workshop, Research Institute for Humanity and Nature, Kyoto

The Neolithisation of Japan remains a topic of scholarly debate and great research interest. Significant issues include the impacts of complex hunter-gatherer and early agricultural societies on local and regional environments, the diverse cultural trajectories of the Jomon Period (16,000 to 3,000 CYBP) leading to cultural and landscape changes during the Yayoi Period (3,000-1,750 CYBP), how these different groups co-existed, traded and interacted, and the factors influencing the adoption of metallurgy, horticulture/agriculture, and increased sedentism in some regions (e.g., Kyushu, Shikoku, Honshu) versus continued fisher-hunter-gatherer adaptations and traditions in others (e.g., Okinawa, Hokkaido). Advancements in the design and implementation of archaeological databases, geographic information systems (GIS), and map modeling enable archaeologists to construct empirical models of past cultural and natural systems at a

variety of scales. The goals of this paper are to explore critical considerations in the resolution and accuracy of archaeological and environmental GIS datasets, to highlight useful GIS datasets that are distributed freely on the internet, and to discuss techniques for modeling prehistoric cultural landscapes and their impacts on the environment using examples from North America, South America, and East Asia.

Migration as Transformation in Science Fact and Science Fiction: Lessons on Distant Migrations by Early Formative Cultures on Land and Sea

J. Christopher Gillam

Invited presentation for the RIHN Ecohistory Programme International Symposium, "Towards the Future of Civilization: Three Science Fiction Novelists Dialogue at the R.I.H.N.," Research Institute for Humanity and Nature, Kyoto

In Arthur C. Clarke's novel, *2001: A Space Odyssey*, the main character, Dr. David Bowman, is transformed from his human form to an immortal being after he travels through a portal bridging space and time; he eventually returns to Earth to ensure the survival of humanity by destroying our ability to annihilate ourselves and in effect, rules the Earth. Similarly, in prehistoric and historic times, whether by human agency, opportunity, or necessity, cultures have frequently been transformed by the act of migration from one place to another, often becoming the dominant species and/or cultural group. Classic examples of migrations that led to cultural transformations include: 1. Out-of-Africa (85,000-55,000 YBP); 2. Ice Age peopling of the Americas (16,000-14,000 YBP); 3. Polynesians (3,000-1,000 YBP); and 4. European Colonialism (16th-19th centuries AD). Each of these major migrations was influenced by: 1. Human Agency; 2. Culture; 3. Technology; 4. Environment; and 5. Limits' to growth (population pressure, cultural conflict, and/or carrying capacity of land). Using hypotheses from the Ice Age peopling of the Americas migrations, I will attempt to bridge the gap between science fact and science fiction to discuss what factors will influence future migrations on Earth, our solar system, and beyond, and how humanity may be transformed by such experiences.

Modeling Neolithic Cultural Landscapes in East Asia

J. Christopher Gillam

Fourteenth International Conference of Historical Geographers, Kyoto

East Asia experienced a process of Neolithisation of its cultural and natural landscapes over many millennia (ca. 16,000 to 3,000 CALYBP). As a period witnessing fundamental environmental and cultural changes, the Neolithic of East Asia was dynamic, with sub-periods of relative stability punctuated by episodes of rapid change in lifestyle, material culture, and environmental and cultural setting. The Neolithisation and Modernisation of East Asian Inlands Seas (NEOMAP) project of the Research Institute for Humanity and Nature (RIHN), Kyoto, is exploring the development and change in cultural landscapes throughout the region using an archaeological Geographic Information System (GIS),

multivariate statistics, and GIS modeling techniques. This paper demonstrates the techniques for modeling cultural landscapes and landscape change that are being applied in East Asia and other regions around the globe.

Modeling Cultural Landscapes and Landscape Change in East Asia

J. Christopher Gillam and Carlos Zeballos Velarde

Paper presented at the 74th Annual Meeting of the Society for American Archaeology, Atlanta, GA

The Neolithization of East Asia extended over many millennia (ca. 16,000-3,000 CALYBP) and witnessed dynamic changes in culture and corresponding cultural landscapes. An integral part of the Neolithization and Modernization of East Asian Inlands Seas (NEOMAP) project has been the design an implementation of advanced archaeological GIS databases to explore the development and change in cultural landscapes throughout the region. This paper highlights techniques for modeling cultural landscapes and landscape change, such as prediction, caloric cost modeling, least-cost path analysis, and territorial modeling that can be applied in East Asia and other regions throughout the world.

Paleoindians in North America: Evidence from PIDBA (Paleoindian Database of the Americas)

David G. Anderson, D. Shane Miller, Derek T. Anderson, Stephen J. Yerka, J. Christopher Gillam, Erik N. Johanson, and Ashley Smallwood

Paper presented at the 74th Annual Meeting of the Society for American Archaeology, Atlanta, GA

The Paleoindian Database of the Americas (PIDBA), available on-line at http://pidba.utk.edu, provides locational data on close to 30,000 projectile points and attribute data on over 10,000 from across much of North America. These samples document patterns of land and lithic raw material use, and the changes in numbers of artifacts over time may reflect demographic trends within the Paleoindian period. PIDBA grows through the contribution of primary data, and recent additions include radiometric and bibliographic databases, and updated distributional maps. Ongoing research is directed to adding images of artifacts, and compiling the attribute data into a single comprehensive database.

Mound Bottom and the Early Mississippian Landscape in the Middle Cumberland Region

Charles R. Cobb and J. Christopher Gillam

Paper presented at the 65th Annual Meeting of the Southeastern Archaeological Conference, Charlotte, NC

Archaeological analyses of settlement patterns consistently stumble over the hurdle of establishing site contemporaneity. It might seem that the relatively brief span of some 500 years represented by the Mississippian period would give us some advantage over

those working with sites from much longer Archaic time periods. However, we now recognize so much volatility during the late prehistoric era one cannot assume that even large mound centers in the same locale were occupied at the same time. Kevin Smith, Mike Moore, and others have devoted an enormous effort toward unraveling the Mississippian sequence of the Middle Cumberland Region (MCR), an effort hampered by the wholesale destruction of sites by the growth of Nashville. Nevertheless, strides are being made and this progress allows us to make some preliminary statements about the nature of very early Mississippian settlement and how it changed through time.

Funeral Monuments and Ritual Celebrations: Mound and Enclosure Complexes of the Southern Brazilian Highland of Argentina

José Iriarte, J. Christopher Gillam, and Oscar Marozzi

15th Congress of the Brazilian Archaeological Society, Belém do Pará, Brasil

and

Proceedings of the 15th Congress of the Brazilian Archaeological Society

Around A.D. 1000, during a period of great environmental change in the Southern Brazilian Highlands of Argentina and Brazil, there arose a monumental architectural tradition of earthen enclosure complexes and associated funeral mounds. Based on ethnographic analogy with historical southern Jê groups and comparison to similar archaeological sites of southern Brazil, recent excavations in Misiones province, Argentina, suggest that the complexes served as locations of ritual celebrations where the prehistoric Taquara people consumed roasted meat and maize beer.

Ethnic Enclaves, Monument Building and Postfunerary Rites: The Emergence of Taquara/Itarare Mound and Enclosure Complexes in the Southern Brazilian Highlands

José Iriarte, J. Christopher Gillam, and Oscar Marozzi

Antiquity 82: 947-968

Fundamental problems in the archaeology of the South American lowlands are the social and economic circumstances behind the appearance of Taquara/Itatare mound enclosure complexes and their context in the political landscape of the region during the late Holocene. This research presents a synthesis of the Taquara/Itararé earthen monument tradition as it relates to these problems and provides a revised interpretation as evidenced by recent investigations at the mound enclosure complex, site PM01, near ElDorado, Misiones Province, Argentina. We interpret the construction of the PM01 mound and causewayed enclosure as a single-event construction of a burial mound, followed by prolonged use of its surrounding circular earthen embankments for multiple-generation, time-extended funerary practices associated with ritualized feasting of meats and the consumption of maize beverages. We argue that the development and elaboration of ceremonial complexes in the southern Brazilian highlands took place at a time when the

South American lowlands were characterized by population pressure, long-distance migrations, and regional developments. During that time, these ceremonial places became crucial for territorial stability, providing an arena for the consolidation of power and authority of emerging chiefs. Multi-generational funerary practices on the rim of these complexes were an integral part of this process.

The Southern Cone, the Rio de la Plata Basin, and Their Interaction with the South American Lowlands

José Iriarte, J. Christopher Gillam, and Oscar Marozzi

Paper presented at the 74th Annual Meeting of the Society for American Archaeology, Atlanta, GA

New archaeological research in the south-eastern sector of the La Plata Basin, which represent an integral part of the southern cone of South America, are beginning to reveal unexpected and unique cultural trajectories in a region that has traditionally been considered a marginal one. This presentation summarizes these new data and argues for the need of examining these cultural developments at a broader geographical scale exploring the interaction with other parts of the South American lowlands.

Understanding Neolithization of East Asian Cultural Landscapes.

Junzo Uchiyama, Peter Jordan, and J. Christopher Gillam

Paper presented at the 74th Annual Meeting of the Society for American Archaeology, Atlanta, GA

Scholarly archaeology in East Asia has established the complex local trajectories of culture change. The region enjoys a rich material record, including some of the world's oldest pottery (ca.16,000 CALYBP), evidence of unique hunter-gatherer adaptations, and early plant cultivation and dispersal. These innovations generated new forms of cultural landscapes. In this symposium, regional specialists examine how natural and cultural landscapes were transformed physically and ideologically as fisher-hunter-gatherers developed more complex social systems during the "Neolithization" of littoral East Asia. The papers explore cultural landscapes as constructs of human agency, integrating and changing the natural and cultural environments through active ideologies.

Continuing the Debate on the Dating of Etowah's Mound C

Adam King

Paper presented at the 74th Annual Meeting of the Society of American Archaeology, Atlanta, GA.

It has been 47 years since one of Southeastern archaeology's marquee projects—the complete excavation of Mound C—was finished. The continued relevance of the project is evidenced by the fact that its results are still debated. In this paper, I present a contribution to an ongoing debate about the dating of Mound C. Using radiocarbon dates, sherd collections from mound fill and grave fill, and ceramic vessels from graves I argue

that Mound C was built between AD 1250 and AD 1375. I also present a response to recent critiques of these dating arguments.

Three-Dimensional Laser Scanning of Copper Plates from Etowah

Adam King and Christopher Goodmaster

Paper presented at the 65th Annual Meeting of the Southeastern Archaeological Conference, Charlotte, NC.

The copper plates excavated by John Rogan from Etowah's Mound C are some of the most famous images in the Southeast. Long-term stylistic studies place those images in the Classic Braden style of the American Bottom. At least five other birdman plates were excavated from Mound C by Moorehead and Larson. The images of two of these plates are obscured by corrosion, making it impossible to determine their stylistic connections. In this paper we preset the results of our efforts to use three-dimensional laser scanning to clarify the imagery recorded on two plates recovered by Larson.

Remote Sensing at Etowah and Macon Plateau

Adam King and Chester P. Walker

Paper presented at the Spring meeting of the Society for Georgia Archaeology, Macon, GA.

Etowah and Macon Plateau are two Georgia's most famous Mississippian mound towns. While both sites have been investigated extensively, there is still a great deal to learn about them. In this paper we present the results of our efforts to learn about Etowah and Macon Plateau using remote sensing. Gradiometer and ground-penetrating radar data reveal important information about the nature and distribution of architecture at each of the sites.

Native Perspectives on Archaeology in the Carolinas

King, Adam, Brett Riggs, and Russell Townsend

Symposium organized for the 65th Annual Meeting of the Southeastern Archaeological Conference, Charlotte, NC.

Southeastern archaeology has long focused on the record of the South's indigenous peoples, yet the practitioners of, and audience for, this work have primarily been non-native academics. Descendant native communities, although keenly interested in the material evidence of their own heritage, have been justifiably suspicious of the motives and practice of archaeology, an enterprise of outsiders. How do we bridge this gap to create archaeological practices that is relevant and meaningful to the stakeholders with the most direct connection to the archaeological record? As a first step, we must listen to Indian County to begin to understand native perspectives on archaeology and the archaeological record of the Southeast. This panel brings together representatives of federally recognized tribes who regularly consult on cultural resources issues in the

Carolinas to discuss "How Can Archaeology Serve Indian Country?" The immediate goal of the session is to provide a platform for tribal representatives to voice the needs and aims of native communities that could be, or should be, served by the discipline of archaeology. The ultimate goal is to build frameworks for dialog between archaeologists and contemporary native communities to guide Southeastern archaeology in becoming more relevant and responsive to the interests of Indian Country.

Regalia to Die For: The Accoutrements of Etowah's Burial 57

Dwight Jones and Adam King

Invited paper presented at the 65th Annual Meeting of the Southeastern Archaeological Conference, Charlotte, NC

Etowah's Mound C contained some 350 burials, many accompanied by finely crafted objects. Arguably the richest burial in Mound C is Larson's Burial 57, interred in a lobe on the northern side of the mound. Burial 57 contained an adult male with an impressive collection of objects and dressed in elaborate regalia. According to Larson, the creation of Burial 57 represented a pivotal moment in the history of Mound C and probably Etowah. In this paper, we use iconographic studies, sacred narratives, and archaeology to investigate the meaning of the regalia worn by the occupant of Burial 57.

Exploratory Archaeology in the Summerville Cemetery of Augusta, Georgia

Robert Moon

Poster presented at the 65th Annual Meeting of the Southeastern Archaeological Conference, Charlotte, NC

Early in 2008 the Savannah River Archaeological Research Program was contacted by the Church of the Good Shepherd in Augusta, Georgia to help resolve a nagging problem. For years, Good Shepherd has owned two seemingly empty plots in the Summerville Cemetery (9RI1123). The big question, could the two cemetery plots be used for modern interments? Early non-invasive efforts, including ground penetrating radar, produced questionable and unreliable results. Through limited trench excavation looking for burial shafts we were able to finally determine the status of the two plots. This poster will discuss our efforts that revealed, not only had the plots already been used, but apparently they were used multiple times.

Pine Barrens and Possum's Rations Revisited: Late-PaleoIndian and Early Archaic Settlement in the Carolina Sandhills

Christopher R. Moore, Jeffrey D. Irwin, and William Covington

Poster presented at the 39th Annual Meeting of the Archaeological Society of South Carolina, Columbia, SC

In a paper presented at the 59th annual meeting of the Southeastern Archaeological Conference (Understanding Landscapes of Southeastern Hunter-Gatherers symposium) archaeologists from Fort Bragg compared competing models of Early Archaic settlement in the Southeast and presented evidence for overland settlement along interfluvial ridges in the Sandhills. This poster summarizes more recent analysis of artifacts and presents "least-cost" movement corridors produced within a GIS that lend support to our original hypothesis. Distributional analysis of Late-PaleoIndian and Early Archaic tools, analysis of tool assemblages from two upland base camps, and application of Spatial Analyst within ArcGIS provide evidence for interriverine settlement activity linking the North Carolina Piedmont to the Coastal Plain.

The South Boundary Project

Maggie Needham

Poster presented at the 65th Annual Meeting of the Southeastern Archaeological Conference, Charlotte, NC

Recent archaeological investigations at Augusta State University, formerly Augusta Arsenal, associated with the South Boundary Project unearthed a number of artifacts. Ad hoc recovery methods were used and most artifact retrieval was done by untrained heavy equipment operators. The unconventional recovery method did not permit accurate records of artifact dispositions. However routine cleaning, classification, and analysis was implemented to determine the age, manufacture, source, and use of each bottle. Through the additional study of archival maps and site geography suggest that over a period of 60 years a random collection of disposal pits were dug to discard waste material.

Identity and Meaning in Mississippian Female Regalia

Johann Sawyer and Christopher Thornock

Invited paper presented at the 65th Annual Meeting of the Southeastern Archaeological Conference, Charlotte, NC

Gender Studies are an important emerging field in Mississippian studies. However, the role of gender in relation to regalia and symbolism has been largely overlooked. Within the Southern Appalachian region, female regalia consisted of apparel with a number of symbols and motif sets. In addition to exploring these regalia types and motif sets, this paper provides insights into the function of female regalia and symbols in social context. Futhermore, this paper provides possible explanations into the meaning behind the symbols associated with female regalia as it relates to social identification, group identity, ideology, and cosmology.

Middle Swift Creek/Weeden Island I Ceremonialism in the Interior Coastal Plain of Georgia

Keith Stephenson and Karen Y. Smith

Poster presented at the 65th Annual Meeting of the Southeastern Archaeological Conference, Charlotte, NC

The Shelly Mound, located on a bluff overlooking the Ocmulgee River, represents the most northerly expression of Weeden Island ceremonialism in the Southeast. The mound contained several centrally located burials and a cache of over 50 "killed" vessels on its eastern margin. We briefly describe the archaeological work at Shelly, but our primary aim is to place Shelly in its proper chronological and social context. To accomplish the former, we employ frequency seriation, AMS dating, and inter-site Swift Creek design motif contacts. We also explore connections between Shelly and better-known sites, such as Kolomoki, closer to the Weeden Island heartland.

Prospectors, Property, and Profit: The Commodification of a South Carolina Plantation, 1880-1943

Megan Taylor

Poster presented at the 65th Annual Meeting of the Southeastern Archaeological Conference, Charlotte, NC

Mont Repose, a former rice plantation, reflects the larger theme concerning land usage and exchange in the postwar South. Following the decline of the rice industry and the destruction wrought by the Civil War, Southern elites were forced to sell their lush plantations for extremely low prices to Northern land speculators eager to turn a profit. A few fortunes were made, but many more were lost, as Yankees soon discovered that their road to wealth was nothing more than a pipe dream. Eventually, the land fell into the hands of Southern lumber barons, who exhausted the property's timber resources for their own economic benefit.

RESEARCH NOTES

Geoarchaeological and Paleoenvironmental Research in FY09

Christopher R. Moore, Mark J. Brooks, and Barbara E. Taylor

Geoarchaeological and paleoenvironmental research continued in FY09 on the SRS and beyond. The year witnessed greater involvement with volunteers in support of research goals. Involvement with graduate student research, consulting with colleagues, and writing projects continued as well.

Carolina Bay Research

There was a dramatic increase in Carolina bay field research this year with the addition of Chris Moore to the SRARP staff; the increase was possible due to the SRARP's enhanced volunteer program under Chris' direction. The fieldwork continued to address our basic Carolina bay research themes, which include: 1) determining the age, origin, and evolution of Carolina bays; 2) addressing issues of prehistoric activities and site formation processes on Carolina bay sand rims; 3) determining the role of Carolina

bays in prehistoric settlement systems, particularly those of early hunter-gatherers; and, 4) exploring linkages at Carolina bays between climate change, depositional processes, and prehistoric adaptations. In addition to the ongoing, baseline investigations at Flamingo Bay on the SRS (Brooks et al. 1996; Brooks and Taylor 2003, 2004, 2005, 2006, 2007, 2008; Grant et al. 1998), a body of comparative data were obtained this year from fairly intensive investigations at Frierson's Bay near Blackville, SC and Johns' Bay near Allendale, SC.

At Flamingo Bay, investigations continued this year at site 38AK469, situated on the bay's east-central sand rim. Several Early Archaic activity areas, or possibly discrete, small-scale occupations were identified earlier through systematic, close-interval testing (Brooks and Taylor 2003); the testing was on a 10 m grid, subsequently reduced to 5 m, and consisted of .50 x .50 m units excavated in 5 cm arbitrary levels to a depth of 80 cm below surface. The major site-level goal is to derive a better understanding of site activities and how these small-scale, Early Archaic hunter-gatherer societies were organized, in this case with respect to the use of Carolina bays. However, because most behavioral interpretations are based on artifact patterning, it is necessary to first differentiate between the natural and cultural processes that collectively formed the archaeological record. This is particularly critical when dealing with shallow, sandy, multicomponent, Coastal Plain sites with no visually observable depositional stratigraphy; the net result is often the vertical conflation of artifact distributions that appear to be mixed when, upon further scrutiny, it is often found that the artifacts were actually shallowly buried and that much of the apparent mixing was due to arbitrary excavation levels (typically 10 cm increments) that cross-cut multiple, shallowly buried occupation surfaces. Clearly, finer scale vertical resolution is called for in the collection and analyses of all data sets (below). To that end, four contiguous 2 x 2 m units were excavated immediately south of the 38AK469 site datum at N300, E300 within the area of one of the high-density Early Archaic artifact distributions; once the present analyses are completed to guide future work, additional units will be excavated to expand the block for recovery of spatial data.

With the present interest in delineating buried occupation surfaces and depositional processes, stratigraphic (vertical) data were emphasized. As at the other bays, the Flamingo Bay units were excavated by "shovel schnitting" in 10 cm arbitrary levels to 100 cmbd, well below the archaeology ending at 75-80 cmbd, and all soil was screened through .25 inch (7.5 mm) mesh hardware cloth. Grain-size analyses in combination with a consideration of the vertical distribution of artifacts have proven successful in delineating buried occupation surfaces (e.g., Brooks and Sassaman 1990; Brooks et al. 1996). Accordingly, artifacts larger than 2.5 cm were point-plotted (larger artifacts are less likely to be displaced vertically due to post-occupational processes, a proposition that will be evaluated by refitting broken artifacts) and a continuous sediment column was collected at 2.5 cm increments to the depth of excavation. In the past, 5 cm increments were used, but it is likely that multiple, thin burial events were cross-cut. Other sediment data of possible relevance to identifying buried surfaces, for which samples were also collected at finer increments, included soil chemistry, soluble silica, magnetic susceptibility, bulk density, field water content, and Optically Stimulated

Luminescence (OSL) dating. In addition, several samples were taken for micro-morphology analysis at Flamingo Bay. These data were collected, and are being analyzed, in consultation with Andrew H. Ivester (University of West Georgia) and Terry A. Ferguson (Wofford College).

With specific reference to the OSL dating, refinements were made by reducing the sample collection tube size from ~5 cm (or larger) to 1.5 to 2 cm, and by shifting from the single aliquot to the single grain technique. This was done in order to test our hypothesis that depositional events along bay sand rims since the late Pleistocene were centimeter-scale events and that use of larger sampling tubes likely intersect multiple depositional events (e.g., Feathers et al. 2006). A shift to single-grain OSL dating also reflects our increased understanding of site-formation processes of shallow aeolian and fluvial depositional environments within the Costal Plain (e.g., bay rims and source-bordering dunes and sand-sheets) (Brooks and Taylor 2008; Moore 2009a, 2009b). The combined effects of small-scale deflation and mixing, limited faunal and floral-turbation, partially-bleached or otherwise "older" grains with an inherited paleodose and/or combined very thin depositional units collected within individual OSL sampling tubes may cause problems for age estimates produced by traditional single-aliquot dating (e.g., Feathers et al. 2006).

Frierson's Bay is large (~1.2 km along its long axis and .6 km at its widest point), forested, and contained permanent water until drained in the early 1960s. Its prominent eastern sand rim, which was the focus of our geoarchaeological attention, has prograded into the western edges of two other Carolina bays immediately to the east. Archaeological survey consisted of shovel tests (.50 x .50 m excavated in 20 cm levels to 100 cmbs) at 20 m intervals along the spine of the sand rim, along with east-west shovel test transects across the sand rim at key locations. The GPS location of all shovel tests was recorded and the sand rim mapped with a total station. Virtually all shovel tests contained archaeological material, primarily Coastal Plain chert debitage in the 40-80 cmbs depth range. All Archaic and Woodland period components were represented but, like most bays, the Early Archaic seemed dominant. Unlike Flamingo Bay, no particular area appeared to contain noticeably higher densities of material, but this may be due to the larger testing interval at Frierson's Bay. Thus, the placement of two adjacent 2 x 2 m units and one isolated 1 x 2 m unit was largely arbitrary. One of the 2 x 2 m units produced an exhausted, Early Archaic quartz Taylor biface at 77 cmbd, and the 1 x 2 m unit produced a cache (n = 12) of Coastal Plain chert, biface preforms and one quartzite biface between 66 and 69.5 cmbs. Based on depth range, technology, degree of patination, and thermal alteration, a Middle or Late Archaic component is likely for the cache. Dates from OSL samples collected from the unit should resolve the question.

Continuous sediment columns sampled at 2.5 cm intervals were taken from one of the 2 x 2 m units and from the 1 x 2 m unit. These samples were subsampled for magnetic susceptibility analysis. In total, eight OSL samples were collected from the walls of the same two units at key depths indicated by the archaeological record. At Frierson Bay, 1.5 cm diameter OSL sampling tubes were used to reduce the likelihood of sampling across "invisible" depositional boundaries. Soil chemistry, soluble silica, bulk density, and field

water content analyses will be conducted at Frierson's and Johns' Bays in the future if the pilot study (for these analyses) at Flamingo Bay proves fruitful.

Also at Frierson's Bay, an attempt was made to obtain an OSL sample from the base of the sand rim using a soil auger with a slide hammer and an AMS Core Sampler for sample collection.Unfortunately, a perched water table was encountered at ~230 cmbs and the sample could not be obtained. A basal date would have provided a minimum age for the bay. We currently have 45 OSL dates of bay sand rims and interior river dunes indicating they were both active over the last 120,000 years, with dates clustering in time primarily during climatic transitions from warmer, moister to cooler, drier conditions (Ivester et al. 2007). So far, our only basal or near basal dates come from Flamingo Bay and Mathis Lake (also a bay) in NW Aiken County, suggesting initial bay formation around the time of the Sangamon Interglacial some 115-135,000 years ago. Through future sampling, it would be interesting if it turns out that basal ages of Carolina bay sand rims all date to the Sangamon Interglacial. This would suggest a common time of origin for all bays under a specific climatic regime.

Johns' Bay is also large (~.7 km along its long axis and .5 km at its widest point) with a prominent eastern sand rim merging laterally into a markedly elevated (~3 m), broad, parabolic dune-shaped landform on the southestern bay margin. The bay basin is open, characterized by low, herbaceous vegetation and an open-water pool (~.5 ha) at the south end. The owner, Mary Johns, whose house is located on the NE portion of the rim, noted that the entire basin was open water until at least 1955 when she remembers people waterskiing. Ms. Johns also noted that the bay was most recently completely inundated in 2003 when the water level was up to her yard. An interesting manifestation of the most recent inundation was the formation of a "clean" white sandy beach along the bays southeast margin. This was produced by high-energy wave action reworking the toe of the sand rim, representing former shoreline deposits consisting of both water lain and eolian components. This is significant because most bays transitioned from high-energy, open-water ponds to low-energy, vegetated wetlands during the mid-Holocene (Brooks et al. 1996), such that sediments became vegetation bound. Under this circumstance, it is hard to explain how Mid- to Late-Holocene archaeological materials could be buried on the sand rim if the sediment supply was shut down. As demonstrated by Johns Bay, this can be explained by the episodic, small-scale reworking of existing source-bordering (sand rim) deposits; in this case the beach sands would be exposed for eolian transport up on to the sand rim by winds out of the W-NW once the water level receded and the sediments dried.

