

Cultural Resources Management Program

San Juan College

TOTAH ARCHAEOLOGICAL PROJECT RESEARCH DESIGN

Submitted by
San Juan College
Cultural Resources Management Program
Linda Wheelbarger and Meredith Matthews, Co-directors

Submitted to
New Mexico State
Cultural Properties Review Committee



Report 98-SJC-063
New Mexico Cultural Permit No. 99-015
New Mexico Burial Permit No. ABE-338

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Abstract

This document provides a research design for the joint-effort venture between San Juan College and B-Square Ranch to initiate an archaeological field school to be conducted and managed by the San Juan College Cultural Resources Management Program. The 1999 Totah Archaeological Project Field School is scheduled for a six week session from June 14 to July 23, 1999. If successful, summer field school sessions will be held on a yearly basis. This first year=s plan will focus on teaching archaeological excavation methods at the Tommy Site, LA 126581, an Anasazi Pueblo I to early Pueblo III habitation site located in a narrow area between the base of the Shannon Bluffs and the San Juan River. The site is located in the SW1/4 of the SE1/4 of Section 23, T29N, R13W, NMPM, San Juan County, New Mexico. Survey methods will be taught to the students through inspection of various areas of the B-Square Ranch which may include both those areas which have been previously surveyed and those which have not yet been systematically inspected. The primary management goal is to provide archaeological educational opportunities for San Juan College students, local community members, and visitors to the region, and to contribute to research on the Anasazi culture in the Totah area.

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INTRODUCTION

In an effort to utilize the 12,000 acre B-Square Ranch as an educational field laboratory, the San Juan College Foundation and the Bolack Foundation have agreed to provide financial and administrative support to the San Juan College Cultural Resources Management Program (SJC-CRMP), a New Mexico State permitted cultural resource contractor, for initiation of an archaeological field school course. Funding is being provided for the initial set-up, a six-week field school session, data analysis, and a report to be published by the end of 1999 (Appendix A). The hope is that this will be one of several steps toward development of a full-scale educational research laboratory providing opportunities for scientific research into both environmental and cultural research domains relative to the Totah area of the Four Corners.

Dr. James Henderson, President of San Juan College, is highly interested in expansion of educational opportunities for San Juan College students. Mr. Tommy Bolack, owner and manager of the B-Square Ranch, is highly interested in expansion of general knowledge about the Anasazi culture of the Totah area and in using the B-Square Ranch as a teaching outdoor laboratory.

Of the dozen or so known large Anasazi habitations located along the southern bank of the San Juan River on B-Square Ranch property, the Tommy Site provides the greatest wealth of previously collected archaeological data. The first year's plan will focus on teaching archaeological excavation methods at the Tommy Site, an Anasazi Pueblo I-III habitation site, and survey methods in various areas of the Ranch including those which have and have not yet been systematically inspected. Publication of summary information will be provided by the end of the year on the San Juan College web page and in attractive hard copy form for the general public.

All activity will be in compliance with the New Mexico state law, the Cultural Properties Act (CPA) (NMSA 1978) and the federal public law, the Native Americans Grave Protection and Repatriation Act (NAGPRA 1990). The CPA requires a state permit for archaeological excavation of unmarked burials on private land and SJC-CRMP maintains this permit on a yearly basis. Also, the CPA requires a permit to conduct excavation with mechanical equipment on private land. Mechanical equipment will be necessary and therefore SJC-CRMP must apply for this permit. Among the requirements for the permit are submission of a research design, data recovery plan, site form, burial disposition plan, agreement to publish the data, and written authorization from the landowner, all of which are provided herein. The result of complying with the CPA and NAGPRA is that any excavated human burials and their associated funerary objects must be inventoried and provided to probable claimants. Probable claimants include the Hopi, Zuni, Jemez, and Navajo tribes.

San Juan College

San Juan College was established in 1956 as a branch of New Mexico A&M, which changed its name to New Mexico State University in 1960. Dr. James Henderson was hired as the branch director in 1975 and led the institution to independence by 1982. Dr. Henderson, as President of San Juan College continues to lead campus expansion projects.

San Juan College is one of the fastest growing community colleges in New Mexico and serves the community through academic, occupational and community service programs. The College was founded with the commitment that anyone with a desire to succeed should have access to higher education. The College is located on a 600-acre site in Farmington, a thriving and dynamic community of 40,000 in the heart of the beautiful Four Corners area of the U.S. The College serves students in San Juan County as well as New Mexico, Colorado, Arizona and Utah. The College also has

campuses in Aztec (San Juan College East) and in Kirtland (San Juan College West).

The College is fully accredited by the North Central Association of Colleges and Secondary Schools as a degree-granting institution, offering 70+ degrees and certificates. Originally a branch of New Mexico State University for 25 years, San Juan College became an independent community college in 1982 following an overwhelming vote of support from the citizens. Today, the College is noted state-wide and regionally for its state-of-the-art teaching technology and its commitment to the success of all its students. San Juan College is governed by a seven-member board of trustees elected by the citizens of the district.

In addition to its award-winning academic and occupational programs, San Juan College has also become a leader in cultural programs and educational outreach in its community. The area offers boundless recreational opportunities and a diverse culture representing both Native American and Hispanic people.

San Juan College enrolled 11,700 students in 1997-98 for the summer, fall, and spring semesters, reflecting both credit and non-credit enrollment. Annual credit enrollment for 1997-98 was 8,912. San Juan College grants two-year degrees in Associate of Arts, Associate of Science, Associate of Applied Science, Associate of General Studies and Associate Degree in Nursing. In addition, one- and two-year certificates are awarded in a variety of vocational trades programs.

On the non-credit side, the College offers courses through the community Learning Center (including the summer Kids Kollege), Business and industry Training Center, Adult Basic Education, Project Read literacy program and the Child and Family Development Center. In addition, the College regularly hosts meetings and conferences, and the Henderson Fine Arts Center is a magnet for performing groups.

The College's mission to improve the quality of the life of the citizens it serves is manifested in the four goals of access, excellence, student success and building communities. San Juan College is positioning itself as a "Learning College" for the 21st century, with emphasis on the learner and meeting his or her educational goals.

B-Square Ranch

The B-Square Ranch was established in 1957 by Tom Bolack, Sr.. Today, the ranch is 12,000 acres consisting of a working farm and ranch, private wildlife refuge, and home of two museums. The operation maintains a 650 head cattle herd, supports about 400 head of deer, and provides winter refuge for 75,000 waterfowl. Raccoons, badgers, porcupines, jackrabbits, pheasant, quail, hawks, eagles, and owls reside on the ranch along with goats, sheep, llamas, chickens, peacocks, and turkey. Seven man-made lakes covering some 75 acres contain crappie, bass, and catfish. Turtles, muskrats, and beaver also make the riverine area their home. A 700 acre experimental farm produces over 100 varieties of drought and disease resistant non-surplus crops yearly. The B-Square Ranch uses a highly diversified crop program, land reclamation, reforestation, game management, and conservation practices. The plan is to reach complete multiple use of the land and water with lasting benefits to recreational needs and the beauty of the great southwest.

The Bolack Museum of Fish and Wildlife is one of the largest private collections of its type in the world today with over 2,500 specimens. The collection contains animals from five continents and is attractively displayed to allow visitors a chance to view animals in their natural setting. The Bolack Electromechanical Museum displays antique electrical, radio, communication, industrial, and agricultural artifacts.

San Juan College Cultural Resources Management Program

The CRMP office was established at San Juan College in 1975 as a result of finalization of the implementing regulations for the National Historic Preservation Act of 1969. Under the direction of R.B. Grove, the CRMP office was granted the first Bureau of Land Management permit and has been conducting contract archaeology since that time. The SJC-CRMP office is currently under the direction of Meredith Matthews and Linda Wheelbarger, co-directors since 1991.

SJC-CRMP is a contract-based archaeological organization qualified to conduct archaeological inventories, testing programs, excavation projects, monitoring, traditional cultural properties inventories, and ethnohistoric documentation. San Juan College has a wide range of academic and technical facilities available to SJC-CRMP. Such facilities include an accredited library, graphics and production department, herbarium, and the Computer Science Center which has a state-of-the-art geographic information system.

SJC-CRMP maintains a fully equipped office with four complete word and data processing work stations, a library containing pertinent archaeological and anthropological literature, graphic and reproduction facilities, and various technical and analytical capabilities. The office also includes a laboratory with artifact processing areas and storage space. Three of the work stations are networked to a Digital Equipment Corporation PDP 11-44 VAX mainframe computer which supports the SPSS and SAS Statistical Packages, the Poise Data Base Management System, and a variety of programming languages and text processing software. Data generated by archaeological projects is entered into the data base management software Paradox for Windows 5.0. SJC-CRMP is currently using WordPerfect for Windows 6.1 for word processing.

In addition to office and computer facilities, SJC-CRMP also maintains a complete array of field equipment for archaeological surveys, testing programs, mitigation, and monitoring projects. In addition to the co-directors, Edward Kotyk is a supervisory agency-permitted archaeologist. Vitae for supervisory personnel are on file with the State Historic Preservation Office. The office also maintains a number of on-call crew-level staff archaeologists. SJC-CRMP personnel are also qualified to conduct ceramic, lithic, archaeobotanical analyses, and ethnohistorical investigations.

SJC-CRMP is permitted to conduct archaeological projects within several states and on properties under the jurisdiction of various federal and state agencies, as well as properties under the jurisdiction of the Navajo Nation and Southern Ute tribes.

HISTORY OF TOTAH ARCHAEOLOGICAL PROJECT

by Tommy Bolack

Tommy Bolack has been interested in archaeology since he found his first Anasazi Black-on-white bowl in an irrigation furrow of an onion field in 1959. This interest intensified and was like his father's. In 1962, his excavation of a round chamber yielded a couple of beautiful Mesa Verde Black-on-white bowls and sparked a life-long interest in the Anasazi culture.

