

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

FISCAL YEAR 2014

Prepared by  
staff of the

SAVANNAH RIVER  
ARCHAEOLOGICAL RESEARCH PROGRAM

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

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**SAVANNAH RIVER ARCHAEOLOGICAL RESEARCH PROGRAM PERSONNEL****Staff**

Jessica M. Cooper	Field/Laboratory Technician
J. Christopher Gillam	GIS Specialist/Archaeologist
Tammy F. Herron	Curator of Artifact Collections
Adam King	Special Projects Archaeologist
Christopher R. Moore	Public Outreach/Geoarchaeologist
Maggie M. Needham	Curatorial Assistant
Lisa A. Pittman	Field/Laboratory Technician
Keith Stephenson	Archaeologist
Christopher Thornock	Field Coordinator of CRM Survey
George L. Wingard	Administrative Manager

**Volunteers**

Mark J. Brooks	Volunteer Coordinator
Rooney Floyd	Laboratory/Field Assistant
George Heath	Laboratory/Field Assistant
John Kolmar	Laboratory/Field Assistant
Jill Nazarete	Laboratory/Field Assistant
Bob Van Buren	Laboratory/Field Assistant
John Whatley	Laboratory/Field Assistant

## 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 resource 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 2014 (FY14) 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 2013 to August 2014. Due to DOE security concerns, however, parts of this report do not contain material (exact project area size, map scales, etc.) typically contained in standard archaeological documents.

In FY14, 461 acres of land on the SRS were investigated with 2,481 Shovel Test Pits (STPs) for CRM. This activity entailed 25 field reconnaissance and testing surveys. Eighteen newly discovered sites were recorded, and 7 previously recorded sites were revisited. The site file records were updated accordingly. Geographic 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 maintained continuous support to DOE Cold War Cultural Resources Management Plan (CRMP) efforts through participation on DOE's Cold War Artifact Selection Team and at Heritage Tourism Board meetings.

Research conducted by SRARP personnel during FY14 was published in three professional articles. The SRARP staff presented research results in 18 papers and posters at professional conferences. SRARP personnel peer reviewed six journal articles for publication. Ten research projects involving excavation, laboratory analysis, museum, and archival study were conducted. Three grants were acquired to support both on- and off-site research. Employees served as consultants on eight projects in off-site CRM and research activities. The SRARP staff held 14 offices and appointments to committees in various educational, avocational, and professional organizations.

In the area of heritage education, the SRARP continued its activities in FY14 with a full schedule of classroom education, public outreach, and on-site tours. Seventy-eight 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 eight thesis and dissertation committees, served as advisor for two senior honors theses, as well as taught six anthropology courses at the University of South Carolina and Georgia Regents University, Augusta.

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## INTRODUCTION

Since 1990, CRM compliance on the SRS has been based on a programmatic memorandum of agreement (PMOA) among the DOE, the South Carolina State Historic Preservation Office (SCSHPO), and the Advisory Council on Historic Preservation (ACHP). Through this PMOA, the DOE commits to conduct an integrated CRM program at the 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 various other CRM laws and regulations.

The SRARP provides the DOE with the technical expertise that enables the DOE to meet its PMOA commitments. The specific elements of the SRARP compliance, research, and outreach efforts are identified within a cooperative agreement between the DOE and the South Carolina Institute of Archaeology and Anthropology-University of South Carolina (SCIAA-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 FY14 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 FY14 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 lists all professional and public service activities of the SRARP staff.

## PART I. CULTURAL RESOURCE MANAGEMENT

### RESULTS OF FY14 SITE USE AND TIMBER COMPARTMENT SURVEYS

Keith Stephenson, Christopher Thornock, and Tammy F. Herron

#### Survey Coverage

Archaeological survey of Site Use Permit Application and Timber Compartment Prescription projects by SRARP staff continued through FY14 according to procedures outlined in 1990 (SRARP 1990:7-17). During FY14, archaeological reconnaissance and survey were conducted on 25 proposed projects<sup>1</sup> through the subsurface inspection of 461 acres with a total of 2,481 Shovel Test Pits (STPs) excavated. Altogether, 18 new sites were recorded and delineated, and 7 previously recorded sites were revisited during FY14. 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 such, these sites will be completely avoided by SRS contractors during any land-disturbing activities. At the time 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, 11 isolated artifact occurrences were recorded during FY14 surveys. Summary information concerning specific aspects of all new and existing sites, as well as isolated artifact occurrences, is provided in

Table I-1 to Table I-4. The locations of all Site Use Application and Timber Compartment surveys are shown in Figure I-1.

Over the past 25 years, the SRARP has conducted compliance survey according to a predictive locational model for archaeological sites, as established in the revised Archaeological Resource Management Plan (SRARP 2013:39-54, 71-79, Appendix D). 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 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 a process that includes intensive, systematic shovel test survey to delineate and evaluate the significance of any sites present. If a site that is considered eligible or has not been evaluated cannot be

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<sup>1</sup> A field survey project is defined as subsurface inspection for a DOE Site Use Application or all subsurface investigations within a U. S. Forest Service-Savannah River Timber Compartment Prescription.

avoided, the SRARP consults with SC SHPO to formulate an evaluation and mitigation plan.

Table I-1. Data on the Extent, Depth, and Content of New Sites Recorded, FY14.

STATE SITE NUMBER	SURVEY PROJECT	SURVEY METHOD	SITE SIZE (m)	SURF. VIS. (%)	SITE DEPTH (cmbs)	#	STPs	STPs	POS. COMPONENTS
38AK1000	SU 3067	Full Coverage	105 x 45	1-25	50	31	11	Unk. Preh., 19th-20th c.	
38AK1001	SU 3084	Full Coverage	15 x 10	51-75	25	5	2	20th c.	
38AK1002	SU 3116	Full Coverage	75 x 20	76-100	40	25	3	Unk. Preh.	
38BR1331	SU 3067	Full Coverage	15 x 15	51-75	25	12	2	19th-20th c.	
38BR1332	SU 3067	Full Coverage	15 x 15	1-25	25	4	1	20th c.	
38BR1333	SU 3067	Full Coverage	30 x 15	26-50	25	11	3	EW, 20th c.	
38BR1334	SU 3067	Full Coverage	60 x 20	1-25	30	7	3	19th-20th c.	
38BR1335	TC 74	Full Coverage	165 x 135	51-75	60	79	24	Unk. Preh., 19th-20th c.	
38BR1336	TC 46	Full Coverage	135 x 135	1-25	50	58	23	LW	
38BR1337	TC 29	Full Coverage	70 x 20	26-50	30	16	3	20th c.	
38BR1338	TC 29	Full Coverage	105 x 60	1-25	80	56	18	EW, MW, LW	
38BR1339	TC 74	Full Coverage	60 x 75	26-50	45	21	4	Unk. Preh.	
38BR1340	TC 74	Full Coverage	30 x 40	26-50	30	19	4	Unk. Preh., 19th-20th c.	
38BR1341	TC 54	Opportunistic	70 x 90	51-75	Unk.	0	0	20th c.	
38BR1342	TC 54	Full Coverage	70 x 55	26-50	55	57	18	19th-20th c.	
38BR1343	TC 29	Full Coverage	30 x 20	1-25	45	23	5	19th-20th c.	
38BR1344	SU 3116	Full Coverage	150 x 135	26-50	40	82	26	Unk. Preh., 18th-19th c.	
Recon. – Reconnaissance			MA – Middle Archaic			LW – Late Woodland			
SU – Site Use			LA – Late Archaic			Miss. – Mississippian			
STPs – Shovel Test Pits			EW – Early Woodland			Unk. Preh. – Unknown Prehistoric			
EA – Early Archaic			MW – Middle Woodland			na – not applicable			

Table I-2. Data on the Extent, Depth, and Content of Site Revisits, FY14.

STATE SITE NUMBER	SURVEY PROJECT	SURVEY METHOD	SITE SIZE (m)	SURF. VIS. (%)	SITE DEPTH (cmbs)	#	STPs	STPs	POS. COMPONENTS
38AK135	SU 3116	Full Coverage	60 x 20	0	50	14	1	Unk. Preh.	
38AK308	TC16	Predictive	135 x 125	1-25	60	102	32	19th-20th c.	
38AK611	SU 3116	Full Coverage	60 x 130	0	40	3	1	19th-20th c.	
38BR523	TC 29	Full Coverage	120 x 120	26-50	50	68	25	19th-20th c.	
38BR1047	TC 85	Predictive	255 x 135	26-50	80	141	48	MW, LW., 19th-20th c.	
38BR1119	SU 3067	Full Coverage	15 x 45	1-25	60	4	4	Unk. Preh., 19th-20th c.	
38BR1160	TC 54	Full Coverage	90 x 110	26-50	25	3	3	19th-20th c.	
Recon. – Reconnaissance			MA – Middle Archaic			LW – Late Woodland			
SU – Site Use			LA – Late Archaic			Miss. – Mississippian			
STPs – Shovel Test Pits			EW – Early Woodland			Unk. Preh. – Unknown Prehistoric			
EA – Early Archaic			MW – Middle Woodland			Unk. – Unknown			

Table I-3. Evaluation of New and Previously Recorded Sites, FY14.

STATE SITE NUMBER	SURVEY PROJECT	SURVEY METHOD	SITE COMPONENTS	SITE INTEGRITY	NRHP ELIGIBILITY	FURTHER WORK
38AK135	SU 3116	Full Coverage	Unk. Preh., 19th-20th c.	Moderate	Unevaluated	Testing
38AK308	TC16	Full Coverage	19th-20th c.	Good	Eligible	Testing
38AK611	SU 3116	Full Coverage	19th-20th c.	Moderate	Unevaluated	Testing
38AK1000	SU 3067	Full Coverage	Unk. Preh., 19th-20th c.	Poor	Not Eligible	None
38AK1001	SU 3084	Predictive	20th c.	Poor	Not Eligible	None
38AK1002	SU 3116	Full Coverage	Unk. Preh.	Moderate	Unevaluated	Testing
38BR523	TC 29	Full Coverage	19th-20th c.	Moderate	Unevaluated	Testing
38BR1047	TC 85	Full Coverage	MW, LW., 19th-20th c.	Good	Unevaluated	Testing
38BR1119	SU 3067	Full Coverage	Unk. Preh., 19th-20th c.	Poor	Not Eligible	None
38BR1160	TC 54	Full Coverage	19th-20th c.	Poor	Not Eligible	None
38BR1331	SU 3067	Full Coverage	19th-20th c.	Poor	Not Eligible	None
38BR1332	SU 3067	Full Coverage	20th c.	Poor	Not Eligible	None
38BR1333	SU 3067	Full Coverage	EW, 20th c.	Moderate	Unevaluated	Testing
38BR1334	SU 3067	Full Coverage	19th-20th c.	Poor	Unevaluated	Survey
38BR1335	TC 74	Full Coverage	Unk. Preh., 19th-20th c.	Moderate	Unevaluated	Testing
38BR1336	TC 46	Full Coverage	LW	Moderate	Unevaluated	Testing
38BR1337	TC 29	Full Coverage	20th c.	Moderate	Unevaluated	Testing
38BR1338	TC 29	Full Coverage	EW, MW, LW	Good	Unevaluated	Testing
38BR1339	TC 74	Full Coverage	Unk. Preh.	Moderate	Unevaluated	Testing
38BR1340	TC 74	Full Coverage	Unk. Preh., 19th-20th c.	Moderate	Unevaluated	Testing
38BR1341	TC 54	Full Coverage	20th c.	Good	Unevaluated	Survey
38BR1342	TC 54	Full Coverage	19th-20th c.	Moderate	Unevaluated	Testing
38BR1343	TC 29	Full Coverage	19th-20th c.	Moderate	Unevaluated	Testing
38BR1344	SU 3116	Full Coverage	Unk. Preh., 18th-19th c.	Good	Eligible	Testing
EA – Early Archaic			MA – L 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 I-4. Isolated Artifact Occurrences, FY14.

ISOLATED FIND NO.	STPs	COMPONENT	SURVEY PROJECT
AKOCC-159	7	Historic	TC 67 STD12
AKOCC-160	9	Historic/Prehistoric	SU 3116
BROCC-312	8	Historic	TC 70 STD 11
BROCC-313	7	Historic	TC 70 STD 9
BROCC-314	6	Prehistoric	TC 72 STD 23
BROCC-315	5	Historic	TC 72 STD 44
BROCC-316	6	Historic	TC 29 STD17
BROCC-317	7	Prehistoric	TC 29 STP 42
BROCC-318	9	Historic	TC 74 STD 30
BROCC-319	9	Prehistoric	TC 74 STP 33
BROCC-320	7	Historic	TC 56 STD 11
BROCC-321	9	Prehistoric	TC 29 STD 42
OCC – Artifact Occurrence		TC – Timber Compartment	

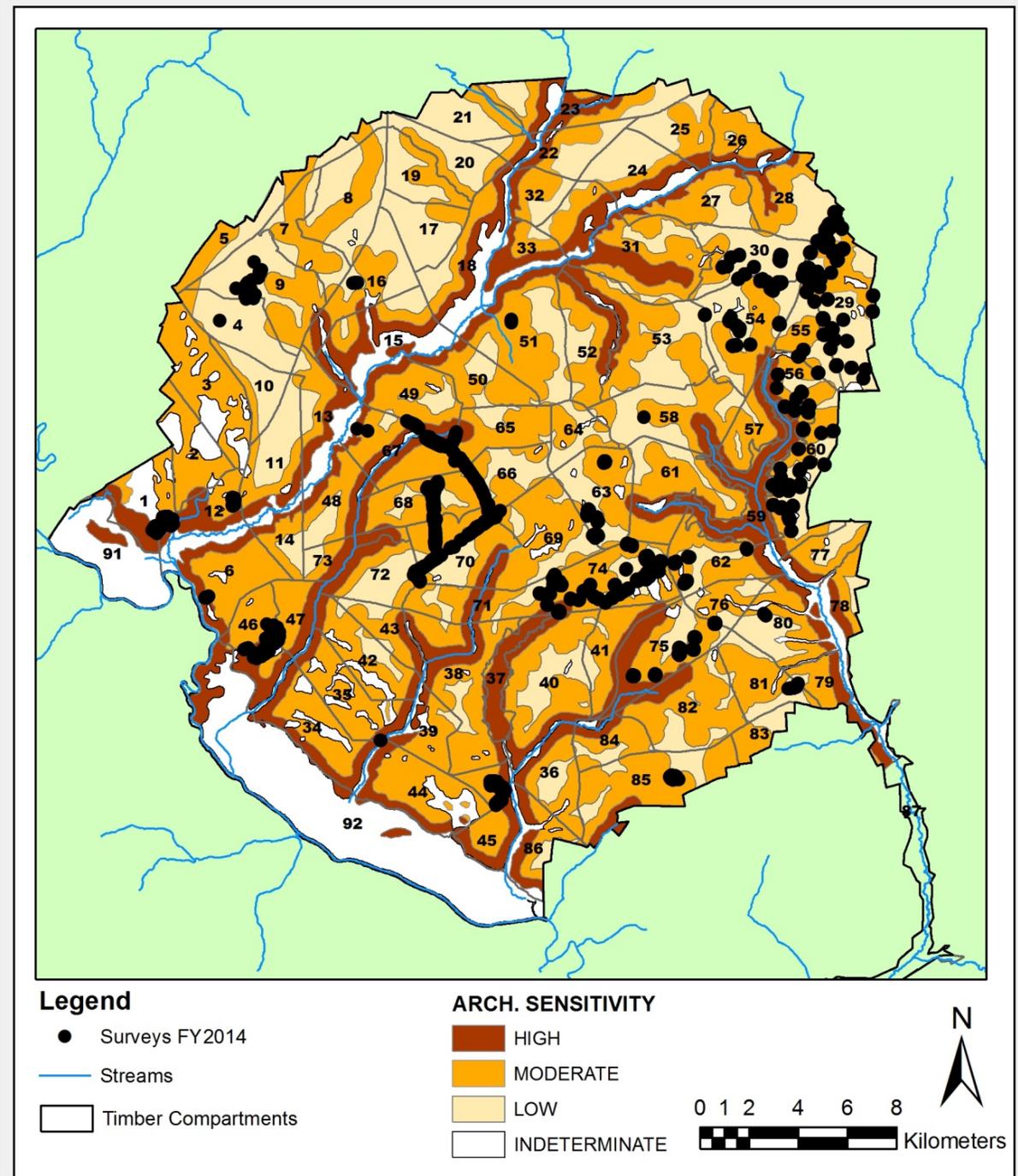


Figure I-1. Location of FY14 project areas on the SRS.

### SR-88 Site Use Permit Application Survey

The SRARP received 66 Site Use Permit Applications from various contractors on the SRS during FY14. Each permit application underwent review by SRARP management for proposed land modification. Of these, 11 Site Use projects required field reconnaissance or archaeological survey (Table I-5). These Site Use projects comprised 275 acres (60%) of the total survey coverage in FY14. The following summaries describe Site Use projects and survey results during FY14.

Table I-5. SR-88 Site Use Application Projects, FY14.

PROJECT	PROJECT AREA SURVEYED (ac)	TOTAL PROJECT STPs	NEW SITES	SITE REVISITS
SU Log No. 3067	142	482	38BR1332 38BR1333 38BR1334	38AK1000 38BR1120
SU Log No. 3070	1	3		
SU Log No. 3074	1	5		
SU Log No. 3075	2	13		
SU Log No. 3084	1	7	38AK1001	
SU Log No. 3104	1	2		
SU Log No. 3106	16	24		
SU Log No. 3110	1	1		
SU Log No. 3112	1	2		
SU Log No. 3116	107	107	38BR1344	38AK135 38AK611 38AK1002
SU Log No. 3124	2	14		
<b>TOTAL</b>	<b>275</b>	<b>660</b>	<b>5</b>	<b>5</b>

Certain aspects of archaeological work are standard for all projects. Prior to fieldwork, a review of 1951 aerial photography 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. 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. 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. 3067 – *Construction of Shipment Routes Clear Zone*

This Site Use Permit, issued on June 25, 2013, proposed the mechanical removal of merchantable trees 100 ft. from specified major roadways to enhance the security and protection of shipments made between K and H Areas (Figure I-2 to Figure I-5). Review of the SRARP database showed one recorded site (38BR1119) in the project area. Fieldwork was initiated during FY13 (SRARP 2013:8-9) and completed in FY14. These efforts resulted in a site revisit to 38BR1119, as well as the discovery and delineation of five new sites (38AK1000, 38BR1331, 38BR1332, 38BR1333, and 38BR1334). Due to their lack of surface and subsurface integrity, sites 38AK1000, 38BR1119, 38BR1331, and 38BR1332 are not eligible for nomination to the National Register of Historic Places. Sites 38BR1333 and 38BR1334 will not undergo any new impacts from these timbering activities. Thus, there will be no adverse effects to any historic properties as a result of the proposed Site Use project.

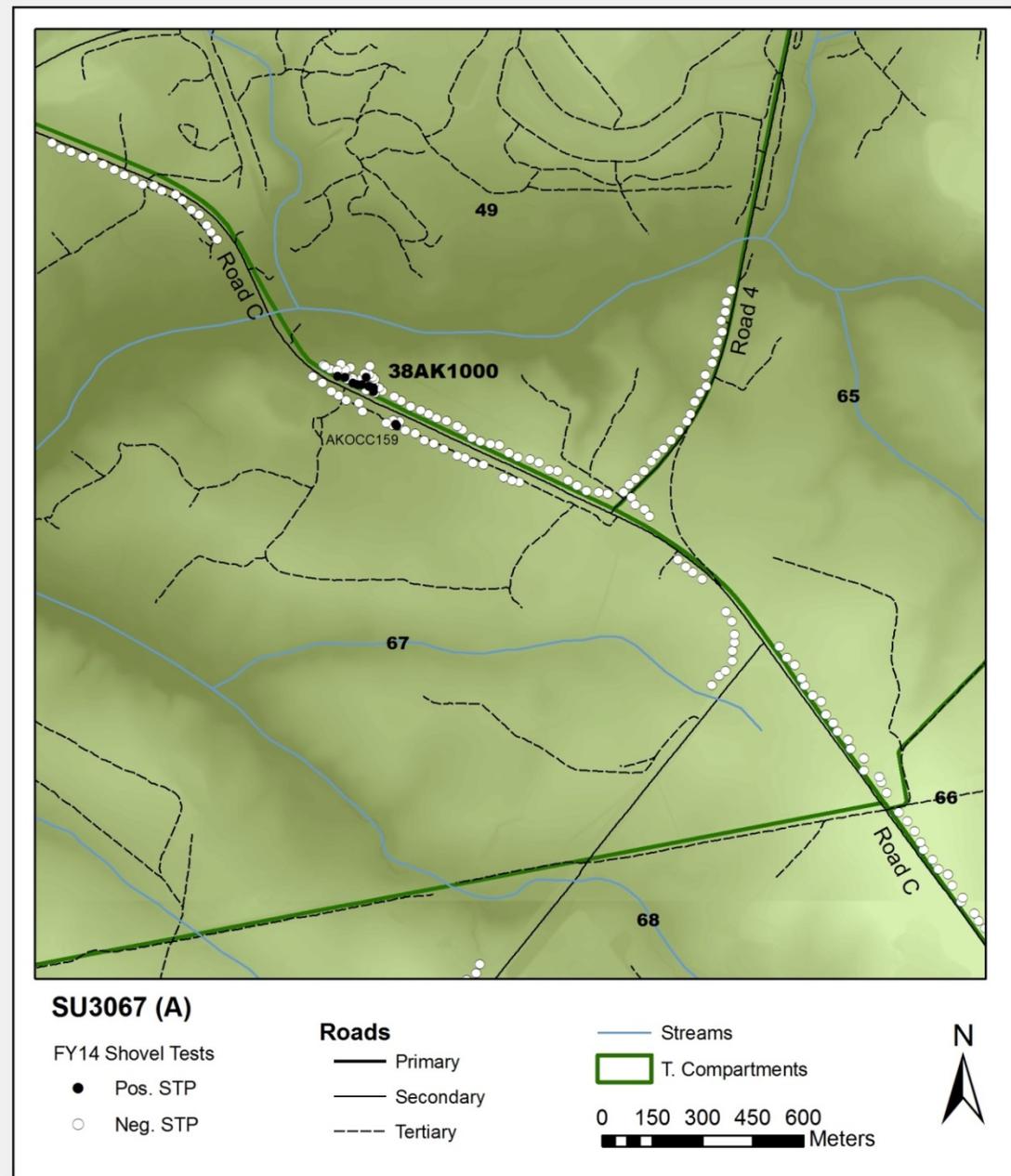


Figure I-2. SU Log No. 3067 survey area.

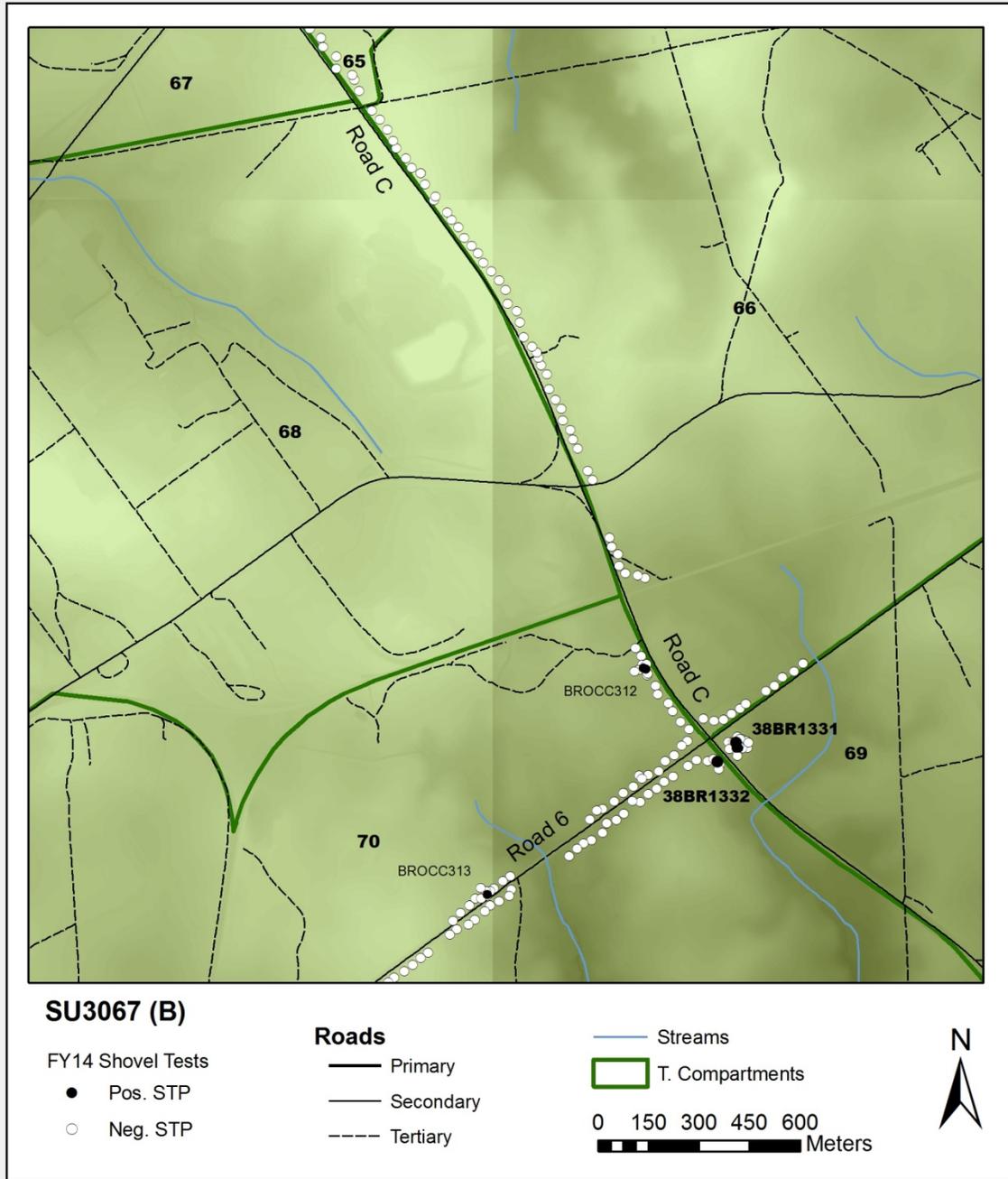


Figure I-3. SU Log No. 3067 survey area continued.

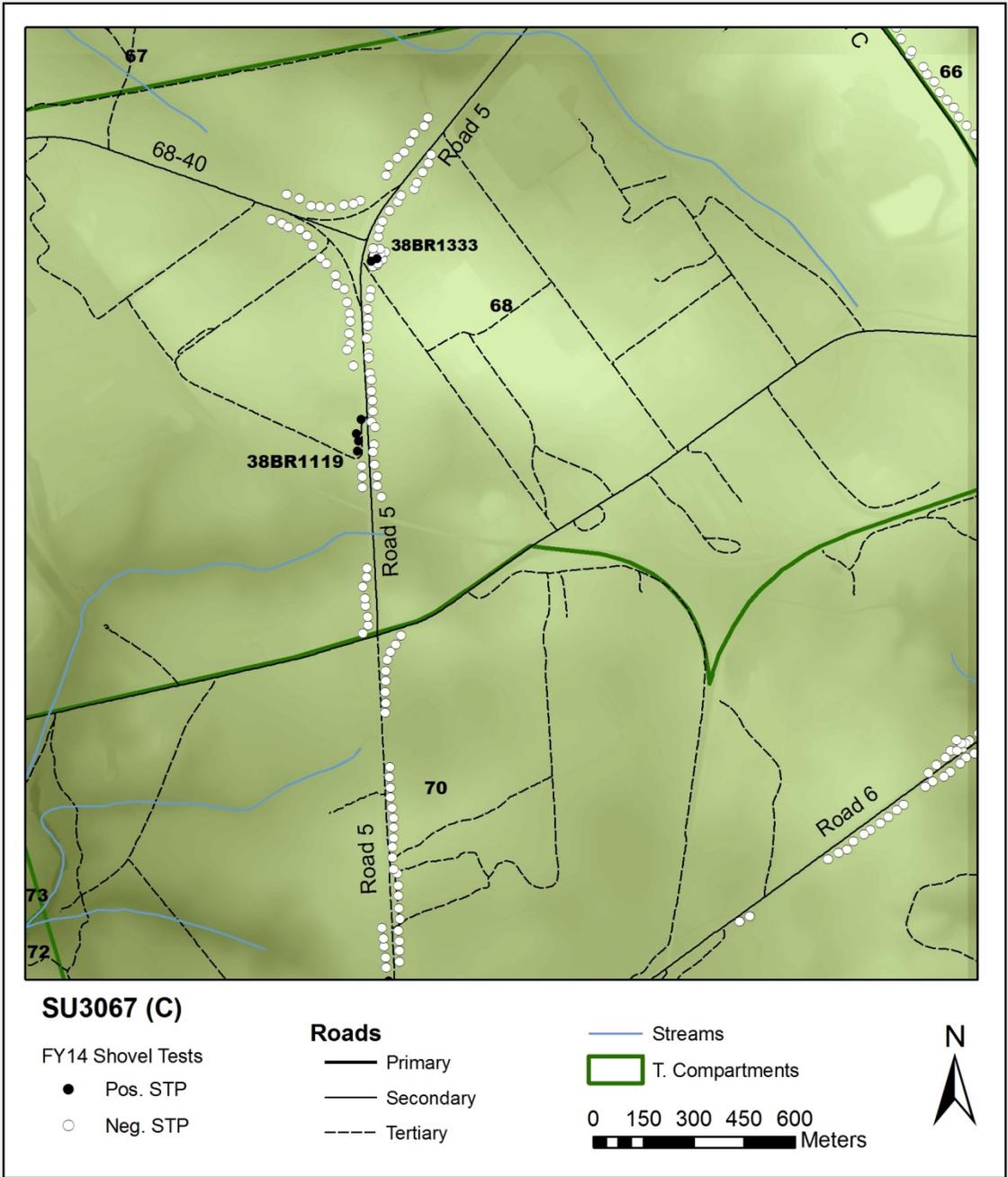


Figure I-4. SU Log No. 3067 survey area continued.

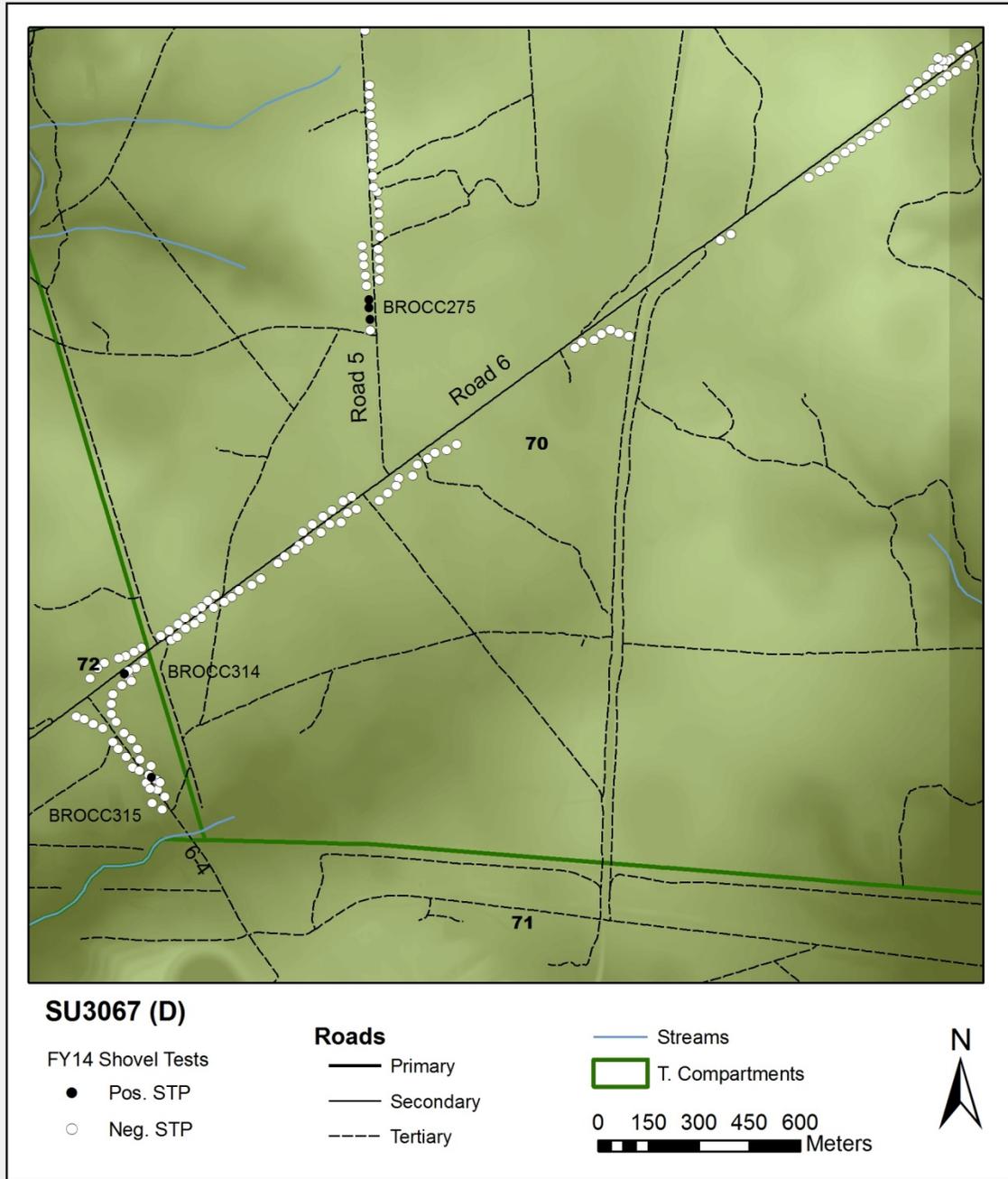


Figure I-5. SU Log No. 3067 survey area continued.