Another interesting feature of the Johns Bay sand rim is the presence of water lain pebbles at elevations far exceeding the bankfull elevation of the basins margins. This seems to be typical of most bays, but the elevation differential between the bays' bankfull margins and the top of the E-SE sand rim, especially in the area of the parabolic dune-shaped feature at the southeastern end of the bay, is dramatic. With the bay sand rims representing high-energy, lacustrine shoreline features, one would expect the sediments to have both water lain and eolian components. However, the occurrence of water lain pebbles at elevations far exceeding that of what would have been the swash zone under

normal water levels can only be explained by extreme storm events with strong directional winds stacking water in surge-like fashion against the eastern and southeastern shores. This would be somewhat analogous to storm washover events in coastal settings where coarse materials (e.g., shells) are deposited well above and landward of the normal high tide range.

The parabolic dune-shaped deposits of the southeastern rim were targeted for geoarchaeological investigations. Two areas were selected for archaeological survey, with every shovel test (.50 x .50 m excavated in 20 cm levels to 100 cmbs) producing cultural material. One of these areas contained a fairly dense spatial cluster (~30 x 30 m), more similar to the archaeological patterning at Flamingo Bay than of that at Frierson's Bay.All temporal components appeared to be present, dominated by Archaic period material with the Early Archaic likely most prevalent.

In the area of highest density of archaeological material, two 2 x 2 m units ~20 m apart were excavated. Woodland and Late Archaic materials were immediately below the plow zone and an exhausted, Early Archaic Kirk/Palmer biface of Coastal Plain chert was point-plotted at 80 cmbd in one of the units. Coastal Plain chert dominated the assemblage, but small amounts of non-local material were present in the Archaic horizons. Possibly relating to proximity to the Allendale chert quarries, the chert debitage from Johns and Flamingo Bays represent the complete range of post-quarry reduction activities, whereas the small chert debitage from Frierson's Bay indicates primarily late stage tool reduction and maintenance.

Grain-size, magnetic susceptibility, and OSL samples were collected from one of the 2 x 2 m units in the manner employed at Flamingo and Frierson's Bays. Basal bay rim OSL samples were also collected from Johns Bay at 165-195 and 255-285 cmbs just above the Tertiary-aged boundary, to obtain a minimum age for the bay and to document rates of net sedimentation in the vicinity of the excavation units. The GPS coordinates for all sample locations were recorded, and surface mapping will be conducted in the near future. Analyses of samples collected from the three bays during this field season are in progress. Future fieldwork at the bays will include GeoProbe and GPR surveys of the sand rims, along with additional data collection suggested by the results of the present effort.

Tar River Survey, Greenville, NC

Christopher R. Moore and I. Randolph Daniel, Jr.

Geoarchaeological investigations along the Tar River in North Carolina continued during FY09 with collaborative research between Drs. Christopher R. Moore and I. Randolph Daniel, Jr. (Department of Anthropology at East Carolina University). This collaborative research involved ongoing archaeological and geoarchaeological investigations of Barber Creek (31Pt259) as well as Squires Ridge (31Ed365) and Owens Ridge (31Ed369) identified during Moore's dissertation research (Moore 2009b).

Barber Creek (31Pt259) and Squires Ridge (31Ed365)

Luminescence samples (n = 3) collected last summer from the Barber Creek site (31Pt259) near Greenville, NC were recently dated by Jim Feathers at the University of Washington Luminescence Dating Laboratory using the more accurate single-grain technique (Moore 2009b) (Figure 82). These age estimates provided ages in broad agreement with ages determined by Moore using the single-aliquot dating technique and with radiocarbon dating already obtained from the Barber Creek site (Daniel et al. 2008). In short, single grain OSL age estimates from Barber Creek support earlier conclusions that indicate a major transition during the Younger Dryas stadial event from primarily fluvial to primarily aeolian depositional regimes. These age estimates also bolster claims for an entirely Holocene origin for the upper meter of sand at the Barber Creek site.

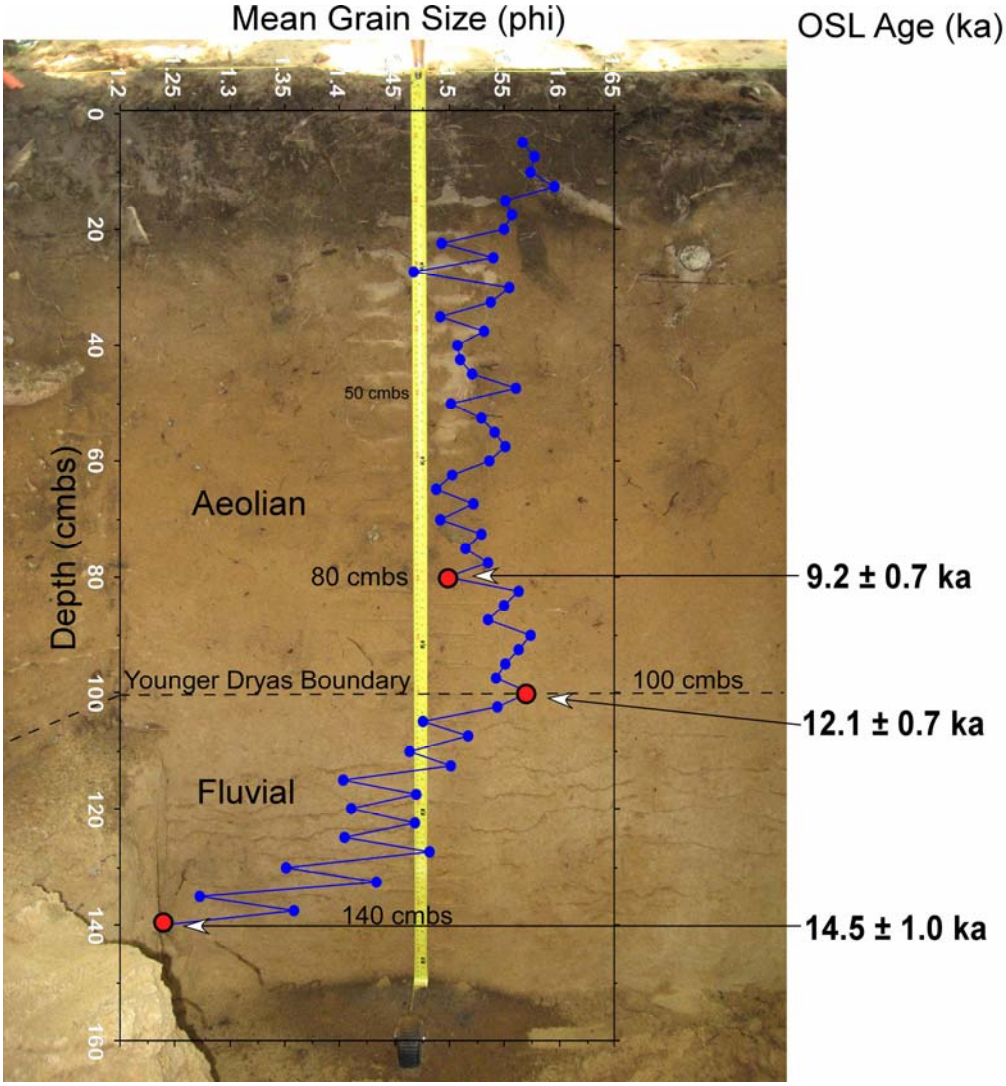


Figure 82. Single-grain luminescence (OSL) dating for the Barber Creek site (31Pt259) (Moore 2009b). Note: Close-interval grain-size data are from McFadden (2009).

This indicates that biorturbation is not the primary site formation process with respect to artifact burial at the site and that artifacts and occupation surfaces have been sequentially and episodically buried over the course of the Holocene by both aeolian and fluvial processes. In this scenario, biortubation is more accurately conceived as an overprint of the relatively intact archaeostratigraphy of the site. These data support interpretations by Moore (2009b) concerning site formation processes and artifact burial at other sites along the Tar River.

The Squires Ridge site (31Ed365) is a large relict sand ridge overlooking the modern Tar River floodplain and is located along the middle Tar River valley within the upper Coastal Plain of North Carolina. The landform was first identified with the use of high resolution LiDAR (Light Detection and Ranging) elevation data acquired through the NC DOT Floodplain Mapping Program (Figure 83). Geoarchaeological investigations by Moore (2009b) identified the site as having great potential for buried/stratified archaic through woodland occupations. Limited shovel testing and test unit excavations revealed dense archaeological deposits with indications of relatively intact stratigraphy. Luminescence dating produced age estimates consistent with Guilford, Kirk Stemmed and Palmer occupations (Moore 2009b).

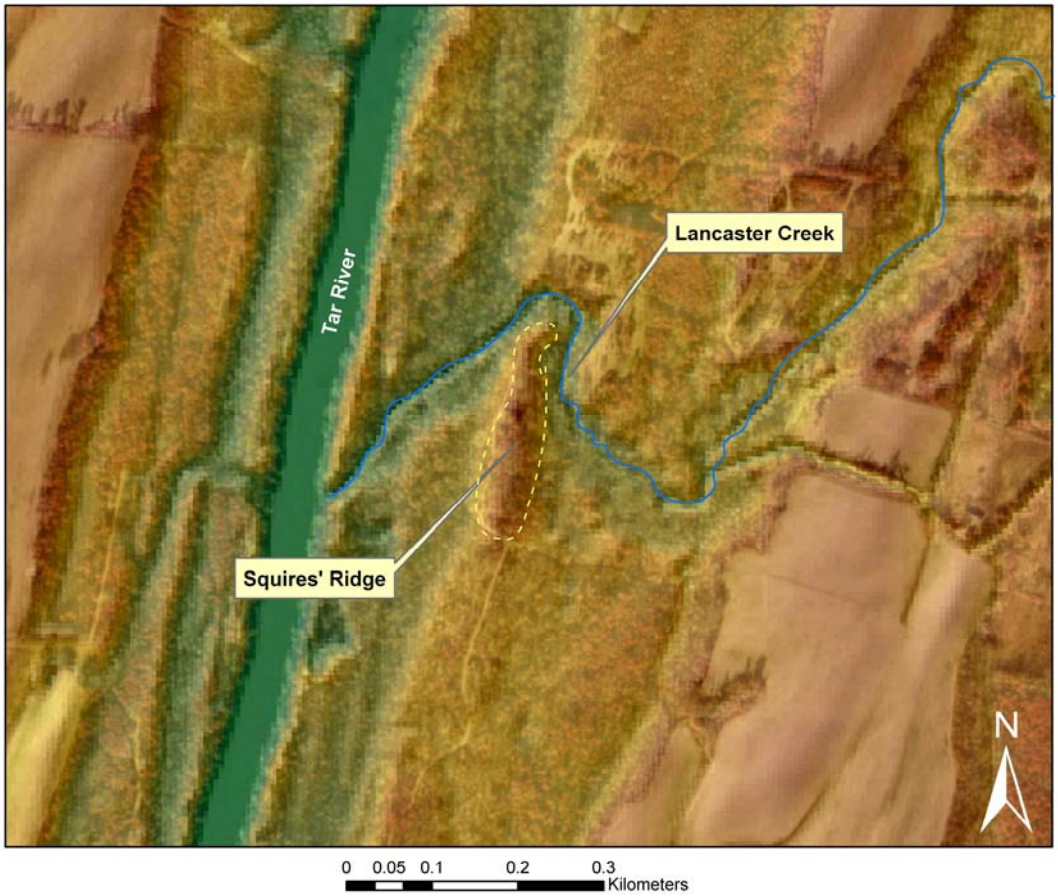


Figure 83. Color Infrared DOQQ image of the Squires Ridge site (31Ed365) in Edgecombe County, North Carolina overlaying a LiDAR shaded-relief map.

During June and July of FY09, a shovel test survey was undertaken at Squires Ridge in order to delineate site boundaries and to produce a topographic map of the sand ridge. Excavations at Squires Ridge are part of a larger collaborative and ongoing research effort between Dr. I. Randolph Daniel, Jr. (Department of Anthropology, East Carolina University) and Dr. Christopher R. Moore (Savannah River Archaeological Research Program). Shovel testing revealed dense archaeological deposits across the entire landform with some indication of broad spatial patterning between Woodland and Archaic period occupations (Figure 84). A single metavolcanic side-notched point was excavated from a shovel test along with several well made unifacial tools and endscrapers (made from local quartzite and non-local high quality rhyolite) and indicates the presence

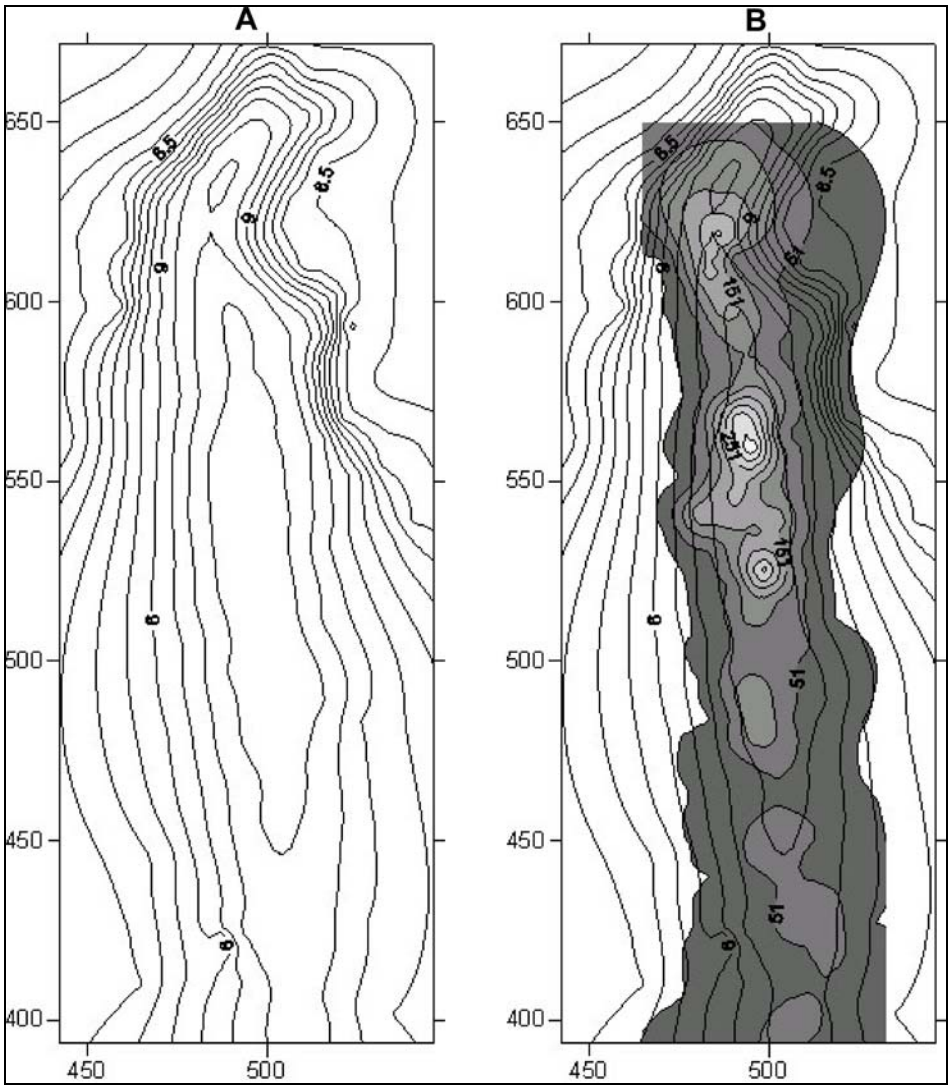


Figure 84. Contour map of the Squires Ridge site (31Ed365) generated during summer fieldwork along the Tar River in North Carolina. A) Contour map of landform, B) Isodensity map of all artifacts recovered in shovel tests. Note: Grid North is up.

of early Holocene occupations at Squires Ridge. Future work at Squires Ridge will build on previous work by Moore (2009b) and recent shovel testing with more extensive test unit and block excavations. Additional geoarchaeological analyses are also planned.

In addition to the research component of this collaboration, public outreach objectives (as set forth in the PMOA and the cooperative agreement between DOE/SCIAA) were also realized through collaboration with East Carolina University and the North Carolina Summer Ventures Program in Science and Mathematics. Selected high school students from around the state were allowed to participate in research-driven archaeological fieldwork and were taught proper excavation techniques, artifact analysis and report writing. At the end of a four week program, students were required to present their findings orally to their peers and parents.

Owens Ridge Site (31Ed369)

In July of 2009, archaeological investigations at the Owens Ridge site (31Ed369) in Edgecombe County, NC continued with the excavation of a single 2x2 m test unit (i.e., Test Unit 3). The purpose of this excavation was to expand upon previous excavations conducted during the doctoral dissertation research by Moore (2009b). Previous work (Moore 2009a) had established a baseline luminescence and ^{14}C geochronology for the landform and interpreted the site formation history of the site based on close-interval (5 cm) grain size analysis and archaeostratigraphy. Archaeological and chronometric data had indicated the potential for buried late Pleistocene/early Holocene occupations in level 8 (70-80 cmbd) of Test Unit 2. Test Unit 3 was excavated in order to look for evidence of this early occupation in the form of diagnostic stone tool artifacts. Four samples were collected for single-grain luminescence (OSL) dating in order to refine age estimates provided by single-aliquot dating of the site by Moore (2009b). Additionally, a continuous sediment column was taken in 2.5 cm intervals from Test Unit 3. Analysis of grain size data for this sediment column should help to refine our understanding of site formation processes and depositional processes at the site. While no diagnostic artifacts were found in the lower levels of Test Unit 3, a single distal point fragment (probably Middle Archaic) was recovered in level 5 (40-50 cmbd) and unifacial tools and undiagnostic biface fragments and cobble biface performs were recovered and piece-plotted in levels 7 and 8.

Evidence for stratification of Archaic occupations was evident through a clear distinction in the dominant raw material types between upper and lower levels with primarily late state metavolcanic flakes in upper levels and almost exclusively earlier stage local quartzite in lower levels. Previous excavations from Test Unit 2 had revealed a dense concentration of quartzite debitage and a formal endscrapper in level 8 (70-80 cmbd) (Moore 2009a; 2009b). This pattern was even more evident in Test Unit 3 (located immediately adjacent to Test Unit 2) with artifact concentrations peaking in level 8 and falling off quickly in level 9. Processing of sediment column and archaeological data along with single-grain luminescence dating may provide additional clues as to the age of early occupations at Owens Ridge. Future work will continue with additional excavations

in hopes of refining the cultural chronology and typology of the site by recovering diagnostic artifacts—particularly from the lower levels.

Harriot Trail Woods Site (Fort Raleigh National Historic Site), Roanoke Island, NC

Christopher R. Moore

Chris Moore continued consulting work with the First Colony Foundation in FY09 with geoarchaeological analysis of sediments and luminescence (OSL) samples from the Harriot Trail Woods site at Fort Raleigh National Historic Site. Keith Seramur (Department of Geology, Appalachian State University) and Paul Hanson (School of Natural Resources, University of Nebraska-Lincoln) are providing specialized analyses, including Scanning Electron Microscope (SEM) analysis of sand grains and single-grain OSL dating.

Excavations at Harriot Trail Woods by the First Colony Foundation have revealed 16th-century artifacts and copper pendants possibly associated with early English colonists buried beneath 50 or 60 centimeters of culturally sterile sand unit. High resolution LiDAR data reveal extensive parabolic dunes along the eastern shore of Roanoke Island along with indications of a possible overwash fan within the Fort Raleigh National Park boundaries (Figure 85). Shoreline dunes are probably more recent than the

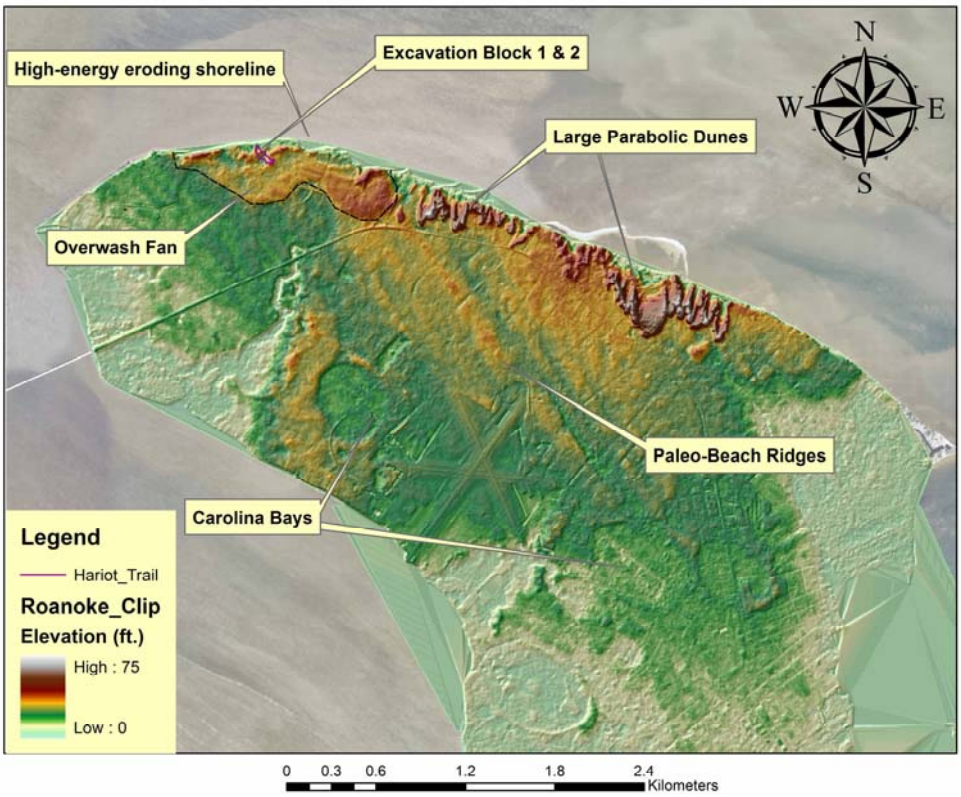


Figure 85. LiDAR image of the north end of Roanoke Island showing excavation area (Block 1 & 2) of Harriot Trail Woods, Fort Raleigh National Park. Note: Numerous parabolic dunes, Carolina Bays and paleo-beach ridges are clearly visible on this image.

early Colonial occupation of the site and may be in response to a rapidly retreating and eroding shoreline along the northern and eastern parts of the island. Analysis of grain-size samples (n = 5) from the Block 1 profile at Harriot Trail Woods clearly distinguishes the upper overwash sand unit from the underlying paleosol and B*w* soil horizon (Figure 86).

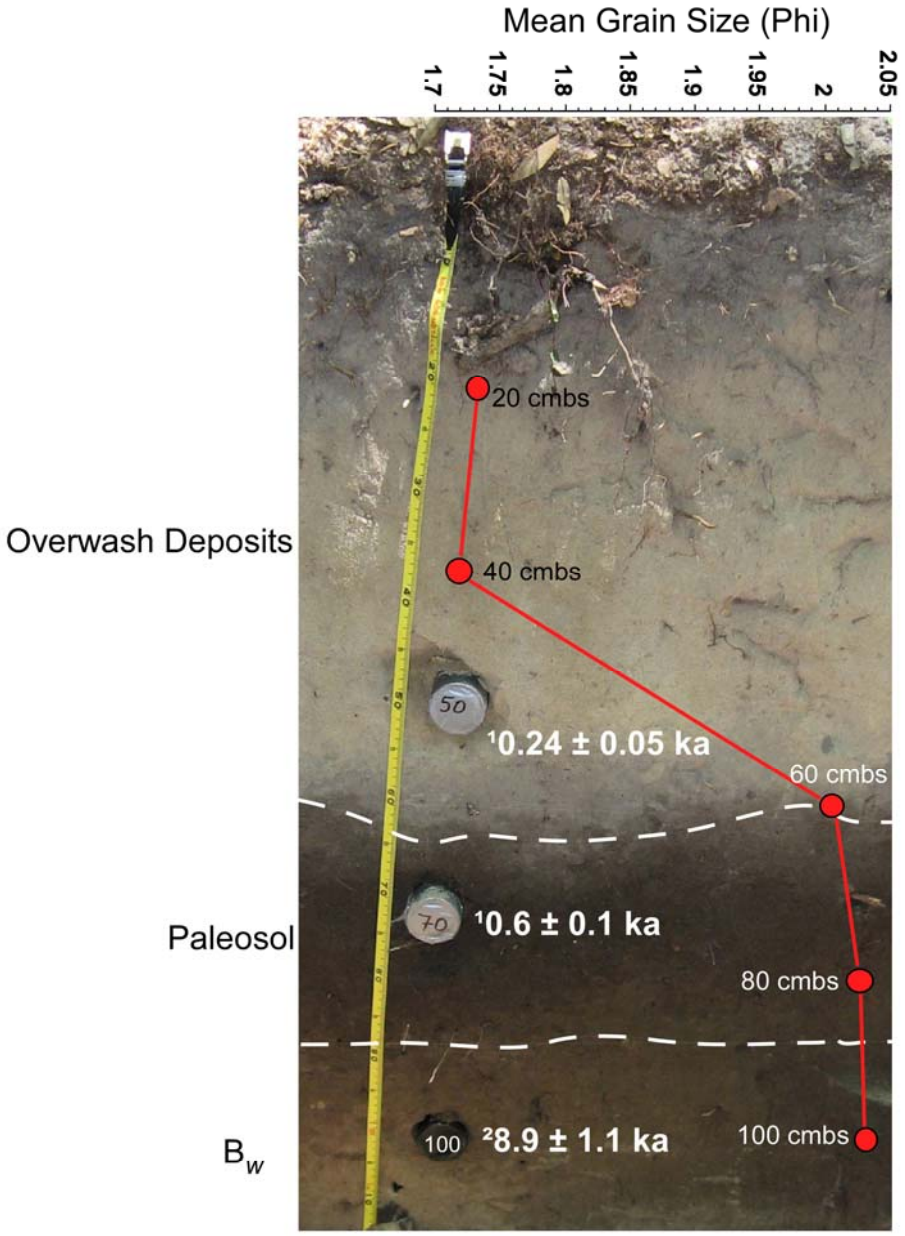


Figure 86. Stratigraphic profile with grain-size data and luminescence (OSL) age estimates for the Harriot Trail Woods site (Block 1), Roanoke Island, North Carolina.

Luminescence samples collected by Moore in May of 2008 were sent to Paul Hanson at The University of Nebraska, Lincoln for single-grain OSL dating.