The first attempt to begin research and field school possibilities on the B-Square Ranch was in 1972 when the San Juan Valley Archaeological Project, associated with the excavations at Salmon Ruins, helped the Archaeological Society of New Mexico sponsor a field school at the Sterling Site. Field school sessions were held from 1972-1974. Eastern New Mexico University granted credit for the latter two sessions. The field school ended because of shortages in funding. In the dozen years that followed, attempts were made to again establish a field school with Eastern

New Mexico University and the local Archaeological Society. Tommy Bolack named the project the Totah Field School, but the attempt failed. A final attempt in the early 1990s with Salmon Ruins/Division of Conservation Archaeology also failed due to lack of interest and funding. At that point in time, Tommy Bolack identified the field school project as the Total Archaeological Project.

Frustrated but not giving up, Tommy Bolack contacted San Juan College in 1998 to revive his long-lived hope of better understanding the Anasazi culture living in the Totah area of northwestern New Mexico. His hopes are to research the substantial artifact assemblage which has been collected from the B-Square Ranch through the years. In addition, he hopes to possibly change some long held ideas of the center of the Anasazi culture and to educate by providing field schools, research, and publications on this most interesting culture. This endeavor will be different in that funding will come from both the San Juan College and Bolack Foundations.

ENVIRONMENTAL SETTING

Totah is a Navajo word referring to Aland among waters or more specifically Aland where three rivers junction, the Animas, La Plata, and San Juan Rivers (Figure 1). These three permanent rivers provided a relatively bountiful supply of water for prehistoric inhabitants of this semi-arid area. The B-Square Ranch (Figure 2) is located in a more or less triangular shaped area with the base of the triangle establishing a northern boundary which encompasses about 5 miles along the San Juan River.

The western boundary is just east of where the Animas River drains into the San Juan River and the eastern boundary is about a mile west of Gallegos Wash. The tip of the triangle is at the southern end of the Ranch and lies near the head of Stewart Canyon on the northern edge of Gallegos Mesa. The fertile San Juan River Valley bottomland on the B-Square Ranch presently supports large agricultural fields. The majority of the project area is on the south side of the San Juan River with the major drainages identified as Head Canyon, Mine Canyon, and Stewart Canyon.

The climate of the area is semi-arid and falls into the upper Sonoran life zone as defined by Bailey (1913:31). A semi-arid climate is characterized by widespread daily and annual temperature fluctuations, infrequent seasonal precipitation, and relatively low humidity. The city of Farmington receives an average of 8.4 inches of rainfall per year. The Farmington area has a rainy season that extends from July to October. Unlike most of New Mexico, less than 50 percent of the annual rainfall occurs during these four months (Tuan 1969:18-26).

The region is characterized geologically by sedimentary sandstone of the Ojo Alamo Formation and clays and shales of the Kirtland and Fruitland Formations (Dane and Bachman 1965), cut by numerous dendritic drainages creating knife-backed shale erosional remnants and shallow dissected colluvial mesa tops which drop off into narrow steep-walled canyons. The Ranch area is bordered to the southwest by the dune-covered rim of the rolling Bisti plain which is the highest elevation within the B-Square Ranch at 6,100 ft. The Ranch is bordered to the southeast and east by contact with the shallow colluvial slopes to the Gallegos Wash. On the south side of the San Juan River, adjacent to the flood plain are sheer sandstone cliffs popularly known as the Bluffs, the Shannon Bluffs, or the Farmington Bluffs.

Acklen and Greiser (1977:4-5) divided the B-Square Ranch into four micro-environments to help understand the area's potential for human exploitation. The micro-environments include dune areas, badlands, valley bottoms and shallow colluvial mesa tops.

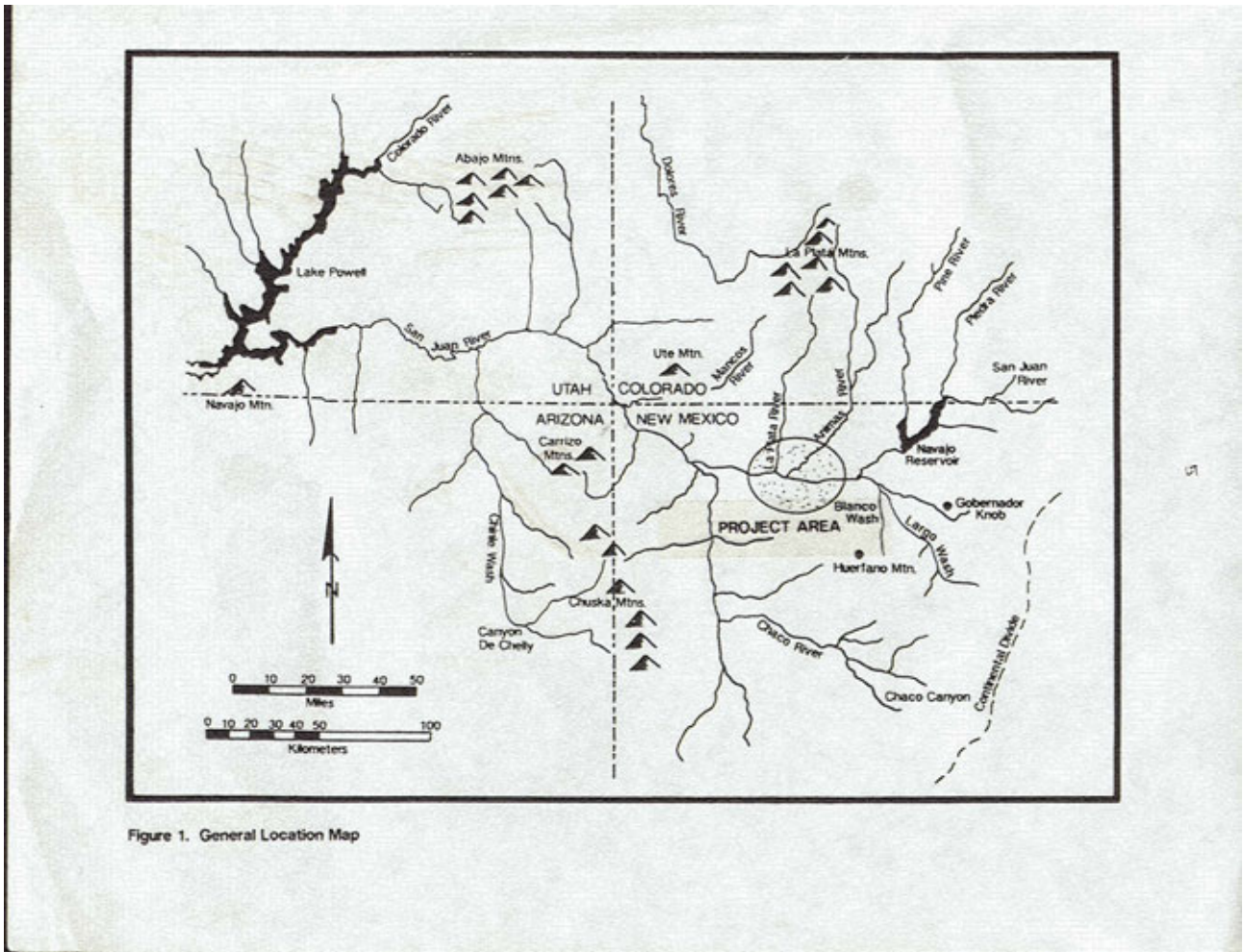


Figure 1. General Location Map

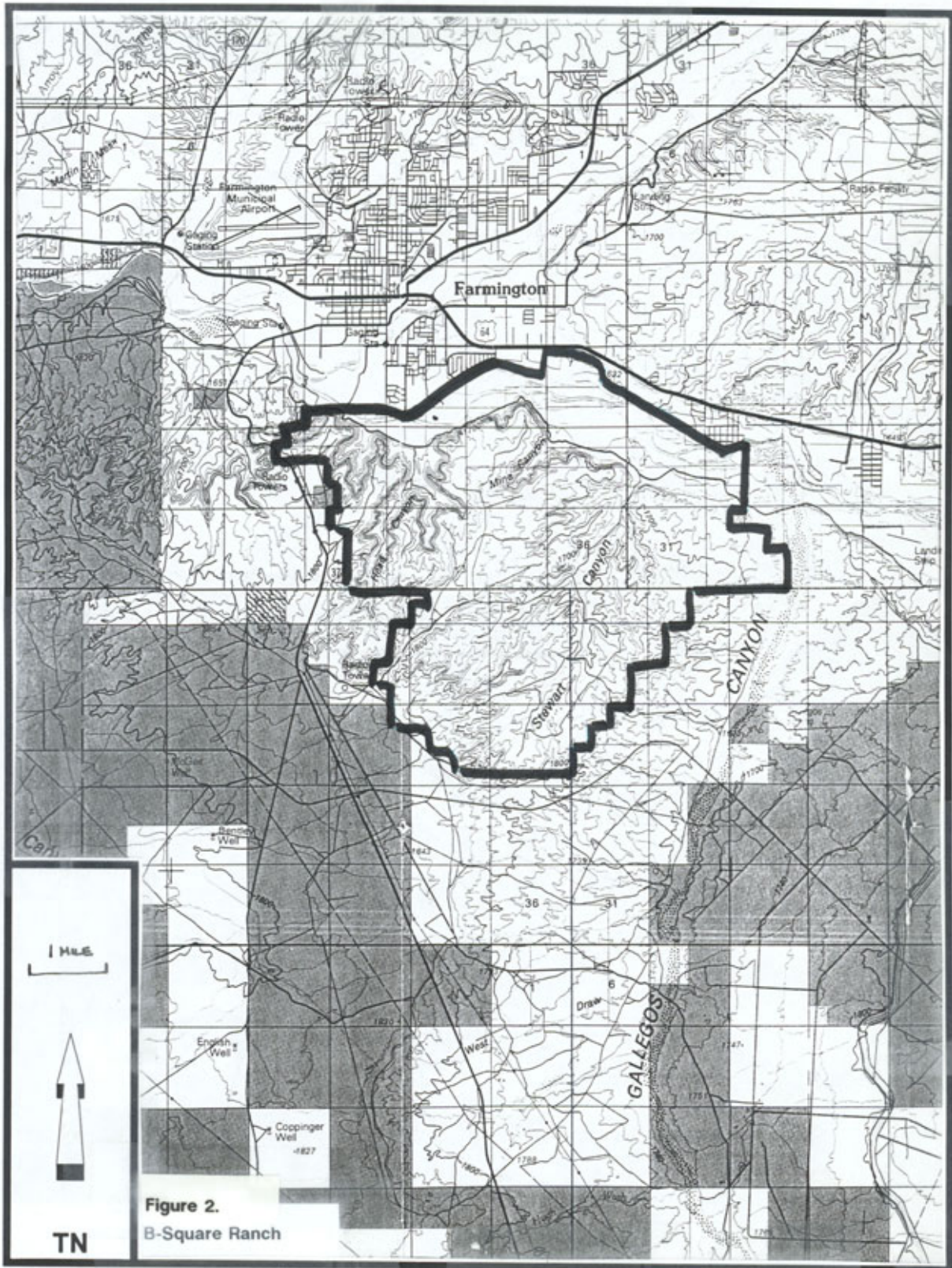


Figure 2.
B-Square Ranch

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semi-stable dune areas of wind-blown sand are located primarily in the southwestern and southern portions of the Ranch on the mesa top. The dunes most often occur on the margins above shallow washes and support a healthy community of seed grasses including Indian Rice grass, blue grama, and various dropseeds. These grasses were heavily used as food sources prehistorically.