*SU Log No. 3070 – Proposed Cone Penetrometer Tests for Groundwater Samples*

This Site Use Permit, issued on July 29, 2013, proposed the installation of five Cone Penetrometer Test cores within a 1-acre area to obtain groundwater samples. Two were in the existing dirt road. Each sub-surface core was 2-in. in diameter down to groundwater (Figure I-6). Review of the SRARP database showed no recorded sites in

the project area. Fieldwork consisted of 3 STPs (0 positive) excavated in the project location. As this survey effort resulted in only negative STPs, no further archaeological work was required. Thus, there will be no adverse effects to any historic properties as a result of the proposed project.

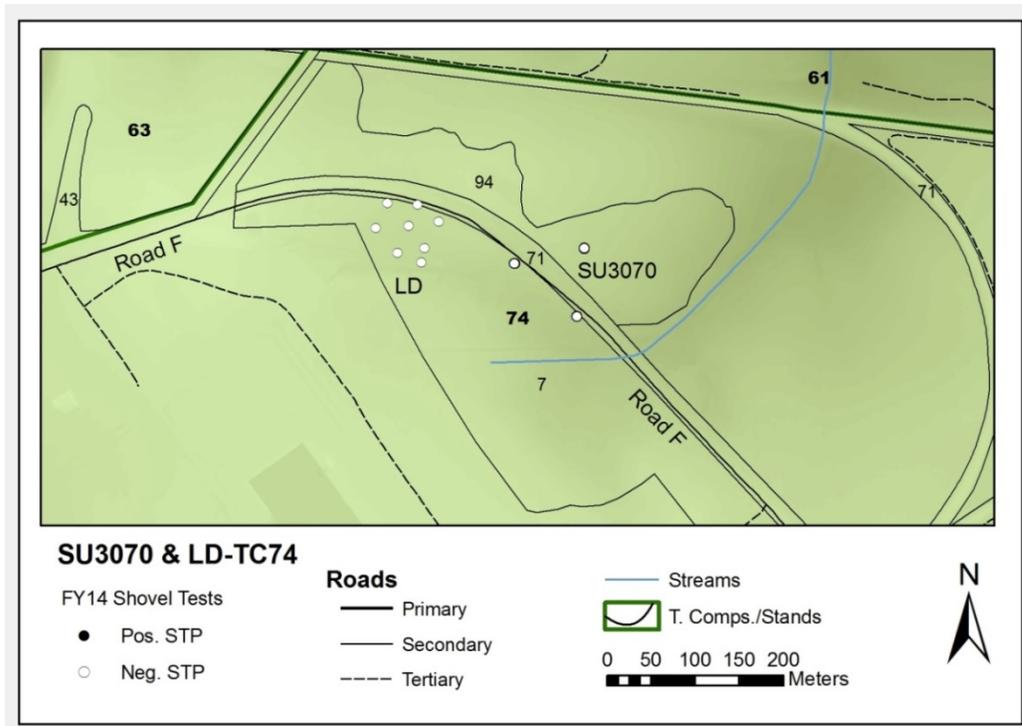


Figure I-6. SU Log No. 3070 survey area continued.

#### SU Log No. 3074 – *Proposed Extension of Secondary Access Road*

This Site Use Permit, issued on September, 10, 2013, proposed the 150-m extension of a secondary access road (Figure I-7). Review of the SRARP database showed no recorded sites in the project area. Fieldwork consisted of 5 STPs (0 positive) excavated along a single transect following the proposed road extension. As this survey effort resulted in only negative STPs, no further archaeological work was required. Thus, there will be no adverse effects to any historic properties as a result of the proposed Site Use project.

#### SU Log No. 3075 – *Proposed Extension of Secondary Access Road*

This Site Use Permit, issued on September, 10, 2013, proposed the extension of two secondary access roads totaling 400 m in length (Figure I-8 and Figure I-9). Review of

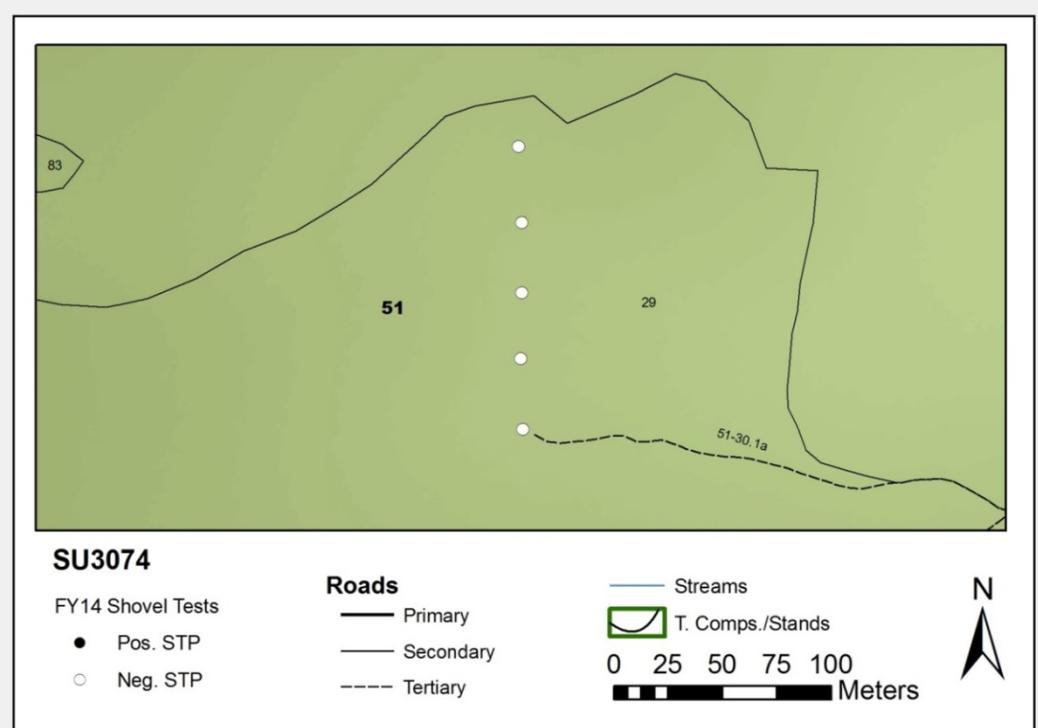


Figure I-7. SU Log No. 3074 survey area.

the SRARP database showed no recorded sites in the project area. Fieldwork consisted of 13 STPs (0 positive) excavated along two transects within the road extension corridors. As this survey effort resulted in only negative STPs, no further archaeological work was required. Thus, there will be no adverse effects to any historic properties as a result of the proposed Site Use project.

#### SU Log No. 3084 – *Request for Tree Removal in the TNX Area*

This Site Use Permit, issued on December 12, 2013, proposed the removal of all trees within 100 ft. of the TNX fence line (Figure I-10). Review of the SRARP database showed no previously recorded sites in the project area. Fieldwork consisted of 11 STPs (2 positive) excavated along a single transect within the project area. These efforts resulted in the discovery and delineation of site 38AK1001. This site consists of mid-twentieth-century discarded debris resulting from various SRS-related activities, and as such, is not considered eligible for nomination to the National Register of Historic Places. Thus, there will be no adverse effects to any historic properties by the proposed Site Use action.

#### SU Log No. 3104 – *Proposed Installation of Pen Branch Flow Rate Monitor*

This Site Use Permit, issued on April 2, 2014, proposed the installation of two metal stakes to support a cable across Pen Branch to monitor stream flow rates (Figure I-11). Review of the SRARP database showed no recorded sites in the project area. Fieldwork consisted of 2 STPs (0 positive) excavated along two transects within the road extension corridors. As this survey effort resulted in only negative STPs,

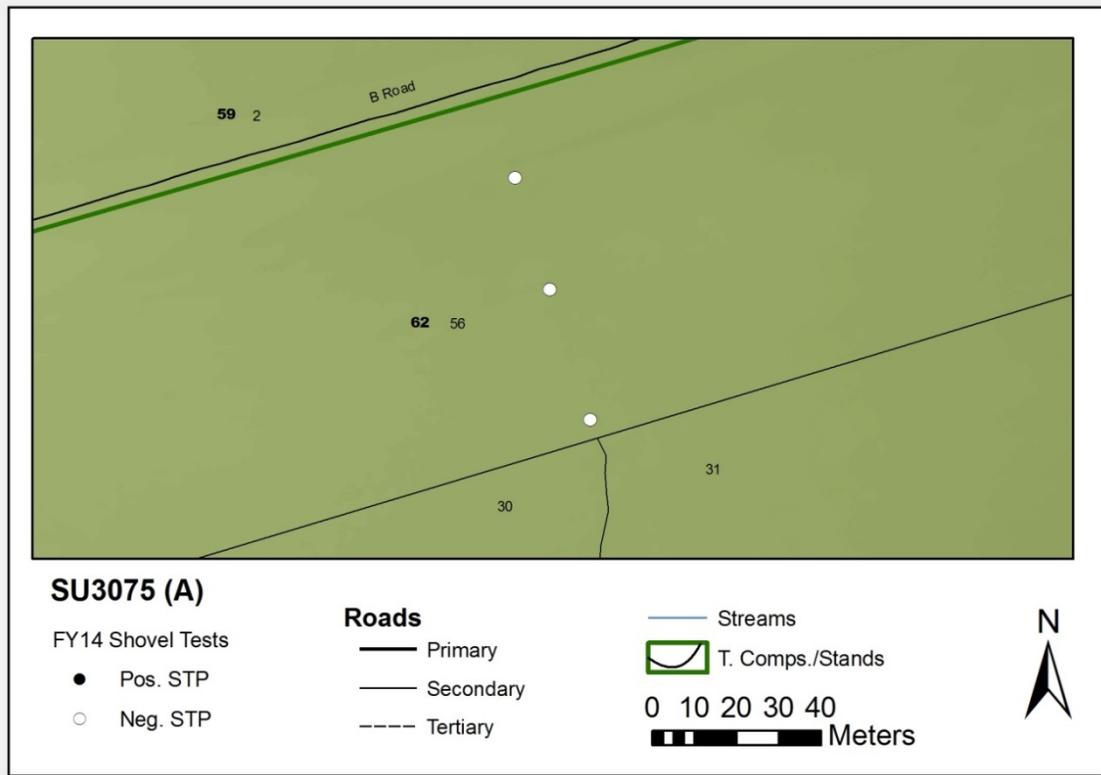


Figure I-8. SU Log No. 3075 survey area.

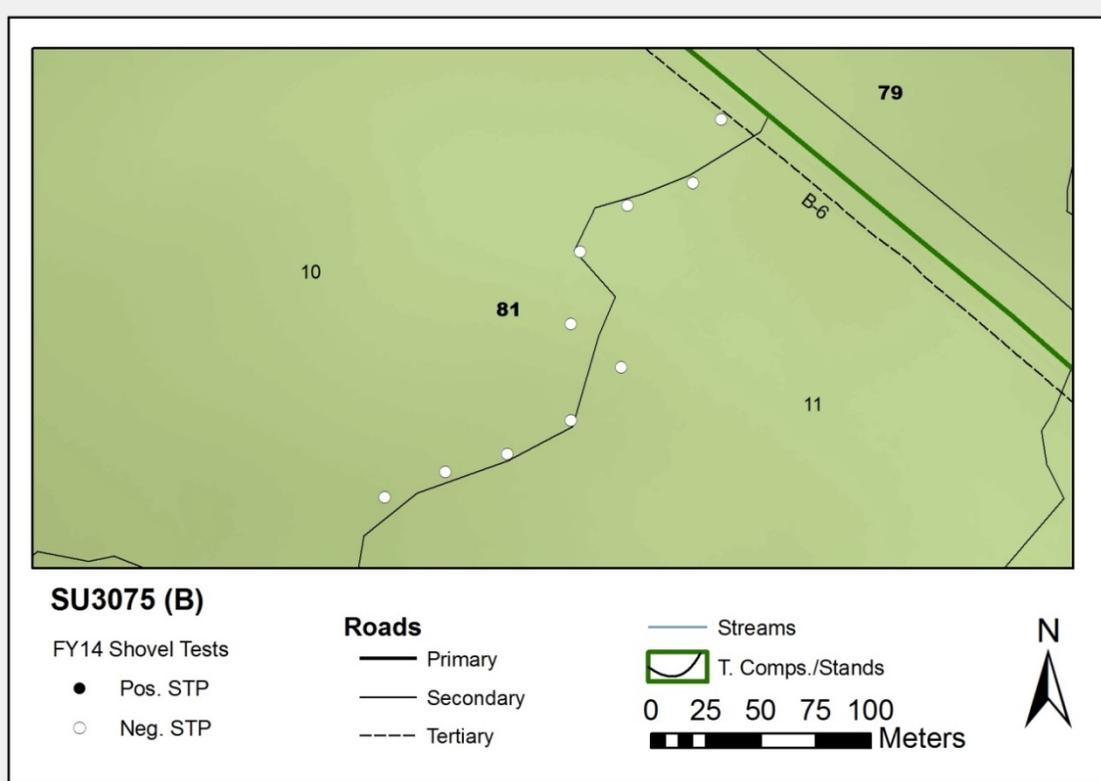


Figure I-9. SU Log No. 3075 survey area continued.

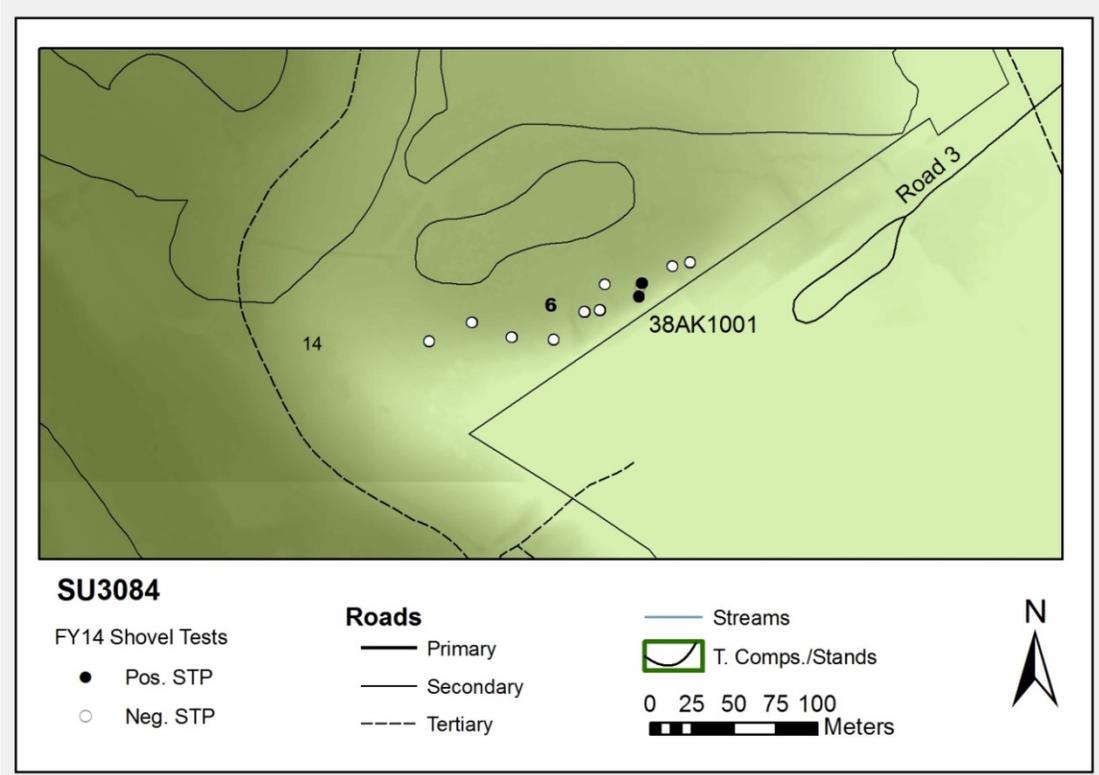


Figure I-10. SU Log No. 3084 survey area.

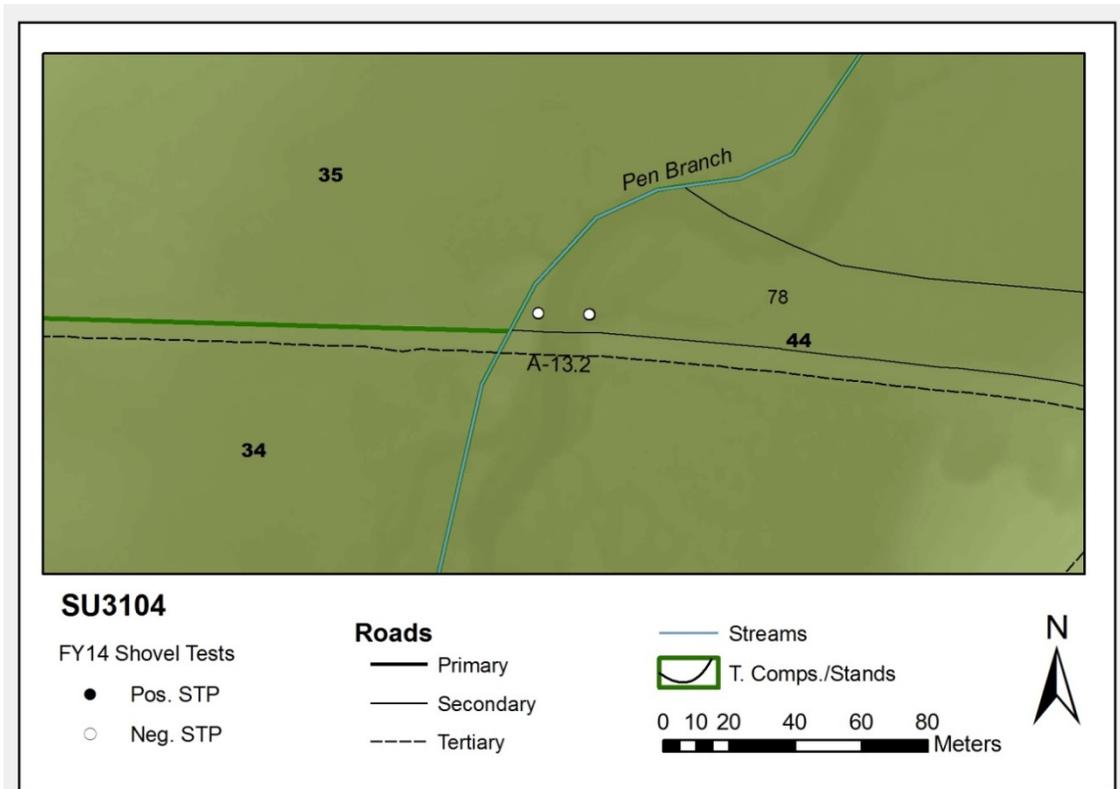


Figure I-11. SU Log No. 3104 survey area.

no further archaeological work was required. Thus, there will be no adverse effects to any historic properties as a result of the proposed Site Use project.

*SU Log No. 3106 – Proposed Monitoring Wells, Soil Borings, and Access Roads*

This Site Use Permit, issued on April 23, 2014, proposed the installation of groundwater monitoring wells, soil borings and several secondary, access roads 16 acre-tract (Figure I-12). Review of the SRARP database showed no recorded sites in the project area. Fieldwork consisted of 24 STPs (0 positive) excavated along two transects within the road extension corridors. As this survey effort resulted in only negative STPs, no further archaeological work was required. Thus, there will be no adverse effects to any historic properties as a result of the proposed Site Use project.

*SU Log No. 3110 – Proposed Monitoring Well*

This Site Use Permit, issued on June 3, 2014, proposed installation of a single groundwater monitoring well on a 1 acre-tract (Figure I-13). Review of the SRARP database showed no recorded sites in the project area. Fieldwork consisted of 1 STPs (0 positive) excavated along two transects within the road extension corridors. As this survey effort resulted in only negative STPs, no further archaeological work was required. Thus, there will be no adverse effects to any historic properties as a result of the proposed Site Use project.

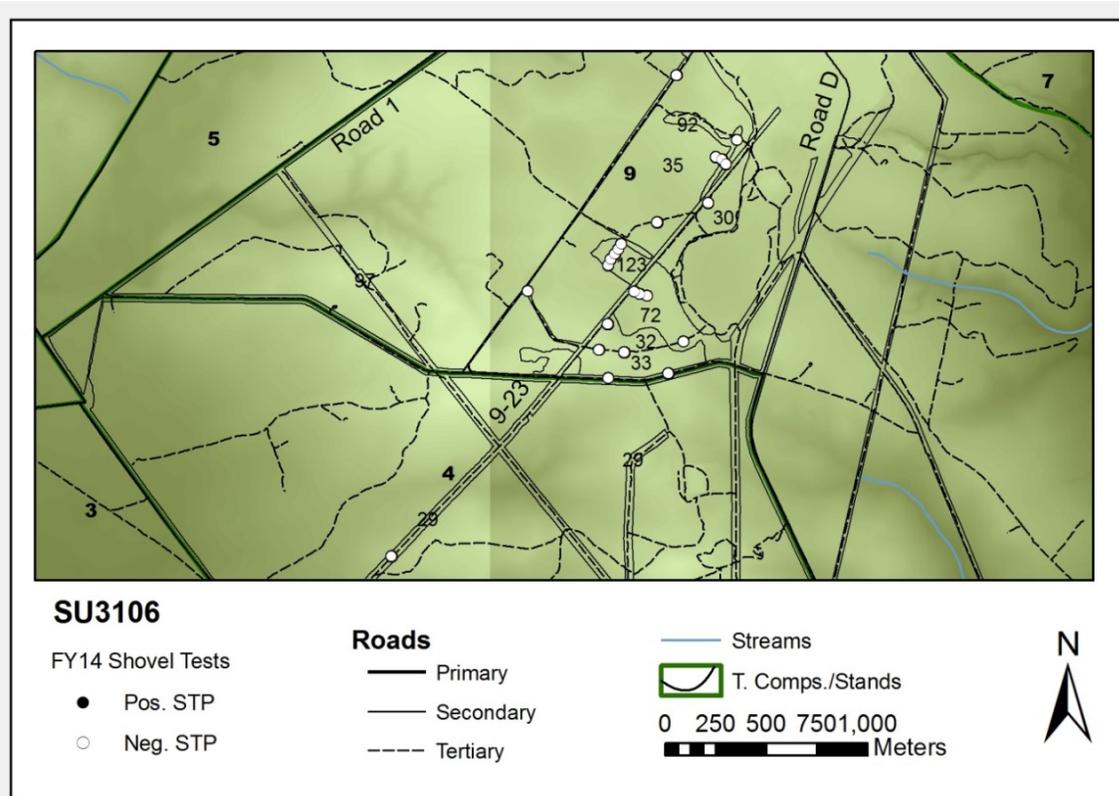


Figure I-12. SU Log No. 3106 survey area.

SU Log No. 3112 – *Installation of Piezometer Well and Sampling Station*

This Site Use Permit, issued on March 26, 2013, proposed the installation of a single piezometer well and a surface sampling station on a one-acre tract (Figure I-14). Review of the SRARP database showed no recorded sites in the project area. Fieldwork consisted of 2 STPs (0 positive) excavated along two transects within the road extension corridors. As this survey effort resulted in only negative STPs, no further archaeological work was required. Thus, there will be no adverse effects to any historic properties as a result of the proposed Site Use project.

SU Log No. 3116 – *Installation of Collection Tubs for Invertebrate Scavenger Study*

This Site Use Permit, issued on June 24, 2014 by the Savannah River Ecology Laboratory, proposed the installation of 11 in. by 22 in. tubs to capture invertebrate scavengers (Figure I-15 to Figure I-17). Review of the SRARP database showed three previously recorded sites (38AK135, 38AK611, 38AK1002) in the project area. Fieldwork consisted of 107 STPs (6 positive) excavated at the proposed location of each tub. These efforts resulted in the re-delineation of 38AK135, 38AK611, and 38AK1002, as well as the discovery and delineation of site 38AK1001. Additionally, fieldwork resulted in the recovery of one isolated find (AK-OCC-160). This artifact occurrence has no research potential to advance our understanding of the history of the region. All sites will be avoided during the proposed activities. Thus, there will be no adverse effects to any historic properties as a result of the proposed Site Use project.

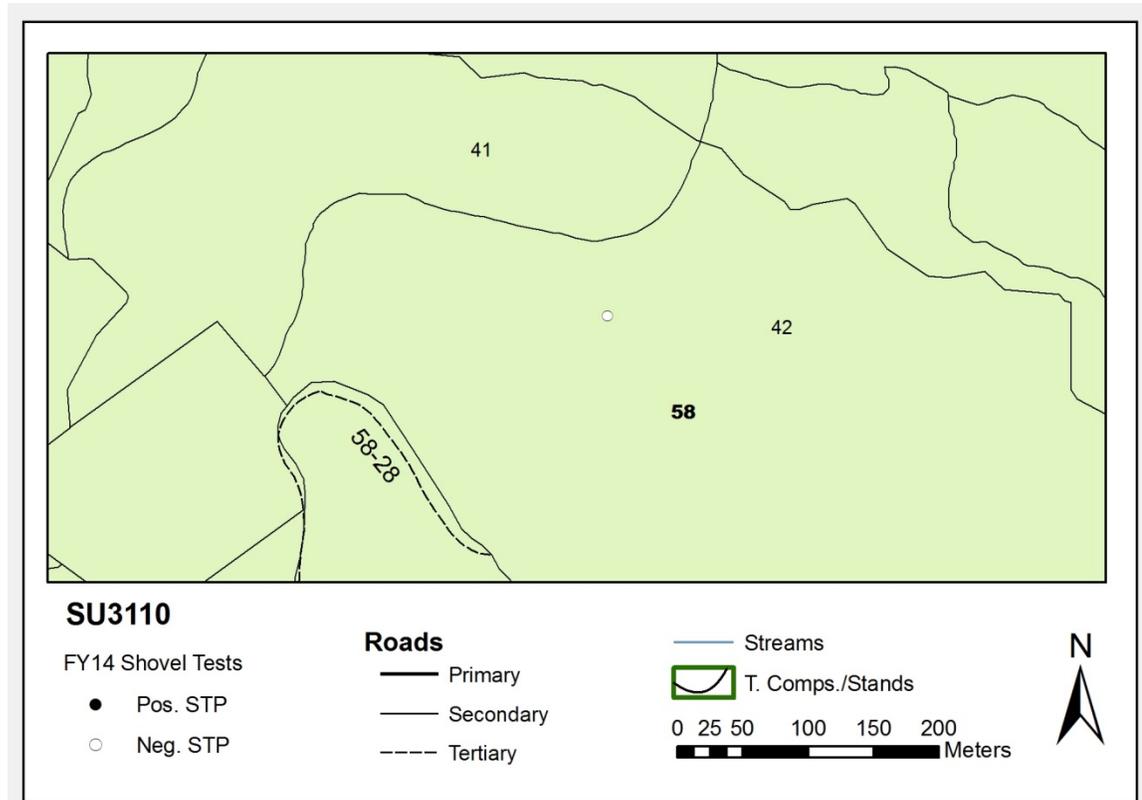


Figure I-13. SU Log No. 3110 survey area.

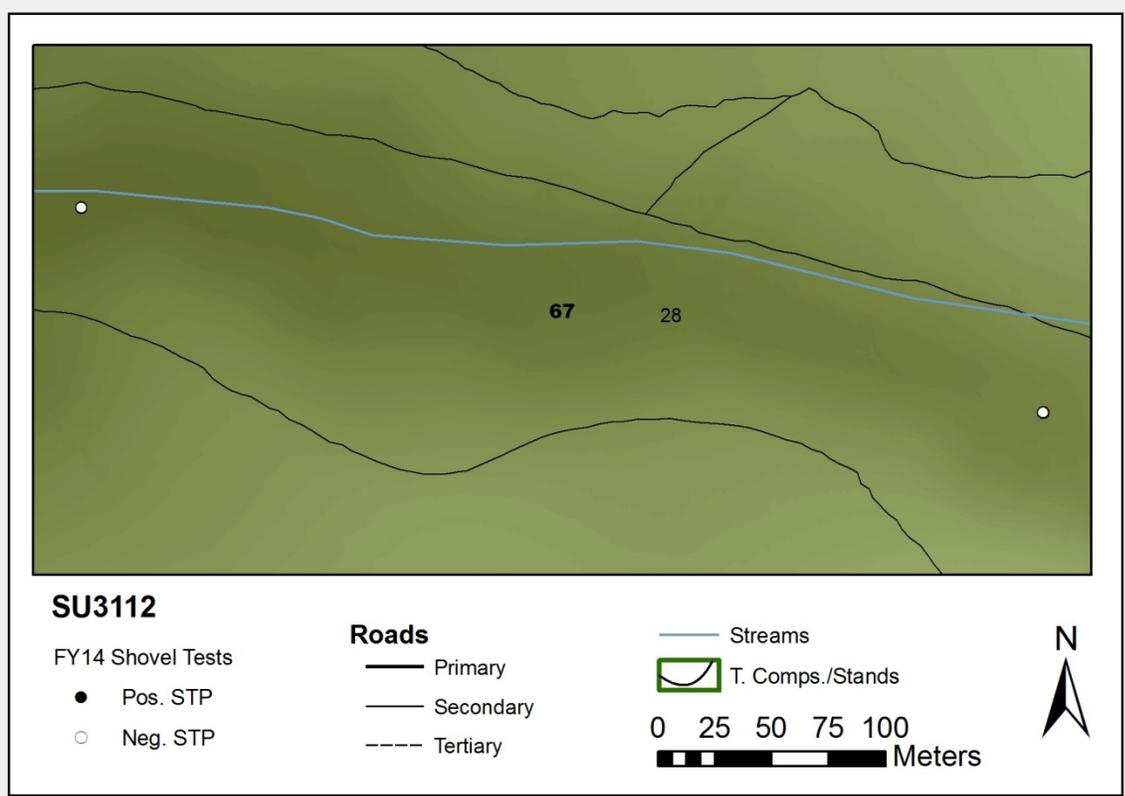


Figure I-14. SU Log No. 3112 survey area.

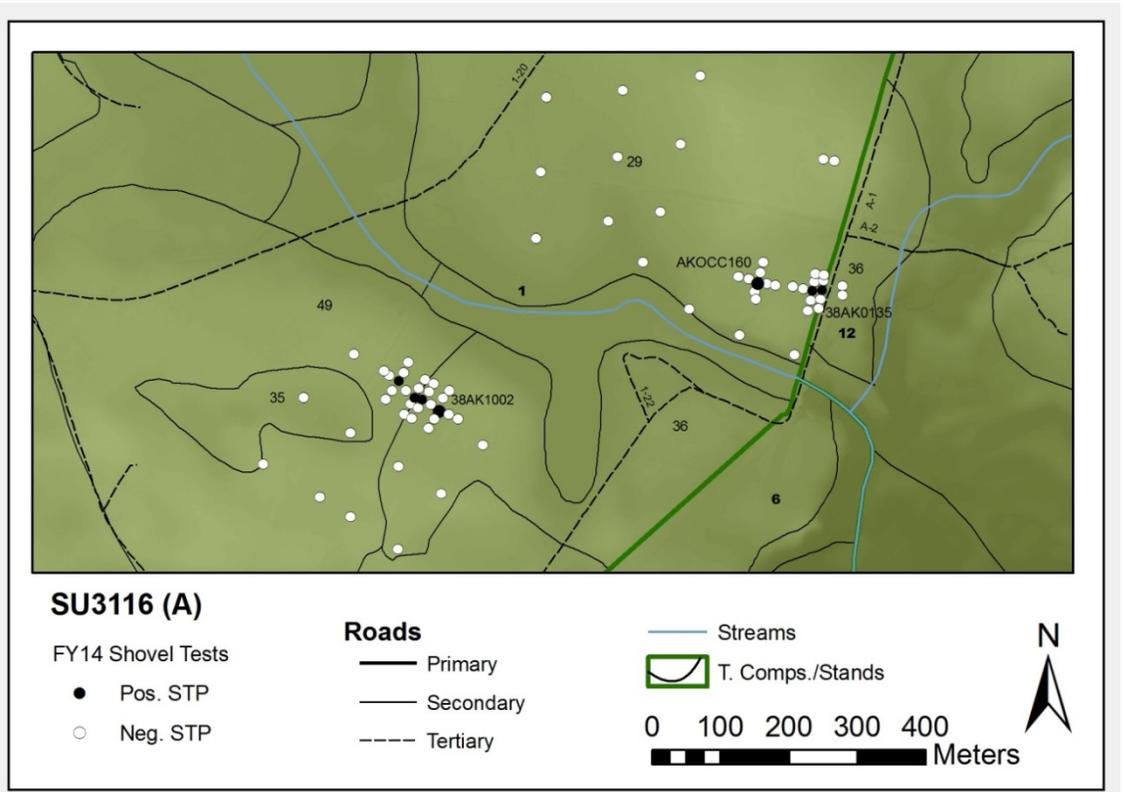


Figure I-15. SU Log No. 3116 survey area.