Luminescence samples were collected from the base of sterile overwash sands (50 cmbs), from within a buried paleosol (containing 16th through 18th century artifacts) at 70 cmbs and from below the paleosol at 100 cmbs in presumably culturally sterile sands. Based on the age estimate at 50 cmbs (0.24 ± 0.05 ka), it appears that a major overwash event occurred across the north end of Roanoke Island around ca. AD 1769. Perhaps not coincidentally, historical records indicate a major hurricane event occurring in 1769 with reports of widespread damage in colonial settlements throughout the region. The buried paleosol sample at 50 cmbs also returned a relatively young age estimate, (0.6 ± 0.1 ka), while the sample from 100 cmbs (below the paleosol) produced an age-estimate considerably older (8.9 ± 1.1 ka). Thus, it appears that the buried soil horizon was a stable surface until at least the early1400's, until it was buried by overwash sediments in the mid-to-late-1700s. The overwash event most likely relates to the historically documented hurricane, although it's still possible that several events are responsible given the encroaching high-energy eroding shoreline along with periodic large storm events over the last 250 to 300 years. More evidence of the early colonists on Roanoke Island is likely preserved within the buried soil horizon under extensive aeolian dunes along the shoreline margin. While dune deposits will continue to migrate and reform as the shoreline continues to recede, the underlying archaeological deposits are being reworked by the high-energy shoreline with significant loss of archaeological integrity.

Graduate Student Research

Mark J. Brooks and Christopher R. Moore

Brooks continued on Christopher R. Moore's graduate committee in FY09. Chris, who was in the Coastal Resource Management Ph.D. Program at East Carolina University in Greenville, NC, graduated in May 2009. His dissertation research area was the Coastal Plain portion of the Tar River in North Carolina. The research focused on linkages between archaeological site formation processes and climate change, as manifested by shifts in fluvial and eolian depositional environments. Chris came to work at the SRARP in June 2008. His research areas include geoarchaeology, hunter-gatherer archaeology, lithic analysis, GIS, and remote sensing.

Brooks continued on David Rigtrup's graduate committee as well. David started the MA Program in the Department of Anthropology at the University of South Carolina in the fall semester of 2008. His interests include hunter-gatherers and lithic analysis. Accordingly, his thesis research will involve analyses of lithic assemblages from Early Archaic sites on the SRS. With the emphasis on gaining a better understanding of Early Archaic social and technological organization, analyses of a wide range of cultural and environmental variables will be conducted. These include lithic techno-functional, intra-site spatial, and site locational analyses. As a departure from the norm, the lithic analyses will emphasize debitage and expedient tools. These assemblage categories are more likely to be discarded in areas of tool production, use, or maintenance, and therefore should be more indicative of site-level activities and organization than formal, curated tools; formal tools tend to "move through the system" and may or may not be discarded where used or maintained. The thesis proposal, or research design, draws heavily upon

the general hunter-gatherer literature and, at the Southeastern US regional level, literature on the Early Archaic, ethnohistory, and wildlife ecology.

Moore continued on Paulette McFadden's graduate committee in FY09. Paulette completed her master's thesis in the Department of Anthropology at East Carolina University and graduated in May 2009. Paulette's thesis research involved an examination of site formation and archaeostratigraphy at the Barber Creek site (31Pt259). Paulette has been accepted into the Ph.D. program in Anthropology at the University of Florida, Gainesville and will be studying with Dr. Ken Sassaman. Paulette will be part of an interdisciplinary team of researchers examining the archaeology and geology of dunes and shell middens along the middle St. Johns River basin in northeast Florida.

Consulting

Christopher R. Moore, Mark J. Brooks, and Barbara E. Taylor

The consulting front involved a diversity of topics. These included: geomorphic and settlement modeling in the Congaree River National Park; background geomorphic and soils research in anticipation of fieldwork at an early man site in Uruguay; compiling teaching materials and references for an Environmental Geology course at USC-Aiken; delineating site formation processes at a shallow, multicomponent Coastal Plain site (Kolb site—38DA75) whose landform was of fluvial origin; geoarchaeological investigations and single-grain luminescence dating of overwash deposits at the Harriot Trail Woods site (Fort Raleigh National Monument, Roanoke Island, NC); and, examining landform evolution and site formation processes at a deeply buried, stratified, multicomponent, Piedmont site (38PN35) on the South Saluda River near Greenville, SC. The names and affiliations of the colleagues requesting assistance are presented below in the *Consulting* sub-section.

Writing Projects

Mark J. Brooks, Christopher R. Moore, and Barbara E. Taylor

Four writing projects are in progress. The first is a paper titled "Carolina Bays: Time Capsules of Culture and Climate Change" by Mark J. Brooks, Barbara E. Taylor, and Andrew H. Ivester. The paper was submitted to *Southeastern Archaeology* in May 2009.

The second writing project is an article titled "Life on the Edge: the Formation of Mathis Lake and its Human Occupation: by Andrew H. Ivester, Eric C. Poplin, Mark J. Brooks, and George A. Brook. The paper was submitted to *South Carolina Antiquities* in June 2009.

The third writing project is an article titled "Late Pleistocene and Holocene Vegetation Changes in the Sandhills, Ft. Jackson, South Carolina" by Barbara E. Taylor, Fredrick J. Rich, Mark J. Brooks, Andrew H. Ivester, and Christopher O. Cement. The

article, based on an 18 ka ^{14}C yr B.P. sediment core from a streamhead basin (Taylor et al. 2003; Brooks and Taylor 2004, 2005, 2006, 2007; Brooks et al. 2005), will be submitted to *Southeastern Geology*.

The fourth writing project is a manuscript titled "Geoarchaeology and Geochronology of Stratified Aeolian Deposits in the North Carolina Coastal Plain" by Christopher R. Moore and I. Randolph Daniel, Jr. (Department of Anthropology, East Carolina University). This manuscript will be published as part of an edited volume on the archaeology of the North Carolina Coastal Plain by The Historic Publications section of the North Carolina Archives and History.

SRS Historic Land Plat Project

George L. Wingard

All of the 1,800 ca. 1950 Atomic Energy Commission (AEC) land-plats and photos of houses and other structures have been photocopied and digitally scanned for curation at the SRARP offices. These early acquisition records are vital in aiding the SRARP in their daily compliance related activities, as well as creating the potential for further research projects.

Preliminary Archaeological Explorations at Bettis Academy and Junior College

Geoffrey R. Hughes

This project was undertaken in an effort to assist the Mt. Canaan Association with their ongoing effort to revitalize the grounds of Bettis Academy and Junior College, archaeological site number 38ED742. At the request of the Mt. Canaan Association, archaeologists with the SRARP initiated preliminary investigation of the site beginning in 2006. The project utilized a variety of methods including archival research, aerial photo rectification, ground penetrating radar, and exploratory subsurface excavation. This phase of research had three goals: 1) identify as many likely building locations as possible; 2) test the suitability of remote sensing to aid in future investigation; 3) determine the condition and nature of archaeological deposits that future investigators could likely encounter. The following is a summary of this investigation.

The following report is divided into four sections. The first section discusses the use of a 1938 aerial photograph that, when rectified with current road locations, shows the locations of over 30 structures. The next section describes the use and potential for remote sensing as a survey technique on the academy's grounds. It presents a discussion of the site's soil conditions and the results of a ground penetrating radar survey conducted over a 40 x 40 meter test square in an effort to locate the remains of Rebecca Hall. Following this, the third section describes the artifacts recovered from a 1 x 1 meter test unit excavated near the likely location of Rebecca Hall. This report concludes with a brief results and recommendations section.

Aerial Photo Rectification

In an effort to identify the likely locations of structures on the grounds of Bettis Academy and Junior College, a 1938 aerial photograph from an agricultural census was located in Thomas Cooper Library at the University of South Carolina, Columbia. Staff librarians graciously made a digital copy of the area of the photo showing Bettis Academy (Figure 87).

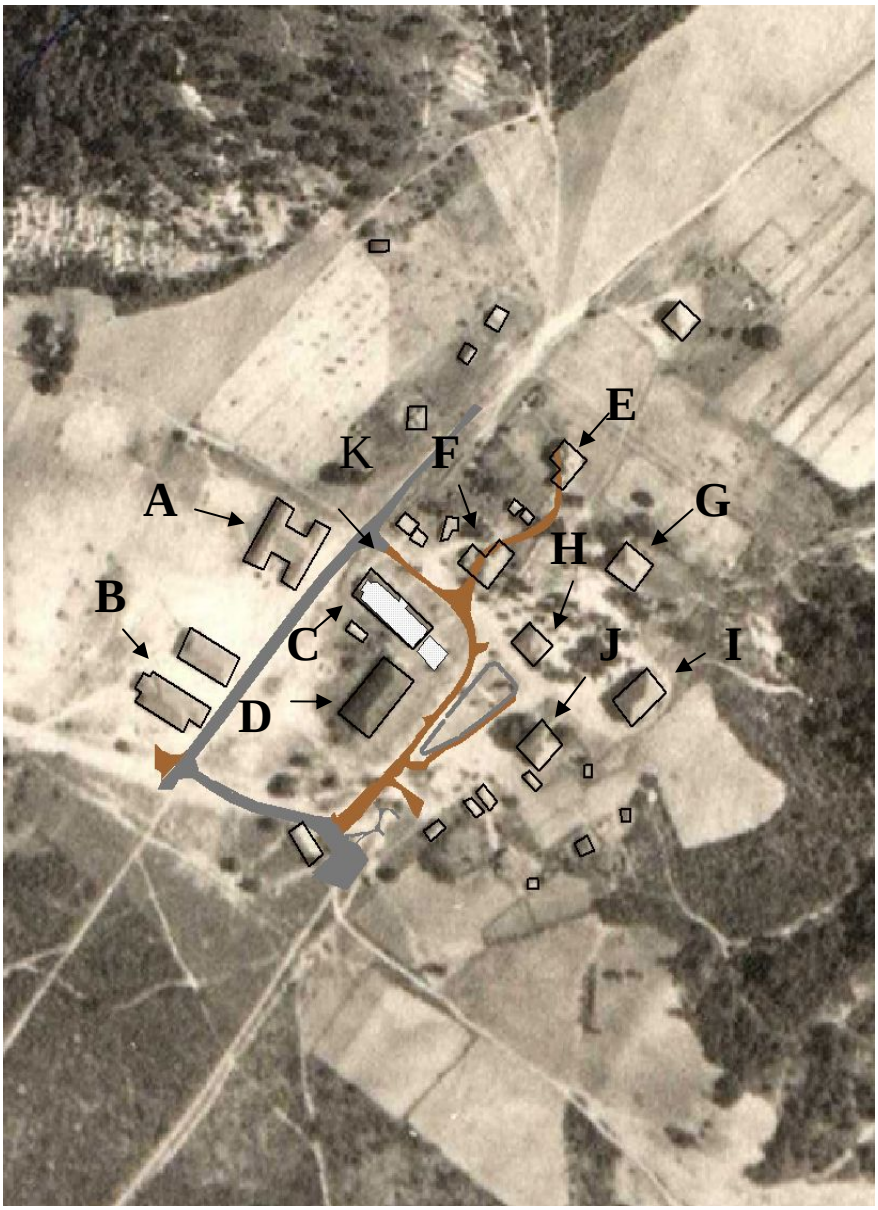


Figure 87. 1938 Agricultural Census Aerial Photograph Showing Buildings and Current Roadways (Courtesy of Thomas Cooper Map Library, University of South Carolina).

When enlarged, at least 30 structures are clearly visible. These include the following structures: A) N.Y.A. Boys' Dormitory; B) Grammar School; C) Cafeteria and Laundry; D) Girls Dormitory; E) Girls' Dormitory, Rebecca Hall; F) Pres. A.W. Nicholson Residence; G) Boys' Dormitory, Martha Hall; H) Library; I) Quinby Chapel; J) Mrs. Bessie Nicholson Residence (map on file at South Caroliniana manuscript collection). Also, as shown above, the current dirt road appears to run over the tops of the structures labeled F and E—Pres. A.W. Nicholson Residence and Rebecca Hall, respectively. In addition, walking over the segment of this dirt road, near the location of structure F, artifacts and what appear to be architecturally related brick features are visible on the surface.

Remote Sensing

Given the number of structures that have occupied Bettis Academy and Junior College through time, the site likely contains a great deal of archaeological remains. Determining the precise location of these structures will assist the Mt. Canaan Association in its efforts to revitalize the campus for the community. In addition, knowing the locations of the highest densities of artifacts will help future researchers determine where to investigate and what areas to avoid. Remote sensing offers one possible solution to this problem.

Ground Penetrating Radar (or GPR) is an effective tool for locating subsurface cultural deposits at Bettis Academy and Junior College given its location on a ridge top, overlooking Horse Creek, and soil in the heart of the campus that consists of Lakeland sand (LaB). Lakeland sands are sandy marine deposits, characterized by excessively drained sands up to at least 80 centimeters in depth below the surface that occupy 0 to 6 degree slopes (Natural Resources Conservation Service 2009). Thus, the sandy nature of the soil at Bettis Academy offers little in the way of resistance to the radar's pulse, resulting in a clear view of any subsurface features such as buried foundations and large deposits of artifacts. As cited in Walker's report, "…ideal soil types for GPR include dry homogenous soils with minimal clay" (2007:4).

In an effort to test the applicability of a GPR survey, a 40 x 40 meter square grid was established southwest of the L.W. Collins Building. This area was selected by combining oral history, historic period maps and the 1938 aerial photograph that indicated it was the most likely location to find any architectural remains associated with Rebecca Hall, the girls' dormitory. The square was laid out on a separate grid from that of the excavation grid. This grid is oriented on a north-south axis and its datum point is the southwestern most corner of the concrete retaining wall surrounding the pavilion and Reverend Alexander Bettis' memorial. Like the excavation grid, this datum is labeled N500E500, making the southwest corner of the GPR survey square located at N640E550. The GPR survey grid, its datum, and survey square are illustrated in Figure 88.

In the spring of 2007, Archaeo-Geophysical Associates, LLC was contracted to conduct a remote sensing survey over part of Bettis Academy and Junior College. Chester P. Walker surveyed the block described above using ground penetrating radar. Walker

was able to locate two, linear anomalies that appear to clearly show the buried corner of a building. Given its location, this is likely related to Rebecca Hall (Walker: 2007:6). Walker's report identifies this feature as part of Martha Hall, the boys' dormitory, instead of Rebecca Hall due to a miscommunication.

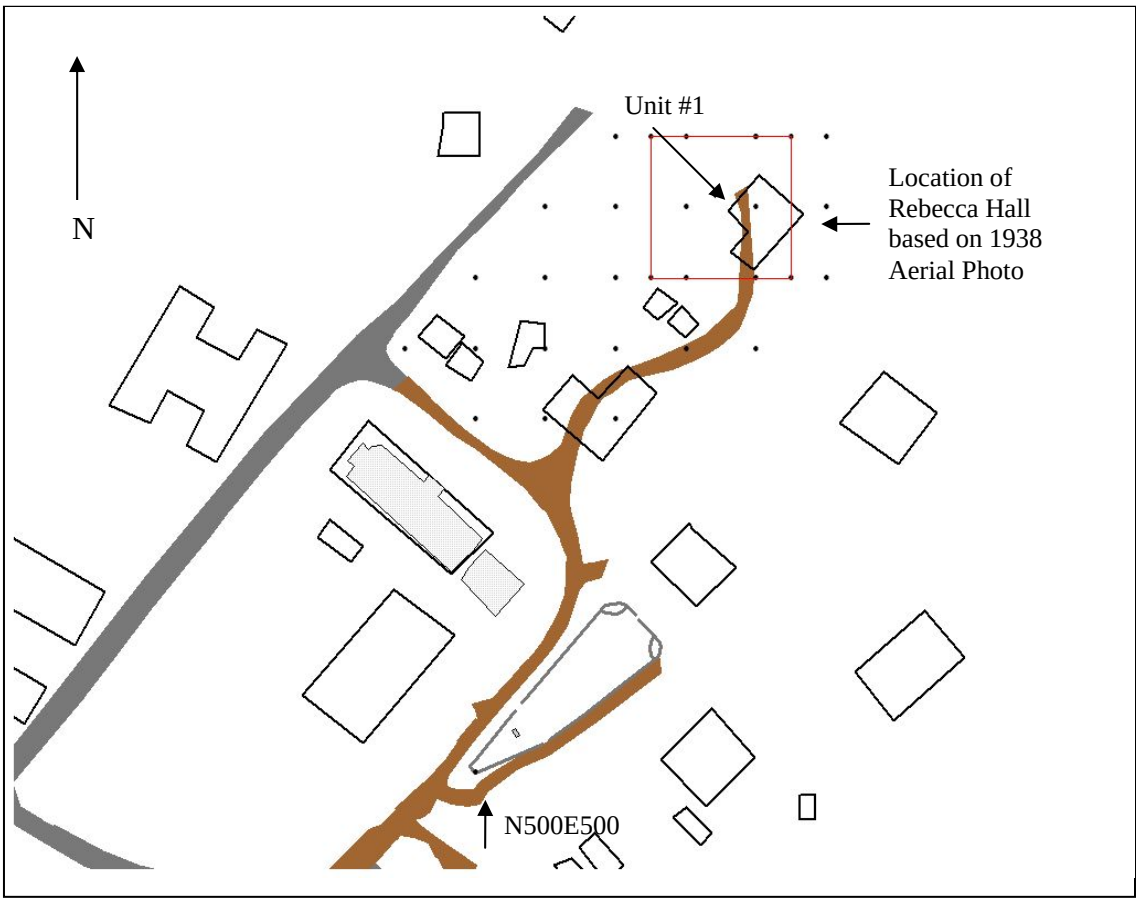


Figure 88. GPR Survey Grid Map.

Excavation

In an attempt to ascertain the presence and condition of buried artifacts and features, a 1x1 meter unit was excavated in the vicinity of Rebecca Hall's likely location. Three stratigraphic layers were encountered during excavation, labeled Layers A, B and C. At the base of Layer C, the surface of one feature, bisecting the unit diagonally, was discovered (labeled Feature #1). Excavation terminated when Feature #1 was encountered and the base of the excavation unit was covered with a layer of black plastic and backfilled to protect the feature. Each excavated layer, its contents and Feature #1 are discussed below.

Prior to the excavation of Unit #1, an excavation grid (independent from the GPR survey grid) was established, using the still visible concrete foundation of the Bettis

Academy's cafeteria. The grid was laid in using a transit and pulling a reel tape starting at the northwest corner of the cafeteria's stoop. Grid North was laid out at 309°, parallel with the foundation's long axis. This orientation is also consistent with the orientation of many of the buildings shown on the 1938 aerial photograph. The grid datum, was assigned the coordinate of North 500 meters, East 500 meters (N500E500). Based on this system, the southwest corner of Unit #1 was located at N465E614.

Layer A (also called the A Horizon) is the current surface. This layer consisted of lawn grass, rooted in a sandy loam (Munsell color: 10YR4/2 "dark grayish brown"). The depth of this layer ranged from only 2.2 to 4.1 centimeters in thickness. No artifacts were recovered. Artifacts were first encountered while excavating Layer B. In both texture and color, this sandy loam was consistent with that of Layer A. However, unlike Layer A, Layer B was full of artifacts and architectural debris. The layer averaged from 3.6 to 5.4 centimeters in thickness to a depth of up to 9.5 centimeters below ground surface. A total of 279 artifacts were recovered, cleaned, and recorded from this layer. Some of the commonly found artifacts within this layer included ceramic sherds, brick and mortar fragments, medicinal bottle shards (Figure 89), flat glass, and mirror shards.

Figure 89. "IMPERIAL MEDICINE" bottle fragment recovered from Level B, Unit #1.

Below Layer B, a "very dark grey" (Munsell: 10YR3/1) midden, rich in artifacts and debris was encountered. Layer C averaged in thickness from 6 to 11.9 centimeters in thickness and a depth up to 19.8 centimeters below ground surface. Similar to Layer B, artifacts recovered from Layer C include ceramics, nails, glass, pins, and a U.S. Army insignia as shown in Figure 90.

Excavation of Unit #1 ended when the first feature was encountered directly underneath Layer C. Feature #1, consisting of a "brownish-grey" loamy-sand (Munsell:

10YR4/1) nearly bisected the base of Layer C from northwest to southeast. In contrast, the matrix of the northeastern half of Unit #1 consisted of a "yellowish brown" (Munsell: 10YR5/4) mottled sand with common clay inclusions. Three glass marbles were recovered from the surface of Feature #1 as shown in Figure 91.

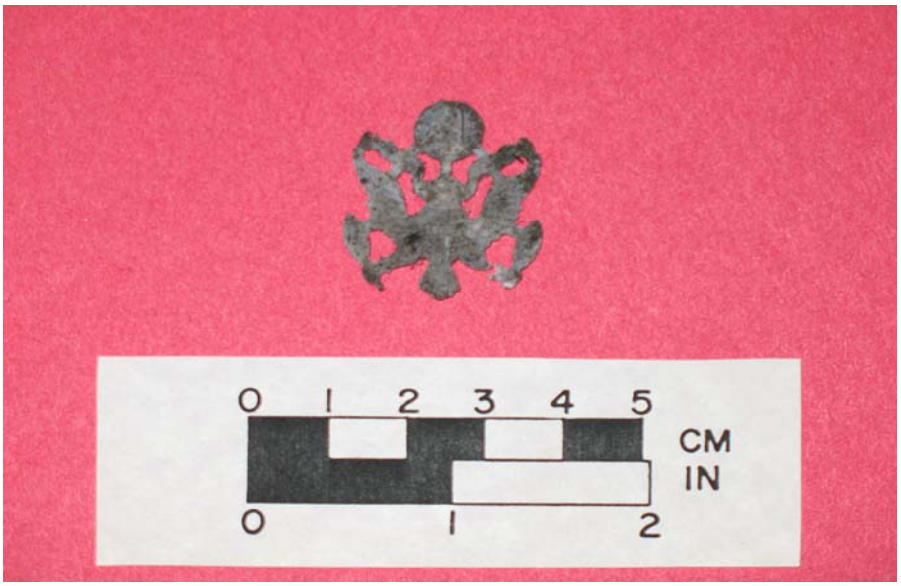


Figure 90. United States Army insignia recovered from Level C. Unit #1.

Figure 91. Marbles recovered from surface of Feature #1, Unit #1.

As stated above, fragments of brick and mortar as well as carbonized wood were recovered during the excavation of Unit #1. Representative samples of brick and mortar fragments were collected, cleaned and recorded. The remainder was collected, counted and weighed. Approximately 826 brick and 2,170 mortar fragments were collected in this manner. The brick fragments weighed a total of 7.2 lbs. while the mortar weighed 31.8 lbs. It is common archaeological practice to discard ubiquitous artifacts that offer little in the way of meaningful research data beyond being counted, weighed and representative samples collected. The brick, mortar and carbonized wood collected from Unit #1 represent just such a case. However, all recovered brick, mortar and carbonized wood was collected and saved for the Mt. Canaan Association, as the property owners of the Bettis Academy and Junior College grounds, to decide whether they should be discarded. The discard of these bags would not represent a substantial loss of data.

As excavated artifacts were recovered from Unit #1, they were transferred to the SRARP laboratory for processing. Consistent with SRARP curation procedures, all artifacts were visually examined prior to being washed. All iron artifacts such as nails and screws were dry brushed so as to avoid further corrosion. Once the artifacts were cleaned, they were bagged in inert polyethylene bags by artifact class and field specimen number (Crass 1991:7-11). Bag tags consist of acid-free tags, marked with acid-free, waterproof markers. Finally, the exterior of each bag are labeled with a bag number, field specimen number and the site number.

Results and Recommendations

Preliminary investigation at Bettis Academy and Junior College revealed a site with significant potential for further research. Based on the exploratory work reported here, it is likely that the grounds of Bettis Academy and Junior College are archaeologically rich. Moreover, the richness of the site's historical documentation and oral tradition make it an ideal candidate to both generate and answer a range of research questions. Several aerial photographs exist, showing the campus and its structures in detail, especially a 1938 agricultural census photograph. The combination of all of these sources should allow the Mt. Canaan Association to accurately identify the locations of a significant number of structures.

Subsurface testing revealed the presence of intact archaeological deposits, including at least one feature. Layers B and C of Unit #1 revealed a wealth of architectural material. The presence of large quantities of brick, mortar and window glass in the vicinity of where the aerial photograph, historic maps and oral history locate Rebecca Hall, suggest that these remains may in fact be part of the dormitory. Many of the artifacts recovered date to the period when Rebecca Hall was occupied. The presence of a nail with a hand-wrought head, a manufacturing technique dating to before the 1820s and prior to the academy's founding, suggests that some building materials may have been reused (Hume 1991:253).

Given the site's sandy soils, Bettis Academy and Junior College is an ideal candidate for a more complete remote sensing survey. The test survey was successful in

locating what could be a corner of Rebecca Hall. Further remote sensing survey of the academy's lawns, is likely to reveal a number of buried architectural features and related deposits. While remote sensing surveys can be costly, they represent a noninvasive means of locating buried cultural resources; thereby helping to both protect the resource and provide guidance for future archaeological investigation and historic interpretation.

A Geophysical Assessment of the Macon Plateau Site, Ocmulgee National Monument, Macon, Georgia

Adam King and Chester P. Walker

This report presents the results of our effort to evaluate the effectiveness of the gradiometer and ground-penetrating radar for locating prehistoric cultural features and old excavation units at the Macon Plateau site. Toward that end, we conducted gradiometer and ground-penetrating radar surveys at four different locales within the Macon Plateau site. Our results indicate that these techniques were effective in meeting our goals and justify additional effort to develop a geophysical survey protocol for mound and non-mound areas at the site and ultimately conducting large-scale surveys at the site.

Macon Plateau and Geophysical Prospecting

The Macon Plateau site (9BI1) is one of the most enigmatic Mississippian period mound towns in the Deep South (Figure 92). It is both one of the largest and earliest Mississippian centers in the region. It also is well established that the material culture associated with the site is unlike the pottery traditions, burial practices, architectural modes, and town organization found at contemporary sites in central Georgia. For this reason, it has long been argued that Macon Plateau represents an intrusion of foreign people and practices into central Georgia (Kelly 1938; Fairbanks 1952; Willey 1953; M. Williams 1994).

In the history of Southeastern archaeology, Macon Plateau is also famous for the scale of archaeology that was conducted at the site during the Depression Era (Figure 93). At that time, federal monies employed as many as seven hundred field crew conducting testing and excavation across the Macon Plateau site (Lyon 1994:180; Hally 1994). While the scale of the project is legendary, the results of the project are infamous because they are under-analyzed, under-published, and difficult to interpret (Hally 1994:3). It is clear that these problems were created by the emphasis—from a federal perspective—on labor intensive aspects of archaeology at the expense of the more knowledge intensive elements of analysis and reporting (S. Williams 1994:12). The ironic result is that, despite the scale of archaeology conducted at the site, we know surprisingly little about the dating, function, and structure of Macon Plateau.