The badland areas are located primarily in the southern and central parts of the Ranch. They are composed of eroding soft shale. Due to the very slow permeability, large amounts of water runoff after heavy rains cause soluble salts to erode and collect in seepage areas which were exploited as water sources prehistorically. The badlands support little vegetation (Maker et al. 1974:24) because of alkaline and impermeable qualities

The gently sloping canyon bottoms located throughout the Ranch generally drain from south to north. Soils are typically deep and are weakly stratified with medium to fine texture (Maker et al. 1974:24). Small chert and quartzite covered terraces are in the canyon bottoms, as well as the mesa top, and were used prehistorically as lithic sources. The wider canyon bottoms support a variety of bushes and grasses including sagebrush and rabbitbrush as well as pinyon-juniper woodland.

The dissected colluvial mesa tops are located in the central part of the project area. The mesa top soils are shallow and range from coarse sands to silty clay loams. The mesa tops are covered with rather sparse pinyon-juniper woodland with an understory of grasses, sagebrush, snakeweed, yucca, and prickly pear cactus.

CULTURAL SETTING

This section discusses previous archaeological work conducted in various areas of the B-Square Ranch and provides a summary of the prehistory and history of the northern San Juan Basin relative to the B-Square Ranch area within a regional cultural context. Cultural materials from the Paleo-Indian Period and Archaic Periods are present in this region as well as the more ubiquitous Anasazi, Navajo, and Historic sites. At this point in time, the Totah Archaeological Project research focus will be on the Anasazi culture.

Previous Work

Numerous archaeological surveys have been conducted within the current boundaries of the B-Square Ranch and approximately 100 sites have been recorded since the 1950s (Figure 3) (Appendix B). The first site which was recorded and submitted to the Laboratory of Anthropology site files was site LA 2611 (Cattanach 1956). It was recorded for the San Juan Pipeline Project (Wendorf et al. 1956) and was described as a concentration of fire-cracked rock with chipped and ground stone artifacts and a single Mancos Black-on-white sherd located within a dune area a short distance west of LA 2609, the Jaquez Ruin.

Sites LA 3026 and LA 3027 were recorded for the Navajo Reservoir Project in conjunction with the Hammond survey (Dittert 1958), a survey of a portion of the San Juan River bottomland for purposes of irrigation canal development. In 1958, Harry Hadlock, representing the San Juan County Archaeological Society recorded four of the Pueblo II-III habitations on the south side of the San Juan River and east of where the Animas River joins it. These include sites LA 5611, LA 8610-8612, and LA 8619. The 8000 series sites were rerecorded by Peckham and Wilson (1967) during survey of areas adjacent to, and south of, the San Juan River.

In 1972, in association with the excavation conducted at Salmon Ruins, the San Juan Valley Archaeological Project was initiated by Cynthia Irwin Williams. A search for large Anasazi ruins was conducted along the three ATotalah≅ rivers, the San Juan, Animas, and La Plata Rivers. Several of the larger Anasazi sites were recorded at that time in order to provide research data concerning the level of Chacoan interaction in the middle San Juan area for interpretation of Salmon Ruins. Sites LA 8619, the Point Site, and the Sterling Site, LA 122652, were tested and investigated at that time (Whalley 1980). Both sites are considered to be Chacoan outliers, although there is some controversy over the designation of LA 8619 as a Chacoan outlier (Stein and McKenna 1988).

The Sterling Site displays classic Chacoan features such as large rooms, core and veneer architecture, and a great kiva. The Archaeological Society of New Mexico conducted limited field school excavations there with ENMU in 1972-1974 (Bice 1983). The Chacoan structure is E-shaped, similar to Salmon Ruins but much smaller in size, estimated at about 25 rooms compared to the 175 rooms estimated for Salmon Ruins. However, the true size of Sterling will never be known because the northern portion has been washed into the San Juan River. No prehistoric roads are known in the vicinity of the Sterling Site.

The largest survey was conducted in 1977 by the Agency of Conservation Archaeology in association with Eastern New Mexico University (ENMU) (Acklen and Greiser 1977). They recorded more than half of the known sites including 12 Archaic sites, 9 Anasazi sites, 28 Navajo sites, and 13 sites of undetermined cultural affiliation, sites LA 16137-16198 and LA 16655-16663. The ENMU survey primarily covered the central and southern portion of the B-Square Ranch, the mesa top and canyon slopes of the Shannon Bluffs.

The ENMU sites were relocated by Bureau of Land Management (BLM) and Office of Contract Archeology (OCA) employees in the mid 1980s. The sites were reviewed and some were tested in preparation for proposed data recovery to mitigate possible adverse effect on the sites arising from transfer of BLM land to the B-Square Ranch (Hogan 1986).

At this point in time, a dozen or so large Anasazi Pueblo II/Pueblo III habitations dating to between AD 900 and 1300 are known. All of these are located in the bottomland of the San Juan River. Formal and informal excavations have been conducted at a number of these sites including the Sterling Site, Mine Canyon Site, Box B Site, Fort Site, Middle Site, Stewart Canyon Site, Point Site, Orchard Site, Lone Kiva Site, and the Tommy Site.

Sterling Site excavations were mentioned above. Some cultural materials were recovered from the Mine Canyon Site during contouring of fields. The San Juan County Archaeological Society, under the direction of Roger Moore, also conducted limited excavations there in 1982. Those records are with the Archaeological Society. Limited excavations were conducted at site LA 104984, the Orchard Site, by the Division of Conservation Archaeology in 1994 (Rottach and Park). The Office of Contract Archaeology excavated site LA 16660, a small Anasazi PII-III house mound (Hogan and Sebastian 1991) and two early Navajo sites, LA 16151 and LA 16153 (Hogan 1992). Tommy Bolack, prior to 1989, conducted informal excavations at the Lone Kiva Site (LA 126584), the Chipping Site (LA 126583), and the Tommy Site (LA 126581).

Summary information is provided below on the known larger Anasazi Pueblo II-III habitation sites located on the B-Square Ranch (from west to east):

The Fort Site, LA 61051: This is a Pueblo II site with no apparent earlier occupation. The site form claims that up to 100 multistory rooms and numerous kivas are present. The site is located on a steep overlook location just above the canyon bottomland. A road has cut through several walls of

apparently both surface rooms and kivas. The site has been potted through the years and the evidence of this is clear. There is an interesting small square walled enclosure which may have been a tower/shaft forming quick entry to the rock outcrop located above where the main structures are located. Overall, artifacts seem generally sparse, perhaps because of location right in the middle of the road, pothunting, and because most of trash would have been thrown over the edge. An interesting small boulder is located in bottomland below the site.

Middle Site, LA 8610: The Pueblo II-III site contains less than 20 rooms, maybe less than 10. Although some erosion control has been conducted, the site is in severe danger of eroding away into the river and much may have already gone. However, the site does seem to have definite east, west, and south boundaries which are relatively small and perhaps not a whole lot has gone after all. There are likely to be at least 3 kiva/pitstructures, maybe more. The site is located on the edge of the drop-off of a low alluvial terrace/bench overlooking river. The area is not farmed presently and the remaining portion of the site may be in relatively good condition. The river is only a few hundred feet to the north.

Head Canyon Site, LA 8611: The Pueblo II-III site contains two separate mounds separated by approximately 300 ft. 10-20 rooms are estimated for each mound and there is one good size depression associated with each and there are likely to be a few more kivas/pitstructures. This area is also not farmed and the topographic situation is similar to the Middle Site.

Tommy Site, LA 126581: The Pueblo II-early PII (probably some PI also) was completely buried by colluvium and alluvium. Eight kivas have been discovered and excavated and several more are probably present. Portions of four trash mounds and several roomblocks were also excavated. The upper part of site was washed away by flooding and then covered with alluvial deposition of minimum of 6 ft. Approximately 100 burials were recovered from the site. It is located at the base of bluffs with little farmland remaining. Perhaps the river was much further to the north during the Anasazi occupation. The Point Site is about 1,000 ft to the northeast and was occupied contemporaneously. The Point Site, LA 8619: The site encompasses Pueblo I-III and perhaps earlier. There is evidence of a Great House, Great Kiva, and possibly an Enclosed Plaza. The site is in an excellent lookout position directly above (about 100 ft) San Juan River with extensive views to both the east and the west. Smoke flares could have provided communication between the Point Site, Sterling, Jaquez, and even Salmon Ruins. Two roads run through the site and have caused damage, and the site has been potted by locals for very long time. Overall, however, it does not look in too bad a condition. At first glance, it appears to be quite large, perhaps half the size of Salmon but not an E-shape, probably a C-shape. Whalley (1980) agrees that the site was a Chacoan outlier, but Stein and McKenna believe the high quantity of early Pueblo II Red Mesa ceramics and lack of finer late Pueblo II ceramics such as Chaco Black-on-white indicate it is not a Chacoan outlier. They do, however, acknowledge the presence of a large Mesa Verdean occupation structure.