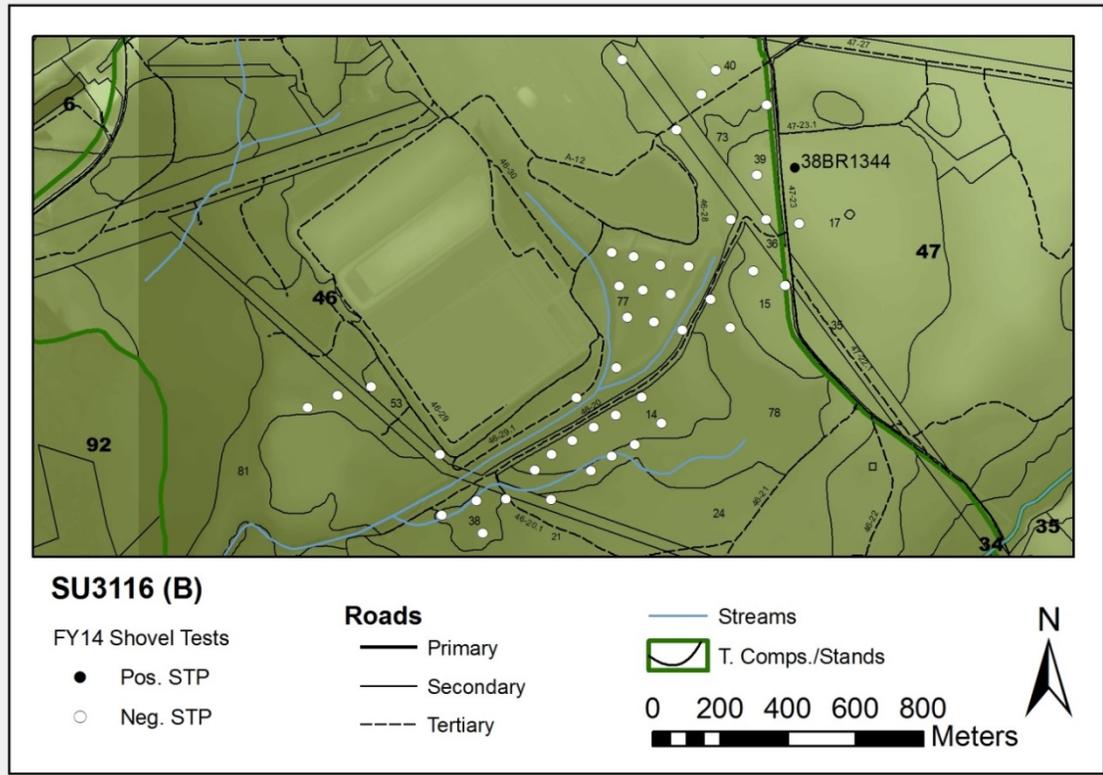


Figure I-16. SU Log No. 3116 survey area continued.

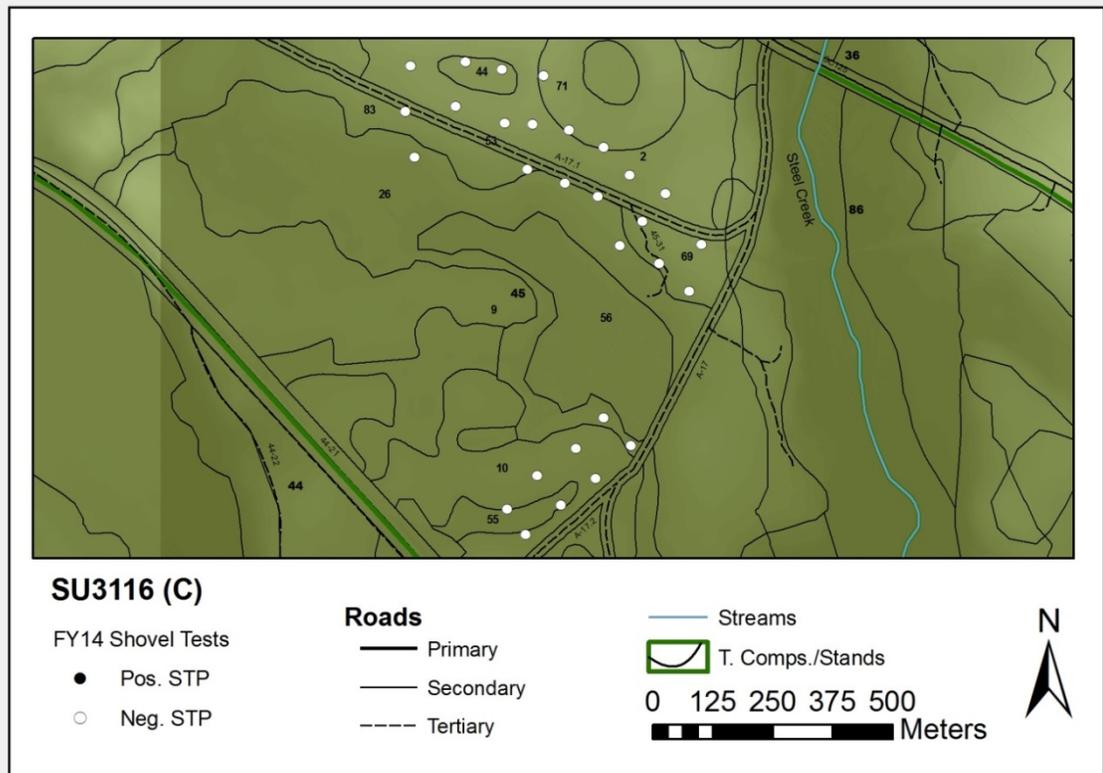


Figure I-17. SU Log No. 3116 survey area continued.

SU Log No. 3124 – *Construction of Secondary, Access Roads*

This Site Use Permit, issued on August 5, 2014, proposed the construction of two secondary, access roads (Figure I-18). Review of the SRARP database showed no recorded sites in the project area. Fieldwork consisted of 14 STPs (0 positive) excavated along two transects within the road extension corridors. As this survey effort resulted in only negative STPs, no further archaeological work was required. Thus, there will be no adverse effects to any historic properties as a result of the proposed Site Use project.

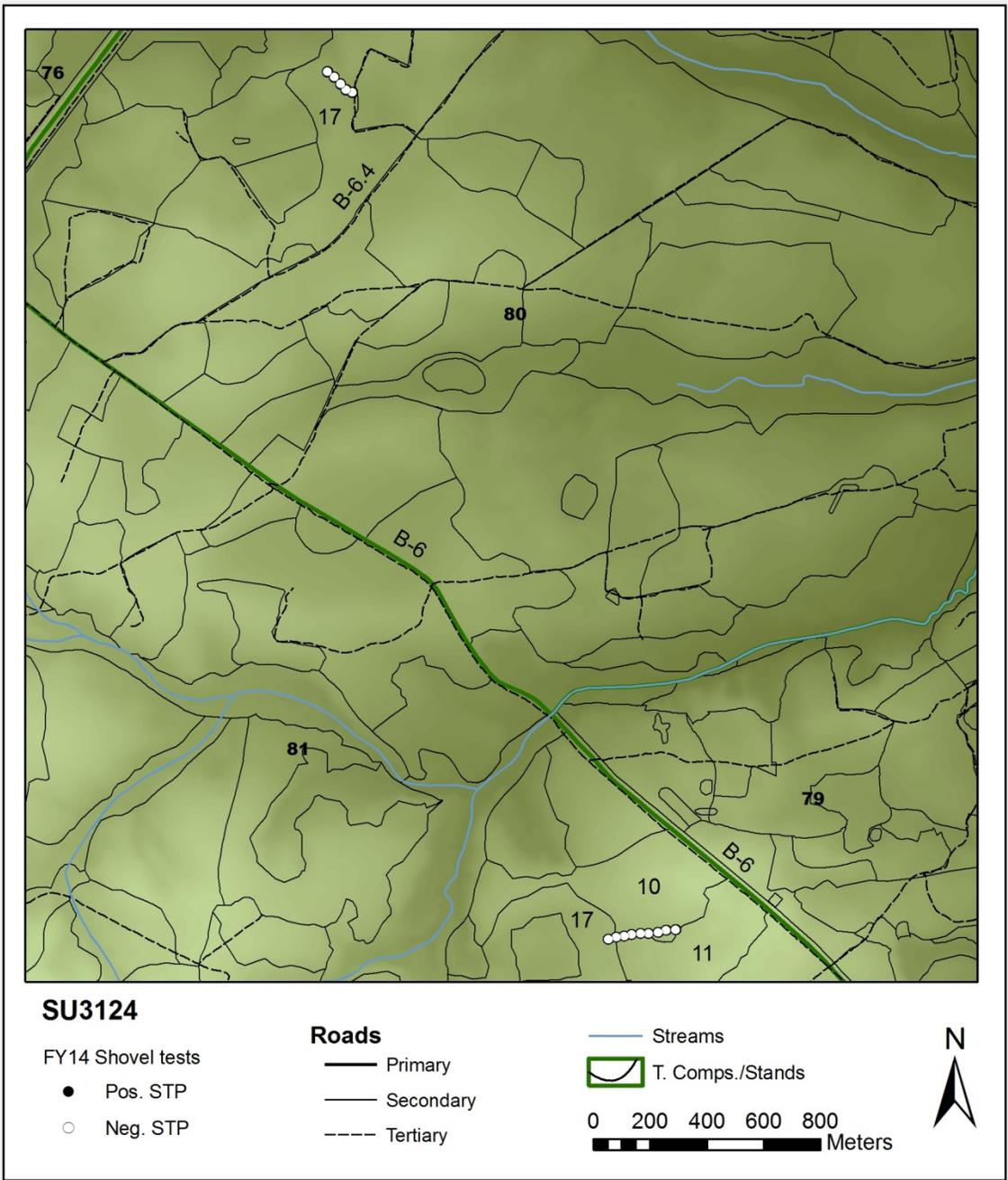


Figure I-18. SU Log No. 3124 survey area.

### **Timber Compartment Survey**

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 a 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. Employing these Prescriptions, the SRARP identifies areas that must be surveyed prior to forest management 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 request detailing all proposed timber management actions. Finally, all historic and prehistoric sites with potential research significance are avoided completely during harvesting activities.

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.

This does not apply to log decks, which are only planned days to weeks before timbering activities begin. SRARP staff review proposed log deck locations and conduct surveys as they are notified of their locations. Log deck locations are surveyed with a 30-m interval grid of shovel tests. The USFS-SR, in consultation with the SRARP, insures that all archaeological sites deemed significant for research potential are avoided in log deck placement. If avoidance is not possible the SRARP consults with SC SHPO to formulate a mitigation plan for proposed impacts.

Surveys of Log Decks and Timber Stands were conducted in 14 Timber Compartments. These surveys involved 186 acres (40%) of the total survey area coverage in FY14. Table I-6 provides a listing by Timber Compartment of all sites investigated. The following summaries describe Timber Compartment projects and survey results during FY14.

Certain aspects of archaeological work are standard for all projects. 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. Upon completion of each survey project, point data for all STPs, all new and previously recorded sites, and isolated artifact occurrences are recorded using GPS equipment. 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 I-6. Timber Compartment Prescription and Log Deck Surveys, FY14.

PROJECT	PROJECT AREA SURVEYED (ac.)	TOTAL SURVEY STPs	NEW SITES	SITE REVISITS
Timber Comp. 16	4	7		38AK308
Timber Comp. 29	44	241	38BR1337 38BR1338 38BR1343	38BR523
Timber Comp. 30	10	63	38BR1341	
Timber Comp. 46	1	15	38BR1336	
Timber Comp. 54	16	72	38BR1342	38BR1160
Timber Comp. 55	5	19		
Timber Comp. 56	20	82	not yet assigned	
Timber Comp. 60	18	72		
Timber Comp. 62	6	41		
Timber Comp. 63	7	62		
Timber Comp. 71	4	16		
Timber Comp. 74	38	225	38BR1335 38BR1339 38BR1340	
Timber Comp. 75	6	54		
Timber Comp. 85	7	12		38BR1047
<b>TOTALS</b>	<b>186</b>	<b>981</b>	<b>10</b>	<b>4</b>

### *Timber Compartment 16*

Archaeological survey in Compartment 16 involved subsurface inspection of 4 acres in Stand 66 (Figure I-19). Review of the SRARP database showed one previously recorded site (38AK308) in the project area. Fieldwork consisted of 7 STPs (3 positive) excavated along a single transect in the project area. These efforts resulted in the re-delineation of site 38AK308. This site will be avoided completely by any timbering activities. No new sites were discovered during survey. Thus, there will be no adverse effects to any historic properties as a result of the proposed USFS-SR management action for Compartment 16.

### *Timber Compartment 29*

Archaeological survey in Compartment 29 involved subsurface inspection of 44 proposed Log Decks totaling 1 acre each in Stands 1, 6, 8, 9, 13, 25, 28, 29, 30, 31, 33, 39, 41, 42, 43, 44, 49, 51, 54, 61, 62, 81, 109, 110, 115, 129 (Figure I-20 and Figure I-21). Review of the SRARP database showed one previously recorded site (38BR523) in

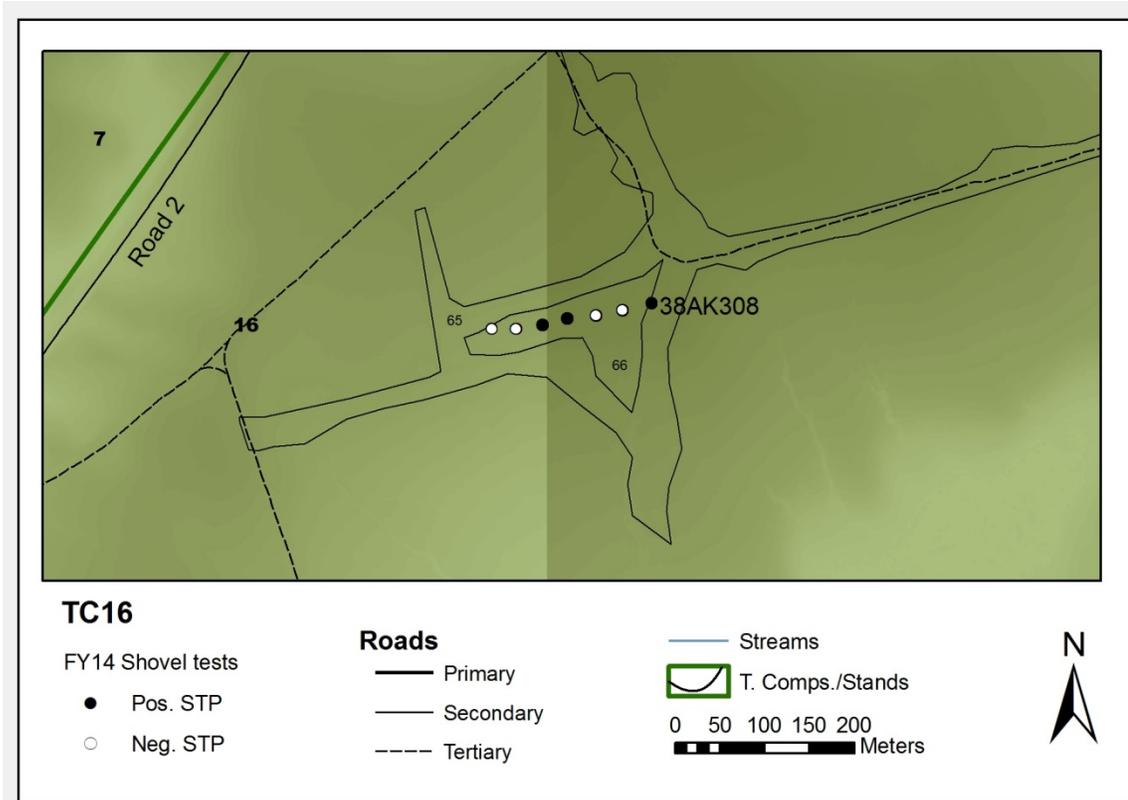


Figure I-19. Timber Compartment 16 survey area.

the project area. Fieldwork consisted of 241 STPs (10 positive) excavated on a 30-m grid at each Log Deck location. These efforts resulted in the discovery and delineation of three new sites (38BR1337, 38BR1338, 38BR1343). Survey efforts also resulted in the recovery of two isolated artifact occurrences (BR-OCC-317, BR-OCC-321). These artifact occurrences have no research potential to advance our understanding of the history of the region. All sites will be avoided completely by any timbering activities. Thus, there will be no adverse effects to any historic properties as a result of the proposed USFS-SR management action for Compartment 29.

### *Timber Compartment 30*

Archaeological survey in Compartment 30 involved subsurface inspection of 10 proposed Log Decks totaling 1 acre each in Stands 16, 31, 32, 39, and 44 (Figure I-22). Review of the SRARP database showed no previously recorded sites in the project area. Fieldwork consisted of 63 STPs (0 positive) excavated on a 30-m grid at each Log Deck location. These efforts resulted in the discovery and delineation of no new sites. As these survey efforts resulted in only negative STPs, no further archaeological work was required. Thus, there will be no adverse effects to any historic properties as a result of the proposed USFS-SR management action for Compartment 30.

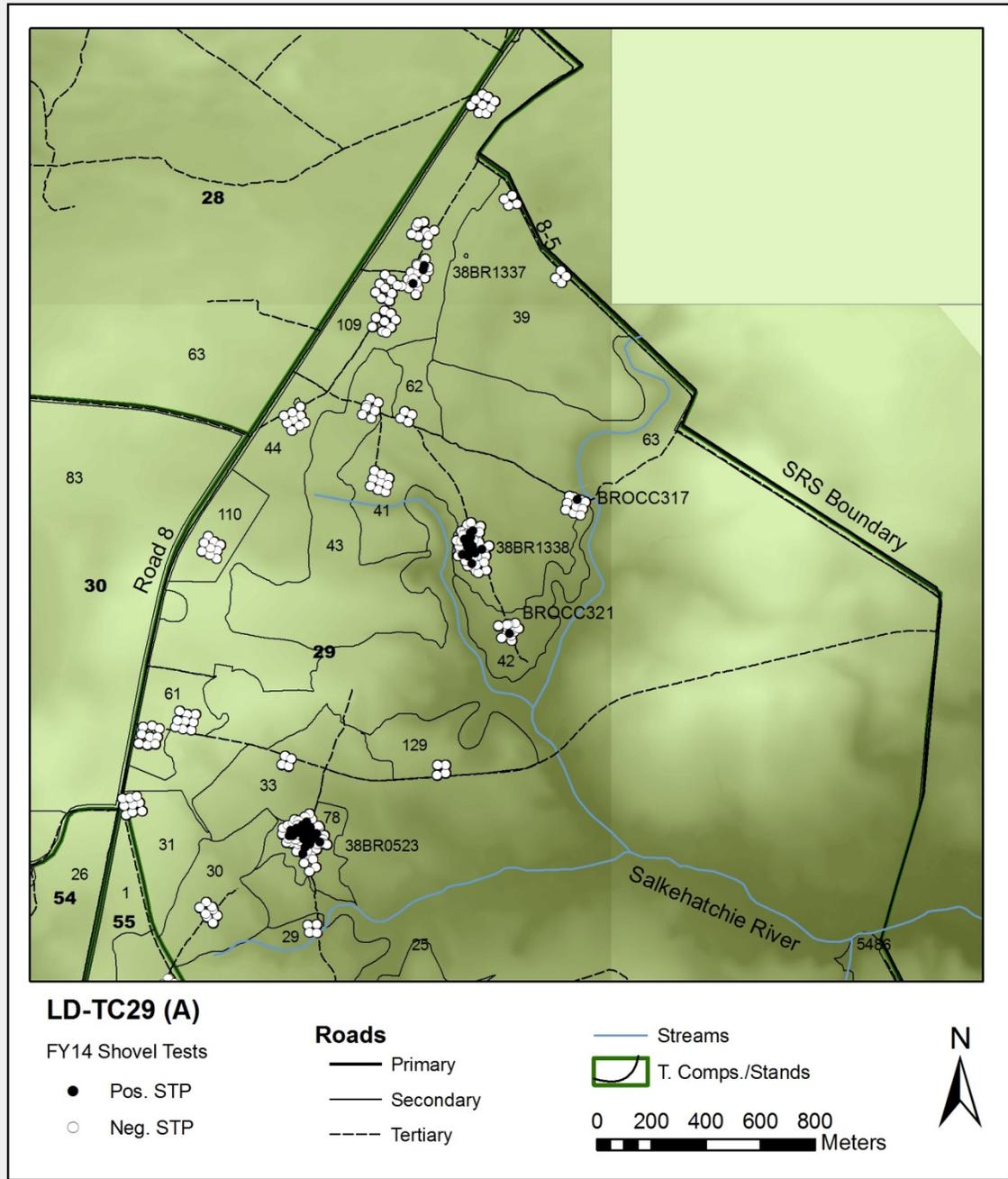


Figure I-20. Timber Compartment 29 survey area.

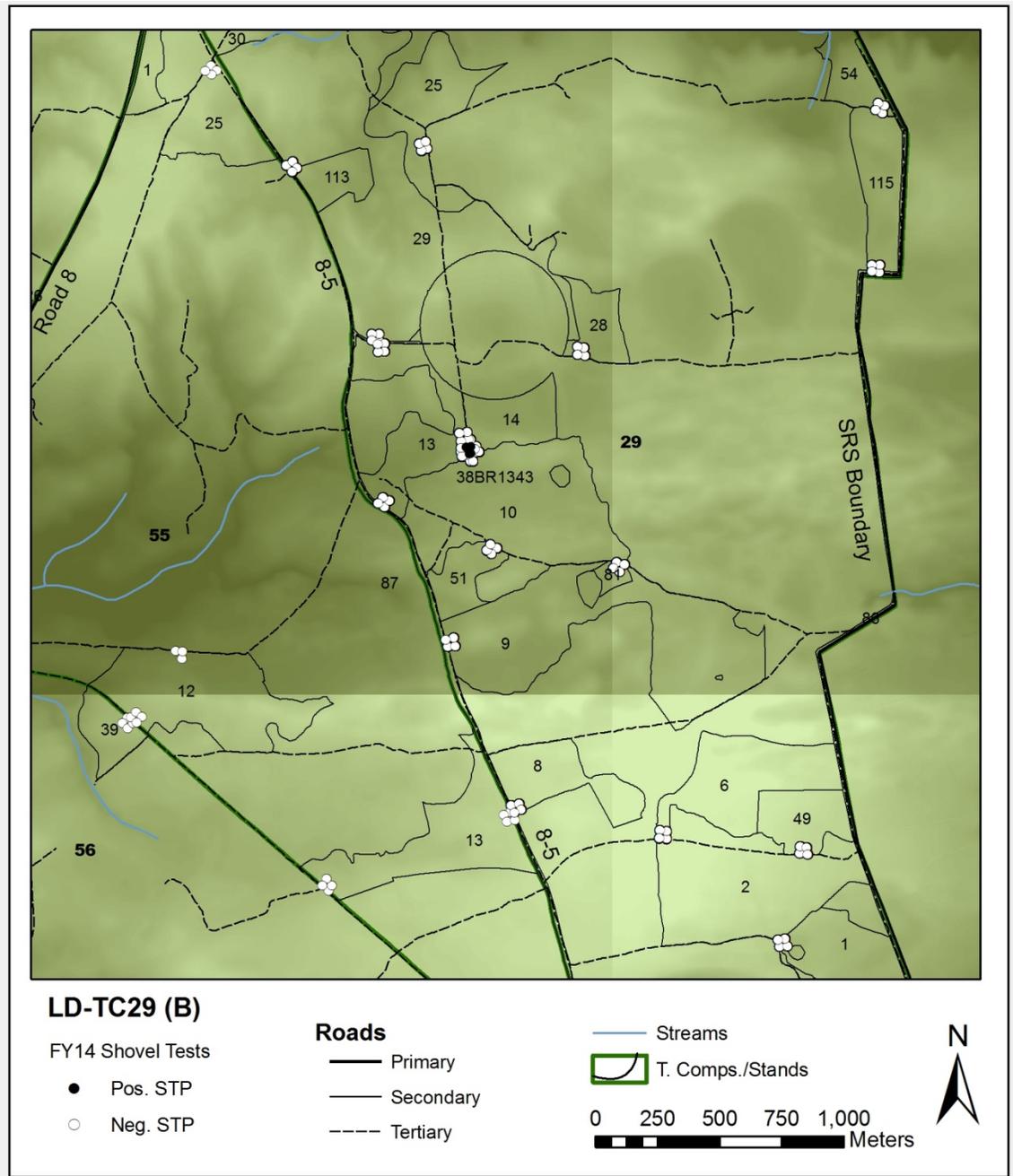


Figure I-21. Timber Compartment 29 survey area continued.

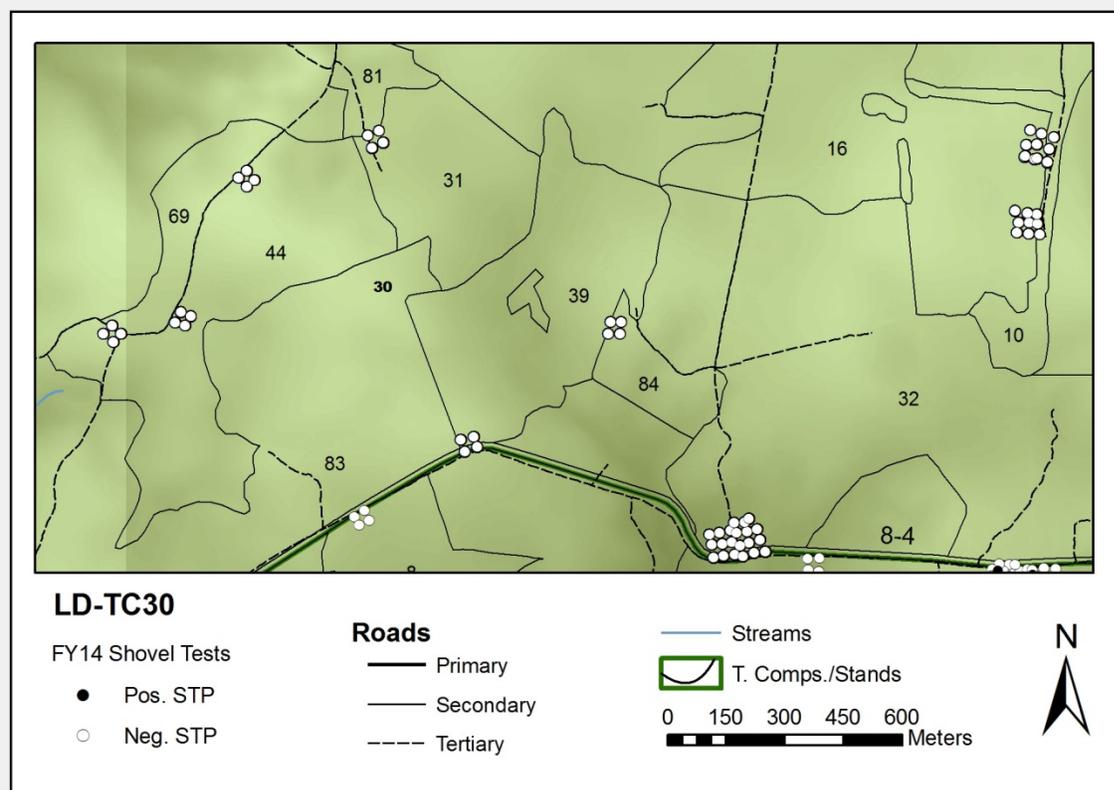


Figure I-22. Timber Compartment 30 survey area.

#### *Timber Compartment 46*

Archaeological survey in Compartment 46 involved subsurface inspection of 1 proposed Log Deck totaling 1 acre in Stand 30 (Figure I-23). Review of the SRARP database showed no previously recorded sites in the project area. Fieldwork consisted of 15 STPs (5 positive) excavated on a 30-m grid at the Log Deck location. These efforts resulted in the discovery and delineation of one new site (38BR1336). This site will be avoided by relocating the log deck. Thus, there will be no adverse effects to any historic properties as a result of the proposed USFS-SR management action for Compartment 46.

#### *Timber Compartment 54*

Archaeological survey in Compartment 54 involved subsurface inspection of 16 proposed Log Decks totaling 1 acre each in Stands 8, 11, 12, 32, 36, 44, 51, 84, and 116 (Figure I-24 and Figure I-25). Review of the SRARP database showed one previously recorded site (38BR1160) in the project area. Fieldwork consisted of 72 STPs (4 positive) excavated on a 30-m grid at each Log Deck location. These efforts resulted in a site revisit to 38BR1160, as well as the discovery and delineation of one new site (38BR1342). These sites will be avoided completely by any timbering activities. Thus, there will be no adverse effects to any historic properties as a result of the proposed USFS-SR management action for Compartment 54.

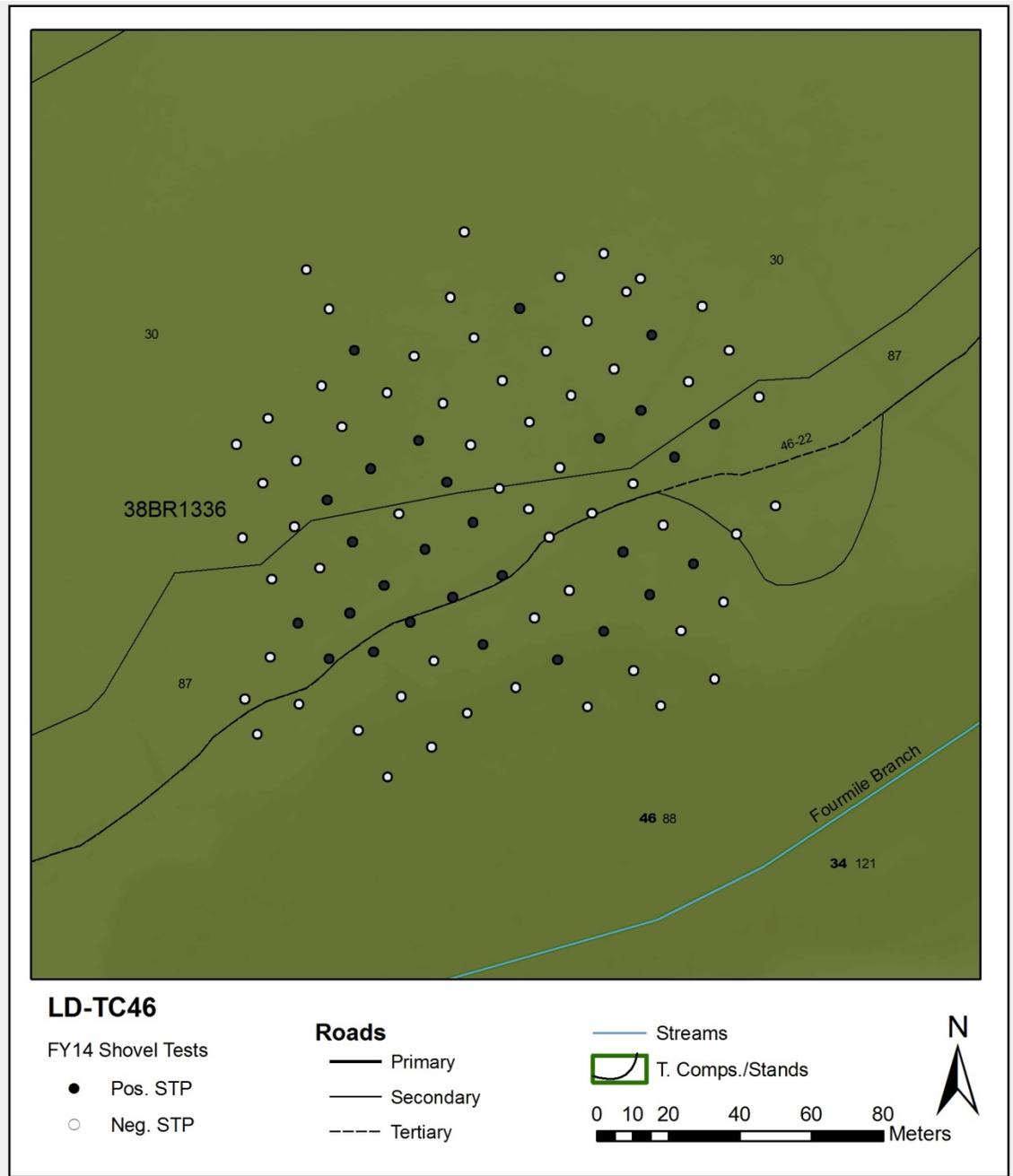


Figure I-23. Timber Compartment 46 survey area.