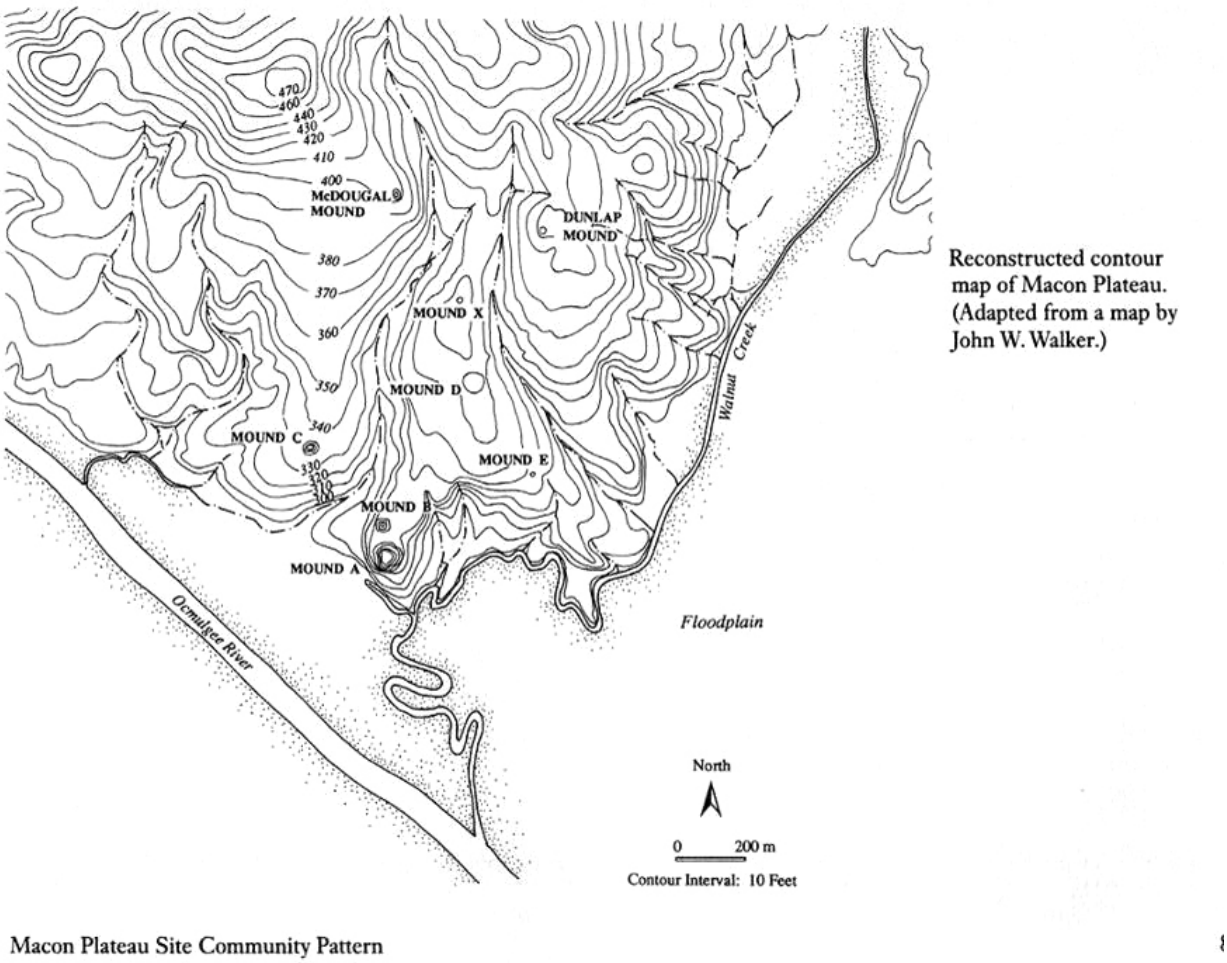


Figure 92. Topographic map of the Macon Plateau site (from Hally and Williams 1994).

Geophysical Survey Methods

Across the Southeast, researchers are producing large-scale geophysical data sets at major Mississippian sites such as Etowah (Walker et al. 2008), Angel (Peterson 2003), and Kincaid (Clay et al. 2007). These data construct a compelling case that geophysical surveys can produce detailed information about the nature and distribution of cultural features more quickly and inexpensively than conventional excavation strategies. They also have the important benefit of being non-destructive. Ultimately, geophysical surveys cannot provide contextual and chronological information fundamental to archaeological research. While these kinds of data can be produced only by excavation, geophysical surveys provide a level of knowledge that makes it possible to limit and focus excavations to answer key questions and limit the impact of excavation.

For this project, we employed both a gradiometer and ground-penetrating radar. Magnetometer and gradiometer surveys are non-invasive and passive techniques that measure slight variations in the magnetic properties of soil. Magnetometers and

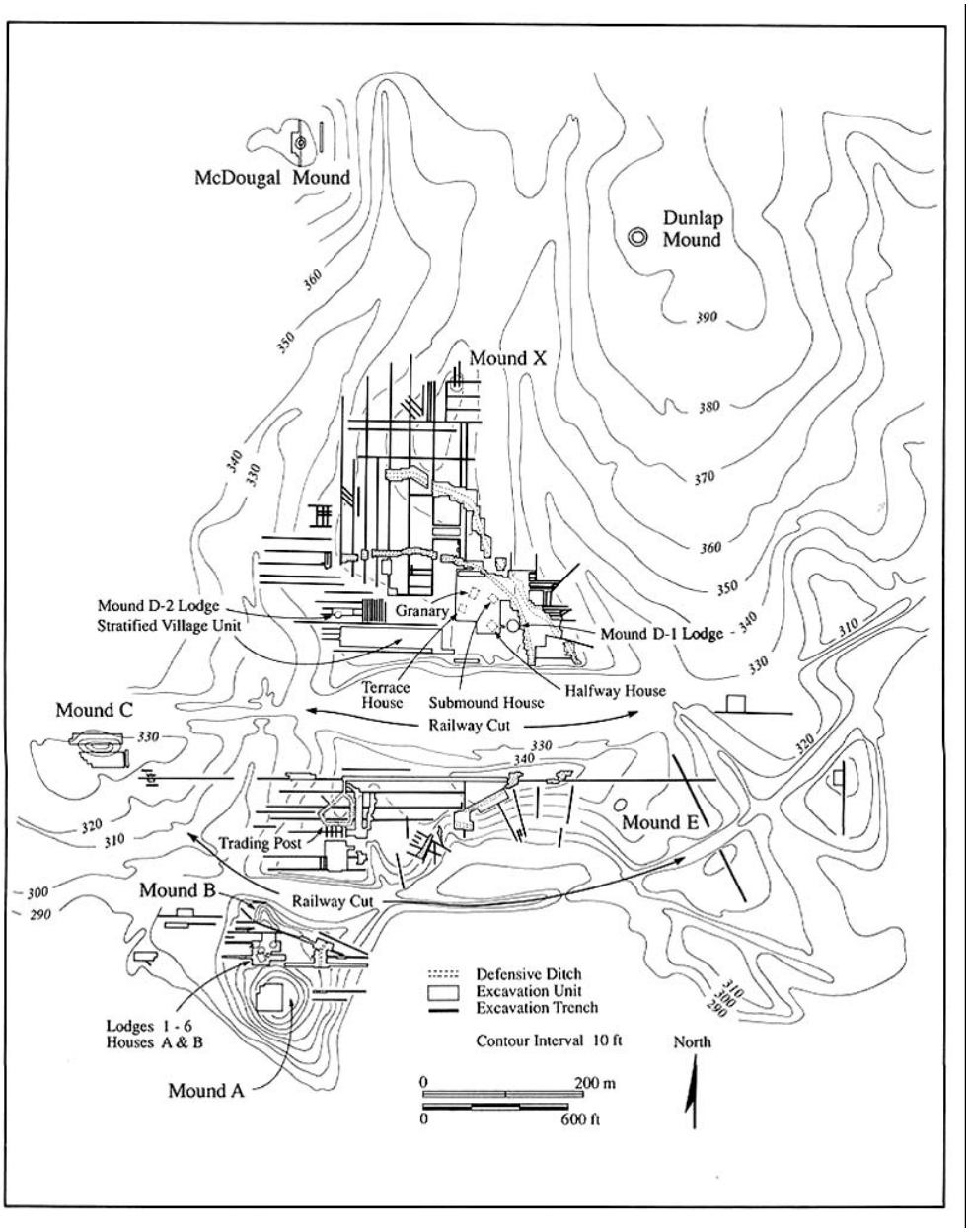


Figure 93. Map of the WPA excavations (from Hally and Williams 1994).

gradiometers have become the primary tool for archaeo-geophysicists due in part to the fact that geophysical data can be collected and processed rapidly and efficiently, and when conditions are right due to the properties of specific soils, magnetometers and gradiometers have proven useful in locating negative relief features such as pits and post holes as well as thermally-altered features such as fire hearths and burned structures (Gaffney 2008; Gaffney et al. 2000; Kvamme 2006a).

Magnetometers and gradiometers record the minute fluctuations that sediments and objects have on the earth's magnetic field. This is known as induced magnetism because the object does not maintain its own magnetic field. If the effects of this induced

magnetism are strong enough compared to the magnetism of the surrounding soil matrix, even small pit features or post holes can be identified or resolved in the geophysical data along with the larger-sized features (i.e., structures). A second type of magnetism called remnant magnetism is created when an object maintains its own magnetic field. In prehistoric archaeological examples, this occurs when objects themselves are thermally altered, thus creating a magnetic state called thermoremanent magnetism (Kvamme 2006b:207). The properties of the specific magnetometer used in the current study—a Bartington 601-2 Fluxgate Gradiometer—is discussed in detail by Bartington and Chapman (2004).

Ground-penetrating radar (GPR) is an active, non-invasive technique that uses a shielded surface antenna to transmit pulses of radar energy, generally high-frequency electromagnetic (EM) waves, that reflect off buried objects, features, or geological bedding contacts and are detected using a receiving antenna (Conyers 2004:23-28). The waves detected by the receiving antenna are recorded in nano seconds (ns) that reflect the two-way travel time of the radar energy. Fairly accurate approximations of depth of recorded anomalies can be determined through velocity analysis (Conyers and Lucius 1996).

While GPR is one of the more widely used techniques in archaeological geophysics, its success, like that of the other archaeo-geophysics techniques discussed herein, is largely based on such site conditions as soil type, sediment mineralogy, and moisture content (Conyers 2004; Kvamme 2003). For example, ideal soil types for GPR include dry homogenous soils with minimal clay. On the other extreme, radar energy will become attenuated more quickly in more conductive mediums such as clay and poorly drained soils or in mediums with high magnetic permeability (Conyers 2004).

Data Collection and Processing

Both gradiometer and GPR data were collected using an RTK GPS system to position the readings. The gradiometer was zeroed out and then attached to a two wheeled non-magnetic hand cart. Realtime data output was stored in an Allegro CX field computer and integrated with the GPS coordinates. A grid is projected on the display of the filed computer that is adjusted to the parameters of the survey area. The field surveyor walks along these grid lines to ensure complete coverage. The gradiometer is set to ouput data at 10 Hz and the GPS is set to output data at 2 Hz. The data collection software interpolates the GPS positions for the gradiometer data points that fall between the 2 Hz GPS cycle.

For the GPR a GPS to GPR data bridge was used to store GPS data, outputted at 1 Hz. At the start and stop of each GPR file the SIR 3000 communicates with the data bridge and uses a time sync to log a GPS coordinate. A GPR survey wheel was used to calculate the exact length of the GPR data file. Then at the end of the file the GPR communicates with the data bridge again and positions the GPS coordinates appropriately along the GPR file using the start and end points as well as the survey wheel information.

All data were processed and filtered to remove extraneous false readings (spikes and drop-outs). Data processing levels the datasets so adjacent grids are combined into a single image with no "grid lines." Datasets were processed to enhance the visibility of the target features and geophysical anomalies through statistical manipulation of the recorded data as well as through image processing of the image file output.

The general goal of data processing is to lessen the effects of background "noise" and to enhance the quality of the "signal" or "target." In field geophysics in general, and archaeo-geophysics in particular, the term noise is used to discuss any return that is not a result of the object under investigation—the latter being referred to as the "target" or "signal." Hence, in some cases what is discussed as noise can in another case become the signal or target (Milsom 2005:13-14). Accuracy of the geophysical readings are not as important for resolving targets as is the contrast between the target and its surrounding matrix.

The major data processing techniques are discussed in this section (see also the ArchaeoSurveyor or GPR Slice user manuals), along with details on the specific data processing workflow applied to each collection grid. Kvamme (2006a:236) is followed in the general approach to data processing. After each processing step, the results are closely compared to their previous state to assure that data manipulation is not in fact decreasing the clarity and quality of the data, and thus insures that the findings are not products of data processing.

GPS guided gradiometer data was processed using a zero median de-stripping filter. De-stripped data was then imported into Surfer 9.0 and gridded, projected as a raster image and exported as a Geo Tiff world file. The raster was imported into ArcGIS 9.2 for the production of vector polygon interpretative maps. GPR data collect both with GPS and in a DG was processed in GPR Slice 6.0. EM and Resistance data were processed using ArchaeoSurveyor 2.0. Image files were exported into ArcGIS for geo-referencing and as well as the production of vector polygon interpretative maps.

Results and Interpretation

In an effort to assess the usefulness of the gradiometer, and to a lesser extent the ground-penetrating radar, for identifying buried archaeological features and old excavation units, data were collected in several different parts of the site. These have been designated as the Mound X Area, the Trading Post Area, the Mound A Area, and the Funeral Mound (Figure 94).

The Mound X Area encompassed four different survey blocks located between Mound X and the outer defensive ditch excavated during the WPA work (Figure 95). Tree cover in these areas impacted the ability of the GPS system to contact satellites and as a result some of the data are difficult to interpret. In the easternmost area the WPA excavation trenches are visible (Figure 96). In the southern area a circular pattern of highly magnetic anomalies is visible (Figure 97) and segments of two similar anomalies are visible in the northernmost area (Figure 98). There is a high likelihood that these represent the remains of circular buildings.

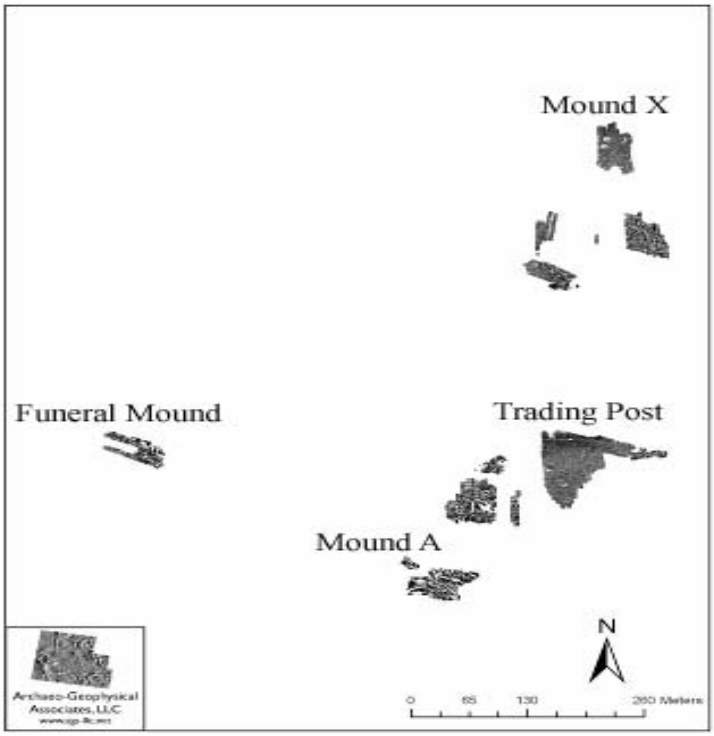
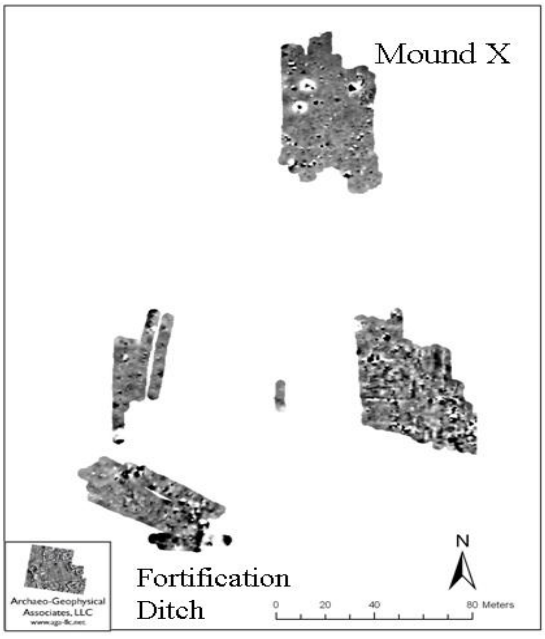


Figure 94. 2009 gradiometer survey areas.



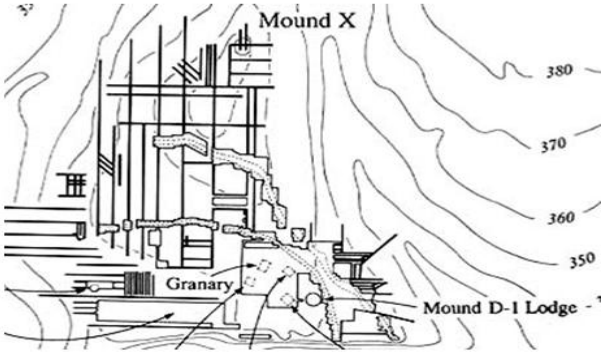


Figure 95. Mound X Area gradiometer data.

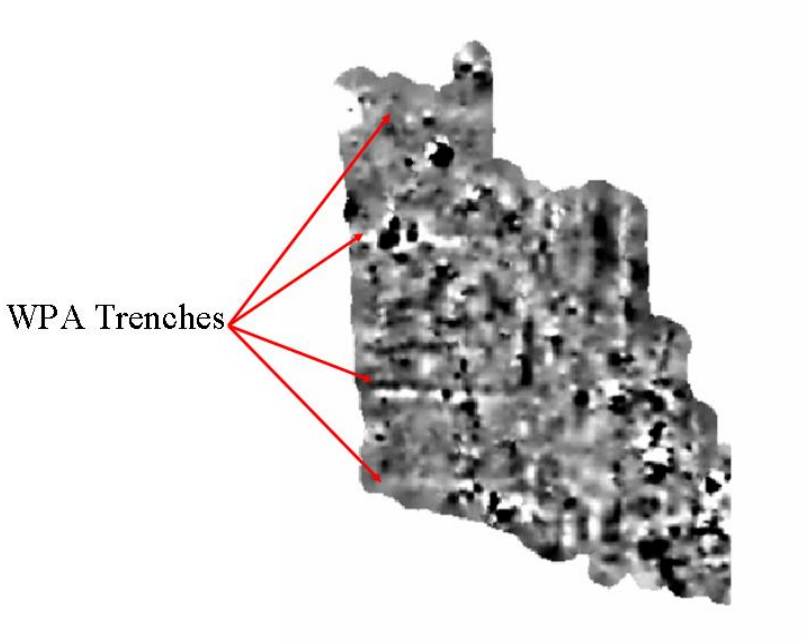


Figure 96. Mound X Area East gradiometer data.

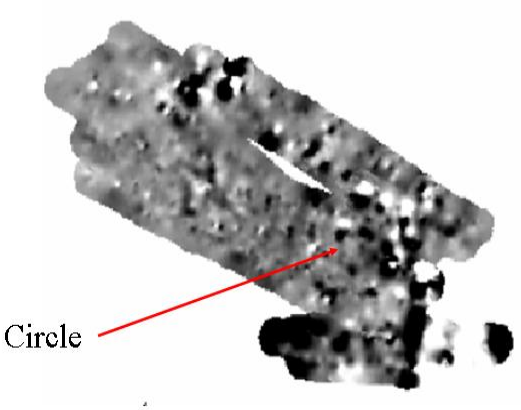


Figure 97. Mound X Area South gradiometer data.

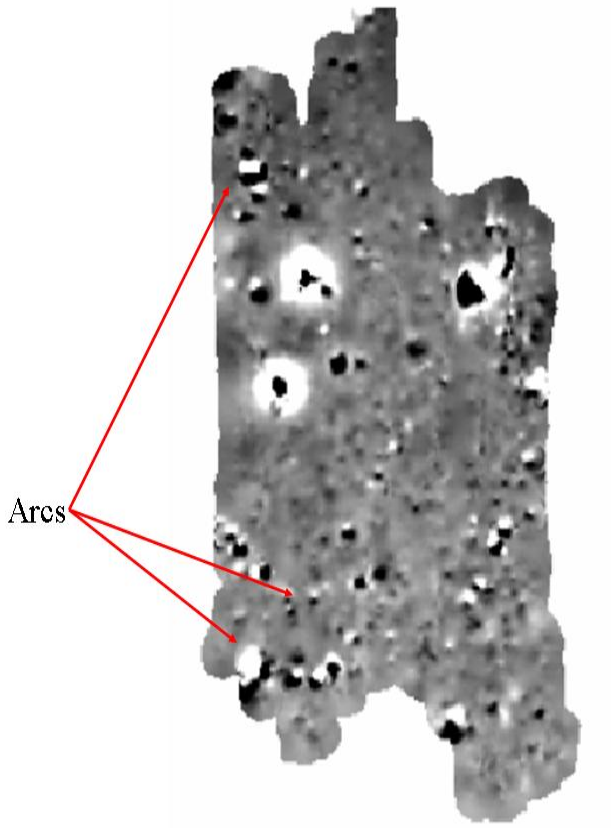


Figure 98. Mound X Area North gradiometer data.

Survey in the Trading Post Area concentrated on the open areas to the east, west and south of Trading Post (Figure 99). To the east of the Trading Post we were able to relocate the WPA trenches (Figure 100) and to the south a WPA excavation block is visible (Figure 99). This area also contained three circular patterns and three arcs that likely represent the remains of as many as six additional circular buildings (Figure 101).

The Mound A Area consisted of survey blocks located on the summit of Mound B and a second between Mounds A and B (Figure 102). Unfortunately the data from the Mound B summit show no visible patterns and the data from the area between the mounds was extremely complex, indicating a soil matrix that had been mixed and re-deposited. Despite this, the excavations conducted by the WPA are visible in this area.

The final survey area was chosen in the vicinity of the Funeral Mound. A gradiometer survey block was completed west of the Funeral Mound (see Figure 94), but it produced no visible patterns. Data were collected from the summit, flanks and to the south of the Funeral Mound itself using ground-penetrating radar (Figure 103 – Figure 104). These data are very preliminary, but they do appear to show the extent of the WPA excavations on the mound's summit and northern flank. A series of anomalies appear to the east and south of the mound that may represent unexcavated burials or other large features.

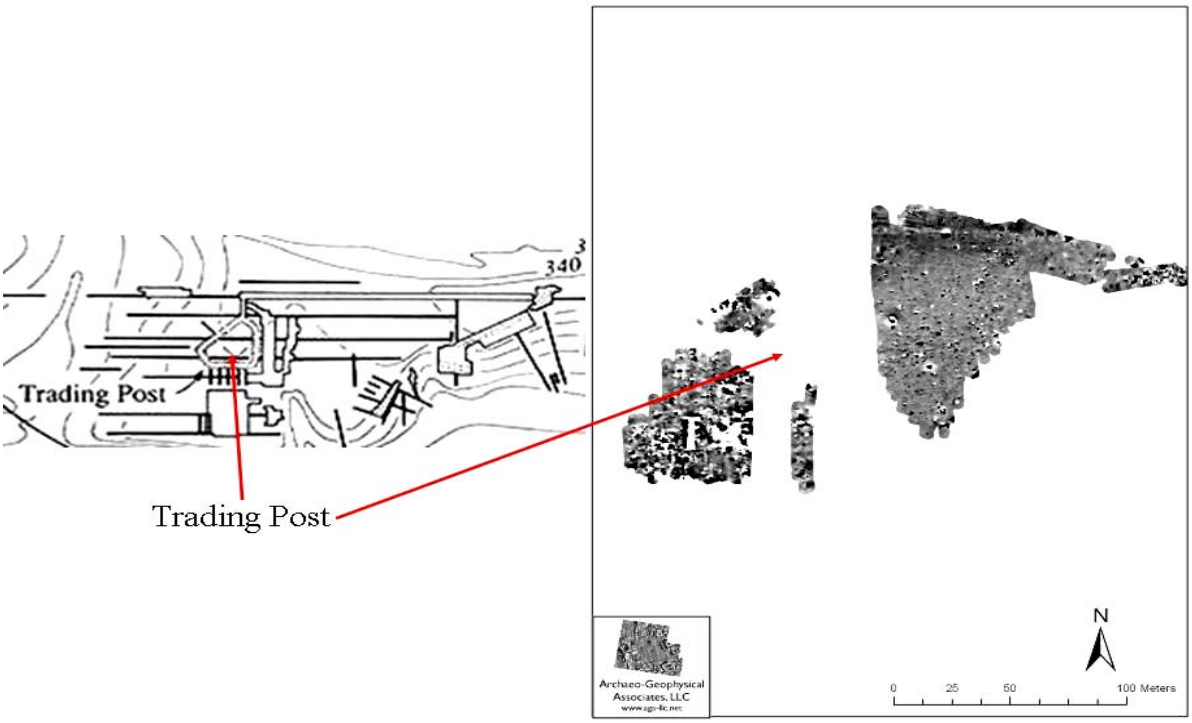


Figure 99. Trading Post Area gradiometer data.