Mine Canyon Site, LA 126582: The existing rubble mound was contoured over to provide farmland, but there is probably a great deal of buried material. Roger Moore (personal communication) believes the site could be very extensive covering much of the area at the mouth of Mine Canyon. The site apparently represents a Pueblo I-III occupation.

Stewart Canyon Site, LA 126586: This site is not in the San Juan River bottomland but on the slopes in the bottom of a moderately wide portion of Stewart Canyon. A spring is nearby. It appears to be

a rather small site with midden and probably several rooms, less than 5?. It is in rather poor condition because of road and roadside ditch passing through site.

Sterling Site, LA 122652: This site is a Chacoan outlier with supposedly 25 rooms and at least one Chacoan style kiva and a San Juan (Mesa Verde style)kiva. The northern portion of the site has washed into the San Juan River and the original size of structure will never be known.

Chipping Site, LA 126583: Probably Pueblo II-III occupation. The site is in an area that is farmed and the ground has been contoured. Site size is unknown.

Lone Kiva Site, LA 126584: Probably Pueblo II-III occupation with situation same as at Chipping Site, the site is in an area that is farmed and the ground has been contoured. Previous excavation conducted by Tommy Bolack prior to 1989 revealed one kiva and a very deep burial containing a skeleton in excellent condition (Mesa Verde Black-on-white grave goods).

Box B Site, LA 16660: Pueblo II-III occupation of small house mound consisting of eight total rooms associated with two kivas and an earlier pitstructure. The site is located at the edge of a low alluvial terrace overlooking the San Juan River floodplain. The site was completely excavated by OCA in 1987 (Hogan and Sebastian 1991).

Culture History

The project area is located in the middle San Juan River Valley archaeological district as defined by Irwin-Williams and Shelley (1980). Other nearby archaeologically defined districts include the La Plata River Valley (Morris 1939), Mesa Verde District (Rohn 1977), Navajo Reservoir District (Dittert et al. 1961), Chaco Canyon (Judge and Schelberg 1984), and Largo-Gallina (Dick 1976; Mera 1935). Numerous overviews of the cultural history of the northern San Juan Basin are available (Hogan 1986; Vogler et al. 1993; Brown 1991; Tainter 1997). These overviews discuss general adaptations of the Archaic, Anasazi, and Navajo aboriginal inhabitants. Other important culture groups of the area are the Utes and the nonaboriginal (Hispanic, Euro-American) groups.

Archaic

The Archaic period extends from about 5500 B.C. to A.D. 400. Archaic adaptive strategy is believed to have been focused on a mixed of floral and faunal resources, with less emphasis on faunal resource procurement noted for the previous Paleoindian period (Irwin-Williams 1973). Settlement patterns reflect a system of base camps that were reoccupied over time and special use camps and processing areas established to take advantage of resource availability throughout the region. Mobile foraging strategies during the spring through fall months and semisedentism supported by stored foods during the winter enhanced with year-round hunting allowed for a flexible social structure dependent upon availability of resources. The subsistence base of the Late Archaic period expands with the introduction of limited maize agriculture, with concomitant changes in site structure and technological attributes. Numerous Middle and Late Archaic sites have been documented south of the middle San Juan River (Vogler et al. 1993).

Anasazi

The transition from dependence on Archaic hunting and gathering strategies to Anasazi farming strategies occurred during the overlapping Late Archaic En Medio phase, 800 B.C.-A.D. 400 (Irwin-Williams 1973:11), and the Anasazi Basketmaker II period, 100 B.C. to A.D. 400 (Vogler et al. 1993:334). The nature of this transition and the resulting cultural change is a major research topic. Hogan (1985) believes that although maize and squash were probably cultivated as early as 1000 B.C. in northwest New Mexico, it may have been climatic changes between 550 B.C. and A.D. 350 in the

northern San Juan Basin that precipitated the transition from cultivating strategies to horticultural and agricultural strategies practiced within the local settlement-subsistence system. Basketmaker II sites appear very similar to Late Archaic sites, although some habitations become more formalized with somewhat deeper pithouses containing numerous internal features. Basketmaker II sites are generally not abundant in the area (Brown 1991:46). The limited number of Basketmaker II sites may be, in part, because they are misidentified as Archaic sites.

The Anasazi Basketmaker III period, A.D. 400-700 (Eddy 1966:478), is characterized by the presence of pottery and an increase in population and sedentism based on dependency of stored agricultural products (e.g., corn, beans, and squash). Sites consist of pit structures, wattle and daub surface structures, intramural and extramural features, and the first appearance of villages. Basketmaker III sites are typically found on benches and terraces along the edges of river valleys or on ridges adjacent to valleys (Brown 1991:48). While it is assumed that Basketmaker III occupation could have been high in the San Juan River Valley, no sites are assigned to this time period based on survey level data (Hogan 1986:14).

The Pueblo I occupation, exhibiting predominantly jacal architectural structures (pithouses and surface structures) and undecorated gray utility ware ceramics is present in the San Juan River Valley and La Plata Valley. However, most of these sites are overlain with Pueblo II and/or Pueblo III occupations.

The Pueblo I adaptation stands in marked contrast to the more concentrated Pueblo II and III Anasazi populations (A.D. 900-1050/1100 and 1050/1100-1300) found within areas with more reliable water, such as the La Plata River Valley, the San Juan River valley, the Animas River Valley, the Mesa Verde area, and Chaco Canyon. Maximum geographic dispersal is reached by the Anasazi during Pueblo II times (Hogan 1986:15). Predominant cultural elements consist of masonry architectural structures (kivas and roomblocks), some multi-story architecture, and decorated black-on-white ceramics, reflecting specialization within an intensive agricultural economy. The early Pueblo II period saw the beginning of the spread of Chacoan influence into the Four Corners area, that culminated during the early Pueblo III period. Pueblo II and III sites are abundant in the San Juan, La Plata, and Animas River valleys. Many of these sites reveal a short period of abandonment between the waning years of the Chacoan influence, A.D. 1130-1150, and a reoccupation of sites by northern Mesa Verde Anasazi during the time period of A.D. 1185-1220. The Anasazi had abandoned the San Juan Basin by A.D. 1300, although within the overall Puebloan occupation there are variations in the density of population in various areas.

Navajo

The beginning of the Navajo occupation of the northern San Juan Basin area is subject to controversy. Many of the early sites are difficult to see due to the perishable nature of the structures and the short duration of occupation. Although dates from the Navajo Reservoir District (Eddy 1966; Hester and Shiner 1963) did not substantiate an occupation prior to the late 1600s, it was believed that sites with no Puebloan traits indicated that Navajo people may have lived in the area as early as 1550. More recent excavations have revealed dates verifying this date of Diné phase occupation (Ford 1979; Hancock 1997; Hancock et al. 1988; Hogan 1992; Reed et al. 1988; Reed and Horn 1989). Demographically, the extent of early Navajo occupation remains unidentified.

The Gobernador phase follows the Diné phase and has recently been split into an early Gobernador phase, A.D. 1625-1690 and a late Gobernador phase A.D. 1690-1760 (Marshal 1995). The beginning of the phase is dated by the presence of Gobernador Polychrome, a pottery type manufactured by the Navajo but influenced by Pueblo V Polychromes. During the Spanish Reconquest of A.D. 1692-1696, a number of Puebloan families fled the consequences of the

reassertion of Spanish dominance by temporarily moving north to join Navajo families in Dinetah (the Navajo homeland on the upper San Juan River). Subsequently, Ute expansion through raiding and warfare forced the Navajo to abandon Dinetah circa A.D. 1750-1760.

Ute

Based on archaeological and historic evidence, prehistoric Utes inhabited all of Colorado and possibly the area north of the San Juan River (Schaafsma 1995) prior to settlement of these areas by Hispanic and Euro-American populations. Linguistic evidence suggests that Utes entered eastern Utah and Colorado circa A.D. 1300 (Reed 1984). Ute prehistory in the San Juan Basin, however, is poorly understood or documented compared to other contemporaneous peoples. Historic records indicate that the Escalante Expedition of 1776 contacted Ute settlements in southwest Colorado and that the Spanish were aware of the Utes during missionary work among the Rio Grande Pueblos (Hogan et al. 1991).

Archaeological identification of Ute sites is difficult because Ute technology, settlement patterns, and subsistence practices appear similar to that of contemporaneous Shoshonean or Athabascan cultures. Consequently, what needs to be developed is a series of archaeo-cultural markers that are unique or definitive of Ute occupation of a site.

Historic Period

The nonaboriginal occupation of the San Juan Basin did not become well established until the late nineteenth century. Prior to this, the area appears to have served mainly as a transportation corridor from the populated Spanish centers to the south and southeast. Homesteaders, predominately Hispanics, began to settle the northern San Juan Basin area beginning in the 1870s, while the adjacent southwest Colorado saw an influx of Euro-American miners in the 1860s after gold and silver were discovered in the southern Rocky Mountains. By the late 1800s, several communities had been established in the upper San Juan Basin, such as Farmington, Aztec, Bloomfield, Blanco, Gobernador, and Cedar Hill.

In general, ranching and farming appear to have been the primary livelihood in the northern San Juan Basin and flourished by providing supplies to the mining industries to the north. In addition, secondary businesses in the major towns arose both to supply the outlying farming/ranching communities and serve as distribution centers for communities to the north. Improvement of transportation corridors, such as roadways and construction of railroads, enhanced the flow of goods and people into the area. The economic events which affected the United States in the 1930s were felt in the San Juan Basin. Dittert et al. (1961) describe the period from 1910 to 1940 as one of isolation and abandonment within the general area. Those populations that were not forced to abandon the region were economically invigorated by the 1950s growth and development of energy exploration and exploitation, which continue today.