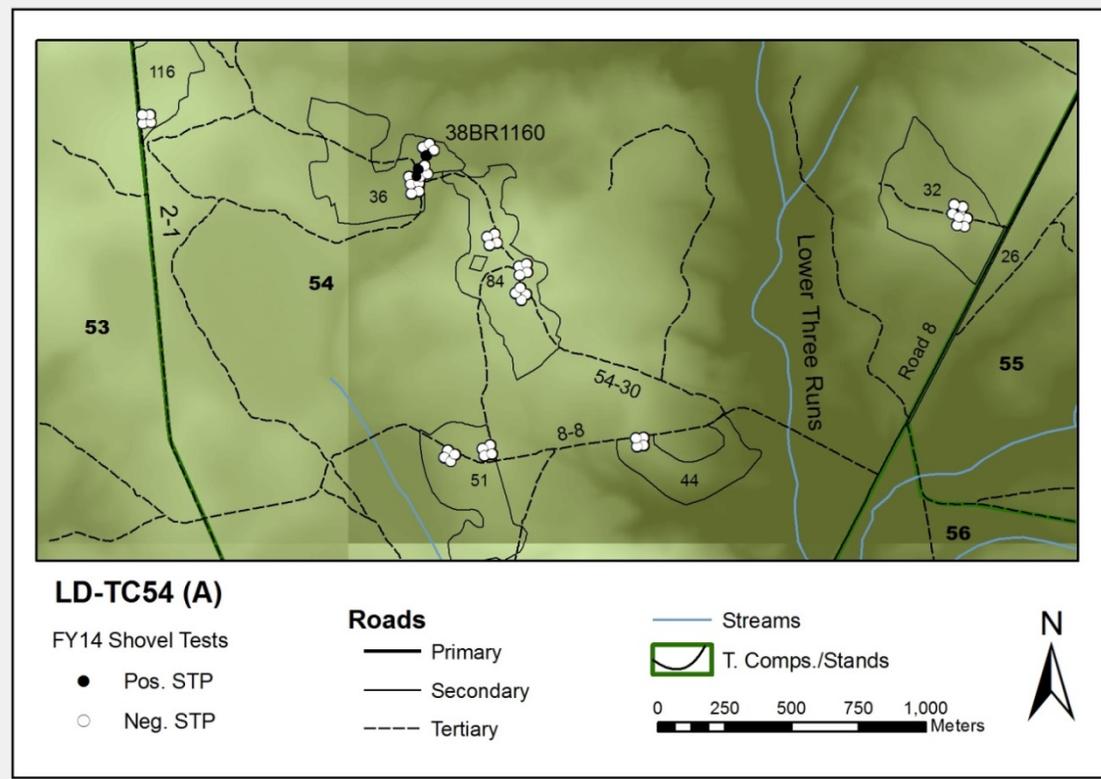


Figure I-24. Timber Compartment 54 survey area.

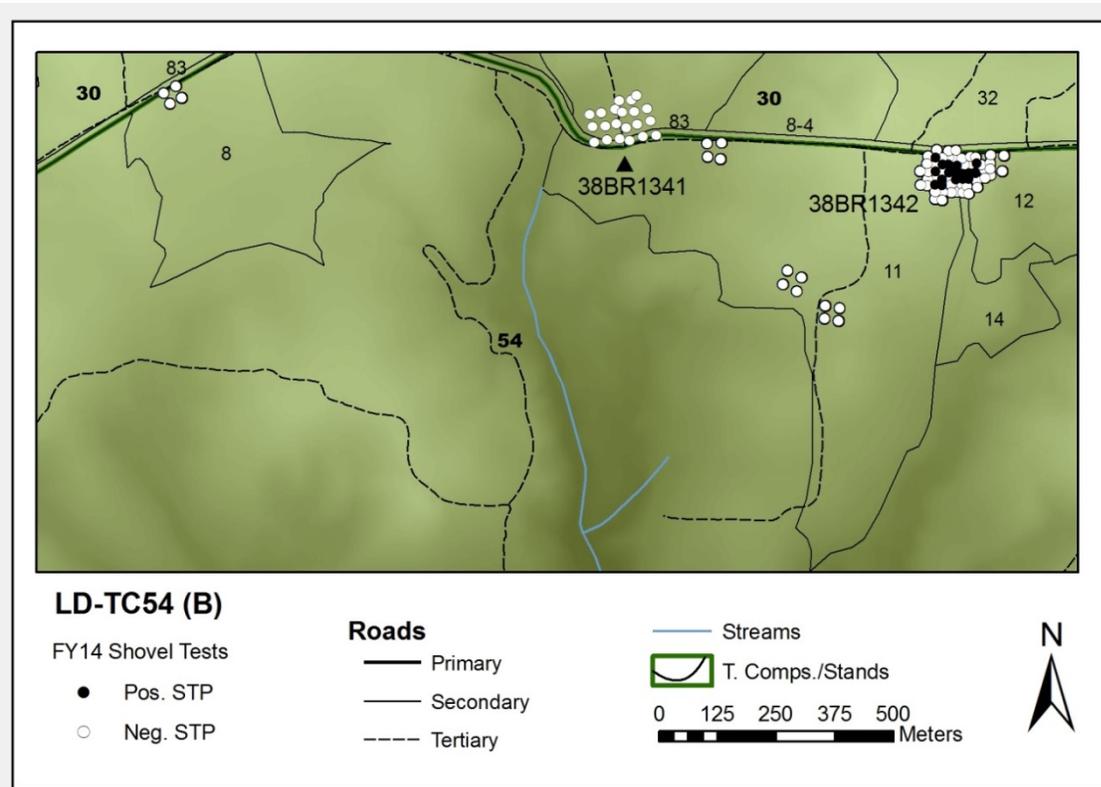


Figure I-25. Timber Compartment 54 survey area continued.

*Timber Compartment 55*

Archaeological survey in Compartment 55 involved subsurface inspection of 5 proposed Log Decks totaling 1 acre each in Stands 12, 13, and 25 (Figure I-26). Review of the SRARP database showed no previously recorded sites in the project area. Fieldwork consisted of 19 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 effects 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 of 20 proposed Log Deck totaling 1 acre in Stands 7, 8, 11, 15, 17, 25, 26, 32, 39, 78, 79, 81, 84, 99, 108, and 113 (Figure I-27 and Figure I-28). Review of the SRARP database showed no previously recorded sites in the project area. Fieldwork consisted of 82 STPs (3 positive) excavated on a 30-m grid at each Log Deck location. These efforts resulted in the discovery of one new site, which was not assigned a trinomial site number in FY14. Site delineations are ongoing and the results will be reported in FY15. Additionally, fieldwork resulted in the recovery of one isolated find (BR-OCC-320). This artifact occurrence has no research potential to advance our understanding of the history of the region. Thus, there will be no adverse effects 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 of 18 proposed Log Decks totaling 1 acre each in Stands 1, 2, 3, 5, 6, 7, 19, 30, 35, 41, and 42 (Figure I-29). Review of the SRARP database showed no previously recorded sites in the project area. Fieldwork consisted of 72 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 effects 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 of 6 proposed Log Decks totaling 1 acre each in Stands 17, 20, and 88 (Figure I-30). Review of the SRARP database showed no previously recorded sites in the project area. Fieldwork consisted of 41 STPs (1 positive) excavated on a 30-m grid at each Log Deck location. These efforts resulted in the recovery of one isolated find (BR-OCC-316). This artifact occurrence has no research potential to advance our understanding of the history of the region. Thus, there will be no adverse effects to any historic properties as a result of the proposed USFS-SR management action for Compartment 62.

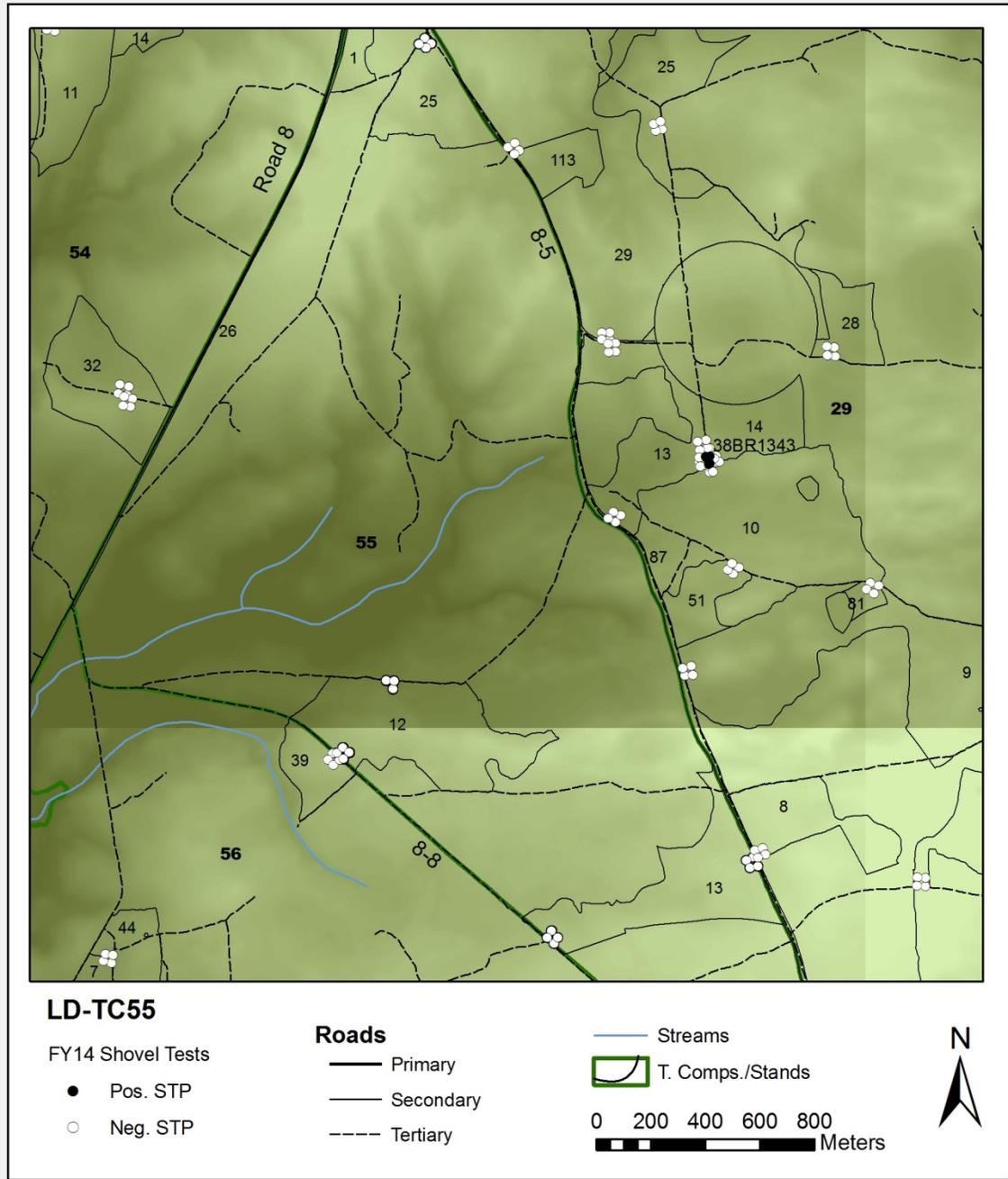


Figure I-26. Timber Compartment 55 survey area.

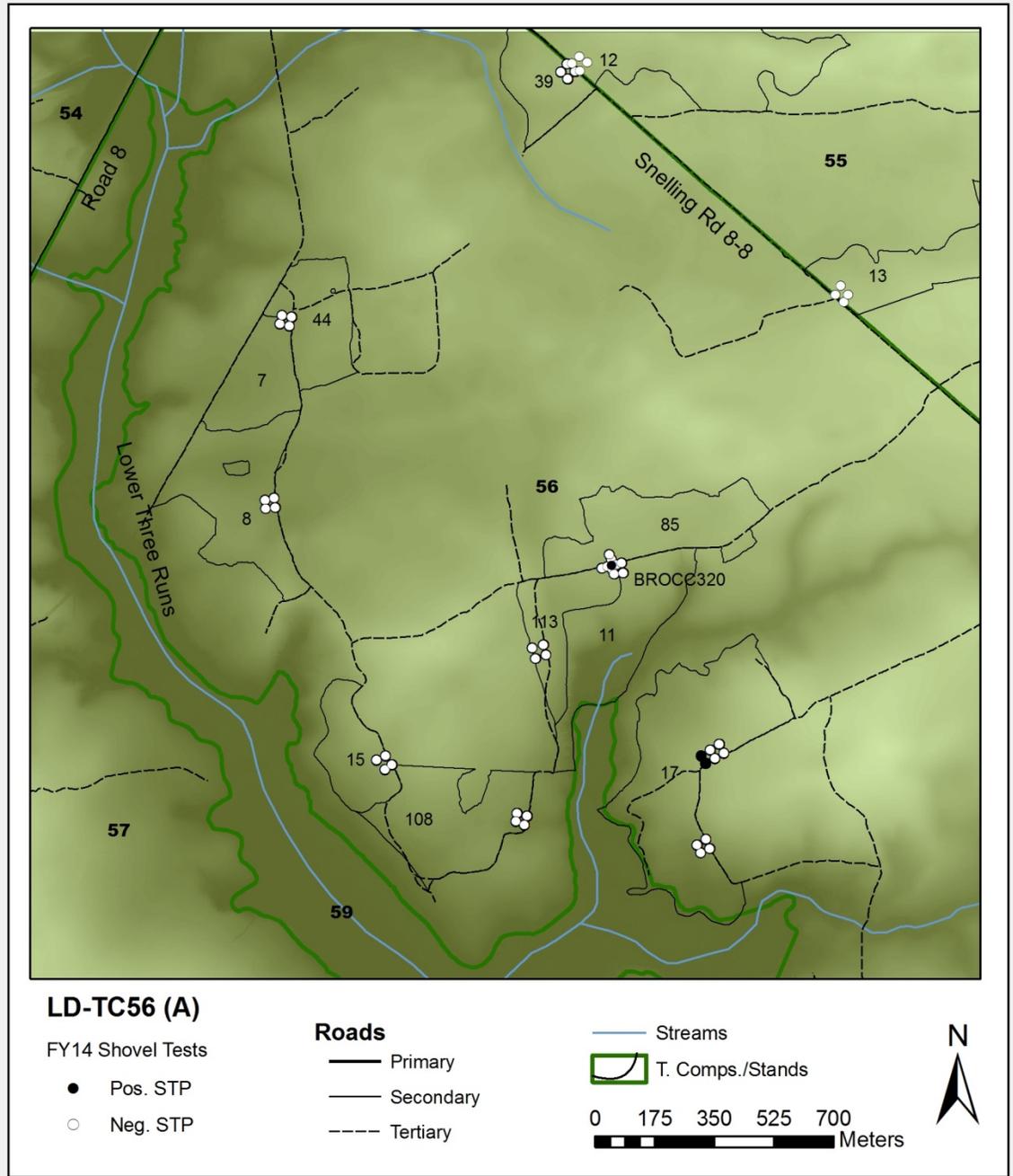


Figure I-27. Timber Compartment 56 survey area.

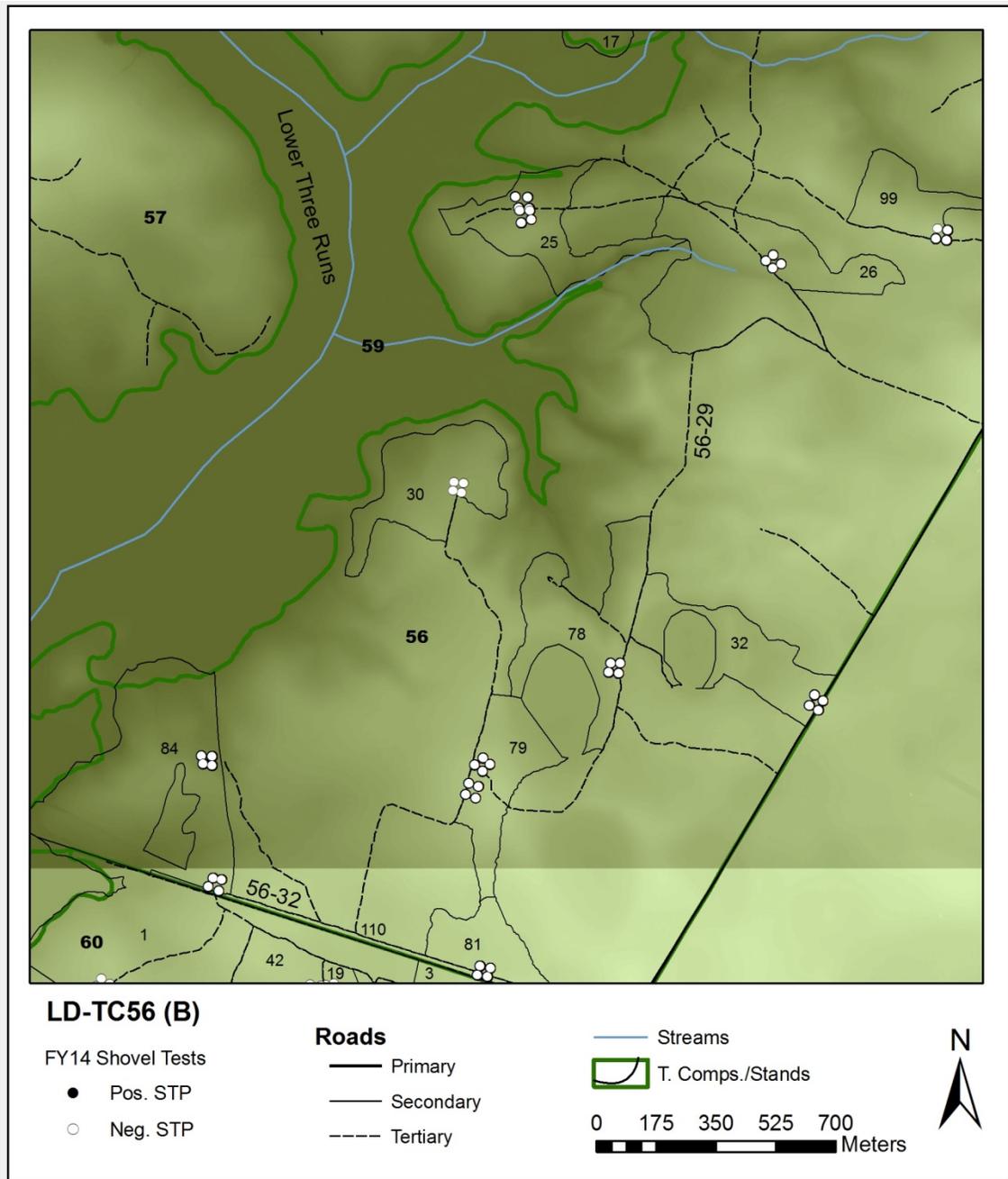


Figure I-28. Timber Compartment 56 survey area continued.

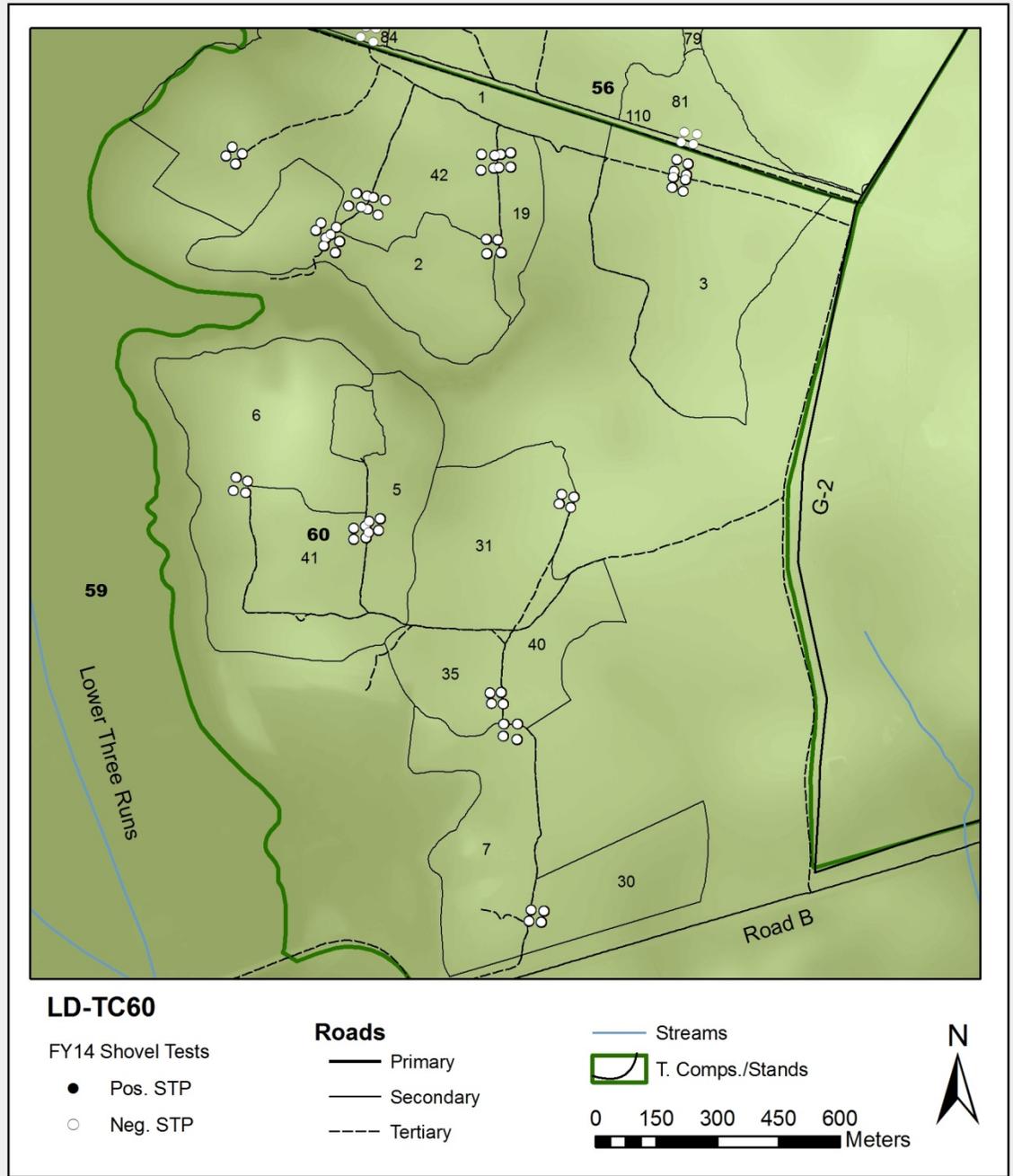


Figure I-29. Timber Compartment 60 survey area.

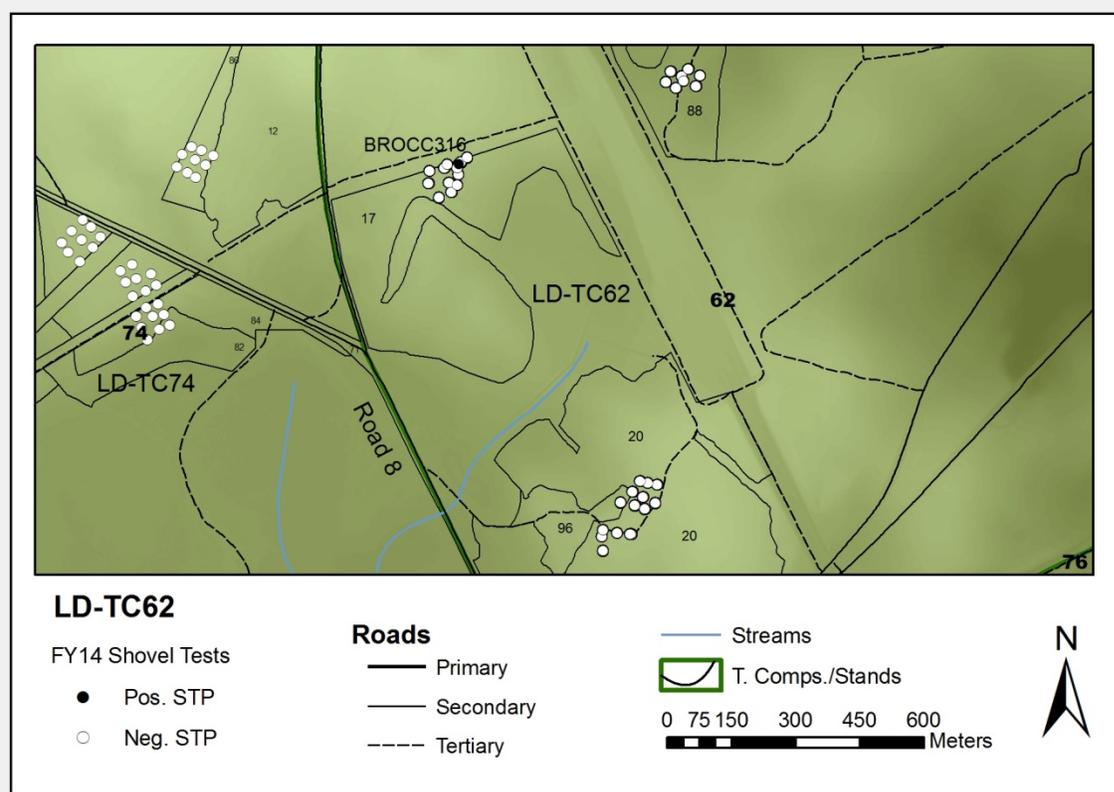


Figure I-30. Timber Compartment 62 survey area.

### *Timber Compartment 63*

Archaeological survey in Compartment 63 involved subsurface inspection of 7 proposed Log Decks totaling 1 acre each in Stands 6, 19, and 21 (Figure I-31). Review of the SRARP database showed no previously recorded sites in the project area. Fieldwork consisted of 62 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 effects to any historic properties as a result of the proposed USFS-SR management action for Compartment 63.

### *Timber Compartment 71*

Archaeological survey in Compartment 71 involved subsurface inspection of 1 proposed Log Deck totaling 1 acre in Stands 1 and 72 (Figure I-32). Review of the SRARP database showed no previously recorded sites in the project area. Fieldwork consisted of 16 STPs (0 positive) excavated on a 30-m grid at the Log Deck location. As these survey efforts resulted in only negative STPs, no further archaeological work was required. Thus, there will be no adverse effects to any historic properties as a result of the proposed USFS-SR management action for Compartment 71.

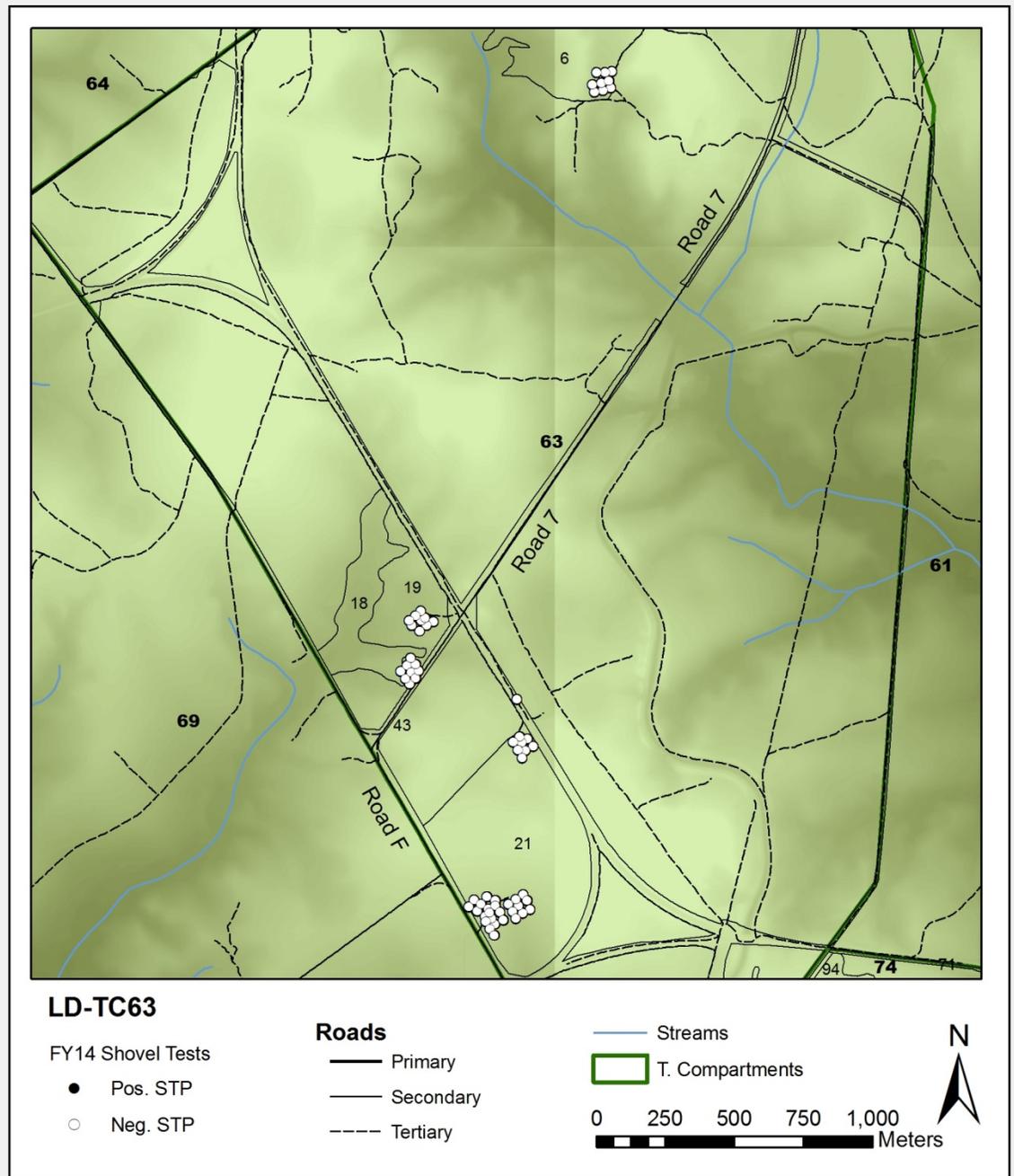


Figure I-31. Timber Compartment 63 survey area.