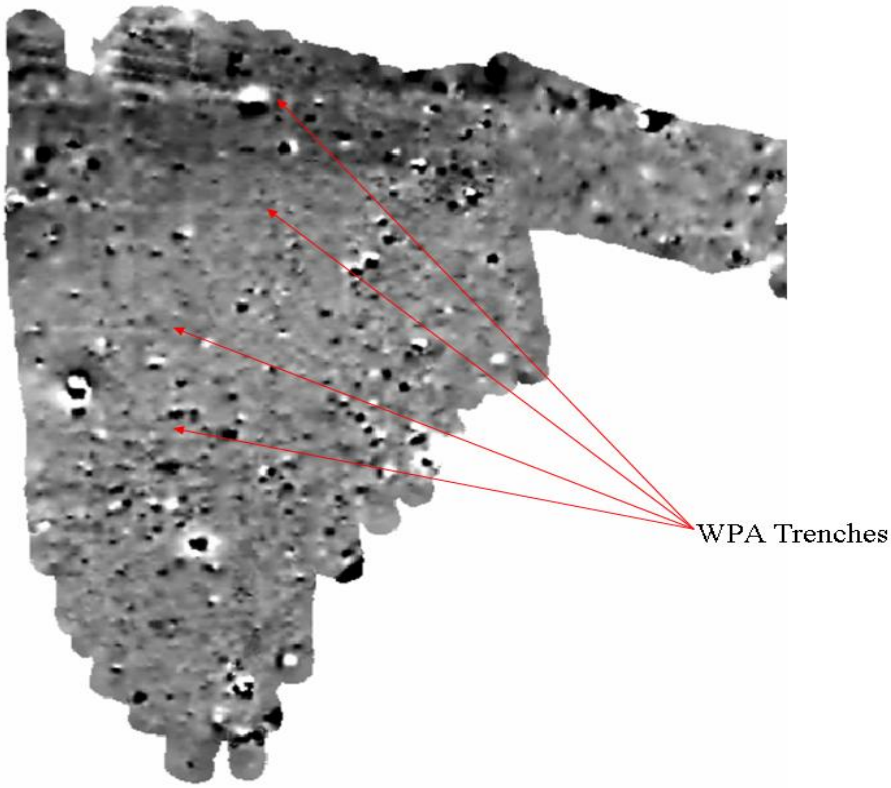


Figure 100. Trading Post East WPA trenches.

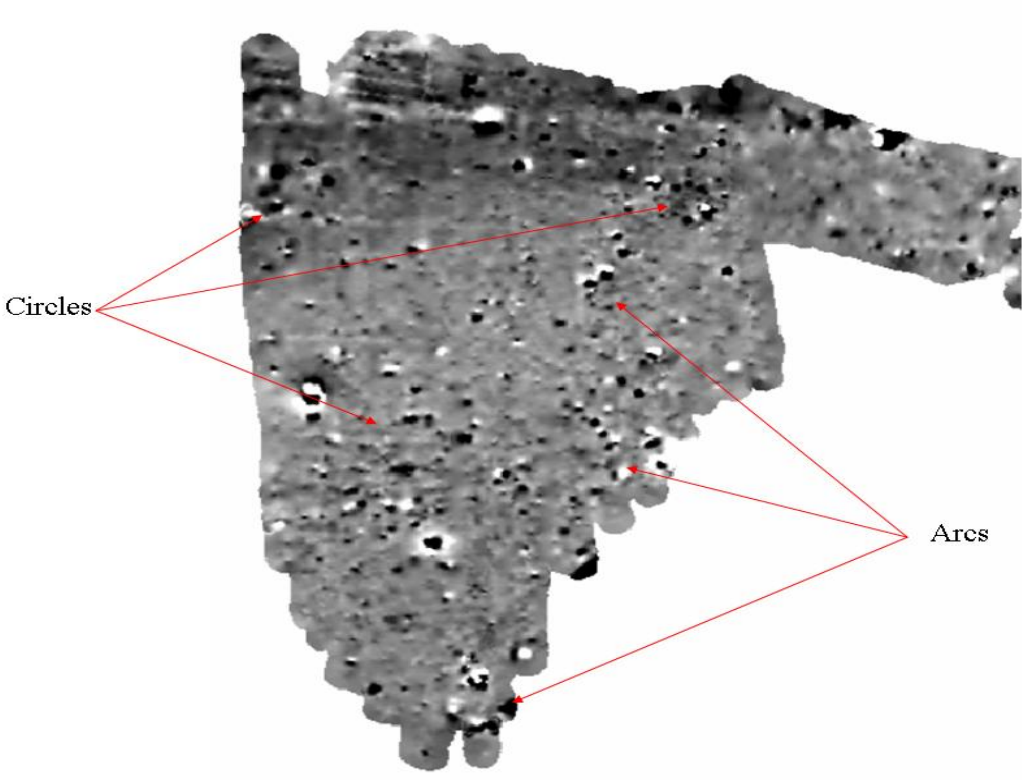


Figure 101. Trading Post East buildings.

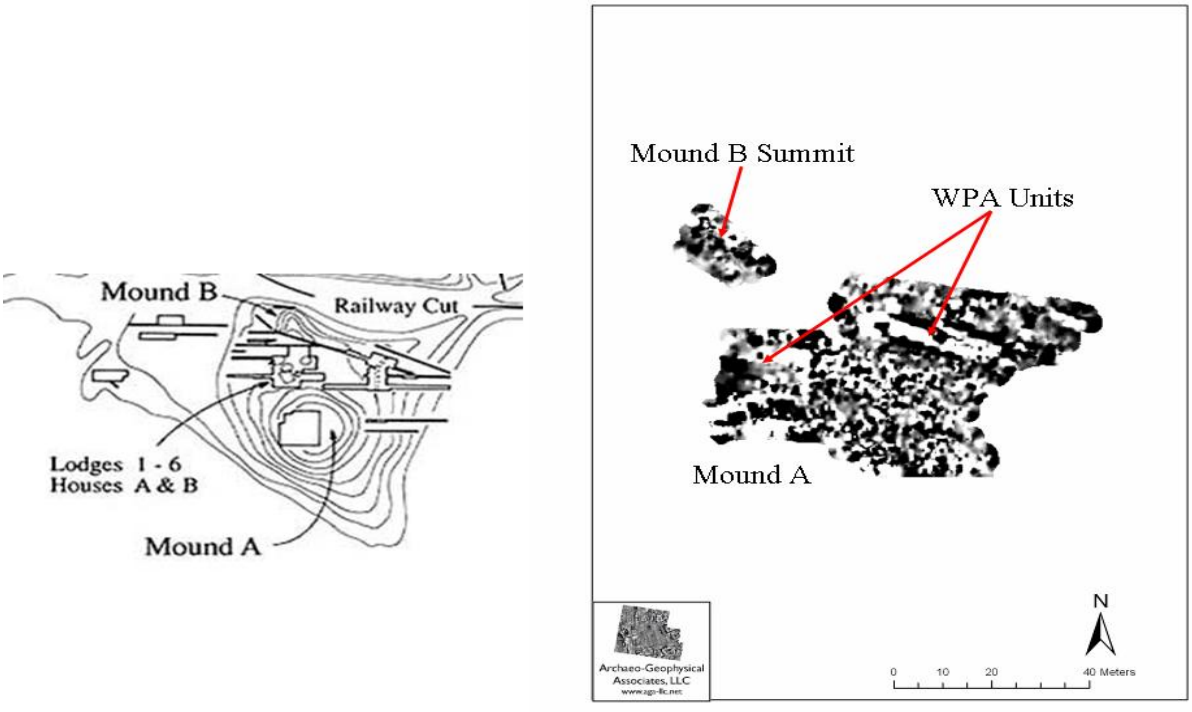


Figure 102. Mound A Area gradiometer data.

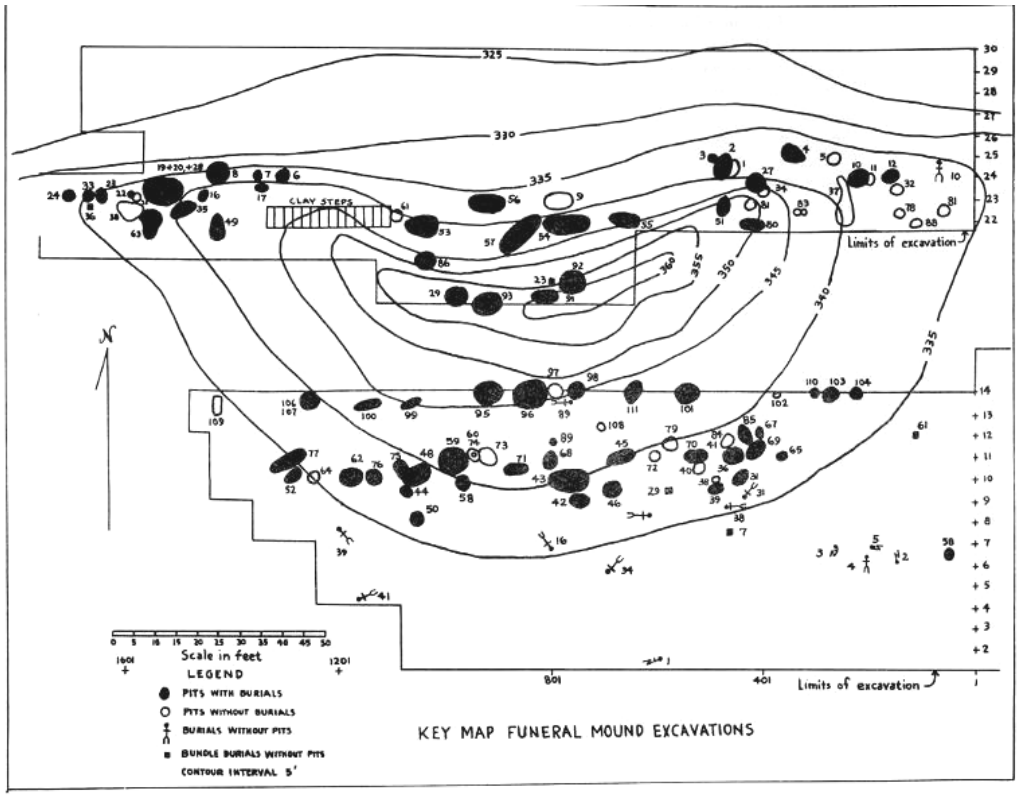


Figure 103. Map of Funeral Mound excavations (from Fairbanks 1952).

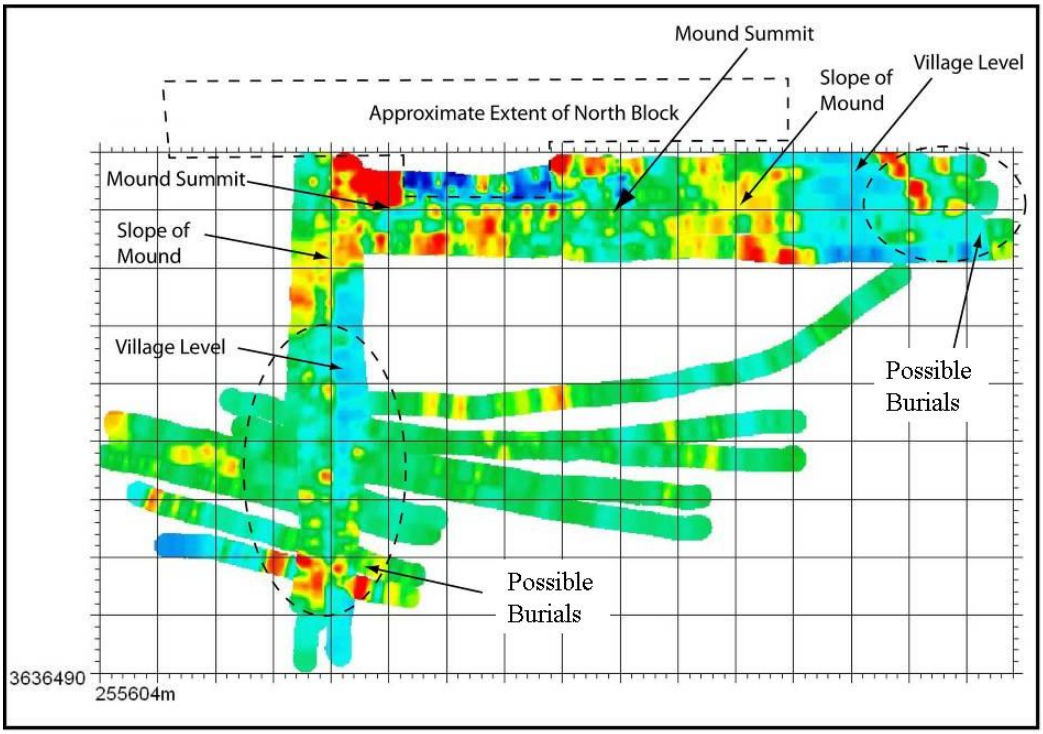


Figure 104. GPR Data from the Funeral Mound.

Concluding Comments

Our goal in conducting these geophysical prospecting surveys was to evaluate the effectiveness of the gradiometer and ground-penetrating radar for locating prehistoric cultural features and old excavation units. Both techniques proved effective as WPA-era excavations were located in each of the areas investigated and the remains of as many as seven circular buildings were detected south of Mound X and east of the Trading Post.

Without question, the most interesting result from these preliminary surveys was the discovery of those circular buildings. The famous Macon Earthlodge or Lodge D-1 was a large round building with elaborate internal architectural features that has been interpreted to be a ceremonial structure. As many as three others may have been recorded adjacent to Mound A (Hally and Williams 1994). In addition, Hally and Williams (1994) report that WPA excavators recorded as many as seven other circular buildings that lacked the architectural elements of the earthlodges. These buildings along with the group we identified begin to build a case that circular buildings may be more common than rectangular forms at Macon Plateau.

Equally exciting is the fact that the ground-penetrating radar was effective in locating not only old excavations at the Funeral Mound, but also unexcavated features. Those features, at least at the base of the mound, appear to line up with a partially excavated ring of excavated burials recorded by WPA excavators. Given this, it is possible that a more thorough survey using ground-penetrating radar would produce results that could be combined with the excavated data to produce a three dimensional reconstruction the entire Funeral Mound remnant.

Suggestions for the Future

At this point, it is clear that geophysical prospecting techniques are capable of answering important questions at Macon Plateau. Given this, we propose that the next step should be to conduct more extensive and systematic surveys in key areas of the site as well as expand the suite of techniques to include magnetic susceptibility and conductivity. We suggest that three areas of the site be targeted for this next phase: the Funeral Mound and immediate non-mound areas, the MacDougal Mound and immediate non-mound areas, and the Mound X Area. Completing surveys in these three areas should make it possible to refine a survey protocol for mound and non-mound areas that can be used as the basis for seeking grant funds to conduct more extensive surveys of Macon Plateau.

Geophysical Survey Results at the Hartford Site (9PU1)

Chester P. Walker and Keith Stephenson

Geophysical surveys were conducted at the Hartford site to asses their potential for future use on Woodland sites in Middle Coastal Plain region (Figure 105). Magnetometer data

did contain a fair amount of useful information regarding the prehistoric landscape at Hartford; however, it reveals much more about the modern earth moving events that have taken place at the site (Figure 106 and Figure 107). On the northern portion of the site there appears to have been intensive earth moving, possibly both scraping and filling. On the southern portion of the site there also seems to have been a fair amount of earth moving as well as modern disturbances from a gas pipeline (with a small electrical current to prevent corrosion, which obscures magnetometer readings for up to 20 m on either side of the pipeline) that traverses the site. It is not possible to say if the earth moving events have impacted the buried archaeological deposits. This should be independently assessed using archaeological excavations. There are several truncated positive magnetic anomalies that could represent thermal features or pits. A sample of these should be tested to asses their potential.

GPR picked up several discrete anomalies that possibly represent archaeological features (Figure 108 and Figure 109). Overlays of the GPR and Magnetometer anomalies shows interesting patterns (Figure 110), as some of the anomalies show up with both instruments and some only with the GPR. Both should be ground-truthed to asses the potential of sorting out different classes of archaeological features using geophysical surveys.

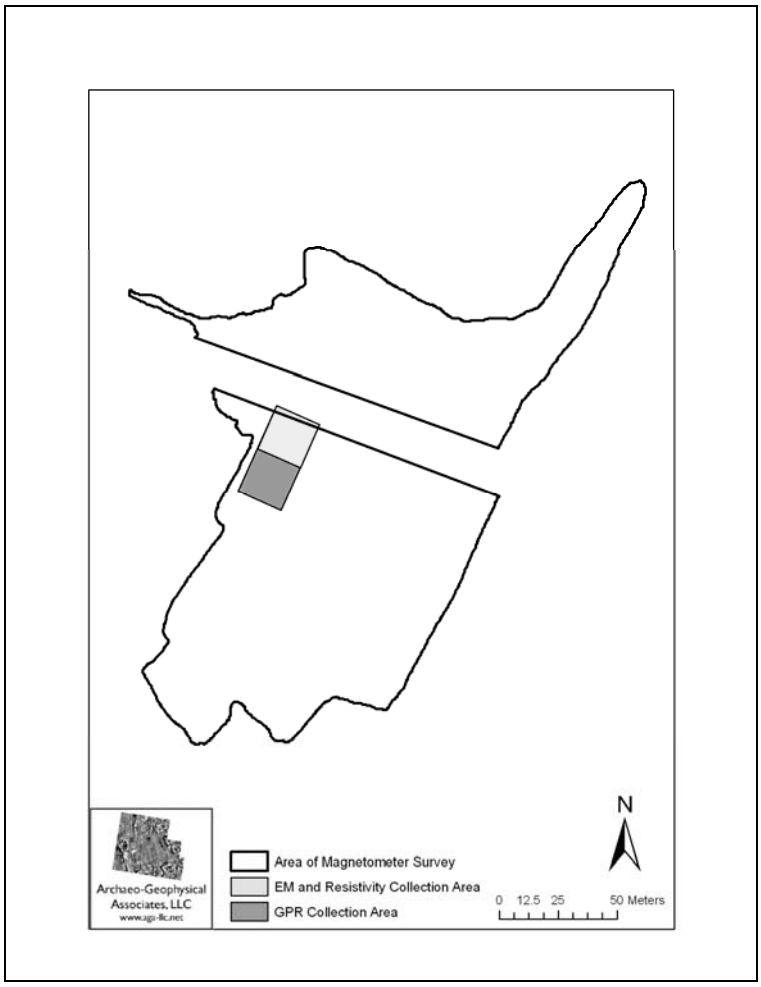


Figure 105. Collection areas at the Hartford site (9PU1)

Resistance and EM surveys were also conducted (Figure 111 and Figure 112), but did not reveal any compelling trends. Due to time constraints, these two instruments were just tested in a small portion of the site and should be expanded to further asses their potential for archaeological sites of this time period in this region.

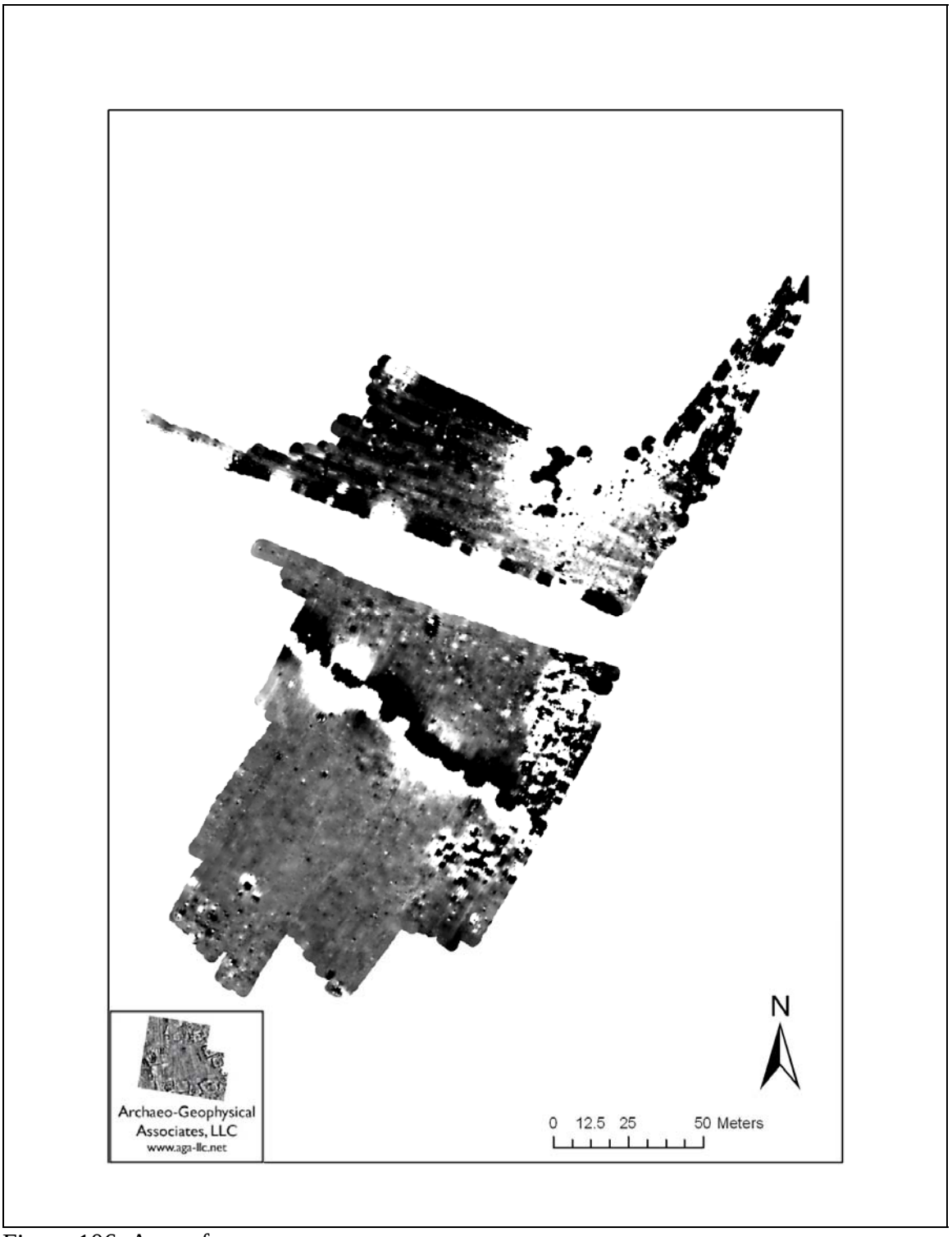


Figure 106. Area of magnetometer survey.

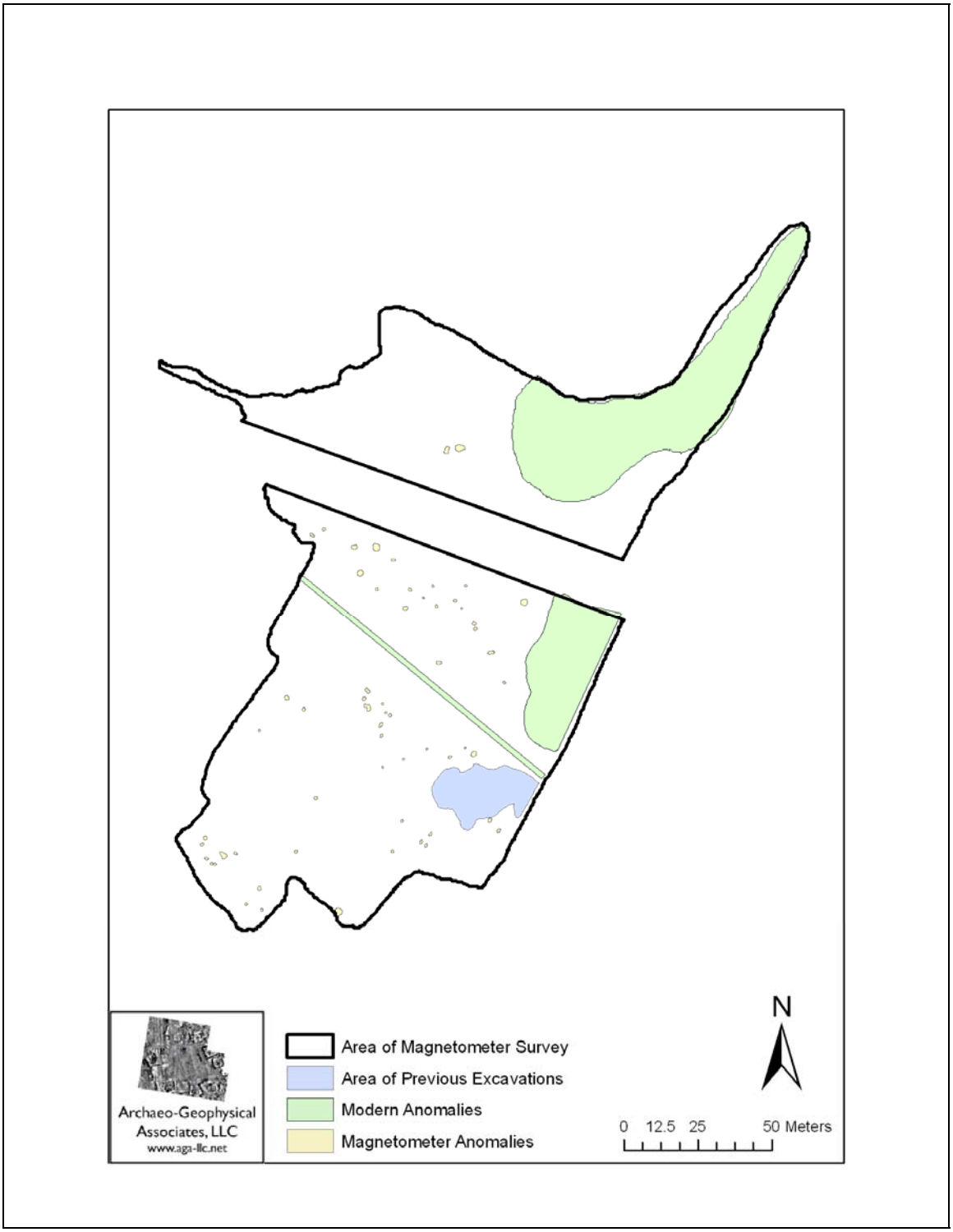


Figure 107. Interpretations of the magnetometer survey.