RESEARCH GOALS

The goals of the Totah Archaeological Project will be to gather both excavation and survey data about the Anasazi culture in the Totah area. We will look at Anasazi site types and distribution of those sites over the entire B-Square Ranch project area. Areas of the Ranch that have never been previously surveyed will be of first priority in terms of survey. Major research interests will include investigation

into whether the middle San Juan River valley may have functioned as a major regional center prior to and during the collapse of Chacoan influence; the possible presence of prehistoric roads junctioning with the Sterling Site, Point Site, or Mine Canyon Site; methods of water control in the alluvial/colluvial environment found at the base of the Shannon Bluffs, the level of Chacoan influence on middle San Juan River valley sites, the relationship between Chacoan outliers and nearby small sites, community structure in the middle San Juan River valley, and trading relationships with other nearby Anasazi populations.

Hogan and Sebastian (1991) acknowledge what others (Whalley 1980; Stein and McKenna 1988; and Morris 1939) have noted, surprisingly little is known about Anasazi settlement patterns in the San Juan River valley near Farmington. The primary reasons include the frequent flooding of the San Juan River prior to construction of Navajo Dam (many potentially large sites may simply have been washed away, others may be deeply buried) and the historic development of the area. Hogan and Sebastian (1991) also note that the presence of numerous small Anasazi Pueblo II-III sherd and lithic scatters situated along the Bluffs within easy walking distance of the middle San Juan River strongly suggest that the San Juan Valley was supporting a residential population during that time.

The great size of Aztec and Salmon Ruins and evidence of a tremendous build-up of outliers in the north between A.D. 1075 and 1130 may indicate that the middle San Juan River, Totah area, had become more important, controlled more power, by A.D. 1100. Access to water can provide power, and the Totah area contains a great deal of water.

Most of the research issues defined above are regional in scope and data from numerous site excavations will be necessary to begin to address these issues. Therefore, for purposes of the field school, we will initially focus on the usual research questions concerning chronology, cultural affinity, and subsistence.

To develop the chronological sequence of site occupation, dendrochronological samples will be collected whenever possible, ceramics and architecture will be analyzed for relative dating purposes, and stratigraphic superposition information will be utilized. As to radiocarbon samples, they will be collected, but generally speaking the date range provided by C-14 analysis is broader than the relative dates provided by ceramics and architecture. The chronological data can be used to determine whether LA 126581 exhibits the same pattern of Chacoan abandonment and Mesa Verdean reoccupation as found at Aztec and Salmon Ruins and La Plata Valley sites.

Data needed for questions concerning cultural affiliation includes primarily ceramics, lithics, and architecture. Specific questions will concern the degree of Chacoan or Mesa Verdean influence throughout the site occupation. Whalley (1980) found a relatively high number of Chacoan ceramic tradewares at sites in the Totah area, indicating to her that both small and large sites participated fully in the Chacoan system. Previously, Irwin-Williams (1983) had suggested that Salmon Ruins was established by a group of Chacoan immigrants which would mean that the local small sites may not have participated fully in the Chacoan system.

Emphasis will be given to collecting macrobotanical and zooarchaeological samples in order to learn how the Anasazi utilized the wild food resources from the San Juan River riverine habitat and cultivated products grown on the floodplain fields. Pollen data will be collected from the modern environment as well as the archaeological deposits. As Hogan and Sebastian (1991) note, comparison of these two types of pollen samples may indicate how extensively the floodplain vegetation had been disturbed during the site occupation. This information can then be used as an indirect indicator of the intensity of the floodplain agriculture.

THE TOMMY SITE

The Totah Archaeological Project Field School will initially focus on continuing with the previous work conducted at LA 126581, the Tommy Site (Appendix C). The Tommy Site is an Anasazi Pueblo I to early Pueblo III habitation located at the base of the Shannon Bluffs on the south side of the San Juan River. The site was discovered by Mr. Tommy Bolack, B-Square Ranch owner and manager. It is in a narrow area, less than 200 ft wide, situated between the base of the Shannon Bluffs and the San Juan River. Stratigraphy shows that the site was severely flooded, perhaps several times throughout the entire Puebloan occupation. Ceramics suggest the site was originally settled some time during the Pueblo I time period, A.D. 700-900, with the occupation continuing through early Pueblo III, approximately A.D. 1150. There is no evidence of a late Pueblo III occupation, but much of that later occupation may have been washed away. Six to nine feet of sterile alluvially deposited sand has buried the site since the last Puebloan occupation. Analysis of site data recovered during the field school will incorporate previously recovered site materials and data as much as possible.

Previous Work

Mr. Bolack discovered the site in 1987 during construction of catch-basins for control of run-off, and conducted his excavation at that time. The entire site was overlain with from 5-9 ft of sterile overburden with absolutely no surface cultural indications. Four trenches and expansion of those trenches revealed a Pueblo I habitation overlain by a Pueblo II occupation which appears to have extended into the early Pueblo III time period (Figure 4). Flooding had removed the upper portions of kivas and trash mounds which were subsequently overlain by alluvially deposited sterile sand and clay.

Trench 1 was placed in what now appears to be the middle of the site and revealed a large midden, Midden A. Trench 2 was placed at right angle to Trench 1 at the eastern end of the trench and Trench 3 was placed at right angle to Trench 1 at its western end. Trench 4 was placed some distance to the west to see if the site continued and few cultural materials were found here. Some of the composite profiles drawn by Mr. Bolack are in Figure 5. A copy of Mr. Bolack's site notes is in Appendix D.

The site contains a minimum of eight kivas, four or more room blocks, and four trash mounds. A total of approximately 100 burials were recovered during the previous work (Appendix E). Ceramics are dominated by Cortez/Red Mesa and followed by Mancos/Escavada/Chaco black-on-white types with both some earlier (Piedra) and later (McElmo) black-on-white types. This complex of pottery indicates a Pueblo I through early Pueblo III temporal span.

Kiva A measured approximately 3.5 m in diameter. It was badly washed with only about 10 inches of bench left, the kiva was trash filled. Floor items/features noted included three-fourths of a broken bowl and a cottonwood bark-lined pit measuring approximately 18" deep and 20" square. The pit is located at the southeast edge of kiva.

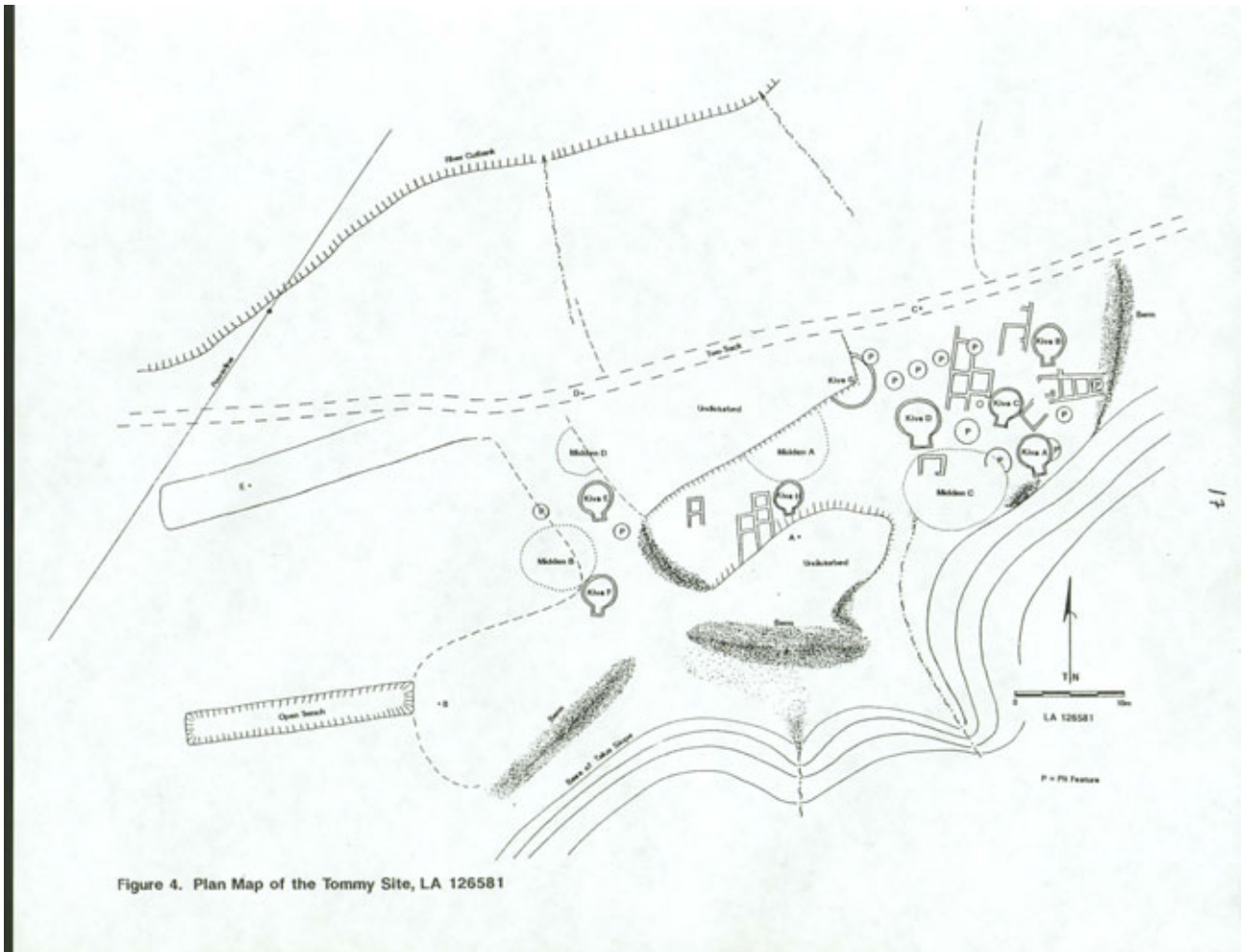
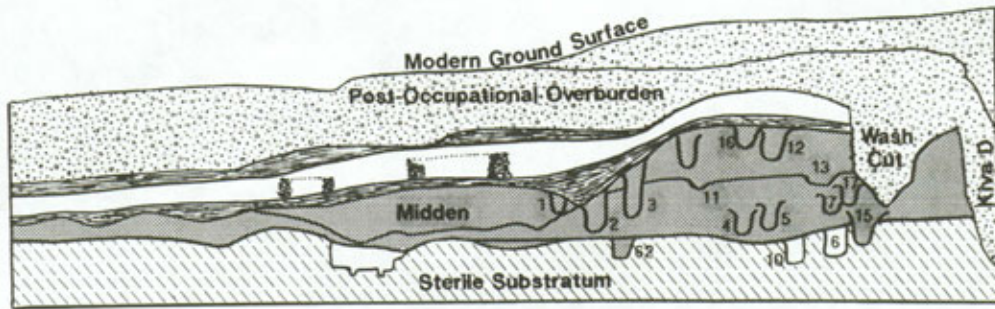
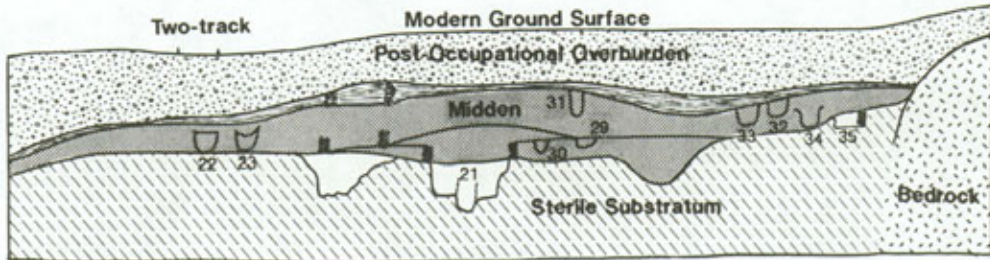