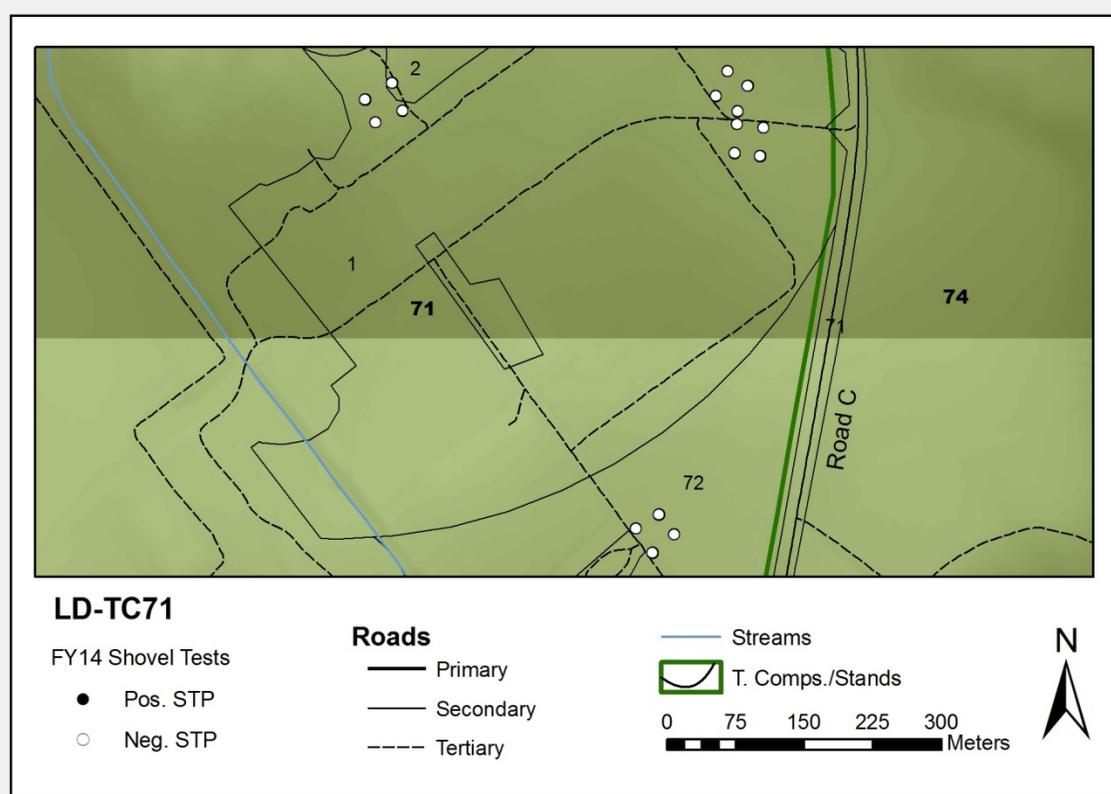


Figure I-32. Timber Compartment 71 survey area.

#### *Timber Compartment 74*

Archaeological survey in Compartment 74 involved subsurface inspection of 30 proposed Log Decks totaling 1 acre each in Stands 1, 7, 11, 14, 25, 27, 30, 39, 41, 50, 53, 56, 57, 75, 76, 79, 83, 84, 86, 95 and 106 (Figure I-33 and Figure I-34). Review of the SRARP database showed no previously recorded sites in the project area. Fieldwork consisted of 225 STPs (11 positive) excavated on a 30-m grid at each Log Deck location. These efforts resulted in the discovery and delineation of three new sites (38BR1335, 38BR1339, and 38BR1340), as well as the recovery of 3 isolated finds (BR-OCC-318 and BR-OCC-319). All sites will be avoided completely by any timbering activities. The artifact occurrences have no research potential to advance our understanding of the history of the region. Thus, there will be no adverse effects 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 6 proposed Log Deck totaling 1 acre in Stands 14, 21, 73, and 95 (Figure I-35). Review of the SRARP database showed no previously recorded sites in the project area. Fieldwork consisted of 54 STPs (0 positive) excavated on a 30-m grid at the Log Deck location. As these survey efforts resulted in only negative STPs, no further archaeological work was required. Thus, there will be no adverse effects to any historic properties as a result of the proposed USFS-SR management action for Compartment 71.

Timber Compartment 85

Archaeological survey in Compartment 85 involved subsurface inspection of 7 acres in Stand 129 (Figure I-36). Review of the SRARP database showed one previously recorded site (38BR1047) in the project area. Fieldwork consisted of 12 STPs (4 positive) excavated along a single transect in the project area. These efforts resulted in the re-delineation of 38BR1047. This site will be avoided completely by any timbering activities. Thus, there will be no adverse effects to any historic properties as a result of the proposed USFS-SR management action for Compartment 85.

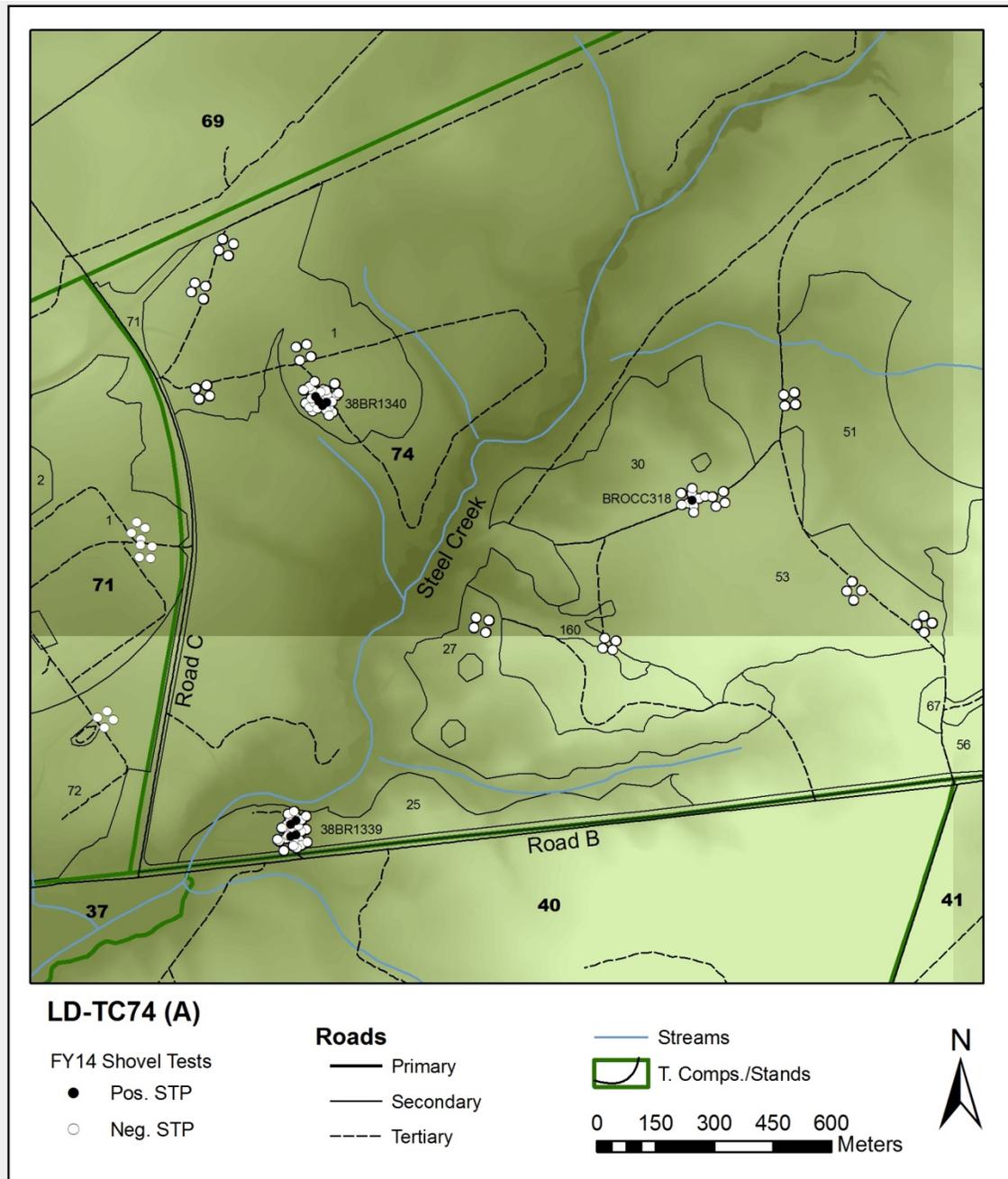


Figure I-33. Timber Compartment 74 survey area.

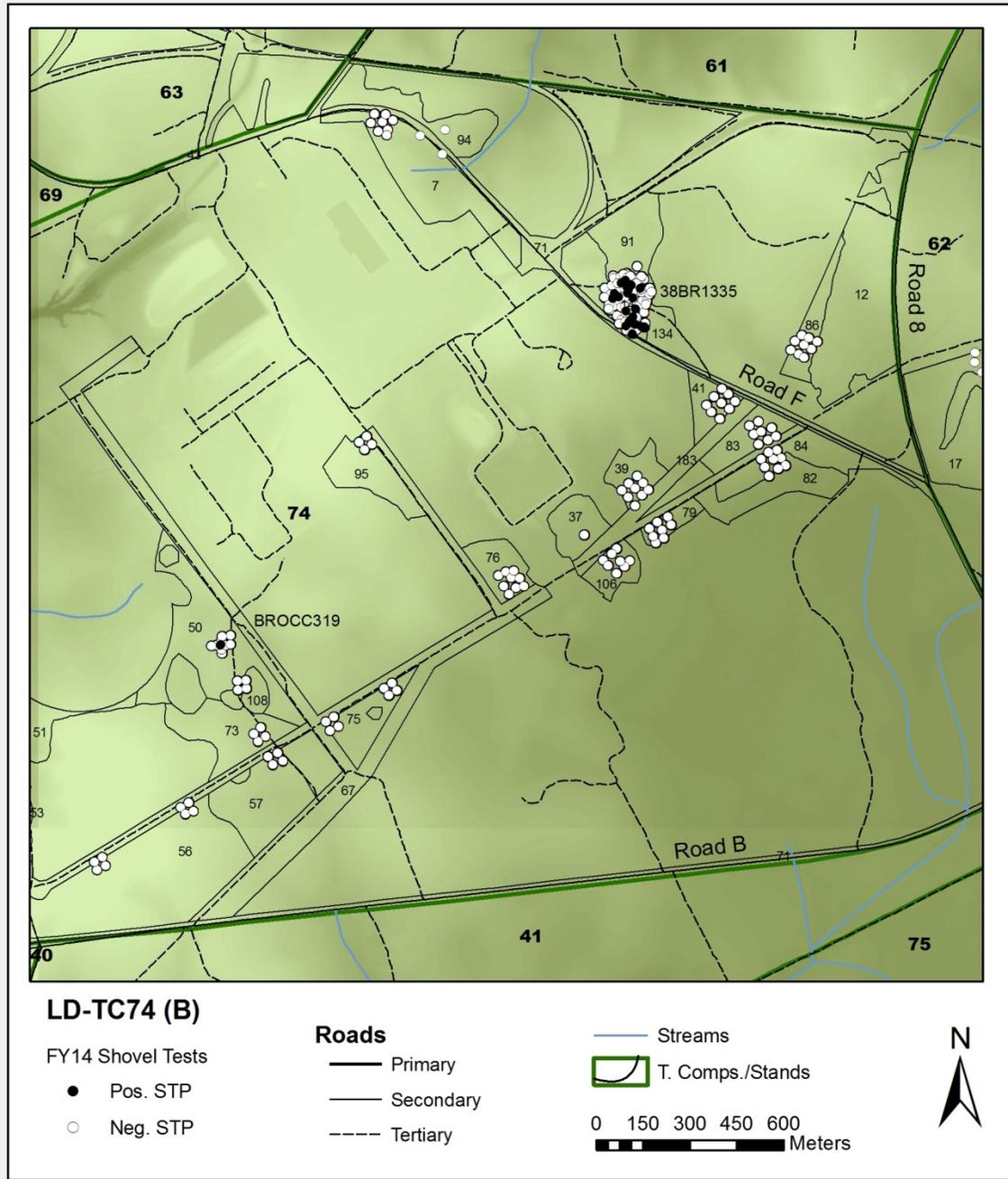


Figure I-34. Timber Compartment 74 survey area continued.

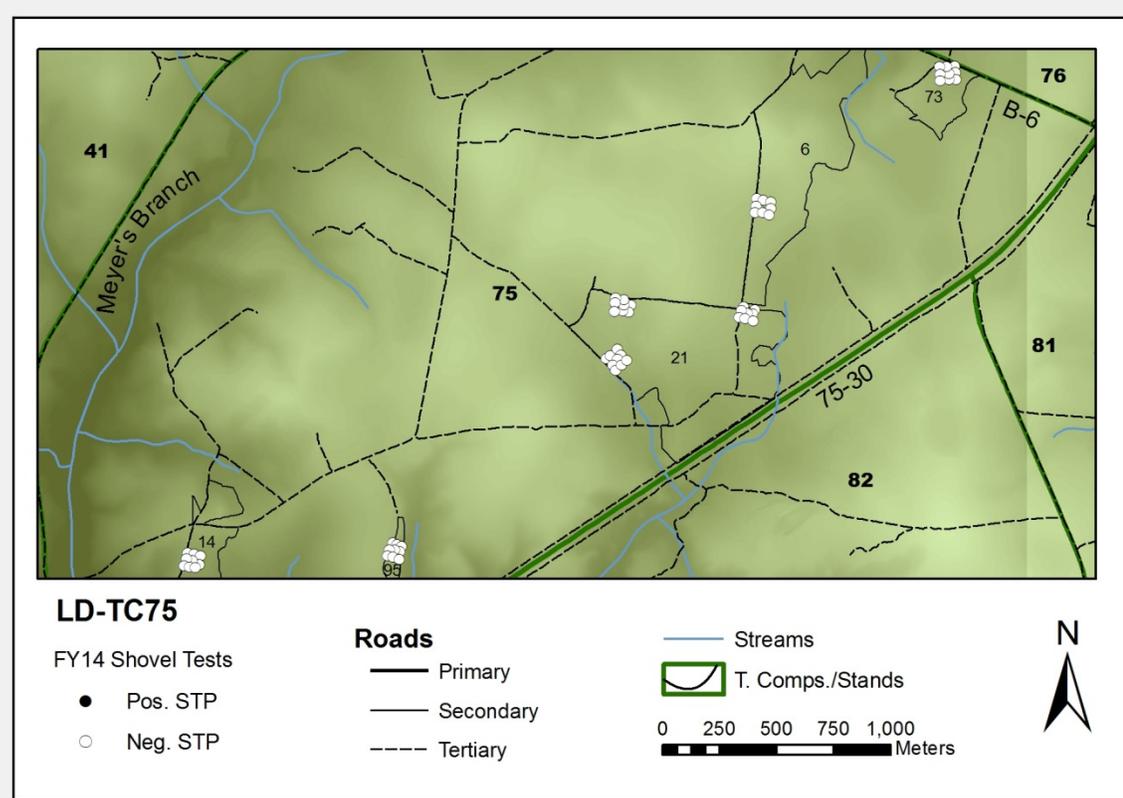


Figure I-35. Timber Compartment 75 survey area.

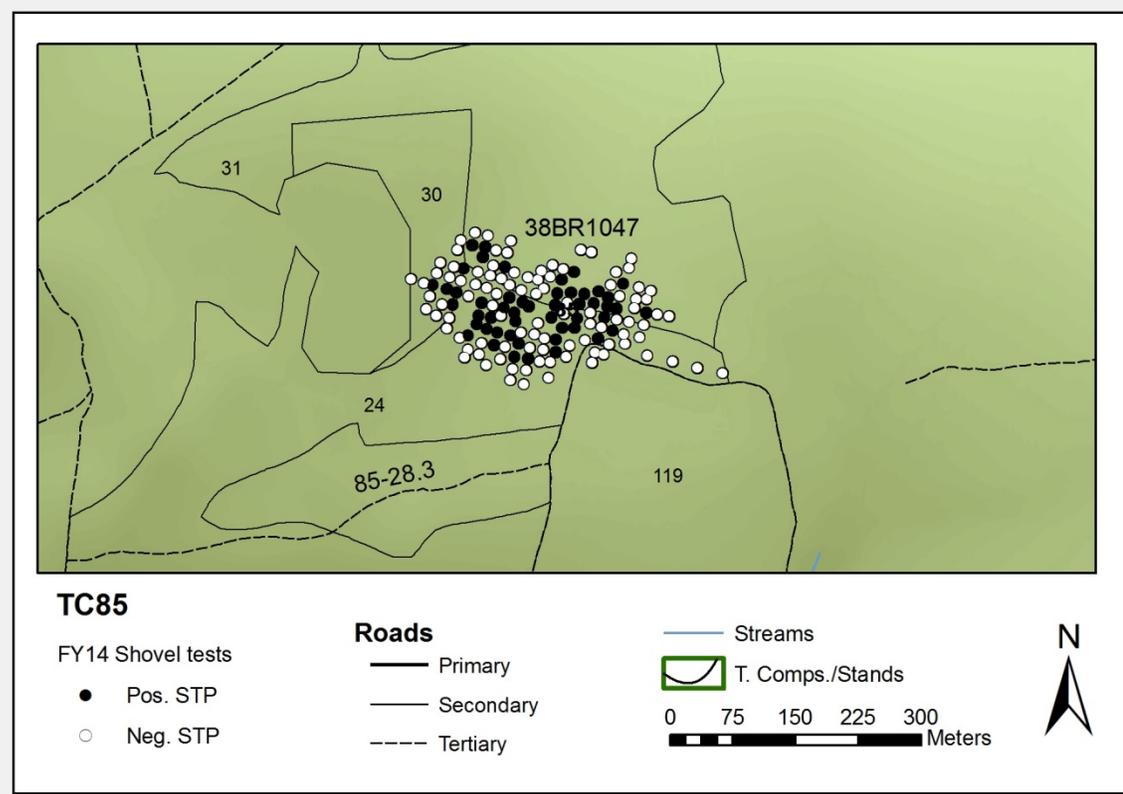


Figure I-36. Timber Compartment 85 survey area.

### Survey Results

To summarize, Table I-7 lists the results of FY14 compliance survey. Altogether, 17 new sites were recorded and delineated, and 7 previously recorded sites were revisited. Of the total sites investigated during FY14, 2 are considered eligible, and 6 are considered not eligible for inclusion in the NRHP. The remaining 16 sites have been assigned an unevaluated status (requires testing for eligibility determination), 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. Eleven isolated artifact occurrences were also recorded during FY14. 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

Table I-1 and Table I-2. Evaluations of these sites are provided in Table I-3. Finally, a tabulation of isolated artifact occurrences by project type is provided in Table I-4.

The SRARP surveyed 461 acres in FY14 for 11 Site Use Permits and 14 Timber Compartment Prescriptions. Of the total area surveyed, 275 acres (60%) involved Site Use Permit projects, and 186 acres (40%) involved Timber Compartment Stands slated for harvesting or Log Deck use. Altogether, 2,481 STPs were excavated during FY14 archaeological surveys with a total of 278 STPs producing artifacts.

In conclusion, 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 67,609 acres (34.98%) out of a total of 193,276 (97.4%) of SRS acreage suitable for survey (i.e., excluding SRS wetlands and developed areas). In total, the SRS comprises 198,344 acres or 310 sq. mi. These efforts have resulted in the inventory of 1,954 sites (943 prehistoric, 511 historic, and 500 with both prehistoric/historic components) recorded to date.

Table I-7. Summary of FY14 Survey Results.

Site Use Application Surveys	11
Timber Compartment Surveys	14
Total STPs Excavated	2,481
Total Positive STPs Excavated	278
Total Area Surveyed (acres)	461
New Sites	17
Site Revisits	7
Isolated Artifact Occurrences	11

## **CURATION COMPLIANCE ACTIVITIES**

Tammy F. Herron

As a result of the primary analysis of artifacts recovered through daily compliance activities, 1,555 artifacts were entered into curation over the course of the past fiscal year. Throughout the year, researchers continued to conduct secondary analysis on artifacts recovered as a result of the Carolina Bay Volunteer Research Program, as well as from the Dave site (38AK953) and Bush Hill (38AK660). With regard to the artifacts recovered from Flamingo Bay (38AK469) that have undergone primary analysis, Rooney Floyd and John Kolmar pulled and separated each of the categories of artifacts in preparation for secondary analysis. After an extended absence due to health concerns, John Whatley returned to assist the program with the secondary lithic analysis of artifacts recovered from Flamingo Bay (38AK469). George Wingard and Keith Stephenson, along with the assistance of the field crew, conducted secondary analysis of some of the artifacts from the Dave site (38AK953). George Wingard and Maggie Needham continued secondary analysis of stoneware artifacts recovered from Bush Hill (38AK660). For more information regarding volunteer efforts, see the section titled "SRARP Volunteer Program."

## **THE SRARP ARCHAEOLOGICAL GEOGRAPHIC INFORMATION SYSTEM**

J. Christopher Gillam

In FY14, The SRARP archaeological Geographic Information System (GIS) involved maintaining ArcGIS equipment and datasets, use of updated Trimble GeoXH GPS units and software, and continued work on the curation and site form databases in FileMaker format. The archaeological point and polygon layers were updated and errors from previous records were corrected. The site-wide survey coverage and associated database were updated by the SRARP staff. The SRARP staff continues updating the curation and site files databases as new data are collected from the field and also continued research on new data products for future use by the SRARP.

## **ARCHAEOLOGICAL CURATION FACILITY**

Tammy F. Herron

As of mid-August 2014, 893 banker boxes and 6 large plastic storage containers of artifacts, 16 oversized artifacts, 4 large flats containing oversized documents, and 2 map cabinets have been transferred to the Archaeological Curation Facility (ACF) located in Building 315-M. Additionally, 22 boxes of the Atomic Energy Commission Land Acquisition Records were acquired for curation this year from the DOE Records Management. Due to the fact that these records document pre-SRS information, they were released to the SRARP for long-term curation and will be utilized in future research endeavors.

Curatorial Assistant Maggie Needham re-inventoried 15 boxes of artifacts this year, placed inventory sheets inside each box, and sealed each box with strapping tape as a further security precaution. Mrs. Needham resigned in mid-October 2013, and the position of Curatorial Assistant remained unfilled throughout the rest of the fiscal year.

#### BUILDING 760-11G and the CENTRAL CURATION FACILITY

While the aerial photograph collection, photograph archives, and curation supplies continue to be housed in the Central Curation Facility (CCF) in Building 760-11G, all of the archaeological artifacts that were originally curated in the CCF have been transferred to the ACF in Building 315-M. This transfer has created much needed layout space necessary to efficiently accomplish two of the primary missions of the organization: compliance and research. Dedicated layout space has been assigned to researchers in the eastern side of the CCF, as well as a portion of the western side of the room.

#### **SAFETY COMPLIANCE**

George L. Wingard

During FY14, the SRARP continued compliance regarding federal and state regulations governing human health and safety. As Director of Safety, George Wingard shared with the staff a variety of topics pertaining to their health and safety at meetings held throughout the year and during early morning briefings.

## PART II. RESEARCH

### RESEARCH ABSTRACTS

*Use-Wear and Immunological Analyses of In-Situ Clovis and Early Archaic Tools from a Carolina Bay in South Carolina*

Christopher R. Moore, Mark J. Brooks, Larry R. Kimball, Margaret Newman, and Brian P. Kooyman

Poster presented at the 70th Annual Southeastern Archaeological Conference, Tampa, FL

Site 38AK469 is located on a Carolina bay in the Upper Coastal Plain of South Carolina. Microwear analysis of *in-situ* Clovis and Early Archaic artifacts from Flamingo Bay (including 2 Clovis and 1 reworked fluted point fragment) indicate intensive hide scraping (both fresh and dry), bone boring/graving/pointing, hafting traces, and residual organic residue. This analysis also suggests intentional snap-fracture or bipolarization of exhausted or broken Clovis points for reuse as hide scrapers. Immunological testing, using cross-over electrophoresis (CIEP), indicated positive results for bovine, deer, and turkey. This study highlights the importance of inter-disciplinary approaches in Archaic and Paleoindian research.

*Use-Wear and Protein Residue Analysis of an In-Situ Clovis Assemblage from a Carolina Bay in the Coastal Plain of South Carolina*

Christopher R. Moore, Mark J. Brooks, Larry R. Kimball, Margaret Newman, and Brian P. Kooyman

Paper presented at the Paleoamerican Odyssey Conference in Santa Fe, NM

Site 38AK469 is located on a Carolina bay in the Upper Coastal Plain of South Carolina. Carolina bays are oriented, upland ponds on the Atlantic Coastal Plain from Northeast Florida to New Jersey. Ongoing geoarchaeological investigations at Flamingo Bay have revealed the presence of stratigraphically discrete artifacts that are part of an isolated, low-density (probably single occupation) Clovis assemblage. This discovery constitutes one of the few documented Clovis assemblages recovered in buried context in the Southeast, and includes portions of exotic and local raw material Clovis points, blades, unifacial tools with graver spurs, end scrapers, tools with spokeshave notches, and robust hafted side-scrapers made on thick blade blanks.

Microwear analysis of 20 Clovis and likely Clovis artifacts from Flamingo Bay (including 2 Clovis and 1 reworked fluted point fragment) indicate intensive hide scraping (both fresh and dry), bone boring/graving/pointing, hafting traces, and residual organic residue. This analysis also suggests intentional snap-fracture or bipolarization of exhausted or broken Clovis points for reuse as hide scrapers. A portion of these tools along with tools recovered more recently, were submitted for immunological testing.

This study highlights the importance of inter-disciplinary approaches in Paleoindian research.

*Rapid Scour, Sand Rim Construction, and Basin Migration of a Carolina Bay in Southeastern North Carolina*

Christopher R. Moore, Mark J. Brooks, David J. Mallinson, Peter R. Parham,  
Andrew H. Ivester, and James K. Feathers

Poster presented at the 63rd Annual Meeting of the Southeastern Section, Geological Society of America,  
Blacksburg, VA

Ongoing geomorphological fieldwork at Herndon Bay in northern Robeson County, North Carolina, has revealed evidence for rapid bay basin scour and landform migration. LiDAR data show a regressive sequence of sand rims that partially backfill the remnant older bay basin, with bay migration of more than 600 meters to the northwest. Similarly, other bays in the region show evidence of significant migration.

A series of Geoprobe® cores (n=4), basal OSL samples (n=3), and GPR data were collected along transects that cross-cut multiple bay sand rims along the bays southeastern margin. Cores were subsequently analyzed to determine basic lithologies, grain-size statistics of lithologic units (i.e., lithofaces), and magnetic susceptibility. These data, along with GPR data and OSL age estimates are used to reconstruct landform geomorphology and provide a geochronology for bay rim development. Evidence suggests bay migration, including scouring of the underlying mud facies. This migration is punctuated by periods of high-energy shoreline processes leading to the development of a regressive sequence of bay sand rims with basal muddy sands incorporated into the earliest sand rims. Single grain OSL place the initial formation of each sand rim from oldest to most recent as ca.  $31.8 \pm 3.9$ ,  $29.6 \pm 3.1$ , and  $27.2 \pm 2.8$  ka. This chronology indicates that migration and rim construction events occurred during early MIS 2. Elsewhere in the Southeast, source-bordering eolian dunes attest to considerably greater average wind speeds, prevailing winds out of the west and southwest, and sparse tree-cover during this time (e.g., Swezey et al. 2013). Evidence for high-energy subaqueous basin scour and rapid construction of multiple sand rims at Herndon Bay is consistent with strong prevailing winds and ecological reconstructions of the late Pleistocene Southeast. The fact that these landforms can migrate, yet maintain their characteristic oval shape, orientation, and rim sequences demonstrate that Carolina bays are oriented lakes shaped by lacustrine processes. Clear evidence of basin scour into the underlying Tertiary marine sandy clays reveal that Carolina bay are capable of creating, shaping, and migrating through their own basins while backfilling remnant basins with a regressive sequence of paleoshorelines.

J. Christopher Gillam

*Advances in Archaeological Geographic Information Science: A Perspective from South Carolina*

Paper presented at the 79th Annual Meeting of the Society for American Archaeology Austin, TX.

Archaeological applications of Geographic Information Science have witnessed many recent advances as archaeological datasets have become more and more automated and available online. With this burgeoning availability of data, models of cultures and their associated landscapes are being developed using increasingly complex methods and environmental datasets. As archaeological site samples increase and multivariate analyses take hold, existing models need to be tested with independent site samples and compared directly to new models employing advanced multivariate techniques. Methods for testing extant models, detecting changes in land-use through time, and for developing time-sliced and adaptation-based landscape models are demonstrated using data from South Carolina.

J. Christopher Gillam

Thinking Outside of the Rocks: A Holistic View of the Peopling of the Americas

*Paper presented at the 40th Annual Conference of the Archaeological Society of South Carolina, Columbia.*

Recent hypotheses regarding the origins and timing of Pleistocene migrations into the Americas have radically altered archaeological perceptions of the “First Americans.” Although the search for Clovis’ cultural forbearers’ have largely failed in East Asia, perhaps investigators have been looking for the wrong cultural markers, i.e. lithic technology. Too often, the focus on lithic technology has led researchers to grasp at remotely plausible, yet highly improbable, hypotheses of human migration during the Pleistocene. Drawing on two decades of primary research by the author in Eastern North America, Europe, East Asia, and the Southern Cone of South America, this research explores the cultural origins and pathways of Pleistocene migrations from a bio-physical geographic perspective at continental scales-of-analysis for the Northern Hemisphere and South America. It is demonstrated that the high degree of cultural diversity in late Pleistocene East Asia set the stage for migration to the Americas. Pottery, beginning around 16,000 BP, suggests a shift toward relatively sedentary foragers throughout the area. This likely led to regional territoriality that pressured the lifeway of traditional, highly mobile fisher-hunter-gatherers, i.e., an incentive to migrate northeast along the coast toward the Americas. Bio-physical geographic models highlight the most likely origins of these migratory populations. In addition, geographic analyses indicate that Mesoamerica also played a significant, yet largely unrecognized, role in the peopling of the Americas. Previously recognized as a passage for the peopling of South America *from the north*, the Isthmus of Tehuantepec was more likely an early pathway for the peopling of *eastern* North and South America from the Pacific Coast. The significance of this region to the initial peopling of the Americas is highlighted further as Paleoamerican studies lend growing support for an early coastal migration from East Asia.

J. Christopher Gillam, Sergei A. Gladyshev, Andrei V. Tabarev, B. Gunchinsuren, and John W. Olsen

*Exploring Time and Space in Paleolithic Landscapes of Northern Mongolia*

Invited presentation for the panel, "Visualizing the Past: Field Methods and Techniques of Archaeological Investigations in East and Central Asia," 6th Worldwide Conference of the Society for East Asian Archaeology, Ulaanbaatar, Mongolia.

In the past decade, sites (n=40) dating to the Pleistocene and early Holocene have been discovered along the Ikh-Tulberiin-Gol, Kharganyn-Gol, and Altatyn-Gol rivers of the Selenge-Gol Basin, northern Mongolia. Ongoing excavations and a GIS database provide the context and means to explore the nature of the region's Paleolithic landscapes. Initial results indicate a settlement preference for south- and east-facing slopes with good viewsheds of surrounding terrain. Analysis of local topography identified the location of a significant saddle in the mountainous terrain separating the Ikh-Tulberiin from the Kharganyn and Altatyn rivers. The saddle has archaeological evidence of continued use from early Upper Paleolithic (ca. 40,000 cal. B.P.) to modern times. The Saddle Site also lies nearly due east and within the viewshed of a previously recorded middle Upper Paleolithic cache (n=57 artifacts; ca. 25,000-15,000 cal. B.P.) that is unique to the region, bringing into focus the locational meaning of this significant cultural feature.

*James B. Griffin, Mississippian Archaeology and the Etowah Archaeo-Geophysical Survey*

Adam King

Paper presented at the 70th Annual Meeting of the Southeastern Archaeological Conference. Tampa, FL

Anyone who does Southeastern archaeology, especially that later part of prehistory, builds upon a foundation laid by James B. Griffin. Griffin was by all accounts an excellent teacher, a rigorous field practitioner, and a vocal critic of sloppy archaeology and poor reasoning. He is known for building chronologies, championing methodological advances, and remembering every potsherd he ever saw. In this paper, we discuss our recent field project at Etowah and show how it has grown out of the pioneering influence of Jimmie Griffin.

*Summer Testing at the Etowah Site*

Adam King

Paper presented at the 2013 Fall Meeting of the Society for Georgia Archaeology, Red Top Mountain, GA

Between 2005 and 2008 the Etowah Archaeo-Geophysical Survey conducted remote sensing surveys at the Etowah Indian Mounds State Historic Site in Cartersville. The result of that work was a complete gradiometer map of the archaeological features visible using magnetism. Among the inferences made using those data was that it is possible to distinguish Early Mississippian (A.D. 900-1200) residential structures from Middle and Late Mississippian (A.D. 1200-1550) just using gradiometer data. This summer a field

school sponsored by the University of SC, Texas State University, and the Muscogee (Creek) Nation tested this proposition. In this paper we present our preliminary results.

*First Man and the Power of the Pipe*

Johann A. Sawyer and Adam King

Paper presented at the 70th Annual Meeting of the Southeastern Archaeological Conference, Tampa, FL

Bowl-Giver pipes are distinctive and yet under examined symbolic media within the corpus of Mississippian art. These pipes exhibit a male figure looking up while holding a strap or loop handled ceramic pot that also functions as the bowl of the pipe. These pipes are executed in a wide range of styles and have an extensive geographic and temporal distribution. Using multiple lines of archaeological, symbolic, and ethnographic evidence, we argue that bowl-giver pipes represented a commonly understood visualization of specific cult rituals and practices linked to centering and the culture-hero known as First-Man.