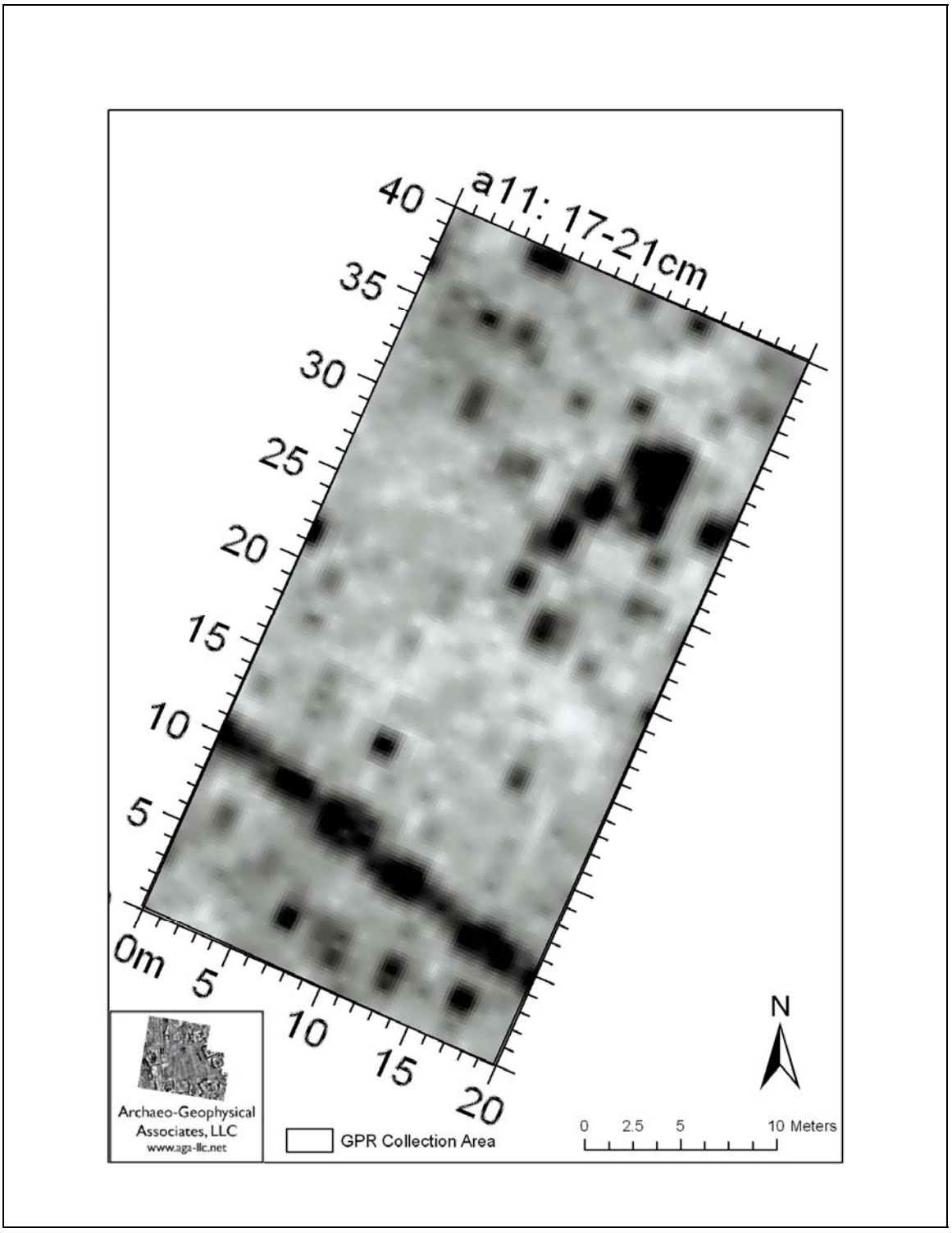


Figure 108. GPR data from the Hartford site (9PU1).

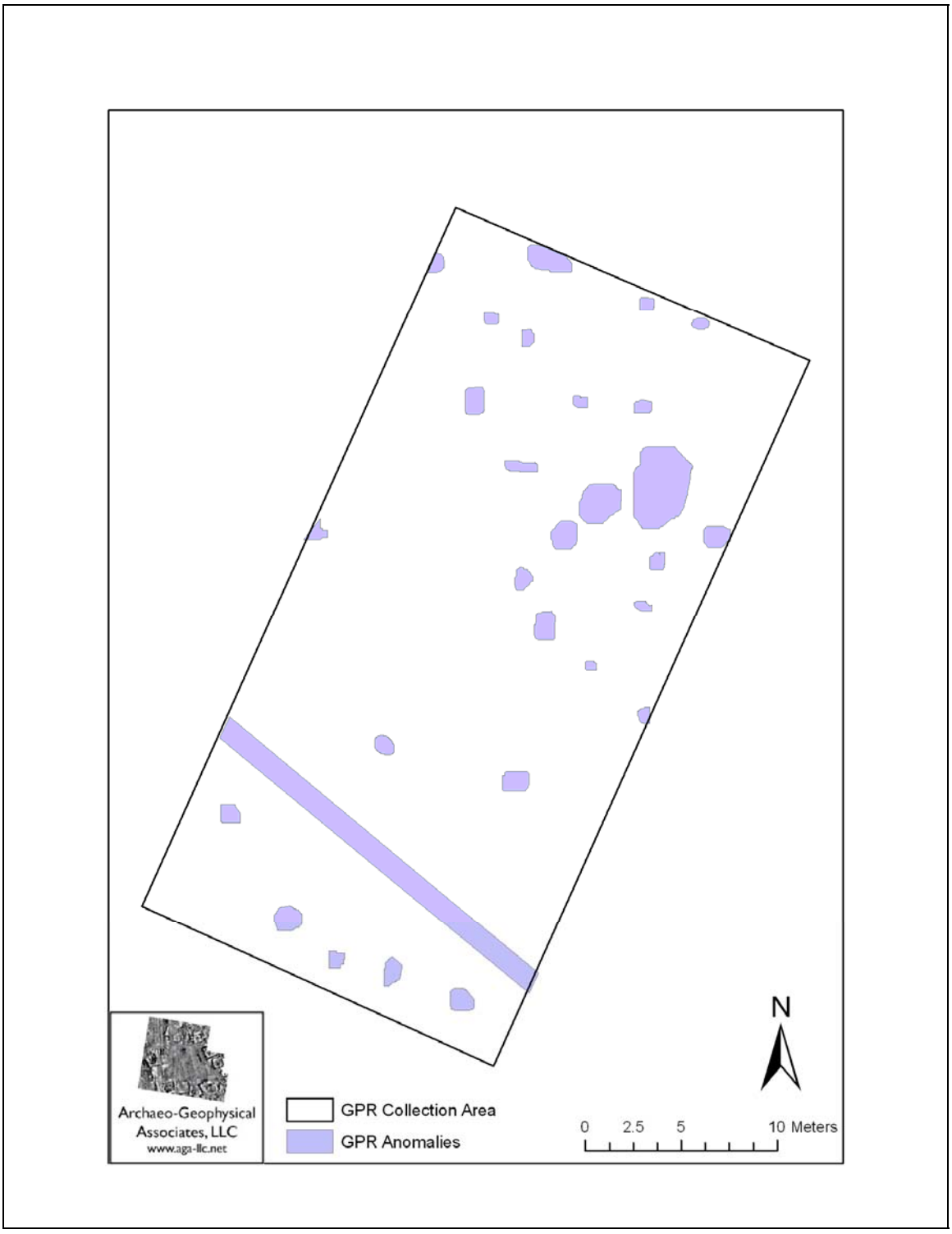


Figure 109. Interpretations of the GPR Data.

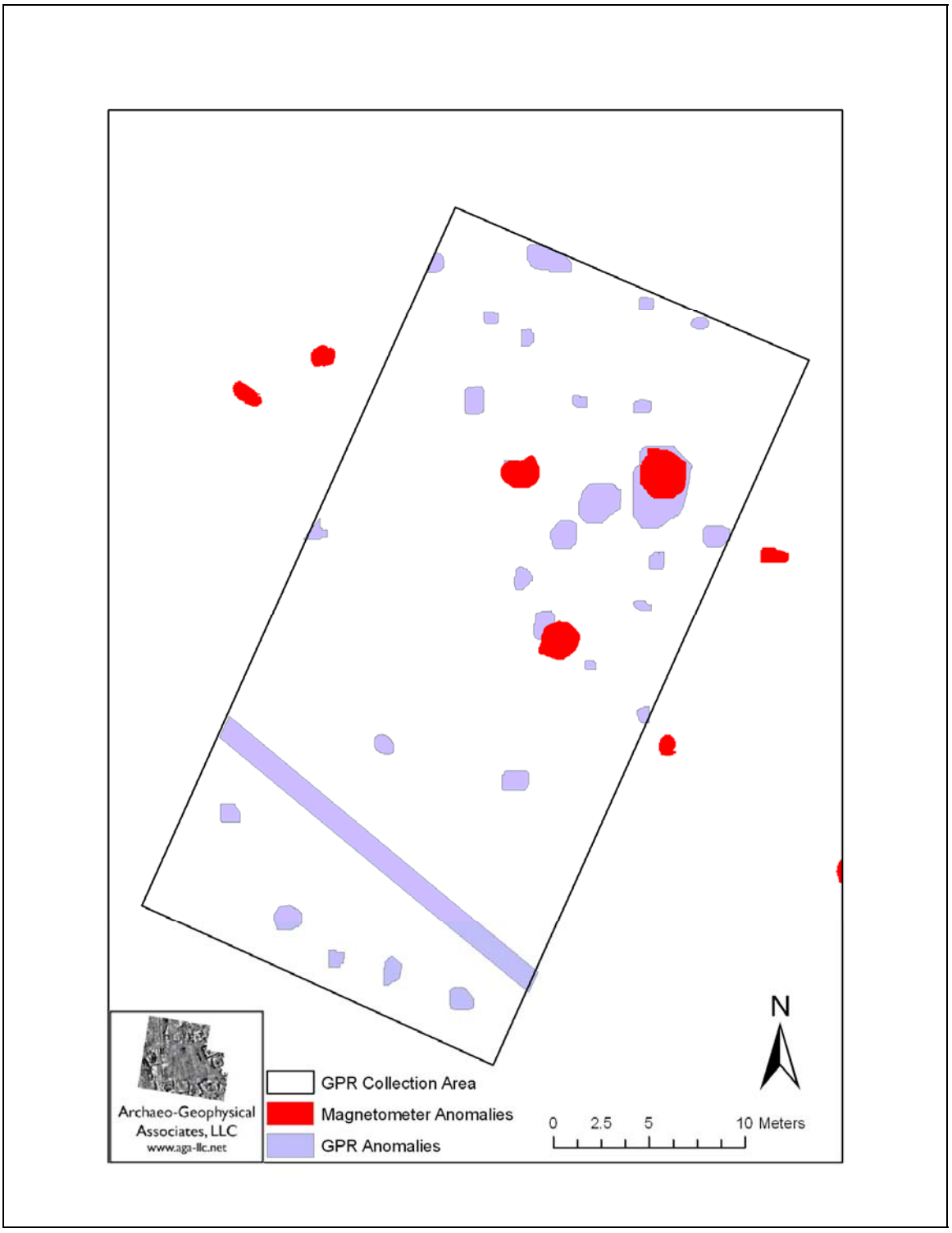


Figure 110. Overlay of GPR and select magnetometer anomalies.

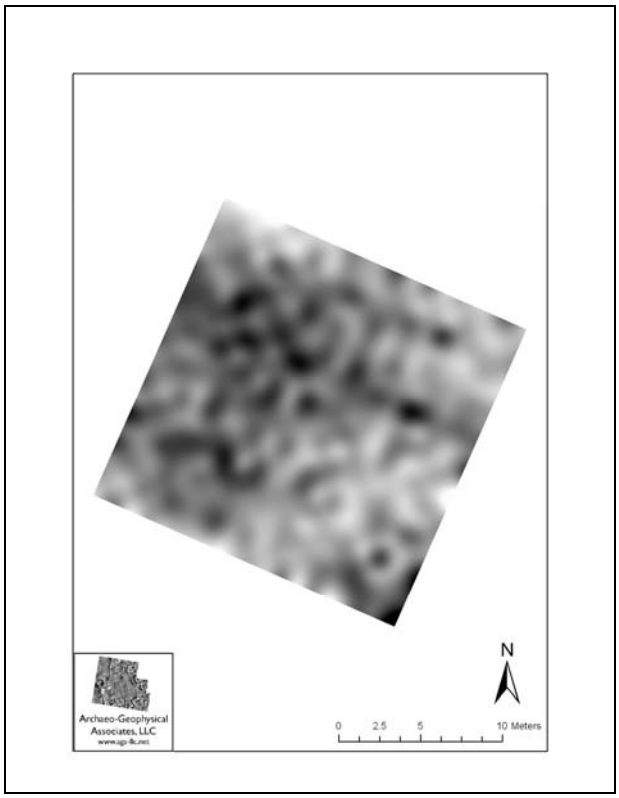


Figure 111. Resistance data from 9PU1.

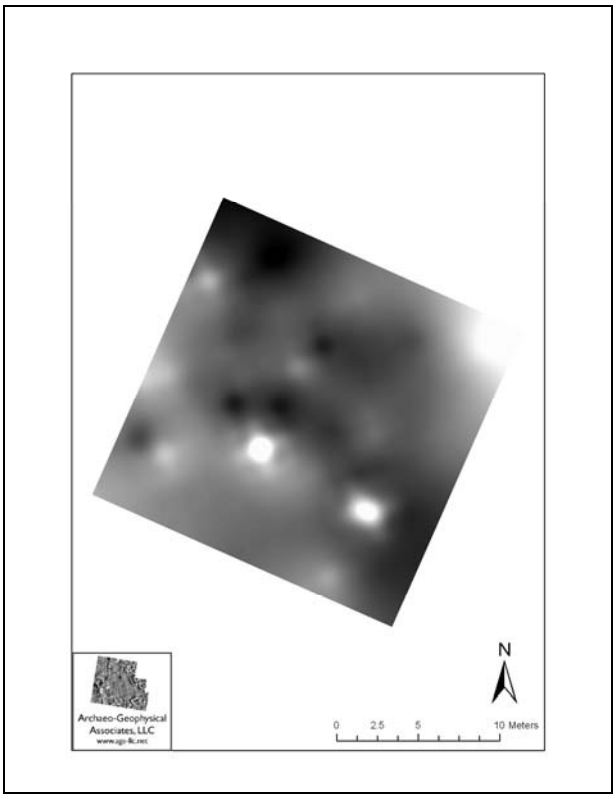


Figure 112. Magnetic Susceptibility from 9PU1.

The Mississippi Period Chiefdom Context for the Middle Savannah River Valley

Adam King, Keith Stephenson, and Christopher Thornock

Late 19th-century antiquarians and archaeologists documented five prehistoric mound sites in the middle Savannah River valley, or that area from the Fall Line zone at Augusta, Georgia downstream to the Brier Creek confluence in Screven Co., Georgia (Figure 113). Currently, these remain the only identified Mississippian mounds in the region and are recognized as: Hollywood (Thomas 1985 [1894]), Masons Plantation (Jones 1873; Moore 1998:265-266 [1898:167-168]), Lawton (Moore 1998:269-270 [1898:171-172]), Red Lake (Moore 1998:269 [1898:171]), and Spring Lake (Moore 1998:269 [1898:171]). With the exception of Spring Lake, which has only one mound, the others are multi-mound sites that appear to have existed as paired centers with each located opposite one another on the Georgia and South Carolina sides of the river. Although there are local reports of other mounds in the vicinity, these have yet to be documented archaeologically. Of the five known mound sites, only four have received any level of archaeological attention, with Mason's Plantation having eroded over time into the Savannah River without any principle investigations.

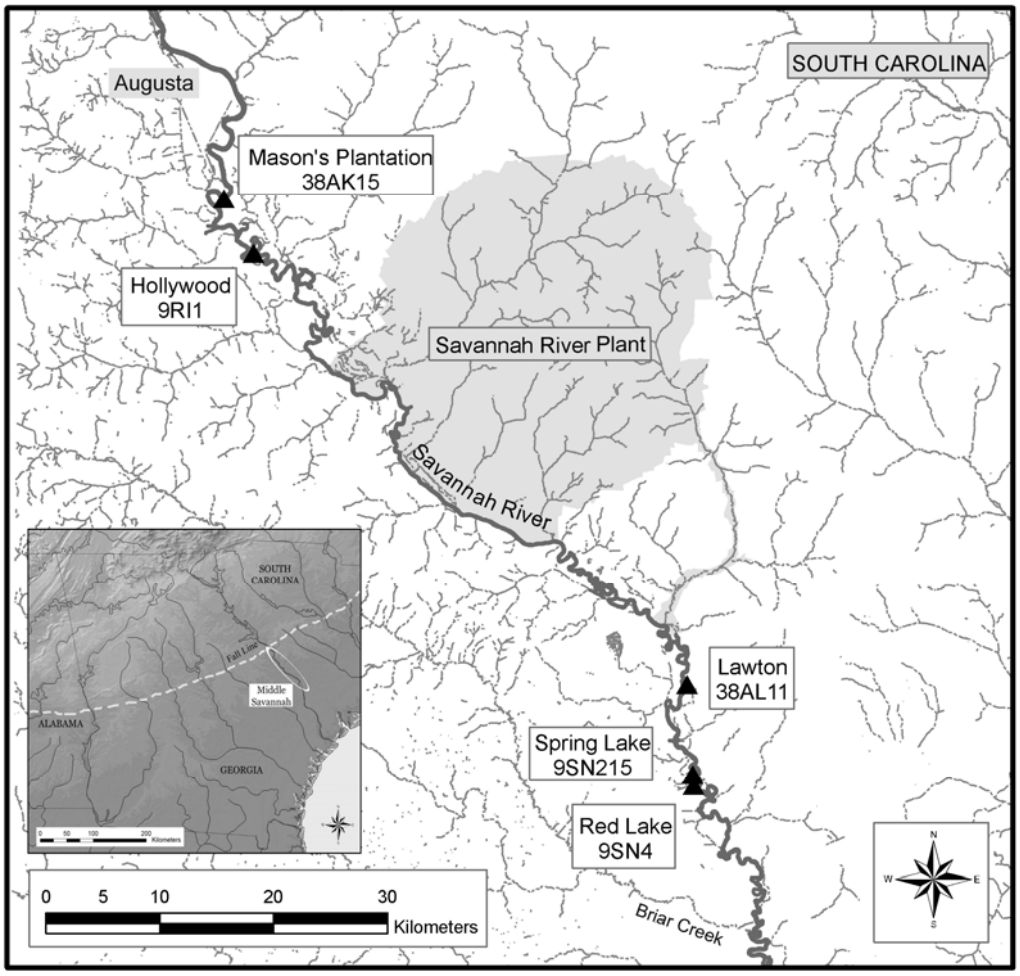


Figure 113. Mound sites of the middle Savannah River valley.

The five mound centers are located in the floodplain of the Savannah River. Mason's Plantation and Hollywood are positioned about 20 km (12 mi) direct distance below the Fall Line shoals of Augusta (Figure 114). The three other mound sites, Lawton, Red Lake, and Spring Lake, are concentrated in an area approximately 80 km (50 mi) direct distance below the Fall Line (Figure 115).

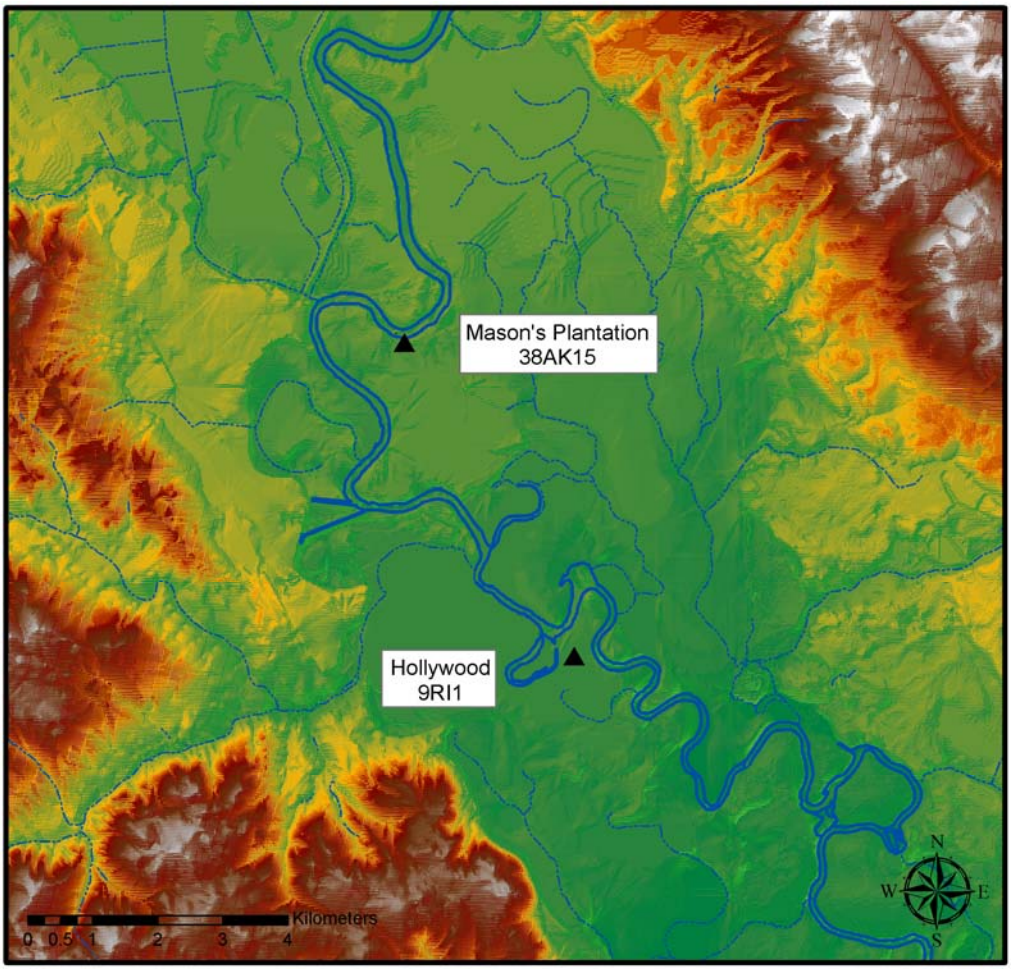


Figure 114. Location of the Mason's Plantation and Hollywood mound sites.

The Hollywood site consists of two mounds with a domestic occupation on a natural levee in the floodplain of the Savannah River in Georgia. The site was first documented after excavation into the smaller mound by Henry L. Reynolds of the Bureau of Ethnology Mound Division (Thomas 1894:317-326). This investigation recovered artifacts of the Southeastern Ceremonial Complex. These materials originated from interments in an initial stage of mound construction and included copper plates, painted and engraved bottles with sun circle and cross, serpent and human hand motifs, elaborate pipes, shell beads, and earspools (Anderson et al. 1986:33). Excavation into the larger mound in 1965 by Clemens de Baillou of the Augusta Museum yielded a pottery assemblage distinct enough to merit recognition as the Hollywood phase of the Savannah period.

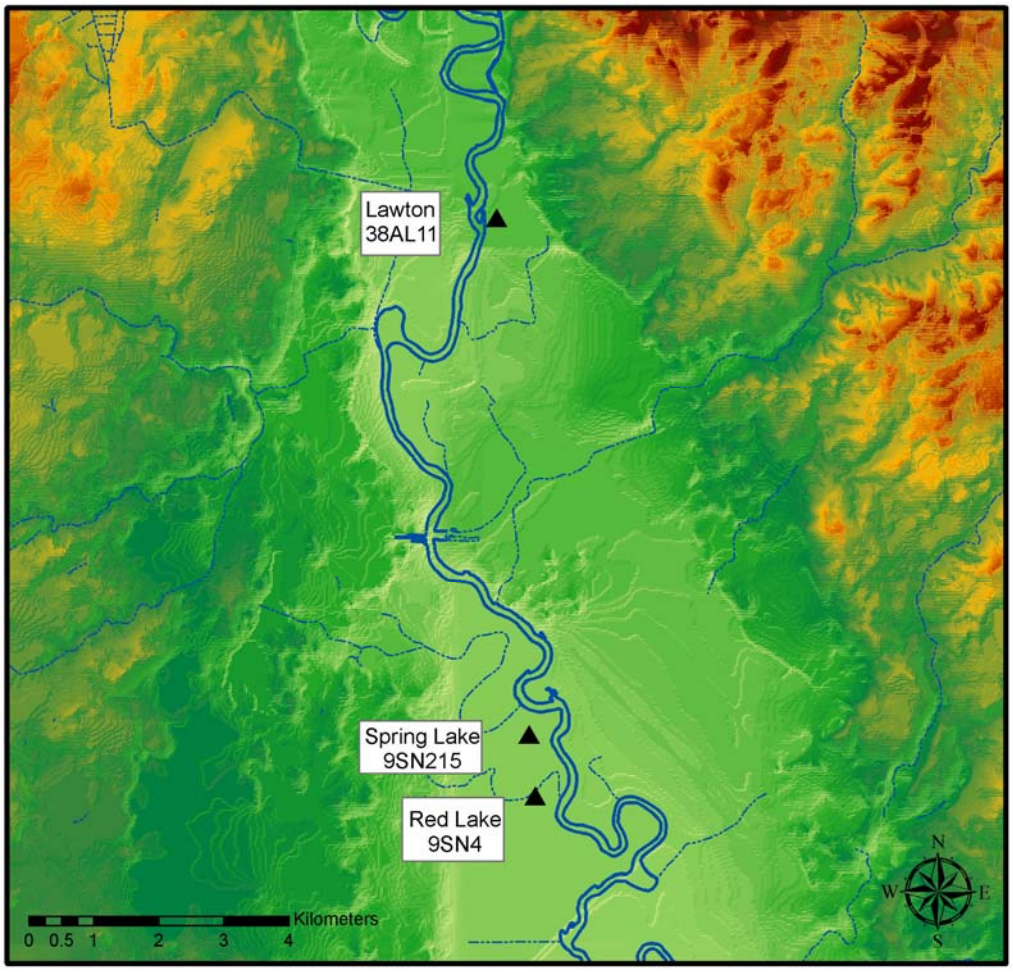


Figure 115. Location of the Lawton, Spring Lake, and Red Lake mound sites.

The Mason's Plantation mound group was most likely the largest late prehistoric center of the entire Savannah River valley (Anderson 1994:193-194). With a reported six mounds present at one time, all had eroded into the river by the end of the 19th century. The site was described and documented by such historic luminaries as William Bartram, Charles C. Jones, and its natural destruction lamented by Clarence B. Moore in 1898. A reconnaissance of the Mason's Plantation tract by Anderson in 1990 failed to locate any remnants of the mounds suggesting they had indeed eroded away, although portions of the site including possibly the smaller mounds, may be preserved under deep alluvial sediments of up to 3 m (10 ft) deposited during the late 19th century. A surface collection by Anderson from sandbars in the river and at and just below the presumed area of the site is dominated by Hollywood-phase pottery, thus strongly indicating a Hollywood phase occupation for the Mason's Plantation mound group.

The Red Lake mounds, located in the floodplain of the Savannah River in Georgia, are about 5 miles downstream from the Lawton site. The mounds were mapped in 1987 by Mark Williams and then tested by Fred Cook (Anderson 1994:187). Following limited excavation adjacent to the larger mound, Cook concluded that Red Lake had a short occupation history within the Hollywood phase.

The Lawton site is a double-mound complex situated in the floodplain of the Savannah River in South Carolina. Based on radiometric dates, mound construction occurred between A.D. 1280 and 1340, or during the Hollywood phase. First investigated by C. B. Moore in 1898, recent investigations have revealed much about site structure and layout. The South Mound is a three-meter high, split-level edifice constructed in several episodes most likely as an elite residence. In contrast, the North Mound is an approximately two and one-half-meter high platform built in several episodes over a sub-mound midden. A fortification ditch and palisade enclosed the site, which included a plaza and small residential area.