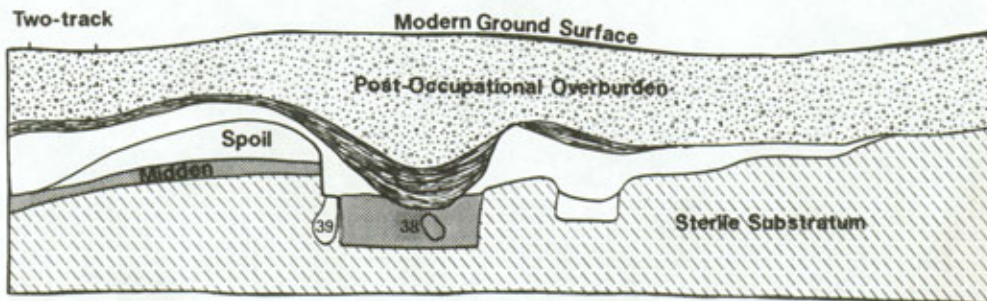
Figure 4. Plan Map of the Tommy Site, LA 126581



Composite Profile Facing North



Composite Profile Facing East



Composite Profile Facing East



LA 126581

Figure 5. Composite Profiles from the Tommy Site, LA 126581.

Kiva B measured approximately 3 m in diameter. Only the lower portion of the kiva was left and those showed sandstone masonry wall with a little plaster remaining. It was built on top of an earlier depression/pitstructure. Floor items/features noted included: small seed jar vessel, smashed corrugated vessel with bottom missing, child's skull (#28) in middle of kiva fill, 3 bodies at top of lower wall, mug corrugated line design, buried wood inside mid trash upright???

Kiva C measured approximately 2.9 m in diameter, keyhole, upper 1/3 of structure gone, floor was barren, no fire pit or deflector wall, juniper uprights and airway cover (2) saved. Apx 6" bench observed.

Kiva D measured approximately 12' in diameter and has masonry walls, 14" bench, no deflector wall found. Numerous items found on floor. Floor items/features noted: olla bottom sherd, large crushed corrugated jar, medium-size crushed corrugated jar, one-third large spiral corrugated jar, two-handled 8" bowl (perfect)(upside-down), large black-on-white mug on its side, corrugated jar concealed in wall (jar contained pipe, spear point, and polished stones), heavy coil pot on floor, 6" red bowl (shattered, not complete), olla smashed on floor, ground top olla (complete)

Two burials were found on the floor of Kiva D, #8-9. Both were on the west side of the structure. Burial #8 was outstretched with hands over face (notes indicate that the individual appeared to have died in place). Burial #9 was also outstretched and also appears to have died in place. No burial goods were found with either skeleton.

Kiva E contains a sub-floor ventilator. It is a later kiva that was dug through trash. Floor items/features noted: broken seed jar, nearly complete corrugated jar

Trench 2 Upper Roomblock

Top of walls washed away by flood. Remaining walls are 6-8" high. Barren of features except occasional fire pit.

Depression 4 was clay filled from flooding activity and exhibited a five ft diameter depression. Two ollas (A and C) and a 3-compartment dish were found on the floor. A rotted basket was found in the upper clay (a sample was collected).

Midden A is located near the center of the site and is approximately 6-9 ft thick in the center of the deposit. Total of 18 burials, 1-7, 10-13, 15-17, 62, and 67-69

Lower trash = 6, 10, 15, and 62, 69

Middle trash = 4-5, 7, 13, and 17, 67

Upper trash = 1-3, 11-12, and 16

#68 may not be burial, just washed in skeletal parts

Midden B is located at the west end of the site and is approximately 5 ft thick. Total of 23 burials, 37 and 40-61

Lower trash = 37, 45-48/49, 51-54, 57-58, 60-61

Middle trash = 43-44, 50

Upper trash = 40-41, 55-56, 59

#42 has no skeletal material

Midden C is located at the southeast end of the site and is approximately 5 ft thick. Total of 33 burials, 64-66, 70-98, and 70A.

Lower trash = 65, 74, 82, 85

Middle trash = 64, 71, 73, 76, 80-81, 98

Upper trash = 66, 70, 72, 75, 77-79, 83-84, 86-97

Proposed Work

The students will participate in a laboratory initiation period of approximately two days during which time they will be familiarized with the tools and techniques of excavation as well as the paperwork. Standard excavation forms which have been used by SJC-CRMP for the past 8 years will be used as well as our existing database format which has also been used for the past 8 years. SJC-CRMP uses a Provenience Designation (PD) system for proveniencing and cataloguing, similar to that used by Crow Canyon. All artifacts except sherds smaller than 1-2 sq cm will be collected. The maximum of 15 students will be divided into working crews of three individuals for both excavation and survey. Before the field school session begins, a permanent datum will be established in the southern portion of the site at the base of the talus. Using mechanical equipment, the 5 m long profile along the western edge of Trench 2, between Trench 1 and the two-track road, will be reestablished. Once the top of the cultural level has been determined, mechanical equipment will be used to remove sterile overburden down to about 30-50 cm above cultural fill in a portion of the undisturbed area north of Trench 1. The areal extent of the overburden removal will depend on several factors including the number of students who will be working on the site, but it is likely that about half of that area will be affected by the 1999 proposed operations.

Using subdatums set in from the permanent datum, the newly cleared area will be gridded into 1 x 1 m or 2 x 2 m units to provide horizontal control. Vertical control will be established from the subdatums. The elevations for the subdatums will be established from the arbitrary elevation of 100.00 m designated for the permanent datum.

We propose to begin excavation at Kiva G in the southeast corner of the undisturbed area located between Trenches 1, 2, and 3. Excavation will proceed using 10 cm arbitrary levels until the cultural level is reached. Unless noncultural structural fill is discovered, 10 cm levels, or less, will be utilized for excavation of cultural levels also.

When rooms are encountered, walls will be exposed to determine the room=s spatial extent. Then half the room fill, to 10 cm above the floor level, will be removed, a stratigraphic section drawn, and the remainder of the room fill removed. Finally, the last 10 cm will be excavated and floor artifacts will be piece plotted. Floor fill materials will be provenienced by grid square. Pollen and flotation samples will be taken from several places on the floor, particularly near the walls. When the entire floor is exposed, a plan view will be drawn and floor features will be excavated. Appropriate chronometric and archaeobiological samples will be collected from each feature as necessary.

Kivas or other types of pitstructures will be treated in similar fashion to rooms. The spatial extent will be determined through means of a trench of 1 x 1 m grid squares excavated to bisect the structure. The trench will be excavated to about 10-20 cm above floor level and profiles drawn. A grid will be established within the kiva and the cultural fill to above the floor or roof fall will be removed. The floor will be excavated and samples collected as described above for rooms.

Work within structures may proceed utilizing a separate grid aligned to the structure. Middens will be excavated within grid squares but care will be taken so that appropriate profiles can be drawn.

Artifacts and samples will be removed to the lab on a weekly basis unless the quantity of material forces us to do it more often. One-half day per week or more will be spent teaching laboratory methods. Artifacts will be cleaned, labeled, and catalogued. Some work may be conducted on previously collected ceramics from the site.

BURIAL DISPOSITION PLAN

Based on previous work at the site, excavation of burials is expected and procedures upon discovery will follow those defined in SJC-CRMP's annual New Mexico State Burial Permit. Herein, SJC-CRMP is notifying the State Historic Preservation Office (SHPO) of intent to use our Permit during field school excavations conducted at site LA 126581. Legal description of the site is in Appendix B. Upon discovery of the first human burial, the Farmington Medical Investigator (MI) and SHPO will be notified of the event. All burials will be of prehistoric Anasazi cultural affiliation and the MI will be informed of this and asked whether he wants to be informed of each burial discovery or the total number of discoveries at the end of the field school session. SHPO will be afforded the same consideration.

Excavation of burials will be conducted or closely supervised by SJC-CRMP personnel listed in our Permit; Linda Wheelbarger, Meredith Matthews, and Edward Kotyk. Vitas are on file with the SHPO. All excavation and analyses will be conducted in accordance with the guidelines listed in Section 7 of the Historic Preservation Division's Regulations for the Issuance of Permits to Excavate Unmarked Human Burials in the State of New Mexico (HPD Rule 89-1). Burials will be excavated as carefully but as quickly as possible to forestall accidental damage or malicious acts. Plan maps of each in situ burial and associated funerary goods will be drawn and photographs will be taken. Notes will be written concerning the field methodology and observations about the soils and the context of each burial. Soil samples will be taken as appropriate. The skeletal material will be cleaned as much as possible without damaging the bones in the field, wrapped in protective material, and boxed with the appropriate provenience information.