*The G. S. Lewis-West Site in Regional Context*

Keith Stephenson and Karen Smith

Paper presented at the 70th Annual Southeastern Archaeological Conference, Tampa, FL

The G. S. Lewis-West site (38AK228), located on the eastern side of the Savannah River, is unique in the region for its rich assemblage of Woodland-period artifacts and cultural deposits. Over 500 features, 50,000 ceramics, and a 25-cm thick midden, in addition to rare exotics and notable lithic, faunal, and botanical remains, point to a substantial occupation of the landform from at least 200 B.C. In this paper, we examine the Lewis-West excavation data generated in the mid-1980s and radiocarbon dates collected since the 1990s to situate the occupation of Lewis-West into the larger Woodland-period world.

*G. S. Lewis-West, South Carolina: A Deptford Period Site in Regional Context*

Keith Stephenson and Karen Smith

Poster presented at the 79th Annual Meeting of the Society for American Archeology, Austin, TX

The G. S. Lewis-West site, located in the Upper Coastal Plain of the Savannah River, is unique in the region for its rich assemblage of Woodland period artifacts and cultural deposits. Over 500 features, 50,000 ceramics, and a 25-cm thick midden, in addition to rare exotics and notable lithic, faunal, and botanical remains, point to a substantial occupation of the landform from at least 200 B.C. In this poster, we re-examine the Lewis-West excavation data generated in the mid-1980s along with a current series of radiocarbon dates to situate the occupation of Lewis-West into the larger Woodland period world.

*Identifying and Correcting Misunderstandings of the Archaeological Record of the  
Hollywood Site*

Christopher L. Thornock

Paper presented at the 70th Annual Meeting of the Southeastern Archaeological Conference, Tampa, FL

The Hollywood site (9RI1) is a Mississippian Mound center on the Savannah River in Georgia excavated by Henry Reynolds in 1889. Recent reexamination of the artifacts from 9RI1 revealed discrepancies within descriptions of the arrangement of artifacts. I believe that incorrect understandings of the archaeological context have been repeatedly used in the interpretations of the Hollywood site and these misunderstandings can be primarily attributed to the misreferencing of figures in the original 1894 report by Cyrus Thomas. In this paper, I attempt to clarify how the artifacts were arranged and interpret why the artifacts were arranged in this way.

## RESEARCH NOTES

### *Beech Island Agricultural Museum Exhibit Update*

Tammy F. Herron

In 2005, the Beech Island Historical Society (BIHS) was awarded a \$200,000 Rural Business Enterprise Grant from the United States Department of Agriculture (USDA) through the USDA's Rural Development Program. These funds were used to renovate a historic brick barn dating to the 1800s that is situated directly behind the BIHS. As renovations were being made to the barn, members were set to the task of finding funding to create exhibits for the new Beech Island Agricultural Museum that will be housed in this historic structure. Much of the research conducted by the staff of the SRARP is applicable to Beech Island. A number of archaeological excavations have also been conducted by SRARP staff in Beech Island and the surrounding area. This work will be featured in the museum's exhibits.

This fiscal year, a temporary exhibit of Native American pottery types found in the region/indigenous to the region was installed in the Agricultural Museum. A framed print depicting the Green Corn Ceremony was also installed in the Native American section of the museum. As an interesting aside, corn cupules were recently discovered in flotation samples from Savannah I period features excavated at the G. S. Lewis West site (38AK228). Text panels continue to be edited for the next round of printing, and ground treatments for the featured exhibits are slated to be installed during the winter of 2014.

### *The DAACS Research Consortium and Archaeological Research at 38AK7*

Brandy Joy, Charles Cobb, and Tammy F. Herron

For a number of years, staff of the SRARP has been conducting research associated with Silver Bluff Plantation (38AK7), also known as the George Galphin site. Situated along the Savannah River in western Aiken County, South Carolina, the site is located in the Silver Bluff Plantation Sanctuary—a wildlife sanctuary consisting of over 3,000 acres owned and operated by the National Audubon Society. Born circa 1709, Galphin emigrated from Northern Ireland in 1737, worked with a successful trading company in Augusta, Georgia, and eventually established his own colonial backcountry trading post at Silver Bluff. As his business flourished during the mid-18th century, Galphin acquired thousands of acres of land near Silver Bluff and eventually established himself as a gentleman planter.

This fiscal year, Dr. Charles Cobb of the SCIAA inquired about the possibility of using artifacts recovered from archaeological excavations at the site as part of a pilot study for the Digital Archaeological Archive of Comparative Slavery (DAACS) Research Consortium. SCIAA has been an institutional partner of the DAACS since 2006.

The Digital Archaeological Archive of Comparative Slavery is a Web-based initiative designed to foster inter-site, comparative archaeological research on slavery throughout the Chesapeake, the Carolinas, and the Caribbean. Our goal is to help scholars from different disciplines use archaeological evidence to advance

our historical understanding of the slave-based society that evolved in the Atlantic World during the colonial and ante-bellum periods. The archive was conceived and built by archaeologists at Monticello, with the collaboration of archaeologists, historians, and research institutions from across the Atlantic World. As a result, DAACS serves as a model for the use of the Web to foster new kinds of scholarly collaboration and data sharing among archaeologists working in a single region (Thomas Jefferson Foundation 2014a).

In March 2013, the DAACS received a grant from the Andrew W. Mellon Foundation to fund the DAACS Research Consortium.

The DAACS Research Consortium (DRC) is an innovative, collaborative project that will allow faculty, students and scholars from leading graduate programs and museums to contribute data from archaeological collections to Digital Archaeological Archive of Comparative Slavery through the development of a web accessible application. The Mellon grant will fund development of new software infrastructure, using open-source tools, in a partnership with the University of Virginia's Institute of Advanced Technology in the Humanities and Convoy, Inc., a Charlottesville-based design firm. The software will allow DRC partners to use an ordinary web browser to enter data from their excavations into the DAACS database, to discover meaningful patterns, and to compare patterns across geographically scattered archaeological sites (Thomas Jefferson Foundation 2014b).

In the spring of 2014, Dr. Charles Cobb and USC Graduate Assistant Brandy Joy traveled to Monticello with a sample of artifacts from the Galphin site to take part in a training session regarding the DAACS database. Since that time, Ms. Joy has been analyzing a collection of artifacts from the site to the DAACS specifications. These artifacts were recovered in May-June 1999 during the field school directed by Mark Groover of Augusta State University and SRARP staff member Tammy Forehand. Fieldwork conducted during the field school centered on one of the structures pinpointed in the spatial analysis of architectural artifacts recovered from the site. The ground surface of this particular area was littered with brick rubble, and shovel testing revealed a high density of other architectural artifacts including nails, window glass, and limestone mortar fragments. A 4 x 5 m block was excavated revealing the base of a brick chimney, numerous post holes, and a palisade trench. The palisade appears to have been constructed with split logs or pales, perhaps driven in between larger buttress posts. The students assisted in excavating several additional 1 x 2 m units in an attempt to determine the extent of the palisade boundary prior to the close of the field school. Ms. Joy is analyzing artifacts recovered during the May-June 1999 field season as part of her Master's thesis.

Backcountry trading posts, such as Galphin's, were important places on the colonial landscape because individuals from so many cultures and competing interests interacted there, including various European ethnic groups, Native Americans, and enslaved Africans. It will be interesting to see if the DAACS data generated as a result of Ms. Joy's analysis will shed light on any meaningful patterns at the site; then, to compare and contrast those findings with data entered from other colonial period sites in the

DAACS database. Archaeological research at Silver Bluff has the potential to bring to light the dramatic social changes that accompanied the rapid shift from trading frontier to plantation economy in the late eighteenth century, especially with regard to the developing a better understanding of the customary manner of living for enslaved individuals during this period of American history.

*Geoarchaeological and Paleoenvironmental Research in FY2014*

Christopher R. Moore and Mark J. Brooks

**Carolina Bay Research**

Excavations at site 38AK469 (Flamingo Bay) continued in FY14 with a short winter field season in December of 2013 (Figure II-1). The purpose of this excavation was to finish two Test Units in the main excavation block (Block A) at Flamingo Bay. As part of the now standard protocol, recovery of formal stone tools was done without contact with human skin and with soil samples collected from around the artifact. Avoiding skin contact is done to ensure that artifacts that may be submitted for protein residue or immunological testing are not contaminated by handling or washing. Soil samples collected from around artifacts serve as another test of possible contamination of the sediment matrix (e.g., historic cattle farming). Additional excavations of Block B are planned for the spring of 2015.



Figure II-1. In the foreground are SRARP volunteers, Rooney Floyd (in Test Unit) and John Kolmar (at the screen) and in the background are Bob Van Buren (standing), Robert Hiergersell (in Test Unit) and former SRARP field crew, Lizzie Gillispie excavating in Block A at 38AK469 (Flamingo Bay).

*Herndon Bay Research*

Ongoing geomorphological fieldwork at Herndon Bay in northern Robeson County, North Carolina, has revealed evidence for rapid bay basin scour and landform migration. LiDAR data show a regressive sequence of sand rims that partially backfill the remnant older bay basin, with bay migration of more than 600 meters to the northwest (see SRARP 2013:Figure II-15). Similarly, other bays in the region show evidence of significant migration

A series of Geoprobe® cores (n=4), basal OSL samples (n=3), and GPR data were collected along transects that cross-cut multiple bay sand rims along the bays southeastern margin. Cores were subsequently analyzed to determine basic lithologies, grain-size statistics of lithologic units (i.e., lithofaces), and magnetic susceptibility. These data, along with GPR data and OSL age estimates are used to reconstruct landform geomorphology and provide a geochronology for bay rim development. Evidence suggests bay migration, including scouring of the underlying mud facies. This migration is punctuated by periods of high-energy shoreline processes leading to the development of a regressive sequence of bay sand rims with basal muddy sands incorporated into the earliest sand rims. Single grain OSL place the initial formation of each sand rim from oldest to most recent as ca.  $36.7 \pm 4.1$ ,  $29.6 \pm 3.1$ , and  $27.2 \pm 2.8$  ka (Figure II-2). OSL dating of 3 sand rims indicates a period of fairly rapid bay migration between 40.8 and 24.4 ka, with the development of distinct sand rims in a regressive sequence occurring over a period of time between ca. 8,000 and 16,500 years and over a distance of 370 meters. Assuming gradual formation, this equates to a migration rate of between ~22 and 44 meters per millennium towards the northwest; however the distinct nature of the individual rims is consistent with punctuated and very rapid migration over short distances followed by periods of stability and rim formation. This chronology indicates that migration and rim construction events began during late Marine Isotope Stage (MIS) 3 and continued during the early part of MIS 2 (Figure II-3). GPR data reveal structural features of sand rims, including dipping clinofolds and evidence for a buried sand rim between cores 3 and 4 (Figure II-4).

Elsewhere in the Southeast, source-bordering eolian dunes attest to considerably greater average wind speeds, prevailing winds out of the west and southwest, and sparse tree-cover during this time (e.g., Swezey et al. 2013). Evidence for high-energy subaqueous basin scour and rapid construction of multiple sand rims at Herndon Bay is consistent with strong prevailing winds and ecological reconstructions of the late Pleistocene Southeast. The fact that these landforms can migrate, yet maintain their characteristic oval shape, orientation, and rim sequences demonstrate that Carolina bays are oriented lakes shaped by lacustrine processes. Clear evidence of basin scour into the underlying Tertiary marine sandy clays reveal that Carolina bay are capable of creating, shaping, and migrating through their own basins while backfilling remnant basins with a regressive sequence of paleoshorelines.

Geoprobe core data reveal down-cutting with muddy sands incorporated throughout the oldest sand rims during the initial period of high-energy lacustrine

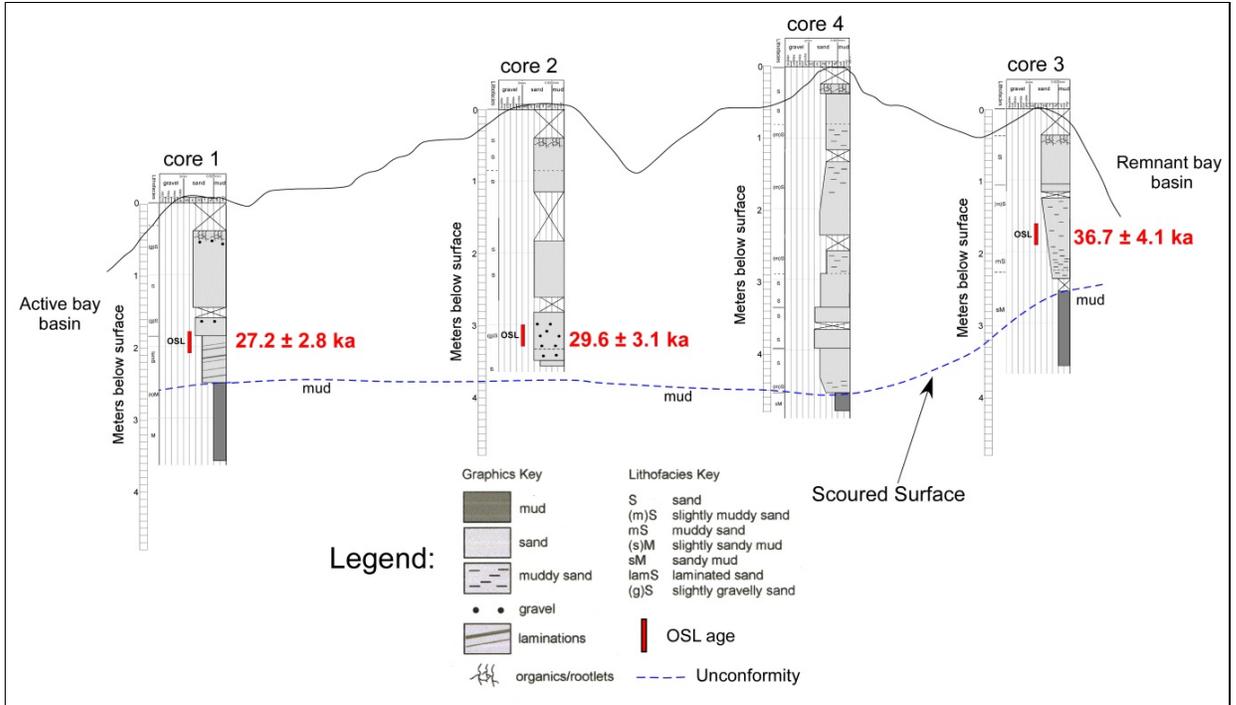


Figure II-2. Geoprobe® core data, corrected for elevation and rim topography, showing major lithofacies and single-grain luminescence geochronology.

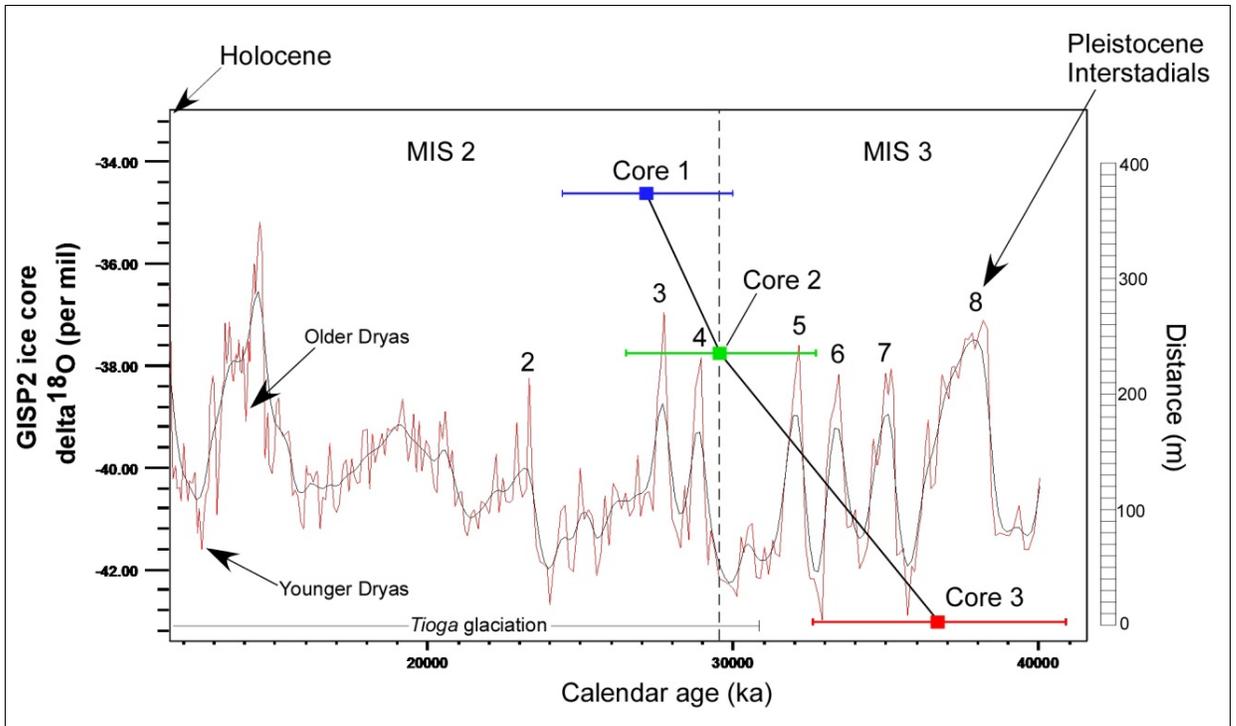


Figure II-3. Sand rim OSL age/distance relationship plotted over the GISP2 Oxygen Isotope data from Greenland.

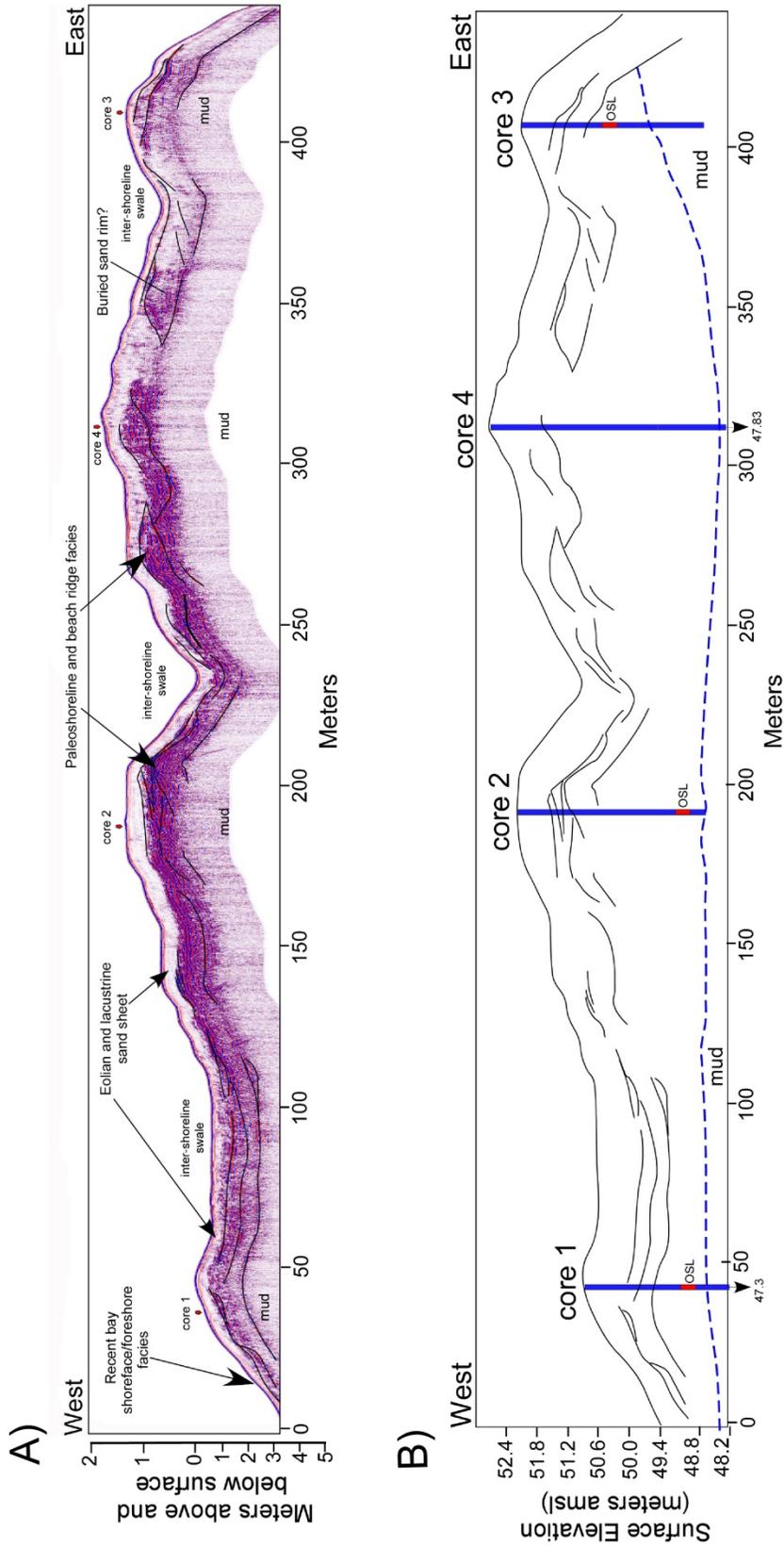


Figure II-4. Ground-penetrating radar (GPR) data of multiple sand rims at Herndon Bay. A) Surface-normalized GPR transect showing rim topography, interpreted radar facies, and core locations. and B) interpreted radar reflections, location of cores, OSL samples, and the contact with underlying mud facies.

processes and basin scour into underlying Tertiary muds. The basal portions of more recent sand rims contain gravelly sands and laminated sands but lack the muddy sands common in the oldest sand rims.

Following Kaczorowski (1977), a Carolina bay migration model was developed to explain processes that shape, orient, and lead to bay basin migration and the development of a regressive sequence of sand rims along the southeastern margin of Carolina bays (Figure II-5). Kaczorowski's wind table modeling suggests obvious mechanisms for these processes, with circulation cells in shallow ponded water eroding along southwest and northwest margins and depositing (lacustrine sand rims) on the downdrift sides (eastern and southeastern margins). Bay migration is perpendicular to the most common or prevailing wind (from the southwest in the Carolinas) although this research suggests a significant role for winds out of the northwest. In this scenario, strong prevailing winds from the southwest are principally responsible for bay shape, orientation, and the development of sand rims along the eastern or northeastern margins of bays, while more seasonal and stronger northwest winds appear to drive limited bay migration and development of multiple southeastern sand rims in a regressive sequence towards the northwest. Principally in the lower Coastal Plain of North and South Carolina, expansive, flat terrain, along with easily eroded cover sands, facilitate the lateral expression of bays through migration. In the Upper Coastal Plain, bay migration is often restricted due to dissected terrain and antecedent topographic highs. Punctuated periods of bay migration and rim formation at Herndon Bay likely occurred during transitions between cooler/drier and warmer/wetter conditions during Pleistocene interstadials 3 to 8 during late MIS 3 and early MIS 2.

Future work at Herndon Bay will focus on evaluating the Late Pleistocene and Holocene archaeological occupations of the bay sand rims. These data will provide comparative data to that for Carolina bays investigated on the SRS and CSRA. Thus far, limited shovel test data indicates that prehistoric occupations of the sand rims were minimal. In contrast, work on Carolina bay sand rims on the SRS and other areas of South Carolina have revealed archaeological evidence for intensive occupation of virtually all Carolina bays that have undergone testing. The minimal use of Herndon Bay by prehistoric inhabitants may suggest that the bay was "shut-down" and infilled by the early Holocene and thus not as attractive as numerous and nearby bays that still hold water year-round or on a seasonal basis.

#### **Immunological Analysis of Hafted Bifaces in the Central Savannah River Area: Evaluating Diachronic Trends in Animal Species Selection and Availability over the Last 13 ka**

In FY13, a pilot study was initiated (funded in part by the Archaeological Research Trust) to determine if animal protein residues are preserved on Paleoindian and Early Archaic stone tools from Flamingo Bay (38AK469). This study produced positive results for 7 out of the 27 tools submitted for immunological testing (~27 percent success rate) (see SRARP 2013:Figure II-6). These results established a proof of concept for immunological analysis of weathered Coastal Plain Chert artifacts spanning more than 13,000 years of prehistory along the Savannah River.

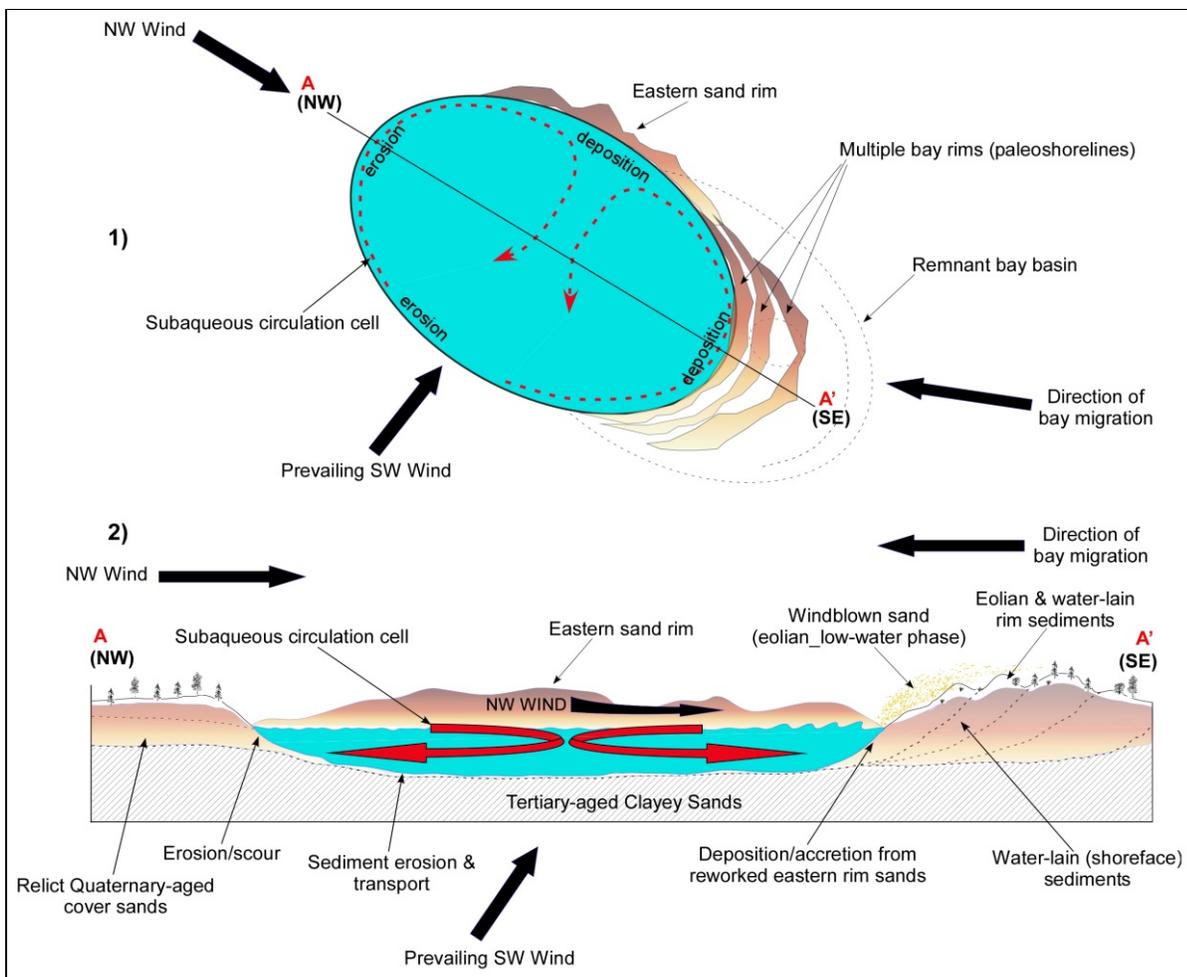


Figure II-5. Carolina bay formation and migration model based on earlier models by Kaczorowski (1977) and comparison with LiDAR data from North and South Carolina. 1) Overhead view; 2) Bay cross-section.

Of particular significance, results of this pilot study identified bovid protein residue (*B. bison* or *B. antiquus*) on a large, likely Paleoindian, bifacial knife from Flamingo Bay. This result is one of the first examples of bison protein residue identified in the Southeastern United States (see SRARP 2013:Figure II-8).

As a follow-up to this initial research, in FY14, we initiated a much larger study of temporally diagnostic hafted bifaces (n=75) in order to evaluate diachronic trends in animal prey species selection and availability as evidenced through protein residue analysis. In this study, we included 15 diagnostic hafted bifaces from each time-period represented on the Savannah River Site and the CSRA, including Paleoamerican Clovis, Redstone and Dalton hafted bifaces, 15 Early Archaic points (Taylor Side-Notched, and Palmer and Kirk Corner-Notched), 15 Middle Archaic Morrow Mountain hafted bifaces, 15 Late Archaic Savannah River type hafted bifaces, and 15 Woodland and Mississippian Triangular and small notched/stemmed points. Out of 75 hafted bifaces analyzed, 22 (30 percent) were found to be positive for animal protein residues, including: bovid, rabbit, bear, deer, cat, and canidae.

Although these results are yet to be fully published, a significant finding in our most recent immunological study was the verification of bovid (bison residue) on multiple hafted bifaces that span the Paleoindian through early Middle Archaic (Figure II-6) with clear implications for early hunter-gathers in the region. If bison (*B. bison* or *B. antiquus*) were as plentiful and hunted as intensely as suggested by our analysis, the targeting of migrating herds of bison surely would have conditioned settlement and subsistence patterns. That a Middle Archaic Morrow Mountain point exhibited the most recent evidence of bovid residue may also indicate that bison in the South Atlantic Slope were extirpated by the early Middle Holocene. Plans are underway for additional analysis of Paleoamerican through Middle Archaic points to test this hypothesis. With regard to Paleoamerican subsistence, the lack of evidence for extinct megafauna (e.g., mammoth) is interesting given the traditional view of Clovis hunters. This may mean that large megafauna were regionally extinct by the time of Clovis, were hunted infrequently, or that our sample size was just too small. Analysis of additional Clovis points could help address these questions.

### **Magnetic Microspherule Research at Squires Ridge (31ED365)**

The Squires Ridge site (31ED365) is a stratified sand ridge on the lower paleo-braidplain terrace of the Tar River in Edgecombe County, North Carolina and has been the focus of intensive geoarchaeological survey for several years (Moore and Daniel 2011; Daniel et al. 2013). In January of FY14, a sediment column collected in 2012 as part of an ongoing geoarchaeological survey of the Tar River, was analyzed to determine if samples contained magnetic microspherules. Magnetic microspherules have been reported from sediments from numerous sites on multiple continents that date to the Younger Dryas boundary layer (YDB) (ca. 12,800 ± 150 cal. BP), along with a suite of other markers including but not limited to: nanodiamonds, aciniform soot, high-temperature melt glass, and elevated concentrations of Platinum and Iridium (e.g., Firestone et al. 2007; Wittke et al. 2013). Various researchers have suggested that these markers were produced during a cosmic impact of a comet or as a result of a series of comet airbursts over North America. The aftermath of which is claimed to have led to the Younger Dryas climate event, continental-scale wildfires, extinction of more than 35 genera of Pleistocene megafauna, and demise of the Clovis "culture". Others have argued that microspherules are formed from non-impact related processes, including volcanism, meteoritic ablation, lightning strikes, biogenesis, diagenesis, wildfires, or are a result of industrial pollution (e.g., fly ash) (e.g., Pinter et al. 2011; Pinter and Isman 2008). Still others claim that previously reported elevated concentrations of many of these markers cannot be reproduced (Surovell et al. 2009), that chronologies are incorrect or in error (Meltzer et al. 2014), and that purported effects on animal and human populations did not take place (e.g., Buchanan et al. 2008; Holliday et al. 2014; Ruban 2009).