Anderson (1994:237-240) charts the formation and fragmentation of Lawton and Red Lake to between ca. A.D. 1200 and 1350. He comments that that these emerging polities may have been the foci of complex chiefdoms given the presence of multiple mounds at each site. Noting the proximity of Lawton to Red Lake, Anderson ponders whether each was actually a discrete chiefdom or rather formed a paired-mound relationship within a larger chiefdom; however, the lack of fine-grained archaeological data precludes his addressing this situation. Referring to basin-wide historical events, Anderson states that between "A.D. 1250 and 1350, the political situation changed dramatically in the Savannah River valley, although, unfortunately, our chronological controls are not sufficiently refined to delimit precisely when and in what order events occurred" (1994:240). He does conclude that both the Red Lake and Lawton mound centers were abandoned sometime between A.D. 1300 and 1350. In line with the collapse of these centers, broader settlement trends show a decline in the number of outlying upland sites on the SRS during this same period (n=14), which occur with less than half the frequency of Early Mississippian components (n=33) for the area (Anderson 1994:249).

A Short History of Chiefdoms

In the middle Savannah valley, the time from A.D. 800 to as late as 1250 was a period when small scale, undifferentiated societies occupied the landscape. They lived permanently in both upland and riverine settings, although it is unclear whether they moved with the seasons or simply shifted habitation sites every few years or decades. For at least 350 years of this period, the landscape was used by groups of people make two or possible even three different pottery assemblages. Since they are rarely found on the same sites, we presume those different phase assemblages represent different social groups that overlapped in the middle Savannah valley.

By AD 1250, the area experienced some significant changes. Savannah I pottery ceased to be made and the Lawton phase of the primarily Etowah Complicated Stamped ceramic tradition gave way to the Hollywood phase of the Irene Complicated Stamped ceramic tradition. More significantly, at least five polities with one or more mounds were established in the area. Settlement data on the SRS, which is positioned between two sets of mound centers, indicates that permanent use of area between mound centers declined

significantly. We suspect this reflects a shift in settlement focus toward the areas around the mound centers.

At least some level of archaeological testing has been conducted at all of the mound centers and in all cases the sites show evidence of only a single Mississippian occupation dating to the Hollywood phase. Thornock's underwater research adjacent to Masons Plantation seems to indicate that it also was occupied during the Hollywood phase, and Wood's (2009) testing at the single mound Spring Lake site also documents a Hollywood phase occupation.

By the end of the fourteenth century, it looks as though all of these mound towns were abandoned. At that same time, settlements begin to appear again in the upland and riverine settings on the SRS. We have interpreted these settlement changes to indicate the collapse of the Hollywood polities centered on the mounds and a return to a more dispersed settlement approach. When de Soto's army passes through the middle Savannah valley in A.D. 1540 they nearly starve because there are no large settlements from which to exploit food (i.e. maize) from the indigenous population. The apparent abandonment of this part of the valley described in early historic documents is supported by a total lack of Late Lamar material culture in the middle Savannah River valley.

There are several interesting issues that emerge from this quick summary of the Late Woodland and Mississippian periods in the middle Savannah valley. For our purposes here, we are interested in why chiefdoms developed in the region and how they might have been structured. As we have focused the majority of our work at Lawton and Red Lake, we will concentrate on those sites in our discussion here.

The Emergence of Middle Savannah Valley Chiefdoms

Mound construction at precise locations represent surplus in the form of social labor that was put to a specific use. We hypothesize that the means of mobilizing that surplus and expending it came in the form of a set of beliefs revolving around mounds and their manipulation. As Wood (2009) discovered last summer, both the North Mound at Lawton and Mound A at Red Lake are preceded by a dense midden containing mainly freshwater mussel shell. The dense and localized nature of these middens suggests to us that they were produced through feasting. Worldwide, feasting has been and continues to be used as a means of attracting and employing labor. The close association between these middens and mounds further suggests to us that feasting activities were related to the construction and use of at least the initial stages of the associated mounds. Knight (1981, 1986, 1989) argued long ago that the mound was an earth symbol and its manipulation was part of efforts to purify or renew the world and human society. In so doing, the fertility and productivity of the earth also was guaranteed.

Those individuals or corporate groups that facilitated this renewal had the grounds to claim some material and social benefit for their efforts on behalf of all. We suspect that this opportunity to leverage social position and reformulate the structure of society in the favor of a few was a key factor in the rather sudden appearance of mounds in the middle

Savannah River valley. Mounds have been present in the Deep South for millennia and there is little reason to doubt that people in the middle Savannah River valley had knowledge of them and their association with the earth. Furthermore, the manipulation of mounds and world renewal beliefs was a strategy that had been used by emerging elites throughout northern Georgia since A.D. 900 at the Macon Plateau site. King has argued that one of the earliest chiefdoms centered at Etowah was created as competing corporate groups came together in a strategic alliance facilitated by the common need to renew the earth and society. Logically, there is no reason to think that people on the Savannah were unaware of social developments in northern Georgia or even central Georgia where Macon Plateau was located. The presence of pottery styles in the middle Savannah River valley similar to those found in northern Georgia confirms connection between the two regions. Thus, we see the emergence of chiefdoms in the middle Savannah River valley as part of a calculated effort by individuals or specific corporate groups to use a prevailing belief system to mobilize, appropriate, and expend labor for their own material and social benefit.

The Structure of Middle Savannah River Polities

As we have noted, the Middle Savannah River valley polities do not necessarily look or function as established models of Mississippian chiefdoms predict. True, these polities have mound centers and mound top architecture and seem to be associated with corn horticulture at some level. However, unlike theoretical notions of chiefdoms, there is little material evidence for differential social ranking. At least that is the case if you look to mortuary data. Here we are working largely with negative data or second hand accounts of looting. In the work at both Lawton and Red Lake, no formal burials have been found, and what we have heard from the collector community suggests to us that there are no burials to be found at these sites. Unfortunately for the archaeological record, enough looting has been done at Lawton so that if there were burials in the mounds or habitation zones, they would have been found and pillaged.

The only place that large numbers of burials have been found are on a series of natural sand ridges located at various points along the Savannah River floodplain (Figure 116). Except for some work done by Leland Ferguson 40 years ago, no systematic work has been done on these sites. Chester DePratter (1991) conducted salvage work on a looted sand ridge further down the Savannah on Groton Plantation. Looter's descriptions of the sites in the middle Savannah sound the same. These sites appear to have been community cemeteries where people were most often buried as cremations in burial urns. There is little evidence of social differentiation, either indicating that these were undifferentiated societies or social ranking was not expressed in mortuary treatment.

The settlement systems associated with these mound centers do not necessarily meet expectations of ranked social structures. Our best evidence, which is not great, indicates that Red Lake and Lawton are surrounded by dispersed households and possibly small multiple household hamlets. Some would argue that this is the kind of settlement system associated with simple chiefdoms (Anderson 1994; Hally 1996; Wright 1984).

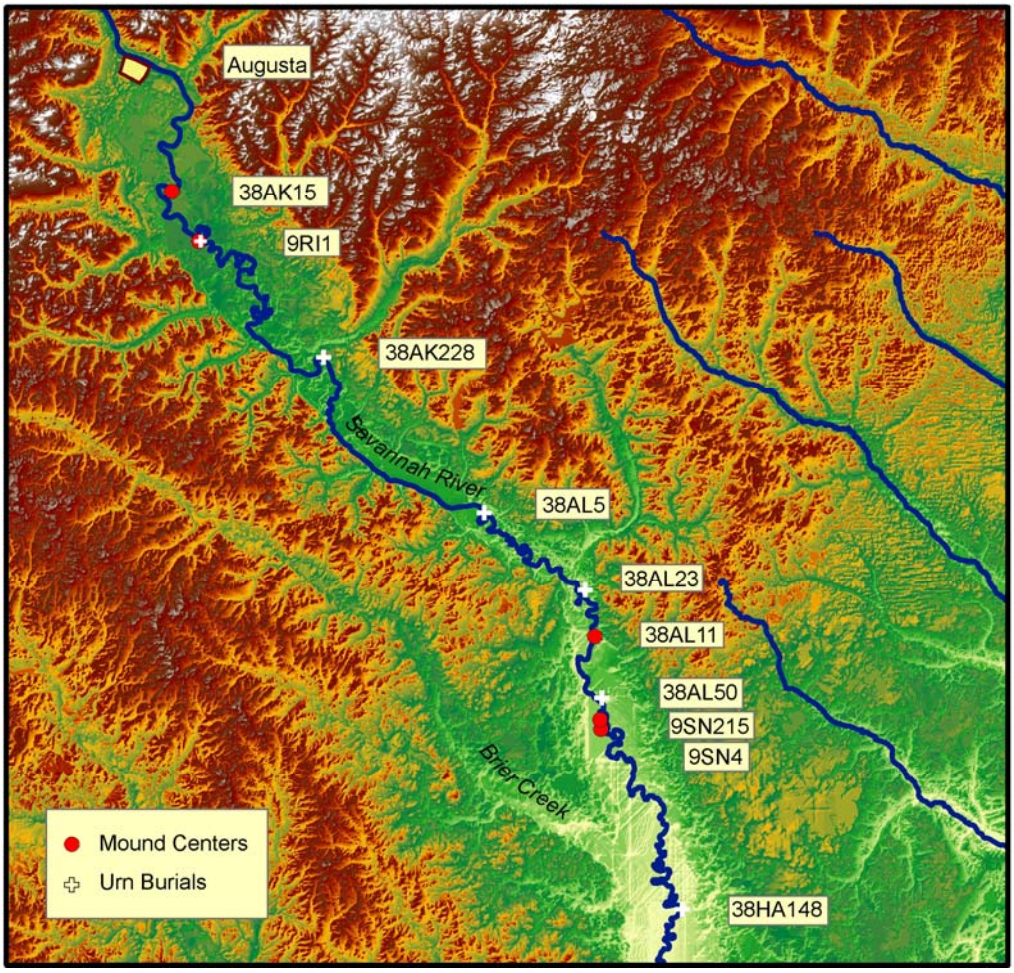


Figure 116. Mound centers and urn-burial cemeteries in the middle Savannah.

However, as Dave Hally and John Blitz have discussed, the short distances separating Lawton and Red Lake go against conventional ideas about the structure of Mississippian chiefdoms. Using the spacing of mound towns in the Deep South, Hally has argued that closely spaced mound sites like Lawton and Red Lake should be primary and secondary centers in a complex chiefdom. However, as Hally and Blitz have pointed out, it is difficult to see which of the two should be considered more important in a complex administrative structure.

One piece of evidence that we do have that may inform about the nature of the societies associated with Red Lake and Lawton is the structure of the mound centers themselves. Over the past several years, we have mapped, shovel tested and conducted at least some testing at both Red Lake and Lawton. Much of this work has been done in conjunction with graduate students, including Michael Nelson and Emily Dale at the University of South Carolina and Jared Wood at the University of Georgia.

A close comparison of the mound centers show that they are very similar both in terms of scale and structure. Each town is comprised of a core area of two or more mounds arranged around an open space that we have interpreted to be plazas. Ringing

that core is an area of midden that we think is some kind of occupation zone. When you superimpose Red Lake over Lawton it becomes clear that these core areas and associated dense occupation zones are about the same size.

There are some apparent differences. First, the occupied area of Red Lake seems larger than that of Lawton. This is an artifact of the work done at each site. In working at Lawton, we chose to focus our energy on the area inside the ditch. Mississippian occupation continues outside of that ditch along the slough edge in both directions. We have not tested enough to find the actual extent of that occupation, but it is clearly Hollywood phase.

Another difference between the sites is that the core area at Lawton is set off from the rest of the site by the ditch and presumed palisade wall. In a sense, we have what we think is a sacred precinct surrounded by and separated from the rest of the community. Although there is no ditch at Red Lake, we simply have not done the work to know if its sacred precinct is separated from the rest of the community by a wall.

Finally, it is clear that Lawton has only two mounds and Red Lake has three. At Lawton, we understand that the North Mound was part of periodically occurring events that may have included mortuary practices, while the South Mound was a residential structure. Because we do not understand the function of the mounds at Red Lake, it is impossible to know if functionally they, or the Red Lake site, were any different from Lawton and its mounds.

There are obviously many questions to answer about these mound centers that will tell us more about their political place on the larger landscape. However, the layout and distribution of the mound towns in this part of the Savannah River valley may provide some insights into those issues. The settlement system in the middle Savannah, as far as we understand it, is reminiscent of the talwa or town systems of the Creek Indians, particularly of the 17th and 18th centuries. Creek communities had a sacred core that included a winter council house, a square ground where summer councils and important ceremony took place, a ball pole and field, and sometimes one or more small mounds (Howard 1968; Knight 1994). This civic-ceremonial space was surrounded by households that often were strung up and down the major drainages on which the towns were located (Etheridge 2004; Knight 1994; Worth 2000). This is a classic dispersed settlement system. Following B. Smith's (1978) arguments for Mississippian settlement in the Mississippi River valley, the middle Savannah valley system makes ecological and social sense in the ridge and swale floodplain setting of the Coastal Plain.

In many instances, Creek towns were scattered up and down major drainages, sometimes close enough to one another that the scatter of households for one town butted up on the households associated with a nearby town. Town affiliation was important among the Creeks, and although some towns were more important than others each had a great deal of autonomy (Knight 1994; Saunt 1999).

It is possible that what we are looking at in the middle Savannah valley is a social system not unlike the Creeks of the 18th century. There was social ranking, but it was embedded within some kind of corporate kin group system and expressed in terms like "older brother" or as part of the Red and White symbolism of war and peace (King 2003). If there was a social segment that achieved a measure of prominence through its control over mound manipulation, that prominence did not translate into great material differences. In fact, it appears that it never succeeded in breaking out of the bounds of the nested and complimentary nature of corporate kin organization.

Just as in the Creek system, some communities were recognized as more important and there was a certain deference shown to their leaders. However, individual towns were largely politically independent (Knight 1994; Saunt 1999). We think it is fair to call these entities chiefdoms (King 1999). There were certainly social and political relationships among them, but there was no overarching hierarchy linking them all into one social system.

Discussion

There is clearly a lot of work to be done in the middle Savannah valley. In this discussion, I have tried to use what has been learned so far to formulate some ideas on how Mississippian chiefdoms emerged and how they operated. We think the polities in the area were small, politically independent, and largely dominated by a series of corporate kin groups. Organizationally, this is not particularly different from the social stock out of which these chiefdoms formed. Efforts by particular social segments, or even individuals, to use world renewal and mound manipulation as a means of rewriting that social order met with only limited success. Ultimately, those more centralized social systems represented by the mound centers did not last. By the time de Soto came through the area, they were gone.

Anderson (1994) has placed at least some of the causation for this collapse on extended periods of lower than average rainfall. While gardening was certainly practiced in the middle Savannah valley, available data suggest that it was likely heavily mixed with hunting and gathering. Given this, we believe as much or more of the reason for the collapse of these polities may fall on social processes. Hierarchical forms of social ranking systems, like those often associated with classic Mississippian society, ran counter to a local tradition dominated by multiple, relatively undifferentiated corporate groups. The abandonment of the middle Savannah valley mound centers may have been as much the result of the failure of would be elites to rewrite the social order and transcend that tradition.

The Southeast Prehistoric and Historic Landscapes Tour

J. Christopher Gillam

From April 26 to May 1, 2009, I led a group of seven international scholars on a 1,000-mile (1,500-km) tour of South Carolina and Georgia to encourage cross-cultural studies

and collaboration in the region (Figure 117). My colleagues and I are members of the international research project, "Neolithisation and Modernisation of East Asian Inland Seas (NEOMAP)," granted by the Research Institute for Humanity and Nature (RIHN), Kyoto, Japan, that held a symposium at the Society for American Archaeology conference in Atlanta, Georgia. Participants in the tour included NEOMAP Director, Junzo Uchiyama (RIHN), Shinji Ito (Kokugakuin University, Tokyo), Keisuke Makibayashi (RIHN), Shinji Seguchi (Shiga Prefectural Cultural Properties Protection Association, Japan), Carlos Zeballos Velarde (RIHN/Peru), Ilona Bausch (Leiden University, Netherlands), and Alexander Popov (Far Eastern National University, Vladivostok, Russia). In Georgia, the group visited Ocmulgee National Monument (Macon), Etowah Indian Mounds State Park (Cartersville), the Savannah Historic District, and Fort Pulaski National Monument. In South Carolina, they visited the Sea Pines Shell Ring (Hilton Head Island), Green Shell Enclosure (Beaufort Co.), Fig Island Shell Rings (Charleston Co.), Sewee Shell Ring and Clam Mound (Awendaw), Old Sheldon Church (Beaufort Co.), the Charleston Historic District and Charleston Museum, Middleton Place Plantation (Charleston Co.), the Congaree Vista District (Columbia), South Carolina State Museum (Columbia), and the SCIAA, University of South Carolina, Columbia (Figure 118). Special thanks are extended to our friends and colleagues: SC DNR archaeologist, Sean Taylor, and the S. C. Department of Natural Resources management and staff; Robert Morgan, National Park Service archaeologist, and staff of the Sewee Visitor and Environmental Education Center; SCIAA Curator, Sharon Pekrul, and SCIAA hosts, Charlie and Terry Cobb.

Figure 117. Drs. Makibayashi, Popov, Ito, Uchiyama, Zeballos, Seguchi, and Bausch at the Ocmulgee National Monument site, Macon, Georgia.

Figure 118. Drs. Makibayashi and Ito examining Fig Island artifacts at SCIAA.

PART III. PUBLIC EDUCATION

EDUCATIONAL OUTREACH

Christopher R. Moore

As set forth in the PMOA, and implemented through the DOE/SCIAA cooperative agreement, the SRARP continued to offer a variety of school programs, lectures, tours, archaeological displays, and special assistance for the public in FY09. We continued our efforts to foster cooperation with other educational organizations in the CSRA, such as the Silver Bluff Audubon Center and Sanctuary, through public outreach efforts with the staff of the Science Technology Enrichment Program.

Outreach activities in FY09 continued with an emphasis on archaeological displays at area events and the "You Be the Archaeologists" program held at the Audubon Center at Silver Bluff. Additionally, flintknapping demonstrations and displays or lithic raw material types were incorporated into educational events. In FY09, over 300 students participated in the program at Silver Bluff while more than 6,000 people attended public outreach displays at Redcliffe Plantation, USC Science Education and Enrichment Day, North Augusta Kids Earth Day, Georgia on My Mind Day, the Audubon Society's Carriage Ride at Silver Bluff along with numerous other outreach activities including lecture seminars for local schools, Aiken Museum, Augusta Archaeological and Genealogical Societies.

Additionally, Rob Moon reports that the SRARP website www.srarp.org continued with steady traffic throughout the year. In FY09, we had over 10,000 visitors to the website. The website continues to undergo upgrades and improvements with additional activity content for the SRARP.

CINEMATIC OUTREACH

George L. Wingard

In June 2005, SRARP staff member George Wingard met film documentarist Mark Albertin at the Ellenton reunion, held in Jackson South Carolina. Albertin, through his work with Morris Communication, Inc. had completed documentaries on the local towns of Augusta, Georgia and Aiken, South Carolina, and was interested in documenting the story of the communities formerly located on the SRS. After perusing the SRARP publications *Memories of Home: Dunbarton* and *Memories of Home: Ellenton,* he decided the story of the towns' displacement during the acquisition of property for the SRS would be an intriguing one.

Over the ensuing years, Albertin was given tours of the former towns by the SRARP, and allowed access to records collected during the writing of the Dunbarton and Ellenton publications. Video footage from the tours, photos and documents borrowed

from the SRARP, and his interviews with the former residents developed into the documentary film titled *Displaced: The Unexpected Fallout from the Cold War*.

On March 20, 2009 the film premiered at the Etherredge Center on the University of South Carolina-Aiken Campus (Figure 119). Both showings of the film were to a capacity audience, and it was declared a success by those whose memories of the era were portrayed on the movie screen. Patrons of the movie also had a chance to purchase a DVD copy of the film, which includes a four-minute "extra" describing the cultural resource management, research, and outreach mission of the SRARP.

Figure 119. Frances Harley, Mark Albertin, Steven Harley, and George Wingard at the premier of *Displaced: The Unexpected Fallout from the Cold War* held on the USC-Aiken campus.

The SRARP developed a great working relationship with Mark and his company Scrapbook Productions. It was a unique collaboration where the research compiled by the SRARP was further enhanced by the vision of this talented filmmaker and we look forward to working with Mark again on future projects.

GENEALOGICAL OUTREACH: CONNECTING THE PUBLIC TO THEIR PAST

George L. Wingard

On March 20, 2009 the SRARP presented a display at the premier of the film *Displaced: The Unexpected Fallout of the Cold War*. After the first showing, SRARP staff member George Wingard was approached by two ladies from Florida who had

genealogical ties to the local area. Phone numbers were exchanged and a tour was eventually scheduled for early May.

Mrs. Dot Swendson and her cousin, Mrs. Rita Mobly, arrived at the SRS on Friday, May 1, and were escorted by Wingard to the Williams Cemetery where some of their distant relatives were buried. Next they were given a tour where the former town of Dunbarton was located. Finally they were shown the SRARP office where the most important discovery lay waiting for them.

Once arriving at the SRARP, the ladies read a poster about the Upper Three Runs area of the Savannah River Site located in a display case. The poster showed the location of several colonial era sites located on the SRS one being the Elkanah Greene homeplace, designated by archaeological site number 38AK289. This site was partially excavated in the early 1990s as part of the survey for the Savannah River Ecology Laboratory Conference Center and Educational Facility (Stephenson et al. 1993). It just so happened that the property once owned by Elkanah Greene was one of the distant relatives whom they had been researching. Overjoyed at their discovery, the two made plans to return as soon as possible to visit the site.

In early June, the pair returned with their cousin Linda Rutenkroger, and all were given a tour of the Elkanah Greene homeplace. After an emotional visit to the site of their colonial ancestor, the trio returned to the SRARP to view and ponder artifacts recovered during archaeological excavation of Elkanah's property (Figure 120). Holding the broken pieces of pottery that once belonged to Elhanah was a momentous and memorable

Figure 120. Left to right: Dot Swendson, Rita Mobley, and Lynda Rutenkroger looking at artifacts excavated from the Elkanah Greene homeplace, site 38AK289.

occasion for them, given their research and knowledge of the Greene family genealogy, and Elkanah in particular.

On Saturday June 13, Wingard and his wife Elizabeth escorted the ladies around the local area visiting several cemeteries and the Aiken County Museum. The following day they participated in the Ellenton Reunion held in Jackson, South Carolina where they reconnected with potentially distant relatives to discuss common genealogical history. On Monday, the long weekend ended with Wingard and the ladies having lunch with Mr. Cecil and Mrs. Betty Greene of Jackson. The Greene's were residents of the former town of Ellenton and also related to Elkanah.

SRARP VOLUNTEER PROGRAM

Tammy F. Herron and Christopher R. Moore

The staff of the SRARP would like to acknowledge the hard work and diligence of the volunteers who support the program by giving of their time to aid in advancing the research conducted here at the SRARP. Over the course of the 2009 Fiscal Year, our volunteers have logged in over 500 hours of work. Volunteers assist in a variety of tasks such as archaeological fieldwork, artifact processing and analysis, soil sediment analysis, data entry, document research, assisting with exhibits, Xeroxing, and filing.

This fiscal year, Jill Trefz Nazarete—an avid volunteer since the 1970s—spent time in the lab pulling lithic artifacts recovered from block excavations at 38AK155 for secondary analysis. This prehistoric site was mitigated as a result of the proposed construction of the Surplus Plutonium Disposition Facilities (SPDF). Mrs. Nazarete analyzed 2,306 artifacts and 178 kilograms of daub excavated from 38AL11, the Lawton site. She also spent time washing artifacts recovered from previous excavations at site 38AK469. Researchers are studying artifacts recovered from this prehistoric site, also known as Flamingo Bay, to gain a better understanding of the organization of hunter-gatherer societies from the Early Archaic period. Other tasks included data entry, placing artifacts pulled from various sites for secondary analysis back into storage, and Xeroxing. Mrs. Nazarete logged in a total of 201.25 hours of volunteer time over the course of the fiscal year.

A volunteer-based research program was initiated this fiscal year for the interested public that involves geoarchaeological and paleoenvironmental research of Carolina bays located throughout the CSRA. In its first year, this program worked with 17 volunteers from the area and logged more than 300 hours of volunteer time. In addition, to archaeological excavation, efforts are underway to include a more substantial volunteer lab component that will allow interested volunteers to process and analyze artifacts recovered during excavations of Carolina bay sand rims. The proposed research of Carolina bays involves utilizing dedicated avocational archaeologists, collectors, and the interested public in an ongoing and systematic study of Carolina bay archaeology, geoarchaeology, and geomorphology. Both specific site level research and more general regional–level studies of Carolina bays will provide high resolution archaeological and

geological data from a single bay and provide a comparative database for regional bay variability (see Research Notes in this report).

The mission of the public education program here at the SRARP is furthered through the active participation of our volunteers as we continuously strive to bridge the gap between archaeologists and the public. The contributions of our volunteers are indeed greatly appreciated, and much of the research that we carry out would not be possible without their help and support.

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APPENDIX. PUBLICATIONS AND PROFESSIONAL ACTIVITIES

PUBLISHED PAPERS

Gillam, J. Christopher
2009 Empirical Modeling of Cultural Landscapes and their Environmental Impact. In *Neolithisation and Landscape: NEOMAP International Workshop*, Junzo Uchiyama, Kati Lindström, Carlos Zeballos, and Keisuke Makibayashi (eds.), Research Institute for Humanity and Nature (RIHN), Kyoto, Japan. Pp. 25-44.

Iriarte, José, Christopher Gillam, and Oscar Marozzi
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Moore, Christopher R.
2009 Geoarchaeology and Geochronology at the Owens Ridge Site (31Ed369). *North Carolina Archaeological Society Newsletter* 18 (4).

TECHNICAL REPORTS

Brooks, Mark J.
2009 Natural vs. Anthropogenic Depositional Processes: Summary of a Day in the Field at Dunham's Bluff. Appendix B In *Archaeological Evaluation of the Dunham's Bluff Sites, 38MA207 and 38MA165* by Steven D. Smith with contributions by Tamara S. Wilson, Sean Taylor, Mark Brooks, and Diane Wallman. Report submitted to the Francis Marion Trail Commission, Florence, SC.

PROFESSIONAL PAPERS AND POSTERS

Ivester, Andrew H., Eric C. Poplin, and Mark J. Brooks
2008 Geomorphological Analysis of the Mathis Lake Sand Rim: Implications for Late Quaternary Site Formation Processes at Carolina Bays. Poster presented at the 65th Annual Meeting of the Southeastern Archaeological Conference, Charlotte, NC.

Ivester, Andrew H., Eric C. Poplin, and Mark J. Brooks
2009 Geomorphological Analysis of the Mathis Lake Sand Rim: Implications for Late Quaternary Site Formation Processes at Carolina Bays. Poster presented at the 2009 Annual Conference of the Archaeological Society of South Carolina, Columbia, SC.