Dr. Rick Watson, SJC Anthropology Professor, is experienced with skeletal analysis and has consented to offer guidance with laboratory analyses. Dr. Stuart Wilson, retired M.D. and avocational archaeologist has offered to conduct the analyses. At a minimum, analysis will include basic measurements as well as observations on sex, age, and pathologies. All skeletal material will be photodocumented.

The associated grave goods will be inventoried for each burial. Information will include the type of artifact, typological description, and description of the quantity and condition of the items recovered. Scaled photographs will be taken of all recovered items and the photos will be labeled with the name of the permittee, provenience of the burial, date of excavation, and proposed disposition of items. A complete written inventory of the human burials encountered during the field school session and their associated grave goods will be provided to the SHPO and probable claimants by August 6, 1999, two weeks after the end of the field school. Information on the context of the burial, the site type, probable cultural affiliation, and apparent date of interment will be included. Probable claimants for the Anasazi occupants of site LA 126581 include the Hopi, Zuni, Jemez, and Navajo tribes. Other tribes will be considered as possible claimants if SHPO so notifies SJC-CRMP.

Each tribe will be requested to make claim of the materials by demonstrating a relationship to the human burials, if they so wish. This claim must be accompanied with their recommendations for disposition of the human remains and associated grave goods. The tribes will be requested to do so within a time limit of 30 days. SHPO will be notified of any claims and recommendations received within 45 days of completion of permitted excavations. This notification will be accompanied by a

specific disposition plan which may involve reburial or removal to an approved curatorial facility, or release to the landowner by written instrument if there are no specific requests for reinterment made by a tribe, clan, or person claiming and demonstrating a relationship to the human burials.

MANAGEMENT OVERVIEW

It is the hopeful intent of the 1999 Totah Archaeological Project Field School to be one of several beginning steps toward establishing an archaeological and environmental education research center using the 12,000 acre B-Square Ranch located in the well-watered semi-arid Totah area of San Juan County, northwestern New Mexico. Educational partnerships are possible with a wide range of federal, state, city, private, and tribal entities including colleges, archaeological contractors, the National Park Service, the Bureau of Land Management, museums, and elementary and secondary schools. Initially, we will focus on the Anasazi culture even though the B-Square Ranch property is equally rich in Archaic, Navajo, and Historic cultural sites. The Environmental Sciences division of San Juan College will be conducting flora and fauna studies in the near future and a geological study is also proposed.

Although the initial focus will be on excavation at the Tommy Site, future years may concentrate on sites which are in more danger of being damaged through the natural process of erosion. Testing may be proposed for yet other sites which may contain particular data pertinent to our research goals.

We also hope that archaeological methods can be taught on the B-Square Ranch through San Juan College Community Learning Center classes. Week-end or week-long classes could be tailored for people who can not take a six-week long course. The educational possibilities are limitless.

The Society for American Archaeology (<http://saa.org/AboutSAA/Ethics/prethic.html>) promotes eight guiding ethical principles for professional archaeologists (Appendix F) to consider and they are noted here because of their importance. Stewardship, taking care of the remains of our past, our cultural heritage, is designated as the first priority followed by Accountability, responsible research involving interaction among all involved parties, particularly Native Americans. The third principle reminds archaeologists to discourage the commercialization of specific artifacts such as ceramic vessels or ceremonial items by never involving themselves in activities that would assign or enhance value of such objects.

The fourth principle binds all other principles together and is the focus of the Totah Archaeological Project, Public Education and Outreach. Here, the goals are dominated by exhibition of archaeological knowledge to the various publics and development of cooperative efforts between diverse public groups who are interested in the archaeological record with the aim of improving the preservation, protection, and interpretation of the record.

The fifth principle declares that archaeological knowledge is not a personal possession and that it should be treated with the principles of stewardship, allowing other access to the material in a timely manner.

The sixth principle deals with public reporting and publication stating that archaeological information should be presented to as wide a range of interested publics as possible. Documents should be kept in a suitable place for permanent safekeeping. An interest in preserving and protecting in situ archaeological sites must be taken in to account when publishing and distributing information about their nature and location.

The seventh principle also deals with records, and preservation. Archaeologists should work actively for the preservation of, and long term access to, archaeological collections, records, and reports. To

this end, they should encourage colleagues, students, and others to make responsible use of collections, records, and reports in their research as one means of preserving the in situ archaeological record, and of increasing the care and attention given to that portion of the archaeological record which has been removed and incorporated into archaeological collections, records, and reports.

The eighth principle deals with training and resources and prevails on archaeologists to ensure that they have adequate training, experience, facilities, and other support necessary to conduct any program of research they initiate in a manner consistent with the foregoing principles and contemporary standards of professional practice.

It is the intent of SJC-CRMP to adhere to all of these principles during management of the Totah Archaeological Project. In addition, advice will be requested from the SHPO/HPD offices concerning Native American involvement in the project.

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Appendix A
Cooperative Agreement between San Juan College and B-Square Ranch
(Coming Soon)

Appendix B
NMCRIS B-Square Ranch Archaeological Site Record

(Not Available)

Appendix C
Laboratory of Anthropology Site Form for LA 126581

(Not Available)

Appendix D
List of Burials from LA 126581, the Tommy Site

List of Burials from LA 126581, the Tommy Site

Burial No.	Midden/ Site Area	Location	Skeleton Notes	Associated Materials
1	A	Upper trash	Jumbled position	1 ceramic vessel
2	A	Mid trash	Flexed position	3 ceramic vessels 1) smooth plain 2) corrugated outside/ painted inside 3) B/W bowl w/ design pendant from the rim *
3	A	Deep trash, rodent disturbed	Little bone, jumbled position	No ceramics
4	A	Lower trash	Flexed with knee bones pointed up	2 ceramic vessels 1) grayware cup with handle, coiled upper half * 2) ??
4A	A		Jumbled position, deteriorated	1 large sherd
5	A	Lower trash	Flexed position	2 ceramic vessels 1) grayware cup, completely corrugated 2) ??
6	A	Below trash (2 ft)	Flexed position	6 sherds in sand (5 painted, 1 corrugated) 1) grayware cup with handle, completely corrugated * 2) B/W bowl *
7	A	Lower trash, ancient robbed?	One jaw only	One sherd
8		NW portion of Kiva D floor	Not interred. Outstretched on floor with hands over face, appears to have died in kiva by drowning or asphyxiation	No ceramics
9		W portion of Kiva D Floor	Not interred. Outstretched on floor similar to #8	No ceramics
10	A	Below trash in sand	Flexed position	6 sherds (spiral wove 1.5 piece with squash seeds painted ceramics)
11	A	Mid trash, ancient robbed?	Jumbled position	No ceramics

Burial No.	Midden/ Site Area	Location	Skeleton Notes	Associated Materials
12	A	Mid trash, disturbed and mixed.	Flexed position	2 ceramic vessels
13	A	(Cannot locate)	Only few pieces of bone	2 ceramic vessels
14		Mid trash	Flexed position, deteriorated	2 ceramic vessels 1) miniature B/W jar with hourglass design around middle *
15	A	Below trash, hole filled with trash	On back outstretched	2 ceramic vessels 1) B/W bowl with spiral design *
16	A	Upper trash	Jumbled position, disturbed	No ceramics
17	A	Lower trash	Jumbled position, disturbed	No ceramics
18		Near pithouse?	Flexed position	No ceramics
19		Below trash	No solid bone left (child)	2 small ceramic vessels 1) miniature B/W (McElmo?) jar w/ handle *
20		Below trash, rodent holes	Jumbled position, bone deteriorated	2 ceramic vessels 1) B/W miniature in gourd shape * 2) large B/W jar with handle (checkerboard design) *
21		Subfloor room burial	Flexed position	3 ceramic vessels 1) miniature B/W bowl * 2) miniature B/W jar/cup with handle (paint has burned off) * 3) grayware corrugated cup
22		Lower trash	Little bone	1 ceramic vessel (corrugated cup)
23		Upper trash	Few bone pieces	1 ceramic vessel 1) miniature B/W jar with checkerboard and hachured triangles designs *
24		Disturbed when later occupants dug through trash to construct Kiva C	Bones in little pile	No ceramics
25		Same as in #24	Bones in little pile	Part of 5 "Bowl sherd"
26		In Kiva backfill	Flexed position	2 ceramic vessels (one corrugated cup)

Burial No.	Midden/ Site Area	Location	Skeleton Notes	Associated Materials
		outside wall		
27		Mid trash, disturbed from subsequent construction phase	Jumbled position	No ceramics
28		SE Wall Area	3 bodies, may have died from drowning or foul play, 1) baby lying in U shape with head and feet up 2) adult with face down, outstretched at 30 degree angle 3) adult with face up, outstretched in level position	No ceramics
29		Lower trash	Flexed position	2 ceramic vessels 1) corrugated
30		Lower trash	Flexed position	2 ceramic vessels 1) painted B/W 2) ??
31		Mid trash	Jumbled position, few bones left	1 ceramic vessel
32		Lower trash	Flexed position, few bones left	2 ceramic vessels 1) miniature B/W jar with handle *
32A		Unassociated	Skull only?	No ceramics
33		Mid trash	Flexed position	1 sherd only
34		Mid trash, rodent disturbed	Flexed position	2 excellent ceramic vessels 1) miniature B/W jar with handle * 2) B/W bowl with entire squiggle hachured snake including head and tail near rim *
35			Death by drowning? Head down.	No ceramics
36		Mid trash	Little pile of bones	1 sherd
37	B	Lower trash, rodent disturbed	Jumbled position	1 large corrugated sherd *
38		1' above Kiva E floor, dug into Kiva	Flexed position, excellent skeleton with	1 large sherd with unusual very wide (1.5 cm) angled corrugated coils *