In order to evaluate these claims, the magnetic fraction of each 2.5 centimeter (cm) interval sediment sample from Squires Ridge was extracted following the original protocol established by Firestone et al. (2007). The sediment samples are dried and weighed, before pouring into a container of water. The magnetic fraction is then extracted

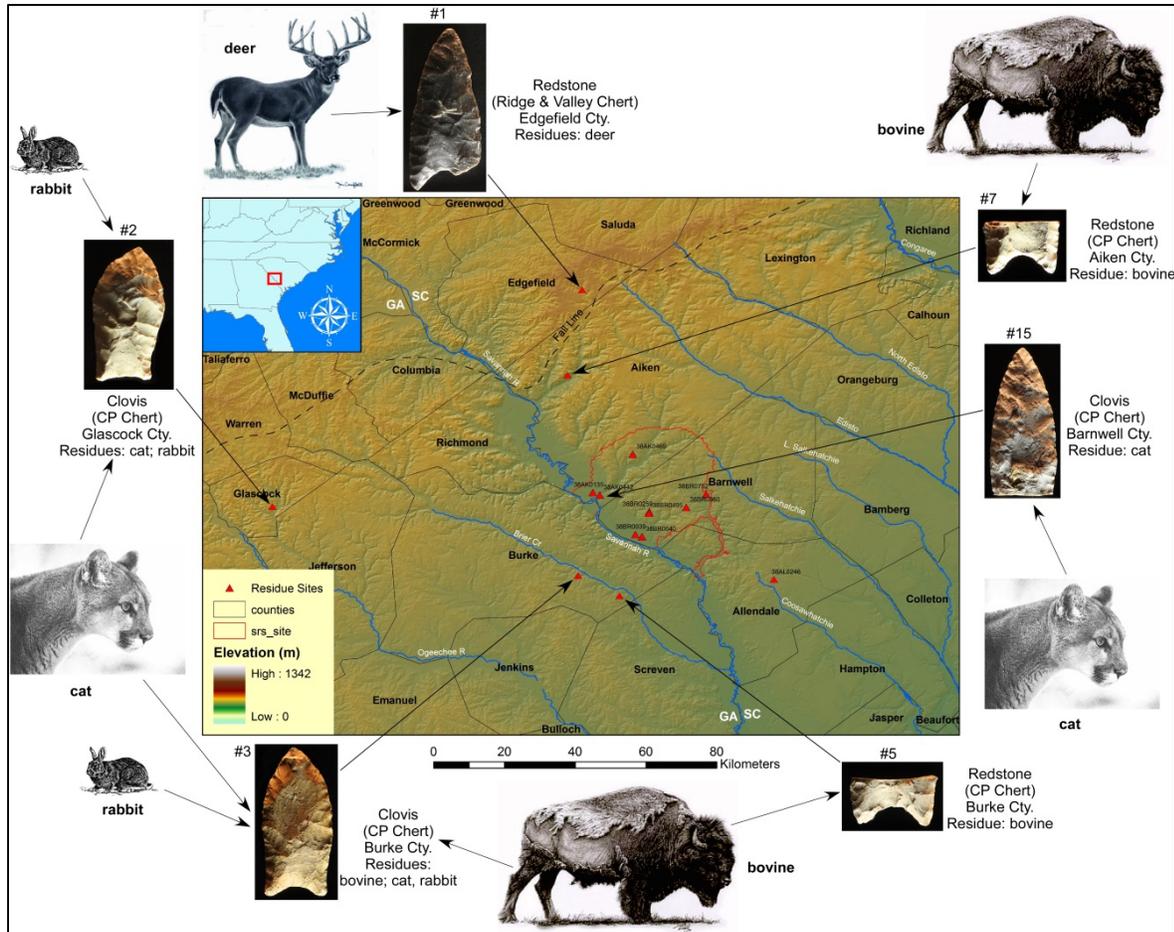


Figure II-6. Immunological results for Paleoamerican hafted bifaces from the CSRA.

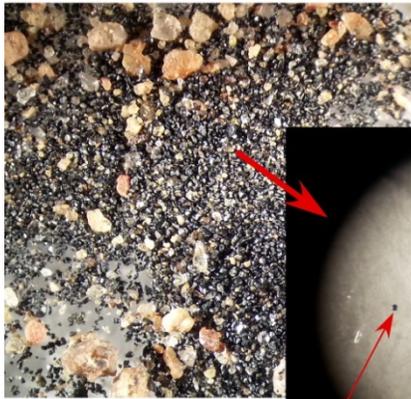
using a very strong (grade-52) neodymium (NdB) magnet placed inside of a plastic bag (Figure II-7). The magnetic grains are collected by swirling the magnet through a water-sediment slurry and then placing the bag with the magnet and attached grains into a separate container of clean water. The magnet is then slowly pulled out of the bag, releasing the magnetic grains. Water is then decanted and allowed to evaporate before the magnetic grains are collected, weighted, and placed into a separate bag for analysis.

After magnetic grains are extracted, they are size-sorted through USGS testing sieves in order to remove the majority of sand and large detrital magnetic grains. Size-sorting has been shown to greatly increase the chances of locating microspherules which tend to be among the smallest grains in the magnetic grain sample (e.g., LeCompte et al. 2012). For this study, magnetic grain samples were separated into  $\geq$  and  $\leq 61\mu$  size fractions. The smaller size-fraction was then examined under an optical binocular microscope for the presence of microspherules. Once located, microspherules are carefully mounted onto Scanning Electron Microscope (SEM) analysis stubs using double-sided carbon tape and imaged with a SEM and Energy Dispersive Spectroscopy (EDS) to evaluate surface textures and elemental composition (Figure II-8).

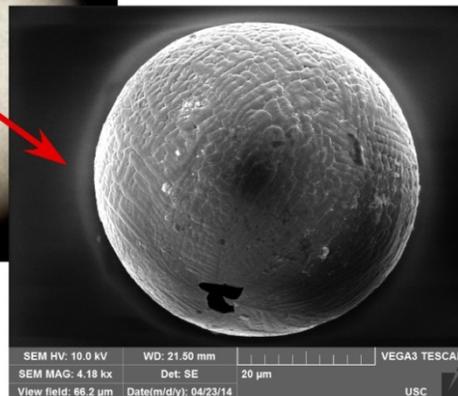


Figure II-7. Magnetic grains collected by SRARP volunteer Bob Van Buren using a grade-52 neodymium magnet placed inside a plastic bag.

1) Extracted magnetic grains



2) Optical microscope image of two microspherules



3) SEM image of spherule

Figure II-8. 1) Extracted magnetic grains, 2) optical image of extracted microspherules, and 3) Scanning Electron Microscope (SEM) image of an Fe-oxide rich microspherule with dendritic surface texture and a small hole at the bottom showing the spherule to be hollow and extremely thin-walled.

Although the analysis of samples from Squires Ridge is not yet complete, several observations are apparent from an analysis of the majority of samples (at 2.5 cm intervals) in the upper 100 cm of sand. First, magnetic microspherules were not observed in samples deeper than 80-82.5 cmbs, while low levels of spherules are found in virtually every sample above 82.5 cmbs. Second, a clear spherule peak was found in the sample from 65-67.5 cmbs that has a significantly higher abundance than detected immediately above and below this sample (Figure II-9).

Third, analysis of sediment samples from the surface (upper 10-15 cm) revealed samples with large numbers of very small spherules that greatly exceed the more deeply-buried spherule peak observed in the 65-67.5 cmbs sample. These spherules are most likely fly ash spherules from industrial coal burning processes. Additional SEM and EDS work is planned on a sample of microspherules recovered from all depths in order to evaluate the elemental chemistry and possible genesis of microspherules. It remains unclear if industrial (i.e., fly ash) spherules can account for spherules found in deeper sediments. Preliminary SEM and EDS analysis of several spherules from the spherule peak at 65-67.5 cmbs have shown them to be predominantly Fe-oxide-rich (FeO, Fe<sub>3</sub>O<sub>4</sub> or Fe<sub>2</sub>O<sub>3</sub>), with dendritic or "quench" textures (presumably from melting and rapid cooling), and many appear to be hollow and very thin-walled—essentially solidified iron oxide "vapor."

Another interesting observation is that spherules at Squires Ridge are only found to about the maximum depth of observed archaeological occupations. At Squires Ridge, we have Early Archaic corner-notched points down to a maximum depth of about 80 cm (although other possibly thicker portions of the site have Early Archaic occupations as deep as 100 cmbs). The earliest diagnostic hafted biface found thus far is a basal fragment of a Hardaway Side-Notched point (see SRARP 2012:Figure II-6 in) at about 80 cmbs. Two AMS dates on carbonized nutshell are relevant to this discussion. One sample was recently recovered from a second sediment column placed next to the original 2012 sediment column and collected from the peak spherule layer at 65-67.5 cmbs. This sample produced a conventional radiocarbon age of  $9160 \pm 30$  BP ( $\delta^{13}\text{C} -25.2$  o/oo) (10,400 to 10,240 cal. BP at  $2\sigma$ ). A previously dated sample of carbonized nutshell from a test unit about 4 meters away produced a conventional radiocarbon age of  $9010 \pm 50$  BP ( $\delta^{13}\text{C} -24.1$  o/oo) (10,240 to 10,150 and 9980 to 9970 cal. BP at  $2\sigma$ ) from Level 7 (60-70 cmbs). These dates overlap at  $2\sigma$  and suggest the buried spherule peak at Squires Ridge is several millennia later than the YDB.

Interestingly, the radiocarbon dates from the spherule peak at Squires Ridge correspond with Bond Event 5 (ca. 10,300 ka)—a period of rapid climate change during the Holocene associated with major ice-rafter events in the North Atlantic (Bond et al. 1997, 2001). In general, these events appear to represent the rapid onset of cooler and dryer conditions and occur on quasi-periodic (~1,500 year) cycles (Bond et al. 1997, 1999). Bond Events also appear correlated with regional records of rapid climate change in the mid-Atlantic (e.g., Willard et al. 2005) and globally by multiple proxy records of climate change (Mayewski et al. 2004). Some have suggested that periodic inputs of

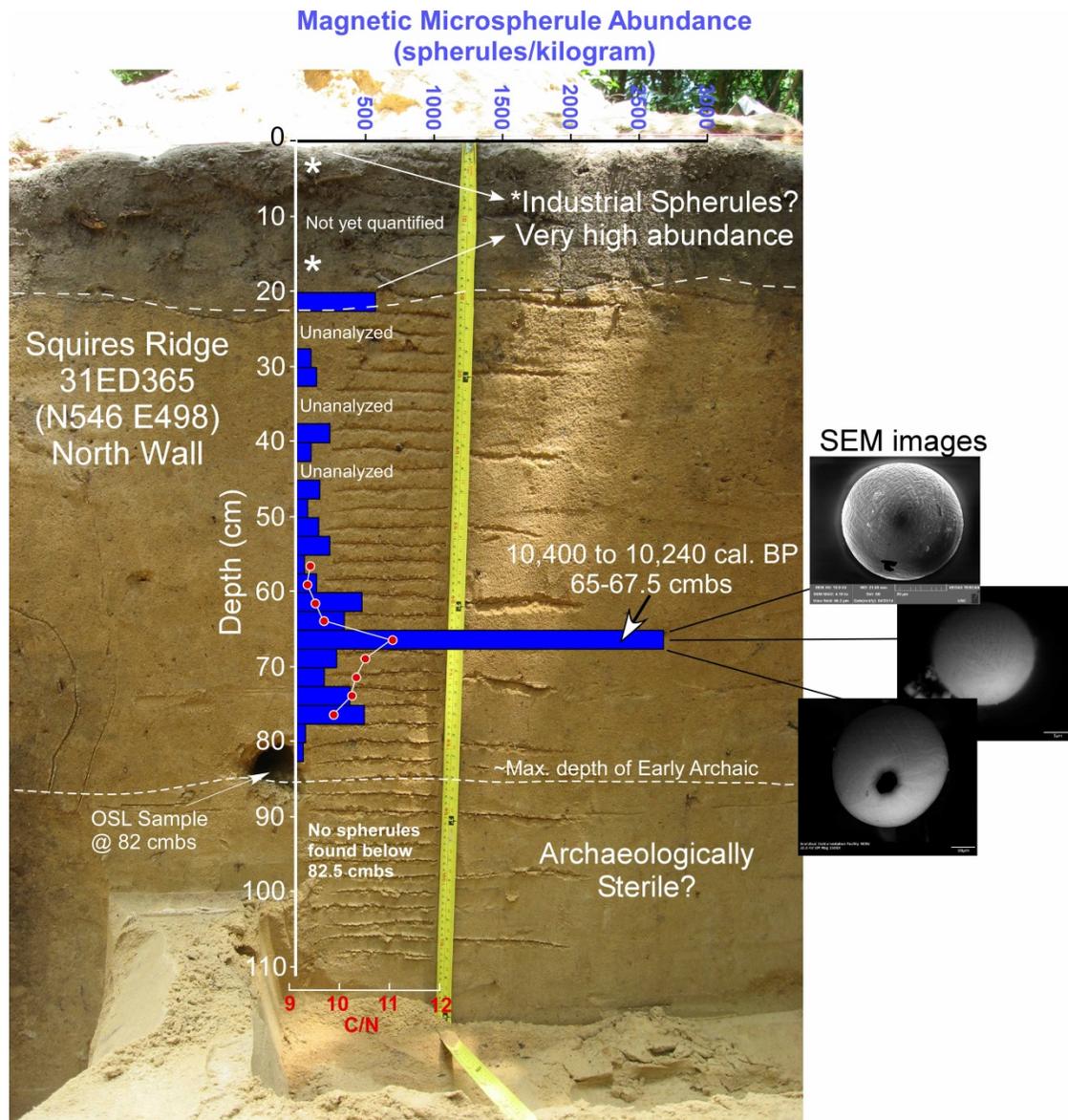


Figure II-9. Sediment column profile at Squires Ridge (31ED365) showing preliminary estimates for microspherule abundance (spherules/kilogram), SEM images of Fe-oxide-rich microspherules, an INTCAL04 calibrated  $^{14}\text{C}$  date from 65-67.5 cmbs, C and N isotope ratio data for select samples, and the estimated maximum depth of Early Archaic artifacts recovered to date.

cosmic dust contribute to millennial-scale climatic cyclicality during the Holocene (Clube and Napier 1990; Franzen and Cropp 2007). For example, large influxes of dust could lead to dimming of solar radiation and may enhance marine biological production due to the "fertilization" of surface waters with micronutrients (e.g., Fe, Zn, Co). Additions of these micronutrients during periods of greatly enhanced cosmic dust input would speed up the biological pump and cause global cooling due to the sequestration of atmospheric  $\text{CO}_2$  (Franzen and Cropp 2007).

The presence of low levels of microspherules throughout the upper 80 cm may indicate that spherules are formed through some as of yet not understood anthropogenic or natural soil-formation processes (e.g., anthropogenic burning, wildfires, or diagenesis); however, the extremely high temperatures necessary to melt iron or silica would seem to rule this out. The uniform distribution may also indicate that spherules are deposited (at least partly) as a result of a natural background "rain" during periods of enhanced meteoritic input or interactions of the Earth's atmosphere with comet dust (e.g., Abbott et al. 2014). This possibility, however, has been ruled out by Wittke et al. (2013) and LeCompte et al. (2012) with geochemistry of purported YD impact spherules consistent with terrestrial sources rather than cosmic (i.e., the idea that YD spherules form from terrestrial material pulled up into the plume of a cosmic airburst). A volcanic origin also appears to have been ruled out (at least for YD-aged spherules) along with possible formation during lightning strikes of the ground (Wittke et al. 2013).

Given the presence of small numbers of spherules found throughout the upper 80 cm of sand at Squires Ridge, the spherule peak at 65-67.5 cmbs may be due to translocation of silt-sized spherules from above and accumulation at a lithologic discontinuity, such as the tops of fining or coarsening-upward sediment packages (Holliday et al. 2014). On the other hand, lithologic discontinuities often represent periods of landform stability. In that case, enhanced abundance of spherules may relate to longer exposure of that surface before subsequent burial and landform aggradation. Planned grain size analysis and luminescence dating of the site may help to address this possibility.

Another possible explanation for the presence of microspherules throughout the upper 80 cm of sand is reworking of source-sediments previously "seeded" with microspherules from an earlier event. It may be that microspherules were deposited over the entire landscape sometime prior to the Early Archaic (based on depth of spherules and Early Archaic artifacts) and then later reworked from source-sediments into the Holocene-age sediments that make up the archaeologically-stratified deposits at Squires Ridge. Although this may be possible, the anomalously high spherule peak at 65-67.5 cmbs is hard to explain as simply due to reworking of source-sediments which would be expected to produce a much more uniform and low-level distribution throughout the sediment column.

If all other possibilities are ruled-out, it may indicate a far greater role than has been previously recognized for impacts throughout the Holocene with spherule peaks corresponding to other, perhaps smaller impacts or comet dust loading of Earth's atmosphere. For example, several Earth/comet interactions or impacts may have been recorded by early Chinese and Roman astronomers in 530 A.D. who report periods of prolonged dimming of the sun and indicate that the atmosphere was filled with fine dust (e.g., Abbott et al. 2013; Napier 2014). The environmental effects of the vast majority of these impacts (if any) are likely to be minor rather than catastrophic, short-lived rather than long-lasting, regional rather than global, and otherwise largely invisible (or nearly so) in the archeological and geological record. Of course, the truth of the matter is that we simply don't know. If microspherules are ultimately shown to be from cosmic impacts,

we may have to rethink our understanding of the rate of impacts by Earth-crossing asteroids and comets and the likely influence these events may have had on climates and human cultures over many millennia (Napier 2014). The great difficulty in extracting and identifying microspherules testifies to the ephemeral nature of these markers (whatever their origin) and to the fact that they have been overlooked for so long.

Future work will include elemental chemistry of bulk sediments and magnetic grains to look for elevated levels of Platinum-group metals (PGEs) such as osmium, iridium, and platinum. Elevated concentrations of these elements (above background for terrestrial sediments) has been reported for other sites with abundant microspherules in YD-aged sediments (Firestone et al. 2007). Recently, a team of researchers from Harvard identified a large Platinum (Pt) anomaly from the Greenland Ice Sheet Project 2 (GISP2) ice core samples that date to the YDB (Petaev et al. 2013). Correlation between the observed microspherule peak or peaks and PGEs would provide evidence consistent with a cosmic impact. Other elements such as high levels of sodium and potassium may allow industrial spherules, produced from the burning of coal, to be differentiated from spherules produced by cosmic impact or meteoric ablation.

Additional sediment columns have been collected from other sites in the South Carolina with established or inferred sequences (based on archaeological evidence) that include the Younger Dryas chronozone. These include: the Kolb Site (38DA75) on the Pee Dee River in Darlington County, Flamingo Bay; 38AK469 (on the SRS), the Topper site (38AL23), in Allendale County, and other Carolina bay sand rims from Barnwell and Allendale Counties. Many other sites offer good potential for identifying microspherule peaks; however, the procedure for extracting and identifying candidate spherules is extremely labor extensive. Regardless of the outcome of the scientific debate over the origin of microspherules in sediments deposited during the Younger Dryas or any other time, identification of proxy temporal markers may eventually provide precise chronometric indicators of isochronous events in the sedimentological record. Such a temporal marker of a particular stratigraphic horizon would be incredibly useful in geoarchaeological research.

### **Public Archaeology at Langley Pond**

In May of FY14, the SRARP was invited by the Aiken County Parks and Recreation Department to conduct an archaeological survey and test excavations in a wooded track overlooking Langley Pond in advance of planned development of the property. The location of the aptly named, Big Pine Tree site (not to be confused with Big Pine Tree site, 38AL143, in Allendale County) has suffered extensive looting over many years, although it was clear that portions of the ridge-nose of the landform likely contained significant evidence of prehistoric occupation within Horse Creek Valley (Figure II-10).

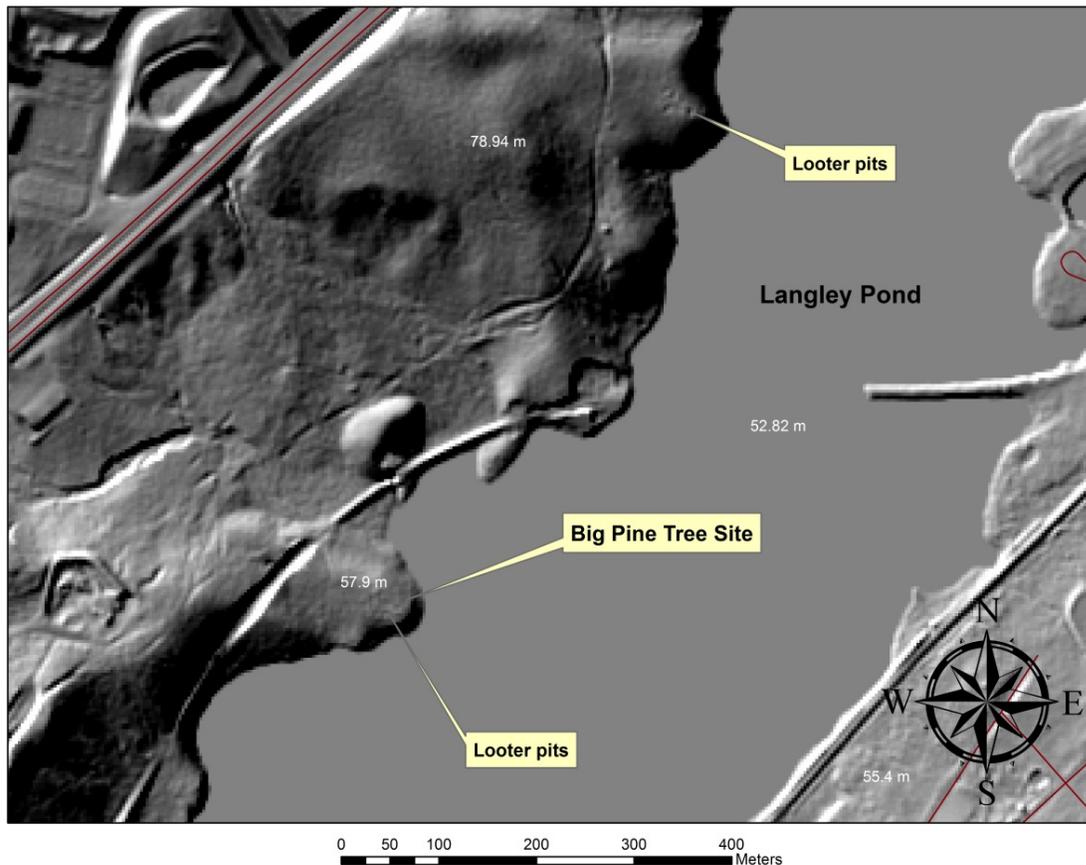


Figure II-10. LiDAR image of a portion of Langley Pond showing the Big Pine Tree site and areas of extensive looting visible as small depressions on several landforms.

Salvage work at “Big Pine Tree” consisted of arbitrarily placing two (2x2m) test units over undisturbed areas between large looter pits (Figure II-11 and Figure II-12). Excavations consisted of using 1/8 in. (3.175 mm) hardware mesh, quad sub-units, and 10 cm arbitrary levels. Any artifacts recovered in place during shovel schnitting were piece-plotted and drawn on the back of level forms. Below the A-horizon, everything recovered for each level was bagged for later processing and sorting in the lab. This was done in part because of the nature of salvage excavations and the desire to thoroughly sample the site for micro-artifacts, seeds, nuts, and faunal remains that may be present but only recovered through careful laboratory analysis using bulk recovery methods.

Limited shovel testing was also conducted across the landform in order to evaluate the thickness of the sand deposits, determine the depth and cultural affiliation of buried artifacts, and to provide a rough estimate of site boundaries. Seven shovel tests were excavated across the landform at 30 m intervals, including 4 in a transect from east to west and 3 running north to south. Shovel test data revealed a low-density distribution of cultural material across the entire landform with 11 flakes and 1 small Woodland Triangular biface recovered.



Figure II-11. Test Units (2x2m) placed in between looted areas of the sites.



Figure II-12. SRARP volunteers, George Heath (foreground), Bob Hiergersell, and Rooney Floyd (background), along with Mark Brooks assisting in salvage excavations at Langley Pond.

Analysis of site data is ongoing, however, field recovery of numerous artifacts including debitage, cobble fragments, hammerstones, triangular points, ceramics, a small Early Archaic point (ca. 11,450-8,900 cal BP) made of quartz, and a likely sandstone hearth suggest fairly intensive occupation of the landform throughout much of the prehistory of the region. Of particular note, the hearth feature consisted of what appeared to be a stacked or grouped cluster of very friable sandstone that were possibly formed as a result of the heat generated through its use as a fire pit or earth oven (i.e., low firing of coarse sand and clay matrix) (Figure II-13). Sediments in excavation units consisted of medium to coarse sands and small gravels about 60-70 cm thick unconformably overlying a culturally-sterile “hardpan” of coarse clayey sand with clearly scoured erosional features in its surface. The base of the hearth feature sits ~10 cm above the hardpan and given its depth of 47-54 centimeters below datum (cmbd) and association with a Palmer Corner-Notched point at 51 cmbd, may represent an Early Archaic occupation at the site (Figure II-14).

The thin sediments overlying the scoured clayey sand unit is consistent with a denuded and eroded landform sometime during the Late Pleistocene (possibly during the LGM) with Dalton occupations (ca. 12,000 cal BP) (reported by local avocational archaeologists) found immediately on top or even within scoured and runneled portions of the unconformity at ~70 centimeters below surface (cmbs) and Early Archaic side and corner-notched occupations found slightly higher within the coarse sandy matrix. The coarse sandy matrix is consistent with colluviation or slope-wash of sediments from immediately upslope on the landform. Based on shovel test data, these sediments form a wedge of sand that have buried archaeological deposits with thicker packages of sand along the toe-slope of the ridge where our excavation units were located.

Work will continue at the SRARP to process a large amount of bulk material collected from the excavation. Attempts are underway to identify charred wood or nutshell from the possible hearth feature in order to attempt radiocarbon dating. Several of the weakly cemented “sandstone” fragments recovered from the hearth feature have what appear to be carbonized material adhering to the surface. This material will be examined for its potential for radiocarbon dating and may provide a very precise chronology for the use of the hearth and the cultural affiliation of the early hunter-gatherers that constructed it.

The thicker portions along the toe-slope of the landform have suffered greatly from years of looting but, based on very limited testing, still contain areas of undisturbed sediment with intact prehistoric features. While the Big Pine site will be developed, several other areas along the former terraces of Horse Creek drainage overlooking Langely Pond appear to have thick sands with equal potential for preserved and buried cultural deposits. Many of these sites have also experienced varying degrees of looting over the years. A planned walking trail goes through several elevated landforms with significant potential for intact archaeological deposits; however, the thickness of the sands and limited impact of the walking trail should protect the more deeply buried cultural material. Hopefully, the trail will also discourage additional looting at the site.



Figure II-13. Profile shot of *in-situ* rock cluster feature from Test Unit 1 that likely represent the remnants of a hearth. The rock cluster sits ~10 cm above the clayey sand hardpan.



Figure II-14. Early Archaic Palmer Corner-Notched point found in Test Unit 1 at 51 cmbd.

Future research excavations by the SRARP at Langley Pond may reveal even more about the early prehistory of Horse Creek Valley and provide data useful for interpreting and protecting cultural resources on the Savannah River Site (SRS). In fact, it is only by going off-site that we are able to contextualize the important archaeological resources on the SRS—particularly for the early prehistory of the region. The Langley Pond sites appear to have significant research potential not only for the cultural history of the region but also for documenting ecological and landscape changes that have occurred in the CSRA over the last 12,000 years.

*Deciphering Boundaries of World War II Warehouses at the Augusta Arsenal, 9R11045*

Maggie M. Needham, Jennifer Trunzo, George L. Wingard

During the summer of 2014 a crew of Georgia Regents University (GRU) archaeologists, with the aid of colleagues and equipment from the Savannah River Archaeological Research Program, conducted a Ground Penetrating Radar (GPR) investigation on an area located on the Summerville Campus at GRU. The purpose of the GPR investigation was intended to determine its viability for archaeological explorations on the GRU Summerville campus, and test its capabilities in a highly disturbed environment. The area of investigation is currently used as green space but was once the location of Hardy Hall, a building utilized as a lecture hall until it was tore down in 2004. Hardy Hall, along with five other buildings, was constructed by the federal government during World War II for use as warehouses to support war operations at the Augusta Arsenal. At the end of the war the federal government moved its personnel and operations to Fort Gordon and relinquished control of the area to the city of Augusta. The city ultimately decided to use the land and buildings as an institution of higher learning. Due to the historic nature of the campus many archaeological investigations have been conducted on the campus. It is the hope of the GRU archaeologists that conducting GPR investigations will clarify and define transformations in the landscape during the last one-hundred and fifty years. These discoveries will aid in defining the relationships between material culture recovered during the last three decades.

*A Comparison of Basal Widths of Triangular Bifaces*

Jessica M. Cooper

Triangular points appear in the archaeological record in the Southeast between 700 and 800 A.D., and are often considered to signify the introduction of the bow and arrow. Because most of these triangular bifaces appear similar in form, accurate dating of sites with a lack of other diagnostics or contextually questionable artifacts is important. Basal width was chosen for two reasons: it is less likely to be subject to either use wear or resharpening and precedence. The hypothesis that basal width is a good indicator of temporal association has been previously put forth (Sassaman, et al. 1990; Rudolph and Hally 1985, Anderson 1989; Blanton et al. 1986).

In their previous study of Mississippian triangular points, Rudolph and Hally (1985) were able to identify several distinct groups of triangular forms in a sample of points from the Beaverdam Creek Mound site (9EB85). While base shape (incurvate, excurvate and straight categories) appeared to be the most significant (Anderson 1989), none of the observed characteristics appeared to be temporally sensitive. Anderson (1989:9-10), using a comparative approach between Rucker's Bottom and Beaverdam Creek—two Mississippian period sites in the same vicinity as 9EB85, found that the data "...yielded little evidence for intra- or inter-site size and/or shape variability." He also found that when controlling for basal shape "...there is no evidence in the projectile point assemblage recovered at Rucker's Bottom to suggest significant size differences exist." These two studies, however, represent attempts to detect significant morphological differences among contemporaneous Mississippian triangular assemblages.

In another study, Blanton and colleagues (1986) were able to separate triangular bifaces recovered at 38SU83 into three distinct groups on the basis of morphological characteristics: Group 1 consisted of small triangulars with basal widths averaging 12 mm; Groups 2 and 3 had basal widths greater than 17 mm. The Group 1 assemblage correlates with the Mississippian component, whereas Groups 2 and 3 are associated with the Woodland period occupation. Similarly, Sassaman and colleagues (1990:168) found that a collection of 91 triangular bifaces from 40 sites on the Savannah River Site "...exhibits a slight bimodality in basal width. One mode consists of specimens wider than 18 mm at the base, the other of specimens 18 mm or less at the base." To more fully evaluate the hypothesis that a threshold value for basal width exists between Woodland and Mississippian triangular assemblages, a total of 369 triangular bifaces from 24 sites across Georgia and South Carolina were analyzed. The data was obtained from published reports and the site files at Savannah River Archaeological Research Program.

The definition of triangular used to identify points eligible for this study is given by Peacock (1986:28): "A small to medium bifacially flaked pointed artifact with two blade edges and wider at every point than it is thick, which lacks basal modification in the form of notching or a pronounced stem." Examples of small triangular points are shown in Figure II-15. Since carbon dates were not available for all sites, I decided to group the assemblages based on ceramic association and cross-referenced with <sup>14</sup>C dates where available. "Woodland" triangulars are those associated with cordmarked ceramics while "Mississippian" triangulars are those associated with complicated stamped pottery. The data were entered into a spreadsheet and analyzed using the R Project (2014) statistical computing.

The threshold value used to designate Woodland from Mississippian triangular assemblages was assigned based on the bimodal distribution noted when the assemblages were plotted on the Kernel density plot. Figure II-16 shows that the bimodal distribution occurs between 16 and 17 mm basal widths. Due to the wide variation in basal widths for individual projectile points, I propose that the threshold value is 17 mm.



Figure II-15. An example of triangular bifaces from 38BR495.

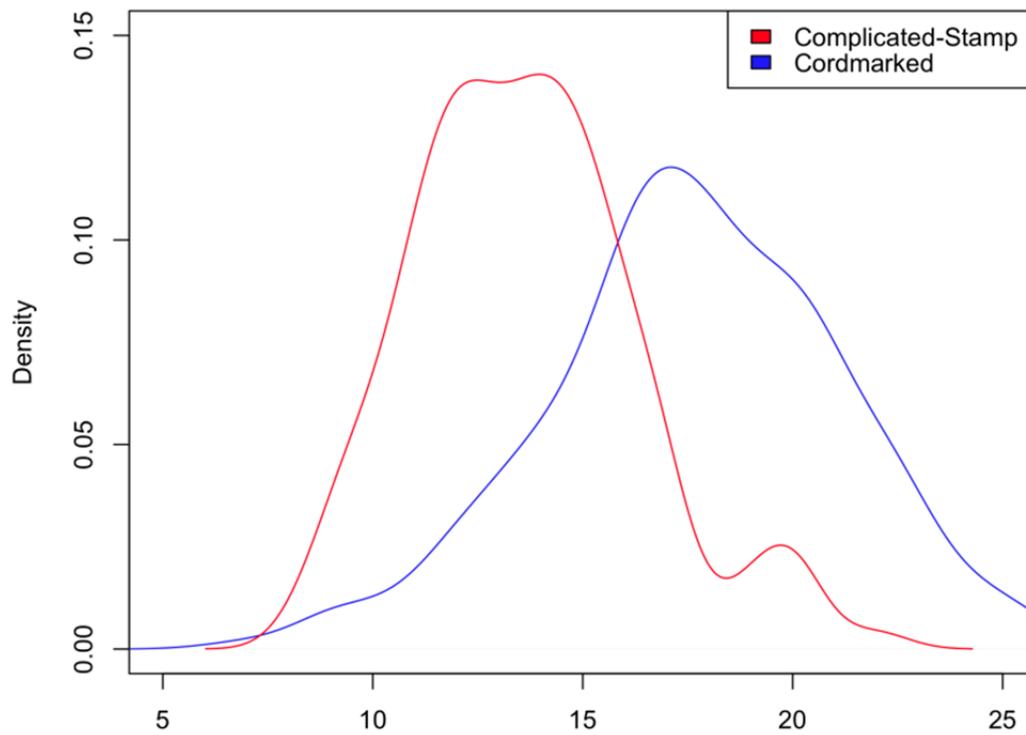


Figure II-16. A kernel density plot (using R-version 3.1.2) comparing basal widths of Woodland and Mississippian triangular bifaces.