Cobb, Charles R., and J. Christopher Gillam
2008 Mound Bottom and the Early Mississippian Landscape in the Middle Cumberland Region. Paper presented at the 65th Annual Meeting of the Southeastern Archaeological Conference, Charlotte, NC.

Gillam, J. Christopher
2008 Geographic Information Science in Ecohistory, GIS Specialty Group, Research Institute for Humanity and Nature, Kyoto.

Gillam, J. Christopher
2009 Migrating from Science Fact to Science Fiction: Lessons on Distant Migrations by Formative Cultures on Land and Sea. Invited paper for the Ecohistory Program Symposium, "History of Civilization and Environment," Research Institute for Humanity and Nature, Kyoto.

Gillam, J. Christopher
2009 Modeling Neolithic Cultural Landscapes in East Asia. Fourteenth International Conference of Historical Geographers, Kyoto.

Gillam, J. Christopher and Carlos Zeballos Velarde
2009 Modeling Cultural Landscapes and Landscape Change in East Asia. Paper presented at the 74th Annual Meeting of the Society for American Archaeology, Atlanta, GA.

Gillam, J. Christopher
2009 Pilot Study on GIS Modeling of Neolithic Cultural Landscapes in East Asia. NEOMAP General Meeting for Fiscal Year 2008, Research Institute for Humanity and Nature, Kyoto.

Anderson, David G., Scott C. Meeks, D. Shane Miller, Stephen J. Yerka, Derek T. Anderson, J. Christopher Gillam, Albert C. Goodyear, Erik N. Johanson, and Allen West
2008 The Effect of the Younger Dryas on Paleoindian Occupations in Eastern North America: Evidence from Artifactual, Pollen, and Radiocarbon Records. Fall Meeting of the American Geophysical Union, San Francisco, CA

Anderson, David G., D. Shane Miller, Derek T. Anderson, Stephen J. Yerka, J. Christopher Gillam, Erik N. Johanson, and Ashley Smallwood
2009 Paleoindians in North America: Evidence from Paleoindian Database of the Americas. Paper presented at the 74th Annual Meeting of the Society for American Archaeology, Atlanta, GA.

Iriarte, José, Christopher Gillam, and Oscar Marozzi

2009 Funeral Monuments and Ritual Celebrations: Mound and Enclosure Complexes of the Southern Brazilian Highland of Argentina. 15th Congress of the Brazilian Archaeological Society, Belém do Pará, Brasil.

Uchiyama, Junzo, Peter Jordan, and J. Christopher Gillam
2009 Understanding Neolithization of East Asian Cultural Landscapes. Paper presented at the 74th Annual Meeting of the Society for American Archaeology, Atlanta, GA.

Iriarte, José, Christopher Gillam, and Oscar Marozzi
2009 *The Southern Cone, the Rio de la Plata basin, and their interaction with the South American lowlands*. Paper presented at the 74th Annual Meeting of the Society for American Archaeology, Atlanta, GA.

Jones, Dwight, and Adam King
2008 Regalia to Die For: The Accoutrements of Etowah's Burial 57. Paper presented at the 65th Annual Meeting of the Southeastern Archaeological Conference in Charlotte, NC.

King, Adam
2009 Continuing the Debate on the Dating of Etowah's Mound C. Paper presented at the 74th Annual Meeting of the Society of American Archaeology, Atlanta, GA.

King, Adam, and Christopher Goodmaster
2008 Three-Dimensional Laser Scanning of Copper Plates from Etowah. Paper presented at the 65th Annual Meeting of the Southeastern Archaeological Conference in Charlotte, NC.

King, Adam, and Chester P. Walker
2009 Remote Sensing at Etowah and Macon Plateau. Paper presented at the Spring meeting of the Society for Georgia Archaeology, Macon, GA.

Moon, Robert
2008 Exploratory Archaeology in the Summerville Cemetery of Augusta, Georgia. Poster presented at the 65th Annual Meeting of the Southeastern Archaeological Conference, Charlotte, NC.

Moore, Christopher R.
2008 Geoarchaeological Investigations of Stratified Holocene Aeolian Deposits along the Tar River in North Carolina. Presented at the North Carolina Coastal Plains Symposium: Twenty-five Years and Counting: Current Archaeological Research in the North Carolina Coastal Plain.

2009 Pine Barrens and Possum's Rations Revisited: Late-PaleoIndian and Early Archaic Settlement in the Carolina Sandhills. Poster presented at the 39th Annual Meeting of the Archaeological Society of South Carolina, Columbia, SC.

Nelson, Michael
2005 *Understanding Lawton (38AL11): The Social and Political Functions and Occupational History of a Middle Mississippian Chiefdom Capital*. Unpublished Master's thesis, Department of Anthropology, University of South Carolina, Columbia.

Sawyer, Johann, and Christopher Thornock
2008 Identity and Meaning in Mississippian Female Regalia. Invited paper present in the 65th Annual Meeting of the Southeastern Archaeological Conference, Charlotte, NC.

Stephenson, Keith, and Karen Y. Smith
2008 Analysis of the Ceramic Cache from the 1972 Shelly Mound Excavations, Pulaski County, Georgia. Poster presented at the 65th Annual Meeting of the Southeastern Archaeological Conference, Charlotte, NC.

Stephenson, Keith, and Frankie Snow
2009 A History of Mounds and Mound Exploration in Georgia's Interior Coastal Plain. Paper presented at the Annual Spring Meeting of the Society for Georgia Archaeology, Macon, GA.

CONTRIBUTIONS TO CURRENT RESEARCH

Gillam, J. Christopher
2009 International Outreach: The Southeast Prehistoric and Historic Landscapes Tour. *Legacy* 13(2): 3.

REVIEWS OF ARTICLES AND MANUSCRIPTS

Brooks, Mark J.
Review of article for *Early Georgia*. A. King, Journal Editor.

Gillam, J. Christopher
Review of article for *Latin American Antiquity*. H. Silverman and L. J. Castillo Butters, Journal Co-Editors.

Review of article for *American Antiquity*. A. Rautman, Journal Editor.

King, Adam
Review of article for *Southeastern Archaeology*. C. Cobb, Journal Editor.

Review of manuscript for the University Presses of Florida. Amy Gorelick, Senior Acquisitions Editor.

Review of manuscript for the University of Alabama Press. J. Knight, Senior Acquisitions Editor.

Moore, Christopher R.
Peer-review of article for *Southeastern Archaeology*. C. Cobb, Journal Editor.

Review of manuscript by Brockington and Associates, Inc. Prepared for the Georgia Department of Transportation.

Stephenson, Keith
Peer-review of article for *Southeastern Archaeology*. C. Cobb, Journal Editor.

CONFERENCES/SYMPOSIA ORGANIZED

Gillam, J. Christopher
2009 Chair and Co-organizer, symposium titled "Landscape Neolithization along East Asian Inland Seas" held at the 74th Annual Meeting of the Society for American Archaeology, Atlanta, GA.

King, Adam, Brett Riggs, and Russell Townsend
2009 Co-organizer, symposium titled "Native Perspectives on Archaeology in the Carolinas" held at the 65th Annual Meeting of the Southeastern Archaeological Conference, Charlotte, NC.

Thornock, Christopher
2009 Program Chair and Organizer of the 35th Annual Meeting of the Archaeological Society of South Carolina, Columbia, SC.

CONFERENCE DISCUSSANT

Gillam, J. Christopher
2008 Discussant, Kokugakuin University Museum Forum, "GIS Applications in Archaeological Research," Kokugakuin University, Tokyo.

2008 Discussant, Ecohistory Program Lecture, From 'Neolithic' to 'Neolithisation': Reconstructing Deep Histories of Human-Environment Relations in Northern Eurasia, by Dr. Peter Jordan (University of Aberdeen, Scotland, UK), Research Institute for Humanity and Nature, Kyoto.

King, Adam
2009 Discussant in symposium "Revisiting the Etowah Valley: New Data from 9CK1, the Long Swamp Site" at the 74th Annual Meeting of the Society for American Archaeology, Atlanta, GA.

PROFESSIONAL ORGANIZATION SERVICE

Gillam, J. Christopher

2009 Organizer, "The Southeast Prehistoric and Historic Landscapes Tour," seven international scholars taken on a 1,500-km tour of South Carolina and Georgia to encourage cross-cultural studies and collaboration in the region. Participants included Drs. Junzo Uchiyama (Research Institute for Humanity and Nature (RIHN), Kyoto, Japan), Shinji Ito (Kokugakuin University, Tokyo, Japan), Keisuke Makibayashi (RIHN), Shinji Seguchi (Shiga Prefectural Cultural Properties Protection Association, Japan), Carlos Zeballos Velarde (RIHN/Peru), Ilona Bausch (Leiden University, Netherlands), and Alexander Popov (Far Eastern National University, Vladivostok, Russia).

Herron, Tammy F.

2009 Co-Contributor. Poster design and text for Georgia Archaeology Month 2009 with the theme "Mounds in Our Midst."

King, Adam

2009 Co-Contributor. Poster text for Georgia Archaeology Month 2009 with the theme "Mounds in Our Midst."

OFFICES AND APPOINTMENTS HELD

Brooks, Mark J.

Director, Savannah River Archaeological Research Program.

Associate Director and Division Head, South Carolina Institute of Archaeology and Anthropology.

Member, Senior Advisory Council, South Carolina Institute of Archaeology and Anthropology.

Member, Ethics Committee, South Carolina Institute of Archaeology and Anthropology.

Member, Grants and Contracts Committee, South Carolina Institute of Archaeology and Anthropology.

Member, Building Committee for the new SCIAA building.

Member, SRS Senior Environmental Managers Council.

Gillam, J. Christopher

Research Archaeologist and GIS Manager, Savannah River Archaeological Research Program.

Chair, Database Integration Committee, Savannah River Archaeological Research Program.

Research Member, international research project, Neolithisation and Modernisation (NEOMAP) of the East Asian Inland Seas, with Junzo Uchiyama, NEOMAP Director, and others at the Research Institute for Humanity and Nature (RIHN), Kyoto, Japan.

Principle Investigator, Uruguay Paleoindian Survey (UPS) project with Rafael Suárez, Museo de Historia Natural y Antropología, División Antropología, Montevideo, Uruguay, and Oscar Marozzi, SAR, Servicios Arqueológicos, Montevideo, Uruguay.

Co-Principle Investigator for research on the socio-political and environmental context of Taquara/Itarare Culture in Misiones Province, Argentina, with José Iriarte, Primary Investigator, University of Exeter, United Kingdom, and Oscar Marozzi, SAR, Servicios Arqueológicos, Montevideo, Uruguay.

Project Co-Director and GIS Manager, Paleoindian Database of the Americas (PIDBA), with David G. Anderson, Project Director, and others at the University of Tennessee, Knoxville.

GIS and SC Paleo-Point Database Manager, Southeastern Paleoamerican Survey, with Albert C. Goodyear, Director, and others at the S.C. Institute of Archaeology and Anthropology, College of Arts and Sciences, University of South Carolina, Columbia.

Project Director, Far East Archaeological Database (FEAD) international research project with Andrei V. Tabarev, (Institute of Archaeology and Ethnography, Novosibirsk, Russia), Masami Izuho (Sapporo Buried Cultural Property Center, Japan), Yuichi Nakazawa (TRC, Albuquerque, New Mexico), Chen Quanjia (Research Center for the Frontier Archaeology, Jilin University, Changchun, China), Batmunkh Tsogtbaatar (Archaeological Institute of the Mongolian Academy of Sciences, Ulaanbaatar, Mongolia), and Yongwook Yoo (Centre for Korean Studies, University of California, Los Angeles).

Archivist, Council of South Carolina Professional Archaeologists.

Research Associate, Walker Institute of International and Area Studies, University of South Carolina.

Research Affiliate, Center for Asian Studies, University of South Carolina.

Research Affiliate, Latin American Studies Program, University of South Carolina.

Research Affiliate, Russian and Eurasian Studies Program, University of South Carolina.

Voting Member, E&GIS Data Trustee Committee, SRS, Aiken, SC.

Herron, Tammy F.

Board Member, Society for Georgia Archaeology.

Board Member and Secretary, Beech Island Historical Society.

Chairman, Exhibits Committee, Beech Island Agricultural Museum owned by the Beech Island Historical Society, Beech Island, SC.

Member, Beech Island Heritage Corridor Committee.

Sub-Committee Member, Aiken County Heritage Corridor.

Archaeobus Committee Member, Society for Georgia Archaeology.

Committee Co-Chairman, Georgia Archaeology Month Committee, Society for Georgia Archaeology.

King, Adam
Vice President, Council of South Carolina Professional Archaeologists.

Editorial Board for the SCIAA *Legacy*.

Moore, Christopher R.
Member, North Carolina Archaeological Council.

Moon, Robert
Newsletter Editor, Southeastern Archaeology Conference.

Webmaster, Southeastern Archaeology Conference.

Webmaster, Council of South Carolina Professional Archaeologists.

Member of the Board of Directors, Historic Augusta.

Stephenson, Keith
Treasurer, Council of South Carolina Professional Archaeologists.

Thornock, Christopher
President, USC Anthropology Graduate Organization for Research Action and Ethics.

CONSULTING

Brooks, Mark J.
Geoarchaeological and paleoenvironmental consultant to Christopher O. Clement (SCIAA) for on-going archaeological investigations at Ft. Jackson, Richland County, SC.

Geoarchaeological and paleoenvironmental consultant to Christopher R. Moore and Randy Daniel (East Carolina University) for on-going investigations of archaeological sites on the Tar River, NC, formed in conjunction with eolian processes.

Geoarchaeological consultant to Adam King for various proposals to conduct paleoenvironmental and archaeological research at the Congaree River National Park.

Geoarchaeological consultant to J. Christopher Gillam for the project titled The Cerro de los Burros Locality, Uruguay: a Cross-Cultural Comparison to the Allendale Chert Quarries of South Carolina. Fieldwork in Uruguay is tentatively scheduled for February, 2010.

Geoarchaeological and paleoenvironmental consultant (Jan. 2009) to Dr. Van Price for teaching materials and references for his Environmental Geology class at USC-Aiken.

Brooks, Mark J., and Christopher R. Moore

Geoarchaeological consultants (Mar. 18-19, 2009) to Carl Steen (Diachronic Research Foundation), Christopher Judge (USC-Lancaster), and Sean Taylor (DNR-Heritage Trust) for their work at the Kolb site (38DA75) on the SC DNR's Great PeeDee Heritage Preserve near Mechanicsville, SC.

Geoarchaeological consultants (June 3, 2009) to Terry Ferguson (Wofford College) for his work at 38PN35, a deeply buried, stratified site on the South Saluda River in Pickens County, SC.

Gillam, J. Christopher

Numerous consultations during the year on prehistoric archaeology, GIS, GPS, and computer-related equipment and software for the Divisions of SCIAA.

Herron, Tammy F.

Archaeological Consultant, Beech Island Historical Society, Beech Island, SC.

Archaeological Consultant, Silver Bluff Audubon Center & Sanctuary, Jackson, SC.

Archaeological Consultant, Oakley Park Museum, Edgefield, SC.

Moore, Christopher R.

Visit to Jarett Museum in Jackson, SC to examine and consult on projectile point collection.

Geoarchaeological consultant along with Keith Seramur of Appalachian State University and Paul Hanson of the University of Nebraska-Lincoln to the First Colony Foundation at Fort Raleigh National Historic Site on Roanoke Island, North Carolina. Soil samples for grain size analysis and luminescence (OSL) samples were collected for lab analyses to characterize site geomorphology and formation processes.

Wingard, George

Consultant to Mark Albertin of Scrapbook Productions for a video production he researched about the former towns of the Savannah River Site. The documentary *Displaced: The Unexpected Fallout from the Cold War* premiered in at the USCA campus in March.

Worked with Barnwell County Administrator Pickens Williams who obtained SRS land plat records for the purpose of assessing property taxes. Mr. Pickens in turn shared the records with the administrators of Aiken and Allendale counties.

Represented the SRARP on the Savannah River Heritage Foundation Committee who are in the process of creating a walking trail in the former SRS town of Ellenton.

GRANT PROPOSALS SUBMITTED

Natural and Cultural History of the Congaree River Floodplain, Congaree National Park, South Carolina. Submitted to the National Park Service.

Mississippian Settlement in the Congaree River Floodplain. Submitted to the University of South Carolina's Research Opportunity Program.

Exploring the Mississippian Emergence at Macon Plateau and Mound Bottom. Submitted to the National Endowment for the Humanities.

GRANTS AND CONTRACTS

Brooks, Mark J.

FY09 Cultural Resources Management on the U.S. Department of Energy's Savannah River Site, Aiken and Barnwell Counties, South Carolina. U.S. Department of Energy, Savannah River Operations Office.

Cobb, Charles (SCIAA), Chester DePratter (SCIAA), and J. Christopher Gillam

National Science Foundation grant for "Savannah Valley Research Project" (NSF 0852686). ($150,263.00)

Gillam, J. Christopher

SCIAA Archaeological Research Trust grant for "The Cerro de los Burros Locality, Uruguay: A Cross-Cultural Comparison to the Allendale Chert Quarries of South Carolina." ($4,000.00)

Iriarte, José (University of Exeter, UK), J. Christopher Gillam, and Oscar Marozzi (SAR, Servicios Arqueológicos, Montevideo, Uruguay)

National Geographic Committee for Research & Exploration grant for, "Investigating the socio-political organization of Early Formative Taquara/Itararé societies: Regional

survey and excavations in the Piray Mini Basin, Interior Atlantic Forest, Argentina." ($19,980.00)

Moore, Christopher R.
SCIAA Archaeological Research Trust grant for "Geoarchaeology and Geochronology at Flamingo Bay (38AK469)." ($4,500)

ACADEMICS

Brooks, Mark J.
Ph.D. dissertation committee: Christopher R. Moore, Coastal Resources Management Program, East Carolina University, Greenville, NC. Degree conferred in May 2009.

M.A. thesis committee: David Rigtrup, Department of Anthropology, University of South Carolina, Columbia, SC.

King, Adam
M.A. thesis committee chair: Christopher Thornock, Department of Anthropology, University of South Carolina, Columbia, SC.

M.A. thesis committee chair: Dwight Jones, Department of Anthropology, University of South Carolina, Columbia, SC.

M.A. thesis committee member: Johann Sawyer, Department of Anthropology, Texas State University at San Marcos, TX.

M.A. thesis committee member: Mark Barnett, Department of Anthropology, Texas State University at San Marcos, TX.

B.A. thesis committee member: Alexander Corsi, University of South Carolina, Department of Anthropology, Columbia, SC.

B.A. thesis committee member: David Macias, University of South Carolina, Department of Anthropology, Columbia, SC.

Fall Semester 2008 – Instructor, Department of Anthropology, University of South Carolina, ANTH 102 (Understanding Other Cultures) and ANTH 591I (North American Iconography).

Spring Semester 2009 – Instructor, Department of Anthropology, University of South Carolina, ANTH 317 (Native American Cultures of North America) and ANTH 591P (Public Archaeology).

Moon, Robert
Summer 2009 – Adjunct Instructor, Ashford University, ANTH 101 (Introduction to Cultural Anthropology).

Moore, Christopher R.
M.A. thesis committee: Paulette McFadden, Department of Anthropology, East Carolina University, Greenville, NC.

North Carolina Summer Ventures Program in Science and Mathematics, East Carolina University, Greenville, NC.

PUBLIC SERVICE ACTIVITIES

September 2008

Moore, Christopher R.
Discovering Archaeology program at Schofield Middle School, Aiken, SC.

Volunteer excavation on September 23 at the Frierson Bay site in Blackville, SC.

Volunteer excavation on September 30 at the Frierson Bay site in Blackville, SC.

Educational and artifact display for Redcliffe Plantation Archaeology Day, Beech Island, SC.

October 2008

Brooks, Mark J., and Christopher R. Moore
Assessed the archaeological potential of a Carolina bay in Barnwell County, SC at the request of landowner John Schaffer.

Herron, Tammy F.
Organized an archaeological exhibit to be displayed at CoastFest, sponsored by the Georgia Department of Natural Resources Coastal Resources Division, Brunswick, GA.

Organized an archaeological exhibit to be displayed at Fall Field Day, sponsored by the Archaeological Society of South Carolina, Old Dorchester State Historic Site, Summerville, SC.

Lecture regarding Oakley Park Museum presented to the Town and Country Club, University of South Carolina – Aiken.

Moore, Christopher R.
You Be the Archaeologist program on October 17 for students at the Silver Bluff Audubon Center and Sanctuary, Jackson, SC.

You Be the Archaeologist program on October 21 for students at the Silver Bluff Audubon Center and Sanctuary, Jackson, SC.

Artifact display and flintknapping demonstration for students at the Science Education Enrichment Day, Ruth Patrick Science Education Center, USC-Aiken.

November 2008

Brooks, Mark J.
Presented an overview of the SRARP to the SCIAA Archaeological Research Trust Board, Aiken, SC.

Moore, Christopher R.
Volunteer excavation at the Frierson Bay site in Blackville, SC.

Presentation on the SRARP Carolina Bay Research Program to the SCIAA Archaeological Research Trust Board, Aiken, SC.

December 2008

Gillam, J. Christopher
Hosted the Midlands ASSC annual holiday party at SCIAA, Columbia, SC.

January 2009

Moore, Christopher R.
Volunteer excavation on January 21 at the Frierson Bay site in Blackville, SC.

Volunteer excavation on January 27 at the Frierson Bay site in Blackville, SC.

Volunteer excavation on January 29 at the Frierson Bay site in Blackville, SC.

February 2009

Gillam, J. Christopher
Hosted the Midlands ASSC monthly meeting at SCIAA, Columbia, SC.

Herron, Tammy F., and George Wingard
Checked the inventory of artifacts, cleaned, and rearranged the artifact cases in the Archaeology Room at the Aiken County Historical Museum, Aiken, SC.

Moore, Christopher R.
Volunteer excavation on February 2 at the Johns Bay site in Allendale County, SC.

Volunteer excavation on February 5 at the Johns Bay site in Allendale County, SC.

Lecture titled “The Prehistory of the Middle Savannah River Valley and the Aiken Plateau” presented in the Aiken County Historical Society Lecture Series, Aiken County Museum, Aiken, SC.

March 2009

Brooks, Mark J.

Helped man an SRARP display during a wine and cheese reception at the Etherredge Center, USC-Aiken in conjunction with the premier showing of a documentary film (co-sponsored by the SRARP) on the former SRS town of Ellenton.

Moore, Christopher R.

You Be the Archaeologist program on March 16 for students at the Silver Bluff Audubon Center and Sanctuary, Jackson, SC.

You Be the Archaeologist program on March 17 for students at the Silver Bluff Audubon Center and Sanctuary, Jackson, SC.

You Be the Archaeologist program on March 31 for students at the Silver Bluff Audubon Center and Sanctuary, Jackson, SC.

Education and artifact display for the Audubon Society's Carriage Ride at the Silver Bluff Audubon Center and Sanctuary, Jackson, SC.

Discovering Archaeology program for students at the Hammond Hill Elementary Science Day, North Augusta, SC.

Wingard, George

Tour of Dunbarton with Dawn Haygood sponsored by the Savannah River Site Tours Program.

Tour of Dunbarton with Laurie Posey sponsored by the Savannah River Site Tours Program.

Wingard, George and SRARP staff

Outreach at the premier of the documentary film *Displaced: The Unexpected Fallout from the Cold War* with a display on the SRARP, Etherredge Center, USC-Aiken.

April 2009

Herron, Tammy F.

Organized an archaeological exhibit to be displayed at Georgia On My Mind Day, sponsored by the Georgia Department of Transportation, Georgia Visitor Information Center, Sylvania, GA.

King, Adam

Lecture titled "Recent Discoveries at Etowah and Macon Plateau Revealed through Remote Sensing" presented to the Augusta Archaeological Society, Augusta, GA.

Lecture titled “Makers of the Teepee: Native Americans of the Great Plains” class presentation for the NIKE Home School Group, Columbia, SC.

Lecture titled “Makers of the Totem Pole: Native Americans of the Northwest Coast” class presentation for the NIKE Home School Group, Columbia, SC.

Lecture titled “Cultures of the Creek and Cherokee Indians” class presentation for the NIKE Home School Group, Columbia, SC.

Moore, Christopher R.
Volunteer excavation at the Johns Bay site, Allendale, SC.

Volunteer excavation at the Flamingo Bay site, SRS.

Artifact display and flintknapping demonstration for students at the North Augusta Kids Earth Day, Lions Memorial Field, North Augusta, SC.

May 2009

Herron, Tammy F.
Designed and installed an exhibit titled “Remembering Former Towns of the Savannah River Site” for the grand opening of the Aiken County Visitor Center, Aiken, SC.

Moore, Christopher R.
Volunteer excavation at the Flamingo Bay site, SRS.

Presentation on the SRARP Carolina Bay Research Program at the Topper site, Allendale, SC.

Wingard, George
Tour of Williams Cemetery on the SRS for the Mobley/Green family.

Display presented at the Dunbarton Town Reunion held at Barnwell State Park.

Tour of Dunbarton sponsored by the Savannah River Site Tours Program.

Tour of former home-sites on the SRS with members of the Richard E. Lindell family.

June 2009

Gillam, J. Christopher
Hosted the Midlands ASSC monthly meeting at SCIAA, Columbia, SC.

Herron, Tammy F. and Rob Moon
Participated in Artifact Identification Day sponsored by the Augusta Archaeological Society, Ezekial Harris House, Augusta, GA.

King, Adam

Lecture titled “Five Things I have Learned Since Ken Came to Etowah” presented at the Etowah Indian Mounds State Park, Cartersville, GA.

Lecture titled “Recent Advances in the Archaeology of Etowah” presented in honor of Lewis H. Larson, Jr. at the Etowah Indian Mounds State Park, Cartersville, GA.

Moore, Christopher R.

Archaeological excavation from June 23 to July 10 for gifted high school students in the North Carolina Summer Ventures Program in Science and Mathematics, East Carolina University, Greenville, NC.

You Be the Archaeologist program for students at the Silver Bluff Audubon Center and Sanctuary, Jackson, SC.

Wingard, George

Tour of family home-sites on the SRS for the Swendson/Green family.

Tour of local Central Savannah River Area, including cemeteries and museums, for members of the Swendson/Green family.

Display presented at the Ellenton Town Reunion held at Silverbluff High School, Jackson, SC.

Tour of Ellenton sponsored by the Savannah River Site Tours program.

July 2009

Herron, Tammy F.

Prepared materials for an archaeological exhibit to be displayed at Georgia On My Mind Day, sponsored by the Georgia Department of Transportation, Georgia Visitor Information Center, Augusta, GA.

Moore, Christopher R.

Educational display and promotion of Georgia archaeology at the Georgia Visitor Information Center, Augusta, GA.