Burial No.	Midden/ Site Area	Location	Skeleton Notes	Associated Materials
		fill and covered with same.	possible soft tissue in open cavity.	
39		Below Kiva E Bench outside lower wall. North side. Kiva apparently filled in soon after burial.	Flexed position	No ceramics
40	B	Upper trash	Skeleton on back	1 large sherd
41	B	Four ft diameter hole extending from upper trash through both layers to 4 feet below trash.	Flexed position	1 ceramic vessel (painted)
42	B	Stain, possible burial	No skeletal material	2 sherds 1) apx 1/4 B/W bowl * 2) apx 1/4 B/W jar *
43	B	Mid trash	Flexed position	1 sherd apx Chaco? B/W bowl with very white slip, fine rim, and neatly hachured design *
44	B	Mid trash (dug from top when buried)	Flexed position	2 ceramic vessels and 1 sherd 1) apx 1/4 bowl with very fine faded lines, looks similar to Bancos B/W *
45	B	Below trash, 3 ft piece of wood over top of burial	Flexed position, poor bone	2 excellent ceramics (painted). Best in mound
46	B	Lower trash-dug from top	Flexed position, poor bone	2 ceramic vessels and 1 sherd 1) Cortez/Red Mesa B/W ladle w/ slip and squiggles * 2) Cortez/Red Mesa B/W jar * 3) large B/W bowl sherd w/ rounded step design *
47	B	Lower trash-dug from top	Flexed position, poor bone	1 sherd apx 1/4 B/W jar with large lug and hachured design *
48	B	Lower one. Just under #49	Flexed position	1 sherd B/W hachured design jar/olla *
49	B	Above #48 (possible mixed with #48)	Flexed position	2 sherds

Burial No.	Midden/ Site Area	Location	Skeleton Notes	Associated Materials
50	B	Mid trash	Flexed position	No ceramics
51	B	Lower trash	Flexed position	1 sherd apx top of jar, hachured B/W *
52	B	Lower trash	Flexed position	No ceramics
53	B	Lower trash	Flexed position, disturbed	1 sherd apx of plain smoothed grayware cooking vessel *
54	B	Just below trash (filled with trash)	Flexed position	1 corrugated sherd *
55	B	Upper trash	Flexed position	1 large corrugated sherd *
56	B	Upper trash	Flexed position	1 sherd, B/W bowl sherd *
57	B	Below trash (filled with trash)	Flexed position	1 sherd, apx of small bowl *
58	B	Lower trash	Flexed position	Large corrugated sherd *
59	B	Upper trash	Flexed position	2 ceramic vessels 1) miniature B/W duck effigy * 2) ??
60	B	Below trash	Flexed position	2 sherds 1) apx hachured B/W jar * 2) apx 1/3 B/W jar *
61	B	Below trash	Flexed position	2 sherds 1) B/W ladle * 2) apx 3/4 B/W bowl with very fine lines and nice slip *
62		Below trash	Flexed position, possibly disturbed	Large vessel sherds in immediate fill material (trash)
63		In Kiva A back fill	Flexed position	1 large B/W bowl sherd
64	C	Dug through trash,	Jumbled position	2 sherds

Burial No.	Midden/ Site Area	Location	Skeleton Notes	Associated Materials
		clean fill		
65	C	Below trash, clean fill, dug through trash	Flexed position	1 ceramic vessel, B/W jar with large double loop handle, diagonally hachured triangle design *
66	C	Upper trash	Flexed position	2 sherds 1) piece of B/W olla * 2) ??
67		Mid trash, disturbed	Jumbled position	1 large corrugated sherd
68		Clay covered (burial??) Probably washed	Skull only	No ceramics
69		Lower trash (dug from top)	Flexed position	2 excellent B/W ceramic vessels 1) med. size B/W bowl, painted rim with finely-made design * 2) large Red Mesa/Cortez B/W bowl with thin lines *
70	C	Upper trash	Flexed position	No ceramics
70A	C	In trash (burial??)	Jumbled position	No ceramics
71	C	Below trash, dug from 1/2 way up in trash	Flexed position	2 ceramics (1 B/W)
72	C	Top of trash, flood washed part away	Flexed position	No ceramics
73	C	Mid trash	Flexed position	2 sherds
74	C	Lower trash, disturbed from later occupants	Jumbled position	No ceramics
75	C	Upper trash	Flexed position	2 ceramics vessels 1) miniature B/W jar with handle lugs *
76	C	Lower trash (below) dug from 1/2 way up	Flexed position	1 sherd (corrugated)
77	C	Upper trash	Flexed position	2 excellent ceramic vessels (bowl was placed on top of head) 1) med size B/W jar with lug handles, broad B/W design may be McElmo B/W *

Burial No.	Midden/ Site Area	Location	Skeleton Notes	Associated Materials
78	C	In filled depression, dug from 6 ft up	Body on back w/ knees flexed and upward	Corrugated vessled upside down over right knee
79	C	Upper trash		2 excellent ceramic vessels 1) corrugated (top only) cup with broken handle * 2) large B/W bowl, possible Piedra design *
80	C	Mid trash	Flexed position, disturbed	No ceramics
81	C	Below trash, dug from 1/2 way up.	Jumbled position	One sherd
82	C	Below trash	Jumbled position	Part of ladle, 1 corrugated sherd
83	C	Upper trash (close to #84)	Jumbled position	Disturbed. No ceramics
84	C	Upper trash	Flexed position	Small ladle part
85	C	Bottom of trash.	Jumbled position	No ceramics
86	C	Upper trash	Flexed position	1 sherd
87	C	Top of trash-nearly washed away.	Jumbled position	1 sherd
88	C	Top of trash-nearly washed away.	Jumbled position	No ceramics
89	C	Lower trash, dug from top.	Flexed position	2 ceramics (both B/W) 1) large B/W bowl with star design, also squiggles and hachured elements *
90	C	Upper trash-nearly washed away.	Jumbled position	No ceramics
91	C	Upper trash.	Flexed position	Disturbed. No ceramics
92	C	Lower trash-dug from top	Outstretched on back	No ceramics
93	C	Upper trash	Flexed position	No ceramics
94	C	Upper trash	Flexed position	No ceramics
95	C	Mid trash,dug from top	Flexed position	2 ceramics (B/W) 1) miniature B/W olla with 2 lugs,

Burial No.	Midden/ Site Area	Location	Skeleton Notes	Associated Materials
				Cortez/Red Mesa B/W design * 2) 3/4 med. size B/W bowl *
96	C	Mid trash, dug from top	Flexed position	1 sherd
97	C	Mid trash, dug from top.	Flexed position	1 sherd
98	C	Below trash, dug from 1/2 way up.	Bones neatly laid in a line, jumbled position, disturbed.	No ceramics
99		Mid trash	Jumbled position	1 ceramic vessel small B/W bowl w/ very fine lines *
100		Mid trash	Jumbled position	1 sherd partial B/W bowl with broad lines, rim is thin but almost squared *

Appendix E
Tommy Site Excavation Notes by Tommy Bolack

(Coming Soon)

Appendix F
Society for American Archaeology
Principles of Archaeological Ethics

Principle No. 1: Stewardship

The archaeological record, that is, in situ archaeological material and sites, archaeological collections, records and reports, is irreplaceable. It is the responsibility of all archaeologists to work for the long-term conservation and protection of the archaeological record by practicing and promoting stewardship of the archaeological record. Stewards are both caretakers of and advocates for the archaeological record for the benefit of all people; as they investigate and interpret the record, they should use the specialized knowledge they gain to promote public understanding and support for its long-term preservation.

Principle No. 2: Accountability

Responsible archaeological research, including all levels of professional activity, requires an acknowledgment of public accountability and a commitment to make every reasonable effort, in good faith, to consult actively with affected group(s), with the goal of establishing a working relationship that can be beneficial to all parties involved.

Principle No. 3: Commercialization

The Society for American Archaeology has long recognized that the buying and selling of objects out of archaeological context is contributing to the destruction of the archaeological record on the American continents and around the world. The commercialization of archaeological objects - their use as commodities to be exploited for personal enjoyment or profit - results in the destruction of archaeological sites and of contextual information that is essential to understanding the archaeological record. Archaeologists should therefore carefully weigh the benefits to scholarship of a project against the costs of potentially enhancing the commercial value of archaeological objects. Whenever possible they should discourage, and should themselves avoid, activities that enhance the commercial value of archaeological objects, especially objects that are not curated in public institutions, or readily available for scientific study, public interpretation, and display.

Principle No. 4: Public Education and Outreach

Archaeologists should reach out to, and participate in cooperative efforts with others interested in the archaeological record with the aim of improving the preservation, protection, and interpretation of the record. In particular, archaeologists should undertake to: 1) enlist public support for the stewardship of the archaeological record; 2) explain and promote the use of archaeological methods and techniques in understanding human behavior and culture; and 3) communicate archaeological interpretations of the past. Many publics exist for archaeology including students and teachers; Native Americans and other ethnic, religious, and cultural groups who find in the archaeological record important aspects of their cultural heritage; lawmakers and government officials; reporters, journalists, and others involved in the media; and the general public. Archaeologists who are unable to undertake public education and outreach directly should encourage and support the efforts of others in these activities.

Principle No. 5: Intellectual Property

Intellectual property, as contained in the knowledge and documents created through the study of archaeological resources, is part of the archaeological record. As such it should be treated in accord with the principles of stewardship rather than as a matter of personal possession. If there is a compelling reason, and no legal restrictions or strong countervailing interests, a researcher may have primary access to original materials and documents for a limited and reasonable time, after which these materials and documents must be made available to others.

Principle No. 6: Public Reporting and Publication

Within a reasonable time, the knowledge of archaeologists gain from investigation of the archaeological record must be presented in accessible form (through publication or other means) to as wide a range of interested publics as possible. The documents and materials on which publication and other forms of public reporting are based should be deposited in a suitable place for permanent safekeeping. An interest in preserving and protecting in situ archaeological sites must be taken in to account when publishing and distributing information about their nature and location.

Principle No. 7: Records and Preservation

Archaeologists should work actively for the preservation of, and long term access to, archaeological collections, records, and reports. To this end, they should encourage colleagues, students, and others to make responsible use of collections, records, and reports in their research as one means of preserving the in situ archaeological record, and of increasing the care and attention given to that portion of the archaeological record which has been removed and incorporated into archaeological collections, records, and reports.

Principle No. 8: Training and Resources

Given the destructive nature of most archaeological investigations, archaeologists must ensure that they have adequate training, experience, facilities, and other support necessary to conduct any program of research they initiate in a manner consistent with the foregoing principles and contemporary standards of professional practice.