*Preliminary Investigations at Pon Pon Chapel of Ease, Colleton County, South Carolina*

George L. Wingard, and Maggie Needham

Explorations at Pon Pon Chapel of Ease, Colleton County, South Carolina began in July of 2014 by George L. Wingard, and Maggie Needham of Georgia Regents University. Pop Pon Chapel of Ease was established in 1725 as a result of the Church Act of 1706 by the South Carolina General Assembly. Pon Pon has a rich history but its original wooden structure was damaged by a hurricane in 1745 and rebuilt in brick in 1753. Tragedy struck again in 1801 when Pon Pon nearly burned to the ground and remained as ruins until its rebuilding in 1822. Pon Pon was abandoned sometime after 1832 and faced damage by another hurricane in 1959. Pon Pon Chapel of Ease was added to the National Register in 1972 and since then efforts have been made to partially reconstruct and stabilize the existing structure. In the spring of 2014 a project conducted by graduate students of Clemson University and the College of Charleston, with assistance from the Colleton County Historical and Preservation Society, were aimed at documenting, expanding, and exploring upon the conservation and preservation efforts at Pon Pon. The archaeological explorations in July were aimed at building on this wealth of knowledge and ascertain the integrity of the archaeological remains. These explorations included preliminary mapping, excavation, and remote sensing in an effort to determine the location, depth, integrity, and material of the original floor. More investigations will follow to enhance the initial results and to determine the future trajectory of this ongoing preservation and archaeological project.

### **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 offers a variety of educational and outreach programs each year. Educational programs for schools include the very popular “You Be the Archaeologist” program conducted at the Silver Bluff Audubon Center & Sanctuary located near Jackson, South Carolina. Outreach activities include archaeological displays, lectures, tours, and special assistance for the public. Outreach activities in FY14 continued with an emphasis on local archaeological displays. In FY14, approximately 175 students participated in the program at Silver Bluff, while more than 4,350 people attended public outreach displays at Kids Earth Day in North Augusta, USC Aiken’s Science Education and Enrichment Day (SEED), and the Archaeological Society of South Carolina’s (ASSC) Fall Field Day event at Santee State Park on Lake Marion. SRARP staff also participated in outreach events during Georgia on My Mind Day, the SRS Take Our Children to Work Day, and CoastFest—an annual event in Brunswick, Georgia with over 9,000 visitors (also see PUBLIC SERVICE ACTIVITIES section below).

#### **SRARP VOLUNTEER PROGRAM**

Christopher R. Moore and Tammy F. Herron

As part of the SRARP’s three-fold mission of compliance, research, and public outreach, we rely on dedicated volunteers to assist with archaeological research. Volunteers aid in a variety of tasks and have been an integral part of the SRARP since the program’s inception in 1973. Staff members of the SRARP are sincerely grateful for the contributions of our volunteers. Indeed, much of the research that we carry out would not be possible without the assistance and support of the volunteers.

George Heath, a former resident of the area that would become the Savannah River Plant (known today as the SRS), has been assisting with archaeological site survey on the SRS and processing artifacts, including water-screening, sorting artifacts, and weighing brick fragments. He constructed the framework to house screens in the new Research Wetlab, as well as replaced a missing piece of platform in the 760-11G Central Curation Facility. Mr. Heath has also been very helpful in providing information about Sleepy Hollow Township and the community of Hawthorne and continues to identify agricultural-related artifacts that mystify the archaeologists. As a result of his volunteer work with the program, Mr. Heath logged in 315 hours this fiscal year.

Mr. Heath has shared a wealth of information from his personal collection with the SRARP this year, including his grandfather’s postal route address book and his cousin’s memoirs on Hawthorne. Some of these documents are being used to reconstruct

the rural mail route that wound its way through Hawthorne community. By reconstructing this route, we hope to locate a number of home-places that have been previously unrecorded as sites of the former inhabitants of the township.

Long-time volunteer Jill Trefz assisted with a variety of tasks in the lab this year, including data entry for the radiocarbon dating database, washing artifacts, and Xeroxing. Ms. Trefz also spent a considerable amount of time analyzing and cataloguing the complicated stamped pottery in the SRARP collection. She is entering the data generated from this project into an access-based computer program designed for the project. Throughout the course of the fiscal year, Ms. Trefz donated a total of 192 hours of volunteer time to the program.

The Carolina Bay Volunteer Research Program (CBVRP) involves the interested public in geoarchaeological and paleoenvironmental research of Carolina bays located throughout the CSRA. Now in its sixth year, the CBVRP logged approximately 760 volunteer hours in FY14. Total hours increased significantly over FY13 due to the return of volunteer John Whatley after a one-year absence due to health issues. Each year, volunteers undertake a variety of tasks including washing and sorting artifacts, lithic analysis, analysis of archaeological sediments (i.e., sieving), flotation, and data entry. Volunteer fieldwork this year consisted of a short winter field season at Flamingo Bay in order to complete excavation Block A. Volunteers included Rooney Floyd, John Kolmar, Bob Hiergersell, and several other SRS employees that stopped by to help out for a few hours. Bob Van Buren continued to work in our wet-lab to process sediment samples from several archaeological sites, including the Topper Site in Allendale County, South Carolina, while John Whatley continued the lithic analysis of artifacts recovered from Flamingo Bay.

In addition to Carolina bay research, SRARP volunteers assisted in a salvage excavation at Langley Pond. This work was conducted prior to the development of a landform by Aiken County and in coordination with the Aiken County Parks and Recreation Department and local avocational archaeologists (see section in Research Notes on Langley Pond). John Kolmar is currently working on sorting large amounts of pebbles, charcoal, carbonized nutshell, lithics, ceramics, and daub from the Big Pine Tree site at Langley Pond. Over the course of the fiscal year, program volunteers have logged in approximately 1,267 hours of work. The staff of the SRARP appreciates the work of our volunteers in helping further the program's three-fold mission.

### **Augusta-Richmond County Library SRARP Display**

George L. Wingard

During the month of August the SRARP and the Augusta-Richmond County Public Library's Georgia History Room presented a month long display on the enslaved potter Dave (Figure III-1). The display focused on the discovery and excavation of the signed "Dave" alkaline-glazed storage vessel, its use as an outreach tool, and on the documentary "Discovering Dave: Spirit Captured in Clay" produced by the SRARP.

The Georgia History Room focuses on the history of the local Central Savannah River Area and the library requested that the SRARP present on the research surrounding the vessel's discovery. The display consisted of four cases and featured the actual "Dave" vessel, the jar created for us in the documentary, photos taken during outreach venues, and awards presented to the documentary. Georgia History Room lead historian Tina Monaco stated that there was an increase in non-research oriented visitors to the room during the month of August and was one of the more popular displays ever presented.

The Augusta-Richmond County Public Library and the SRARP are planning to work together on future local history displays and to make presentations during upcoming monthly library speaker sessions.



Figure III-1. Dave vessel on display in the Georgia History Room at the Augusta-Richmond County Public Library.

### CINEMATIC OUTREACH

George L. Wingard

George L. Wingard continued his association with filmmaker Mark Albertin of Scrapbook Video Productions this year and completed the documentary *Discovering Dave: Spirit Captured in Clay*. It premiered on September 7th, 2013 in Edgefield, South Carolina. Nearly one-hundred invited guests filled the auditorium and afterwards the Edgefield Historical Society sponsored a wine reception honoring the film. On September 17th, the film was screened at the Etheredge Center on the University of South Carolina–Aiken campus for nearly five-hundred members of the public.

One of the film's goals was to expose the public to Dave's incredible biography with the hope that more tangible evidence of his 64 years of enslavement and the years afterward as a freedman may come to light. For example, it was theorized that Dave had a

“silent period,” the years between 1843 and 1849, where he did not inscribe any of his wares. In February of 2014, during a presentation by the SRARP on Dave and the documentary, a family brought in a signed “Dave” vessel dated 1845. With the surfacing of this vessel, the “silent period” is now not as silent as was once believed, and the film’s goal of helping to depict more of Dave’s life has been fulfilled.

During FY14, the film was entered in several film festivals around the country. At this point, the film has been a finalist in the *Best Documentary* category at the Dixie Film Festival in Athens, GA; *Audience Favorite* at the Arkhais Film Festival on Hilton Head Island, SC; was a finalist in the *Best Documentary* at the Beaufort International Film Festival in Beaufort, SC; Was *First-Runner Up Best Documentary* at the Myrtle Beach International Film Festival, Myrtle Beach, SC; and won *First-Runner Up Best Film* and *Most Inspirational Film* at the Archaeology Channel International Film Festival in Eugene, Oregon. The film was also given an “Award of Merit” by the Confederation of South Carolina Local Historical Societies. Recently the University of Delaware and Boston University both have asked for copies of the film with the plan to include it in their curriculum on African-American history.

As a non-profit project, the film cannot be sold, but is currently being placed in local schools, museums, and libraries. For additional information about the film, please visit the facebook page “Discovering Dave: Spirit Captured in Clay Documentary” at, <https://www.facebook.com/groups/228960090560683/>.



Figure III-2. George Wingard (left) and Mark Albertin with the First Runner-Up Best Documentary Award presented at the Myrtle Beach International Film Festival.

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**APPENDIX. PUBLICATIONS AND PROFESSIONAL ACTIVITIES**

## PUBLISHED PAPERS

Moore, Christopher R., and Jeffrey D. Irwin

2013 Pine Barrens and Possum's Rations: Early Archaic Settlement in the North Carolina Sandhills. *Southeastern Archaeology* 32:169-192.

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

2013 Sifting the Sands of Time: Geoarchaeology, Culture Chronology, and Climate Change at Squires Ridge, Northeastern North Carolina. *Southeastern Archaeology* 32:253-270.

Tabarev, Andrei, J. Christopher Gillam, Y. Kanomata, and B. Gunchinsuren

2013 A Paleolithic Cache at Tolbor (Northern Mongolia). *Archaeology, Ethnology and Anthropology of Eurasia* 41(3):14-21.

## PROFESSIONAL PAPERS AND POSTERS

Cooper, Jessica M.

2014 A Comparison of Triangular Basal Widths for Temporal Significance. Poster presented at the 49th Annual Conference of the Archaeological Society of South Carolina, Columbia.

Gillam, J. Christopher

2013 *Paleoamerican Origins and Migration: A Cultural and Bio-Physical Geographic Perspective*. Poster presented at the 2013 Paleoamerican Odyssey Conference, Santa Fe, NM.

2014 *Advances in Archaeological Geographic Information Science: A Perspective from South Carolina and Beyond*. Paper presented at the 79th Annual Meeting of the Society for American Archaeology, Austin, TX.

2014 *Thinking Outside of the Rocks: A Holistic View of the Peopling of the Americas*. Paper presented at the 40th Annual Conference of the Archaeological Society of South Carolina. Columbia, SC.

Gillam, J. Christopher, Sergei A. Gladyshev, Andrei V. Tabarev, Biambaa Gunchinsuren, and John W. Olsen

2014 *Exploring Time and Space in Paleolithic Landscapes of Northern Mongolia*. Paper presented for the panel, "Visualizing the Past: Field Methods and Techniques of Archaeological Investigations in East and Central Asia," 6th Worldwide Conference of the Society for East Asian Archaeology, Ulaanbaatar, Mongolia.

## King, Adam

2013 James B. Griffin, Mississippian Archaeology and the Etowah Archaeo-Geophysical Survey. Paper presented at the 70th Annual Meeting of the Southeastern Archaeological Conference. Tampa, FL.

2013 Summer Testing at the Etowah Site. Paper presented at the 2013 Fall Meeting of the Society for Georgia Archaeology, Red Top Mountain, GA.

2013 Mississippian. Presentation delivered to the First Annual Muscogee (Creek) Nation Archaeology Symposium, Okmulgee, OK.

2013 Testing the Etowah Archaeo-Geophysical Survey. Paper delivered at the annual Cherokee Archaeological Symposium, Cherokee, NC.

2014 Mississippian Archaeology and the Etowah Archaeo-Geophysical Survey. Paper delivered at the Second Annual Muscogee (Creek) Nation Archaeology Symposium, Okmulgee, OK.

## Moore, Christopher R., Mark J. Brooks, Larry R. Kimball, Margaret E. Newman, and Brian P. Kooyman

2013 Use-Wear and Protein Residue Analysis of an *In-Situ* Clovis Assemblage from a Carolina bay in the Coastal Plain of South Carolina. Poster presented at the 70th Annual Southeastern Archaeological Conference, Tampa Bay, FL.

## Moore, Christopher R., Mark J. Brooks, Larry R. Kimball, Margaret E. Newman, and Brian P. Kooyman

2013 Use-wear and Immunological Analyses of *In-Situ* Clovis and Early Archaic Tools from a Carolina bay in South Carolina. Poster presented at the Paleoamerican Odyssey Conference, Santa Fe, NM.

## Moore, Christopher R., Mark J. Brooks, David J. Mallinson, Peter R. Parham, Andrew H. Ivester, and James K. Feathers

2014 Rapid Scour, Sand Rim Construction, and Basin Migration of a Carolina Bay in Southeastern North Carolina. Poster presented at the 63rd Annual Meeting of the Southeastern Section, Geological Society of America, Blacksburg, VA.

## Sawyer, Johann A., and Adam King

2013 First Man and the Power of the Pipe. Paper presented at the 70th Annual Meeting of the Southeastern Archaeological Conference. Tampa, FL.

## Stephenson, Keith, and Karen Y. Smith

2013 The G. S. Lewis-West Site in Regional Context. Paper presented at the 70th Annual Southeastern Archaeological Conference, Tampa, FL.

Stephenson, Keith, and Karen Y. Smith

2014 G. S. Lewis-West, South Carolina: A Deptford Period Site in Regional Context. Poster presented at the 79th Annual Meeting of the Society for American Archeology, Austin, TX.

Thornock, Christopher

2013 Identifying and Correcting Misunderstandings of the Archaeological Record of the Hollywood Site. Paper presented at the 70th Annual Meeting of the Southeastern Archaeological Conference, Tampa, FL.

Wingard, George L., and Keith Stephenson

2014 The Stoneware of Enslaved African American Potter–Poet Dave. Poster presented at the 4th Annual South Carolina State Parks Archaeology Conference, Charleston, SC.

#### POPULAR LITERATURE

Gillam, J. Christopher, Charles Cobb, Chester DePratter, and Tammy Herron

2013 Exploring the Native American Colonial Landscape of the Central Savannah River Area, Late 17th - Early 18th Centuries. *Legacy* 17(2):24-27.

King, Adam

2013 Recent Investigations at Etowah Field School 2013. *Legacy* 17(2):20-23.

King, Adam, Christopher L. Thornock, and Keith Stephenson

2014 Dating Mound B at the Hollywood Site (9BR1). *Legacy* 18(1):16-18

#### PEER REVIEWS OF ARTICLES, MANUSCRIPTS, AND PROPOSALS

Gillam, J. Christopher

Article review for the *Journal of World Prehistory*. Timothy Taylor, editor

Moore, Christopher R.

Article review for *North American Archaeology*. Anthony Boldurian, editor.

Article review for *North American Archaeology*. Anthony Boldurian, editor.

Article review for *American Antiquity*. Kenneth E. Sassaman, editor.

Article review for *Quaternary Research Reviews*. Derek B. Booth and Alan R. Gillespie, editors.

Proposal review for SCIAA/BOEM Continental Shelf Project, James D. Spirek, State Underwater Archaeologist.

Stephenson, Keith

Article review for *American Antiquity*. Kenneth E. Sassaman, editor.

## BOOK REVIEWS

Cooper, Jessica M.

2014 Review of *Contemporary Lithic Analysis in the Southeast: Problems, Solutions, and Interpretations*, edited by P. J. Carr, A. P. Bradbury, and S E. Price. *South Carolina Antiquities* 46:97-98.

Pittman, Lisa A.

2014 Review of *Mission Cemeteries, Mission Peoples: Historical and Evolutionary Dimensions of Intracemetery Bioarchaeology in Spanish Florida*, by C. M. Stojanowski. *South Carolina Antiquities* 46:98-99.

## OFFICES AND APPOINTMENTS HELD

Gillam, J. Christopher

Research Member of the joint-international Mongolia Archaeological Project (MAP) on Paleolithic archaeology along the Tolbor River of northern Mongolia, with Biambaa Gunchinsuren, Mongolia Academy of Sciences/Institute of Archaeology, Ulaanbaatar; Sergei Gladyshev and Andrei Tabarev, Russian Academy of Sciences/Institute of Archaeology and Ethnography, Novosibirsk; and Nicolas Zwyns and Tamara Dogandzic, Max Planck Institute for Evolutionary Anthropology, Leipzig, Germany.

Research Member of the 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, Kyoto, Japan.

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

GIS and SC Paleo-Point Database Manager for the Southeastern Paleoamerican Survey, with Albert C. Goodyear, Director, and others at SCIAA, USC.

Archivist, Council of South Carolina Professional Archaeologists.

Research Affiliate of the Walker Institute of International and Area Studies, Latin American Studies Program, USC.

Herron, Tammy F.

President, Society for Georgia Archaeology.

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

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

Board Member and Secretary, Beech Island Historical Society.

Member, Beech Island Heritage Corridor Committee.

Moore, Christopher R.

Journal Editor, *South Carolina Antiquities*.

Co-Principle Investigator for the Tar River Geoarchaeological Survey, Coastal Plain portion of the Tar River in eastern North Carolina, with I. Randolph Daniel, Jr., Principle Investigator, East Carolina University, Department of Anthropology, East Carolina University, Greenville, NC.

Stephenson, Keith

Treasurer, Council of South Carolina Professional Archaeologists.

#### PROFESSIONAL ORGANIZATION SERVICE

Herron, Tammy F.

Assisted with organizing the Society for Georgia Archaeology's twenty-first annual Georgia Archaeology Awareness promotion for Archaeology Month 2014 themed "Site Destruction: Pieces of Our Past Lost Forever."

Assisted with organizing and presided over the Society for Georgia Archaeology's Annual Spring Meeting at Red Top Mountain State Park, in Cartersville, Georgia.

King, Adam

Advisory Committee for 2017 Spiro site exhibition. Thomas Gilcrease Museum, Tulsa, OK.

#### CONSULTING

Herron, Tammy F.

Archaeological Consultant, Aiken County Historical Museum, Aiken, SC.

Archaeological Consultant, Beech Island Historical Society, Beech Island, SC. Compiling text and photographs for exhibits in the Beech Island Agricultural Museum that will be operated by the Beech Island Historical Society.

Archaeological Consultant, Oakley Park Museum, Edgefield, SC.

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

Moore, Christopher R.

Consultant to Jim Spirek on SCIAA/BOEM Continental Shelf Project.

Moore, Christopher R., and Mark J. Brooks

Geoarchaeological consultants to Carl Steen (Diachronic Research Foundation), Christopher Judge (USC-Lancaster), and Sean Taylor (DNR-Heritage Trust) for

ongoing work at the Kolb site (38DA75) on the SC DNR's Great PeeDee Heritage Preserve near Mechanicsville, SC.

Wingard, George L.

Consulted with Aiken County Parks, Recreation and Tourism on the proposed Langley Pond Walking Trail.

Consulted with Savannah River Heritage Foundation on the proposed Ellenton Walking Trail.

## CONTRACTS AND GRANTS

Gillam, J. Christopher

(Co-PI) Joint Mongolian-Russian-American Archaeological Expedition grant for 2014 fieldwork and Paleolithic research on the Kharganyn and Altatyn rivers, Mongolia, with John W. Olsen (PI), Department of Anthropology, University of Arizona, and others.

Moore, Christopher R.

Archaeological Research Trust grant for "Immunological Analysis of Stone Tools in the Central Savannah River Area: Evaluating Diachronic Trends in Animal Species Selection and Availability over the Last 13 ka." (\$3,750)

Smith, Karen, and Keith Stephenson

2014 Archaeological Research Trust grant for "Instrumental and Neutron Activation Analysis of Pre-Contact Ceramics from the G. S. Lewis Site." (\$2,400)

## ACADEMICS

King, Adam

Ph.D. dissertation committee co-chair: Christopher Thornock, Department of Anthropology, University of South Carolina, Columbia, SC.

Ph.D. dissertation committee co-chair: Johann Sawyer, Department of Anthropology, University of South Carolina, Columbia, SC.

Ph.D. dissertation committee member: Kimberly Wescott, Department of Anthropology, University of South Carolina, Columbia, SC.

Ph.D. dissertation committee co-chair: Jeremy Vanier, Department of Anthropology, University of South Carolina, Columbia, SC.

M.A. dissertation committee co-chair: Amy Goldstein, Department of Anthropology, University of South Carolina, Columbia, SC.

M.A. thesis committee member: Grant Stouffer, Department of Anthropology, Texas State University, San Marcos, TX.

M.A. thesis committee member: Jesse Nowack, Department of Anthropology, Texas State University, San Marcos, TX.

Senior honors thesis advisor: Tara Smith, Department of Anthropology, University of South Carolina, Columbia, SC.

Senior honors thesis advisor: Natalie Kendall, Department of Anthropology, University of South Carolina, Columbia, SC.

Fall Semester 2013 – Instructor, Department of Anthropology, University of South Carolina, ANTH 101 (Primates, People, and Prehistory) and ANTH 205 (Panorama of Prehistory).

Spring Semester 2014 – Instructor, Department of Anthropology, University of South Carolina, ANTH 101 (Primates, People, and Prehistory) and ANTH 101 evening course (Primates, People, and Prehistory).

Moore, Christopher R.

Ph.D. dissertation committee: Jacob Turner, Department of Geography, University of North Carolina, Greensboro, NC.

Thornock, Christopher L.

Fall Semester 2013 – Instructor, Department of Anthropology, University of South Carolina – Salkehatchie, ANTH 101 (Primates, People, and Prehistory).

Spring Semester 2014 – Instructor, Department of Anthropology, University of South Carolina – Salkehatchie, ANTH 101 (Primates, People, and Prehistory).

## PUBLIC SERVICE ACTIVITIES

*September 2013*

Moore, Christopher R.

SRARP representative at the Archaeological Society of South Carolina Fall Field Day, Santee State Park, SC.

Stephenson, Keith

Presentation titled “The WPA Archaeology of Preston Holder at the Evelyn Site, Darien, Georgia” delivered to the Golden Isles Archeology Society, St. Simons Island, GA.

Wingard, George L.

Premier of *Discovering Dave: Spirit Captured in Clay*, Edgefield, SC.

Screening of *Discovering Dave: Spirit Captured in Clay* for the public at the Etherredge Center, University of South Carolina - Aiken.

*October 2013*

Herron, Tammy F.

Lecture titled "Co. A, 13th Regiment, South Carolina Infantry (a.k.a. Martin Guards) and Efforts to Conserve the Flag of the Martin Guards," presented to the J. B. Kershaw Chapter, United Daughters of the Confederacy, Laurens, SC.

Staffed an archaeological exhibit displayed at CoastFest; an event sponsored by the Georgia Department of Natural Resources Coastal Resources Division, Brunswick, GA (9,463 attendees).

Staffed an archaeological exhibit displayed at the annual Conference of the Georgia Council for the Social Studies with Abby the ArchaeoBus, Athens, GA.

King, Adam

Presentation titled "Mississippian" delivered at the First Annual Muscogee (Creek) Nation Archaeology Symposium, Okmulgee, OK.

Presentation titled "Testing the Etowah Archaeo-Geophysical Survey" delivered at the annual Cherokee Archaeological Symposium, Cherokee, NC.

Moore, Christopher R.

USC Aiken Seed Day (4,100 people attended).

Stephenson, Keith

Presentation titled "Archaeology at the Historic Graniteville Mill Village" to the Aiken - Barnwell Genealogical Society, Aiken, SC.

Wingard, George L.

Presentation on the historic Graniteville mill village research to the Beech Island Historical Society, Beech Island, SC.

Screening of *Discovering Dave: Spirit Captured in Clay* for Dr. Angela Bratton's history/anthropology/art classes at Georgia Regents University, Augusta, GA.

Screening of *Discovering Dave: Spirit Captured in Clay* for Maggie Needham's Physical Anthropology class at Georgia Regents University, Augusta, GA.

Screening of *Discovering Dave: Spirit Captured in Clay* for the Arkhais Cultural Heritage Film Festival, Hilton Head, SC.

Stephenson, Keith

Assisted with the public excavation at Twin Lakes Park for Field Day at Fort Jackson, SC.

*November 2013*

Gillam, J. Christopher

Lecture titled "Shedding New Light on the Ice Age Peopling of the Americas" presented to the USFS-SR honoring National American Indian Heritage Month, SRS, Aiken, SC.

Moore, Christopher R.

SRARP display at the Congaree River Keepers event at High Creek Plantation, Calhoun County, SC.

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

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

Wingard, George L.

Tour of Ellenton and Dunbarton for Mrs. Jo Marie Schuh.

Tour of Graniteville, SC for University of South Carolina Architecture Students and Mrs. Jo Marie Shcuh.

Presentation titled "The Potter Dave" to the English Speaking Union group of Columbia, SC.

*December 2013*

Moore, Christopher R.

Volunteer excavations at Flamingo Bay (38AK469), SRS.

*January 2014*

Needham, Maggie M. and George L. Wingard

Presentation on GPR work in the Graniteville Cemetery to the Horse Creek Historical Society, Graniteville, SC.

Wingard, George L.

Tour of the Williams Cemetery for the Rosier Family of Aiken, SC.

Veterans Curation Program - Augusta Laboratory tour of the SRARP curation facility, SRARP office and laboratory, and the former town of Ellenton.

*February 2014*

Wingard, George and Stephenson, Keith

Poster titled "The Biography of an Artifact: From a Mid-Nineteenth Pottery Manufacturing Center to a Mid-Twentieth Century Trash Midden" presented at the South Carolina State Parks Archaeology Conference.

Wingard, George L.

Presentation titled "The Potter Dave" to the South Carolina State Museum, Columbia, SC.

Screening of *Discovering Dave: Spirit Captured in Clay* for Dr. Bobby Donaldson's African American History class at the University of South Carolina, Columbia.

Screening of *Discovering Dave: Spirit Captured in Clay* at the Beaufort International Film Festival, Beaufort, SC.

Screening of *Discovering Dave: Spirit Captured in Clay* for Brenda Barrato and the North Augusta History Society, SC.

Presentation titled "The Potter Dave" to the Lexington County Library, Lexington, SC.

Presentation titled "The Potter Dave" to the Chester DePratter's Camp Asylum archaeological crew.

Screening of *Discovering Dave: Spirit Captured in Clay* for Tina Monaco and the Augusta/Richmond County Public Library, Augusta, GA.

*March 2014*

Gillam, J. Christopher

Lecture titled “Exploring the Polar Vortex of the Distant Past: Shedding New Light on the Ice Age Peopling of the Americas” presented to the Orangeburg Chapter of Kiwanis International, Orangeburg, SC.

Herron, Tammy F.

Staffed an archaeological exhibit at Georgia On My Mind Day, an event sponsored by the Georgia Department of Transportation, Georgia Visitor Information Center, Sylvania, GA.

Moore, Christopher R.

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

Wingard, George L.

Screening of *Discovering Dave: Spirit Captured in Clay* for the Colleton County Historical and Preservation Society, Walterboro, SC.

Poster titled “The Biography of an Artifact: From a Mid-Nineteenth Pottery Manufacturing Center to a Mid-Twentieth Century Trash Midden” presented at the South Carolina African American Heritage Commission Conference, South Carolina Department of Archives and History, Columbia.

*April 2014*

Herron, Tammy F.

Display of prehistoric period artifacts for attendees of the 8th Annual Historic Beech Island Tour, Beech Island Historical Society.

Moore, Christopher R.

Lecture titled “Carolina Bay Archaeology” presented at the Shepherd’s Center of Columbia, SC.

Kids Earth Day, North Augusta (250 people attended).

Wingard, George L.

Presentation titled “The Potter Dave” for Dr. Sarah Miller, History Professor, University of South Carolina – Salkehatchie, Allendale, SC.

Presentation on the former towns of the Savannah River Site for Dr. Sarah Miller’s history class, University of South Carolina – Salkehatchie, Allendale, SC.

Screening of *Discovering Dave: Spirit Captured in Clay* for the South Carolina State Museum, Columbia, SC.

Presentation on historic architecture of the Graniteville mill town at the South Carolina Historic Preservation Conference, South Carolina Department of Archives and History, Columbia.

Presentation on the historic commercial buildings formerly located on SRS at the Historic Preservation Conference, South Carolina Department of Archives and History, Columbia.

Screening of *Discovering Dave: Spirit Captured in Clay* at the Myrtle Beach International Film Festival, Myrtle Beach, SC.

#### *May 2014*

Herron, Tammy F.

Organized and staffed an exhibit at Artifact Identification Day, an event co-sponsored by the Augusta Archaeological Society and the Augusta Museum of History, Ezekiel Harris House, Augusta, GA.

Lecture titled "Co. A, 13th Regiment, South Carolina Infantry (a.k.a. Martin Guards) and Efforts to Conserve the Flag of the Martin Guards," presented to the Henry Laurens Chapter, Daughters of the American Revolution, Clinton, SC.

Moore, Christopher R.

Lecture titled "A Summary of Recent Geologic and Paleoindian Research on Carolina Bays by the Savannah River Archaeological Research Program" presented to a joint meeting of the Aiken Gem, Mineral, and Fossil Society, and the CSRA Geological Society, University of South Carolina - Aiken.

Public archaeology at Langley Pond involving salvage excavations of the Big Pine Tree prehistoric site, Langley, SC.

Smith, Karen Y., and Keith Stephenson

Lecture titled "Woodland Period Prehistory in the Southeast" presented at the Shepherd's Center of Columbia, SC.

Conducted public excavations at the Belle W. Baruch Foundation's Hobcaw Barony for the USC Alumni and Friends Weekend at the Coast, Georgetown, SC.

Stephenson, Keith

Lecture titled "Excavation at the Lewis West Site, Aiken County, South Carolina" presented to the Hilton Head Island Chapter of the Archaeological Society of South Carolina, Coastal Discovery Museum, Hilton Head Island, SC.

Lecture titled "Mississippian Period Prehistory in the Southeast" presented at the Shepherd's Center of Columbia, SC.

Wingard, George L.

Tour of the former town of Dunbarton for members of the King family.

SRARP representative at the 61st Annual Dunbarton Reunion.

Screening of *Discovering Dave: Spirit Captured in Clay* at the Archaeology Channel International Film Festival, Eugene, Oregon.

Tour of Ellenton for the SR-SRFS and the DOE.

#### *June 2014*

Cooper, Jessica M., and Lisa A. Pitman

Display for *Take Your Kids to Work Day*, SRS.

Moore, Christopher R.

Documented an artifact collection for an upcoming display at the Marion County Museum, Marion, SC.

Wingard, George L.

SRARP representative at the 43rd Annual Ellenton Reunion.

Tour of the former SRS town of Hawthorne for Dr. Bobby Donaldson.

Tour of the Stalling Property located on the SRS for Sherrie Cork.

Tour of Williams Cemetery for members of the Corbin family.

Tour of Ellenton for members of the SR-USFS.

#### *July 2013*

Wingard, George L.

Veterans Curation Program - Augusta Laboratory tour of the SRARP curation facility, SRARP office and laboratory, and the former town of Ellenton.

Screening of *Discovering Dave: Spirit Captured in Clay* for the Cheraw County African American Museum, Cheraw, SC.

#### *August 2013*

Gillam, J. Christopher

Lecture titled "Shedding New Light on the Ice Age Peopling of the Americas" presented to the Hilton Head Island Chapter of the Archaeological Society of South Carolina, Coastal Discovery Museum, Hilton Head Island, SC.

Herron, Tammy F.

Lecture titled "Native Americans in South Carolina" presented to the South Carolina Society of the Continental Society Daughters of Indian Wars, Charleston, SC.

Wingard, George L.

One month display on the enslaved potter David Drake for the Augusta - Richmond County Public Library, GA.